# ORANGE COUNTY FIRE AUTHORITY

# AGENDA

## BOARD OF DIRECTORS REGULAR MEETING
## AND
## CONCURRENT JOINT SPECIAL MEETINGS OF THE BOARD OF DIRECTORS, EXECUTIVE COMMITTEE, BUDGET & FINANCE COMMITTEE AND THE HUMAN RESOURCES COMMITTEE

**Thursday, May 26, 2022**
**6:00 P.M.**

**Regional Fire Operations and Training Center**
**Board Room**
1 Fire Authority Road
Irvine, CA 92602

Link to:
Board of Directors Member Roster

**NOTICE REGARDING PUBLIC PARTICIPATION**
**DURING COVID-19 EMERGENCY**

This meeting is open to the public. In addition, there are several alternative ways to view and to make comments during the meeting, including:

**Access Meeting Live (No Public Comments):**
You may access the meeting live electronically at: https://player.cloud.wowza.com/hosted/xvtnclkw/player.html. (Note: you should use one of the other alternatives below if you want to make comments during the meeting.)

**Public Comments Live via Zoom:** You may also view and make real-time verbal comments during the meeting via the Zoom link below during the meeting. You will be audible during your comments, but the board members will not be able to see you. To submit a live comment using Zoom, please be prepared to use the "Raise Your Hand" feature when public comment opportunities are invited by the Chair. (You can raise your hand on your smart phone by pressing *9.) Also, members of the public must unmute themselves when prompted upon being recognized by the Chair in order to be heard. (To unmute your smartphone in Zoom, press *6.)

Public Comments via Zoom: https://zoom.us/j/83264128588#success
Meeting ID: 832 6412 8588
Passcode: 298121
Raise Your Hand (press *9) and Unmute (press *6)

**E-Comments:** Alternatively, you may email your written comments to coa@ocfa.org. E-comments will be provided to the board members upon receipt and will be part of the meeting record as long as they are received during or before the board takes action on an item. Emails related to an item that are received after the item has been acted upon by the board will not be considered.

Further instructions on how to provide comments is available at: https://ocfa.org/PublicComments.

In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, you should contact the Clerk of the Authority at (714) 573-6040 and identify the need and the requested modification or accommodation. Please notify us as soon as is feasible, however 48 hours prior to the meeting is appreciated to enable the Authority to make reasonable arrangements to assure accessibility to the meeting.

This Agenda contains a brief general description of each item to be considered. Except as otherwise provided by law, no action or discussion shall be taken on any item not appearing on the following Agenda. Unless legally privileged, all supporting documents, including staff reports, and any writings or documents provided to a majority of the board members after the posting of this agenda are available for review at the Orange County Fire Authority Regional Fire Operations & Training Center, 1 Fire Authority Road, Irvine, CA 92602 or you may contact the Clerk of the Authority at (714) 573-6040 Monday through Thursday, and every other Friday from 8 a.m. to 5 p.m. and available online at http://www.ocfa.org

**CALL TO ORDER** by Chair Steggell

**INVOCATION** by OCFA Chaplain Devin Chase

**PLEDGE OF ALLEGIANCE** by Director Bartlett

**ROLL CALL** by Clerk of the Authority

**REPORTS**

**A. Report from the Budget and Finance Committee Chair**

**B. Report from the Human Resources Committee Chair**

**C. Report from the Fire Chief**
- Coastal Fire
- Laguna Woods Active Shooter
- Best & Bravest Awards

**PUBLIC COMMENTS**

**Please refer to instructions on how to submit a public comment during COVID-19 Emergency on Page 1 of this Agenda.**

**1. PRESENTATIONS**
No items.

**2. CONSENT CALENDAR**
*All matters on the consent calendar are considered routine and are to be approved with one motion unless a director or a member of the public requests separate action on a specific item.*

**A. Minutes for the Board of Directors**
Submitted by: Maria D. Huizar, Clerk of the Authority

The record will reflect that any Director not in attendance at the meeting of the Minutes will be registered as an abstention, unless otherwise indicated.

Recommended Actions:

1. Approve the Minutes for the April 14, 2022, Concurrent Joint Special Meeting as submitted
2. Approve the Minutes for the April 28, 2022, Regular and Concurrent Joint Special Meeting as submitted.

**B. Award of Public Works Contract for Tenant Improvements at OCFA Fire Stations 14 & 16**

Submitted by: Jim Ruane, Assistant Chief/Logistics Department and Patrick Bauer, Construction & Facilities Division Manager, Logistics Department

Recommended Action:

1. Approve the plans and specifications for Tenant Improvements at OCFA Fire Stations 14 & 16. (See Attachment Three to this staff report).
2. Accept the Neuroth Construction, Inc bid dated March 8, 2022.
3. Approve and award the public works contract to Neuroth Construction, Inc. in the amount of $821,227.

**C. Third Quarter Purchasing Report**

Submitted by: Robert Cortez, Assistant Chief/Business Services Department and Sara Kennedy, Purchasing Division Manager

On May 11, 2022, the Budget and Finance Committee reviewed the proposed agenda item and directed staff to place the item on the Board of Directors agenda by a vote of 6-0 (Directors O'Neill, Hernandez, and Sachs absent).

Recommended Action:

Receive and file the report.

**D. Organizational Service Level Assessment Update**

Submitted by: Lori Zeller, Deputy Chief/Administration & Support Bureau and Robert Cortez, Assistant Chief/Business Services Department

On May 11, 2022, the Budget and Finance Committee reviewed the proposed agenda item and directed staff to place the item on the Board of Directors agenda by a vote of 6-0 (Directors O'Neill, Hernandez, and Sachs absent).

Recommended Action:

Receive and file the Organizational Service Level Assessment (SLA) update for Field Deployment, Emergency Medical Services, Emergency Command Center, Fleet Services, Executive Leadership/Human Resources, Business Services, and Community Risk Reduction.

**3. DISCUSSION ITEMS**
No items.

**4. PUBLIC HEARING**

**A. Review of the Fiscal Year 2022/23 Proposed Budget**
Submitted by: Lori Zeller, Deputy Chief/Administration & Support Bureau, Robert Cortez, Assistant Chief/Business Services Department and Tricia Jakubiak, Treasurer/Treasury & Financial Planning

On May 11, 2022, the Budget and Finance Committee reviewed the proposed agenda item and directed staff to place the item on the Board if Directors agenda by a vote of 5-1 (Directors O'Neill, Hernandez and Sachs absent and Director Bourne dissenting).

Recommended Actions:
1. Conduct a Public Hearing.
2. Adopt the FY 2022/23 Proposed Budget as submitted.
3. Adopt the resolution entitled A RESOLUTION OF THE ORANGE COUNTY FIRE AUTHORITY BOARD OF DIRECTORS ADOPTING AND APPROVING THE APPROPRIATIONS BUDGET FOR THE ORANGE COUNTY FIRE AUTHORITY FOR FISCAL YEAR 2022/23.
4. Approve and authorize the temporary transfer of up to $90 million from the Fund 190 Workers' Compensation Reserve Fund to the General Fund 121 to cover a projected temporary cash flow shortfall for FY 2022/23.
5. Approve and authorize the repayment of $90 million borrowed funds from Fund 121 to Fund 190 along with interest when General Fund revenues become available in FY 2022/23.
6. Approve changes to the Master Position Control list to unfreeze, reclassify and/or add 38 positions as detailed in Attachment 3.
7. Approve transfers from the General Fund 121 to CIP Funds and Settlement Agreement Fund totaling $26,110,226.

**RECESS THE REGULAR MEETING OF THE BOARD OF DIRECTORS**

**CALL TO ORDER THE CONCURRENT JOINT SPECIAL MEETINGS OF THE: BOARD OF DIRECTORS, EXECUTIVE COMMITTEE, BUDGET & FINANCE COMMITTEE, AND HUMAN RESOURCES COMMITTEE**

**A. Findings Required by AB 361 for the Continued Use of Teleconferencing for Meetings**
Submitted by: David Kendig, General Counsel

Recommended Actions by each legislative body:
**Option #1:**
Make the following findings by majority votes of the Board of Directors, Executive Committee, Budget and Finance Committee and Human Resource Committee:

a. A state of emergency has been proclaimed by California's Governor due to the COVID-19 pandemic and continues in effect; and
b. The Board of Directors and each Committee has reconsidered the circumstances of the emergency; and
c. State and local officials continue to recommend measures to promote social distancing to slow the spread of COVID-19.

**Option #2:**
Make the following findings by majority votes of the Board of Directors, Executive Committee, Budget and Finance Committee and Human Resource Committee:

a. Although a state of emergency has been proclaimed by California's Governor due to the COVID-19 pandemic and continues in effect, the OCFA Board of Directors and each Committee has reconsidered the circumstances of the emergency and no longer finds a need for the legislative body to continue the use of teleconferencing for its meetings.

**ADJOURN THE CONCURRENT JOINT MEETINGS AND RECONVENE TO THE REGULAR MEETING OF THE BOARD OF DIRECTORS**

**BOARD MEMBER COMMENTS**

**RECESS TO CLOSED SESSION**

*The Brown Act permits legislative bodies to discuss certain matters without members of the public present. The Board of Directors find, based on advice from the General Counsel, that discussion in open session of the following matter will prejudice the position of the Authority on item listed below:*

**CS1. CONFERENCE WITH LABOR NEGOTIATORS** pursuant to Government Code Section 54957.6

| | |
|---|---|
| Negotiators: | Peter Brown, Liebert Cassidy Whitmore and Stephanie Holloman, Assistant Chief/Human Resources Director |
| Employee Organizations: | • Orange County Professional Firefighters Association, IAFF - Local 3631,<br>• Orange County Employees Association (OCEA), and<br>• Orange County Fire Authority Management Association (OCFAMA) |

**CS2. CONFERENCE WITH LEGAL COUNSEL - PUBLIC EMPLOYEE PERFORMANCE EVALUATION** pursuant to Government Code Section 54954.5

| | |
|---|---|
| Position: | Fire Chief |

**CS3. CONFERENCE WITH LEGAL COUNSEL - PUBLIC EMPLOYEE PERFORMANCE EVALUATION** pursuant to Government Code Section 54954.5

| | |
|---|---|
| Position: | General Counsel |

**CS4. CONFERENCE WITH LEGAL COUNSEL - SIGNIFICANT EXPOSURE TO LITIGATION** pursuant to paragraph (2) and (3) of subdivision (d) of Section 54956.9 of the Government Code: Two (2) Cases

**RECONVENE TO OPEN SESSION**

**CLOSED SESSION REPORT** by General Counsel

**ADJOURNMENT** – The next meeting of the Orange County Fire Authority Board of Directors is scheduled for Thursday, June 23, 2022, at 6:00 p.m.

**AFFIDAVIT OF POSTING**

I hereby certify under penalty of perjury and as required by the State of California, Government Code § 54954.2(a), that the foregoing Agenda was posted in the lobby and front gate public display case of the Orange County Fire Authority, Regional Fire Operations and Training Center, 1 Fire Authority Road, Irvine, CA, not less than 72 hours prior to the meeting.

Maria D. Huizar, CMC
Clerk of the Authority

**FUTURE BOARD AGENDA ITEMS – THREE-MONTH OUTLOOK:**

- QRF Program
- ABH Reimbursements
- Labor Negotiations
- Award a Public Works Contract for Fire Station 24
- Extension of FIRIS 3.0
- Fire Prevention Proclamation
- Year End Budget Adjustments
- Cal Fire Grant Agreement

**UPCOMING MEETINGS:**

| | |
|---|---|
| Special Human Resources Committee | Tuesday, May 31, 2022, 12 noon |
| Budget & Finance Committee | Wednesday, June 8, 2022, 12 noon |
| Executive Committee | Thursday, June 23, 2022, 5:30 p.m. |
| Board of Directors | Thursday, June 23, 2022, 6:00 p.m. |
| Concurrent Joint Special Meeting of the Board of Directors and all Committees | Thursday, June 23, 2022, 6:00 p.m. |

# MINUTES
# ORANGE COUNTY FIRE AUTHORITY

## Board of Directors
## Concurrent Joint Special Meeting
## Thursday, April 14, 2022
## 6:00 P.M.

**Regional Fire Operations and Training Center**
Board Room
1 Fire Authority Road
Irvine, CA 92602

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**CALL TO ORDER**
A Concurrent Joint Special Meeting of the Orange County Fire Authority Board of Directors, Executive Committee, Budget and Finance Committee, and the Human Resources Committee was called to order on April 14, 2022, at 6:02 p.m. by Board of Directors Chair Michele Steggell.

**ROLL CALL**

| | | |
|---|---|---|
| **Present:** | Michele Steggell, La Palma, Chair* | Anthony Kuo, Irvine, Vice Chair* |
| | Ross Chun, Aliso Viejo* | Carol Gamble, Rancho Santa Margarita* |
| | Gene Hernandez, Yorba Linda* | Anne Hertz-Mallari, Cypress* |
| | Joe Kalmick, Seal Beach* | Jessie Lopez, Santa Ana* |
| | Austin Lumbard, Tustin* | John O'Neill, Garden Grove* |
| | Sandy Rains, Laguna Niguel* | Vince Rossini, Villa Park* |
| | Dave Shawver, Stanton* | Don Sedgwick, Laguna Hills* |
| | Tri Ta, Westminster* | Richard Viczorek, Dana Point* |
| | Donald P. Wagner, County of Orange* | Kathy Ward, San Clemente* |
| **Absent:** | Lisa Bartlett, County of Orange | Troy Bourne, San Juan Capistrano |
| | Shelley Hasselbrink, Los Alamitos | Noel Hatch, Laguna Woods |
| | Sunny Park, Buena Park | Ed Sachs, Mission Viejo |
| | Mark Tettemer, Lake Forest | |

**Also present were:**

| | |
|---|---|
| Fire Chief Brian Fennessy | Deputy Chief Lori Zeller |
| Assistant Chief TJ McGovern | Assistant Chief Robert Cortez |
| Communications Director Matt Olson | Assistant Chief Randy Black |
| Clerk of the Authority Maria Huizar | General Counsel David Kendig |

** Those members attending via Teleconferencing*

**PUBLIC COMMENTS**
Chair Steggell opened the Public Comments portion of the meeting, without any comments from the general public Chair Steggell closed the Public Comments portion of the meeting.

**1. PRESENTATION**
No Items.

**2. DISCUSSION CALENDAR**

**A. Findings Required by AB 361 for the Continued Use of Teleconferencing for Meetings** (FILE 11.03)

General Counsel David Kendig presented the Findings Required by AB 361 for the Continued Use of Teleconferencing for Meetings.

On motion of Director Hernandez, and second by Director Wagner, and following a roll call vote, approved 15 -3 (Directors Hertz-Mallari, Kuo, and Steggell opposed, Directors Bourne, Park, Hatch, Tettemer, Hasselbrink, Sachs, and Bartlett absent) to select Option #1, to make the following findings:

a. A state of emergency has been proclaimed by California's Governor due to the COVID-19 pandemic and continues in effect; and
b. The Board of Directors and each Committee has reconsidered the circumstances of the emergency; and
c. State and local officials continue to recommend measures to promote social distancing to slow the spread of COVID-19.

**REPORTS**
None.

**COMMITTEE MEMBER COMMENTS**
None.

**ADJOURNMENT –** Chair Steggell adjourned the meeting at 6:17 p.m. The next regular meeting of the Orange County Fire Authority Board of Directors is scheduled for Thursday, April 28, 2022, at 6:00 p.m.

Maria D. Huizar, CMC
Clerk of the Authority

# MINUTES
# ORANGE COUNTY FIRE AUTHORITY

## Board of Directors Regular and Concurrent Joint Special Meetings
## Thursday, April 28, 2022
## 6:00 P.M.

**Regional Fire Operations and Training Center Board Room**
1 Fire Authority Road
Irvine, CA 92602-0125

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**CALL TO ORDER**
A regular meeting of the Orange County Fire Authority Board of Directors was called to order on April 28, 2022, at 6:00 p.m. by Chair Steggell.

**INVOCATION**
The invocation was led by Chaplain Emily McColl.

**PLEDGE OF ALLEGIANCE**
Director Lumbard led the Assembly in the Pledge of Allegiance to the Flag.

**ROLL CALL**

| | | |
|---|---|---|
| | Michele Steggell, La Palma, Chair | Anthony Kuo, Irvine, Vice Chair |
| | Lisa Bartlett, County of Orange* | Troy Bourne, San Juan Capistrano* |
| | Ross Chun, Aliso Viejo* | Carol Gamble, Rancho Santa Margarita* |
| | Gene Hernandez, Yorba Linda* | Anne Hertz-Mallari, Cypress* |
| | Joe Kalmick, Seal Beach | Jessie Lopez, Santa Ana* |
| | Austin Lumbard, Tustin* | John R. O'Neill, Garden Grove* |
| | Sunny Park, Buena Park* | Vince Rossini, Villa Park* |
| | Don Sedgwick, Laguna Hills | Dave Shawver, Stanton* |
| | Tri Ta, Westminster* | Mark Tettemer, Lake Forest |
| | Richard Viczorek, Dana Point* | Donald P. Wagner, County of Orange* |
| | Kathleen Ward, San Clemente* | |
| **Absent** | Shelley Hasselbrink, Los Alamitos | Noel Hatch, Laguna Woods |
| | Sandy Rains, Laguna Niguel | Ed Sachs, Mission Viejo |

**Also present were:**

| | |
|---|---|
| Fire Chief Brian Fennessy | Deputy Chief Lori Zeller |
| Deputy Chief Kenny Dossey | Assistant Chief Robert Cortez |
| Assistant Chief Jim Ruane | Assistant Chief Stephanie Holloman |
| Assistant Chief Lori Smith | Assistant Chief TJ McGovern |
| General Counsel David Kendig | Director of Communications Matt Olson |
| Clerk of the Authority Maria D. Huizar | |

**Those members attending via Teleconferencing.*

## REPORTS

**A. Report from the Budget and Finance Committee Vice Chair** (FILE 11.12)
Budget and Finance Committee Chair Tri Ta reported at its April 13, 2022, Budget and Finance Committee meeting, the Committee reviewed and recommended to forward to the Board of Directors the Fiscal Year 2020/21 Backfill/Overtime and Calendar Year 2021 Total Earnings/Compensation Analysis for approval of the recommended actions. The Committee also reviewed and made the recommendation to forward the Community Risk Reduction Fee Study and Adoption of Associated Fee Schedules to the Board to conduct a Public Hearing and approve the recommended actions.

**B. Report from the Fire Chief** (FILE 11.14)
Fire Chief Brian Fennessy introduced the OCFA Strategic Goals FY2021/2022, Third Quarter Update. He also addressed the OCFA standards of accountability, transparency, and integrity.

## PUBLIC COMMENTS (FILE 11.11)

Aaron Peardon, Senior Labor Relations Representative for Orange County Employees Association (OCEA), addressed the need of a fair wage increase.

Rich Swanson, OCFA Plan Reviewer and member of the OCEA negotiation team, addressed the performance and high standards of OCFA employees and the need for fair wage increase.

Samantha Soto, OCFA Emergency Command Center Supervisor and OCEA negotiation team member, asked for fair wage increases.

Brian Slegers, OCFA Senior Fire Prevention Specialist, requested consideration of the Board for fair cost of living wages.

Andrea Bruennieks, OCFA Fire Prevention Analyst, addressed the work ethic of OCFA employees and requested consideration by the Board of fair wage increase.

John Bowden, OCFA Assistant Fire Marshal, addressed the OCEA negotiations and lack of fair increase of wages.

Josh Miller, OCEA Member, requests consideration of a fair contract.

Patty Hernandez, OCEA Board Member and County of Orange probation department employee, thanked all of those who serve OCFA as essential workers, and asked the Board reconsider providing fair wages to its employees.

Velecia Stevens, ECC Dispatcher, addressed the professionalism of the ECC staff and requested the Board provide a contract that recognizes the exceptional service by the employees.

Charles Barfield, General Manager of OCEA, spoke of employees who worked diligently during the pandemic, but are being disregarded during negotiations.

Patricia Cabada, Orange County resident, representing Latinos United for America, asked that the Board reintroduce the safe and surrender policy to the public.

Libby Fallman with the phone number ending in 8403, addressed her concerns of disrespect for women employees of Orange County Fire Authority.

Dawn Larson, volunteer and founding member of the Girls Camp Circuit, addressed women being treated unfairly at the OCFA.

Kris, no phone number provided, addressed the DEI Survey sent out recently to OCFA staff.

Resident with the phone number ending in 7575, addressed women not treated fairly at OCFA.

Resident with the phone number ending in 4415, spoke to the unfair treatment of women at the OCFA.

## 1. PRESENTATIONS

No items.

## 2. CONSENT CALENDAR

On motion of Vice Chair Kuo and second by Director Tettemer, and following a roll call vote, approved 2A-2B 18-0 (Directors Chun, Hasselbrink, Hatch, Rains, Sachs, Shawver, and Wagner absent) with Agenda Item 2C pulled by staff for a separate presentation.

### A. Minutes for the Board of Directors (FILE 11.06)

Action: Approve the Minutes for the March 24, 2022, Regular and Concurrent Joint Special Meeting as submitted.

### B. Wildfire Awareness and Prevention Proclamation (FILE 11.09A)

Action: Approve proclamation designating mid-summer through early autumn as "Wildfire Awareness and Prevention Season."

**C. Fiscal Year 2020/21 Backfill/Overtime and Calendar Year 2021 Total Earnings/Compensation Analysis** (FILE 15.11)

Staff pulled this item for separate consideration. Assistant Chief Robert Cortez introduced the item and Finance Manager Julie Nemes, who presented a PowerPoint presentation.

OCFA Fire Captain Chris Hamm addressed the Board expressing concerns about forced shifts and overtime.

Justin Dillon, Vice President of Local 3631, addressed the staffing demands within OCFA.

Discussion ensued.

On motion of Vice Chair Kuo and second by Director Tettemer, and following a roll call vote, approved 19-0 (Directors Chun, Hasselbrink, Hatch, Rains, Sachs, and Shawver absent) to:

1. Direct staff to continue pursuing reductions in overtime by filling permanent vacancies as quickly as possible after the positions become vacant.
2. Authorize staff to temporarily exceed the number of authorized firefighter positions on the Master Position Control to maximize the number of firefighters hired into each academy, pending attrition/promotions that occur during and following academy graduations.
3. Direct staff to continue using overtime to fill temporary vacancies rather than hiring additional personnel, recognizing this as a cost-effective practice for temporary needs.

## 3. DISCUSSION ITEMS

No items.

## 4. PUBLIC HEARING

**A. Community Risk Reduction Fee Study and Adoption of Associated Fee Schedules** (FILE 15.05A)

Chair Steggell opened the Public Hearing.

Finance Manager Julie Nemes presented a PowerPoint presentation for the Community Risk Reduction Fee Study and Adoption of Associated Fee Schedules.

Discussion ensued.

There were no comments from the public.

Chair Steggell closed the Public portion of the Public Hearing.

On motion of Director Gamble and second by Director Hernandez, and following a roll call vote, declared approved 20-0 (Directors Chun, Hasselbrink, Hatch, Rains, and Sachs absent) to:

1. Conduct a Public Hearing.
2. Find that, in accordance with California Government Code Section 66014, the proposed fees do not exceed the cost of providing services and are only for the purpose of meeting operational expenses and are, therefore, exempt from compliance with the California Environmental Quality Act pursuant to Public Resources Code Section 21080.
3. Approve and adopt Resolution No 2022-03 entitled A RESOLUTION OF THE BOARD OF DIRECTORS OF THE ORANGE COUNTY FIRE AUTHORITY APPROVING CHANGES IN COMMUNITY RISK REDUCTION (FORMERLY FIRE PREVENTION) AND MISCELLANEOUS FEES approving changes in Community Risk Reduction and Miscellaneous fees and effective date.
4. On the condition that a strong audit, be conducted on 3-4 types of projects that could include multifamily housing over 100 units, High-rise structure 75 feet or above, and a Mid-rise structure under 75 feet.

**RECESS THE REGULAR MEETING OF THE BOARD OF DIRECTORS**

**CALL TO ORDER THE CONCURRENT JOINT SPECIAL MEETINGS OF THE: BOARD OF DIRECTORS, EXECUTIVE COMMITTEE, BUDGET & FINANCE COMMITTEE, AND HUMAN RESOURCES COMMITTEE**

**A. Findings Required by AB 361 for the Continued Use of Teleconferencing for Meetings** (FILE 11.03)

General Counsel David Kendig presented the Findings Required by AB 361 for the Continued Use of Teleconferencing for Meetings.

On motion of Director Hernandez and second by Director Lopez, and following a roll call vote, approved 15-5 (Directors Tettemer, Sedgwick, Hertz-Mallari, Kuo, and Steggell opposed, and Directors Chun, Sachs, Hasselbrink, Hatch, and Rains absent) to: select Option #1 to make the following findings:

a. A state of emergency has been proclaimed by California's Governor due to the COVID-19 pandemic and continues in effect; and
b. The Board of Directors and each Committee has reconsidered the circumstances of the emergency; and
c. State and local officials continue to recommend measures to promote social distancing to slow the spread of COVID-19.

**ADJOURN THE CONCURRENT JOINT MEETINGS AND RECONVENE TO THE REGULAR MEETING OF THE BOARD OF DIRECTORS**

**BOARD MEMBER COMMENTS** (FILE 11.13)

Vice Chair Kuo requested staff provide a memo to the Wildfire Awareness and Prevention activity in follow up to the proclamation approved this evening.

**RECESS TO CLOSED SESSION** (FILE 11.15)

**CS1. CONFERENCE WITH LABOR NEGOTIATORS** pursuant to Government Code Section 54957.6

| | |
|---|---|
| Negotiators: | Peter Brown, Liebert Cassidy Whitmore and Stephanie Holloman, Assistant Chief/Human Resources Director |
| Employee Organizations: | • Orange County Professional Firefighters Association, IAFF - Local 3631,<br>• Orange County Employees Association (OCEA), and<br>• Orange County Fire Authority Management Association (OCFAMA) |

**CS2. CONFERENCE WITH LEGAL COUNSEL - PUBLIC EMPLOYEE PERFORMANCE EVALUATION** pursuant to Government Code Section 54954.5

Position: Fire Chief

**CS3. CONFERENCE WITH LEGAL COUNSEL - SIGNIFICANT EXPOSURE TO LITIGATION** pursuant to paragraph (2) and (3) of subdivision (d) of Section 54956.9 of the Government Code: One (1) Case

**RECONVENE TO OPEN SESSION**

**CLOSED SESSION REPORT** (FILE 11.15)

General Counsel David Kendig stated there was no reportable action.

**ADJOURNMENT** – Chair Steggell adjourned the meeting at 9:47 p.m. The next meeting of the Orange County Fire Authority Board of Directors is scheduled for Thursday, May 26, 2022, at 6:00 p.m.

Maria D. Huizar, CMC
Clerk of the Authority

Orange County Fire Authority

# AGENDA STAFF REPORT

**Board of Directors Meeting**
**May 26, 2022**

**Agenda Item No. 2B**
**Consent Calendar**

## Award of Public Works Contract for Tenant Improvements at OCFA Fire Stations 14 & 16


### Contact(s) for Further Information

| | | |
|---|---|---|
| Jim Ruane, Assistant Chief<br>Logistics Department | jimruane@ocfa.org | 714.573.6028 |
| Patrick Bauer, Construction & Facilities<br>Division Manager, Logistics Department | patrickbauer@ocfa.org | 714.573.6471 |



### Summary

This agenda item seeks approval of the plans and specifications for Tenant Improvements at OCFA Fire Stations 14 & 16 and award of a public works contract to Neuroth Construction, Inc., the lowest responsive and responsible bidder, responding to bid RO2511A.


### Prior Board/Committee Action

None

### RECOMMENDED ACTION(S)

1. Approve the plans and specifications for Tenant Improvements at OCFA Fire Stations 14 and 16 (see Attachment Three to this staff report).
2. Accept the Neuroth Construction, Inc. bid dated March 8, 2022.
3. Approve and award the public works contract to Neuroth Construction, Inc. in the amount of $821,227.

### Impact to Cities/County

Not Applicable.

### Fiscal Impact

Funding for this contract is available in the existing FY2021/22 Logistics Department Fund 12150 Capital Improvement Budget, project Inclusive Facilities/Station Bathrooms (P413).

### Background

The restroom facilities at OCFA Fire Stations 14 and 16 were identified as needing modifications to meet OCFA's standards for providing inclusive facilities. The scope of work requires demolition of the existing restroom and shower facilities, and to comply with the conditions of plan check and permitting, the building is required to be brought up to current ADA codes, requiring exterior ADA parking and path of travel. New construction consists of walls, doors, flooring, HVAC, plumbing, concrete, asphalt, and electrical improvements. The project will bring the restroom facilities and building exterior at stations 14 and 16 up to current ADA codes and provide gender-neutral facilities consistent with the objectives of the Inclusive Facilities project.

***Invitation for Bids (IFB) Process***

On January 24, 2022, staff issued IFB RO2511A to solicit competitive bids for tenant improvements at OCFA Fire Stations 14 and 16. A mandatory job-walk was held on February 10, 2022, with bids due on March 9, 2022. Eleven construction bids were received and reviewed by staff for responsiveness, and then vetted for bidder qualifications. Three of the eleven participating bidders were deemed responsive and qualified. See Attachment One for a detailed report of the responsive contractors' qualifications.

| Bidder | Lump Sum Pricing |
|---|---|
| Neuroth Construction Inc. | $821,227.00 |
| Golden Gate Steel, Inc. | $828,465.00 |
| Sanders Construction Services, Inc. | $892,180.00 |

Additionally, staff reviewed the pricing submitted and confirmed the reasonableness of the apparent lowest bidder's pricing based on the engineer's estimate, individual cost categories, and comparison to other bidders' pricing. See Attachment Two for the Bid Tabulation with cost category comparison.

Subsequent to this review, a discussion was conducted between Neuroth Construction, Inc. and the OCFA project team to confirm specifications, scope of work, and construction schedule of the project as provided in the bid submittal. In addition, an updated schedule of values was requested from Neuroth Construction, Inc. to provide additional detail to the project pricing breakdown. As a result of the pre-qualification process, price analysis, confirmation of the specifications, scope of work, and construction schedule, Neuroth Construction, Inc. is deemed the lowest responsive and responsible bidder.

***Recommendation***

Based on the bid results, staff recommends contract award to Neuroth Construction, Inc. as the lowest responsive responsible bidder based on the base bid in the amount of $821,227.

**Attachment(s)**

1. Executive Summary
2. Bid Tabulation
3. Proposed Public Works Contract ***(Contract posted online and hard copy available in the Clerk's Office upon request)***

Attachment 1

# Executive Summary: Formal Public Works Bid

***Bid #RO2511A : Tenant Improvements FS 14 & 16***

| **Section 1.** Project Information | | | |
|---|---|---|---|
| IFB Issue Date | 1/24/2022 | IFB Due Date | 3/9/2022 |
| Vendors Notified | 897 | Bids Received | 11 |
| Job Walk | 2/10/2022 | Job Walk Attendees | 21 |
| Addenda Issued | 1 | Engineer's Estimate | $850,000 |
| Project Description: | Tenant Improvement Project at OCFA Fire Stations 14 and 16 including bathroom remodel, plumbing, and ADA upgrades. | | |
| Solicitation Method: | Due to the public works nature of this project and the estimated value exceeding $200,000, this project was solicited through the Formal Invitation for Public Works bid utilizing the one-step pre-qualification process. | | |

| **Section 2.** Pre-Qualification of Responsive Bidders | | | |
|---|---|---|---|
| **Neuroth Construction, Inc.** | | | ☒ **Qualified**<br>☐ **Not Qualified** |
| **Contractor Reputation:**<br>*Labor Compliance, Safety Record, Previous Disqualifications, Civil Wage Penalties, Convictions* | | | ☒ Satisfactory<br>☐ Unsatisfactory |
| **Notes:** | No findings. | | |
| **Contractor Capability to Perform Work:**<br>*CSLB Licensing, DIR Registration, Surety Information, Prior Claims, Completion of Similar Work, Ability to Complete Project, Prior Contract Termination* | | | ☒ Satisfactory<br>☐ Unsatisfactory |
| **Prior & Current Contracts:** | Prior:<br>- Mira Costa College – Science Building Renovation<br>- Cal State San Marcos – Food Pantry Renovation<br>- City of Loma Linda – (10/29/21)<br>Current:<br>- Loma Linda Fire Station 251 | | |
| **Disposition of References:** | | | ☒ Favorable<br>☐ Unfavorable |
| **References Provided:** | • Mira Costa College<br>• Cal State San Marcos<br>• City of Loma Linda<br>• Alvarado Parkway Behavioral Institute | **No. References that Responded:** | 3 |
| **Notes:** | Per references, contractor performed and completed work as agreed, were easy to reach for communication, project was completed within time and budget. Contractor would be recommended for future projects. | | |
| **Golden Gate Construction** | | | ☒ **Qualified**<br>☐ **Not Qualified** |
| **Contractor Reputation:**<br>*Labor Compliance, Safety Record, Previous Disqualifications, Civil Wage Penalties, Convictions* | | | ☒ Satisfactory<br>☐ Unsatisfactory |
| **Notes:** | No findings. | | |
| **Contractor Capability to Perform Work:** | | | ☒ Satisfactory<br>☐ Unsatisfactory |

| | | | |
|---|---|---|---|
| *CSLB Licensing, DIR Registration, Surety Information, Prior Claims, Completion of Similar Work, Ability to Complete Project, Prior Contract Termination* | | | |
| **Prior & Current Contracts:** | Prior:<br>- City of Torrance – Dee Hardison Sports Center Restroom Renovation<br>- City of Pasadena – Hale Builsin Interior Remodel<br>- San Jacinto USD – District Office ADA Upgrades<br>Current:<br>- West Valley Concrete repairs<br>- Civic Center ADA and COVID improvements<br>- Harvey Elementary School fencing, entrance of site lighting, and surveillance cameras<br>- General JOC<br>- RSCCD – ITS HVAC upgrade at District Operations Center | | |
| **Disposition of References:** | | | ☒ Favorable<br>☐ Unfavorable |
| **References Provided:** | San Jacinto USD<br>City of Torrance<br>City of Pasadena | **No. References that Responded:** | 2 |
| **Notes:** | Per references, contractor performed and completed work as agreed, within a reasonable amount of time and budget. | | |
| **Sanders Construction Services, Inc.** | | | **☒ Qualified**<br>**☐ Not Qualified** |
| **Contractor Reputation:**<br>*Labor Compliance, Safety Record, Previous Disqualifications, Civil Wage Penalties, Convictions* | | | ☒ Satisfactory<br>☐ Unsatisfactory |
| **Notes:** | No findings. | | |
| **Contractor Capability to Perform Work:**<br>*CSLB Licensing, DIR Registration, Surety Information, Prior Claims, Completion of Similar Work, Ability to Complete Project, Prior Contract Termination* | | | ☒ Satisfactory<br>☐ Unsatisfactory |
| **Prior & Current Contracts:** | Prior:<br>- Capistrano Unified School District – CUSD Transportation Center Expansion<br>- Irvine Unified School District – Woodbridge High School Bleachers<br>- Laguna Beach Unified School District – Laguna Beach High School Concession Building and ADA Upgrades<br>Current:<br>- None | | |
| **Disposition of References:** | | | ☒ Favorable<br>☐ Unfavorable |
| **References Provided:** | CUSD (Telacu PM) – Dave Creek<br>Irvine USD – Joe Chapin<br>LBUSD – Ryan Zajda | **No. References that Responded:** | 2 |
| Notes: | Per references, contractor performed and completed work as agreed, within a reasonable amount of time and budget. Would recommend for future project. | | |

**Section 3.** Bid Pricing *See attached Bid Tabulation for Detailed Cost Comparison*

| | |
|---|---|
| **Lowest Responsive, Responsible Bidder:** | Neuroth Construction |
| **Comparison to Engineer's Estimate:** | 3% Less |
| **Pricing Determination:** | ☒ Reasonable ☐ Not Reasonable |

**Section 4.** Recommendation for Award

**Award Documentation:**

| | | | |
|---|---|---|---|
| **Payment Bond:** | ☒ Yes ☐ No | **Performance Bond:** | ☒ Yes ☐ No |
| **Award Certifications:** | ☒ Yes ☐ No | **Insurance Certificates:** | ☒ Yes ☐ No |

**Discussion:**

Additional research was completed by OCFA staff to confirm responsiveness and responsibility of the bid and qualifications of the apparent low-bidder, Neuroth Construction, Inc. Staff also considered the Bidder's current performance on another OCFA project awarded by the Board of Directors in January 2022 and determined the performance to be satisfactory thus far.

A discussion was conducted with the apparent low bidder and OCFA staff for the project after bid opening to confirm specifications, scope of work, and construction schedule of the project as provided in the bid submittal. OCFA staff also verified the current California State License Board (CSLB) license statuses and registration with the Department of Industrial Relations (DIR) for Neuroth Construction, Inc. and all listed subcontractors as follows:

| Contractor | CSLB License Number, Classification, and Expiration | DIR Registration Number |
|---|---|---|
| HCI Systems, Inc. | 905493, C10, C7, C16, 2/29/24 | 1000000046 |
| RB Concrete Solutions | 1071714, C8, 12/31/22 | 1000832867 |
| Thomas Partitions & Specialties, Inc. | 613974, C61/D34, 2/28/23 | 1000008781 |
| T3 Contractors Corp. | 867365, C21, C22, 11/30/23 | 1000002965 |
| Allison Mechanical Inc | 679866, B, C20, C36, 11/30/23 | 1000002213 |
| Riverstone Construction, Inc. | 1050001, B, 2/28/23 | 1000710766 |
| Shortliff Drywall, Inc. | 550618, C9, 11/30/22 | 100006160 |
| Plumbing Commercial Innovations | 1077416, A, B, C6, C36, 6/30/23 | 1000788254 |
| Double Play Industries | 941941, B, C17, 1/31/24 | 1000710766 |
| Wakeland Electric, Inc. | 1063245, C10, 2/29/2024 | 1000580743 |
| Pro Spectra Flooring | 740392, C15, C54, C61/D12, D06, 9/30/23 | 1000002810 |
| TriCounty Construction | 1056098, C33, C15, C61, 7/31/23 | 1000629469 |

As a result of the additional research, meeting, and verified qualifications of the apparent low bidder, its bid was accepted.

| RO2511A - Tenant Improvements at OCFA Fire Stations 14 & 16 | Neuroth Construction | | | Golden Gate Steel | | | Sanders Construction Services Inc. | | |
|---|---|---|---|---|---|---|---|---|---|
| | Bid Lump Sum | Difference from Lowest Bid | Difference from Engineer's Estimate | Bid Lump Sum | Difference from Lowest Bid | Difference from Engineer's Estimate | Bid Lump Sum | Difference from Lowest Bid | Difference from Engineer's Estimate |
| | $821,227.00 | $0.00 | -$28,773.00 | $828,465.00 | $7,238.00 | -$21,535.00 | $892,180.00 | $70,953.00 | $42,180.00 |
| **Line Item Breakdown** | **Category Total** | | | **Category Total** | **Difference from** | | **Category Total** | **Difference from** | |
| **Category I:** Labor Classifications (Prevailing Wage) | $400,000.00 | | | $366,357.91 | -$39,642.09 | | $356,872.00 | -$43,128.00 | |
| **Category II:** Permanent & Non-Permanent Materials/Supplies | $200,000.00 | | | $236,425.97 | $36,425.97 | | $446,090.00 | $246,090.00 | |
| **Category III:** Equipment | $25,000.00 | | | $99,733.75 | $74,733.75 | | $89,218.00 | $64,218.00 | |
| **Category IV:** Overhead & Indirect Costs | $96,191.00 | | | $81,824.15 | -$14,366.85 | | $60,500.00 | $35,691.00 | |
| **Category V:** Profit *(% As written)* | 13.87% | | | 5.28% | -7.18% | | 3.03% | -9.18% | |
| **Category VI:** Permits/Fees | $0.00 | | | $2,700.00 | $2,700.00 | | $5,000.00 | $5,000.00 | |
| **Additional:** | **Note:** Price is 3.4% lower than engineer's estimate. Bid price deemed reasonable. | | | **Note 1:** Price is 2.6% lower than engineer's estimate. Bid price deemed reasonable.<br>**Note 2:** Bid Lump Sum includes $2,700 in estimated permit fees. | | | **Note 1:** Price is 5% higher than engineer's estimate. Bid price deemed reasonable.<br>**Note 2:** Bid Lump Sum does not include $5,000 in estimated permit fees.<br>**Note 3:** The figures noted for Categories IV and V are for comparison purposes. These amounts are blended into the totals listed for Categories I-III. | | |

## 4F: CONTRACT AGREEMENT

THIS CONTRACT AGREEMENT (hereinafter "Agreement" or "Contract" or "Contract Agreement") is made and entered into for the above identified Project this 25 day of April, 20 22, BY AND BETWEEN THE **ORANGE COUNTY FIRE AUTHORITY** (hereinafter "OCFA"), and Neuroth Construction Inc., as CONTRACTOR.

WITNESSETH that OCFA and CONTRACTOR have mutually agreed as follows:

[SECTIONS 1 - 40 are set forth in the Solicitation Information and Instructions to Bidders above.]

41 - PROJECT MANUAL

This Contract consists of the Project Manual. The Project Manual includes the following component parts thereof, each of which is a part of this Contract:

(1) R02511A - Notice Inviting Bids
(2) R02511A- Instructions to Bidders
(3) R02511A - Bid Documents
(4) R02511A - Contract Documents
(5) R02511A - Technical Specifications
(6) Any and all addenda and other supplemental notices and agreements issued by OCFA clarifying, amending, or extending the work contemplated as may be required to ensure its completion in an acceptable manner

All of the above component documents of the Project Manual are complementary and Work required by one of the above documents shall be done as if required by all. In the event of conflict among the component documents of the Project Manual, the conflict shall be resolved as set forth in Section 52 of the General Conditions.

42 - CONTRACT PRICE

OCFA shall pay to Contractor as full consideration for the faithful performance of the Contract, the sum of EIGHT HUNDRED TWENTY-ONE THOUSAND, TWO HUNDRED TWENTY-SEVEN DOLLARS ($821,227). This sum is the total amount stipulated in the Bid. Payment shall be made as set forth in the General Conditions.

43 - CONTRACTOR'S COMMITMENT TO FURNISH MATERIALS AND WORK

For and in consideration of the payments and agreements to be made and performed by OCFA, CONTRACTOR agrees to furnish all materials and perform all work required for the above identified Project, and to fulfill all other obligations as set forth in the aforesaid Contract Documents.

44 - CONTRACTOR'S COMMITMENT TO PRICES

CONTRACTOR agrees to receive and accept the prices set forth in the Proposal as full compensation for furnishing all materials, performing all work, and fulfilling all obligations hereunder. Said compensation shall cover all expenses, losses, damages, and consequences arising out of the nature of work during its progress or prior to its acceptance including those for well and faithfully completing the work and the whole thereof in the manner and time specified in the aforesaid Contract Documents; and also including those arising from actions of the elements, unforeseen difficulties or obstructions encountered in the prosecution of the work, suspension or discontinuance of the work, and all other unknowns or risks of any description connected with the work.

44.1 - NO INCREASE IN BID COST DUE TO SUBSTITUTION OF SUBCONTRACTOR. In the event that a subcontractor is substituted in any manner for any reason, any increased cost related to such substitution shall be the sole responsibility of the Contractor. Such substitution shall not cause or result, directly or indirectly, in any increase in the bid price. This subsection shall not be construed to be prior consent to substitution of subcontractors, nor to authorize any substitution that is prohibited by the Subletting and Subcontracting Fair Practices Act.

45 – PAYMENT TO CONTRACTOR

OCFA hereby promises and agrees to employ, and does hereby employ, CONTRACTOR to provide the materials, do the work, and fulfill the obligations according to the terms and conditions herein contained and referred to, for the prices aforesaid, and hereby contracts to pay the same at the time, in the manner, and upon the conditions set forth in the Contract Documents.

46 - WORKER'S COMPENSATION

CONTRACTOR acknowledges the provisions of the Labor Code requiring every employer to be insured against liability for workers' compensation, or to undertake self-insurance in accordance with the provisions of that Code, and certifies compliance with such provisions.

47 – PRINCIPAL INTERESTS

CONTRACTOR affirms that the signatures, titles, and seals set forth hereinafter in execution of this Agreement represent all individuals, firm members, partners, joint ventures, and/or corporate officers having a principal interest herein.

48 – COMPLIANCE WITH FEDERAL IMMIGRATION AND NATIONALITY ACT

CONTRACTOR hereby represents and warrants that it will comply with all of the provisions of the Federal Immigration and Nationality Act, 8 U.S.C. Section 1101, *et seq.*, as amended, and in connection therewith, shall not employ unauthorized aliens as defined therein. Should CONTRACTOR so employ such unauthorized aliens for the performance of any work and/or services under this Agreement, and should any liability or sanctions be imposed against OCFA for such use of unauthorized aliens, CONTRACTOR hereby agrees to defend and indemnify OCFA against any and all liabilities, actions, suits, claims, demands, losses, costs, judgments, arbitration awards, settlements, damages, demands, orders, or penalties which arise out of or are related to such employment, together with any and all costs, including attorneys' fees, incurred by OCFA.

49 – CERTIFICATION RE DEBARMENT

CONTRACTOR confirms that neither CONTRACTOR nor its principals are suspended, debarred, proposed for debarment, declared ineligible, or voluntarily excluded from the award of contracts from United States (U.S.) federal government procurement or nonprocurement programs, or are listed in the List of Parties Excluded from Federal Procurement or Nonprocurement Programs (http://www.sam.gov/) issued by the U.S. General Services Administration. "Principals" means officers, directors, owners, partners, and persons having primary management or supervisory responsibilities within a business entity (e.g. general manager, plant manager, head of a subsidiary, division or business segment, and similar positions). CONTRACTOR will provide immediate written notification to OCFA if, at any time prior to award, CONTRACTOR learns that this certification was erroneous when submitted or has become erroneous by reason of changed circumstances. This certification is a material representation of fact upon which reliance will be placed when OCFA executes this Agreement. If it is later determined that

CONTRACTOR knowingly rendered an erroneous certification, in addition to the other remedies available to OCFA, OCFA may terminate this Agreement for default by CONTRACTOR.

50 - INDEMNIFICATION

To the fullest extent permitted by law, CONTRACTOR (at CONTRACTOR's sole cost and expense) shall defend (with legal counsel acceptable to OCFA in OCFA's sole discretion), indemnify, protect, and hold harmless the INDEMNIFIED PARTIES and each of them against all CLAIMS which arise out of, pertain to, or are related to CONTRACTOR's performance under, or failure to perform under, the Agreement. Under no circumstances shall the insurance requirements and limits set forth in this Agreement be construed to limit CONTRACTOR's indemnification obligation or other liability hereunder. Notwithstanding the foregoing, such obligation to defend, indemnify, protect, and hold harmless the INDEMNIFIED PARTIES shall not apply to the extent such CLAIMS arise from the sole negligence or willful misconduct of the OCFA.

As used herein, "INDEMNIFIED PARTIES" refers to OCFA and its appointed officials, officers, employees, agents, representatives, attorneys and volunteers.

As used in this Section 50, "CLAIMS" refers to any and all liabilities, actions, suits, claims, demands, losses, costs, judgments, arbitration awards, settlements, damages, demands, orders, penalties, and expenses including legal costs, expert fees and attorney fees, including but not limited to CLAIMS arising from injuries to or death of persons (CONTRACTOR's employees included), or for damage to property, including property owned by OCFA.

51 – COMPLIANCE WITH WORK RULES

CONTRACTOR shall be familiar with, observe, and comply at all times during the term of this Agreement with any work rules for contractors as may be established and promulgated by the OCFA Fire Chief, which work rules shall be additional terms and conditions for providing the work and services to the OCFA pursuant to this Agreement, as may be updated and/or amended from time to time at the sole discretion of the Fire Chief.

**[SIGNATURE PAGE FOLLOWS]**

IN WITNESS WHEREOF the parties hereto have caused this Agreement to be executed the day and year first written.

ORANGE COUNTY FIRE AUTHORITY:

_____
[NAME}, CHAIR
OCFA BOARD OF DIRECTORS

ATTEST:

_____
MARIA D. HUIZAR,
CLERK OF THE AUTHORITY

APPROVED AS TO FORM:

_____
DAVID E. KENDIG
GENERAL COUNSEL

CONTRACTOR:

Neuroth Construction Inc. (S-Corp)
(CORPORATION (NAME - TYPE))

BY: Rob Neuroth
(PRINT)

_____
(SIGNATURE)

President
(TITLE)

BY:_____
(PRINT)

_____
(SIGNATURE)

_____
(TITLE)

NOTE:

SIGNATURES OF CORPORATE OFFICIALS MUST BE NOTARIZED, ATTACH JURAT.

# ORANGE COUNTY FIRE AUTHORITY
# FORMAL INVITATION FOR BIDS

## TENANT IMPROVEMENTS AT
## OCFA FIRE STATIONS 14 AND 16
### FOR PROJECTS EXCEEDING $200,000

**January 24, 2022** **Solicitation No. RO2511A**

The Orange County Fire Authority is requesting bids to establish a construction agreement for Tenant Improvements at OCFA Fire Stations 14 and 16, as specified herein.

**THIS PROJECT IS CONSIDERED A PUBLIC WORK.**

Pursuant to SB 854, no contractor or subcontractor may be awarded a contract for a public works project unless registered with the CA Department of Industrial Relations per California Labor Code section 1725.5. This project is a public work and is subject to compliance monitoring and enforcement.

**MANDATORY REQUIREMENTS:**

- Meet Minimum Qualifications
- Attendance at Job Walk on **2/10/2022**
- Contractors' License: **A, B or Specialty Contractor's license**
- Registration with the California Department of Industrial Relations
- Bid Bond - 10% of Bid Amount *(All Bidders)*
- Faithful Performance Bond – 100% of Agreement Price *(Awarded Contractor Only)*
- Payment Bond – 100% of Agreement Price *(Awarded Contractor Only)*

**BID SUBMITTALS:**

- Bids will be received no later than **11:00 A.M. on 2/24/2022**
- **Only paper bids will be accepted for this solicitation**
- Bids may be hand delivered or mailed to Orange County Fire Authority, Purchasing Department, 1 Fire Authority Road, Building C, Irvine, CA 92602 no later than the date and time specified.
- One (1) original hard copy and one (1) duplicate hard copy shall be sent to the attention of the Purchasing Section, within said time limit, in a sealed envelope.
- The envelope should include the Bidder's Business Name, Solicitation Number, and the Due Date.

**LATE BIDS WILL NOT BE ACCEPTED.**

Any questions concerning this Formal Invitation for Bids or the specifications should be submitted on-line via the Q&A Module available through PlanetBids before **5:00 P.M. on 2/10/2022**. OCFA will publish a response to all inquiries through the e-procurement system and/or may issue an addendum as a result.

**Rothchild Ong,** Assistant Purchasing Agent
rothchildong@ocfa.org | 714-573-6642

**Table of Contents**

SECTION 1: NOTICE INVITING BIDS ..... 3
1A: ORANGE COUNTY FIRE AUTHORITY NOTICE INVITING SEALED BIDS ..... 3
1B: SOLICITATION INFORMATION ..... 4
SECTION 2: INSTRUCTIONS TO BIDDERS ..... 10
SECTION 3: PROPOSAL DOCUMENTS ..... 19
3A: TRANSMITTAL PAGE ..... 20
3B: BIDDER'S BOND ..... 21
3C: CERTIFICATION OF BID ..... 23
3D: NON-COLLUSION AFFIDAVIT ..... 25
3E: CONTRACTOR'S LICENSING CERTIFICATION ..... 26
3F: PROPOSED SUBCONTRACTORS ..... 28
3G: DESIGNATION OF SURETIES ..... 29
3H: BIDDER'S CERTIFICATION OF COMPLIANCE WITH ..... 30
3I: CERTIFICATION OF SITE EXAMINATION ..... 31
3J: BID SHEETS ..... 32
3K: PROJECT APPROACH AND TIMELINE ..... 33
3L: LIST OF PROJECT REFERENCES ..... 34
3M: QUALIFICATIONS QUESTIONNAIRE ..... 35
3N: PARTY AND PARTICIPANT DISCLOSURE FORMS ..... 36
SECTION 4: CONTRACT DOCUMENTS ..... 41
4A: TRANSMITTAL PAGE TWO – BID AWARD DOCUMENTS ..... 42
4B: FAITHFUL PERFORMANCE BOND ..... 43
4C: PAYMENT BOND ..... 45
4D: AWARD CERTIFICATIONS ..... 47
4E: IRS FORM W9 ..... 48
4F: CONTRACT AGREEMENT ..... 49
4G: GENERAL CONDITIONS ..... 53
SECTION 5: TECHNICAL SPECIFICATIONS ..... 111
5A: OCFA FIRE STATION 14 PERMIT SET ..... 112
5B: OCFA FIRE STATION 14 ASBESTOS REPORT ..... 113
5C: OCFA FIRE STATION 16 PERMIT SET ..... 114
5D: OCFA FIRE STATION 16 ASBESTOS REPORT ..... 115

## SECTION 1: NOTICE INVITING BIDS

### 1A: ORANGE COUNTY FIRE AUTHORITY NOTICE INVITING SEALED BIDS FOR CONSTRUCTION OF TENANT IMPROVEMENTS AT OCFA FIRE STATIONS 14 AND 16

==========

**ORANGE COUNTY FIRE AUTHORITY REQUEST FOR QUALIFICATIONS:** SCOPE: Tenant Improvements at OCFA Fire Stations 14 and 16 located in Silverado Canyon, California as specified herein. For official bid documents visit: https://www.planetbids.com/portal/portal.cfm?CompanyID=14773. A MANDATORY job walk will be held February 10, 2022 AT 10:30 A.M. Bid submittals will be accepted until February 24, 2022 AT 11:00 A.M.

==========

**Published:** Orange County Register
**FIRST PUBLICATION DATE: January 28, 2022**
**SECOND PUBLICATION DATE: February 4, 2022**

## 1B: SOLICITATION INFORMATION

### 1. ABBREVIATIONS

IFB: Invitation for Bids
OCFA: Orange County Fire Authority
DIR: California Department of Industrial Relations
CSLB: California Contractors State License Board
PCC: California Public Contract Code

### 2. OBJECTIVE

The Orange County Fire Authority is requesting bids to establish a construction agreement for tenant improvements at OCFA Fire Stations 14 and 16 located in Silverado, California, as specified herein. Project work will be coordinated by the OCFA Property Management section.

### 3. MANDATORY SITE INSPECTION

A mandatory job walk for prime contractors will be held on **THURSDAY, FEBRUARY 10, 2022, 10:30 A.M. at OCFA FIRE STATION 14 located at 29402 Silverado Canyon Rd., Silverado, CA 92676**. The job-walk will begin at Fire Station 14 and then relocate to OCFA Fire Station 16 located at 28891 Modjeska Canyon Rd., Silverado, CA 92676 for the duration of the job-walk.

Contractor's representative must attend the entirety of the job walk. **Late arrivals will not be granted access to the site, nor permitted to attend the job walk.** This informational meeting will be held to allow for site inspection and questions or clarifications concerning OCFA's IFB process and subsequent contract award. Prospective Bidders should be familiar with the IFB prior to attending the job walk.

**DUE TO COVID-19, ATTENDEES MUST PROVIDE AND ARE REQUIRED TO WEAR A MASK DURING THE JOB WALK REGARDLESS OF VACCINATION STATUS.**

### 4. CONTRACTOR MINIMUM QUALIFICATIONS

Bidder must meet the following minimum qualifications in order to have its response considered:

- **Current and valid A, B, or Specialty Contractor's License issued by the California Contractor State License Board for the related work**
- **Current and valid California Department of Industrial Relations registration**
- **Minimum 10 years' experience providing the same or similar services**

### 5. DUE DATE

Bids will be received no later than **11:00 AM on 2/24/2022**. Late submittals will not be accepted. There will be a public opening of the bids on the specified due date and time in the Purchasing Office at the OCFA's Regional Fire Operations and Training Center located at 1 Fire Authority Road, Irvine, CA 92602. If attending the bid opening, please allow time to check in at the Reception Desk.

### 6. SUBMITTAL INSTRUCTIONS

The Bid Response Forms are available for download on OCFA's online bidding platform, PlanetBids. Bids must be prepared using the response forms included in this IFB document. Bids shall be executed by an authorized signatory. Contractors are to fill in all blank spaces (insert "N/A" where the answer is not applicable). Contractors are to initial all interlineations, annotations, deletions, alterations, erasures and other modifications on the forms. Deviations in the form may result in the bid being deemed non-responsive. **Only paper bids will be accepted for this solicitation.**

Bids may be hand delivered or mailed to Orange County Fire Authority, Purchasing Department, 1 Fire Authority Road, Building C, Irvine, CA 92602 no later than the date and time specified in Section 5 above. One (1) original hard copy and one (1) duplicate hard copy shall be sent to the attention of the Purchasing Section, within said time limit, in a sealed envelope. The envelope should include the Bidder's Business

Name, Solicitation Number, and the Due Date. (Failure to include a duplicate hard copy will not cause an otherwise responsive bid to be deemed non-responsive.)

Any vendor who wishes his or her bid to be considered for award is responsible for ensuring that it is complete and received by the Purchasing Office on or before the due date and time. **Facsimile, electronic or e-mail bids will not be considered.**

## 7. INQUIRIES

Any questions related to the IFB shall be directed to the Assistant Purchasing Agent, Rothchild Ong. Questions and comments must be submitted via this bid's Q&A module on the PlanetBids website no later than **5:00 P.M. on 9/9/2021**. The inquirer's name, company, address, phone number should be included. Verbal interpretations or clarifications on the part of OCFA will be without legal effect. Only responses submitted in writing via the Q&A module or addendum will be binding.

## 8. SCHEDULE OF IMPORTANT DATES

| | |
|---|---|
| Invitation for Bid Issue Date | **January 24, 2022** |
| Mandatory Job Walk | **February 10, 2022** |
| Final Day to Submit Questions | **February 10, 2022** |
| Deadline to Submit Bid Response | **February 24, 2022** |

## 9. CONTRACTOR RESPONSIBILITIES

### 9.1 MATERIAL AND LABOR

Contractor shall provide all permits, material, labor, tools and supplies to complete the project as described herein. See Section 5 for detailed information on these requirements and additional components that must be included in Contractor's bid and pricing.

### 9.2 CSLB LICENSE

Contractor and all subcontractors shall possess a valid California **A, B, or Specialty Contractor's** license, as required by California law, at the time of bid submission, pursuant to California Public Contract Code Section 3300 and Business and Professions Code Section 7028.15. The successful contractor and all subcontractors must maintain the license throughout the duration of the project.

### 9.3 PREVAILING WAGE AND COMPLIANCE MONITORING

Contractor and all subcontractors shall conform to the State of California Public Works Contract requirements regarding prevailing wages, benefits, on-site audits with 48-hour notice, payroll records, and apprentice and trainee employment requirements, for all Services on the above Project, including, without limitation, the State labor compliance monitoring and enforcement by the Compliance Monitoring Unit of the Department of Industrial Relations. The successful contractor and all subcontractors must maintain DIR registration throughout the duration of the project.

### 9.4 STANDARD SPECIFICATIONS

OCFA relies on the standard specifications, CSI and Greenbook applicable in the jurisdiction where the project is located, as modified by the local jurisdiction.

### 9.5 BUSINESS LICENSE REQUIREMENTS

Contractor and all subcontractors shall conform to the requirements of the city in which the project is located (or the requirements of the County if the project is located within an unincorporated area) and shall maintain active business license(s) as required by the jurisdiction(s) in which the project is located. The successful contractor and all subcontractors must remain in compliance with these requirements throughout the duration of the project.

### 9.6 WARRANTY

In addition to any warranties specified in the drawings and any manufacturer's warranty, Contractor shall warrant the workmanship and manufacturing for a minimum of one year.

## 10. OCFA RESPONSIBILITIES

OCFA will coordinate with training operations to ensure Contractor has access to necessary areas to perform work. OCFA shall be responsible for the registration of the project with the CA DIR subsequent to contract award.

## 11. DELIVERABLES

### 11.1 PROJECT COMPONENTS

#### 11.1.1 FIRE STATION 14

**11.1.1.1 SELECTIVE DEMOLITION (DEMOLISH EXISTING NON-COMPLIANT TOILET ROOMS/SHOWER)**

**11.1.1.2 INTERIOR ACCESSIBLE IMPROVEMENTS:**

- 11.1.1.2.1 NEW ACCESSIBLE TOILET ROOM
- 11.1.1.2.2 NEW ACCESSIBLE TOILET ROOM AND ACCESSIBLE SHOWER
- 11.1.1.2.3 NEW ACCESSIBLE DOORS TO APPARATUS BAY
- 11.1.1.2.4 NEW ACCESSIBLE COUNTER
- 11.1.1.2.5 NEW ACCESSIBLE DOOR TO STUDY FOR COMPLIANT USE AS A NEW LACTATION ROOM
- 11.1.1.2.6 ADA BRAILLE SIGNAGE

**11.1.1.3 IMPROVEMENTS AS A RESULT OF ACCESSIBLE IMPROVEMENTS:**

- 11.1.1.3.1 CONCRETE SLAB WORK
- 11.1.1.3.2 NON-BEARING WALL RE-WORK
- 11.1.1.3.3 FINISH SYSTEMS INCLUDING GYPSUM BOARD, CARPET, TILE, AND PAINTING
- 11.1.1.3.4 MEP WORK INCLUDING NEW PLUMBING FIXTURES, RE-WORKED EXHAUST AND SUPPLY/RETURN AIR DUCTING, RE-WORKED ELECTRICAL AND NEW ELECTRICAL LIGHT FIXTURES
- 11.1.1.3.5 MINOR STRUCTURAL IMPROVEMENTS/ALTERATION AT TOILET ROOM WALLS

**11.1.1.4 EXTERIOR ACCESSIBLE IMPROVEMENTS (SEE CIVIL DRAWINGS):**

- 11.1.1.4.1 NEW ACCESSIBLE PARKING AREA
- 11.1.1.4.2 NEW ACCESSIBLE PATH OF TRAVEL FROM PARKING TO MAIN

**11.1.1.5 PORTABLE RESTROOM/SHOWER TRAILER:**

- 11.1.1.5.1 PROVIDE A MINIMUM OF ONE SINGLE STALL SELF CONTAINED COMBINATION RESTROOM/SHOWER TRAILER FOR DURATION OF PROJECT

#### 11.1.2 FIRE STATION 16

**11.1.2.1 SELECTIVE DEMOLITION (DEMOLISH EXISTING NON-COMPLIANT TOILET ROOMS/SHOWER)**

- 11.1.2.1.1 INTERIOR ACCESSIBLE IMPROVEMENTS:
- 11.1.2.1.2 NEW ACCESSIBLE TOILET ROOM
- 11.1.2.1.3 NEW ACCESSIBLE TOILET ROOM AND ACCESSIBLE SHOWER
- 11.1.2.1.4 NEW ACCESSIBLE DOORS TO APPARATUS BAY
- 11.1.2.1.5 NEW ACCESSIBLE COUNTER
- 11.1.2.1.6 NEW ACCESSIBLE DOOR TO STUDY FOR COMPLIANT USE AS A NEW LACTATION ROOM
- 11.1.2.1.7 ADA BRAILLE SIGNAGE

**11.1.2.2 IMPROVEMENTS AS A RESULT OF ACCESSIBLE IMPROVEMENTS:**

- 11.1.2.2.1 CONCRETE SLAB WORK

11.1.2.2.2 NON-BEARING WALL RE-WORK
11.1.2.2.3 FINISH SYSTEMS INCLUDING GYPSUM BOARD, CARPET, TILE, AND PAINTING
11.1.2.2.4 MEP WORK INCLUDING NEW PLUMBING FIXTURES, RE-WORKED EXHAUST AND SUPPLY/RETURN AIR DUCTING, RE-WORKED ELECTRICAL AND NEW ELECTRICAL LIGHT FIXTURES

**11.1.2.3 EXTERIOR ACCESSIBLE IMPROVEMENTS (SEE CIVIL DRAWINGS):**
11.1.2.3.1 NEW ACCESSIBLE PARKING AREA
11.1.2.3.2 NEW ACCESSIBLE PATH OF TRAVEL FROM PARKING TO MAIN ENTRANCE

**11.1.2.4 PORTABLE RESTROOM/SHOWER TRAILER:**
11.1.2.4.1 PROVIDE A MINIMUM OF ONE SINGLE STALL SELF CONTAINED COMBINATION RESTROOM/SHOWER TRAILER FOR DURATION OF PROJECT

**Refer to Section 5 of the IFB Document for detailed information about the project requirements including, but not limited to, the scope of services, drawings, specifications, submittals, required permits, inspections, etc.**

## 11.2 SPECIFICATIONS

### 11.2.1 MINIMUM SPECIFICATIONS

The purpose of the information provided herein is to establish the minimum requirements for the supplies, materials, and equipment used for this project. It is not the intention of OCFA to exclude suppliers of similar or equal products of the types specified. Provided specifications, brands, and/or manufacturers describe OCFA expectations for the equipment, supplies and materials to be acquired.

### 11.2.2 EQUIVALENT ALTERNATE ITEMS

#### 11.2.2.1 EQUIPMENT SUBMITTALS

As noted throughout Section 5, deviations from the specifications provided herein are not preferred but in some instances may be accepted. OCFA retains the sole right to determine whether proposed deviations to the specified items are acceptable. Any bidder offering items or equipment as equivalent alternatives to those items specified must submit documentation in accordance with the requirements outlined in Section 5 to substantiate that the item is equal no less than ten (10) business days prior to the bid deadline. Failure to do so may result in the bid that includes such alternative(s) being deemed non-responsive. As part of the evaluation of proposed alternate items, OCFA may request additional product information or product samples. Such information or samples must be submitted at no expense to OCFA by an agreed-upon due date for inspection and approval prior to contract award. Failure to comply with the request, or failure of the proposed alternate product to meet the required specifications, may be cause for OCFA to deem the bid that includes such alternative(s) to be non-responsive.

#### 11.2.2.1 ADDITIONAL SUBMITTALS

Contractor shall submit for approval all items and documentation prior to beginning work in accordance with the requirements outlined in Section 5. In addition to the requirements specified in Section 5, any equivalent alternate items offered as a submittal during the course of construction must include documentation to substantiate that the item is equal. As part of the evaluation of proposed alternate items, OCFA may request additional product information or product samples. Such information or samples must be submitted at no expense to OCFA by an agreed-upon due date for inspection and approval prior to installation. Failure to comply with the request, or failure of the proposed alternate product to meet the required specifications, may be cause for OCFA to deem the Contractor to have caused a delay in the

project, to be remedied by the assessment of liquidated damages, as described in the Contract Documents (see Section 4).

#### 11.2.3 MATERIALS

Materials shall be pure, unadulterated, first quality and shall be delivered to the project in original unbroken packages bearing the maker's name and brand number. Materials shall comply with all requirements described in Section 5. Materials shall be submitted for approval prior to use. Contractor must furnish additional stock of materials, as specified in Section 5.

OCFA intends to purchase and keep as inventory commonly replaced items for the purpose of expediting future repairs. Should Contractor or subcontractors utilize this inventory to perform repairs, use of these items will not void or otherwise negatively affect the warranty. Contractor or subcontractors must replace the stock at no cost to OCFA.

### 11.3 PROJECT EXECUTION

#### 11.3.1 WORKMANSHIP

Contractor shall:

a. Perform work under conditions best suited to produce the specified deliverables.
b. Correct all work that does not comply with the intent of the specification and/or does not meet the approval of OCFA.
c. Protect all adjacent areas and surfaces from damage from work performed (i.e. automobiles, sidewalks, asphalt, concrete, plants, etc.).
d. Coordinate with the OCFA before using noisy, motorized equipment.
e. Take all necessary steps to protect the public and all property concerned.

#### 11.3.2 CLEAN-UP

Contractor shall, at completion of work each day, remove all debris and rubbish resulting from this project and leave work spaces in a clean condition subject to OCFA approval.

#### 11.3.3 PROTECTION

Contractor shall protect work of other trades, correct damage by cleaning, repairing or replacing, and repainting, as approved by OCFA.

#### 11.3.4 REPAIR

At completion of work, Contractor shall repair and/or restore damaged work of other trades.

#### 11.3.5 ACCEPTANCE DOCUMENTATION

Upon completion of work, Contractor shall provide the documents specified herein for final review and acceptance by OCFA.

#### 11.3.6 HEALTH AND SAFETY

Contractor shall ensure compliance at all times with the Health and Safety requirements in Section 86 of the Contract Agreement.

### 11.4 SCHEDULES, TIMELINES, AND MEETINGS

#### 11.4.1 COORDINATION OF WORK

Prior to beginning work, Contractor shall prepare a schedule and submit to OCFA for approval. Contractor shall coordinate the commencement of all work with OCFA so as not to cause inconvenience to the facility. Contractor parking, along with the placement of all trailers, equipment and materials must be coordinated with OCFA in advance.

All work at the location must be coordinated with OCFA in a manner that shall accommodate the requirements of OCFA personnel. Contractor shall post notices in conspicuous places at least three to five days in advance warning occupants what date work will begin. Work, deliveries or efforts which may impede existing circulation roadways shall be scheduled at least seven (7) days in advance.

### 11.4.2 HOURS OF WORK

Work shall be performed Monday through Friday between the hours of 7:00 AM and 5:00 PM. Overtime and after-hours work is not permitted, unless otherwise coordinated with and approved by the city in which the project is located.

### 11.4.3 PROJECT TIMELINE

OCFA anticipates that

- Project work will begin 14 days after the agreement and all other required award documents are received and approved by OCFA
- Project will be complete within 60 days

## 12. MEETINGS

Meetings between OCFA and Contractor will include, at a minimum, the following:

### 12.1 PRE-AWARD MEETING

This meeting will aid OCFA in determining responsibility of Contractor and to finalize the specifications and services to be provided.

### 12.2 PRE-CONSTRUCTION JOB WALKS

These meetings with OCFA, the staff of the city in which the project is located, and others as necessary and/or required by law will be coordinated by the Contractor.

### 12.3 PROJECT STATUS MEETINGS

Weekly meetings held in person, unless otherwise determined by OCFA.

### 12.4 ACCEPTANCE

Meetings regarding project acceptance and warranty punch list items.

### 12.5 ADDITIONAL

Other meetings deemed necessary by OCFA for contract compliance.

## SECTION 2: INSTRUCTIONS TO BIDDERS

### 13.1 AMENDMENT OF INVITATION FOR BID

Notification via email will be sent to vendors listed as "Prospective Bidders" on PlanetBids in the event that a Q&A set or amendment to the IFB is released. The bidder shall acknowledge receipt of an amendment to this Invitation for Bid on the bid submittal. The OCFA reserves the right to revise the bid documents prior to the bid opening date. Revisions, if any, shall be made by written Addenda.

**13.1.1** Pursuant to Public Contract Code Section 4104.5, if OCFA issues an Addendum later than seventy-two (72) hours prior to the deadline for submission of bids, and the Addendum requires material changes, additions or deletions to the description of the work to be performed or the content, form or manner of submission of bids, OCFA will extend the deadline for submission of bids by at least seventy-two (72) hours. Otherwise, OCFA may determine, at its sole discretion, whether an Addendum requires that the date set for opening bids be postponed. Announcement of a new date, if any, will be made by Addenda. All bidders will be notified by e-mail when an addendum is posted to PlanetBids.

**All Addenda issued before the time bids are due shall form part of the contract documents. It is the bidder's responsibility to be familiar with Addenda issued. OCFA will deem any bid that fails to acknowledge all Addenda to be non-responsive. Bidders must acknowledge the Addenda in writing on the form provided in the bid documents.**

### 13.2 INTERPRETATION OF BID DOCUMENTS

Discrepancies in, and/or omissions from the Specifications or other bid documents or questions as to their meaning shall be immediately brought to the attention of the Purchasing Manager by submission of a written request for interpretation or correction thereof no later than the deadline specified for questions specified in Section 1 of the Notice Inviting Bids. The person submitting the request will be responsible for its prompt delivery.

Any interpretation of the bid documents will be made only by addendum duly issued electronically to each bidder registered on the prospective bidder's list. The OCFA will not be responsible for any explanations or interpretations provided in any other manner. No person is authorized to make any oral interpretation of any provision in the bid documents to any bidder, and no bidder should rely on any such oral interpretation.

### 14. DISPUTES RELATING TO THIS INVITATION FOR BID

In the event a dispute arises concerning any aspect of this bid, including specifications and/or process, the party bringing the dispute shall submit a written request for resolution to the Purchasing Department prior to the IFB's due date and time.

In the event a dispute arises regarding this IFB's Recommendation for Award or Denial of Award, the party bringing the dispute must do so in accordance with OCFA's **Purchasing Ordinance, Article IX. Legal and Contractual Remedies**, which can be found online under "Doing Business with OCFA" at https://www.ocfa.org/Uploads/Purchasing/OCFA%20Purchasing%20Ordinance.pdf .

### 15. WITHDRAWAL OF BID

#### 15.1 PRIOR TO BID DUE DATE AND TIME

At any time prior to the specified due date specified in IFB Section 1, an Offeror may formally withdraw the bid by a written letter, facsimile or electronic mail from the Offeror or an authorized representative to the OCFA Purchasing Manager, provided such letter, facsimile or electronic mail is actually and timely received by the OCFA Purchasing Manager. **Telephonic or oral withdrawals shall not be considered.**

### 15.2 AFTER BID DUE DATE AND TIME

In accordance with California Public Contract Code sections 5100-5110, Bidder shall not be relieved of the obligations of its bid unless by consent of OCFA, nor shall any change be made in the bid because of mistake. Bids may be withdrawn for mistake upon mutual written agreement of Bidder and OCFA, or if all of the following conditions apply:

- A mistake is made in the bid; and
- Written notice is provided to OCFA within five (5) working days from the date of the public opening specifying in the notice in detail how the mistake occurred. Telephonic or oral withdrawals will not be considered; and
- The mistake makes the bid materially different than Bidder intended it to be; and
- The mistake was made in filling out the bid and was not due to error in judgment or to carelessness in inspecting the site of the work, or in reading the plans or specifications.

Any bidder who claims a mistake or who forfeits its bid security (Bidder's Bond) shall be prohibited from participating in further bidding on the project on which the mistake was claimed or bid security was forfeited.

## 16. INDEMNIFICATION

Bidder agrees to protect, defend, indemnify, save and hold harmless the OCFA and its officers, officials, employees and volunteers from any and all claims, liabilities, expenses, or damages of any nature, including attorney fees, for injury to or death of any person (Bidder's employees included), and for injury to any property, including consequential damages of any nature resulting there from, arising out of or in any way connected with the Bidder's submittal.

## 17. RESERVATIONS (RIGHTS RESERVED TO OCFA)

OCFA reserves the right to reject any or all bids or any part thereof; to rebid the solicitation; to reject non-responsive or non-responsible bids; to reject unbalanced bids; to reject bids where the terms, prices, and/or awards are conditioned upon another event; to reject individual bids for failure to meet any requirement; to award by item, part or portion of an item, group of items, or total; to make multiple awards; to investigate the qualifications of any bidder under consideration; to modify or amend this IFB in writing; to waive minor irregularities, defects, omissions, technicalities or form errors in any bid. Waiver of one irregularity does not constitute waiver of any other irregularity. OCFA may seek clarification of the bid from the bidder at any time, and failure to respond is cause for rejection. OCFA is required to make an award that is in the best interest of the OCFA. All decisions on compliance, evaluation, terms and conditions shall be made solely at the OCFA's discretion and made to favor the OCFA. OCFA may cancel this solicitation at any time.

The OCFA may reject any bid which, in its sole opinion, does not accurately reflect the cost to perform the work as compared to other bids received and/or to project estimates. In addition, because the OCFA may elect to include or exclude any of the bid items and alternate bid items (if applicable) at its sole and absolute discretion, each bidder must ensure that each bid items contain a proportionate share of profit, overhead and other costs or expenses which will be incurred by the bidder. The OCFA may deem any bid which unevenly weights or allocates costs, including but not limited to overhead and profit to one or more particular bid items as non-responsive. No contract will be executed unless the bidder is licensed in accordance with the provisions of the State law.

## 18. INSPECTION OF SITE/MANDATORY MEETING AND JOB WALK

Each prospective bidder is responsible for becoming familiar with the conditions of the project site as well as those relating to the construction and labor of the project, to fully understand the facilities, conditions, difficulties and restrictions which may impact the completion of the project. Attendance by a representative of each prospective contractor at the mandatory meeting as stated in the request for

informal bid is required. **Any bid received by a contractor not represented at the mandatory meeting will be rejected and deemed non-responsive.**

**19. CONTRACTOR AND SUBCONTRACTOR LICENSING REQUIREMENTS**

Bidder and all listed Subcontractors shall possess valid California Contractor's licenses, as required herein and as appropriate for each specialty subcontracted at the time of bid submission, pursuant to California Public Contract Code Section 3300 and Business and Professions Code Section 7028.15. Licenses must be maintained throughout the duration of the contract resulting from this IFB.

Pursuant to Section 7028.15 of the Business and Professions Code, the OCFA shall consider any bid submitted by a contractor not currently licensed in accordance with California law and pursuant to the requirements found in the bid documents to be nonresponsive, and the OCFA shall reject the bid. The OCFA shall have the right to request evidence of all valid license(s) currently held by the bidder and each of the subcontractors listed in the bid before awarding the contract. In such cases, Bidders shall provide evidence of valid licenses satisfactory to the OCFA within five (5) calendar days. Pursuant to Public Contract Code Section 20676, sellers of "mined material" must be on an approved list of sellers published pursuant to Public Resources Code Section 2717(b) in order to supply mined material for this contract.

**20. SB 854 DEPARTMENT OF INDUSTRIAL RELATIONS REGISTRATION**

No contractor or subcontractor may be listed on an offer for a public works project unless registered with the California Department of Industrial Relations pursuant to California Labor Code Section 1725.5, with limited exceptions from this requirement for bid purposes only under California Labor Code Section 1771.1(a). No contractor or subcontractor may be awarded a contract for public work, or engage in the performance of any public works project unless registered with the California Department of Industrial Relations pursuant to California Labor Code Section 1725.5. Pursuant to SB 854, the DIR registration number of each subcontractor must be identified on the bid; **failure to do so may result in the bid being deemed non-responsive**.

**The contract resulting from this solicitation is subject to compliance monitoring and enforcement by the California Department of Industrial Relations. OCFA reports all public works contracts to the DIR subsequent to contract execution.**

The OCFA will not recognize any claim for additional compensation because of the payment by the Contractor of any wage rate in excess of the prevailing wage rate set forth in the contract. The possibility of wage increases is one of the elements to be considered by the Contractor in determining bid pricing, and will not under any circumstances be considered as the basis of a claim against the OCFA on the contract resulting from this solicitation.

**21. PREVAILING WAGE**

This project is a public work in the State of California, funded in whole or in part with public funds. Therefore, the applicable prevailing wage rates will be enforced. The work is subject to the payment of not less than prevailing wages under California Labor Code Section 1770 et seq. Contractor must comply with all related provision of the California Labor Code if awarded the agreement, including but not limited to:

- The provisions of California Labor Code Section 1775 relating to payment of prevailing wages, and
- Section 1777.5 relating to employment of apprentices, and
- Section 1811-1813 relating to the payment of overtime.

Failure to comply with the applicable prevailing wage, overtime, and apprenticeship requirements may result in penalties.

Contractors are hereby notified that the Director of Industrial Relations has ascertained the general prevailing rate of per diem wages and the rates for overtime and holiday work in the locality in which the work is to be performed for each craft, classification or type of worker needed to perform the work under the contract which will be awarded to the successful contractor.

Additional information is available at the Department of Industrial Relations website at:

**http://www.dir.ca.gov/oprl/DPreWageDetermination.htm**.

Contractors are further notified that this project is subject to compliance monitoring and enforcement by the Department of Industrial Relations. Additional information on the Compliance Monitoring Unit requirements can be found at:

**https://www.dir.ca.gov/Public-Works/PublicWorksEnforcement.html**.

**22. DEBARMENT OF CONTRACTORS**

In accordance with the provisions of the Labor Code, contractors or subcontractors may not perform work on a public works project with a subcontractor who is ineligible to perform work on a public project pursuant to Section 1777.1 or Section 1777.7 of the Labor Code and Federal "Excluded Parties List System". Any contract on a public works project entered into between a contractor and a debarred subcontractor is void as a matter of law. A debarred subcontractor may not receive any public money for performing work as a subcontractor on a public works contract. Any public money that is paid to a debarred subcontractor by the Contractor for the Project shall be returned to the OCFA. The Contractor shall be responsible for the payment of wages to workers of a debarred subcontractor who has been allowed to work on the Project. In order to prohibit the procurement of any goods or services ultimately funded by Federal awards from debarred, suspended or otherwise excluded parties, each Contractor will be screened at the time of response to ensure the Contractor, its principal and their named subcontractors are not debarred, suspended or otherwise excluded by the United States Government in compliance with the requirements of 2 Code of Federal Regulations (CFR) 200.12 7 Code of Federal Regulations (CFR) 3016.35, 28 CFR 66.35, 29 CFR 97.35, 34 CFR 80.35, 45 CFR 92.35 and Executive Order 12549.

**23. CONTRACT**

A response to this IFB is an offer to contract with OCFA based upon the terms, conditions, and specifications contained within this document, all Addenda, and the Construction Services Agreement, attached hereto as Section 4. Submission of a bid confers on the bidder no right to an award or to a subsequent contract. No binding contract will exist between the bidder and the OCFA unless and until the OCFA executes a written contract or purchase order.

**24. BID DOCUMENTS & FORMS**

Bid submittals are to be prepared using the bid forms which are included in this IFB Document. Bids shall be executed by an authorized signatory. As a condition of bidding and in accordance with the provisions of Section 20101 of the California Public Contract Code, prospective bidders are required to submit all the bid forms listed in the Bidder's Checklist. Failure to do so may result in the rejection of the bid.

**25. PREPARATION OF BID**

All bids shall incorporate the forms provided in this IFB document. It is permissible to copy these forms as required. Facsimiles or electronic mail bids shall not be considered.

The Bid form and any solicitation amendments must be signed and returned with the bid. The forms submitted shall be signed by a person authorized to submit an offer. Authorized signature on the Bid forms shall constitute an irrevocable offer to provide services specified herein. Offeror shall submit any additional requested documentation, signifying intent to be bound by the terms of the agreement.

- The authorized person signing the bid shall initial all interlineations, annotations, deletions, alterations, erasures and other modifications on the bid.
- Periods of time, stated as days, shall be in calendar days.
- It is the responsibility of all Offerors to examine the entire Request for Bid package and seek clarification of any requirement that may not be clear and to check all responses for accuracy before submitting a bid. Negligence in preparing a bid confers no right of withdrawal after the due date and time.
- OCFA shall not reimburse the cost of developing, presenting, submitting or providing any response to this solicitation.
- Offeror must list any subcontractors to be utilized in the performance of the services specified herein. For each subcontractor, details on respective qualifications must be included.
- Each bidder shall submit its bid in strict conformity with the requirements of the bid documents. Unauthorized additions, modifications, revisions, conditions, limitations, exclusions or provisions attached to a bid may render it non-responsive and may cause its rejection. Bidders shall not delete, modify, supplement printed matter on the bid forms.
- **Verbal, telephonic, facsimile, email or other electronic bids or modifications will not be considered.**

**26. BID CERTIFICATION**

By signature on the Bid Response Forms, Bidder certifies:

- The Bidder has thoroughly examined and become familiar with the requirements of this IFB;
- Clear understanding of the rules as defined in this IFB and compliance with all terms and conditions specified herein;
- The Bidder is an authorized and/or certified retailer and/or installer of the specified items;
- The submission of the bid did not involve collusion or other anti-competitive practices;
- The bid is compliant with all state and federal laws;
- The Bidder will not discriminate against any employee or applicant for employment in violation of Federal or State law;
- The Bidder has not given, offered to give, and does not intend to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, meal or service to any Director, officer, or employee of OCFA in connection with the submitted offer;
- That the individual signing the submittal is an authorized agent for the Bidder and has the actual authority to legally bind the Bidder to the Contract;
- That its principal and named subcontractors are not debarred, suspended or otherwise excluded by the United States Government, in compliance with the requirements of 7 Code of Federal Regulations (CFR) 3016.35, 28 CFR 66.35, 29 CFR 97.35, 34 CFR 80.35, 45 CFR 92.35 and Executive Order 12549.

**27. ACCEPTANCE PERIOD**

Unless otherwise specified herein, bids are firm and may be accepted by OCFA at any time within 180 days of bid opening.

**28. BID OPENING**

All the bids opened by the OCFA will be subject to further evaluation with respect to responsiveness of the bid and for purposes of determining that the bidder is responsible.

**29. SUBLETTING AND SUBCONTRACTING.**

Pursuant to the Subletting and Subcontracting Fair Practices Act (commencing with Section 4100 of the Public Contract Code), bidders are required to list in their proposal the name, business address, California contractor license number, and public works contractor registration number issued pursuant to Section 1725.5 of the Labor Code of each subcontractor who will perform work or labor or render services in or about the construction of the work or improvement, or a subcontractor who specially fabricates and installs a portion of the work or improvement according to detailed drawings contained in the Plans and

Specifications in excess of 1/2 of 1% of the prime Contractor's total bid or $10,000, whichever is greater. If a subcontractor's California contractor license number or public works contractor registration number are submitted incorrectly in the bid, it will not be grounds for filing a bid protest or grounds for considering the bid nonresponsive if the corrected subcontractor's California contractor license number is submitted to OCFA within 24 hours after the bid opening.

If the Bidder fails to list a subcontractor for a portion of work or if the Bidder lists more than one subcontractor of the same portion of work in excess of 1/2 of 1% of the total bid or $10,000, whichever is greater, the Bidder agrees that it is fully qualified to perform that portion of work itself, and that the Bidder shall perform that portion of work itself. If after award of the contract, the Bidder actually subcontracts that portion of work, except as provided in Public Contract Code Section 4107 or 4109, the Bidder shall be subject to the penalties listed in Section 4111 of the Public Contract Code. It is the OCFA's intent for the Subletting and Subcontracting Fair Practices Act to apply to all phases of the work.

**29.1 NO INCREASE IN BID COST DUE TO SUBSTITUTION OF SUBCONTRACTOR.**

In the event that a subcontractor is substituted in any manner for any reason, any increased cost related to such substitution shall be the sole responsibility of the Contractor. Such substitution shall not cause or result, directly or indirectly, in any increase in the bid price. This subsection shall not be construed to be prior consent to substitution of subcontractors, nor to authorize any substitution that is prohibited by the Subletting and Subcontracting Fair Practices Act.

**30. PRICING**

Contractors shall provide itemized pricing. No aggregate bids will be considered. The bid must state the amount for which the contractor offers to supply all labor, materials, equipment, tools, transportation, services and applicable taxes to perform all work specified. Bids shall not contain any conditions, limitations or provisions for the work to be done. Alternative bids will not be considered unless requested. The contractor shall set forth for each item of work, in clearly legible figures, a unit item price and a total for each item in the respective spaces provided. In case of a variation between the unit price and the totals shown by the contractor, the unit price will take precedence. In case of discrepancy between the numerical lump sum price and the written lump sum price, the written lump sum price shall prevail.

**31. TAXES**

No mention shall be made in the proposal of Sales Tax, Use Tax, or any other tax, as all amounts set forth in the bid will be deemed and held to include any such taxes that may be applicable. Bidder acknowledges and agrees that OCFA shall not be responsible for the payment of any increase in any Sales Tax, Use Tax, or any other tax that takes effect after award.

**32. COMPLIANCE WITH LAWS**

All bids shall comply with current and applicable federal, state, and local laws relative thereto.

**33. CRITERIA FOR EVALUATION AND AWARD**

The OCFA will award the contract to the lowest responsive, responsible bidder as required by law. The OCFA evaluates three categories of information: responsiveness, responsibility, and price. Bids must meet the following responsiveness and responsibility criteria in order to be considered for award:

a) RESPONSIVENESS: OCFA will determine whether the bid complies with the instructions for submitting bids including completeness of bid which encompasses the inclusion of all required attachments and submissions. The OCFA will reject any bids that are submitted late. Failure to meet the specifications, project timeline, product availability, or other requirements may result in rejection.

b) RESPONSIBILITY: OCFA will determine whether the bidder is one with whom it can or should do business. Factors that OCFA may evaluate to determine whether a contractor is a "responsible bidder" for purposes of the Public Contract Code include, but are not limited to: excessively high or low priced bids, past performance, references (including those found outside the bid), compliance with applicable laws - including tax laws, business standing, bidder's record of performance and integrity - e.g. has the bidder been delinquent or unfaithful to any contract with OCFA, whether the bidder is qualified legally to contract with the OCFA, financial stability and the perceived ability to perform completely as specified. A bidder must at all times have financial resources sufficient, in the opinion of the OCFA, to ensure performance of the contract and must provide proof upon request. OCFA staff may also use Dun & Bradstreet and/or any generally available industry information to assist in making such determinations. The OCFA reserves the right to inspect and review bidder's facilities, equipment and personnel and those of any identified subcontractors, and by submitting a bid, bidder consents thereto. The OCFA will determine whether any failure to supply information, or the quality of the information, will result in rejection.

c) PRICE: OCFA will then evaluate bids that have met the requirements above for price, quality of product, life cycle cost, maintenance, warranty, etc.

**34. GROUNDS FOR DISQUALIFICATION**

OCFA may disqualify a submittal for any of the following reasons:

- Contact regarding this procurement is made with any OCFA Director, officer or employee other than those in the Purchasing Department from the time of issuance until the end of the dispute period;
- Evidence of collusion, directly or indirectly, among bidders regarding the amount, terms, or conditions of this solicitation is found;
- Evidence of submitting incorrect information in the response to this solicitation or misrepresenting or failing to disclose material facts during the award process is found;
- Submittal of added terms, conditions, or agreements with the bid document;
- Offering of gifts or souvenirs, even of minimal value, to OCFA Directors, officers or employees;
- The existence of any lawsuit, unresolved contractual claim or dispute between the Bidder and OCFA;
- Evidence of the Bidder's inability to successfully complete the responsibilities and obligations of the bid is found;
- Bidder's default under any OCFA agreement.
- No bidder shall be allowed to make, submit or be interested in more than one bid. No person, firm, corporation, or other entity may submit a sub-proposal to a bidder, or quote prices of materials to a bidder when also submitting as a prime on the same project.

**35. PUBLIC RECORD**

All bids submitted in response to this IFB shall become the property of OCFA and shall become a matter of public record available for review when required by law, including but not limited to the California Public Records Act.

**36. CLAYTON ACT AND CARTWRIGHT ACT**

In accordance with Section 7103.5 of the Public Contract Code, in entering into a public works contract or a subcontract to supply goods, services or materials pursuant to a public works contract, the Contractor or subcontractor offers and agrees to assign to OCFA all rights, and interest in and all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to the Contractor, without further acknowledgment by the parties.

**37. INSURANCE**

The successful bidder shall procure the insurance in the form and in the amount specified in the Contract Documents, including but not limited to the General Conditions. Failure to do so may result in forfeiture of the bid guarantee. No time extensions or extra payments shall be made to contractor for delays it may encounter in obtaining such coverage.

Contractor shall not commence work under the agreement until he/she has obtained all required insurance, including any and all endorsements, and the insurance has been approved by the OCFA as to form, amount, and carrier, nor shall Contractor allow any subcontractor to commence any work until all insurance required of the subcontractor has been obtained and approved.

**38. NOTICE OF INTENT TO AWARD/EXECUTION OF CONTRACT**

A notification of OCFA's intent to award contract ("Notice of Intent to Award") will be sent to the successful Offeror(s). Following receipt of the Notice of Intent to Award, and within fourteen (14) calendar days of the notice, the successful Offeror(s) shall complete and/or submit the items listed in Exhibit 4A: Transmittal Page – Bid Award Documents to the Purchasing & Materials Manager or designee.

**The successful contractor or any designated subcontractors shall not perform any work on the project prior to attending the pre-construction conference and executing the appropriate certification.** In case of failure of the Offeror(s) to execute and return all required documents in a form satisfactory to OCFA and within the time allowed, the OCFA may, at its option, consider that the Offeror(s) has/have abandoned the contract.

**39. SUBSTITUTION OF SECURITIES**

In conformance with Public Contract Code Section 22300, which is incorporated herein by this reference, the Contractor may substitute securities for any monies retained by the OCFA to ensure performance under the Contract or, in the alternative, may request payment of retention earned directly to an escrow agent.

At the request and expense of the Contractor, the Contractor has the option to deposit securities, which have been approved by the OCFA, with a State or Federally chartered bank as the escrow agent or require the OCFA to deposit 5% of each progress payment with the escrow agent. Said securities will be used as a substitute for retention earnings required to be withheld by the OCFA pursuant to the construction contract. Said securities shall have no obligation to any other construction contract for substitution of securities in lieu of retention. When the Contractor deposits the OCFA approved securities with the escrow agent, the escrow agent shall notify the OCFA within 10 calendar days of the deposit. Said securities shall be evaluated quarterly by the escrow agent to verify the current market value. If the current market value of said securities falls below the required amount, the escrow agent shall notify the Contractor and require additional securities and/or cash to be submitted for OCFA approval, and to be held in the escrow account to meet the Contractor's obligations. The escrow agent shall hold said securities until such time as the escrow agent receives written notification from the OCFA that the Contractor has satisfactorily completed his Contract obligations.

The type of securities deposited and the method of release shall be approved by the OCFA's Office of General Counsel.

If the Contractor chooses not to exercise its rights under Public Contract Code Section 22300, the full five percent (5%) retention will be deducted from all payments. The final retention will be authorized for payment thirty-five (35) days after the date of recordation of the Notice of Completion, if no stop notices have been filed. The OCFA may withhold from release of the final retention amounts authorized under Public Contracts Code Section 7107 and/or 125% of the cumulative amounts identified in all stop notices.

**40 AWARD AND EXECUTION OF CONTRACT.** If a bid bond is submitted with a 10% of Bid designation for the amount as noted in the OCFA Approved Bid Bond form, a revised Bid Bond with numerical dollar values, both in words and with digits, shall be submitted to the OCFA within three (3) working days of bid opening.

Within seven (7) calendar days after the date of the Notice of Apparent Low Bidder, the Contractor shall execute and return the following documents to the OCFA:

- All required evidence of insurance
- Two (2) Original Signed Contract Agreements

Within fourteen (14) calendar days after the date of the Notice of Award, the Contractor shall execute and return the following documents to the OCFA:

- Faithful Performance Bond
- Material and Labor Bond
- Construction Schedule
- Traffic Control Plan
- Water Pollution Control Plan
- Form W-9
- Encroachment Permit Application
- Construction Materials Submittals

**FAILURE TO COMPLY WITH ALL OF THE ABOVE WILL RESULT IN ANNULMENT OF THE AWARD AND FORFEITURE OF THE PROPOSAL GUARANTEE AT THE SOLE DISCRETION OF OCFA.**

The Contract Agreement shall not be considered binding upon the OCFA until executed by the authorized OCFA officials.

## 3A: TRANSMITTAL PAGE

**TO:** **Orange County Fire Authority**

**FROM:** Neuroth Construction Inc.

(Legal Name of Contractor)

**PROJECT:** **TENANT IMPROVEMENTS AT OCFA FIRE STATIONS 14 AND 16**

The contractor will accept in full payment for the work specified herein the following total lump sum amount, inclusive of all applicable taxes and markup (transferred from Exhibit 3J: Bid Sheets):

**BID LUMP SUM:**

**NUMERICAL:** $ 821,227

**WRITTEN:** Eight Hundred Twenty One thousand two hundred twenty seven & 00/100

**ACKNOWLEDGMENT OF ADDENDA:**

No.: 1 Dated: 2/17/2022 No.: _____ Dated: _____

No.: _____ Dated: _____ No.: _____ Dated: _____

**BIDDER'S CHECKLIST:**

Bidder certifies that the following documents are included in its Bid:

- ☐ **Transmittal Page** *(Exhibit 3A)*
- ☐ **Bidder's Bond** *(Exhibit 3B)*
- ☐ **Certification of Bid** *(Exhibit 3C)*
- ☐ **Contractor's Licensing Statement** *(Exhibit 3D)*
- ☐ **Non-Collusion Affidavit** *(Exhibit 3E)*
- ☐ **List of Subcontractors** *(Exhibit 3F)*
- ☑ **Designation of Sureties** *(Exhibit 3G)*
- ☐ **Bidder's Certification of Compliance with Insurance Requirements** *(Exhibit 3H)*
- ☐ **Certification of Site Examination** *(Exhibit 3I)*
- ☐ **Bid Sheets** *(Exhibit 3J)*
- ☑ **Project Approach and Schedule** *(Exhibit 3K)*
- ☑ **List of Project References** *(Exhibit 3L)*
- ☑ **Qualifications Questionnaire** *(Exhibit 3M)*
- ☑ **Party and Participant Disclosure Forms** *(Exhibit 3N)*

**MINIMUM QUALIFICATIONS:**

Bidder Meets the Minimum Qualifications as follows:

**CSLB License #:** 1062300 **Expiration:** 06/30/2022

**DIR Registration #:** PW-LR-1000666197 **Expiration:** 06/30/2022

**Number of Years of Experience:** 12 years

**SIGNATURE OF CONTRACTOR:** _____

**PRINTED NAME:** Rob Neuroth **TITLE:** President

## 3B: BIDDER'S BOND

(10% of Agreement Price)

**Bidders must use this form, NOT a surety company form**

KNOW ALL PERSONS BY THESE PRESENTS:

That the undersigned, Neuroth Construction Inc. as Principal ("Principal"), and The Gray Casualty & Surety Company as Surety ("Surety"), a corporation organized and existing under and by virtue of the laws of the State of Louisiana and authorized to do business as a surety in the State of California, are held and bound unto the Orange County Fire Authority ("OCFA") of Orange County, State of California as Obligee, in the sum of Ten Percent of Amount Bid Dollars ($ 10% ) lawful money of the United States of America, for the payment of which sum well and truly to be made, we, and each of us, bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that whereas the Principal has submitted a bid to the OCFA for all work specifically described in the accompanying bid;

NOW, THEREFORE, if the Principal is awarded the Project and, within the time and manner required under the Bid Documents, after the prescribed forms are presented to Principal for signature, enters into a written contract ("Agreement"), in the prescribed form in accordance with the bid, and files two bonds, one guaranteeing faithful performance and the other guaranteeing payment for labor and materials as required by law, and meets all other conditions to the contract between the Principal and the Obligee becoming effective, or if the Principal shall fully reimburse and save harmless the Obligee from any damage sustained by the Obligee through failure of the Principal to enter into the Agreement and to file the required performance and labor and material bonds, and to meet all other conditions to the Agreement between the Principal and the Obligee becoming effective, then this obligation shall be null and void; otherwise, it shall be and remain in full force and effect. The full payment of the sum stated above shall be due immediately if Principal fails to submit and execute the Agreement award documents as required in the Invitation for Bid Document within the timeline specified therein.

Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Agreement or the call for bids, or to the work to be performed thereunder, or the specifications accompanying the same, shall in any way affect its obligation under this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Agreement or the call for bids, or to the work, or to the specifications.

In the event suit is brought upon this bond by the Obligee and judgment is recovered, the Surety shall pay all costs incurred by the Obligee in such suit, including a reasonable attorneys' fee to be fixed by the Court.

If the OCFA awards the bid, the security of unsuccessful bidder(s) shall be returned within sixty (60) days from the time the award is made. Unless otherwise required by law, no bidder may withdraw its bid for ninety (180) days after the date of the bid opening.

**[Signature Page Follows]**

IN WITNESS WHEREOF, two (2) identical counterparts of this instrument, each of which shall for all purposes be deemed an original thereof, have been duly executed by the Principal and Surety above named, on the 3rd day of March, 2022.accordance with Article 5 - commencing at section 1860, chapter 1, part 7, division 2 of the Labor Code, this certificate must be signed and filed with the awarding body prior to performing any work under this Contract:

**CONTRACTOR:**
(Affix Corporate Seal)

Neuroth Construction Inc.
**Principal**

**By**

Rob Neuroth, President
**Print Name and Title of Signatory**

**SURETY:**
(Affix Corporate Seal)

The Gray Casualty & Surety Company
**Surety**

**By** Lawrence F. McMahon, Attorney-in-Fact

Alliant Insurance Services, Inc.
**Name of California Agent of Surety**

701 B Street, 6th Floor, San Diego, CA 92101
**Address of California Agent of Surety**

(619) 238-1828
**Telephone Number of California Agent of Surety**

**Attach Notary acknowledgments for all signatures. Attach Power of Attorney Attach Power of Attorney if executed by Attorney-in-Fact. The California Department of Insurance must authorize the Surety to be an admitted Surety Insurer.**

**CALIFORNIA ACKNOWLEDGMENT** **CIVIL CODE § 1189**

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
County of Orange }

On March 09th, 2022 before me, D. K. Shah, Notary Public
*Date* *Here Insert Name and Title of the Officer*

personally appeared Robert William Nemeth
*Name(s) of Signer(s)*

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ authorized capacity(~~ies~~), and that by his/~~her/their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

D.K. SHAH
COMM...2333629
NOTARY PUBLIC-CALIFORNIA
ORANGE COUNTY
My Term Exp. September 17, 2024

*Place Notary Seal and/or Stamp Above*

Signature D Shah
*Signature of Notary Public*

**OPTIONAL**

*Completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.*

**Description of Attached Document**
Title or Type of Document: 313: Bidder's Bond
Document Date: _____ Number of Pages: _____
Signer(s) Other Than Named Above: _____

**Capacity(ies) Claimed by Signer(s)**

| | |
|---|---|
| Signer's Name: _____ | Signer's Name: _____ |
| ☐ Corporate Officer – Title(s): _____ | ☐ Corporate Officer – Title(s): _____ |
| ☐ Partner – ☐ Limited ☐ General | ☐ Partner – ☐ Limited ☐ General |
| ☐ Individual ☐ Attorney in Fact | ☐ Individual ☐ Attorney in Fact |
| ☐ Trustee ☐ Guardian or Conservator | ☐ Trustee ☐ Guardian or Conservator |
| ☐ Other: _____ | ☐ Other: _____ |
| Signer is Representing: _____ | Signer is Representing: _____ |

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# CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT Civil Code § 1189

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document, to which this certificate is attached, and not the truthfulness, accuracy or validity of that document.

STATE OF CALIFORNIA

County of San Diego }

On MAR 03 2022 (Date) before me, Maria Guise (Insert Name of Notary exactly as it appears on the official seal), Notary Public,

personally appeared Lawrence F. McMahon (Name(s) of Signer(s))

,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/~~are~~ subscribed to the within instrument and acknowledged to me that he/~~she/they~~ executed the same in his/~~her/their~~ authorized capacity(~~ies~~), and that by his/~~her/their~~ signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

Witness my hand and official seal.

Signature _____ (Signature of Notary Public) Maria Guise

MARIA GUISE
COMMISSION # 2283717
Notary Public - California
ORANGE COUNTY
My Comm. Expires Apr. 14, 2023

Place Notary Seal Above

## OPTIONAL

*Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of the form to another document.*

**Description of Attached Document**

Title or Type of Document: _____

Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

**Capacity(ies) Claimed by Signer(s)**

Signer's Name: _____
- ☐ Individual
- ☐ Corporate Officer — Title(s): _____
- ☐ Partner ☐ Limited ☐ General
- ☑ Attorney in Fact
- ☐ Trustee
- ☐ Guardian or Conservator
- ☐ Other: _____

Signer is Representing:
Surety Company

RIGHT THUMBPRINT OF SIGNER
Top of thumb here

Signer's Name: _____
- ☐ Individual
- ☐ Corporate Officer — Title(s): _____
- ☐ Partner ☐ Limited ☐ General
- ☐ Attorney in Fact
- ☐ Trustee
- ☐ Guardian or Conservator
- ☐ Other: _____

Signer is Representing:

RIGHT THUMBPRINT OF SIGNER
Top of thumb here

Alliant Insurance Services, San Diego
03/03/2022 13:27 211548604228

**THE GRAY INSURANCE COMPANY**
**THE GRAY CASUALTY & SURETY COMPANY**

## GENERAL POWER OF ATTORNEY

**Bond Number:** N/A **Principal:** Neuroth Construction Inc.

**Project:** Tenant Improvements at OCFA Fire Stations 14 and 16

KNOW ALL BY THESE PRESENTS, THAT The Gray Insurance Company and The Gray Casualty & Surety Company, corporations duly organized and existing under the laws of Louisiana, and having their principal offices in Metairie, Louisiana, do hereby make, constitute, and appoint: **Lawrence F. McMahon, Sarah Myers, Ryan E. Warnock, Maria Guise, Janice Martin, and Christopher J. Conte of San Diego, California jointly and severally** on behalf of each of the Companies named above its true and lawful Attorney(s)-in-Fact, to make, execute, seal and deliver, for and on its behalf and as its deed, bonds, or other writings obligatory in the nature of a bond, as surety, contracts of suretyship as are or may be required or permitted by law, regulation, contract or otherwise, provided that no bond or undertaking or contract of suretyship executed under this authority shall exceed the amount of $15,000,000.00.

This Power of Attorney is granted and is signed by facsimile under and by the authority of the following Resolutions adopted by the Boards of Directors of both The Gray Insurance Company and The Gray Casualty & Surety Company at meetings duly called and held on the 26th day of June, 2003.

"RESOLVED, that the President, Executive Vice President, any Vice President, or the Secretary be and each or any of them hereby is authorized to execute a power of Attorney qualifying the attorney named in the given Power of Attorney to execute on behalf of the Company bonds, undertakings, and all contracts of surety, and that each or any of them is hereby authorized to attest to the execution of such Power of Attorney, and to attach the seal of the Company; and it is

FURTHER RESOLVED, that the signature of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be binding upon the Company now and in the future when so affixed with regard to any bond, undertaking or contract of surety to which it is attached.

IN WITNESS WHEREOF, The Gray Insurance Company and The Gray Casualty & Surety Company have caused their official seals to be hereinto affixed, and these presents to be signed by their authorized officers this 28th day of October, 2021.

THE GRAY INSURANCE COMPANY SEAL

By: Michael T. Gray
President
The Gray Insurance Company

Cullen S. Piske
President
The Gray Casualty & Surety Company

THE GRAY CASUALTY & SURETY COMPANY SEAL

State of Louisiana
ss:
Parish of Jefferson

On this 28th day of October, 2021, before me, a Notary Public, personally appeared Michael T. Gray, President of The Gray Insurance Company, and Cullen S. Piske, President of The Gray Casualty & Surety Company, personally known to me, being duly sworn, acknowledged that they signed the above Power of Attorney and affixed the seals of the companies as officers of, and acknowledged said instrument to be the voluntary act and deed, of their companies.

Leigh Anne Henican
Notary Public
Notary ID No. 92653
Orleans Parish, Louisiana

Leigh Anne Henican
Notary Public, Parish of Orleans State of Louisiana
My Commission is for Life

## 3C: CERTIFICATION OF BID

In responding to IFB RO2511A – TENANT IMPROVEMENTS AT OCFA FIRE STATIONS 14 AND 16, the undersigned Bidder(s) certifies the following:

**1.** Bidder agrees to provide all necessary labor, materials, equipment, and services to OCFA per the specifications contained herein and that all furnished labor is able to work in harmony with all other elements of labor employed or to be employed on the work.

**2.** Bidder further agrees to the terms and conditions specified herein, the following terms and conditions that are a part of this IFB, and the resulting Construction Services Agreement. ***If there are any exceptions to or deviations from the terms of the Contract Documents (Section 4), they must be stated in an attachment included with the bid.*** Where Bidder wishes to propose alternatives to the OCFA's contractual requirements, these should be thoroughly explained. While exceptions will be considered, OCFA reserves the right to determine that an offer is non-responsive based upon any exceptions taken. OCFA's governing body reserves the right to deny any material exceptions to the contract. If no contractual exceptions are noted, Bidder will be deemed to have accepted the form of the contract requirements set forth in Section 4.

**3.** The Bidder hereby certifies that the individual signing the submittal is an authorized agent for the Bidder and has the OCFA to legally bind the Bidder to the Contract.

**4.** The undersigned has reviewed the work outlined in the documents and fully understands the scope of work required, understands the construction and project management function(s) as described, and that each contractor who is awarded a contract shall be in fact the prime contractor, not a subcontractor, to the OCFA, and agrees that its offer, if accepted by the OCFA, will be the basis for the contractor to enter into a contract with the OCFA.

**5.** The undersigned had notified the OCFA in writing any discrepancies or omission or of any doubt, questions, or ambiguities about the meaning of any of the IFB documents.

**6.** By submitting this Offer Form and signing below, the liquidated damages clause of the Agreement is hereby acknowledged.

**7.** It is understood that the OCFA reserves the right to reject this bid and that the bid shall remain open to acceptance and is irrevocable for a period of one hundred eighty (180) days.

**8.** Contractor expressly acknowledges that it is aware that if a false claim is knowingly submitted (as the terms "claim" and "knowingly" are defined in the California False Claims Act, Cal. Gov. Code,§12650 et seq.), the OCFA will be entitled to civil remedies set forth in the California False Claim Act. It may also be considered fraud and the contractor may be subject to criminal prosecution.

**9.** Labor Code Section 1735 requires that no discrimination be made in the employment of persons upon public works because of the race, religious creed, color, national origin, ancestry, physical handicap, medical condition, marital status or sex of such persons, except as provided in Government Code Section 12940. Bidder certifies that it does not discriminate in its employment with regard to the factors set forth in Labor Code Section 1735; that it is in compliance with all federal, state and local directives and executive orders regarding non-discrimination in employment; and that it agrees to demonstrate positively and aggressively the principle of equal employment opportunity in employment.

**10.** The Bidder, under penalty of perjury, certifies that, except as noted below, he/she or any other person associated therewith in the capacity of owner, partner, director, officer, manager: (1) is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any Federal agency; (2) has not been suspended, debarred, voluntarily excluded or determined ineligible by

any Federal agency within the past 3 years; (3) does not have a proposed debarment pending; and (4) has not been indicted, convicted, or had a civil judgment rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past 3 years.

**To the Orange County Fire Authority:**

Contractor hereby certifies to the OCFA that all representations, certifications, and statements made by the contractor, as set forth in this offer form, are true and correct and are made under penalty of perjury. The Undersigned hereby offers and shall furnish the services in compliance with all terms, scope of work, conditions, specifications, and amendments in the Request for Proposal which is incorporated by reference as fully set forth herein. The representations herein are made under penalty of perjury.

**LEGAL NAME OF CONTRACTOR:** Neuroth Construction Inc.

**SIGNATURE OF CONTRACTOR:**

**PRINTED NAME:** Rob Neuroth **TITLE:** President

**CONTRACTOR ADDRESS:** 1165 Linda Vista Dr. Ste. 102

**CITY:** San Marcos **STATE:** CA **ZIP CODE:** 92078

**IF CONTRACTOR IS A CORPORATION, AFFIX CORPORATE SEAL AND COMPLETE THE FOLLOWING:**

**NAME OF CORPORATION:** Neuroth Construction Inc.

**DATE OF INCORPORATION:** 04/07/2020

**PRESIDENT:** Rob Neuroth **TREASURER:** Rob Neuroth

**SECRETARY:** Rob Neuroth **MANAGER:** Rob Neuroth

**SUBSCRIBED AND SWORN TO BEFORE ME** **BY** Rob Neuroth

**THIS** 09th **DAY OF** March **20**22 **(Print Name)**

**(Signature of Notary Public)** **(Signature)**

**(Attach Jurat)** **TITLE** President

**(SEAL)** **(SEAL)**

**CALIFORNIA JURAT** **GOVERNMENT CODE § 8202**

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California

County of Orange

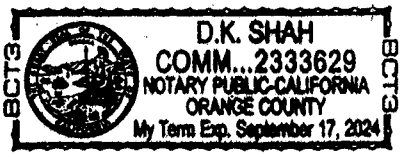
Subscribed and sworn to (or affirmed) before me on

this 09th day of March, 2022, by
*Date* *Month* *Year*

(1) Robert William Nemoth

(and (2) _____),
*Name(s) of Signer(s)*

proved to me on the basis of satisfactory evidence to be the person(s) who appeared before me.




*Place Notary Seal and/or Stamp Above*

Signature _____
*Signature of Notary Public*

**OPTIONAL**

*Completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.*

**Description of Attached Document**

Title or Type of Document: 3C: Certification of Bid

Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

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## 3D: NON-COLLUSION AFFIDAVIT

STATE OF CALIFORNIA )
) SS
COUNTY OF )

In conformance with Public Contract Code Section 7106, the party making the foregoing bid declares that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that such bid is genuine and not collusive or sham; that said bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on 03/09/2022 [date], at San Marcos [city], CA [state]."

Signed _____

Rob Neuroth, President
Title

Subscribed and sworn to before me
this _____ day of _____,20____.

_____
Signature of Notary Public

(SEAL)

**CALIFORNIA JURAT** **GOVERNMENT CODE § 8202**

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California

County of Orange

Subscribed and sworn to (or affirmed) before me on

this 09th day of March, 2022, by

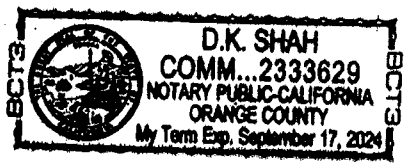
*Date* *Month* *Year*

(1) Robert William Nemsoth

(and (2) _____),

*Name(s) of Signer(s)*

proved to me on the basis of satisfactory evidence to be the person(s) who appeared before me.




*Place Notary Seal and/or Stamp Above*

Signature _____

*Signature of Notary Public*

**OPTIONAL**

*Completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.*

**Description of Attached Document**

Title or Type of Document: 3D Non-Collusion Affidavit

Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

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## 3E: CONTRACTOR'S LICENSING CERTIFICATION

If the contractor is a sole proprietorship or another entity that does business under a fictitious name, the bid shall be in the real name of the respondent with a designation following showing "DBA (the fictitious name)," provided however, that no fictitious name shall be used unless there is a current registration with the Orange County Recorder. If the bid is submitted by a corporation, provide an additional attachment that states the names of the officers who can sign an agreement on behalf of the corporation and whether more than one officer must sign. If the bid is by a partnership or a joint venture, state the names and addresses of all general partners and joint venture parties.

The undersigned certifies that the contractor is licensed in accordance with the laws of the State of California to do the type of work required. Contractor further certifies that it is regularly engaged in the general class and type of work called for in this Request for Informal Bid. The successful contractor and subcontractors are required to hold the State of California Contractor's License(s) and DIR registration as required by SB854. Please complete and/or provide all requested information.

**CONTRACTOR'S LICENSE NO:** 1062300 **CLASS:** B **EXPIRATION:** 06/30/2022

**CA DIR REGISTRATION NUMBER:** PW-LR-100666197 **EXPIRATION:** 06/30/2022

**CONTRACTOR TELEPHONE:** (517) 652-3156 **CONTRACTOR FAX:** _____

**BUSINESS ADDRESS:** 1165 Linda Vista Dr. Ste 102, San Marcos, CA 92078

**LENGTH OF TIME IN BUSINESS:** 2 years

**LENGTH OF TIME AT CURRENT LOCATION:** 1 year

**NUMBER OF EMPLOYEES:** 5 **NUMBER OF CURRENT CLIENTS:** 3

---

*If the contractor operates as a sole proprietorship:*

**NAME OF INDIVIDUAL CONTRACTOR:** _____

**SIGNATURE OF OWNER:** _____

**BUSINESS ADDRESS:** _____

---

*If the contractor operates under a partnership:*

**NAME OF FIRM:** _____

**PARTNER NAME:** _____ **PARTNER TITLE:** _____

**PARTNER ADDRESS:** _____

**SIGNATURE OF PARTNER:** _____

**PARTNER NAME:** _____ **PARTNER TITLE:** _____

**PARTNER ADDRESS:** _____

**SIGNATURE OF PARTNER:** _____

*If contractor operates under a corporation:*

**NAME OF CORPORATION:** Neuroth Construction Inc.

**CORPORATION ORGANIZED UNDER THE LAWS OF THE STATE OF CALIFORNIA:**

_____ **SIGNATURE OF CORPORATION PRESIDENT**

_____ **SIGNATURE OF THE CORPORATION SECRETARY**

**DATE** 03/09/2022

***Management person responsible for direct contact with OCFA:***

**NAME:** Rob Neuroth **TITLE:** President

**TELEPHONE:** (517) 652-3156 **E-MAIL:** rob.neuroth@neurothconstruction.com

***Person responsible for the day-to-day servicing of the account/project.***

**NAME:** Ed Hearn **TITLE:** Superintendent

**TELEPHONE:** Ed Hearn **E-MAIL:** Ed.Hearn@neurothconstruction.com

**SUBSCRIBED AND SWORN TO BEFORE ME THIS** _____ **DAY OF** _____ **20**____

**BY** Rob Neuroth

**(Print Name)**

_____

**(Signature of Notary Public)**

**(Attach Jurat)**

_____

**(Signature)**

**TITLE** President

**(SEAL)**

**(SEAL)**

**CALIFORNIA JURAT** **GOVERNMENT CODE § 8202**

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California

County of Orange

Subscribed and sworn to (or affirmed) before me on this 09th day of March, 2022, by

*Date* *Month* *Year*

(1) Robert William Neusath

(and (2) _____),

*Name(s) of Signer(s)*




proved to me on the basis of satisfactory evidence to be the person(s) who appeared before me.

*Place Notary Seal and/or Stamp Above*

Signature _____

*Signature of Notary Public*

**OPTIONAL**

*Completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.*

**Description of Attached Document**

Title or Type of Document: 3E: Contractor's Licensing Certification

Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

©2019 National Notary Association

## 3F: PROPOSED SUBCONTRACTORS

Bidder acknowledges and agrees that under Public Contract Code section 4100, et seq., Bidder must clearly set forth the name and location of each subcontractor who will perform work or labor or render service to the bidder in or about the construction of the work in an amount in excess of one-half of one percent (0.5%) of bidder's total bid and the kind of work that each will perform. This is to include any subcontractor that will specially fabricate and install a portion of work according to detailed drawings contained in the plans and specifications in the amount greater than one half of one percent (.05%) of the Contractor's total bid.

Furthermore, Bidder acknowledges and agrees that under Public Contract Code section 4100, et seq., if bidder fails to list as to any portion of work, or if bidder lists more than one subcontractor to perform the same portion of work (i.e. bidder must indicate what portion of the work each subcontractor will perform), bidder must perform that portion itself or be subjected to penalty under applicable law. If alternate bids are called for and Bidder intends to use subcontractors different from or in addition to those subcontractors listed for work under the base bid, Bidder must list subcontractors that will perform work in an amount in excess of one half of one percent (0.5%) of bidder's total bid, including alternates.

In case more than one subcontractor is named for the same kind of work, the Contractor is to state the portion of work that each subcontractor will perform. Bidders or suppliers of materials only do not need to be listed. If further space is required for the list of proposed subcontractors, additional sheets showing the required information, as indicated below, shall be attached hereto and made a part of this document.

| | | | | | |
|---|---|---|---|---|---|
| **Subcontractor Name** | Tri-County Construction | | | | |
| Address | 1 league PO Box 62411, Irvine, CA 92602 | | | | |
| DIR Registration No. | 1000029469 | CSLB No. | | Class | C 33/45/6 |
| Phone | 714 920 6195 | Email | john@paintblasters.com | | |
| Percent of Total Contract | .05% | | | | |
| Specific Scope of Work | Painting | | | | |
| **Subcontractor Name** | HCI Systems Inc. | | | | |
| Address | 1354 S. Parkside Pl Ontario, CA 91761 | | | | |
| DIR Registration No. | 1000000046 | CSLB No. | 905493 | Class | C-10/3/16 |
| Phone | 877 331 2084 | Email | Klum@hcisystems.net | | |
| Percent of Total Contract | 9% | | | | |
| Specific Scope of Work | Fire Alarm + Sprinkler | | | | |
| **Subcontractor Name** | Shurtliff Drywall Inc. | | | | |
| Address | 2701 Caballeros Rd. Norco, CA 92860 | | | | |
| DIR Registration No. | 1000061160 | CSLB No. | 550018 | Class | C-9 |
| Phone | 909 702 4764 | Email | shurtliffdrywall@gmail.com | | |
| Percent of Total Contract | 5% | | | | |
| Specific Scope of Work | Framing / drywall / insulation | | | | |
| **Subcontractor Name** | Plumbing Commercial Innovations | | | | |
| Address | 43020 Blackdeer Loop # 204 Temecula, CA 92590 | | | | |
| DIR Registration No. | 1000788254 | CSLB No. | 1077416 | Class | A, B, C16 C36 |
| Phone | 951 928 2211 | Email | estimating@pci-corpinc.com | | |
| Percent of Total Contract | 10% | | | | |
| Specific Scope of Work | Plumbing | | | | |
| **Subcontractor Name** | ~~[illegible]~~ Riverstone Construction Inc. | | | | |
| Address | 3600 Park Ave. ~~1754 W. 8th St~~ San Bernadino, CA 92411 | | | | |
| DIR Registration No. | PW-LR-1000710766 | CSLB No. | 1050001 | Class | C-8 |
| Phone | 909 910 4503 | Email | | | |
| Percent of Total Contract | 5% | | | | |
| Specific Scope of Work | Handrails + landscaping | | | | |

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Furthermore, Bidder acknowledges and agrees that under Public Contract Code section 4100, et seq., if bidder fails to list as to any portion of work, or if bidder lists more than one subcontractor to perform the same portion of work (i.e. bidder must indicate what portion of the work each subcontractor will perform), bidder must perform that portion itself or be subjected to penalty under applicable law. If alternate bids are called for and Bidder intends to use subcontractors different from or in addition to those subcontractors listed for work under the base bid, Bidder must list subcontractors that will perform work in an amount in excess of one half of one percent (0.5%) of bidder's total bid, including alternates.

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| | | | | | |
|---|---|---|---|---|---|
| **Subcontractor Name** | RB Concrete Solutions | | | | |
| Address | 1159 W. 8th St. San Bernardino, CA 92411 | | | | |
| DIR Registration No. | PW-LR-1000832867 | CSLB No. | 1071714 | Class | C-8 |
| Phone | 909 676 4655 | Email | sergio@rbconcretesolutions.com | | |
| Percent of Total Contract | 15%. | | | | |
| Specific Scope of Work | Earthwork / concrete | | | | |
| **Subcontractor Name** | Wakland Electric Inc. | | | | |
| Address | 18510 Pasadena St. Ste G | | | | |
| DIR Registration No. | 1000580743 | CSLB No. | 1063245 | Class | C-10 |
| Phone | 951 399 0987 | Email | chandra@waklandelectric.com | | |
| Percent of Total Contract | 9%. | | | | |
| Specific Scope of Work | Electrical | | | | |
| **Subcontractor Name** | Pro Spectra Flooring | | | | |
| Address | 17405 B Valley View Ave. Cerritos, CA 90703 | | | | |
| DIR Registration No. | 1000002810 | CSLB No. | 740392 | Class | C15 |
| Phone | 706 532 4644 | Email | adam.kato@spectra6.com | | |
| Percent of Total Contract | 3%. | | | | |
| Specific Scope of Work | Flooring / epoxy | | | | |
| **Subcontractor Name** | Thomas Partition & Specialties | | | | |
| Address | 2172 Yucca Alhambra CA 91001 | | | | |
| DIR Registration No. | 1000008781 | CSLB No. | 613974 | Class | C9 |
| Phone | 323 256 8666 | Email | estimating@thomaspart.com | | |
| Percent of Total Contract | 1 | | | | |
| Specific Scope of Work | Toilet Access | | | | |
| **Subcontractor Name** | Double Play Glass | | | | |
| Address | 240 Paseo Plaza Escondido CA 92029 | | | | |
| DIR Registration No. | 1000001627 | CSLB No. | 941 941 | Class | C-17 |
| Phone | 760 591 7500 | Email | evan@doubleplayglass.com | | |
| Percent of Total Contract | 7%. | | | | |
| Specific Scope of Work | Doors & Glazing | | | | |

## 3F: PROPOSED SUBCONTRACTORS

Bidder acknowledges and agrees that under Public Contract Code section 4100, et seq., Bidder must clearly set forth the name and location of each subcontractor who will perform work or labor or render service to the bidder in or about the construction of the work in an amount in excess of one-half of one percent (0.5%) of bidder's total bid and the kind of work that each will perform. This is to include any subcontractor that will specially fabricate and install a portion of work according to detailed drawings contained in the plans and specifications in the amount greater than one half of one percent (.05%) of the Contractor's total bid.

Furthermore, Bidder acknowledges and agrees that under Public Contract Code section 4100, et seq., if bidder fails to list as to any portion of work, or if bidder lists more than one subcontractor to perform the same portion of work (i.e. bidder must indicate what portion of the work each subcontractor will perform), bidder must perform that portion itself or be subjected to penalty under applicable law. If alternate bids are called for and Bidder intends to use subcontractors different from or in addition to those subcontractors listed for work under the base bid, Bidder must list subcontractors that will perform work in an amount in excess of one half of one percent (0.5%) of bidder's total bid, including alternates.

In case more than one subcontractor is named for the same kind of work, the Contractor is to state the portion of work that each subcontractor will perform. Bidders or suppliers of materials only do not need to be listed. If further space is required for the list of proposed subcontractors, additional sheets showing the required information, as indicated below, shall be attached hereto and made a part of this document.

| | | | | | |
|---|---|---|---|---|---|
| **Subcontractor Name** | T3 Contractors Inc. | | | | |
| Address | 17130 Van Buren Blvd #53 Riverside, Ca 92504 | | | | |
| DIR Registration No. | ~~[illegible]~~ 1000002965 | CSLB No. | 867365 | Class | G21 |
| Phone | 951 977 8370 | Email | todd@t3contractors.com | | |
| Percent of Total Contract | 6% | | | | |
| Specific Scope of Work | Demo / Abatement | | | | |
| **Subcontractor Name** | Alison Mechanical 92373 | | | | |
| Address | 1968 Essex Ct. Redlands CA | | | | |
| DIR Registration No. | 1000000231 | CSLB No. | 67866 | Class | GB |
| Phone | 909 478 5633 | Email | bran@alisonmech.com | | |
| Percent of Total Contract | 3% | | | | |
| Specific Scope of Work | HVAC | | | | |
| **Subcontractor Name** | | | | | |
| Address | | | | | |
| DIR Registration No. | | CSLB No. | | Class | |
| Phone | | Email | | | |
| Percent of Total Contract | | | | | |
| Specific Scope of Work | | | | | |
| **Subcontractor Name** | | | | | |
| Address | | | | | |
| DIR Registration No. | | CSLB No. | | Class | |
| Phone | | Email | | | |
| Percent of Total Contract | | | | | |
| Specific Scope of Work | | | | | |
| **Subcontractor Name** | | | | | |
| Address | | | | | |
| DIR Registration No. | | CSLB No. | | Class | |
| Phone | | Email | | | |
| Percent of Total Contract | | | | | |
| Specific Scope of Work | | | | | |

## 3F: PROPOSED SUBCONTRACTORS

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| | | | | | |
|---|---|---|---|---|---|
| **Subcontractor Name** | | | | | |
| Address | | | | | |
| DIR Registration No. | | CSLB No. | | Class | |
| Phone | | Email | | | |
| Percent of Total Contract | | | | | |
| Specific Scope of Work | | | | | |
| **Subcontractor Name** | | | | | |
| Address | | | | | |
| DIR Registration No. | | CSLB No. | | Class | |
| Phone | | Email | | | |
| Percent of Total Contract | | | | | |
| Specific Scope of Work | | | | | |
| **Subcontractor Name** | | | | | |
| Address | | | | | |
| DIR Registration No. | | CSLB No. | | Class | |
| Phone | | Email | | | |
| Percent of Total Contract | | | | | |
| Specific Scope of Work | | | | | |
| **Subcontractor Name** | | | | | |
| Address | | | | | |
| DIR Registration No. | | CSLB No. | | Class | |
| Phone | | Email | | | |
| Percent of Total Contract | | | | | |
| Specific Scope of Work | | | | | |
| **Subcontractor Name** | | | | | |
| Address | | | | | |
| DIR Registration No. | | CSLB No. | | Class | |
| Phone | | Email | | | |
| Percent of Total Contract | | | | | |
| Specific Scope of Work | | | | | |

## 3F: PROPOSED SUBCONTRACTORS

Bidder acknowledges and agrees that under Public Contract Code section 4100, et seq., Bidder must clearly set forth the name and location of each subcontractor who will perform work or labor or render service to the bidder in or about the construction of the work in an amount in excess of one-half of one percent (0.5%) of bidder's total bid and the kind of work that each will perform. This is to include any subcontractor that will specially fabricate and install a portion of work according to detailed drawings contained in the plans and specifications in the amount greater than one half of one percent (.05%) of the Contractor's total bid.

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| | | | | | |
|---|---|---|---|---|---|
| **Subcontractor Name** | | | | | |
| Address | | | | | |
| DIR Registration No. | | CSLB No. | | Class | |
| Phone | | Email | | | |
| Percent of Total Contract | | | | | |
| Specific Scope of Work | | | | | |
| **Subcontractor Name** | | | | | |
| Address | | | | | |
| DIR Registration No. | | CSLB No. | | Class | |
| Phone | | Email | | | |
| Percent of Total Contract | | | | | |
| Specific Scope of Work | | | | | |
| **Subcontractor Name** | | | | | |
| Address | | | | | |
| DIR Registration No. | | CSLB No. | | Class | |
| Phone | | Email | | | |
| Percent of Total Contract | | | | | |
| Specific Scope of Work | | | | | |
| **Subcontractor Name** | | | | | |
| Address | | | | | |
| DIR Registration No. | | CSLB No. | | Class | |
| Phone | | Email | | | |
| Percent of Total Contract | | | | | |
| Specific Scope of Work | | | | | |
| **Subcontractor Name** | | | | | |
| Address | | | | | |
| DIR Registration No. | | CSLB No. | | Class | |
| Phone | | Email | | | |
| Percent of Total Contract | | | | | |
| Specific Scope of Work | | | | | |

## 3G: DESIGNATION OF SURETIES

The following are the names, addresses and phone numbers for all brokers and sureties from whom Bidder intends to procure insurance and bonds.

| | |
|---|---|
| **Name** | Alliant Insurance Services, Inc. |
| Address | 701 B Street, 6th Floor, San Diego, CA 92101 |
| Phone No. | (858) 472-5547 |
| **Name** | |
| Address | |
| Phone No. | |
| **Name** | |
| Address | |
| Phone No. | |
| **Name** | |
| Address | |
| Phone No. | |

## 3H: BIDDER'S CERTIFICATION OF COMPLIANCE WITH INSURANCE REQUIREMENTS FOR PUBLIC WORKS CONSTRUCTION

BIDDER agrees, acknowledges and is fully aware of the insurance requirements as specified in the INSTRUCTIONS TO BIDDERS FOR TENANT IMPROVEMENTS AT OCFA FIRE STATIONS 14 AND 16 AND IN THE SPECIAL PROVISIONS FOR TENANT IMPROVEMENTS AT OCFA FIRE STATIONS 14 AND 16 and accepts all conditions and requirements contained therein.

BIDDER acknowledges that ACORD forms will not be accepted when policy forms or endorsements are required.

BIDDER acknowledges that some insurance companies may be unwilling to issue all of the policy coverage and endorsements required in the conditions and requirements. It is BIDDER's responsibility to ensure that it will be able to provide evidence of all required types and amounts of insurance and all policy endorsements required hereunder.

BIDDER represents and warrants that, prior to signing below, BIDDER has confirmed with BIDDER's insurer(s) or insurance broker(s) that all required evidence of the types and amounts of insurance, and all required endorsements of insurance coverage, will be timely provided to OCFA in accordance with the conditions and requirements. Failure to provide all required evidence of insurance and endorsements when required will constitute a material breach of the agreement.

Neuroth Construction Inc. 

Bidder

Rob Neuroth 03/09/2022

By Date

## 3I: CERTIFICATION OF SITE EXAMINATION

By signing below, Bidder certifies each of the following:

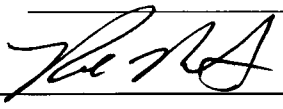
1. Bidder is fully informed of the conditions relating to the construction of the work and the employment of labor thereon
2. The specifications for the work show conditions as they are believed to exist. The conditions shown do not constitute a representation or warranty express or implied by the OCFA, its officers or agents that such conditions actually exist.
3. Bidder has thoroughly examined the site for the work described herein and attended the mandatory pre- bid inspection of the building(s) and site(s), conducted by the OCFA. Failure to attend the mandatory pre-bid inspection shall be cause for rejection of the bid.
4. Bidder has observed the designated Contractor work areas, material equipment storage areas, access routes, as well as the ability to protect existing surface and subsurface improvements. No claim for allowance of time or money will be allowed for such matters.
5. Bidder is competent, knowledgeable, and has special skills with respect to the nature, extent, and inherent conditions of the work to be performed.
6. Bidder acknowledges that there are certain peculiar and inherent conditions existent in the construction of the work that may create, during the work, unusual or peculiar unsafe conditions hazardous to persons and property and expressly acknowledges that it is aware of such peculiar risks and that it has the skill and experience to foresee and to adopt protective measures to adequately and safely perform the work with respect to such hazards.

**To the Orange County Fire Authority:**

I certify that I have examined the site and the bid is complete and there will be no requests for additional payment for failure to examine the site thoroughly.

**Date of Site Examination:** 02/10/2022

**Company Name:** Neuroth Construction Inc.

**Signature:** 

**Printed Name / Title of Company Representative:** Rob Neuroth

**Date:** 03/08/2022

## 3J: BID SHEETS

**Cost Analysis:** The bid information is relevant to a determination of whether the pricing offered is fair and reasonable in light of the Scope of Services to be provided. **Failure to submit the information in the format requested may result in the bid being deemed non-responsive.**

**Instructions:** - Input your information in the blank cells as follows:

- Insert a description for each Line
- Insert the lump sum subtotal for each category
- Add all categories to arrive at the Project Grand Total

| CATEGORY I: Labor | | |
|---|---|---|
| **Line** | **Description** | |
| 1 | Labor Provided by all subs | |
| | ***SUBTOTAL LABOR:*** | ~~600~~,000 |
| **CATEGORY II: Permanent & Non-Permanent Materials/Supplies** | | |
| **Line** | **Description** | |
| 2 | Materials Provided | |
| | ***SUBTOTAL MATERIALS:*** | 200,000 |
| **CATEGORY III: EQUIPMENT** | | |
| **Line** | **Description** | |
| 3 | Equipment Used | |
| | ***SUBTOTAL EQUIPMENT:*** | ~~125~~ 25,000 |
| **CATEGORY IV: OVERHEAD & INDIRECT COSTS** | | |
| **Line** | **Description** | |
| 4 | Overhead + Indirect | |
| | ***SUBTOTAL OVERHEAD:*** | 96,191 |
| | ***PROJECT SUBTOTAL*** | |
| **CATEGORY V: PROFIT** | | |
| **Line** | **Description** | **% Profit** |
| 5 | Provide the percentage of the project subtotal (above) that will be assessed as profit: | 100,036 |
| | ***SUBTOTAL PROFIT (IN DOLLARS)*** | 827,227 |
| **CATEGORY VI: PERMITS/FEES** | | |
| **Line** | **Description** | **Estimated Permits/Fees** |
| 6 | Provide an estimate of the permits and fees for the project. These fees will be reimbursed at actual cost or may be paid directly to the regulating agency by OCFA. | |
| | ***SUBTOTAL PERMITS/FEES*** | |
| | ***PROJECT GRAND TOTAL*** | |

## 3K: PROJECT APPROACH AND TIMELINE

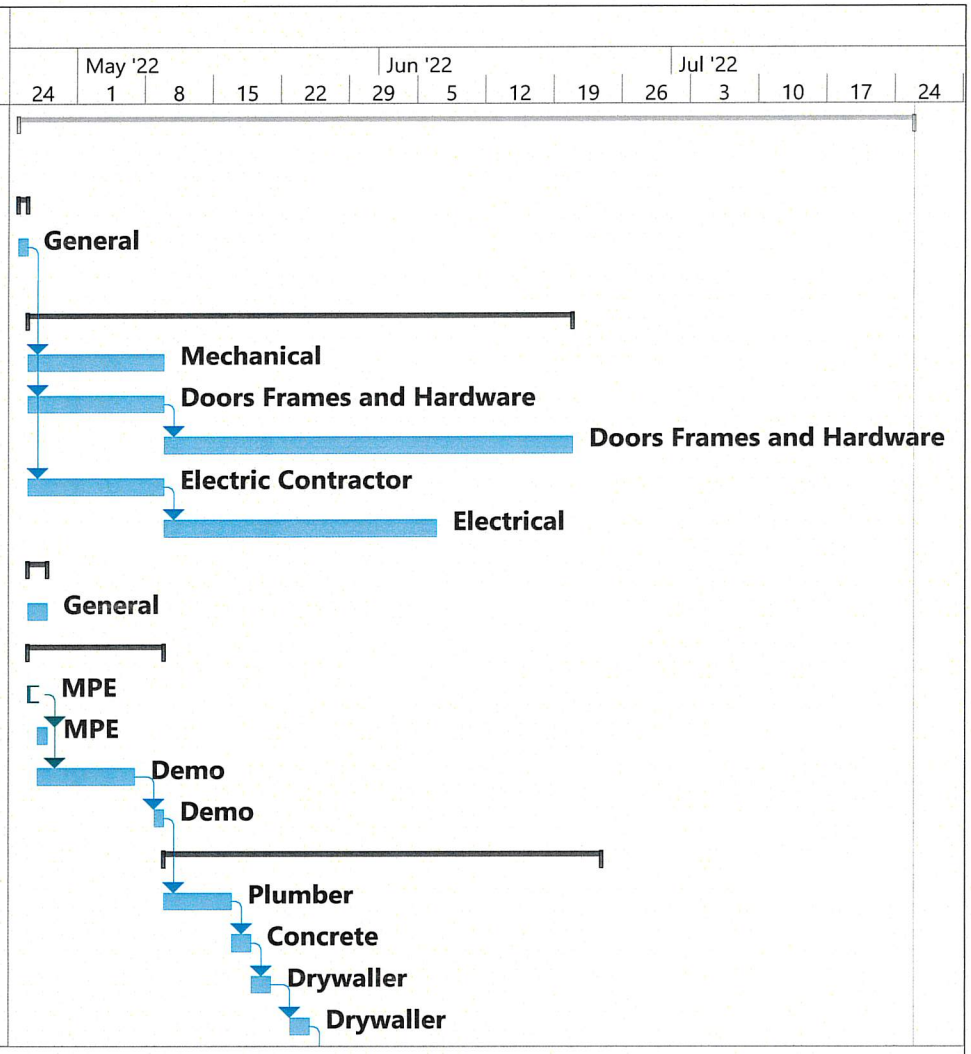
**Failure to provide the information requested below may result in the bid being deemed non-responsive:**

1. Submit a Rough Construction Schedule. This will be the basis for the approved Construction Schedule.

2. Submit a Rough Schedule of Values, including mobilization and field office costs, in a format consistent with AIA Document G703 – 1992. This will be the basis for the approved Schedule of Values.

3. Submit a narrative explanation of the proposed Construction Schedule and Schedule of Values. The narrative should include project phases and major project milestones.

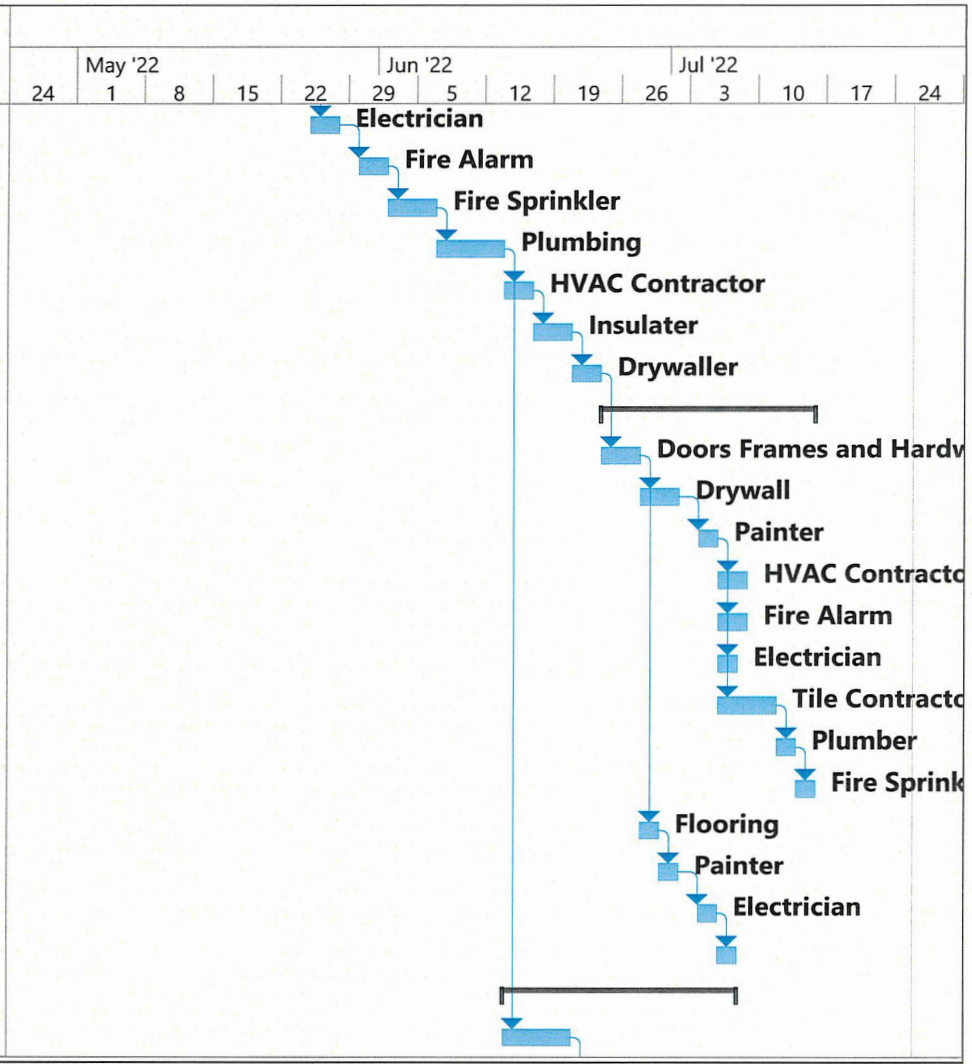
| ID | Task Name | Duration | Start |
|---|---|---|---|
| 0 | **OCFA Fire Station 14 and 16 (Concurrent)** | **66 days** | **Mon 4/25/22** |
| 1 | **Contract Complete** | **1 day** | **Mon 4/25/22** |
| 2 | Receive notice to proceed and sign contract | 1 day | Mon 4/25/22 |
| 3 | **Long Lead Procurement** | **40 days** | **Tue 4/26/22** |
| 4 | Mechanical Equipment Submittal | 2 wks | Tue 4/26/22 |
| 5 | Doors/ Hardware Submittal | 2 wks | Tue 4/26/22 |
| 6 | Doors Frames and Hardware Fab | 6 wks | Tue 5/10/22 |
| 7 | Electrical Package Submittal | 2 wks | Tue 4/26/22 |
| 8 | Electrical Faband Deliver | 4 wks | Tue 5/10/22 |
| 9 | **Mobilize on Site** | **2 days** | **Tue 4/26/22** |
| 10 | Mobilize Onsite | 2 days | Tue 4/26/22 |
| 11 | **Demo** | **10 days** | **Tue 4/26/22** |
| 12 | Safe-off | | Tue 4/26/22 |
| 13 | MEP Coordination of Demolition | 1 day | Wed 4/27/22 |
| 14 | Interior Demolition | 8 days | Wed 4/27/22 |
| 15 | Demo Clean Up | 1 day | Mon 5/9/22 |
| 16 | **Interior Rough Ins** | **33 days** | **Tue 5/10/22** |
| 17 | Underslab Plumbing | 5 days | Tue 5/10/22 |
| 18 | Concrete Patchback | 2 days | Tue 5/17/22 |
| 19 | Layout Walls | 2 days | Thu 5/19/22 |
| 20 | Frame Interior Walls | 2 days | Mon 5/23/22 |




Project: OCFA Fire Station 14 an
Date: Tue 3/8/22

| | | | |
|---|---|---|---|
| Task | Inactive Summary | External Tasks | |
| Split | Manual Task | External Milestone | |
| Milestone | Duration-only | Deadline | |
| Summary | Manual Summary Rollup | Progress | |
| Project Summary | Manual Summary | Manual Progress | |
| Inactive Task | Start-only | | |
| Inactive Milestone | Finish-only | | |

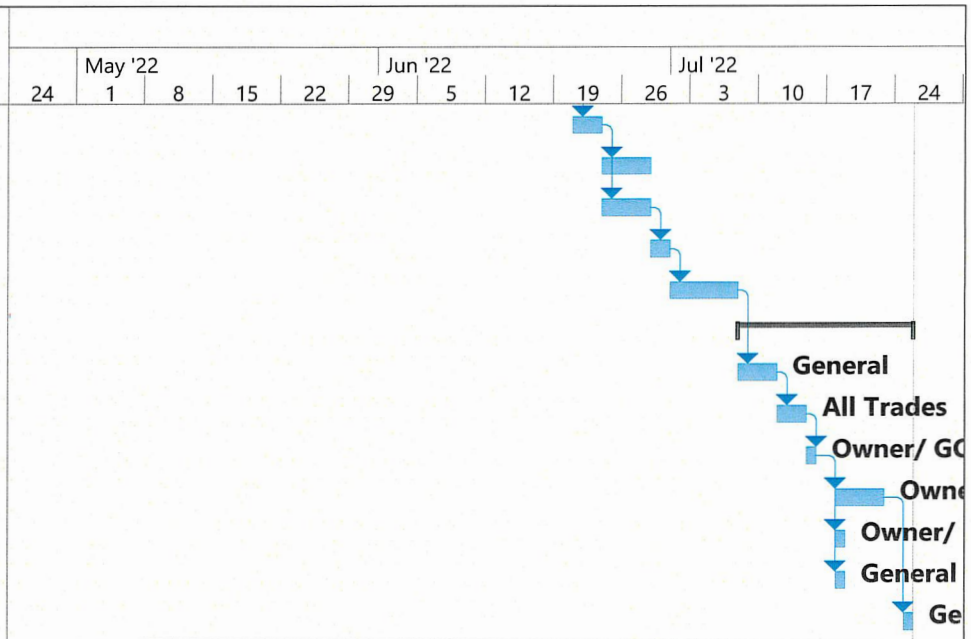
| ID | Task Name | Duration | Start |
|---|---|---|---|
| 21 | Rough in Electrical | 3 days | Wed 5/25/22 |
| 22 | Rough in Fire Alarm Conduit | 3 days | Mon 5/30/22 |
| 23 | Rough in Fire Sprinkler | 3 days | Thu 6/2/22 |
| 24 | Rough In Wall Plumbing | 5 days | Tue 6/7/22 |
| 25 | Rough in Mechanical Duct | 3 days | Tue 6/14/22 |
| 26 | Insulation | 2 days | Fri 6/17/22 |
| 27 | Hang Drywall | 3 days | Tue 6/21/22 |
| 28 | **Interior Finishes** | **16 days** | **Fri 6/24/22** |
| 29 | Install Door Frames | 2 days | Fri 6/24/22 |
| 30 | Tape and Finsh Drywall | 4 days | Tue 6/28/22 |
| 31 | Prime and Paint First Coat | 2 days | Mon 7/4/22 |
| 32 | Install HVAC Register's | 3 days | Wed 7/6/22 |
| 33 | Install Fire Alarm Devices | 3 days | Wed 7/6/22 |
| 34 | Install Lighting | 2 days | Wed 7/6/22 |
| 35 | Tile Work in Restrooms | 4 days | Wed 7/6/22 |
| 36 | Plumbing finishes | 2 days | Tue 7/12/22 |
| 37 | Fire Sprinkler Drop/ Heads | 2 days | Thu 7/14/22 |
| 38 | Flooring Prep and Install | 2 days | Tue 6/28/22 |
| 39 | Wall touch up and final coat | 2 days | Thu 6/30/22 |
| 40 | Electrical Trim-Out | 2 days | Mon 7/4/22 |
| 41 | Restroom Accessories | 2 days | Wed 7/6/22 |
| 42 | **Exterior Work** | **18 days** | **Tue 6/14/22** |
| 43 | Demo/ Earthwork | 5 days | Tue 6/14/22 |




Project: OCFA Fire Station 14 an
Date: Tue 3/8/22

| | | |
|---|---|---|
| Task | Inactive Summary | External Tasks |
| Split | Manual Task | External Milestone |
| Milestone | Duration-only | Deadline |
| Summary | Manual Summary Rollup | Progress |
| Project Summary | Manual Summary | Manual Progress |
| Inactive Task | Start-only | |
| Inactive Milestone | Finish-only | |

| ID | Task Name | Duration | Start |
|---|---|---|---|
| 44 | Irrigation rough in | 3 days | Tue 6/21/22 |
| 45 | Concrete Prep | 3 days | Fri 6/24/22 |
| 46 | Install Handrails | 3 days | Fri 6/24/22 |
| 47 | Concrete Pour | 2 days | Wed 6/29/22 |
| 48 | Landscape Remediation | 5 days | Fri 7/1/22 |
| 49 | **Project Closeout** | **12 days** | **Fri 7/8/22** |
| 50 | Contractor Punch Walk | 2 days | Fri 7/8/22 |
| 51 | Punch Corrections | 3 days | Tue 7/12/22 |
| 52 | Owner Final Walk | 1 day | Fri 7/15/22 |
| 53 | Owner Punch Walk Corrections | 5 days | Mon 7/18/22 |
| 54 | Substantial Completion date | 1 day | Mon 7/18/22 |
| 55 | Provide O&M's and Warranties | 1 day | Mon 7/18/22 |
| 56 | Issue final request for payment | 1 day | Mon 7/25/22 |




Project: OCFA Fire Station 14 an
Date: Tue 3/8/22

| | | |
|---|---|---|
| Task | Inactive Summary | External Tasks |
| Split | Manual Task | External Milestone |
| Milestone | Duration-only | Deadline |
| Summary | Manual Summary Rollup | Progress |
| Project Summary | Manual Summary | Manual Progress |
| Inactive Task | Start-only | |
| Inactive Milestone | Finish-only | |

# CONTINUATION SHEET

PAGE OF PAGES

APPLICATION AND CERTIFICATION FOR PAYMENT, containing
Contractor's signed certification is attached.
In tabulations below, amounts are stated to the nearest dollar.
Use Column I on Contracts where variable retainage for line items may apply.

**OCFA FS 14 and 16 Bid SOV**

APPLICATION NO: **Draft**
APPLICATION DATE: **Draft**
PERIOD TO: **Draft**
ARCHITECT'S PROJECT NO: **NA**

| A | B | C | D | E | F | G | | H | I |
|---|---|---|---|---|---|---|---|---|---|
| ITEM NO. | DESCRIPTION OF WORK | SCHEDULED VALUE | WORK COMPLETED FROM PREVIOUS APPLICATION (D + E) | WORK COMPLETED THIS PERIOD | MATERIALS PRESENTLY STORED (NOT IN D OR E) | TOTAL COMPLETED AND STORED TO DATE (D+E+F) | % (G ÷ C) | BALANCE TO FINISH (C - G) | RETAINAGE (IF VARIABLE RATE) 5% |
| | **Fire Station 14** | | | | | | | | |
| 1 | Mobilization | $ 40,000 | | $ - | | $ - | 0% | $ 40,000 | $ - |
| 2 | Demolition | $ 35,000 | | $ - | | $ - | 0% | $ 35,000 | $ - |
| 3 | Framing | $ 15,000 | | $ - | | $ - | 0% | $ 15,000 | $ - |
| 4 | Drywall | $ 10,000 | | $ - | | $ - | 0% | $ 10,000 | $ - |
| 5 | Electrical | $ 35,000 | | $ - | | $ - | 0% | $ 35,000 | $ - |
| 6 | Mechanical | $ 12,500 | | $ - | | $ - | 0% | $ 12,500 | $ - |
| 7 | Plumbing | $ 30,000 | | $ - | | $ - | 0% | $ 30,000 | $ - |
| 8 | Fire Suppression | $ 10,000 | | $ - | | $ - | 0% | $ 10,000 | $ - |
| 9 | Fire Alarm | $ 40,000 | | $ - | | $ - | 0% | $ 40,000 | $ - |
| 10 | Doors Frames and Hardware | $ 17,500 | | $ - | | $ - | 0% | $ 17,500 | $ - |
| 13 | Concrete | $ 30,227 | | $ - | | $ - | 0% | $ 30,227 | $ - |
| 14 | Restroom Accessories | $ 3,000 | | $ - | | $ - | 0% | $ 3,000 | $ - |
| 15 | Painting | $ 1,500 | | $ - | | $ - | 0% | $ 1,500 | $ - |
| 16 | Earthwork | $ 17,500 | | | | | | | |
| 17 | Exterior Landscape | $ 45,000 | | $ - | | $ - | 0% | $ 45,000 | $ - |
| 18 | Flooring | $ 12,500 | | $ - | | $ - | 0% | $ 12,500 | $ - |
| 19 | Tile Install | $ 11,500 | | $ - | | $ - | 0% | $ 11,500 | $ - |
| 20 | Insulation | $ 1,000 | | $ - | | $ - | 0% | $ 1,000 | $ - |
| 21 | Signage | $ 1,500 | | $ - | | $ - | 0% | $ 1,500 | $ - |
| | **Fire Station 16** | | | | | | | | |
| 1 | Mobilization | $ 40,000 | | $ - | | $ - | 0% | $ 40,000 | $ - |
| 2 | Demolition | $ 35,000 | | $ - | | $ - | 0% | $ 35,000 | $ - |
| 3 | Framing | $ 25,000 | | $ - | | $ - | 0% | $ 25,000 | $ - |
| 4 | Drywall | $ 15,000 | | $ - | | $ - | 0% | $ 15,000 | $ - |
| 5 | Electrical | $ 40,000 | | $ - | | $ - | 0% | $ 40,000 | $ - |
| 6 | Mechanical | $ 17,500 | | $ - | | $ - | 0% | $ 17,500 | $ - |
| 7 | Plumbing | $ 45,000 | | $ - | | $ - | 0% | $ 45,000 | $ - |
| 9 | Fire Alarm | $ 40,000 | | $ - | | $ - | 0% | $ 40,000 | $ - |
| 10 | Doors Frames and Hardware | $ 25,000 | | $ - | | $ - | 0% | $ 25,000 | $ - |
| 11 | Concrete | $ 22,500 | | $ - | | $ - | 0% | $ 22,500 | $ - |
| 12 | Restroom Accessories | $ 8,000 | | $ - | | $ - | 0% | $ 8,000 | $ - |
| 13 | Painting | $ 8,000 | | $ - | | $ - | 0% | $ 8,000 | $ - |
| 15 | Flooring | $ 17,500 | | $ - | | $ - | 0% | $ 17,500 | $ - |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 16 | Exterior Demo | $ 35,000 | | $ - | | $ - | 0% | $ 35,000 | $ - |

## OCFA FS 14 and 16 Schedule and SOV Narrative

The schedule provided shows a 90 calendar day schedule, and 66 working day schedule. This schedule is broken out showing key milestones, to include: Long Lead Procurements, Mobilization, Demolition, Interior Rough Complete, Interior Finishes Complete, and Construction Closeout. These dates are provided on the schedule and will be key in ensuring the schedule is maintained. The goal will be to expedite this schedule to come in early. To maintain schedule NCI will pay close attention to material lead times, as in the current environment this is a main concern for construction projects. NCI will be sure to closely coordinate any changes in schedule with OCFA personnel and keep open communication in any delays to the schedule provided through 6 week look ahead's, which will more accurately portray the current schedule expectation.

For the Schedule of Values, this SOV is a rough draft. NCI will work with OCFA personnel to ensure that the SOV is laid out in a way that works for OCFA budgets for the project. For billing purposes, NCI will send over percentages to OCFA PM for approval prior to sending invoice, to avoid any unnecessary back and forth of paperwork.

## 3L: LIST OF PROJECT REFERENCES

The Bidder must demonstrate knowledge of public construction techniques and must possess a working ability to perform a similar scope of construction work for other public agencies. The information provided below may be used to determine whether the bid is submitted by a "responsible bidder" for purposes of the Public Contract Code, as stated this IFB document. The OCFA expressly reserves the right to reject the bid of any bidder who has failed to complete three (3) similar projects of substantially the same type of work in a timely or satisfactory manner. **Failure to provide the requested information may cause your bid to be rejected as non-responsive.**

1. Submit the following information for three public agencies for which the Bidder has performed similar work within the past three (3) years:
   a) Agency Name
   b) Address
   c) Contact Name and Title
   d) Telephone Number
   e) Email Address
   f) Project Name
   g) Project Value
   h) Description of Scope of Work

2. References will be asked the following information:
   a) Did the Contractor perform the work as agreed?
   b) Did the Contractor perform the work within the allocated time frame?
   c) Were you satisfied with the Contractor's performance
   d) Would you recommend the Contractor for a future contract?
   e) Did you have easy accessibility to the Contractor?

## 1. Project References:

All of the listed projects were completed successfully, and the owner has been very satisfied with the services Neuroth Construction Inc. provided. References and Completed projects below:

**Client:** Mira Costa College
**Owner Contact:** Tracy Gibson (email: tgibson@miracosta.edu) (phone: (760)415-0217)
**Project:** SAN 1000 Science Building Renovation
**Contract Value:** $350,000
**Scope:** The scope of the work included 1600 sf renovation of Science Building San 1000 remodel will consist of HVAC additions and upgrades, expansion of chemistry storage rooms, addition of Lab Associate office space, modifications to existing fume hoods, addition of compressed air in most locations, relocation of storage cabinets and epoxy flooring modifications per plans and specs.
**Outcome:** As a result of having successfully managed and completed the above project, NCI was sole sourced two minor projects at the MCC Oceanside Campus. NCI established a great working relationship with MCC and will continue to do work for them in the future.

**Client:** Cal State University San Marcos
**Owner Contact:** Steve Watters (email: swatters@csusm.edu) (phone: (760) 715-8538)
**Project:** Associated Students Inc. Food Pantry
**Contract Value:** $244,227
**Scope:** In general, the work consists of the renovation of ASI Food Pantry of 1200 sf of interior spaces to include new wall construction, door installation, lights, power/data and fire alarm with sprinklers, new flooring, New HVAC, and Plumbing Systems.
**Outcome:** Neuroth Construction has been asked to bid on projects that are not needed to be publicly bid upon. NCI established a relationship with CSUSM on all levels and will continue to be asked to do future projects for the university.

**Client:** City of Loma Linda
**Owner Contact:** Brian Bolger (email: bbolger@lomalinda-ca.gov) (phone: (909) 478-4270)
**Project:** Renovation of Fire Station #251
**Contract Value:** $722,548
**Scope:** The work consists of renovation 2,400 sf. of existing fire station dorms and restrooms for the firemen. Scope included: demo, concrete, all MEP's, including underground utilities, framing, acoustic ceiling, tile, fire suppression, fire alarm, station alerting systems, as well as data and communications.
**Outcome:** NCI has been awarded small projects that have not needed to be publicly bid upon. The owner has directly sent over city RFP's directly to NCI, to ensure that NCI is able to bid upon the new projects. Neuroth Construction has again established a great working relationship with a client that would like to continue to do business with NCI.

**Client:** Alvarado Parkway Institute
**Owner Contact:** Patrick Walsh (email: Patrick.walsh@apibhs.com) (phone: (619) 249-1163)
**Project: Exterior** Renovations at Various Clinics

**Contract Value:** $120,000
**Scope:** Exterior Renovation of Behavioral Health Clinics, including demolition of exterior siding, waterproofing, exterior siding install, renovation of covered patio, stucco repair, and paint.
**Outcome:** NCI has continued to receive requests for bids on projects from API, and is currently contracted to do a kitchen renovation, which must comply with OSHPD requirements.

**Other References**

**Konrad Bolowich- Grand Terrace City Manager**

- Worked together during time with Loma Linda, on Fire Station 251 Renovation
- Phone: (909) 583-3152

**Kathy Oswalt- Miller Architects**

- Worked together or Fire Station 251 and currently working together at Norco Riley Gym Reno.
- Phone: (909) 910-2437

## 3M: QUALIFICATIONS QUESTIONNAIRE

The information and documents provided below may be used to determine the responsibility of Bidder's submittal, as stated in Section 33 of this IFB document. **Failure to provide the requested information may cause your bid to be rejected as non-responsive.**

1. Provide the names, titles, addresses, and phone numbers of all individuals, firm members, partners, joint ventures, and/or corporate officers having a principal interest in this proposal:

2. Provide the dates of any voluntary or involuntary bankruptcy judgments against any principal having an interest in this proposal.

3. Provide all current and prior DBA's, aliases, and fictitious business names for any principal having an interest in this proposal.

4. For each violation of labor law determined by any Federal, State or local agency to have been committed by the Bidder or any principal having an interest in this proposal, identify any measures that have been imposed by, or agreed upon with, the Federal, State or local agency as punishment for past violations or to prevent future violations.

5. State the title and date, and attach a copy of, each written threat, bid depository, claim, lawsuit, discipline or other written action by the Contractor State License Board against the Bidder or any principal having an interest in this proposal.

6. Identify the following information about each claim asserted against the Bidder or any principal having an interest in this proposal relating to industrial safety within the past eight (8) years: name of the agency/entity asserting the claim; the date of the claim; the date of the alleged violation giving rise to the claim; the claim number, if any. Attach a copy of the claim.

7. Has the Bidder or any principal having an interest in this proposal been disqualified from bidding on, or from finishing, any other public works project in the past 8 years? If so, for each such disqualification, identify: who was disqualified; which public agency disqualified; the date of the disqualification; the alleged basis for the disqualification;

8. Has the Bidder or any principal having an interest in this proposal: (a) filed (voluntarily or involuntarily) for bankruptcy protection; (b) been sued or arbitrated a dispute; been involved in a contract termination involving a public works project; or (c) failed to complete work required by a construction contract? If so, provide detailed information.

9. Please submit an attachment detailing the following information about all current projects:
   a) Project Name
   b) Description of Bidder's Work
   c) Completion Date
   d) Project Cost

**Orange County Fire Authority**

**Tenant Improvements FS 14 and 16**
**Qualifications Questionnaire**

1. Corporate Officers
    a. President/ CEO- Robert Neuroth
        i. Address: 2927 Rancho Vacada, Carlsbad, CA 92009
        ii. Phone: (517) 652-3156
    b. COO- Alexandra Neuroth
        i. 2927 Rancho Vacada, Carlsbad, CA 92009
        ii. Phone: (949) 228-2353
2. Bankruptcy Judgements- **NA**
3. DBA's:
    a. Neuroth Construction Inc. is the only name that Neuroth Construction Inc. has operated under.
4. Labor Law- **NA**
5. CSLB Claims- **NA**
6. Safety Claims- **NA**
7. Disqualification- **NA**
8. Suits, Bankruptcy claims, etc.. - **NA**
9. Current Projects

    a. **Yorba Linda Fire Station 32 and 53**
    b. The work consists of renovation of 2 existing fire station's dorms and restrooms for the firemen. Scope included: demo, concrete, all MEP's, including underground utilities, framing, acoustic ceiling, tile, fire suppression, fire alarm, station alerting systems.
    c. 06/30/2022
    d. $747,227
    a. **Norco Riley Gymnasium**
    b. The work consists of renovation of gymnasium, to include demo and reinstall insulation, painting, restroom renovations, plumbing, electrical, and installation of storefront systems.
    c. 03/30/2022
    d. $474,227

## 3N: PARTY AND PARTICIPANT DISCLOSURE FORMS

**Campaign Contributions Disclosure:** In conformance with the statutory requirements of the State of California Government Code Section 84308, part of the Political Reform Act and Title 2, California Code of Regulations 18438 through 18438.8, regarding campaign contributions to members of appointed Boards of Directors, Offeror is required to complete the attached Party and Participant Disclosure Forms and submit as part of the proposal, **if applicable.**

Offeror is required to submit only one copy of the completed form(s) as part of its proposal. This/these form(s) should be included in the original RFP. The Offeror and subcontractors must complete the form entitled "Party Disclosure Form". Lobbyists or agents representing the Offeror in this procurement must complete the form entitled "Participant Disclosure Form". Reporting of campaign contributions is a requirement from the proposed submittal date up and until the OCFA Board of Directors takes action.

**ORANGE COUNTY FIRE AUTHORITY**
**BOARD OF DIRECTORS**

**David John Shawver, Chair**
City of Stanton

**Michele Steggell, Vice Chair**
City of La Palma

**Ross Chun, Director**
City of Aliso Viejo

**Sunny Park, Director**
City of Buena Park

**Frances Marquez, Director**
City of Cypress

**Joseph Muller, Director**
City of Dana Point

**John O'Neill, Director**
City of Garden Grove

**Anthony Kuo, Director**
City of Irvine

**Don Sedgwick, Director**
City of Laguna Hills

**Sandy Rains, Director**
City of Laguna Niguel

**Noel Hatch, Director**
City of Laguna Woods

**Mark Tettemer, Director**
City of Lake Forest

**Shelley Hasselbrink, Director**
City of Los Alamitos

**Ed Sachs, Director**
City of Mission Viejo

**Carol Gamble, Director**
City of Rancho Santa Margarita

**Kathy Ward, Director**
City of San Clemente

**Troy Bourne, Director**
City of San Juan Capistrano

**Jessie Lopez, Director**
City of Santa Ana

**Joe Kalmick, Director**
City of Seal Beach

**Letitia Clark, Director**
City of Tustin

**Vince Rossini, Director**
City of Villa Park

**Tri Ta, Director**
City of Westminster

**Eugene Hernandez, Director**
City of Yorba Linda

**Donald Wagner, Director**
County of Orange

**Lisa Bartlett, Director**
County of Orange

## PARTY DISCLOSURE

The attached *Party Disclosure Form* must be completed and submitted by the Offeror and subcontractors with the proposal by all firms subject to the campaign contribution disclosure requirements stated in Section VI this solicitation. It is anticipated that a recommendation for award of this contract will be presented to the Board of Directors of OCFA for approval. (Please see next page for definitions of these terms.)

### IMPORTANT NOTICE

Basic Provisions of Government Code Section 84308

A. If you are an applicant for, or the subject of, any contract award, you are prohibited from making a campaign contribution of more than $250 to any board member or his or her alternate. This prohibition begins on the date the solicitation is initiated, and the prohibition ends three months after a final decision is rendered by the Board of Directors. In addition, no board member or alternate may solicit or accept a campaign contribution of more than $250 from you during this period.

B. These prohibitions also apply to your agents, and, if you are a closely held corporation, to your majority shareholder as well. These prohibitions also apply to your subcontractor(s), joint venturer(s), and partner(s) in this proceeding. Also included are parent companies and subsidiary companies directed and controlled by you, and political action committees directed and controlled by you.

C. You must file the attached disclosure form and disclose whether you or your agent(s) have in the aggregate contributed more than $250 to any board member or his or her alternate during the 12-month period preceding the contract award.

D. If you or your agent have in the aggregate contributed more than $250 to any individual board member or his/or her alternate during the 12 months preceding the decision on the contract award or proceeding, that board member or alternate must disqualify himself or herself from the decision. However, disqualification is not required if the board member or alternate returns the campaign contribution within 30 days from the time the director knows, or should have known, about both the contribution and the fact that you are a party in the proceeding. The Party Disclosure Form should be completed and filed with your proposal, or with the first written document you file or submit after the proceeding commences.

1. A proceeding involving "a license, permit, or other entitlement for use" includes all business, professional, trade and land use licenses and permits, and all other entitlements[1] for use, including all entitlements for land use, all contracts[2] (other than competitively bid, labor or personal employment contracts), and all franchises.
2. Your "agent" is someone who represents you in connection with a proceeding involving a license, permit or other entitlement for use. If an individual acting as an agent is also acting in his or her capacity as an employee or member of a law, architectural, engineering, consulting firm, or similar business entity, both the business entity and the individual are "agents."
3. To determine whether a campaign contribution of more than $250 has been made by you, campaign contributions made by you within the preceding 12 months must be aggregated with those made by your agent within the preceding 12 months or the period of the agency, whichever is shorter. Contributions made by your majority shareholder (if a closely held corporation), your subcontractor(s), your joint venturer(s), and your partner(s) in this proceeding must also be included as part of the aggregation. Campaign contributions made to different directors or their alternates are not aggregated.

This notice summarizes the major requirements of Government Code Section 84308 of the Political Reform Act and 2 Cal. Adm. Code Sections 18438-18438.8 as it relates to contract awards.

[1] *Entitlement for the purposes of this form refers to contract award.* [2] *All Contracts for the purposes of this form refer to the contract award of this specific solicitation.*

**PARTY DISCLOSURE FORM**

Party's Name: Neuroth Construction Inc. Rob Neuroth, President

Party's Address: 1165 Linda Vista Dr. Ste 102, San Marcos, CA 92078

Party's Telephone: (517) 652-3156

Solicitation Title and Number: Tenant Improvements at OCFA Fire Stations 14 and 16 RO2511A

Based on the party disclosure information provided, are you or your firm subject to party disclosures? No ☒ If no, check the box and sign below. Yes ☐ If yes, check the box, sign below and complete the form.

**Date**: 03/09/2022 Rob Neuroth, President

**Signature of Party and/or Agent**

***To be completed only if campaign contributions have been made in the preceding twelve (12) months. Attach additional copies if needed.***

Board Member(s) to whom you and/or your agent made campaign contributions and dates of contribution(s) in the preceding 12 months:

**Name of Member:** _____

**Name of Contributor (if other than Party):** _____

**Date(s):** _____

**Amount(s):** _____

**Name of Member:** _____

**Name of Contributor (if other than Party):** _____

**Date(s):** _____

**Amount(s):** _____

## PARTICIPANT (AGENT) DISCLOSURE

The *Participant Disclosure Form* must be completed by lobbyists or agents representing the Offeror in this procurement. It is anticipated that a recommendation for award of this contract will be presented to the Board of Directors of OCFA for approval.

**IMPORTANT NOTICE**

Basic Provisions of Government Code Section 84308

A. If you are a participant in a proceeding involving any contract award, you are prohibited from making a campaign contribution of more than $250 to any Board member. This prohibition begins on the date you begin to actively support or oppose an application for contract award pending before OCFA or any of its affiliated agencies, and continues until three months after a final decision is rendered on the application or proceeding by the Board of Directors. No Board member may solicit or accept a campaign contribution of more than $250 from you and/or your agency during this period if the Board member knows or has reason to know that you are a participant.

B. The attached disclosure form must be filed if you or your agent has contributed more than $250 to any Board member for OCFA or any of its affiliated agencies during the 12-month period preceding the beginning of your active support or opposition (The disclosure form will assist the Board members in complying with the law).

C. If you or your agent have made a contribution of more than $250 to any Board member during the 12 months preceding the decision in the proceeding, that Board member must disqualify himself or herself from the decision. However, disqualification is not required if the Board member returns the campaign contribution within 30 days from the time the Board member knows, or should have known, about both the contribution and the fact that you are a participant in the proceeding

The Participant Disclosure Form should be completed and filed with the proposal submitted by a party, or should be completed and filed the first time that you lobby in person, testify in person before, or otherwise directly act to influence the vote of the Board members of OCFA or any of its affiliated agencies.

1. An individual or entity is a "participant" in a proceeding involving an application for a license, permit or other entitlement for use if:
   a. The individual or entity is not an actual party to the proceeding, but does have a significant financial interest in the OCFA's or one of its affiliated agencies' decisions in the proceeding; AND
   b. The individual or entity, directly or through an agent, does any of the following:
      i. Communicates directly, either in person or in writing, with a Board member of OCFA or any of its affiliated agencies for the purpose of influencing the Board member's vote on the proposal;
      ii. Communicates with an employee of OCFA or any of its affiliated agencies for the purpose of influencing a Board member's vote on the proposal; or
      iii. Testifies or makes an oral statement before the Board of Directors of OCFA or any of its affiliated agencies.
2. A proceeding involving "a license, permit, or other entitlement for use" includes all business, professional, trade and land use licenses and permits, and all other entitlements for use, including all entitlements for land use; all contracts (other than competitively bid, labor, or personal employment contracts) and all franchises.
3. Your "agent" is someone who represents you in connection with a proceeding for this proposed involving a contract award. If an agent acting as an employee or member of a law, architectural, engineering, or consulting firm, or a similar business entity or corporation, both the business entity or corporation and the individual are agents.
4. To determine whether a campaign contribution of more than $250 has been made by a participant or his or her agent, contributions made by the participant within the preceding 12 months shall be aggregated with those made by the agent within the preceding 12 months or the period of the agency, whichever is shorter. Campaign contributions made to different Board members are not aggregated.

*This notice summarizes the major requirements of Government Code Section 84308 and 2 Cal. Adm. Code Sections 18438-18438.8*

## PARTICIPANT (AGENT) DISCLOSURE FORM

Prime's Firm Name: Neuroth Construction Inc.

Party's Name: Neuroth Construction Inc. Rob Neuroth, President

Party's Address: 1165 Linda Vista Dr. Ste 102, San Marcos, CA 92078

Party's Telephone: (517) 652-3156

Solicitation Title and Number:
Based on the participant disclosure information provided, are you or your firm subject to participant disclosures?
No [X] If no, check the box and sign below. Yes [ ] If yes, check the box, sign below and complete the form.

**Date**: 03/09/2022

Rob Neuroth, President
**Signature of Party and/or Agent**

***To be completed only if campaign contributions have been made in the preceding twelve (12) months. Attach additional copies if needed.***

Board Member(s) to whom you and/or your agent made campaign contributions and dates of contribution(s) in the preceding 12 months:

**Name of Board Member:**

**Name of Contributor (if other than Party):**

**Date(s):**

**Amount(s):**

**Name of Board Member:**

**Name of Contributor (if other than Party):**

**Date(s):**

**Amount(s):**

## 4A: TRANSMITTAL PAGE TWO – BID AWARD DOCUMENTS

**TO:** **Orange County Fire Authority**

**FROM:** Neuroth Construction Inc.
(Legal Name of Contractor)

**PROJECT:** **TENANT IMPROVEMENTS AT OCFA FIRE STATIONS 14 AND 16**

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**AWARDED CONTRACTOR'S CHECKLIST:**
The awarded Contractor is required to provide the following documents:

| | | |
|---|---|---|
| ☐ **Transmittal Page** *(Exhibit 4A)* | ☐ **Award Certifications** *(Exhibit 4D)* | ☐ **Signed Agreement** *(Exhibit 4F)* |
| ☐ **Performance Bond** *(Exhibit 4B)* | ☐ **W9** *(Exhibit 4E)* | |
| ☐ **Payment Bond** *(Exhibit 4C)* | ☐ **Insurance Certificates** | |

---

**TO THE OCFA:**
Signature below acknowledges that, should the Contractor fail to provide the above documents in a form satisfactory to OCFA within fourteen days of the issuance of the Notice of Award, OCFA may, at its option, consider the Contractor to have has abandoned the agreement, upon which the full payment of the sum stated in the Bidder's Bond shall be due immediately.

**SIGNATURE OF CONTRACTOR:** 

**PRINTED NAME:** Rob Neuroth **TITLE:** President

## 4B: FAITHFUL PERFORMANCE BOND

(100% of Agreement Price)

**Bidders must use this form, NOT a surety company form**

KNOW ALL PERSONS BY THESE PRESENTS:

WHEREAS, the governing board ("Board") of the Orange County Fire Authority, ("OCFA") and Neuroth Construction Inc. ("Principal)" have entered into a contract for the furnishing of all materials and labor, services and transportation, necessary, convenient, and proper to perform the following project:

**IFB RO2511A – TENANT IMPROVEMENTS AT OCFA FIRE STATIONS 14 AND 16**

("Contract") which Contract dated , and all of the Bid Documents attached to or forming a part of the Contract, are hereby referred to and made a part hereof; and

WHEREAS, said Principal is required under the terms of the Contract to furnish a bond for the faithful performance of the Contract.

NOW, THEREFORE, the Principal and The Gray Casualty & Surety Company ("Surety") are held and firmly bound unto the Board of the OCFA in the penal sum of [EIGHT HUNDRED TWENTY-ONE THOUSAND, TWO HUNDRED TWENTY-SEVEN] DOLLARS ($821,227), lawful money of the United States, for the payment of which sum well and truly to be made we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally, firmly by these presents, to:

- Perform all the work required to complete the Project; and
- Pay to the OCFA all damages the OCFA incurs as a result of the Principal's failure to perform all the work required to complete the Project.

The condition of the obligation is such that, if the above bounden Principal, his or its heirs, executors, administrators, successors, or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions, and agreements in the Contract and any alteration thereof made as therein provided, on his or its part to be kept and performed at the time and in the intent and meaning, including all contractual guarantees and warrantees of materials and workmanship, and shall indemnify and save harmless the OCFA, its trustees, officers and agents, as therein stipulated, then this obligation shall become null and void, otherwise it shall be and remain in full force and virtue.

As a condition precedent to the satisfactory completion of the Contract, the above obligation shall hold good for a period equal to the warranty and/or guarantee period of the Contract, during which time Surety's obligation shall continue if Contractor shall fail to make full, complete, and satisfactory repair and replacements and totally protect the OCFA from loss or damage resulting from or caused by defective materials or faulty workmanship. The obligations of Surety hereunder shall continue so long as any obligation of Contractor remains. Nothing herein shall limit the OCFA's rights or the Contractor or Surety's obligations under the Contract, law or equity, including, but not limited to, California Code of Civil Procedure section 337.15.

The Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the contract or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the Contract or to the work or to the specifications.

**[Signature Page Follows]**

IN WITNESS WHEREOF, two (2) identical counterparts of this instrument, each of which shall for all purposes be deemed an original thereof, have been duly executed by the Principal and Surety above named, on the 25th day of April, 2022 in accordance with Article 5, commencing at section 1860, chapter 1, part 7, division 2 of the Labor Code, this certificate must be signed and filed with the awarding body prior to performing any work under this Contract:

**CONTRACTOR:**
(Affix Corporate Seal)

Neuroth Construction Inc.
**Principal**

**By**

Rob Neuroth. President
**Print Name and Title of Signatory**

**SURETY:**
(Affix Corporate Seal)

The Gray Casualty & Surety Company
**Surety**

**By** Lawrence F. McMahon, Attorney-in-Fact

Alliant Insurance Services, Inc.
**Name of California Agent of Surety**

701 B Street 6th Floor, San Diego, CA 92101
**Address of California Agent of Surety**

(619)238-1828
**Telephone Number of California Agent of Surety**

**Attach Notary acknowledgments for all signatures. Attach Power of Attorney Attach Power of Attorney if executed by Attorney-in-Fact. The California Department of Insurance must authorize the Surety to be an admitted Surety Insurer.**

**CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT** **CIVIL CODE § 1189**

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California )
County of San Diego )

On APR 25 2022 before me, Natassia Kirk-Smith, Notary Public,
*Date* *Here Insert Name and Title of the Officer*

personally appeared Lawrence F. McMahon
*Name(s) of Signer(s)*

,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

NATASSIA KIRK-SMITH
Notary Public - California
Orange County
Commission # 2253818
My Comm. Expires Aug 12, 2022

Signature
*Signature of Notary Public*

*Place Notary Seal Above*

***OPTIONAL***

*Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.*

**Description of Attached Document**

Title or Type of Document: _____

Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

**Capacity(ies) Claimed by Signer(s)**

| | |
|---|---|
| Signer's Name: Lawrence F. McMahon | Signer's Name: _____ |
| ☐ Corporate Officer — Title(s): _____ | ☐ Corporate Officer — Title(s): _____ |
| ☐ Partner — ☐ Limited ☐ General | ☐ Partner — ☐ Limited ☐ General |
| ☐ Individual ☒ Attorney in Fact | ☐ Individual ☐ Attorney in Fact |
| ☐ Trustee ☐ Guardian or Conservator | ☐ Trustee ☐ Guardian or Conservator |
| ☐ Other: _____ | ☐ Other: _____ |
| Signer Is Representing: _____ | Signer Is Representing: _____ |

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**THE GRAY INSURANCE COMPANY**
**THE GRAY CASUALTY & SURETY COMPANY**

# GENERAL POWER OF ATTORNEY

**Bond Number:** GSM30705 **Principal:** Neuroth Construction Inc.

**Project:** IFB RO2511A – TENANT IMPROVEMENTS AT OCFA FIRE STATIONS 14 AND 16

KNOW ALL BY THESE PRESENTS, THAT The Gray Insurance Company and The Gray Casualty & Surety Company, corporations duly organized and existing under the laws of Louisiana, and having their principal offices in Metairie, Louisiana, do hereby make, constitute, and appoint: **Lawrence F. McMahon, Sarah Myers, Ryan E. Warnock, Maria Guise, Janice Martin, and Christopher J. Conte of San Diego, California jointly and severally** on behalf of each of the Companies named above its true and lawful Attorney(s)-in-Fact, to make, execute, seal and deliver, for and on its behalf and as its deed, bonds, or other writings obligatory in the nature of a bond, as surety, contracts of suretyship as are or may be required or permitted by law, regulation, contract or otherwise, provided that no bond or undertaking or contract of suretyship executed under this authority shall exceed the amount of $15,000,000.00.

This Power of Attorney is granted and is signed by facsimile under and by the authority of the following Resolutions adopted by the Boards of Directors of both The Gray Insurance Company and The Gray Casualty & Surety Company at meetings duly called and held on the 26th day of June, 2003.

"RESOLVED, that the President, Executive Vice President, any Vice President, or the Secretary be and each or any of them hereby is authorized to execute a power of Attorney qualifying the attorney named in the given Power of Attorney to execute on behalf of the Company bonds, undertakings, and all contracts of surety, and that each or any of them is hereby authorized to attest to the execution of such Power of Attorney, and to attach the seal of the Company; and it is

FURTHER RESOLVED, that the signature of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be binding upon the Company now and in the future when so affixed with regard to any bond, undertaking or contract of surety to which it is attached.

IN WITNESS WHEREOF, The Gray Insurance Company and The Gray Casualty & Surety Company have caused their official seals to be hereinto affixed, and these presents to be signed by their authorized officers this 28th day of October, 2021.

THE GRAY INSURANCE COMPANY SEAL

By: Michael T. Gray
President
The Gray Insurance Company

Cullen S. Piske
President
The Gray Casualty & Surety Company

THE GRAY CASUALTY & SURETY COMPANY SEAL

State of Louisiana
ss:
Parish of Jefferson

On this 28th day of October, 2021, before me, a Notary Public, personally appeared Michael T. Gray, President of The Gray Insurance Company, and Cullen S. Piske, President of The Gray Casualty & Surety Company, personally known to me, being duly sworn, acknowledged that they signed the above Power of Attorney and affixed the seals of the companies as officers of, and acknowledged said instrument to be the voluntary act and deed, of their companies.

Leigh Anne Henican
Notary Public
Notary ID No. 92653
Orleans Parish, Louisiana

Leigh Anne Henican
Notary Public, Parish of Orleans State of Louisiana
My Commission is for Life

**CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT** **CIVIL CODE § 1189**

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California )
County of San Diego )

On May 2, 2022 *Date* before me, Patricia Rosales NOTARY PUBLIC *Here Insert Name and Title of the Officer*

personally appeared Rob Neuroth *Name(s) of Signer(s)*

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature Patricia Rosales
*Signature of Notary Public*

PATRICIA ROSALES
Notary Public - California
San Diego County
Commission # 2364819
My Comm. Expires Jul 8, 2025

*Place Notary Seal Above*

**OPTIONAL**

*Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.*

**Description of Attached Document**
Title or Type of Document: Faithful Performance Bond
Document Date: _____ Number of Pages: _____
Signer(s) Other Than Named Above: _____

**Capacity(ies) Claimed by Signer(s)**

| | |
|---|---|
| Signer's Name: _____ | Signer's Name: _____ |
| ☐ Corporate Officer — Title(s): _____ | ☐ Corporate Officer — Title(s): _____ |
| ☐ Partner — ☐ Limited ☐ General | ☐ Partner — ☐ Limited ☐ General |
| ☐ Individual ☐ Attorney in Fact | ☐ Individual ☐ Attorney in Fact |
| ☐ Trustee ☐ Guardian or Conservator | ☐ Trustee ☐ Guardian or Conservator |
| ☐ Other: _____ | ☐ Other: _____ |
| Signer Is Representing: _____ | Signer Is Representing: _____ |

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## 4C: PAYMENT BOND
**Contractor's Labor & Material Bond**
(100% of Agreement Price)
**Bidders must use this form, NOT a surety company form**

KNOW ALL PERSONS BY THESE PRESENTS:

WHEREAS, the governing board ("Board") of the Orange County Fire Authority, ("OCFA") and Neuroth Construction Inc., ("Principal)" have entered into a contract for the furnishing of all materials and labor, services and transportation, necessary, convenient, and proper to perform the following project:

**IFB RO2511A – TENANT IMPROVEMENTS AT OCFA FIRE STATIONS 14 AND 16**

("Contract") which Contract dated , and all of the Bid Documents attached to or forming a part of the Contract, are hereby referred to and made a part hereof; and

WHEREAS, pursuant to law and the Contract, the Principal is required, before entering upon the performance of the work, to file a good and sufficient bond with the body by which the Contract is awarded in an amount equal to one hundred percent (100%) of the Contract price, to secure the claims to which reference is made in sections 9000 through 9510 and 9550 through 9566 of the Civil Code, and division 2, part 7, of the Labor Code.

NOW, THEREFORE, the Principal and, The Gray Casualty & Surety Company ("Surety") are held and firmly bound unto all laborers, material men, and other persons referred to in said statutes in the sum of [EIGHT HUNDRED TWENTY-ONE THOUSAND, TWO HUNDRED TWENTY-SEVEN] DOLLARS ($821,227), lawful money of the United States, being a sum not less than the total amount payable by the terms of Contract, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, or assigns, jointly and severally, by these presents.

The condition of this obligation is that if the Principal or any of his or its subcontractors, of the heirs, executors, administrators, successors, or assigns of any, all, or either of them shall fail to pay for any labor, materials, provisions, provender, or other supplies, used in, upon, for or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or for amounts required to be deducted, withheld, and paid over to the Employment Development Department from the wages of employees of the Principal or any of his or its subcontractors of any tier under Section 13020 of the Unemployment Insurance Code with respect to such work or labor, that the Surety will pay the same in an amount not exceeding the amount herein above set forth, and also in case suit is brought upon this bond, will pay a reasonable attorney's fee to be awarded and fixed by the Court, and to be taxed as costs and to be included in the judgment therein rendered.

It is hereby expressly stipulated and agreed that this bond shall inure to the benefit of any and all persons, companies, and corporations entitled to file claims under section 9100 of the Civil Code, so as to give a right of action to them or their assigns in any suit brought upon this bond.

Should the condition of this bond be fully performed, then this obligation shall become null and void; otherwise it shall be and remain in full force and affect.

And the Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of Contract or the specifications accompanying the same shall in any manner affect its obligations on this bond, and it does hereby waive notice of any such change, extension, alteration, or addition.

**[Signature Page Follows]**

IN WITNESS WHEREOF, two (2) identical counterparts of this instrument, each of which shall for all purposes be deemed an original thereof, have been duly executed by the Principal and Surety above named, on the 25th day of April, 2022.

**CONTRACTOR:**
(Affix Corporate Seal)

Neuroth Construction Inc.
**Principal**

**By**

Rob Neuroth, President
**Print Name and Title of Signatory**

**SURETY:**
(Affix Corporate Seal)

The Gray Casualty & Surety Company
**Surety**

**By** Lawrence F. McMahon, Attorney-in-Fact

Alliant Insurance Services, Inc.
**Name of California Agent of Surety**

701 B Street 6th Floor, San Diego, CA 92101
**Address of California Agent of Surety**

(619)238-1828
**Telephone Number of California Agent of Surety**

**Attach Notary acknowledgments for all signatures. Attach Power of Attorney Attach Power of Attorney if executed by Attorney-in-Fact. The California Department of Insurance must authorize the Surety to be an admitted Surety Insurer.**

**CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT** **CIVIL CODE § 1189**

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California )
County of San Diego )

On APR 25 2022 before me, Natassia Kirk-Smith, Notary Public,
*Date* *Here Insert Name and Title of the Officer*

personally appeared Lawrence F. McMahon
*Name(s) of Signer(s)*

,

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

NATASSIA KIRK-SMITH
Notary Public - California
Orange County
Commission # 2253818
My Comm. Expires Aug 12, 2022

Signature _____
*Signature of Notary Public*

*Place Notary Seal Above*

***OPTIONAL***

*Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.*

**Description of Attached Document**

Title or Type of Document: _____
Document Date: _____ Number of Pages: _____
Signer(s) Other Than Named Above: _____

**Capacity(ies) Claimed by Signer(s)**

| | |
|---|---|
| Signer's Name: Lawrence F. McMahon | Signer's Name: _____ |
| ☐ Corporate Officer — Title(s): _____ | ☐ Corporate Officer — Title(s): _____ |
| ☐ Partner — ☐ Limited ☐ General | ☐ Partner — ☐ Limited ☐ General |
| ☐ Individual ☒ Attorney in Fact | ☐ Individual ☐ Attorney in Fact |
| ☐ Trustee ☐ Guardian or Conservator | ☐ Trustee ☐ Guardian or Conservator |
| ☐ Other: _____ | ☐ Other: _____ |
| Signer Is Representing: _____ | Signer Is Representing: _____ |

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**THE GRAY INSURANCE COMPANY**
**THE GRAY CASUALTY & SURETY COMPANY**

# GENERAL POWER OF ATTORNEY

**Bond Number:** GSM30705 **Principal:** Neuroth Construction Inc.

**Project:** IFB RO2511A – TENANT IMPROVEMENTS AT OCFA FIRE STATIONS 14 AND 16

KNOW ALL BY THESE PRESENTS, THAT The Gray Insurance Company and The Gray Casualty & Surety Company, corporations duly organized and existing under the laws of Louisiana, and having their principal offices in Metairie, Louisiana, do hereby make, constitute, and appoint: **Lawrence F. McMahon, Sarah Myers, Ryan E. Warnock, Maria Guise, Janice Martin, and Christopher J. Conte of San Diego, California jointly and severally** on behalf of each of the Companies named above its true and lawful Attorney(s)-in-Fact, to make, execute, seal and deliver, for and on its behalf and as its deed, bonds, or other writings obligatory in the nature of a bond, as surety, contracts of suretyship as are or may be required or permitted by law, regulation, contract or otherwise, provided that no bond or undertaking or contract of suretyship executed under this authority shall exceed the amount of $15,000,000.00.

This Power of Attorney is granted and is signed by facsimile under and by the authority of the following Resolutions adopted by the Boards of Directors of both The Gray Insurance Company and The Gray Casualty & Surety Company at meetings duly called and held on the 26th day of June, 2003.

"RESOLVED, that the President, Executive Vice President, any Vice President, or the Secretary be and each or any of them hereby is authorized to execute a power of Attorney qualifying the attorney named in the given Power of Attorney to execute on behalf of the Company bonds, undertakings, and all contracts of surety, and that each or any of them is hereby authorized to attest to the execution of such Power of Attorney, and to attach the seal of the Company; and it is

FURTHER RESOLVED, that the signature of such officers and the seal of the Company may be affixed to any such Power of Attorney or to any certificate relating thereto by facsimile, and any such Power of Attorney or certificate bearing such facsimile signature or facsimile seal shall be binding upon the Company now and in the future when so affixed with regard to any bond, undertaking or contract of surety to which it is attached.

IN WITNESS WHEREOF, The Gray Insurance Company and The Gray Casualty & Surety Company have caused their official seals to be hereinto affixed, and these presents to be signed by their authorized officers this 28th day of October, 2021.

THE GRAY INSURANCE COMPANY SEAL

By: Michael T. Gray
President
The Gray Insurance Company

Cullen S. Piske
President
The Gray Casualty & Surety Company

THE GRAY CASUALTY & SURETY COMPANY SEAL

State of Louisiana
ss:
Parish of Jefferson

On this 28th day of October, 2021, before me, a Notary Public, personally appeared Michael T. Gray, President of The Gray Insurance Company, and Cullen S. Piske, President of The Gray Casualty & Surety Company, personally known to me, being duly sworn, acknowledged that they signed the above Power of Attorney and affixed the seals of the companies as officers of, and acknowledged said instrument to be the voluntary act and deed, of their companies.

Leigh Anne Henican
Notary Public
Notary ID No. 92653
Orleans Parish, Louisiana

Leigh Anne Henican
Notary Public, Parish of Orleans State of Louisiana
My Commission is for Life

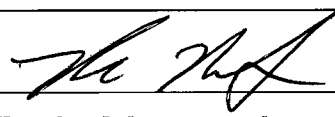
## 4D: AWARD CERTIFICATIONS

**Prevailing Wage:**
I hereby certify that I will conform to the State of California Public Works Contract requirements regarding prevailing wages, benefits, on-site audits with 48-hour notice, payroll records, and apprentice and trainee employment requirements, for all Services on the above Project, including, without limitation, the State labor compliance monitoring and enforcement by the Compliance Monitoring Unit of the Department of Industrial Relations, if this Project is subject to a labor compliance.

**Workers' Compensation:**
In accordance with Article 5 - commencing at section 1860, chapter 1, part 7, division 2 of the Labor Code, this certificate must be signed and filed with the awarding body prior to performing any work under this Contract. CA Labor Code section 3700 in relevant part provides that every employer except the State shall secure the payment of compensation in one or more of the following ways: (1) By being insured against liability to pay compensation in one or more insurers duly authorized to write compensation insurance in this state; (2) By securing from the Director of Industrial Relations, a certificate of consent to self- insure, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations of ability to self-insure and to pay any compensation that may become due to his employees. I am aware of the provisions of Section 3700 of the Labor Code which requires every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that Code, and I will comply with such provisions before commencing the performance of work of this contract.

**Date:** 5/4/22

**Legal Name of Contractor:** Neuroth Construction Inc.

**Signature:** 

**Printed Name:** Rob Neuroth

**Title:** President

## 4E: IRS FORM W9

Form **W-9**
(Rev. October 2018)
Department of the Treasury
Internal Revenue Service

**Request for Taxpayer Identification Number and Certification**

▶ Go to *www.irs.gov/FormW9* for instructions and the latest information.

**Give Form to the requester. Do not send to the IRS.**

Print or type. See Specific Instructions on page 3.

1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank.
Neuroth Construction Inc.

2 Business name/disregarded entity name, if different from above

3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only one of the following seven boxes.

☐ Individual/sole proprietor or single-member LLC ☐ C Corporation ☒ S Corporation ☐ Partnership ☐ Trust/estate

☐ Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶ _____

Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is not disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.

☐ Other (see instructions) ▶

4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):

Exempt payee code (if any) _____

Exemption from FATCA reporting code (if any) _____

*(Applies to accounts maintained outside the U.S.)*

5 Address (number, street, and apt. or suite no.) See instructions.
1165 Linda Vista Dr. Ste 102

Requester's name and address (optional)

6 City, state, and ZIP code
San Marcos, CA, 92078

7 List account number(s) here (optional)

**Part I Taxpayer Identification Number (TIN)**

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

**Note:** If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

**Social security number**
___ - ___ - ____

or

**Employer identification number**
85 - 0956703

**Part II Certification**

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
3. I am a U.S. citizen or other U.S. person (defined below); and
4. The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

**Certification instructions.** You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

**Sign Here** Signature of U.S. person ▶ [signature] Date ▶ 5/2/2022

## General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

**Future developments.** For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to *www.irs.gov/FormW9*.

## Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-INT (interest earned or paid)
- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

*If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See* What is backup withholding, *later.*

Cat. No. 10231X

Form **W-9** (Rev. 10-2018)

## 4G: GENERAL CONDITIONS

## ORANGE COUNTY FIRE AUTHORITY GENERAL CONDITIONS

### 51 Definitions

As used in these General Conditions and in the Project Manual generally, the following terms have the meaning indicated:

Acts of God: An earthquake in excess of a magnitude of 3.5 on the Richter Scale or a tidal wave.

Addendum: A written or graphic instrument issued by Project Manager on behalf of the OCFA prior to the execution of the Contract which sets forth additions, deletions, or other revisions to the Project Manual or clarifications thereof.

Authority: The Orange County Fire Authority, a California Joint Powers Authority.

Board of Directors: The governing body of the Orange County Fire Authority.

Change Order: A written Modification executed by both parties (except in the event of a unilateral Change Order as herein provided) and consisting of additions, deletions or other changes to the Contract. A Change Order may be accompanied by and/or may identify additional or revised Drawings, sketches or other written instructions which become and form a part of the Project Manual by virtue of the executed Change Order. Except as otherwise provided in Subparagraph 1.1.5., a Change in the Work, or a change in the Contract Time or the Contract Sum shall only be approved by written Change Order.

Construction Contract or Contract: The written "Contract Agreement" covering the performance of the Work and the furnishing of labor, materials, tools, and equipment in the construction of the Work. The term "Construction Contract" also includes the Project Manual.

Contract Directive: A written document issued by the Project Manager and consisting of additions, deletions, clarifications, interpretations, or other written instructions issued by the Project Manager with respect to the performance of the Work or the activities of the Contractor on the Job Site or the property of OCFA. A Contract Directive can be a response to a Request for Information; however, all responses to Requests for Information need not be Contract Directives. A Contract Directive may become the subject of a Change Order only if such Directive involves a substantial change in the Work, or a change in the Contract Time or the Contract Amount, approved as a Change Order by the Project Manager.

Contractor's Construction Schedule: The detailed schedules, based on a critical path method ("CPM"), prepared by the Contractor, presenting an orderly and realistic plan for completion of the work required in the Project Manual. The Contractor's Construction Schedule shall also include the completion dates of the Milestones and a final proposal narrative as described in the Project Manual.

Contractor: The person or entity awarded the Contract to perform the work.

Day: All references to days in the Project Manual refer to calendar day unless otherwise specifically indicated.

Design Professional: Officers, employees, and consultants, the architectural and engineering firm, a party to the design-build entity responsible for the overall design of the Project.

Excusable Labor Dispute: Any labor dispute directed against an entire industry, or any labor dispute that is not directed solely against the Project, the Contractor, or any subcontractor or supplier, and which prevents Contractor from obtaining labor or materials necessary for the performance of the Work and that actually delays the performance of the Work; provided, however, that suitable substitute labor or materials are not reasonably obtainable.

Excusable Transportation Delay: Any labor dispute directed at an entire industry, or any labor dispute that is not directed solely against the Project, the Contractor, or any subcontractor or supplier, or other delay not within the reasonable control of the Contractor which prevents the transportation of necessary materials to the Project and actually delays the performance of Work; provided, however, that suitable substitute transportation for such materials is not reasonably available.

Fire Chief: The Fire Chief of the OCFA or the Fire Chief's Designee.

Laws: Each and every Federal, state, and local law, ordinance, code, rule, and regulation, as well as the lawful order or decree of any public or quasi-public authority and each of their respective inspectors or officials, including but not limited to all applicable building codes, bearing on or otherwise applicable to the Project. The term "Laws" also includes any and all conditions of approval of each and every entitlement or permit issued or approved by the Local Jurisdictions.

Local Jurisdictions: Any governmental agency with land use authority over the Project or part of the Project and each regulatory agency or authority with jurisdiction over the project, and their respective inspectors and representatives.

Modification or Contract Modification: (1) a written amendment to this Contract signed by both Parties; (2) a Change Order; or (3) a Contract Directive or other written interpretation or order issued as a response to a Request for Information or otherwise issued by the Project Manager pursuant to the terms of the Project Manual. Contractor acknowledges that the execution on its behalf of any such Modification by any one person with apparent authority shall be binding against the Contractor. A Modification may be made only after execution of the Contract. No Contract Directive or response to a Request for Information shall be construed as a Change Order or other Modification unless it expressly so states.

Non-Conformance Notice: A notice issued by the Project Manager documenting that the work or some portion thereof has not been performed in accordance with the requirements of the Project Manual.

Notice to Proceed: The written notice of the OCFA to the Contractor to commence work under the Contract.

OCFA: The Orange County Fire Authority, a California Joint Powers Authority.

Plans: The drawings, supplemental drawings, or reproductions thereof, the project plans, standard plans, profiles, cross-sections, and all graphic depictions, which show the location, character, dimensions, and details of the work to be performed and contained in the Project Manual.

Project: The Project is the performance, construction, installation, and completion of the entire scope of all work as described in the Contract Documents.

Project Manager: The person or persons designated by the OCFA to serve as the Project Manager of the project.

Project Manual: Defined in Section 41 of the Contract Agreement.

Provide: To furnish, fabricate, complete, deliver, install, and erect including all labor, materials, equipment, apparatus, appurtenances, and expenses, necessary to complete in place, ready for operation or use under the terms of the Project Manual.

Regulatory Agency – A Federal, State or local governmental agency that has regulatory jurisdiction over one or more aspects of the Project. (Examples may include, but are not limited to the Regional Water Quality Control Board, the California Coastal Commission, or the South Coast Air Quality Management Board.)

Related Work: Work performed by the OCFA or by any separate Contractor retained or hired by the OCFA, related to the completion of the Project and which is not required to be performed by the Contractor pursuant to this Contract and the Project Manual.

Requests for Information: A written request from the Contractor or one of the Subcontractors to the Project Manager seeking an interpretation or a clarification of some requirement of the Project Manual. Contractor shall clearly and concisely set forth in writing the issue for which Contractor seeks clarification or interpretation and why a response is needed from the Project Manager. Contractor shall set forth Contractor's interpretation or understanding of the Project Manual's requirements along with reasons why Contractor reached such an understanding. Responses from the Project Manager will not change any requirements of the Project Manual unless so noted in the Request for Information response.

Scheduled Completion Date: The number of days specified in the Construction Schedule for completion of the Project.

Site or Sites: The land on which the Project will be constructed as specifically described in the Project Manual.

Specifications: The directives, provisions, and requirements contained in Project Manual, however such may be labeled or otherwise described.

Subcontractor: A person or organization having a direct contract with the Contractor to perform any of the Work at the Site or to supply any materials, equipment, or supplies to be incorporated in, or utilized in connection with, the Work and as used herein shall include the Subcontractor's authorized representative.

Substantial Completion of the Project: occurs when all of the following are achieved: (1) substantial completion of all Work; and (2) suitable to meet the requirements for the issuance of a certificate of occupancy and receipt of all other required approvals of construction from the Local Jurisdictions; and (3) in strict accordance with the Project Manual; and (4) such that OCFA may fully utilize the Project for the use for which it is intended. Early occupation of the Project by OCFA does not constitute Substantial Completion of the Project if one or more of the four factors above has not yet been achieved. (See Section General Conditions, Section 74.)

Supplemental Agreements: The written agreements covering alterations, amendments, or extensions to the Construction Contract and include contract change orders.

Work: All the work specified, indicated, shown, or contemplated in the Construction Contract to construct the Project, including all alterations, amendments, or extensions thereto made by contract change order or other written orders of the Project Manager, including each activity, labor, task, service, acquisition, purchase, installation, or action of any kind required to be performed under the terms of this Contract and as specified in the Project Manual.

## 52 The Project Manual

52.1 The Project Manual is defined in **Section 41** of the Contract Agreement. The Contractor has examined carefully the site of the work contemplated, the plans and specifications, and the proposal and contract forms therefor. The submission of a bid shall be conclusive evidence that the Contractor has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and scope of work to be performed, the quantities of materials to be furnished and as to the requirements of the proposal, plans, specifications and the Construction Contract. The Contractor warrants and represents that, in executing the Contract and undertaking the Work, it has not relied upon any oral inducement or representation by OCFA, Project Manager, or any of their officers or agents as to the nature of the Work, the Site, the Project conditions or otherwise.

52.2 All parts and provisions of the Project Manual are complementary, and what is required by any one shall be as binding as if required by all. If the Project Manual does not specifically allow the Contractor a choice as to quality or cost of items to be furnished, but could be interpreted to permit such choice, subject to confirmation or approval by Project Manager, they shall be construed to require the Contractor to provide the best quality. Words and abbreviations which have well-known technical or trade meanings are used in the Project Manual in accordance with such recognized meanings.

52.3 Where conflict exists within or between parts of the Project Manual, or between the Project Manual and either applicable industry standards or applicable codes, ordinances, or other legal requirements, the more stringent requirements shall apply; otherwise, the following order of precedence shall be used: the Construction Contract; the Special Conditions of the Contract for Construction; these General Conditions of the Construction Contract; the balance of the Project Manual, and the Drawings. If the Contractor is required to perform any extra or corrective Work to comply with the preceding sentence, it shall not be entitled to an increase in the Contract Sum or Contract Time, and no claim shall result from such compliance. Subject to confirmation or approval by OCFA, more detailed Drawings take precedence over less detailed scaled Drawings, figured dimensions on the Drawings take precedence over scaled dimensions, and otherwise noted matters on the drawings take highest precedence.

52.4 Drawings take precedence over graphic representations. Contractor shall bring or submit to the Project Manager any such conflicts as soon as Contractor or its Subcontractors discover or learn about such apparent conflicts in the form of an RFI.

52.5 The organization of the Specifications into divisions, sections, and articles, and the arrangement of Drawings, are not intended to influence the Contractor in its division of the Work among Subcontractors or its establishment of the extent of the Work to be performed by any trade.

52.6 The Contractor shall request in writing that Project Manager provide any interpretations or clarifications necessary for the proper execution, coordination or progress of the Work. Such interpretations shall be issued by Project Manager in writing for implementation by the Contractor. The Contractor shall make all such requests for interpretation or clarification in writing.

52.7 The Project Manual reflects conditions as they are believed to exist, but it is not intended or to be inferred that the conditions as shown thereon constitute a representation by or on behalf of Authority that such conditions actually exist. The Contractor shall inspect the Site and conduct any tests or surveys it deems necessary or desirable prior to the commencement of the Work and shall accept full responsibility for any loss sustained by it as a result of any variances between the conditions as shown on the Project Manual and the actual conditions revealed during the progress of the Work or otherwise. The Contract Sum shall in no event be increased by reason of any such variance unless otherwise specifically provided herein.

52.8 The Contractor shall develop and maintain current "as-built" Plans to be provided to Project Manager in accordance with the Construction Contract and Section 01770 of the Project Manual. Project Manager may inspect and copy such Plans at any time during the course of the Work.

52.9 The intent of the plans and specifications is to prescribe the details for the construction and completion of the work which the Contractor undertakes to perform in accordance with the terms of the Construction Contract. Where the plans or specifications describe portions of the work in general terms, but not in complete detail, it is understood that only the best general practice is to prevail and that only materials and workmanship of the first quality are to be used. Unless otherwise specified, the Contractor shall provide all labor, materials, tools, equipment, and incidentals, and do all the work involved in executing the contract in a satisfactory and workmanlike manner.

**53 Contract Bonds.**

Both the Faithful Performance Bond and the Material and Labor Bond shall each be for not less than one hundred percent (100%) of the total Contract amount. The Material and Labor Bond shall remain in force until thirty-five (35) days after the date of recordation of the Notice of Completion. The Faithful Performance Bond will be held for one year after the date of recordation of the Notice of Completion.

Prior to the acceptance of any bond, the OCFA shall verify that the surety is an admitted surety in the State of California. If requested by the OCFA, the Contractor shall provide other information specified in the Code of Civil Procedure Section 995.660 to enable the OCFA to verify the sufficiency of the bond.

Should any bond become insufficient, the Contractor shall correct the insufficiency within ten (10) calendar days after receiving notice from the OCFA. The Contractor shall provide the OCFA with evidence of the correction within ten (10) calendar days of said correction. Should any surety at any time be unsatisfactory to the OCFA, written notice will be given to the Contractor to that effect. No further payments shall be deemed due or will be payable under the Contract until Contractor submits an acceptable bond from a surety accepted by the OCFA. Changes to the work or extensions of time made pursuant to the Contract Agreement shall in no way release the Contractor or the surety from its obligations. Notice of such changes or extensions shall be waived by the surety.

**54 OCFA AND OCFA'S REPRESENTATIVES**

54.1 The work will be under the general direction of the Fire Chief. The Project Manager is the authorized representative of the Fire Chief and has complete charge of the work, and shall exercise full control of the work, so far as it affects the interest of the OCFA.

54.2 The provisions in this General Conditions or elsewhere in the Contract Documents regarding approval or direction by the Fire Chief, the OCFA, the Board of Directors, or the Project Manager, or action taken pursuant thereto, are not intended to and shall not relieve the

Contractor of responsibility for the accomplishment of the work, either as regards sufficiency or the time of performance, except as expressly otherwise provided herein.

54.3 The Project Manager is the OCFA's exclusive representative and agent to the Contractor with respect to this Project during construction and until the completion of the Project. The OCFA's communications with the Contractor shall be exclusively through the Project Manager.

54.4 Project Manager shall at all times have access to the work whenever it is in preparation or progress. The Contractor shall provide safe facilities for such access.

54.5 The OCFA shall not be responsible for or have control or charge of the construction means, methods, techniques, sequences or procedures, or for safety precautions and programs in connection with the work, and will not be responsible for the Contractor's failure to carry out the work in accordance with the Contract Documents.

54.6 The OCFA will not be responsible for the failure of the Contractor to plan, schedule, and execute the work in accordance with the approved schedule or the failure of the Contractor to meet the Contract Documents completion dates or the failure of the Contractor to Schedule and coordinate the work of Contractor's own trades and subcontractors or to coordinate with other Separate Contractors.

54.7 The OCFA will not be responsible for the acts or omissions of the Contractor, or any subcontractor, or any Contractor's or subcontractor's agents or employees, or any other persons performing any of the work.

54.8 The Project Manager has the authority to disapprove or reject work on behalf of the OCFA when, in the Project Manager's opinion, the work does not conform to the Contract Documents. Whenever, in the Project Manager's reasonable opinion, it is considered necessary or advisable to ensure the proper implementation of the intent of the Contract Documents, the Project Manager has the authority to require special inspection or testing of any work in accordance with the provisions of the Contract Documents whether or not such work shall then be fabricated, installed, or completed.

54.9 The Project Manager has the authority to require special inspection or testing of the work. However, neither the Project Manager's authority nor any decision made by the Project Manager in good faith whether to exercise or not to exercise such authority shall give rise to any duty or responsibility of the OCFA to the Contractor, or any subcontractor, or any of their agents, or employees, or any other person performing any portion of the work.

54.10 The Project Manager has the authority and discretion, but not the obligation, to call, schedule, and conduct job meetings to be attended by the Contractor and representatives of Contractor's subcontractors, to discuss such matters as safety, procedures, progress, problems, and scheduling.

54.11 The Project Manager will establish procedures to be followed for processing all submittals, Change Orders, Progress payments, other project reports, documentation, and test reports.

54.12 The Project Manager will review all requests for changes and shall implement the processing of Change Orders including application for extensions of time.

54.13 The Project Manager will review and process all Progress Payment Requests by the Contractor including Final Progress Payment Requests.

54.14 Nothing contained in the Project Manual shall create any contractual relationship between Project Manager and the Contractor.

54.15 Except as otherwise provided in the Project Manual, and until the Contractor is notified in writing to the contrary, all actions to be taken by, all approvals, notices, consent, directions and instructions to be given by, all notices and other matters to be delivered to, all determinations and decisions to be made by and, in general, all other action to be taken by, or given to, OCFA shall be taken, given and made by, or delivered or given to, Project Manager in the name of and on behalf of OCFA. Only those so designated are authorized to grant on behalf of OCFA any approval, consent or waiver with respect to the Project Manual or the Work, or to otherwise act for OCFA in any capacity whatsoever.

54.16 The Contractor shall not be relieved of its obligations to perform the Work in accordance with the Project Manual either by the activities or duties of the Project Manager in its administration of the Contract, including, without limitation, by any inspections or tests required, or by approvals or other similar action with regard to shop drawings or submittals (of any type), or by the activities of persons other than the Contractor with respect to the Project. Further, notwithstanding the fact that a dispute, controversy or other question may have arisen between the parties hereto relating to the execution or progress of the Work, the interpretation of the Project Manual, the payment of any monies, the delivery of any materials or any other matter whatsoever, the Contractor shall not be relieved of its obligations to pursue the Work diligently under the Project Manual pending the determination of such dispute, controversy, or other question.

54.17 OCFA reserves the right, but assumes no duty, to establish and enforce standards, and to change the same from time to time, for the safety and protection of persons and property, with which the Contractor shall comply, and to review the efficiency of all protective measures taken by the Contractor. The exercise of or failure to exercise any or all of these acts by OCFA shall not relieve the Contractor of its duties and responsibilities under the Project Manual, and OCFA shall not thereby assume, nor be deemed to have assumed, such duties or responsibilities of the Contractor.

## 55 CONTRACTOR

55.1 Composition: If the Contractor hereunder is comprised of more than one legal entity, each such entity shall be jointly and severally liable hereunder.

55.2 Examination of Plans, Specifications, and Site of Project: In addition to the representations and warranties contained in the Contract, the Contractor acknowledges that prior to execution of the Contract it has thoroughly reviewed and inspected the Project Manual, and satisfied itself regarding any error, inconsistency, discrepancy, ambiguity, omission, insufficiency of detail or explanation. OCFA shall not be responsible for any costs, nor liable to the Contractor for any damage, resulting from any such matter that the Contractor reasonably should have discovered. The Contractor shall perform no portion of the Work at any time which is not as provided or specified in the Project Manual or, where required, shop drawings, product data, or samples, for such portions bearing the Design Professional's appropriate action stamp. Work performed in violation of this provision shall be at the Contractor's risk

55.3 Contractor Certification: Contractor certifies and agrees that all the terms, conditions, and obligations of the Project Manual, the location and condition of the Site, and the conditions under which the work is to be performed have been thoroughly reviewed and investigated and Contractor enters into this Contract based upon Contractor's review and investigation of all such matters. Contractor certifies and agrees that Contractor is in no way relying upon

any opinions or representations of OCFA or the OCFA's officers, employees, agents, and consultants, including but not limited to, the Project Manager and the Design Professional.

55.4 Preparation of Documents: The Contractor shall carefully review and where appropriate or as may be required in the Scope of Work or at the direction of the Project Manager prepare drawings, specifications, and other instructions and shall at once report to Project Manager any error, inconsistency, or omission which Contractor may discover. Except as otherwise specifically provided hereinafter under warranties, the Contractor shall not be an agent for the OCFA.

55.5 Superintendence: The Contractor shall maintain on the site, during all construction activity, a competent superintendent and any necessary assistants, all satisfactory to the Project Manager. The superintendent shall not be changed except with the consent of the Project Manager, unless the superintendent proves to be unsatisfactory to the Contractor and ceases to be in his employ, in which case he/she shall be replaced immediately and in no case more than 24 hours with a superintendent acceptable to the Project Manager. The superintendent shall represent the Contractor and all directions given to the superintendent shall be as binding as if given to the Contractor. The Contractor shall provide Project Manager with complete work history profiles of management staff associated with this Project for Project Manager's review.

55.6 Licenses and Certificates: The Contractor represents and warrants that it has all necessary licenses and permits required by the laws of the United States, State of California, County of Orange, and any local jurisdiction, and all other appropriate governmental agencies, and agrees to maintain these licenses and permits in effect for the duration of this Contract. Further, Contractor warrants that its employees, agents, and contractors and subcontractors shall conduct themselves in compliance with all applicable laws and licensure requirements now in effect or as subsequently enacted or modified, as promulgated by any local, state, or federal governmental entities, including, without limitation, compliance with laws applicable to non-discrimination, harassment, and ethical behavior. Contractor shall notify the Project Manager immediately and in writing of its inability to obtain or maintain, irrespective of the pendency of any appeal, any such permits, licenses, approvals, certificates, waivers, and exemptions. Such inability shall be cause for termination of this Contract.

55.7 Materials and Equipment: The Contractor shall cause all materials and equipment to be delivered to the Site in accordance with any schedule or schedules therefore established from time to time and approved by Project Manager and, in any event, in a manner which will assure the timely progress and completion of the Work but will not encumber the Site unreasonably. Materials delivered to the Site for incorporation in the Work shall not be removed from the Site without the consent of Project Manager. The Contractor shall give, or shall require its Subcontractors to give, full and accurate quality, performance and delivery status reports, in a form satisfactory to Project Manager, regarding any materials and equipment, or such other data with respect thereto as may be requested by Project Manager, and shall obtain for Project Manager the written assurances of any manufacturer that its material or equipment is designed, and appropriate, for the use intended. The Contractor warrants to OCFA that all materials and equipment furnished under this Contract shall be new unless otherwise specified in the Project Manual and that all Work shall be of good quality, free from faults and defects and in conformance with the Project Manual. All Work not so conforming to these standards may be considered defective. All warranties and guarantees from Subcontractors (including, without limitation, manufacturers) shall be assignable to OCFA regardless of whether it is so stated therein, and the Contractor agrees to assign all such warranties and guarantees to the OCFA.

55.8 Completion Schedule: The Contractor shall prepare and submit, for Project Manager's approval, a Construction Schedule for the work which shall provide for expeditious and practicable execution of the work for completion within the Contract Time. This schedule shall be coordinated with the entire Project Construction Schedule to the extent required by the Contract Documents.

55.9 Reports by Contractor: Daily reports of the site and construction activities shall be provided to Project Manager. The reports shall follow the OCFA approved format including, but not limited to, information regarding trades at work, manpower, weather conditions, construction progress, and solutions to problems.

55.10 Contractor Responsibility: The Contractor shall supervise and direct the Work, using its best skill and attention. The Contractor shall be solely responsible for all construction means, methods, techniques, sequences, coordination, scheduling and procedures, for all cleanup and for all safety and weather precautions and programs, in connection with the Work. Contractor shall be solely responsible for the work and the Project as described in the Contract Documents. Contractor shall have complete control over the construction methods, techniques, and procedures, except as may be specifically provided in the Contract Documents. Contractor shall, at its sole cost and expense, perform all labor and services and furnish all material, tools, appliances, and equipment necessary and proper for performing and completing the Work of the Project in strict compliance with the terms and conditions of the Project Manual. Contractor shall provide all labor, materials, and equipment in conformity with the Project Manual and other directions as may be provided by the Project Manager. Contractor shall, at its sole cost and expense, prepare and fully comply with all provisions of the Quality Assurance/Quality Control Program as provided in the Project Manual.

55.11 Ongoing Oversight: Contractor shall keep itself continuously informed of the progress of the Work and the Related Work and will attend all meetings related to the Work and the Related Work as specified in the Project Manual and as identified in the Contractor's Construction Schedule. Contractor further agrees to work in a prompt, efficient, expert, and diligent manner and to furnish sufficient manpower to complete the Work in accordance with the Contractor's Construction Schedule. Contractor shall prosecute the Work diligently to completion. Contractor shall be responsible for the coordination and scheduling of all Work and the Related Work.

55.12 Ongoing Self-Inspection: Contractor shall, at its sole cost and expense, inspect its work to determine strict conformance to the requirements of the Project Manual. (This obligation of the Contractor is in addition to the Contractor's obligations to make repairs or to remedy deficient or unacceptable work as may be required under this Contract or any other provision of the Project Manual.) If some of the work performed on the Project does not comply with the requirements of the Project Manual, Contractor shall repair or replace such defective work at its sole cost and expense. Contractor shall gain no protection or right of reliance on the Project Manager's or Fire Chief's inspection of the work. If it is determined that the Project Manager or Fire Chief inspected work and failed to call defects or non-conforming items to the attention of Contractor, the OCFA shall not be deemed to have waived the requirements of the Project Manual or accepted the work.

55.13 Monitoring and Compliance: The Project Manager shall, at all times, have safe access to the Project site and its related work during its construction, and shall be furnished with every reasonable facility for ascertaining that the materials and the workmanship are in accordance with the requirements and intentions of Contract Documents. All work done and all materials furnished shall be subject to Project Manager inspection. In the event the Project Manager finds or determines that the work or material are not in accordance with

the requirements and the intentions of the Contract Documents, the Project Manager shall issue a Non-Conformance Notice. Upon receipt of a Non-Conformance Notice the Contractor shall provide a written Response to the Non- Conformance Notice within five (5) working days after receipt of the Notice. The Contractor's response shall detail either (a) why Contractor believes that the work was performed in accordance with the Project Manual or (b) what corrective action Contractor intends to take, at its sole cost and expense, to correct the non-conforming work. If Contractor disputes issuance of the Notice, the Project Manager has five- (5) working days in which to respond by either (a) withdrawing the Notice of Non-Conformance or (b) directing the Contractor to correct the work. Such determination of the Project Manager shall be final and conclusive of the matter. If directed to correct the work, Contractor shall do so within five (5) working days after receipt of such direction from the Project Manager, or such other time as may be agreed in writing from the Project Manager.

55.14 Inspectors: In addition to the Project Manager, inspectors of Local Jurisdictions are authorized to enforce strict compliance with the terms and conditions of the Contract and the Project Manual and to determine the acceptability of materials and workmanship. Inspectors are authorized to reject work or materials if they determine that such work or materials do not conform to the requirements of the Contract and the Project Manual. Whenever an inspector determines that some work installed by the Contractor, or any Subcontractor or supplier at any tier does not conform to the requirements of the Contract, a Notice of Non-Conformance will be issued to record this determination. In the event of a dispute between the Contractor and an inspector concerning non-conforming work, the Contractor shall pursue the issue in accordance with the requirements of Subsection M above this Section 1.03 of this contract, relating to Non-Conforming Work. Inspectors other than the Project Manager are not authorized to issue or direct changes to the requirements of the Contract. In the event that the Contractor believes some direction given by an inspector does constitute a change to the requirements of the Contract, Contractor shall within two (2) days provide written notice to the Project Manager detailing the direction given, by whom, when and under what circumstances, and why the Contractor believes that such direction constitutes a change to the requirements of the Contract. Failure to provide such written notice to the Project Manager within the specified timeframe shall constitute a waiver of claim with respect to the direction received by the Contractor.

55.15 Remedy and Repair of Work: The inspection of the work or materials shall not relieve the Contractor of any of the Contractor's obligations to fulfill the Construction Contract as prescribed. Work and materials not meeting the requirements shall be made good, and unsuitable work or materials may be rejected, notwithstanding that the work or materials have been previously inspected by the Project Manager or that payment therefor has been included in a progress payment. All work which has been rejected as indicated in a Non-Conformance Notice shall be remedied, or removed and replaced by the Contractor in an acceptable manner, and no compensation will be allowed to the Contractor for the removal, replacement or remedial work. Payment shall not be made on any portion of the work for which a Non-Conformance Notice has been issued and the work not corrected to the satisfaction of the Project Manager.

55.16 Failure to Comply: Upon failure of the Contractor to comply promptly with any order of the Project Manager made under Paragraphs L, M, N, and O above, the Project Manager, with the approval of the Fire Chief, may cause rejected or unauthorized work to be remedied, removed, or replaced, and to deduct the costs from any moneys due or to become due the Contractor.

55.17 Contactor Liabilities: The Contractor shall be responsible to OCFA for the acts and omissions of its employees. The Contractor shall be held responsible for all damages

resulting from its employees or its subcontractors or agents from all errors, omissions, or negligence in the performance of the work and completion of the Project.

55.18 Deficiencies in Contract Documents: Contractor covenants and agrees that Contractor, its employees, agents, subcontractors, and suppliers have an affirmative duty and obligation to promptly disclose to the Project Manager any deficiency, error, or inconsistency in the Contract Documents and any of the plans and specifications contained therein, so that Project Manager, the OCFA, and the Design Professional can affect any required or necessary modification or clarification thereof in a timely and cost effective manner. In this regard and in furtherance of the Contractor's obligations, the Contractor agrees not to take advantage of errors or omissions in the Project Manual. It is the duty of the Contractor to promptly notify the Project Manager in writing of any design, materials, or specified method that the Contractor believes may prove defective or insufficient. If the Contractor believes that a defect or insufficiency exists in design, materials, or specified methods and fails to promptly notify the Project Manager in writing of this belief, the Contractor thereby waives any right to assert that defect or insufficiency in design, materials, or specified method at any later date in any legal or equitable proceeding against the OCFA, or in any subsequent arbitration or settlement conference between the OCFA and the Contractor. The Project Manager, on receipt of any such notice, will promptly investigate the circumstances and give appropriate instructions to the Contractor. Until such instructions are given, any work done by the Contractor after the Contractor becomes aware that a defect or insufficiency exists in design, materials, or specified method which is directly or indirectly affected by such alleged defect or insufficiency in design, materials, or specified method will be at the Contractor's own risk and the Contractor shall bear all costs arising therefrom.

55.19 Ongoing Duty to Disclose: If the Contractor, either before commencing work or in the course of the work, finds any discrepancy within the Project Manual, or between the Project Manual and the physical conditions at the Site, or finds an error or omission on the Plans, Specifications, or in any survey, the Contractor shall promptly notify the Project Manager in writing of such discrepancy, error, or omission. If the Contractor observes that the Project Manual is at variance with any applicable law, regulation, order, or decree, the Contractor shall promptly notify the Project Manager in writing of such conflict. The Project Manager, on receipt of such notice, will promptly investigate the circumstances and give appropriate instructions to the Contractor. Until such instructions are given, work done by the Contractor after the discovery of such error, discrepancy, or conflict which is directly or indirectly affected by such error, discrepancy, omission, or conflict will be at the Contractor's own risk and the Contractor shall bear all costs arising therefrom.

55.20 Duty to Coordinate: The Contractor shall be responsible for coordinating any work carried on at the Site by other parties or by the OCFA, including the Related Work, simultaneously with the Work. The compensation to be paid to Contractor under this Contract includes any costs which the Contractor may incur as a result of coordinating the Work with such other work, including the Related Work. In no case shall the Contractor be entitled to extra compensation from the OCFA for damages suffered as a result of work being carried on at the Site by other parties or the OCFA simultaneously with the construction work for this Project. Nevertheless, if such work results in a delay to the Contractor's work beyond reasonable time allocations afforded to such work and Related Work identified on the Contractor's Construction Schedule as approved by the Project Manager, the Contractor may be eligible for an extension of time as specified in this Contract.

55.21 Failure to Pay for Labor or Materials: If Contractor fails to pay for labor or materials when due, OCFA may settle such claims by making demand upon the surety to this Agreement. In the event of the failure or refusal of the surety to satisfy said claims, OCFA may settle any claims directly and deduct the amount of payments from the Contract price and any amounts

due to Contractor. In the event OCFA receives a stop notice from any laborer or material supplier alleging non-payment by Contractor, OCFA shall be entitled to deduct all of its costs and expenses incurred relating thereto, including but not limited to administrative and legal fees.

55.22 Compliance with Laws: The Contractor shall, at its cost and expense, comply with all Laws, as any may now exist or be hereafter changed or added. It shall be the responsibility of the Contractor to familiarize itself with all such Laws, and any performance of the Work by or on behalf of the Contractor which is not in compliance with the Laws shall be at the Contractor's sole risk and expense. The Contractor shall notify OCFA prior to execution of the Contract (and, without limiting the continuous duty of the Contractor to advise the OCFA) of any instances where the Contract Documents are, or where the Contractor believes the Contract Documents are, not in compliance with the Laws.

55.23 Ongoing Responsibility: Any work or material not specified in the Project Manual but which by fair implication, in the judgment of the Project Manager, should be included therein, shall be accomplished, furnished, or provided by the Contractor as part of the Project Manual.

55.24 Taxes, Fees, and Licenses: The Contractor shall pay, or cause to be paid, all import duties and sales, consumer, use, excise, value added and ad valorem taxes required to be paid in connection with the Work or upon materials, tools or equipment brought to the Site or used in the Work. If any of the foregoing taxes are not paid in a timely manner, OCFA may withhold the amount of any such taxes from any amounts owing to the Contractor under the Project Manual, submit the amount so withheld to the appropriate taxing authority on behalf of the Contractor or its Subcontractors or Sub-subcontractors and offset said amount against the Contract Sum. The Contractor shall secure and pay for all governmental fees, permits and licenses which OCFA is not specifically required to provide and pay for under the Project Manual.

55.25 Tests: If the Project Manual, or any laws, ordinances, rules, regulations, or any orders or decrees of any public or quasi-public authority having jurisdiction, or common practice in the industry, require or dictate that the Contractor have any portion of the Work inspected, tested or approved, the Contractor shall advise Project Manager in a timely manner (in writing, if practicable) of its readiness and of the date arranged so that Project Manager may observe such inspection, testing or approval. The Contractor shall bear all costs of such inspections, tests and approvals except as otherwise specified. Project Manager may require any special inspection, testing or approval of the Work not included under above, or any more stringent inspection, testing or approval thereof, in which event it shall instruct the Contractor to order such inspection, testing or approval, and the Contractor shall advise Project Manager in a timely manner (in writing, if practicable). If such inspection or testing reveals any failure of the Work or the performance thereof to comply with the more stringent of: (a) the requirements of the Project Manual; (b) applicable industry standards; or (c) applicable laws, ordinances, codes, rules, regulations or orders or decrees of any public or quasi-public authority having jurisdiction, or reveals any defect in the Work, the Contractor shall bear the costs of such inspection or testing and all costs to correct the Work to the satisfaction of Project Manager, which, if incurred by OCFA, may be offset by OCFA against any amounts then or thereafter due to the Contractor. If such inspection or testing proves that the Work was performed properly, OCFA shall bear the costs of such inspection or testing. Required certificates of inspection, testing or approval shall be secured by the Contractor and promptly delivered by it to the Project Manager.

55.26 General: The duties and responsibilities of the Contractor as set forth in this Section 1.03 are in addition to, and not in lieu of, other duties and responsibilities of the Contractor enumerated elsewhere in the Project Manual.

# 56 - RESPONSIBILITIES OF THE CONTRACTOR

## 56.1 CONTRACTOR'S EQUIPMENT AND FACILITIES.

### 56.1.1 General.

**56.1.1.1 Conduct of the Work**. The Contractor shall behave, at all times, in a courteous, professional manner. While on site, or entering or exiting the site, there shall be no extraneous activity that might cause disruption to the Project site, surrounding areas, or residents. Failure to comply may result in the suspension of work, or removal of contractor's staff from the Project.

**56.1.1.2. Noise Levels**. A noise level limit of 86 dbA Max at a distance of fifty feet (50') shall apply to all construction equipment on or related to the job whether owned by the Contractor or not. The use of excessively loud warning signals shall be avoided except in those cases required for the protection of personnel. In addition to those requirements, all work shall comply with all applicable noise ordinances at all times.

## 56.2 COOPERATION AND COLLATERAL WORK.

The Contractor is advised as to the possibility of other construction projects within the proposed construction zone by the OCFA, other governing agencies or private enterprises. In the event of such projects, the Contractor shall coordinate with the applicable parties as to the extent of any time required to complete their work and shall schedule its work and conduct its operations so as to permit access and time as required for the concurrent work. The Contractor shall immediately notify the Engineer in the event of a delay in scheduling caused solely by this concurrent work. Payment for the above, if any, shall be deemed as included in the items of work as shown on the proposal bid sheet and no additional compensation will be allowed.

## 56.3 PROJECT SITE MAINTENANCE.

### 56.3.1. Cleanup and Dust Control.

The Contractor shall keep adjacent properties clean and free of rubbish and debris in a timely manner as necessary and/or as directed by the Engineer.

The Contractor shall implement effective handling, storage, usage, and disposal practices to control material pollution and manage waste and nonstormwater at the job site before they come in contact with storm drain systems and receiving waters.

#### 56.3.1.1 Construction Cleaning

The Contractor shall:

(a) Initiate and maintain a daily program to prevent accumulation of debris on-site and along access roads and haul routes. Maintain areas under Contractor's control free of waste materials, debris, weeds 6" high, and rubbish. Maintain site in a clean and orderly condition.
(b) Provide suitable covered containers for deposit of debris and rubbish. Dispose of accumulation of extraneous materials, prohibit overloading of trucks to prevent spillages on access and haul routes and provide daily inspection of haul routes to enforce requirements.
(c) The Contractor shall supply self-loading motorized street sweepers equipped with a

functional water spray system as part of his daily program.

(d) Schedule at a minimum, weekly collection and disposal of debris. Provide additional collections and disposals of debris whenever the weekly schedule is inadequate to prevent accumulation.

The Contractor shall remove debris from closed or remote spaces prior to closing the space, control cleaning operations to minimize dust and other particulates and immediately remove clay and earth which adhere to the paved surface of the roadway. Remove by hand scraping, washing, sweeping, and/or other method(s) which will leave a clean non-skid surface without impairing, injuring or loosening the surface.

The Contractor is required to control dust throughout the life of the Contract. The control may be required by job conditions or Engineer. In any case, the Contractor shall use water or other effective means to control the dust. No chemical agents may be used without written authorization from the Agency. The Contractor shall be solely responsible for safety problems, accidents or any other complications or claims arising from inadequate dust control.

No separate payment will be made for any work performed or material used to control dust resulting from the Contractor's performance of the work, or by public traffic, either inside or outside the right-of-way. Full compensation for such dust control will be considered as included in the price paid for the various items of work involved.

No separate payment will be made for any work performed or material used in cleaning the Project. Full compensation for such cleaning shall be considered as included in the price paid for the various items of work involved and no additional compensation will be allowed therefore.

## 57 Subcontracts

57.1 Licensed Subcontractors: The Contractor shall comply with the provisions of the Subletting and Subcontracting Fair Practices Act (the "Act") (Public Contracts Code Section 4100 et seq.). The Contractor shall not terminate the employment of a Subcontractor or Sub-subcontractor engaged in the Work prior to the expiration of that subcontract without complying with the Act. The Contractor shall in all respects select the subcontractors in the manner provided under law. Each subcontractor selected for the work shall be licensed in the State of California in the subcontractor's particular field.

57.2 Transactions: Transactions with subcontractors shall be made through the Contractor. OCFA may assign to the Contractor any contracts or purchase orders entered into between OCFA and any other person or organization in any way related to the Project or the Work, at any time, in which event the Contractor shall assume full responsibility for such person or organization and its portion of the Work as if such person or organization was originally a Subcontractor. Such assignment may occur by Change Order or other Modification to the Contract, and any increase in the Contract Sum shall be governed by Section 01200 of the Project Manual.

57.3 Writing: All subcontracts and sub-subcontracts shall be in writing. Each subcontract and sub-subcontract shall contain a reference to this Contract and shall incorporate the terms and conditions hereof to the full extent applicable to the portion of the Work covered thereby. Each Subcontractor must agree, for the benefit of OCFA, to be bound by, and to require each of its Subcontractors to be bound by, such terms and conditions to the full extent applicable to its portion of the Work.

57.4 Responsibility: The Contractor shall be fully responsible to the OCFA for the acts and omissions of subcontractors and all persons directly or indirectly employed by them as Contractor is for the acts and omissions of Contractor and of persons directly or indirectly employed by

Contractor and shall pay each subcontractor promptly the amount allowed Contractor on account of such subcontractor's work to the extent of such subcontractor's interest therein.

57.5 Incompetent or Disorderly Conduct: If any Subcontractor or person employed by the Contractor shall appear to the Project Manager to be incompetent or to act in a disorderly or improper manner, such person shall be discharged immediately on the request of the Project Manager, and that person shall not again be employed on the work.

57.6 Mandatory Subcontract Terms: Each subcontract shall provide for its termination by the Contractor if, in Project Manager's opinion, the Subcontractor fails to comply with the requirements of the Project Manual insofar as the same may be applicable to its portion of the Work; and each Subcontractor shall be required to insert a similar provision in each of its sub-subcontracts. In the event of any such failure by a Subcontractor or Sub-subcontractor to comply with the requirements of the Project Manual, such Subcontractor or Sub-subcontractor, as the case may be, shall be removed immediately from the Work and shall not again be employed on the Work. The Contractor shall be responsible for all costs and expenses arising out of, and shall indemnify OCFA on account of, any such failure by a Subcontractor or Sub-subcontractor (specifically including, without limitation, a failure to pay for labor (including applicable fringe benefits) or materials).

57.8 Contractual Relations: Nothing contained in this Contract shall create any contractual relationship between OCFA or the Project Manager or the Design Professional on the one hand, and a subcontractor on the other.

## 58 Drawings And Specifications

58.1 Checking: The Contractor, as part of this Contract, shall agree not to take advantage of errors or omissions in the Contract Documents, including any plans and specifications thereto. It is the duty of the Contractor to promptly notify the Project Manager in writing of any design, materials, or specified method that the Contractor believes may prove defective or insufficient. If the Contractor believes that a defect or insufficiency exists in design, materials, or specified methods and fails to promptly notify the Project Manager in writing of this belief, the Contractor thereby waives any right to asset that defect or insufficiency in design, materials, or specified method at any later date in any legal or equitable proceeding against the OCFA, or in any subsequent arbitration or settlement conference between the OCFA and the Contractor. The Project Manager, on receipt of any such notice, will promptly investigate the circumstances and give appropriate instructions to the Contractor. Until such instructions are given, any work done by the Contractor after the Contractor becomes aware that a defect or insufficiency exists in design, materials, or specified method which is directly or indirectly affected by such alleged defect or insufficiency in design, materials, or specified method will be at the Contractor's own risk and the Contractor shall bear all costs arising therefrom.

58.2 Discrepency in Contract Documents: If the Contractor, either before commencing work or in the course of the work, finds any discrepancy within the Contract Documents, or between the Contract Documents and the physical conditions at the Project site, or finds an error or omission on the plans, specifications, or in any survey, the Contractor shall promptly notify the Project Manager in writing of such discrepancy, error, or omission. If the Contractor observes that the Contract Documents is at variance with any applicable law, regulation, order, or decree, the Contractor shall promptly notify the Project Manager in writing of such conflict. The Project Manager, on receipt of such notice, will promptly investigate the circumstances and give appropriate instructions to the Contractor. Until such instructions are given, work done by the Contractor after the discovery of such error, discrepancy, or conflict which is directly or indirectly affected by such error, discrepancy, omission, or conflict will be at the Contractor's own risk and the Contractor shall bear all costs arising therefrom.

58.3 Implication: Any work or material not specified in the Contract Documents but which by fair implication, in the judgment of the Project Manager, should be included therein, shall be accomplished, furnished, or provided by the Contractor as part of the Contract Documents.

58.4 Precedence: Figures marked on drawings shall in general be followed in reference to scale measurements. Large scale drawings shall in general govern small scale drawings. Specifications and schedules shall govern over drawings. The Contractor shall compare all drawings and verify the figures before laying out the work and will be responsible for any errors. When measurements are affected by conditions already established, the Contractor shall take measurements notwithstanding the giving of scale or figure dimensions in the drawings. Anything mentioned in the specifications and not shown on the drawings, or shown on the drawings and not mentioned in the specifications, shall be of like effect as if shown or mentioned in both. In case of discrepancy in the Plans or Specifications, the matter shall be immediately submitted to the Project Manager, without whose decision Contractor shall not adjust said discrepancy save only at Contractor's own risk and expense. The decision of the Project Manager shall be final.

58.5 Shop Drawings: The Contractor shall establish, implement, and supervise the submission of shop drawings and other submittals (of any type) in accordance with the Schedule and any Milestones. The Contractor shall note any variances between any such shop drawings or other submittals and the Project Manual for the benefit of OCFA at the time of submission. No approval or other similar action regarding any such submission shall be binding in any way upon OCFA.

58.6 Drawings and Specifications at the Site: The Contractor shall keep available at the site for ready reference a complete set of all contract drawings, details, supplementary drawings and approved shop drawings, a complete copy of the specifications with all addenda, bulletins, amendments, and copies of Project correspondence. The Contractor shall maintain on the site a complete "as built" record set of prints. In addition, the Contractor shall keep on the site as required a copy of each manufacturer's current printed recommendations. Contractor shall also submit a copy to the Project Manager.

58.7 Deviations: Deviations from the drawings and the dimensions therein given, whether or not error is believed to exist, shall be made only after written authority is obtained from the Project Manager.

## 59 Divisions Of The Specifications

59.1 For convenience, the work as described in the Contract Documents are arranged in several divisions and sections, but such separations shall not be considered as the limits of the work required for any subcontract or trade: the terms and conditions of such limitations are wholly between the Contractor and his subcontractors, and the OCFA will not be responsible for any division of work by subcontractors. The Contractor will be solely responsible for all subcontract arrangements of work regardless of the location of provisions in the specifications.

59.2 Schedules of work included in the sections, where listed, are given for convenience only, and shall not be considered as a comprehensive list of items or work necessary to complete the work of any section.

59.3 Where devices or items or parts thereof are referred to in the singular, it is intended that such reference shall apply to as many soon devices, items, or parts as are required to properly complete the work.

59.4 Each section of the specifications is covered by applicable requirements of the Contract Documents and other related sections as if therein written.

## 60 Site Conditions

60.1 Existing Site Conditions: Information respecting the site of the work given in drawings or specifications has been obtained by OCFA's representatives and is believed to be reasonably correct, but the OCFA does not warrant either the completeness or accuracy of such information, and it is the responsibility of the Contractor to verify all such information.

60.2 Changed Conditions: The Contractor shall promptly, and before such conditions are disturbed, notify the Project Manager in writing of:

60.2.1 Subsurface or latent physical conditions at the site differing materially from those indicated in the Contract Documents; or

60.2.2 Unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents. The Project Manager shall promptly investigate the conditions, and if, as a result, finds that such conditions do so materially differ and cause an increase or decrease in the Contractor's cost of, or the time required for performance an equitable adjustment shall be made and the Contract Documents modified in writing accordingly. Any claim of the Contractor for adjustment hereunder shall not be allowed unless Contractor has given notice as above required.

60.3 Public Utility Facilities on Project Site: Pursuant to Government Code, Section 4215, the Contractor shall be compensated for the costs of locating and repairing damage to public utility facilities on the Project site which was not due to failure of Contractor to exercise reasonable care, and removing or relocating main or trunk line utility facilities located on the Project site, if such work is required in the Contract Documents or the Project Manager. Such compensation shall also cover the cost of Contractor's equipment necessarily idled during such work. This provision shall not be deemed to require compensation when the presence of existing service laterals or appurtenances can be inferred from the presence of visible facilities such as buildings, meter and junction boxes, on or adjacent to the construction site. If the Contractor discovers such unidentified utility facilities during construction, Contractor shall immediately notify the Project Manager and the utility in writing.

60.4 Space at Site: The Contractor shall be allowed reasonable space at the site of the work as available and access thereto and shall confine Contractor operations to the space assigned. The work shall be done without interference with the ordinary use of the fire station. The Contractor shall cooperate with other Contractors of the OCFA and shall not commit or permit any act which will interfere with the performance of work by any other Contractor or employees of the OCFA whether at the site or not.

## 61 Conditions Affecting The Work

The Contractor shall be responsible for having taken steps reasonably necessary to ascertain the nature and location of the work, and the general and local conditions which can affect the work or the cost thereof. Any failure by the Contractor to do so will not relieve Contractor from responsibility for successfully performing the work without additional expense to the OCFA. The OCFA assumes no responsibility for any understanding or representations concerning conditions made by any of its officers or agents prior to the execution of the Contract Documents, unless such understanding or representations by the OCFA are expressly stated in the Contract Documents.

## 62 OCFA's Property On Site

All fixtures, facilities, equipment, vehicles, furniture, and all other personal property of the OCFA located at the job site which are removed in the course of construction of the Project remain the property of the OCFA unless express provision to the contrary is made in the Contract Documents, and the Contractor shall exercise reasonable care to prevent loss or damage to said property and shall deliver promptly such property to the place designated by the Project Manager.

## 63 Protection

63.1 The Contractor shall, throughout the performance of the Work, maintain adequate and continuous protection of all Work, all material and supplies, and temporary facilities against loss or damage from whatever cause, shall protect the property of OCFA and third parties from loss or damage from whatever cause, and shall comply with the requirements of OCFA and its insurers and with all applicable laws, codes, rules and regulations with respect to the prevention of loss or damage to property as a result of fire or other hazards.

63.2 The Project Manager may, but shall not be required to, make periodic patrols of the Site as a part of its normal security and safety program. In such event, however, the Contractor shall not be relieved of its aforesaid responsibilities and OCFA shall not assume same, nor shall it be deemed to have assumed, any responsibility otherwise imposed upon the Contractor by the Contract.

63.3 Until final acceptance of the Work by OCFA, the Contractor shall have full and complete charge and care of and, except as otherwise provided in this Subparagraph, shall bear all risk of loss of, and injury or damage to, the Work or any portion thereof (specifically including OCFA-furnished supplies, equipment or other items to be utilized in connection with, or incorporated in, the Work), materials, equipment, and supplies, from any cause whatsoever, subject to the limitations set forth below.

63.4 The Contractor shall rebuild, repair, restore, replace, and make good all losses of, and injuries or damages to, the Work or any portion thereof (specifically including OCFA-supplied, equipment or other items to be utilized in connection with, or incorporated in, the Work), material, equipment, and supplies before final acceptance of the Work. Such rebuilding, repair, replacement, or restoration shall be at the Contractor's sole cost and expense.

63.5 Contractor shall take proper safety and health precautions to protect the work, the workers, the public, and the property of others. Contractor shall comply with the provisions of the Construction Safety Orders issued by the State Division of Occupational Safety & Health. Contractor shall also be responsible for all materials delivered and work performed until completion and acceptance of the entire construction work, except for any completed unit of construction thereof which theretofore may have been accepted.

63.6 The Contractor shall maintain continuously adequate protection of all work from damage and shall protect the OCFA's property from injury or loss arising in connection with the Contract Documents. Contractor shall make good any such damage, injury, or loss, except such as may be directly due to errors in the Contract Documents or caused by agents or representatives of the OCFA. Contractor shall adequately protect adjacent property as provided by law and the Contract Documents, and shall maintain reasonable security of the site at all times, if necessary. Contractor shall limit visitors to the site to those necessary for construction and inspections. Visitors for other purposes shall be referred to the Project Manager Contractor's and subcontractors' employees shall possess mans of identification at all times as required by the Project Manager while on the job site.

63.7 In an emergency affecting the safety of life or of the work or of adjoining property the Contractor, without special instruction or authorization from the OCFA, is hereby permitted to act at Contractor's discretion to prevent such threatened loss or injury. Contractor shall so act if directed or instructed by the Project Manager. Any dispute as to compensation claimed by the Contractor on account of emergency work shall be determined by agreement as hereinafter set forth.

63.8 The Project Manager may notify the Contractor of any noncompliance with the foregoing provisions and the action to be taken. The Contractor shall, after receipt of such notice, immediately correct such conditions. Such notices, when delivered to the Contractor or Contractor's representative at the site of the work, shall be deemed sufficient for said purpose. Failure of receipt of such notice from the Project Manager shall not relieve the Contractor of responsibility.

63.9 If the Contractor fails or refuses to comply promptly, the Project Manager my issue an order stopping all or part of the work until satisfactory corrective action has been taken. No part of the time lost due to any such stop order shall be made the subject of a claim for extension of time or for excess costs or damages to the Contractor. The Contractor will be responsible for ensuring that his subcontractors comply with the provisions of this Section 63.

63.10 Surface or Subsurface water or other fluid shall not be permitted to accumulate in excavations or under the structures. Should such conditions develop or be encountered, the water or other fluid shall be controlled and suitably disposed of by means of temporary pumps, piping, drainage lines and ditches, dams or other methods approved in writing by OCFA. The proposed location and coordination of temporary channels and conduits conducting accumulated water from the Site shall be submitted to Project Manager for its prior written approval. All such work shall be done at the sole expense of the Contractor, and in accordance with the Federal National Pollutant Discharge Elimination System (NPDES) and the NPDES General Construction Permit which includes the Contractor's Storm Water Pollution Prevention Plan (SWPPP) pursuant thereto.

## 64 **Payments**

The OCFA shall make payments upon the contract price in accordance with the Contract Documents.

## 65 **Assignment**

The Contract Documents, and any portion thereof, may not be assigned by the Contractor. Claims for monies due or to become due the Contractor from the OCFA under the Contract Documents may be assigned, with the written consent of the Board of Directors, to a bank, trust company, or other financing institution and may thereafter be further assigned or reassigned to any such institution. To effect such assignments, the Contractor, or Contractor's assignee, shall submit a written request to the Board of Directors enclosing a letter from the proposed assignee indicating that it will accept such assignment. Any attempted assignment contrary to provisions of this paragraph shall be void.

## 66 **Other Contracts**

The Board of Directors may undertake or award other contracts for additional work or other work, and the Contractor shall fully cooperate with such other contractors and OCFA employees and carefully fit Contractor's own work to such additional work as may be directed by the Project Manager. The Contractor shall not commit or permit any act which will interfere with the performance of work by any other contractor or by OCFA employees.

## 67 Warranty / Warranty Work

67.1 One-Year Warranty: The Contractor agrees to maintain and guarantees for a period of twelve (12) months from the date of the issuance of the certificate of acceptance of the Project or the issuance of a temporary certificate of occupancy as requested by the Fire Chief in the Fire Chief's sole discretion, whichever event occurs first, (and for such additional or extended periods for portions of the Work as provided in the Project Manual), that the completed work is free from all defects due to faulty materials, equipment or workmanship and that Contractor shall promptly make whatever adjustments or corrections which may be necessary to cure any defects, including repairs or any damage to theSite, Project, Work, or any system installed therein resulting from such defects. .

67.2 Warranty Work / Normal Response Time: In the event of failure to comply with the above-mentioned conditions within one (1) week after being notified in writing, the OCFA is hereby authorized to proceed to have the defects remedied and made good at the expense of the Contractor who hereby agrees to pay the cost and charges therefore immediately on demand.

67.3 Warranty Work / Emergency Response Time: If in the opinion of the OCFA, defective work creates a dangerous condition, affects the OCFA's essential operations / essential use of the facility, affects the safety or preservation of property or personnel, or requires immediate correction or attention to prevent further loss to the OCFA, the Contractor shall be required to take corrective action within 24 hours after personal or telephonic notice by the OCFA's Property Management Section. If the Contractor cannot be contracted or does not comply with the OCFA's request for correction within 24 hours (or a reasonable time as determined by the OCFA), the OCFA may, notwithstanding the provisions of this Section 67, proceed to make such correction, the cost of which shall be charged against the Contractor.

67.4 Failure to Take Corrective Action: Failure by the Contractor to take corrective action as specified above shall constitute a material breach of this agreement and will result in the OCFA taking whatever corrective action it deems necessary including termination of this agreement. All costs resulting from such action by the OCFA will be claimed against Contractor or, if necessary, the Contractor's Performance Bond. The Contractor's Performance Bond shall remain in full force and effect through the warranty period.

67.5 Alternative Remedy: In the event that the Contractor fails to make adjustments, repairs, corrections or other work made necessary by such defects, or to properly maintain and service the Project, the OCFA may do so and charge the Contractor the cost incurred. The performance bond shall remain in full force and effect through the guarantee period or, at the option of the Contractor, a warranty bond in the amount of one hundred percent of the Contract price may be substituted for the performance bond. Such warranty bond must be in a form approved by OCFA General Counsel, be issued by a surety authorized by the State Insurance Commissioner to transact business in the State of California as a surety, and must have and maintain, throughout the warranty period, at least an "A-" policyholder's rating, or better, and a financial rating of "Class VII," or better, in accordance with the most current A.M. Best's Rating Guide.

67.6 All Inclusive Remedies: The Contractor' obligations under this clause are in addition to the Contractor's other express or implied assurances of this Contract, Project Manual, or state law and in no way diminish any other rights that the OCFA may have against the Contractor for faulty materials, equipment, or work.

## 68 Extra Work And Changes

68.1 The Contract price as set forth in the Contract and the Contractor's Bid, includes compensation for all work performed by Contractor, unless Contractor obtains a written change order signed by the Project Manager specifying the exact nature of the extra work and the amount of extra compensation to be paid all as more particularly set forth in this Section 1.16. OCFA shall extend the time fixed in the Contract Documents for completion of the Project by the number of days reasonably required for Contractor to perform the extra work only if Contractor is actually delayed in the performance of any item of the Project on the critical path by:

68.1.1 Any act or neglect of OCFA, Project Manager, Design Professional, or any employee, agent, or representative of OCFA; or
68.1.2 Combined action of workers, either those employed on the Project or in any industry essential to the conduct of the Work not caused by or resulting from default, negligence, or collusion on the part of Contractor or its Subcontractors of every tier; or
68.1.3 Unusually severe weather conditions not reasonably anticipatable for that portion of the Site is located, based upon U.S. Weather Bureau climatological reports for the months included plus a report indicating average precipitation, temperature, etc. for the last ten (10) years from the nearest reporting station; or
68.1.4 Excusable Transportation Delays; or
68.1.5 Excusable Labor Disputes; or
68.1.6 Acts of God; or
68.1.7 National Emergency, declared by the President of the United States.

In the event one or more of the specific situations described above occurs, the Scheduled Completion Date may be extended by Change Order for a period not to exceed the length of such delay, provided that Contractor presents a written request to Project Manager, with demonstrated justification, for such time extension within five (5) days of the commencement of such delay. Failure to file such request within the time allowed shall be deemed a waiver of the claim by Contractor as determined by Project Manager. The decision of the Project Manager shall be final.

68.2 The Project Manager may, at any time, by written order, and without notice to the sureties, make changes in the drawings or specifications of the Contract Documents if within the general scope thereof. A change order shall also be any other written order (including direction, instruction, interpretation or determination) from the OCFA which causes any change, provided Contractor gives the OCFA written notice stating the date, circumstances and source of the order and that Contractor regards the order as a change order.

68.3 If any change under this Section 68 causes an increase or decrease in Contractor's actual direct cost or the time required to perform any part of the work under this Contract, whether or not changed by any order, the Project Manager shall make an equitable adjustment and modify the Contract in writing. Except for claims based on defective specifications, no claim for any change shall be allowed for any costs incurred more than 20 days before the Contractor gives written notice as required below. In the case of defective specifications for which the OCFA is responsible, the equitable adjustment shall include any increased direct cost Contractor reasonably incurred in attempting to comply with those defective specifications.

68.4 No extension of time shall be given unless the delay for which a request is made is included in those items for which an extension to the Scheduled Completion Date is appropriate pursuant to the provisions of this Section 68 and the Project Manager finds that such reason for the delay actually adversely affected the ability of the Contractor to complete the Project

by the Scheduled Completion Date or to complete a Milestone. Project Manager's decision will be conclusive on the parties to this Contract.

68.5 No claims by Contractor for additional compensation or damages for delays will be allowed unless Contractor satisfies the Project Manager that such delays were unavoidable and not the result of any action or inaction of Contractor and that Contractor took all available measures to mitigate such damages. The Project Manager's decision will be conclusive on all parties to this Contract.

68.6 No extension of the Scheduled Completion Date or the right on the part of Contractor to secure any such extension pursuant to this Section 68 shall prejudice any right OCFA may have under the Project Manual, or otherwise, to terminate this Contract.

68.7 The Contract Price includes compensation for all work performed by Contractor, unless Contractor obtains a written change order signed by the Project Manager specifying the exact nature of the extra work and the amount of extra compensation to be paid all as more particularly set forth in in this Section 68.

68.8 Project Manager may extend the Scheduled Completion Date by the number of days reasonably required for Contractor to perform the extra work, but only to the extent such extra work actually adversely affects the Scheduled Completion Date, as determined by Project Manager. The decision of the Project Manager shall be final.

68.9 The OCFA or the Fire Chief may order modifications or authorize change orders for any reason. Such modifications shall be reviewed, evaluated, and processed in the manner specified in this Section 68.

68.10 Project Manager may at any time, without notice to any surety, by written order designated or indicated to be a Class 1 or Class 2 Change Order, make any change in the work within the general scope of the Contract, including, but not limited to, changes in:

68.10.1 The Project Manual (including drawings and designs);

68.10.2 The time, method, or manner of performance of the work;

68.10.3 The OCFA-furnished facilities, equipment, materials, services, or site; or

68.10.4 Directing acceleration in the performance of the work.

68.11 Except as provided in this Section 68, no order, statement or conduct of the OCFA or its representatives, including, but not limited to the Fire Chief, Project Manager, or the Design Professional, shall be treated as a change under this Section 1.16 or entitle Contractor to an equitable adjustment.

68.12 If any change under this Section 68 causes an increase or decrease in Contractor's actual, direct cost or the time required to complete the Project or a Milestone under this Contract and Project Manual, whether or not changed by any order, the Project Manager shall make an equitable adjustment and the OCFA shall modify the Contract in writing. Except for Class 1 claims based on defective provisions of the Project Manual, no claim for any change under Section 1.16 shall be allowed for any costs incurred more than 15 days before the Contractor gives written notice as required in this Section 68. In the case of defective specifications for which the OCFA is responsible, the equitable adjustment shall include any increased direct cost Contractor reasonably incurred in attempting to comply with those defective specifications.

68.13 If Contractor intends to assert a claim for an equitable adjustment under this Section 68, it must, within fifteen (15) days after receipt of a written change order under this Section 68 or the furnishing of a written notice hereunder, submit a written statement to the Project Manager setting forth the general nature and monetary extent of such claim. Such claim shall contain the documentation and information as specified herein. The Project Manager may extend the 15-day period so long as the request for the extension is submitted within such 15-day period and only for good and justified cause. Project Manager's decision regarding any request for extension shall be final and binding on all parties.

68.14 Claim documentation shall conform to generally accepted accounting principals and all supporting documentation shall be cited by reference, photocopies, or explanation. Supporting documentation may include, but shall not be limited to, general conditions, general requirements, technical specifications, drawings, correspondence, conference notes, shop drawings logs, survey books, inspection reports, delivery schedules, test reports, daily reports, subcontracts, fragmentary schedules or time impact analyses, photographs, technical reports, requests for information, field instructions, and all other related records necessary to support Contractor's claim.

68.15 Supporting documentation of damages for each claim shall be cited, photocopied, or explained. Supporting documentation may include, but shall not be limited to, any or all documents related to the preparation and submission of the bid; certified, detailed labor records including labor distribution reports, material and equipment procurement records, construction equipment ownership cost records or rental records, Subcontractor or vendor files and cost records, service cost records, purchase orders, invoices, project as planned and as-built records, general ledger records, variance reports, accounting adjustment records, and any other accounting materials necessary to support Contractor's claim.

68.16 Each copy of the claim documentation shall be certified by a responsible office of the Contractor in accordance with the requirements of the Project Manual.

68.17 Should Contractor be unable to support any part of the claim and it is determined that such inability is attributable to falsity of such certification or misrepresentation of fact or fraud on the part of Contractor, the Contractor shall be liable to OCFA as provided for under California Government Code Section 12650 et seq.

68.18 Disputed work shall be performed as ordered in writing by the Project Manager, so long as the cost of such work is within the OCFA of the Project Manager as described above, so as to minimize the impact on, and delays to, the Work.

68.19 Costs which shall not be allowed or paid in Change Orders or claim settlements under this Contract include, but are not limited to, interest cost of any type other than those mandated by statute; claim preparation or filing costs; legal expenses; the costs of preparing or reviewing proposed Change Orders or change order proposals concerning change orders which are not issued by the OCFA; lost revenues; lost profits; lost income or earnings; rescheduling costs; costs of idled equipment when such equipment is not yet at the Site or has not yet been employed on the Work; lost earnings or interest on unpaid retainage; claims consulting costs; the costs of corporate officers or staff visiting the Site or participating in meetings with the OCFA; any compensation due to the fluctuation of foreign currency conversions or exchange rates; loss of other business; or any other cost identified as unallowable cost under the provisions of the Federal Acquisition Regulations.

68.20 No claim by Contractor for an equitable adjustment shall be allowed if made after final payment under this Agreement. Contractor hereby agrees to make any and all changes, furnish the materials and perform the work that OCFA or its Project Manager may require without

nullifying this Contract. Contractor shall adhere strictly to the Contract Documents unless a change therefrom is authorized in writing by the Project Manager, subject to the limitations contained herein. Under no condition shall Contractor make any changes to the Project, either in additions or deductions, without the written order of the OCFA or its Project Manager and the OCFA shall not pay for any extra charges made by Contractor that have not been agreed upon in advance in writing by the OCFA. Contractor shall submit immediately to the OCFA written copies of its firm's cost or credit proposal for change in the work. Disputed work shall be performed as ordered in writing by the OCFA or the Project Manager and the proper cost or credit breakdowns therefor shall be submitted without delay by Contractor to the Project Manager.

68.21 Project Manager is authorized by the Board of Directors to make, by written order, changes or additions to the work within the scope of the Contract Documents. This authority to approve changes is limited to 10% of the original contract amount. All changes over the amounts specified above shall be subject to the approval of the Board of Directors. Any change or addition of any kind pursuant to any provision of the Contract Documents which exceeds the limits described in this subsection and which have not been approved by the Board of Directors is void and can not be enforced against the OCFA.

68.22 Any claim of the Contractor for adjustment under this Section 68 or any other provision of the Project Manual must be asserted in writing within 15 days from the date of receipt by the Contractor of the notification of change unless the Board of Directors or Project Manager grants a further period of time before the date of final payment under the Contract Documents. Nothing provided in this Section 68 shall excuse the Contractor from proceeding with the prosecution of the work as changed. Except as otherwise provided in this Contract, no charge for any extra work or material will be allowed.

68.23 Labor wage rates shall not exceed the Prevailing Wage Rates supported by payroll records. Equipment rental rates should be based on latest edition of equipment rental rates published by the State of California Department of Transportation; Division of Construction.

68.24 Nothing in this Section shall excuse the Contractor from proceeding with the Contract Documents as changed.

## 69 **No Verbal Modifications**

No verbal statement of any person whomsoever shall in any manner or degree modify or otherwise affect the terms of the Contract or the Project Manual.

## 70 **Material, Workmanship, And Acceptance**

70.1 Where materials are specified by reference to standard specifications of the American Society for Testing Materials (A.S.T.M.), Federal Specifications, or others, all applicable provisions of the designated specifications shall be considered as forming a part of the Contract Documents to the same force and effect as if repeated therein.

70.2 All work under this Contract Documents shall be performed in a skillful and workmanlike manner. The Project Manager may, in writing, require the Contractor to remove from the work any employee the Project Manager deems incompetent, careless, or otherwise objectionable.

70.3 The Contractor shall, without charge, replace any material or correct any workmanship found by the Project Manager not to conform to the contract requirements, unless in the public interest the Project Manager consents to accept such material or workmanship with an

appropriate adjustment in contract price. The Contractor shall promptly segregate and remove rejected material from the premises.

70.4 If the Contractor does not promptly replace rejected material or correct rejected workmanship, the OCFA (1) may, by contract or otherwise, replace such material or correct such workmanship and charge the cost thereof to the Contractor, or (2) may terminate the Contractor's right to proceed in accordance with these General Conditions.

70.5 Unless otherwise provided in the Contract Documents, acceptance by the OCFA shall be accomplished by recordation of Notice of Completion which shall be made as promptly as practicable after completion and inspection of all work required by the Contract Documents. Acceptance shall be final and conclusive except as regards latent defects, fraud, or such gross mistakes as may amount to fraud, or as regard the OCFA's rights under any warranty or guarantee. Informal procedures such as "punch lists" are not to be deemed final or conditional acceptance.

## 71 Termination For Default & Damages For Delay

71.1 The Contract may be terminated in whole or in part in writing by either party in the event of substantial failure by the other party to fulfill its obligations under this Agreement through no fault of the terminating party, provided that no termination may be effected unless the other party is given: (1) Not less than ten (10) calendar days' written notice (delivered by certified mail, return receipt requested) of intent to terminate; and (2) An opportunity for consultation with the terminating party prior to termination.

71.2 If the Contractor refuses or fails to prosecute the work with such diligence as will ensure its completion within the time specified in the Contract Documents or any extension thereof, or fails to complete said work within such time, the Board of Directors may, by written notice to the Contractor, terminate Contractor's right to proceed with the work or such part of the work as to which there has been delay. In such event, the OCFA may take over the work and prosecute the same to completion, by contract or otherwise, and may take possession of and utilize in completion the work such materials, appliances, and plant as may be on the site of the work and necessary therefor. Whether or not the Contractor's right to proceed with the work is terminated, Contractor and Contractor's sureties shall be liable for any damage to the OCFA resulting from Contractor's refusal or failure to complete the work within the specified time.

71.3 Fixed and agreed liquidated damages are provided in the Contract Documents, these General Conditions, paragraph 1.38 J. If the OCFA so terminates the Contractor's right to proceed, the resulting damage will consist of such liquidated damages until such reasonable time as may be required for final completion of the work together with any increased costs occasioned the OCFA in completing the work.

71.4 Fixed and agreed liquidated damages are provided in the Contract Documents, these General Condition, paragraph 1.38 J. If the OCFA does not so terminate the Contractor's right to proceed, the resulting damage will consist of such liquidated damages until the work is completed or accepted.

71.5 The Contractor's right to proceed shall not be so terminated nor the Contractor charged with resulting damage if the Contractor is actually delayed in the performance of any item of the Project on the critical path by:

71.5.1 Any act or neglect of OCFA, Project Manager, Design Professional, or any employee, agent, or representative of OCFA; or

71.5.2 Combined action of workers, either those employed on the Project or in any industry essential to the conduct of the Work not caused by or resulting from default, negligence, or collusion on the part of Contractor or its Subcontractors of every tier; or

71.5.3 Unusually severe weather conditions not reasonably anticipatable for that portion of the County of Orange where the Project site is located, based upon U.S. Weather Bureau climatological reports for the months included plus a report indicating average precipitation, temperature, etc. for the last ten (10) years from the nearest reporting station; or

71.5.4 Excusable Transportation Delays; or

71.5.5 Excusable Labor Disputes; or

71.5.6 Acts of God; or

71.5.7 National Emergency, declared by the President of the United States.

The Scheduled Completion Date may be extended by Change Order for a period not to exceed the length of such delay, provided that Contractor presents a written request to Project Manager, with demonstrated justification, for such time extension within five (5) days of the commencement of such delay. Failure to file such request within the time allowed shall be deemed a waiver of the claim by Contractor. No extension of time shall be given unless the delay for which a request is made is included in those items for which an extension to the Scheduled Completion Date is appropriate as provided above and the Project Manager finds that such reason for the delay actually adversely affected the ability of the Contractor to complete the Project by the scheduled completion date. Project Manager's decision will be conclusive on the parties to this Contract. No claims by Contractor for additional compensation or damages for delays will be allowed unless Contractor satisfies the Project Manager that such delays were unavoidable and not the result of any action or inaction of Contractor and that Contractor took all available measures to mitigate such damages. The Project Manager's decision will be conclusive on all parties to this Contract. Project Manager may extend the time indicated for completion of the Project by the number of days reasonably required for Contractor to perform the extra work, but only to the extent such extra work actually adversely affects the Scheduled Completion Date, as determined by Project Manager. The decision of the Project Manager shall be final.

The rights and remedies of the OCFA provided in this Section 71 are in addition to any other rights and remedies provided by law or under the Contract Documents.

## 72 **OCFA's Rights Regarding Work**

72.1 If the Work or any portion thereof is defective and/or does not conform to the Project Manual, or if Contractor fails to supply sufficient skilled workers and suitable material, services, or equipment, or if Contractor fails to make prompt payments to Subcontractors or for labor, materials, or equipment, or if Contractor fails to supervise or coordinate the Work, or if grounds exist pursuant to any other provision of the Project Manual, Project Manager may order Contractor to stop the Work, or any portion thereof, until cause for the order to stop has been eliminated. Project Manager's exercise of this right to stop the Work shall not give rise to any duty on the part of the Project Manager to exercise this right for the benefit of Contractor or any other party. This right to stop the Work pursuant to this Section is in addition to and not in limitation of OCFA's rights to terminate this Contract in accordance with the Project Manual.

72.2 Project Manager may at any time and without cause suspend the Work or any portion thereof by written notice to Contractor and a Change Order shall be issued extending the Scheduled Completion Date by the number of days of such suspension. For suspensions of the Work which are fourteen (14) days or less, Contractor shall recommence the Work at the direction of Project Manager with the Lump Sum Price remaining unchanged. Provided Contractor is not in default of the terms of the Project Manual, if there is a suspension of Work or suspensions which in the aggregate extend beyond fourteen (14) days, Contractor shall recommence the Work at the direction of Project Manager and Contractor and Project Manager shall, at Contractor's written request and through good faith negotiations, equitably adjust the Scheduled Completion Date and any Milestones, and shall equitably adjust the Lump Sum Price, in an amount to be approved by the Fire Chief or the OCFA, which approval shall not be unreasonably withheld, for each day of such suspension exceeding fourteen (14) days. Adjustments to the Scheduled Completion Date or completion of a Milestone shall only be provided to the extent the suspension of Work actually adversely affects the Scheduled Completion Date or completion of a Milestone, as determined by Project Manager. The decision of the Project Manager shall be final.

72.3 In the event the Project Manager determines that the progress of the Work is behind the progress set forth in the Contractor's Construction Schedule, Project Manager may require Contractor to take such actions as the Project Manager deems necessary to expedite the progress of the Work in conformance with the progress set forth in the Contractor's Construction Schedule. Such actions may include without limitation, increasing the number of workers performing the Work, utilizing overtime work, and requiring additional work shifts. Such action by Project Manager to place Contractor back on schedule shall not be the subject of a Change Order increasing the Lump Sum Price, nor shall Contractor receive any additional compensation for these activities.

72.4 Contractor shall cooperate with OCFA, Project Manager, Design Professional, and all other persons as OCFA may retain or employ for (by way of illustration only) installation of furniture, decoration, and training, and the like at the Project. Contractor acknowledges that it is critical to OCFA that separate Contractors are allowed to perform and coordinate the installation of furnishings, fixtures, and equipment not covered by this Contract but necessary for the Project. Contractor covenants to use its best efforts to prevent OCFA from suffering delay in completion of the Work as a result of Contractor's failure to cooperate and coordinate its work with Related Work as required by the Project Manual.

72.5 To the extent that OCFA timely provides to Contractor information relating to the work of its separate Contractors, the interrelationships between the work of separate Contractors and/or third parties such as OCFA's purchasing agent and any other special consultants shall be indicated on the Contractor's Construction Schedule to allow OCFA to provide for proper phasing.

## 73 Contract Price; Method of Payment; Retention Of Funds

73.1 OCFA agrees to pay and the Contractor agrees to accept as full consideration for the faithful performance of this Contract, subject to any subsequent additions or deductions as provided in approved change orders, the sum as itemized in the Exhibit K: Schedule of Values.

73.2 Progress payments shall be made to the Contractor per month for each successive month as the work progresses. The Contractor shall be paid such sum as will bring the total payments received since the commencement of the work up to ninety percent (90%) of the value of the work completed, less all previous payments, provided that the Contractor submits the request for payment prior to the end of the day required to meet the payment schedule. The OCFA

will retain ten percent (10%) of the amount of each such progress estimate and material cost until 30 days after the recordation of the Notice of Completion.

73.3 The Contractor shall request payment through the preparation and submission to OCFA of an Invoice in accordance with the Project Manual. It shall show in detail all monies properly payable to the Contractor, approved by the Project Manager, in accordance with the previously approved activities as identified on the Contractor's Construction Schedule, including those items of labor, materials, and equipment used or incorporated in the Work (and, if OCFA has agreed in advance in writing, suitably stored at the Site) through and including the Payment Application Date. The Application for Partial Payment shall have, as attachments waivers of mechanics' and materialmen's liens by the Contractor and its Subcontractors and Sub-subcontractors as of the date of submission of the Application for Partial Payment, which waivers shall conform in all material respects with the then current provisions of Section 3262 of the California Civil Code (or any successor thereto), certifications of payrolls (30 days in arrears), and such other evidence of performance of the Work, the costs thereof and payment therefor as OCFA may deem necessary or desirable.

73.4 The Contractor warrants that title to all Work, materials and equipment covered by an Application for Partial Payment shall pass to OCFA, free and clear of all liens, claims, security interests or encumbrances, upon the sooner occurrence of: (a) the delivery of any such materials or equipment to the Site; or (b) the tender of payment of the applicable Application for Partial Payment by OCFA to the Contractor; and that no Work, materials, or equipment covered by an Application for Partial Payment shall have been acquired, whether by the Contractor or by any Subcontractor or Sub-subcontractor, subject to an agreement under which an interest therein or an encumbrance thereon is retained by the seller or otherwise imposed by the Contractor or such other person. The passage of title to OCFA as provided herein shall not alter or limit the obligations and duties of the Contractor with respect to the Work and the materials or equipment incorporated therein or used in connection therewith as set forth in the Project Manual. In this regard, it is specifically noted that neither the OCFA, nor its Directors, officers, employees, or agents shall be held responsible in any manner for any loss that may happen to the Work or any part thereof during the course of construction; for any loss or damage to any of the materials, equipment, supplies, or other things used or employed in performing the Work; for injury to or death of any person, either workers or the public; or for damage to property, from any cause that might have been prevented by the Contractor, Contractor's workers, employees, Subcontractors, suppliers, or agents.

73.5 If the Contractor has submitted an Application for Partial Payment in the manner prescribed in the Project Manual, The Project Manager shall, with reasonable promptness, review, approve the same (or such portions thereof covering amounts it determines to be properly due), or shall state in writing its reasons for withholding its approval (whether of all or a part).

73.6 The Project Manager's approval of an Application for Partial Payment shall not constitute a representation by OCFA that the conditions precedent to the Contractor's entitlement to payment have been fulfilled, nor shall approval of an Application for Partial Payment by OCFA be deemed a representation by OCFA: (a) that it has made exhaustive or continuous on-site inspections to check the quality or quantity of the Work; (b) that it has reviewed the construction means, methods, techniques, sequences, coordination or procedures, or the cleanliness of the Site, or the safety precautions and programs, in connection with the Work; (c) that it has made any examination to ascertain how or for what purposes the Contractor has used the monies previously paid on account of the Contract Sum.

73.7 No approval of an Application for Partial Payment, progress payment or any beneficial, partial or entire use or occupancy of the Project by OCFA shall constitute an acceptance of any Work which is not in accordance with the Project Manual; and regardless of approval of an

Application for Partial Payment by OCFA, the Contractor shall remain totally obligated and liable for the performance of the Work in strict compliance with the Project Manual.

73.8 Subject to OCFA's rights to offset or withhold as set forth in these General Conditions, after OCFA has approved an Application for Partial Payment, in whole or in part, it shall make payment of the amount approved to the Contractor as provided in the Project Manual.

73.9 Pursuant to California Public Works Contract Code Section 22300, the Contractor will be entitled to post approved securities with the OCFA or an approved financial institution in order to have the OCFA release funds retained by the OCFA to ensure performance of the Contract. Contractor shall be required to execute an addendum to this Contract together with escrow instructions and any other documents in order to effect this substitution.

## 74 Right To Occupy - Beneficial Use

74.1 OCFA reserves the right, prior to Substantial Completion of the entire Project, to use a portion or portions of the Work when Project Manager determines that such portion or portions may be safe for such use provided such use will not unreasonably interfere with the Contractor's orderly progress of the Work. Such use ("beneficial use") shall not be construed as an acceptance of any such Work, or a part of the Work, as substantially complete, nor shall it affect the dates and times when payments shall become due from the OCFA to Contractor, nor shall it prejudice OCFA's rights pursuant to the Contract or any bonds guaranteeing the same. Notwithstanding such occupancy or use, Contractor shall continue to provide insurance, security, maintenance, utilities, and protection to the Work, unless otherwise agreed by the parties in writing.

74.2 At the sole discretion of the Fire Chief, any time after beneficial use and prior to issuance of a certificate of occupancy by the Local Jurisdictions, the Fire Chief may request one or more of the local Jurisdictions to issue a temporary certificate of occupancy for a portion or portions of the Project. Upon the issuance of such temporary certificate of occupancy, the OCFA may occupy such portion or portions of the Project, and such portions shall be deemed to be substantially complete.

74.3 Beneficial Occupancy shall not constitute acceptance by OCFA or Project Manager of the completed Work or any portion thereof, shall not relieve the Contractor of its full responsibility for correcting defective Work and repairing the Work, shall not be deemed to be the equivalent of completion of the Work and shall not entitle the Contractor to any increase in the Contract Sum.

74.4 Anything in this Section 74 to the contrary notwithstanding, OCFA may certify any portion of the Work to be occupied or used hereunder to be Substantially Completed and, upon the Contractor's timely completion or correction of the items on the "punch-list" with respect thereto, accept that portion of the Work.

## 75 Final Completion and Final Payment.

75.1 When all permits for the Work have been approved, accepted, or otherwise signed off as complete by the inspectors of the Local Jurisdictions, Contractor shall certify to the Project Manager in writing within ten (10) days that the Work is complete in accordance with the Project Manual and is ready for occupancy. Project Manager, Design Professional, and Fire Chief will make an investigation and inspection of all phases of the Work. If all contractual obligations have not been met, Project Manager shall furnish Contractor a detailed list of all remaining work (the "Punchlist") and Contractor shall commence correction of all items on the Punchlist. A letter of acceptance shall be issued upon completion of all Work specified on the

Punchlist to the satisfaction of the Project Manager. In no case will the letter of acceptance relieve Contractor of any obligations of Contractor that may be outstanding. Within five (5) business days after issuance of a letter of acceptance, Project Manager and the Design Professional shall issue a certificate of final completion. Upon receipt of the certificate of final completion, Contractor shall submit its final application for payment ("Final Application for Payment") which shall set forth all amounts due and remaining unpaid to Contractor and upon approval thereof by the Project Manager and the Design Professional, OCFA shall pay to Contractor the amount due under such Final Application for Payment as provided herein.

75.2 Before OCFA makes the Final Payment to Contractor, all requirements of the Project Manual shall have been fulfilled, including the following:

(1) Receipt by Project Manager of a complete list of Subcontractors and principal vendors, including addresses, telephone numbers, and names of individuals to contact who are familiar with the Project, including Contractor;
(2) Receipt by Project Manager of all operation and maintenance manuals, approved by the Design Professional;
(3) Receipt by OCFA of all releases and written guarantees from all Subcontractors and material suppliers for the Project in a form and content satisfactory to the Project Manager, which Contractor hereby agrees to obtain for, and deliver to, Project Manager prior to completion of the Project;
(4) Receipt by Project Manager of all "As-Built" records, approved by Project Manager and the Design Professional as specified in the Project Manual;
(5) Copies of any other warranties or guarantees received from manufacturers, suppliers, or Subcontractors of Contractor or any Subcontractor; and
(6) Evidence satisfactory to the Project Manager showing that the Contractor has promptly and satisfactorily settled all claims, if any, for services performed and materials furnished in connection with the Work.
(7) Receipt by Project Manager of all documentation necessary to demonstrate compliance with the Leadership and Environmental Design program requirements.

75.3 Final Payment shall not become due until Contractor submits to Project Manager: (1) an affidavit that all payrolls, bills for materials and equipment, and other indebtedness connected with the Work for which OCFA or OCFA's property might in any way be responsible, have been paid or otherwise satisfied; (2) the consent of the surety to Final Payment; and (3) if reasonably required by the Project Manager, other data establishing payment or satisfaction of all such obligations, such as receipts, releases and waivers of liens arising out of the Contract, to the extent and in such form as may be designated by the Project Manager. Project Manager may require affidavits or certificates of payment and/or releases from any Subcontractor, laborer, or material supplier.

75.4 If any Subcontractor or material supplier refuses to furnish a release or waiver required by Project Manager, Contractor may satisfy its obligation with respect to such Subcontractor or material supplier by furnishing a cash bond, assignment of a certificate of deposit, or other liquid security satisfactory to Project Manager to indemnify OCFA against any lien. If any lien remains unsatisfied after all payments are made, Contractor shall refund to OCFA all monies that the OCFA may be compelled to pay in discharging such lien, including all costs and reasonable attorneys' fees.

75.5 The acceptance of Final Payment shall constitute a waiver of all claims by Contractor except those previously made in writing and identified by Contractor as unsettled at the time of the Final Application for Payment.

75.6 The making of Final Payment shall constitute a waiver of all claims by OCFA except those arising from (1) unsettled claims; (2) faulty or defective Work appearing after Final Completion of the Work; (3) failure of the Work to comply with the requirements of the Project Manual; (4) terms of any special warranties required by the Project Manual; (5) "Punchlist" items not yet completed by the Contractor; (6) discrepancies noted in subsequent audits performed by OCFA or its agents within one (1) year following Final Payment; or (7) any claims identified by Project Manager as unsettled prior to making of Final Payment.

75.7 Final Payment shall not relieve Contractor of its warranty and indemnification obligations pursuant to the Project Manual, which shall survive such payment.

75.8 Contractor shall keep and present within fifteen (15) days after request by OCFA or its agents, in a form reasonably approved by the Project Manager, a final itemized accounting of all expenditures made in connection with the Work together with appropriate suplf any Subcontractor or Sub-subcontractor refuses to furnish any release, satisfaction or waiver of lien required at any time by OCFA under Paragraphs 9.1., or files a claim of lien against OCFA's property, the Contractor shall, if requested by Project Manager and at the Contractor's expense, furnish and record a Mechanic's Lien Release Bond (separate and apart from any other bond provided by the Contractor hereunder) that is in full compliance with the requirements of the then current provisions of Section 3143 of the California Civil Code. If any Subcontractor or Sub- subcontractor serves a Stop Notice (bonded or otherwise) on OCFA, Contractor shall, if requested by OCFA and at Contractor's expense, furnish a Stop Notice Release Bond (separate and apart from any other bond provided by the Contractor hereunder) that is in full compliance with the then current provisions of Section 3171 of the California Civil Code. The Contractor authorizes OCFA, and shall cause its Subcontractors and Sub-subcontractors to authorize OCFA, to check directly with any suppliers of labor and material with respect to any item chargeable to OCFA's property, to confirm balances due and to obtain sworn statements and waivers of lien, all if OCFA so elects. If any lien remains unsatisfied after all payments are made to the Contractor, the Contractor shall reimburse OCFA on account of all monies that the latter may be compelled to pay in discharging such lien, including all costs and attorneys' fees.

## 76 Surety Bonds.

Contractor shall, upon entering into performance of this Agreement, furnish a bond in the amount of one hundred percent (100%) of the Contract price bid, to guarantee the faithful performance of the work, and an additional bond in the amount of one hundred percent (100%) of the Contract price bid to guarantee payment of all claims for labor and materials furnished. The bonds required pursuant to this Section shall be issued by a surety authorized by the State Insurance Commissioner to transact business in the State of California as a surety and shall have and maintain throughout the life of the Project, at least an "A-" policyholder's rating, or better, and a financial rating of "Class VII," or better, in accordance with the most current A.M. Best's Rating Guide. This Contract shall not become effective until such bonds are supplied to and approved by the OCFA.

## 77 Risk And Indemnification

77.1 Indemnification: To the fullest extent permitted by law, Contractor shall indemnify, defend (at Contractor's sole cost and expense and with legal counsel approved by OCFA, which approval shall not be unreasonably withheld), protect and hold harmless OCFA and all of OCFA's officers, directors, employees, consultants, agents, successors and assigns (collectively the "Indemnified Parties"), from and against any and all claims (including, without limitation, claims for bodily injury, death or damage to property), demands, obligations, damages, actions, causes of action, suits, losses, judgments, fines, penalties, liabilities, costs and expenses (including, without limitation, attorneys' fees, disbursements and court costs, and all other

professional, expert or consultants' fees and costs and OCFA's general and administrative expenses) of every kind and nature whatsoever (individually, a "Claim"; collectively, "Claims") which may arise from or in any manner related (directly or indirectly) to any work performed or services provided under this Agreement (including, without limitation, the negligent and/or willful acts, errors and/or omissions of Contractor, its principals, officers, agents, employees, Contractors, suppliers, consultants, subconsultants, subcontractors, anyone employed directly or indirectly by any of them or for whose acts they may be liable or any or all of them) regardless of any active or passive negligence or strict liability of an Indemnified Party. Contractor understands and acknowledges that the indemnification obligation hereunder is intended to constitute a "Type I" indemnity under California law and extends to and includes Claims arising from the active or passive negligence of Indemnified Parties. Notwithstanding the foregoing, nothing herein shall be construed to require Contractor to indemnify the Indemnified Parties from any Claim arising from the sole negligence or willful misconduct of the Indemnified Parties.

77.2 Duty to Defend: The duty to defend hereunder is wholly independent of and separate from the duty to indemnify and such duty to defend exists regardless of any ultimate liability of Contractor. Such defense obligation shall arise immediately upon presentation of a Claim by any party and written notice of such Claim being provided to Contractor. Payment to Contractor by any Indemnified Party or the payment or advance of defense costs by any Indemnified Party shall not be a condition precedent to enforcing such Indemnified Party's rights to indemnification hereunder. Contractor's indemnification obligation hereunder shall survive the expiration or earlier termination of this Agreement until such time as action against the Indemnified Parties for such matter indemnified hereunder is fully and finally barred by the applicable statute of limitations or statute of repose. Contractor's liability for indemnification hereunder is in addition to any liability Contractor may have to OCFA for a breach by Contractor of any of the provisions of this Agreement. Under no circumstances shall the insurance requirements and limits set forth in this Agreement be construed to limit Contractor's indemnification obligation or other liability hereunder. The terms of this Agreement are contractual and the result of negotiation between the parties hereto. Accordingly, any rule of construction of contracts (including, without limitation, California Civil Code Section 1654) that ambiguities are to be construed against the drafting party shall not be employed in the interpretation of this Agreement.

## 78 Insurance.

### 78.1 Compliance with Insurance Requirements.

78.1.1 As a condition precedent to the effectiveness of this Agreement, and without limiting the indemnity provisions set forth in this Agreement, Contractor shall obtain, maintain, and keep in full force and effect during the term of this Agreement, at its sole cost and expense, and in a form and content satisfactory to OCFA, all insurance required under this section. Contractor shall not commence any work or services under this Agreement unless and until it has provided evidence satisfactory to OCFA that it has secured all insurance required under this section. If Contractor's existing insurance policies do not meet the insurance requirements set forth herein, Contractor agrees to amend, supplement or endorse the policies to do so.

78.1.2 The amount of insurance coverage available to pay claims under each policy required hereunder shall be the higher of (a) the minimum limits required below, or (b) the actual limits established in each policy. Thus, by way of example only, if the minimum policy limit is $2 million per occurrence but insurance actually carried by the Contractor or subcontractor is $4 million per occurrence, the coverage required to be available for claims

under that policy would be $4 million. (Nothing herein requires the Contractor to purchase insurance at limits greater that the minimum limits established below.)

**78.2 Types of Insurance Required.**

Contractor shall obtain and maintain in full force and effect during the term of this Agreement, including any extension thereof, the following policies of insurance:

78.2.1 Commercial General Liability Insurance. Contractor shall obtain and maintain, in full force and effect throughout the term of this Agreement, a policy of Commercial General Liability Insurance (Insurance Services Office form CG 00 01) written on an occurrence basis with limits of at least five million dollars ($5,000,000.00) per occurrence, five million dollars ($5,000,000.00) in the general aggregate, and five million dollars ($5,000,000.00) for completed operations aggregate. Defense costs shall be paid in addition to (and shall not reduce) the limits. The policy shall contain no endorsements or provisions limiting coverage for: (1) contractual liability; (2) cross liability exclusion for claims or suits by one insured against another; or (3) any other exclusion contrary to the Agreement.

78.2.2 Automobile Liability Insurance. Contractor shall obtain and maintain, in full force and effect throughout the term of this Agreement, a policy of Automobile Liability Insurance (Insurance Services Office form CA 001) written on a per occurrence basis with limits of at least one million dollars ($1,000,000.00) combined limit for each occurrence covering bodily injury and property damage. The policy shall specifically include coverage for owned, non-owned, leased, and hired automobiles.

78.2.3 Workers' Compensation Insurance. Contractor shall obtain and maintain, in full force and effect throughout the term of this Agreement, a policy of Workers' Compensation Insurance in at least the minimum statutory amounts, and in compliance with all other statutory requirements, as required by the State of California. Contractor hereby waives, and agrees to obtain endorsements from its workers' compensation insurer waiving, all subrogation rights against the OCFA, its officials, officers, employees, agents, representatives, attorneys and volunteers, and to require each of its subcontractors, if any, to waive the same and to obtain endorsements waiving the same subrogation rights under their workers' compensation insurance policies. Contractor shall obtain and maintain, in full force and effect throughout the term of this Agreement, a policy of Employer's Liability Insurance written on a per occurrence basis with limits of at least one million dollars ($1,000,000.00) per incident for bodily injury, disease or other covered claim.

78.2.4 Builders Risk (Course of Construction) Insurance. Contractor shall obtain and maintain, in full force and effect throughout the term of this Agreement, a Builders Risk (Course of Construction) Insurance policy with limits of at least five million dollars ($5,000,000.00). [Covered causes of loss shall include, or be endorsed to include, earthquake, flooding and other acts of God.] Contractor and each subcontractor agree to waive all rights of subrogation against the OCFA, its officials, officers, employees, agents, representatives, attorneys and volunteers. The Builders Risk policy shall be endorsed to waive all rights of subrogation against against the OCFA, its officials, officers, employees, agents, representatives, attorneys and volunteers.

**78.3 Acceptability of Insurers.**

Insurance required by this section 78 shall be issued by a licensed company authorized to transact business in the state by the Department of Insurance for the State of California with a current rating

of A-:VII or better (if an admitted carrier), or a current rating of A:X or better (if offered by a non-admitted insurer listed on the State of California List of Approved Surplus Line Insurers (LASLI), by the latest edition of A.M. Best's Key Rating Guide, except that the OCFA will accept workers' compensation insurance from the State Compensation Fund. In the event the OCFA determines that the work or services to be performed under this Agreement creates an increased or decreased risk of loss to the OCFA, the Contractor agrees that the minimum limits of the insurance policies may be changed accordingly upon receipt of written notice from the OCFA. Contractor shall immediately substitute any insurer whose A.M. Best rating drops below the levels specified herein.

**78.4 Insurance Endorsements.**

Required insurance policies shall not be in compliance if they include any limiting provision or endorsement that has not been submitted to the OCFA for written approval. Required insurance policies shall contain the following provisions, or Contractor shall provide endorsements issued by the insurance company on forms approved by the OCFA to add the following provisions to the insurance policies:

78.4.1 Additional Insured: The OCFA and its officials, officers, employees, agents, representatives, attorneys and volunteers shall be additional insureds with regard to liability and defense of suits and claims arising out of the performance of the Agreement; and

78.4.2 Additional Insured Endorsements: Additional insured endorsements shall not: (1) be restricted to "ongoing operations", (2) exclude "contractual liability", (3) restrict coverage to "sole" liability of Contractor, or (4) contain any other exclusions contrary to the Agreement. The coverage shall contain no special limitations on the scope of protection afforded to additional insureds; and

78.4.3 Primary and Non-Contributing Insurance: All policies of Commercial General Liability Insurance and Automobile Liability Insurance shall be primary and any other insurance, deductible, or self-insurance maintained by the OCFA, its officials, officers, employees, agents, representatives, attorneys and volunteers, shall not contribute with this primary insurance. Policies shall contain, or be endorsed to contain, such provisions.

78.4.4 Waiver of Subrogation: All policies of Commercial General Liability, Automobile Liability Insurance and Worker's Compensation shall contain or be endorsed to waive all rights of subrogation against the OCFA, its officials, officers, employees, agents, representatives, attorneys and volunteers, or shall specifically allow Contractor or others providing insurance evidence in compliance with the requirements set forth in this section to waive their right to recovery prior to a loss. Contractor hereby agrees to waive its own right of recovery against the OCFA, its officials, officers, employees, agents, representatives, attorneys and volunteers, and Contractor hereby agrees to obtain similar written express waivers and insurance clauses from each of its subcontractors prior to commencement of work by the subcontractor.

78.4.5 Notice: Each policy of insurance required by this section 78 shall be endorsed to state that coverage shall not be suspended, voided, cancelled, or modified, or reduced in coverage or in limits, except after thirty (30) days prior written notice by First Class U.S. Mail, postage-prepaid, has been provided to the OCFA. Notwithstanding the foregoing, if coverage is to be suspended, voided, or cancelled because of Contractor's failure to pay the insurance premium, the notice provided to OCFA shall be by ten (10) days prior written notice. (Note: an endorsement that fails to state that the insurance company will provide the notice required by this subsection (e.g., "will endeavor to" or similar non-

committal phrases) does not comply with the requirements of this subsection. Similarly, Contractor's offer to provide the required notice in lieu of the insurance company doing so will not comply with this subsection. It is the Contractor's obligation to ensure that its insurance company(ies) will provide all policy endorsements required under this Contract.)

78.4.2 For all policies of Commercial General Liability Insurance, Contractor shall provide endorsements for completed operations to effectuate this requirement.

**78.5. Deductibles and Self-Insured Retentions.**

Any deductible or self-insured retention must be approved in writing by the OCFA in advance and shall protect the OCFA, its officials, officers, employees, agents, representatives, attorneys and volunteers in the same manner and to the same extent as they would have been protected had the policy or policies not contained a deductible or self-insured retention. Contractor shall be solely responsible for the payment, and if required by the insurer the advancement, of any and all deductible amounts and self-insured retentions.

**78.6. Evidence of Coverage.**

Within seven (7) calendar days after the date of the Notice of Apparent Low Bidder, Contractor shall deliver certificates of insurance together with original endorsements affecting each of the insurance policies required by this section. Required insurance policies shall not be in compliance if they include any limiting provision or endorsement that has not been submitted to the OCFA for written approval. The certificates of insurance and endorsements for each insurance policy shall be signed by a person authorized by that insurer to bind coverage on its behalf. (ACORD form Certificates of insurance will not be accepted in lieu of approved endorsements.) At least fifteen (15) days prior to the expiration of any such policy, evidence of insurance showing that such insurance coverage has been renewed or extended shall be filed with the OCFA. If such coverage is cancelled or reduced and not replaced immediately so as to avoid a lapse in the required coverage, Contractor shall, within ten (10) days after receipt of written notice of such cancellation or reduction of coverage, file with the OCFA evidence of insurance showing that the required insurance has been reinstated or is being provided through another insurance company or companies. Contractor shall promptly furnish, at OCFA's request, copies of actual policies including all declaration pages, endorsements, exclusions and any other policy documents OCFA requires to verify coverage.

**78.7 Requirements Not Limiting.**

Requirement of specific coverage or minimum limits contained in this section are not intended as a limitation on coverage, limits, or other requirements, or a waiver of any coverage normally provided by any insurance. Nothing in this section shall be construed as limiting in any way the indemnification provision contained in this Agreement, or the extent to which Contractor may be held responsible for payments of damages to persons or property.

**78.8 Enforcement of Agreement (Non-Estoppel).**

Contractor acknowledges and agrees that actual or alleged failure on the part of the OCFA to inform Contractor of any non-compliance with any of the insurance requirements set forth in this section imposes no additional obligation on the OCFA nor does it waive any rights hereunder.

**78.9 Insurance for Subcontractors.**

Contractor shall either: (1) include all subcontractors engaged in any work or services for Contractor relating to this Agreement as additional named insureds under the Contractor's insurance policies; or (2) Contractor shall be responsible for causing its subcontractors to procure and maintain the same types and amounts of insurance in compliance with the terms of the insurance requirements set forth in this section (except Builders Risk (Course of Construction) Insurance), including but not limited to adding the OCFA, its officials, officers, employees, agents, representatives, attorneys and volunteers, as additional insureds to their respective policies. All policies of Commercial General Liability Insurance and Automobile Liability Insurance provided by Contractor's subcontractors performing any work or services related to this Agreement shall be endorsed to name the OCFA, its officials, officers, employees, agents, representatives, attorneys and volunteers, as additional insureds. Contractor shall not allow any subcontractor to commence any work or services relating to this Agreement unless and until the Contractor has received confirmation that the subcontractor has secured all required insurance. Upon request of OCFA, Contractor shall deliver to OCFA all certificates of insurance and endorsements required from subcontractors. (Note: Contractor's duty to obtain all required insurance for subcontractors required under this Agreement applies whether or not OCFA requests delivery of evidence of such coverage.)

**78.10. Insurance for Large Equipment Suppliers**

Suppliers of large equipment that will be installed as part of the Project must have and maintain General Liability Insurance and Automobile Insurance with all endorsements required hereinabove unless the Contractor or Subcontractor that will install the large equipment maintains General Liability Insurance and Automobile Liability Insurance that is endorsed to name the large equipment supplier as an additional named insured and such endorsement is provided to OCFA prior to delivery of the large equipment.

**78.11 Other Insurance Requirements.**

The following terms and conditions shall apply to the insurance policies required of Contractor pursuant to this Agreement:

78.11.1 Contractor shall provide immediate written notice to OCFA if (1) any of the insurance policies required herein are terminated, cancelled or suspended, (2) the limits of any of the insurance coverage types or amounts required herein are reduced by the insurer or depleted by other claims, or (3) the deductible or self-insured retention is increased.

78.11.2 All insurance coverage and limits provided by Contractor and available or applicable to this Agreement are intended to apply to each insured, including additional insureds, against whom a claim is made or suit is brought to the full extent of the policies. Nothing contained in this Agreement or any other agreement relating to the OCFA or its operations shall limit the application of such insurance coverage.

78.11.3 None of the insurance coverages required herein will be in compliance with the requirements of this section if they include any limiting endorsement which substantially impairs the coverages set forth herein (e.g., elimination of contractual liability or reduction of discovery period), unless the endorsement has first been submitted to the OCFA and approved in writing.

78.11.4 Certificates of insurance will not be accepted in lieu of required endorsements, and submittal of certificates without required endorsements may delay commencement of the Project. It is

Contractor's obligation to ensure timely compliance with all insurance submittal requirements as provided herein.

78.11.5 Contractor agrees to ensure that subcontractors, if any, and any other parties involved with the Project who are brought onto or involved in the Project by Contractor, have, or are provided by Contractor's insurer, the same minimum insurance coverage required of Contractor. Contractor agrees to monitor and review all such coverage and assumes all responsibility for ensuring that such coverage is provided in conformity with the requirements of this section. Contractor agrees that upon request, all agreements with subcontractors and others engaged in the Project will be submitted to the OCFA for review. Claims for which coverage is required but not provided due to Contractor's failure to comply with this section (e.g., allowing subcontractors to proceed with disallowed limitations on their insurance coverage, or failing to require subcontractors to provide required insurance coverage or endorsements) will result in retention of payments in amounts necessary to cover the anticipated costs associated with defending and paying the claims.

78.11.6 Contractor agrees to provide immediate written notice to OCFA of any claim, demand or loss against Contractor arising out of the work or services performed under this Agreement and for any other claim, demand or loss which may reduce the insurance available to pay claims, demands or losses arising out of this Agreement.

79. **Contractor's Liability; OCFA Not Liable; Claims Resolution**

79.1 Contractor's liability. The Contractor shall be responsible for any loss or damage that may occur to:

- The work or any part thereof;
- Any of the materials or other things used or employed in performing the work;
- Any injury to any person or persons, either workers or the public;
- Any damage to property resulting from any cause which might have been prevented by the Contractor, including defects or obstructions at any time before completion of the work and its final acceptance.

79.2. OCFA ordered precautions. If, in the opinion of the Engineer, the precautions taken by Contractor are not safe or adequate at any time during the term of the Contract, the Engineer may order the Contractor to take further precautions, and if the Contactor shall fail to do so, the Engineer may order the work done by others and charge the Contractor for the cost thereof, such cost to be deducted from any moneys due or becoming due the Contractor. Failure of the Engineer to order such additional precautions, however, shall not relieve the Contractor from his full responsibility for public safety.

79.3 OCFA not liable. The OCFA shall not be answerable or accountable in any manner, for any loss or damage that may occur to any of the following from any cause which might have been prevented by the Contractor:

- The work or any part thereof;
- Any of the materials or other things used or employed in performing the work;
- Any injury to any person or persons, either workers or the public;
- Any damage to property.

79.4 Claims Resolution.

79.4.1. From time to time during the period of this contract, the OCFA and/or the Contractor may be served with third-party claims, as a result of alleged conduct by Contractor. The following procedures shall be followed by OCFA and Contractor:

For claims received by Contractor:

(1) Contractor shall provide OCFA on a monthly basis details regarding any claim for damages to persons or property, including, date claim made, date of alleged damages, type of damages, alleged cause of damages and, as claims are resolved, details regarding Contractor's denial or payment of such claim and the reasons for denial or payment.

(2) Contractor shall resolve or deny any claim received within thirty (30) days of receipt. If Contractor is unable to resolve a claim within the thirty (30) days set forth above, it shall, prior to the expiration of the thrity (30) days request and extension in writing from the OCFA.

For claims received by OCFA:

(1) OCFA shall process any claims received pursuant to the California Government Claims Act.

(2) If after investigation of the claim, the OCFA determines the Contractor is liable under this Contract, OCFA shall tender the claim to the Contractor for proper handling and resolution.

79.5. Retention of Claimed Damages by OCFA. The OCFA may retain so much of the money due the Contractor under and by virtue of the Contract as shall be considered necessary by the OCFA until disposition has been made of such suits or claims for damages aforesaid.

## 80 Termination

80.1 The performance of work under the Contract Documents may be terminated in whole, or from time to time in part, whenever the Board of Directors shall determine that such termination is in the best interest of the OCFA, provided that the Contractor is given (1) Not less than ten (10) calendar days' written notice (delivered by email, followed by overnight delivery with proof of delivery) of intent to terminate; (2) the extent to which performance of work under the Contract Documents is terminated: (3) the date upon which such termination becomes effective; and (4) An opportunity for consultation with the terminating party prior to the effective date of the termination.

80.2 This Contract may be terminated, or the right of the Contractor to complete the Project may be terminated, without liability or damage, when in the OCFA's opinion, the Contractor is not complying with the Contract requirements in good faith, has become insolvent, or has assigned or subcontracted any part of the Work without the OCFA's consent. In the event of such termination, the Contractor will be paid the actual amount due based upon the quantity of work completed at the time of termination, less damages caused to the OCFA by acts of the Contractor causing the termination. The Contractor, in having tendered a bid, shall be deemed to have waived any and all claims for damages because of termination of the Contract or the right of the Contractor to complete the Project for any cause stated in this Section 80.

80.3 If termination is effected by the OCFA, an equitable adjustment in the price provided for in this Contract shall be made, but (1) no amount shall be allowed for anticipated profit on unperformed services or other work, and (2) any payment due to the Contractor at the time of termination may be adjusted to cover any additional costs to the OCFA because of the Contractor's default. The equitable adjustment for any termination shall provide for payment to the Contractor for services rendered and expenses incurred in accordance with Section 8 of the California, Department of Transportation Standard Specifications.

80.4 After receipt of a Notice of Termination, and except as otherwise directed by the Board of Directors, the Contractor shall:

(1) Stop work under the Contract Documents on the date and to the extent specified in the Notice of Termination; and
(2) Place no further orders or subcontracts for materials, services, or facilities except as may be necessary for completion of such portion of the work under the Contract Documents as is not terminated; and
(3) Terminate all orders and subcontracts to the extent that they relate to the performance of work terminated by the Notice of Termination; and
(4) Assign to the OCFA, all of the right, title and interests of the Contractor under the orders and subcontracts so terminated, in which case the OCFA shall have the right, in its discretion, to settle or pay any or all claims arising out of the termination of such orders and subcontracts; and
(5) Settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, subject to the approval of the Board of Directors; and
(6) Complete performance of such part of the work as shall not have been terminated by the Notice of Termination; and
(7) Deliver or otherwise make available to the OCFA all data, drawings, specifications, reports, estimates, summaries and such other information and materials as may have been accumulated by the Contractor in performing this Contract whether completed or in process; and
(8) Take such action as may be necessary, or as the Project Manager may direct, for the protection and preservation of the property related to the Contract Documents which is in the possession of the Contractor and in which the OCFA has, or may acquire, interest.

80.5 After receipt of a Notice of Termination, the Contractor shall submit to the Project Manager a verified termination claim. Such claim shall be submitted promptly but in no event later than one year from the effective date of termination, unless one or more extensions in writing are granted by the Board of Directors upon request of the Contractor made in writing within such one-year period or authorized extension thereof.

80.6 If any dispute concerning a question of fact arising under the terms of this Contract is not disposed of within a reasonable period of time by Contractor and Project Manager, such matter shall be brought to the attention of the OCFA via written notice of unresolved dispute(s). If agreement cannot be reached after a good faith effort to resolve the dispute, either party may assert its other rights and remedies within this Contract or within a court of competent jurisdiction. The Parties agree that, in the event of a dispute notwithstanding, they will continue without delay to carry out all their responsibilities under this Contract. The Contractor and the OCFA Board of Directors may agree upon the whole or any part of the amount or amounts to be paid to the Contractor by reason of the total or partial termination of work pursuant to this Section 80, which amount or amounts may include a reasonable allowance for profit on work done; provided, that such agreed amount or amounts, exclusive of settlement costs, shall not exceed the total contract price as reduced by the amount of payments otherwise made and as further reduced by the contract price of work not

terminated. The Contract Documents shall be amended accordingly, and the Contractor shall be paid the agreed amount.

**81 Patent Infringement**

81.1 The Contractor shall report to the Project Manager, promptly and in reasonable detail, each notice or claim of patent infringement based on the performance of the Contract Documents of which the Contractor has knowledge.

81.2 In the event of any suit against the OCFA, or any claim against the OCFA made before suit has been instituted, on account of any alleged patent infringement arising out of the performance of the obligations under the Contract Documents, or out of the use of any supplies furnished or work or services performed hereunder, the Contractor shall, at Contractor's own expense, furnish to the OCFA, upon request, all evidence and information in possession fo the Contractor pertaining to such suit or claim. The Contractor further agrees to indemnify and hold harmless the OCFA against any and all claims or lawsuits based upon such patent infringement, to defend such suits, and to pay any judgment rendered against OCFA, its employees, or the Board of Directors.

**82 No Waiver By OCFA**

The failure of the OCFA in any one or more instances to insist upon strict performance of any of the terms of the Contract Documents or to exercise any option herein conferred shall not be construed as a waiver or relinquishment to any extent of the right to assert or rely upon any such terms or option on any future occasion.

**83 Disputes**

83.1 In the event of a dispute between the parties as to performance of the work, the interpretation of the Contract Documents, or payment or nonpayment for work performed, the parties shall attempt to resolve the dispute. Pending resolution of the dispute, the Contractor shall continue the work diligently to completion as directed by Project Manager. If the dispute is not resolved, the Contractor agrees Contractor will neither rescind the Contract Documents nor stop the progress of the work.

83.2 With respect to any "claim" as that term is defined in Public Contract Code section 9204, Contractor shall submit such claim in accordance with Section 91 hereinbelow.

**84 Attorneys' Fees**

If any action at law or in equity is necessary to enforce or interpret the terms of this Contract, each party shall be responsible for their respective costs, including attorneys' fees. The prevailing party shall not be entitled to recover its attorneys' fees or related costs. Nevertheless, if any action is brought against the Contractor or any Subcontractor to enforce a Stop Notice or Notice to Withhold, which names the OCFA as a party to said action, the OCFA shall be entitled to reasonable attorneys' fees, costs and necessary disbursements arising out of the defense of such action by the OCFA. The OCFA shall be entitled to deduct its costs for any Stop Notice filed, whether court action is involved or not.

**85 Contractor's Employees' Compensation**

85.1 General Prevailing Rate: OCFA has been advised by the State of California Director of Industrial Relations of the Director's of the general prevailing rate of per diem wages and the general prevailing rate for legal holiday and overtime work in the locality in which the work is to be performed for each craft or type of work needed to execute this Contract, and copies of the same are on file in the Office of the Engineer of OCFA. The Contractor agrees that not

less than said prevailing rates shall be paid to workers employed on this public works contract as required by Labor Code Section 1774 of the State of California.

85.2 Forfeiture For Violation: Contractor shall, as a penalty to the OCFA, forfeit Fifty Dollars ($50.00) for each calendar day or portion thereof for each worker paid (either by the Contractor or any subcontractor under it) less than the prevailing rate of per diem wages as set by the Director of Industrial Relations, in accordance with Sections 1770-1780 of the California Labor Code for the work provided for in this Contract, all in accordance with Section 1775 of the Labor Code of the State of California.

85.3 Apprentices: Sections 1777.5, 1777.6 and 1777.7 of the Labor Code of the State of California, regarding the employment of apprentices is applicable to this Contract and the contractor shall comply therewith if the prime contract involves Thirty Thousand Dollars [$30,000.00] or more or twenty (20) working days, or more; or if contracts of specialty contractors not bidding for work through the general or prime contractor are Two Thousand Dollars [$2,000.00] or more or Five (5) working days or more. Information relative to apprenticeship standards, contributions, wage schedules and other requirements may be obtained from the State Director of Industrial Relations or from the Division of Apprenticeship Standards.

85.4 Workday: In the performance of this Contract, not more than eight (8) hours shall constitute a day's work, and Contractor shall not require more than eight (8) hours of labor in a day from any person employed by him hereunder except as provided in Section 11.4.2 above. Contractor shall conform to Article 3, Chapter 1, Part 7 (Sections 1810 et seq.) of the Labor Code of the State of California and shall forfeit to the OCFA as a penalty, the sum of twenty-five Dollars ($25.00) for each worker employed in the execution of this Contract by Contractor or any Subcontractor for each calendar day during which any worker is required or permitted to labor more than eight (8) hours in any one calendar day and forty (40) hours in any one week in violation of said Article. Contractor shall keep an accurate record showing the name and actual hours worked each calendar day and each calendar week by each worker employed by Contractor in connection with the Project.

85.5 Record of Wages; Inspection: The Contractor and each subcontractor performing any portion of the work under the Contract Documents shall keep an accurate record, showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed by Contractor in connection with the work. Said payroll records shall be certified and shall be available for inspection at the principal office of the Contractor on the basis set forth in Labor Code Section 1776. The Contractor shall file a certified copy of said payroll records with the OCFA within ten days after receipt of a written request therefor from Project Manager or othersise from the OCFA. The Contractor shall inform the OCFA of the location of said payroll records, including the street address, City and State, and shall, within five working days, provide a notice of change of location and address of said payroll records. It shall be the responsibility of the Contractor to ensure the compliance with the provisions of this Section 85 and the provisions of Labor Code Section 1776. In the event of noncompliance with the requirements of this Section or the requirements of Labor Code Section 1776, the Contractor shall have ten days in which to comply subsequent to receipt of written notice specifying in what respects Contractor must comply. Should noncompliance exist after said ten-day period, the Contractor shall, as a penalty to the OCFA, forfeit Twenty-five Dollars ($25) for each calendar day, or portion thereof, for each worker to whom the noncompliance pertains until strict compliance is effectuated. The Contractor acknowledges that, without limitation as to other remedies of enforcement available to the OCFA, upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement of the California Department of Industrial Relations, such penalties shall be withheld from progress payments then due the Contractor.

85.6 Pursuant to California Labor Code Section 1771.4, Contractor's services are subject to compliance monitoring and enforcement by the Department of Industrial Relations. Contractor shall post job site notices as prescribed by DIR regulations and furnish the records specified in California Labor Code Section 1776 directly to the Labor Commissioner in the manner prescribed by California Labor Code Section 1771.4(a)(3) and (c)(2).

## 86 SAFETY & HEALTH

86.1 The General Contractor (the Contractor) shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. The Contractor shall take all precautions and follow all procedures for the safety of, and shall provide all protection to prevent injury to, all persons involved in any way in the Work and all other persons, including, without limitation, the employees, agents, guests, visitors, invitees and licensees of OCFA who may be involved. These precautions shall include, but in no event be limited to the:

(1) Provisions of Local, State and Federal Regulations.
(2) Posting of danger signs and personal notification to all affected persons of the existence of a hazard, of whatever nature.
(3) Furnishing and maintaining of necessary traffic control barricades and flagman services.
(4) Use or storage of required explosives or other hazardous materials only under the supervision of qualified personnel.
(5) Maintenance of adequate quantities of operable fire protection equipment at the Work Site, as required by Local and /or State regulations.

86.2 The Contractor shall set forth in writing its site specific safety precautions and programs in connection with the Work, including an Anti-Substance Abuse Program which meets or exceeds any and all applicable laws, ordinances, rules, regulations, and orders of any public, quasi-public, or other authority relating to the safety of persons and their protection against injury, specifically including, but in no event limited to the:

(1) California Occupational Safety and Health Act of 1973, as amended, and rules and regulations now or hereafter in effect pursuant to said Act.
(2) California Code of Regulations, Title 8, as amended.
(3) The Labor Code of the State of California, as amended.
(4) Federal Occupational Safety and Health Act of 1970, as amended, and all rules and regulations now or hereafter in effect pursuant to said Act.
(5) Code of Federal Regulations, Title 29, as amended.
(6) The Drug-Free Workplace Act of 1988.
(7) In the event of conflicting requirements, the more stringent shall govern and if requested by OCFA, submit the same to OCFA for review. OCFA may, but shall not be obligated to, make suggestions and recommendations to the Contractor. OCFA shall review and approve the Contractor's Site Specific Program.

86.3 All work, whether performed by the Contractor or its Subcontractors, of all tiers or anyone directly or indirectly employed by any of them, and all equipment, machinery, materials, tools and like items incorporated or used in the Work, shall be compliance with and conform to:

(1) All applicable laws, ordinances, rules, regulations, and orders of any public, quasi-public, or other authority relating to the safety of persons and their protection against injury, specifically including, but in no event limited to, the Federal Occupational Safety and Health Act of 1970, as amended, and all rules and regulations now or hereafter in effect pursuant to said Act, and California Code of Regulations, Title 8, as amended; and,

(2) All codes, rules, regulations and requirements of OCFA and its insurance carriers relating thereto. In the event of conflicting requirements, the more stringent shall govern.

86.4 The Contractor shall designate a responsible and qualified member of its organization at the Work Site who has the authority to enforce the Contractor's Safety and Anti-Substance Abuse Programs, to assure compliance with Paragraph 10.1 and to prevent accidents.

86.5 The Contractor shall have a safety representative. The Contractor's safety representative will have:

(1) The authority to stop work when safety problems are identified.
(2) The authority to implement corrective actions.
(3) Extensive training in safety and loss control practices regarding the Contractor's type of work.
(4) Certification in the OSHA Construction Outreach 10/30 Hour Program.
(5) Certification in first aid and CPR.

86.6 The Contractor shall require its Subcontractors of all tiers to designate a competent and responsible safety representative to assist the Contractor's representative in the performance of his or her duties.

86.7 Should the Contractor fail to provide a safe work environment in accordance with the provisions in 10.1.1, OCFA or Project Manager shall have the right, but not the obligation, to suspend Work in the unsafe area, as specified in 10.6. All costs of any nature resulting from the suspension, by whomsoever incurred, shall be paid by the Contractor.

86.8 After a Contractor has been awarded the construction contract for the Project, it will be required to attend a pre-construction safety meeting. The purpose of the meeting is to review the Project's Safety Program and requirements. At this time, specific safety concerns related to the Contractor's work will be discussed.

86.9 If deemed necessary by the Project Manager or Project Safety Coordinator, or other OCFA representative, a written Job Safety Analysis (JSA) will be required of the Contractor. The JSA will be required for frequency and severity exposures such as steel erection, deep excavations, spray painting, crane handling of large/expensive equipment, etc. This is to ensure that appropriate controls are established prior to work beginning.

86.10 Workplace violence (Type III), verbal intimidation or threats to the Project Manager, OCFA or designee will result in immediate removal from the Project. Contractor shall develop and implement a workplace violence policy and procedure.

86.11 The Contractor shall provide, or cause to be provided, each worker on the Site the proper safety equipment for the duties being performed by that worker and will not permit any worker on the Site who fails or refuses to use the same. OCFA and/or Project Manager shall have the right, but not the obligation, to order the Contractor to send a worker off the Site for the day or to require the contractor to not allow the worker any further work on OCFA's site for his or her failure to comply with safety practices, with which order the Contractor shall promptly comply.

86.12 **Safety Indemnification**. The Contractor shall defend, indemnify, and hold the Project Manager, OCFA, and their respective officers, directors, agents, employees, and assigns harmless from and against any and all liability, public or private, penalties, contractual or otherwise, losses, damages, costs, attorneys' fees, expenses, causes of action, claims or judgments resulting either in whole or in part from any failure of the Contractor, or its

Subcontractors, of all tiers or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, to comply with provisions of the Project Manual, including but not limited to all applicable laws, ordinances, rules, regulations, and orders of any public, quasi-public, or other authority relating to the safety of persons and their protection against injury, specifically including, but in no event limited to, all Cal/OSHA laws and regulations and the Federal Occupational Safety and Health Act of 1970, as amended, and all rules and regulations now or hereafter in effect pursuant to thereto. The Contractor shall not be relieved of its responsibilities under this Subsection should OCFA act or fail to act pursuant to its rights hereunder, nor shall OCFA thereby assume, nor be deemed to have assumed, any responsibilities otherwise imposed on the Contractor by this Contract, by virtue of providing OCFA's Safety Policies & Procedures, or any other manner whatsoever.

86.12.1 The Contractor shall not raise a defense as to its obligation to indemnify under Subsection 86.12 above any contributing negligence of any of those indemnified hereunder, its being understood and agreed that no such contributing negligence shall relieve the Contractor from its liability to so indemnify nor entitle the Contractor to any contribution, either directly or indirectly, by those indemnified hereunder.

86.12.2 In any and all claims against those indemnified hereunder by any employee of the Contractor or its Subcontractors of all tiers, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under this Section 86.12 shall not be limited in any way to any limit on the amount or type of damage, compensation or benefits payable by or for the Contractor or its Subcontractors of any tiers under any Worker's Compensation Acts, Disability Benefit Acts or other Employee Benefit Acts.

86.13 In connection with the performance of this contract, OCFA shall have the authority to enter the worksite at any time for the purpose of identifying the existence of conditions, either actual or threatened, that may present a danger or hazard to any or all employees. Contractor agrees that OCFA, in its sole authority and discretion, may order the immediate abatement of any and all conditions that may present an actual or threatened danger or hazard to any and all employees at the worksite. Contractor acknowledges that provisions of Section 6400 of the California Labor Code, which requires that employers shall furnish employment and a place of employment that is safe and healthful for all employees working therein. In the event OCFA identifies the existence of any condition that presents an actual or threatened danger or hazard to any or all employees at the worksite, OCFA is hereby authorized to order the immediate abatement of that actual or threatened condition pursuant to this Section. OCFA may also, at its sole authority and discretion, issue an immediate stop work order to Contractor to ensure that no employee working at the worksite is exposed to a dangerous or hazardous condition. Any stop work order issued by OCFA to Contractor in accordance with the provisions of this Section, shall not give rise to any claim or cause of action for delay damages by Contractor or Contractor's agents or subcontractors against OCFA.

## 87 Non-Discrimination

87.1 Contractor covenants that, by and for itself, successors, and assigns, including its Subcontractors and suppliers, that there shall be no discrimination against or segregation of, any person or group of persons on account of race, color, creed, religion, gender, marital status, national origin, sexual orientation, or ancestry in the performance of this Contract. Contractor shall take steps to ensure that applicants for any job and that employees are treated without regard to their race, color, creed, religion, gender, marital status, national origin, sexual orientation, or ancestry in full compliance with applicable federal, state, and local laws and regulations.

87.2 Contractor shall not engage in, nor permit its agents, including its Subcontractors and suppliers, to engage in discrimination in employment of persons or provision of services or supplies, on the grounds of race, color, creed, religion, gender, marital status, national origin, sexual orientation, or ancestry.

87.3 Contractor, and Contractor's Subcontractors and suppliers, shall employ fair employment practices with regard to all employees and all applicants for employment and shall act in accordance with all applicable federal, state, and local laws and regulations relating to such fair employment practices. In furtherance of such obligation, Contractor agrees that Contractor, Subcontractors, and suppliers shall not discriminate in employment and/or provision of services under this Contract and all employment practices shall be without regard to a person's race, color, creed, religion, gender, national origin, age, ancestry, physical handicap, medical condition, marital status, all in accordance with applicable federal, state, and local laws or regulations. Fair employment practices shall include, but not be limited to, employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rate of pay or other form of compensation and selection for training including apprenticeship.

87.4 In the performance of the terms of the Contract Documents, Contractor agrees that Contractor will not engage in nor permit such subcontractors as Contractor may employ to engage in discrimination against any employee or applicant for employment on the basis of race, sex, color, religion, ancestry, national origin, marital status, age or as an otherwise qualified handicapped individual. This prohibition shall pertain to employment, upgrading, demotion, or transfer, recruitment advertising, layoff or termination, rates of pay and other forms of compensation, selection for training, including apprenticeship, and any other action or inaction pertaining to employment matters.

## 88 Assignment of Antitrust Actions

In accordance with Public Contract Code Section 7103.5, by entering into the Contract Documents or into a subcontract to supply goods, services, or materials pursuant to the Contract Documents, the Contractor, or subcontractor, offers and agrees to assign to the OCFA all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Sec. 15) or under the Cartwright Act (Chapter 2 [commencing with Section 16700] of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the Contract Documents or the subcontract. This assignment shall be made and become effective at the time the OCFA tenders final payment to the Contractor, without further acknowledgment by the parties. The contractor shall cause to be inserted in any such subcontract stipulations to effectuate this Section 88 and the provision of Public Contract Code Section 7103.5.

## 89 Time of Commencement; Time Is of the Essence

89.1 **Commencement**: Contractor agrees to commence the Project within ten (10) calendar days from the date the OCFA's Board approves this Contract, and Contractor shall diligently prosecute the work to Substantial Completion of the Milestones as identified in the Contractor's Construction Schedule and Substantial Completion of the Project no later than the Scheduled Completion Date, excluding modifications for delays caused or authorized by the OCFA as set forth in Section 71.5.

89.2 **Construction Schedule**: Within 30 days of the Award of the Contract, Contractor shall furnish to the Project Manager one reproducible, three prints, and an electronic or digital copy in a format approved by the Project Manager of the Contractor's Construction Schedule. The schedule shall be supported by written statements from each supplier of materials or equipment indicating that all orders have been placed and acknowledged, and setting forth

the dates that each item will be delivered. The schedule shall establish the order of work which minimizes disruption of existing travel lanes. Upon submission by Contractor, and approval by the Project Manager, the Contractor's Construction Schedule shall be attached to Project Manual as an Exhibit and shall be deemed the baseline schedule. The Contractor's Construction Schedule shall identify and specify scheduling for the Work based on the critical path method (or other scheduling method acceptable to the Project Manager) and updating thereof, and shall provide other schedules that would further the efficient completion of the Project, including the Work and the Related Work in the most expeditious and economical manner. The Contractor's Construction Schedule shall depict in detail the sequence and timing of all activities of the Work and Related Work, including, without limitation, commencement and Completion Dates of Milestones and for all other significant portions of the Work and Related Work. The Contractor's Construction Schedule shall be updated at least monthly, except that the Scheduled Completion Date shall not be changed or modified unless otherwise approved by the Project Manager pursuant to the terms of this Contract.

89.3 **Progress Reports**: Concurrently with its submission of Applications for Payment, Contractor shall provide the Project Manager with a report (1) detailing the actual progress of the Work and Related Work as of the date of such report; (2) stating any discrepancies between the actual progress of the Work and Related Work; (3) identifying the progress anticipated by the Contractor's Construction Schedule as of the date of such reports; and (4) stating a recovery schedule to place the Work and Related Work back on schedule, at no cost to the OCFA. The Contractor's Construction Schedule shall include Milestones for each aspect of the Work and the timing for completion of Related Work that could affect completion of the Work by the date listed in the Contractor's Construction Schedule.

89.4 **Acceleration.**

89.4.1 The OCFA reserves the right to accelerate the work of the Contract at any time during its performance. In the event the OCFA directs acceleration, such directive will be given to the Contractor in writing. The Contractor shall keep cost and other Project records related to the acceleration directive separately from the normal Project cost records and shall provide a written record of acceleration costs to the OCFA on a daily basis.

89.4.2 In the event the Contractor believes that some action or inaction on the part of the OCFA constitutes an acceleration directive, the Contractor shall immediately notify the OCFA in writing that the Contractor considers the actions or inactions an acceleration directive. The Contractor shall not accelerate their work efforts until the OCFA responds to the written notification. If acceleration is then directed or required by the OCFA, all cost records referred to in the previous paragraph shall be maintained by the Contractor and provided to the OCFA on a daily basis.

89.4.3 In order to recover additional costs due to acceleration, the Contractor must document that additional expenses were incurred and paid by the Contractor. Labor costs recoverable will only be overtime or shift premium costs or the cost of additional laborers brought to the site to accomplish the accelerated work effort. Equipment costs recoverable will only be the cost of added equipment mobilized to the site to accomplish the accelerated work effort.

89.5 **TIME IS THE ESSENCE OF THIS CONTRACT**: NOTWITHSTANDING OCFA'S APPROVAL OF ANY UPDATED CONTRACTOR'S CONSTRUCTION SCHEDULE, THE SCHEDULED COMPLETION DATE SHALL BE STRICTLY ADHERED TO DURING THE TERM OF THIS

CONTRACT. THE SCHEDULED COMPLETION DATE MAY ONLY BE CHANGED AS PROVIDED IN THE CONSTRUCTION CONTRACT.

89.6 **Ongoing Responsibility of Contractor:** As required by the Project Manual, Contractor shall prepare and obtain approval of all shop drawings, submittals, details, and samples, and do all other things necessary and incidental to the prosecution of Contractor's work in conformance with the Project Manual and Contractor's Construction Schedule. Contractor shall coordinate the Work with the Related Work through the Project Manager, in a manner that will facilitate the efficient completion of the Project in accordance with the Project Manual.

89.7 **Control of the Site and Order of Work**: Contractor shall have control of the Site and shall have the right to decide the time or order in which the various portions of the work shall be constructed or installed consistent with the Contractor's Construction Schedule and shall establish the priority of the work of Subcontractors of the Work and the Related Work, and, in general, all matters representing the timely and orderly completion of the Project.

89.8 **Cooperation**: Notwithstanding the Scheduled Completion Date, Contractor will cooperate with the OCFA and the OCFA's separate Contractors, consultants, and employees and Contractor agrees to provide for and coordinate access to the Project prior to the Scheduled Completion Date.

89.9 **Contractor's Risk Of Non-Performance**: IT IS SPECIFICALLY AGREED THAT CONTRACTOR ASSUMES THE RISK OF NONPERFORMANCE, LATE PERFORMANCE, AND NONCOMPLIANCE WITH THE REQUIREMENTS OF THE PROJECT MANUAL BY CONTRACTOR, CONTRACTOR'S SUBCONTRACTORS, SUPPLIERS, AND AGENTS. CONTRACTOR SHALL NOT BE ENTITLED TO AN EXTENSION OF ANY COMPLETION DATE OF THE SCHEDULED COMPLETION DATE FOR THE ABOVE STATED REASONS OR ANY OTHER REASONS, EXCEPT AS OTHERWISE EXPRESSLY PROVIDED IN THE PROJECT MANUAL.

89.10 **Notification of Inability to Comply**: If the Contractor, at any time, ascertains that for any reason it is unable to complete the phases of the Work by the Milestones, or complete the Project by the Scheduled Completion Date, Contractor shall promptly and without delay notify the Project Manager in writing of this fact.

89.11 **Liquidated Damages**: The Parties acknowledge and agree that if Contractor fails to achieve Substantial Completion of the Project by the Scheduled Completion Date or fails to achieve Substantial Completion of a Milestone, as such dates may be extended in accordance with the Project Manual, OCFA will suffer, as a result of Contractor's failure, substantial damages which are both extremely difficult and impracticable to ascertain. Therefore the Parties having reasonably endeavored, but failed, to ascertain an amount bearing a reasonable relationship to the actual damage that OCFA will incur if Contractor fails to achieve Substantial Completion of the Project by the Scheduled Completion Date or fails to achieve completion of a Milestone as such dates may be extended in accordance with the Project Manual, agree that in addition to all other damages to which OCFA may be entitled, Contractor agrees to pay to OCFA as liquidated damages, and not as a penalty but as a reasonable estimate of the amount of damages OCFA will suffer, the amount of Five Hundred Dollars ($500.00) per day for each calendar day occurring after the completion date of a Milestone during which Contractor fails to achieve Substantial Completion for each such Milestone. In addition, the OCFA shall have the right to charge to the Contractor and to deduct from payments for the Work the actual cost to the OCFA of engineering, inspection, superintendence, and other overhead expenses, which are directly chargeable to the Contract and which accrue during the period of such delay. The expenses and damages described above shall be deducted

from any money due the Contractor under this contract. The Contractor and its sureties shall be liable for any excess cost.

89.12 **Additional Remedies**: The Parties also acknowledge and agree that OCFA is entitled to any and all legal and equitable remedies OCFA may have that exceed the amount of Liquidated Damages.

## 90 Audit And Access To Records

90.1 Contractor shall maintain all books, records, documents, and other evidence directly pertinent to the performance of the work under this Contract in accordance with generally accepted accounting principles and practices consistently applied. Contractor shall also maintain all financial information and data used by the Contractor in the preparation or support of any cost submission, including the Contractor's original bid required for this Contract, or any Change Order, claim, or other request for any adjustment, and a copy of the cost summary or information submitted to the OCFA. The Project Manager or the Fire Chief shall have access upon twenty-four hours advanced written notice, at all times during normal business hours, to all such books, records, documents, financial information, and all other evidence for the purpose of inspection, audit, and copying. The Contractor shall, at no cost to the OCFA, provide proper facilities for such access, inspection, and copying purposes.

90.2 The Parties agree that the provisions of this Section 90 are applicable to Project Manual and all Change Orders, claims, and any other request for adjustment affecting the time or price of this Contract. The Contractor agrees to include the provisions of this Section in all Subcontracts and purchase orders, at any tier, and make this Section 90 applicable to all Change Orders, claims, and other requests for adjustment related to Project performance by Contractor's Subcontractors and suppliers.

90.3 Audits conducted under this Section shall be in accordance with generally accepted auditing standards and established procedures and guidelines.

90.4 The Contractor agrees to the disclosure of all information and reports resulting from access to records under the provisions of this Section to the OCFA, the Fire Chief, the Project Manager, and any affected or interested state or local agency.

90.5 Records under the provisions of this Section shall be maintained and made available during the performance of the Work under this Contract until three years past final payment and until final settlement of all disputes, claims, or litigation, whichever occurs later. In addition, those records which relate to any portion of this Contract to any Change Order, dispute, litigation, settlement of any claim arising out of such performance, or to the cost of items to which an audit exception has been taken, shall be maintained and made available until final payment or final resolution of such dispute, litigation, claim, or exception, whichever occurs later.

90.6 These rights to access provisions as provided in this Section apply to all financial records pertaining to this Contract and all Change Orders and claims. In addition, this right to access applies to all records pertaining to all contracts, Change Orders, and any amendments to this Contract: (1) To the extent the records pertain directly to Contract performance; (2) If there is any indication that fraud, gross abuse, or corrupt practices may be involved; or (3) If the Contract is terminated for default or convenience.

90.7 Access to records is not limited to the required retention periods. The Fire Chief shall have access to records at any reasonable time for as long as the records are maintained.

## 91 Resolution Of Construction Claims

91.1 California Public Contract Code (PCC) section 9204 as adopted by Assembly Bill 626 prescribes a process to present, confer, and mediate construction claims relating to the OCFA's public works project. Notwithstanding any provisions to the contrary in the Project Manual, this section shall govern all disputes to which section 9204 applies.

91.2 For purposes of this Section 91, "Claim" means a separate demand by the Contractor sent by registered mail or certified mail with return receipt requested for (A) a time extension, including, without limitation for relief from damages or penalties for delay assessed by a public entity under a contract for a public works project (B) payment of money or damages arising from work done by or on behalf of the Contractor pursuant to the contract for a public works project and payment for which is not otherwise expressly provided or to which the claimant is not otherwise entitled, or the amount the payment of which is disputed by the local agency. (PCC 9204(c)(1))

91.3 For purposes of this Section 91, "Public works project" means the erection, construction, alteration, repair, or improvement of any public structure, building, road, or another public improvement of any kind.

91.4 For any Claim subject to this Section 91, California Public Contract Code section 9204 requires the following:

91.4.1 The claim shall be submitted by the Contractor in writing, sent by registered mail or certified mail with return receipt requested and must include the documents necessary to substantiate the claim. Nothing in this subdivision is intended to extend the time limit or supersede notice requirements otherwise provided by contract for the filing of claims. However, upon receipt of a claim, the OCFA, and the Contractor may, by mutual agreement, extend the time period provided by statute.

91.4.2 For claims of all amounts, the OCFA shall respond within 45 days of receipt of the claim, and provide the claimant a written statement identifying which portion of the claim is disputed and which portion of the claim is undisputed. If the OCFA requires approval from the Board of Directors, and the Board of Directors does not meet within the 45-day period to respond, the OCFA shall have up to three days to issue its response following the Board of Directors meeting.

91.4.3 For all portions of a claim determined to be undisputed, the OCFA must process payment to the claimant within 60 days of issuing the OCFA's written determination.

91.4.4 If the claimant disputes the OCFA's response, or if the OCFA fails to respond within the time limits provided, the claimant may demand an informal conference to meet and confer for settlement of the issues in dispute. The demand must be sent in writing by registered or certified mail, return receipt requested. Upon receipt of a demand, the OCFA must schedule a meet and confer conference within 30 calendar days for settlement of the disputed claim.

91.4.5 Within ten (10) business days following the conclusion of the meet and confer conference, if any portion of the claim remains in dispute, the OCFA shall provide the claimant an addition written statement identifying the portion of the claim that is undisputed and the portion that remains in dispute.

91.4.6 For all portions of a claim determined to be undisputed, the OCFA must process payment to the claimant within 60 calendar days of issuing the OCFA's written determination.

91.4.7 Any remaining undisputed portion of the claim, as identified by the Contractor in writing, shall be submitted to nonbinding mediation in which the parties share the cost evenly. The OCFA and the claimant shall mutually agree on a mediator within ten (10) business days after the disputed portion of the claim has been identified in writing. If the parties cannot agree, each party shall select a mediator and those mediators shall jointly select a qualified, neutral third party to mediate the remaining undisputed claim. Each party shall bear the respective costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside of PCC section 9204.

91.4.8 Unless otherwise agreed to by the OCFA and the Contractor in writing, the mediation conducted pursuant to this Section 91 shall excuse any further obligation under PCC Section 20104.4 to mediate after litigation has been commenced.

91.4.9 Public Contract Code Section 9204 does not preclude the OCFA from requiring arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program if mediation under this section does not resolve the parties' dispute.

91.4.10 Should the OCFA fail to respond to a claim, or fail to issue written statements as required, the Contractor's claim is deemed denied. A claim denied by reason of the OCFA's failure to respond shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of the claimant.

91.4.11 Amounts not paid in a timely manner as required by PCC 9204 shall bear interest at seven percent per annum.

**92 Notice Of Third-Party Claims**

When required by PCC Section 9201, the OCFA will provide timely notification to Contractor of the receipt of any third-party claim relating to the Agreement. The Contractor agrees to reimburse the OCFA for its reasonable costs incurred in providing such notice.

**93 Cleanup**

93.1 The Contractor shall at all times keep the Site clean and free from accumulation of waste materials or rubbish (including, without limitation, hazardous waste), caused by his performance of the Work, and shall continuously throughout performance of the Work remove and dispose of all such materials from the Site and the Project.

93.2 Project Manager may require the Contractor to comply with such standards, means and methods of cleanup, removal or disposal as Project Manager may make known to the Contractor. In event the Contractor fails to keep the Site clean and free from such waste or rubbish, or to comply with such standards, means and methods, OCFA may take such action and offset any and all costs or expenses of whatever nature paid or incurred by OCFA in undertaking such action against any sums then or thereafter due to the Contractor.

93.3 The Contractor shall notify OCFA in advance of the generation, importation, storage, transportation or disposal, of any hazardous waste, toxic materials or contaminants of any type in connection with the Project. Contractor shall provide Project Manager with Material

Safety Data Sheets (MSDS's) and the Uniform Hazardous Waste documents. The Contractor will develop and implement a written and effective Spill Control and Containment Plan.

**94 Trenches and Excavations**

94.1 The Contractor shall promptly, and before any of the following conditions are disturbed, notify the Project Manager, in writing, of any:

(1) Material that the Contractor believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class 1, Class II, or Class III disposal site in accordance with the provisions of existing law; or
(2) Subsurface of latent physical conditions at the Site differing from those indicated; or
(3) Unknown physical conditions at the Site of unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract and Project Manual.

94.2 The Project Manager shall promptly investigate the conditions, and if the Project Manager finds that the conditions materially so differ, or do involve hazardous waste, and cause an increase or decrease in the Contractor's cost of, or the time required for, performance of any part of the work shall issue a change order, subject to the provisions of the Project Manual.

94.3 In the event that a dispute arises between the Project Manager and the Contractor whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the Contractor's cost of, or time required for, performance of any part of the Work, the Contractor shall not be excused from any Scheduled Completion Date provided for in the Contract, but shall proceed with all work to be performed under the Contract. The Contractor shall retain any and all rights provided either by the Contract or by law which pertain to the resolution of disputes and protests between parties.

**95 Uncovering and Correction of Work; OCFA's Right To Carry Out Work**

95.1 If any portion of the Work should be covered contrary to the instructions or request of Project Manager or the requirements of the Project Manual, the Contractor shall, if required by Project Manager, uncover such portion of the Work for Project Manager's observation and shall replace such Work all at the Contractor's expense.

95.2 If any portion of the Work should be covered prior to a specific request for observation or instruction by Project Manager, Project Manager may request to see such Work, and it shall be uncovered by the Contractor. If such Work is found to be in accordance with the Project Manual and without defect, the cost of uncovering and replacement shall, by appropriate Change Order, be charged to OCFA. If such Work is found to be defective or not in accordance with the Project Manual, the Contractor shall bear such costs.

95.3 Project Manager shall have the authority to reject any portion of the Work which is defective or does not conform to the Project Manual, and the Contractor shall promptly correct all Work so rejected by Project Manager, whether observed before or after the Date of Substantial Completion and whether or not fabricated, installed or completed. In order that such corrective Work shall not interrupt or delay Contractor's Construction Schedule or the completion date of the Project, the Contractor shall perform such Work according to a schedule therefor established by Project Manager (which may provide that the same be performed on overtime, shiftwork, Saturdays, Sundays and/or holidays), utilizing in the performance thereof such manpower as is necessary to complete the corrective Work in accordance with said schedule. The Contractor shall bear all costs of correcting such rejected

Work including, without limitation, compensation for any additional architectural and engineering services made necessary thereby.

95.4 If, within one (1) year after the Completion of the Work (as determined by OCFA) or within such longer period of time as may be prescribed by law or by the terms of any applicable warranty or guarantee required by the Project Manual, any of the Work is found to be defective or not in accordance with the Project Manual, the Contractor shall correct it promptly after receipt of written instructions to that effect from OCFA unless OCFA has previously given the Contractor a written acceptance of such condition.

95.5 The Contractor shall remove from the Site all Work which is defective or non-conforming and not corrected under the provisions of these General Conditions unless removal is waived in writing by OCFA.

95.6 If the Contractor does not remove such uncorrected defective or non-conforming Work within a reasonable time fixed by written instructions to that effect from Project Manager, OCFA may remove it and store the materials and equipment at the expense of the Contractor. If the Contractor does not pay the cost of such removal and storage within ten (10) days thereafter, OCFA may, upon ten (10) additional days written notification to the Contractor, sell such materials and equipment at public or private sale and account to the Contractor for the net proceeds thereof, after deducting all the costs that should have been borne by the Contractor, including compensation for any additional architectural and engineering services and attorneys' fees made necessary thereby. If such proceeds of sale do not cover all costs which the Contractor should have borne, the difference shall be offset against any amounts then or thereafter due to the Contractor. If the amounts then or thereafter due to the Contractor are not sufficient to cover such difference, the Contractor shall, upon demand, pay the same to OCFA. The obligations of the Contractor under this Subsection shall be in addition to, and not in limitation of, any obligations imposed on it by law, by any other provision of this Contract or by any warranty or guarantee under this Contract.

95.7 If the Contractor fails to correct any defective or non-conforming Work, OCFA may correct it with its own forces or by contract with a third party contractor. In the event of a defect found after final acceptance of the Work by OCFA which the Contractor is obligated to correct pursuant to Project Manual, OCFA may, at its option, after giving the Contractor an opportunity to correct such defect, cause such corrective Work to be performed by others and charge the Contractor with the cost thereof. Such charge shall be due and payable by the Contractor upon demand.

95.8 If the Contractor defaults or neglects to carry out the Work in accordance with the Project Manual or fails to perform any provision of this Contract, and such default, neglect or non-performance shall continue for a period of 48 hours after written notification thereof from OCFA (or if such default, neglect or non-performance cannot be reasonably remedied within such 48-hour period, and Contractor does not (in the sole determination of OCFA) undertake in good faith the remedy of the same within said period and thereafter proceed diligently to completion), then OCFA may, without prejudice to any other remedy OCFA may have, make good such deficiencies; provided, however, that in the event of an emergency, as determined by OCFA, no notification shall be required. OCFA shall have the right to take possession of such portion of the Site as will enable it to make good such deficiencies and, in connection therewith, to utilize the materials, equipment, tools, construction equipment and machinery of the Contractor located on the Site. If OCFA makes good any such deficiencies, the costs of correcting the same including, without limitation, compensation for additional architectural and engineering services made necessary by such default, neglect or non-performance, shall be offset against any amounts then or thereafter due to the Contractor. If the amounts then

or thereafter due to the Contractor are not sufficient to cover such costs, then the Contractor shall, upon demand, pay the difference to OCFA.

95.9 If OCFA prefers to accept defective or non-conforming Work, it may do so instead of requiring its removal and correction, in which case an appropriate amount shall be offset against any amounts then or thereafter due to the Contractor; or, if the said appropriate amount of offset is determined after final payment (or if there is not then or thereafter due to the Contractor an amount sufficient to cover the offset available to OCFA), the Contractor shall, upon demand, pay the appropriate amount (or the difference after offset, as applicable) to OCFA.

**96 Plans, Specifications and Survey**

The Contractor shall maintain a control set of Plans, Specifications and survey on the Project site at all times. All final locations determined in the field by survey, and any deviations from the Plans and Specifications, shall be marked in red on this control set to show the as-constructed conditions. Upon completion of all work, the Contractor shall return the control set to the Engineer. Final payment will not be made until this requirement has been met.

**97 Permits**

OCFA will reimburse the Contractor for the public agency-charged fee for permits, inspections. No profit amount shall be added to such reimbursement.

**98 Compliance with Laws; Non-Discrimination**

Contractor shall ensure that its officers, employees, agents, contractors, and subcontractors: (1) conduct themselves in compliance with all applicable laws and licensure requirements including, without limitation, compliance with laws applicable to nondiscrimination, harassment, and ethical behavior, throughout the duration of the Contract; and (2) comply with all OCFA, State, and Federal, Local Agency and Regulatory Agency orders regarding affirmative action to ensure equal employment opportunities and fair employment practices. Failure to file any report due under said orders will result in suspension of periodic progress payments. The Contractor shall ensure unlimited access to the job site for all equal employment opportunity compliance officers.

**99 Right-Of-Way And Easements**

In the event any required easements have not yet been acquired by the OCFA, the Contractor shall conduct its operation so as to confine its work to the limits of the existing right-of-way.

**100 Disputed Work**

Contractor shall keep all records of disputed work in accordance with the General Conditions. In any case where the Contractor believes extra compensation is due the Contractor for work or materials not clearly covered in the Contract, or not ordered by the OCFA as "extra work", the Contractor shall notify the OCFA in writing of the Contractor's intention to make claim for such extra compensation before the Contractor begins the work on which Contractor bases the claim. All "claims" as that term is defined in Public Contract Code section 9204 shall be submitted and processed in accordance with Section 91 hereinabove. Such notice by the Contractor, and the fact that the OCFA has kept account of the cost as aforesaid, shall not in any way be construed as proving the validity of the claim. The validity of the claim must be determined by the OCFA. If the OCFA determines that all or a portion of the claim is well founded, the valid portion shall be allowed and paid for as "extra work"; if the OCFA determines that all or a portion of the claim is not well founded, the portion that is not well founded shall be disallowed and not paid, subject to Section 91. Nothing herein limits the authority of the OCFA to consider, approve or disapprove of Change Orders in accordance with the Project Manual.

**101 Time of Completion.**

Work will be deemed completed on the same date when the Notice of Completion is recorded with the County of Orange.

**102 Delivered Materials.**

Materials and equipment delivered but not incorporated into the work shall not be included in the estimate for progress payment.

**103 Mobilization.**

103.1 Mobilization shall consist of preparatory work and operations, including but not limited to those necessary for the movement of personnel, equipment, supplies, and incidentals to the Project site; for the establishment of all offices, buildings and other facilities necessary for the work on this Project; and for all other work and operations which must be performed or cost incurred prior to beginning work on the various contract items on the Project site. Mobilization is deemed to include all aspects of mobilization and de-mobilization work occurring during the life of the Project for any reason.

103.2 Full compensation for mobilization shall be included in the Contract lump sum price bid for Mobilization and shall include full compensation for all costs incurred by the Contractor for doing all the work involved in mobilization as specified herein, and no additional compensation will be allowed. Mobilization shall not exceed 5% of the entire bid, excluding mobilization and as shown in the Proposal Bid Sheet.

**104 Facilities For Contract Personnel.**

104.1 Extended Field Office Overhead Cost.

104.1.1 Within fourteen (14) calendar days after receipt of the Notice to Proceed, the Contractor shall submit a written statement to the OCFA detailing its field office overhead costs which are time related. The OCFA will review this first cost submittal and reach a written agreement with the Contractor on a daily field office overhead cost rate which shall be memorialized in a no cost change order. The daily rate agreed to in this change order will be applicable throughout the duration of the Contract. No field office costs will be paid until such an agreement is reached between the OCFA and the Contractor and the change order concerning this daily rate is executed by both parties. Progress payments will be withheld pending receipt of the above-referenced cost submittal and executed change order.

104.1.2 The individual cost components of the daily field office overhead rate shall represent costs which increase as a direct result of any time extension caused solely and exclusively by an act or omission of the OCFA. This listing may include such cost items as on-site project management, supervision, Engineering and clerical salaries; on-site utilities and rent; on-site company vehicles and their operating expenses; and site maintenance and security expenses. Field office overhead costs which are unaffected by increased time shall not be allowable cost in calculating the daily field office overhead rate. These non-time related costs include, but are not limited to, acquisition and installation of stationary equipment; temporary construction facilities; utilities and office furnishings (unless such items are rented or leased); the preparation of the site

including clearing, grubbing, grading, fencing, mobilizations and demobilization costs; and the costs of permits, bonds and insurance coverage for the Project.

104.1.3 The individual wage cost components used to calculate the daily field office rate shall be supported by actual employee payroll records, not salary ranges or estimates. Hourly rates for management, supervisory, engineering, and clerical employees shall be based upon 2080 work hours per year and shall not include allowances for holidays, vacations, or sick time.

104.1.4 When applicable, the daily field office overhead rate shall be multiplied by the number of days the Contract is delayed or extended by change order and shall be added to the agreed upon change order cost. The days of delay shall be those caused solely by the acts or omissions of the OCFA and documented by a time impact analysis prepared and submitted by the Contractor. In the event a deductive change order is issued which reduces time under the Contract, the daily field office overhead rate shall be used to calculate the deductive amount. No allowance for overhead costs and no profit allowance shall be added to the extended field office overhead cost.

## 105 OCFA Officers And Employees; Non-Discrimination

105.1 No member, officer, member of the OCFA Board of Directors, or employee of the OCFA shall be personally liable to Contractor, or any successor in interest, in the event of any default or breach by OCFA or for any amount which may become due to Contractor or to its successor, or for breach of any obligation of the terms of this Contract.

105.2 Pursuant to the provisions of the OCFA's conflict of interest code, the Political Reform Act as set forth in Government Code Section 81000 et seq., and/or the prohibition against self-dealing in contracts as set forth in Government Code Section 1090 et. seq., the Parties acknowledge that no officer or employee of the OCFA, or any member of the OCFA Board, shall have any personal interest, direct or indirect, in this Contract or any Subcontract under the Contract, nor shall any such officer, employee, or member of the OCFA Board participate in any decision relating to the Contract which effects his or her personal interest or the interest of any corporation, partnership, or association in which he or she is, directly or indirectly, interested. In the furtherance of such acknowledgement, Contractor:

i. Contractor agrees that no officer, employee, member of the OCFA Board of Directors, agent, or assignee of the OCFA having direct or indirect control of any monies allocated by OCFA to finance this Project, shall serve as an officer, director, employee, or agent of Contractor, or as a officer, director, employee, or agent of any Subcontractor of supplier of Contractor under this Contract; and

ii. Any conflict or potential conflict of interest of any officer, director, employee, or agent of Contractor or any Subcontractor or supplier of Contractor has been fully disclosed to the OCFA prior to execution of this Contract and such disclosure shall be deemed a part of this Contract.

105.3 Contractor shall not expend any funds for the purpose of influencing or attempting to influence an officer, member, employee, or member of the OCFA Board in the connection with the awarding and the administration of this Contract or any subcontract in furtherance of the Project.

## 106 Entire Agreement

It is agreed that this Contract (which incorporates the Project Manual) represents the entire agreement. It is further agreed that the Project Manual is incorporated in this Contract by this reference, with the same force and effect as if the same were set forth at length within the Contract, and that Contractor and Contractor's officers, employees, agents, trades, material suppliers, and Subcontractors will be and are bound by any and all of said Project Manual insofar as they relate in any part or in any way, directly or indirectly, to the work covered by this Contract.

## 107 Written Notices

Any written notice required to be given in any part of the Contract Documents shall be performed by dispatching the same via email directed to the email address of the Contractor as set forth in the Contract Documents, and to the OCFA addressed as follows:

A. [INSERT OCFA CONTACT INFO FOR NOTICES]

B. [INSERT CONTRACTOR CONTACT INFO FOR NOTICES]

## 108 Miscellaneous Provisions

108.1 Assignment: Contractor shall neither delegate its duties or obligations, nor assign its rights with respect to this Contract, either in whole or in part. Any such attempted delegation and/or assignment shall be void and deemed void at such occurrence, if it were to occur.

108.2 Computation of Time: When any period of time is referred to in the Project Manual by days, it shall be computed to exclude the first and include the last day of the period, provided, however, that if the last day of the period falls on a Saturday, Sunday, or legal holiday, that day shall be omitted from the computation. "Days" refers to calendar days unless otherwise expressly provided.

108.3 Remedies Cumulative: No remedy herein reserved to OCFA is intended to be exclusive of any other remedy, but each and every such remedy shall be cumulative and shall be in addition to any other given in the Project Manual as now or hereafter existing or at law, equity, or by statute.

108.4 Nonwaiver: The failure of the OCFA to notify the Contractor of any default under the Project Manual shall not be deemed to be a waiver by OCFA of any continuing default by Contractor of any term, covenant, or condition set forth in this Contract, nor of the OCFA's right to declare a default for any such continuing breach, and the failure of OCFA to insist upon strict performance of any of the terms, covenants, or conditions of the Project Manual, or to exercise any option in the Project Manual in any one or more instances, shall not be construed as a waiver or relinquishment of any such terms, covenants, conditions or options, but the same shall be and remain in full force and effect.

108.5 Severability: In case any one or more provisions set forth in the Project Manual shall for any reason be held invalid, illegal, or unenforceable in any respect, any such invalidity, illegality, or unenforceability shall not affect any other provision of the Project Manual, and the Project Manual and this Contract shall be construed as if such invalid, illegal, or unenforceable provision had never been incorporated therein so long as the deletion of such provision does not, in the OCFA's judgment, materially alter this Contract.

108.6 No Third Party Beneficiaries: The Project Manual and this Contract are not intended and shall not be deemed or construed, to confer any rights, powers, or privileges on any person, firm, partnership, corporation, or other entity not a party to this Contract except as may be expressly provided in the Contract to the contrary.

108.7 No Verbal Agreements: No verbal order, objection, claim, or notice by any party to the other shall affect or modify any of the terms or obligations contained in this Contract or the Project Manual, and none of the provisions of the Project Manual shall be held to be waived or modified by reason of any act whatsoever, other than by a definitely agreed waiver or Modification in writing and executed in the manner required in this Contract by authorized officers or representatives of the Parties. No evidence shall be introduced in any proceeding of any other waiver or modification.

108.8 Counterparts: This Contract may be executed in any number of counterparts, and each of such counterparts for all purposes shall be deemed to be an original, and all of such counterparts should constitute one and the same agreement.

108.9 Governing Law/Venue: The Contract, including the Project Manual, shall be governed by the laws of the State of California. Venue for all disputes related to the Project, the Contract Agreement and/or the Project Manual shall be in Orange County, California.

108.10 Services Prior to Execution: Notwithstanding the fact that this Contract is executed as of the date first set forth above, the Parties recognize that a portion of the Work required under the Project Manual may have been performed prior to such date, all of which Work shall be governed by the terms and conditions of this Contract and shall be deemed to be a part of the Work. Without limiting the foregoing, all of Contractor's liabilities and obligations to OCFA under the Project Manual shall apply to all Work and services provided by the Contractor for the Work prior hereto, notwithstanding the fact that the Work may have been performed prior to the date hereof pursuant to prior negotiations, representations, agreements, understandings, or otherwise.

108.11 Survival of Rights: Any indemnity, warranty, guarantee given by the Contractor to the OCFA under this Contract shall survive the expiration or termination of this Contract and shall be binding upon Contractor until any action under this Contract is barred by the applicable statute of limitations.

108.12 Notice: All notices (whether or not designated as such herein) which are required under this Contract to be given between the parties pursuant to this Paragraph shall be in writing and deemed given and, unless otherwise provided herein, effective when delivered personally to an officer of the party to be served (including the Contractor's Project Manager, in the case of the Contractor), when deposited in the United States mail, or in a sealed envelope, with postage thereon prepaid, sent by registered or certified mail, return receipt requested, and addressed to the appropriate party at the address set forth in the Contract or such other address as may be designated by either party hereto by notice to the other, or when transmitted by wire or facsimile to the appropriate party at the aforesaid address (a complimentary confirming letter shall also be mailed to the appropriate party on the same date).

108.13 Maintenance of Harmonious Relations: The Contractor is hereby advised that any portion of the Project, or other projects in proximity to the Project may be subject to, and governed by, certain union or trade agreements. It is the policy of OCFA to promote and maintain harmonious relationships in connection with the Project. The Contractor and its Subcontractors and Sub- subcontractors shall follow this policy; and shall utilize only

qualified persons or organizations in the performance of the Work. A qualified person or organization is one: which is not likely to promote labor unrest on the Project; which shall abide by all local, state and federal labor and employment relation rules, regulations and laws; whose financial stability is reasonably assured throughout the duration of the Contract; and whose commitments to other projects are not likely to interfere with its ability to perform its portion of the Work efficiently and cost effectively. OCFA reserves the right to disapprove, or to require the removal of, any person or organization who is being considered for, or has received, an award to perform all or a portion of the Work but has failed to demonstrate the willingness or ability to follow this policy.

108.14 Union Agreements: Regardless of the expiration of any collective bargaining agreement during the term of this Contract which may affect the Contractor in any of its activities including, without limitation, with respect to the Work or the Project, the Contractor is obligated to man the job and properly and timely perform the Work in a diligent manner. Upon notification of expected or actual labor disputes or job disruption arising out of any such collective bargaining negotiations, the expiration of any union or trade agreement or any other cause, the Contractor and its Subcontractors and Sub-subcontractors shall cooperate with OCFA concerning any legal, practical or contractual actions to be taken by OCFA in response thereto and shall perform any actions requested by OCFA to eliminate, neutralize or mitigate the affects of such actions on the progress of the Work and the impact of such actions on the public access to OCFA's facilities. It is the Contractor's obligation, at the Contractor's own cost and expense, to take all steps available to prevent any persons performing the work from engaging in any disruptive activities such as strikes, picketing, slowdowns, job actions or work stoppages of any nature or ceasing to work due to picketing or other such activities, which steps shall include, without limitation, execution of an appropriate project agreement with appropriate unions prohibiting all such activities on or about the Project. Notwithstanding any such occurrences, the Contractor shall not be relieved of its obligation to man the job and properly and timely perform the Work in a diligent manner.

108.15 Immigration Reform Control Act: All Contractors, Subcontractors, and Sub-subcontractors must adhere to the Immigration Reform Control Act of 1986 and shall maintain I-9 forms regarding all employees. It is not OCFA's obligation to insure compliance with this law, however, OCFA reserves the right to inspect and copy the Contractor's records in this regard upon request.

108.16 General: The captions of divisions, sections, articles, Paragraphs, Subparagraphs, clauses and the like in the Project Manual are for convenience only and shall in no way define the content or limit the meaning or construction of the wording of the divisions, sections, articles, Paragraphs, Subparagraphs, clauses and the like. The parties agree that the Project Manual shall not be construed more strictly against any party regardless of the identity of their drafter. Unless otherwise specified, Section and Subsection references appearing in these General Conditions are to Section and Subsections of the Contract Agreement.

108.17 Evidence of Corporate Existence and Good Standing. A corporation to which an award is made may be required, before the Contract Agreement is executed by the OCFA, to furnish evidence of its corporate existence and good standing, of its right to enter into contracts in the State of California, and that the officers signing the Contract and bonds for the corporation have the authority to do so. (Ref: California Corporations Code section 7214.)

END OF DOCUMENT

# SECTION 5: TECHNICAL SPECIFICATIONS

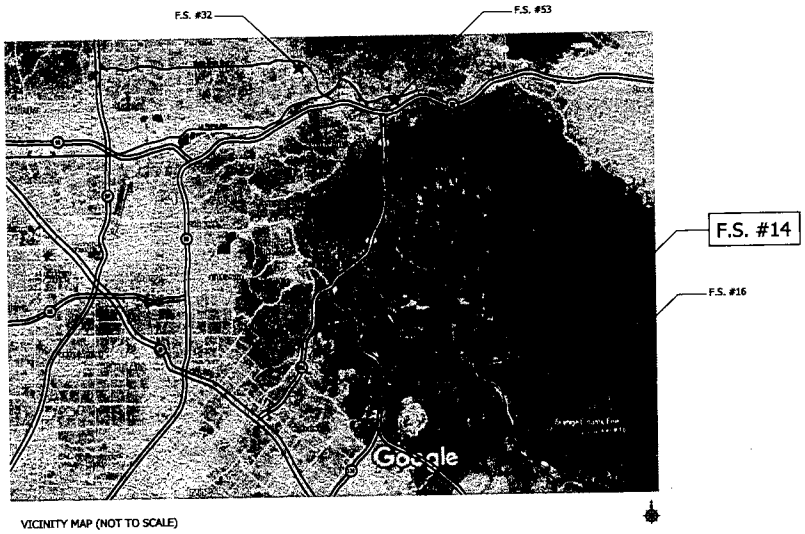
## 5A: OCFA FIRE STATION 14 PERMIT SET

# ORANGE COUNTY FIRE AUTHORITY

GILLIS + PANICHAPAN ARCHITECTS, INC.

Jack Panichapan, AIA
PRINCIPAL-IN-CHARGE

## RE-BID SET




VICINITY MAP (NOT TO SCALE)

# FIRE STATION FACILITIES - TENANT IMPROVEMENTS

PROJECT NO. 4009

F.S. NO. 14: 29402 SILVERADO CANYON RD.
SILVERADO, CA 92676

## SHEET INDEX


CV-1 COVER SHEET

CIVIL DRAWINGS:

C-2.0 OCFA STATION #14 SURVEY
C-3.0 OCFA STATION #14 DEMO
C-5.0 OCFA STATION #14 GRADING
C-6.0 OCFA STATION #14 DETAILS

ARCHITECTURAL DRAWINGS:

T-1 TITLE SHEET - F.S. 14
T-2 AERIAL SITE PLAN (FOR REFERENCE) - F.S. 14
T-3 MISCELLANEOUS
A-1.1 EXISTING/DEMO FLOOR PLAN - F.S. 14
A-1.2 PROPOSED FLOOR PLAN - F.S. 14
A-1.3 PROPOSED REFLECTED CEILING PLAN - F.S. 14
A-1.4 INTERIOR ELEVATIONS - F.S. 14
A-1.5 DOOR AND FLOOR FINISH SCHEDULES - F.S. 14
A-5.1 ADA DETAILS
A-5.2 DETAILS

STRUCTURAL DRAWINGS:

S-1 MEZZANINE FRAMING PLAN & DETAILS

ELECTRICAL DRAWINGS:

E-0.1 ELECTRICAL SYMBOL LIST AND ABBREVIATIONS
E-0.2 ELECTRICAL SPECIFICATIONS
E-0.3 PANEL SCHEDULES & DETAILS
E-0.4 T-24 COMPLIANCE FORMS & LIGHT FIXTURE SCHEDULE
E-0.5 LIGHTING FIXTURE CUTSHEETS
E-2.0 DEMOLITION LIGHTING PLAN
E-2.1 DEMOLITION POWER PLAN
E-3.0 PROPOSED LIGHTING PLAN
E-3.1 PROPOSED POWER PLAN

MECHANICAL DRAWINGS:

M-0.1 MECHANICAL GENERAL NOTES AND LEGEND
M-0.2 MECHANICAL SCHEDULES AND DETAILS
M-2.0 MECHANICAL DEMOLITION FLOOR PLAN
M-3.0 MECHANICAL PROPOSED FLOOR AND ROOF PLAN

PLUMBING DRAWINGS:

P-0.1 GENERAL NOTES, LEGEND, AND DRAWING INDEX
P-0.2 PLUMBING SCHEDULES AND DETAILS
P-2.0 PLUMBING DEMOLITION FLOOR PLAN
P-3.0 PLUMBING FLOOR PLAN - WASTE AND VENT
P-3.1 PLUMBING FLOOR PLAN - WATER
P-4.0 PLUMBING RISER DIAGRAMS



Gillis + Panichapan Architects, Inc.
2900 BRISTOL STREET COSTA MESA CALIFORNIA 92626
FAX (714) 668-4265 SUITE G-205 TEL (714) 668-4260



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RE-BID SET

| | | |
|---|---|---|
| 2 | BID SET | DATE: 02/16/2022 |
| 3 | RE-BID SET | DATE: 01/07/2022 |
| 4 | BID RFIs | |

JOB NO.: 4009
DRAWN BY: STAFF
CHECKED BY: LP
SCALE:

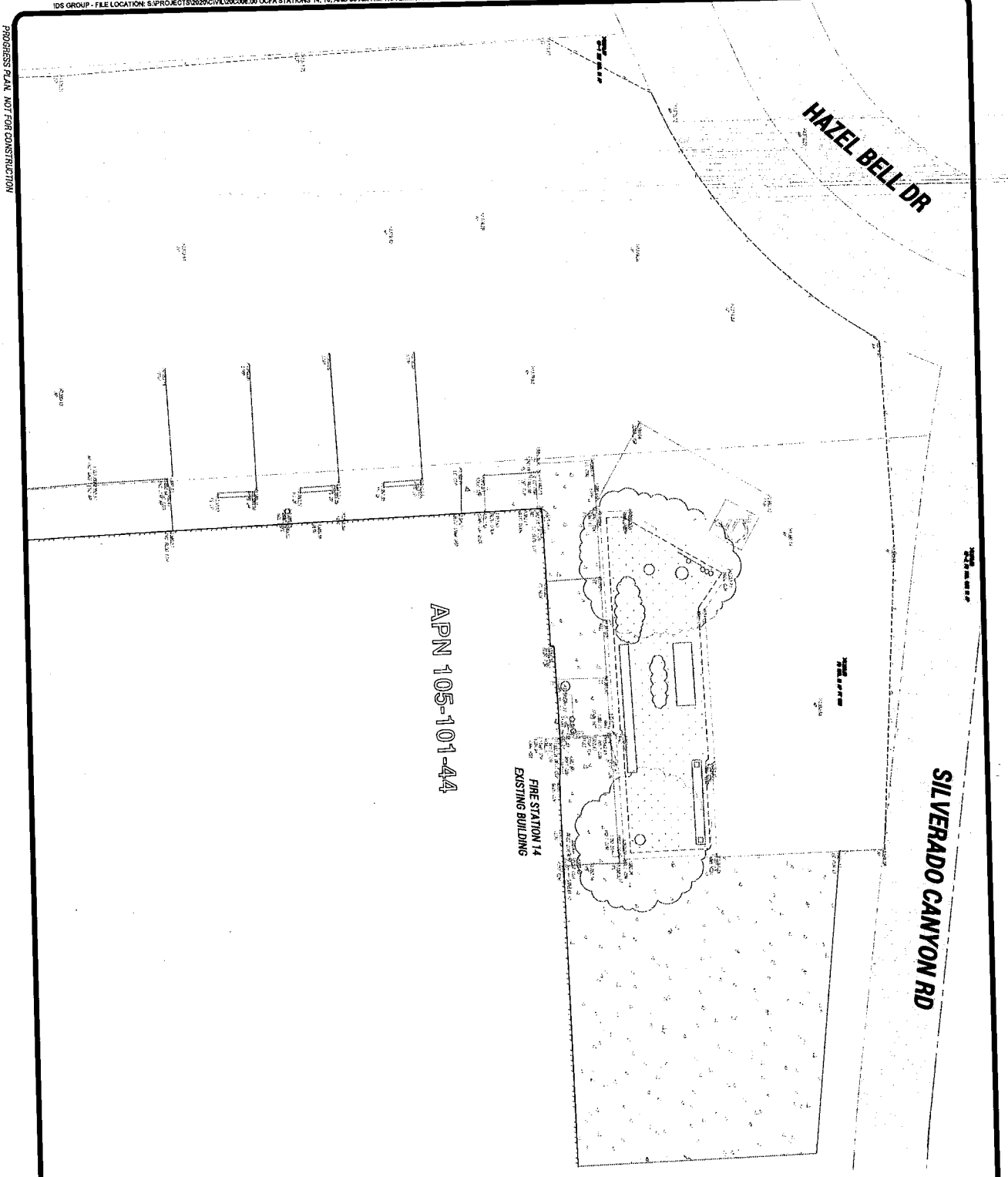
COVER SHEET - F.S. 14

ORANGE COUNTY FIRE AUTHORITY
Fire Station #14 - Tenant Improvements
29402 SILVERADO CANYON RD., SILVERADO, CA 92676

CV-1

IDS GROUP - FILE LOCATION: S:\PROJECTS\2020\CIVIL\20C006.00 OCFA STATIONS 14, 16, AND 53 ADA IMPROVEMENTS\04 CAD\STATION 14\02 CD (CONSTRUCTION DOCUMENTS)\20C006.00-CC0200 SURVEY PLOT DATE: 2/1/2021 1:45 PM USER: JAD.BOUKAI

PROGRESS PLAN, NOT FOR CONSTRUCTION




SCALE 0 5 10

C-2.0

OCFA STATION #14 SURVEY

*ORANGE COUNTY FIRE AUTHORITY*
*Fire Station #14 - Tenant Improvements*
*29402 SILVERADO CANYON RD., SILVERADO, CA 92676*

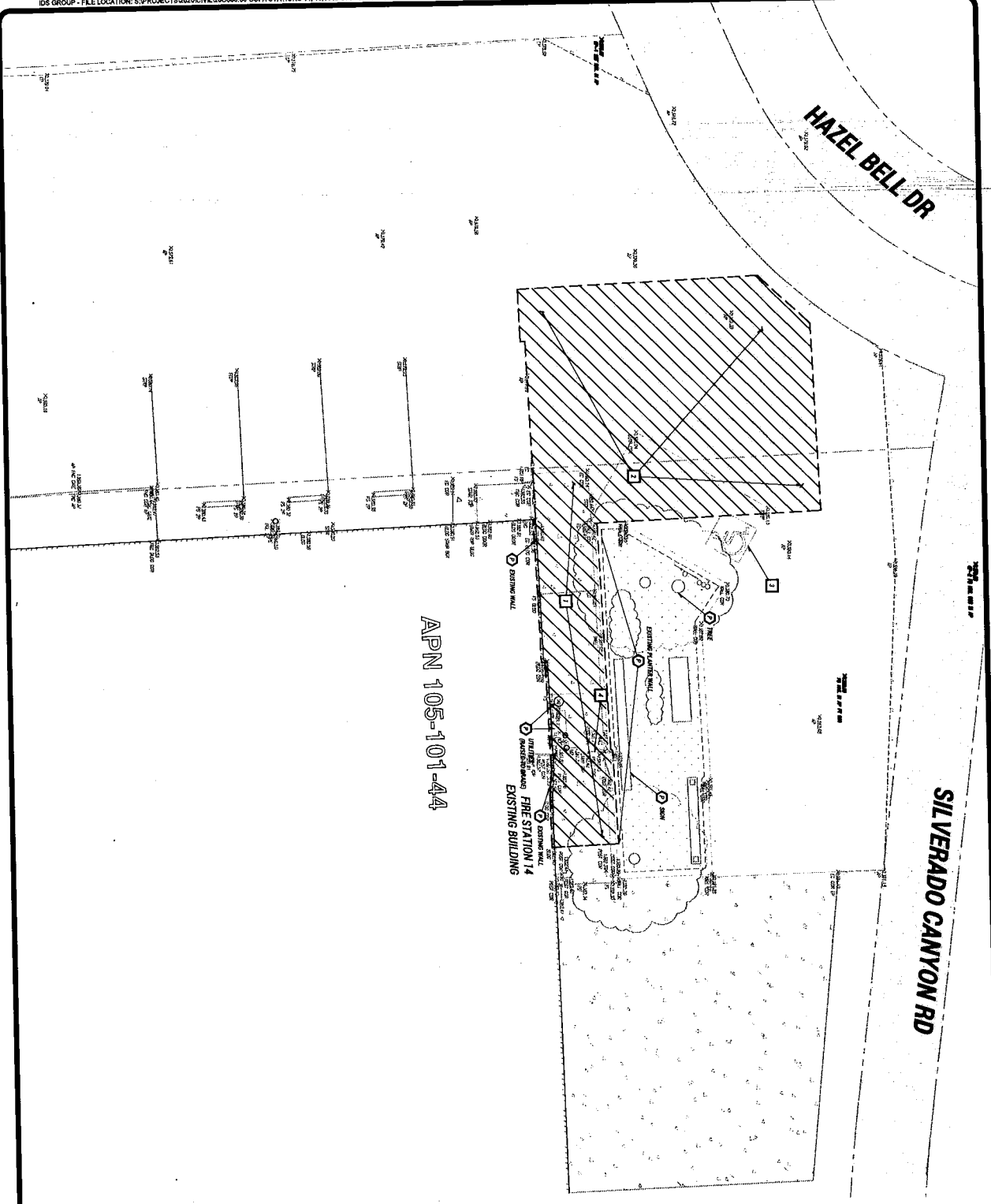
| | |
|---|---|
| PLAN CHECK CORRECTIONS | |
| BID SET | |
| RE-BID SET | |
| JOB NO.: 4009 | DATE: 01/07/2022 |
| DRAWN BY: JB | |
| CHECKED BY: NK | |
| SCALE: AS NOTED | |

RE-BID SET

GPa
Gillis + Panichapan Architects, Inc.
2900 BRISTOL STREET COSTA MESA CALIFORNIA 92626
FAX (714) 668-4265 SUITE G-205 TEL (714) 668-4260

STATE OF CALIFORNIA

PROGRESS PLAN NOT FOR CONSTRUCTION




**LEGEND**

- DEMO SURFACE
- BUILDING OUTLINE
- EDGE OF PAVEMENT

**DEMOLITION NOTES**

1. REMOVE EXISTING CONCRETE WALL
2. SAWCUT AND REMOVE AND DISPOSE EXISTING ASPHALT
3. SAWCUT/LAY EXISTING STRIPING
4. REMOVE EXISTING STAIRS

**DISPOSITION NOTES**

1. PROTECT-IN-PLACE ITEM AS SHOWN

SCALE 0 5 10

C-3.0

OCFA STATION #14 DEMO

*ORANGE COUNTY FIRE AUTHORITY*
*Fire Station #14 - Tenant Improvements*
*29402 SILVERADO CANYON RD., SILVERADO, CA 92676*

| | |
|---|---|
| PLAN CHECK CORRECTIONS | |
| BID SET | |
| RE-BID SET | |
| JOB NO.: 4009 | DATE: 01/07/2022 |
| DRAWN BY: JB | |
| CHECKED BY: MK | |
| SCALE: AS NOTED | |

RE-BID SET

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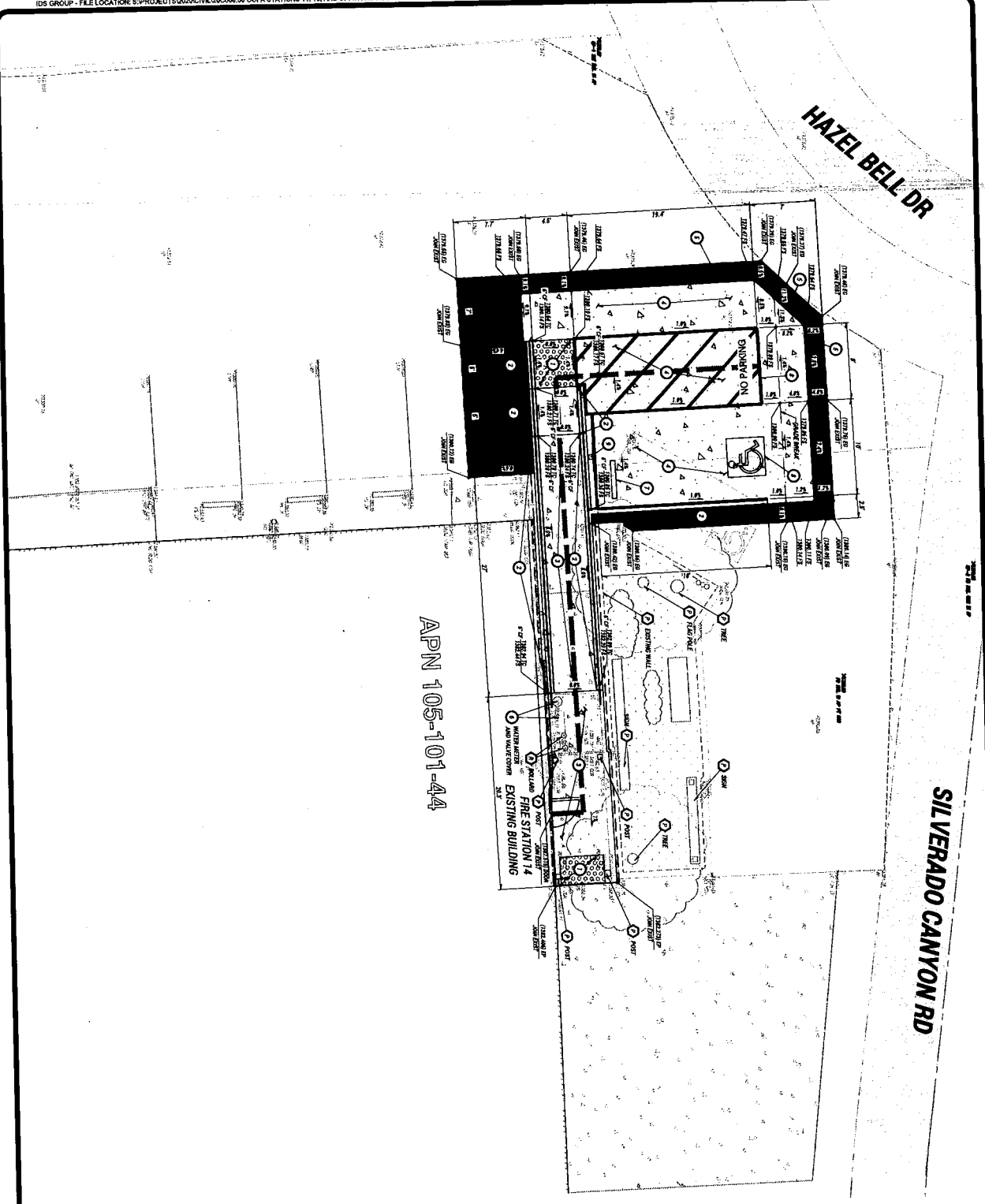
C 35577
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA

PROGRESS PLAN. NOT FOR CONSTRUCTION




## DISPOSITION NOTES

(P) PROTECT-IN-PLACE ITEM AS SHOWN

(R) RELOCATE OR REPLACE IN KIND ITEM AS SHOWN

## CONSTRUCTION NOTES

1. CONSTRUCT PCC WITH CAST-IN-PLACE TRUNCATED DOMES PER SPPWC STD DWG NO. 111-2 AND DETAIL 1, SHEET C-6.0
2. CONSTRUCT MODIFIED PCC CURB PER SPPWC STD NO. 120-2 TYPE A1, MODIFY PER PLAN
3. CONSTRUCT 6" PCC PAVEMENT OVER 6" CAB PER PLANS. CONCRETE SHALL BE CLASS 564-C-3250
4. FULL DEPTH AC REMOVAL PER DETAIL 1.0
5. VERTICALLY RELOCATE UTILITY
6. CONSTRUCT WHEEL STOP PER SPPWC STD PLAN 120-2 TYPE C1-6 AND DETAIL 2
7. PAINT PARKING LOT STRIPING PER SPPWC STD PLAN 180-0
8. CONSTRUCT NEW ADA PARKING SIGN PER SPPWC STD PLAN 180-0

## LEGEND

EDGE OF PAVEMENT
BUILDING OUTLINE
SURVEY LINE
CURB
LANDSCAPE
EXISTING AC
PROPOSED AC
PROPOSED PCC
PROPOSED TRUNCATED DOMES
ADA PATH OF TRAVEL
PROPERTY LINE
GRADE BREAK

SCALE 0 5 10

| | |
|---|---|
| C-5.0 | OCFA STATION #14 GRADING |
| | ORANGE COUNTY FIRE AUTHORITY<br>Fire Station #14 - Tenant Improvements<br>29402 SILVERADO CANYON RD., SILVERADO, CA 92676 |

| | |
|---|---|
| PLAN CHECK CORRECTIONS | |
| BID SET | |
| RE-BID SET | |
| JOB NO.: 4009 | DATE: 01/07/2022 |
| DRAWN BY: XB | |
| CHECKED BY: NK | |
| SCALE: AS NOTED | |

RE-BID SET

GPc
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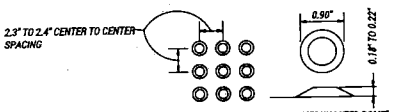
C 55077
REGISTERED PROFESSIONAL ENGINEER
STATE OF CALIFORNIA



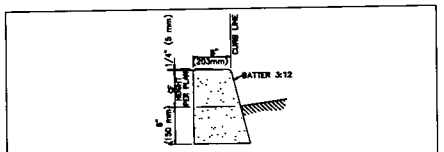

NOTE:

CURB RAMPS SHALL HAVE A DETECTABLE WARNING SURFACE THAT EXTENDS THE FULL WIDTH AND 3'-0" DEPTH OF THE RAMP. COLOR OF DETECTABLE WARNING SURFACE SHALL BE DARK GRAY.

DETECTABLE WARNINGS SHALL CONSIST OF A SURFACE OF TRUNCATED DOMES AND SHALL COMPLY WITH SECTION 11B-705.

NTS

## TRUNCATED DOMES 1




NOTES:

1. THE LAST NUMBER IN THE DESIGNATION IS THE CURB FACE (CF) HEIGHT, INCHES (mm).
2. GUTTER WIDTH, W, IS 24" (600 mm) UNLESS OTHERWISE SPECIFIED.
3. TYPES A1, A2, A3 AND C1 SHALL BE CONSTRUCTED FROM PCC.
4. TYPE D1 CURB SHALL BE CONSTRUCTED FROM ASPHALT CONCRETE.
5. TYPE C1 CURB SHALL BE ANCHORED WITH STEEL DOWELS AS SHOWN OR WITH AN EPOXY APPROVED BY THE ENGINEER.
6. ALL EXPOSED CORNERS ON PCC CURBS AND GUTTERS SHALL BE ROUNDED WITH A 1/2" (13 mm) RADIUS.

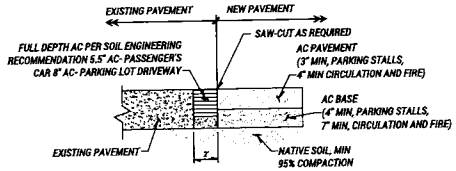
STANDARD PLAN FOR PUBLIC WORKS CONSTRUCTION

| | MODIFIED* CURB | STANDARD PLAN 120–2 |
|---|---|---|

USE WITH STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION

NTS

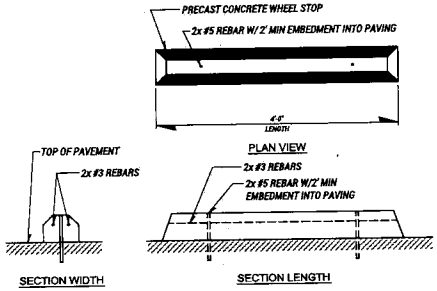
## MODIFIED* CURB TYPE A1-6 2




NOTE: CAST-IN-PLACE CONCRETE SHALL BE FLUSH WITH ADJACENT SURFACES.

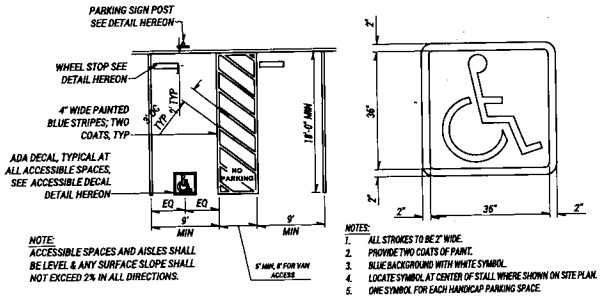
NTS

## AC PAVEMENT & BASE, AND JOIN EXISTING 3




NTS

## CONCRETE WHEEL STOP 7



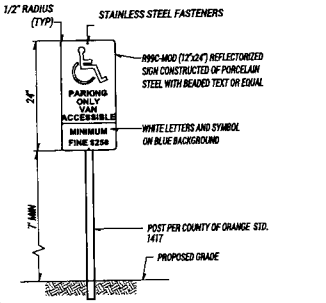

NOTE:
ACCESSIBLE SPACES AND AISLES SHALL BE LEVEL & ANY SURFACE SLOPE SHALL NOT EXCEED 2% IN ALL DIRECTIONS.

NOTES:

1. ALL STROKES TO BE 2" WIDE.
2. PROVIDE TWO COATS OF PAINT.
3. BLUE BACKGROUND WITH WHITE SYMBOL.
4. LOCATE SYMBOL AT CENTER OF STALL WHERE SHOWN ON SITE PLAN.
5. ONE SYMBOL FOR EACH HANDICAP PARKING SPACE.

NTS

## TYPICAL ADA PARKING STALL AND DECAL 8




NOTES:

1. ALL MATERIAL AND WORK SHALL CONFORM TO THE CALIFORNIA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (CA MUTCD 2014, REV 4).
2. ALL SALVAGED SIGNS AND POSTS SHALL BE DISPOSED OF AT THE CONTRACTORS EXPENSE.

NTS

## SIGN AND POST 9

GPA
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RE-BID SET

| MARK | DESCRIPTION | DATE |
|---|---|---|
| 1 | CLIENT COMMENTS | |
| 2 | RE-BID SET | |
| 3 | RE-BID SET | DATE: 01/07/2022 |

JOB NO.: 4009
DRAWN BY: JB
CHECKED BY: MK
SCALE: AS NOTED

OCFA STATION #14 DETAILS

ORANGE COUNTY FIRE AUTHORITY
Fire Station #14 - Tenant Improvements
29402 SILVERADO CANYON RD., SILVERADO, CA 92676

C-6.0

IDS GROUP - FILE LOCATION: S:\PROJECTS\2020\20VAL\20C008.00 OCFA STATIONS 14, 16, AND 53 ADA IMPROVEMENTS\04 CAD\STATION 14\02 CD (CONSTRUCTION DOCUMENTS)\20C008.00-CC0600 DETAILS PLOT DATE: 2/1/2021 1:46 PM USER: JAD.BOUKAI

PROGRESS PLAN. NOT FOR CONSTRUCTION

## GENERAL NOTES

1. THESE PLANS AND SPECIFICATIONS ARE THE PROPERTY OF OCFA AND ARE NOT TO BE USED FOR OTHER PROJECTS WITHOUT THE PERMISSION OF THE ARCHITECT.
2. THESE NOTES APPLY TO ALL DRAWINGS, UNLESS NOTED OTHERWISE. ANY OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE DRAWINGS AND/OR GENERAL NOTES ARE TO BE BROUGHT TO THE ATTENTION OF THE OWNER AND THE OWNER BEFORE PROCEEDING WITH ANY WORK SO INVOLVED.
3. ALL DRAWINGS AND SPECIFICATIONS ARE CONSIDERED TO BE PART OF THE CONTRACT DOCUMENTS. THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE, UNLESS OTHERWISE SHOWN. THEY DO NOT INDICATE METHOD OF CONSTRUCTION. CONTRACTOR IS TO SUPERVISE AND DIRECT THE WORK UNDER HIS CONTRACT AND SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY FIELD REPRESENTATIVES OF THE OWNER AND / OR HIS CONSULTANTS ARE NOT TO INCLUDE INSPECTIONS OF REQUIRED FOR SAME, WHICH ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY SUPPORT SERVICES PERFORMED BY THE OWNER AND / OR HIS CONSULTANTS DURING CONSTRUCTION ARE TO BE DISTINGUISHED FROM CONTINUOUS AND DETAILED INSPECTION SERVICES WHICH ARE FURNISHED BY OTHERS. THESE SUPPORT SERVICES PERFORMED BY THE OWNER AND / OR HIS CONSULTANTS, WHETHER OF MATERIAL OR WORK, AND WHETHER PERFORMED PRIOR TO, DURING OR AFTER COMPLETION OF CONSTRUCTION ARE PERFORMED SOLELY FOR THE PURPOSE OF ASSISTING IN QUALITY CONTROL AND IN ACHIEVING GENERAL CONFORMANCE WITH DESIGN CONCEPT AND CONTRACT DRAWINGS AND SPECIFICATIONS AND THEREFORE, THEY DO NOT GUARANTEE CONTRACTORS PERFORMANCE AND ARE NOT TO BE CONSTRUED AS SUPERVISION OF CONSTRUCTION.
4. CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS TO BE REMOVED, RELOCATED OR REMAIN INTACT AND HOW THE NEW CONSTRUCTION RELATES TO THE SITE CONDITION.
5. THE CONTRACTOR SHALL EXAMINE THE JOB SITE, CONFIRM ALL UTILITY LOCATIONS; SIZES, PRESSURES, ETC., AND PROTECT, RELOCATE, CONNECT OR REMOVE ALL NECESSARY FOR TOTAL PROJECT COMPLETION. VERIFY ALL DIMENSIONS AND SATISFY HIMSELF AS TO THE EXISTING CONDITIONS UNDER WHICH HE WILL BE OBLIGATED TO OPERATE. NOTIFY THE OWNER OF ANY AND ALL DISCREPANCIES PRIOR TO COMMENCING WORK.
6. ALL CONTRACTORS AND SUBCONTRACTORS SHALL FAMILIARIZE THEMSELVES WITH THE CONTENTS OF ALL THE DRAWING AND ALL SPECIFICATION SECTIONS, REGARDLESS OF THEIR LICENSE CLASSIFICATION. NO REQUEST FOR CHANGE ORDER WILL BE CONSIDERED BASE UPON INFORMATION FOUND IN ONE ARE OF THE PLANS OR SPECIFICATIONS, AND NOT THE OTHER. INFORMATION FOUND IN ONE PART OF THE PLANS SHALL BE DEEMED TO BE IN ALL SECTIONS.
7. ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION STANDARDS. IF CLARIFICATION IS REQUIRED THE CONTRACTOR SHALL NOTIFY THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.
8. THE CONTRACT DOCUMENTS AND SPECIFICATIONS REPRESENT THE FINISH STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE AND SAFETY OF WORKMEN DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE BUT NOT BE LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE OWNER OR OWNERS STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS AND DOES NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES FOR THE ABOVE. UNLESS NOTED
9. DO NOT SCALE DRAWINGS. PRINTED DIMENSIONS HAVE PRECEDENCE OVER SCALED DRAWINGS AND LARGE SCALE OVER SMALL. DIMENSIONS SHOWN ARE TO THE FACE OF WALL FRAMING (CMU, STUD) UNLESS OTHERWISE NOTED.
10. ALL DIMENSIONS AND THE SITE CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE JOB SITE PRIOR TO BID SUBMITTAL, START OF SHOP DRAWINGS, START OF CONSTRUCTION, AND/OR FABRICATION OF MATERIALS. IF DISCREPANCIES ARE ENCOUNTERED, OR CONDITIONS DEVELOP NOT COVERED BY THE CONTRACT DOCUMENTS, THE OWNER SHALL BE NOTIFIED FOR CLARIFICATION.
11. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BUILDING BACKING SLEEVES, FRAMING FOR LIGHT FIXTURES, ELECTRICAL LIGHTS, A/C EQUIPMENT, DRAPERY, CEILING TRACKS, PLUMBING EQUIPMENT, COUNTERS, HANDRAILS, AND ALL OTHER ITEMS REQUIRING BACKING SUPPORT.
12. ANYONE SUPPLYING LABOR AND MATERIALS TO THE PROJECT IS TO CAREFULLY EXAMINE ALL SUBSURFACES TO RECEIVE WORK. ANY CONDITIONS DETRIMENTAL TO WORK TO BE REPORTED IN WRITING TO OWNER & PROJECT ARCHITECT PRIOR TO BEGINNING WORK. COMMENCEMENT OF WORK IMPLIES ACCEPTANCE OF SUBSURFACES.
13. REFER TO ARCHITECTURAL, PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS FOR DEPRESSED SLABS, CURBS, FINISHES, TEXTURES, CLIPS, GROUNDS, ETC., NOT SHOWN ON STRUCTURAL DRAWINGS.
14. PROVIDE OPENINGS AND SUPPORTS FOR MECHANICAL EQUIPMENT, DUCTS, PIPING, VENTS, ETC, AS REQUIRED. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR ADDITIONAL OPENINGS AND EQUIPMENT NOT SHOWN ON STRUCTURAL DRAWINGS. ALL SUSPENDED EQUIPMENT AND MATERIALS TO BE INSTALLED WITH APPROVED LATERAL BRACING. VERIFY SIZES AND LOCATIONS OF ALL MECHANICAL EQUIPMENT BEFORE CONSTRUCTION OF ANY BASES OR PADS TO SUPPORT SUCH EQUIPMENT. VERIFY ALL PLUMBING AND EQUIPMENT SIZES BEFORE BEGINNING CONSTRUCTION OF CABINETS.
15. NOTIFY OWNER 24 HOURS PRIOR TO PLACING CONCRETE.
16. NOTED FINISH FLOOR ELEVATIONS ARE TO THE TOP OF CONCRETE FLOOR SLAB. WHERE FLOORS ARE SLOPED FOR DRAINAGE, THE HIGH POINT OF FINISH FLOOR IS (+ OR -) 0'- 0" UNLESS NOTED OTHERWISE, AND IS AT THE PERIMETER OF THE ROOM. STANDARD SLOPE IS 1/4" PER FOOT (MINIMUM = 3/16" PER FOOT; MAXIMUM = 5/16" PER FOOT). SUB-SLABS DEPRESSED FOR TILE FLOOR FINISH TO BE SLOPED TO DRAIN AND MAINTAIN SLAB THICKNESS INDICATED ON THE STRUCTURAL DRAWINGS.
17. NOTIFY THE OWNER IF ANY CONDITIONS EXIST WHICH WILL PREVENT THE COMPLETION OF WORK IN A PROFESSIONAL AND SATISFACTORY MANNER AS WELL AS ANY AND ALL ADDITIONAL WORK TO BE PERFORMED BEFORE STARTING WORK. ALL NOTIFICATIONS SHALL BE IN WRITING.
18. ALL CONTRACTORS AND SUB-CONTRACTORS SHALL OBTAIN A CITY BUSINESS LICENSE.
19. PROVIDE SAFEGUARDING FEATURES DURING CONSTRUCTION SUCH AS PROTECTION OF ADJOINING PROPERTY AS REQUIRED AND OTHER ITEMS SUCH AS SITE FENCING AND BARRIERS (3306.9), SANITATION (3305) ETC.

## WATERPROOFING COMMENTS

1. THERE IS A HEIGHTENED CONCERN IN THE CONSTRUCTION INDUSTRY ABOUT THE INTRUSION OF WATER INTO BUILDINGS AND THE RESULTING MOLD THAT DEVELOPS SUBSEQUENTLY. THE OWNER HAS MADE A DILIGENT ATTEMPT TO SPECIFICALLY DETAIL THE PROJECT TO STOP THIS WATER FROM ENTERING THROUGH PENETRATIONS INTO THE BUILDING. HOWEVER, ALL OF THESE AVENUES WHICH ALLOW THE INTRUSION OF WATER INTO THE BUILDING MAY NOT HAVE BEEN OBSERVED DURING DESIGN. DURING THE COURSE OF YOUR CONSTRUCTION OF THE BUILDING, THE OWNER ASKS TO BE ADVISED IMMEDIATELY OF ANY QUESTIONABLE CONDITIONS THAT MAY OCCUR WITH RESPECT TO THE PERCEIVED WATER-TIGHTNESS OF THE STRUCTURE. ONCE A BUILDING SUFFERS A BREACH, AND MOLD DEVELOPS, A BUILDING CAN BECOME UNTENABLE, AND CORRECTIONS COSTLY. WE ASK THAT THE CONSTRUCTION TEAM BE DILIGENT IN THEIR CONSTRUCTION EFFORTS TO HELP INSURE THAT, THE BUILDING THAT WE TURN OVER AS A TEAM, WILL BE AS WATERTIGHT AS WE CAN MAKE IT. YOU, THE CONTRACTOR, WILL BE THE LAST HANDS ON THE PROJECT, AND WE ARE CERTAINLY AVAILABLE TO DISCUSS WITH YOU, YOUR CONSTRUCTABILITY IDEAS TO KEEP THIS PROJECT WATERTIGHT.

## CALGREEN MEASURES

THE CONTRACTOR SHALL COMPLY WITH CALGREEN MEASURES AS NOTED IN DRAWINGS AND AS INDICATED. CONTRACTOR SHALL SUPPLY DOCUMENTATION INDICATING COMPLIANCE OF THESE MEASURES. CONTRACTOR SHALL COORDINATE WITH OWNER AND DESIGN TEAM, AS NEEDED, FOR VERIFICATION OF CALGREEN INFORMATION/COMPLIANCE.

1. CONSTRUCTION WASTE REDUCTION. SECTION 5.408
2. FINISH MATERIAL POLLUTANT CONTROL, SECTION 5.504.4
3. PAINTS AND COATINGS, SECTION 5.504.4.3 AND 5.504.4.3.1
4. VOCS TO BE WITHIN LIMITS FOR ALL ARCHITECTURAL COATINGS, SECTION TABLE 5.504.4.3

UPON COMPLETION, THE CONTRACTOR SHALL REVIEW THE REQUIRED ITEMS ON THE CALGREEN CHECKLIST AND INITIAL EACH ITEM COMPLETED WITH VERIFICATION BY THE GOVERNING AUTHORITY. THE CHECKLIST SHALL BECOME A PART OF THE RECORD DRAWINGS.

## CODE (GENERAL)

1. IT IS THE RESPONSIBILITY OF ANYONE SUPPLYING LABOR OR MATERIALS OR BOTH TO BRING TO THE ATTENTION OF THE OWNER AND PROJECT ARCHITECT ANY DISCREPANCIES OR CONFLICTS BETWEEN THE CODE REQUIREMENTS AND THE DRAWINGS BEFORE PROCEEDING WITH WORK.
2. CONTRACTOR SHALL COMPLY FULLY WITH THE LATEST EDITION OF THE LOCAL BUILDING CODE, ALL LAWS AND ORDINANCES PERTINENT TO ALL WORK OF THIS PROJECT. IN CASE OF ANY CONFLICT WHEREIN THE METHOD OR STANDARDS OF INSTALLATION OR THE MATERIALS SPECIFIED DO NOT EQUAL OR EXCEED THE REQUIREMENTS OF THE LAWS OR ORDINANCES. THE LAWS OR ORDINANCES SHALL GOVERN.
3. ALL WORK SHALL COMPLY WITH TITLE 24 OF THE CODE OF REGULATIONS AND THE UNIFORM BUILDING CODE LATEST EDITION (INDICATED ON THESE SHEETS WITH CBC AMENDMENTS, AND ALL OTHER LOCAL OR STATE AGENCIES HAVING JURISDICTION OVER THIS PROJECT) AND ICC REGULATIONS.

## LIFE SAFETY (GENERAL)

1. POST ROOM CAPACITY SIGN AS PROVIDED BY THE LOCAL FIRE DEPARTMENT IN EACH CLASSROOM, ASSEMBLY ROOM OR SIMILAR PURPOSED ROOM HAVING AN OCCUPANT LOAD OF 50 OR MORE.
2. PORTABLE FIRE EXTINGUISHERS TO BE PROVIDED IN CABINETS LOCATED WITHIN SEVENTY-FIVE (75) FOOT TRAVEL DISTANCE TO ALL PORTIONS OF THE BUILDING ON EACH FLOOR AND AS SHOWN ON PLANS.
3. INTERIOR FINISHES TO COMPLY WITH CHAPTERS 7 AND 8, AND GLASS AND GLAZING TO COMPLY WITH CHAPTER 24 OF THE CBC AND ALL OTHER APPLICABLE CODES AND REGULATIONS GOVERNING THE PLACE OF THE BUILDING.
4. PENETRATIONS OF FIRE RESISTIVE WALLS, FLOOR -CEILINGS AND ROOF-CEILING SHALL BE PROTECTED AS REQUIRED IN CBC CHAPTER 7.
5. CONTRACTOR SHALL MAINTAIN THE RATING OF ALL PENETRATING WALLS AND SHALL APPLY FIRESTOP AND FIREPROOFING, AT HIS EXPENSE, WHENEVER ANY PENETRATION ARE MADE...ETC. FIRESTOP AND FIREPROOFING MATERIAL SHALL BEAR U.L. LISTING NUMBER DEPICTING WALL TYPE COMPOSITION AND FIRE RATED MATERIAL LIMITATIONS. SUBMIT PROPOSED FIRESTOP FIREPROOFING METHOD FOR APPROVAL PRIOR TO APPLICATION IN THE FIELD.
6. EVERY EXIT DOOR SHALL BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT. SPECIAL LOCKING DEVICES SHALL BE OF AN APPROVED TYPE.
7. PANIC HARDWARE SHALL BE PROVIDED ON EXIT DOORS SERVING ROOMS, CORRIDORS OR STAIRWAYS HANDLING AN OCCUPANT CAPACITY OF 50 OR MORE PERSONS.
8. ANY DECORATIONS (DRAPES, CURTAINS, SHADES, ETC.) USE SHALL BE NON-COMBUSTIBLE OR FLAME-PROOF I AN APPROVED MANNER, TO COMPLY WITH FIRE MARSHALL BUILDING CODE REQUIREMENTS.
9. ALL EXIT SIGNS OR ILLUSTRATED ON PLANS ARE TO BE ILLUMINATED PER CURRENT ELECTRICAL CODE AND SHALL BE CEILING OR WALL MOUNTED. THE EMERGENCY LIGHTING SYSTEM PROVIDES FOR A LIGHTING VALUE OF PER TITLE 19 ONE-FOOT-CANDLE AT FLOOR LEVEL EXIT LIGHTING AND CBC CHAPTER 10. SIGNS SHALL HAVE 6" LETTERS ON CONTRASTING BACKGROUND.

## FINISHES

**GENERAL ARCHITECTURAL FINISH INFORMATION:**

1. UNLESS NOTED OTHERWISE, THE CONTRACTOR SHALL FINISH ALL EXPOSED SURFACES WITH THE APPROPRIATE FINAL COATING/PAINT/PROTECTION/STAIN/SEAL AS REQUIRED FOR A COMPLETE PROJECT. THIS FINAL FINISH SHALL BE APPROPRIATE TO THE SUBSTRATE THAT IT IS INSTALLED ON OR PROTECTING.
2. PRE-FINISHED OR FACTORY FINISHED EQUIPMENT, SYSTEMS, ETC. SHALL BE PROTECTED IN PLACE UNTIL COMPLETION OF THE PROJECT.
3. EXPOSED SURFACES SHALL BE CONSIDERED AS AREAS VISIBLE BY PERSON. AREAS THAT ARE HIDDEN TO VIEW (BEHIND FINISH MATERIALS SUCH AS ACOUSTICAL PANELS, ETC.) SHALL BE CONSIDERED "HIDDEN SURFACES".
4. HIDDEN SURFACES SHALL BE GOVERNED BY REGULATING CODE (GYPSUM BOARD TAPING, ETC.), WATER PROOFING CONTINUITY AND CORROSION REDUCTION (PRIMERS AND SEPARATION OF DISSIMILAR MATERIALS).
5. WALL AND MATERIALS SHALL NOT EXCEED THE FLAME SPREAD CLASSIFICATION IN CBC TABLE 803.5.

## BUILDING CLIMATIZATION

1. THE BUILDING MUST BE "CLOSED IN" SO THAT THE HVAC SYSTEM CAN BE OPERATIONAL FOR COOLING/HEATING AT 70°F. FOR AT LEAST ONE (1) WEEK PRIOR TO INSTALLATION OF ANY FINISH MATERIAL REQUIRING CLIMATE CONTROL.
2. PRIOR TO INSTALLATION OF ANY FLOORING MATERIAL, THE SLAB ON GRADE MUST BE TESTED PER ANSI APPROVED MOISTURE LEVELS. THE MOISTURE LEVEL SHOULD BE IN THE RANGE ACCEPTED (AS NOTED BY THE MANUFACTURER) FOR THE INSTALLED PRODUCT.

## ABBREVIATIONS

| | | | |
|---|---|---|---|
| @ | AT | HT | HEIGHT |
| AB | ANCHOR BOLT | HVAC | HEATING VENTILATION AIR CONDITION |
| AC | ASPHALTIC CONCRETE | HP | HIGH POINT |
| ACOUST | ACOUSTICAL | ID | INSIDE DIAMETER |
| ADJ | ADJUSTABLE | INCL | INCLUDING |
| AFF | ABOVE FINISH FLOOR | INT | INTERIOR |
| AL | ALUMINUM | LP | LOW POINT |
| ANOD | ANODIZED | L | LONG (LENGTH) |
| AP | ACCESS PANEL | LAM | LAMINATED |
| ARCH | ARCHITECT (URAL) | LAV | LAVATORY |
| BD | BOARD | LBL | LABEL |
| BFL | BFLOW | LH | LEFT HAND |
| BET | BETWEEN | LW | LIGHTWEIGHT |
| BLDG | BUILDING | MAS | MASONRY |
| BLK(G) | BLOCKING | MAX | MAXIMUM |
| B | BOTTOM | MB | MACHINE BOLT |
| BRG | BEARING | MECH | MECHANICAL |
| BUR | BUILT UP ROOFING | MED | MEDIUM |
| CB | CATCH BASIN | MET | METAL |
| CEM | CEMENT | MFR | MANUFACTURER |
| CFCI | CONTRACTOR FURNISHED CONTRACTOR INSTALLED | MISC | MISCELLANEOUS |
| CI | CAST IRON | MO | MASONRY OPENING |
| CJ | CEILING JOIST | MTL | MATERIALS |
| CL | CENTERLINE | NAT | NATURAL |
| CLG | CEILING | (N) | NEW |
| CLR | CLEARANCE | NIC | NOT IN CONTRACT |
| COL | COLUMN | N | NORTH |
| CONC | CONCRETE | O.C. | ON CENTER(S) |
| CONST | CONSTRUCTION | OD | OUTSIDE DIAMETER |
| CONT | CONTINOUS OR CONTINUE | OFCI | OWNER FURNISHED CONTRACTOR INSTALLED |
| D | DEEP (DEPTH) | OFOI | OWNER FURNISHED OWNER INSTALLED |
| DF | DRINKING FOUNTAIN | OPNG | OPENING |
| DIAG | DIAGONAL | OPP | OPPOSITE |
| DIAM | DIAMETER | OH | OVERHANG |
| DIM | DIMENSION | PLAS | PLASTER, PLASTIC |
| DN | DOWN | PSF | POUNDS PER SQUARE FOOT |
| DR | DOOR | PSI | POUNDS PER SQUARE INCH |
| DS | DOWNSPOUT | PVC | POLYVINYL |
| DTL | DETAIL | R | RISER |
| DWG | DRAWING | RAD | RADIUS |
| E | EAST | RD | ROOF DRAIN |
| EA | EACH | REF | REFERENCE |
| EL | ELEVATION | REFL | REFLECTED |
| ELECT | ELECTRIC(AL) | REINF | REINFORCED |
| EQ | EQUAL | REQD | REQUIRED |
| EWC | ELECTRICAL WATER COOLER | S | SOUTH |
| EX | EXHAUST | REV | REVISION |
| (E) | EXISTING | RM | ROOM |
| EXP | EXPOSED | RO | ROUGH OPENING |
| EXT | EXTERIOR | S | SOUTH |
| FD | FLOOR DRAIN | SC | SOLID CORE |
| FE(C) | FIRE EXTINGUISHER CABINET | SEC | SECTION |
| FFE | FINISH FLOOR ELEVATION | SF | SQUARE FOOT (FEET) |
| FIN | FINISH(ED) | SIM | SIMILAR |
| FJ | FLOOR JOIST | SPEC | SPECIFICATIONS |
| FLR | FLOORINGS | SQ | SQUARE |
| FOC | FACE OF CONCRETE | SYM | SYMMETRICAL |
| FOF | FACE OF FINISH | TE | TELEPHONE |
| FOM | FACE OF MASONRY | (T) | TEMPERED |
| FOS | FACE OF STUDS | TAG | TONGUE & GROOVE |
| FTG | FOOTING | TOP | TOP OF PARAPET |
| GA | GAUGE | TOS | TOP OF SLAB |
| GI | GALVANIZED IRON | TS | TOP OF STEEL |
| GL | GLASS, GLAZING | TW | TOP OF WALL |
| GLB | GLUE LAMINATED BEAM | TYP | TYPICAL |
| GYP | GYPSUM | U.N.O | UNLESS NOTED OTHERWISE |
| H | HIGH (HEIGHT) | UR | URINAL |
| HB | HOSE BIBB | VERT | VERTICAL |
| HC | HOLLOW CORE | VIN | VINYL |
| HDR | HEADER | W | WEST, WIDTH, WIDE |
| HDW | HARDWARE | WC | WATER CLOSET |
| HM | HOLLOW METAL | WP | WATER PROOFING |
| HOR | HORIZONTAL | | |

## EXISTING CONDITIONS

1. ALL EXISTING CONDITIONS SHOWN AND IMPLIED IN THE DRAWINGS ARE BASED ON LIMITED EXISTING DRAWINGS AND LIMITED NON-DESTRUCTIVE SITE OBSERVATIONS. IT WILL BE IMPERATIVE FOR ANYONE SUPPLYING WORK, ON THE PROJECT, TO REVIEW EXISTING CONDITIONS RELATING TO THEIR WORK PRIOR TO COMMENCEMENT OF WORK OR PREPARATION OF THE PORTION OF WORK.
2. COMMENCEMENT OF WORK IS CONSIDERED ACCEPTANCE OF EXISTING CONDITIONS.
3. IF EXISTING CONDITIONS ARE DIFFERENT THAN DESCRIBED OR AS SHOWN OR AS EASILY INFERRED IN THIS TYPE OF CONSTRUCTION, THAT MAY AFFECT THE DESIGN INTENT, REPORT THE CONDITION IN A TIMELY MANOR TO THE PROJECT MANAGER AND/OR DESIGN TEAM.

## SYMBOLS LEGEND

**INTERIOR ELEVATION BUBBLE**
DRAWING NUMBER.
ELEVATION NUMBER
SHEET NUMBER

**BUILDING SECTION BUBBLE**
DRAWING NUMBER.
SHEET NUMBER

**DETAIL REFERENCE BUBBLE**
DRAWING NUMBER.
SHEET NUMBER

**WALL TYPE MARK**
WALL TYPE NUMBER.

**DOOR TYPE MARK**
DOOR NUMBER.

**WINDOW TYPE MARK**
WINDOW NUMBER.

**KEYNOTE/GRIDLINE MARK**

**WORKING POINT**

## APPLICABLE CODES

| | | | |
|---|---|---|---|
| 1. CALIFORNIA BUILDING CODE | 2019 | 6. CALGREEN BUILDING STANDARDS 2019 | |
| 2. CALIFORNIA ELECTRICAL CODE | 2019 | 7. CALIFORNIA T-24 | CURRENT |
| 3. CALIFORNIA MECHANICAL CODE | 2019 | 8. ORANGE COUNTY FIRE AUTHORITY | CURRENT |
| 4. CALIFORNIA PLUMBING CODE | 2019 | | |
| 5. ENERGY (TITLE 24 - 6) | 2019 STANDARDS | | |

## PROJECT DIRECTORY

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MONITA VERMA
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## CONSTRUCTION COORDINATION

1. THE GENERAL CONTRACTOR WILL COORDINATE ACCESS TO AND FROM THE SITE. THE CONSTRUCTION STAGING AREA SHALL BE PREVIOUSLY ACCEPTED BY THE TOWN OF YUCCA VALLEY PRIOR TO CONSTRUCTION.
2. BUILDING SECURITY DURING CONSTRUCTION AND OFF-HOURS SHALL BE COORDINATED WITH THE OWNER. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SECURE THE SITE AND BUILDING DURING CONSTRUCTION AND REMODEL.

## DESIGN/BUILD COORDINATION

1. AUTOMATIC FIRE SPRINKLERS MODIFICATIONS SHALL BE A DESIGN/BUILD SCOPE OF WORK, PROVIDED AND COMPLETED AS A PART OF THE CONTRACTOR'S WORK INCLUDING, BUT NOT LIMITED TO: DESIGN, REVIEW AND APPROVAL BY LOCAL GOVERNING AUTHORITIES, COORDINATION (ELECTRICAL, PLUMBING & MECHANICAL), STRUCTURAL COORDINATION FOR SUPPORT, ETC.
   1.1. DESIGN/BUILD INCLUDE INTERIOR FIRE LINES
2. CONTRACTOR TO OBTAIN AND PAY FOR PLAN CHECK FEES AND PERMIT FEES FOR DESIGN/BUILD SCOPE OF WORK.

## DEFERRED APPROVAL

1. THE CONTRACTOR IS RESPONSIBLE FOR ALL DEFERRED APPROVALS (OR DESIGN/BUILD PORTION OF WORK) REQUIRED BY LOCAL CODE. COORDINATION AND TIMING OF APPROVALS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. THE ARCHITECT AND DESIGN CONSULTANTS MAY REQUIRE A SUBMITTAL OF A DEFERRED APPROVAL PRIOR TO SUBMITTING TO GOVERNING AGENCIES TO REVIEW FOR GENERAL CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS.
3. DEFERRED SUBMITTAL FOR BUILDING DEPARTMENT REVIEW:
   3.1. AUTOMATIC FIRE SPRINKLERS (MODIFICATIONS).
4. FIRE ALARM SYSTEM:
   MODIFICATIONS AND UPGRADES TO THE FIRE ALARM SYSTEM WILL BE A DEFERRED APPROVAL SYSTEM. THE SCOPE OF WORK SHALL BE DEFINED AND PRICED BY OCFA'S FIRE ALARM VENDOR.

## SPECIAL INSPECTION

1. SEE STRUCTURAL DRAWING S-1 FOR ADDITIONAL INFORMATION AND REQUIREMENTS FOR SPECIAL INSPECTIONS ON THE FOLLOWING:
   1.1. POST-INSTALLED ANCHORS INSTALLED IN HARDENED CONCRETE

## PROTECTION DURING CONSTRUCTION

1. PROTECT EXISTING BUILT DEVICES, MATERIALS, EQUIPMENT AND SYSTEMS WHERE ITEMS ARE TO REMAIN INTACT.
2. WHERE ITEMS ARE NEEDING TO BE TEMPORARILY REMOVED TO ACCESS DEHOLITION OR NEW CONSTRUCTION, STORE ITEMS IN A SAFE PLACE AND RE-INSTALL WHEN NEW CONSTRUCTION IS COMPLETE.

## AUTOMATIC FIRE SPRINKLERS

**MODIFICATIONS TO THE EXISTING AUTOMATIC FIRE SPRINKLER SYSTEM:**

1. THE CONTRACTOR IS TO PROVIDE DESIGN/BUILD MODIFICATIONS TO THE AUTOMATIC FIRE SPRINKLER SYSTEM AS REQUIRED BY CODE AND AS REQUIRED BY FIRE AUTHORITY HAVING JURISDICTION.
2. CONTRACTOR TO PROVIDE THE FOLLOWING (AND/OR AS REQUIRED) FOR A COMPLETE APPROVED PROJECT.
   2.1. SUBMIT DESIGN/BUILD PROPOSED MODIFICATIONS FOR REVIEW AND APPROVAL. CBC SECTION 449.3.
   2.2. PAY REVIEW/PERMIT FEES
   2.3. COORDINATE WITH EXISTING SPRINKLER SYSTEM.
   2.4. SEE DRAWINGS FOR NEW ROOM LAYOUT.
   2.5. CONSTRUCT MODIFICATIONS AND OBTAIN ALL REQUIRED INSPECTIONS/APPROVALS.
   2.6. PROVIDE FINAL APPROVED SHOP DRAWINGS/RECORD DRAWINGS FOR PROJECT CLOSEOUT.
   2.7. THE DESIGN/BUILD AUTOMATIC FIRE SPRINKLER CONTRACTOR IS TO HAVE A CURRENT (AND IN GOOD STANDING) CALIFORNIA STATE C-16 LICENSE FOR THE DESIGN AND THE INSTALLATION AND MODIFICATIONS TO THE EXISTING AUTOMATIC FIRE SPRINKLER SYSTEM.

## A.C. PAVING

FULL DEPTH ASPHALT CONCRETE PAVEMENT REPLACEMENT. MATCH EXISTING THICKNESS, PLUS ONE-INCH (1") MIN., PER SPPWC STD DRAWING 133-3, OVER CRUSHED ASPHALT BASE. MATCH EXISTING ASPHALT BASE THICKNES, 4-INCH MINIMUM.

## PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE CONSTRUCTION OF THE FOLLOWING INTERIOR ACCESSIBLE MODIFICATIONS/IMPROVEMENTS (BUT NOT LIMITED TO):

ACCESSIBLE INTERIOR IMPROVEMENTS:

1. SELECTIVE DEMOLITION (DEMOLISH EXISTING NON-COMPLIANT TOILET ROOMS/SHOWER)
2. INTERIOR ACCESSIBLE IMPROVEMENTS:
   2.1. NEW ACCESSIBLE TOILET ROOM
   2.2. NEW ACCESSIBLE TOILET ROOM AND ACCESSIBLE SHOWER
   2.3. NEW ACCESSIBLE DOORS TO APPARATUS BAY
   2.4. NEW ACCESSIBLE COUNTER
   2.5. NEW ACCESSIBLE DOOR TO STUDY FOR COMPLIANT USE AS A NEW LACTATION ROOM
   2.6. ADA BRAILLIE SIGNAGE
3. IMPROVEMENTS AS A RESULT OF ACCESSIBLE IMPROVEMENTS:
   3.1. CONCRETE SLAB WORK
   3.2. NON-BEARING WALL RE-WORK
   3.3. FINISH SYSTEMS INCLUDING GYPSUM BOARD, CARPET, TILE, AND PAINTING.
   3.4. MEP WORK INCLUDING NEW PLUMBING FIXTURES, RE-WORKED EXHAUST AND SUPPLY/RETURN AIR DUCTING, RE-WORKED ELECTRICAL AND NEW ELECTRICAL LIGHT FIXTURES.
   3.5. MINOR STRUCTURAL IMPROVEMENTS/ALTERATION AT TOILET ROOM WALLS
4. EXTERIOR ACCESSIBLE IMPROVEMENTS (SEE CIVIL DRAWINGS):
   4.1 NEW ACCESSIBLE PARKING AREA
   4.2 NEW ACCESSIBLE PATH OF TRAVEL FROM PARKING TO MAIN ENTRANCE
5. SEE SHEET A-1.5 FOR FINISHES SCOPE (INCLUDING PAINTING)

## F.S. No. 14 PROJECT ADDRESS

29402 SILVERADO CANYON ROAD
SILVERADO, CA 92676

## CODE ANALYSIS

**GENERAL CODE INFORMATION:**

MINOR TENANT IMPROVEMENTS TO INTERIOR NON-BEARING WALLS

EXISTING OCCUPANCY: ASSUMED B-OCCUPANCY (FIRE STATION)
PROPOSED OCCUPANCY: NO CHANGE

BUILDING AREA: 2,987 S.F. APPROX.
NO CHANGE IN BUILDING AREA

BUILDING CONSTRUCTION TYPE: ASSUMED TYPE V- SPRINKLERED
PROPOSED OCCUPANCY: NO CHANGE IN OCCUPANCY

SINGLE STORY
FULLY SPRINKLERED


Gillis + Panichapan Architects, Inc.
2900 BRISTOL STREET COSTA MESA, CALIFORNIA 92626
TEL (714) 668-4265 FAX (714) 668-4268



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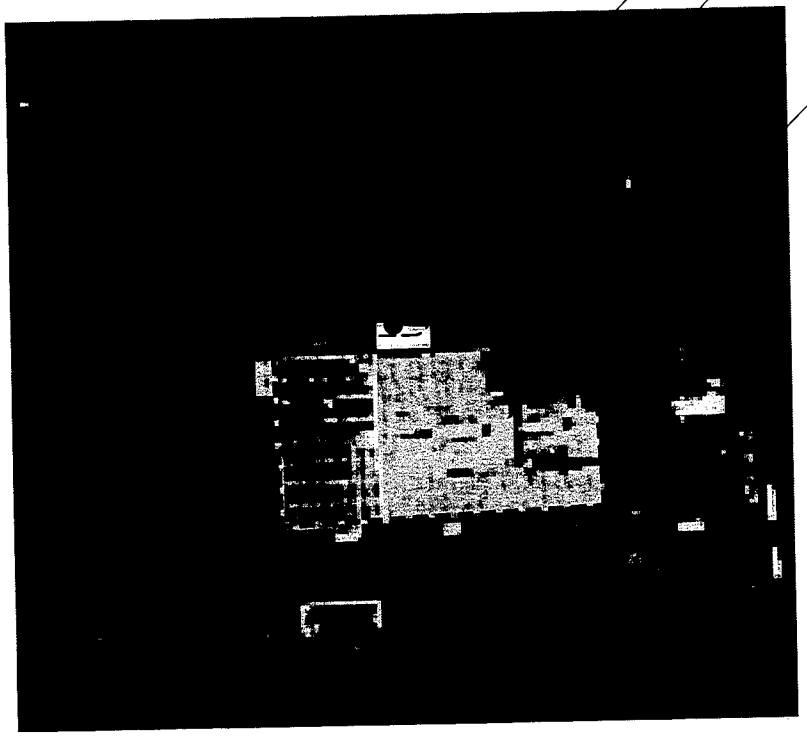
RE-BID SET

| | |
|---|---|
| BID SET | |
| RE-BID SET | DATE: 02/16/2022 |
| RE-BID #2 | |
| JOB NO.: 409 | DATE: 01/07/2022 |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: | |

TITLE SHEET - F.S. 14

ORANGE COUNTY FIRE AUTHORITY
Fire Station #14 - Tenant Improvements
29402 SILVERADO CANYON RD., SILVERADO, CA 92676

T-1




LANDSCAPING NOTES:

1. Remove existing Accessible signage (concrete footing) located at Landscape Area. Infill existing hole with dirt. Provide 3" top soil to match adjacent surface.

01 T-2 AERIAL SITE PLAN - FIRE STATION NO. 14
Scale: N.T.S.

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RE-BID SET

| | |
|---|---|
| 1 BID SET | |
| 2 RE-BID SET | DATE: 02/16/2022 |
| 3 BID RFIs | DATE: 01/07/2022 |
| JOB NO.: 4009 | |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: | |

AERIAL SITE PLAN - F.S. 14

ORANGE COUNTY FIRE AUTHORITY
Fire Station #14 - Tenant Improvements
29402 SILVERADO CANYON RD., SILVERADO, CA 92676

T-2

OCPublicWorks

# Special Inspection Program and Designation of Special Inspectors

| SPECIAL INSPECTIONS (Only checked items are required) | |
|---|---|
| INSPECTION ITEMS | SPECIAL INSPECTORS(S) NAME, PHONE NUMBER, REGISTRATION # |
| ☒ Concrete (Design Mix, Form Work, Placement, etc., per table 1705.3) | |
| ☐ Erection of Pre-Cast Concrete Members | |
| ☐ Bolts Installed in Concrete | |
| ☐ Reinforcing Steel and Pre-Stressing Steel Tendons | |
| ☐ Structural Welding/Rebar Welding | |
| ☐ High-Strength Bolting/Material Verification | |
| ☐ Steel Frame Joint Details | |
| ☐ All Masonry Construction | |
| ☐ Sprayed Fire-Resistive Materials | |
| ☐ Shotcrete (Curing Temperature, Design Mix, Placement, Strength etc. per table 1705.3) | |
| ☐ Soils (Excavation, Fill, etc. per table 1705.6) | |
| ☐ Smoke-Control System | |
| ☐ Driven Piles per Table 1705.7 | |
| ☐ Cast in Place Piles per Table 1705.8 | |
| ☐ Mastic and Intumescent Fire-Resistant Coatings | |
| ☐ Exterior Insulation and Finish Systems (EIFS) | |
| ☐ Wood for High-Load Diaphragms | |
| ☐ Others | |
| ☐ Others | |
| ☐ Others | |
| ☐ Others | |

**DECLARATION BY OWNER OR ARCHITECT/ENGINEER OF RECORD:**

I, the ☒ Owner ☐ Engineer or ☐ Architect of record, declare that the above listed Special Inspector(s) is/are hired by me.

Julie Samaniego — Print Name

[signature] — Signature

5/20/21 — Date

601 N. Ross Street, Santa Ana, CA 92701
P.O. Box 4048, Santa Ana, CA 92702-4048
www.ocpublicworks.com
714.667.8888 | myOCeServices.ocgov.com

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architecture planning interior

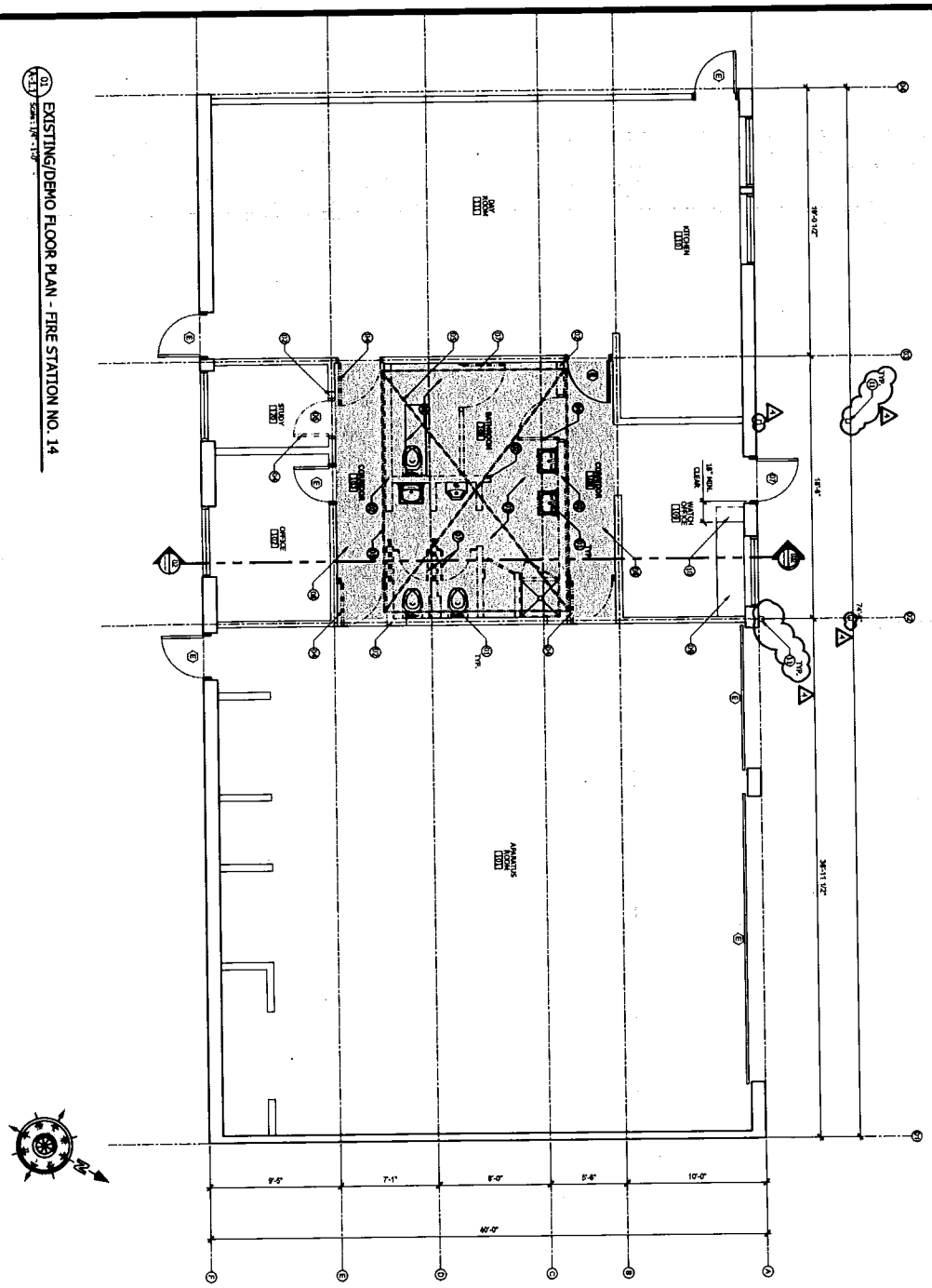
RE-BID SET

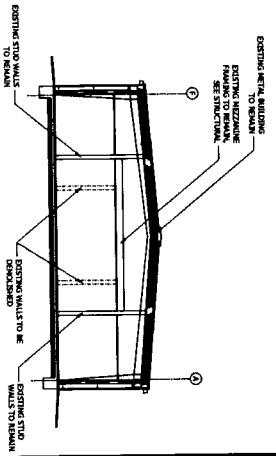
| | |
|---|---|
| 1 BID SET | |
| 2 RE-BID SET | |
| 3 BID RFIs | DATE: 02/16/2022 |
| 4 | DATE: 01/07/2022 |
| JOB NO.: 4009 | |
| DRAWN BY: STAFF | |
| CHECKED BY: LF | |
| SCALE: AS NOTED | |

MISCELLANEOUS

ORANGE COUNTY FIRE AUTHORITY
Fire Station #14 - Tenant Improvements
29402 SILVERADO CANYON RD., SILVERADO, CA 92676

T-3




EX./DEMO SECTION - FIRE STATION NO. 14
SCALE: 1/4" = 1'-0"

KEYNOTES:
1. REMOVE EXISTING PLUMBING FIXTURE AND PIPING AS REQUIRED FOR INSTALLATION OF NEW SYSTEM
2. REMOVE EXISTING INTERIOR NON-BEARING WALLS
3. REMOVE EXISTING FLOOR FINISH AND BASE
4. REMOVE EXISTING DOOR AND FRAME
5. AREA OF CONCRETE SLAB REMOVAL (APPROXIMATE). SEE STRUCTURAL DRAWINGS FOR TYPICAL SLAB REPLACEMENT DETAIL
6. NOT USED
7. REMOVE EXISTING TOILET PARTITIONS/DOORS
8. REMOVE EXISTING GYPSUM BOARD (PATCHED AREA) FRAMING
9. EXISTING HALLWORK TO BE PARTIALLY DEMOLISHED TO PROVIDE REQUIRED DOOR APPROACH CLEARANCE FOR EXISTING AND NEW DOORS AS PROPOSED RE-WORKED PLAN FOR REVIEW PRIOR DEMOLISHING. REMAINDER OF HALLWORK TO BE PROTECTED-IN-PLACE
10. AREA OF EXISTING HALLWORK TO BE PARTIALLY DEMOLISHED
11. REMOVE EXISTING 4X POSTS, HEADAGE W/ 12X8 BEAM

LEGEND:
- EXISTING WALL TO REMAIN
- EXISTING WALL/DOOR TO BE REMOVED
- (E) EXISTING DOOR TO REMAIN

RE-BID SET

| | |
|---|---|
| BID SET | |
| RE-BID SET | |
| BID RFIs | DATE: 02/16/2022 |
| JOB NO.: 4000 | DATE: 01/07/2022 |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: 1/4" = 1'-0" | |

A-1.1

EXISTING/DEMO FLOOR PLAN- F.S. 14

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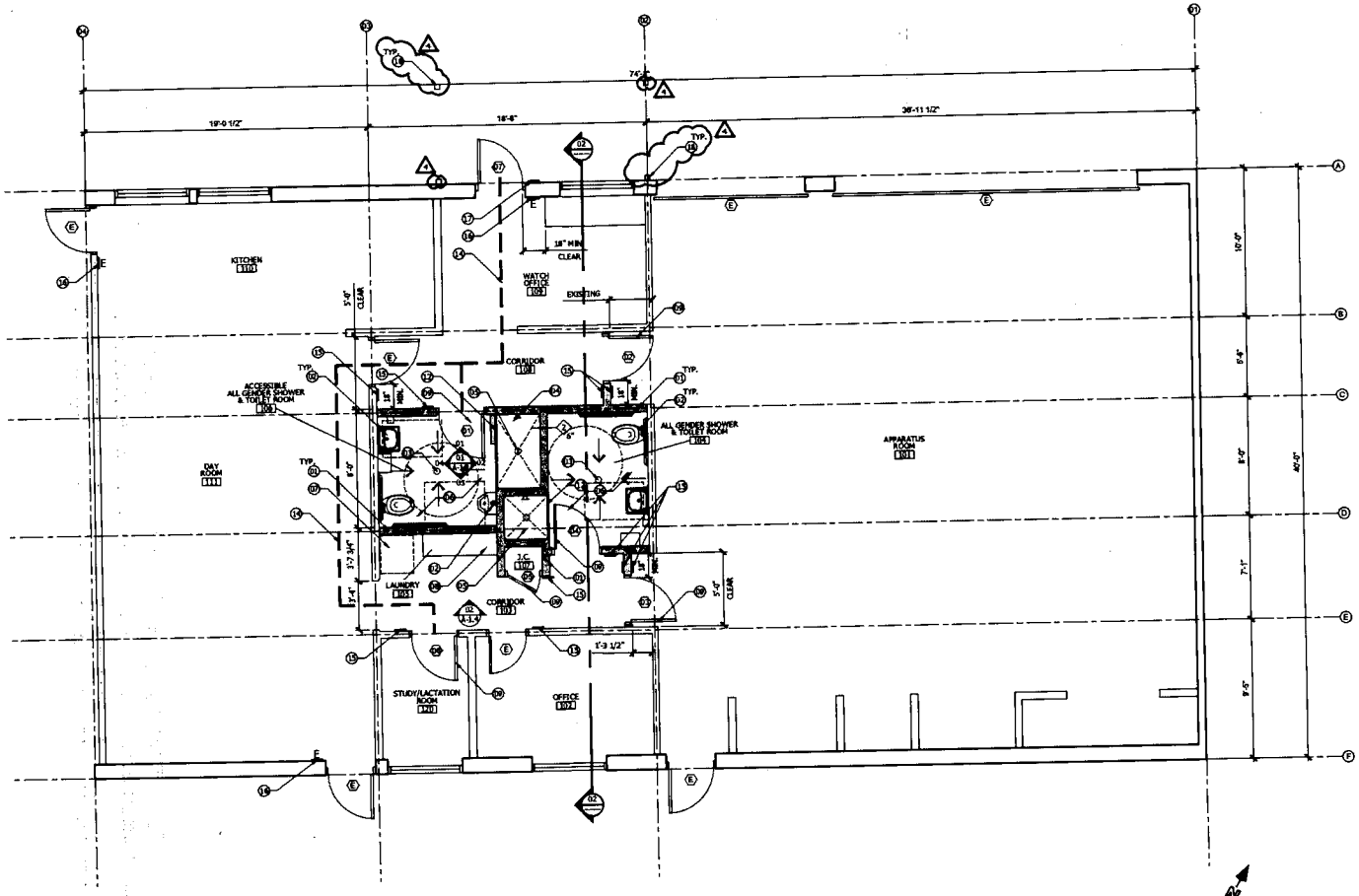



01 A-1.2 PROPOSED FLOOR PLAN - FIRE STATION NO. 14
Scale : 1/4" = 1'-0"

KEYNOTES:

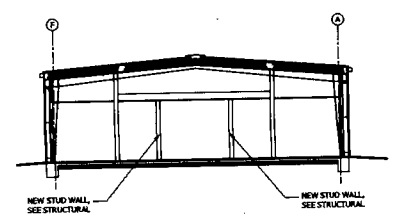
01 NEW STUD WALL
02 NEW PLUMBING FIXTURES AND PIPING (SUPPLY AND WASTE LINES)
03 NEW FLOOR DRAIN
04 NEW ACCESSIBLE SHOWER STALL
05 NEW SHOWER STALL
06 NEW FLOOR FINISH, SLOPE TO DRAIN
07 FUTURE ACCESSIBLE COMBINATION CLOTHES WASHER/DRYER UNIT
08 NEW COUNTERTOP
09 NEW DOOR AND FRAME
10 NOT USED
11 NOT USED
12 NEW SHOWER CURTAIN AND STAINLESS STEEL ROD
13 NEW WALL MOUNTED ROBE HOOK
14 ACCESSIBLE PATH OF TRAVEL FROM MAIN ENTRY TO ACCESSIBLE ALL GENDER SHOWER/ TOILET ROOM AND LACTACTION ROOM
15 NEW ROOM SIGNAGE
16 NEW WALL MOUNTED BRAILLE EXIT SIGNAGE
17 NEW ADA ENTRY SIGN, SEE DETAIL 14/A-5.1
18 PROVIDE AND INSTALL NEW GALV. POST BASES. MATCH EXISTING, PAINT NEW 4X POSTS AND BASES

LEGEND:

| | |
|---|---|
| | EXISTING WALL TO REMAIN |
| | NEW STUD WALL |
| XX | DOOR, SEE SHEET A-1.5 |
| X | WALL TYPES, SEE SHEET A-5.2 |

NOTE:

1. FOR ACCESSIBLE CLEARANCES AND REQUIREMENTS SEE SHEETS A-5.1




02 A-1.2 PROPOSED SECTION - FIRE STATION NO. 14
Scale : 1/8" = 1'-0"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RE-BID SET

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| 1 BID SET | DATE: 02/16/2022 |
| 2 RE-BID SET | DATE: 01/07/2022 |
| 3 BID RFPs | |
| JOB NO.: 4009 | |
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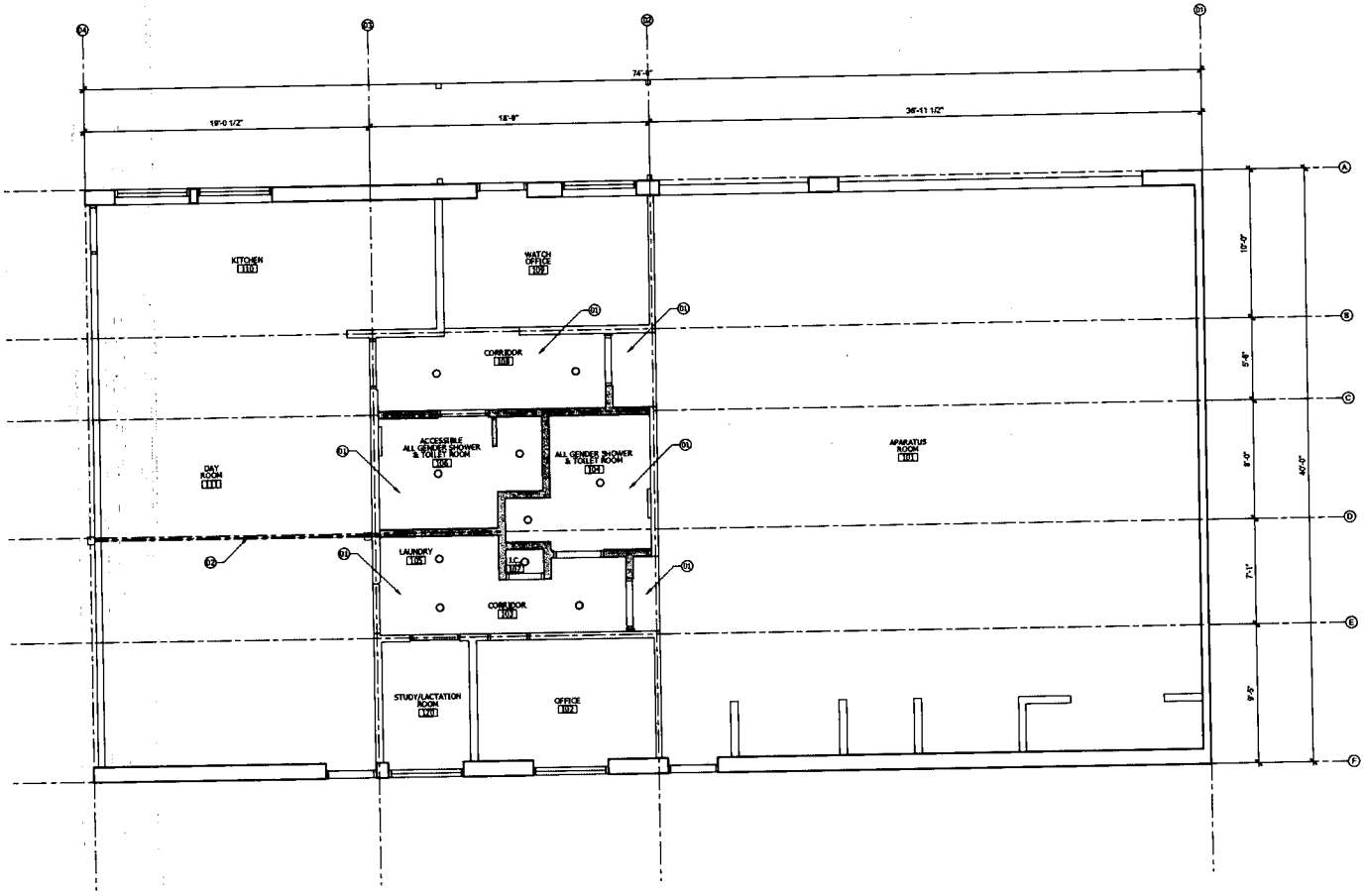
| CHECKED BY: LP | |
| SCALE: 1/4" = 1'-0" | |

PROPOSED FLOOR PLAN- F.S. 14

ORANGE COUNTY FIRE AUTHORITY
Fire Station #14 - Tenant Improvements
29402 SILVERADO CANYON RD., SILVERADO, CA 92676

A-1.2




01 A-1.3 PROPOSED REFLECTED CEILING PLAN - FIRE STATION NO. 14
Scale: 1/4" = 1'-0"

KEYNOTES:

01 NEW GYPSUM BOARD CEILING WITH NEW R-21 NON-FACED INSULATION ABOVE

02 NEW RIGID GALVANIZED DRYER VENT ABOVE CEILING. COORDINATE FINAL LOCATION WITH EXISTING CONDITIONS, MECHANICAL DRAWINGS, AND CURRENT CODE

LEGEND:

| | |
|---|---|
| | EXISTING WALL TO REMAIN |
| | NEW STUD WALL |
| | NEW LED RECESSED LIGHT |
| | NEW LED WALL MOUNTED LIGHT |

RE-BID SET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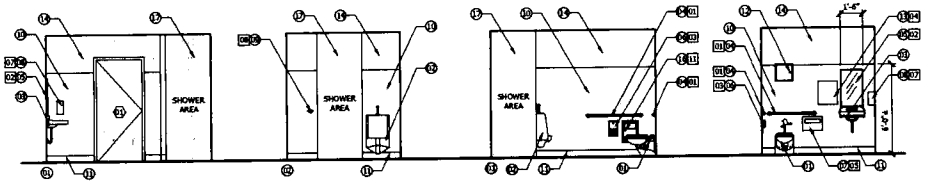
| | |
|---|---|
| 1 | BID SET |
| 2 | RE-BID SET |
| 3 | BID RFIs |
| 4 | DATE: 02/16/2022 |
| 5 | DATE: 01/07/2022 |
| JOB NO.: 4009 | |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: 1/4" = 1'-0" | |

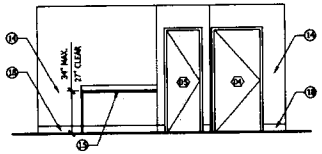
PROP. REFLECT. CLNG. PLAN- F.S. 14

ORANGE COUNTY FIRE AUTHORITY
Fire Station #14 - Tenant Improvements
29402 SILVERADO CANYON RD., SILVERADO, CA 92676

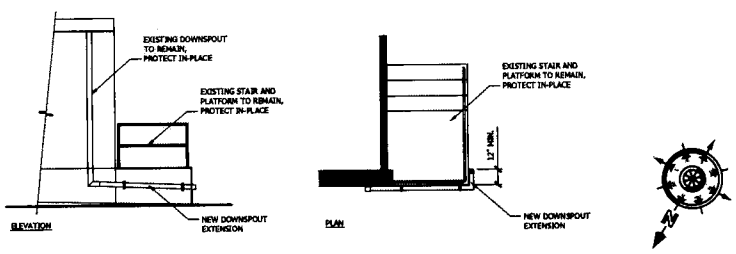
A-1.3




01 A-1.4 INTERIOR ELEVATIONS- ACCESSIBLE ALL GENDER SHOWER & TOILET ROOM 106 (RM. 104 SIM.)
Scale : 1/4" - 1'-0"




02 A-1.4 INTERIOR ELEVATIONS- CORRIDOR 103 & LAUNDRY 104
Scale : 1/4" - 1'-0"




04 A-1.4 DOWNSPOUT EXTENSION @ EXTERIOR
Scale : 1/4" - 1'-0"

KEYNOTES:

01 FLOOR MOUNT WATER CLOSET, SEE PLUMBING
02 URINAL, SEE PLUMBING
03 SINK, SEE PLUMBING
04 GRAB BAR, SEE SPECIFICATIONS
05 MIRROR
06 TOILET PAPER DISPENSER
07 SEAT COVER DISPENSER
08 HANDS FREE SOAP DISPENSER
09 ROBE/TOWEL HOOK
10 TILE WAINSCOT
11 COVED EPOXY BASE, TYPICAL
12 12"X12" SURFACE MOUNTED STAINLESS STEEL ACCESS PANEL
13 HANDS FREE PAPER TOWEL DISPENSER
14 PAINTED GYPSUM BOARD
15 NEW COUNTERTOP AND SPLASH W/ 1" THICK END PANEL, SEE SPECIFICATIONS
16 RECESSED SANITARY DISPOSAL RECEPTACLE
17 FULL HEIGHT EPOXY @ SHOWER AREA
18 COVED RUBBER BASE

LEGEND:

XX DOOR TYPES, SEE SHEET A-1.5

WASHROOM TOILET ACCESSORIES:

01 GRAB BAR - BOBRICK B-6806
02 MIRROR - BOBRICK B-290
03 TOILET TISSUE DISPENSER- BOBRICK B-3888
04 HANDS FREE PAPER TOWEL DISPENSER - GEORGIA-PACIFIC, EMOTION, #59462
05 SEAT COVER - BOBRICK B-4221
06 FOLDING SHOWER SEAT - BOBRICK B-5181
07 HANDS FREE SOAP DISPENSER - RUBBERMAID AUTOFOAM DISPENSER, #FG730127
08 ROBE HOOK - BOBRICK B-7672
09 VINYL CURTAINS - BOBRICK B-204-3
10 SHOWER CURTAIN ROD - BOBRICK B-6047
11 SANITARY NAPKIN DISPOSAL - BOBRICK B-353

NOTE:

1. BASIS OF DESIGN: BOBRICK. APPROVED EQUAL IS ACCEPTABLE, SUBMIT SUBSTITUTION REQUEST.
2. FOR ACCESSIBLE CLEARANCES AND REQUIREMENTS SEE SHEETS A-5.1

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RE-BID SET

| | |
|---|---|
| 1 BID SET | DATE: 02/16/2022 |
| 2 RE-BID SET | DATE: 01/07/2022 |
| 3 BID INFO | |
| JOB NO.: 4009 | |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: 1/4" = 1'-0" | |

INTERIOR ELEVATIONS- F.S. 14

ORANGE COUNTY FIRE AUTHORITY
Fire Station #14 - Tenant Improvements
29402 SILVERADO CANYON RD., SILVERADO, CA 92676

A-1.4

## DOOR SCHEDULE

| DOOR NUMBER | LOCATION (ROOM NUMBER) | SIZE | TYPE | HARDWARE | THICKNESS | CORE | DOOR MATERIAL | DOOR FINISH | FRAME MATERIAL | FRAME FINISH | DOOR/PNL SIDES | HEAD | JAMB | THRESHOLD | RATING | VISION GLAZING | HINGES | CLOSER | UNDERCUT | THRESHOLD | SEALS | 12" S.S. KICK PLATE | DOOR STOPS | DOOR BOTTOM | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 106 | 3'-0"W X 7'-0"H | A | 2 | 1 3/4" | SC | WD | PL | HM | PT | S5 | 08/A-5.2 | 08/A-5.2 | 07/A-5.2 | | | | | | | | | | | KICK PLATE @ BOTH SIDES |
| 02 | 108 | 3'-0"W X 7'-0"H | B | 1 | 1 3/4" | HM | HM | PT | HM | PT | S1 | 10/A-5.2 | 10/A-5.2 | 08/A-5.2 | 20 MIN. | | | | | | | | | | KICK PLATE @ BOTH SIDES |
| 03 | 103 | 3'-0"W X 7'-0"H | B | 1 | 1 3/4" | HM | HM | PT | HM | PT | S1 | 10/A-5.2 | 10/A-5.2 | 08/A-5.2 | 20 MIN. | | | | | | | | | | KICK PLATE @ BOTH SIDES |
| 04 | 104 | 3'-0"W X 7'-0"H | A | 2 | 1 3/4" | SC | WD | PL | HM | PF | S5 | 06/A-5.2 | 06/A-5.2 | 07/A-5.2 | | | | | | | | | | | KICK PLATE @ BOTH SIDES |
| 05 | 107 | 2-2'W X 7'-0"H | A | S | 1 3/4" | SC | WD | PL | HM | PF | S5 | 06/A-5.2 | 06/A-5.2 | --- | | | | | | | | | | | |
| 06 | 120 | 3'-0"W X 7'-0"H | A | 3 | 1 3/4" | SC | WD | PL | HM | PF | S1 | 06/A-5.2 | 06/A-5.2 | 07/A-5.2 | | | | | | | | | | | *** |
| 07 | 109 | EXISTING | --- | 7 | --- | --- | --- | --- | --- | --- | S4 | --- | --- | --- | | | | | | | | | | | |

NOTES:

*** EXISTING DOOR CLOSER TO BE ADJUSTED TO OBTAIN A 5 LB. MAX OPENING FORCE AND TO CLOSE AT REQUIRED SPEED PER CBC 118-404.2.8

## FINISH SCHEDULE

| NUMBER | NAME | FLOOR: EPOXY | FLOOR: VCT | BASE: RESILIENT WALL BASE | BASE: EPOXY COVED BASE | WALLS: GYPSUM BOARD | WALLS: TILE WAINSCOT | WALLS: FRP | CEILING: ACOUSTICAL TILE | CEILING: GYPSUM BOARD | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 103 | CORRIDOR | | ● | | ● | | ● | | | ● | TILE WAINSCOT 6'-0" A.F.F. |
| 104 | ALL GENDER SHOWER & TOILET ROOM | ● | | | ● | | | ● | | ● | |
| 105 | LAUNDRY | | ● | ● | | ● | | | | ● | |
| 106 | ACCESSIBLE ALL GENDER SHOWER & TOILET ROOM | ● | | | ● | | | ● | | ● | TILE WAINSCOT 6'-0" A.F.F. FRP 4'-0" A.F.F. |
| 107 | JANITOR CLOSET | | ● | ● | | ● | | | | ● | |
| 108 | CORRIDOR | | ● | | ● | | ● | | | ● | |

GENERAL NOTE:
1. ALL WALL AND CEILING SURFACES TO BE PAINTED EXCEPT WHEN NOTED. (REFER TO SPECIFICATIONS FOR EXCEPTIONS)
2. ● INDICATES APPLICABLE FINISH, SEE REMARKS FOR ADDITIONAL COMMENTS

## NOTES

GENERAL NOTES (ALL DOORS):

A. MAXIMUM EFFORT TO OPERATE DOORS APPLIED AT RIGHT ANGLES TO HINGED DOORS OR AT CENTER PLANE, PER CBC SECTION 404.2.9 WILL BE:
   a) ≤ 5 LB. AT EXTERIOR DOORS
   b) ≤ 5 LB. AT INTERIOR DOORS
   c) ≤ 15 LB. WHERE FIRE DOORS ARE REQUIRED.
B. ALL DOORS SHALL COMPLY WITH CBC CHAPTER 10 DOORS
C. DOORS SHALL BE EQUIPPED ONLY WITH MECHANICAL/MORTISE, SENSOR-ACTION HARDWARE. LOCKS THAT REQUIRE KEYS OR ADDITIONAL ACTIONS TO OPERATE (EXCEPT FOR MANUAL BOLTS) ARE NOT PERMITTED. CBC 1010.1.9. ALL DOOR HARDWARE SHALL BE LEVER TYPE, PUSH-PULL ACTIVATING BARS OR PANIC HARDWARE THAT DOES NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST TO OPERATE. (REF CBC 118-309.4)
D. DOORS WITH GLAZING SHALL BE PROVIDED WITH 10" HIGH SMOOTH METAL PANEL AT THE BOTTOM. (REF CBC 118-404.2.10)
E. BOTTOM OF DOOR TO BE SMOOTH AND UNINTERRUPTED. TO ALLOW DOOR TO BE OPENED BY WHEELCHAIR FOOTREST. SEE: 118-404.2.10.
F. PROVIDE SIGN AT MAIN EXIT DOORS INDICATING "THIS DOOR MUST REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED" PER CBC 1010.1.9.3. ALL OTHER DOORS SHALL BE OPENABLE FROM INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.
G. ALL HOLLOW METAL DOORS STILES AND TOP RAILS SHALL BE 5" MINIMUM. (U.N.O.)
H. ALL ALUMINUM DOORS STILES AND TOP RAILS SHALL BE 5" U.N.O. ALL GLASS TYPES AND THICKNESS SHALL COMPLY WITH CBC TABLE 2406 AND SECTION 2613.
I. SEE SPECIFICATIONS FOR ADDITIONAL DOOR HARDWARE INFORMATION. REFER TO FLOOR PLANS FOR DOOR HARDWARE FUNCTION FOR REQUIREMENTS.
J. COMPLY WITH SEC. 2406 FOR REQUIRED SAFETY GLAZING.
K. DOOR, SIDELITES, AND SIDE LIGHTS ADJACENT TO DOORS OR GATES, CONTAINING ONE OR MORE GLAZING PANELS THAT PERMIT VIEWING THROUGH THE PANELS SHALL HAVE THE BOTTOM OF AT LEAST ONE OF THE GLAZED PANEL LOCATED 43 INCHES MAXIMUM ABOVE THE FINISHED FLOOR. (MIN CBC 118-404.2.11)

DOOR SCHEDULE LEGEND:

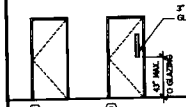
S1 - HEAVY ROOM NAME WITH OWNER
S2 - TOILET ROOM SIGNAGE "MEN"
S3 - TOILET ROOM SIGNAGE "WOMEN"
S4 - ACCESSIBLE ENTRANCE SIGN
S5 - TOILET ROOM SIGNAGE "ALL GENDER"

DOOR ABBREVIATIONS:

HM - HOLLOW METAL
PL - PLASTIC LAMINATE
PT - PAINT
AL - ALUMINUM
SC - SOLID CORE
TG - TEMPERED GLAZING
PF - PRE-FINISHED PAINT

## DOOR TYPES

NOTE:
PROVIDE SAFETY GLAZING AS REQUIRED PER CBC SECTION 2406.

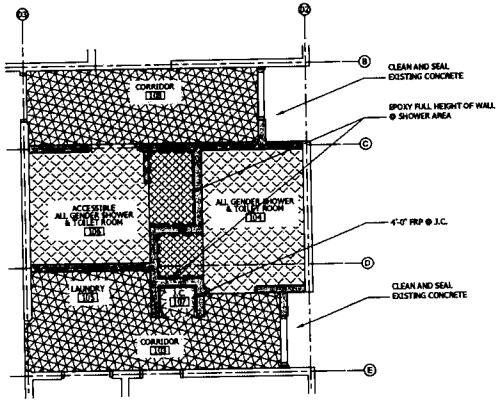



GENERAL ACCESSIBILITY NOTES:

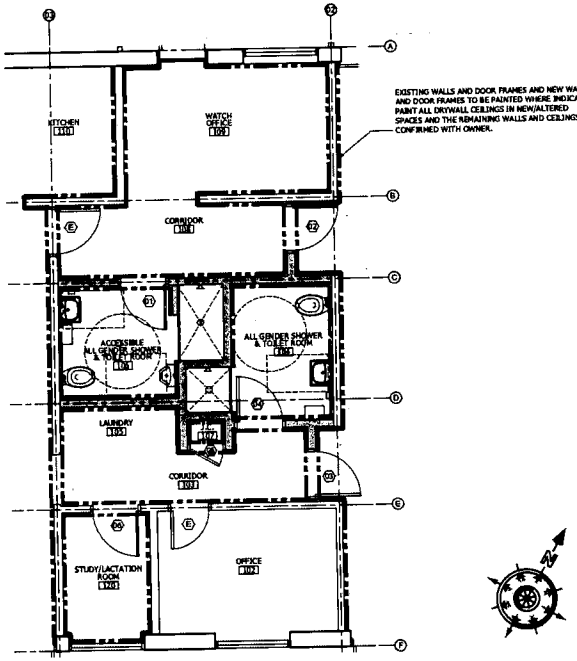
1. EXIT DOORS SHALL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY, SPECIAL KNOWLEDGE OR EFFORT. (CBC 1010.1.9)
2. THERE SHALL BE A LEVEL AND CLEAR FLOOR OR LANDING ON EACH SIDE OF DOOR. THE LEVEL AREA SHALL HAVE A LENGTH IN THE DIRECTION OF DOOR SWING OF AT LEAST 60" AND THE LENGTH OPPOSITE THE DIRECTION OF DOOR SWING OF 48" AS MEASURED AT RIGHT ANGLES TO THE PLANE OF THE DOOR IN THE CLOSED POSITION. (CBC 118-404.2.4.1)
3. MAXIMUM DOOR EFFORT TO OPERATE DOORS SHALL NOT EXCEED 5 POUNDS FOR EXTERIOR DOORS AND 5 POUNDS FOR INTERIOR DOORS. SUCH PULL OR PUSH EFFORT BEING APPLIED AT RIGHT ANGLES TO HINGED DOORS AND AT THE CENTER PLANE OF SLIDING OR FOLDING DOORS. COMPENSATING DEVICES OR AUTOMATIC DOOR OPERATORS MAY BE UTILIZED TO MEET THE ABOVE STANDARDS. WHEN FIRE DOORS ARE REQUIRED, THE MAXIMUM EFFORT TO OPERATE THE DOOR MAY BE INCREASED TO THE MINIMUM ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY, NOT TO EXCEED 15 POUNDS. (CBC 118-404.2.9)
4. DOOR HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERATING DEVICES ON DOORS REQUIRED TO BE ACCESSIBLE BY CHAPTER 11A OR CHAPTER 11B SHALL NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING OR TWISTING OF THE WRIST TO OPERATE. (CBC 1010.1.9.1)
5. HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERABLE PARTS ON DOORS AND GATES SHALL BE 34 INCHES MINIMUM AND 44 INCHES MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. WHERE SLIDING DOORS ARE IN THE FULLY OPEN POSITION, OPERATING HARDWARE SHALL BE EXPOSED AND USABLE FROM BOTH SIDES. (CBC 118-404.2.7 AND 11B-309.4)
6. SWINGING DOOR AND GATE SURFACES WITHIN 10 INCHES OF THE FINISH FLOOR OR GROUND MEASURED VERTICALLY SHALL HAVE A SMOOTH SURFACE ON THE PUSH SIDE EXTENDING THE FULL WIDTH OF THE DOOR OR GATE. PARTS CREATING HORIZONTAL OR VERTICAL JOINTS IN THESE SURFACES SHALL BE WITHIN 1/16 INCH OF THE SAME PLANE AS THE OTHER AND BE FREE OF SHARP OR ABRASIVE EDGES. CAVITIES CREATED BY ADDED KICK PLATES SHALL BE CAPPED. (CBC 118-404.2.10)

FLOOR FINISH LEGEND

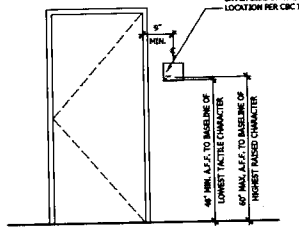
- EPOXY FLOOR AND EPOXY COVED BASE
- VCT AND RESILIENT BASE




01 FINISH FLOOR PLAN - FIRE STATION NO. 14
A-1.5 Scale : 1/4" = 1'-0"



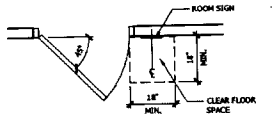

02 PAINTING SCOPE FLOOR PLAN - FIRE STATION NO. 14
A-1.5 Scale : 1/4" = 1'-0"




03 ROOM SIGNAGE
A-1.5 Scale : 1/2" = 1'-0"

NOTE:

1. ALL WALL SIGNAGE WITH VISUAL AND TACTILE CHARACTERS SHALL COMPLY WITH CBC 118-703.1 THRU 118-703.7.
2. ALL SIGNAGE TO BE APPROVED PRIOR TO FABRICATION AND FIELD INSPECTED AFTER INSTALLATION AND APPROVED BY OWNER AND ENFORCING AGENCY FOR REGULATION COMPLIANCE.




04 ROOM SIGNAGE LOCATION
A-1.5 Scale : 1/2" = 1'-0"


Gillis + Panichapan Architects, Inc.
2900 BRISTOL STREET COSTA MESA CALIFORNIA 92626
714 | 751 | 2770 FAX | 714 | 444 | 4266 REG. NO. C-26


RE-BID SET

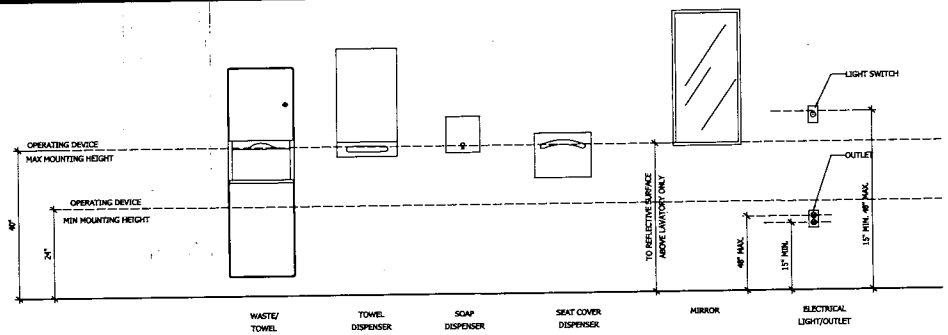
| NO. | DESCRIPTION | DATE |
|---|---|---|
| A | RE-BID SET | DATE: 02/16/2022 |
| A | BID RFIS | DATE: 01/07/2022 |

DRAWN BY: STAFF
CHECKED BY: LP
SCALE: AS NOTED

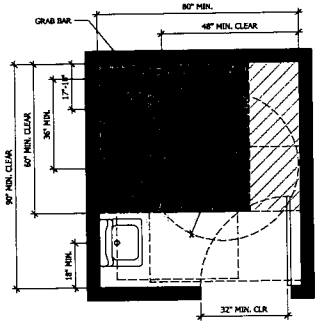
DOOR & FINISH FLOOR SCHEDULES - F.S. 14

ORANGE COUNTY FIRE AUTHORITY
Fire Station #14 - Tenant Improvements
29402 SILVERADO CANYON RD., SILVERADO, CA 92676

A-1.5




01 A-5.1 CALDAG TOILET ACCESSORIES DIMENSIONS & CLEARANCES
Scale : 3/4" = 1'-0"




06 A-5.1 SINGLE COMPARTMENT CONDITION
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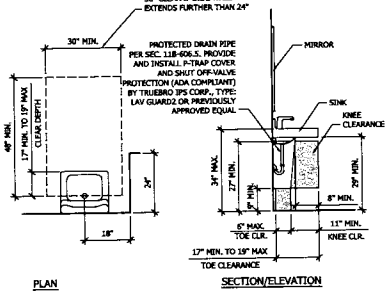
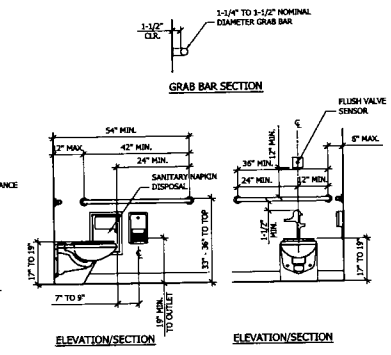
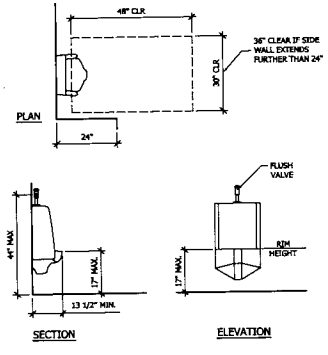


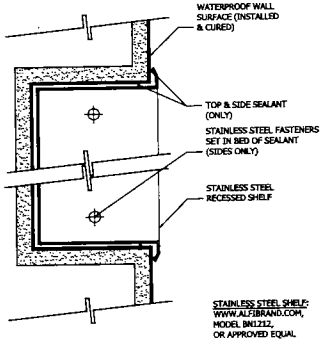

07 A-5.1 ACCESSIBLE LAVATORY
Scale : 1/2" = 1'-0"



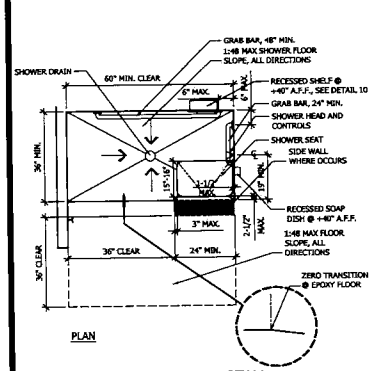

08 A-5.1 ACCESSIBLE WATER CLOSET
Scale : 1/2" = 1'-0"

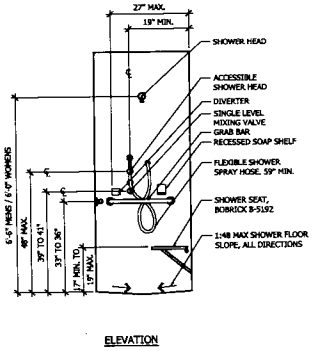



09 A-5.1 ACCESSIBLE URINAL
Scale : 1/2" = 1'-0"



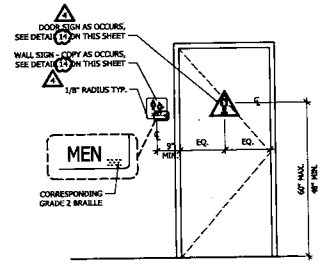

10 A-5.1 RECESSED SHELF @ SHOWER
Scale : 6" = 1'-0"



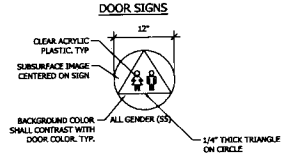

11 A-5.1 ACCESSIBLE SHOWER STALL
Scale : 1/2" = 1'-0"

NOTE:
1. ATTACH SIGNS WITH SILICON ADHESIVE AND NON-CORROSIVE, VANDAL RESISTANT FLAT HEAD SCREWS
2. WHEN MOUNTING SIGN TO NON-OPAQUE MATERIAL, APPLY VINYL ADHESIVE BACKER; COLOR AND SIZE TO MATCH SIGNAGE.
3. TACTILE CHARACTERS ON SIGNS TO BE LOCATED 48 IN. MIN. ABOVE THE FINISH FLOOR TO THE BASELINE OF THE LOWEST TACTILE CHARACTER AND 60 IN. MAX. ABOVE THE FINISH FLOOR TO THE BASELINE OF THE HIGHEST RAISED CHARACTERS.



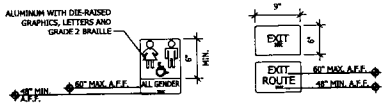

13 A-5.1 TOILET ROOM SIGNAGE
Scale : 1/2" = 1'-0"

DOOR SIGNS




NOTE:
1. ALL DOOR AND WALL SIGNAGE WITH VISUAL AND TACTILE CHARACTERS SHALL COMPLY WITH CBC 118-703.1 THRU 118-703.7.
2. ALL SIGNAGE TO BE APPROVED PRIOR TO FABRICATION AND FIELD INSPECTED AFTER INSTALLATION AND APPROVED BY OWNER AND ENFORCING AGENCY FOR REGULATION COMPLIANCE.
3. SEE SHEET A-XX FOR ADDITIONAL SIGNAGE LOCATION INFORMATION.

WALL SIGNS




WINDOW DECAL
ENTRANCE SIGN




14 A-5.1 SIGNAGE DETAILS
Scale : 1" = 1'-0"

Gills + Panichapan Architects, Inc.
2900 INYOKERN STREET, SUITE H
REDLANDS, CA 92373
TEL (T) 909.307.4200

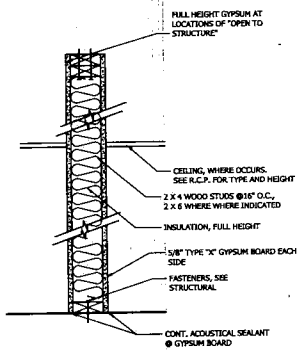
RE-BID SET

| | |
|---|---|
| RD SET | DATE: 02/16/2022 |
| RE-BID SET | |
| BID PER | DATE: 01/07/2022 |
| JOB NO.: 4009 | |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: AS NOTED | |

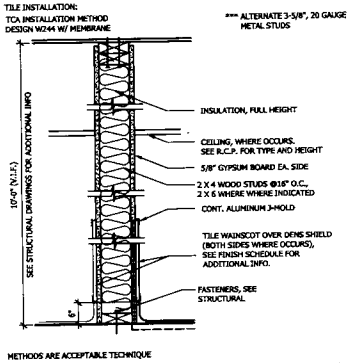
# ADA ACCESSIBLE DETAILS

ORANGE COUNTY FIRE AUTHORITY
Fire Station #14 - Tenant Improvements
29402 SILVERADO CANYON RD., SILVERADO, CA 92676

A-5.1

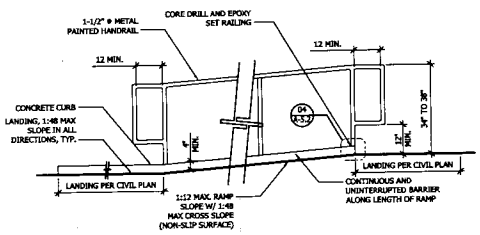



1 A-5.2 TYP. INT. PARTITION
Scale : 1-1/2" = 1'-0"

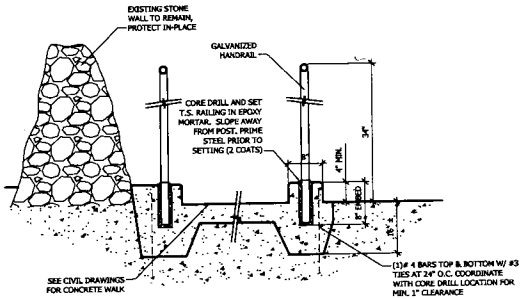



METHODS ARE ACCEPTABLE TECHNIQUE

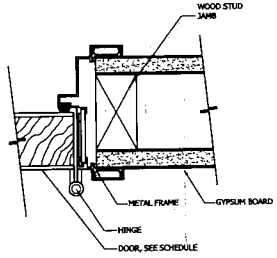
2 A-5.2 PARTITION W/ TILE
Scale : 1-1/2" = 1'-0"



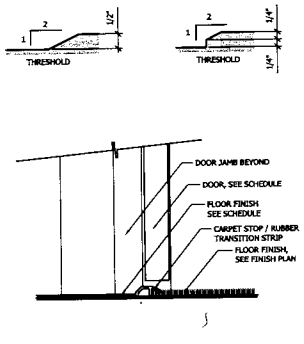

03 A-5.2 RAMP & HANDRAIL
Scale : 1/2" = 1'-0"



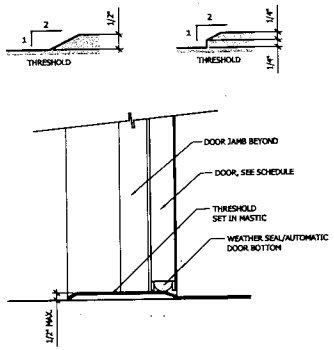

04 A-5.2 CORE DRILL & RAILING
Scale : 1" = 1'-0"



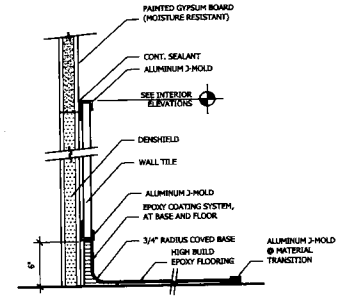

06 A-5.2 INTERIOR DOOR JAMB (HEAD SIM.)
Scale : 6" = 1'-0"



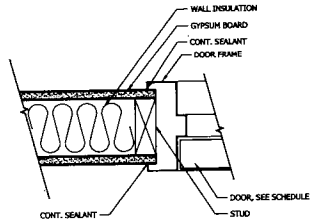

07 A-5.2 TRANSITION @ INTERIOR DOOR
Scale : 3" = 1'-0"



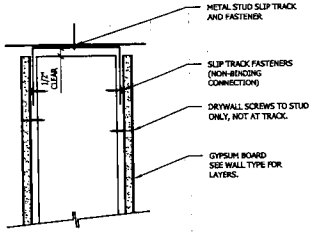

08 A-5.2 THRESHOLD @ INTERIOR DOOR
Scale : 3" = 1'-0"




09 A-5.2 EPOXY COVED BASE
Scale : 6" = 1'-0"



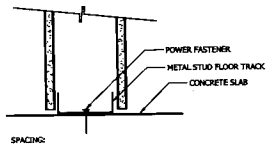

10 A-5.2 HOLLOW METAL DOOR FRAME
Scale : 3" = 1'-0"




11 A-5.2 SLIP TRACT @ FULL HEIGHT WALL
Scale : 3" = 1'-0"

NOTES:

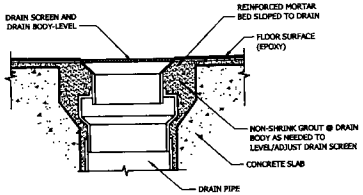
1. INSTALL POWER DRIVEN FASTENERS PER MANUFACTURER'S INSTRUCTIONS AND PER ICC-ESR-1663 REPORT. A COPY OF THE REPORT AND INSTALLATION DIRECTIONS TO BE AVAIL. ON THE JOB SITE AT ALL TIMES FOR THE INSTALLATION METHOD USED.
2. METAL STUD TRACKS TO BE FASTENED INTO NORMAL-WEIGHT OR STRUCTURAL LIGHT WEIGHT CONCRETE COMPLYING WITH CBC CHAPTER 19 OR IBC SECTION 1402.2, AS APPLICABLE. MINIMUM COMPRESSIVE STRENGTH OF CONCRETE 15-2,000 PSI. SEE TABLE 2 (ESR-1663 REPORT) FOR ALLOWABLE TENSION/SHEAR.
3. FASTENER PLACEMENT TO BE INSTALLED BY APPLICABLE TOOL AS REQD. BY MANUFACTURER.
4. INSTALLERS MUST BE CERTIFIED BY HILTI, INC. AND HAVE CURRENT HILTI-ISSUED OPERATOR'S LICENSE. OR APPROVED EQUAL MANUFACTURE AND SYSTEM.
5. USE HILTI X-C22 PITH FASTENING SYSTEM AT INTERIOR NON-BEARING METAL STUD WALL SYSTEMS INSTALLED DIRECTLY TO CONCRETE SLAB ON GRADE OR CONCRETE/METAL DECK SYSTEM.



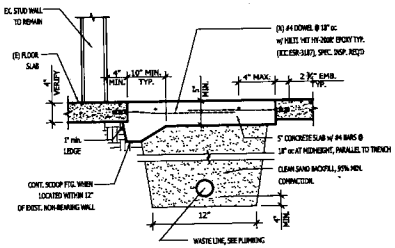

SPACING:
-MAX. 24" O.C. -MIN. FASTENERS PER TRACK: (3)
-MIN. 6" O.C. -MAX. DISTANCE FROM ENDS: 4"

12 A-5.2 POWER DRIVEN FASTENERS
Scale : 3" = 1'-0"

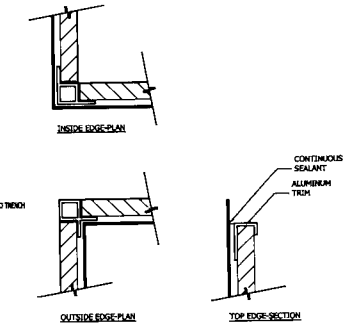
NOTE:
COORDINATE W/ FLOOR DRAIN PRIOR TO POURING CONCRETE




13 A-5.2 FLOOR DRAIN
Scale : 3" = 1'-0"




14 A-5.2 NEW TRENCH & CONCRETE SLAB REPAIR
Scale : 1" = 1'-0"




15 A-5.2 TRIM @ TILE WAINSCOT- TYPICAL
Scale : N.T.S.

Gillis + Panichapan Architects, Inc.
2000 BRISTOL STREET COSTA MESA, CALIFORNIA 92626
TEL (714) 668-0200 FAX (714) 668-0266

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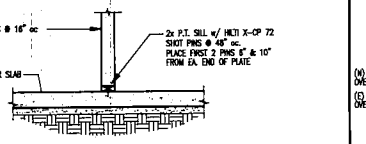
RE-BID SET

| | |
|---|---|
| RED SET | DATE: 10/14/2022 |
| 1 RE-BID SET | DATE: 11/07/2022 |
| 2 RED MARK | |
| JOB NO.: 4069 | |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: AS NOTED | |

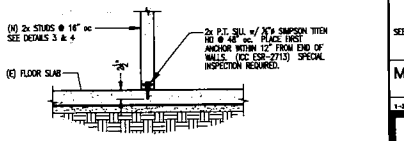
DETAILS

ORANGE COUNTY FIRE AUTHORITY
Fire Station #14 - Tenant Improvements
29402 SILVERADO CANYON RD., SILVERADO, CA 92676

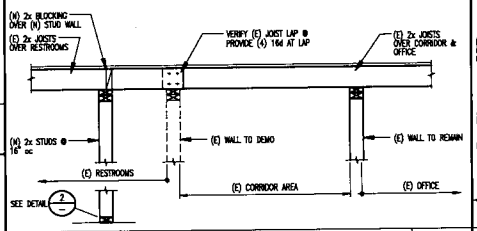
A-5.2



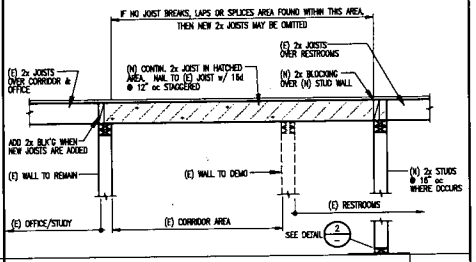

TYPICAL INTERIOR NON BEARING WALL ANCHORAGE — 1



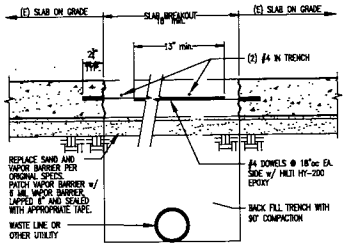

TYPICAL INTERIOR BEARING WALL ANCHORAGE — 2



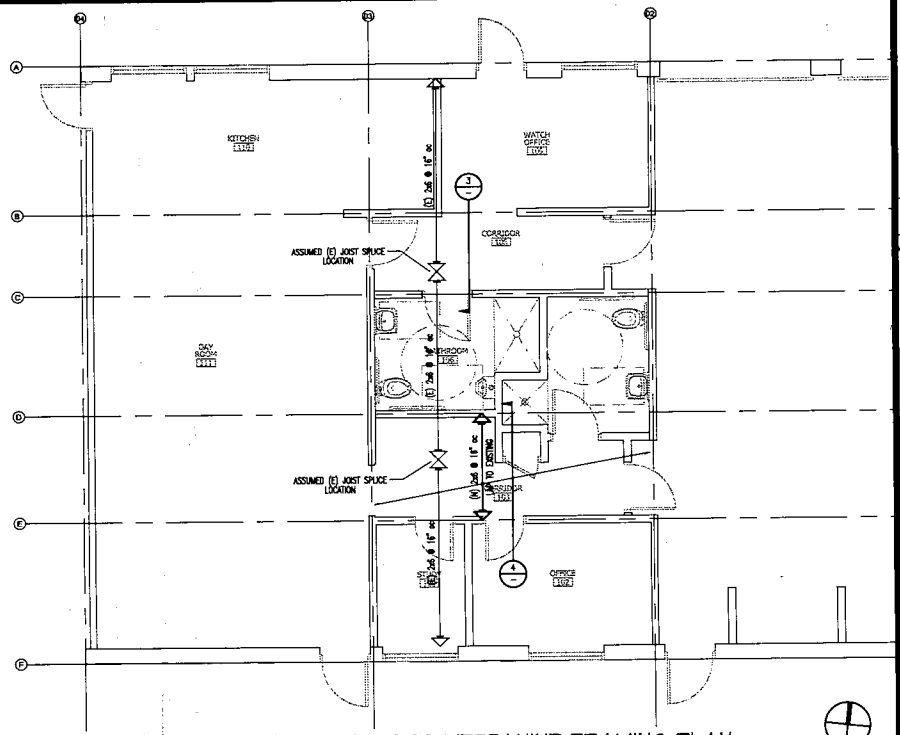

MEZZANINE JOIST SECTION — 3




MEZZANINE JOIST SECTION — 4




SLAB REPLACEMENT at UTILITY TRENCH — 5




MECHANICAL/DATA ACCESS MEZZANINE FRAMING PLAN

SCALE: 1/4"= 1'-0"

NORTH

## WOOD FRAME, continued

6. PROVIDE FIRE STOPS AT ALL INTERSECTIONS OF STUD WALLS AT FLOOR, CEILING AND ROOF. FIRE STOPS SHALL BE 2X NOMINAL THICKNESS OF WOOD AND SHALL BE THE FULL WIDTH OF THE ENCLOSED SPACE. PROVIDE 2X FIRE STOPS IN ALL FURRED SPACES, VERTICAL AND HORIZONTAL, AND AT A MAXIMUM SPACING OF 10'-0" IN EACH DIRECTION AND AT THE SAME LINES AS FIRE STOPS IN ADJACENT STUD WALLS.
7. TOP PLATES OF ALL STUD WALLS SHALL BE 2 PIECES THE SAME SIZE AS STUDS. SPLICES TO LAP 4'-0" MINIMUM AND BE NAILED PER THE DETAILS.
8. STRUCTURAL MEMBERS SHALL NOT BE CUT FOR PIPES, ETC. UNLESS SPECIFICALLY DETAILED. NOTCHING OF HORIZONTAL STRUCTURAL MEMBERS SHALL CONFORM TO THE PROVISIONS OF SECTION 2308.4.2.4 AND 2308.7.4 OF THE CBC EXCEPT NOTCHING ON THE TENSION SIDE OF A 4x AND LARGER MEMBER IS NOT ALLOWED. NOTCHING AND BORING OF STUDS AND TOP PLATES SHALL CONFORM TO THE PROVISIONS OF SECTIONS 2308.5.8 AND 2308.5.10
9. PROVIDE SOLID BLOCKING BETWEEN JOISTS AND RAFTERS AT ALL SUPPORTS. USE 2X BLOCKING AT CONVENTIONAL FRAMING AND I-JOIST BLOCKING AT I-JOIST FRAMING. BLOCKING SHALL BE ONE PIECE AND THE FULL DEPTH OF THE JOIST OR RAFTER.

## TESTS AND INSPECTIONS

1. INSPECTION BY A REGISTERED DEPUTY INSPECTOR IS REQUIRED FOR THE MATERIALS LISTED BELOW. THE EXTENT OF SUCH INSPECTION SHALL CONFORM TO SECTION 1704 OF THE CALIFORNIA BUILDING CODE.
2. AN AFFIDAVIT SHALL BE ISSUED TO THE ARCHITECT/ENGINEER AND THE BUILDING DEPARTMENT AT THE COMPLETION OF EACH TYPE OF WORK STATING WHETHER THE WORK WAS IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.

SPECIAL INSPECTIONS
(only checked items are required)

| MATERIAL | INSPECTION TYPE: CONTINUOUS | INSPECTION TYPE: PERIODIC | NOTES |
|---|---|---|---|
| CONCRETE - Section 1705.3 & Table 1705.3 | | | |
| Inspect post-installed anchors installed in hardened concrete | ■ | ■ | a. |

NOTES:
a. INSPECTION SHALL BE IN ACCORDANCE WITH THE CURRENT CODE APPROVAL REPORT FOR THE PRODUCT BEING INSTALLED.

## GENERAL

1. ALL CONSTRUCTION AND WORKMANSHIP SHALL CONFORM TO THE 2019 CALIFORNIA BUILDING CODE (CBC).
2. THESE NOTES SHALL BE USED IN CONJUNCTION WITH THE PLANS AND ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND THE ENGINEER.
3. CONTRACTOR MUST CHECK DIMENSIONS, FRAMING CONDITIONS, AND SITE CONDITIONS BEFORE STARTING WORK. ARCHITECT AND THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES OR POSSIBLE DEFICIENCIES.
4. CONDITIONS NOT SPECIFICALLY DETAILED SHALL BE CONSTRUCTED AS SPECIFIED IN TYPICAL DETAILS FOR THE RESPECTIVE MATERIALS.
5. THE DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. ALL BRACING, TEMPORARY SUPPORTS, SHORING, ETC. IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. OBSERVATION VISITS TO THE JOB SITE BY THE ARCHITECT AND THE ENGINEER DO NOT INCLUDE INSPECTION OF CONSTRUCTION PROCEDURES. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION METHODS AND FOR SAFETY CONDITIONS AT THE WORKSITE. THESE VISITS SHALL NOT BE CONSTRUED AS CONTINUOUS AND DETAILED INSPECTIONS.
6. DESIGN, MATERIALS, EQUIPMENT, AND PRODUCTS OTHER THAN THOSE DESCRIBED BELOW OR INDICATED ON THE DRAWINGS MAY BE CONSIDERED FOR USE, PROVIDED PRIOR APPROVAL IS OBTAINED FROM THE OWNER, ARCHITECT, THE ENGINEER, AND THE APPLICABLE GOVERNING CODE AUTHORITY.
7. ALL CONDITIONS NOTED AS EXISTING ARE BASED ON THE BEST INFORMATION CURRENTLY AVAILABLE AT THE TIME OF PREPARATION OF THESE DRAWINGS. THE CONTRACTOR IS TO VERIFY ALL CONDITIONS BEFORE STARTING WORK. SHOULD CONDITIONS ARISE WHICH ARE DIFFERENT FROM THOSE SHOWN ON THE DRAWINGS, THE ARCHITECT AND THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY AND ADDITIONAL DRAWINGS BASED ON MORE ACCURATE INFORMATION WILL BE PREPARED.

## DESIGN CRITERIA

WIND ANALYSIS
N/A – INTERIOR STRUCTURE

SEISMIC PARAMETERS
SITE CLASS: 'D'
SEISMIC DESIGN CATEGORY: 'D'
RISK CATEGORY: IV
SEISMIC IMPORTANCE FACTOR: 1.25

| | | | |
|---|---|---|---|
| $I_E$ | = 1.2 | $I_E$ | = 1.7 |
| $S_S$ | = 1.5 | $S_S$ | = 0.6 |
| $S_{MS}$ | = 1.2 | $S_{MS}$ | = 0.88 |

BUILDING DESIGN LOADS:
MECHANICAL/DATA ACCESS MEZZANINE:
$F_{PA}$ = 7 PSF
$F_{PL}$ = 20 PSF (storage above ceiling)

## WOOD FRAME

1. ALL STRUCTURAL LUMBER SHALL BE DOUGLAS FIR – LARCH OF THE FOLLOWING GRADES, CONFORMING TO STANDARD GRADING RULES FOR WEST COAST LUMBER NO. 17, UNLESS NOTED OTHERWISE. THE LUMBER GRADES AS SPECIFIED BELOW MEET MINIMUM REQUIREMENTS:
   PLATES, BLOCKING — STAND & BTR
   STUDS TO 10'-0" IN HEIGHT (2x, 3x, 4x) — STAND & BTR, NO. 2 800 Fb
   2x RAFTERS, JOISTS — NO. 2 800 Fb
   2x LUMBER SHALL HAVE 19% MAXIMUM MOISTURE CONTENT AT TIME OF INSTALLATION.
2. UTILITY GRADE LUMBER IS UNACCEPTABLE FOR ANY PURPOSE INCLUDING, BUT NOT LIMITED TO, BRACING, SILLS OR CRIPPLE STUDS.
3. WHERE POSSIBLE ALL LUMBER GRADE STAMPS SHALL REMAIN ON LUMBER AFTER INSTALLATION.
4. ALL WOOD BEARING ON CONCRETE OR MASONRY SHALL BE PRESSURE TREATED FIR.
5. ALL NAILING SHALL BE PER THE NAILING SCHEDULE SHOWN ON THE CURRENT EDITION OF THE CALIFORNIA BUILDING CODE UNLESS NOTED OTHERWISE ON THE PLANS OR DETAILS. ALL NAILS INTO PRESSURE TREATED LUMBER SHALL BE HOT DIPPED GALVANIZED.
   EXCEPTION: IN ACCORDANCE WITH SECTION 2304.10.5.1 OF THE CALIFORNIA BUILDING CODE, FASTENERS IN PRESSURE TREATED LUMBER BEING USED IN AN INTERIOR, DRY CONDITION (i.e. MUDSILL PLATES, etc.) ARE NOT REQUIRED TO BE GALVANIZED WHERE THE PRESERVATIVE TREATED LUMBER IS TREATED WITH SBX/DOT OR ZINC BORATE. IF NON-GALVANIZED FASTENERS ARE USED, A LETTER SHALL BE PROVIDED BY THE LUMBER DISTRIBUTOR STATING THAT ALL PRESERVATIVE TREATED LUMBER SUPPLIED TO THE JOBSITE UTILIZES EITHER SBX/DOT OR ZINC BORATE PRESERVATIVE TREATMENT. WHERE POSSIBLE, LUMBER STAMPS SHOWING THE PRESERVATIVE TREATMENT USED SHALL REMAIN ON THE LUMBER IN A VISIBLE LOCATION. NAILS ARE DEFINED AS FOLLOWS:

| | |
|---|---|
| 16d COMMON: | 0.162" dia. x 3 1/2" |
| 16d BOX: | 0.135" dia. x 3 1/2" |
| 16d SINKERS (12d COMMON): | 0.148" dia. x 3 1/4" |
| 16d SHORT: | 0.131" dia. x 3" |
| 10d COMMON: | 0.148" dia. x 3" |
| 10d BOX: | 0.128" dia. x 3" |
| 8d COMMON: | 0.131" dia. x 2 1/2" |
| 8d BOX: | 0.113" dia. x 2 1/2" |

16d SHORT (0.131"x3") NAILS ARE NOT ACCEPTABLE.

REGISTERED PROFESSIONAL ENGINEER — DALE A. CHRISTIAN — No. 2706 — STRUCTURAL — STATE OF CALIFORNIA

DATE SIGNED: 5/14/21

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ASSOCIATES, INC.
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PH: 714 997 1145
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PLOT DATE 5/14/21

gills + Parichapon Architects, Inc.
25002 MOUNTAIN AVENUE, HEMET, CALIFORNIA 92544
PH: (951) 652-2585 FAX: (951) 652-2586

RE-BID SET

| | |
|---|---|
| A PLAN CHECK CORRECTIONS | |
| A RE-BID SET | |
| JOB NO.: 409 | DATE: 01/07/2022 |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: | |

MEZZANINE FRAMING PLAN & DETAILS

ORANGE COUNTY FIRE AUTHORITY
Fire Station #14 - Tenant Improvements
29402 SILVERADO CANYON RD., SILVERADO, CA 92676

S-1

# SYMBOLS LIST

| Symbol | Description |
|---|---|
| F | FIRE ALARM PULL STATION. MOUNT AT +48 INCHES UNLESS OTHERWISE NOTED. |
| F◁ | FIRE ALARM PULL STATION, VISUAL STROBE LIGHT AND HORN. MOUNT PULL STATION AT +48 INCHES. MOUNT HORN AND LIGHT AT +80 INCHES ABOVE HIGHEST FLOOR LEVEL IN ROOM OR 6 INCHES BELOW CEILING, WHICHEVER IS LOWER.VISUALS SHALL BE 30 CANDELA (75 CD ON AXIS) U.N.O. 15 CD OR 110 CD DEVICES SHALL BE PROVIDED AS PER NFPA 72. |
| FATC | FIRE ALARM TERMINAL CABINET. |
| FACP | FIRE ALARM CONTROL PANEL "FACP". REFER TO SPECIFICATIONS. |
| SD | PHOTOELECTRIC TYPE SMOKE DETECTOR MOUNTED ON CEILING OR WALL PER DRAWINGS. ASTERISK (*) ADJACENT INDICATES RELAY BASED AND LISTED FOR DOOR CONTROL. |
| | CONDUIT RUN, CONCEALED IN CEILING, WALLS OR UNDER FLOORS. |
| | CONDUIT RUN EXPOSED. |
| | CONDUIT RUN UNDERGROUND. |
| | CONDUIT STUBBED OUT AND CAPPED. PULL LINE IN PLACE. |
| AIC | "AMPERES INTERRUPTING CAPACITY" |
| RMS | "ROOT MEAN SQUARED" |
| KW | "KILOWATT" |
| KVA | "KILOVOLT - AMPERES" |
| V | "VOLTS" |
| A | "AMPS" |
| WP | WEATHERPROOF, NEMA 3R |
| KWH | KILOWATT HOURS |
| AFF | ABOVE FINISHED FLOOR |
| O.C. | "ON CENTER" |
| UNO | UNLESS NOTED OTHERWISE |
| C.O. | "CONDUIT ONLY". PROVIDE PULL ROPE FOR ALL EMPTY CONDUIT. |
| C. | "CONDUIT", WITH CONDUCTORS AS REQUIRED BY DRAWINGS OR SPECIFICATIONS. |
| ø | PHASE |
| X / X.X | REFERENCE DETAIL NUMBER. "X" INDICATES DETAIL NUMBER AND "X.X" INDICATES SHEET NUMBER. |
| | CROSS LINES ON CONDUIT RUNS INDICATE NUMBER OF #10 CURRENT CARRYING CONDUCTORS CONTAINED THEREIN. TWO #10 AND ONE #10 GROUND WIRE ARE INDICATED WHEN CROSS LINES ARE NOT SHOWN. NUMERALS ADJACENT TO CROSS LINES ON CONDUIT RUNS INDICATE SIZE OF CONDUCTORS IN LIEU OF #10. ALL CONDUITS SHALL CONTAIN ONE GROUND WIRE SIZED PER C.E.C. TABLE 250-95, BUT NOT SMALLER THAN #10. |
| B-1,3 | CONDUIT HOMERUN TO PANELBOARD. LETTER AND NUMERALS INDICATE ELECTRICAL PANEL AND CIRCUIT NUMBER. |
| | ISOLATED GROUND WIRE. RUN IN ADDITION TO REGULAR GROUND WIRE. |
| | SURFACE MOUNTED BRANCH CIRCUIT PANELBOARD. |
| | RECESSED BRANCH CIRCUIT PANELBOARD. |
| P1 | PANEL DESIGNATION. |
| | RECESSED COMMUNICATION TERMINAL CABINET. REFER TO DRAWINGS AND SPECIFICATIONS. |
| | SURFACE MOUNTED COMMUNICATION TERMINAL CABINET. REFER TO DRAWINGS AND SPECIFICATIONS. |
| J | JUNCTION BOX IN ACCESSIBLE CEILING SPACE OR FLUSH IN WALL WITH BLANK COVER PLATE TO MATCH DEVICE PLATES. |

| Symbol | Description |
|---|---|
| | COMBINATION MAGNETIC MOTOR STARTER AND NON-FUSED DISCONNECT SWITCH. |
| F II | COMBINATION MAGNETIC MOTOR STARTER AND FUSED DISCONNECT SWITCH. |
| | SINGLE PHASE FRACTIONAL OR INTEGRAL HORSEPOWER MOTOR. |
| T | TRANSFORMER, PRIMARY & SECONDARY VOLTAGE AND KVA RATING AS NOTED. TYPE AND CONFIGURATION AS SPECIFIED. PROVIDE DRY TYPE, COPPER WOUND, WALL OR BOX MOUNTED UNLESS NOTED OTHERWISE. |
| E | EQUIPMENT WITH "E" ADJACENT IS EXISTING TO REMAIN. |
| R | EQUIPMENT WITH "R" ADJACENT IS EXISTING TO BE COMPLETELY DISCONNECTED AND REMOVED. |
| RR | EQUIPMENT WITH "RR" ADJACENT IS EXISTING TO BE DISCONNECTED, REMOVED AND RELOCATED TO NEW LOCATION AND RECONNECTED AS REQUIRED. |
| ER | RELOCATED EQUIPMENT SHOWN IN NEW LOCATION. |
| | FLOOR MOUNTED COMBINATION RECEPTACLE & TELE/DATA |
| | HALF-SWITCHED DUPLEX RECEPTACLE |
| J | JUNCTION BOX FLUSH IN FLOOR |
| 100AS | NON-FUSED DISCONNECT SWITCH. "AS" INDICATES SWITCH AMPERE RATING. |
| 100AS / 60AFU | FUSED DISCONNECT SWITCH. "AS" INDICATES SWITCH AMPERE RATING. "AFU" INDICATES FUSE AMPERE RATING. |
| VFD II | MAGNETIC MOTOR STARTER. ROMAN NUMERAL INDICATES NEMA STARTER SIZE. ADDITIONAL SUBSCRIPTS INDICATE STARTER TYPE AND SIZE. (TYPICAL FOR ALL MAGNETIC STARTER SYMBOLS.) |

- NO SUBSCRIPT – FULL VOLTAGE, NON REVERSING
- PR – PRIMARY RESISTOR REDUCED VOLTAGE
- AT – AUTOTRANSFORMER REDUCED VOLTAGE
- WD – WYE-DELTA REDUCED VOLTAGE
- PW – PART WINDING REDUCED VOLTAGE
- SS – SOLID STATE REDUCED VOLTAGE
- REV – REVERSING TYPE
- 2S – TWO SPEED
- 2W – TWO WINDINGS
- CH – CONSTANT HORSEPOWER
- CT – CONSTANT TORQUE
- VT – VARIABLE TORQUE
- VFD – VARIABLE FREQUENCY DRIVE

| Symbol | Description |
|---|---|
| S | LOW VOLTAGE DIMMER SWITCH (SAME ABBREVIATIONS APPLY AS ABOVE) |
| 100AF / 70AT 3P | MOLDED CASE CIRCUIT BREAKER. "AF" INDICATES AMPERE FRAME, "AT" INDICATES AMPERE TRIP RATING AND NUMBER OF POLES AS INDICATED. SUBSCRIPT INDICATES TYPE. |

- NO SUBSCRIPT – THERMAL MAGNETIC
- NA – NON-AUTOMATIC
- MO – MAGNETIC ONLY
- CL – CURRENT LIMITING
- SS – SOLID STATE
- EM – ELECTRONIC METERING PACKING

| Symbol | Description |
|---|---|
| | DRAW-OUT TYPE CIRCUIT BREAKER. |
| 100AS / 90FU 3P | FUSED SWITCH. "AS" INDICATED AMPERE SWITCH RATING, "AFU" INDICATES AMPERE FUSE RATING, NUMBER OF POLES AS INDICATED. |
| | VOLTAGE TRANSFORMER. FLOOR MOUNTD, COPPER WOUND, DRY TYPE UNLESS SPECIFIED OTHERWISE. |
| | CURRENT TRANSFORMERS, "C.T.s" |
| | POTENTIAL TRANSFORMER, P.T.s". |
| M | UTILITY METER SOCKET, WITH C.T.s, CLIPS, ETC., PER SERVING UTILITY COMPANY. |
| | GROUND, "GRD". |
| | DUPLEX GROUNDING TYPE RECEPTACLE, 20 AMP, 125 VOLT |
| | DUPLEX GROUND FAULT INTERRUPTING TYPE RECEPTACLE, 20 AMP, 125 VOLT |
| | TWO DUPLEX GROUNDING TYPE RECEPTACLES IN 4S BOX, 20 AMP, 125 VOLT |

| Symbol | Description |
|---|---|
| | WALL MOUNTED COMBINATION VOICE/DATA OUTLET. SINGLE GANG MUD RING AND PLATE. ENGRAVE PLATE "VOICE" AND "DATA" OVER RESPECTIVE JACKS. VERIFY TYPE OF JACK WITH SCE IT. CONTRACTOR SHALL RUN 1-1/2"C.O MIN. FROM DATA JACK TO 6" ABOVE CEILING SPACE. COORDINATE CABLING REQUIREMENTS WITH SCE IT. |
| X | PANEL NAME. |
| FD-SD | FIRE AND SMOKE DAMPER |
| | SURFACE MOUNTED EMERGENCY LIGHTING UNIT WITH 90 MIN. EMERGENCY BATTERY PACK. REFER TO LIGHTING FIXTURE SCHEDULE. |
| OS | CEILING MOUNTED OCCUPANCY SENSOR |
| DL | CEILING MOUNTED DAYLIGHT SENSOR |
| RC | ROOM CONTROLLER |
| 1a | CEILING LIGHT FIXTURE AND OUTLET, HID, FLUORESCENT, OR INCANDESCENT. LOWER CASE LETTER INDICATES CONTROLLING SWITCH, NUMERAL INDICATES CIRCUIT. SHADED SYMBOL INDICATES FIXTURE WITH EMERGENCY POWER PROVISIONS. |
| 1a | FLUORESCENT LIGHT FIXTURE OUTLET. LOWER CASE LETTER INDICATES CONTROLLING SWITCH, NUMERAL INDICATES CIRCUIT. SHADED CIRCLE DENOTES FIXTURE WITH EMERGENCY POWER PROVISIONS. |
| | FLUORESCENT STRIP FIXTURE. LOWER CASE LETTER INDICATES CONTROLLING SWITCH. NUMERAL INDICATES CIRCUIT. SHADED CIRCLE DENOTES FIXTURE WITH EMERGENCY POWER PROVISIONS. |
| 1a | BRACKET OR WALL MOUNTED LIGHT FIXTURE AND OUTLET, HID, FLUORESCENT OR INCANDESCENT. LOWER CASE LETTER INDICATES CONTROLLING SWITCH, NUMERAL INDICATES CIRCUIT. SHADED CIRCLE DENOTES FIXTURE WITH EMERGENCY POWER PROVISIONS. |
| | ILLUMINATED EXIT LIGHT FIXTURE. SIDE, BACK, CEILING, OR PENDANT MOUNTED, SINGLE OR DOUBLE FACED AS NOTED BY SHADED ARC, WITH OR WITHOUT DIRECTIONAL ARROW AS NOTED ON THE DRAWINGS. NOT TO BE USED AS JUNCTION BOX OR "THROUGH-WIRE" DEVICE. |
| | LOW LEVEL EXIT LIGHT FIXTURE, WALL MOUNTED WITH OR WITHOUT DIRECTIONAL ARROW AS NOTED ON THE DRAWINGS. BOTTOM OF FIXTURE AT +6 INCHES ABOVE FINISHED FLOOR AND WITHIN FOUR INCHES OF DOOR FRAME WHERE APPLICABLE. |
| D / 106 / 21, +9'-0" | LIGHTING FIXTURE IDENTIFICATION SYMBOL. LETTER INDICATES FIXTURE TYPE. NUMERALS IN LOWER HALF OF HEXAGON INDICATE FIXTURE WATTAGE (INCLUDING BALLAST WHERE APPLICABLE). NUMERAL OUTSIDE TOP OF HEXAGON INDICATES NUMBER OF FIXTURES REQUIRED. NUMERAL OUTSIDE BOTTOM OF HEXAGON INDICATES MOUNTING HEIGHT FROM FLOOR TO BOTTOM OF FIXTURE. OMISSION OF MOUNTING HEIGHT INDICATES CEILING MOUNTING. |
| $S^M$ | HP RATED SWITCH |
| $S_a^{3k}$ | SWITCH. LOWER CASE LETTER AT BOTTOM INDICATES OUTLETS CONTROLLED. CAPITAL SUPERSCRIPT INDICATES SWITCH TYPE. |

- NO SUPERSCRIPT – SINGLE POLE SWITCH
- 2 – DOUBLE POLE
- 3 – THREE WAY
- 4 – FOUR WAY
- I – ILLUMINATED HANDLE
- K – KEYED SWITCH
- LC – LOCKABLE COVER
- M – MANUAL MOTOR STARTER WITH THERMAL OVERLOAD PROTECTION
- MC – MOMENTARY CONTACT
- P – PILOT LIGHT
- PR – PRESS TYPE
- TP – THREE POSITION
- T – TIMER, 0-6 HR ROTARY OR AS NOTED

| Symbol | Description |
|---|---|
| | HALF CONTROLLED DUPLEX GROUND FAULT INTERRUPTING TYPE RECEPTACLE, 20 AMP, 125 VOLT, 2 POLE, 3 WIRE. |
| | FLUSH FLOOR MOUNTED DUPLEX GROUNDING TYPE RECEPTACLE, 20 AMP, 125 VOLT |
| IG | ANY RECEPTACLE INDICATED WITH"IG" ADJACENT SHALL BY ISOLATED GROUND TYPE WITH INDIVIDUAL GROUND WIRE TO PANELBOARD. |
| IG | DEDICATED RECEPTACLE INDICATED WITH"IG" ADJACENT SHALL BY ISOLATED GROUND TYPE WITH INDIVIDUAL GROUND WIRE TO PANELBOARD. |
| | WALL MOUNTED OCCUPANCY SENSOR +42"AFF,U.O.N. (SINGLE MANUAL ON/OFF DIMMER SWITCH) |
| a,b | WALL MOUNTED OCCUPANCY SENSOR +42"AFF,U.O.N. (DOUBLE MANUAL ON/OFF DIMMER SWITCH) |

# APPLICABLE CODES

BUILDING OCCUPANCY CLASSIFICATION:

THE CONSTRUCTION OF THIS PROJECT SHALL CONFORM TO THE REQUIREMENTS OF:
2019 BUILDING STANDARD ADMINISTRATIVE CODE

2019 CALIFORNIA BUILDING CODE (CBC)

2019 CALIFORNIA ELECTRICAL CODE (CEC)

2019 CALIFORNIA MECHANICAL CODE (CMC)

2019 CALIFORNIA PLUMBING CODE (CPC)

2019 CALIFORNIA ENERGY CODE

2019 CALIFORNIA FIRE CODE (CFC).

# FIRE ALARM PERMIT NOTE

CONTRACTOR SHALL PROVIDE AND SUBMIT FIRE ALARM SAFETY CONSTRUCTION DOCUMENTS FOR ALL AGENCY PLAN CHECK REQUIREMENTS. APPROVAL SHALL BE OBTAINED PRIOR TO THE INSTALLATION OF THE SYSTEM.INTERCONNECTING WIRING AND CONDUIT SIZES ARE NOT INDICATED. CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING RACEWAY, WIRING PLANS, VOLTAGE DROP CALCULATION AND COMPLETE ONE LINE DIAGRAM OF THE SYSTEM.

CONTRACTOR SHALL PROVIDE AS PART OF FIRE ALARM SYSTEM:
- CONSTRUCTION DOCUMENT AND SHOP DRAWINGS.
- SUBMIT AND SECURE FIRE MARSHAL APPROVAL.
- FIELD TO VERIFY EXISTING FIRE ALARM DEVICES. ADD AND/OR RELOCATE EXISTING DEVICES TO COMPLY TO NEW SPACE CONFIGURATION.

# ABBREVIATIONS

| | |
|---|---|
| AF | AMPERE FRAME RATING OF CIRCUIT BREAKERS |
| AFF | ABOVE FINISHED FLOOR |
| AFU | AMPERE FUSE RATING |
| AIC | AMPS INTERRUPTING CAPACITY RATING (RMS SYMMETRICAL) |
| AM | AMMETER |
| AMP, A | AMPERES |
| AS | AMPERE SWITCH RATING |
| AT | AMPERE TRIP RATING OF BREAKER |
| AWG | AMERICAN WIRE GAUGE |
| BKR | BREAKER |
| C. | CONDUIT |
| CAB | CABINET |
| CC | CENTER TO CENTER |
| CKT | CIRCUIT |
| C.O. | CONDUIT ONLY |
| CU | COPPER |
| DWG | DRAWING |
| E | EXISTING |
| FF | FINISHED FLOOR |
| FLEX | FLEXIBLE |
| FLUOR | FLUORESCENT |
| FUT | FUTURE |
| GND | GROUND |
| HZ | HERTZ |
| J.B. | JUNCTION BOX |
| k | THOUSAND (KILO) |
| kV | KILOVOLTS |
| kW | KILOWATTS |
| kVA | KILOVOLT AMPERES |
| kWH | KILOWATT-HOURS |
| LT, LTS | LIGHT, LIGHTS |
| LTG | LIGHTING |
| MAX | MAXIMUM |
| MCB | MAIN CIRCUIT BREAKER |
| MCC | MOTOR CONTROL CENTER |
| MCM | THOUSAND CIRCULAR MILS |
| MT, MTD, MTG | MOUNT, MOUNTED, MOUNTING |
| NO, NOS | NUMBER, NUMBERS |
| NTS | NOT TO SCALE |
| OC | ON CENTER |
| PNL | PANEL |
| PNLBD | PANELBOARD |
| PRI | PRIMARY |
| PWR | POWER |
| R | REMOVED |
| REC | RECEPTACLE |
| RECPTS | RECEPTACLES |
| REQD | REQUIRED |
| SW | SWITCH |
| SYS | SYSTEM |
| SYM | SYMMETRICAL |
| TEMP | TEMPERATURE |
| TYP | TYPICAL |
| UNO | UNLESS NOTED OTHERWISE |
| W | WIRE |
| WP | WEATHERPROOF |
| XFMR | TRANSFORMER |
| ZD | ZONE DAMPER |

# SHEET INDEX



| SHEET NO. | SHEET NAME |
|---|---|
| E-0.1 | ELECTRICAL SYMBOL LIST AND ABBREVIATIONS |
| E-0.2 | ELECTRICAL SPECIFICATIONS |
| E-0.3 | PANEL SCHEDULES & DETAILS |
| E-0.4 | T-24 COMP. FORMS & LTG. FIXTURE SCH. |
| E-0.5 | LIGHTING FIXTURE CUTSHEETS |
| E-2.0 | DEMOLITION LIGHTING PLAN |
| E-2.1 | DEMOLITION POWER PLAN |
| E-3.0 | PROPOSED LIGHTING PLAN |
| E-3.1 | PROPOSED POWER PLAN |




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REGISTERED PROFESSIONAL ENGINEER MONIT VERMA ELECTRICAL EXP. 3-31-22 STATE OF CALIFORNIA



LICENSED ARCHITECT LONGKAVACH PANICHAPAN NO. C-29344 EXP. 11-30-21 STATE OF CALIFORNIA

GPa architecture planning interior
Gillis + Panichapan Architects, Inc.
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RE-BID SET

| | |
|---|---|
| 1 PLAN CHECK CORRECTIONS | |
| 2 BID SET | |
| 3 RE-BID SET | |
| JOB NO.: 4009 | DATE: 01/07/2022 |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: | |

ELECTRICAL SYMBOL LIST AND ABBREVIATIONS

ORANGE COUNTY FIRE AUTHORITY
Fire Station #14 - Tenant Improvements
29402 SILVERADO CANYON RD., SILVERADO, CA 92676

E-0.1

PART 1 – GENERAL

A. SCOPE

1. FURNISH AND INSTALL A COMPLETELY WIRED AND OPERATIONAL ELECTRICAL SYSTEM AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN, INCLUDING BUT NOT LIMITED TO, THESE MAJOR ITEMS:
   a. LIGHTING FIXTURES AS INDICATED AND SPECIFIED ON THE PLANS.
   b. ELECTRICAL PANELS, CONTROLS, SERVICE, DISCONNECTS, CONDUIT WIRING, ETC., FOR ALL OUTLETS AND EQUIPMENT.
   c. TELEPHONE OUTLETS AND CONDUIT AS INDICATED.
   d. CONDUIT AND OUTLETS FOR ALARM, COMPUTER, AND SECURITY SYSTEMS AS INDICATED.
   e. CONTROL WIRING FOR ELECTRICAL SYSTEMS.
2. PROMOE PERMITS AND INSPECTIONS AS REQUIRED.

B. CODES, REGULATIONS AND STANDARDS

1. THE INSTALLATION SHALL COMPLY WITH APPLICABLE LOCAL AND STATE CODES AND ORDINANCES, WITH THE REGULATIONS OF THE LATEST ADOPTED EDITION OF THE FOLLOWING CODES AND WITH THE REQUIREMENTS OF THE POWER AND TELEPHONE COMPANIES FURNISHING SERVICES TO THIS INSTALLATION.
2. THE FOLLOWING INDUSTRY STANDARDS, SPECIFICATIONS AND CODES ARE MINIMUM REQUIREMENTS:
   a. NEMA-NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION STANDARDS
   b. NEC-NATIONAL ELECTRICAL CODE
   c. UL-UNDERWRITER LABORATORIES INCORPORATED STANDARDS
   d. ANSI-AMERICAN NATIONAL STANDARDS INSTITUTE
   e. IEEE-INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
   f. NESC-NATIONAL ELECTRICAL SAFETY CODE
   g. TITLE 24-CALIFORNIA ENERGY COMMISSION

C. INSPECTION OF SITE

1. PRIOR TO SUBMITTING A BID FOR ELECTRICAL WORK, THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE OF THE PROPOSED CONSTRUCTION AND SHALL THOROUGHLY ACQUAINT HIMSELF WITH EXISTING UTILITIES AND WIRING CONDITIONS TO BE ENCOUNTERED, ETC. ALLOWANCE WILL NOT BE MADE FOR NON-COMPLIANCE WITH THIS CONDITION AFTER BIDDING.

D. GENERAL WORKMANSHIP

1. ALL WORK SHALL BE EXECUTED AND FINISHED IN A TECHNICAL MANNER AND SHALL PRESENT A NEAT AND WORKMANLIKE APPEARANCE WHEN COMPLETED.
2. ALL WORK MUST BE ACCEPTABLE TO THE OWNER. WHERE A DETAILED METHOD OF INSTALLING THE WORK IS NOT SPECIFIED OR INDICATED, INSTALL WORK AS DIRECTED BY THE OWNER.

E. RELATED WORK BY OTHERS

1. ELECTRICAL DRAWINGS IDENTIFY UTILITY SERVICE REQUIREMENTS FOR POWER, TELEPHONE, AND CABLE TV WITHIN AND UP TO FIVE FEET OUTSIDE THE BUILDING. UTILITY ELECTRICAL SERVICE TRANSFORMERS, WHERE SHOWN ON THE SITE PLAN, ARE FOR INFORMATION ONLY AND INDICATE THE PREFERRED POINT OF SERVICE. UTILITY CONDUIT SYSTEMS, PULLBOXES, AND OTHER STRUCTURES, WHERE SHOWN ON THE SITE PLAN, ARE ALSO FOR INFORMATION ONLY AND INDICATE THE PREFERRED ROUTING. THE ELECTRICAL CONTRACTOR SHALL REFER TO UTILITY SERVICE DRAWINGS FOR ACTUAL UTILITY SERVICE REQUIREMENTS FOR THIS PROJECT. UTILITY SYSTEMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED UTILITY SERVICE DRAWINGS. IT SHALL BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO CONTACT AND FOLLOW-UP WITH ALL UTILITY COMPANIES TO OBTAIN BOTH PRELIMINARY AND FINAL DESIGN DRAWINGS FOR THIS PROJECT.
   a. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE ELECTRICAL SERVICE ENTRANCE, MEET ALL POWER COMPANY REQUIREMENTS AND SHALL PAY ALL UTILITY COMPANY CHARGES.
   b. THE LOCAL TELEPHONE COMPANY WILL FURNISH AND INSTALL ALL TELEPHONE WIRING AND EQUIPMENT AND WILL MAKE ALL FINAL TELEPHONE CONNECTIONS. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE TELEPHONE SERVICE ENTRANCE, MEET ALL TELEPHONE REQUIREMENTS AND SHALL PAY ALL UTILITY COMPANY CHARGES.
   c. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE CABLE SERVICE ENTRANCE, MEET ALL CABLE COMPANY REQUIREMENTS AND SHALL PAY ALL UTILITY COMPANY CHARGES.

F. COOPERATION WITH OTHER CONTRACTORS

1. COOPERATE WITH THE OTHER TRADES SO THAT THE INSTALLATION OF THE ELECTRICAL OUTLETS AND EQUIPMENT WILL BE PROPERLY COORDINATED. CONDUIT, FIXTURES, AND ON-SITE EQUIPMENT LOCATIONS SHALL BE CHECKED WITH THE OTHER TRADES TO AVOID CONFLICT WITH THE PIPING, DUCTWORK, STEEL, BEAMS, OR OTHER OBSTRUCTIONS.
2. CAREFULLY CHECK THE LOCATIONS OF THE OUTLET BOXES AND DETERMINE THAT THEY HAVE NOT BEEN DISTURBED DURING THE INSTALLATION OF MATERIALS OF OTHER TRADES.
3. COORDINATE THE LOCATION OF TRENCHES AND CONDUITS FOR UTILITY SERVICES AND OTHER DISCIPLINES WITH THE GENERAL CONTRACTOR.

G. MECHANICAL AND ELECTRICAL COORDINATION

1. EVERY DEVICE WHICH CARRIES THE FULL LOAD CURRENT OF THE ELECTRICALLY DRIVEN MACHINERY, AS EXPOSED TO THE CONTROL OF INSTRUMENTATION CURRENT IN THE HOLDING COIL, IS A POWER CIRCUIT AND IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. CONTROL OR INSTRUMENTATION CIRCUITS CONNECTING HOLDING COILS TO THE CONTROL SYSTEM AS SPECIFIED BY THE MECHANICAL DRAWINGS ARE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR.
2. THE POWER CIRCUIT IS DEFINED AS ALL DEVICES NECESSARY TO OPERATE, AND AS REQUIRED BY CODE TO PROTECT AND SERVICE THE UNIT, INCLUDING BRANCH CIRCUIT PROTECTIVE DEVICES, DISCONNECTS, MAGNETIC MOTOR STARTERS WITH RUNNING OVERLOAD AND SINGLE PHASING PROTECTION, MAGNETIC CONTACTORS, ETC.
3. THE CONTROL OR INSTRUMENTATION CIRCUIT IS DEFINED AS ALL DEVICES NECESSARY TO INTERFACE THE ELECTRICAL POWER CIRCUIT WITH THE CONTROL SYSTEM AS SPECIFIED BY THE MECHANICAL DRAWINGS INCLUDING CONDUIT, BOXES, CONDUIT FITTINGS, CONDUCTORS, ELECTRO-PNEUMATIC SWITCHES, PNEUMATIC-ELECTRIC SWITCHES, ELECTRICAL AND PNEUMATIC RELAYS, PNEUMATIC TUBING, ETC.
4. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE 120V DUPLEX RECEPTACLES WITHIN 25 FEET OF ALL ROOF MOUNTED EQUIPMENT, PER NEC 210.63.

H. DRAWINGS

1. THE DRAWINGS INDICATE THE GENERAL ARRANGEMENT AND LOCATIONS OF THE ELECTRICAL WORK. INFORMATION PRESENTED ON THESE DRAWINGS ARE, AS ACCURATE AS PLANNING CAN DETERMINE, BUT FIELD VERIFICATION OF ALL DIMENSIONS, LOCATIONS, LEVELS, ETC., TO SUIT FIELD CONDITIONS IS REQUIRED. REVIEW ALL ARCHITECTURAL, STRUCTURAL, AND MECHANICAL DRAWINGS AND ADJUST ALL WORK TO MEET THE REQUIREMENTS OF CONDITIONS SHOWN. THE ARCHITECTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER ALL OTHER DRAWINGS. DISCREPANCIES BETWEEN DIFFERENT PLANS, OR BETWEEN DRAWINGS AND SPECIFICATIONS, OR REGULATIONS AND CODES GOVERNING THE INSTALLATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING BEFORE THE DATE OF BID OPENING. WHERE DISCREPANCIES OR CONFLICTS OCCUR, THE BID SHALL REFLECT THE MOST STRINGENT REQUIREMENTS. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO FIELD MEASURE AND CONFIRM MOUNTING HEIGHTS AND LOCATION OF ELECTRICAL EQUIPMENT WITH RESPECT TO COUNTERS, ETC. DO NOT SCALE DISTANCES OFF THE ELECTRICAL DRAWINGS. USE ACTUAL BUILDING DIMENSIONS.
2. 2) UPON COMPLETION OF THE WORK UNDER THESE DRAWINGS AND SPECIFICATIONS, THE ELECTRICAL CONTRACTOR SHALL PROVIDE THE OWNER WITH A COMPLETE SET OF MARKED-UP ELECTRICAL DRAWINGS SHOWING THE "AS-BUILT" CONDITION OF THE WORK. BOND PRINTS OF THE DRAWINGS REQUIRED WILL BE FURNISHED BY THE OWNER, FOR THIS PURPOSE.
3. ALL OPERATING INSTRUCTIONS, PARTS LISTS AND SPARE PARTS FOR MATERIAL AND EQUIPMENT FURNISHED AND/OR INSTALLED BY THE ELECTRICAL CONTRACTOR SHALL BE TURNED OVER TO THE OWNER (THREE COPIES).

I. SHOP DRAWINGS AND APPROVALS

1. SUBMITTALS SHALL CONSIST OF DETAILED SHOP DRAWINGS, SPECIFICATIONS, BLOCK WIRING DIAGRAMS, "DATA/CUT SHEETS" AND DATA SHEETS CONTAINING PHYSICAL AND DIMENSIONAL INFORMATION, PERFORMANCE DATA, ELECTRICAL CHARACTERISTICS, MATERIALS USED IN FABRICATION, AND MATERIAL FINISH. CLEARLY INDICATE BY ARROWS OR BRACKETS PRECISELY WHAT IS BEING SUBMITTED ON AND THOSE OPTIONAL ACCESSORIES WHICH ARE INCLUDED AND THOSE WHICH ARE EXCLUDED.
2. EACH SUBMITTAL SHALL BE ACCOMPANIED SHALL BEAR A STAMP STATING THAT THE SUBMITTAL HAS BEE THOROUGHLY REVIEWED BY THE CONTRACTOR AND IS IN FULL COMPLIANCE WITH THE REQUIREMENTS OF CONTRACT DOCUMENTS. COVER LETTERS SHALL LIST IN FULL THE ITEMS AND DATA SUBMITTED. FAILURE TO COMPLY WITH THIS REQUIREMENTS SHALL CONSTITUTE GROUNDS FOR REJECTION OF DATA.
3. THE CONTRACTOR SHALL SUBMIT DETAILED DRAWINGS OF ALL ELECTRICAL EQUIPMENT AND GENERATOR ROOMS, YARDS, AND UTILITY AREAS. MINIMUM SCALE: 1/4"=1'-0".
4. AS PART OF THE EQUIPMENT SUBMITTALS, THE MANUFACTURER SHALL PROVIDE AND ENCHANCE CALCULATIONS FOR FLOOR AND WALL MOUNTED ELECTRICAL EQUIPMENT. STRUCTURAL CALCULATIONS SHALL BE PREPARED AND SIGNED BY REGISTERED STRUCTURAL ENGINEER IN CALIFORNIA.
5. ALL RESUBMITTALS SHALL INCLUDE A COVER LETTER THAT LISTS THE ACTION TAKEN AND REVISIONS MADE TO EVERY DRAWING AND EQUIPMENT DATA SHEET IN RESPONSE TO SUBMITTAL REVIEW COMMENTS. FAILURE TO INCLUDE THIS COVER LETTER WILL CONSTITUTE REJECTION OF THE RESUBMITTAL PACKAGE.
6. CONTRACTOR SHALL SUBMIT SHORT CIRCUIT AND COORDINATION STUDIES SIGNED BY A REGISTERED ELECTRICAL ENGINEER. STUDIES SHALL BE PERFORMED IN ACCEPTANCE WITH IEEE GUIDELINES. CONTRACTOR SHALL BE SUBMITTED FOR ARCHITECT-ENGINEER REVIEW PRIOR TO ORDERING AND INSTALLING ANY EQUIPMENT. CONTRACTOR SHALL ENSURE THAT THE ACTUAL FEEDER LENGTHS MATCH STUDIES (REVISE STUDIES IF NECESSARY). SERVICE EQUIPMENT WARNINGS AS REQUIRED PER NEC 110.24 SHALL BE BASED ON CONTRACTOR SUBMITTED STUDIES.
7. SUBMIT CONDUITS, FITTINGS, OUTLET PULL AND JUNCTION BOXES, WIRES, WIRING DEVICES, LIGHTING FIXTURES, LAMPS, BALLASTS, SAFETY SWITCHES, FUSES, TRANSFORMERS, PANELBOARDS, SWITCHBOARDS, CIRCUIT BREAKERS, LIGHTING CONTROL SYSTEMS/DEVICES, AND FIRE ALARM SYSTEMS.

J. SUBSTITUTIONS

1. ALL REQUESTS FOR SUBSTITUTIONS SHALL CONFORM TO THE GENERAL REQUIREMENTS AND PROCEDURE OUTLINED IN DIVISION 1.
2. WHERE ITEMS ARE NOTED AS "OR EQUAL", A PRODUCT OF EQUAL DESIGN, CONSTRUCTION AND PERFORMANCE WILL BE CONSIDERED.
3. SUBSTITUTIONS SHALL BE EQUAL, IN THE OPINION OF THE OWNER'S REPRESENTATIVE, TO THE SPECIFIED PRODUCT.
4. THE BURDEN OF PROOF OF EQUALITY OF A PROPOSED SUBSTITUTION FOR A SPECIFIED ITEM SHALL BE UPON THE ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL SUPPORT ITS REQUEST WITH SUFFICIENT TEST DATA, ENGINEERING DATA, DETAILED BREAKDOWN LISTING COST SAVINGS, AND OTHER MEANS TO PERMIT THE ARCHITECT AND/OR ENGINEER TO MAKE A FAIR AND EQUITABLE DECISION ON THE MERITS OF THE PROPOSED SUBSTITUTION. ANY ITEM BY A MANUFACTURER OTHER THAN THOSE SPECIFIED, OR BRAND NAME OR MODEL NUMBER WILL BE CONSIDERED A SUBSTITUTION. THE ARCHITECT AND/OR ENGINEER WILL BE THE SOLE JUDGE OF WHETHER OR NOT THE SUBSTITUTION IS EQUAL IN QUALITY, UTILITY, AND ECONOMY TO THAT SPECIFIED.
5. APPROVAL OF A SUBSTITUTION SHALL NOT RELIEVE ELECTRICAL CONTRACTOR FROM RESPONSIBILITY FOR COMPLIANCE WITH ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS. ELECTRICAL CONTRACTOR SHALL BEAR THE EXPENSE FOR ANY CHANGES IN OTHER PARTS OF THIS WORK OR OTHER WORK CAUSED BY THE PROPOSED SUBSTITUTION.
6. IF ARCHITECT AND/OR ENGINEER REJECTS ELECTRICAL CONTRACTOR'S SUBSTITUTE ITEM ON THE FIRST SUBMITTAL, ELECTRICAL CONTRACTOR MAY MAKE ONLY ONE ADDITIONAL REQUEST FOR SUBSTITUTION IN THE SAME CATEGORY.

K. GUARANTEE & TESTING

1. GUARANTEE ALL MATERIAL FURNISHED AND ALL WORKMANSHIP PERFORMED FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK. ANY DEFECTS DEVELOPING WITHIN THIS PERIOD, TRACEABLE TO MATERIAL FURNISHED AS A PART OF THIS SECTION OR WORKMANSHIP PERFORMED HEREUNDER, SHALL BE CORRECTED AS NECESSARY AT NO COST TO THE OWNER.
2. SYSTEM SHALL BE TESTED FOR PROPER OPERATION. IF TESTS SHOW THAT WORK IS DEFECTIVE, ELECTRICAL CONTRACTOR SHALL MAKE CORRECTIONS AS NECESSARY AT NO COST TO THE OWNER.

L. LABELING

1. PROMOE ENGRAVED NAME PLATES ON SWITCHBOARDS, PANEL BOARDS, DISCONNECT SWITCHES, MOTOR CONTROL CENTERS, TRANSFORMERS, ETC., INDICATING EQUIPMENT DESIGNATED (OR DESIGNATION OF EQUIPMENT SERVED) AND VOLTAGE.

M. HOUSEKEEPING PADS

1. PROMOE 4 INCH HIGH CONCRETE EQUIPMENT PADS FOR ALL FLOOR-MOUNTED EQUIPMENT INCLUDING SWITCHBOARDS, MOTOR CONTROL CENTERS, TRANSFORMERS, ETC.

N. MATERIALS

1. ALL MATERIALS SHALL BE NEW AND OF QUALITY AS SPECIFIED ON THE PLANS OR SPECIFICATIONS AND MUST CARRY THE UNDERWRITERS LABORATORIES APPROVAL COVERING THE PURPOSE FOR WHICH THEY ARE USED, IN ADDITION TO MEETING ALL REQUIREMENTS OF THE CURRENT APPLICABLE CODES AND REGULATIONS.
2. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING EQUIPMENT WHICH IS DAMAGED DUE TO INCORRECT FIELD WIRING PROMOED UNDER THIS SECTION OR FACTORY WIRING IN EQUIPMENT PROMOED UNDER THIS SECTION.

O. STORAGE AND HANDLING OF MATERIAL

1. DELIVER MATERIALS AND EQUIPMENT TO THE PROJECT IN THE MANUFACTURER'S ORIGINAL, UNOPENED, LABELED CONTAINERS. PROTECT AGAINST MOISTURE, TAMPERING, OR DAMAGE FROM IMPROPER HANDLING OR STORAGE. ELECTRICAL CONTRACTOR SHALL PROTECT AND BE RESPONSIBLE FOR ANY DAMAGE TO WORK OR MATERIALS UNTIL FINAL ACCEPTANCE BY THE OWNER, AND SHALL MAKE GOOD WITHOUT COST TO THE OWNER, ANY DAMAGE OR LOSS THAT MAY OCCUR DURING THIS PERIOD.
2. ARRANGE FOR TIMELY DELIVERY OF MATERIALS AND EQUIPMENT TO THE JOBSITE IN ORDER TO MINIMIZE THE LENGTH OF TIME BETWEEN DELIVERY AND INSTALLATION.
3. ARRANGE FOR TIMELY DELIVERY OF OWNER SUPPLIED MATERIALS AND EQUIPMENT TO THE JOBSITE IN ORDER TO MINIMIZE THE LENGTH OF TIME BETWEEN DELIVERY AND INSTALLATION.
4. COVER AND PROTECT ANY MATERIAL WHICH MAY BE AFFECTED BY THE WEATHER WHILE IN TRANSIT OR STORED AT THE PROJECT SITE. ANY MATERIAL FOUND DEFECTIVE OR NOT INSTALLED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS MAY BE REJECTED BY THE ENGINEER.
5. NO ELECTRICAL WORK SHALL BE INSTALLED IN AREAS WHERE OTHER TRADE'S WORK MIGHT CAUSE PHYSICAL DAMAGE TO WIRES, CONDUIT, EQUIPMENT, BOXES OR FITTINGS UNTIL THE OTHER TRADE'S WORK HAS BEEN COMPLETED. ANY EQUIPMENT OR MATERIALS WHICH BECOME DAMAGED SHALL BE REMOVED AND REPLACED AT NO EXTRA COST TO THE OWNER.

P. CLEAN-UP

1. KEEP THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIALS, OR RUBBISH CAUSED BY EMPLOYEES OR WORK UNDER THE DIVISION OF THE SPECIFICATIONS. AT THE COMPLETION OF THE WORK, REMOVE ALL SURPLUS MATERIALS, TOOLS, ETC., AND LEAVE THE PREMISES "BROOM-CLEAN".

Q. EXCAVATION, CUTTING AND FITTING

1. PERFORM THE EXCAVATION, CUTTING, FITTING, REPAIRING AND FINISHING OF THE WORK NECESSARY FOR THE INSTALLATION OF ELECTRICAL EQUIPMENT HOWEVER, NO CUTTING OF THE WORK OF OTHER TRADES OR OF ANY STRUCTURAL MEMBER SHALL BE DONE WITHOUT THE CONSENT OF THE ARCHITECT.

R. EXCAVATION AND BACKFILL

1. PERFORM ALL EXCAVATION AND BACKFILLING REQUIRED FOR WORK PERFORMED UNDER THIS DIVISION OF THE SPECIFICATIONS. TRENCH BOTTOMS SHALL BE GRADED TRUE AND FREE FROM STONES OR SOFT SPOTS. USE EXCAVATED MATERIALS FOR BACKFILL UNLESS OTHERWISE MATERIALS ARE DEEMED NECESSARY BY THE ARCHITECT. TRENCHING AND BACKFILLING FOR ELECTRICAL AND TELEPHONE UTILITY SERVICES TO BUILDING SHALL BE PROMOED BY THE ELECTRICAL CONTRACTOR IN ACCORDANCE WITH UTILITY COMPANY REQUIREMENTS.
2. VERIFY LOCATION OF EXISTING UNDER GROUND UTILITIES PRIOR TO TRENCHING.

PART 2 – PRODUCTS AND EXECUTION

A. CONDUIT

1. ALL WIRING SHALL BE INSTALLED IN USED METALLIC CONDUIT EXCEPT AS PERMITTED BELOW. GRC MAY BE USED IN ALL AREAS. IMC MAY BE USED IN INDOOR LOCATIONS NOT IN CONTACT WITH EARTH. EMT MAY BE USED IN INDOOR LOCATIONS NOT IN CONTACT WITH EARTH, NOT IN CONCRETE SLABS OR WALLS AND NOT SUBJECT TO DAMAGE. PVC MAY BE USED IN OR BELOW CONCRETE SLABS OR WALLS AND NOT SUBJECT TO DAMAGE. FLEXIBLE STEEL CONDUIT SHALL BE USED FOR INDOOR FINAL CONNECTIONS TO MECHANICAL EQUIPMENT NOT TO EXCEED 30", AND RECESSED REMOVABLE FLUORESCENT LIGHT FIXTURES NOT TO EXCEED 72". LIQUID-TIGHT FLEXIBLE STEEL CONDUIT SHALL BE FOR OUTDOOR FINAL CONNECTIONS TO EQUIPMENT NOT TO EXCEED 36".
2. WHERE THE CONDUIT ENTERS OUTLET BOXES, FIXTURES OR CABINETS, FIRMLY FASTEN BY DOUBLE LOCKNUTS AND BUSHINGS (ONE AND IMC ONLY). FIRMLY FASTEN CONDUIT TO THE BUILDING CONSTRUCTION. RUN EXPOSED CONDUIT PARALLEL TO THE BUILDING LINES, SUPPORTED BY APPROPRIATE HANGERS.
3. COVER METALLIC CONDUIT IN CONTACT WITH EARTH OR FILL WITH POLYETHYLENE TAPE SPIRAL WRAPPED, 1/2" LAPPED TO PROMOE DOUBLE THICKNESS. TAPE SHALL BE SCOTCH NO. 50 TAPE. CONDUIT AND DUCTS FOR UNDER BUILDINGS AND FEEDER DUCTS SHALL BE INSTALLED PER NEC 300.5, EXCEPT THAT THE BENDS IN CONDUIT LARGER THAN 1" IN DIAMETER SHALL BE MADE WITH GALVANIZED STEEL CONDUIT TREATED AS NOTED ABOVE. MANC JOINTS WITH COMPOUND TO BE WATERTIGHT.
4. CONDUIT SIZES SHALL BE AS REQUIRED BY CODE AND AS INDICATED OR SPECIFIED ON DRAWINGS. NO CONDUIT SMALLER THAN 3/4 INCH TRADE SIZE SHALL BE USED.
5. PENETRATION THROUGH FLOOR SLABS WHERE SUBJECT TO DAMAGE SHALL BE IN WRAPPED ROD STEEL SCHEDULE 40 PVC SLEEVES AND PENETRATIONS MAY BE USED IN SLAB ON GRADE WHERE PENETRATIONS OCCUR IN PROTECTED AREAS ONLY.
6. CONDUITS AND OUTLETS SHALL BE CONCEALED WITHIN THE BUILDING STRUCTURE, EXCEPT THAT CERTAIN MOTOR AND LIGHTING FEEDER CONDUITS MAY BE RUN EXPOSED IN CERTAIN AREAS AS INDICATED ON THE DRAWINGS. CONDUIT SHOWN TO BE INSTALLED IN CABINETS, COUNTERS, AND CASEWORK SHALL BE RUN AS DIRECTED BY THE ARCHITECT.
7. ALL CONDUIT SERVING ROOF MOUNTED EQUIPMENT AND DEVICES INCLUDING HVAC EQUIPMENT, GFCI MAINTENANCE RECEPTACLES AND ROOF TYPE SMOKE DETECTORS SHALL BE ROUTED IN THE CEILING SPACE. CONDUIT SHALL PENETRATE ROOF AT EQUIPMENT LOCATIONS ONLY. NO CONDUIT SHALL BE INSTALLED HORIZONTALLY ACROSS ROOF SURFACE.
8. FLEXIBLE METALLIC AND NON-METALLIC CONDUIT SYSTEMS SHALL HAVE A CODE SIZED COPPER GROUND CONDUCTOR. ANDSIZED CONDUIT SIZE AS REQUIRED.
9. FLEXIBLE METAL CONDUIT/CUT-IN BOXES FOR LOW VOLTAGE SYSTEMS (TEL/DATA) MAY BE USED IN WALL CAVITIES PROMOED THE INSTALLATION COMPLIES WITH NEC ARTICLE 348. ALL CONDUIT FOR LOW VOLTAGE WIRING SYSTEMS IN NEW WALL PARTITIONS SHALL BE EMT. FLEXIBLE METAL CONDUIT FOR THESE SYSTEMS IS NOT ACCEPTABLE IN NEW WALLS.
10. ALL DUCTY CONDUIT SYSTEMS SHALL HAVE A 200 POUND TEST PULL CORD INSTALLED TO FACILITATE INSTALLATION OF FUTURE WIRE.

B. FITTINGS

1. EMT-FITTINGS AND CONDUIT BODIES SHALL BE STEEL, MALLEABLE IRON OR DIE CAST COMPRESSION OR SET SCREW TYPE.
2. IMC AND GRC-SHALL BE STEEL OR MALLEABLE IRON TYPE AND SHALL ENGAGE A MINIMUM OF FIVE (5) THREADS.

C. OUTLET, PULL AND JUNCTION BOXES

1. PULL AND/OR JUNCTION BOXES SHALL BE INSTALLED WHEREVER SHOWN ON THE DRAWINGS OR AS REQUIRED BY CODE.
2. EACH SWITCH, LIGHT, RECEPTACLE OR OTHER OUTLET SHALL BE PROMOED WITH A CODE GAUGE, GALVANIZED STEEL, OUTLET BOX. JUNCTION AND PULLBOXES SHALL BE CODE GAUGE, GALVANIZED STEEL. OUTLET BOXES SHALL BE OF THE ONE PIECE, KNOCKOUT TYPE. IN GENERAL 4-INCH SQUARE, 2 1/8-INCH WITH PLASTER RING. PLASTER RINGS SHALL BE SET TO PROMOE NOT MORE THAN 1/8" FROM WALL SURFACE TO RING. IN NO CASE SHALL PLASTER RING PROJECT BEYOND SURFACE OF WALL. SINGLE GANG RINGS SHALL BE TWO PIECE, ONE SIZE USED FOR 4" BOXES IN UNFINISHED BRICK. NUMBER 180 BOXES MAY BE USED FOR UNFINISHED MASONRY FLUSH WALL OUTLETS. CONFER ALL OUTLET BOXES IN BLOCK COURSE.
3. BOXES INSTALLED IN POURED CEMENT FLOORS SHALL BE FLUSH TYPE CAST IRON WITH WATERTIGHT GASKETED COVERS, GRADE TO FINISH. WHERE BOXES ARE INSTALLED IN FLOORS WITH TILE OR CARPET FLOOR COVERING, COVERS SHALL BE OF THE RECESSED TYPE TO ACCOMMODATE THE FLOOR COVERING.
4. BOXES INSTALLED FOR THE ALARM, COMPUTER AND SECURITY SYSTEM SHALL BE PROMOED WITH APPROPRIATE COVERPLATES.
5. PULL BOXES SHALL BE THE TYPES, SIZE AND DESIGN AS APPROVED BY THE NEC FOR THE CLASS OF INSTALLATION REQUIRED.
6. PULL BOXES AND OUTLET BOXES SHALL BE SIZED BY THE ELECTRICAL CONTRACTOR AS REQUIRED BY THE NEC BASED ON NUMBER OF CONDUCTORS, YOKES, STRAPS, ETC., USED IN THE INSTALLATION.

D. WIRE

1. MATCH BUILDING STANDARDS IF APPLICABLE IN AN EXISTING BUILDING CONDITION, UNLESS OTHERWISE FOLLOW THE SPECIFICATIONS BELOW.
2. CONDUCTOR SIZES SHOWN ON THE DRAWINGS ARE BASED ON COPPER WIRE, UNLESS OTHERWISE SPECIFIED. ALL WIRE SHALL BE 75 DEGREE C TYPE THWN OR XHHW. ALL BRANCH CIRCUIT AND FEEDER WIRING SHALL BE COPPER.
3. WIRES SHALL BE MARKED WITH COLOR TO SIMPLIFY CIRCUIT IDENTIFICATION. UNLESS OTHERWISE REQUIRED BY LOCAL ORDINANCES, IDENTIFICATION SHALL BE AS FOLLOWS:
   a. 120/208V AND 120/240V
      - PHASE A: BLACK
      - PHASE B: RED
      - PHASE C: BLUE
      - NEUTRAL: WHITE
      - GROUND: GREEN
   b. 277/480V
      - PHASE A: BROWN
      - PHASE B: ORANGE
      - PHASE C: YELLOW
      - NEUTRAL: GRAY
      - GROUND: GREEN
4. THE WIRE SHALL BE #12 AWG UNLESS OTHERWISE INDICATED.
5. NO WIRE SHALL BE INSTALLED IN THE CONDUIT SYSTEM UNTIL THE CONDUIT SYSTEM IS COMPLETE. USE U.L. APPROVED LUBRICANT TO FACILITATE THE INSTALLATION OF THE CONDUCTORS IN THE CONDUIT SYSTEM.
6. CONDUCTORS NO. 10 AWG AND SMALLER SHALL BE SOLID. CONDUCTORS LARGER THAN NO. 10 AWG SHALL BE STRANDED.
7. MC CABLE MAY BE UTILIZED FOR #10 AND #12 BRANCH CIRCUIT WIRING WITH THE FOLLOWING LIMITATIONS.
   a. THE INSTALLATION IS IN ACCORDANCE WITH NEC ARTICLE 330.
   b. MC CABLE USE IS LIMITED TO WIRING WITHIN PARTITIONS AND WALLS AND TO CONNECTIONS TO AND BETWEEN SWITCHES AND WIRING DEVICES.
   c. MC CABLE IS NOT TO BE USED FOR HOME RUN CIRCUITING. HOME RUN CIRCUITING SHALL BE INDIVIDUAL CONDUCTORS INSTALLED IN EMT CONDUIT.
8. HOME RUN SHALL BE DEFINED AS THE PORTION OF THE CIRCUIT FROM THE PANEL TO THE FIRST DEVICE.

E. WIRING DEVICES

1. SWITCHES – WALL SWITCHES SHALL BE SPECIFICATION GRADE AC SILENT TYPE SWITCHES 20A, 120 – 277 VOLT, HUBBELL 1221 (SP), 1222 (DP), 1223 (3-WAY) AND 1224 (4-WAY). DIMMERS SHALL BE SPECIFICATION GRADE WITH PRESET SLIDE CONTROL. COLOR SHALL BE AS APPROVED BY THE ARCHITECT/OWNER. MATCH BUILDING STANDARD (IF EXISTING).
2. RECEPTACLES – DUPLEX TYPE OUTLETS SHALL BE HEAVY DUTY, SPECIFICATION GRADE NEMA 5-20R, 20A, 120V GROUNDED TYPE EQUAL TO HUBBELL EQUIVED GROUND OUTLETS SHALL BE EQUAL TO HUBBELL IG5362. SPECIAL APPLICATION RECEPTACLES SHALL BE AS INDICATED ON PLANS AND VERIFIED WITH EQUIPMENT SUPPLIER. COLOR SHALL BE AS APPROVED BY THE ARCHITECT/OWNER. MATCH BUILDING STANDARD (IF EXISTING).
3. WEATHERPROOF RECEPTACLES – CONSTS SHALL BE HUBBELL WP5325 WITH 5362 DUPLEX OUTLET OR EQUAL.
4. GFCI RECEPTACLES – SHALL BE HUBBELL GF5362. GFCI RECEPTACLES SHALL BE USED IN ALL OUTDOOR APPLICATIONS AS WELL AS THOSE PLACED WITHIN 6' OF WATER SOURCE AND ALL OTHER NEC REQUIRED LOCATIONS.
5. MOUNTING HEIGHTS: SWITCHES – +48 INCHES. RECEPTACLES – +18 INCHES COMMUNICATION DEVICES – +18 INCHES. FIRE ALARM DEVICES – AS REQUIRED BY ADA, NFPA 72 OR AUTHORITY HAVING JURISDICTION. ALL MOUNTING HEIGHTS ARE TO CENTERLINE OF DEVICE.
6. DEVICE PLATES SHALL BE EQUAL TO SIERRA SMOOTH-LINE PLASTIC WALL PLATES COLOR SHALL BE AS APPROVED BY THE ARCHITECT/OWNER. MATCH BUILDING STANDARD (IF EXISTING).
7. IN ALL CASES, SWITCHES CONTROLLING LIGHTING ARE TO BE LOCATED ON THE STRIKE SIDE OF DOORS. LOCATIONS INDICATED FOR SWITCHES AND OUTLETS ARE APPROXIMATE. OWNER MAY MAKE MINOR RELOCATIONS AT NO ADDITIONAL CHARGE.

F. LIGHTING FIXTURES

1. COORDINATE THE FINAL LOCATION OF FIXTURES SHOWN DIAGRAMMATICALLY ON THE DRAWINGS WITH OTHER TRADES IN ORDER TO AVOID INTERFERENCES. RELOCATE FIXTURES AS REQUIRED AS PART OF THE WORK UNDER THIS DIVISION IF NEW LOCATION IS WITHIN A FIVE FOOT RADIUS OF LOCATION SHOWN.
2. PROMOE ALL LIGHTING FIXTURES, WIRED AND CONNECTED. THE DRAWINGS INDICATE THE FIXTURES FOR EACH LOCATION. ELECTRICAL CONTRACTOR SHALL VERIFY FIXTURE LOCATIONS, MOUNTING REQUIREMENTS AND U.L. LABELING OF ALL FIXTURES PRIOR TO ORDERING. INCLUDE ALL ACCESSORIES NEEDED FOR A COMPLETE INSTALLATION INCLUDING MOUNTING CLIPS, PLASTER FRAMERS, HANGERS AND HARDWARE IN BASE BID. PROMOE LAMPS FOR ALL FIXTURES. VERIFY CEILING CONSTRUCTION BEFORE ORDERING RECESSED ITEMS.
3. ADJUSTABLE FIXTURES SHALL BE LOCATED AND PROPERLY AIMED AS DIRECTED BY THE ARCHITECT OR THE LIGHTING DESIGNER.
4. SUPPORT RECESSED FIXTURES FROM CEILING STRUCTURAL SUPPORT PER ADOPTED BUILDING CODES.
5. ALL FIXTURES TO BEAR THE U.L. LABEL. ALL OUTDOOR FIXTURES SHALL BE U.L. LABELED FOR WET OR DAMP LOCATION AS DEFINED BY NEC ARTICLE 100.

G. LAMPS

1. LAMPS SHALL BE BY THE SAME MANUFACTURER. LAMPS SHALL BE MANUFACTURED BY GE, PHILIPS OR USHIO.
2. INCANDESCENT – EXTENDED LAMP LIFE, INSIDE FROSTED.
3. FLUORESCENT – MINIMUM 75 CRI, 3500K, 20

MOUNTING: FLUSH
VOLTAGE: 120/240V,1Ø,3W

## EXISTING PANEL-A

LOCATION: SEE PLANS
10,000 AIC SYM
100 AMP BUS
MAIN LUGS ONLY

| NOTE | DESCRIPTION | VOLT-AMPERES ØA | VOLT-AMPERES ØB | LITE | RECP | MISC | POLE | BRKR | CIRC | CIRC | BRKR | POLE | MISC | RECP | LITE | VOLT-AMPERES ØA | VOLT-AMPERES ØB | DESCRIPTION | NOTE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | REF | 1080 | | | | | 1 | 20 | 1 | 2 | 20 | 1 | | | | 1080 | | BATH RM RECEP | 1 |
| 1 | OFFICE RECEP | | 1080 | | | | 1 | 20 | 3 | 4 | 20 | 1 | | | | | 1080 | DROP CORDS RECEP | 1 |
| 1 | APP RM RECEP | 1080 | | | | | 1 | 20 | 5 | 6 | 20 | 2 | | | | 1200 | | ROLL-UP DOOR EAST | 1 |
| 1 | TTB | | 500 | | | | 1 | 20 | 7 | 8 | - | - | | | | | 1200 | - | 1 |
| 1 | OFFICE RECEP | 1080 | | | | | 1 | 20 | 9 | 10 | 20 | 2 | | | | 1200 | | ROLL-UP DOOR WEST | 1 |
| 3 | OFFICE/APP. RM LTGS | | 1080 | | | | 1 | 20 | 11 | 12 | - | - | | | | | 1200 | - | 1 |
| 1 | OFFICE LTGS | 500 | | | | | 1 | 20 | 13 | 14 | 20 | 1 | | | | 1080 | | WATCH OFFICE RECEP | 1 |
| 1 | APP RM LTGS | | 500 | | | | 1 | 20 | 15 | 16 | 20 | 1 | | | | | 1080 | WATCH OFFICE RECEP | 1 |
| 1 | KITCHEN COUNTER | 1050 | | | | | 1 | 20 | 17 | 18 | 20 | 1 | | | | 500 | | FIRE ALARM RECEP | 1 |
| 1 | GARBAGE DISPOSAL | | 1080 | | | | 1 | 20 | 19 | 20 | 20 | 1 | | | | | 1080 | ATTIC RECEP | 1 |
| 1 | APP RM RECEP | 1080 | | | | | 1 | 20 | 21 | 22 | 20 | 1 | | | | 500 | | ATTIC LIGHTS | 1 |
| 1 | APP RM RECEP | | 1080 | | | | 1 | 20 | 23 | 24 | 20 | 1 | | | | | 500 | OUTSIDE LTGS | 1 |
| 1 | ROOF SIREN | 1080 | | | | | 1 | 20 | 25 | 26 | 20 | 1 | | | | 1200 | | KITCHEN COUNTER | 1 |
| 1 | GEN. CONTROLS | | 500 | | | | 1 | 20 | 27 | 28 | 20 | 1 | | | | | | SPARE | 1 |
| 1 | GEN. CONTROLS | 500 | | | | | 1 | 20 | 29 | 30 | 20 | 1 | | | | | | SPARE | 1 |
| 1 | VEHICLE EXHAUST | | 1200 | | | | 2 | 20 | 31 | 32 | 20 | 1 | | | | | | SPARE | 1 |
| | - | 1200 | | | | | - | - | 33 | 34 | 20 | 1 | | | | 1080 | | TOWER RECEP | 1 |
| 2 | WASHER/DRYER | | | | | | 2 | 30 | 35 | 36 | 20 | 1 | | | | | 500 | TOWER LTGS | 1 |
| | - | | | | | | - | - | 37 | 38 | 20 | 1 | | | | | | SPARE | 1 |
| 1 | AIR COMPRESSOR | | 1200 | | | | 2 | 20 | 39 | 40 | 70 | 2 | | | | | | EQUIPMENT | 1 |
| | - | 1200 | | | | | - | - | 41 | 42 | - | | | | | | | - | 1 |
| | VA PER PHASE | 9850 | 8220 | | | | | | | | | | | | | 7840 | 6640 | VA PER PHASE | |
| | | | | | | | | | | | | | | | | 17720 | 14880 | TOTAL VA PER PHASE | |
| | | | | | | | | | | | | | | | | 32580 | | TOTAL CONNECTED VA | |

CONTINUOUS LOAD 3580 x1.25= 4475 VA
+OTHER= 29000 VA
TOTAL LOAD= 33475 VA ____ AMPS

CEILING OUTLETS =
CONV. OUTLETS =
MISC. OUTLETS =

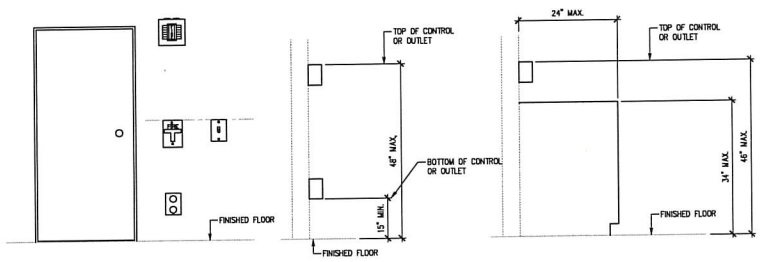
THIS PANEL IS FED BY:

NOTES

| | |
|---|---|
| 1 | EXISTING CIRCUIT TO REMAIN |
| 2 | NEW C.B. TO MATCH EXISTING |
| 3 | EXISTING C.B. WITH NEW LOAD |
| 4 | |

1 PANEL SCHEDULES
SCALE: NONE

| LOAD CALCULATIONS FOR "A", 120/240V, 1P, 4W | |
|---|---|
| TOTAL DEMAND BASED ON SCE BILL IN KVA | 24.00 |
| ADD 25% SAFETY FACTOR | 6.00 |
| WASHER/DRYER | 3.00 |
| TOTAL DEMAND KVA | 33.00 |
| AMPS @120/240V, 1P, 3W | 137.50 |




1. ALL DEVICE HEIGHTS DEPICTED SHALL BE MODIFIED AS REQUIRED BY GOVERNING BUILDING CODES. CONTRACTOR TO VERIFY/RECONCILE APPLICABLE CODE REQUIREMENTS AND ANY DEVICE HEIGHT REQUIREMENTS DEPICTED ON ARCHITECTURAL OR INTERIOR DESIGN PLANS AND SPECIFICATIONS PRIOR TO DEVICE ROUGH-IN. CONFLICTS OR LACK OF MOUNTING HEIGHT SPECIFICITY ON THE ARCHITECTURAL OR INTERIOR DESIGN PLANS AND SPECIFICATIONS SHALL BE CAUSE FOR THE CONTRACTOR TO ISSUE A FORMAL WRITTEN RFI FOR RESOLUTION. DEVICE MOUNTING HEIGHT CLARIFICATION/SPECIFICATIONS SHALL NOT RESULT IN AN ADDITIONAL COST TO THE OWNER – CONTRACTOR SHALL INCLUDE ALL COSTS IN BASE BID
2. ALL DEVICES IN IMMEDIATE PROXIMITY TO EACH OTHER SHALL ALIGN VERTICALLY AND HORIZONTALLY.

2 DEVICE ALIGNMENT AND MOUNTING HEIGHT DETAILS
SCALE: NONE


H2S Engineers Inc.
Consulting MEP Engineers
Anaheim, CA 92801
Ph: (714) 290-0718
E-mail: mverma@h2sengineers.com



Gillis + Panichapon Architects, Inc.
2300 BRISTOL STREET SUITE C-125 COSTA MESA CALIFORNIA 92626
FAX (714) 662-4565 TEL (714) 662-4565



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RE-BID SET

| | | |
|---|---|---|
| 1 | PLAN CHECK CORRECTIONS | |
| 2 | BID SET | |
| 3 | RE-BID SET | DATE: 01/07/2022 |
| JOB NO.: 4009 | | |
| DRAWN BY: STAFF | | |
| CHECKED BY: LP | | |
| SCALE: | | |

EXISTING SINGLE LINE DIAGRAM AND PANEL SCHEDULES

ORANGE COUNTY FIRE AUTHORITY
Fire Station #14 - Tenant Improvements
29402 SILVERADO CANYON RD., SILVERADO, CA 92676

E-0.3

STATE OF CALIFORNIA
**Indoor Lighting**
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

| CERTIFICATE OF COMPLIANCE | | | NRCC-LTI-E |
|---|---|---|---|
| Project Name: | FIRE STATION 14 | Report Page: | (Page 3 of 7) |
| Project Address: | 29402 SILVERADO CANYON RD | Date Prepared: | 5/18/2021 |

**F. INDOOR LIGHTING FIXTURE SCHEDULE**

| # | WALL MOUNTED | No | Yes | 16 | Mfr Spec | 2 | No | 32 | ☐ | ☐ |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Total Designed Watts: CONDITIONED SPACES | 202 | | |

*FOOTNOTE: Design Watts for wall aperture and color changing luminaires which qualify per §140.6(a)4 is equaled to be 75% of their rated wattage. Table F automatically makes this adjustment, the permit applicant should enter full rated wattage in column 05.
*Authority Having Jurisdiction may ask for luminaire cut sheets to confirm wattage used for compliance per §140.6(c). Wattage used must be the maximum rated for the luminaire, not the lamp.

**G. MODULAR LIGHTING SYSTEMS**
This section does not apply to this project.

**H. INDOOR LIGHTING CONTROLS (Not Including PAFs)**
*This table includes lighting controls for conditioned and unconditioned spaces. When a control heating is * is shown, the notes section of this table provides more detail on how compliance is achieved. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank.*

| Building Level Controls | | | |
|---|---|---|---|
| 01 | 02 | 03 | |
| Mandatory Demand Response §130.3(b) | Shut-off controls §130.1(c) | Field Inspector | |
| | | Pass | Fail |
| Not Required <= 10,000 SF | See Area/Space Level Controls | ☐ | ☐ |

| Area Level Controls | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 04 | 05 | 06 | 07 | 08 | 09 | 10 | 11 | 12 | |
| Area Description | Complete Building or Area Category Primary Function Area | Area Controls §130.1(a) | Multi-Level Controls §130.1(b) | Shut-Off Controls §130.1(c) | Primary/Side Daylighting §130.1(d) | Secondary Daylighting §140.6(d) | Interlocked Systems §140.6(e) | Field Inspector | |
| | | | | | | | | Pass | Fail |
| RESTROOMS | Restroom | Manual ON/OFF | Dimmer | Occupancy Sensor | N/A | N/A | No | ☐ | ☐ |
| CORRIDOR | Corridor Area | Manual ON/OFF | Dimmer | Occupancy Sensor | N/A | N/A | No | ☐ | ☐ |

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601
Registration Provider: Energycoft
Report Generated: 2021-05-18 12:23:41

STATE OF CALIFORNIA
**Indoor Lighting**
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

| CERTIFICATE OF COMPLIANCE | | | NRCC-LTI-E |
|---|---|---|---|
| Project Name: | FIRE STATION 14 | Report Page: | (Page 3 of 7) |
| Project Address: | 29402 SILVERADO CANYON RD | Date Prepared: | 5/18/2021 |

**I. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE**
*Selections have been made based on information provided in this document. If any selection have been changed by the permit applicant, an explanation should be included in Table E Additional Remarks. These documents must be provided to the building inspector during construction and any with "-A" in the form name must be completed through an Acceptance Test Technician Certification Provider (ACTCP). For more information visit: http://www.energy.ca.gov/title24/nltg/provisions.html*

| Yes | No | Form/Title | Field Inspector Pass | Field Inspector Fail |
|---|---|---|---|---|
| ● | ● | NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls. | ☐ | ☐ |
| ● | ● | NRCA-LTI-03-A - Must be submitted for automatic daylight controls. | ☐ | ☐ |
| ● | ● | NRCA-LTI-04-A - Must be submitted for demand responsive lighting controls. | ☐ | ☐ |
| ● | ● | NRCA-LTI-05-A - Must be submitted for institutional tuning power adjustment factor (PAF) | ☐ | ☐ |

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601
Registration Provider: Energycoft
Report Generated: 2021-05-18 12:23:41

STATE OF CALIFORNIA
**Indoor Lighting**
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

| CERTIFICATE OF COMPLIANCE | | | NRCC-LTI-E |
|---|---|---|---|
| Project Name: | FIRE STATION 14 | Report Page: | (Page 3 of 7) |
| Project Address: | 29402 SILVERADO CANYON RD | Date Prepared: | 5/18/2021 |

**J. DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**
**I certify that this Certificate of Compliance documentation is accurate and complete.**

| | |
|---|---|
| Documentation Author Name: H2S Engineers Inc. | Documentation Author Signature: Monita |
| Company: H2S Engineers Inc. | Signature Date: |
| Address: 1134 N Bowtsmann Circle | 1134 N Bowtsmann Circle Certification Identification (if applicable): 5A9C 6230 6720A 3122 E5BB A943 74C3 58AA C8F2 1B56 4588 93E1 0F26 6894 E656 0FF7 |
| City/State/Zip: Anaheim CA 92801 | Phone: 203 585 1698 |

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**
I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Section 5 of the Business and Professions Code to assume responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The building design features or performance, specifications, assumptions, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Parts of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation provided to the enforcement agency for acceptance.

| | |
|---|---|
| Responsible Designer Name: MANITA VERMA | Responsible Designer Signature: Monita |
| Company: H2S ENGINEERS INC. | Date Signed: 2021-05-18 |
| Address: 1134 N BOWTSMANN CIRCLE | License: E19876 |
| City/State/Zip: ANAHEIM CA 92801 | Phone: 7142900718 |

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601
Registration Provider: Energycoft
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STATE OF CALIFORNIA
**Indoor Lighting**
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

| CERTIFICATE OF COMPLIANCE | | | NRCC-LTI-E |
|---|---|---|---|
| Project Name: | FIRE STATION 14 | Report Page: | (Page 3 of 7) |
| Project Address: | 29402 SILVERADO CANYON RD | Date Prepared: | 5/18/2021 |

**C. COMPLIANCE RESULTS**
*If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D for guidance.*

| Lighting in conditioned and unconditioned spaces must not be combined for compliance per §140.6(b)1 | Allowed Lighting Power per §140.6(b) (Watts) | | | | | | Adjusted Lighting Power per §140.6(a) (Watts) | | | | Compliance Results |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 01 | 02 | 03 | 04 | 05 | | 06 | 07 | | 08 | 09 |
| | Complete Building §140.6(c)1 | Area Category §140.6(c)2 | Area Category Additional §140.6(c)2 (+) | Tailored §140.6(c)3 (+) | Total Allowed (Watts) | = | Total Designed (Watts) | Adjustments: PAF Lighting Control Credits §140.6(a)2 (-) | Total Adjusted (Watts) *Includes Adjustments | | 05 must be >= 08 §140.6 |
| | (See Table I) | (See Table I) | (See Table II) | (See Table K) | | | (See Table F) | (See Table P) | | | |
| Conditioned | | 218.4 | 0 | | = 219 | ≥ | 202 | 0 | = 202 | | COMPLIES |
| Unconditioned | | | | | = | ≥ | | | = | | |
| Controls Compliance (See Table H for Details) | | | | | | | | | | | COMPLIES |
| Rated Power Reduction Compliance (See Table Q for Details) | | | | | | | | | | | |

**D. EXCEPTIONAL CONDITIONS**
*This table is auto-filled with unreliable comments because of selections made or data entered in tables throughout the form.*

**E. ADDITIONAL REMARKS**
*This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.*

**F. INDOOR LIGHTING FIXTURE SCHEDULE**
*This table includes all permanent designed lighting and all portable lighting in offices.*

| Designed Wattage: Conditioned Spaces | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 02 | 03 | 04 | 05 | 06 | 07 | 08 | 09 | 10 | |
| Name or Item Tag | Complete Luminaire Description | Modular (Track) Fixture | Small Aperture & Color Change | Watts per Luminaire | How is Wattage determined | Total Number of Luminaires | Excluded per §140.6(a)2 | Design Watts | Field Inspector Pass | Field Inspector Fail |
| A | DOWNLIGHT | No | No | 17 | Mfr Spec | 10 | No | 170 | ☐ | ☐ |

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601
Registration Provider: Energycoft
Report Generated: 2021-05-18 12:23:41

STATE OF CALIFORNIA
**Indoor Lighting**
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

| CERTIFICATE OF COMPLIANCE | | | NRCC-LTI-E |
|---|---|---|---|
| Project Name: | FIRE STATION 14 | Report Page: | (Page 3 of 7) |
| Project Address: | 29402 SILVERADO CANYON RD | Date Prepared: | 5/18/2021 |

**G. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE**
This section does not apply to this project.

**H. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))**
This section does not apply to this project.

**Q. RATED POWER REDUCTION COMPLIANCE FOR ALTERATIONS**
This section does not apply to this project.

**R. 80% LIGHTING POWER FOR ALL ALTERATIONS - CONTROLS EXCEPTIONS**
This section does not apply to this project.

**S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)**
This section does not apply to this project.

**T. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION**
*Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/*

| Yes | No | Form/Title | Field Inspector Pass | Field Inspector Fail |
|---|---|---|---|---|
| ● | ● | NRCI-LTI-01-E - Must be submitted for all buildings | ☐ | ☐ |
| ● | ● | NRCI-LTI-02-E - Must be submitted for a lighting control system, or for an Energy Management Control System (EMCS), to be recognized for compliance | ☐ | ☐ |
| ● | ● | NRCI-LTI-04-E - Must be submitted for two interlocked systems serving an auditorium, a convention center, a conference room, a multipurpose room or a theater to be recognized for compliance | ☐ | ☐ |
| ● | ● | NRCI-LTI-05-E - Must be submitted for a Power Adjustment Factor (PAF) to be recognized for compliance | ☐ | ☐ |
| ● | ● | NRCI-LTI-06-E - Must be submitted for additional wattage installed in a video conferencing studio to be recognized for compliance. | ☐ | ☐ |

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601
Registration Provider: Energycoft
Report Generated: 2021-05-18 12:23:41

STATE OF CALIFORNIA
**Indoor Lighting**
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

| CERTIFICATE OF COMPLIANCE | | | NRCC-LTI-E |
|---|---|---|---|
| Project Name: | FIRE STATION 14 | Report Page: | (Page 3 of 7) |
| Project Address: | 29402 SILVERADO CANYON RD | Date Prepared: | 5/18/2021 |

**A. GENERAL INFORMATION**

| | | | |
|---|---|---|---|
| 01 Project Location (city) | SILVERADO CANYON | 04 Total Conditioned Floor Area (ft²) | 348 |
| 02 Climate Zone | 9 | 05 Total Unconditioned Floor Area (ft²) | 0 |
| 03 Occupancy Types Within Project (select all that apply) | | 06 # of Stories (Inaltable Above Grade) | 1 |

☐ Office ☐ Hotel ☐ Warehouse ☐ Home/Motel ☐ School ☒ Support Areas
☐ Parking Garage ☐ High-Rise Residential ☐ Relocatable ☐ Healthcare ☐ Other (Write in) See Table I

**B. PROJECT SCOPE**
*This table includes any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.6 or §141.0(b)2 for alterations.*

| Scope of Work | Conditioned Spaces | | Unconditioned Spaces | |
|---|---|---|---|---|
| 01 | 02 | 03 | 04 | 05 |
| My Project Consists of (check all that apply) | Calculation Method | Area (ft²) | Calculation Method | Area (ft²) |
| ☐ New Lighting System | | | | |
| ☐ New Lighting System - Parking Garage | | | | |
| ☒ Altered Lighting System | Area Category Method | 348 | Area Category Method | 0 |
| Total Area of Work (ft²) | 348 | | 0 | |

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601
Registration Provider: Energycoft
Report Generated: 2021-05-18 12:23:41

STATE OF CALIFORNIA
**Indoor Lighting**
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

| CERTIFICATE OF COMPLIANCE | | | NRCC-LTI-E |
|---|---|---|---|
| Project Name: | FIRE STATION 14 | Report Page: | (Page 3 of 7) |
| Project Address: | 29402 SILVERADO CANYON RD | Date Prepared: | 5/18/2021 |

**H. INDOOR LIGHTING CONTROLS (Not including PAFs)**

| | |
|---|---|
| *NOTES: Controls with a * require a note in the space below explaining how compliance is achieved. EX: Conference 2: Primary/Skylight Daylighting: Exempt because less than 120 watts of general lighting, EXCEPTION 1 to §130.1(d)2 | 13 Plan Sheet Showing Daylit Zones: |

**I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS**
*Each area comprising using the Complete Building or Area Category Methods per §140.6(c)2 are included in this table. Citation 06 indicates if additional lighting power allowances per §140.6(c)2 or adjustments per §140.6(a)2 are being used.*

| Conditioned Spaces | | | | | | |
|---|---|---|---|---|---|---|
| 01 | 02 | 03 | 04 | 05 | 06 | |
| Area Description | Complete Building or Area Category Primary Function Area | Allowed Density (W/ft²) | Area (ft²) | Allowed Wattage (Watts) | Additional Allowance / Adjustment: Area Category | PAF |
| RESTROOMS | Restrooms | 0.65 | 200 | 130 | No | No |
| CORRIDOR | Corridor Area | 0.6 | 148 | 88.8 | No | No |
| | | TOTALS | 348 | 218.8 | See Tables 1 or P for detail | |

**J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM**
This section does not apply to this project.

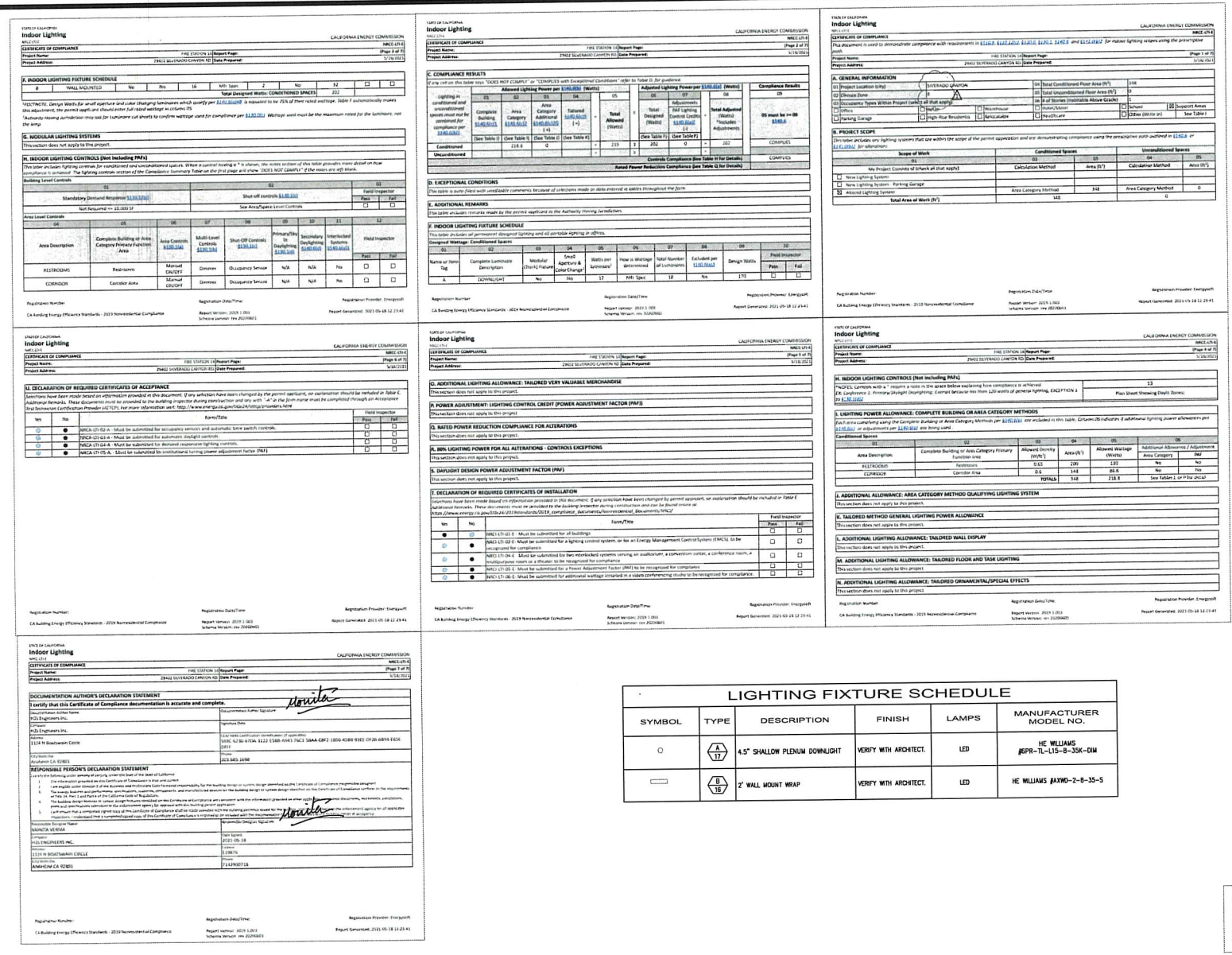
**K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE**
This section does not apply to this project.

**L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY**
This section does not apply to this project.

**M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING**
This section does not apply to this project.

**N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED ORNAMENTAL/SPECIAL EFFECTS**
This section does not apply to this project.

Registration Number: CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance
Registration Date/Time: Report Version: 2019.1.003 Schema Version: rev 20200601
Registration Provider: Energycoft
Report Generated: 2021-05-18 12:23:41



## LIGHTING FIXTURE SCHEDULE

| SYMBOL | TYPE | DESCRIPTION | FINISH | LAMPS | MANUFACTURER MODEL NO. |
|---|---|---|---|---|---|
| ○ | A/17 | 4.5" SHALLOW PLENUM DOWNLIGHT | VERIFY WITH ARCHITECT. | LED | HE WILLIAMS #6PR-TL-L15-B-35K-DIM |
| ▭ | B/16 | 2' WALL MOUNT WRAP | VERIFY WITH ARCHITECT. | LED | HE WILLIAMS #AXWD-2-B-35-S |

REGISTERED PROFESSIONAL ENGINEER MONITA VERMA No. E19876 Exp. 3-31-22 ELECTRICAL STATE OF CALIFORNIA


H2S ENGINEERS INC
H2S Engineers Inc.
Consulting MEP Engineers
Anaheim, CA 92801
Ph: (714) 290-0718
E-mail: mverma@h2sengineers.com



GPa architecture planning interior
Gillis + Panichapan Architects, Inc.
2900 BRISTOL STREET COSTA MESA CALIFORNIA 92626
FAX (714) 668-4265 SUITE C-205 TEL (714) 668-4260



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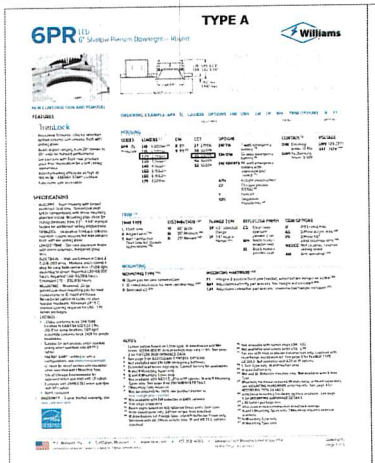
RE-BID SET

| | |
|---|---|
| 1 | PLAN CHECK CORRECTIONS |
| 2 | BID SET |
| 3 | RE-BID SET |
| JOB NO.: 4099 | DATE: 01/07/2022 |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: | |

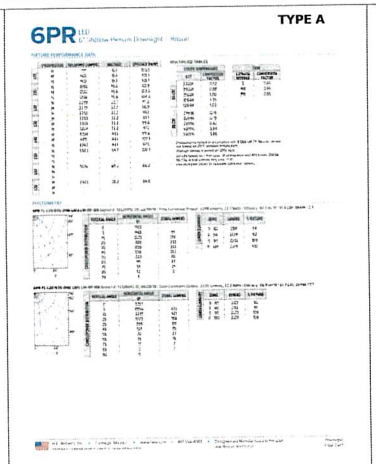
T-24 COMPLIANCE FORMS & LTG. FIXTURE SCH.
ORANGE COUNTY FIRE AUTHORITY
Fire Station #14 - Tenant Improvements
29402 SILVERADO CANYON RD., SILVERADO, CA 92676

E-0.4

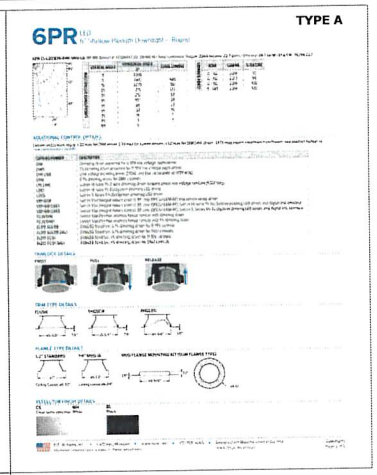
TYPE A




TYPE A




TYPE A

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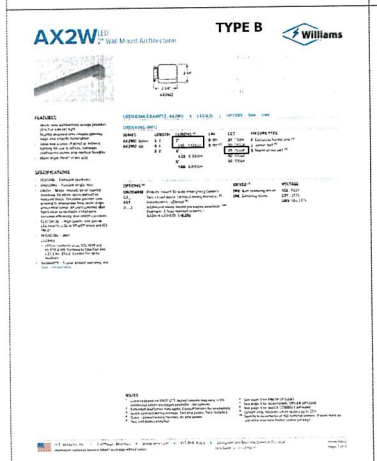


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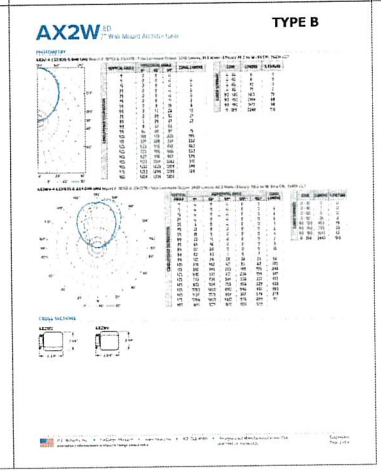


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RE-BID SET

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| PLAN CHECK CORRECTIONS | |
| RE-BID SET | |
| RE-BID SET | DATE: 01/07/2022 |
| JOB NO.: 409 | |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: | |

LIGHTING FIXTURE CUTSHEETS

ORANGE COUNTY FIRE AUTHORITY
Fire Station #14 - Tenant Improvements
29402 SILVERADO CANYON RD., SILVERADO, CA 92676

E-0.5




01 DEMOLITION LIGHTING PLAN
E-2.0 Scale :1/4" = 1'-0"

## SHEET NOTES

1. CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING LIGHT FIXTURES, EXIT LIGHTS, SENSORS AND SWITCHES IN THE SCOPE OF WORK AREA WITH ASSOCIATED CONDUITS AND CONDUCTORS. CONTRACTOR SHALL MAINTAIN CONTINUITY OF ALL EXISTING CIRCUITS WHICH ARE TO REMAIN.

## GENERAL NOTES

A. ELECTRICAL CONTRACTOR SHALL INVESTIGATE PROJECT SITE TO DETERMINE ALL CONDITIONS WHICH MAY AFFECT THE EXECUTION OF HIS WORK. HE SHALL BE RESPONSIBLE FOR DE-ENERGIZING CIRCUITS IN DEMOLITION AREAS TO ENSURE A SAFE CONDITION. MAINTAIN ELECTRICAL SERVICE TO THE EXITING EQUIPMENT, SERVICES AND CIRCUITS AS REQUIRED. SCHEDULING OF SERVICE OUTAGES SHALL BE COORDINATED WITH ARCHITECT AND OWNER.

B. ELECTRICAL CONTRACTOR SHALL DISCONNECT AND REMOVE ALL EXISTING ELECTRICAL MATERIAL WHICH WILL NOT BE REUSED. UNUSED CONDUITS SHALL BE CUT OFF AND PLUGGED FLUSH WITH SURFACES. EXISTING MATERIAL WHICH IS NOT TO BE REUSED OR IS NOT REQUIRED TO BE RETAINED BY OWNER SHALL BE REMOVED FROM SITE

C. DISCONNECT AND REMOVE CIRCUITING BACK TO SOURCE OR NEAREST POINT PRACTICAL TO MAINTAIN ELECTRICAL CONTINUITY OF REMAINING DEVICES. EXTEND CONDUIT AND CONDUCTORS AS NECESSARY TO MAINTAIN CIRCUIT INTEGRITY.

D. FOR ALL COMMUNICATION OUTLETS PROVIDE DOUBLE GANG BACK BOX WITH SINGLE GANG PLASTER RING. PROVIDE 1" CONDUIT TO 6" ABOVE ACCESSIBLE CEILING WITH 90° BEND AND CONDUIT BUSHING UNLESS OTHERWISE NOTED ON DRAWINGS. FOR NON-ACCESSIBLE CEILINGS, ROUTE CONDUIT TO NEAREST ACCESSIBLE CEILING SPACE OR TO NEAREST COMMUNICATION CLOSET. PROVIDE BLANK COVER PLATES FOR ALL UNUSED BOXES.

E. WHERE EXISTING CIRCUITING IS DISTURBED BY DEMOLITION WORK, THE CONTRACTOR SHALL REWORK AND/OR EXTEND EXISTING CIRCUITING AS REQUIRED TO MAINTAIN CONTINUITY TO ALL REMAINING LOADS AFFECTED BY CIRCUIT.

F. PANELBOARD NAME AND CIRCUITS NUMBER ARE BASED ON AS-BUILTS DRAWINGS. CONTRACTOR SHALL FIELD-VERIFY, AS REQUIRED.

REGISTERED PROFESSIONAL ENGINEER — JOSHUA PANCHAPAVI — 3-31-22 — ELECTRICAL — STATE OF CALIFORNIA

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RE-BID SET

DEMOLITION LIGHTING PLAN

ORANGE COUNTY FIRE AUTHORITY
Fire Station #14 - Tenant Improvements
29402 SILVERADO CANYON RD., SILVERADO, CA 92676

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| PLAN CHECK CORRECTIONS | |
| BID SET | |
| RE-BID SET | DATE: 01/07/2022 |
| JOB NO.: 4009 | |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: | |

E-2.0




01 E-2.1 DEMOLITION POWER PLAN
Scale :1/4" = 1'-0"

## SHEET NOTES

1. CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING POWER OUTLETS IN THE SCOPE OF WORK AREA UNLESS NOTED OTHERWISE WITH ASSOCIATED CONDUITS AND CONDUCTORS. CONTRACTOR SHALL MAINTAIN CONTINUITY OF ALL EXISTING CIRCUITS WHICH ARE TO REMAIN.

## GENERAL NOTES

A. ELECTRICAL CONTRACTOR SHALL INVESTIGATE PROJECT SITE TO DETERMINE ALL CONDITIONS WHICH MAY AFFECT THE EXECUTION OF HIS WORK. HE SHALL BE RESPONSIBLE FOR DE-ENERGIZING CIRCUITS IN DEMOLITION AREAS TO ENSURE A SAFE CONDITION. MAINTAIN ELECTRICAL SERVICE TO THE EXITING EQUIPMENT, SERVICES AND CIRCUITS AS REQUIRED. SCHEDULING OF SERVICE OUTAGES SHALL BE COORDINATED WITH ARCHITECT AND OWNER.

B. ELECTRICAL CONTRACTOR SHALL DISCONNECT AND REMOVE ALL EXISTING ELECTRICAL MATERIAL WHICH WILL NOT BE REUSED. UNUSED CONDUITS SHALL BE CUT OFF AND PLUGGED FLUSH WITH SURFACES. EXISTING MATERIAL WHICH IS NOT TO BE REUSED OR IS NOT REQUIRED TO BE RETAINED BY OWNER SHALL BE REMOVED FROM SITE

C. DISCONNECT AND REMOVE CIRCUITING BACK TO SOURCE OR NEAREST POINT PRACTICAL TO MAINTAIN ELECTRICAL CONTINUITY OF REMAINING DEVICES, EXTEND CONDUIT AND CONDUCTORS AS NECESSARY TO MAINTAIN CIRCUIT INTEGRITY.

D. FOR ALL COMMUNICATION OUTLETS PROVIDE DOUBLE GANG BACK BOX WITH SINGLE GANG PLASTER RING. PROVIDE 1" CONDUIT TO 6" ABOVE ACCESSIBLE CEILING WITH 90° BEND AND CONDUIT BUSHING UNLESS OTHERWISE NOTED ON DRAWINGS. FOR NON-ACCESSIBLE CEILINGS, ROUTE CONDUIT TO NEAREST ACCESSIBLE CEILING SPACE OR TO NEAREST COMMUNICATION CLOSET. PROVIDE BLANK COVER PLATES FOR ALL UNUSED BOXES.

E. WHERE EXISTING CIRCUITING IS DISTURBED BY DEMOLITION WORK, THE CONTRACTOR SHALL REWORK AND/OR EXTEND EXISTING CIRCUITING AS REQUIRED TO MAINTAIN CONTINUITY TO ALL REMAINING LOADS AFFECTED BY CIRCUIT.

F. PANELBOARD NAME AND CIRCUITS NUMBER ARE BASED ON AS-BUILTS DRAWINGS. CONTRACTOR SHALL FIELD-VERIFY, AS REQUIRED.

G. WHERE EXISTING LOW VOLTAGE CABLING AND DEVICES ARE DISTURBED BY DEMOLITION WORK, THE CONTRACTOR SHALL REWORK AND/OR PULL NEW CABLES AS REQUIRED TO MAINTAIN CONTINUOUS OPERATION OF EXISTING NEW DEVICES .

REGISTERED PROFESSIONAL ENGINEER MONITA VERMA No. 29678 31-22 ELECTRICAL STATE OF CALIFORNIA


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REGISTERED ARCHITECT
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EXP. 11-30-21
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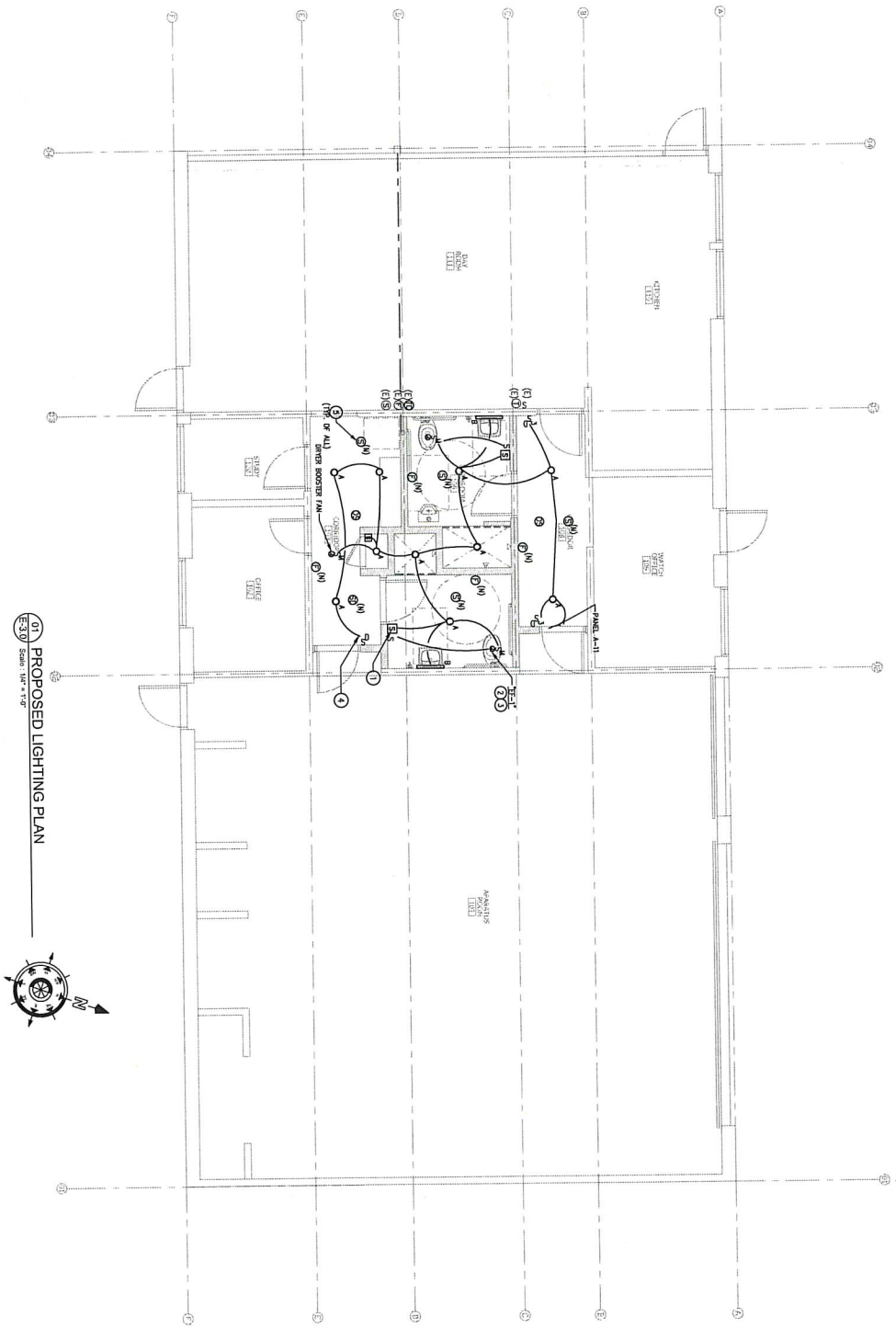
| 1 PLAN CHECK CORRECTIONS | |
| 2 BID SET | |
| 3 RE-BID SET | |
| JOB NO.: 4009 | DATE: 01/07/2022 |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: | |

# DEMOLITION POWER PLAN

ORANGE COUNTY FIRE AUTHORITY
Fire Station #14 - Tenant Improvements
29402 SILVERADO CANYON RD., SILVERADO, CA 92676

E-2.1




01 E-3.0 PROPOSED LIGHTING PLAN
Scale: 1/4" = 1'-0"

## SHEET NOTES

1. PROVIDE WALL MOUNTED SENSOR SWITCH.
2. PROVIDE SEPARATE SWITCH FOR EXHAUST FAN. REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL REQUIREMENTS AND PROVIDE AS DIRECTED.
3. PROVIDE 15/1P TOGGLE WATER RATED DISCONNECT SWITCH FOR EF. VERIFY WITH MECHANICAL PRIOR TO ANY ROUGH IN.
4. DIMMER SWITCH.
5. PROVIDE AND INSTALL NEW SPEAKER, PULL NEW CABLES AS REQUIRED. COORDINATE WITH EXISTING SYSTEM. NEW ENTRANCE. COORDINATE WITH OCFA PERSONNEL. CONTRACTOR SHALL BE RESPONSIBLE FOR A COMPLETE AND OPERATIONAL SYSTEM.

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REGISTERED PROFESSIONAL ENGINEER — MOSHIN WONG — No. E-22 — ELECTRICAL — STATE OF CALIFORNIA

E-3.0

# PROPOSED LIGHTING PLAN

ORANGE COUNTY FIRE AUTHORITY
Fire Station #14 - Tenant Improvements
29402 SILVERADO CANYON RD., SILVERADO, CA 92676

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| PLAN CHECK CORRECTIONS | |
| BID SET | |
| RE-BID SET | |
| JOB NO.: 4009 | DATE: 01/07/2022 |
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REGISTERED ARCHITECT — LONG GARCH PANICHAPAN — No. C-29344 EXP. 11-30-23 — STATE OF CALIFORNIA




01 E-3.1 PROPOSED POWER PLAN
Scale : 1/4" = 1'-0"


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# PROPOSED POWER PLAN

ORANGE COUNTY FIRE AUTHORITY
Fire Station #14 - Tenant Improvements
29402 SILVERADO CANYON RD., SILVERADO, CA 92676

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|---|---|
| 1 | PLAN CHECK CORRECTIONS |
| 2 | BID SET |
| 3 | RE-BID SET |
| JOB NO.: 4009 | DATE: 01/07/2022 |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: | |

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E-3.1

## GENERAL NOTES

1. ALL DRAWINGS ARE CONSIDERED TO BE PART OF THE CONTRACT DOCUMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS PRIOR TO ANY CONSTRUCTION, INCLUDING STRUCTURAL, PLUMBING, AIR CONDITIONING AND ELECTRICAL. ANY DISCREPANCIES THAT OCCUR SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE START OF CONSTRUCTION SO THAT A CLARIFICATION CAN BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT HIS OWN EXPENSE, AND AT NO EXPENSE TO THE OWNER.
2. THESE DRAWINGS ARE DIAGRAMMATIC. THE LOCATION & ELEVATION OF ALL PIPING IS APPROXIMATE AND SHALL BE VERIFIED AND COORDINATED WITH ALL OTHER TRADES, STRUCTURAL CONDITIONS AND BUILDING CONSTRUCTION PRIOR TO START OF INSTALLATION.
3. ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION STANDARDS. IF CLARIFICATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY ENGINEER PRIOR TO PROCEEDING WITH THE WORK.
4. DO NOT SCALE DRAWINGS. ALL DIMENSIONS AND JOB SITE CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE JOB SITE PRIOR TO BID SUBMITTAL, START OF CONSTRUCTION AND/OR FABRICATION OF MATERIALS. VERIFY ALL EXISTING DUCTWORK, PIPING, ELEVATIONS, SIZES AND POINT OF CONNECTIONS PRIOR TO START OF WORK. IF DISCREPANCIES ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED FOR CLARIFICATION.
5. THE CONTRACTOR SHALL FURNISH ALL MATERIALS, LABOR, EQUIPMENT, TRANSPORTATION AND SERVICES NECESSARY FOR COMPLETION OF THE WORK. ALL MATERIALS AND WORK SHALL COMPLY WITH APPLICABLE CODES AND GOVERNING REGULATION AND MEET THE APPROVAL OF THE CITY AND STATE FIRE MARSHALL.
6. CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR PROTECTION AND REPAIR OF ADJACENT EXISTING SURFACES AND AREAS WHICH MAY BE DAMAGED AS A RESULT OF DEMOLITION AND/OR NEW WORK.
7. VERIFY FINAL LOCATION OF THERMOSTATS WITH ARCHITECT AND/OR TENANT CONSTRUCTION COORDINATOR PRIOR TO ANY INSTALLATION WORK. MOUNT THERMOSTATS 4'-0" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE.
8. CONTRACTOR SHALL PROVIDE RECORD/AS BUILT DOCUMENTS TO TENANT CONSTRUCTION COORDINATOR OR ARCHITECT AT COMPLETION OF CONSTRUCTION.
9. ALL DUCTWORK SHALL CONFORM TO CHAPTER 6 OF 2019 CMC. ALL DUCTWORK SHALL BE CONSTRUCTED, ERECTED, AND TESTED IN ACCORDANCE WITH THE MOST RESTRICTIVE OF REGULATIONS, PROCEDURES DETAILED IN THE ASHRAE HANDBOOK OF FUNDAMENTALS, OR THE APPLICABLE STANDARDS ADOPTED BY THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA).
10. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL FITTINGS,TRANSITIONS, DAMPERS, VALVES, AND OTHER DEVICES REQUIRED FOR A COMPLETE WORKABLE INSTALLATION.
11. WRAP CONCEALED DUCTS WITH FIBERGLASS DUCT INSULATION WRAP (ALL SUPPLY DUCT TO HAVE VAPOR BARRIER). ALL NEW SUPPLY AND RETURN DUCT INSULATION WITHIN THE BUILDING TO HAVE MINIMUM 8.0 R-VALUE.
12. INSTALL DOUBLE WALL DUCTS FOR ALL EXPOSED OUTDOOR SUPPLY AND RETURN DUCTS WITH AT LEAST 8.0 R-VALUE INSULATION.
13. INSULATION APPLIED TO THE EXTERIOR SURFACE OF DUCTS LOCATED IN BUILDINGS SHALL HAVE A FLAME SPREAD OF NOT MORE THAN 25 AND SMOKE DEVELOPED RATING OF NOT MORE THAN 50 WHEN TESTED AS A COMPOSITE INSTALLATION INCLUDING INSULATION, FACING MATERIALS, TAPES AND ADHESIVES AS NORMALLY APPLIED.
14. ENTIRE INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE 2019 CALIFORNIA MECHANICAL CODE (C.M.C.), 2019 CALIFORNIA BUILDING CODE (C.B.C.) AND ALL OTHER APPLICABLE CODES AND REGULATIONS.
15. INSTALLATION SHALL BE COMPLIANT WITH 2019 CBC SECTION 425, APPLICABLE NFPA CODE SECTIONS AND SECTION 1632A AND CHAPTER 35 OF 2019 CBC.
16. MANUFACTURER'S INSTALLATION INSTRUCTIONS SHALL BE MADE AVAILABLE TO THE INSPECTING AUTHORITIES.
17. AIR LEAKAGE TESTING SHALL BE PERFORMED BY SMACNA HVAC DUCT LEAKAGE TEST MANUAL.
18. LINE VOLTAGE WIRING, ALL CONDUIT, DISCONNECT SWITCHES AND FINAL CONNECTION BY ELECTRICAL CONTRACTOR. LOW VOLTAGE CONDUIT AND WIRING AND FINAL CONNECTION BY MECHANICAL CONTRACTOR.
19. THE TOTAL SYSTEM AIR BALANCE SHALL BE PERFORMED BY AN INDEPENDENT AGENCY CERTIFIED BY THE AABC OR NEBB. THIS WORK SHALL CONFORM TO AABC OR NEBB SPECIFICATIONS AS REFERRED TO IN THE NATIONAL STANDARDS.
20. ALL PIPING AND DUCT WORK SHALL BE INSULATED CONSISTENT WITH THE REQUIREMENTS OF SECTIONS 118, 123, 124, E.E.S. AND TABLE 6D OF 2019 CMC.
21. PROVIDE GUIDE VANES FOR ALL RECTANGULAR DUCT ELBOWS.
22. AUTOMATIC SHUTOFFS:
23. PER SEC. 608 OF 2019 CMC WHEN REQUIRED, EACH SINGLE SYSTEM PROVIDING HEATING OR COOLING AIR IN EXCESS OF 2,000 CUBIC FEET PER MINUTE SHALL BE EQUIPPED WITH AN AUTOMATIC SHUTOFF. AUTOMATIC SHUTOFF SHALL BE ACCOMPLISHED BY INTERRUPTING THE POWER SOURCE OF THE AIR MOVING EQUIPMENT DEVICES WHICH WILL DETECT PRODUCTS OF COMBUSTION OTHER THAN HEAT AND WHICH COMPLY WITH THE UBC, SHALL BE LABELED BY AN APPROVED AGENCY FOR AIR DUCT INSTALLATION AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. SUCH DEVICES SHALL BE COMPATIBLE WITH THE OPERATING VELOCITIES, PRESSURES, TEMPERATURES AND HUMIDITY OF THE SYSTEM WHERE FIRE DETECTION OR ALARM SYSTEMS ARE PROVIDED FOR THE BUILDING, SMOKE DETECTORS SHALL BE SUPERVISED BY SUCH SYSTEMS.
24. FOR THE PURPOSE OF CLEARNESS AND LEGIBILITY, THE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND ALTHOUGH SIZES AND LOCATIONS OF EQUIPMENT IS DRAWN TO SCALE WHEREVER POSSIBLE, THE CONTRACTOR SHALL MAKE USE OF ALL DATA IN ALL OF THE CONTRACT DOCUMENTS AND VERIFY THIS INFORMATION BEFORE ORDERING, FABRICATING OR INSTALLATION OF ANY MATERIALS.
25. HVAC SYSTEM AND COMPONENTS WILL BE TESTED ,A ADJUSTED AND BALANCED IN ACCORDANCE WITH AABC'S NATIONAL STANDARDS FOR TOTAL SYSTEM BALANCE 6TH EDITION.
26. HVAC SYSTEM AND CONTROLS:

- NEW HVAC UNITS ARE PACKAGED ROOFTOP HEAT PUMP UNITS.
- THERMOSTATS SHALL HAVE NUMERIC SETPOINTS IN F.
- THERMOSTATS SHALL HAVE ADJUSTABLE SETPOINTS ACCESSIBLE ONLY TO AUTHORIZED PERSONNEL.
- DEMAND CONTROL VENTILATION DEVICE SHALL ALLOW THE RATE OF OUTDOOR AIR TO BE REDUCED TO 0.15 CFM PER SQUARE FOOT OF CONDITIONED AREA, IF THE DEMAND CONTROL VENTILATION DEVICE INDICATES THAT THE SPACE CONDITIONS ARE ACCEPTABLE. IF THE DEVICE IS A CARBON-DIOXIDE SENSOR, IT SHALL LIMIT THE CARBON DIOXIDE LEVEL TO NO MORE THAN 800 PPM WHILE THE SPACE IS OCCUPIED.
- DEMAND CONTROL VENTILATION DEVICE APPROVED BY THE ENERGY COMMISSION SHALL BE PROVIDED FOR HVAC SYSTEMS SERVING "ASSEMBLY AREAS, CONCENTRATED USE (WITHOUT FIXED SEATS)" OR "AUCTION ROOMS", AS IDENTIFIED IN CHAPTER 10 OF THE UBC, IF SUCH AREAS ARE SERVED BY SYSTEMS WITH DESIGN OUTDOOR CAPACITIES EQUAL TO OR EXCEEDING 3,000 CFM. THE DEVICE SHALL INCLUDE A SENSOR LOCATED IN THE SPACE.

27. MECHANICAL MATERIAL STANDARD SHALL BE LISTED AND LABELING TO COMPLY WITH TABLE 1701.1. CMC 306.1 AND CMC 307.1.
28. ALL DIR DISTRIBUTION SYSTEM DUCTS AND PLENUMS, INCLUDING, BUT NOT LIMITED, BUILDING CAVITIES, MECHANICAL CLOSETS, AIR HANDLER BOXES AND SUPPORT PLATFORMS USED AS DUCTS AND PLENUMS, SHALL BE INSTALLED, SEALED AND INSULATED TO MEET THE REQUIREMENTS OF THE CMC SECTION 601.0, 602.0, 603.0, 604.0, AND ANSI/SMACNA-006-2006 HVAC DUCT CONSTRUCTION STANDARDS, METAL AND FLEXIBLE, 3RD EDITION.
29. CONNECTIONS OF METAL DUCTS AND THE INNER CORE OF FLEXIBLE DUCTS SHALL BE MECHANICALLY FASTENED. OPENINGS SHALL BE SEALED WITH MASTIC TAPE, AEROSOL SEALANT OR OTHER DUCT CLOSURE SYSTEM THAT MEETS THE APPLICABLE REQUIREMENTS OF UL 181, UL 181A OR UL 181B. IF MASTIC OR TAPE IS USED TO SEAL OPENINGS GREATER THAN 1/4",

## AIR DISTRIBUTION SCHEDULE

| SYMBOL | MODULE SIZE | NECK SIZE | CFM RANGE | REMARKS |
|---|---|---|---|---|
| CD-1 TITUS "OMNI" OR APPROVED EQUAL | 24"X24" | 6" | 60-160 | - 4-WAY THROW, UNLESS NOTED ON OTHERWISE ON PLANS. |
| | | 8" | 110-210 | - 4-WAY THROW, UNLESS NOTED ON OTHERWISE ON PLANS. |
| | | 10" | 180-400 | - 4-WAY THROW, UNLESS NOTED ON OTHERWISE ON PLANS. |
| | | 12" | 380-600 | - 4-WAY THROW, UNLESS NOTED ON OTHERWISE ON PLANS. |
| CR-1 TITUS "PAR-FR" OR APPROVED EQUAL | 24"X24" | DUCT SIZE | - | - |
| EG-1 TITUS "350 RL" OR APPROVED EQUAL | SEE PLANS | DUCT SIZE | SEE PLANS FOR SIZES | - |

## SHEET INDEX

| SHT.NO. | DESCRIPTION |
|---|---|
| M-0.1 | MECHANICAL GENERAL NOTES AND LEGEND |
| M-0.2 | MECHANICAL SCHEDULES AND DETAILS |
| M-2.0 | MECHANICAL DEMOLITION FLOOR PLAN |
| M-3.0 | MECHANICAL PROPOSED FLOOR AND ROOF PLAN |

## APPLICABLE CODES

2019 CALIFORNIA BUILDING CODE (CBC)
2019 CALIFORNIA ELECTRICAL CODE (CEC)
2019 CALIFORNIA MECHANICAL CODE (CMC)
2019 CALIFORNIA PLUMBING CODE (CPC)
2019 CALIFORNIA ENERGY STANDARDS CODE (CESC)

## MECHANICAL LEGEND

| SYMBOL | ABBV. | DESCRIPTION |
|---|---|---|
| | SWS | SIDEWALL DIFFUSER – SUPPLY |
| | CD | CEILING DIFFUSER – SUPPLY |
| | CD | CEILING DIFFUSER BELOW DUCT – SUPPLY |
| | SAD | RISER – SUPPLY AIR DUCT |
| | SAD | DROP – SUPPLY AIR DUCT |
| | SAD | ROUND DROP – SUPPLY AIR DUCT |
| | SWR | SIDEWALL REGISTER – RETURN |
| | CR | CEILING REGISTER – RETURN |
| | CR | CEILING REGISTER BELOW DUCT – RETURN |
| | RAD | RISER – RETURN AIR DUCT |
| | RAD | DROP – RETURN AIR DUCT |
| | SWE | SIDEWALL REGISTER – EXHAUST |
| | CR | CEILING REGISTER – EXHAUST |
| | CD | CEILING DIFFUSER BELOW DUCT – EXHAUST |
| | EAD | RISER – EXHAUST AIR DUCT |
| | EAD | DROP – EXHAUST AIR DUCT |
| | L | LINED DUCTWORK |
| | VD | VOLUME DAMPER |
| | FC | FLEXIBLE CONNECTION |
| | | NEW DUCT |
| | | EXISTING DUCT – NEW PLAN |
| | | EXISTING DUCT – DEMOLITION PLAN |
| | | EXISTING MECHANICAL WORK TO BE REMOVED |
| | FSD | FIRE SMOKE DAMPER |
| 1" UC | UC | UNDER CUT DOOR |
| | TSTAT | THERMOSTAT |
| | POC | POINT OF CONNECTION |
| | POD | POINT OF DEMOLITION |
| | OSA | OUTSIDE AIR |
| | UTR | UP THRU ROOF |
| S | CSFD | COMBINATION SMOKE/FIRE DAMPER |
| F | F | FUSIBLE LINK FIRE DAMPER |
| | N.T.S. | NOT TO SCALE |

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LICENSED ARCHITECT LONGKAVACH PANICHAPAN NO. C-29344 EXP. 11-30-21 STATE OF CALIFORNIA

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RE-BID SET

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| 1 PLAN CHECK CORRECTIONS | |
| 2 BID SET | |
| 3 RE-BID SET | |
| JOB NO.: 4009 | DATE: 01/07/2022 |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: | |

# MECHANICAL GENERAL NOTES AND LEGEND

ORANGE COUNTY FIRE AUTHORITY
Fire Station #14 - Tenant Improvements
29402 SILVERADO CANYON RD., SILVERADO, CA 92676

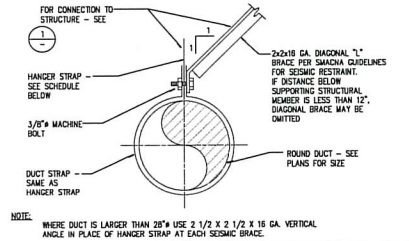
M-0.1

## EXISTING HEATER SCHEDULE

| SYMBOL | MANUFACTURER MODEL NO. | AREA SERVED | S.A. CFM | O.A. CFM | MOTOR HP | ELECTRICAL | | | OPERATING WEIGHT (LBS.) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | MCA | MOCP | VOLT/PH/Hz | | |
| FC 1 | XXXX | – | 1,400 | 140 | ½ | 5.1 | 15 | 208–230/1/60 | 210 | – PROVIDE COMPLETE WITH DIGITAL PROGRAMMABLE THERMOSTAT, HANGING BRACKETS, AND DUCT SMOKE DETECTOR IN SUPPLY AIR DUCT DOWNSTREAM OF FANCOIL FOR AUTOMATIC SHUT-OFF. PROVIDE 3/4" SECONDARY DRAIN. DAYLIGHT THRU CEILING AT A VISIBLE LOCATION, COMPLETE WITH ESCUTCHEON. PAINT TO MATCH EXISTING CEILING. |

## NEW BATHROOM EXHAUST FAN

| TAG | MANUFACTURER MODEL NO. | SERVING | CFM | SP (W.G) | FAN RPM | POWER (HP) | SUPPLY VOLTAGE | DRIVE | WEIGHT LBS | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| EF 1 | NUTONE CEILING MOUNTED | RESTROOM | 150 | 0.2 | – | 21 W | 115/1/60 | DIRECT | 30 | – PROVIDE SEPARATE SWITCH.– SHALL BE EQUIPPED WITH HUMIDISTAT. |

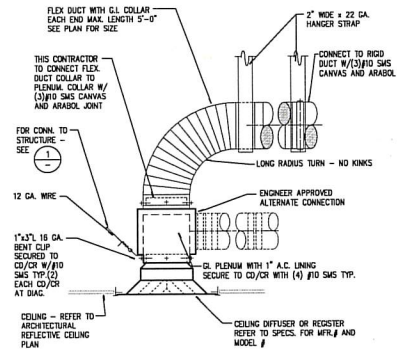



NOTE: WHERE DUCT IS LARGER THAN 28"ø USE 2 1/2 X 2 1/2 X 16 GA. VERTICAL ANGLE IN PLACE OF HANGER STRAP AT EACH SEISMIC BRACE.

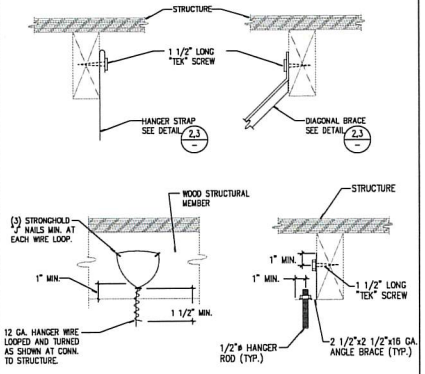
### HANGER STRAP SCHEDULE

| DUCT SIZE | HANGER SIZE | MAX. LOAD EA. HANGER | MAX. SPACING |
|---|---|---|---|
| UP THRU 10" | 1" x 22 GA. | 260 LBS | 10'–0" |
| 11" TO 18" | 1" x 22 GA. | 260 LBS | 10'–0" |
| 19" TO 24" | 1" x 22 GA. | 260 LBS | 10'–0" |
| 25" TO 36" | 1" x 20 GA. | 320 LBS | 10'–0" |

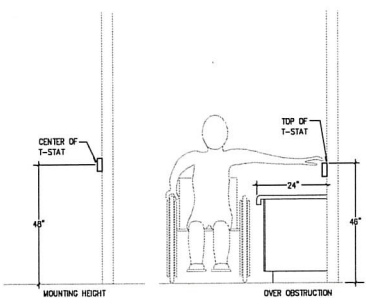
ROUND DUCT SUPPORT DETAIL — SCALE: NTS — 4




AIR DISTRIBUTION DETAIL — SCALE: NTS — 3




CONNECTION TO STRUCTURE — SCALE: NTS — 2




T-STAT MOUNTING DETAIL — SCALE: NTS — 1

NOT USED — SCALE: NTS — 7

NOT USED — SCALE: NTS — 6

NOT USED — SCALE: NTS — 5

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RE-BID SET

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|---|---|---|
| 1 | PLAN CHECK CORRECTIONS | 08/17/2022 |
| 2 | RE-BID SET | 01/07/2022 |

JOB NO.: 2009
DRAWN BY: STAFF
CHECKED BY: LP
SCALE:

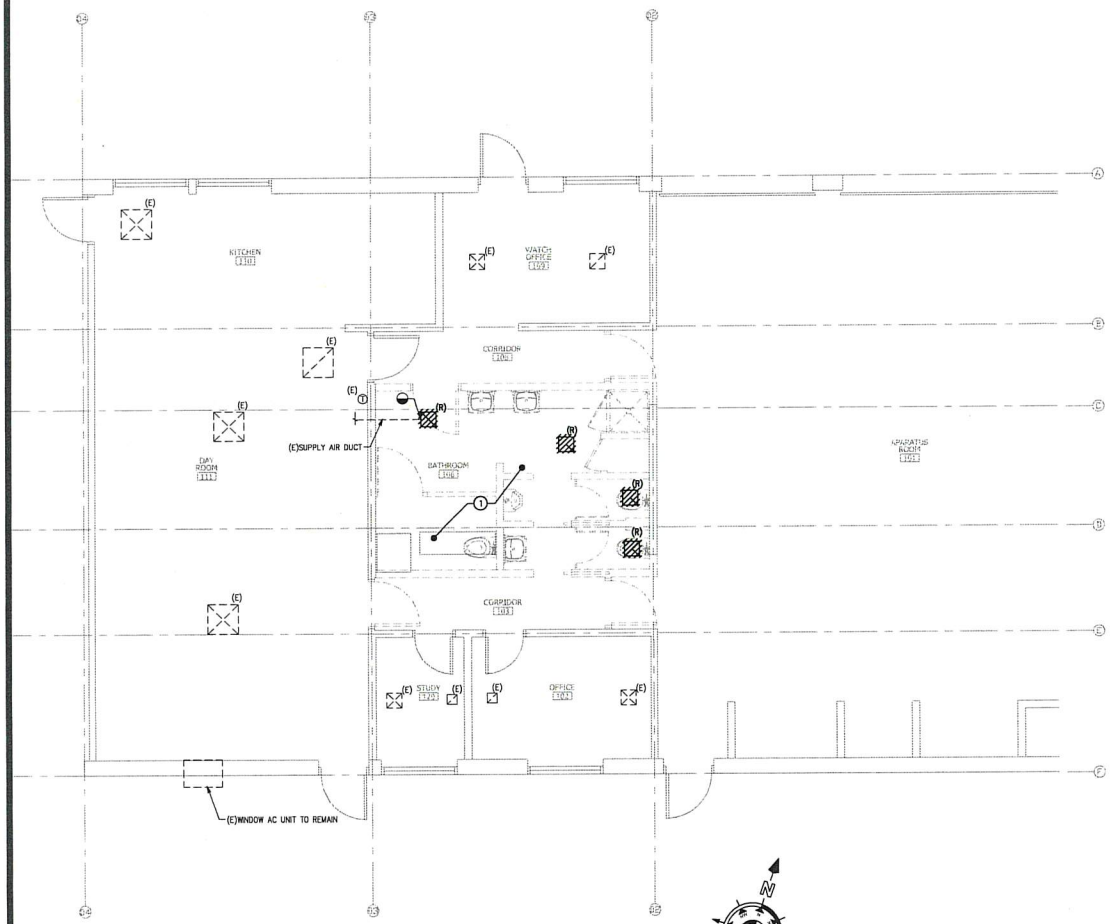
MECHANICAL SCHEDULES AND DETAILS

ORANGE COUNTY FIRE AUTHORITY
Fire Station #14 - Tenant Improvements
29402 SILVERADO CANYON RD., SILVERADO, CA 92676

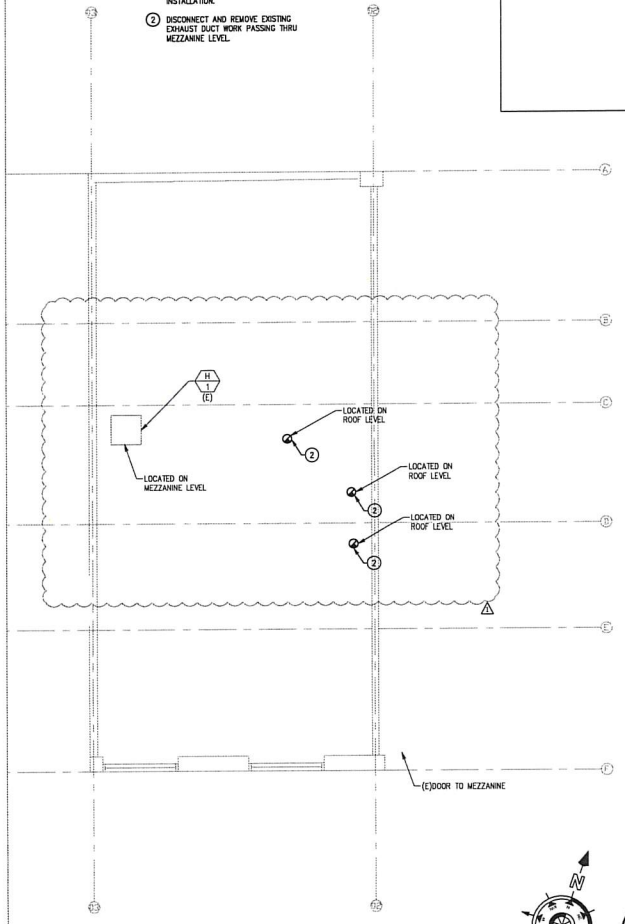
M-0.2

## SHEET NOTES

1. DEMO EXISTING EXHAUST FAN, DUCTWORK, GRILLES AND ANY ASSOCIATED CONTROL. CLEAN AND MAKE READY FOR NEW INSTALLATION.
2. DISCONNECT AND REMOVE EXISTING EXHAUST DUCT WORK PASSING THRU MEZZANINE LEVEL.




01 M-2.0 MECHANICAL DEMOLITION FLOOR PLAN
Scale : 1/4" = 1'-0"




02 M-2.0 MECHANICAL DEMOLITION MEZZAINE PLAN
Scale : 1/4" = 1'-0"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REGISTERED PROFESSIONAL ENGINEER
MECHANICAL
STATE OF CALIFORNIA



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RE-BID SET

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| PLAN CHECK CORRECTIONS | |
| BID SET | |
| RE-BID SET | |
| JOB NO.: 4009 | DATE: 01/07/2022 |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: | |

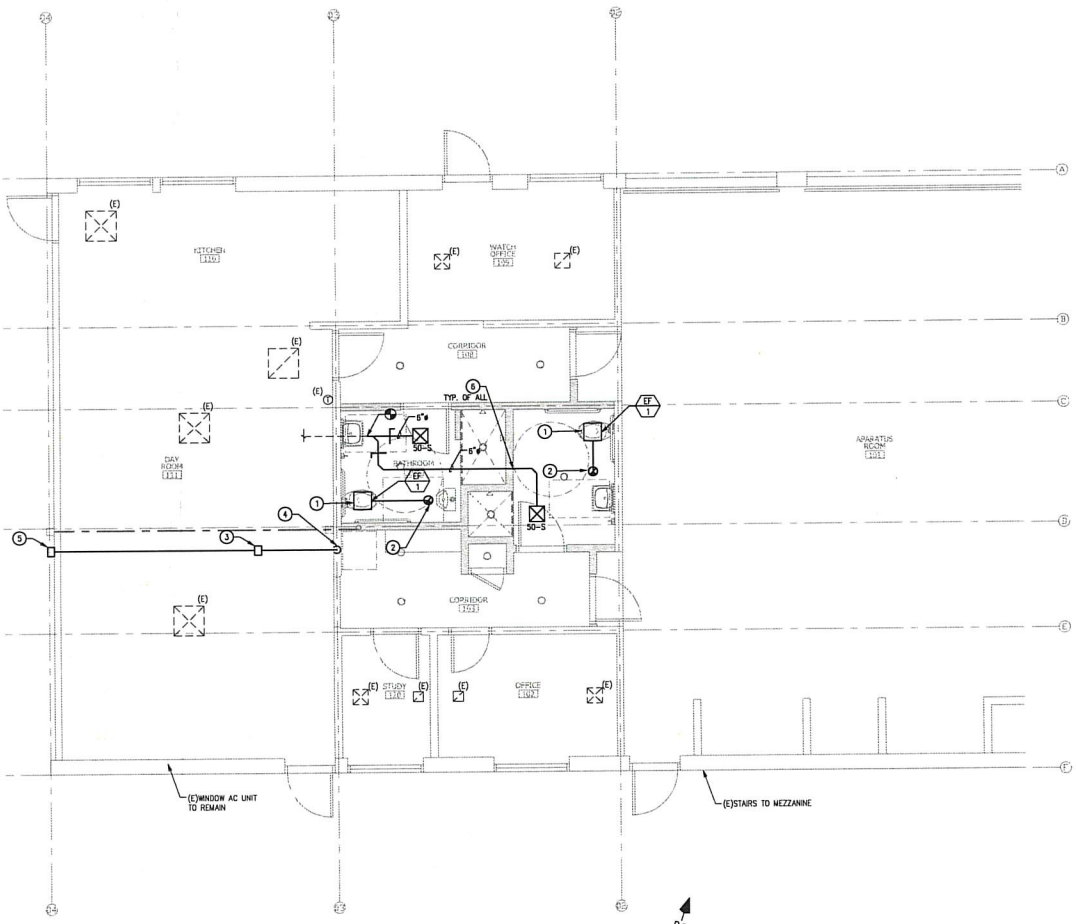
MECHANICAL DEMOLITION FLOOR PLAN

ORANGE COUNTY FIRE AUTHORITY
Fire Station #14 - Tenant Improvements
29402 SILVERADO CANYON RD., SILVERADO, CA 92676

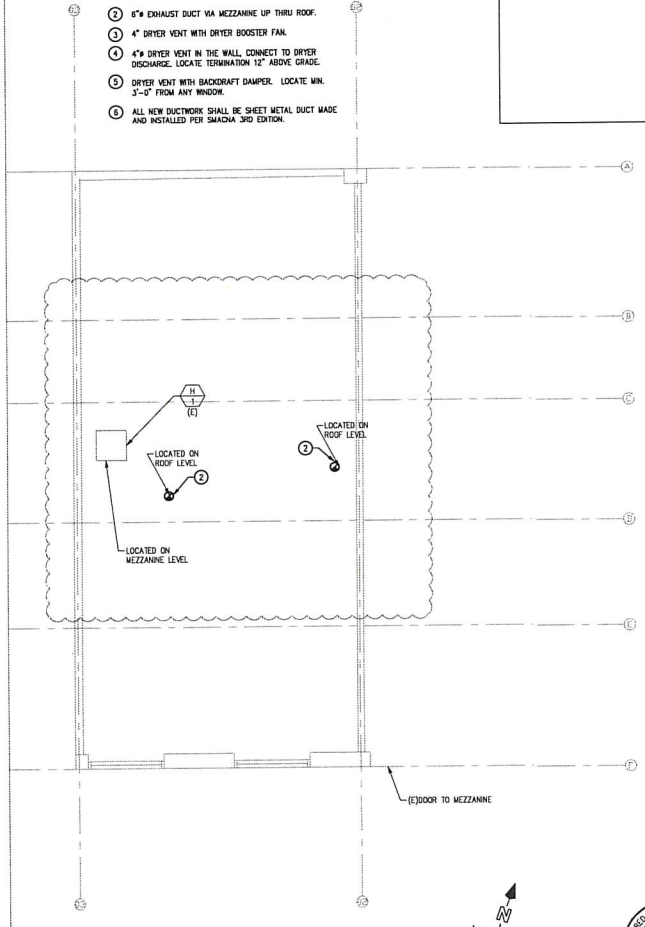
M-2.0

## SHEET NOTES

1. CEILING MOUNTED EXHAUST FAN WITH EXHAUST DUCT TERMINATING ABOVE ROOF WITH WEATHER CAP AND MESH SCREEN. TERMINATE EXHAUST DUCT 10' AWAY FROM ANY AIR INTAKE.
2. 6"ø EXHAUST DUCT VIA MEZZANINE UP THRU ROOF.
3. 4" DRYER VENT WITH DRYER BOOSTER FAN.
4. 4"ø DRYER VENT IN THE WALL. CONNECT TO DRYER DISCHARGE. LOCATE TERMINATION 12" ABOVE GRADE.
5. DRYER VENT WITH BACKDRAFT DAMPER. LOCATE MIN. 3'-0" FROM ANY WINDOW.
6. ALL NEW DUCTWORK SHALL BE SHEET METAL DUCT MADE AND INSTALLED PER SMACNA 3RD EDITION.




01 M-3.0 MECHANICAL PROPOSED FLOOR PLAN
Scale : 1/4" = 1'-0"




02 M-3.0 MECHANICAL PROPOSED MEZZAINE PLAN
Scale : 1/4" = 1'-0"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RE-BID SET

| | |
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| PLAN CHECK CORRECTIONS | |
| RID SET | |
| RE-BID SET | |
| JOB NO.: 4709 | DATE: 01/07/2022 |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: | |

MECHANICAL PROPOSED FLOOR AND ROOF PLAN

ORANGE COUNTY FIRE AUTHORITY
Fire Station #14 - Tenant Improvements
29402 SILVERADO CANYON RD., SILVERADO, CA 92676

M-3.0

## GREEN BUILDING CODE REQUIREMENTS
(NOT ALL NOTES MAY APPLY)

1. PROJECTS WHICH DISTURB LESS THAN ONE ACRE OF LAND SHALL PREVENT THE POLLUTION OF STORM WATER RUNOFF FROM THE CONSTRUCTION ACTIVITIES THROUGH ONE OR MORE OF THE FOLLOWING MEASURES (SECTION 5.106.1):

A) BEST MANAGEMENT PRACTICES (BMP). PREVENT THE LOSS OF SOIL THROUGH WIND OR WATER EROSION BY IMPLEMENTING AN EFFECTIVE COMBINATION OF EROSION AND SEDIMENT CONTROL AND GOOD HOUSEKEEPING BMP. SEE SECTION 5.106.1.2 FOR SPECIFICS.

B) LOCAL ORDINANCE.

5. THE SITE GRADING OR A DRAINAGE SYSTEM WILL MANAGE ALL SURFACE WATER FLOWS TO KEEP WATER FROM ENTERING BUILDINGS. CGC SECTION 5.106.10.

6. LANDSCAPE IRRIGATION SYSTEMS SHALL BE DESIGNED TO PREVENT SPRAY ON STRUCTURES. EXTERIOR ENTRIES SUBJECT TO FOOT TRAFFIC OR WIND-DRIVEN RAIN SHALL BE DESIGNED TO PREVENT WATER INTRUSION INTO THE BUILDING. CGC SECTION 5.407.2.2.1.

7. THE CONTRACTOR MUST SUBMIT TO THE ENGINEERING DEPARTMENT OR OTHER AGENCY THAT REGULATES CONSTRUCTION WASTE MANAGEMENT A WASTE MANAGEMENT PLAN THAT OUTLINES THE ITEMS LISTED IN CGC SECTION 5.408.1.1.

8. A MINIMUM OF 50% OF CONSTRUCTION WASTE IS TO BE RECYCLED. CGC 5.408.1. DOCUMENTATION SHALL BE PROVIDED TO THE ENFORCING AGENCY WHICH DEMONSTRATES COMPLIANCE. CGC SECTION 5.408.1.4.

9. 100% OF TREES, STUMPS, ROCKS, AND ASSOCIATED VEGETATION AND SOILS PRIMARILY FROM THE CONSTRUCTION WILL BE REUSED OR RECYCLED. CGC 5.408.3

10. AN IDENTIFIED, READILY ACCESSIBLE AREA SHALL BE PROVIDED THAT SERVES THE ENTIRE BUILDING FOR COLLECTING RECYCLING, SUCH AS PAPER, CARDBOARD, GLASS, PLASTICS, METALS, ETC. CGC SECTION 5.410.1.

11. A BUILDING 'SYSTEMS MANUAL' AS LISTED IN CGC SECTION 5.410.2.5 SHALL BE DELIVERED TO THE BUILDING OWNER OR REPRESENTATIVE AND THE FACILITIES OPERATOR. THE 'SYSTEMS MANUAL' SHALL CONTAIN THE REQUIRED FEATURES LISTED IN CGC SECTION 5.410.2.5.1.

12. DURING CONSTRUCTION, ENDS OF DUCT OPENINGS ARE TO BE SEALED, AND MECHANICAL EQUIPMENT IS TO BE COVERED. CGC 5.504.3.

13. VOC'S MUST COMPLY WITH THE LIMITATIONS LISTED IN SECTION 5.504.4 AND TABLES 4.504.1, 5.504.4.1 5.504.4.2, 5.504.4.3 AND 5.504.4.5 FOR: ADHESIVES, SEALANTS, PAINTS AND COATINGS, CARPET AND COMPOSITION WOOD PRODUCTS. CGC 5.504.4.

14. WHERE OUTDOOR AREAS ARE PROVIDED FOR SMOKING, SUCH AREAS ARE PROHIBITED WITHIN 25' OF BUILDING ENTRIES, WINDOWS AND OUTDOOR AIR INTAKES. SIGNAGE SHALL BE POSTED TO INFORM OCCUPANTS OF THE PROHIBITIONS. CGC SECTION 5.504.7.

15. MECHANICALLY VENTILATED BUILDINGS SHALL PROVIDE REGULARLY OCCUPIED AREAS WITH AIR FILTRATION MEDIA FOR OUTSIDE AND RETURN AIR THAT PROVIDES AT LEAST A MINIMUM EFFICIENCY REPORTING VALUE (MERV) OF 8. MERV 8 FILTERS SHALL BE INSTALLED PRIOR TO OCCUPANCY. CGC SECTION 5.504.5.3.

16. WALL AND FLOOR ASSEMBLIES SEPARATING TENANT SPACES (AND TENANT SPACES FROM PUBLIC SPACES) SHALL HAVE AN STC OF AT LEAST 40. CGC SECTION 5.507.4.3.

17. WALL AND ROOF ASSEMBLIES EXPOSED TO NOISE SOURCES SHALL HAVE AN STC RATING OF AT LEAST 50, WITH EXTERIOR WINDOWS HAVING A MINIMUM STC OF 40 IN THE FOLLOWING LOCATIONS, PER CGC SECTION 5.507.4.1:
A) WITHIN THE 65 CNEL NOISE CONTOUR OF A FREEWAY, RAILROAD OR INDUSTRIAL SOURCE, AS DETERMINED BY THE JURISDICTION'S NOISE ELEMENT OF THE GENERAL PLAN.

B) WITHIN THE 65 CNEL NOISE CONTOUR OF AN AIRPORT.

18. INSTALLATIONS OF HVAC, REFRIGERATION AND FIRE SUPPRESSION SYSTEMS WILL NOT CONTAIN CFC'S OR HALONS, PER CGC 5.508.1.

19. FOR NEW BUILDINGS, SHOW ON THE SITE UTILITY PLAN SEPARATE SUB-METERS PER CGC SECTION 5.303.1 FOR THE FOLLOWING:
(A) EACH LEASED OR OWNED SPACE THAT CONSUMES MORE THAN 100 GAL/DAY
(B) TENANT SPACES CONTAINING LAUNDRY, CLEANERS, RESTAURANT, MEDICAL/DENTAL OFFICE, LABORATORY OR BEAUTY/BARBER SHOPS.

20. THE FOLLOWING MAXIMUM FIXTURE FLOW RATES FROM TABLE 5.303.2.3 AND SECTION 5.303.3, AS SHOWN BELOW. REVISE GENERAL NOTES, PLUMBING PLANS, ETC. TO MATCH. CGC 5.303.

MAXIMUM FIXTURE FLOW RATES

| FIXTURE TYPE | MAXIMUM FLOW RATE |
|---|---|
| LAVATORY FAUCETS-NONRESIDENTIAL | 0.5 GPM @ 60 PSI |
| KITCHEN FAUCETS | 1.8 GPM @ 60 PSI |
| METERING FAUCETS | 0.2 GALLONS/CYCLE |
| WATER CLOSETS | 1.28 GALLONS/FLUSH |
| URINALS | 0.5 GALLONS/FLUSH |

21 A WATER BUDGET SHALL BE DEVELOPED FOR LANDSCAPE IRRIGATION USE THAT CONFORMS TO THE LOCAL WATER EFFICIENT LANDSCAPE ORDINANCE. WHERE NO LOCAL ORDINANCE EXISTS, SHOW COMPLIANCE WITH THE CALIFORNIA DEPARTMENT OF WATER RESOURCES MODEL WATER EFFICIENT LANDSCAPE ORDINANCE. SEE SECTIONS 492.5 THROUGH 492.9, 492.10 AND 492.11 OF THE STATE ORDINANCE AT HTTP://WWW.WATER.CA.GOV/WATERUSEEFFICIENCY/DOCS/WATERORDSEC492.CFM.

22. FOR NEW WATER SERVICE (OR ADDITIONS/ALTERATIONS WITH > 1,000 SQUARE FEET OF CUMULATIVE LANDSCAPED AREA), SEPARATE SUBMETERS OR METERING DEVICES SHALL BE INSTALLED FOR OUTDOOR POTABLE WATER USE. ALSO, IRRIGATION CONTROLLERS AND SENSORS SHALL BE INSTALLED. CGC SECTIONS 5.304.2 AND 5.304.3.

23 PRIOR TO FINAL INSPECTION THE LICENSED CONTRACTOR, ARCHITECT OR ENGINEER IN RESPONSIBLE CHARGE OF THE OVERALL CONSTRUCTION MUST PROVIDE TO THE BUILDING DEPARTMENT OFFICIAL WRITTEN VERIFICATION THAT ALL APPLICABLE PROVISIONS FROM THE GREEN BUILDING STANDARDS CODE HAVE BEEN IMPLEMENTED AS PART OF THE CONSTRUCTION. CGC 102.3.

## PIPING MATERIALS

| | | |
|---|---|---|
| 1. | SANITARY SEWER, VENT AND STORM DRAIN PIPING BELOW GROUND: | SERVICE WEIGHT NO-HUB CAST IRON PIPE & FITTINGS CONFORMING TO THE REQUIREMENTS CISPI STANDARD 301, ASTM A 888 OR ASTM A74 WITH TYPE 304 STAINLESS STEEL HEAVY DUTY NO-HUB COUPLINGS. PROVIDE PIPE WRAP ON ALL UNDERGROUND PIPING IN ACCORDANCE WITH ANSI/AWWA STANDARDS C105 /A21.5-93. BED AND BACKFILL WITH CLEAN SAND, 6" THICK ALL AROUND PIPE. CAST IRON BELOW GRADE SHALL BE SPIRAL WRAPPED WITH 20 MIL VISQUEEN TAPE. |
| 2. | SOIL, WASTE, VENT, STORM DRAIN PIPING ABOVE GROUND: | SERVICE WEIGHT NO-HUB CAST IRON PIPE & FITTINGS CONFORMING TO THE REQUIREMENTS OF CISPI STANDARD 301, ASTM A888 OR ASTM A74 WITH TYPE 304 STAINLESS STEEL STANDARD DUTY NO-HUB COUPLINGS. |
| 3. | WATER PIPING BELOW GROUND: | TYPE 'K' COPPER WITH BRAZED JOINTS. |
| 4. | WATER PIPING ABOVE GROUND: | TYPE 'L' COPPER WITH LEAD-FREE SOLDERED JOINTS. |
| 5. | CONDENSATE DRAIN PIPING: | TYPE 'M' COPPER WITH SOLDERED JOINTS. |
| 6. | GAS PIPING ABOVE GROUND: | SCHEDULE 40 BLACK STEEL WITH MALLEABLE IRON SCREWED OR WELDED JOINTS. |
| 7. | GAS PIPING BELOW GROUND: | DRISCOPLEX PE2406 POLYETHYLENE PIPING SYSTEMS WITH ELECTRIC FUSION SOCKET JOINTS. PROVIDE #12 ELECTRIC TRACER COPPER WIRE, SPIRAL WRAPPED AROUND PIPE. UNDERGROUND STEEL PIPING AND FITTINGS SHALL BE AS FOR ABOVE GROUND. PIPING SHALL BE WRAPPED AND CATHODICALLY PROTECTED PER THE SOILS ENGINEER DIRECTION. |
| 8. | INSULATION OF DOMESTIC HOT WATER SUPPLY AND HOT WATER RETURN PIPING: | GLASS FIBER PIPE INSULATION WITH FACTORY APPLIED WHITE JACKET, J-M MICRO-LOK 650AP, 1" THICK FOR PIPE SIZES OF 1/2" TO 1", AND 1 1/2" THICK FOR PIPE SIZES TO 1 1/4" AND LARGER. INSULATE FITT- INGS AND VALVES W/ PREFORMED INSULATION WITH PVC PREMOLDED ONE PIECE FITTING COVER BY J.M. ZESTON. ADHERE LONGITUDINAL LAPS AND BUTTS OF STRIPS OF JACKET W/ FACTORY APPLIED PRESSURE SENSITIVE TAPE SYSTEM, J-M AP-T. FLANGES AND UNIONS SHALL NOT BE COVERED. SURFACE BURNING CHARACTERISTICS COMPOSITE FHC 25/50. |
| 9. | INSULATION OF INTERIOR CONDENSATE DRAIN PIPING: | AP ARMFLEX CLOSED-CELL ELASTOMERIC FOAM INSULATION. FLAME-SPREAD INDEX OF 25 OR LESS AND SMOKE-DEVELOPED INDEX OF 50 OR LESS. 1/2 INCH THICK FOR 4 INCH DIAMETER PIPE AND LESS. |

10. ALL OF THE ABOVE SHALL COMPLY WITH THE SPECIFICATIONS. ALL PIPING BELOW SLAB OR GRADE SHALL BE CORROSION PROTECTED PER SPECIFICATIONS.

NOTE:
ALL PIPE, FITTINGS, FIXTURES, ETC. THAT CONTACT POTABLE WATER FOR HUMAN CONSUMPTION SHALL SHOW APPROVAL TO NSF 61, ANNEX "G". EFFECTIVE JANUARY 1, 2010, THE LEAD CONTENT OF THE WETTED SURFACE AREA OF THE PIPES, FITTINGS AND FIXTURES CONVEYING POTABLE WATER FOR HUMAN CONSUMPTION, OF NOT MORE THAN 0.25% SHALL BE DETERMINED PURSUANT TO A PRESCRIBED FORMULA AS DETERMINED BY THIRD PARTY CERTIFIERS TO NSF STANDARD 61, ANNEX "G". REFERENCE SECTION 604.2, CALIFORNIA PLUMBING CODE, 2016 EDITION, AND HEALTH & SAFETY CODE SECTION 116875.

## APPLICABLE CODES

2019 CALIFORNIA BUILDING CODE (CBC: PART 2 , TITLE 24 , CCR) (BASED ON 2018 INTERNATIONAL BUILDING CODE)

2019 CALIFORNIA ELECTRICAL CODE (CEC: PART 3 , TITLE 24 , CCR) (BASED ON 2017 NATIONAL ELECTRICAL CODE)

2019 CALIFORNIA MECHANICAL CODE (CMC: PART 4 , TITLE 24 , CCR) (BASED ON 2018 UNIFORM MECHANICAL CODE)

2019 CALIFORNIA PLUMBING CODE (CPC: PART 5 , TITLE 24 , CCR) (BASED ON 2018 UNIFORM PLUMBING CODE)

2019 CALIFORNIA FIRE CODE (CFC: PART 9, TITLE 24, CCR.) (BASED ON 2018 INTERNATIONAL FIRE CODE)

2019 CALIFORNIA ENERGY CODE.

2019 CALIFORNIA GREEN BUILDING CODE.

## PLUMBING LEGEND

1. NOTE: FOR THE PURPOSE OF CLEARNESS AND LEGIBILITY, THE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND ALTHOUGH SIZES AND LOCATIONS OF EQUIPMENT ARE DRAWN TO SCALE WHEREVER POSSIBLE, THE CONTRACTOR SHALL MAKE USE OF ALL DATA IN ALL OF THE CONTRACT DOCUMENTS AND VERIFY THIS INFORMATION PRIOR TO ORDERING, FABRICATING OR INSTALLING ANY MATERIALS.
2. CONTRACTOR SHALL COORDINATE ALL WORK SHOWN ON THESE DRAWINGS AND SPECIFICATIONS WITH ALL DISCIPLINES AND TRADES PRIOR TO SUBMITTAL OF BID AND INSTALLATION OF SYSTEM.
3. THE PLUMBING CONTRACTOR SHALL GUARANTEE ALL MATERIALS & LABOR (INCLUDING THE COMPLETE PLUMBING SYSTEM) FOR A PERIOD OF ONE YEAR FROM WRITTEN ACCEPTANCE BY THE OWNER. ANY DEFECTS IN MATERIALS & OR LABOR FOUND WITHIN THE GUARANTEE PERIOD SHALL BE REMEDIED OR REPAIRED BY THIS CONTRACTOR IN A TIMELY FASHION, AT NO COST TO THE OWNER.
4. ALL PLUMBING FIXTURE LOCATIONS (WATER CLOSETS, LAVATORIES ETC.) ARE DIAGRAMMATIC & CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS FOR ADA COMPLIANT FIXTURES, EXACT LOCATIONS, MOUNTING HEIGHTS & COLOR.
5. ANY DEVIATIONS FROM THE DRAWINGS OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER PRIOR TO INSTALLATION.
6. CONTRACTOR SHALL VISIT SITE PRIOR TO SUBMITTAL OF BID AND FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS. SUBMITTAL OF BID WILL VERIFY THAT THE CONTRACTOR HAS VISITED THE SITE.
7. PIPING SHALL BE INSTALLED PARALLEL TO BUILDING LINES AND SUPPORTED AND ANCHORED AS REQUIRED TO FACILITATE EXPANSION AND CONTRACTION. THE INSTALLATION SHALL MEET ALL CONSTRUCTION CONDITIONS AND ALLOW FOR THE INSTALLATION OF OTHER TRADES.
8. TRAP PRIMERS FOR FLOOR DRAINS AND FLOOR SINKS AND WATER HAMMER ARRESTORS TO BE INSTALLED AS PER THE LISTED PLUMBING CODE AND THE LATEST EDITION OF THE AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE 1010) SIZING AND INSTALLATION REQUIREMENTS.
9. ALL VALVES, TRAP PRIMERS, WATER HAMMER ARRESTORS OR OTHER EQUIPMENT SHOWN IN WALLS OR ABOVE NON-ACCESSIBLE CEILINGS SHALL BE INSTALLED BEHIND AN ACCESS PANEL.
10. ALL SERVICE WATER HEATING EQUIPMENT TO BE IN COMPLIANCE WITH THE STATE ENERGY CODE AND 2013 IECC REQUIREMENTS AND LABELED AS SUCH.
11. ALL ITEMS PROJECTING THROUGH THE ROOF SHALL BE FLASHED THROUGH CURBS OR PIPE SEALS A MINIMUM OF 12" ABOVE THE ROOF. THE PIPE CURBS AND SEALS SHALL BE INSTALLED BY THE ROOFING CONTRACTOR. ENSURE THAT AMPLE BOOT OPENINGS ARE PROVIDED TO ACCOMMODATE ANY ELECTRICAL CONDUIT PENETRATIONS REQUIRED FOR POWER.
12. CONTRACTOR TO REFER TO PLUMBING FIXTURE SCHEDULE FOR INDIVIDUAL WASTE, VENT & WATER CONNECTION SIZES AT EACH PLUMBING FIXTURE.
13. ALL CLEANOUTS SHALL BE INSTALLED WHERE READILY ACCESSIBLE AND LOCATED AS PER CODE REQUIREMENTS. THE CONTRACTOR SHALL COORDINATE ALL CLEAN OUT LOCATIONS WITH EQUIPMENT, MILLWORK, ETC., PRIOR TO INSTALLATION.
14. ALL PLUMBING FIXTURE VENTS TO TERMINATE A MINIMUM OF 12 INCHES FROM ANY VERTICAL SURFACE AND 10'-0" FROM OR 3'-0" ABOVE ANY MECHANICAL EQUIPMENT OUTSIDE AIR INTAKE.
15. ALL VALVES, UNIONS, ETC. TO BE SAME SIZE AS CONNECTED SUPPLY LINE UNLESS OTHERWISE NOTED ON DRAWINGS.
16. UNIONS SHALL BE PROVIDED AND INSTALLED AFTER EACH SCREW-TYPE VALVE AND PRIOR TO EQUIPMENT CONNECTIONS.
17. ALL UNDERGROUND METALLIC PIPE AND FITTINGS SHALL BE PROTECTED IN ACCORDANCE WITH THE SOILS ENGINEER'S RECOMMENDATIONS.
18. NO PIPING SHALL BE DIRECTLY EMBEDDED IN CONCRETE, MASONRY WALLS, OR CONCRETE FOOTINGS.
19. THE PLUMBING CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS FOR ALL POINTS OF CONNECTION WITH THE GENERAL CONTRACTOR AND OTHER TRADES PRIOR TO START OF WORK.
20. VERIFY EXACT LOCATIONS, DEPTH AND SIZE OF ALL PIPING TO WHICH CONNECTIONS ARE REQUIRED. COORDINATE ALL CONNECTIONS WITH SITE CONDITIONS AND SITE UTILITY CONTRACTOR/ REPRESENTATIVE.
21. ALL HORIZONTAL PIPING LINES EXTENDED AND CONNECTED TO EQUIPMENT SHALL BE RUN AT THE HIGHEST POSSIBLE ELEVATIONS AND NOT LESS THAN 6" ABOVE THE FLOOR TO PROVIDE CLEARANCE FOR CLEANING.
22. ALL CUTTING OF EXISTING PAVING, WALKS AND/OR FLOORS SHALL UTILIZE MACHINE SAW CUTTING EQUIPMENT. HOLES FOR PIPES IN CONCRETE WALLS OR FLOORS SHALL UTILIZE CORE DRILLING EQUIPMENT. COORDINATE WITH ARCHITECTURAL DETAILS FOR FLOOR CUTTING AND PATCHING.
23. THE PLUMBING CONTRACTOR IS TO PROVIDE ALL ADDITIONAL STEEL, HANGER MATERIALS, RODS AND CLAMPS AS REQUIRED FOR COORDINATION WITH WORK OF OTHER TRADES.
24. PIPING LAYOUT IS SCHEMATIC ONLY, EXACT ROUTING AND INSTALLATION OF PIPES TO BE COORDINATED WITH THE BUILDING STRUCTURE AND THE WORK OF OTHER CONTRACTORS.
25. NO LIQUID TRANSMISSION PLUMBING PIPING SHALL BE INSTALLED ABOVE ELECTRICAL SWITCH GEAR, EQUIPMENT, OR PANELS. MAKE ADJUSTMENTS NECESSARY TO REROUTE PIPING FOR ACTUAL INSTALLATION OF ELECTRIC EQUIPMENT.
26. WHENEVER FOUNDATION WALLS, EXTERIOR WALLS, ROOFS, ETC. ARE PENETRATED FOR THE INSTALLATION OF PLUMBING SYSTEMS, THEY SHALL BE PATCHED TO MATCH EXISTING CONSTRUCTION AND SEALED WEATHER TIGHT.
27. PLUMBING CONTRACTOR SHALL BE ON SITE AND PRESENT AT THE DATE OF TURNOVER.
28. ALL EXTERIOR EXPOSED WATER PIPING SHALL BE INSULATED AND PVC JACKETED. SEAL JACKET PER MANUFACTURER'S REQUIREMENTS.
29. LABEL ALL SHUT-OFF VALVES ABOVE THE CEILING AND IN THE WALL WITH ACCESS DOORS.
30. GENERAL CONTRACTOR TO VERIFY PRESSURE ON SITE EARLY TO VERIFY IF BOOSTER PUMPS ARE REQUIRED.

## PLUMBING LEGEND

| SYMBOL | ABBREVIATION | DESCRIPTION |
|---|---|---|
| | W | SANITARY WASTE |
| | V | SANITARY VENT |
| | CW | DOMESTIC COLD WATER |
| | HW | DOMESTIC HOT WATER |
| | HWR | DOMESTIC HOT WATER RETURN |
| G | G | LOW PRESSURE GAS |
| CD | CD | CONDENSATE DRAIN |
| SD | SD | STORM DRAIN |
| OD | OD | OVERFLOW STORM DRAIN |
| JIL | VTR | VENT THRU ROOF |
| Å | SOV | VERTICAL SHUT-OFF VALVE |
| | SOV | SHUT-OFF VALVE |
| | PRV | PRESSURE REDUCING VALVE |
| | | PRESSURE GAUGE |
| | | THERMOMETER |
| | BV | BALL VALVE |
| | CV | CHECK VALVE |
| | U | UNION |
| | WHA | WATER HAMMER ARRESTER WITH ACCESS PANEL |
| | TP | TRAP PRIMER WITH ACCESS PANEL |
| | | PIPE UP |
| | | PIPE DOWN |
| Ø | FCO OR GCO | FLOOR OR GRADE CLEAN OUT |
| ØØ | SCO | 2-WAY SERVICE CLEAN OUT |
| ⊩ | WCO | WALL CLEAN OUT |
| + | HB | HOSE BIBB |
| | | |
| | POC | POINT OF CONNECTION |
| | | FLOOR DRAIN |
| | AP | ACCESS PANEL |
| | FFE | FINISHED FLOOR ELEVATION |
| | IE | INVERT ELEVATION |
| | FU | FIXTURE UNIT |

## SHEET INDEX

| SHEET NO. | DESCRIPTION |
|---|---|
| P-0.1 | GENERAL NOTES, LEGEND, AND DRAWING INDEX |
| P-0.2 | PLUMBING SCHEDULES AND DETAILS |
| P-2.0 | PLUMBING DEMOLITION FLOOR PLAN |
| P-3.0 | PLUMBING FLOOR PLAN - WASTE & VENT |
| P-3.1 | PLUMBING FLOOR PLAN - WATER |
| P-4.0 | PLUMBING RISER DIAGRAMS |

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REGISTERED PROFESSIONAL ENGINEER HITEN SHAH No. M... Exp. ...-22 MECHANICAL STATE OF CALIFORNIA

LICENSED ARCHITECT LONGKAVACH PANICHAPAN NO. C-29344 EXP. 11-30-21 STATE OF CALIFORNIA

architecture planning interior
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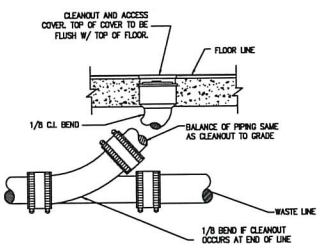
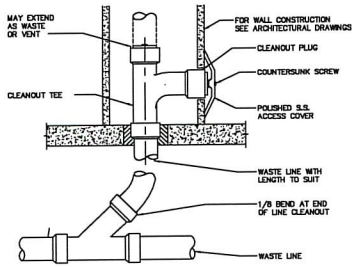
GENERAL NOTES, LEGEND, AND DRAWING INDEX

ORANGE COUNTY FIRE AUTHORITY
Fire Station #14 - Tenant Improvements
29402 SILVERADO CANYON RD., SILVERADO, CA 92676

P-0.1

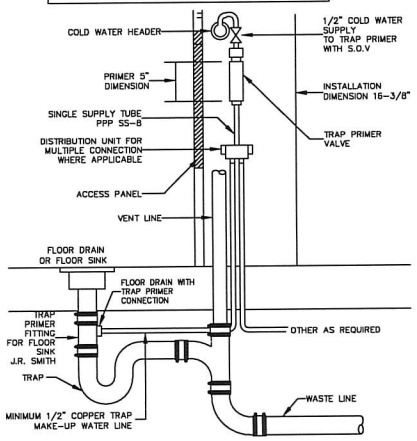



FOOR CLEAN OUT 3
SCALE: NONE




WALL CLEAN OUT 2
SCALE: NONE

NOTE:
1. TRAP PRIMER VALVE SHALL BE MOUNTED ONE FOOT ABOVE THE FINISHED FLOOR.
2. PROVIDE MOUNTING BRACKETS AS REQUIRED.




TRAP PRIMER DETAIL 1
SCALE: NONE

## PLUMBING FIXTURE SCHEDULE

| MARK | FIXTURE | PIPE SIZE S/W | PIPE SIZE V | PIPE SIZE CW | PIPE SIZE HW | DESCRIPTION / REMARKS |
|---|---|---|---|---|---|---|
| WC-1 | WATER CLOSET (ADA) | 4" | 2" | 1-1/4" | – | AMERICAN STANDARD MODEL 3351.528 1.28 GPF AFWALL MILLENIUM FLOWISE, WALL MOUNTED, ELONGATED TYPE. WHITE, SLOAN ROYAL 111-1.28 EXPOSED MANUAL OPERATED FLUSH VALVE, CHURCH 2155CT WHITE OPEN FRONT SEAT. |
| L-1 | LAVATORY (ADA) WALL MOUNT | 2" | 2" | ¾" | ¾" | AMERICAN STANDARD MODEL 0355.012.20 LUCERNE, WALL HUNG, WHITE, CHICAGO FAUCETS 3600-ABCP MANUAL METERING 0.5 GPM. MOUNTED AT ACCESSIBLE HEIGHT; REFER TO ARCHITECTURAL PLANS. INSTALL WITH POINT OF USE THERMOSTATIC VALVE BRADLEY MODEL 559-4000A |
| U-1 | URINAL (ADA) | 2" | 2" | 1-1/4" | – | AMERICAN STANDARD MODEL 6590.001 WASHBROOK, SLOAN ROYAL 186-0.125 DBP 0.125 GPF MANUAL OPERATED FLUSH VALVE, WALL HUNG. |
| SH-1 | SHOWER (NON-ADA) | 2" | 2" | ¾" | ¾" | BRADLEY WS-1F, INDIVIDUAL FLUSH-MOUNTED WALL SHOWER. 1.5 GPM COMPLETE WITH THERMOSTATIC MIXING VALVE LEVER HANDLE, W/ FD-1 DRAIN. |
| SH-2 | SHOWER (ADA) | 2" | 2" | ¾" | ¾" | BRADLEY HN200-T24 RECESSED-MOUNTED ADA SHOWER. 1.5 GPM COMPLETE W/ THERMOSTATIC MIXING VALVE LEVER HANDLE; DRAIN SHALL BE THE SAME AS FD-1. SECOND SHOWER HEAD AND VALVE LOCATION TO BE DETERMINED BY ARCHITECT AND/OR OWNER. |
| FD-1 | FLOOR DRAIN | 2" | 2" | – | – | ZURN MODEL Z415-BZ-P 8"ø NICKEL BRONZE GRATE, CAST IRON BODY, CONVERTIBLE MEMBRANE CLAMP, AND ADJUSTABLE COLLAR (TRAP PRIMER CONNECTION IF SHOWN ON THE PLAN). |
| WHA | WATER HAMMER ARRESTER | – | – | 1" | – | SIOUX CHIEF MODEL 654-CS 1" |
| TP-1 | TRAP PRIMER | – | – | ½" | – | SIOUX CHIEF MODEL 695-01 AUTOMATIC TRAP PRIMER VALVE INSTALL BEHIND ACCESS PANEL |
| WCO<br>FCO<br>GCO<br>CO | CLEAN-OUTS | – | – | – | – | WALL CLEAN OUT: "ZURN" MODEL: Z1447 SQUARE, Z1446 ROUND.<br>FLOOR CLEANOUT: "ZURN" MODEL: Z1400-BZ MUST BE FLUSHED TO SURFACE.<br>CLEAN OUT TO GRADE: "ZURN" MODEL: Z1400 MUST BE FLUSHED TO SURFACE.<br>T CLEAN OUT: "ZURN" MODEL: Z1445. |

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PLUMBING SCHEDULES & DETAILS

ORANGE COUNTY FIRE AUTHORITY
Fire Station #14 - Tenant Improvements
29402 SILVERADO CANYON RD., SILVERADO, CA 92676

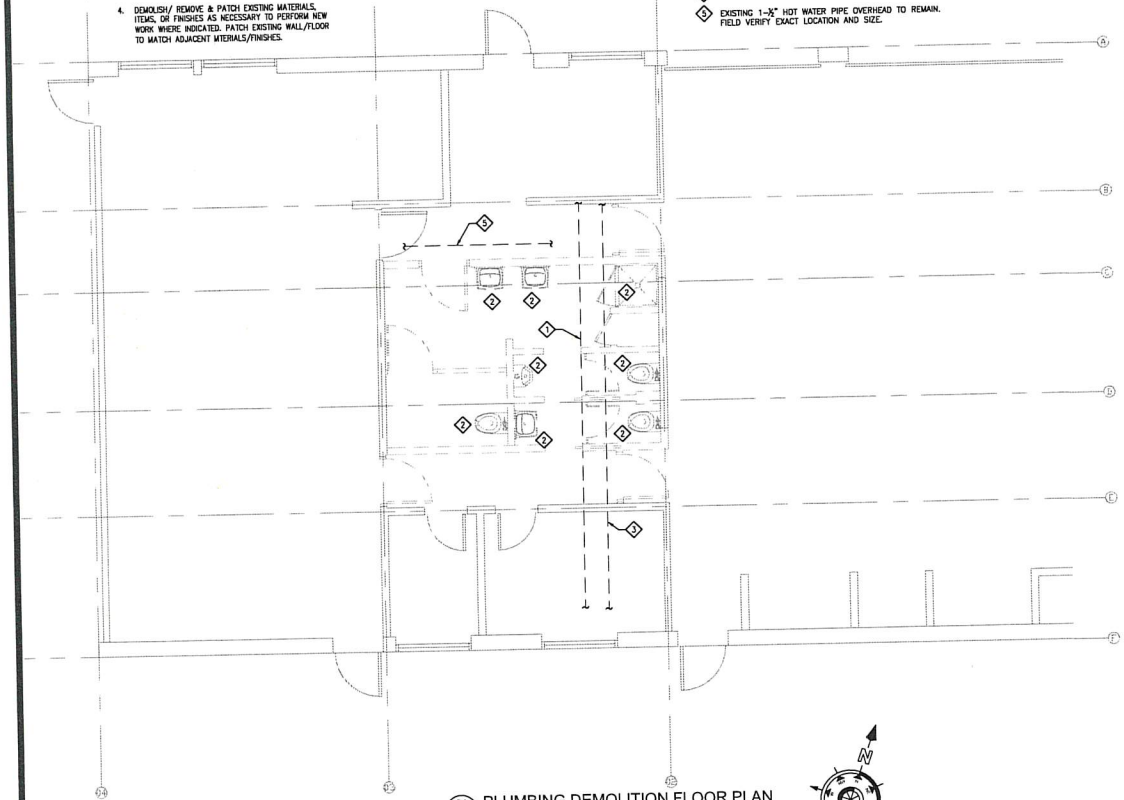
P-0.2

## GENERAL NOTES

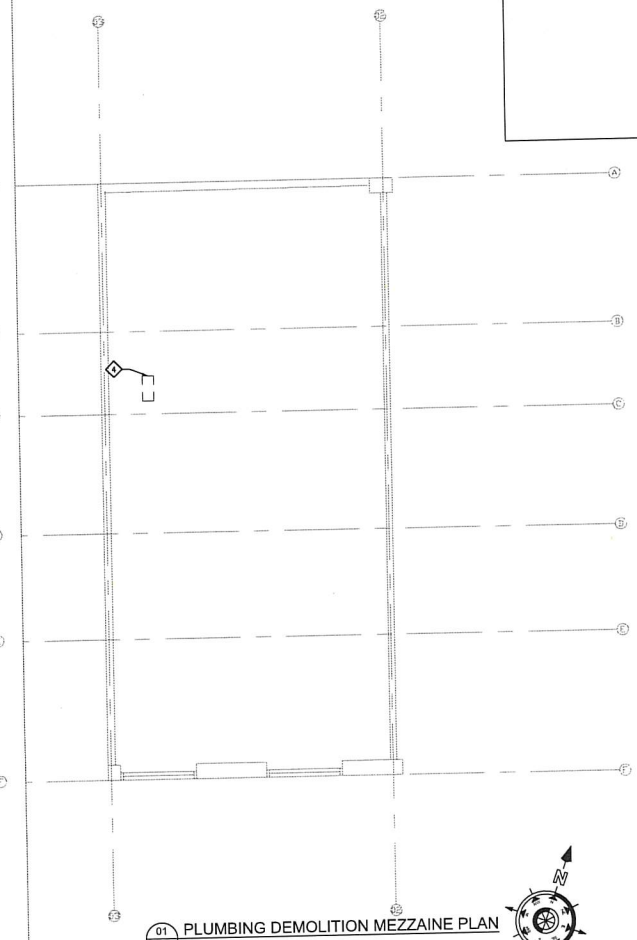
1. DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND ARE NOT INTENDED TO INDICATE NECESSARY OFFSETS OF PIPING, FITTING & APPURTENANCES THAT HAVE TO BE REMOVED, CAPPED OR REROUTED.
2. FOR CLARITY, NOT ALL EXISTING WORK IS SHOWN ON PLANS. CONTRACTOR SHALL FIELD VERIFY EXISTING UTILITIES, LOCATION, SIZE, INVERT ELEVATIONS, PRESSURE AND AVAILABILITY PRIOR TO START ON ANY WORK.
3. ALL WALL, FOOTING AND FLOOR PENETRATION SHALL BE CAULKED WITH FIRE PROOF IN AND APPROVED MANNER BY CALIFORNIA BUILDING CODE.
4. DEMOLISH/ REMOVE & PATCH EXISTING MATERIALS, ITEMS, OR FINISHES AS NECESSARY TO PERFORM NEW WORK WHERE INDICATED. PATCH EXISTING WALL/FLOOR TO MATCH ADJACENT MTERIALS/FINISHES.

## SHEET NOTES

1. EXISTING 4" SEWER PIPE BELOW FLOOR TO REMAIN. FIELD VERIFY EXACT LOCATION AND SIZE.
2. REMOVE EXISTING PLUMBING FIXTURE AND CAP PIPING BELOW FLOOR. PATCH AND REPAIR AS REQUIRED.
3. EXISTING 2" COLD WATER PIPE OVERHEAD TO REMAIN. FIELD VERIFY EXACT LOCATION AND SIZE.
4. EXISTING TANK-LESS WATER HEATER TO REMAIN.
5. EXISTING 1-½" HOT WATER PIPE OVERHEAD TO REMAIN. FIELD VERIFY EXACT LOCATION AND SIZE.



01 P-2.0 PLUMBING DEMOLITION FLOOR PLAN
Scale : 1/4" = 1'-0"



01 P-2.0 PLUMBING DEMOLITION MEZZAINE PLAN
Scale : 1/4" = 1'-0"

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# PLUMBING DEMOLITION PLAN

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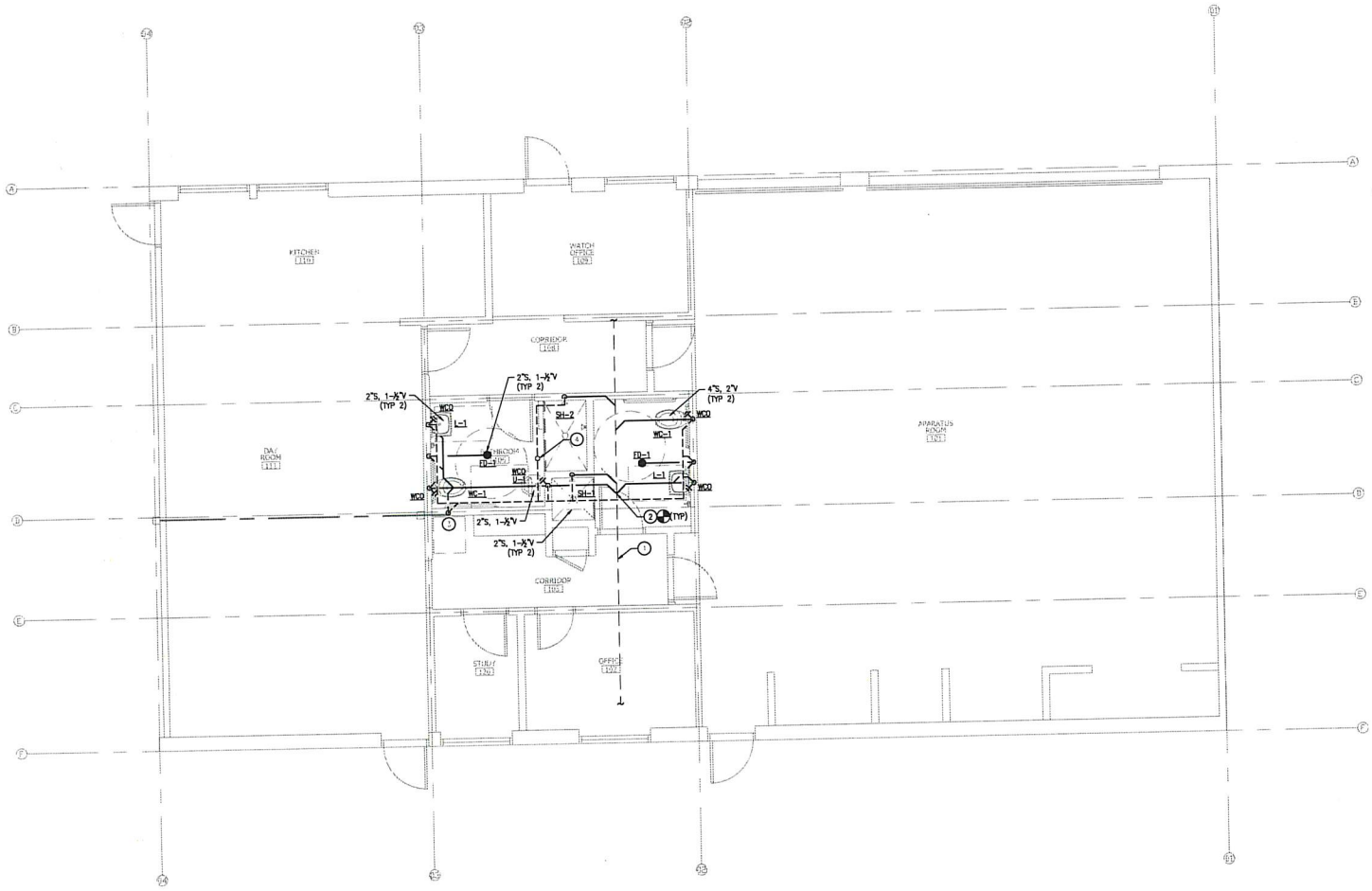
P-2.0




01 P-3.0 PLUMBING FLOOR PLAN - WASTE & VENT
Scale : 1/4" = 1'-0"

## SHEET NOTES

1. EXISTING 4" SEWER PIPE BELOW FLOOR TO REMAIN. FIELD VERIFY EXACT LOCATION AND SIZE.
2. POINT OF CONNECTION TO EXISTING 4" SEWER PIPE.
3. 3"S AND 2"V STUB OUTS FOR FUTURE FIXTURE.
4. 4"VTR. ROUTE THRU EXISTING VTR OPENING.

## GENERAL NOTES

1. PLUMBING WORK SHOWN ON PLAN IS DIAGRAMMATIC. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS.
2. DEMOLISH/ REMOVE & PATCH EXISTING MATERIALS, ITEMS, OR FINISHES AS NECESSARY TO PERFORM NEW WORK WHERE INDICATED. PATCH EXISTING WALL/FLOOR TO MATCH ADJACENT MATERIALS/FINISHES.
3. COORDINATE EXTENT OF DEMOLITION/ REMOVAL WITH ARCHITECTURAL PROPOSED FLOOR PLAN.
4. CONTRACTOR SHALL VERIFY EXISTING UTILITIES, LOCATION, SIZE, INVERT ELEVATIONS, PRESSURE AND AVAILABILITY PRIOR TO START ON ANY WORK.
5. SLOPE ALL WASTE/SANITARY SEWER @ ¼" PER FT SLOPE.
6. ALL VENTS SHALL BE MIN. 10" AWAY FROM AC UNIT AIR INTAKE.
7. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF PLUMBING FIXTURES.

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# PLUMBING FLOOR PLAN

ORANGE COUNTY FIRE AUTHORITY
Fire Station #14 - Tenant Improvements
29402 SILVERADO CANYON RD., SILVERADO, CA 92676

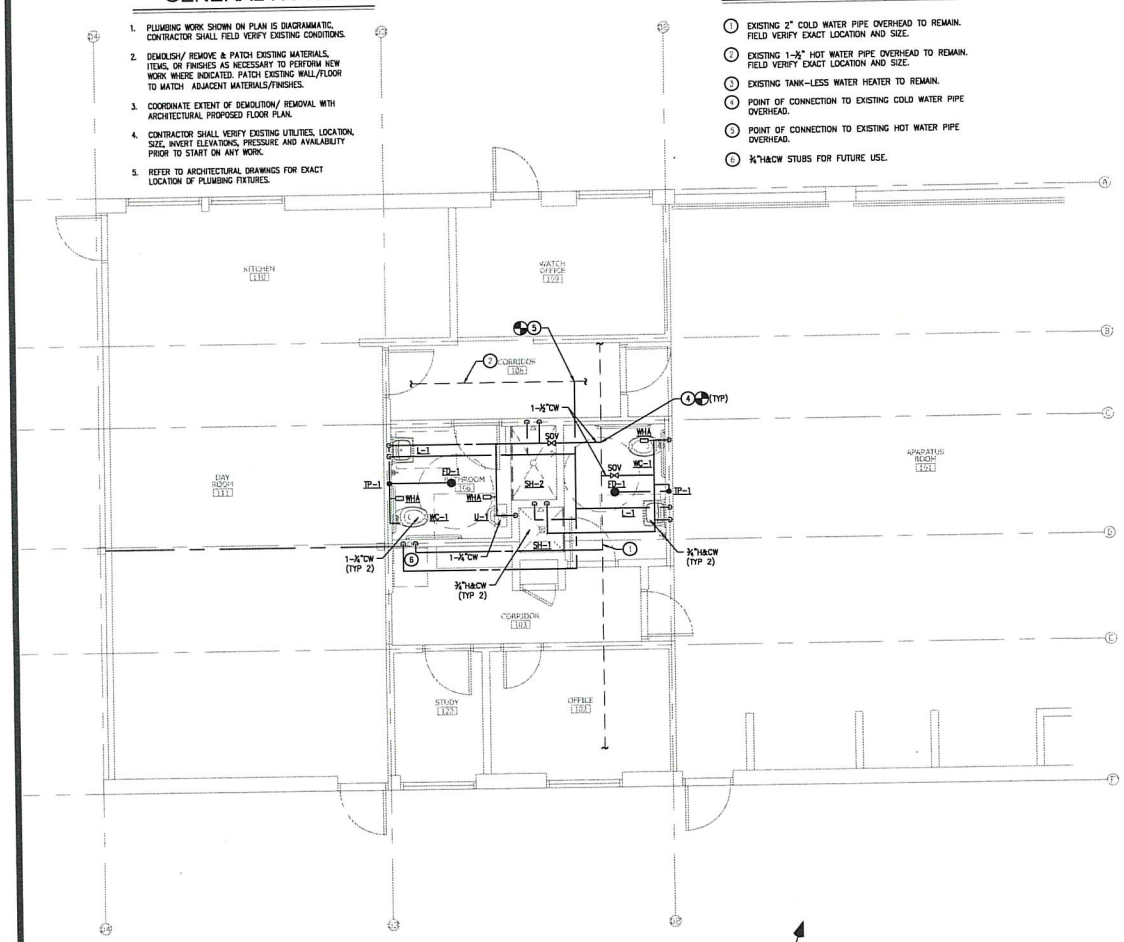
P-3.0

## GENERAL NOTES

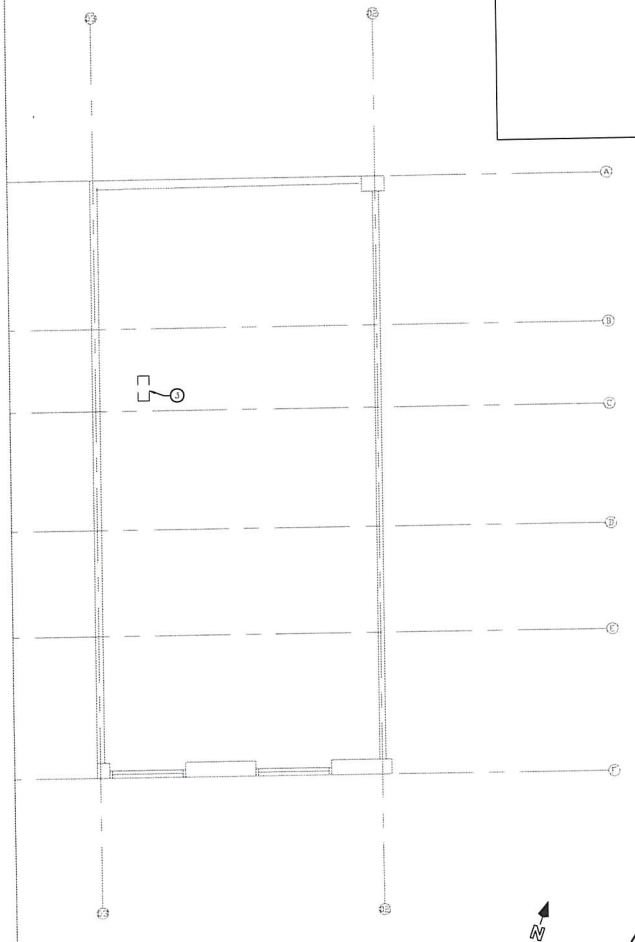
1. PLUMBING WORK SHOWN ON PLAN IS DIAGRAMMATIC. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS.
2. DEMOLISH/ REMOVE & PATCH EXISTING MATERIALS, ITEMS, OR FINISHES AS NECESSARY TO PERFORM NEW WORK WHERE INDICATED. PATCH EXISTING WALL/FLOOR TO MATCH ADJACENT MATERIALS/FINISHES.
3. COORDINATE EXTENT OF DEMOLITION/ REMOVAL WITH ARCHITECTURAL PROPOSED FLOOR PLAN.
4. CONTRACTOR SHALL VERIFY EXISTING UTILITIES, LOCATION, SIZE, INVERT ELEVATIONS, PRESSURE AND AVAILABILITY PRIOR TO START ON ANY WORK.
5. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF PLUMBING FIXTURES.

## SHEET NOTES

1. EXISTING 2" COLD WATER PIPE OVERHEAD TO REMAIN. FIELD VERIFY EXACT LOCATION AND SIZE.
2. EXISTING 1-½" HOT WATER PIPE OVERHEAD TO REMAIN. FIELD VERIFY EXACT LOCATION AND SIZE.
3. EXISTING TANK-LESS WATER HEATER TO REMAIN.
4. POINT OF CONNECTION TO EXISTING COLD WATER PIPE OVERHEAD.
5. POINT OF CONNECTION TO EXISTING HOT WATER PIPE OVERHEAD.
6. ¾"H&CW STUBS FOR FUTURE USE.




01 P-3.1 PLUMBING FLOOR PLAN - WATER
Scale : 1/4" = 1'-0"



01 P-3.1 PLUMBING MEZZAINE PLAN
Scale : 1/4" = 1'-0"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# PLUMBING FLOOR PLAN

ORANGE COUNTY FIRE AUTHORITY
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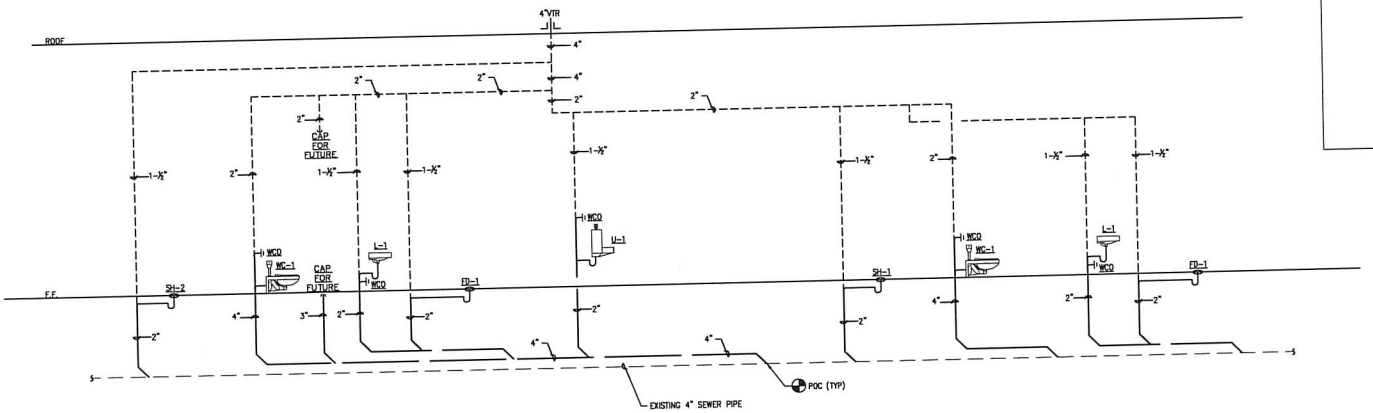
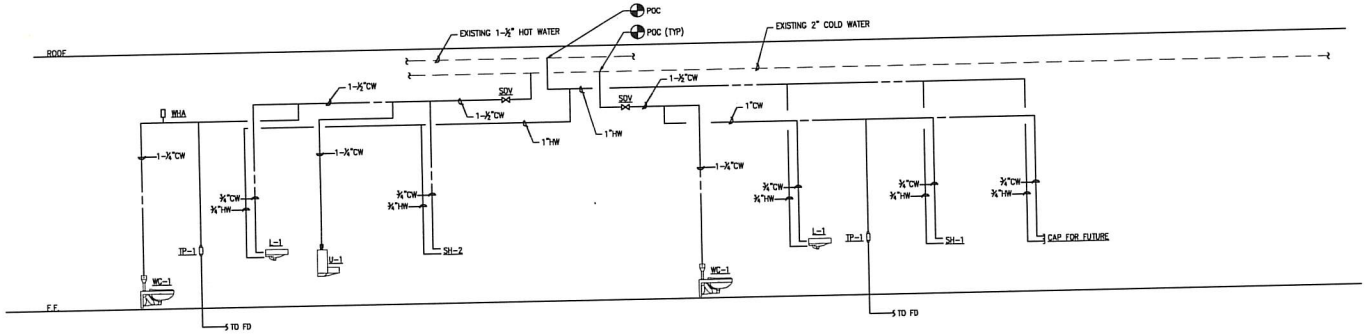
P-3.1




01 P-4.0 PLUMBING RISER DIAGRAM - WASTE & VENT
NTS




02 P-4.0 PLUMBING RISER DIAGRAM - WATER
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# PLUMBING RISER DIAGRAMS

ORANGE COUNTY FIRE AUTHORITY
Fire Station #14 - Tenant Improvements
29402 SILVERADO CANYON RD., SILVERADO, CA 92676

**P-4.0**

## 5B: OCFA FIRE STATION 14 ASBESTOS REPORT

AMBIENT ENVIRONMENTAL, INC.

RECEIVED
OCT - 9 2007
OCFA/Property Management

**CONFIDENTIAL AND PRIVILEGED**
**ASBESTOS SURVEY**

**For the property located at:**
**Fire Station #14**
**29402 Silverado Canyon**
**Silverado, California**

Prepared for:

**Orange County Fire Authority**
**Support Services/Property Management**
1 Fire Authority Road Service Center
Irvine, California 92602
Attn: Ms. Helen Vesperman

Prepared by:
**Ambient Environmental Inc.**
1464 Sixth Street
Norco, California 92860

September 31, 2007

Ambient Environmental Inc. Project #07-1679

John L. Payne
California Certified Asbestos
Consultant #93-1226

## TABLE OF CONTENTS


1.0 EXECUTIVE SUMMARY

2.0 SURVEY PROCEDURES

3.0 BULK SAMPLING PROCEDURES

4.0 POSITIVE ASBESTOS SAMPLE RESULTS AND LOCATIONS

5.0 NEGATIVE ASBESTOS SAMPLE RESULTS AND LOCATIONS

6.0 HAZARDOUS ASSESSMENTS

7.0 RECOMMENDATIONS

APPENDIX A CHAIN OF CUSTODY AND BULK SAMPLE LOG
APPENDIX B LABORATORY CERTIFICATES OF ANALYSIS

## 1.0 EXECUTIVE SUMMARY

Ambient Environmental Inc. was retained by the Orange County Fire Authority to conduct a comprehensive interior asbestos survey for the property located at: Fire Station #14 29402 Silverado Canyon in Silverado, California.

The survey was conducted on September 6th, 2007, by Mr. John L. Payne a California Certified Asbestos Consultant and a United States Environmental Protection Agency (USEPA) certified building inspector for Asbestos-Containing Building Materials (ACBM).

The purpose of the asbestos survey was to locate and identify accessible friable and non-friable suspect asbestos-containing materials within the fire station interior. Once a visual inspection was performed, representative bulk samples were obtained from each homogeneous material. The sample location, material type, friability and condition of material were documented.

Asbestos bulk sampling were obtained in accordance with the USEPA established guidelines document, "Guidance for Controlling Asbestos-Containing Materials in Buildings" (USEPA 560/5-85-024, 1985) and USEPA 40 CFR Part 763 "Asbestos-Containing Materials in Schools, Final Rule" (AHERA). Each bulk sample was analyzed for asbestos content by Polarized Light Microscopy (PLM). A total of 6 bulk samples were obtained for the subject property and submitted to Forensic Analytical for analysis.

The Orange County Fie Authority personnel provided keys and access to the property. All accessible areas of the building interior were visually inspected. ACBM, not identified in this report, may be present within hidden and/or concealed areas of the building. Laboratory analysis revealed detectable levels of asbestos in 1 type of materials:

1. Vinyl Floor Tile and Mastic

Locations and conditions of the materials assessed and sampled can be found in the Material Inventory (Tables).

## 4.0 SURVEY PROCEDURES

Ambient Environmental Inc. conducted a comprehensive asbestos interior survey for the property located at: Fire Station #14 29402 Silverado Canyon in Silverado, California. All accessible areas of the building interior were surveyed for asbestos. Intrusive sampling of areas which would have required demolition and/or damage to building components finishes such as hard enclosures, laminates, floor coverings, ceiling tile, gasket material, etc. were not sampled. ACBM not identified in this report, may be present within hidden or concealed areas of the building.

ACBM identification was performed by entering each functional space and assessing all structural/mechanical components and architectural finishes. The physical conditions, friability, accessibility, activity and damage of suspect ACBM was also assessed and documented.

For reporting purposes, space designations were assigned each functional space within the facilities using the pre-existing designation on doors or as indicated by the on-site personnel. Where neither was available, the space was labeled by the inspector and so indicated in this report. The following procedures were performed:

- A visual assessment to identify the location, type and quantity of, friable and non-friable asbestos building materials.
- Obtain representative bulk samples from suspect ACBM.
- Samples were analyzed by an independent accredited laboratory for the presence of asbestos by PLM.
- Present all survey results in a written report including recommendation, locations and laboratory results.

All findings, recommendations, and analytical data presented in this report are based on the information (assessment and sampling data) obtained by our inspector during the survey.

## 3.0 BULK SAMPLING PROCEDURES

Each suspect ACBM identified during the visual survey, were sampled in accordance with sampling guidelines established by the USEPA. The following summarizes the sampling procedures utilized.

- Building materials were categorized into homogeneous materials. A homogeneous material is defined as being uniform in texture, color, and date of application.

- A sampling scheme was developed based upon the location and quantities of the various homogeneous materials.

- Bulk samples were collected by extracting a representative section of each selected building material, placing the selected building material into a sampling container and assigning a unique sample number to each sample. The samples were then placed into a sealed shipping container for delivery to an accredited laboratory for analysis by PLM.

- Personnel performed proper decontamination procedures to prevent the spread of secondary contamination.

- Each bulk sample was recorded on a bulk sample log and possession of the samples was tracked by a chain of custody record.

The reported laboratory results in this report are a visual estimate by area of asbestos concentration. Results for heterogeneous samples examined by component are reported as a composite. The lower limit of reliable detection for this method is 1%. Samples, which contain more than 1% asbestos are reported in 5% ranges. Samples, which contain asbestos in a concentration lower than the limit of reliable detection (<1%) are "Trace."

All bulk samples were analyzed by PLM in accordance with the "Interim Method for the Determination of Asbestos in Bulk Insulation Samples EPA – 600/M4-82-020" dated December 1982 and adopted by the National Voluntary Laboratory Accreditation Program (NVLAP) Title 15, part 7 of the Code of Federal Register as affiliated with the National Institute for Standards and Testing (NIST).

Six bulk samples were obtained from the subject property and analyzed for asbestos content by Forensic Analytical of Rancho Dominguez, California. Forensic Analytical is accredited by the American Industrial Hygiene Association (AIHA), National Voluntary Laboratory Accreditation Program (NVLAP), National Institute of Standards and Testing (NIST), and is a successful participant in the Proficiency Analytical Testing Program (Pat).

# 4.0 POSITIVE ASBESTOS SAMPLE RESULTS AND LOCATION

| Material | Sample Number | Asbestos Content | Location of Material | Friable | Damage |
|---|---|---|---|---|---|
| Vinyl Floor Tile and Mastic | 04 | Trace Chrysotile | Throughout Interior | No | No |

# 5.0 NEGATIVE ASBESTOS SAMPLE RESULTS AND LOCATION

| Material | Sample Number | Location of Material | Damage |
|---|---|---|---|
| Drywall and Joint Compound | 01<br>02<br>03 | Throughout Interior | No |
| Sprayed Applied Fireproofing | 05 | Garage | No |
| Baseboard and Mastic | 06 | Throughout Interior | No |

## 6.0 HAZARD ASSESSMENTS OF (ACM) MATERIALS

| Material | Location of Material | Hazard |
|---|---|---|
| Vinyl Floor Tile and Mastic | Throughout Interior | Good |

**Good** - Material shows little or no damage and requires no remedial action.
**Moderate** - Material is somewhat damaged and is in need of minor repairs.
**Significantly Damaged** - Material is in need of immediate remedial action.

## 7.0 RECOMMENDATIONS

It is Ambient Environmental, Inc's. professional opinion that all Asbestos Containing Building Materials (ACBM) can be managed in place. If the ACBM are to remain at the facility, then a Asbestos Management Program should be implemented. Notification requirements in accordance with AB3713 and AB1564 and posting requirements in accordance with Proposition 65 should also be implemented and maintained.

Maintenance, construction and repair personnel should be made aware of the presence of ACBM, and instructed them not to disturb and/or damage the ACBM. Current federal and state regulations require any repair, renovation and/or demolition of any ACBM shall be conducted only by workers and/or contractors who have been properly trained in the correct handling of asbestos. All asbestos work should proceed under the guidance or direction of an independent State Certified Asbestos Consultant with oversight performed by a State Certified Site Surveillance Technician.

The ACBM identified during this survey are in good condition, and are not likely to pose an environmental or public health risk so long as the material is maintained in it's present condition.

Ambient Environmental Inc. warrants that our services are performed, within the limits prescribed by our client, with the usual thoroughness and competence of the engineering profession.

The recommendations in this report are professional opinions based solely on visual observations and analytical analyses, as described in this report. Because the scope of services was limited to accessible ACBMs, intrusive investigative techniques were not contracted for, it is possible that unrecognized ACBMs may exist in the facilities.

Opinions and recommendations presented herein apply to site conditions existing at the time of our investigation and those reasonably foreseeable, they cannot necessarily apply to site changes of which this office is not aware of and/or has not had the opportunity to evaluate.

# APPENDIX A

# CHAIN OF CUSTODY
# AND BULK SAMPLE LOG

# AMBIENT ENVIRONMENTAL, INC.

Asbestos / Lead Field Services
Indoor Air Quality Services
Phase I Site Assessments
Lab Services

1464 6TH STREET
NORCO, CALIFORNIA 92860
* TEL: (951) 272-4730
* FAX: (951) 272-4731

## ASBESTOS BULK SAMPLE LOG

Page____ of ____

Client Name: OCFA

Project Location: 29402 Silverado Canyon

Date: 9-6-07 Field Technician: John Payne

Project Number: 07-16~~9~~79 Priority: ASAP ___ 24 HR ✓ 3-5 Days ___

| SAMPLE NUMBER | SAMPLE LOCATION | MATERIAL DESCRIPTION | SQUARE FOOTAGE |
|---|---|---|---|
| 01 | Kitchen | Drywall and Joint compound | |
| 02 | Restroom | ↓ ↓ | |
| 03 | office | | |
| 04 | Kitchen | Brown Vinyl Floor Tile and Mastic | |
| 05 | Truck Garage | Spray Fire Proofing | |
| 06 | Hallway | Baseboard and Mastic | |
| | | | |
| | | | |
| | | | |
| | | | |

Chain of Custody Analytical Method: PLM: ✓ TEM: ____ Other: ____

| | | | |
|---|---|---|---|
| Sampled By | | Date | Time |
| Relinquished By | | Date | Time |
| Received By | Jo Ann Carrillo | Date 9/7/07 | Time 10:25 AM F/E |
| Relinquished By | | Date | Time |
| Received By | | Date | Time |

# APPENDIX B

# LABORATORY CERTIFICATES OF ANALYSIS

**Final Report**

**Forensic Analytical**

# Bulk Asbestos Analysis

(EPA Method 600/R-93-116, Visual Area Estimation)

Ambient Environmental Inc
J.Payne/J.Lumpkin
1464 6th Street

Norco, CA 92860

**Client ID:** 5697
**Report Number:** B103618
**Date Received:** 09/07/07
**Date Analyzed:** 09/10/07
**Date Printed:** 09/10/07
**First Reported:** 09/10/07

**Job ID/Site:** 07-1679, OCFA, 29402 Silverado Canyon

**FASI Job ID:** 5697

**Date(s) Collected:** 09/06/2007

**Total Samples Submitted:** 6
**Total Samples Analyzed:** 6

| Sample ID | Lab Number | Asbestos Type | Percent in Layer | Asbestos Type | Percent in Layer | Asbestos Type | Percent in Layer |
|---|---|---|---|---|---|---|---|
| **01** | 50410994 | | | | | | |
| Layer: Brown Drywall | | | **ND** | | | | |
| Layer: White Skimcoat/Joint Compound | | | **ND** | | | | |
| Layer: Paint | | | **ND** | | | | |
| Total Composite Values of Fibrous Components: | | **Asbestos (ND)** | | | | | |
| Cellulose (20 %) Fibrous Glass (5 %) | | | | | | | |
| **02** | 50410995 | | | | | | |
| Layer: Brown Drywall | | | **ND** | | | | |
| Layer: White Skimcoat/Joint Compound | | | **ND** | | | | |
| Layer: Paint | | | **ND** | | | | |
| Total Composite Values of Fibrous Components: | | **Asbestos (ND)** | | | | | |
| Cellulose (20 %) Fibrous Glass (5 %) | | | | | | | |
| **03** | 50410996 | | | | | | |
| Layer: Brown Drywall | | | **ND** | | | | |
| Layer: White Skimcoat/Joint Compound | | | **ND** | | | | |
| Layer: Paint | | | **ND** | | | | |
| Total Composite Values of Fibrous Components: | | **Asbestos (ND)** | | | | | |
| Cellulose (20 %) Fibrous Glass (5 %) | | | | | | | |
| **04** | 50410997 | | | | | | |
| Layer: White Tile | | | **ND** | | | | |
| Layer: Black/Tan Mastic | | Chrysotile | **Trace** | | | | |
| Total Composite Values of Fibrous Components: | | **Asbestos (Trace)** | | | | | |
| Cellulose (Trace) | | | | | | | |
| **05** | 50410998 | | | | | | |
| Layer: Off-White Fibrous Material | | | **ND** | | | | |
| Total Composite Values of Fibrous Components: | | **Asbestos (ND)** | | | | | |
| Cellulose (99 %) | | | | | | | |
| **06** | 50410999 | | | | | | |
| Layer: Tan Non-Fibrous Material | | | **ND** | | | | |
| Layer: Beige Mastic | | | **ND** | | | | |
| Total Composite Values of Fibrous Components: | | **Asbestos (ND)** | | | | | |
| Cellulose (Trace) | | | | | | | |



2959 Pacific Commerce Drive • Rancho Dominguez, CA 90221 • Telephone: 310/763-2374 • Toll Free: 888/813-9417 • Fax: 310/763-8684

**Report Number:** B103618
**Date Printed:** 09/10/07

**Client Name:** Ambient Environmental Inc

| Sample ID | Lab Number | Asbestos Type | Percent in Layer | Asbestos Type | Percent in Layer | Asbestos Type | Percent in Layer |
|---|---|---|---|---|---|---|---|

Steven Takahashi, Laboratory Supervisor, Rancho Dominguez Laboratory

Note: Limit of Quantification ('LOQ') = 1%. 'Trace' denotes the presence of asbestos below the LOQ. 'ND' = 'None Detected'.

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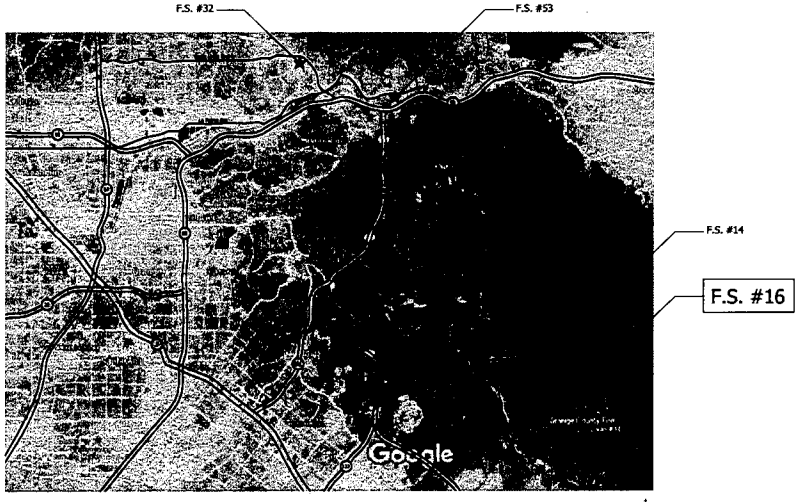
## 5C: OCFA FIRE STATION 16 PERMIT SET

# ORANGE COUNTY FIRE AUTHORITY

GILLIS + PANICHAPAN ARCHITECTS, INC.

Jack Panichapan, AIA
PRINCIPAL-IN-CHARGE

## RE-BID SET




VICINITY MAP (NOT TO SCALE)

# FIRE STATION FACILITIES - TENANT IMPROVEMENTS

PROJECT NO. 4009

F.S. NO. 16: 28891 MODJESKA RD.,
SILVERADO, CA 92676

## SHEET INDEX


CV-1 COVER SHEET - F.S. 16

CIVIL DRAWINGS

C-2.0 OCFA STATION #16 SURVEY
C-3.0 OCFA STATION #16 DEMO
C-5.0 OCFA STATION #16 GRADING
C-6.0 OCFA STATION #16 DETAILS

ARCHITECTURAL DRAWINGS:

T-1 TITLE SHEET - F.S. 16
T-2 AERIAL SITE PLAN (FOR REFERENCE) - F.S. 16
T-3 MISCELLANEOUS
A-1.1 PARTIAL SITE PLAN
A-2.1 EXISTING/DEMO FLOOR PLAN - F.S. 16
A-2.2 PROPOSED FLOOR PLAN - F.S. 16
A-2.3 PROPOSED REFLECTED CEILING PLAN - F.S. 16
A-2.4 INTERIOR ELEVATIONS - F.S. 16
A-2.5 DOOR AND FLOOR FINISH SCHEDULES - F.S. 16
A-5.1 ADA DETAILS
A-5.2 DETAILS
A-5.3 DETAILS

STRUCTURAL DRAWINGS:

S-1 RETAINING WALL & DETAILS

ELECTRICAL DRAWINGS:

E-0.1 ELECTRICAL SYMBOL LIST AND ABBREVIATIONS
E-0.2 ELECTRICAL SPECIFICATIONS
E-0.3 SINGLE LINE DIAGRAM AND PANEL SCHEDULES
E-0.4 T-24 COMPLIANCE FORMS & LIGHT FIXTURE SCHEDULE
E-0.5 LIGHTING FIXTURE CUTSHEETS
E-2.0 DEMOLITION LIGHTING PLAN
E-2.1 DEMOLITION POWER PLAN
E-3.0 PROPOSED LIGHTING PLAN
E-3.1 PROPOSED POWER PLAN

MECHANICAL DRAWINGS:

M-0.1 MECHANICAL GENERAL NOTES AND LEGEND
M-0.2 MECHANICAL SCHEDULES AND DETAILS
M-2.0 MECHANICAL DEMOLITION FLOOR PLAN
M-3.0 MECHANICAL PROPOSED FLOOR AND ROOF PLAN

PLUMBING DRAWINGS:

P-0.1 GENERAL NOTES, LEGEND, AND DRAWING INDEX
P-0.2 PLUMBING SCHEDULES AND DETAILS
P-2.0 PLUMBING DEMOLITION FLOOR PLAN
P-3.0 PLUMBING FLOOR PLAN - WASTE AND VENT
P-3.1 PLUMBING FLOOR PLAN - WATER AND GAS
P-4.0 PLUMBING RISER DIAGRAMS



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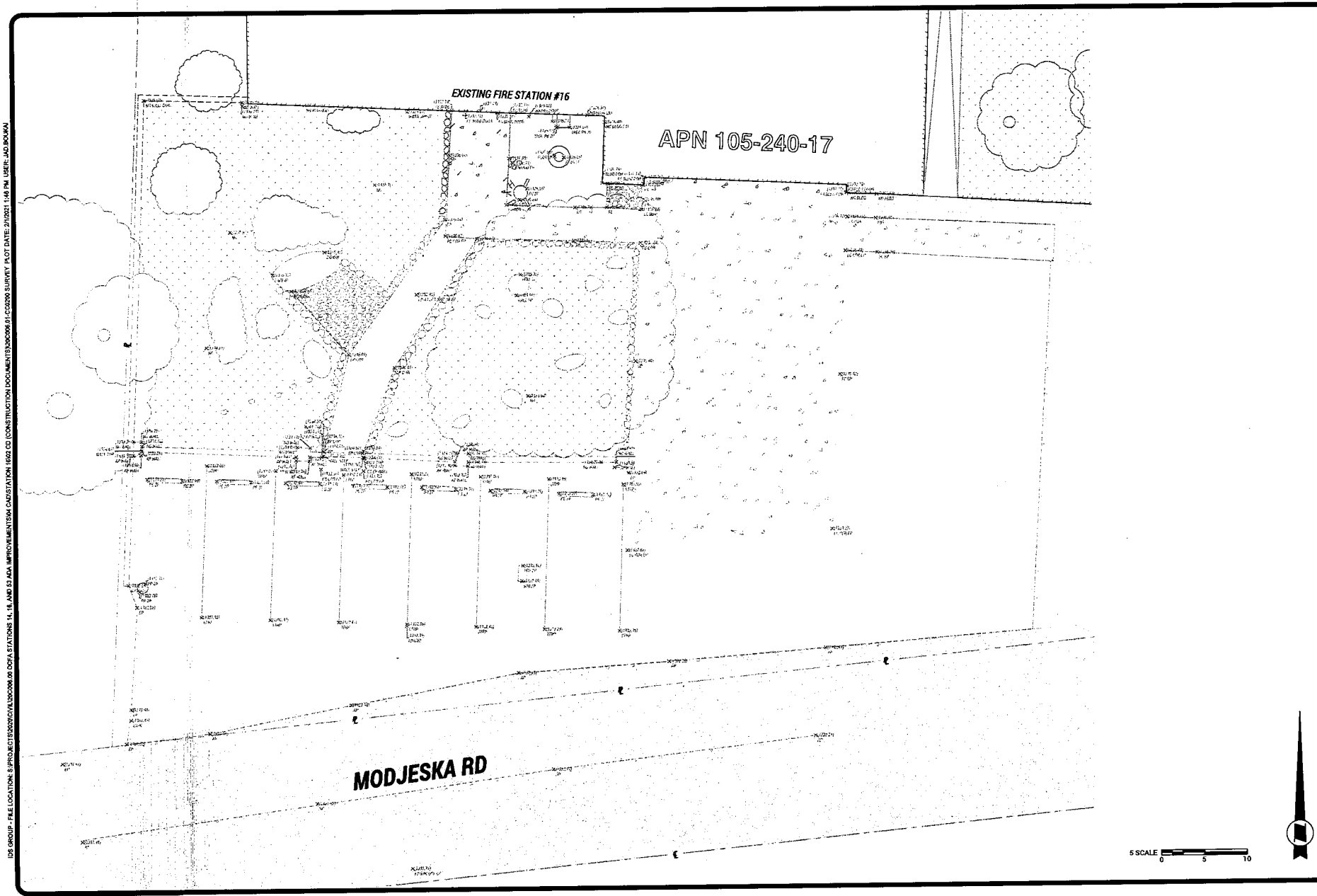
| BID RFIs | DATE: 01/07/2022 |
| JOB NO.: 4009 | |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: | |

COVER SHEET - F.S. 16

ORANGE COUNTY FIRE AUTHORITY
Fire Station #16 - Tenant Improvements
28891 MODJESKA CANYON RD., SILVERADO, CA 92676

CV-1




PROGRESS PLAN. NOT FOR CONSTRUCTION

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| 3 RE-BID SET | |
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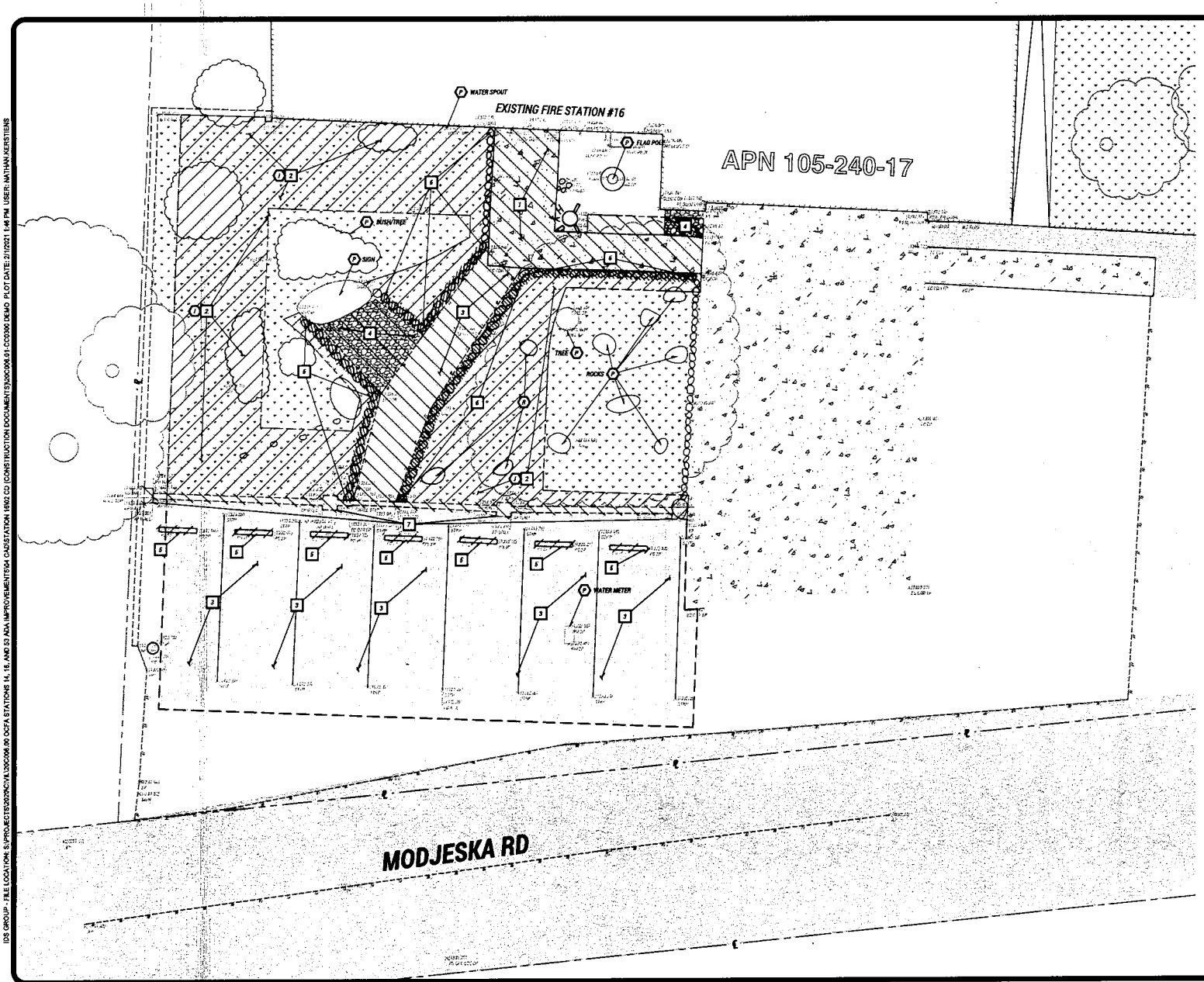
| DRAWN BY: JB | |
| CHECKED BY: MK | |
| SCALE: AS NOTED | |

OCFA STATION #16 SURVEY

ORANGE COUNTY FIRE AUTHORITY
Fire Station #16 - Tenant Improvements
28891 MODJESKA CANYON RD., SILVERADO, CA 92676

C-2.0

IDS GROUP - FILE LOCATION: S:\PROJECTS\2020\CIVIL\20C006.00 OCFA STATIONS 14, 16, AND 53 ADA IMPROVEMENTS\04 CAD\STATION 16\02 CD (CONSTRUCTION DOCUMENTS)\20C006.01-CC0200 SURVEY PLOT DATE: 2/1/2021 1:48 PM USER: JAD.BOUKAI




## DISPOSITION NOTES

- (I) SEE IRRIGATION NOTES ON ARCHITECTURAL PLAN
- (P) PROTECT-IN-PLACE ITEM AS SHOWN
- (R) RELOCATE OR REPLACE IN KIND ITEM AS SHOWN

## DEMOLITION NOTES

- 1 REMOVE EXISTING CONCRETE WALK
- 2 REMOVE EXISTING TREE/VEGETATION
- 3 SAWCUT AND REMOVE AND DISPOSE EXISTING ASPHALT
- 4 SAWCUT AND REMOVE AND DISPOSE EXISTING COBBLESTONE
- 5 REMOVE EXISTING WHEEL STOP
- 6 REMOVE AND SALVAGE EXISTING ROCK
- 7 REMOVE EXISTING RETAINING WALL

## LEGEND

- EDGE OF PAVEMENT
- BUILDING OUTLINE
- DEMO SURFACE

5 SCALE 0 5 10


GPa
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| 3 RE-BID SET | |
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| DRAWN BY: JB | |
| CHECKED BY: HK | |
| SCALE: AS NOTED | |

OCFA STATION #16 DEMO

ORANGE COUNTY FIRE AUTHORITY
Fire Station #16 - Tenant Improvements
28891 MODJESKA CANYON RD., SILVERADO, CA 92676

C-3.0

PROGRESS PLAN. NOT FOR CONSTRUCTION

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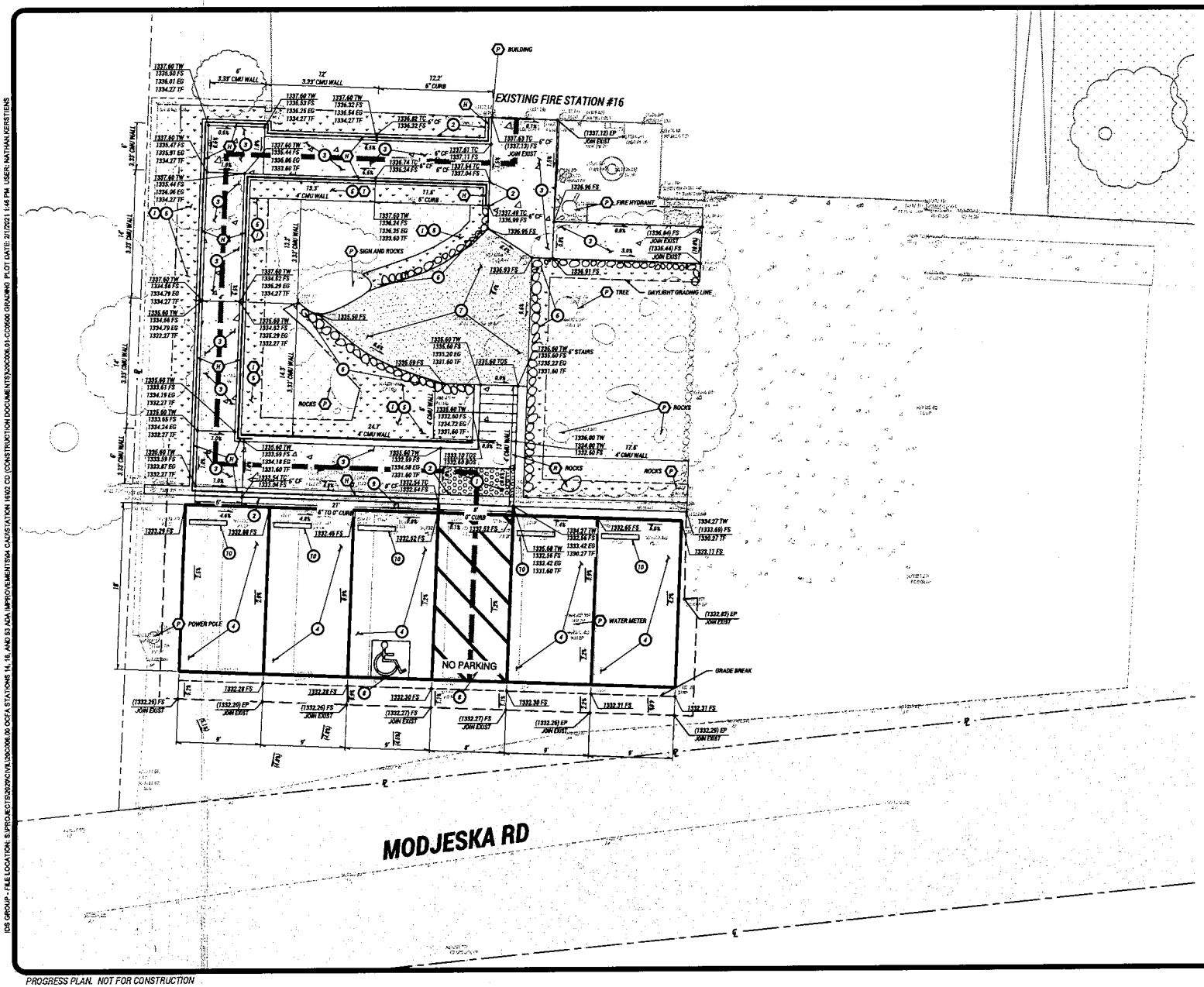


## DISPOSITION NOTES

- (H) SEE HANDRAIL NOTES ON ARCHITECTURAL PLAN
- (I) SEE IRRIGATION NOTES ON ARCHITECTURAL PLAN
- (P) PROTECT-IN-PLACE ITEM AS SHOWN
- (R) RELOCATE OR REPLACE IN KIND ITEM AS SHOWN

## CONSTRUCTION NOTES

1. CONSTRUCT PCC WITH CAST-IN-PLACE TRUNCATED DOMES PER SPPWC STD DWG NO. 111-5 AND DETAIL 1, SHEET C-6.0
2. CONSTRUCT MODIFIED PCC CURB PER SPPWC STD NO. 120-2 TYPE AT. HEIGHT PER PLAN
3. CONSTRUCT 4" SIDEWALK PER PLAN AND ORANGE COUNTY STD NO. 1205
4. CONSTRUCT 6" PCC PAVEMENT OVER 6" CAB PER PLANS AND ORANGE COUNTY STD NO. 1209, CONCRETE SHALL BE CLASS 560-C-3250
5. INSTALL NEW LANDSCAPING, REGRADE TO MATCH PROPOSED GRADE
6. RELOCATE SALVAGED BOULDERS
7. CONSTRUCT DECOMPOSED GRANITE PATH
8. PAINT PARKING LOT STRIPING PER SPPWC STANDARD PLAN 180-0 AND DETAIL 8, SHEET C-6.0
9. CONSTRUCT NEW ADA PARKING SIGN PER SPPWC STANDARD PLAN 180-0 AND DETAIL 9, SHEET C-6.0
10. CONSTRUCT WHEEL STOP PER SPPWC STANDARD PLAN 120-2 TYPE C1-6 AND DETAIL 10, SHEET C-6.0

## LEGEND

- EDGE OF PAVEMENT
- BUILDING OUTLINE
- SAWCUT LINE
- DAYLIGHT GRADING LINE
- GRADE BREAK
- CURB
- LANDSCAPE
- EXISTING AC
- EXISTING STREET AC
- PROPOSED TRUNCATED DOMES
- ADA PATH OF TRAVEL
- PROPERTY LINE

5 SCALE 0 5 10

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| 3 | RE-BID SET |
| JOB NO.: 4009 | DATE: 01/07/2022 |
| DRAWN BY: JB | |
| CHECKED BY: NK | |
| SCALE: AS NOTED | |

OCFA STATION #16 GRADING

ORANGE COUNTY FIRE AUTHORITY
Fire Station #16 - Tenant Improvements
28891 MODJESKA CANYON RD., SILVERADO, CA 92676

C-5.0

PROGRESS PLAN. NOT FOR CONSTRUCTION

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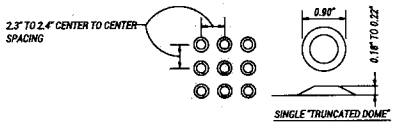


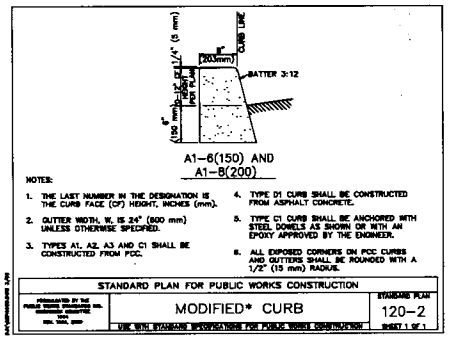

NOTE:

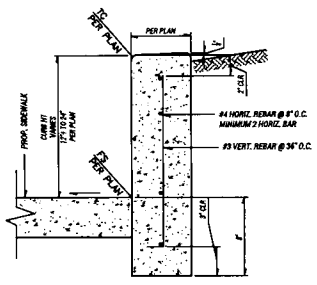
CURB RAMPS SHALL HAVE A DETECTABLE WARNING SURFACE THAT EXTENDS THE FULL WIDTH AND 3'-0" DEPTH OF THE RAMP. COLOR OF DETECTABLE WARNING SURFACE SHALL BE DARK GRAY.

DETECTABLE WARNINGS SHALL CONSIST OF A SURFACE OF TRUNCATED DOMES AND SHALL COMPLY WITH SECTION 118-705.

NTS

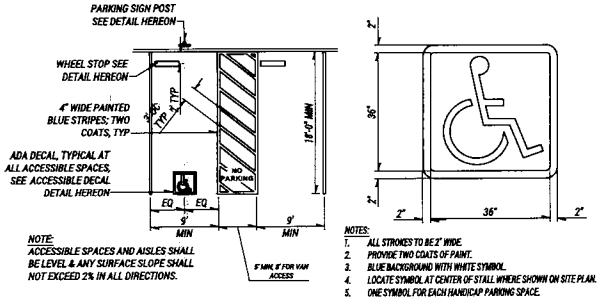
## TRUNCATED DOMES 1




NTS

## MODIFIED* CURB TYPE A1-6 & PCC RETAINING CURB 2

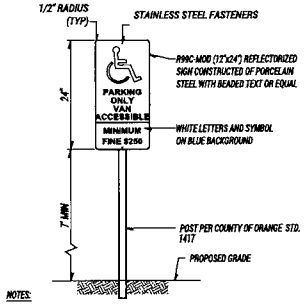






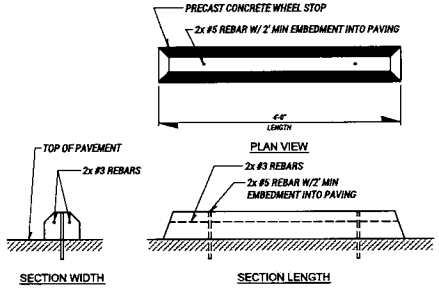
NTS

## TYPICAL ADA PARKING STALL AND DECAL 8




NTS

## SIGN AND POST 9




NTS

## CONCRETE WHEEL STOP 10


Gillis + Panichapan Architects, Inc.
2900 BRISTOL STREET COSTA MESA CALIFORNIA 92626
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|---|---|
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| 2 | BID SET |
| 3 | RE-BID SET |
| JOB NO. | 1.4009 |
| DATE | 01/07/2022 |
| DRAWN BY: | JN |
| CHECKED BY: | MK |
| SCALE: | AS NOTED |

OCFA STATION #16 DETAILS

ORANGE COUNTY FIRE AUTHORITY
Fire Station #16 - Tenant Improvements
28891 MODJESKA CANYON RD., SILVERADO, CA 92676

C-6.0


IDS GROUP - FILE LOCATION: S:\PROJECTS\2020\21\V1\20C006.00 OCFA STATIONS 14, 16, AND 63 ADA IMPROVEMENTS\04 CAD\STATION 16\02 CD (CONSTRUCTION DOCUMENTS)\20C006.01-C-20X DETAILS, PLOT DATE: 2/1/2021 1:45 PM, USER: JAD,BOJKA


PROGRESS PLAN. NOT FOR CONSTRUCTION

## GENERAL NOTES

1. THESE PLANS AND SPECIFICATIONS ARE THE PROPERTY OF OCFA AND ARE NOT TO BE USED FOR OTHER PROJECTS WITHOUT THE PERMISSION OF THE ARCHITECT.
2. THESE NOTES APPLY TO ALL DRAWINGS, UNLESS NOTED OTHERWISE. ANY OMISSIONS OR CONFLICTS BETWEEN THE VARIOUS ELEMENTS OF THE DRAWINGS AND/OR GENERAL NOTES ARE TO BE BROUGHT TO THE ATTENTION OF THE OWNER AND THE OWNER BEFORE PROCEEDING WITH ANY WORK SO INVOLVED.
3. ALL DRAWINGS AND SPECIFICATIONS ARE CONSIDERED TO BE PART OF THE CONTRACT DOCUMENTS. THE CONTRACT DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE, UNLESS OTHERWISE SHOWN. THEY DO NOT INDICATE METHOD OF CONSTRUCTION. CONTRACTOR IS TO SUPERVISE AND DIRECT THE WORK UNDER HIS CONTRACT AND SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY FIELD REPRESENTATIVES OF THE OWNER AND / OR HIS CONSULTANTS ARE NOT TO INCLUDE INSPECTIONS OF REQUIRED FOR SAME, WHICH ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY SUPPORT SERVICES PERFORMED BY THE OWNER AND / OR HIS CONSULTANTS DURING CONSTRUCTION ARE TO BE DISTINGUISHED FROM CONTINUOUS AND DETAILED INSPECTION SERVICES WHICH ARE FURNISHED BY OTHERS. THESE SUPPORT SERVICES PERFORMED BY THE OWNER AND / OR HIS CONSULTANTS, WHETHER OF MATERIAL OR WORK, AND WHETHER PERFORMED PRIOR TO, DURING OR AFTER COMPLETION OF CONSTRUCTION ARE PERFORMED SOLELY FOR THE PURPOSE OF ASSISTING IN QUALITY CONTROL AND IN ACHIEVING GENERAL CONFORMANCE WITH DESIGN CONCEPT AND CONTRACT DRAWINGS AND SPECIFICATIONS AND THEREFORE, THEY DO NOT GUARANTEE CONTRACTORS PERFORMANCE AND ARE NOT TO BE CONSTRUED AS SUPERVISION OF CONSTRUCTION.
4. CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS TO BE REMOVED, RELOCATED OR REMAIN INTACT AND HOW THE NEW CONSTRUCTION RELATES TO THE SITE CONDITION.
5. THE CONTRACTOR SHALL EXAMINE THE JOB SITE. CONFIRM ALL UTILITY LOCATIONS, SIZES, PRESSURES, ETC. AND PROTECT, RELOCATE, CONNECT OR REMOVE ALL NECESSARY FOR TOTAL PROJECT COMPLETION. VERIFY ALL DIMENSIONS AND SATISFY HIMSELF AS TO THE EXISTING CONDITIONS UNDER WHICH HE WILL BE OBLIGATED TO OPERATE. NOTIFY THE OWNER OF ANY AND ALL DISCREPANCIES PRIOR TO COMMENCING WORK.
6. ALL CONTRACTORS AND SUBCONTRACTORS SHALL FAMILIARIZE THEMSELVES WITH THE CONTENTS OF ALL THE DRAWING AND ALL SPECIFICATION SECTIONS, REGARDLESS OF THEIR LICENSE CLASSIFICATION. NO REQUEST FOR CHANGE ORDER WILL BE CONSIDERED BASE UPON INFORMATION FOUND IN ONE AREA OF THE PLANS OR SPECIFICATIONS, AND NOT THE OTHER. INFORMATION FOUND IN ONE PART OF THE PLANS SHALL BE DEEMED TO BE IN ALL SECTIONS.
7. ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION STANDARDS. IF CLARIFICATION IS REQUIRED THE CONTRACTOR SHALL NOTIFY THE ARCHITECT PRIOR TO PROCEEDING WITH THE WORK.
8. THE CONTRACT DOCUMENTS AND SPECIFICATIONS REPRESENT THE FINISH STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE AND SAFETY OF WORKMEN DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE BUT NOT BE LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE OWNER OR OWNER'S STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS AND DOES NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES FOR THE ABOVE. UNLESS NOTED
9. DO NOT SCALE DRAWINGS. PRINTED DIMENSIONS HAVE PRECEDENCE OVER SCALED DRAWINGS AND LARGE SCALE OVER SMALL. DIMENSIONS SHOWN ARE TO THE FACE OF WALL FRAMING (CMU, STUD) UNLESS OTHERWISE NOTED.
10. ALL DIMENSIONS AND THE SITE CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE JOB SITE PRIOR TO BID SUBMITTAL, START OF SHOP DRAWINGS, START OF CONSTRUCTION, AND/OR FABRICATION OF MATERIALS. IF DISCREPANCIES ARE ENCOUNTERED, OR CONDITIONS DEVELOP NOT COVERED BY THE CONTRACT DOCUMENTS, THE OWNER SHALL BE NOTIFIED FOR CLARIFICATION.
11. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BUILDING BACKING SLEEVES, FRAMING FOR LIGHT FIXTURES, ELECTRICAL LIGHTS, A/C EQUIPMENT, DRAPERY, CEILING TRACKS, PLUMBING EQUIPMENT, COUNTERS, HANDRAILS, AND ALL OTHER ITEMS REQUIRING BACKING SUPPORT.
12. ANYONE SUPPLYING LABOR AND MATERIALS TO THE PROJECT IS TO CAREFULLY EXAMINE ALL SUBSURFACES TO RECEIVE WORK. ANY CONDITIONS DETRIMENTAL TO WORK TO BE REPORTED IN WRITING TO OWNER & PROJECT ARCHITECT PRIOR TO BEGINNING WORK. COMMENCEMENT OF WORK IMPLIES ACCEPTANCE OF SUBSURFACES.
13. REFER TO ARCHITECTURAL, PLUMBING, MECHANICAL AND ELECTRICAL DRAWINGS FOR DEPRESSED SLABS, CURBS, FINISHES, TEXTURES, CLIPS, GROUNDS, ETC., NOT SHOWN ON STRUCTURAL DRAWINGS.
14. PROVIDE OPENINGS AND SUPPORTS FOR MECHANICAL EQUIPMENT, DUCTS, PIPING, VENTS, ETC. AS REQUIRED. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR ADDITIONAL OPENINGS AND EQUIPMENT NOT SHOWN ON STRUCTURAL DRAWINGS. ALL SUSPENDED EQUIPMENT AND MATERIALS TO BE INSTALLED WITH APPROVED LATERAL BRACING. VERIFY SIZES AND LOCATIONS OF ALL MECHANICAL EQUIPMENT BEFORE CONSTRUCTION OF ANY BASES OR PADS TO SUPPORT SUCH EQUIPMENT. VERIFY ALL PLUMBING AND EQUIPMENT SIZES BEFORE BEGINNING CONSTRUCTION OF CABINETS.
15. NOTIFY OWNER 24 HOURS PRIOR TO PLACING CONCRETE.
16. NOTED FINISH FLOOR ELEVATIONS ARE TO THE TOP OF CONCRETE FLOOR SLAB. WHERE FLOORS ARE SLOPED FOR DRAINAGE, THE HIGH POINT OF FINISH FLOOR IS (+ OR -) 0'- 0" UNLESS NOTED OTHERWISE, AND IS AT THE PERIMETER OF THE ROOM. STANDARD SLOPE IS 1/4" PER FOOT (MINIMUM = 3/16" PER FOOT; MAXIMUM = 5/16" PER FOOT). SUB-SLABS DEPRESSED FOR TILE FLOOR FINISH TO BE SLOPED TO DRAIN AND MAINTAIN SLAB THICKNESS INDICATED ON THE STRUCTURAL DRAWINGS.
17. NOTIFY THE OWNER IF ANY CONDITIONS EXIST WHICH WILL PREVENT THE COMPLETION OF WORK IN A PROFESSIONAL AND SATISFACTORY MANNER AS WELL AS ANY AND ALL ADDITIONAL WORK TO BE PERFORMED BEFORE STARTING WORK ALL NOTIFICATIONS SHALL BE IN WRITING.
18. ALL CONTRACTORS AND SUB-CONTRACTORS SHALL OBTAIN A CITY BUSINESS LICENSE.
19. PROVIDE SAFEGUARDING FEATURES DURING CONSTRUCTION SUCH AS PROTECTION OF ADJOINING PROPERTY AS REQUIRED AND OTHER ITEMS SUCH AS SITE FENCING AND BARRIERS (3306.9), SANITATION (3305) ETC.

## WATERPROOFING COMMENTS

1. THERE IS A HEIGHTENED CONCERN IN THE CONSTRUCTION INDUSTRY ABOUT THE INTRUSION OF WATER INTO BUILDINGS AND THE RESULTING MOLD THAT DEVELOPS SUBSEQUENTLY. THE OWNER HAS MADE A DILIGENT ATTEMPT TO SPECIFICALLY DETAIL THE PROJECT TO STOP THIS WATER FROM ENTERING THROUGH PENETRATIONS INTO THE BUILDING. HOWEVER, ALL OF THESE AVENUES WHICH ALLOW THE INTRUSION OF WATER INTO THE BUILDING MAY NOT HAVE BEEN OBSERVED DURING DESIGN. DURING THE COURSE OF YOUR CONSTRUCTION OF THE BUILDING, THE OWNER ASKS TO BE ADVISED IMMEDIATELY OF ANY QUESTIONABLE CONDITIONS THAT MAY OCCUR WITH RESPECT TO THE PERCEIVED WATER-TIGHTNESS OF THE STRUCTURE. ONCE A BUILDING SUFFERS A BREACH, AND MOLD DEVELOPS, A BUILDING CAN BECOME UNTENABLE, AND CORRECTIONS COSTLY. WE ASK THAT THE CONSTRUCTION TEAM BE DILIGENT IN THEIR CONSTRUCTION EFFORTS TO HELP INSURE THAT, THE BUILDING THAT WE TURN OVER AS A TEAM, WILL BE AS WATERTIGHT AS WE CAN MAKE IT. YOU, THE CONTRACTOR, WILL BE THE LAST HANDS ON THE PROJECT, AND WE ARE CERTAINLY AVAILABLE TO DISCUSS WITH YOU, YOUR CONSTRUCTABILITY IDEAS TO KEEP THIS PROJECT WATERTIGHT.

## CALGREEN MEASURES

THE CONTRACTOR SHALL COMPLY WITH CALGREEN MEASURES AS NOTED IN DRAWINGS AND AS INDICATED. CONTRACTOR SHALL SUPPLY DOCUMENTATION INDICATING COMPLIANCE OF THESE MEASURES. CONTRACTOR SHALL COORDINATE WITH OWNER AND DESIGN TEAM, AS NEEDED, FOR VERIFICATION OF CALGREEN INFORMATION/COMPLIANCE.

1. CONSTRUCTION WASTE REDUCTION. SECTION 5.408
2. FINISH MATERIAL POLLUTANT CONTROL, SECTION 5.504.4
3. PAINTS AND COATINGS, SECTION 5.504.4.3 AND 5.504.4.3.1
4. VOCS TO BE WITHIN LIMITS FOR ALL ARCHITECTURAL COATINGS, SECTION TABLE 5.504.4.3

UPON COMPLETION, THE CONTRACTOR SHALL REVIEW THE REQUIRED ITEMS ON THE CALGREEN CHECKLIST AND INITIAL EACH ITEM COMPLETED WITH VERIFICATION BY THE GOVERNING AUTHORITY. THE CHECKLIST SHALL BECOME A PART OF THE RECORD DRAWINGS.

## CODE (GENERAL)

1. IT IS THE RESPONSIBILITY OF ANYONE SUPPLYING LABOR OR MATERIALS OR BOTH TO BRING TO THE ATTENTION OF THE OWNER AND PROJECT ARCHITECT ANY DISCREPANCIES OR CONFLICTS BETWEEN THE CODE REQUIREMENTS AND THE DRAWINGS BEFORE PROCEEDING WITH WORK.
2. CONTRACTOR SHALL COMPLY FULLY WITH THE LATEST EDITION OF THE LOCAL BUILDING CODE, ALL LAWS AND ORDINANCES PERTINENT TO ALL WORK OF THIS PROJECT. IN CASE OF ANY CONFLICT WHEREIN THE METHOD OR STANDARDS OF INSTALLATION OR THE MATERIALS SPECIFIED DO NOT EQUAL OR EXCEED THE REQUIREMENTS OF THE LAWS OR ORDINANCES. THE LAWS OR ORDINANCES SHALL GOVERN.
3. ALL WORK SHALL COMPLY WITH TITLE 24 OF THE CODE OF REGULATIONS AND THE UNIFORM BUILDING CODE LATEST EDITION (INDICATED ON THESE SHEETS WITH CBC AMENDMENTS, AND ALL OTHER LOCAL OR STATE AGENCIES HAVING JURISDICTION OVER THIS PROJECT) AND ICC REGULATIONS.

## LIFE SAFETY (GENERAL)

1. POST ROOM CAPACITY SIGN AS PROVIDED BY THE LOCAL FIRE DEPARTMENT IN EACH CLASSROOM, ASSEMBLY ROOM OR SIMILAR PURPOSED ROOM HAVING AN OCCUPANT LOAD OF 50 OR MORE.
2. PORTABLE FIRE EXTINGUISHERS TO BE PROVIDED IN CABINETS LOCATED WITHIN SEVENTY-FIVE (75) FOOT TRAVEL DISTANCE TO ALL PORTIONS OF THE BUILDING ON EACH FLOOR AND AS SHOWN ON PLANS.
3. INTERIOR FINISHES TO COMPLY WITH CHAPTERS 7 AND 8, AND GLASS AND GLAZING TO COMPLY WITH CHAPTER 24 OF THE CBC AND ALL OTHER APPLICABLE CODES AND REGULATIONS GOVERNING THE PLACE OF THE BUILDING.
4. PENETRATIONS OF FIRE RESISTIVE WALLS, FLOOR -CEILINGS AND ROOF-CEILING SHALL BE PROTECTED AS REQUIRED IN CBC CHAPTER 7.
5. CONTRACTOR SHALL MAINTAIN THE RATING OF ALL PENETRATING WALLS AND SHALL APPLY FIRESTOP AND FIREPROOFING, AT HIS EXPENSE, WHENEVER ANY PENETRATION ARE MADE...ETC. FIRESTOP AND FIREPROOFING MATERIAL SHALL BEAR U.L. LISTING NUMBER DEPICTING WALL TYPE COMPOSITION AND FIRE RATED MATERIAL LIMITATIONS. SUBMIT PROPOSED FIRESTOP FIREPROOFING METHOD FOR APPROVAL PRIOR TO APPLICATION IN THE FIELD.
6. EVERY EXIT DOOR SHALL BE OPENABLE FROM THE INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT. SPECIAL LOCKING DEVICES SHALL BE OF AN APPROVED TYPE.
7. PANIC HARDWARE SHALL BE PROVIDED ON EXIT DOORS SERVING ROOMS, CORRIDORS OR STAIRWAYS HANDLING AN OCCUPANT CAPACITY OF 50 OR MORE PERSONS.
8. ANY DECORATIONS (DRAPES, CURTAINS, SHADES, ETC.) USE SHALL BE NON-COMBUSTIBLE OR FLAME-PROOF I AN APPROVED MANNER, TO COMPLY WITH FIRE MARSHALL BUILDING CODE REQUIREMENTS.
9. ALL EXIT SIGNS OR ILLUSTRATED ON PLANS ARE TO BE ILLUMINATED PER CURRENT ELECTRICAL CODE AND SHALL BE CEILING OR WALL MOUNTED. THE EMERGENCY LIGHTING SYSTEM PROVIDES FOR A LIGHTING VALUE OF PER TITLE 19 ONE-FOOT-CANDLE AT FLOOR LEVEL. EXIT LIGHTING AND CBC CHAPTER 10. SIGNS SHALL HAVE 6" LETTERS ON CONTRASTING BACKGROUND.

## FINISHES

**GENERAL ARCHITECTURAL FINISH INFORMATION:**

1. UNLESS NOTED OTHERWISE, THE CONTRACTOR SHALL FINISH ALL EXPOSED SURFACES WITH THE APPROPRIATE FINAL COATING/PAINT/PROTECTION/STAIN/SEAL AS REQUIRED FOR A COMPLETE PROJECT. THIS FINAL FINISH SHALL BE APPROPRIATE TO THE SUBSTRATE THAT IT IS INSTALLED ON OR PROTECTING.
2. PRE-FINISHED OR FACTORY FINISHED EQUIPMENT, SYSTEMS, ETC. SHALL BE PROTECTED IN PLACE UNTIL COMPLETION OF THE PROJECT.
3. EXPOSED SURFACES SHALL BE CONSIDERED AS AREAS VISIBLE BY PERSON. AREAS THAT ARE HIDDEN TO VIEW (BEHIND FINISH MATERIALS SUCH AS ACOUSTICAL PANELS, ETC.) SHALL BE CONSIDERED "HIDDEN SURFACES".
4. HIDDEN SURFACES SHALL BE GOVERNED BY REGULATING CODE (GYPSUM BOARD TAPING, ETC), WATER PROOFING CONTINUITY AND CORROSION REDUCTION (PRIMERS AND SEPARATION OF DISSIMILAR MATERIALS).
5. WALL AND MATERIALS SHALL NOT EXCEED THE FLAME SPREAD CLASSIFICATION IN CBC TABLE 803.5.

## BUILDING CLIMATIZATION

1. THE BUILDING MUST BE "CLOSED IN" SO THAT THE HVAC SYSTEM CAN BE OPERATIONAL FOR COOLING/HEATING AT 70°F. FOR AT LEAST ONE (1) WEEK PRIOR TO INSTALLATION OF ANY FINISH MATERIAL REQUIRING CLIMATE CONTROL.
2. PRIOR TO INSTALLATION OF ANY FLOORING MATERIAL, THE SLAB ON GRADE MUST BE TESTED PER ANSI APPROVED MOISTURE LEVELS. THE MOISTURE LEVEL SHOULD BE IN THE RANGE ACCEPTED (AS NOTED BY THE MANUFACTURER) FOR THE INSTALLED PRODUCT.

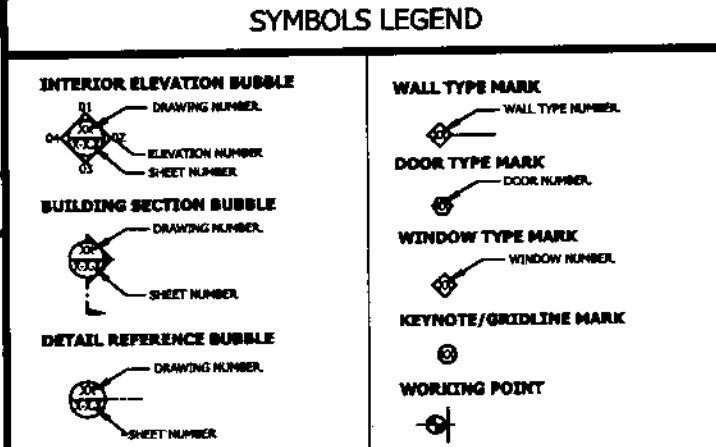
## ABBREVIATIONS

| | |
|---|---|
| @ | AT |
| AB | ANCHOR BOLT |
| AC | ASPHALTIC CONCRETE |
| ACOUST | ACOUSTICAL |
| ADJ | ADJUSTABLE |
| AFF | ABOVE FINISH FLOOR |
| AL | ALUMINUM |
| ANOD | ANODIZED |
| AP | ACCESS PANEL |
| ARCH | ARCHITECT (URAL) |
| BD | BOARD |
| BEL | BELOW |
| BET | BETWEEN |
| BLDG | BUILDING |
| BLK(G) | BLOCKING |
| B | BOTTOM |
| BRG | BEARING |
| BUR | BUILT UP ROOFING |
| CB | CATCH BASIN |
| CEM | CEMENT |
| CFCI | CONTRACTOR FURNISHED CONTRACTOR INSTALLED |
| CI | CAST IRON |
| CJ | CEILING JOIST |
| CL | CENTERLINE |
| CLG | CEILING |
| CLR | CLEARANCE |
| COL | COLUMN |
| CONC | CONCRETE |
| CONST | CONSTRUCTION |
| CONT | CONTINOUS OR CONTINUE |
| D | DEEP (DEPTH) |
| DF | DRINKING FOUNTAIN |
| DIAG | DIAGONAL |
| DIAM | DIAMETER |
| DIM | DIMENSION |
| DN | DOWN |
| DR | DOOR |
| DS | DOWNSPOUT |
| DTL | DETAIL |
| DWG | DRAWING |
| E | EAST |
| EA | EACH |
| EL | ELEVATION |
| ELECT | ELECTRIC(AL) |
| EQ | EQUAL |
| EWC | ELECTRICAL WATER COOLER |
| EX | EXHAUST |
| (E) | EXISTING |
| EXP | EXPOSED |
| EXT | EXTERIOR |
| FD | FLOOR DRAWN |
| FE(C) | FIRE EXTINGUISHER CABINET |
| FFE | FINISH FLOOR ELEVATION |
| FIN | FINISH(ED) |
| FJ | FLOOR JOIST |
| FLR | FLOORINGS |
| FOC | FACE OF CONCRETE |
| FOF | FACE OF FINISH |
| FOM | FACE OF MASONRY |
| FOS | FACE OF STUDS |
| FTG | FOOTING |
| GA | GAUGE |
| GI | GALVANIZED IRON |
| GL | GLASS, GLAZING |
| GLB | GLUE LAMINATED BEAM |
| GYP | GYPSUM |
| H | HIGH (HEIGHT) |
| HB | HOSE BIBB |
| HC | HOLLOW CORE |
| HDR | HEADER |
| HDW | HARDWARE |
| HM | HOLLOW METAL |
| HOR | HORIZONTAL |
| HT | HEIGHT |
| HVAC | HEATING VENTILATION AIR CONDITION |
| HP | HIGH POINT |
| ID | INSIDE DIAMETER |
| INCL | INCLUDING |
| INT | INTERIOR |
| LP | LOW POINT |
| L | LONG (LENGTH) |
| LAM | LAMINATED |
| LAV | LAVATORY |
| LBL | LABEL |
| LH | LEFT HAND |
| LW | LIGHTWEIGHT |
| MAS | MASONRY |
| MAX | MAXIMUM |
| MB | MACHINE BOLT |
| MECH | MECHANICAL |
| MED | MEDIUM |
| MET | METAL |
| MFR | MANUFACTURER |
| MISC | MISCELLANEOUS |
| MO | MASONRY OPENING |
| MTL | MATERIALS |
| NAT | NATURAL |
| (N) | NEW |
| NIC | NOT IN CONTRACT |
| N | NORTH |
| O.C. | ON CENTER(S) |
| OD | OUTSIDE DIAMETER |
| OFCI | OWNER FURNISHED CONTRACTOR INSTALLED |
| OFOI | OWNER FURNISHED OWNER INSTALLED |
| OPNG | OPENING |
| OPP | OPPOSITE |
| OH | OVERHANG |
| PLAS | PLASTER, PLASTIC |
| PSF | POUNDS PER SQUARE FOOT |
| PSI | POUNDS PER SQUARE INCH |
| PVC | POLYVINYL |
| R | RISER |
| RAD | RADIUS |
| RD | ROOF DRAIN |
| REF | REFERENCE |
| REFL | REFLECTED |
| REINF | REINFORCED |
| REQD | REQUIRED |
| REV | REVISION |
| RM | ROOM |
| RO | ROUGH OPENING |
| S | SOUTH |
| SC | SOLID CORE |
| SEC | SECTION |
| SF | SQUARE FOOT (FEET) |
| SIM | SIMILAR |
| SPEC | SPECIFICATIONS |
| SQ | SQUARE |
| SYM | SYMMETRICAL |
| TE | TELEPHONE |
| (T) | TEMPERED |
| T&G | TONGUE & GROOVE |
| TOP | TOP OF PARAPET |
| TOS | TOP OF SLAB |
| TS | TOP OF STEEL |
| TW | TOP OF WALL |
| TYP | TYPICAL |
| U.N.O | UNLESS NOTED OTHERWISE |
| UR | URINAL |
| VERT | VERTICAL |
| VIN | VINYL |
| W | WEST, WIDTH, WIDE |
| WC | WATER CLOSET |
| WP | WATER PROOFING |

## EXISTING CONDITIONS

1. ALL EXISTING CONDITIONS SHOWN AND IMPLIED IN THE DRAWINGS ARE BASED ON LIMITED EXISTING DRAWINGS AND LIMITED NON-DESTRUCTIVE SITE OBSERVATIONS. IT WILL BE IMPERATIVE FOR ANYONE SUPPLYING WORK, ON THE PROJECT, TO REVIEW EXISTING CONDITIONS RELATING TO THEIR WORK PRIOR TO COMMENCEMENT OF WORK OR PREPARATION OF THE PORTION OF WORK.
2. COMMENCEMENT OF WORK IS CONSIDERED ACCEPTANCE OF EXISTING CONDITIONS.
3. IF EXISTING CONDITIONS ARE DIFFERENT THAN DESCRIBED OR AS SHOWN OR AS EASILY INFERRED IN THIS TYPE OF CONSTRUCTION, THAT MAY AFFECT THE DESIGN INTENT, REPORT THE CONDITION IN A TIMELY MANOR TO THE PROJECT MANAGER AND/OR DESIGN TEAM.

## SYMBOLS LEGEND




## APPLICABLE CODES

1. CALIFORNIA BUILDING CODE 2019
2. CALIFORNIA ELECTRICAL CODE 2019
3. CALIFORNIA MECHANICAL CODE 2019
4. CALIFORNIA PLUMBING CODE 2019
5. ENERGY (TITLE 24 - 6) 2019 STANDARDS
6. CALGREEN BUILDING STANDARDS 2019
7. CALIFORNIA T-24 CURRENT
8. ORANGE COUNTY FIRE AUTHORITY CURRENT

## PROJECT DIRECTORY

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## CONSTRUCTION COORDINATION

1. THE GENERAL CONTRACTOR WILL COORDINATE ACCESS TO AND FROM THE SITE. THE CONSTRUCTION STAGING AREA SHALL BE PREVIOUSLY ACCEPTED BY THE TOWN OF YUCCA VALLEY PRIOR TO CONSTRUCTION.
2. BUILDING SECURITY DURING CONSTRUCTION AND OFF-HOURS SHALL BE COORDINATED WITH THE OWNER. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SECURE THE SITE AND BUILDING DURING CONSTRUCTION AND REMODEL.

4

## DEFERRED APPROVAL

1. THE CONTRACTOR IS RESPONSIBLE FOR ALL DEFERRED APPROVALS (OR DESIGN/BUILD PORTION OF WORK) REQUIRED BY LOCAL CODE. COORDINATION AND TIMING OF APPROVALS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. THE ARCHITECT AND DESIGN CONSULTANTS MAY REQUIRE A SUBMITTAL OF A DEFERRED APPROVAL PRIOR TO SUBMITTING TO GOVERNING AGENCIES TO REVIEW FOR GENERAL CONFORMANCE WITH THE CONSTRUCTION DOCUMENTS.
3. FIRE ALARM SYSTEM:
MODIFICATIONS AND UPGRADES TO THE FIRE ALARM SYSTEM WILL BE A DEFERRED APPROVAL SYSTEM. THE SCOPE OF WORK SHALL BE DEFINED AND PRICED BY OCFA'S FIRE ALARM VENDOR.

## PROTECTION DURING CONSTRUCTION

1. PROTECT EXISTING BUILT DEVICES, MATERIALS, EQUIPMENT AND SYSTEMS WHERE ITEMS ARE TO REMAIN INTACT.
2. WHERE ITEMS ARE NEEDING TO BE TEMPORARILY REMOVED TO ACCESS DEMOLITION OR NEW CONSTRUCTION, STORE ITEMS IN A SAFE PLACE AND RE-INSTALL WHEN NEW CONSTRUCTION IS COMPLETE.

## DESIGN/BUILD COORDINATION

CONTRACTOR SHALL COORDINATE ALL DESIGN/BUILD SCOPE OF WORK AND SUBMIT DESIGN/BUILD WORK FOR DESIGN TEAM REVIEW PRIOR TO SUBMITTING FOR FORMAL APPROVAL. DESIGN/BUILD WORK MAY REQUIRE SEPARATE APPROVAL BY LOCAL GOVERNING JURISDICTION. CONTRACTOR SHALL PROMPTLY SUBMIT AND OBTAIN REQUIRED APPROVALS FOR THIS WORK.

4

## A.C. PAVING

FULL DEPTH ASPHALT CONCRETE PAVEMENT REPLACEMENT. MATCH EXISTING THICKNESS, PLUS ONE-INCH (1") MIN., PER SPPWC STD DRAWING 133-3, OVER CRUSHED ASPHALT BASE. MATCH EXISTING ASPHALT BASE THICKNES, 4-INCH MINIMUM.

## PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE CONSTRUCTION OF THE FOLLOWING INTERIOR ACCESSIBLE MODIFICATIONS/IMPROVEMENTS (BUT NOT LIMITED TO):

ACCESSIBLE INTERIOR IMPROVEMENTS:

1. SELECTIVE DEMOLITION (DEMOLISH EXISTING NON-COMPLIANT TOILET ROOMS/SHOWER)
2. ACCESSIBLE IMPROVEMENTS:
   - 2.1. NEW ACCESSIBLE TOILET ROOM
   - 2.2. NEW ACCESSIBLE TOILET ROOM AND ACCESSIBLE SHOWER
   - 2.3. NEW ACCESSIBLE COUNTER
   - 2.4. NEW ACCESSIBLE DOOR TO STUDY FOR COMPLIANT USE AS A NEW LACTATION ROOM
   - 2.5. ADA BRAILLE SIGNAGE
3. IMPROVEMENTS AS A RESULT OF ACCESSIBLE IMPROVEMENTS:
   - 3.1. CONCRETE SLAB WORK
   - 3.2. NON-BEARING WALL RE-WORK
   - 3.3. FINISH SYSTEMS INCLUDING GYPSUM BOARD, CARPET, TILE, AND PAINTING.
   - 3.4. M.E.P. WORK INCLUDING NEW PLUMBING FIXTURES, RE-WORKED EXHAUST AND SUPPLY/RETURN AIR DUCTING, RE-WORKED ELECTRICAL AND NEW ELECTRICAL FIXTURES.
4. EXTERIOR ACCESSIBLE IMPROVEMENTS (SEE CIVIL DRAWINGS):
   - 4.1 NEW ACCESSIBLE PARKING AREA
   - 4.2 NEW ACCESSIBLE PATH OF TRAVEL FROM PARKING TO MAIN ENTRANCE
5. SEE SHEET A-1.5 FOR FINISHES SCOPE (INCLUDING PAINTING)

4

## F.S. No. 16 PROJECT ADDRESS

28891 MODJESKA CANYON ROAD
SILVERADO, CA 92676

## CODE ANALYSIS

**GENERAL CODE INFORMATION:**

MINOR TENANT IMPROVEMENTS TO INTERIOR NON-BEARING WALLS

EXISTING OCCUPANCY: ASSUMED ORIGINAL B-OCCUPANCY (FIRE STATION)
PROPOSED OCCUPANCY: NO CHANGE

BUILDING AREA: 3,472 S.F. APPROX.
NO CHANGE IN BUILDING AREA

BUILDING CONSTRUCTION TYPE: ASSUMED TYPE V- NON-SPRINKLERED
PROPOSED OCCUPANCY: NO CHANGE IN OCCUPANCY

SINGLE STORY
SPRINKLERS: NO AUTOMATIC FIRE SPRINKLERS


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LICENSED ARCHITECT LONGKAMACH PANICHAPAN NO. C-29344 EXP. 11-30-21 STATE OF CALIFORNIA

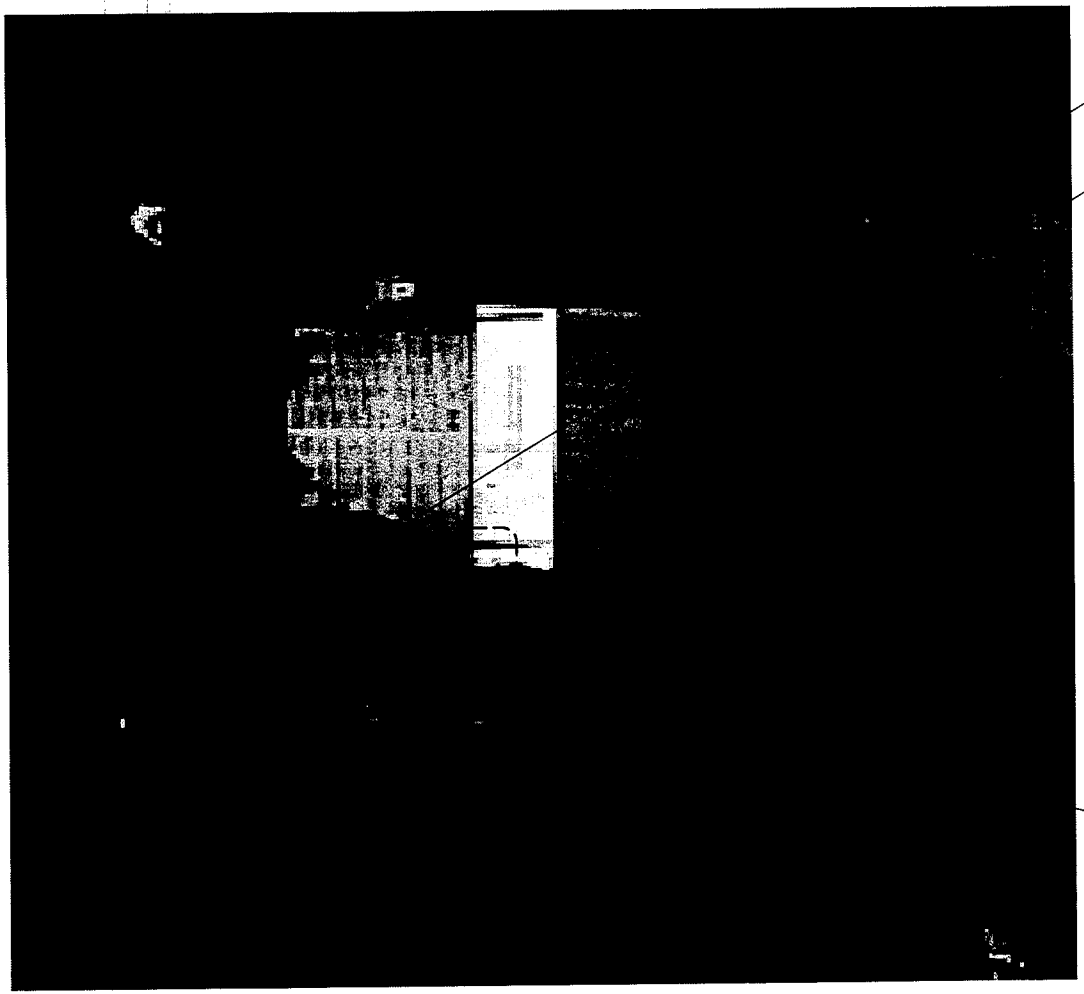
RE-BID SET

| | |
|---|---|
| 1 BID SET | |
| 2 RE-BID SET | DATE: 01/07/2022 |
| 3 BID RFIs | DATE: 02/16/2022 |
| JOB NO.: 4009 | |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: | |

TITLE SHEET - F.S. 16

ORANGE COUNTY FIRE AUTHORITY
Fire Station #16 - Tenant Improvements
28891 MODJESKA CANYON RD., SILVERADO, CA 92676

T-1



MAIN ENTRY

PROJECT BUILDING

LANDSCAPING NOTES:

1. Modify the existing irrigation system as needed to provide cover to remaining planting area with similar design.
2. Install new heads and piping as needed for a complete working system.
3. Contractor may re-use working irrigation heads. All existing piping being removed may not be reused.
4. Cap and/or re-route existing irrigation system at proposed pedestrian walkway/ramps locations.
5. Install new 3" irrigation sleeves as required for new/modified landscape irrigation at other side of concrete walk.
6. Existing Landscaping is to be protected in-place.
7. Removed landscaping is to be relocated as best possible.
8. Decomposed Granite: Install 3" D.G. over weed fabric over compacted grade.
9. Install redwood (two ¼" x 4") edging adjoining native soil.
10. Install DG binder: Stabilizer, G3 by TechniSoil (Home Depot)
11. Slope to drain.
12. Existing (5) cacti along western wall are to be removed, stored and re-planted.
    (2) Candelabra Cactus or Cowboy Cactus -- euphorbia igens
    (2) Aloe Vera
    (1) Candelabra Cactus

△1

PROPOSED AREA OF ACCESSIBILITY SITE WORK, SEE CIVIL DRAWINGS

01 T-2 AERIAL SITE PLAN - FIRE STATION NO. 16
Scale: N.T.S.

△1

N

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RE-BID SET

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| △3 RD SET | |
| △2 RE-BID SET | DATE: 02/16/2022 |
| △1 RD RFS | DATE: 01/07/2022 |
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| SCALE: | |

AERIAL SITE PLAN - F.S. 16

ORANGE COUNTY FIRE AUTHORITY
Fire Station #16 - Tenant Improvements
28891 MODJESKA CANYON RD., SILVERADO, CA 92676

T-2

OCPublicWorks

# Special Inspection Program and Designation of Special Inspectors

| SPECIAL INSPECTIONS (Only checked items are required) | |
|---|---|
| INSPECTION ITEMS | SPECIAL INSPECTORS(S) NAME, PHONE NUMBER, REGISTRATION # |
| ☒ Concrete (Design Mix, Form Work, Placement, etc., per table 1705.3) | |
| ☐ Erection of Pre-Cast Concrete Members | |
| ☐ Bolts Installed in Concrete | |
| ☐ Reinforcing Steel and Pre-Stressing Steel Tendons | |
| ☐ Structural Welding/Rebar Welding | |
| ☐ High-Strength Bolting/Material Verification | |
| ☐ Steel Frame Joint Details | |
| ☐ All Masonry Construction | |
| ☐ Sprayed Fire-Resistive Materials | |
| ☐ Shotcrete (Curing Temperature, Design Mix, Placement, Strength etc. per table 1705.3) | |
| ☐ Soils (Excavation, Fill, etc. per table 1705.6) | |
| ☐ Smoke-Control System | |
| ☐ Driven Piles per Table 1705.7 | |
| ☐ Cast in Place Piles per Table 1705.8 | |
| ☐ Mastic and Intumescent Fire-Resistant Coatings | |
| ☐ Exterior Insulation and Finish Systems (EIFS) | |
| ☐ Wood for High-Load Diaphragms | |
| ☐ Others | |
| ☐ Others | |
| ☐ Others | |
| ☐ Others | |

**DECLARATION BY OWNER OR ARCHITECT/ENGINEER OF RECORD:**

I, the ☒ Owner ☐ Engineer or ☐ Architect of record, declare that the above listed Special Inspector(s) is/are hired by me.

Julie Samaniega — Print Name

[signature] — Signature

5/20/21 — Date

601 N. Ross Street, Santa Ana, CA 92701
P.O. Box 4048, Santa Ana, CA 92702-4048
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architecture planning interior

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| SCALE: AS NOTED | |

MISCELLANEOUS

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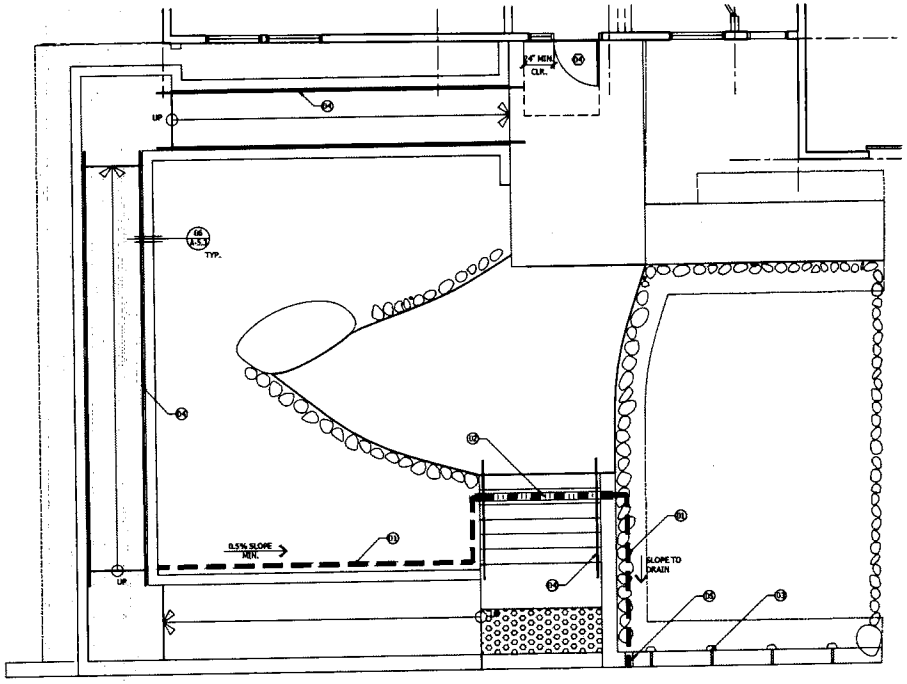
Fire Station #16 - Tenant Improvements
28891 MODJESKA CANYON RD., SILVERADO, CA 92676

T-3




01 A-1.1 PROPOSED PARTIAL SITE PLAN - FIRE STATION NO. 16
Scale: 1/4" = 1'-0"

**KEYNOTES:**

01 NEW 3" PERFORATED DRAINAGE PIPE W/ FILTER FABRIC SOCK

02 NEW 3" NON PERFORATED DRAINAGE PIPE INSIDE 4" SLEEVE

03 NEW 1-1/2"ø PVC DRAINAGE PIPE W/ FILTER FABRIC AND 1 C.Y. PEA GRAVEL @ BACK SIDE

04 NEW RAMP AND STAIR HANDRAIL, SEE DETAIL 08/A-5.3 AND 04/A-5.3

05 NEW DAYLIGHT DRAIN

**LEGEND:**

EXISTING WALL TO REMAIN

DOOR, SEE SHEET A-2.5

NOTE:

REFER TO CIVIL DRAWINGS FOR ADDITIONAL INFORMATION

N

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| A | RE-BID RFI's | DATE: 01/07/2022 |
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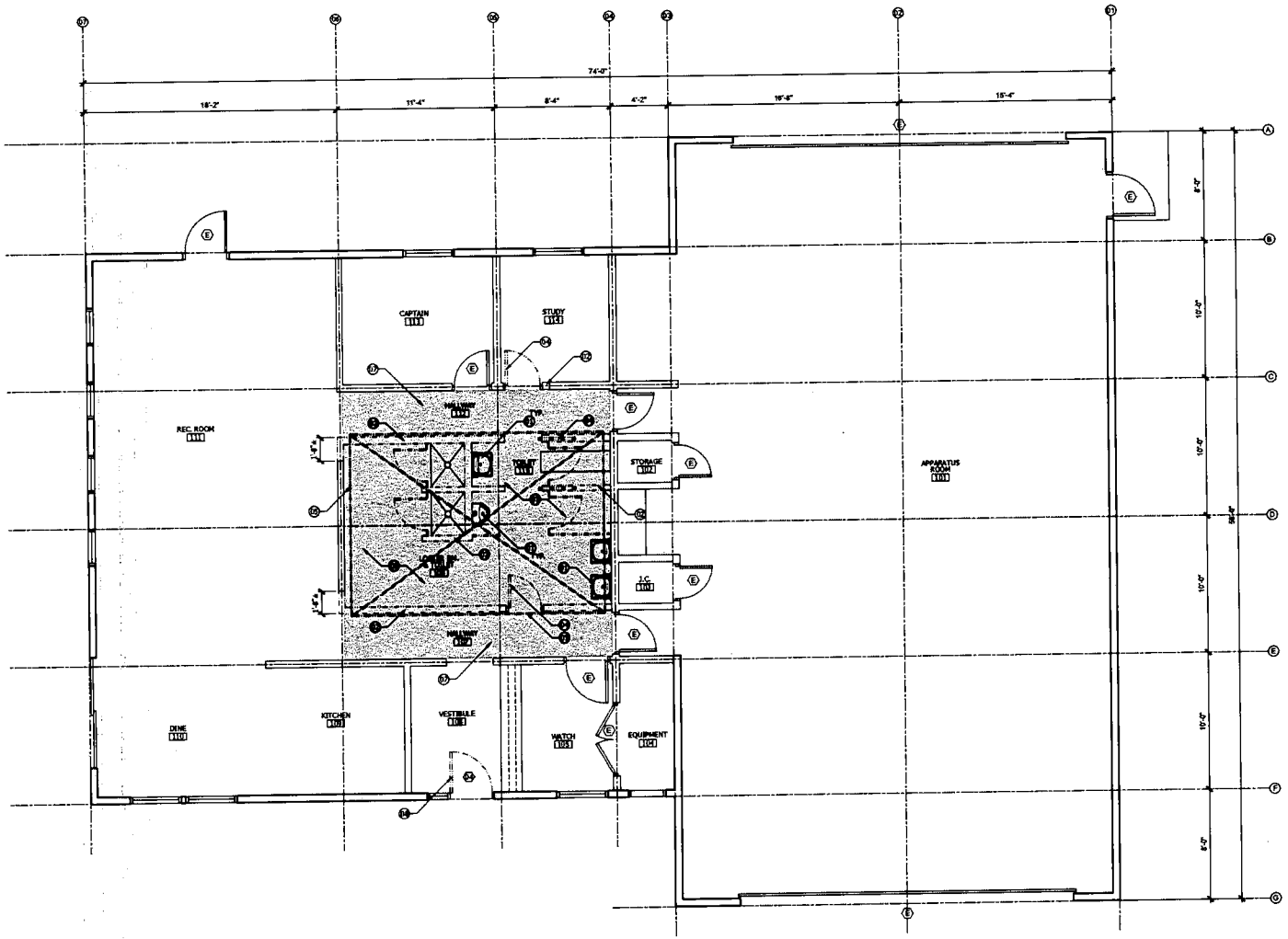
| CHECKED BY: LP | | |
| SCALE: 1/4" = 1'-0" | | |

PROP. PARTIAL SITE PLAN- F.S. 16

ORANGE COUNTY FIRE AUTHORITY
Fire Station #16 - Tenant Improvements
28891 MODJESKA CANYON RD., SILVERADO, CA 92676

A-1.1




01 A-2.1 EXISTING/DEMO FLOOR PLAN - FIRE STATION NO. 16
Scale: 1/4" = 1'-0"

KEYNOTES:

- 01 REMOVE EXISTING PLUMBING FIXTURE AND PIPING AS REQUIRED FOR INSTALLATION OF NEW SYSTEM
- 02 REMOVE EXISTING INTERIOR NON-BEARING WALLS
- 03 REMOVE EXISTING FLOOR FINISH AND BASE
- 04 REMOVE EXISTING DOOR AND FRAME
- 05 AREA OF CONCRETE SLAB REMOVAL (APPROXIMATE). SEE STRUCTURAL DRAWINGS FOR TYPICAL SLAB REPLACEMENT DETAIL
- 06 NOT USED
- 07 REMOVE EXISTING GYPSUM BOARD (HATCHED AREA). SEE STRUCTURAL DRAWINGS FOR NEW CEILING FRAMING
- 08 EXISTING FRAME TO REMAIN, DOOR TO BE RE-USED AND MODIFIED FOR OUT-SWING

LEGEND:

| | |
|---|---|
| ═══ | EXISTING WALL TO REMAIN |
| ═══ | EXISTING WALL/DOOR TO BE REMOVED |
| Ⓔ | EXISTING DOOR TO REMAIN |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EXISTING/DEMO FLOOR PLAN- F.S. 16

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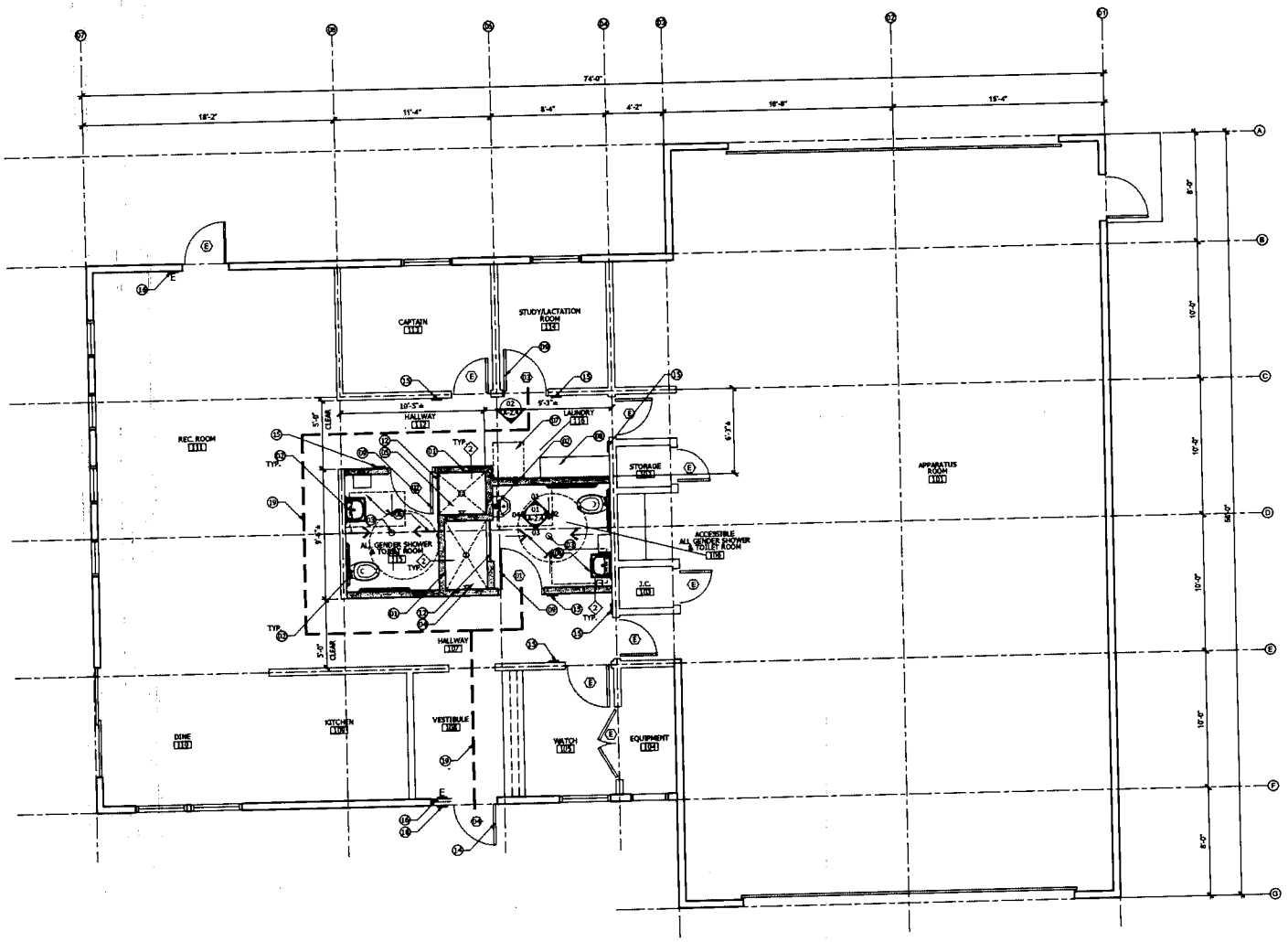
A-2.1




01 A-2.2 PROPOSED FLOOR PLAN - FIRE STATION NO. 16
Scale: 1/4" = 1'-0"

KEYNOTES:

01 NEW STUD WALL
02 NEW PLUMBING FIXTURES AND PIPING (SUPPLY AND WASTE LINES)
03 NEW FLOOR DRAIN
04 NEW ACCESSIBLE SHOWER STALL
05 NEW SHOWER STALL
06 NEW FLOOR FINISH, SLOPE TO DRAIN
07 FUTURE ACCESSIBLE COMBINATION CLOTHES WASHER/DRYER UNIT
08 NEW COUNTERTOP
09 NEW DOOR AND FRAME
10 NOT USED
11 NOT USED
12 NEW SHOWER CURTAIN AND STAINLESS STEEL ROD
13 NEW WALL MOUNTED ROBE HOOK
14 RECONFIGURED OUT-SWINGING DOOR
15 NEW ROOM SIGN
16 NEW WALL MOUNTED BRAILLE EXIT SIGNAGE
17 NOT USED
18 NEW ADA ENTRY SIGN, SEE DETAIL 14/A-5.1
19 ACCESSIBLE PATH OF TRAVEL FROM MAIN ENTRY TO ACCESSIBLE ALL GENDER SHOWER/ TOILET ROOM AND LACTACTION ROOM

LEGEND:

EXISTING WALL TO REMAIN
NEW STUD WALL
DOOR, SEE SHEET A-2.5
WALL TYPES, SEE SHEET A-5.2

NOTE:

1. FOR ACCESSIBLE CLEARANCES AND REQUIREMINTS SEE SHEETS A-5.1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PROPOSED FLOOR PLAN- F.S. 16

ORANGE COUNTY FIRE AUTHORITY
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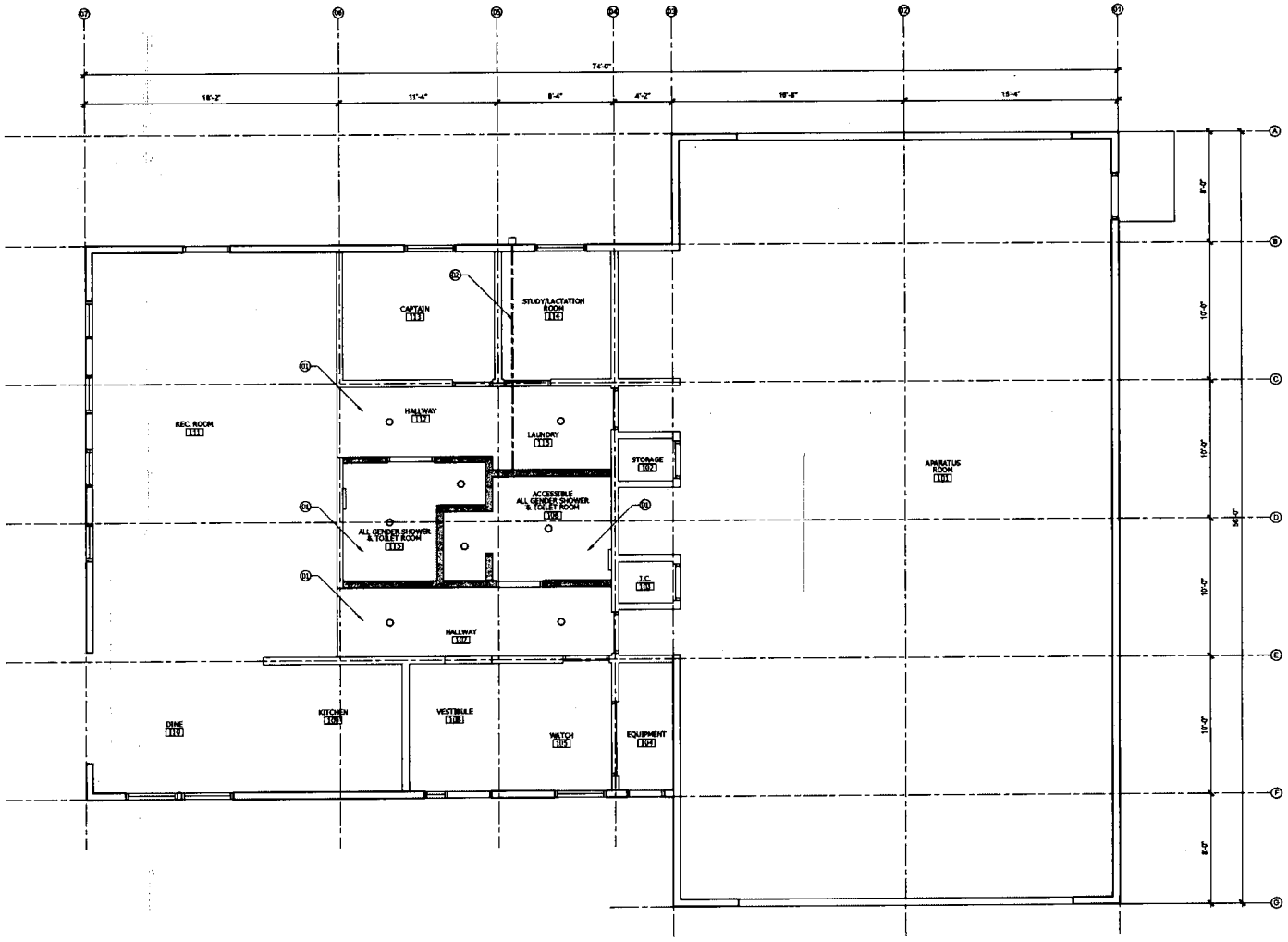
A-2.2




01 A-2.3 PROPOSED REFLECTED CEILING PLAN - FIRE STATION NO. 16
Scale: 1/4" = 1'-0"

KEYNOTES:

01 NEW GYPSUM BOARD CEILING WITH NEW R-21 NON-FACED INSULATION ABOVE

02 NEW RIGID GALVANIZED DRYER VENT ABOVE CEILING. COORDINATE FINAL LOCATION WITH EXISTING CONDITIONS, MECHANICAL DRAWINGS, AND CURRENT CODE

LEGEND:

- EXISTING WALL TO REMAIN
- NEW STUD WALL
- NEW LED RECESSED LIGHT
- NEW LED WALL MOUNTED LIGHT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PROP. REFLECT. CLNG. PLAN- F.S. 16

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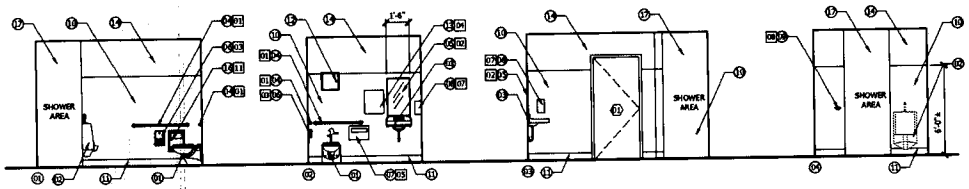
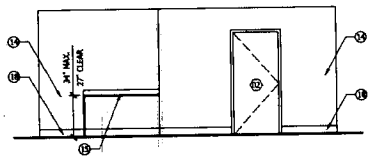
A-2.3




01 A-2.4 INTERIOR ELEVATIONS- ACCESSIBLE ALL GENDER SHOWER & TOILET ROOM 106 (RM. 115 SIM.)
Scale : 1/4" = 1'-0"




02 A-2.4 INTERIOR ELEVATIONS- HALLWAY 112 & LAUNDRY 116
Scale : 1/4" = 1'-0"

KEYNOTES:

01 FLOOR MOUNT WATER CLOSET, SEE PLUMBING
02 URINAL, SEE PLUMBING
03 SINK, SEE PLUMBING
04 GRAB BAR, SEE SPECIFICATIONS
05 MIRROR
06 TOILET PAPER DISPENSER
07 SEAT COVER DISPENSER
08 HANDS FREE SOAP DISPENSER
09 ROBE/TOWEL HOOK
10 TILE WAINSCOT
11 COVED EPOXY BASE, TYPICAL
12 12"X12" SURFACE MOUNTED STAINLESS STEEL ACCESS PANEL
13 HANDS FREE PAPER TOWEL DISPENSER
14 PAINTED GYPSUM BOARD
15 NEW COUNTERTOP AND SPLASH W/ 1" THICK END PANEL, SEE SPECIFICATIONS
16 RECESSED SANITARY DISPOSAL RECEPTACLE
17 FULL HEIGHT EPOXY @ SHOWER AREA
18 COVED RUBBER BASE

LEGEND:

XX DOOR TYPES, SEE SHEET A-2.5

WASHROOM TOILET ACCESSORIES:

01 GRAB BAR - BOBRICK B-6806
02 MIRROR - BOBRICK B-290
03 TOILET TISSUE DISPENSER- BOBRICK B-3888
04 HANDS FREE PAPER TOWEL DISPENSER - GEORGIA PACIFIC, ENMOTION, #59462
05 SEAT COVER - BOBRICK B-4221
06 FOLDING SHOWER SEAT - BOBRICK B-5192
07 HANDS FREE SOAP DISPENSER - RUBBERMAID, AUTOFOAM DISPENSER, #FG730127
08 ROBE HOOK - BOBRICK B-7672
09 VINYL CURTAINS - BOBRICK B-204-3
10 SHOWER CURTAIN ROD - BOBRICK B-6047
11 SANITARY NAPKIN DISPOSAL - BOBRICK B-353

NOTE:

1. BASIS OF DESIGN: BOBRICK (U.N.O.). APPROVED EQUAL IS ACCEPTABLE, SUBMIT SUBSTITUTION REQUEST.
2. FOR ACCESSIBLE CLEARANCES AND REQUIREMENTS SEE SHEETS A-5.1

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INTERIOR ELEVATIONS- F.S. 16

ORANGE COUNTY FIRE AUTHORITY
Fire Station #16 - Tenant Improvements
28891 MODJESKA CANYON RD., SILVERADO, CA 92676

A-2.4

## DOOR SCHEDULE

| DOOR NUMBER | LOCATION (ROOM NUMBER) | SIZE | TYPE | HARDWARE | THICKNESS | CORE | DOOR MATERIAL | DOOR FINISH | FRAME MATERIAL | FRAME FINISH | DOOR/WIN. SIGNS | DETAILS HEAD | DETAILS JAMB | DETAILS THRESHOLD | REMARKS | DOOR STOP | CLOSER | WEATHERSTRIP | THRESHOLD | 12" S.S. KICK PLATE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 01 | 109 | 3'-0"W X 7'-0"H | A | 2 | 1 3/4" | SC | WD | PL | HM | PF | SS | 06/A-5.3 | 08/A-5.3 | 07/A-5.3 | | ● | ● | ● | ● | ● |
| 02 | 108 | 3'-0"W X 7'-0"H | A | 2 | 1 3/4" | SC | WD | PL | HM | PF | SS | 06/A-5.3 | 08/A-5.3 | 07/A-5.3 | | ● | ● | ● | ● | ● |
| 03 | 114 | 3'-0"W X 7'-0"H | A | 3 | 1 3/4" | SC | WD | PL | HM | PF | SI | 06/A-5.3 | 08/A-5.3 | R.T.S. | | ● | ● | ● | ● | ● |
| 04 | 106 | EXISTING | --- | 4 | --- | --- | --- | --- | --- | --- | S4 | --- | --- | --- | | | | | | |

NOTES:

REMARKS

RUBBER TRANSITION STRIP THRESHOLD

*** RECONFIGURE DOOR/HARDWARE FOR OUT-SWINGING DOOR

*** EXISTING DOOR CLOSER TO BE ADJUSTED TO OBTAIN A 5 LB. MAX OPENING FORCE AND TO CLOSE AT REQUIRED SPEED PER CBC 11B-404.2.8

## FINISH SCHEDULE

| NUMBER | NAME | FLOOR: EPOXY | FLOOR: VCT | BASE: RESILIENT WALL BASE | BASE: EPOXY COVED BASE | WALLS: GYPSUM BOARD | WALLS: TILE WAINSCOT | CEILING: ACOUSTICAL TILE | CEILING: GYPSUM BOARD | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 106 | ACCESSIBLE ALL GENDER SHOWER & TOILET ROOM | ● | | | ● | | ● | | | TILE WAINSCOT 8'-0" A.F.F. |
| 107 | HALLWAY | | ● | | ● | ● | | | ● | |
| 112 | HALLWAY | | ● | | ● | ● | | | ● | |
| 115 | ALL GENDER SHOWER & TOILET ROOM | ● | | | ● | | ● | | | TILE WAINSCOT 6'-0" A.F.F. |
| 116 | LAUNDRY | | ● | | ● | ● | | | ● | |

GENERAL NOTE:
1. ALL WALL AND CEILING SURFACES TO BE PAINTED EXCEPT WHEN NOTED. (REFER TO SPECIFICATIONS FOR EXCEPTIONS)
2. ● INDICATES APPLICABLE FINISH, SEE REMARKS FOR ADDITIONAL COMMENTS

## NOTES

GENERAL NOTES (ALL DOORS):

A. MAXIMUM EFFORT TO OPERATE DOORS APPLIED AT RIGHT ANGLES TO HINGED DOORS ON AT CENTER PLANE, PER CBC SECTION 404.2.9 WILL BE:
   - 5 LB. AT EXTERIOR DOORS
   - 5 LB. AT INTERIOR DOORS
   - 15 LB. W/HIRE FIRE DOORS ARE REQUIRED.
B. ALL DOORS SHALL COMPLY WITH CBC CHAPTER 1B DOORS.
C. DOORS SHALL BE EQUIPPED ONLY WITH NON-KNOWLEDGE, SINGLE-ACTION HARDWARE. LOCKS THAT REQUIRE KEYS OR ADDITIONAL ACTIONS TO OPERATION (SUCH AS MANUAL BOLTS) ARE NOT PERMITTED. (SEC 1010.1.9). ALL DOOR HARDWARE SHALL BE LEVER TYPE, PUSH/PULL ACTIVATING BARS OR PANIC HARDWARE THAT DOES NOT REQUIRE TIGHT GRASPING, PINCHING, OR TWISTING OF THE WRIST TO OPERATE. (SEE CBC 11B-309.4)
D. DOORS WITH GLAZING SHALL BE PROVIDED WITH 10" HIGH SMOOTH METAL PLATE AT THE BOTTOM. (SEE CBC 11B-404.2.10)
E. BOTTOM OF DOOR TO BE SMOOTH AND UNINTERRUPTED, TO ALLOW DOOR TO BE OPENED BY WHEELCHAIR FOOTREST. SEC. 11B-404.2.10.
F. PROVIDE SIGN AT MAIN EXIT DOORS INDICATING "THE DOOR MUST REMAIN UNLOCKED WHEN BUILDING IS OCCUPIED" PER CBC 1010.1.9.3. ALL OTHER DOORS SHALL BE OPENABLE FROM INSIDE WITHOUT THE USE OF A KEY OR ANY SPECIAL KNOWLEDGE OR EFFORT.
G. ALL HOLLOW METAL DOORS STILES AND TOP RAILS SHALL BE 5" MINIMUM. (U.N.O.)
H. ALL ALUMINUM DOORS STILES AND TOP RAILS SHALL BE 5" U.N.O. ALL GLASS TYPES AND THICKNESS SHALL COMPLY WITH UBC TABLE 24-A AND CHAPTER 24.
I. SEE SPECIFICATIONS FOR ADDITIONAL DOOR HARDWARE INFORMATION. REFER TO FLOOR PLANS FOR DOOR HARDWARE FUNCTION FOR REQUIREMENTS.
J. COMPLY WITH ASC. 2486 FOR REQUIRED SAFETY GLAZING.
K. DOORS, GATES, AND SIDE LIGHTS ADJACENT TO DOORS OR GATES, CONTAINING ONE OR MORE GLAZING PANELS THAT HAVEANY PORTION OF THE GLASS AREA WITHIN A 24" ARC OF THE DOOR IN A CLOSED POSITION AND HAVING A BOTTOM EXPOSURE LESS THAN 60" ABOVE THE WALKING SURFACE SHALL BE CONSIDERED HAZARDOUS. (SEE CBC 2406.4.4)

DOOR SIGNAGE LEGEND:
- S1 - "EVERY" ROOM NAME WITH OWNER
- S2 - TOILET ROOM SIGNAGE "MEN"
- S3 - TOILET ROOM SIGNAGE "WOMEN"
- S4 - ACCESSIBLE ENTRANCE SIGN
- S5 - TOILET ROOM SIGNAGE "ALL GENDER"

DOOR ABBREVIATIONS:
- HM - HOLLOW METAL
- PL - PLASTIC LAMINATE
- PT - PAINT
- AL - ALUMINUM
- SC - SOLID CORE
- TG - TEMPERED GLAZING
- PF - PRE-FINISHED PAINT

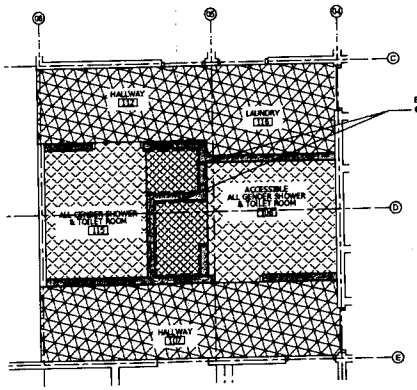
## DOOR TYPES

NOTE:
PROVIDE SAFETY GLAZING AS REQUIRED PER CBC SECTION 2406.

GENERAL ACCESSIBILITY NOTES:

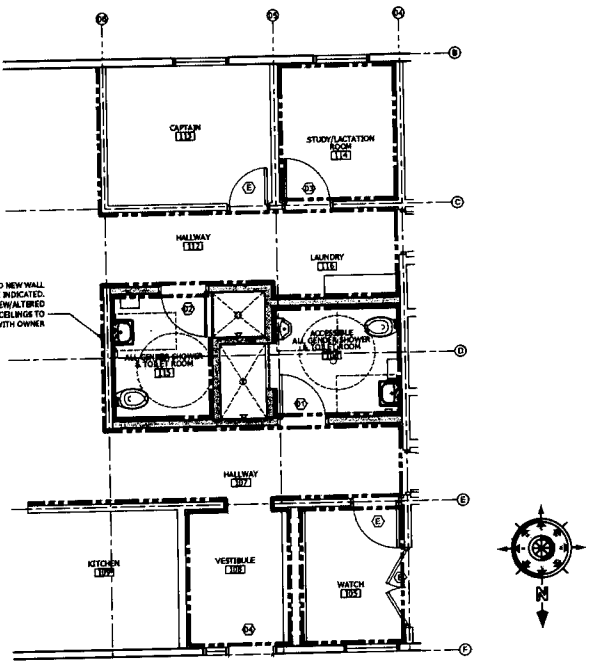
1. EXIT DOORS SHALL BE READILY OPENABLE FROM THE EGRESS SIDE WITHOUT THE USE OF A KEY, SPECIAL KNOWLEDGE OR EFFORT. (CBC 1010.1.9)
2. THERE SHALL BE A LEVEL AND CLEAR FLOOR OR LANDING ON EACH SIDE OF DOOR. THE LEVEL AREA SHALL HAVE A LENGTH IN THE DIRECTION OF DOOR SWING OF AT LEAST 60" AND THE LENGTH OPPOSITE THE DIRECTION OF DOOR SWING OF 48" AS MEASURED AT RIGHT ANGLES TO THE PLANE OF THE DOOR IN THE CLOSED POSITION. (CBC 11B-404.2.4.1)
3. MAXIMUM DOOR EFFORT TO OPERATE DOORS SHALL NOT EXCEED 5 POUNDS FOR EXTERIOR DOORS AND 5 POUNDS FOR INTERIOR DOORS, SUCH PULL OR PUSH EFFORT BEING APPLIED AT RIGHT ANGLES TO HINGED DOORS AND AT THE CENTER PLANE OF SLIDING OR FOLDING DOORS. COMPENSATING DEVICES OR AUTOMATIC DOOR OPERATORS MAY BE UTILIZED TO MEET THE ABOVE STANDARDS. WHEN FIRE DOORS ARE REQUIRED, THE MAXIMUM EFFORT TO OPERATE THE DOOR MAY BE INCREASED TO THE MINIMUM ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY, NOT TO EXCEED 15 POUNDS. (CBC 11B-404.2.9)
4. DOOR HANDLES, PULLS, LATCHES, LOCKS AND OTHER OPERATING DEVICES ON DOORS REQUIRED TO BE ACCESSIBLE BY CHAPTER 11A OR CHAPTER 11B SHALL NOT REQUIRE TIGHT GRASPING, TIGHT PINCHING OR TWISTING OF THE WRIST TO OPERATE. (CBC 10 (0.1.9.1)
5. HANDLES, PULLS, LATCHES, LOCKS, AND OTHER OPERABLE PARTS ON DOORS AND GATES SHALL BE 34 INCHES MINIMUM AND 44 INCHES MAXIMUM ABOVE THE FINISH FLOOR OR GROUND. WHERE SLIDING DOORS ARE IN THE FULLY OPEN POSITION, OPERATING HARDWARE SHALL BE EXPOSED AND USABLE FROM BOTH SIDES. (CBC 11B-404.2.7 AND 11B-309.4)
6. SWINGING DOOR AND GATE SURFACES WITHIN 10 INCHES OF THE FINISH FLOOR OR GROUND MEASURED VERTICALLY SHALL HAVE A SMOOTH SURFACE ON THE PUSH SIDE EXTENDING THE FULL WIDTH OF THE DOOR OR GATE. PARTS CREATING HORIZONTAL OR VERTICAL JOINTS IN THESE SURFACES SHALL BE WITHIN 1/16 INCH OF THE SAME PLANE AS THE OTHER AND BE FREE OF SHARP OR ABRASIVE EDGES. CAVITIES CREATED BY ADDED KICK PLATES SHALL BE CAPPED. (CBC 11B-404.2.10)

FLOOR FINISH LEGEND
- EPOXY FLOOR AND EPOXY COVED BASE
- VCT AND RESILIENT BASE

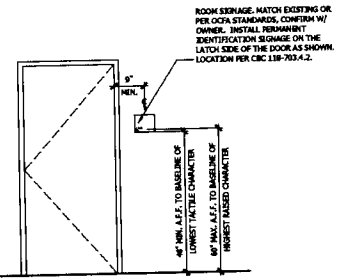



01 FINISH FLOOR PLAN - FIRE STATION NO. 16
A-2.5 Scale : 1/4" = 1'-0"

EXISTING WALLS AND DOOR FRAMES AND NEW WALL AND DOOR FRAMES TO BE PAINTED WHERE INDICATED. PAINT ALL DRYWALL CEILINGS IN NEW/ALTERED SPACES AND THE REMAINING WALLS AND CEILINGS TO BE CONFIRMED WITH OWNER



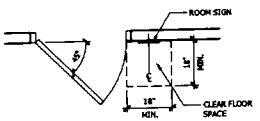

02 PAINTING SCOPE FLOOR PLAN - FIRE STATION NO. 16
A-2.5 Scale : 1/4" = 1'-0"




ROOM SIGNAGE: MATCH EXISTING OR PER OCFA STANDARDS, CONFIRM W/ OWNER. INSTALL PERMANENT IDENTIFICATION SIGNAGE ON THE LATCH SIDE OF THE DOOR AS SHOWN. LOCATION PER CBC 11B-703.4.2.

03 ROOM SIGNAGE
A-2.5 Scale : 1/2" = 1'-0"

NOTE:
1. ALL WALL SIGNAGE WITH VISUAL AND TACTILE CHARACTERS SHALL COMPLY WITH CBC 11B-703.1 THRU 11B-703.7.
2. ALL SIGNAGE TO BE APPROVED PRIOR TO FABRICATION AND FIELD INSPECTED AFTER INSTALLATION AND APPROVED BY OWNER AND ENFORCING AGENCY FOR REGULATION COMPLIANCE.




04 ROOM SIGNAGE LOCATION
A-2.5 Scale : 1/2" = 1'-0"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FAX (714) 668-0266 TEL (714) 668-0260
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RE-BID SET

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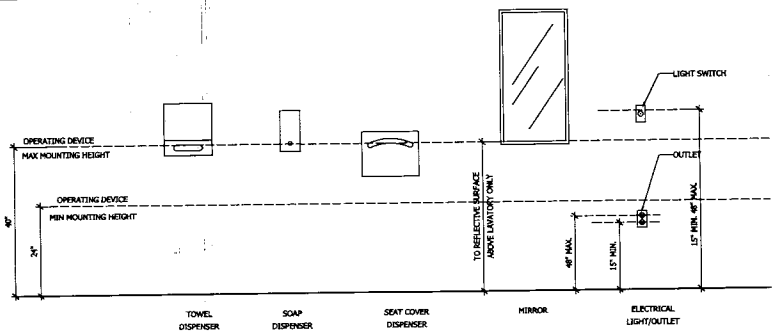
| 1 | | |
| JOB NO.: 1699 | | |
| DRAWN BY: STAFF | | |
| CHECKED BY: LP | | |
| SCALE AS NOTED | | |

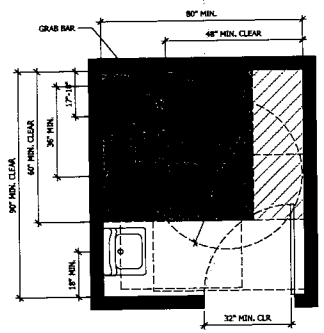
DOOR & FINISH FLOOR SCHEDULES - F.S. 16

ORANGE COUNTY FIRE AUTHORITY
Fire Station #16 - Tenant Improvements
28891 MODJESKA CANYON RD., SILVERADO, CA 92676

A-2.5




01 A-5.1 CALDAG TOILET ACCESSORIES DIMENSIONS & CLEARANCES
Scale : 3/4" = 1'-0"




06 A-5.1 SINGLE COMPARTMENT CONDITION
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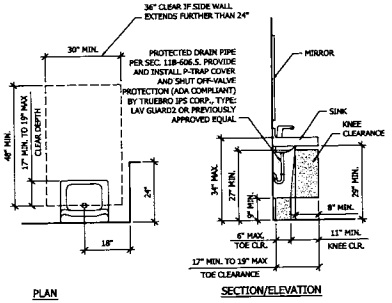
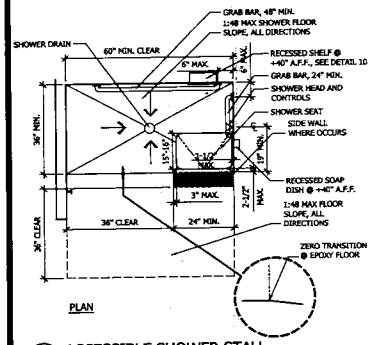
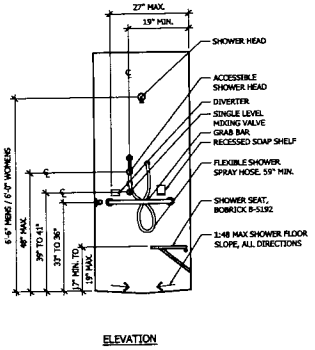
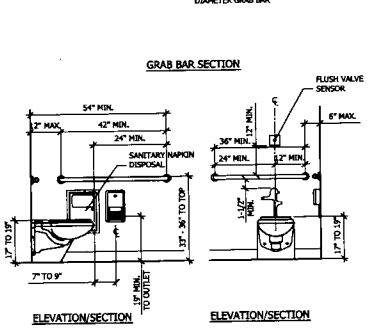



07 A-5.1 ACCESSIBLE LAVATORY
Scale : 1/2" = 1'-0"

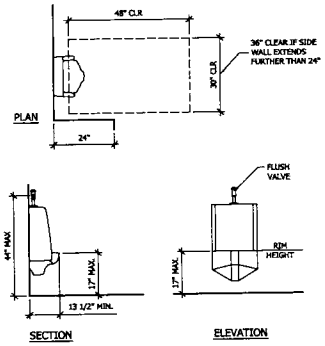


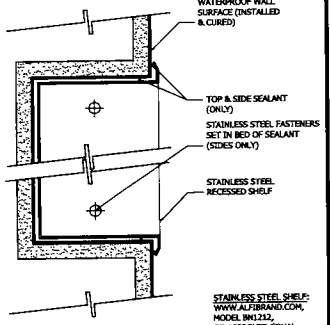

11 A-5.1 ACCESSIBLE SHOWER STALL
Scale : 1/2" = 1'-0"




08 A-5.1 ACCESSIBLE WATER CLOSET
Scale : 1/2" = 1'-0"

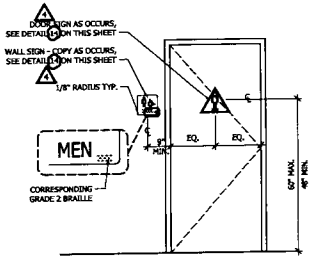



09 A-5.1 ACCESSIBLE URINAL
Scale : 1/2" = 1'-0"



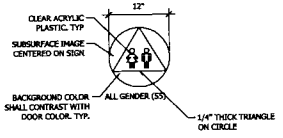

10 A-5.1 RECESSED SHELF @ SHOWER
Scale : 6" = 1'-0"

NOTE:
1. ATTACH SIGNS WITH SILICON ADHESIVE AND NON-CORROSIVE, VANDAL RESISTANT FLAT HEAD SCREWS
2. WHEN MOUNTING SIGN TO NON-OPAQUE MATERIAL, APPLY VINYL ADHESIVE BACKER; COLOR AND SIZE TO MATCH SIGNAGE.
3. TACTILE CHARACTERS ON SIGNS TO BE LOCATED 48 IN. MIN. ABOVE THE FINISH FLOOR TO THE BASELINE OF THE LOWEST TACTILE CHARACTER AND 60 IN. MAX. ABOVE THE FINISH FLOOR TO THE BASELINE OF THE HIGHEST RAISED CHARACTERS.



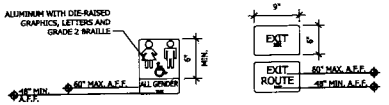

13 A-5.1 TOILET ROOM SIGNAGE
Scale : 1/2" = 1'-0"

DOOR SIGNS




NOTE:
1. ALL DOOR AND WALL SIGNAGE WITH VISUAL AND TACTILE CHARACTERS SHALL COMPLY WITH CBC 11B-703.1 THRU 11B-703.7.
2. ALL SIGNAGE TO BE APPROVED PRIOR TO FABRICATION AND FIELD INSPECTED AFTER INSTALLATION AND APPROVED BY OWNER AND ENFORCING AGENCY FOR REGULATION COMPLIANCE.
3. SEE SHEET A-X.X FOR ADDITIONAL SIGNAGE LOCATION INFORMATION.

WALL SIGNS




WINDOW DECAL
ENTRANCE SIGN




14 A-5.1 SIGNAGE DETAILS
Scale : 1" = 1'-0"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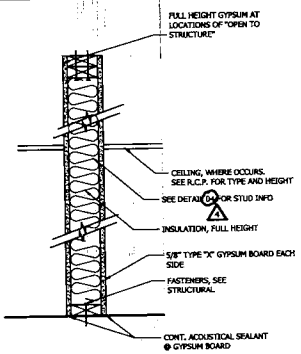
| 3 | BID RFIs | DATE: 01/07/2022 |

JOB NO.: 4909
DRAWN BY: STAFF
CHECKED BY: LP
SCALE: AS NOTED

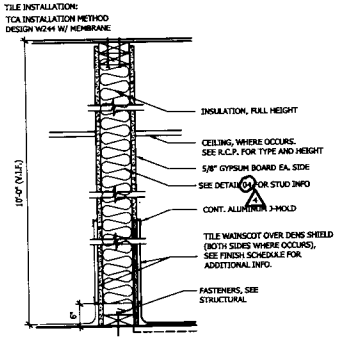
# ADA ACCESSIBLE DETAILS

ORANGE COUNTY FIRE AUTHORITY
Fire Station #16 - Tenant Improvements
28891 MODJESKA CANYON RD., SILVERADO, CA 92676

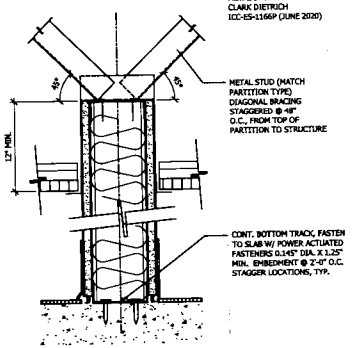
A-5.1



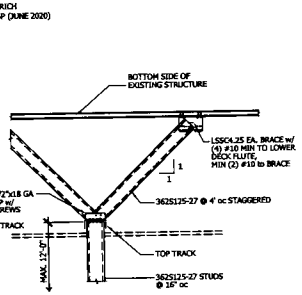

1 A-5.2 TYP. INT. PARTITION
Scale : 1-1/2" = 1'-0"



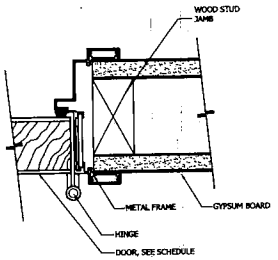

2 A-5.2 PARTITION W/ TILE
Scale : 1-1/2" = 1'-0"



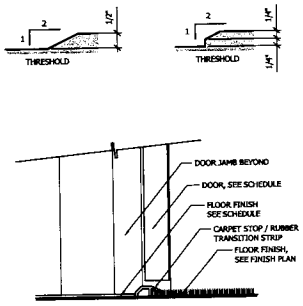

03 A-5.2 PARTITION WALL - BRACED (NON-RATED)
Scale : 3" = 1'-0"



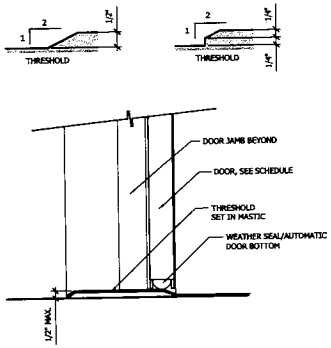

04 A-5.2 BRACING DETAIL
Scale : N.T.S.



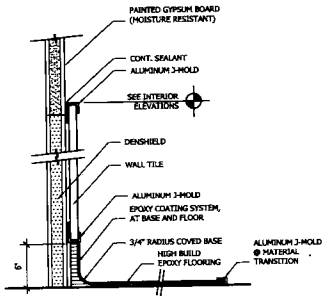

06 A-5.2 INTERIOR DOOR JAMB (HEAD SIM.)
Scale : 6" = 1'-0"



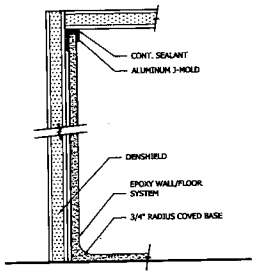

07 A-5.2 TRANSITION @ INTERIOR DOOR
Scale : 3" = 1'-0"



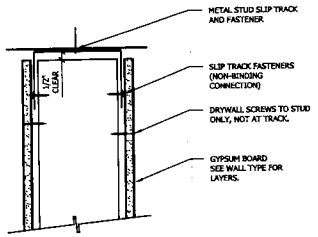

08 A-5.2 THRESHOLD @ INTERIOR DOOR
Scale : 3" = 1'-0"




09 A-5.2 EPOXY COVED BASE
Scale : 6" = 1'-0"



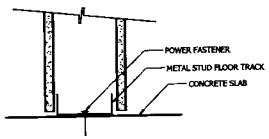

10 A-5.2 EPOXY SHOWER
Scale : 6" = 1'-0"




11 A-5.2 SLIP TRACT @ FULL HEIGHT WALL
Scale : 3" = 1'-0"

NOTES:

1. INSTALL POWER DRIVEN FASTENERS PER MANUFACTURER'S INSTRUCTIONS AND PER ICC-ESR-1663 REPORT. A COPY OF THE REPORT AND INSTALLATION DIRECTIONS TO BE AVAIL. ON THE JOB SITE AT ALL TIMES FOR THE INSTALLATION METHOD USED.
2. METAL STUD TRACKS TO BE FASTENED INTO NORMAL-WEIGHT OR STRUCTURAL LIGHT WEIGHT CONCRETE COMPLYING WITH CBC CHAPTER 19 OR IBC SECTION 1903.2, AS APPLICABLE. MINIMUM COMPRESSIVE STRENGTH OF CONCRETE IS 2,000 PSI. SEE TABLE 2 (ESR-1663 REPORT) FOR ALLOWABLE TENSION/SHEAR.
3. FASTENER PLACEMENT TO BE INSTALLED BY APPLICABLE TOOL AS REQD. BY MANUFACTURER.
4. INSTALLERS MUST BE CERTIFIED BY HILTI, INC. AND HAVE CURRENT HILTI-ISSUED OPERATOR'S LICENSE, OR APPROVED EQUAL MANUFACTURE AND SYSTEM.
5. USE HILTI X-C22 PITCH FASTENING SYSTEM AT INTERIOR NON-BEARING METAL STUD WALL SYSTEMS INSTALLED DIRECTLY TO CONCRETE SLAB ON GRADE OR CONCRETE/METAL DECK SYSTEM.

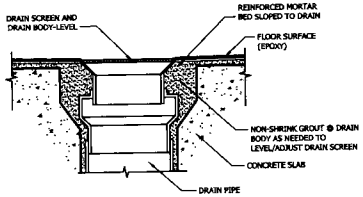



SPACING:

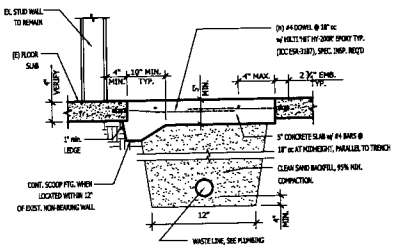
-MAX. 24" O.C. -MIN. FASTENERS PER TRACK: (3)
-MIN. 8" O.C. -MAX. DISTANCE FROM ENDS: 4"

12 A-5.2 POWER DRIVEN FASTENERS
Scale : 3" = 1'-0"

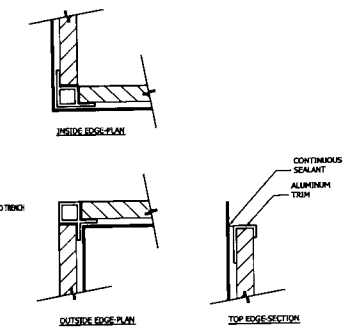
NOTE:
COORDINATE W/ FLOOR DRAIN PRIOR TO POURING CONCRETE




13 A-5.2 FLOOR DRAIN
Scale : 3" = 1'-0"




14 A-5.2 NEW TRENCH & CONCRETE SLAB REPAIR
Scale : 1" = 1'-0"




15 A-5.2 TRIM @ TILE WAINSCOT- TYPICAL
Scale : N.T.S.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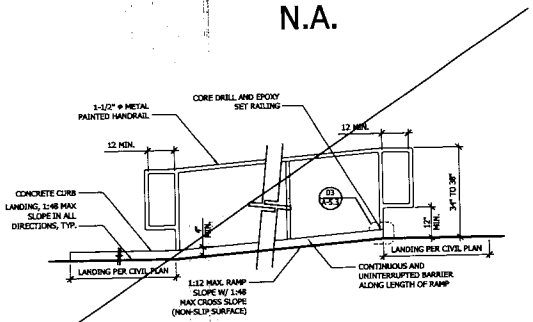
| JOB NO.: 4009 | |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: AS NOTED | |

DETAILS

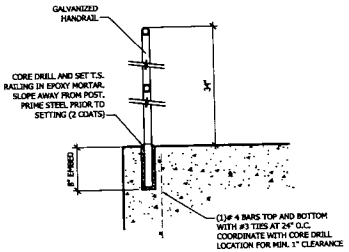
ORANGE COUNTY FIRE AUTHORITY
Fire Station #16 - Tenant Improvements
28891 MODJESKA CANYON RD., SILVERADO, CA 92676

A-5.2

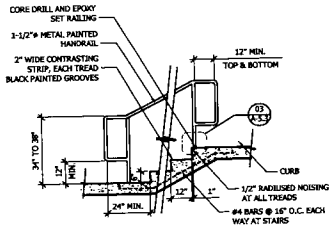
N.A.



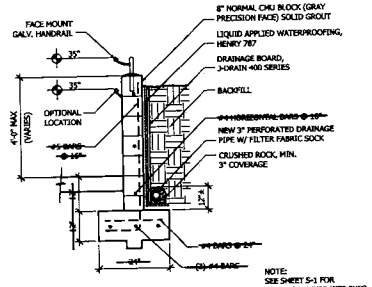

01 A-5.3 RAMP & HANDRAIL
Scale : 1/2" = 1'-0"




03 A-5.3 CORE DRILL RAILING @ STAIR
Scale : 1" = 1'-0"




04 A-5.3 EXTERIOR STAIRS & HANDRAIL
Scale : 3/8" = 1'-0"




NOTE:
SEE SHEET S-1 FOR ADDITIONAL/UPDATED INFO

06 A-5.3 RAMP & HANDRAIL
Scale : N.T.S.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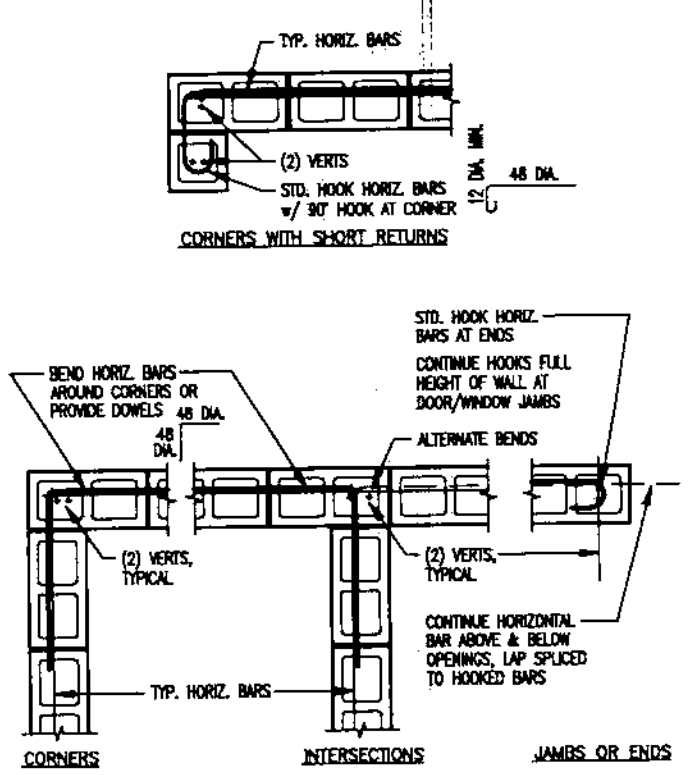
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: AS NOTED | |

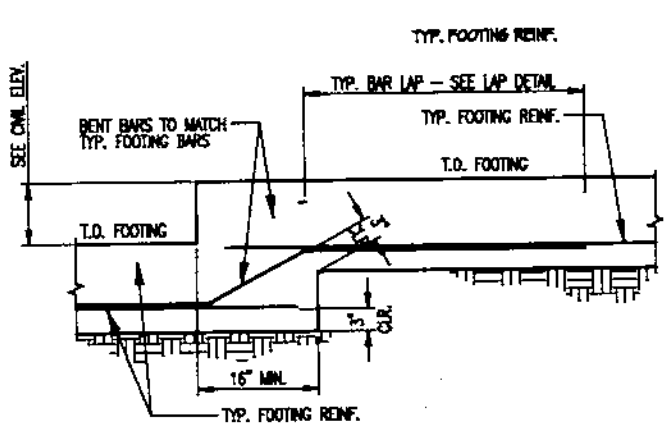
DETAILS

A-5.3

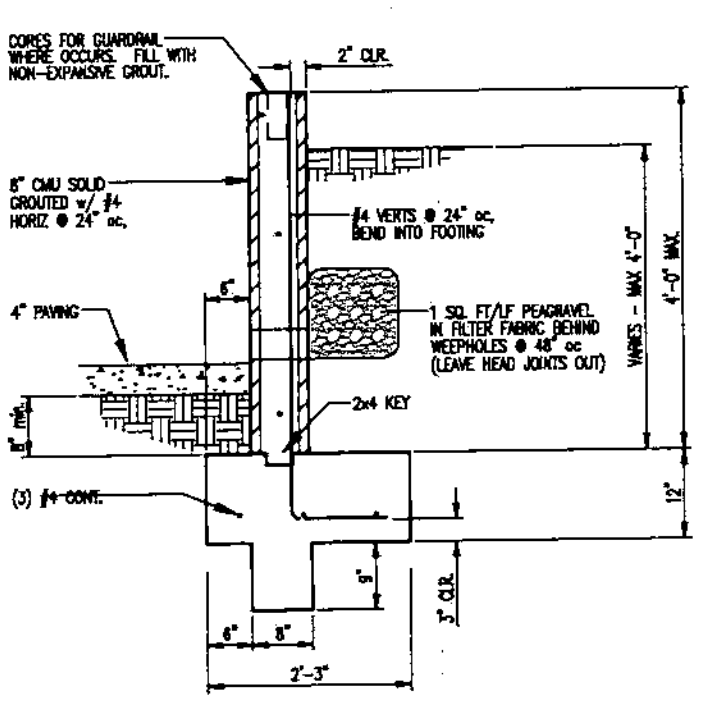
ORANGE COUNTY FIRE AUTHORITY
Fire Station #16 - Tenant Improvements
28891 MODJESKA CANYON RD., SILVERADO, CA 92676



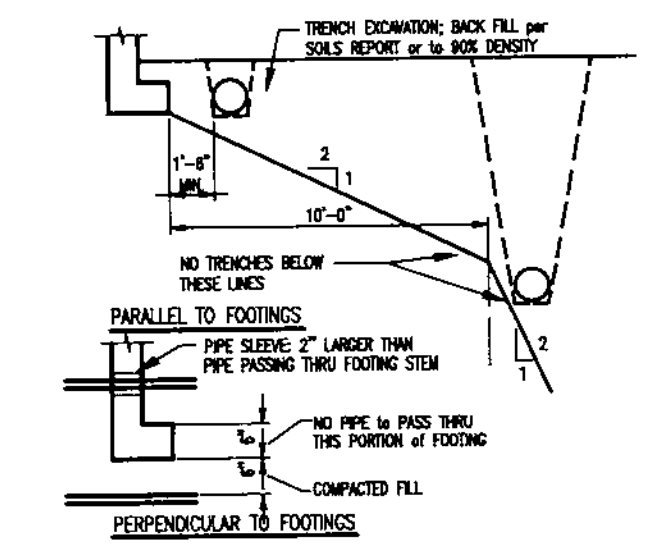

MASONRY CORNERS & INTERSECTIONS 4



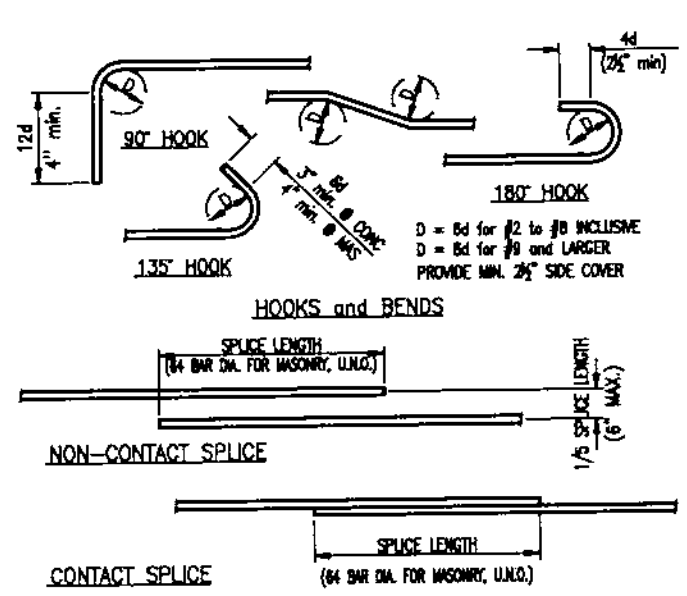

STEPPED FOOTING 5




RETAINING WALL SECTION 6




TRENCH DETAIL 1

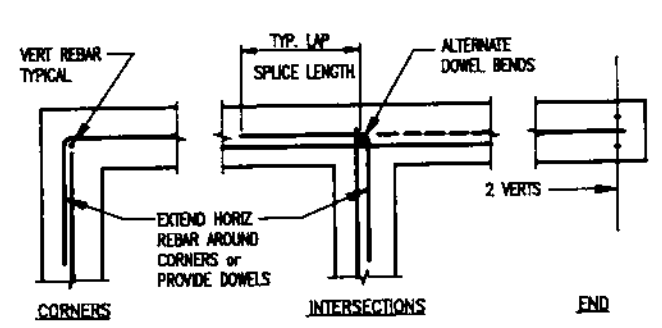



REBAR SPLICE LENGTH FOR CONCRETE

| f'c (PSI) | CLASS | BAR SIZE 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|---|---|---|---|---|---|---|---|---|
| 2500 | B | 18" | 32" | 40" | 48" | 70" | 79" | 89" |
| 3000 | B | 16" | 30" | 37" | 44" | 64" | 73" | 82" |
| 3500 | B | 15" | 28" | 34" | 41" | 59" | 67" | 76" |
| 4000 | B | 14" | 26" | 32" | 38" | 55" | 63" | 71" |
| 4500 | B | 13" | 25" | 31" | 36" | 52" | 60" | 67" |

STAGGER ADJACENT SPLICES 24" MIN.

TYP. REINFORCING BAR DETAIL 2




TYP. REINF. at CORNERS & INTERSECTIONS 3

## TESTS AND INSPECTIONS

1. INSPECTION BY A REGISTERED DEPUTY INSPECTOR IS REQUIRED FOR THE MATERIALS LISTED BELOW. THE EXTENT OF SUCH INSPECTION SHALL CONFORM TO SECTION 1704 OF THE INTERNATIONAL BUILDING CODE.
2. AN AFFIDAVIT SHALL BE ISSUED TO THE ARCHITECT/ENGINEER AND THE BUILDING DEPARTMENT AT THE COMPLETION OF EACH TYPE OF WORK STATING WHETHER THE WORK WAS IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.

SPECIAL INSPECTIONS
(only checked items are required)

| MATERIAL | INSPECTION TYPE: CONTINUOUS | PERIODIC | NOTES |
|---|---|---|---|
| CONCRETE - Section 1705.3 & Table 1705.3 | | | |
| Reinforcing Steel | | X | |
| Reinforcing Steel Welding (see below) | | | |
| Verify use of required design mix | | X | |
| Sampling fresh concrete | X | | b |
| Concrete placement | X | | |
| Maintenance of curing techniques | | X | |
| Formwork dimensions | | X | |
| MASONRY - Section 1705.4 | | | |
| Masonry Construction | | X | g |
| As Masonry Construction Begins | | X | h |
| During Masonry Construction | | X | i |
| Reinforcement Welding | X | | |
| Prior to Grout Placement | | X | j |
| Grout Placement | X | | |
| Grout, Mortar, Prism Specimens | | X | |

NOTES:
a. -
b. INSPECTION INCLUDES SLUMP, AIR CONTENT AND TEMPERATURE TESTS, INCLUDING TAKING SPECIMENS FOR STRENGTH TESTS.
c. -
d. -
e. -
f. -
g. VERIFICATION OF COMPLIANCE WITH THE REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED SUBMITTALS, VERIFICATION OF fm PRIOR TO CONSTRUCTION.
h. VERIFICATION OF PROPORTIONS OF SITE-PREPARED MORTAR, CONSTRUCTION OF MORTAR JOINTS, AND LOCATION OF REINFORCEMENT, CONNECTORS, AND ANCHORAGES.
i. VERIFICATION OF THE SIZE AND LOCATION OF STRUCTURAL ELEMENTS, THE TYPE, SIZE, AND LOCATION OF ANCHORS, INCLUDING ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES, OR OTHER CONSTRUCTION, THE SPECIFIED SIZE, GRADE, AND TYPE OF REINFORCEMENT, ANCHOR BOLTS, AND OTHER ANCHORAGE, AND THE PREPARATION, CONSTRUCTION, AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMP BELOW 40 DEGREES F) OR HOT WEATHER (TEMP ABOVE 90 DEGRESS F).
j. VERIFICATION OF CLEAN GROUT SPACE, PLACEMENT OF REINFORCEMENT, CONNECTORS, AND ANCHORAGES, PROPORTIONS OF SITE-PREPARED GROUT, AND CONSTRUCTION OF MORTAR JOINTS.

## CONCRETE

1. ALL CONCRETE SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
2. AGGREGATES SHALL BE NATURAL SAND AND ROCK CONFORMING TO ASTM C33.
3. CEMENT SHALL BE PORTLAND CEMENT CONFORMING TO ASTM C-150, TYPE I OR II, LOW ALKALI, OR AS REQUIRED TO SATISFY SITE SOIL CONDITIONS AS DETERMINED BY THE PROJECT SOILS ENGINEER. FOR SLAB-ON-GRADE MINIMUM WATER CEMENT RATIO TO BE 0.50.
4. THE FOLLOWING MINIMUM CLEAR DISTANCES BETWEEN REINFORCING STEEL AND FACE OF CONCRETE SHALL BE MAINTAINED UNLESS NOTED OTHERWISE:
   - SLABS ON GRADE — CENTER OF SLAB
   - CONCRETE BELOW GRADE, FORMED — 2"
   - CONCRETE BELOW GRADE, UNFORMED (poured against earth) — 3"
   - CONCRETE EXPOSED TO WEATHER — 1-1/2"
5. PIPES MAY PASS THROUGH STRUCTURAL CONCRETE IN SLEEVES, BUT SHALL NOT BE EMBEDDED THEREIN. PIPES OR DUCTS EXCEEDING ONE-THIRD THE SLAB OR WALL THICKNESS SHALL NOT BE PLACED IN THE STRUCTURAL CONCRETE UNLESS SPECIFICALLY DETAILED.
6. PROVIDE 3/4" CHAMFERS AT ALL EXPOSED CORNERS.
7. REFER TO ARCHITECTURAL DRAWINGS FOR REVEALS, AREAS OF TEXTURED CONCRETE OR SPECIAL FINISHES, ITEMS REQUIRED TO BE CAST INTO THE CONCRETE, CURBS AND SLAB DEPRESSIONS.

## MASONRY

1. ALL MASONRY SHALL BE REINFORCED GROUTED MASONRY. GROUT SOLID ALL CELLS WHICH CONTAIN REBAR, BOLTS, ETC. GROUT SOLID ALL CELLS BELOW GRADE. SPECIFIED COMPRESSIVE STRENGTH (f'm) SHALL BE 1500 PSI MINIMUM. (CMU UNITS ARE 2000 PSI)
2. MORTAR SHALL BE TYPE "S" MIXED IN THE PROPORTION OF 1 PART PORTLAND CEMENT TO 1/2 TO 1/4 PARTS LIME PUTTY TO 2-1/4 TO 3 TIMES THE SUM OF THE CEMENT PLUS LIME PUTTY PARTS OF SAND.
3. GROUT SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI AND SHALL BE MIXED IN PROPORTIONS OF 1 PART PORTLAND CEMENT TO 1/10 PART LIME PUTTY TO 2 TO 3 PARTS SAND TO A MAXIMUM OF 2 PARTS GRAVEL. CONFORM TO ASTM C476.
4. AGGREGATES FOR MORTAR AND GROUT SHALL BE NATURAL SAND AND ROCK CONFORMING TO ASTM C-144 (MORTAR) AND C-404 (GROUT).
5. THE MAXIMUM HEIGHT OF A CMU STACK PRIOR TO A GROUT POUR IS 24" THE MASONRY SHALL BE CURED FOR AT LEAST 4 HOURS PRIOR TO ANY GROUT LIFT. MAXIMUM CMU STACK HEIGHT IS LIMITED BY CLEAR GROUT SPACE PER THE TABLE BELOW:

| CLR GROUT SPACE (FINE) | CLR GROUT SPACE (COARSE) | STACK HEIGHT |
|---|---|---|
| 3x3 | 3x4 | 24'-0" |
| 2½x3 | 3x3 | 12'-8" |
| 2x3 | 2½x3 | 5'-4" |

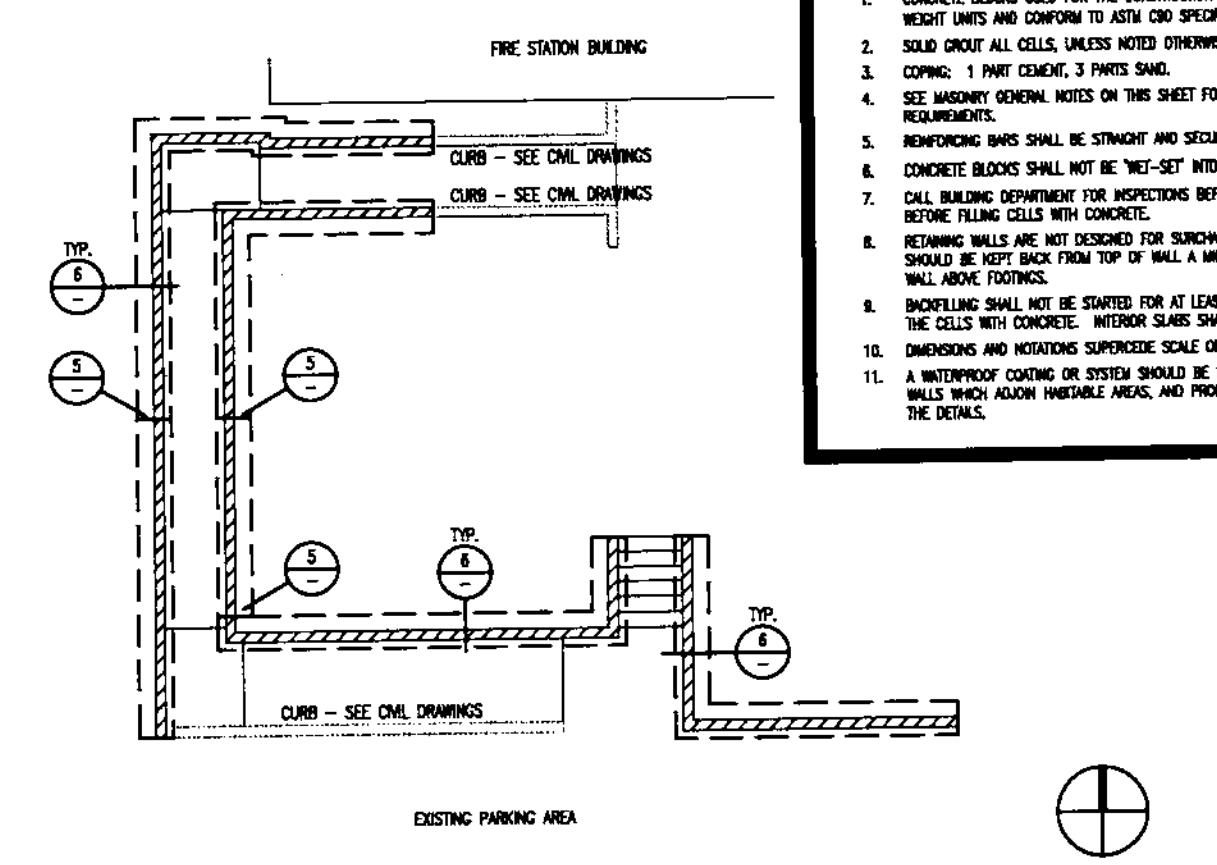
THE DIMENSION SHOWN ARE THE NET DIMENSIONS AFTER SUBTRACTING BAR DIAMETERS AND PROTRUSIONS INTO THE GROUT SPACE.

6. THE MAXIMUM GROUT POUR SHALL NOT EXCEED 5'-4" UNLESS CLEANOUT HOLES ARE PROVIDED AND GROUT SLUMP IS BETWEEN 10" AND 11". FOR POURS BETWEEN 5'-0" AND 12'-8", PROVIDE CLEANOUT HOLES AT THE BOTTOM OF EACH CELL AND AT THE BOTTOM OF EACH GROUP POUR. MORTAR DROPPINGS AND DEBRIS SHALL BE REMOVED FROM CELLS. AND INSPECTED BY THE CITY BUILDING INSPECTOR. CLEANOUT HOLES SHALL THEN BE SEALED AND BRACED BEFORE GROUT IS PLACED.
7. IF INTERMEDIATE BOND BEAMS OCCUR BETWEEN THE TOP AND BOTTOM OF A CMU STACK, THE MAXIMUM GROUT LIFT IS TO THE BOTTOM OF THE INTERMEDIATE BOND BEAM, LIMITED BY THE MAXIMUM GROUT LIFT HEIGHTS SPECIFIED IN NOTE NUMBER 6 ABOVE.
8. CEMENT FOR MASONRY SHALL BE PORTLAND CEMENT CONFORMING TO ASTM C-150 TYPE V I OR II, LOW ALKALI.
9. ALL CONCRETE BLOCK SHALL CONFORM TO ASTM C90, MEDIUMWEIGHT UNITS.
10. ALL REINFORCEMENT, BOLTS, ETC. SHALL HAVE A MINIMUM GROUT COVERAGE OF 3/4".
11. SEE THE ARCHITECTURAL DRAWINGS FOR TYPE OF UNITS, LAYING PATTERN, COLOR, AND JOINT DETAILS. UNLESS SPECIFICALLY SHOWN OTHERWISE, ALL CONCRETE BLOCK SHALL BE LAID IN RUNNING BOND.

## RETAINING WALLS

1. CONCRETE BLOCKS USED FOR THE CONSTRUCTION OF RETAINING WALLS SHALL BE MEDIUM WEIGHT UNITS AND CONFORM TO ASTM C90 SPECIFICATIONS (LATEST REVISION).
2. SOLID GROUT ALL CELLS, UNLESS NOTED OTHERWISE.
3. COPING: 1 PART CEMENT, 3 PARTS SAND.
4. SEE MASONRY GENERAL NOTES ON THIS SHEET FOR ADDITIONAL SPECIFICATIONS AND REQUIREMENTS.
5. REINFORCING BARS SHALL BE STRAIGHT AND SECURED ACCURATELY IN POSITION.
6. CONCRETE BLOCKS SHALL NOT BE "WET-SET" INTO FOUNDATION CONCRETE.
7. CALL BUILDING DEPARTMENT FOR INSPECTIONS BEFORE POURING FOOTINGS AND AGAIN BEFORE FILLING CELLS WITH CONCRETE.
8. RETAINING WALLS ARE NOT DESIGNED FOR SURCHARGE OF PAVING EQUIPMENT. EQUIPMENT SHOULD BE KEPT BACK FROM TOP OF WALL A MINIMUM DISTANCE EQUAL TO HEIGHT OF WALL ABOVE FOOTINGS.
9. BACKFILLING SHALL NOT BE STARTED FOR AT LEAST SEVEN DAYS AFTER THE FILLING OF THE CELLS WITH CONCRETE. INTERIOR SLABS SHALL BE IN PLACE PRIOR TO BACKFILLING.
10. DIMENSIONS AND NOTATIONS SUPERCEDE SCALE OF DRAWINGS.
11. A WATERPROOF COATING OR SYSTEM SHOULD BE INSTALLED TO THE EXTERIOR SIDE OF ALL WALLS WHICH ADJOIN HABITABLE AREAS, AND PROPER DRAWINGS SHALL BE PROVIDED PER THE DETAILS.

NOTES:
1. REFER TO CIVIL DRAWINGS FOR TOP OF FOOTING, FOOTING STEPS AND GRADES.




RETAINING WALL PLAN

SCALE: 1/8" = 1'-0"

## GENERAL

1. ALL CONSTRUCTION AND WORKMANSHIP SHALL CONFORM TO THE 2019 CALIFORNIA BUILDING CODE (CBC).
2. THESE NOTES SHALL BE USED IN CONJUNCTION WITH THE PLANS AND ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND THE ENGINEER.
3. CONTRACTOR MUST CHECK DIMENSIONS, FRAMING CONDITIONS, AND SITE CONDITIONS BEFORE STARTING WORK. ARCHITECT AND THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ANY DISCREPANCIES OR POSSIBLE DEFICIENCIES.
4. CONDITIONS NOT SPECIFICALLY DETAILED SHALL BE CONSTRUCTED AS SPECIFIED IN TYPICAL DETAILS FOR THE RESPECTIVE MATERIALS.
5. THE DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. ALL BRACING, TEMPORARY SUPPORTS, SHORING, ETC. IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR. OBSERVATION VISITS TO THE JOB SITE BY THE ARCHITECT AND THE ENGINEER DO NOT INCLUDE INSPECTION OF CONSTRUCTION PROCEDURES. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION METHODS AND FOR SAFETY CONDITIONS AT THE WORKSITE. THESE VISITS SHALL NOT BE CONSTRUED AS CONTINUOUS AND DETAILED INSPECTIONS.
6. DESIGN, MATERIALS, EQUIPMENT, AND PRODUCTS OTHER THAN THOSE DESCRIBED BELOW OR INDICATED ON THE DRAWINGS MAY BE CONSIDERED FOR USE, PROVIDED PRIOR APPROVAL IS OBTAINED FROM THE OWNER, ARCHITECT, THE ENGINEER, AND THE APPLICABLE GOVERNING CODE AUTHORITY.
7. ALL CONDITIONS NOTED AS EXISTING ARE BASED ON THE BEST INFORMATION CURRENTLY AVAILABLE AT THE TIME OF PREPARATION OF THESE DRAWINGS. THE CONTRACTOR IS TO VERIFY ALL CONDITIONS BEFORE STARTING WORK. SHOULD CONDITIONS ARISE WHICH ARE DIFFERENT FROM THOSE SHOWN ON THE DRAWINGS, THE ARCHITECT AND THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY AND ADDITIONAL DRAWINGS BASED ON MORE ACCURATE INFORMATION WILL BE PREPARED.

## DESIGN CRITERIA

WIND ANALYSIS
WIND SPEED: 106 MPH
RISK CATEGORY: IV

SOIL PARAMETERS
PRESUMED ALLOWABLE SOIL BEARING PRESSURE = 1500 PSF
ACTIVE PRESSURE = 35 PSF/FT
PASSIVE PRESSURE = 100 PSF/FT
LATERAL SLIDING RESISTANCE = 130 PSF

SEISMIC PARAMETERS
SITE CLASS: 'D'
SEISMIC DESIGN CATEGORY: 'D'
RISK CATEGORY: IV
SEISMIC IMPORTANCE FACTOR: 1.25
$F_a$ = 1.0 $F_v$ = 1.–
$S_S$ = 1.474 $S_1$ = 0.518
$S_{DS}$ = 0.983 $S_{D1}$ = 0.–

## FOUNDATIONS

1. ALL EXISTING FILL SOIL AND DISTURBED NATURAL SOILS ARE TO BE EXCAVATED AND REPLACED WITH PROPERLY COMPACTED FILL. ALL FILLING, BACKFILLING, RECOMPACTION, ETC. IS TO BE PERFORMED ONLY UNDER THE SUPERVISION OF A SOILS ENGINEER.
2. ALL EXCAVATIONS ARE TO BE INSPECTED AND APPROVED BY A SOILS ENGINEER PRIOR TO THE PLACEMENT OF ANY CONCRETE OR REINFORCING STEEL.
3. MAT SLAB TO BE CARRIED INTO FIRM UNDISTURBED NATURAL SOIL OR APPROVED COMPACTED FILL A MINIMUM OF 12" BELOW THE LOWEST ADJACENT GRADE. AVERAGE MAT SLAB DESIGN BEARING PRESSURE IS 700 PSF WITH A 33% INCREASE FOR SEISMIC OR WIND LOADING. WHERE CONCENTRATED LOADS OCCUR THE LOCAL BEARING PRESSURE NOT TO EXCEED 1000 PSF.
4. VERTICAL UNIT MODULUS OF SUBGRADE REACTION OF 150 PCI BASED ON A 1' x 1' LOAD PLATE IS ESTIMATED FOR THE COMPACTED FILL.
5. ALL EXCAVATIONS, GRADING, COMPACTION, ETC. SHALL BE PERFORMED IN ACCORDANCE WITH THE SOILS REPORT AS PREPARED BY LK GEOTECHNICAL ENGINEERING, INC., No. 21-0411, DATED MAY 21, 2021. THIS SOILS REPORT IS HEREBY MADE A PART OF THESE GENERAL NOTES AND ALL RECOMMENDATIONS CONTAINED THEREIN SHALL BE CONSIDERED AS MINIMUMS.
6. THE CONTRACTOR MUST VERIFY THAT THE FOUNDATION PLANS HAVE BEEN REVIEWED BY THE SOILS ENGINEER PRIOR TO START OF CONSTRUCTION.

## REINFORCING STEEL

1. REINFORCING STEEL SHALL CONFORM TO ASTM A615 OR A706, GRADE 40 FOR SIZES #3 AND GRADE 60 FOR SIZES #4 AND LARGER.
2. WELDING OF REINFORCING STEEL SHALL CONFORM TO AWS D1.4-11 USING PROPER LOW HYDROGEN ELECTRODES. ALL BARS TO BE WELDED SHALL CONFORM TO ASTM A706.
3. ALL BARS IN MASONRY SHALL BE LAPPED A MINIMUM OF 40 BAR DIAMETERS (2'-0" min.) AT ALL SPLICES UNLESS NOTED OTHERWISE.
4. ALL BARS IN CONCRETE SHALL BE LAPPED PER THE LAP SPLICE SCHEDULE AT ALL SPLICES UNLESS NOTED OTHERWISE.
5. SPLICES OF HORIZONTAL REBAR IN WALLS AND FOOTINGS SHALL BE STAGGERED 4'-0" MINIMUM.
6. DOWELS FOR WALLS AND COLUMNS SHALL BE THE SAME SIZE AND SPACING AS THE WALL/COLUMN REINFORCING UNLESS NOTED OTHERWISE.
7. ALL BENDING OF REINFORCING STEEL SHALL CONFORM TO THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE.

REGISTERED PROFESSIONAL ENGINEER RICHARD A. SUZUKI No. 4071 Exp. 9/30/2022 STRUCTURAL STATE OF CALIFORNIA

DCSE ASSOCIATES, INC.
STRUCTURAL ENGINEERS
1744 West Katella Ave.
Suite 107
Orange, CA 92867
PH: 714 997 1145
www.dalechristian.com

LICENSED ARCHITECT LONGKAMACH PANICHAPAN NO. C-29344 EXP. 11-30-21 STATE OF CALIFORNIA

architecture planning interior
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FAX (714) 444-4266 TEL (714) 444-4260

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RE-BID SET

| | |
|---|---|
| PLAN CHECK CORRECTIONS | |
| BID SET | |
| RE-BID SET | |
| JOB NO.: DC 20149 | DATE: 01/07/2022 |
| DRAWN BY: DCSE | |
| CHECKED BY: RS | |
| SCALE: | |

# RETAINING WALL & DETAILS

ORANGE COUNTY FIRE AUTHORITY
Fire Station #16 - Tenant Improvements
28891 MODJESKA CANYON RD., SILVERADO, CA 92676

S-1

# SYMBOLS LIST

- F — FIRE ALARM PULL STATION. MOUNT AT +48 INCHES UNLESS OTHERWISE NOTED.
- F⋈ — FIRE ALARM PULL STATION, VISUAL STROBE LIGHT AND HORN. MOUNT PULL STATION AT +48 INCHES. MOUNT HORN AND LIGHT AT +80 INCHES ABOVE HIGHEST FLOOR LEVEL IN ROOM OR 6 INCHES BELOW CEILING, WHICHEVER IS LOWER.VISUALS SHALL BE 30 CANDELA (75 CD ON AXIS) U.N.O. 15 CD OR 110 CD DEVICES SHALL BE PROVIDED AS PER NFPA 72.
- FATC — FIRE ALARM TERMINAL CABINET.
- FACP — FIRE ALARM CONTROL PANEL, "FACP". REFER TO SPECIFICATIONS.
- SD — PHOTOELECTRIC TYPE SMOKE DETECTOR MOUNTED ON CEILING OR WALL PER DRAWINGS. ASTERISK (*) ADJACENT INDICATES RELAY BASED AND LISTED FOR DOOR CONTROL.
- ——— CONDUIT RUN, CONCEALED IN CEILING, WALLS OR UNDER FLOORS.
- ——— CONDUIT RUN EXPOSED.
- - - - - - CONDUIT RUN UNDERGROUND.
- ———| CONDUIT STUBBED OUT AND CAPPED. PULL LINE IN PLACE.
- AIC — "AMPERES INTERRUPTING CAPACITY"
- RMS — "ROOT MEAN SQUARED"
- KW — "KILOWATT"
- KVA — "KILOVOLT – AMPERES"
- V — "VOLTS"
- A — "AMPS"
- WP — WEATHERPROOF, NEMA 3R
- KWH — KILOWATT HOURS
- AFF — ABOVE FINISHED FLOOR
- O.C. — "ON CENTER"
- UNO — UNLESS NOTED OTHERWISE
- C.O. — "CONDUIT ONLY". PROVIDE PULL ROPE FOR ALL EMPTY CONDUIT.
- C. — "CONDUIT", WITH CONDUCTORS AS REQUIRED BY DRAWINGS OR SPECIFICATIONS.
- ϕ — PHASE
- X / X.X — REFERENCE DETAIL NUMBER. "X" INDICATES DETAIL NUMBER AND "X.X" INDICATES SHEET NUMBER.
- CROSS LINES ON CONDUIT RUNS INDICATE NUMBER OF #10 CURRENT CARRYING CONDUCTORS CONTAINED THEREIN. TWO #10 AND ONE #10 GROUND WIRE ARE INDICATED WHEN CROSS LINES ARE NOT SHOWN. NUMERALS ADJACENT TO CROSS LINES ON CONDUIT RUNS INDICATE SIZE OF CONDUCTORS IN LIEU OF #10. ALL CONDUITS SHALL CONTAIN ONE GROUND WIRE SIZED PER C.E.C. TABLE 250-95, BUT NOT SMALLER THAN #10.
- B–1,3 — CONDUIT HOMERUN TO PANELBOARD. LETTER AND NUMERALS INDICATE ELECTRICAL PANEL AND CIRCUIT NUMBER.
- ISOLATED GROUND WIRE. RUN IN ADDITION TO REGULAR GROUND WIRE.
- SURFACE MOUNTED BRANCH CIRCUIT PANELBOARD.
- RECESSED BRANCH CIRCUIT PANELBOARD.
- P1 — PANEL DESIGNATION.
- RECESSED COMMUNICATION TERMINAL CABINET. REFER TO DRAWINGS AND SPECIFICATIONS.
- SURFACE MOUNTED COMMUNICATION TERMINAL CABINET. REFER TO DRAWINGS AND SPECIFICATIONS.
- JUNCTION BOX IN ACCESSIBLE CEILING SPACE OR FLUSH IN WALL WITH BLANK COVER PLATE TO MATCH DEVICE PLATES.

- COMBINATION MAGNETIC MOTOR STARTER AND NON-FUSED DISCONNECT SWITCH.
- F II — COMBINATION MAGNETIC MOTOR STARTER AND FUSED DISCONNECT SWITCH.
- SINGLE PHASE FRACTIONAL OR INTEGRAL HORSEPOWER MOTOR.
- TRANSFORMER, PRIMARY & SECONDARY VOLTAGE AND KVA RATING AS NOTED. TYPE AND CONFIGURATION AS SPECIFIED. PROVIDE DRY TYPE, COPPER WOUND, WALL OR BOX MOUNTED UNLESS NOTED OTHERWISE.
- E — EQUIPMENT WITH "E" ADJACENT IS EXISTING TO REMAIN.
- R — EQUIPMENT WITH "R" ADJACENT IS EXISTING TO BE COMPLETELY DISCONNECTED AND REMOVED.
- RR — EQUIPMENT WITH "RR" ADJACENT IS EXISTING TO BE DISCONNECTED, REMOVED AND RELOCATED TO NEW LOCATION AND RECONNECTED AS REQUIRED.
- ER — RELOCATED EQUIPMENT SHOWN IN NEW LOCATION.
- FLOOR MOUNTED COMBINATION RECEPTACLE & TELE/DATA
- HALF-SWITCHED DUPLEX RECEPTACLE
- JUNCTION BOX FLUSH IN FLOOR
- 100AS — NON-FUSED DISCONNECT SWITCH. "AS" INDICATES SWITCH AMPERE RATING.
- 100AS / 60AFU — FUSED DISCONNECT SWITCH. "AS" INDICATES SWITCH AMPERE RATING. "AFU" INDICATES FUSE AMPERE RATING.
- VFD II — MAGNETIC MOTOR STARTER. ROMAN NUMERAL INDICATES NEMA STARTER SIZE. ADDITIONAL SUBSCRIPTS INDICATE STARTER TYPE AND SIZE. (TYPICAL FOR ALL MAGNETIC STARTER SYMBOLS.)

| | |
|---|---|
| NO SUBSCRIPT | – FULL VOLTAGE, NON REVERSING |
| PR | – PRIMARY RESISTOR REDUCED VOLTAGE |
| AT | – AUTOTRANSFORMER REDUCED VOLTAGE |
| WD | – WYE-DELTA REDUCED VOLTAGE |
| PW | – PART WINDING REDUCED VOLTAGE |
| SS | – SOLID STATE REDUCED VOLTAGE |
| REV | – REVERSING TYPE |
| 2S | – TWO SPEED |
| 2W | – TWO WINDINGS |
| CH | – CONSTANT HORSEPOWER |
| CT | – CONSTANT TORQUE |
| VT | – VARIABLE TORQUE |
| VFD | – VARIABLE FREQUENCY DRIVE |

- LOW VOLTAGE DIMMER SWITCH (SAME ABBREVIATIONS APPLY AS ABOVE)
- 100AF / 70AT 3P — MOLDED CASE CIRCUIT BREAKER. "AF" INDICATES AMPERE FRAME. "AT" INDICATES AMPERE TRIP RATING AND NUMBER OF POLES AS INDICATED. SUBSCRIPT INDICATES TYPE.

| | |
|---|---|
| NO SUBSCRIPT | THERMAL MAGNETIC |
| NA | NON-AUTOMATIC |
| MO | MAGNETIC ONLY |
| CL | CURRENT LIMITING |
| SS | SOLID STATE |
| EM | ELECTRONIC METERING PACKING |

- DRAW-OUT TYPE CIRCUIT BREAKER.
- 100AS / 90FU 3P — FUSED SWITCH. "AS" INDICATED AMPERE SWITCH RATING, "AFU" INDICATES AMPERE FUSE RATING, NUMBER OF POLES AS INDICATED.
- VOLTAGE TRANSFORMER. FLOOR MOUNTD, COPPER WOUND, DRY TYPE UNLESS SPECIFIED OTHERWISE.
- CURRENT TRANSFORMERS, "C.T.s"
- POTENTIAL TRANSFORMER, P.T.s".
- M — UTILITY METER SOCKET, WITH C.T.s, CLIPS, ETC., PER SERVING UTILITY COMPANY.
- GROUND, "GRD".
- DUPLEX GROUNDING TYPE RECEPTACLE, 20 AMP, 125 VOLT
- DUPLEX GROUND FAULT INTERRUPTING TYPE RECEPTACLE, 20 AMP, 125 VOLT
- TWO DUPLEX GROUNDING TYPE RECEPTACLES IN 4S BOX, 20 AMP, 125 VOLT

- WALL MOUNTED COMBINATION VOICE/DATA OUTLET. SINGLE GANG MUD RING AND PLATE. ENGRAVE PLATE "VOICE" AND "DATA" OVER RESPECTIVE JACKS. VERIFY TYPE OF JACK WITH SCE IT. CONTRACTOR SHALL RUN 1-1/2"C.O MIN. FROM DATA JACK TO 6" ABOVE CEILING SPACE. COORDINATE CABLING REQUIREMENTS WITH SCE IT.
- X — PANEL NAME.
- FD-SH — FIRE AND SMOKE DAMPER
- SURFACE MOUNTED EMERGENCY LIGHTING UNIT WITH 90 MIN. EMERGENCY BATTERY PACK. REFER TO LIGHTING FIXTURE SCHEDULE.
- OS — CEILING MOUNTED OCCUPANCY SENSOR
- DL — CEILING MOUNTED DAYLIGHT SENSOR
- RC — ROOM CONTROLLER
- CEILING LIGHT FIXTURE AND OUTLET, HID, FLUORESCENT, OR INCANDESCENT. LOWER CASE LETTER INDICATES CONTROLLING SWITCH, NUMERAL INDICATES CIRCUIT. SHADED SYMBOL INDICATES FIXTURE WITH EMERGENCY POWER PROVISIONS.
- FLUORESCENT LIGHT FIXTURE OUTLET. LOWER CASE LETTER INDICATES CONTROLLING SWITCH, NUMERAL INDICATES CIRCUIT. SHADED CIRCLE DENOTES FIXTURE WITH EMERGENCY POWER PROVISIONS.
- FLUORESCENT STRIP FIXTURE. LOWER CASE LETTER INDICATES CONTROLLING SWITCH. NUMERAL INDICATES CIRCUIT. SHADED CIRCLE DENOTES FIXTURE WITH EMERGENCY POWER PROVISIONS.
- BRACKET OR WALL MOUNTED LIGHT FIXTURE AND OUTLET, HID, FLUORESCENT OR INCANDESCENT. LOWER CASE LETTER INDICATES CONTROLLING SWITCH, NUMERAL INDICATES CIRCUIT. SHADED CIRCLE DENOTES FIXTURE WITH EMERGENCY POWER PROVISIONS.
- ILLUMINATED EXIT LIGHT FIXTURE. SIDE, BACK, CEILING, OR PENDANT MOUNTED, SINGLE OR DOUBLE FACED AS NOTED BY SHADED ARC, WITH OR WITHOUT DIRECTIONAL ARROW AS NOTED ON THE DRAWINGS. NOT TO BE USED AS JUNCTION BOX OR "THROUGH-WIRE" DEVICE.
- LOW LEVEL EXIT LIGHT FIXTURE, WALL MOUNTED WITH OR WITHOUT DIRECTIONAL ARROW AS NOTED ON THE DRAWINGS. BOTTOM OF FIXTURE AT +6 INCHES ABOVE FINISHED FLOOR AND WITHIN FOUR INCHES OF DOOR FRAME WHERE APPLICABLE.
- D / 106 / 21 / +9'-0" — LIGHTING FIXTURE IDENTIFICATION SYMBOL. LETTER INDICATES FIXTURE TYPE. NUMERALS IN LOWER HALF OF HEXAGON INDICATE FIXTURE WATTAGE (INCLUDING BALLAST WHERE APPLICABLE). NUMERAL OUTSIDE TOP OF HEXAGON INDICATES NUMBER OF FIXTURES REQUIRED. NUMERAL OUTSIDE BOTTOM OF HEXAGON INDICATES MOUNTING HEIGHT FROM FLOOR TO BOTTOM OF FIXTURE. OMISSION OF MOUNTING HEIGHT INDICATES CEILING MOUNTING.
- SM — HP RATED SWITCH
- Sa / Sa — SWITCH. LOWER CASE LETTER AT BOTTOM INDICATES OUTLETS CONTROLLED. CAPITAL SUPERSCRIPT INDICATES SWITCH TYPE.

| | |
|---|---|
| NO SUPERSCRIPT | – SINGLE POLE SWITCH |
| 2 | – DOUBLE POLE |
| 3 | – THREE WAY |
| 4 | – FOUR WAY |
| I | – ILLUMINATED HANDLE |
| K | – KEYED SWITCH |
| LC | – LOCKABLE COVER |
| M | – MANUAL MOTOR STARTER WITH THERMAL OVERLOAD PROTECTION |
| MC | – MOMENTARY CONTACT |
| P | – PILOT LIGHT |
| PR | – PRESS TYPE |
| TP | – THREE POSITION |
| T | – TIMER, 0–8 HR ROTARY OR AS NOTED |

- HALF CONTROLLED DUPLEX GROUND FAULT INTERRUPTING TYPE RECEPTACLE, 20 AMP, 125 VOLT, 2 POLE, 3 WIRE.
- FLUSH FLOOR MOUNTED DUPLEX GROUNDING TYPE RECEPTACLE, 20 AMP, 125 VOLT
- IG — ANY RECEPTACLE INDICATED WITH"IG" ADJACENT SHALL BY ISOLATED GROUND TYPE WITH INDIVIDUAL GROUND WIRE TO PANELBOARD.
- IG — DEDICATED RECEPTACLE INDICATED WITH"IG" ADJACENT SHALL BY ISOLATED GROUND TYPE WITH INDIVIDUAL GROUND WIRE TO PANELBOARD.
- WALL MOUNTED OCCUPANCY SENSOR +42"AFF,U.O.N. (SINGLE MANUAL ON/OFF DIMMER SWITCH)
- a,b — WALL MOUNTED OCCUPANCY SENSOR +42"AFF,U.O.N. (DOUBLE MANUAL ON/OFF DIMMER SWITCH)

## APPLICABLE CODES

BUILDING OCCUPANCY CLASSIFICATION:

THE CONSTRUCTION OF THIS PROJECT SHALL CONFORM TO THE REQUIREMENTS OF:

2019 BUILDING STANDARD ADMINISTRATIVE CODE

2019 CALIFORNIA BUILDING CODE (CBC)

2019 CALIFORNIA ELECTRICAL CODE (CEC)

2019 CALIFORNIA MECHANICAL CODE (CMC)

2019 CALIFORNIA PLUMBING CODE (CPC)

2019 CALIFORNIA ENERGY CODE

2019 CALIFORNIA FIRE CODE (CFC).

## FIRE ALARM PERMIT NOTE

CONTRACTOR SHALL PROVIDE AND SUBMIT FIRE ALARM SAFETY CONSTRUCTION DOCUMENTS FOR ALL AGENCY PLAN CHECK REQUIREMENTS. APPROVAL SHALL BE OBTAINED PRIOR TO THE INSTALLATION OF THE SYSTEM.INTERCONNECTING WIRING AND CONDUIT SIZES ARE NOT INDICATED. CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING RACEWAY, WIRING PLANS, VOLTAGE DROP CALCULATION AND COMPLETE ONE LINE DIAGRAM OF THE SYSTEM.

CONTRACTOR SHALL PROVIDE AS PART OF FIRE ALARM SYSTEM:

- CONSTRUCTION DOCUMENT AND SHOP DRAWINGS.
- SUBMIT AND SECURE FIRE MARSHAL APPROVAL.
- FIELD TO VERIFY EXISTING FIRE ALARM DEVICES. ADD AND/OR RELOCATE EXISTING DEVICES TO COMPLY TO NEW SPACE CONFIGURATION.

## ABBREVIATIONS

| | |
|---|---|
| AF | AMPERE FRAME RATING OF CIRCUIT BREAKERS |
| AFF | ABOVE FINISHED FLOOR |
| AFU | AMPERE FUSE RATING |
| AIC | AMPS INTERRUPTING CAPACITY RATING (RMS SYMMETRICAL) |
| AM | AMMETER |
| AMP, A | AMPERES |
| AS | AMPERE SWITCH RATING |
| AT | AMPERE TRIP RATING OF BREAKER |
| AWG | AMERICAN WIRE GAUGE |
| BKR | BREAKER |
| C | CONDUIT |
| CAB | CABINET |
| CC | CENTER TO CENTER |
| CKT | CIRCUIT |
| C.O. | CONDUIT ONLY |
| CU | COPPER |
| DWG | DRAWING |
| E | EXISTING |
| FF | FINISHED FLOOR |
| FLEX | FLEXIBLE |
| FLUOR | FLUORESCENT |
| FUT | FUTURE |
| GND | GROUND |
| HZ | HERTZ |
| J.B. | JUNCTION BOX |
| k | THOUSAND (KILO) |
| kV | KILOVOLTS |
| kW | KILOWATTS |
| kVA | KILOVOLT AMPERES |
| kWH | KILOWATT-HOURS |
| LT, LTS | LIGHT, LIGHTS |
| LTG | LIGHTING |
| MAX | MAXIMUM |
| MCB | MAIN CIRCUIT BREAKER |
| MCC | MOTOR CONTROL CENTER |
| MCM | THOUSAND CIRCULAR MILS |
| MT, MTD, MTG | MOUNT, MOUNTED, MOUNTING |
| NO, NOS | NUMBER, NUMBERS |
| NTS | NOT TO SCALE |
| OC | ON CENTER |
| PNL | PANEL |
| PNLBD | PANELBOARD |
| PRI | PRIMARY |
| PWR | POWER |
| R | REMOVED |
| REC | RECEPTACLE |
| RECPTS | RECEPTACLES |
| REQD | REQUIRED |
| SW | SWITCH |
| SYS | SYSTEM |
| SYM | SYMMETRICAL |
| TEMP | TEMPERATURE |
| TYP | TYPICAL |
| UNO | UNLESS NOTED OTHERWISE |
| W | WIRE |
| WP | WEATHERPROOF |
| XFMR | TRANSFORMER |
| ZD | ZONE DAMPER |

## SHEET INDEX

| SHEET NO. | SHEET NAME |
|---|---|
| E–0.1 | ELECTRICAL SYMBOL LIST AND ABBREVIATIONS |
| E–0.2 | ELECTRICAL SPECIFICATIONS |
| E–0.3 | SINGLE LINE DIAGRAM AND PANEL SCHEDULES |
| E–0.4 | T–24 COMP. FORMS & LTG. FIXTURE SCH. |
| E–0.5 | LIGHTING FIXTURE CUTSHEETS |
| E–2.0 | DEMOLITION LIGHTING PLAN |
| E–2.1 | DEMOLITION POWER PLAN |
| E–3.0 | PROPOSED LIGHTING PLAN |
| E–3.1 | PROPOSED POWER PLAN |


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RE-BID SET

| | |
|---|---|
| PLAN CHECK CORRECTIONS | |
| BID SET | |
| RE-BID SET | DATE: 01/07/2023 |
| JOB NO.: 4099 | |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: | |

ELECTRICAL SYMBOL LIST AND ABBREVIATIONS

ORANGE COUNTY FIRE AUTHORITY
Fire Station #16 - Tenant Improvements
28891 MODJESKA CANYON RD., SILVERADO, CA 92676

E-0.1


H2S Engineers Inc.
Consulting MEP Engineers
Anaheim, CA 92801
Ph: (714) 290-0718
E-mail: mverma@h2sengineers.com

PART 1 – GENERAL

A. SCOPE

1. FURNISH AND INSTALL A COMPLETELY WIRED AND OPERATIONAL ELECTRICAL SYSTEM AS SHOWN ON THE DRAWINGS AND SPECIFIED HEREIN, INCLUDING BUT NOT LIMITED TO, THESE MAJOR ITEMS:
   a. LIGHTING FIXTURES AS INDICATED AND SPECIFIED ON THE PLANS.
   b. ELECTRICAL PANELS, CONTROLS, SERVICE, DISCONNECTS, CONDUIT WIRING, ETC., FOR ALL OUTLETS AND EQUIPMENT.
   c. TELEPHONE OUTLETS AND CONDUIT AS INDICATED.
   d. CONDUIT AND OUTLETS FOR ALARM, COMPUTER, AND SECURITY SYSTEMS AS INDICATED.
   e. CONTROL WIRING FOR ELECTRICAL SYSTEMS.
2. PROMOE PERMITS AND INSPECTIONS AS REQUIRED.

B. CODES, REGULATIONS AND STANDARDS

1. THE INSTALLATION SHALL COMPLY WITH APPLICABLE LOCAL AND STATE CODES AND ORDINANCES, WITH THE REGULATIONS OF THE LATEST ADOPTED EDITION OF THE FOLLOWING CODES; AND WITH THE REQUIREMENTS OF THE POWER AND TELEPHONE COMPANIES FURNISHING SERVICES TO THIS INSTALLATION.
2. THE FOLLOWING INDUSTRY STANDARDS, SPECIFICATIONS AND CODES ARE MINIMUM REQUIREMENTS:
   a. NEMA–NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION STANDARDS
   b. NEC–NATIONAL ELECTRICAL CODE
   c. UL–UNDERWRITER LABORATORIES INCORPORATED STANDARDS
   d. ANSI–AMERICAN NATIONAL STANDARDS INSTITUTE
   e. IEEE–INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
   f. NESC–NATIONAL ELECTRICAL SAFETY CODE
   g. TITLE 24–CALIFORNIA ENERGY COMMISSION

C. INSPECTION OF SITE

1. PRIOR TO SUBMITTING A BID FOR ELECTRICAL WORK, THE ELECTRICAL CONTRACTOR SHALL VISIT THE SITE OF THE PROPOSED CONSTRUCTION AND SHALL THOROUGHLY ACQUAINT HIMSELF WITH EXISTING UTILITIES AND WORKING CONDITIONS TO BE ENCOUNTERED, ETC. ALLOWANCE WILL NOT BE MADE FOR NON-COMPLIANCE WITH THIS CONDITION AFTER BIDDING.

D. GENERAL WORKMANSHIP

1. ALL WORK SHALL BE EXECUTED AND FINISHED IN A PRACTICAL MANNER AND SHALL PRESENT A NEAT AND WORKMANLIKE APPEARANCE WHEN COMPLETED.
2. ALL WORK MUST BE ACCEPTABLE TO THE OWNER. WHERE A DETAILED METHOD OF INSTALLING THE WORK IS NOT SPECIFIED OR INDICATED, INSTALL WORK AS DIRECTED BY THE OWNER.

E. RELATED WORK BY OTHERS

1. ELECTRICAL DRAWINGS IDENTIFY UTILITY SERVICE REQUIREMENTS FOR POWER, TELEPHONE, AND CABLE TV WITHIN AND UP TO FIVE FEET OUTSIDE THE BUILDING. UTILITY ELECTRICAL SERVICE TRANSFORMERS, WHERE SHOWN ON THE SITE PLAN, ARE FOR INFORMATION ONLY AND INDICATE THE PREFERRED POINT OF SERVICE. UTILITY CONDUIT SYSTEMS, PULLBOXES, AND OTHER STRUCTURES, WHERE SHOWN ON THE SITE PLAN, ARE ALSO FOR INFORMATION ONLY AND INDICATE THE PREFERRED ROUTING. THE ELECTRICAL CONTRACTOR SHALL REFER TO UTILITY SERVICE DRAWINGS FOR ACTUAL UTILITY SERVICE REQUIREMENTS FOR THIS PROJECT. UTILITY SYSTEMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE APPROVED UTILITY SERVICE DRAWINGS. IT SHALL BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO CONTACT AND FOLLOW-UP WITH ALL UTILITY COMPANIES TO OBTAIN BOTH PRELIMINARY AND FINAL DESIGN DRAWINGS FOR THIS PROJECT.
   a. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE ELECTRICAL SERVICE ENTRANCE, MEET ALL POWER COMPANY REQUIREMENTS AND SHALL PAY ALL UTILITY COMPANY CHARGES.
   b. THE LOCAL TELEPHONE COMPANY WILL FURNISH AND INSTALL ALL TELEPHONE WIRING AND EQUIPMENT AND WILL MAKE ALL FINAL TELEPHONE CONNECTIONS. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE TELEPHONE SERVICE ENTRANCE, MEET ALL TELEPHONE REQUIREMENTS AND SHALL PAY ALL UTILITY COMPANY CHARGES.
   c. THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE INSTALLATION OF THE CABLE SERVICE ENTRANCE, MEET ALL CABLE COMPANY REQUIREMENTS AND SHALL PAY ALL UTILITY COMPANY CHARGES.

F. COOPERATION WITH OTHER CONTRACTORS

1. COOPERATE WITH THE OTHER TRADES SO THAT THE INSTALLATION OF THE ELECTRICAL OUTLETS AND EQUIPMENT WILL BE PROPERLY COORDINATED. CONDUIT, FIXTURES, AND OTHER EQUIPMENT LOCATIONS SHALL BE CHECKED WITH THE OTHER TRADES TO AVOID CONFLICT WITH THE PIPING, DUCTWORK, STEEL, BEAMS, OR OTHER OBSTRUCTIONS.
2. CAREFULLY CHECK THE LOCATIONS OF THE OUTLET BOXES AND DETERMINE THAT THEY HAVE NOT BEEN DISTURBED DURING THE INSTALLATION OF MATERIALS OF OTHER TRADES.
3. COORDINATE THE LOCATION OF TRENCHES AND CONDUITS FOR UTILITY SERVICES AND OTHER DISCIPLINES WITH THE GENERAL CONTRACTOR.

G. MECHANICAL AND ELECTRICAL COORDINATION

1. ANY DEVICE WHICH CARRIES THE FULL LOAD CURRENT OF THE ELECTRICALLY DRIVEN MACHINERY, AS OPPOSED TO THE CONTROL OF INSTRUMENTATION CURRENT IN THE HOLDING COIL, IS A POWER CIRCUIT AND IS THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. CONTROL OR INSTRUMENTATION CIRCUITS CONNECTING HOLDING COILS TO THE CONTROL SYSTEM AS SPECIFIED BY THE MECHANICAL ENGINEER ARE THE RESPONSIBILITY OF THE MECHANICAL CONTRACTOR.
2. THE POWER CIRCUIT IS DEFINED AS ALL DEVICES NECESSARY TO OPERATE, AND AS REQUIRED BY CODE TO PROTECT AND SERVICE THE UNIT, INCLUDING BRANCH CIRCUIT PROTECTIVE DEVICES, DISCONNECTS, MAGNETIC MOTOR STARTERS WITH RUNNING OVERLOAD AND SINGLE PHASING PROTECTION, MAGNETIC CONTACTORS, ETC.
3. THE CONTROL OR INSTRUMENTATION CIRCUIT IS DEFINED AS ALL DEVICES NECESSARY TO INTERFACE THE ELECTRICAL POWER CIRCUIT WITH THE CONTROL SYSTEM AS SPECIFIED BY THE MECHANICAL ENGINEER INCLUDING CONDUIT, BOXES, CONDUIT FITTINGS, CONDUCTORS, ELECTRO-PNEUMATIC SWITCHES, PNEUMATIC-ELECTRIC SWITCHES, ELECTRICAL AND PNEUMATIC RELAYS, PNEUMATIC TUBING, ETC.
4. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO PROMOE 120V DUPLEX RECEPTACLES WITHIN 25 FEET OF ALL ROOF MOUNTED EQUIPMENT, PER NEC 210.63.

H. DRAWINGS

1. THE DRAWINGS INDICATE THE GENERAL ARRANGEMENT AND LOCATIONS OF THE ELECTRICAL WORK. INFORMATION PRESENTED ON THESE DRAWINGS ARE AS ACCURATE AS PLANNING CAN DETERMINE, BUT FIELD VERIFICATION OF ALL DIMENSIONS, LOCATIONS, LEVELS, ETC., TO SUIT FIELD CONDITIONS IS REQUIRED. REVIEW ALL ARCHITECTURAL, STRUCTURAL, AND MECHANICAL DRAWINGS AND ADJUST ALL WORK TO MEET THE REQUIREMENTS OF CONDITIONS SHOWN. THE ARCHITECTURAL DRAWINGS SHALL TAKE PRECEDENCE OVER ALL OTHER DRAWINGS. DISCREPANCIES BETWEEN DIFFERENT PLANS, OR BETWEEN DRAWINGS AND SPECIFICATIONS, OR REGULATIONS AND CODES GOVERNING THE INSTALLATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER IN WRITING BEFORE THE DATE OF BID OPENING. WHERE DISCREPANCIES OR CONFLICTS OCCUR, THE BID SHALL REFLECT THE MOST STRINGENT REQUIREMENTS. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO FIELD MEASURE AND CONFIRM MOUNTING HEIGHTS AND LOCATION OF EQUIPMENT WITH RESPECT TO COUNTERS, ETC. DO NOT SCALE DISTANCES OFF THE ELECTRICAL DRAWINGS. USE ACTUAL BUILDING DIMENSIONS.
2. UPON COMPLETION OF THE WORK UNDER THESE DRAWINGS AND SPECIFICATIONS, THE ELECTRICAL CONTRACTOR SHALL PROMOE THE OWNER WITH A COMPLETE SET OF MARKED-UP ELECTRICAL DRAWINGS SHOWING THE "AS-BUILT" CONDITION OF THE WORK. BOND PRINTS OF THE DRAWINGS REQUIRED WILL BE FURNISHED BY THE OWNER, FOR THIS PURPOSE.
3. ALL OPERATING INSTRUCTIONS, PARTS LISTS AND SPARE PARTS FOR MATERIAL AND EQUIPMENT FURNISHED AND/OR INSTALLED BY THE ELECTRICAL CONTRACTOR SHALL BE TURNED OVER TO THE OWNER (THREE COPIES).

I. SHOP DRAWINGS AND APPROVALS

1. SUBMITTALS SHALL CONSIST OF DETAILED SHOP DRAWINGS, SPECIFICATIONS, BLOCK WIRING DIAGRAMS, "CATALOG CUTS" AND DATA SHEETS CONTAINING PHYSICAL AND DIMENSIONAL INFORMATION, PERFORMANCE DATA, ELECTRICAL CHARACTERISTICS, MATERIALS USED IN FABRICATION, AND MATERIAL FINISH. CLEARLY INDICATE BY ARROWS OR BRACKETS PRECISELY WHAT IS BEING SUBMITTED ON AND THOSE OPTIONAL ACCESSORIES WHICH ARE INCLUDED AND THOSE WHICH ARE EXCLUDED.
2. EACH SUBMITTAL SHALL BE ACCOMPANIED SHALL BEAR A STAMP STATING THAT THE SUBMITTAL HAS BE THOROUGHLY REVIEWED BY THE CONTRACTOR AND IS IN FULL COMPLIANCE WITH THE REQUIREMENTS OF CONTRACT DOCUMENTS. COVER LETTERS SHALL LIST IN FULL THE ITEMS AND DATA SUBMITTED. FAILURE TO COMPLY WITH THIS REQUIREMENTS SHALL CONSTITUTE GROUNDS FOR REJECTION OR DATA.
3. THE CONTRACTOR SHALL SUBMIT DETAILED DRAWINGS OF ALL ELECTRICAL EQUIPMENT AND GENERATOR ROOMS, YARDS, AND UTILITY AREAS. MINIMUM SCALE: 1/4"=1'-0".
4. AS PART OF THE EQUIPMENT SUBMITTALS, THE MANUFACTURER SHALL PROMOE AND ERACE CALCULATIONS FOR FLOOR AND WALL MOUNTED ELECTRICAL EQUIPMENT. STRUCTURAL CALCULATIONS SHALL BE PREPARED AND SIGNED BY REGISTERED STRUCTURAL ENGINEER IN CALIFORNIA.
5. ALL RESUBMITTALS SHALL INCLUDE A COVER LETTER THAT LISTS THE ACTION TAKEN AND REVISIONS MADE TO EVERY DRAWING AND EQUIPMENT DATA SHEET IN RESPONSE TO SUBMITTAL REVIEW COMMENTS. FAILURE TO INCLUDE THIS COVER LETTER WILL CONSTITUTE REJECTION OF THE RESUBMITTAL PACKAGE.
6. CONTRACTOR SHALL SUBMIT SHORT CIRCUIT AND COORDINATION STUDIES SIGNED BY A REGISTERED ELECTRICAL ENGINEER. STUDIES SHALL BE PERFORMED IN ACCEPTANCE WITH IEEE GUIDELINES. CONTRACTOR SHALL BE SUBMITTED FOR ARCHITECT–ENGINEER REVIEW PRIOR TO ORDERING AND INSTALLING ANY EQUIPMENT. CONTRACTOR SHALL ENSURE THAT THE ACTUAL FEEDER LENGTHS MATCH STUDIES (REVISE STUDIES IF NECESSARY). SERVICE EQUIPMENT MARKINGS AS REQUIRED PER NEC 110.24 SHALL BE BASED ON CONTRACTOR SUBMITTED STUDIES.
7. SUBMIT CONDUITS, FITTINGS, OUTLET PULL AND JUNCTION BOXES; WIRES; WIRING DEVICES; LIGHTING FIXTURES; LAMPS; BALLASTS; SAFETY SWITCHES; FUSES; TRANSFORMERS; PANELBOARDS; SWITCHBOARDS; CIRCUIT BREAKERS; LIGHTING CONTROL SYSTEM/DEVICES; AND FIRE ALARM SYSTEMS.

J. SUBSTITUTIONS

1. ALL REQUESTS FOR SUBSTITUTIONS SHALL CONFORM TO THE GENERAL REQUIREMENTS AND PROCEDURE OUTLINED IN DIVISION 1.
2. WHERE ITEMS ARE NOTED AS "OR EQUAL", A PRODUCT OF EQUAL DESIGN, CONSTRUCTION AND PERFORMANCE WILL BE CONSIDERED.
3. SUBSTITUTIONS SHALL BE EQUAL, IN THE OPINION OF THE OWNER'S REPRESENTATIVE, TO THE SPECIFIED PRODUCT.
4. THE BURDEN OF PROOF OF EQUALITY OF A PROPOSED SUBSTITUTION FOR A SPECIFIED ITEM SHALL BE UPON THE ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL SUPPORT ITS REQUEST WITH SUFFICIENT TEST DATA, PHOTOMETRIC ANALYSES, DETAILED BREAKDOWN DEFINING COST SAVINGS, AND OTHER MEANS TO PERMIT THE ARCHITECT AND/OR ENGINEER TO MAKE A FAIR AND EQUITABLE DECISION ON THE MERITS OF THE PROPOSED SUBSTITUTION. ANY ITEM BY A MANUFACTURER OTHER THAN THOSE SPECIFIED, OR OF BRAND NAME OR MODEL NUMBER WILL BE CONSIDERED A SUBSTITUTION. THE ARCHITECT AND/OR ENGINEER WILL BE THE SOLE JUDGE OF WHETHER OR NOT THE SUBSTITUTION IS EQUAL IN QUALITY, UTILITY, AND ECONOMY TO THAT SPECIFIED.
5. APPROVAL OF A SUBSTITUTION SHALL NOT RELIEVE ELECTRICAL CONTRACTOR FROM RESPONSIBILITY FOR COMPLIANCE WITH ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS. ELECTRICAL CONTRACTOR SHALL BEAR THE EXPENSE FOR ANY CHANGES IN OTHER PARTS OF THIS WORK OR OTHER WORK CAUSED BY THE PROPOSED SUBSTITUTION.
6. IF ARCHITECT AND/OR ENGINEER REJECTS ELECTRICAL CONTRACTOR'S SUBSTITUTE ITEM ON THE FIRST SUBMITTAL, ELECTRICAL CONTRACTOR MAY MAKE ONLY ONE ADDITIONAL REQUEST FOR SUBSTITUTION IN THE SAME CATEGORY.

K. GUARANTEE & TESTING

1. GUARANTEE ALL MATERIAL FURNISHED AND ALL WORKMANSHIP PERFORMED FOR A PERIOD OF ONE YEAR FROM THE DATE OF FINAL ACCEPTANCE OF THE WORK. ANY DEFECTS DEVELOPING WITHIN THIS PERIOD, TRACEABLE TO MATERIAL FURNISHED AS PART OF THIS SECTION OR WORKMANSHIP PERFORMED UNDER THIS SECTION, SHALL BE CORRECTED AS NECESSARY AT NO COST TO THE OWNER.
2. SYSTEM SHALL BE TESTED FOR PROPER OPERATION. IF TESTS SHOW THAT WORK IS DEFECTIVE, ELECTRICAL CONTRACTOR SHALL MAKE CORRECTIONS AS NECESSARY AT NO COST TO THE OWNER.

L. LABELING

1. PROMOE ENGRAVED NAME PLATES ON SWITCHBOARDS, PANEL BOARDS, DISCONNECT SWITCHES, MOTOR CONTROL CENTERS, TRANSFORMERS, ETC., INDICATING EQUIPMENT DESIGNATED (OR DESIGNATION OF EQUIPMENT SERVED) AND VOLTAGE.

M. HOUSEKEEPING PADS

1. PROMOE 4 INCH HIGH CONCRETE EQUIPMENT PADS FOR ALL FLOOR-MOUNTED EQUIPMENT INCLUDING SWITCHBOARDS, MOTOR CONTROL CENTERS, TRANSFORMERS, ETC.

N. MATERIALS

1. ALL MATERIALS SHALL BE NEW AND OF QUALITY AS SPECIFIED ON THE PLANS OR SPECIFICATIONS AND MUST CARRY THE UNDERWRITER'S LABORATORIES APPROVAL COVERING THE PURPOSE FOR WHICH THEY ARE USED, IN ADDITION TO MEETING ALL REQUIREMENTS OF THE CURRENT APPLICABLE CODES AND REGULATIONS.
2. ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING EQUIPMENT WHICH IS DAMAGED DUE TO INDIRECT FIELD WIRING PROVIDED UNDER THIS SECTION OR FACTORY WIRING IN EQUIPMENT PROVIDED UNDER THIS SECTION.

O. STORAGE AND HANDLING OF MATERIAL

1. DELIVER MATERIALS AND EQUIPMENT TO THE PROJECT IN THE MANUFACTURER'S ORIGINAL, UNOPENED, UNUSED CONTAINERS. PROTECT AGAINST MOISTURE, DAMPENING, OR DAMAGE FROM IMPROPER HANDLING OR STORAGE. ELECTRICAL CONTRACTOR SHALL PROTECT AND BE RESPONSIBLE FOR ANY DAMAGE TO WORK OR MATERIALS UNTIL FINAL ACCEPTANCE BY THE OWNER, AND SHALL MAKE GOOD WITHOUT COST TO THE OWNER, ANY DAMAGE OR LOSS THAT MAY OCCUR DURING THIS PERIOD.
2. ARRANGE FOR TIMELY DELIVERY OF MATERIALS AND EQUIPMENT TO THE JOBSITE IN ORDER TO MINIMIZE THE LENGTH OF TIME BETWEEN DELIVERY AND INSTALLATION.
3. ARRANGE FOR TIMELY DELIVERY OF OWNER SUPPLIED MATERIALS AND EQUIPMENT TO THE JOBSITE IN ORDER TO MINIMIZE THE LENGTH OF TIME BETWEEN DELIVERY AND INSTALLATION.
4. COVER AND PROTECT ANY MATERIAL WHICH MAY BE AFFECTED BY THE WEATHER WHILE IN TRANSIT OR STORED AT THE PROJECT SITE. ANY MATERIAL FOUND DEFECTIVE OR NOT INSTALLED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS MAY BE REJECTED BY THE ENGINEER.
5. NO ELECTRICAL WORK SHALL BE INSTALLED IN AREAS WHERE OTHER TRADE'S WORK MIGHT CAUSE PHYSICAL DAMAGE TO WIRES, CONDUIT, EQUIPMENT, BOXES OR FITTINGS UNTIL THE OTHER TRADE'S WORK HAS BEEN COMPLETED. ANY EQUIPMENT OR MATERIALS WHICH BECOME DAMAGED SHALL BE REMOVED AND REPLACED AT NO EXTRA COST TO THE OWNER.

P. CLEAN-UP

1. KEEP THE PREMISES FREE FROM ACCUMULATION OF WASTE MATERIALS, OR RUBBISH CAUSED BY EMPLOYEES OR WORK UNDER THIS DIVISION OF THE SPECIFICATIONS. AT THE COMPLETION OF THE WORK, REMOVE ALL SURPLUS MATERIALS, TOOLS, ETC., AND LEAVE THE PREMISES "BROOM-CLEAN".

Q. EXCAVATION, CUTTING AND FITTING

1. PERFORM THE EXCAVATION, CUTTING, FITTING, REPAIRING AND FINISHING OF THE WORK NECESSARY FOR THE INSTALLATION OF ELECTRICAL EQUIPMENT HOWEVER, NO CUTTING OF THE WORK OF OTHER TRADES OR OF ANY STRUCTURAL MEMBER SHALL BE DONE WITHOUT THE CONSENT OF THE ARCHITECT.

R. EXCAVATION AND BACKFILL

1. PERFORM ALL EXCAVATION AND BACKFILLING REQUIRED FOR WORK PERFORMED UNDER THIS DIVISION OF THE SPECIFICATIONS. TRENCH BOTTOMS SHALL BE GRADED TRUE AND FREE FROM STONES OR SOFT SPOTS. USE EXCAVATED MATERIALS FOR BACKFILL UNLESS OFF SITE MATERIALS ARE DEEMED NECESSARY BY THE ARCHITECT. TRENCHING AND BACKFILLING FOR ELECTRICAL AND TELEPHONE UTILITY SERVICES TO BUILDING SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR IN ACCORDANCE WITH UTILITY COMPANY REQUIREMENTS.
2. VERIFY LOCATION OF EXISTING UNDER GROUND UTILITIES PRIOR TO TRENCHING.

PART 2 – PRODUCTS AND EXECUTION

A. CONDUIT

1. ALL WIRING SHALL BE INSTALLED IN LISTED METALLIC CONDUIT EXCEPT AS PERMITTED BELOW. GRC MAY BE USED IN ALL AREAS. IMC MAY BE USED IN INDOOR LOCATIONS NOT IN CONTACT WITH EARTH. EMT MAY BE USED IN INDOOR LOCATIONS NOT IN CONTACT WITH EARTH, NOT IN CONCRETE SLABS OR WALLS AND NOT SUBJECT TO DAMAGE. PVC MAY BE USED IN OR BELOW CONCRETE AND DIRECT BURIED IN EARTH. FLEXIBLE STEEL CONDUIT SHALL BE USED FOR INDOOR FINAL CONNECTIONS TO MECHANICAL EQUIPMENT NOT TO EXCEED 36", AND RECESSED REMOVABLE FLUORESCENT LIGHT FIXTURES NOT TO EXCEED 72". LIQUID-TIGHT FLEXIBLE STEEL CONDUIT SHALL BE FOR OUTDOOR FINAL CONNECTIONS TO EQUIPMENT NOT TO EXCEED 36".
2. WHERE THE CONDUIT ENTERS OUTLET BOXES, FIXTURES OR CABINETS, FIRMLY FASTEN BY DOUBLE LOCKNUTS AND BUSHINGS (GRC AND IMC ONLY). FIRMLY FASTEN CONDUIT TO THE BUILDING CONSTRUCTION. RUN EXPOSED CONDUIT PARALLEL TO THE BUILDING LINES, SUPPORTED BY APPROPRIATE HANGERS.
3. COVER METALLIC CONDUIT IN CONTACT WITH EARTH OR FILL WITH POLYETHYLENE TAPE SPIRAL WRAPPED, 1/2" LAPPED TO PROMOE DOUBLE THICKNESS. TAPE SHALL BE SCOTCH NO. 50 TAPE. CONDUIT AND DUCTS NOT UNDER BUILDINGS AND FEEDER DUCTS SHALL BE INSTALLED PER NEC 300.5, EXCEPT THAT THE BENDS IN CONDUIT LARGER THAN 1" IN DIAMETER SHALL BE MADE WITH GALVANIZED STEEL CONDUIT TREATED AS NOTED ABOVE. MAKE JOINTS WITH COMPOUND TO BE WATERTIGHT.
4. CONDUIT SIZES SHALL BE AS REQUIRED BY CODE AND AS INDICATED OR SPECIFIED ON DRAWINGS. NO CONDUIT SMALLER THAN 3/4 INCH TRADE SIZE SHALL BE USED.
5. PENETRATION THROUGH FLOOR SLABS WHERE SUBJECT TO DAMAGE SHALL BE IN WRAPPED ROD STEEL SCHEDULE 40 PVC CASING AND PENETRATIONS MAY BE USED IN SLAB ON GRADE WHERE PENETRATING COLOR IN PROTECTED AREAS (WALLS, ELECTRICAL ROOMS, ETC.).
6. CONDUITS AND OUTLETS SHALL BE CONCEALED WITHIN THE BUILDING STRUCTURE, EXCEPT THAT CERTAIN MOTOR AND LIGHTING FEEDER CONDUITS MAY BE RUN EXPOSED IN CERTAIN AREAS AS INDICATED ON THE DRAWINGS. CONDUIT SHOWN TO BE INSTALLED IN CABINETS, COUNTERS, AND FURNITURE SHALL BE AS DIRECTED BY THE ARCHITECT.
7. ALL CONDUIT SERVING ROOF MOUNTED EQUIPMENT AND DEVICES INCLUDING HVAC EQUIPMENT, GFCI MAINTENANCE RECEPTACLES AND DUCT TYPE SMOKE DETECTORS SHALL BE ROUTED IN THE CEILING SPACE. CONDUIT SHALL PENETRATE ROOF AT EQUIPMENT LOCATIONS ONLY. NO CONDUIT SHALL BE INSTALLED HORIZONTALLY ACROSS ROOF SURFACE.
8. FLEXIBLE METALLIC AND NON-METALLIC CONDUIT SYSTEMS SHALL HAVE A CODE SIZED COPPER GROUND CONDUCTOR. INCREASE CONDUIT SIZE AS REQUIRED.
9. FLEXIBLE METAL CONDUIT/CUT-IN BOXES FOR LOW VOLTAGE SYSTEMS (TEL/DATA) MAY BE USED IN WALL CAVITIES PROMOED THE INSTALLATION COMPLIES WITH NEC ARTICLE 348. ALL CONDUIT FOR LOW VOLTAGE WIRING SHALL BE RUN IN WALL PARTITIONS SHALL BE EMT. FLEXIBLE METAL CONDUIT FOR THESE SYSTEMS IS NOT ACCEPTABLE IN NEW WALLS.
10. ALL EMPTY CONDUIT SYSTEMS SHALL HAVE A 200 POUND TEST PULL CORD INSTALLED TO FACILITATE INSTALLATION OF FUTURE WIRE.

B. FITTINGS

1. EMT–FITTINGS AND CONDUIT BODIES SHALL BE STEEL, MALLEABLE IRON OR DIE CAST COMPRESSION OR SET SCREW TYPE.
2. IMC AND GRC–SHALL BE STEEL OR MALLEABLE IRON TYPE AND SHALL ENGAGE A MINIMUM OF FIVE (5) THREADS.

C. OUTLET, PULL AND JUNCTION BOXES

1. PULL AND/OR JUNCTION BOXES SHALL BE INSTALLED WHEREVER SHOWN ON THE DRAWINGS OR AS REQUIRED BY CODE.
2. EACH SWITCH, LIGHT, RECEPTACLE OR OTHER OUTLET SHALL BE PROMOED WITH A CODE GAUGE, GALVANIZED STEEL OUTLET BOX. JUNCTION AND PULLBOXES SHALL BE CODE GAUGE, GALVANIZED STEEL. OUTLET BOXES SHALL BE OF THE SIZE AND SHAPE SUITABLE FOR THE SERVICE, IN GENERAL 4-INCH SQUARE, 2 1/8-INCH WITH PLASTER RING. PLASTER RINGS SHALL BE SET TO PROMOE NOT MORE THAN 1/8" FROM WALL SURFACE TO RING. IN NO CASE SHALL PLASTER RING PROJECT BEYOND SURFACE OF WALL. SINGLE GANG RINGS SIMILAR TO STEEL CITY 5000 SHALL BE USED FOR 4" BOXES IN UNFINISHED BRICK. NUMBER 180 BOXES MAY BE USED FOR UNFINISHED MASONRY FLUSH WALL OUTLETS. CENTER ALL OUTLET BOXES IN BLOCK COURSE.
3. BOXES INSTALLED IN POURED CEMENT FLOORS SHALL BE FLUSH TYPE CAST IRON WITH WATERTIGHT GASKETED COVERS, GRAY METALLIC FINISH. WHERE BOXES ARE INSTALLED IN FLOORS WITH TILE OR CARPET FLOOR COVERING, COVERS SHALL BE OF THE RECESSED TYPE TO ACCOMMODATE THE FLOOR COVERING.
4. BOXES INSTALLED FOR THE ALARM, COMPUTER AND SECURITY SYSTEM SHALL BE PROMOED WITH APPROPRIATE COVER PLATES.
5. PULL BOXES SHALL BE OF THE TYPES, SIZE AND DESIGN AS APPROVED BY THE NEC FOR THE CLASS OF INSTALLATION REQUIRED.
6. PULL BOXES AND OUTLET BOXES SHALL BE SIZED BY THE ELECTRICAL CONTRACTOR AS REQUIRED BY THE NEC BASED ON NUMBER OF CONDUCTORS, YOKES, STRAPS, ETC., USED IN THE INSTALLATION.

D. WIRE

1. MATCH BUILDING STANDARDS IF APPLICABLE IN AN EXISTING BUILDING CONDITION, UNLESS OTHERWISE FOLLOW THE SPECIFICATIONS BELOW.
2. CONDUCTOR SIZES SHOWN ON THE DRAWINGS ARE BASED ON COPPER WIRE. UNLESS OTHERWISE SPECIFIED, ALL WIRE SHALL BE 75 DEGREE C TYPE THWN OR RHW-NE. ALL BRANCH CIRCUIT AND FEEDER WIRING SHALL BE COPPER.
3. WIRES SHALL BE MARKED WITH COLOR TO SIMPLIFY CIRCUIT IDENTIFICATION. UNLESS OTHERWISE REQUIRED BY LOCAL ORDINANCES, IDENTIFICATION SHALL BE AS FOLLOWS:
   a. 120/208V AND 120/240V
      - PHASE A: BLACK
      - PHASE B: RED
      - PHASE C: BLUE
      - NEUTRAL: WHITE
      - GROUND: GREEN
   b. 277/480V
      - PHASE A: BROWN
      - PHASE B: ORANGE
      - PHASE C: YELLOW
      - NEUTRAL: GRAY
      - GROUND: GREEN
4. THE WIRE SHALL BE #12 AWG UNLESS OTHERWISE INDICATED.
5. NO WIRE SHALL BE INSTALLED IN THE CONDUIT SYSTEM UNTIL THE CONDUIT SYSTEM IS COMPLETE. USE UL APPROVED LUBRICANT TO FACILITATE THE INSTALLATION OF THE CONDUCTORS IN THE CONDUIT SYSTEM.
6. CONDUCTORS NO. 10 AWG AND SMALLER SHALL BE SOLID. CONDUCTORS LARGER THAN NO. 10 AWG SHALL BE STRANDED.
7. MC CABLE MAY BE UTILIZED FOR #10 AND #12 BRANCH CIRCUIT WIRING WITH THE FOLLOWING LIMITATIONS:
   a. THE INSTALLATION IS IN ACCORDANCE WITH NEC ARTICLE 330.
   b. MC CABLE USE IS LIMITED TO WIRING WITHIN PARTITIONS AND WALLS AND TO CONNECTIONS TO AND BETWEEN SWITCHES AND WIRING DEVICES.
   c. MC CABLE IS NOT TO BE USED FOR HOME RUN CIRCUITING. HOME RUN CIRCUITING SHALL BE INDIVIDUAL CONDUCTORS INSTALLED IN EMT CONDUIT.
8. HOME RUN SHALL BE DEFINED AS THE PORTION OF THE CIRCUIT FROM THE PANEL TO THE FIRST DEVICE.

E. WIRING DEVICES

1. SWITCHES – WALL SWITCHES SHALL BE SPECIFICATION GRADE AC SILENT TYPE SWITCHES 20A, 120 – 277 VOLT, HUBBELL 1221 (SPST), 1222 (DPST), 1223 (3-WAY) AND 1224 (4-WAY), DIMMERS SHALL BE SPECIFICATION GRADE WITH PRESET SLIDE CONTROL. COLOR SHALL BE AS APPROVED BY THE ARCHITECT/OWNER. MATCH BUILDING STANDARD (IF EXISTING).
2. RECEPTACLES – DUPLEX TYPE OUTLETS SHALL BE HEAVY DUTY, SPECIFICATION GRADE NEMA 5–20R, 20A, 120V GROUNDED TYPE EQUAL TO HUBBELL ISOLATED GROUND OUTLETS SHALL BE EQUAL TO HUBBELL IG5362. SPECIAL APPLICATION RECEPTACLES SHALL BE AS INDICATED ON PLANS AND VERIFIED WITH EQUIPMENT SUPPLIER. COLOR SHALL BE AS APPROVED BY THE ARCHITECT/OWNER. MATCH BUILDING STANDARD (IF EXISTING).
3. WEATHERPROOF RECEPTACLES – COVERS SHALL BE HUBBELL WP1526 WITH 5382 DUPLEX OUTLET OR EQUAL.
4. GFCI RECEPTACLES – SHALL BE HUBBELL GF5362. GFCI RECEPTACLES SHALL BE USED IN ALL OUTDOOR APPLICATIONS AS WELL AS THOSE PLACED WITHIN 6' OF WATER SOURCE AND ALL OTHER NEC REQUIRED LOCATIONS.
5. MOUNTING HEIGHTS: SWITCHES – +48 INCHES. RECEPTACLES – +18 INCHES COMMUNICATION DEVICES – +18 INCHES. FIRE ALARM DEVICES – AS REQUIRED BY ADA, NFPA 72 OR AUTHORITY HAVING JURISDICTION. ALL MOUNTING HEIGHTS ARE TO CENTERLINE OF DEVICE.
6. DEVICE PLATES SHALL BE EQUAL TO SIERRA SMOOTH-LINE PLASTIC WALL PLATES COLOR SHALL BE AS APPROVED BY THE ARCHITECT/OWNER. MATCH BUILDING STANDARD (IF EXISTING).
7. IN ALL CASES, SWITCHES CONTROLLING LIGHTING ARE TO BE LOCATED ON THE STRIKE SIDE OF DOORS. LOCATIONS INDICATED FOR SWITCHES AND OUTLETS ARE APPROXIMATE. OWNER MAY MAKE MINOR RELOCATIONS AT NO ADDITIONAL CHARGE.

F. LIGHTING FIXTURES

1. COORDINATE THE FINAL LOCATION OF FIXTURES SHOWN DIAGRAMMATICALLY ON THE DRAWINGS WITH OTHER TRADES IN ORDER TO AVOID INTERFERENCES. RELOCATE FIXTURES AS REQUIRED AS PART OF THE WORK UNDER THIS DIVISION IF NEW LOCATION IS WITHIN A FIVE FOOT RADIUS OF LOCATION SHOWN.
2. PROMOE ALL LIGHTING FIXTURES WIRED AND CONNECTED. THE DRAWINGS INDICATE THE FIXTURES FOR EACH LOCATION. ELECTRICAL CONTRACTOR SHALL VERIFY FIXTURE LOCATIONS, MOUNTING REQUIREMENTS AND U.L. LABELING OF ALL FIXTURES PRIOR TO ORDERING. INCLUDE ALL ACCESSORIES NEEDED FOR A COMPLETE INSTALLATION INCLUDING MOUNTING CLIPS, PLASTER FRAMERS, HANGERS AND HARDWARE IN BASE BID. PROMOE LAMPS FOR ALL FIXTURES. VERIFY CEILING CONSTRUCTION BEFORE ORDERING RECESSED UNITS.
3. ADJUSTABLE FIXTURES SHALL BE LOCATED AND PROPERLY AIMED AS DIRECTED BY THE ARCHITECT OR THE LIGHTING DESIGNER.
4. SUPPORT RECESSED FIXTURES FROM CEILING STRUCTURAL SUPPORT PER ADOPTED BUILDING CODES.
5. ALL FIXTURES TO BEAR THE U.L. LABEL. ALL OUTDOOR FIXTURES SHALL BE U.L. LABELED FOR WET OR DAMP LOCATION AS DEFINED BY NEC ARTICLE 100.

G. LAMPS

1. LAMPS SHALL BE BY THE SAME MANUFACTURER. LAMPS SHALL BE MANUFACTURED BY GE, PHILLIPS OR LSHO.
2. INCANDESCENT – EXTENDED LAMP LIFE, INSIDE FROSTED.
3. FLUORESCENT – MINIMUM 75 CRI, 3500

MOUNTING: SURFACE — **NEW PANEL A** — LOCATION: SEE PLANS

VOLTAGE: 120/240V,1Ø,3W — 10,000 AIC SYM — 125 AMP BUS — MAIN LUGS ONLY

| NOTE | DESCRIPTION | VOLT-AMPERES ØA | VOLT-AMPERES ØB | LITE | RECP | MISC | POLE | BKR | CIRC | CIRC | BKR | POLE | MISC | RECP | LITE | VOLT-AMPERES ØA | VOLT-AMPERES ØB | DESCRIPTION | NOTE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | RECE. APP RM | | | | | | 1 | 20 | 1 | 2 | 20 | 1 | | | | | | LTGS KITCHEN | 1 |
| 1 | LTGS APP RM | | | | | | 1 | 20 | 3 | 4 | 20 | 1 | | | | | | SPARE | 1 |
| 2 | LTGS RR | 240 | | | | | 1 | 20 | 5 | 6 | 20 | 1 | | | | | | LTGS OUTSIDE | 1 |
| 1 | LTGS STORAGE | | | | | | 1 | 20 | 7 | 8 | 20 | 1 | | | | | | RECEP KITCHEN | 1 |
| 1 | RECEP KITCHEN | | | | | | 1 | 20 | 9 | 10 | 20 | 1 | | | | | | RECEP KITCHEN | 1 |
| 1 | RECEP KITCHEN | | | | | | 1 | 20 | 11 | 12 | 20 | 1 | | | | | | RECEP. APP RM | 1 |
| 1 | BATT CHARGER | | | | | | 1 | 20 | 13 | 14 | 20 | 1 | | | | | | RECEP. APP RM | 1 |
| 1 | - | | | | | | 1 | 20 | 15 | 16 | 20 | 1 | | | | | | LTGS FLOOD | 1 |
| 1 | REC. WORK BENCH | | | | | | 1 | 20 | 17 | 18 | 20 | 1 | | | | | | RECEP. CAP OFFICE | 1 |
| 1 | REC. WORK BENCH | | | | | | 1 | 20 | 19 | 20 | 20 | 1 | | | | | 540 | RECEP/RR | 2 |
| 1 | REC. WORK BENCH | | | | | | 1 | 20 | 21 | 22 | 20 | 1 | | | | | | HEATER/APP RM | 1 |
| 1 | REC. WORK BENCH | | | | | | 1 | 20 | 23 | 24 | 30 | 2 | | | | | 1500 | WASHER/DRYER | 1 |
| 1 | SPARE | | | | | | 1 | 20 | 25 | 26 | - | | | | | 1500 | | - | |
| 1 | REC. WATCH RM | | | | | | 1 | 20 | 27 | 28 | 20 | 1 | | | | | | SPARE | 1 |
| 1 | RECEP. GARBAGE | | | | | | 1 | 20 | 29 | 30 | 20 | 1 | | | | | | RECEP. OUTSIDE | 1 |
| 1 | RECEP. HALL | | | | | | 1 | 20 | 31 | 32 | 20 | 1 | | | | | | SPACE | |
| | | | | | | | 1 | 20 | 33 | 34 | 20 | 1 | | | | | | SPACE | |
| | | | | | | | 1 | 20 | 35 | 36 | 20 | 1 | | | | | | SPACE | |
| | | | | | | | 1 | 20 | 37 | 38 | 20 | 1 | | | | | | SPACE | |
| | | | | | | | 1 | 20 | 39 | 40 | 20 | 1 | | | | | | SPACE | |
| | | | | | | | 1 | 20 | 41 | 42 | 20 | 1 | | | | | | SPACE | |
| | VA PER PHASE | 240 | | | | | | | | | | | | | | 1500 | 540 | VA PER PHASE | |
| | | | | | | | | | | | | | | | | 1740 | 540 | TOTAL VA PER PHASE | |
| | | | | | | | | | | | | | | | | 8780 | | TOTAL CONNECTED VA | |

CONTINUOUS LOAD 240 x1.25= 300 VA

+OTHER= 8540 VA

TOTAL LOAD= 8840 VA — 37 AMPS

CEILING OUTLETS =

CONV. OUTLETS =

MISC. OUTLETS =

THIS PANEL IS FED BY: MP

NOTES

1 EXISTING CIRCUIT TO REMAIN

2 EXISTING C.B. WITH NEW LOAD

3

4

MOUNTING: FLUSH — **NEW PANEL- E** — LOCATION: SEE PLANS

VOLTAGE: 120/240V,1Ø,3W — 10,000 AIC SYM — 100 AMP BUS — MAIN LUGS ONLY

| NOTE | DESCRIPTION | VOLT-AMPERES ØA | VOLT-AMPERES ØB | LITE | RECP | MISC | POLE | BKR | CIRC | CIRC | BKR | POLE | MISC | RECP | LITE | VOLT-AMPERES ØA | VOLT-AMPERES ØB | DESCRIPTION | NOTE |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | LTGS WATCH RM | | | | | | 1 | 20 | 1 | 2 | 20 | 1 | | | | | | LTGS REC/KITCHEN | |
| | LTGS HA. | | | | | | 1 | 20 | 3 | 4 | 20 | 1 | | | | | | FAN FURNACE | |
| | LTGS APP RM | | | | | | 1 | 20 | 5 | 6 | 20 | 1 | | | | | | GAS PUMP | |
| | TELEPHONE | | | | | | 1 | 20 | 7 | 8 | 20 | 1 | | | | | | RECEP OFFICE | |
| | EXISTING LOAD | | | | | | 1 | 20 | 9 | 10 | 20 | 2 | | | | | | AIR COMPRESSOR | |
| | LTGS REC. RM | | | | | | 1 | 20 | 11 | 12 | | | | | | | | - | |
| | APP RM DOOR | | | | | | 2 | 20 | 13 | 14 | 20 | 1 | | | | | | FIRE ALARM | |
| | - | | | | | | - | - | 15 | 16 | 20 | 1 | | | | | | FIRE ALARM | |
| | CONTROLS FA | | | | | | 1 | 20 | 17 | 18 | 20 | 1 | | | | | | SIREN | |
| | RADIO | | | | | | 1 | 20 | 19 | 20 | 40 | 2 | | | | | | EXISTING LOAD | |
| | SPACE | | | | | | | | 21 | 22 | - | - | | | | | | - | |
| | SPACE | | | | | | | | 23 | 24 | | | | | | | | SPACE | |
| | VA PER PHASE | | | | | | | | | | | | | | | | | VA PER PHASE | |
| | | | | | | | | | | | | | | | | | | TOTAL VA PER PHASE | |
| | | | | | | | | | | | | | | | | | | TOTAL CONNECTED VA | |

CONTINUOUS LOAD ____ x1.25= ____ VA

+OTHER= ____ VA

TOTAL LOAD= ____ VA ____ AMPS

CEILING OUTLETS =

CONV. OUTLETS =

MISC. OUTLETS =

THIS PANEL IS FED BY:

NOTES

1

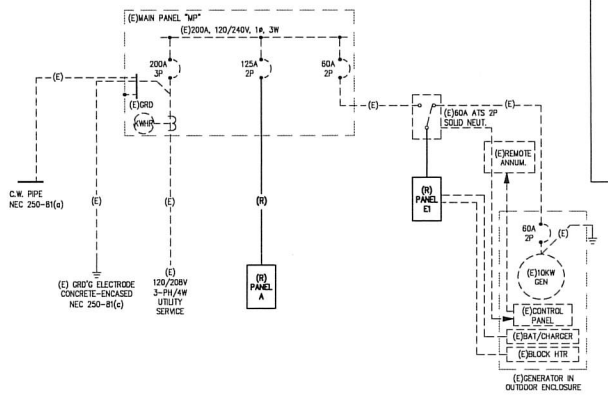
2

3

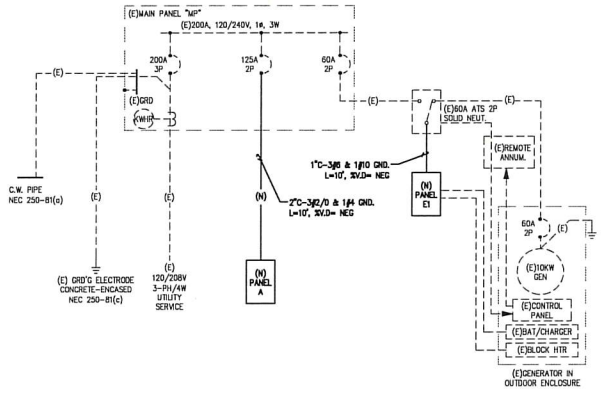
4

3 PANEL SCHEDULES
SCALE: NONE

| LOAD CALCULATIONS FOR "MP", 120/240V, 1P, 4W | |
|---|---|
| TOTAL DEMAND BASED ON SCE BILL IN KVA | 24.00 |
| ADD 25% SAFETY FACTOR | 6.00 |
| WASHER/DRYER | 3.00 |
| TOTAL DEMAND KVA | 33.00 |
| AMPS @120/240V, 1P, 3W | 137.50 |




1 DEMOLITION SINGLE LINE DIAGRAM
SCALE: NONE




2 REMODEL SINGLE LINE DIAGRAM
SCALE: NONE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Anaheim, CA 92801
Ph: (714) 290-0718
E-mail: mverma@h2sengineers.com



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RE-BID SET

| | |
|---|---|
| PLAN CHECK CORRECTIONS | |
| BID SET | |
| RE-BID SET | DATE: 01/07/2022 |
| JOB NO.: 4009 | |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: | |

SINGLE LINE DIAGRAM AND PANEL SCHEDULES

ORANGE COUNTY FIRE AUTHORITY
Fire Station #16 - Tenant Improvements
28891 MODJESKA CANYON RD., SILVERADO, CA 92676

E-0.3

STATE OF CALIFORNIA
**Indoor Lighting**
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

| | | | |
|---|---|---|---|
| CERTIFICATE OF COMPLIANCE | | | NRCC-LTI-E |
| Project Name: | FIRE STATION # 16 | Report Page: | (Page 1 of 7) |
| Project Address: | 28891 MODJESKA CANYON RD. | Date Prepared: | 9/9/2020 |

This document is used to demonstrate compliance with requirements in §110.9, §110.12(c), §120.0, §130.1, §140.6 and §141.0(b)2 for indoor lighting scopes using the prescriptive path.

**A. GENERAL INFORMATION**

| | | | | | |
|---|---|---|---|---|---|
| 01 | Project Location (city) | SILVERADO CANYON | 04 | Total Conditioned Floor Area (ft²) | 148 |
| 02 | Climate Zone | 8 | 05 | Total Unconditioned Floor Area (ft²) | 0 |
| 03 | Occupancy Types Within Project (select all that apply): | | 06 | # of Stories (Habitable Above Grade) | 1 |

☐ Office ☒ Retail ☐ Warehouse ☐ Hotel/Motel ☐ School ☒ Support Areas
☐ Parking Garage ☐ High-Rise Residential ☐ Relocatable ☐ Healthcare ☐ Other (Write In) See Table I

**B. PROJECT SCOPE**

This table includes any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in §140.6 or §141.0(b)2 for alterations.

| Scope of Work | Conditioned Spaces | | Unconditioned Spaces | |
|---|---|---|---|---|
| 01 | 02 | 03 | 04 | 05 |
| My Project Consists of (check all that apply): | Calculation Method | Area (ft²) | Calculation Method | Area (ft²) |
| ☐ New Lighting System | Area Category Method | 148 | Area Category Method | 0 |
| ☐ New Lighting System - Parking Garage | | | | |
| ☒ Altered Lighting System | | | | |
| Total Area of Work (ft²) | 148 | | 0 | |

Registration Number: Registration Date/Time: Registration Provider: EnergySoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.0.001 Schema Version: rev 20190401 Report Generated: 2020-09-09 05:54:49

STATE OF CALIFORNIA
**Indoor Lighting**
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

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**C. COMPLIANCE RESULTS**

If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

| Lighting in conditioned and unconditioned spaces must not be combined for compliance per §140.6(b)1 | 01 Complete Building §140.6(c)1 | 02 Area Category §140.6(c)2 | 03 Area Category Additional §140.6(c)2G (+) | 04 Tailored §140.6(c)3 (+) | | 05 Total Allowed (Watts) | | 06 Total Designed (Watts) | 07 Adjustments PAF Lighting Control Credits §140.6(a)2 (-) | 08 Total Adjusted (Watts) *Includes Adjustments | 09 Compliance Results: 05 must be >= 08 §140.6 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | (See Table I) | (See Table I) | (See Table J) | (See Table K) | | | | (See Table F) | (See Table P) | | |
| Conditioned | 0 | 218.8 | 0 | 0 | = | 218.8 | ≥ | 202 | 0 | = 202 | COMPLIES |
| Unconditioned | 0 | 0 | 0 | 0 | = | 0 | ≥ | 0 | 0 | = | |
| | | | | | | | | Controls Compliance (See Table H for Details) | | | COMPLIES |
| | | | | | | | | Rated Power Reduction Compliance (See Table Q for Details) | | | |

**D. EXCEPTIONAL CONDITIONS**

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

**E. ADDITIONAL REMARKS**

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

**F. INDOOR LIGHTING FIXTURE SCHEDULE**

This table includes all permanent designed lighting and all portable lighting in offices.

Designed Wattage: Conditioned Spaces

| 01 Name or Item Tag | 02 Complete Luminaire Description | 03 Modular (Track) Fixture | 04 Small Aperture & Color Change | 05 Watts per luminaire | 06 How is Wattage determined | 07 Total Number of Luminaires | 08 Exempt per §140.6(a)3 | 09 Design Watts | 10 Field Inspector Pass | Fail |
|---|---|---|---|---|---|---|---|---|---|---|
| A | DOWNLIGHT | No | No | 17 | Mfr. Spec | 10 | No | 170 | ☐ | ☐ |

Registration Number: Registration Date/Time: Registration Provider: EnergySoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.0.001 Schema Version: rev 20190401 Report Generated: 2020-09-09 05:54:49

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| Project Name: | FIRE STATION # 16 | Report Page: | (Page 3 of 7) |
| Project Address: | 28891 MODJESKA CANYON RD. | Date Prepared: | 9/9/2020 |

**F. INDOOR LIGHTING FIXTURE SCHEDULE**

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| B | WALL MOUNTED | No | No | 16 | Mfr. Spec | 2 | No | 32 | ☐ | ☐ |
| | | | | | Total Designed Watts: CONDITIONED SPACES | | | 202 | | |

FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per §140.6(a)4B is adjusted to be 75% of their rated wattage. Table F automatically makes this adjustment, the permit applicant should enter full rated wattage in column 05

**G. MODULAR LIGHTING SYSTEMS**

This section does not apply to this project.

**H. INDOOR LIGHTING CONTROLS (Not including PAFs)**

This table includes lighting controls for conditioned and unconditioned spaces. When an control having a * is shown, the notes section of this table provides more detail on how compliance is achieved. The lighting controls section of the Compliance Summary Table on the first page will show "DOES NOT COMPLY" if the notes are left blank.

Building Level Controls

| 01 | 02 | 03 Field Inspector Pass | Fail |
|---|---|---|---|
| Mandatory Demand Response §110.12(c) | Shut-off controls §130.1(c) | ☐ | ☐ |
| Not Required 10,000 SF | See Area/Space Level Controls | | |

Area Level Controls

| 04 Area Description | 05 Complete Building or Area Category Primary Function Area | 06 Area Controls §130.1(a) | 07 Multi-Level Controls §130.1(b) | 08 Shut-Off Controls §130.1(c) | 09 Primary/Sky lit Daylighting §130.1(d) | 10 Secondary Daylighting §140.6(d) | 11 Interlocked Systems §140.6(a)1 | 12 Field Inspector Pass | Fail |
|---|---|---|---|---|---|---|---|---|---|
| RESTROOMS | Restrooms | Manual ON/OFF | Dimmer | Occupancy Sensor | N/A | N/A | No | ☐ | ☐ |
| CORRIDOR | Corridor, Restroom, Stairs or Support Area | Manual ON/OFF | Dimmer | Occupancy Sensor | N/A | N/A | No | ☐ | ☐ |

Registration Number: Registration Date/Time: Registration Provider: EnergySoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.0.001 Schema Version: rev 20190401 Report Generated: 2020-09-09 05:54:49

STATE OF CALIFORNIA
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| | | | |
|---|---|---|---|
| CERTIFICATE OF COMPLIANCE | | | NRCC-LTI-E |
| Project Name: | FIRE STATION # 16 | Report Page: | (Page 4 of 7) |
| Project Address: | 28891 MODJESKA CANYON RD. | Date Prepared: | 9/9/2020 |

**H. INDOOR LIGHTING CONTROLS (Not including PAFs)**

*NOTES: Controls with a * require a note in the space below explaining how compliance is achieved
EX: Conference 1: Primary/Skylight Daylighting: Exempt because less than 120 watts of general lighting, EXCEPTION 1 to §130.1(d)

| | 13 |
|---|---|
| | Plan Sheet Showing Daylit Zones: |

**I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS**

Each area complying using the Complete Building or Area Category Methods per §140.6(c) are included in this table. Column 06 indicates if additional lighting power allowances per §140.6(c) or adjustments per §140.6(a) are being used.

Conditioned Spaces

| 01 Area Description | 02 Complete Building or Area Category Primary Function Area | 03 Allowed Density (W/ft²) | 04 Area (ft²) | 05 Allowed Wattage (Watts) | 06 Additional Allowance / Adjustment Area Category | PAF |
|---|---|---|---|---|---|---|
| RESTROOMS | Restrooms | 0.65 | 200 | 130 | No | No |
| CORRIDOR | Corridor Area | 0.6 | 148 | 88.8 | No | No |
| | | TOTALS: | 348 | 218.8 | See Tables J, or P for detail | |

**J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM**

This section does not apply to this project.

**K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE**

This section does not apply to this project.

**L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY**

This section does not apply to this project.

**M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING**

This section does not apply to this project.

**N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED ORNAMENTAL/SPECIAL EFFECTS**

This section does not apply to this project.

Registration Number: Registration Date/Time: Registration Provider: EnergySoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.0.001 Schema Version: rev 20190401 Report Generated: 2020-09-09 05:54:49

STATE OF CALIFORNIA
**Indoor Lighting**
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

| | | | |
|---|---|---|---|
| CERTIFICATE OF COMPLIANCE | | | NRCC-LTI-E |
| Project Name: | FIRE STATION # 16 | Report Page: | (Page 5 of 7) |
| Project Address: | 28891 MODJESKA CANYON RD | Date Prepared: | 9/9/2020 |

**O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE**

This section does not apply to this project.

**P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))**

This section does not apply to this project.

**Q. RATED POWER REDUCTION COMPLIANCE FOR ALTERATIONS**

This section does not apply to this project.

**R. 80% LIGHTING POWER FOR ALLALTERATIONS - CONTROLS EXCEPTIONS**

This section does not apply to this project.

**S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)**

This section does not apply to this project.

**T. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION**

Selections have been made based on information provided in this document. If any selection have been changed by permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and can be found online at https://www.energy.ca.gov/title24/2019standards/2019_compliance_documents/Nonresidential_Documents/NRCI/

| Yes | No | Form/Title | Field Inspector Pass | Fail |
|---|---|---|---|---|
| ● | ○ | NRCI-LTI-01-E - Must be submitted for all buildings | ☐ | ☐ |
| ○ | ● | NRCI-LTI-02-E - Must be submitted for a lighting control system, or for an Energy Management Control System (EMCS), to be recognized for compliance | ☐ | ☐ |
| ○ | ● | NRCI-LTI-04-E - Must be submitted for two interlocked systems serving an auditorium, a convention center, a conference room, a multipurpose room or a theater to be recognized for compliance | ☐ | ☐ |
| ○ | ● | NRCI-LTI-05-E - Must be submitted for a Power Adjustment Factor (PAF) to be recognized for compliance | ☐ | ☐ |
| ○ | ● | NRCI-LTI-06-E - Must be submitted for additional wattage installed in a video conferencing studio to be recognized for compliance | ☐ | ☐ |

Registration Number: Registration Date/Time: Registration Provider: EnergySoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.0.001 Schema Version: rev 20190401 Report Generated: 2020-09-09 05:54:49

STATE OF CALIFORNIA
**Indoor Lighting**
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

| | | | |
|---|---|---|---|
| CERTIFICATE OF COMPLIANCE | | | NRCC-LTI-E |
| Project Name: | FIRE STATION # 16 | Report Page: | (Page 6 of 7) |
| Project Address: | 28891 MODJESKA CANYON RD. | Date Prepared: | 9/9/2020 |

**U. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE**

Selections have been made based on information provided in this document. If any selection have been changed by the permit applicant, an explanation should be included in Table E. Additional Remarks. These documents must be provided to the building inspector during construction and any with "A" in the form name must be completed through an Acceptance Test Technician Certification Provider (ATTCP). For more information visit: http://www.energy.ca.gov/title24/attcp/providers.html

| Yes | No | Form/Title | Field Inspector Pass | Fail |
|---|---|---|---|---|
| ● | ○ | NRCA-LTI-02-A - Must be submitted for occupancy sensors and automatic time switch controls. | ☐ | ☐ |
| ○ | ● | NRCA-LTI-03-A - Must be submitted for automatic daylight controls. | ☐ | ☐ |
| ○ | ● | NRCA-LTI-04-A - Must be submitted for demand responsive lighting controls. | ☐ | ☐ |
| ○ | ● | NRCA-LTI-05-A - Must be submitted for institutional tuning power adjustment factor (PAF) | ☐ | ☐ |

Registration Number: Registration Date/Time: Registration Provider: EnergySoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.0.001 Schema Version: rev 20190401 Report Generated: 2020-09-09 05:54:49

STATE OF CALIFORNIA
**Indoor Lighting**
NRCC-LTI-E
CALIFORNIA ENERGY COMMISSION

| | | | |
|---|---|---|---|
| CERTIFICATE OF COMPLIANCE | | | NRCC-LTI-E |
| Project Name: | FIRE STATION # 16 | Report Page: | (Page 7 of 7) |
| Project Address: | 28891 MODJESKA CANYON RD. | Date Prepared: | 9/9/2020 |

**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**

| | |
|---|---|
| Documentation Author Name: H2s Engineers Inc. | Documentation Author Signature: Monita |
| Company: H2s Engineers Inc. | Signature Date: |
| Address: 1174 N Boatswain Circle | CEA/ HERS Certification Identification (if applicable): 569C-6210-670A-1122-E5B8-A943-76C3-58AA CBF2-1850-4588-9312-DF28-6894-165E-DFFF |
| City/State/Zip: Anaheim CA 92801 | Phone: 303 585 1498 |

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**

I certify the following under penalty of perjury, under the laws of the State of California:
1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer).
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

| | |
|---|---|
| Responsible Designer Name: MONITA VERMA | Responsible Designer Signature: Monita |
| Company: H2S ENGINEERS INC. | Date Signed: 2020-09-09 |
| Address: 1174 N BOATSWAIN CIRCLE | License: E19876 |
| City/State/Zip: ANAHEIM CA 92801 | Phone: 7142900718 |

Registration Number: Registration Date/Time: Registration Provider: EnergySoft
CA Building Energy Efficiency Standards - 2019 Nonresidential Compliance Report Version: 2019.0.001 Schema Version: rev 20190401 Report Generated: 2020-09-09 05:54:49

## LIGHTING FIXTURE SCHEDULE

| SYMBOL | TYPE | DESCRIPTION | FINISH | LAMPS | MANUFACTURER MODEL NO. |
|---|---|---|---|---|---|
| ○ | A 17 | 4.5" SHALLOW PLENUM DOWNLIGHT | VERIFY WITH ARCHITECT. | LED | HE WILLIAMS #6PR-TL-L15-8-35K-DIM |
| ▭ | B 16 | 2' WALL MOUNT WRAP | VERIFY WITH ARCHITECT. | LED | HE WILLIAMS #AXWD-2-8-35-S |

REGISTERED PROFESSIONAL ENGINEER — MONITA VERMA — No. E19876 — Exp. 3-31-22 — ELECTRICAL — STATE OF CALIFORNIA

H2S ENGINEERS INC

H2S Engineers Inc.
Consulting MEP Engineers
Anaheim, CA 92801
Ph: (714) 290-0718
E-mail: mverma@h2sengineers.com

LICENSED ARCHITECT — LONGKAVACH PANICHAPAN — NO. C-29344 — EXP. 11-30-21 — STATE OF CALIFORNIA

architecture planning interior

Gillis + Panichapan Architects, Inc.
2900 BRISTOL STREET COSTA MESA CALIFORNIA 92626
SUITE C-205 TEL (714) 668-4260 FAX (714) 668-4265

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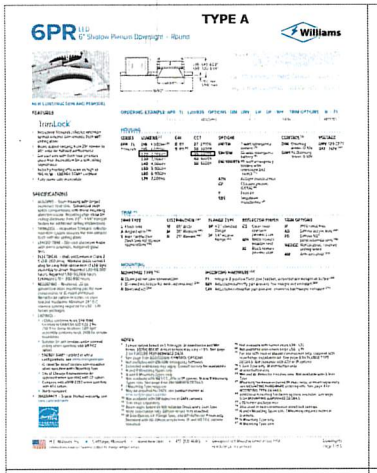
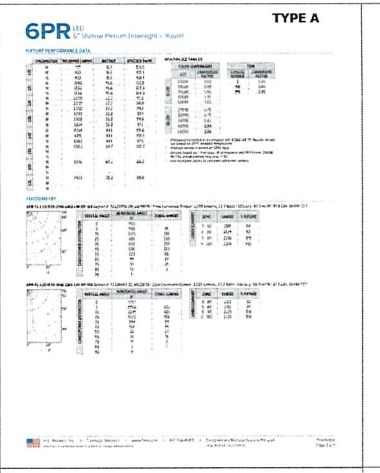
|---|---|
| 1 PLAN CHECK CORRECTIONS | |
| 2 BID SET | |
| 3 RE-BID SET | |
| JOB NO.: 4009 | DATE: 01/07/2022 |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: | |

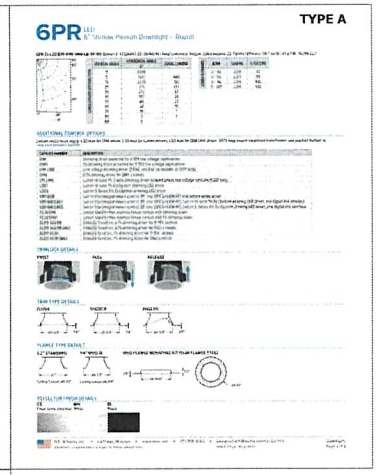
ORANGE COUNTY FIRE AUTHORITY
Fire Station #16 - Tenant Improvements
28891 MODJESKA CANYON RD., SILVERADO, CA 92676

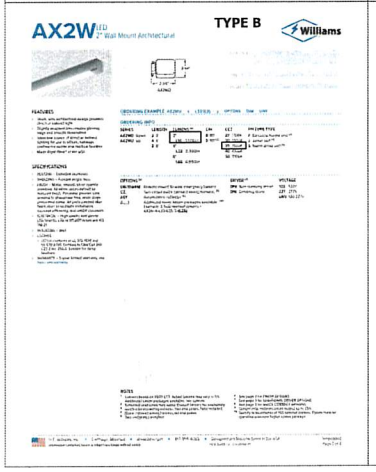
T-24 COMPLIANCE FORMS & LTG. FIXTURE SCH.

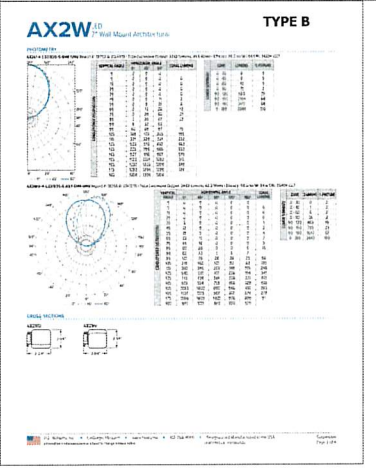
E-0.4

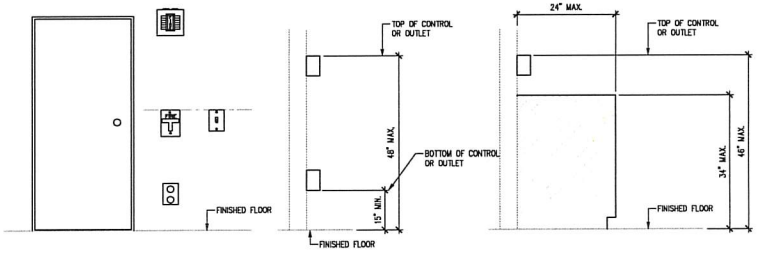



1. ALL DEVICE HEIGHTS DEPICTED SHALL BE MODIFIED AS REQUIRED BY GOVERNING BUILDING CODES. CONTRACTOR TO VERIFY/RECONCILE APPLICABLE CODE REQUIREMENTS AND ANY DEVICE HEIGHT REQUIREMENTS DEPICTED ON ARCHITECTURAL OR INTERIOR DESIGN PLANS AND SPECIFICATIONS PRIOR TO DEVICE ROUGH-IN. CONFLICTS OR LACK OF MOUNTING HEIGHT SPECIFICITY ON THE ARCHITECTURAL OR INTERIOR DESIGN PLANS AND SPECIFICATIONS SHALL BE CAUSE FOR THE CONTRACTOR TO ISSUE A FORMAL WRITTEN RFI FOR RESOLUTION. DEVICE MOUNTING HEIGHT CLARIFICATION/SPECIFICATIONS SHALL NOT RESULT IN AN ADDITIONAL COST TO THE OWNER – CONTRACTOR SHALL INCLUDE ALL COSTS IN BASE BID
2. ALL DEVICES IN IMMEDIATE PROXIMITY TO EACH OTHER SHALL ALIGN VERTICALLY AND HORIZONTALLY.

1 DEVICE ALIGNMENT AND MOUNTING HEIGHT DETAILS
SCALE: NONE

H2S Engineers Inc.
Consulting MEP Engineers
Anaheim, CA 92801
Ph: (714) 290-0718
E-mail: mverma@h2sengineers.com

LONGKAHLCH PANICHAPAN
NO. C-29344
EXP. 11-30-22
STATE OF CALIFORNIA
architecture
planning
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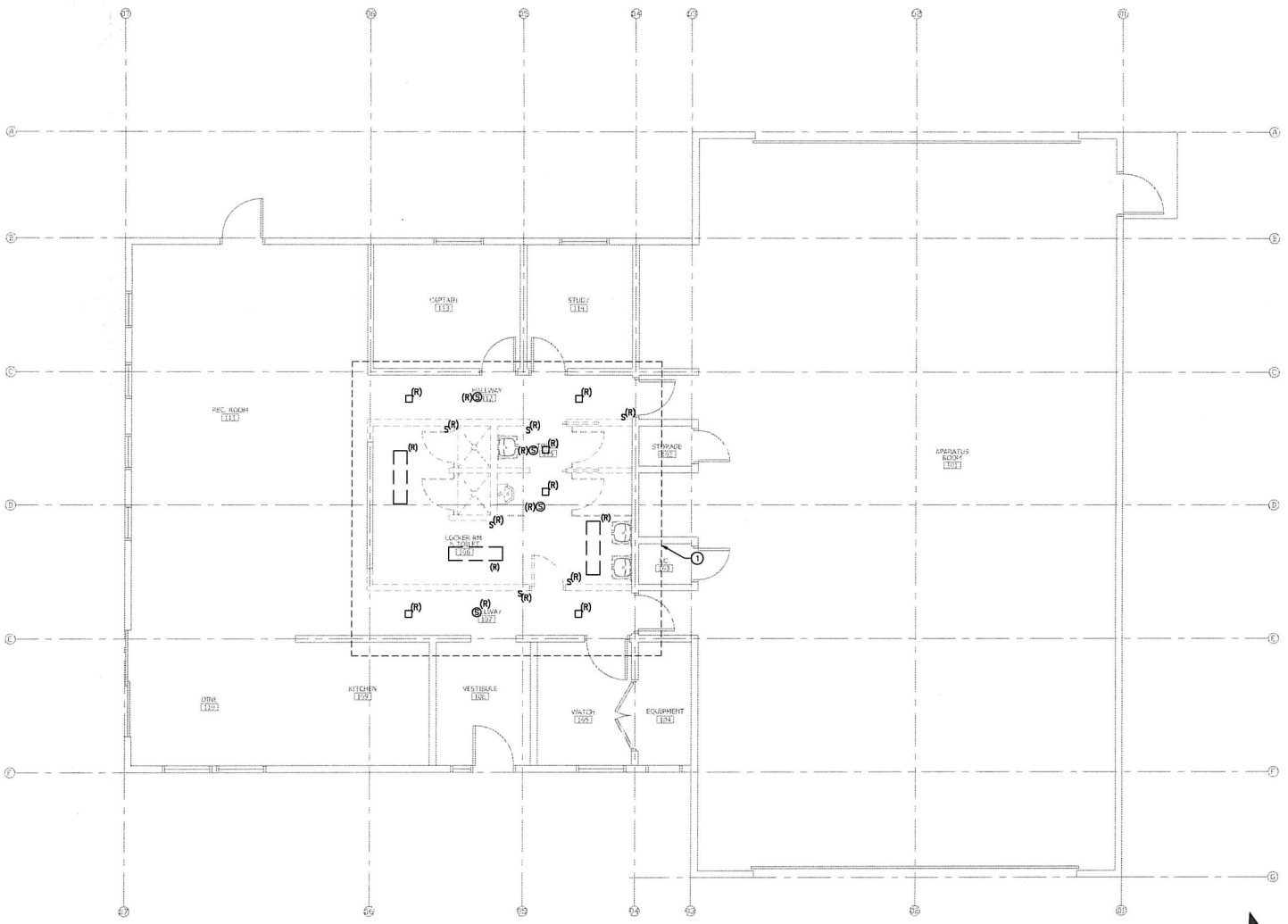
| 1 PLAN CHECK CORRECTIONS | |
| 2 BID SET | |
| 3 RE-BID SET | |
| JOB NO.: 4609 | DATE: 01/07/2022 |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: | |

LIGHTING FIXTURE CUTSHEETS
ORANGE COUNTY FIRE AUTHORITY
Fire Station #16 - Tenant Improvements
28891 MODJESKA CANYON RD., SILVERADO, CA 92676

E-0.5




01 E-2.0 DEMOLITION LIGHTING PLAN
Scale :1/4" = 1'-0"

## SHEET NOTES

1. CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING LIGHT FIXTURES, EXIT LIGHTS, SENSORS AND SWITCHES IN THE SCOPE OF WORK AREA WITH ASSOCIATED CONDUITS AND CONDUCTORS. CONTRACTOR SHALL MAINTAIN CONTINUITY OF ALL EXISTING CIRCUITS WHICH ARE TO REMAIN.

## GENERAL NOTES

A. ELECTRICAL CONTRACTOR SHALL INVESTIGATE PROJECT SITE TO DETERMINE ALL CONDITIONS WHICH MAY AFFECT THE EXECUTION OF HIS WORK. HE SHALL BE RESPONSIBLE FOR DE-ENERGIZING CIRCUITS IN DEMOLITION AREAS TO ENSURE A SAFE CONDITION. MAINTAIN ELECTRICAL SERVICE TO THE EXITING EQUIPMENT, SERVICES AND CIRCUITS AS REQUIRED. SCHEDULING OF SERVICE OUTAGES SHALL BE COORDINATED WITH ARCHITECT AND OWNER.

B. ELECTRICAL CONTRACTOR SHALL DISCONNECT AND REMOVE ALL EXISTING ELECTRICAL MATERIAL WHICH WILL NOT BE REUSED. UNUSED CONDUITS SHALL BE CUT OFF AND PLUGGED FLUSH WITH SURFACES. EXISTING MATERIAL WHICH IS NOT TO BE REUSED OR IS NOT REQUIRED TO BE RETAINED BY OWNER SHALL BE REMOVED FROM SITE

C. DISCONNECT AND REMOVE CIRCUITING BACK TO SOURCE OR NEAREST POINT PRACTICAL TO MAINTAIN ELECTRICAL CONTINUITY OF REMAINING DEVICES, EXTEND CONDUIT AND CONDUCTORS AS NECESSARY TO MAINTAIN CIRCUIT INTEGRITY.

D. FOR ALL COMMUNICATION OUTLETS PROVIDE DOUBLE GANG BACK BOX WITH SINGLE GANG PLASTER RING. PROVIDE 1" CONDUIT TO 6" ABOVE ACCESSIBLE CEILING WITH 90° BEND AND CONDUIT BUSHING UNLESS OTHERWISE NOTED ON DRAWINGS. FOR NON-ACCESSIBLE CEILINGS, ROUTE CONDUIT TO NEAREST ACCESSIBLE CEILING SPACE OR TO NEAREST COMMUNICATION CLOSET. PROVIDE BLANK COVER PLATES FOR ALL UNUSED BOXES.

E. WHERE EXISTING CIRCUITING IS DISTURBED BY DEMOLITION WORK, THE CONTRACTOR SHALL REWORK AND/OR EXTEND EXISTING CIRCUITING AS REQUIRED TO MAINTAIN CONTINUITY TO ALL REMAINING LOADS AFFECTED BY CIRCUIT.

F. PANELBOARD NAME AND CIRCUITS NUMBER ARE BASED ON AS-BUILTS DRAWINGS. CONTRACTOR SHALL FIELD-VERIFY, AS REQUIRED.

G. WHERE EXISTING LOW VOLTAGE CABLING AND DEVICES ARE DISTURBED BY DEMOLITION WORK, THE CONTRACTOR SHALL REWORK AND/OR PULL NEW CABLES AS REQUIRED TO MAINTAIN CONTINUOUS OPERATION OF EXISTING NEW DEVICES .

REGISTERED PROFESSIONAL ENGINEER
NOVA VERMA
No. E10876
Exp. 3-31-22
ELECTRICAL
STATE OF CALIFORNIA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LONGKAHACH PANICHAPAN
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RE-BID SET

| | |
|---|---|
| 1 PLAN CHECK CORRECTIONS | |
| 2 BID SET | |
| 3 RE-BID SET | DATE: 01/07/2022 |
| JOB NO.: 4009 | |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: | |

DEMOLITION LIGHTING PLAN
ORANGE COUNTY FIRE AUTHORITY
Fire Station #16 - Tenant Improvements
28891 MODJESKA CANYON RD., SILVERADO, CA 92676

E-2.0




01 E-2.1 DEMOLITION POWER PLAN
Scale : 1/4" = 1'-0"

## SHEET NOTES

1. CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING POWER OUTLETS IN THE SCOPE OF WORK AREA UNLESS NOTED OTHERWISE WITH ASSOCIATED CONDUITS AND CONDUCTORS. CONTRACTOR SHALL MAINTAIN CONTINUITY OF ALL EXISTING CIRCUITS WHICH ARE TO REMAIN.
2. DISCONNECT AND REMOVE EXISTING PANELS. EXTEND EXISTING BRANCH CIRCUITS TO NEW PANEL LOCATED IN ELECTRICAL ROOM. SEE SHEET E3.1 FOR EXACT LOCATION. PROVIDE PULLBOX IN CEILING SPACE FOR SPILLING EXISTING CIRCUITS.

## GENERAL NOTES

A. ELECTRICAL CONTRACTOR SHALL INVESTIGATE PROJECT SITE TO DETERMINE ALL CONDITIONS WHICH MAY AFFECT THE EXECUTION OF HIS WORK. HE SHALL BE RESPONSIBLE FOR DE-ENERGIZING CIRCUITS IN DEMOLITION AREAS TO ENSURE A SAFE CONDITION. MAINTAIN ELECTRICAL SERVICE TO THE EXITING EQUIPMENT, SERVICES AND CIRCUITS AS REQUIRED. SCHEDULING OF SERVICE OUTAGES SHALL BE COORDINATED WITH ARCHITECT AND OWNER.

B. ELECTRICAL CONTRACTOR SHALL DISCONNECT AND REMOVE ALL EXISTING ELECTRICAL MATERIAL WHICH WILL NOT BE REUSED. UNUSED CONDUITS SHALL BE CUT OFF AND PLUGGED FLUSH WITH SURFACES. EXISTING MATERIAL WHICH IS NOT TO BE REUSED OR IS NOT REQUIRED TO BE RETAINED BY OWNER SHALL BE REMOVED FROM SITE

C. DISCONNECT AND REMOVE CIRCUITING BACK TO SOURCE OR NEAREST POINT PRACTICAL TO MAINTAIN ELECTRICAL CONTINUITY OF REMAINING DEVICES, EXTEND CONDUIT AND CONDUCTORS AS NECESSARY TO MAINTAIN CIRCUIT INTEGRITY.

D. FOR ALL COMMUNICATION OUTLETS PROVIDE DOUBLE GANG BACK BOX WITH SINGLE GANG PLASTER RING. PROVIDE 1" CONDUIT TO 6" ABOVE ACCESSIBLE CEILING WITH 90° BEND AND CONDUIT BUSHING UNLESS OTHERWISE NOTED ON DRAWINGS. FOR NON-ACCESSIBLE CEILINGS, ROUTE CONDUIT TO NEAREST ACCESSIBLE CEILING SPACE OR TO NEAREST COMMUNICATION CLOSET. PROVIDE BLANK COVER PLATES FOR ALL UNUSED BOXES.

E. WHERE EXISTING CIRCUITING IS DISTURBED BY DEMOLITION WORK, THE CONTRACTOR SHALL REWORK AND/OR EXTEND EXISTING CIRCUITING AS REQUIRED TO MAINTAIN CONTINUITY TO ALL REMAINING LOADS AFFECTED BY CIRCUIT.

F. PANELBOARD NAME AND CIRCUITS NUMBER ARE BASED ON AS-BUILTS DRAWINGS. CONTRACTOR SHALL FIELD-VERIFY, AS REQUIRED.

REGISTERED PROFESSIONAL ENGINEER NOVITA VERMA No. E19676 Exp. 3-31-22 ELECTRICAL STATE OF CALIFORNIA


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GPa architecture planning interior
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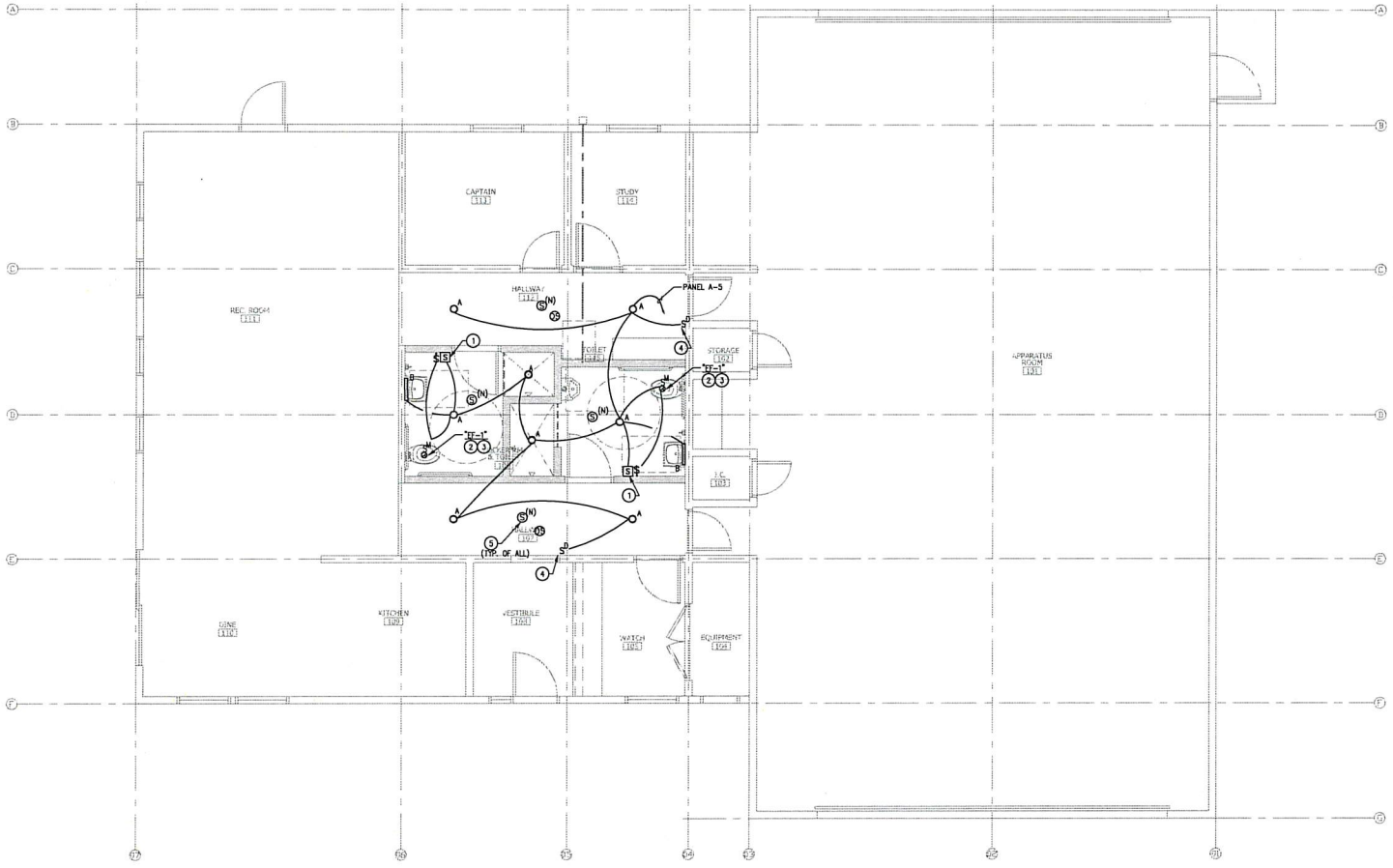
| 2 BID SET | |
| 3 RE-BID SET | |
| JOB NO.: 4609 | DATE: 01/07/2022 |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: | |

# DEMOLITION POWER PLAN

ORANGE COUNTY FIRE AUTHORITY
Fire Station #16 - Tenant Improvements
28891 MODJESKA CANYON RD., SILVERADO, CA 92676

E-2.1




01 PROPOSED LIGHTING PLAN
E-3.0 Scale : 1/4" = 1'-0"

## SHEET NOTES

1. PROVIDE WALL MOUNTED SENSOR SWITCH.
2. PROVIDE SEPARATE SWITCH FOR EXHAUST FAN. REFER TO MECHANICAL PLAN FOR ADDITIONAL REQUIREMENTS AND PROVIDE AS DIRECTED.
3. PROVIDE 15/1P TOGGLE MOTOR RATED DISCONNECT SWITCH FOR EF. VERIFY WITH MECHANICAL PRIOR TO ANY-ROUGH IN.
4. DIMMER SWITCH.
5. PROVIDE AND INSTALL NEW SPEAKER. PULL NEW CABLES FROM HEAD-END EQUIPMENT LOCATED NEAR MAIN ENTRANCE. COORDINATE WITH OCFA PERSONNEL. CONTRACTOR SHALL BE RESPONSIBLE FOR A COMPLETE AND OPERATIONAL SYSTEM.

REGISTERED PROFESSIONAL ENGINEER — LONGKUMAR PANICHAPAN — No. E-19876 — Exp. 12-31-22 — ELECTRICAL — STATE OF CALIFORNIA

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Consulting MEP Engineers
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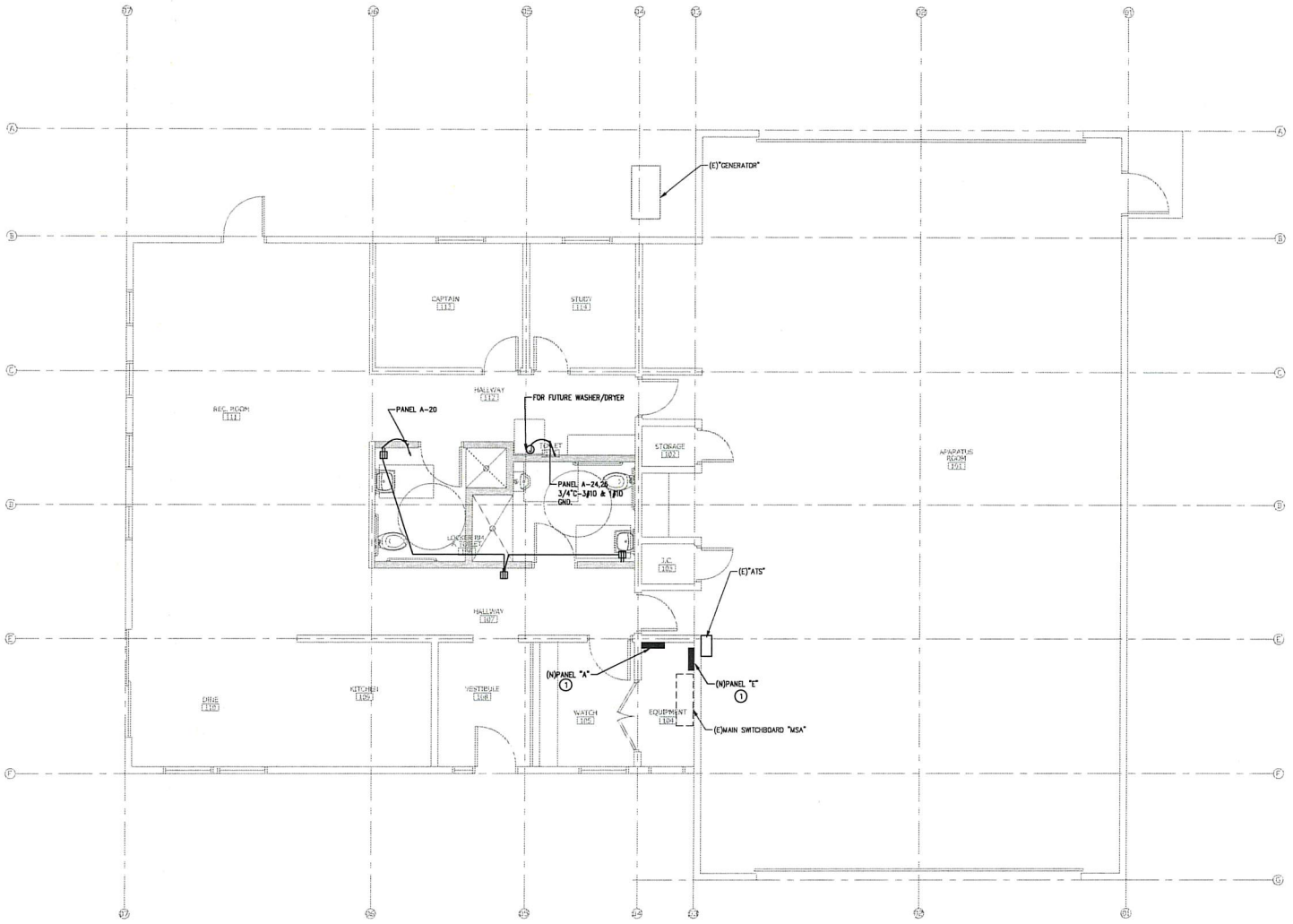
|---|---|
| A | PLAN CHECK CORRECTIONS |
| 1 | RE-BID SET |
| 2 | RE-BID SET |
| JOB NO. | 1909 |
| DATE | 01/07/2022 |
| DRAWN BY: | STAFF |
| CHECKED BY: | LP |
| SCALE: | |

PROPOSED LIGHTING PLAN

ORANGE COUNTY FIRE AUTHORITY
Fire Station #16 - Tenant Improvements
28891 MODJESKA CANYON RD., SILVERADO, CA 92676

E-3.0




01 E-3.1 PROPOSED POWER PLAN
Scale : 1/4" = 1'-0"

## SHEET NOTES

1. PROVIDE AND INSTALL NEW PANEL AFTER WATER HEATER BEEN IS RELOCATED.


H2S Engineers Inc.
Consulting MEP Engineers
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TEL (714) 662-4565 FAX (714) 662-4565



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|---|---|
| A PLAN CHECK CORRECTIONS | |
| A BID SET | |
| A RE-BID SET | |
| JOB NO. 4099 | DATE 03/07/2022 |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: | |

# PROPOSED POWER PLAN

ORANGE COUNTY FIRE AUTHORITY
Fire Station #16 - Tenant Improvements
28891 MODJESKA CANYON RD., SILVERADO, CA 92676

E-3.1

## GENERAL NOTES

1. ALL DRAWINGS ARE CONSIDERED TO BE PART OF THE CONTRACT DOCUMENT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REVIEW AND COORDINATION OF ALL DRAWINGS PRIOR TO ANY CONSTRUCTION, INCLUDING STRUCTURAL, PLUMBING, AIR CONDITIONING AND ELECTRICAL. ANY DISCREPANCIES THAT OCCUR SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE START OF CONSTRUCTION SO THAT A CLARIFICATION CAN BE ISSUED. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT HIS OWN EXPENSE, AND AT NO EXPENSE TO THE OWNER.
2. THESE DRAWINGS ARE DIAGRAMMATIC. THE LOCATION & ELEVATION OF ALL PIPING IS APPROXIMATE AND SHALL BE VERIFIED AND COORDINATED WITH ALL OTHER TRADES, STRUCTURAL CONDITIONS AND BUILDING CONSTRUCTION PRIOR TO START OF INSTALLATION.
3. ALL SYMBOLS AND ABBREVIATIONS USED ON THE DRAWINGS ARE CONSIDERED TO BE CONSTRUCTION STANDARDS. IF CLARIFICATION IS REQUIRED, THE CONTRACTOR SHALL NOTIFY ENGINEER PRIOR TO PROCEEDING WITH THE WORK.
4. DO NOT SCALE DRAWINGS. ALL DIMENSIONS AND JOB SITE CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR AT THE JOB SITE PRIOR TO BID SUBMITTAL, START OF CONSTRUCTION AND/OR FABRICATION OF MATERIALS. VERIFY ALL EXISTING DUCTWORK, PIPING, ELEVATIONS, SIZES AND POINT OF CONNECTIONS PRIOR TO START OF WORK. IF DISCREPANCIES ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED FOR CLARIFICATION.
5. THE CONTRACTOR SHALL FURNISH ALL MATERIALS, LABOR, EQUIPMENT, TRANSPORTATION AND SERVICES NECESSARY FOR COMPLETION OF THE WORK. ALL MATERIALS AND WORK SHALL COMPLY WITH APPLICABLE CODES AND GOVERNING REGULATION AND MEET THE APPROVAL OF THE CITY AND STATE FIRE MARSHALL.
6. CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR PROTECTION AND REPAIR OF ADJACENT EXISTING SURFACES AND AREAS WHICH MAY BE DAMAGED AS A RESULT OF DEMOLITION AND/OR NEW WORK.
7. VERIFY FINAL LOCATION OF THERMOSTATS WITH ARCHITECT AND/OR TENANT CONSTRUCTION COORDINATOR PRIOR TO ANY INSTALLATION WORK. MOUNT THERMOSTATS 4'-0" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE.
8. CONTRACTOR SHALL PROVIDE RECORD/AS BUILT DOCUMENTS TO TENANT CONSTRUCTION COORDINATOR OR ARCHITECT AT COMPLETION OF CONSTRUCTION.
9. ALL DUCTWORK SHALL CONFORM TO CHAPTER 6 OF 2019 CMC. ALL DUCTWORK SHALL BE CONSTRUCTED, ERECTED, AND TESTED IN ACCORDANCE WITH THE MOST RESTRICTIVE OF REGULATIONS, PROCEDURES DETAILED IN THE ASHRAE HANDBOOK OF FUNDAMENTALS, OR THE APPLICABLE STANDARDS ADOPTED BY THE SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION (SMACNA).
10. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE EQUIPMENT MANUFACTURER'S RECOMMENDATIONS. PROVIDE ALL FITTINGS,TRANSITIONS, DAMPERS, VALVES, AND OTHER DEVICES REQUIRED FOR A COMPLETE WORKABLE INSTALLATION.
11. WRAP CONCEALED DUCTS WITH FIBERGLASS DUCT INSULATION WRAP (ALL SUPPLY DUCT TO HAVE VAPOR BARRIER). ALL NEW SUPPLY AND RETURN DUCT INSULATION WITHIN THE BUILDING TO HAVE MINIMUM 8.0 R-VALUE.
12. INSTALL DOUBLE WALL DUCTS FOR ALL EXPOSED OUTDOOR SUPPLY AND RETURN DUCTS WITH AT LEAST 8.0 R-VALUE INSULATION.
13. INSULATION APPLIED TO THE EXTERIOR SURFACE OF DUCTS LOCATED IN BUILDINGS SHALL HAVE A FLAME SPREAD OF NOT MORE THAN 25 AND SMOKE DEVELOPED RATING OF NOT MORE THAN 50 WHEN TESTED AS A COMPOSITE INSTALLATION INCLUDING INSULATION, FACING MATERIALS, TAPES AND ADHESIVES AS NORMALLY APPLIED.
14. ENTIRE INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE 2019 CALIFORNIA MECHANICAL CODE (C.M.C.), 2019 CALIFORNIA BUILDING CODE (C.B.C.) AND ALL OTHER APPLICABLE CODES AND REGULATIONS.
15. INSTALLATION SHALL BE COMPLIANT WITH 2019 CBC SECTION 425, APPLICABLE NFPA CODE SECTIONS AND SECTION 1632A AND CHAPTER 35 OF 2019 CBC.
16. MANUFACTURER'S INSTALLATION INSTRUCTIONS SHALL BE MADE AVAILABLE TO THE INSPECTING AUTHORITIES.
17. AIR LEAKAGE TESTING SHALL BE PERFORMED BY SMACNA HVAC DUCT LEAKAGE TEST MANUAL.
18. LINE VOLTAGE WIRING, ALL CONDUIT, DISCONNECT SWITCHES AND FINAL CONNECTION BY ELECTRICAL CONTRACTOR. LOW VOLTAGE CONDUIT AND WIRING AND FINAL CONNECTION BY MECHANICAL CONTRACTOR.
19. THE TOTAL SYSTEM AIR BALANCE SHALL BE PERFORMED BY AN INDEPENDENT AGENCY CERTIFIED BY THE AABC OR NEBB. THIS WORK SHALL CONFORM TO AABC OR NEBB SPECIFICATIONS AS REFERRED TO IN THE NATIONAL STANDARDS.
20. ALL PIPING AND DUCT WORK SHALL BE INSULATED CONSISTENT WITH THE REQUIREMENTS OF SECTIONS 118, 123, 124, E.E.S. AND TABLE 6D OF 2019 CMC.
21. PROVIDE GUIDE VANES FOR ALL RECTANGULAR DUCT ELBOWS.
22. AUTOMATIC SHUTOFFS:
23. PER SEC. 608 OF 2019 CMC WHEN REQUIRED, EACH SINGLE SYSTEM PROVIDING HEATING OR COOLING AIR IN EXCESS OF 2,000 CUBIC FEET PER MINUTE SHALL BE EQUIPPED WITH AN AUTOMATIC SHUTOFF. AUTOMATIC SHUTOFF SHALL BE ACCOMPLISHED BY INTERRUPTING THE POWER SOURCE OF THE AIR MOVING EQUIPMENT DEVICES WHICH WILL DETECT PRODUCTS OF COMBUSTION OTHER THAN HEAT AND WHICH COMPLY WITH THE UBC, SHALL BE LABELED BY AN APPROVED AGENCY FOR AIR DUCT INSTALLATION AND SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. SUCH DEVICES SHALL BE COMPATIBLE WITH THE OPERATING VELOCITIES, PRESSURES, TEMPERATURES AND HUMIDITY OF THE SYSTEM WHERE FIRE DETECTION OR ALARM SYSTEMS ARE PROVIDED FOR THE BUILDING, SMOKE DETECTORS SHALL BE SUPERVISED BY SUCH SYSTEMS.
24. FOR THE PURPOSE OF CLEARNESS AND LEGIBILITY, THE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND ALTHOUGH SIZES AND LOCATIONS OF EQUIPMENT IS DRAWN TO SCALE WHEREVER POSSIBLE, THE CONTRACTOR SHALL MAKE USE OF ALL DATA IN ALL OF THE CONTRACT DOCUMENTS AND VERIFY THIS INFORMATION BEFORE ORDERING, FABRICATING OR INSTALLATION OF ANY MATERIALS.
25. HVAC SYSTEM AND COMPONENTS WILL BE TESTED ,A ADJUSTED AND BALANCED IN ACCORDANCE WITH AABC'S NATIONAL STANDARDS FOR TOTAL SYSTEM BALANCE 6TH EDITION.
26. HVAC SYSTEM AND CONTROLS:

- NEW HVAC UNITS ARE PACKAGED ROOFTOP HEAT PUMP UNITS.
- THERMOSTATS SHALL HAVE NUMERIC SETPOINTS IN F.
- THERMOSTATS SHALL HAVE ADJUSTABLE SETPOINTS ACCESSIBLE ONLY TO AUTHORIZED PERSONNEL.
- DEMAND CONTROL VENTILATION DEVICE SHALL ALLOW THE RATE OF OUTDOOR AIR TO BE REDUCED TO 0.15 CFM PER SQUARE FOOT OF CONDITIONED AREA, IF THE DEMAND CONTROL VENTILATION DEVICE INDICATES THAT THE SPACE CONDITIONS ARE ACCEPTABLE. IF THE DEVICE IS A CARBON-DIOXIDE SENSOR, IT SHALL LIMIT THE CARBON DIOXIDE LEVEL TO NO MORE THAN 800 PPM WHILE THE SPACE IS OCCUPIED.
- DEMAND CONTROL VENTILATION DEVICE APPROVED BY THE ENERGY COMMISSION SHALL BE PROVIDED FOR HVAC SYSTEMS SERVING "ASSEMBLY AREAS, CONCENTRATED USE (WITHOUT FIXED SEATS)" OR "AUCTION ROOMS", AS IDENTIFIED IN CHAPTER 10 OF THE UBC, IF SUCH AREAS ARE SERVED BY SYSTEMS WITH DESIGN OUTDOOR CAPACITIES EQUAL TO OR EXCEEDING 3,000 CFM. THE DEVICE SHALL INCLUDE A SENSOR LOCATED IN THE SPACE.

27. MECHANICAL MATERIAL STANDARD SHALL BE LISTED AND LABELING TO COMPLY WITH TABLE 1701.1. CMC 306.1 AND CMC 307.1.
28. ALL AIR DISTRIBUTION SYSTEM DUCTS AND PLENUMS, INCLUDING, BUT NOT LIMITED, BUILDING CAVITIES, MECHANICAL CLOSETS, AIR HANDLER BOXES AND SUPPORT PLATFORMS USED AS DUCTS AND PLENUMS, SHALL BE INSTALLED, SEALED AND INSULATED TO MEET THE REQUIREMENTS OF THE CMC SECTION 601.0, 602.0, 603.0, 604.0, AND ANSI/SMACNA-006-2006 HVAC DUCT CONSTRUCTION STANDARDS, METAL AND FLEXIBLE, 3RD EDITION.
29. CONNECTIONS OF METAL DUCTS AND THE INNER CORE OF FLEXIBLE DUCTS SHALL BE MECHANICALLY FASTENED. OPENINGS SHALL BE SEALED WITH MASTIC TAPE, AEROSOL SEALANT OR OTHER DUCT CLOSURE SYSTEM THAT MEETS THE APPLICABLE REQUIREMENTS OF UL 181, UL 181A OR UL 181B. IF MASTIC OR TAPE IS USED TO SEAL OPENINGS GREATER THAN 1/4",

## AIR DISTRIBUTION SCHEDULE

| SYMBOL | MODULE SIZE | NECK SIZE | CFM RANGE | REMARKS |
|---|---|---|---|---|
| CD-1 TITUS "OMNI" OR APPROVED EQUAL | 24"X24" | 6" | 60-160 | - 4-WAY THROW, UNLESS NOTED ON OTHERWISE ON PLANS. |
| | | 8" | 110-210 | - 4-WAY THROW, UNLESS NOTED ON OTHERWISE ON PLANS. |
| | | 10" | 180-400 | - 4-WAY THROW, UNLESS NOTED ON OTHERWISE ON PLANS. |
| | | 12" | 380-600 | - 4-WAY THROW, UNLESS NOTED ON OTHERWISE ON PLANS. |
| CR-1 TITUS "PAR-FR" OR APPROVED EQUAL | 24"X24" | DUCT SIZE | - | - |
| EG-1 TITUS "350 RL" OR APPROVED EQUAL | SEE PLANS | DUCT SIZE | SEE PLANS FOR SIZES | - |

## SHEET INDEX

| SHT.NO. | DESCRIPTION |
|---|---|
| M-0.1 | MECHANICAL GENERAL NOTES AND LEGEND |
| M-0.2 | MECHANICAL SCHEDULES AND DETAILS |
| M-2.0 | MECHANICAL DEMOLITION FLOOR PLAN |
| M-3.0 | MECHANICAL PROPOSED FLOOR AND ROOF PLAN |

## APPLICABLE CODES

2019 CALIFORNIA BUILDING CODE (CBC)
2019 CALIFORNIA ELECTRICAL CODE (CEC)
2019 CALIFORNIA MECHANICAL CODE (CMC)
2019 CALIFORNIA PLUMBING CODE (CPC)
2019 CALIFORNIA ENERGY STANDARDS CODE (CESC)

## MECHANICAL LEGEND

| SYMBOL | ABBV. | DESCRIPTION |
|---|---|---|
| | SWS | SIDEWALL DIFFUSER - SUPPLY |
| | CD | CEILING DIFFUSER - SUPPLY |
| | CD | CEILING DIFFUSER BELOW DUCT - SUPPLY |
| | SAD | RISER - SUPPLY AIR DUCT |
| | SAD | DROP - SUPPLY AIR DUCT |
| | SAD | ROUND DROP - SUPPLY AIR DUCT |
| | SWR | SIDEWALL REGISTER - RETURN |
| | CR | CEILING REGISTER - RETURN |
| | CR | CEILING REGISTER BELOW DUCT - RETURN |
| | RAD | RISER - RETURN AIR DUCT |
| | RAD | DROP - RETURN AIR DUCT |
| | SWE | SIDEWALL REGISTER - EXHAUST |
| | CR | CEILING REGISTER - EXHAUST |
| | CD | CEILING DIFFUSER BELOW DUCT - EXHAUST |
| | EAD | RISER - EXHAUST AIR DUCT |
| | EAD | DROP - EXHAUST AIR DUCT |
| | L | LINED DUCTWORK |
| | VD | VOLUME DAMPER |
| | FC | FLEXIBLE CONNECTION |
| | | NEW DUCT |
| | | EXISTING DUCT - NEW PLAN |
| | | EXISTING DUCT - DEMOLITION PLAN |
| | | EXISTING MECHANICAL WORK TO BE REMOVED |
| | FSD | FIRE SMOKE DAMPER |
| 1" UC | UC | UNDER CUT DOOR |
| | TSTAT | THERMOSTAT |
| | POC | POINT OF CONNECTION |
| | POD | POINT OF DEMOLITION |
| | OSA | OUTSIDE AIR |
| | UTR | UP THRU ROOF |
| S | CSFD | COMBINATION SMOKE/FIRE DAMPER |
| F | F | FUSIBLE LINK FIRE DAMPER |
| | N.T.S. | NOT TO SCALE |


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RE-BID SET

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|---|---|
| 1 PLAN CHECK CORRECTIONS | |
| 2 BID SET | |
| 3 RE-BID SET | |
| JOB NO.: 4009 | DATE: 01/07/2022 |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: | |

# MECHANICAL GENERAL NOTES AND LEGEND

ORANGE COUNTY FIRE AUTHORITY
Fire Station #16 - Tenant Improvements
28891 MODJESKA CANYON RD., SILVERADO, CA 92676


REGISTERED PROFESSIONAL ENGINEER HITEN SHETH M 35789 Exp. 3-31-22 MECHANICAL STATE OF CALIFORNIA
H2S ENGINEERS INC
H2S Engineers Inc.
Consulting MEP Engineers
Anaheim, CA 92801
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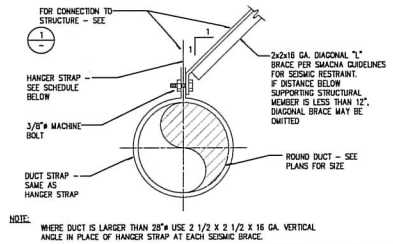
M-0.1

## EXISTING HEATER SCHEDULE

| SYMBOL | MANUFACTURER MODEL NO. | AREA SERVED | S.A. CFM | O.A. CFM | MOTOR HP | ELECTRICAL MCA | ELECTRICAL MOCP | ELECTRICAL VOLT/PH/Hz | OPERATING WEIGHT (LBS.) | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| FC 1 | XXXX | – | 1,400 | 140 | ½ | 5.1 | 15 | 208–230/1/60 | 210 | – PROVIDE COMPLETE WITH DIGITAL PROGRAMMABLE THERMOSTAT, HANGING BRACKETS, AND DUCT SMOKE DETECTOR IN SUPPLY AIR DUCT DOWNSTREAM OF FANCOIL FOR AUTOMATIC SHUT–OFF. PROVIDE 3/4" SECONDARY DRAIN. DAYLIGHT THRU CEILING AT A VISIBLE LOCATION, COMPLETE WITH ESCUTCHEON. PAINT TO MATCH EXISTING CEILING. |

## NEW BATHROOM EXHAUST FAN

| TAG | MANUFACTURER MODEL NO. | SERVING | CFM | SP (IN.G) | FAN RPM | POWER (HP) | SUPPLY VOLTAGE | DRIVE | WEIGHT LBS | NOTES |
|---|---|---|---|---|---|---|---|---|---|---|
| EF 1 | NUTONE CEILING MOUNTED | RESTROOM | 150 | 0.2 | – | 21 W | 115/1/60 | DIRECT | 30 | – PROVIDE SEPARATE SWITCH.– SHALL BE EQUIPPED WITH HUMIDISTAT. |

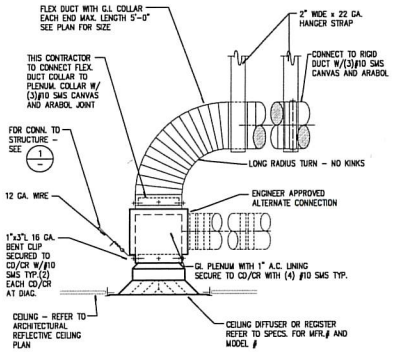



NOTE: WHERE DUCT IS LARGER THAN 28"ø USE 2 1/2 X 2 1/2 X 16 GA. VERTICAL ANGLE IN PLACE OF HANGER STRAP AT EACH SEISMIC BRACE.

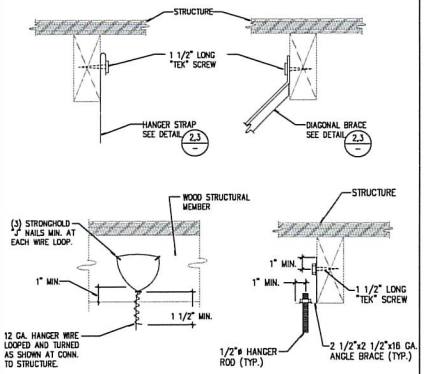
### HANGER STRAP SCHEDULE

| DUCT SIZE | HANGER SIZE | MAX. LOAD EA. HANGER | MAX. SPACING |
|---|---|---|---|
| UP THRU 10" | 1" x 22 GA. | 260 LBS | 10'–0" |
| 11" TO 18" | 1" x 22 GA. | 260 LBS | 10'–0" |
| 19" TO 24" | 1" x 22 GA. | 260 LBS | 10'–0" |
| 25" TO 36" | 1" x 20 GA. | 320 LBS | 10'–0" |

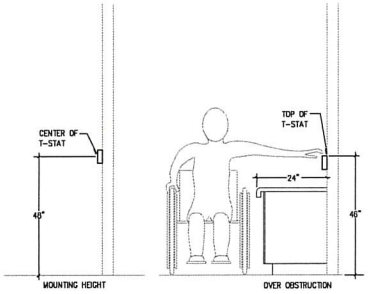
ROUND DUCT SUPPORT DETAIL — SCALE: NTS — 4




AIR DISTRIBUTION DETAIL — SCALE: NTS — 3




CONNECTION TO STRUCTURE — SCALE: NTS — 2




T-STAT MOUNTING DETAIL — SCALE: NTS — 1

NOT USED — SCALE: NTS — 7

NOT USED — SCALE: NTS — 6

NOT USED — SCALE: NTS — 5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| PLAN CHECK CORRECTIONS | |
| BID SET | |
| RE-BID SET | DATE: 01/07/2022 |
| JOB NO.: 4009 | |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: | |

MECHANICAL SCHEDULES AND DETAILS

ORANGE COUNTY FIRE AUTHORITY
Fire Station #16 - Tenant Improvements
28891 MODJESKA CANYON RD., SILVERADO, CA 92676

M-0.2




01 MECHANICAL DEMOLITION FLOOR PLAN
M-2.0 Scale : 1/4" = 1'-0"

## SHEET NOTES

1. DEMO EXISTING EXHAUST FAN, DUCTWORK, GRILLES AND ANY ASSOCIATED CONTROL. CLEAN AND MAKE READY FOR NEW INSTALLATION.
2. DISCONNECT AND REMOVE EXISTING DIFFUSER. PROVIDE NEW DIFFUSER ON NEW CEILING.

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RE-BID SET

| | |
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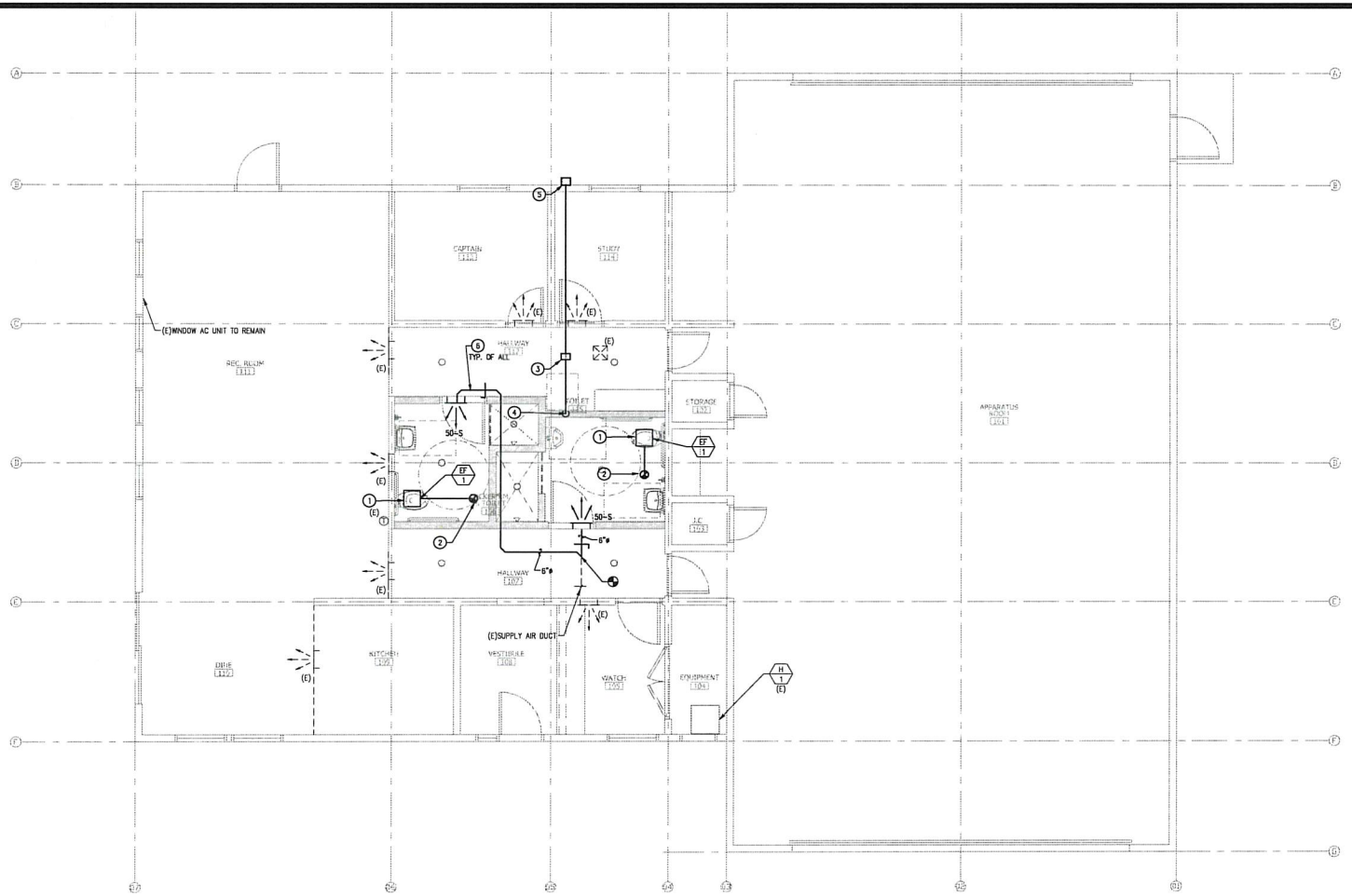
| PLAN CHECK CORRECTIONS | |
| BID SET | |
| RE-BID SET | |
| JOB NO.: 4069 | DATE: 01/07/2022 |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: | |

MECHANICAL DEMOLITION FLOOR PLAN

ORANGE COUNTY FIRE AUTHORITY
Fire Station #16 - Tenant Improvements
28891 MODJESKA CANYON RD., SILVERADO, CA 92676

M-2.0




01 M-3.0 MECHANICAL PROPOSED FLOOR PLAN
Scale : 1/4" = 1'-0"

## SHEET NOTES

1. CEILING MOUNTED EXHAUST FAN WITH EXHAUST DUCT TERMINATING ABOVE ROOF WITH WEATHER CAP AND MESH SCREEN. TERMINATE EXHAUST DUCT 10' AWAY FROM ANY AIR INTAKE.
2. 6"ø EXHAUST DUCT VIA MEZZANINE UP THRU ROOF.
3. 4" DRYER VENT WITH DRYER BOOSTER FAN.
4. 4"ø DRYER VENT IN THE WALL, CONNECT TO DRYER DISCHARGE. LOCATE TERMINATION 12" ABOVE GRADE.
5. DRYER VENT WITH BACKDRAFT DAMPER. LOCATE MIN. 3'-0" FROM ANY WINDOW.
6. ALL NEW DUCTWORK SHALL BE SHEET METAL DUCT MADE AND INSTALLED PER SMACNA 3RD EDITION.

## GENERAL NOTES

1. MECHANICAL LAYOUT IS SCHEMATIC ONLY. CONTRACTOR SHALL NOT USE IT AS FINAL SHOP DRAWING. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND PROVIDE INSTALLATION IN COMPLIANCE WITH DESIGN INTENT.
2. EXHAUST OUTLETS SHALL TERMINATE NO LESS THAN 3' FROM PROPERTY LINE, 3' FROM OPENINGS INTO THE BUILDING, 10' FROM FORCED AIR INLET, AND SHALL NOT DISCHARGE ONTO A PUBLIC WALKWAY.
3. ALL EXPOSED DUCTWORK SHALL BE BUILT AND INSTALLED PER SMACNA'S LATEST EDITION.
4. ALL EXPOSED DUCTWORK FROM AC UNIT UP TO 15' SHALL BE INTERNALLY LINED.
5. ALL DIMENSIONS ARE INSIDE CLEAR DIMENSIONS ONLY. CONTRACTOR SHALL ADD NECESSARY INCHES TO CLEAR DIMENSIONS OF DUCTWORK FOR INTERIOR INSULATION.
6. ALL INTERIOR INSULATION SHALL BE 1" THICK, 0.75 LBS/SF DENSITY FIBERGLASS.
7. ALL SUPPLY DUCTWORK IN SHAFT SHALL BE EXTERNALLY INSULATED WITH R-6.2 INSULATION AND VAPOR RETARDER.
8. ALL VOLUME DAMPERS SHALL BE ACCESSIBLE. IF ABOVE CEILING, PROVIDE 15"X15" ACCESS PANEL FOR ACCESS.
9. ALL BRANCH OFFS SHALL BE LOW LOSS FITTINGS.
10. ALL 90° TURNS SHALL HAVE RADIUS EQUAL TO DUCT DIAMETER.
11. ALL RETURN DUCTWORK SHALL BE INTERNALLY INSULATED WITH FIBERGLASS INSULATION. RETURN DUCTWORK SHALL BE MINIMUM AGGREGATE 15' LONG WITH AT LEAST ONE ELBOW FOR SOUND MITIGATION.
12. ALL RETURN DUCTWORK SHALL TERMINATE WITH A BELL MOUTH OPENING WITH MESH SCREEN.

REGISTERED PROFESSIONAL ENGINEER — STEVEN SHEN — No. M 23259 — EXP. 12-31-22 — MECHANICAL — STATE OF CALIFORNIA

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RE-BID SET

PLAN CHECK CORRECTIONS
BID SET
RE-BID SET
JOB NO.: 4009
DRAWN BY: STAFF
CHECKED BY: LP
SCALE:
DATE: 01/07/2022

MECHANICAL PROPOSED FLOOR AND ROOF PLAN

ORANGE COUNTY FIRE AUTHORITY
Fire Station #16 - Tenant Improvements
28891 MODJESKA CANYON RD., SILVERADO, CA 92676

M-3.0

## GREEN BUILDING CODE REQUIREMENTS
(NOT ALL NOTES MAY APPLY)

1. PROJECTS WHICH DISTURB LESS THAN ONE ACRE OF LAND SHALL PREVENT THE POLLUTION OF STORM WATER RUNOFF FROM THE CONSTRUCTION ACTIVITIES THROUGH ONE OR MORE OF THE FOLLOWING MEASURES (SECTION 5.106.1):

A) BEST MANAGEMENT PRACTICES (BMP). PREVENT THE LOSS OF SOIL THROUGH WIND OR WATER EROSION BY IMPLEMENTING AN EFFECTIVE COMBINATION OF EROSION AND SEDIMENT CONTROL AND GOOD HOUSEKEEPING BMP. SEE SECTION 5.106.1.2 FOR SPECIFICS.

B) LOCAL ORDINANCE.

5. THE SITE GRADING OR A DRAINAGE SYSTEM WILL MANAGE ALL SURFACE WATER FLOWS TO KEEP WATER FROM ENTERING BUILDINGS. CGC SECTION 5.106.10.

6. LANDSCAPE IRRIGATION SYSTEMS SHALL BE DESIGNED TO PREVENT SPRAY ON STRUCTURES. EXTERIOR ENTRIES SUBJECT TO FOOT TRAFFIC OR WIND-DRIVEN RAIN SHALL BE DESIGNED TO PREVENT WATER INTRUSION INTO THE BUILDING. CGC SECTION 5.407.2.2.1.

7. THE CONTRACTOR MUST SUBMIT TO THE ENGINEERING DEPARTMENT OR OTHER AGENCY THAT REGULATES CONSTRUCTION WASTE MANAGEMENT A WASTE MANAGEMENT PLAN THAT OUTLINES THE ITEMS LISTED IN CGC SECTION 5.408.1.1.

8. A MINIMUM OF 50% OF CONSTRUCTION WASTE IS TO BE RECYCLED. CGC 5.408.1. DOCUMENTATION SHALL BE PROVIDED TO THE ENFORCING AGENCY WHICH DEMONSTRATES COMPLIANCE. CGC SECTION 5.408.1.4.

9. 100% OF TREES, STUMPS, ROCKS, AND ASSOCIATED VEGETATION AND SOILS PRIMARILY FROM THE CONSTRUCTION WILL BE REUSED OR RECYCLED. CGC 5.408.3

10. AN IDENTIFIED, READILY ACCESSIBLE AREA SHALL BE PROVIDED THAT SERVES THE ENTIRE BUILDING FOR COLLECTING RECYCLING, SUCH AS PAPER, CARDBOARD, GLASS, PLASTICS, METALS, ETC. CGC SECTION 5.410.1.

11. A BUILDING 'SYSTEMS MANUAL' AS LISTED IN CGC SECTION 5.410.2.5 SHALL BE DELIVERED TO THE BUILDING OWNER OR REPRESENTATIVE AND THE FACILITIES OPERATOR. THE 'SYSTEMS MANUAL' SHALL CONTAIN THE REQUIRED FEATURES LISTED IN CGC SECTION 5.410.2.5.1.

12. DURING CONSTRUCTION, ENDS OF DUCT OPENINGS ARE TO BE SEALED, AND MECHANICAL EQUIPMENT IS TO BE COVERED. CGC 5.504.3.

13. VOC'S MUST COMPLY WITH THE LIMITATIONS LISTED IN SECTION 5.504.4 AND TABLES 4.504.1, 5.504.4.1 5.504.4.2, 5.504.4.3 AND 5.504.4.5 FOR: ADHESIVES, SEALANTS, PAINTS AND COATINGS, CARPET AND COMPOSITION WOOD PRODUCTS. CGC 5.504.4.

14. WHERE OUTDOOR AREAS ARE PROVIDED FOR SMOKING, SUCH AREAS ARE PROHIBITED WITHIN 25' OF BUILDING ENTRIES, WINDOWS AND OUTDOOR AIR INTAKES. SIGNAGE SHALL BE POSTED TO INFORM OCCUPANTS OF THE PROHIBITIONS. CGC SECTION 5.504.7.

15. MECHANICALLY VENTILATED BUILDINGS SHALL PROVIDE REGULARLY OCCUPIED AREAS WITH AIR FILTRATION MEDIA FOR OUTSIDE AND RETURN AIR THAT PROVIDES AT LEAST A MINIMUM EFFICIENCY REPORTING VALUE (MERV) OF 8. MERV 8 FILTERS SHALL BE INSTALLED PRIOR TO OCCUPANCY. CGC SECTION 5.504.5.3.

16. WALL AND FLOOR ASSEMBLIES SEPARATING TENANT SPACES (AND TENANT SPACES FROM PUBLIC SPACES) SHALL HAVE AN STC OF AT LEAST 40. CGC SECTION 5.507.4.3.

17. WALL AND ROOF ASSEMBLIES EXPOSED TO NOISE SOURCES SHALL HAVE AN STC RATING OF AT LEAST 50, WITH EXTERIOR WINDOWS HAVING A MINIMUM STC OF 40 IN THE FOLLOWING LOCATIONS, PER CGC SECTION 5.507.4.1:
A) WITHIN THE 65 CNEL NOISE CONTOUR OF A FREEWAY, RAILROAD OR INDUSTRIAL SOURCE, AS DETERMINED BY THE JURISDICTION'S NOISE ELEMENT OF THE GENERAL PLAN.

B) WITHIN THE 65 CNEL NOISE CONTOUR OF AN AIRPORT.

18. INSTALLATIONS OF HVAC, REFRIGERATION AND FIRE SUPPRESSION SYSTEMS WILL NOT CONTAIN CFC'S OR HALONS, PER CGC 5.508.1.

19. FOR NEW BUILDINGS, SHOW ON THE SITE UTILITY PLAN SEPARATE SUB-METERS PER CGC SECTION 5.303.1 FOR THE FOLLOWING:
(A) EACH LEASED OR OWNED SPACE THAT CONSUMES MORE THAN 100 GAL/DAY
(B) TENANT SPACES CONTAINING LAUNDRY, CLEANERS, RESTAURANT, MEDICAL/DENTAL OFFICE, LABORATORY OR BEAUTY/BARBER SHOPS.

20. THE FOLLOWING MAXIMUM FIXTURE FLOW RATES FROM TABLE 5.303.2.3 AND SECTION 5.303.3, AS SHOWN BELOW. REVISE GENERAL NOTES, PLUMBING PLANS, ETC. TO MATCH. CGC 5.303.

MAXIMUM FIXTURE FLOW RATES

| FIXTURE TYPE | MAXIMUM FLOW RATE |
|---|---|
| LAVATORY FAUCETS-NONRESIDENTIAL | 0.5 GPM @60 PSI |
| KITCHEN FAUCETS | 1.8 GPM @ 60 PSI |
| METERING FAUCETS | 0.2 GALLONS/CYCLE |
| WATER CLOSETS | 1.28 GALLONS/FLUSH |
| URINALS | 0.5 GALLONS/FLUSH |

21 A WATER BUDGET SHALL BE DEVELOPED FOR LANDSCAPE IRRIGATION USE THAT CONFORMS TO THE LOCAL WATER EFFICIENT LANDSCAPE ORDINANCE. WHERE NO LOCAL ORDINANCE EXISTS, SHOW COMPLIANCE WITH THE CALIFORNIA DEPARTMENT OF WATER RESOURCES MODEL WATER EFFICIENT LANDSCAPE ORDINANCE. SEE SECTIONS 492.5 THROUGH 492.9, 492.10 AND 492.11 OF THE STATE ORDINANCE AT HTTP://WWW.WATER.CA.GOV/WATERUSEEFFICIENCY/DOCS/WATERORDSEC492.CFM.

22. FOR NEW WATER SERVICE (OR ADDITIONS/ALTERATIONS WITH > 1,000 SQUARE FEET OF CUMULATIVE LANDSCAPED AREA), SEPARATE SUBMETERS OR METERING DEVICES SHALL BE INSTALLED FOR OUTDOOR POTABLE WATER USE. ALSO, IRRIGATION CONTROLLERS AND SENSORS SHALL BE INSTALLED. CGC SECTIONS 5.304.2 AND 5.304.3.

23 PRIOR TO FINAL INSPECTION THE LICENSED CONTRACTOR, ARCHITECT OR ENGINEER IN RESPONSIBLE CHARGE OF THE OVERALL CONSTRUCTION MUST PROVIDE TO THE BUILDING DEPARTMENT OFFICIAL WRITTEN VERIFICATION THAT ALL APPLICABLE PROVISIONS FROM THE GREEN BUILDING STANDARDS CODE HAVE BEEN IMPLEMENTED AS PART OF THE CONSTRUCTION. CGC 102.3.

## PIPING MATERIALS

1. SANITARY SEWER, VENT AND STORM DRAIN PIPING BELOW GROUND: SERVICE WEIGHT NO-HUB CAST IRON PIPE & FITTINGS CONFORMING TO THE REQUIREMENTS CISPI STANDARD 301, ASTM A 888 OR ASTM A74 WITH TYPE 304 STAINLESS STEEL HEAVY DUTY NO-HUB COUPLINGS. PROVIDE PIPE WRAP ON ALL UNDERGROUND PIPING IN ACCORDANCE WITH ANSI/AWWA STANDARDS C105 /A21.5-93. BED AND BACKFILL WITH CLEAN SAND, 6" THICK ALL AROUND PIPE. CAST IRON BELOW GRADE SHALL BE SPIRAL WRAPPED WITH 20 MIL VISQUEEN TAPE.

2. SOIL, WASTE, VENT, STORM DRAIN PIPING ABOVE GROUND: SERVICE WEIGHT NO-HUB CAST IRON PIPE & FITTINGS CONFORMING TO THE REQUIREMENTS OF CISPI STANDARD 301, ASTM A888 OR ASTM A74 WITH TYPE 304 STAINLESS STEEL STANDARD DUTY NO-HUB COUPLINGS.

3. WATER PIPING BELOW GROUND: TYPE 'K' COPPER WITH BRAZED JOINTS.

4. WATER PIPING ABOVE GROUND: TYPE 'L' COPPER WITH LEAD-FREE SOLDERED JOINTS.

5. CONDENSATE DRAIN PIPING: TYPE 'M' COPPER WITH SOLDERED JOINTS.

6. GAS PIPING ABOVE GROUND: SCHEDULE 40 BLACK STEEL WITH MALLEABLE IRON SCREWED OR WELDED JOINTS.

7. GAS PIPING BELOW GROUND: DRISCOPLEX PE2406 POLYETHYLENE PIPING SYSTEMS WITH ELECTRIC FUSION SOCKET JOINTS. PROVIDE #12 ELECTRIC TRACER COPPER WIRE, SPIRAL WRAPPED AROUND PIPE. UNDERGROUND STEEL PIPING AND FITTINGS SHALL BE AS FOR ABOVE GROUND. PIPING SHALL BE WRAPPED AND CATHODICALLY PROTECTED PER THE SOILS ENGINEER DIRECTION.

8. INSULATION OF DOMESTIC HOT WATER SUPPLY AND HOT WATER RETURN PIPING: GLASS FIBER PIPE INSULATION WITH FACTORY APPLIED WHITE JACKET, J-M MICRO-LOK 650AP, 1" THICK FOR PIPE SIZES OF 1/2" TO 1"., AND 1 1/2" THICK FOR PIPE SIZES TO 1 1/4" AND LARGER. INSULATE FITT- INGS AND VALVES W/ PREFORMED INSULATION WITH PVC PREMOLDED ONE PIECE FITTING COVER BY J.M. ZESTON. ADHERE LONGITUDINAL LAPS AND BUTTS OF STRIPS OF JACKET W/ FACTORY APPLIED PRESSURE SENSITIVE TAPE SYSTEM, J-M AP-T. FLANGES AND UNIONS SHALL NOT BE COVERED. SURFACE BURNING CHARACTERISTICS COMPOSITE FHC 25/50.

9. INSULATION OF INTERIOR CONDENSATE DRAIN PIPING: AP ARMFLEX CLOSED-CELL ELASTOMERIC FOAM INSULATION. FLAME-SPREAD INDEX OF 25 OR LESS AND SMOKE-DEVELOPED INDEX OF 50 OR LESS. 1/2 INCH THICK FOR 4 INCH DIAMETER PIPE AND LESS.

10. ALL OF THE ABOVE SHALL COMPLY WITH THE SPECIFICATIONS. ALL PIPING BELOW SLAB OR GRADE SHALL BE CORROSION PROTECTED PER SPECIFICATIONS.

NOTE:
ALL PIPE, FITTINGS, FIXTURES, ETC. THAT CONTACT POTABLE WATER FOR HUMAN CONSUMPTION SHALL SHOW APPROVAL TO NSF 61, ANNEX "G". EFFECTIVE JANUARY 1, 2010, THE LEAD CONTENT OF THE WETTED SURFACE AREA OF THE PIPES, FITTINGS AND FIXTURES CONVEYING POTABLE WATER FOR HUMAN CONSUMPTION, OF NOT MORE THAN 0.25% SHALL BE DETERMINED PURSUANT TO A PRESCRIBED FORMULA AS DETERMINED BY THIRD PARTY CERTIFIERS TO NSF STANDARD 61, ANNEX "G". REFERENCE SECTION 604.2, CALIFORNIA PLUMBING CODE, 2016 EDITION, AND HEALTH & SAFETY CODE SECTION 116875.

## APPLICABLE CODES

2019 CALIFORNIA BUILDING CODE (CBC: PART 2 , TITLE 24 , CCR) (BASED ON 2018 INTERNATIONAL BUILDING CODE)

2019 CALIFORNIA ELECTRICAL CODE (CEC: PART 3 , TITLE 24 , CCR) (BASED ON 2017 NATIONAL ELECTRICAL CODE)

2019 CALIFORNIA MECHANICAL CODE (CMC: PART 4 , TITLE 24 , CCR) (BASED ON 2018 UNIFORM MECHANICAL CODE)

2019 CALIFORNIA PLUMBING CODE (CPC: PART 5 , TITLE 24 , CCR) (BASED ON 2018 UNIFORM PLUMBING CODE)

2019 CALIFORNIA FIRE CODE (CFC: PART 9, TITLE 24, CCR.) (BASED ON 2018 INTERNATIONAL FIRE CODE)

2019 CALIFORNIA ENERGY CODE.

2019 CALIFORNIA GREEN BUILDING CODE.

## PLUMBING LEGEND

1. NOTE: FOR THE PURPOSE OF CLEARNESS AND LEGIBILITY, THE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND ALTHOUGH SIZES AND LOCATIONS OF EQUIPMENT ARE DRAWN TO SCALE WHEREVER POSSIBLE, THE CONTRACTOR SHALL MAKE USE OF ALL DATA IN ALL OF THE CONTRACT DOCUMENTS AND VERIFY THIS INFORMATION PRIOR TO ORDERING, FABRICATING OR INSTALLING ANY MATERIALS.

2. CONTRACTOR SHALL COORDINATE ALL WORK SHOWN ON THESE DRAWINGS AND SPECIFICATIONS WITH ALL DISCIPLINES AND TRADES PRIOR TO SUBMITTAL OF BID AND INSTALLATION OF SYSTEM.

3. THE PLUMBING CONTRACTOR SHALL GUARANTEE ALL MATERIALS & LABOR (INCLUDING THE COMPLETE PLUMBING SYSTEM) FOR A PERIOD OF ONE YEAR FROM WRITTEN ACCEPTANCE BY THE OWNER. ANY DEFECTS IN MATERIALS & OR LABOR FOUND WITHIN THE GUARANTEE PERIOD SHALL BE REMEDIED OR REPAIRED BY THIS CONTRACTOR IN A TIMELY FASHION, AT NO COST TO THE OWNER.

4. ALL PLUMBING FIXTURE LOCATIONS (WATER CLOSETS, LAVATORIES ETC.) ARE DIAGRAMMATIC & CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS FOR ADA COMPLIANT FIXTURES, EXACT LOCATIONS, MOUNTING HEIGHTS & COLOR.

5. ANY DEVIATIONS FROM THE DRAWINGS OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER PRIOR TO INSTALLATION.

6. CONTRACTOR SHALL VISIT SITE PRIOR TO SUBMITTAL OF BID AND FAMILIARIZE HIMSELF WITH EXISTING CONDITIONS. SUBMITTAL OF BID WILL VERIFY THAT THE CONTRACTOR HAS VISITED THE SITE.

7. PIPING SHALL BE INSTALLED PARALLEL TO BUILDING LINES AND SUPPORTED AND ANCHORED AS REQUIRED TO FACILITATE EXPANSION AND CONTRACTION. THE INSTALLATION SHALL MEET ALL CONSTRUCTION CONDITIONS AND ALLOW FOR THE INSTALLATION OF OTHER TRADES.

8. TRAP PRIMERS FOR FLOOR DRAINS AND FLOOR SINKS AND WATER HAMMER ARRESTORS TO BE INSTALLED AS PER THE LISTED PLUMBING CODE AND THE LATEST EDITION OF THE AMERICAN SOCIETY OF SANITARY ENGINEERING (ASSE 1010) SIZING AND INSTALLATION REQUIREMENTS.

9. ALL VALVES, TRAP PRIMERS, WATER HAMMER ARRESTORS OR OTHER EQUIPMENT SHOWN IN WALLS OR ABOVE NON-ACCESSIBLE CEILINGS SHALL BE INSTALLED BEHIND AN ACCESS PANEL.

10. ALL SERVICE WATER HEATING EQUIPMENT TO BE IN COMPLIANCE WITH THE STATE ENERGY CODE AND 2013 IECC REQUIREMENTS AND LABELED AS SUCH.

11. ALL ITEMS PROJECTING THROUGH THE ROOF SHALL BE FLASHED THROUGH CURBS OR PIPE SEALS A MINIMUM OF 12" ABOVE THE ROOF. THE PIPE CURBS AND SEALS SHALL BE INSTALLED BY THE ROOFING CONTRACTOR. ENSURE THAT AMPLE BOOT OPENINGS ARE PROVIDED TO ACCOMMODATE ANY ELECTRICAL CONDUIT PENETRATIONS REQUIRED FOR POWER.

12. CONTRACTOR TO REFER TO PLUMBING FIXTURE SCHEDULE FOR INDIVIDUAL WASTE, VENT & WATER CONNECTION SIZES AT EACH PLUMBING FIXTURE.

13. ALL CLEANOUTS SHALL BE INSTALLED WHERE READILY ACCESSIBLE AND LOCATED AS PER CODE REQUIREMENTS. THE CONTRACTOR SHALL COORDINATE ALL CLEAN OUT LOCATIONS WITH EQUIPMENT, MILLWORK, ETC., PRIOR TO INSTALLATION.

14. ALL PLUMBING FIXTURE VENTS TO TERMINATE A MINIMUM OF 12 INCHES FROM ANY VERTICAL SURFACE AND 10'-0" FROM OR 3'-0" ABOVE ANY MECHANICAL EQUIPMENT OUTSIDE AIR INTAKE.

15. ALL VALVES, UNIONS, ETC. TO BE SAME SIZE AS CONNECTED SUPPLY LINE UNLESS OTHERWISE NOTED ON DRAWINGS.

16. UNIONS SHALL BE PROVIDED AND INSTALLED AFTER EACH SCREW-TYPE VALVE AND PRIOR TO EQUIPMENT CONNECTIONS.

17. ALL UNDERGROUND METALLIC PIPE AND FITTINGS SHALL BE PROTECTED IN ACCORDANCE WITH THE SOILS ENGINEER'S RECOMMENDATIONS.

18. NO PIPING SHALL BE DIRECTLY EMBEDDED IN CONCRETE, MASONRY WALLS, OR CONCRETE FOOTINGS.

19. THE PLUMBING CONTRACTOR SHALL COORDINATE ALL REQUIREMENTS FOR ALL POINTS OF CONNECTION WITH THE GENERAL CONTRACTOR AND OTHER TRADES PRIOR TO START OF WORK.

20. VERIFY EXACT LOCATIONS, DEPTH AND SIZE OF ALL PIPING TO WHICH CONNECTIONS ARE REQUIRED. COORDINATE ALL CONNECTIONS WITH SITE CONDITIONS AND SITE UTILITY CONTRACTOR/ REPRESENTATIVE.

21. ALL HORIZONTAL PIPING LINES EXTENDED AND CONNECTED TO EQUIPMENT SHALL BE RUN AT THE HIGHEST POSSIBLE ELEVATIONS AND NOT LESS THAN 6" ABOVE THE FLOOR TO PROVIDE CLEARANCE FOR CLEANING.

22. ALL CUTTING OF EXISTING PAVING, WALKS AND/OR FLOORS SHALL UTILIZE MACHINE SAW CUTTING EQUIPMENT. HOLES FOR PIPES IN CONCRETE WALLS OR FLOORS SHALL UTILIZE CORE DRILLING EQUIPMENT. COORDINATE WITH ARCHITECTURAL DETAILS FOR FLOOR CUTTING AND PATCHING.

23. THE PLUMBING CONTRACTOR IS TO PROVIDE ALL ADDITIONAL STEEL, HANGER MATERIALS, RODS AND CLAMPS AS REQUIRED FOR COORDINATION WITH WORK OF OTHER TRADES.

24. PIPING LAYOUT IS SCHEMATIC ONLY, EXACT ROUTING AND INSTALLATION OF PIPES TO BE COORDINATED WITH THE BUILDING STRUCTURE AND THE WORK OF OTHER CONTRACTORS.

25. NO LIQUID TRANSMISSION PLUMBING PIPING SHALL BE INSTALLED ABOVE ELECTRICAL SWITCH GEAR, EQUIPMENT, OR PANELS. MAKE ADJUSTMENTS NECESSARY TO REROUTE PIPING FOR ACTUAL INSTALLATION OF ELECTRIC EQUIPMENT.

26. WHENEVER FOUNDATION WALLS, EXTERIOR WALLS, ROOFS, ETC. ARE PENETRATED FOR THE INSTALLATION OF PLUMBING SYSTEMS, THEY SHALL BE PATCHED TO MATCH EXISTING CONSTRUCTION AND SEALED WEATHER TIGHT.

27. PLUMBING CONTRACTOR SHALL BE ON SITE AND PRESENT AT THE DATE OF TURNOVER.

28. ALL EXTERIOR EXPOSED WATER PIPING SHALL BE INSULATED AND PVC JACKETED. SEAL JACKET PER MANUFACTURER'S REQUIREMENTS.

29. LABEL ALL SHUT-OFF VALVES ABOVE THE CEILING AND IN THE WALL WITH ACCESS DOORS.

30. GENERAL CONTRACTOR TO VERIFY PRESSURE ON SITE EARLY TO VERIFY IF BOOSTER PUMPS ARE REQUIRED.

## PLUMBING LEGEND

| SYMBOL | ABBREVIATION | DESCRIPTION |
|---|---|---|
| | W | SANITARY WASTE |
| | V | SANITARY VENT |
| | CW | DOMESTIC COLD WATER |
| | HW | DOMESTIC HOT WATER |
| | HWR | DOMESTIC HOT WATER RETURN |
| —G— | G | LP GAS |
| —CD— | CD | CONDENSATE DRAIN |
| —SD— | SD | STORM DRAIN |
| —OD— | OD | OVERFLOW STORM DRAIN |
| | VTR | VENT THRU ROOF |
| | SOV | VERTICAL SHUT-OFF VALVE |
| | SOV | SHUT-OFF VALVE |
| | PRV | PRESSURE REDUCING VALVE |
| | | PRESSURE GAUGE |
| | | THERMOMETER |
| | BV | BALL VALVE |
| | CV | CHECK VALVE |
| | U | UNION |
| | WHA | WATER HAMMER ARRESTER WITH ACCESS PANEL |
| | TP | TRAP PRIMER WITH ACCESS PANEL |
| | | PIPE UP |
| | | PIPE DOWN |
| Ø | FCO OR GCO | FLOOR OR GRADE CLEAN OUT |
| ØØ | SCO | 2-WAY SERVICE CLEAN OUT |
| | WCO | WALL CLEAN OUT |
| | HB | HOSE BIBB |
| | | |
| | POC | POINT OF CONNECTION |
| | | FLOOR DRAIN |
| | AP | ACCESS PANEL |
| | FFE | FINISHED FLOOR ELEVATION |
| | IE | INVERT ELEVATION |
| | FU | FIXTURE UNIT |

## SHEET INDEX

| SHEET NO. | DESCRIPTION |
|---|---|
| P-0.1 | GENERAL NOTES, LEGEND, AND DRAWING INDEX |
| P-0.2 | PLUMBING SCHEDULES AND DETAILS |
| P-2.0 | PLUMBING DEMOLITION FLOOR PLAN |
| P-3.0 | PLUMBING FLOOR PLAN - WASTE & VENT |
| P-3.1 | PLUMBING FLOOR PLAN - WATER & GAS |
| P-4.0 | PLUMBING RISER DIAGRAMS |

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REGISTERED PROFESSIONAL ENGINEER HITEN SHETH M 32489 Exp 3-31-22 MECHANICAL STATE OF CALIFORNIA

LICENSED ARCHITECT LONGKAVACH PANICHAPAN NO. C-29344 EXP. 11-30-21 STATE OF CALIFORNIA

architecture planning interior
Gillis + Panichapan Architects, Inc.
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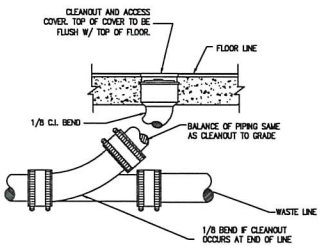
RE-BID SET

| | |
|---|---|
| 1 PLAN CHECK CORRECTIONS | |
| 2 BID SET | |
| 3 RE-BID SET | |
| JOB NO.: 4009 | DATE: 01/07/2022 |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: | |

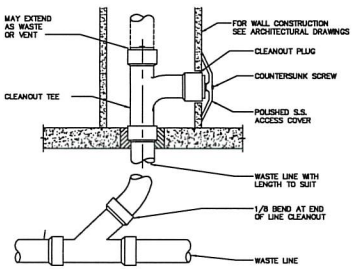
GENERAL NOTES, LEGEND & SCHEDULES

ORANGE COUNTY FIRE AUTHORITY
Fire Station #16 - Tenant Improvements
28891 MODJESKA CANYON RD., SILVERADO, CA 92676

P-0.1




FOOR CLEAN OUT 3
SCALE: NONE



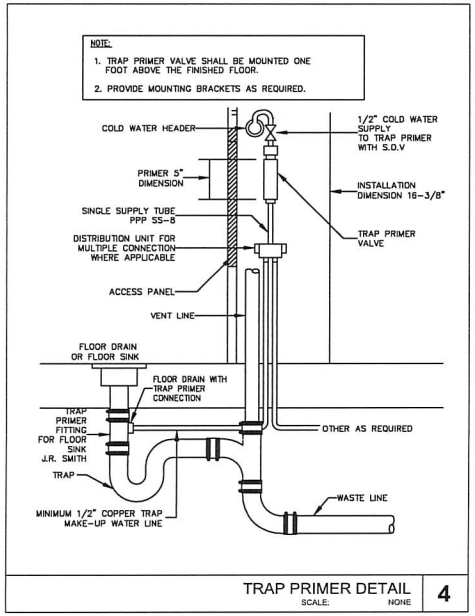

WALL CLEAN OUT 2
SCALE: NONE

## PLUMBING FIXTURE SCHEDULE

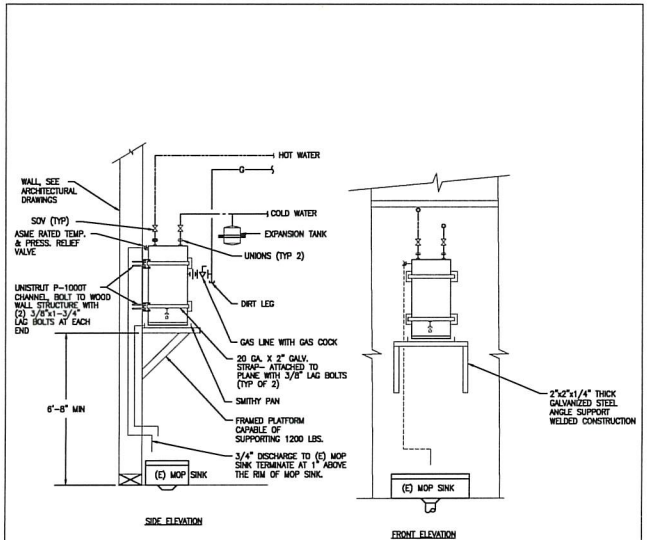
| MARK | FIXTURE | PIPE SIZE S/W | V | CW | HW | DESCRIPTION / REMARKS |
|---|---|---|---|---|---|---|
| WC-1 | WATER CLOSET (ADA) | 4" | 2" | 1-1/4" | – | AMERICAN STANDARD MODEL 3351.528 1.28 GPF AFWALL MILLENIUM FLOWISE, WALL MOUNTED, ELONGATED TYPE. WHITE, SLOAN ROYAL 111-1.28 EXPOSED MANUAL OPERATED FLUSH VALVE, CHURCH 2155CT WHITE OPEN FRONT SEAT. |
| L-1 | LAVATORY (ADA) WALL MOUNT | 2" | 2" | ¾" | ¾" | AMERICAN STANDARD MODEL 0355.012.20 LUCERNE, WALL HUNG, WHITE, CHICAGO FAUCETS 3600-ABCP MANUAL METERING 0.5 GPM. MOUNTED AT ACCESSIBLE HEIGHT; REFER TO ARCHITECTURAL PLANS. INSTALL WITH POINT OF USE THERMOSTATIC VALVE BRADLEY MODEL 559-4000A |
| U-1 | URINAL (ADA) | 2" | 2" | 1-1/4" | – | AMERICAN STANDARD MODEL 6590.001 WASHBROOK, SLOAN ROYAL 186-0.125 DBP 0.125 GPF MANUAL OPERATED FLUSH VALVE, WALL HUNG. |
| SH-1 | SHOWER (NON-ADA) | 2" | 2" | ¾" | ¾" | BRADLEY WS-1F, INDIVIDUAL FLUSH-MOUNTED WALL SHOWER. 1.5 GPM COMPLETE WITH THERMOSTATIC MIXING VALVE LEVER HANDLE, W/ FD-1 DRAIN. |
| SH-2 | SHOWER (ADA) | 2" | 2" | ¾" | ¾" | BRADLEY HN200-T24 RECESSED-MOUNTED ADA SHOWER. 1.5 GPM COMPLETE W/ THERMOSTATIC MIXING VALVE LEVER HANDLE; DRAIN SHALL BE THE SAME AS FD-1. SECOND SHOWER HEAD AND VALVE LOCATION TO BE DETERMINED BY ARCHITECT AND/OR OWNER. |
| FD-1 | FLOOR DRAIN | 2" | 2" | – | – | ZURN MODEL Z415-BZ-P 8"ø NICKEL BRONZE GRATE, CAST IRON BODY, CONVERTIBLE MEMBRANE CLAMP, AND ADJUSTABLE COLLAR (TRAP PRIMER CONNECTION IF SHOWN ON THE PLAN). |
| WHA | WATER HAMMER ARRESTER | – | – | 1" | – | SIOUX CHIEF MODEL 654-CS 1" |
| TP-1 | TRAP PRIMER | – | – | ½" | – | SIOUX CHIEF MODEL 685-01 AUTOMATIC TRAP PRIMER VALVE INSTALL BEHIND ACCESS PANEL |
| WCO FCO GCO CO | CLEAN-OUTS | – | – | – | – | WALL CLEAN OUT: "ZURN" MODEL: Z1447 SQUARE, Z1446 ROUND. FLOOR CLEANOUT: "ZURN" MODEL: Z1400-BZ MUST BE FLUSHED TO SURFACE. CLEAN OUT TO GRADE: "ZURN" MODEL: Z1400 MUST BE FLUSHED TO SURFACE. T CLEAN OUT: "ZURN" MODEL: Z1445. |

## PROPANE GAS FIRED WATER HEATER

| UNIT NO. | MANUFACTURER & MODEL NO. | SERVICE | STORAGE CAPACITY | INPUT BTU/HR | REC @ DEG° △ T (GPH) | OPER. WT. LBS. | REMARKS |
|---|---|---|---|---|---|---|---|
| WH-1 | BRADFORD WHITE LG2PDV75H803X | DOMESTIC HOT WATER | 75 GAL | 80,000 | 127 @ 90° | 1050 | AMTROL ST-12 EXPANSION TANK, DIRECT VENT TYPE. PROVIDE WITH CONDENSATE NEUTRALIZER KIT. |




TRAP PRIMER DETAIL 4
SCALE: NONE




TRAP PRIMER DETAIL 1
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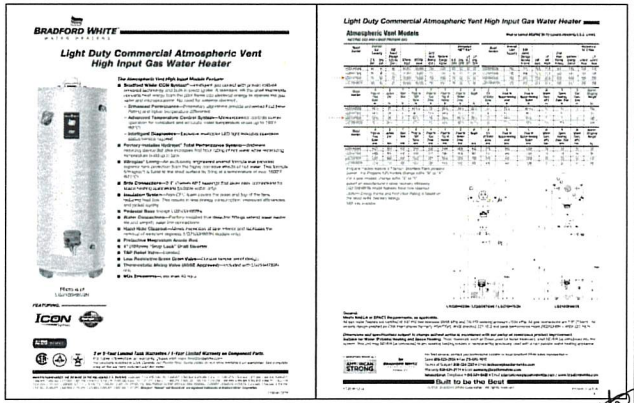


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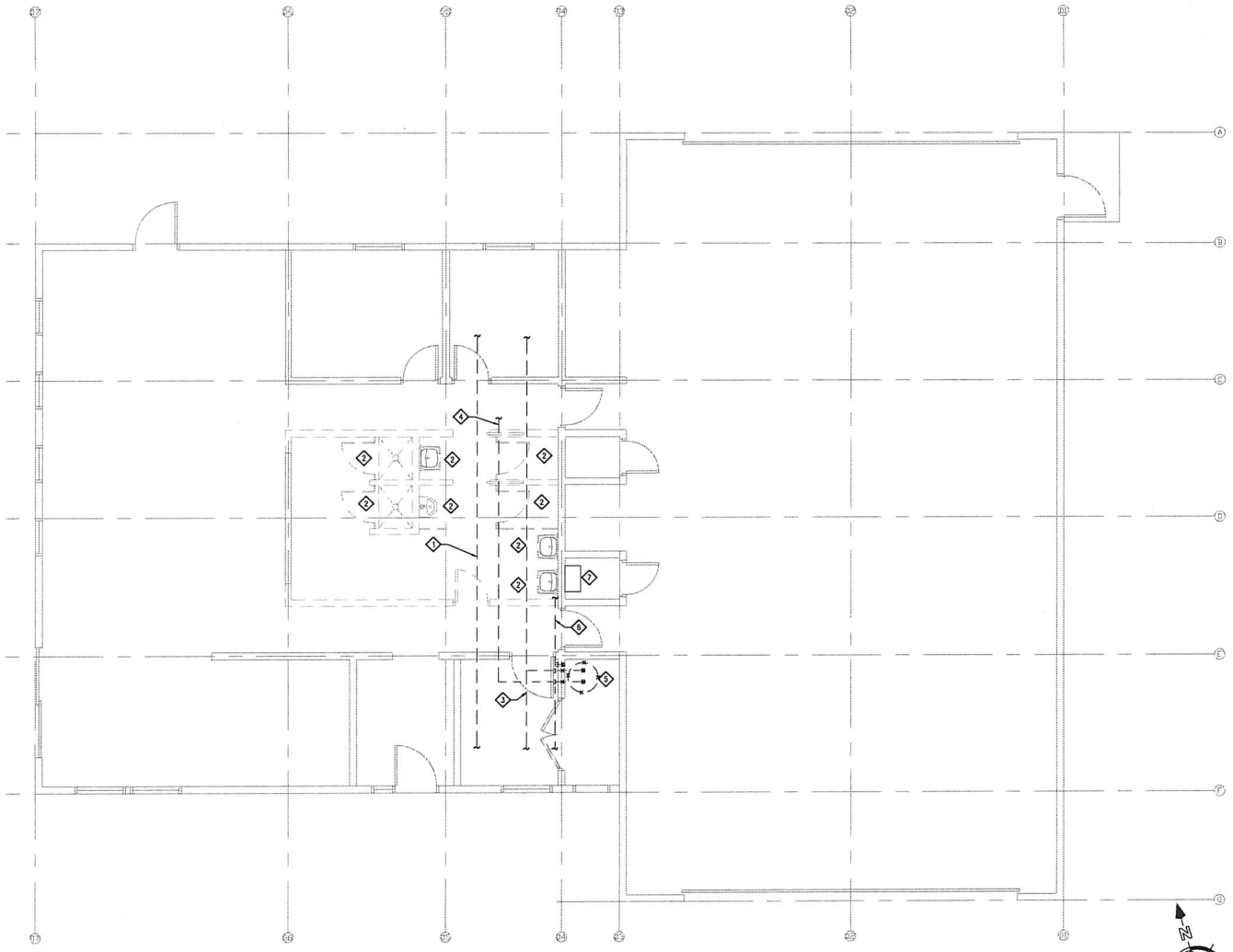
RE-BID SET

PLUMBING SCHEDULES

ORANGE COUNTY FIRE AUTHORITY
Fire Station #16 - Tenant Improvements
28891 MODJESKA CANYON RD., SILVERADO, CA 92676

| | |
|---|---|
| PLAN CHECK CORRECTIONS | |
| BID SET | |
| RE-BID SET | DATE: 01/07/2022 |
| JOB NO.: 4009 | |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: | |

P-0.2



01 P-2.0 PLUMBING DEMOLITION PLAN
Scale : 1/4" = 1'-0"

## DEMOLITION NOTES

1. EXISTING 4" SEWER PIPE BELOW FLOOR TO REMAIN. FIELD VERIFY EXACT LOCATION AND SIZE.
2. REMOVE EXISTING PLUMBING FIXTURE AND CAP PIPING BELOW FLOOR. PATCH AND REPAIR AS REQUIRED.
3. EXISTING 2" COLD WATER PIPE OVERHEAD TO REMAIN. FIELD VERIFY EXACT LOCATION AND SIZE.
4. EXISTING 1-½" HOW WATER PIPE OVERHEAD TO REMAIN. FIELD VERIFY EXACT LOCATION AND SIZE.
5. REMOVE EXISTING WATER HEATER AND ASSOCIATED PIPE CONNECTIONS. CAP PIPING OVERHEAD AS SHOWN. REMOVE VENT OPENING, PATCH AND REPAIR TO MATCH EXISTING.
6. EXISTING 1" PROPANE GAS PIPE OVERHEAD TO REMAIN. FIELD VERIFY EXACT LOCATION AND SIZE.
7. EXISTING MOP SINK TO REMAIN.

## GENERAL NOTES

1. DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC AND ARE NOT INTENDED TO INDICATE NECESSARY OFFSETS OF PIPING, FITTING & APPURTENANCES THAT HAVE TO BE REMOVED, CAPPED OR REROUTED.
2. FOR CLARITY, NOT ALL EXISTING WORK IS SHOWN ON PLANS. CONTRACTOR SHALL FIELD VERIFY EXISTING UTILITIES, LOCATION, SIZE, INVERT ELEVATIONS, PRESSURE AND AVAILABILITY PRIOR TO START ON ANY WORK.
3. ALL WALL, FOOTING AND FLOOR PENETRATION SHALL BE CAULKED WITH FIRE PROOF IN AND APPROVED MANNER BY CALIFORNIA BUILDING CODE.
4. DEMOLISH/ REMOVE & PATCH EXISTING MATERIALS, ITEMS, OR FINISHES AS NECESSARY TO PERFORM NEW WORK WHERE INDICATED. PATCH EXISTING WALL/FLOOR TO MATCH ADJACENT MTERIALS/FINISHES.

REGISTERED PROFESSIONAL ENGINEER — MECHANICAL — STATE OF CALIFORNIA — EXP. 08-31-22

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Consulting MEP Engineers
Anaheim, CA 92801
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RE-BID SET

| | |
|---|---|
| PLAN CHECK CORRECTIONS | |
| BID SET | |
| RE-BID SET | DATE: 01/07/2022 |
| JOB NO.: 1009 | |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: | |

PLUMBING DEMOLITION PLAN

ORANGE COUNTY FIRE AUTHORITY
Fire Station #16 - Tenant Improvements
28891 MODJESKA CANYON RD., SILVERADO, CA 92676

P-2.0




01 PLUMBING FLOOR PLAN - WASTE & VENT
P-3.0 Scale : 1/4" = 1'-0"

## REMODEL NOTES

1. EXISTING 4" SEWER PIPE BELOW FLOOR TO REMAIN. FIELD VERIFY EXACT LOCATION AND SIZE.
2. POINT OF CONNECTION TO EXISTING 4" SEWER PIPE.
3. 3"S AND 2"V STUB OUTS FOR FUTURE WASHER/DRYER.
4. 4"VTR. ROUTE THRU EXISTING VTR OPENING.
5. DISCHARGE T&P RELIEF DRAIN PIPE AND CONDENSATE DRAIN PIPE INTO EXISTING MOP SINK WITH LEGAL AIR GAP.

## GENERAL NOTES

1. PLUMBING WORK SHOWN ON PLAN IS DIAGRAMMATIC. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS.
2. DEMOLISH/ REMOVE & PATCH EXISTING MATERIALS, ITEMS, OR FINISHES AS NECESSARY TO PERFORM NEW WORK WHERE INDICATED. PATCH EXISTING WALL/FLOOR TO MATCH ADJACENT MATERIALS/FINISHES.
3. COORDINATE EXTENT OF DEMOLITION/ REMOVAL WITH ARCHITECTURAL PROPOSED FLOOR PLAN.
4. CONTRACTOR SHALL VERIFY EXISTING UTILITIES, LOCATION, SIZE, INVERT ELEVATIONS, PRESSURE AND AVAILABILITY PRIOR TO START ON ANY WORK.
5. SLOPE ALL WASTE/SANITARY SEWER @ ¼" PER FT SLOPE.
6. ALL VENTS SHALL BE MIN. 10' AWAY FROM AC UNIT AIR INTAKE.
7. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF PLUMBING FIXTURES.

REGISTERED PROFESSIONAL ENGINEER — PETER SAKOVICH — No. M 29659 — EXP. 03-31-22 — MECHANICAL — STATE OF CALIFORNIA

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RE-BID SET

| | |
|---|---|
| PLAN CHECK CORRECTIONS | |
| BID SET | |
| RE-BID SET | DATE: 01/07/2022 |
| JOB NO.: 4009 | |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: | |

# PLUMBING FLOOR PLAN

ORANGE COUNTY FIRE AUTHORITY
Fire Station #16 - Tenant Improvements
28891 MODJESKA CANYON RD., SILVERADO, CA 92676

P-3.0




01 P-3.1 PLUMBING FLOOR PLAN - WATER & GAS
Scale : 1/4" = 1'-0"

## REMODEL NOTES

1. EXISTING 2" COLD WATER PIPE OVERHEAD TO REMAIN. FIELD VERIFY EXACT LOCATION AND SIZE.
2. EXISTING 1-½" HOW WATER PIPE OVERHEAD TO REMAIN. FIELD VERIFY EXACT LOCATION AND SIZE.
3. POINT OF CONNECTION TO EXISTING COLD WATER PIPE OVERHEAD.
4. POINT OF CONNECTION TO EXISTING HOT WATER PIPE OVERHEAD.
5. ¾"H&CW STUBS FOR FUTURE USE.
6. 1-½"H&CW PIPE TO/FROM WATER HEATER ABOVE MOP SINK.
7. EXISTING 1" GAS PIPE OVERHEAD TO REMAIN. FIELD VERIFY EXACT LOCATION AND SIZE.
8. POINT OF CONNECTION TO EXISTING PROPANE GAS PIPE OVERHEAD.
9. ¾"G DOWN TO WATER HEATER. PROVIDE WITH SOC AND SEDIMENT TRAP.

## GENERAL NOTES

1. PLUMBING WORK SHOWN ON PLAN IS DIAGRAMMATIC, CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS.
2. DEMOLISH/ REMOVE & PATCH EXISTING MATERIALS, ITEMS, OR FINISHES AS NECESSARY TO PERFORM NEW WORK WHERE INDICATED. PATCH EXISTING WALL/FLOOR TO MATCH ADJACENT MATERIALS/FINISHES.
3. COORDINATE EXTENT OF DEMOLITION/ REMOVAL WITH ARCHITECTURAL PROPOSED FLOOR PLAN.
4. CONTRACTOR SHALL VERIFY EXISTING UTILITIES, LOCATION, SIZE, INVERT ELEVATIONS, PRESSURE AND AVAILABILITY PRIOR TO START ON ANY WORK.
5. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF PLUMBING FIXTURES.
6. REFER TO MECHANICAL DRAWINGS FOR VENTING OF WATER HEATER.

REGISTERED PROFESSIONAL ENGINEER — STEVEN SHEA VERMA — Exp. 07-31-22 — MECHANICAL — STATE OF CALIFORNIA

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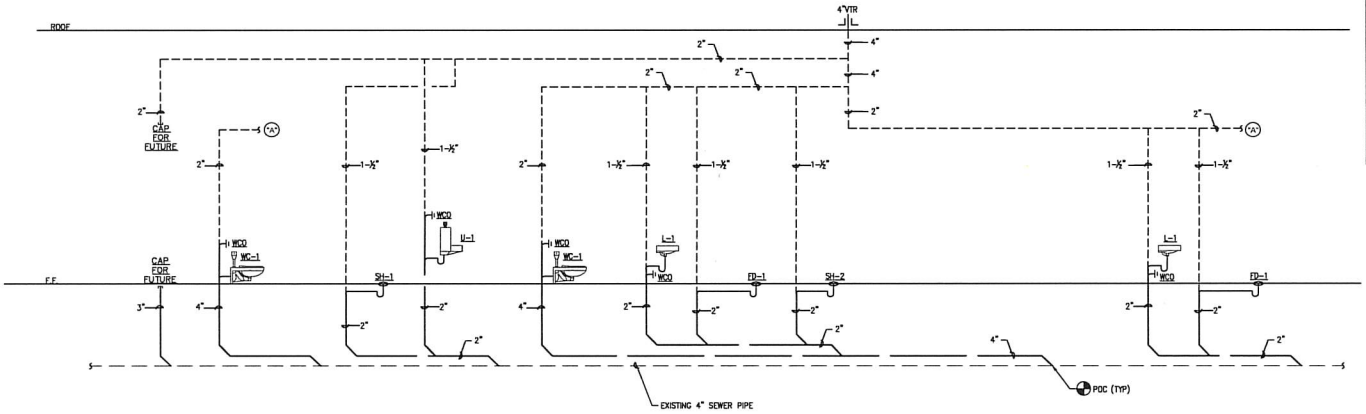
RE-BID SET

| | | |
|---|---|---|
| A | PLAN CHECK CORRECTIONS | |
| A | BID SET | |
| 208 MO. HDS | BID/RFO SET | DATE: 10/07/2022 |
| DRAWN BY: STAFF | | |
| CHECKED BY: LP | | |
| SCALE: | | |

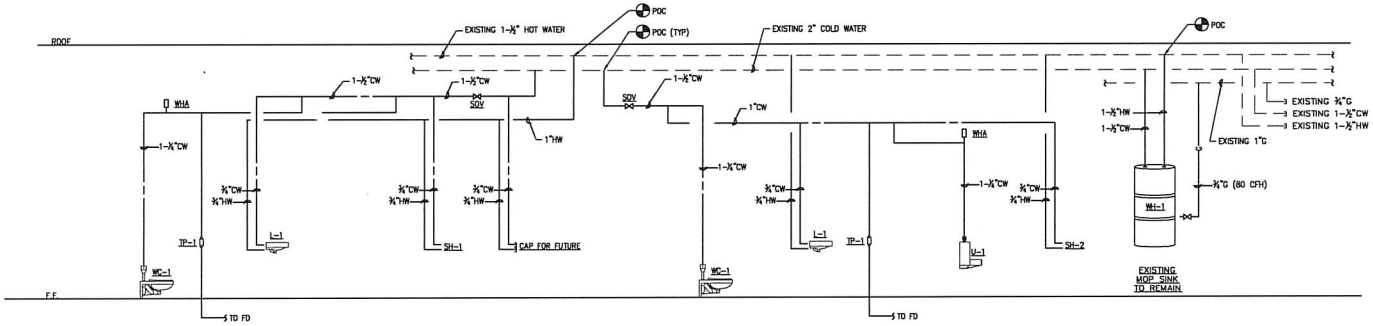
PLUMBING FLOOR PLAN

ORANGE COUNTY FIRE AUTHORITY
Fire Station #16 - Tenant Improvements
28891 MODJESKA CANYON RD., SILVERADO, CA 92676

P-3.1




01 P-4.0 PLUMBING RISER DIAGRAM - WASTE & VENT
NTS




02 P-4.0 PLUMBING RISER DIAGRAM - WATER & GAS
NTS

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RE-BID SET

PLUMBING RISER DIAGRAMS

ORANGE COUNTY FIRE AUTHORITY
Fire Station #16 - Tenant Improvements
28891 MODJESKA CANYON RD., SILVERADO, CA 92676

| | |
|---|---|
| PLAN CHECK CORRECTIONS | |
| BID SET | |
| RE-BID SET | DATE: 01/07/2022 |
| JOB NO.: 4069 | |
| DRAWN BY: STAFF | |
| CHECKED BY: LP | |
| SCALE: | |

P-4.0

## 5D: OCFA FIRE STATION 16 ASBESTOS REPORT

AMBIENT ENVIRONMENTAL, INC.

RECEIVED
OCT - 9 2007
OCFA/Property Management

**CONFIDENTIAL AND PRIVILEGED**
**ASBESTOS SURVEY**

**For the property located at:**
**Fire Station #16**
**28891 Modjeska Canyon Road**
**Silverado, California**

Prepared for:

**Orange County Fire Authority**
**Support Services/Property Management**
1 Fire Authority Road Service Center
Irvine, California 92602
Attn: Ms. Helen Vesperman

Prepared by:
**Ambient Environmental Inc.**
1464 Sixth Street
Norco, California 92860

September 31, 2007

Ambient Environmental Inc. Project #07-1679

John L. Payne
California Certified Asbestos
Consultant #93-1226

## TABLE OF CONTENTS


1.0 EXECUTIVE SUMMARY

2.0 SURVEY PROCEDURES

3.0 BULK SAMPLING PROCEDURES

4.0 POSITIVE ASBESTOS SAMPLE RESULTS AND LOCATIONS

5.0 NEGATIVE ASBESTOS SAMPLE RESULTS AND LOCATIONS

6.0 HAZARDOUS ASSESSMENTS

7.0 RECOMMENDATIONS

APPENDIX A CHAIN OF CUSTODY AND BULK SAMPLE LOG
APPENDIX B LABORATORY CERTIFICATES OF ANALYSIS

## 1.0 EXECUTIVE SUMMARY

Ambient Environmental Inc. was retained by the Orange County Fire Authority to conduct a comprehensive interior asbestos survey for the property located at: Fire Station #16 28891 Modjeska Canyon Road in Silverado, California.

The survey was conducted on September 4th, 2007, by Mr. John L. Payne a California Certified Asbestos Consultant and a United States Environmental Protection Agency (USEPA) certified building inspector for Asbestos-Containing Building Materials (ACBM).

The purpose of the asbestos survey was to locate and identify accessible friable and non-friable suspect asbestos-containing materials within the fire station interior. Once a visual inspection was performed, representative bulk samples were obtained from each homogeneous material. The sample location, material type, friability and condition of material were documented.

Asbestos bulk sampling were obtained in accordance with the USEPA established guidelines document, "Guidance for Controlling Asbestos-Containing Materials in Buildings" (USEPA 560/5-85-024, 1985) and USEPA 40 CFR Part 763 "Asbestos-Containing Materials in Schools, Final Rule" (AHERA). Each bulk sample was analyzed for asbestos content by Polarized Light Microscopy (PLM). A total of 8 bulk samples were obtained for the subject property and submitted to Forensic Analytical for analysis.

The Orange County Fie Authority personnel provided keys and access to the property. All accessible areas of the building interior were visually inspected. ACBM, not identified in this report, may be present within hidden and/or concealed areas of the building. Laboratory analysis revealed detectable levels of asbestos in 2 types of materials:

1. Drywall and Joint Compound
2. Vinyl Floor Tile and Mastic (Under Vinyl Sheet Flooring)

Locations and conditions of the materials assessed and sampled can be found in the Material Inventory (Tables).

## 4.0 SURVEY PROCEDURES

Ambient Environmental Inc. conducted a comprehensive asbestos interior survey for the property located at: Fire Station #16 28891 Modjeska Canyon Road in Silverado, California. All accessible areas of the building interior were surveyed for asbestos. Intrusive sampling of areas which would have required demolition and/or damage to building components finishes such as hard enclosures, laminates, floor coverings, ceiling tile, gasket material, etc. were not sampled. ACBM not identified in this report, may be present within hidden or concealed areas of the building.

ACBM identification was performed by entering each functional space and assessing all structural/mechanical components and architectural finishes. The physical conditions, friability, accessibility, activity and damage of suspect ACBM was also assessed and documented.

For reporting purposes, space designations were assigned each functional space within the facilities using the pre-existing designation on doors or as indicated by the on-site personnel. Where neither was available, the space was labeled by the inspector and so indicated in this report. The following procedures were performed:

- A visual assessment to identify the location, type and quantity of, friable and non-friable asbestos building materials.
- Obtain representative bulk samples from suspect ACBM.
- Samples were analyzed by an independent accredited laboratory for the presence of asbestos by PLM.
- Present all survey results in a written report including recommendation, locations and laboratory results.

All findings, recommendations, and analytical data presented in this report are based on the information (assessment and sampling data) obtained by our inspector during the survey.

## 3.0 BULK SAMPLING PROCEDURES

Each suspect ACBM identified during the visual survey, were sampled in accordance with sampling guidelines established by the USEPA. The following summarizes the sampling procedures utilized.

- Building materials were categorized into homogeneous materials. A homogeneous material is defined as being uniform in texture, color, and date of application.
- A sampling scheme was developed based upon the location and quantities of the various homogeneous materials.
- Bulk samples were collected by extracting a representative section of each selected building material, placing the selected building material into a sampling container and assigning a unique sample number to each sample. The samples were then placed into a sealed shipping container for delivery to an accredited laboratory for analysis by PLM.
- Personnel performed proper decontamination procedures to prevent the spread of secondary contamination.
- Each bulk sample was recorded on a bulk sample log and possession of the samples was tracked by a chain of custody record.

The reported laboratory results in this report are a visual estimate by area of asbestos concentration. Results for heterogeneous samples examined by component are reported as a composite. The lower limit of reliable detection for this method is 1%. Samples, which contain more than 1% asbestos are reported in 5% ranges. Samples, which contain asbestos in a concentration lower than the limit of reliable detection (<1%) are "Trace."

All bulk samples were analyzed by PLM in accordance with the "Interim Method for the Determination of Asbestos in Bulk Insulation Samples EPA – 600/M4-82-020" dated December 1982 and adopted by the National Voluntary Laboratory Accreditation Program (NVLAP) Title 15, part 7 of the Code of Federal Register as affiliated with the National Institute for Standards and Testing (NIST).

Eight bulk samples were obtained from the subject property and analyzed for asbestos content by Forensic Analytical of Rancho Dominguez, California. Forensic Analytical is accredited by the American Industrial Hygiene Association (AIHA), National Voluntary Laboratory Accreditation Program (NVLAP), National Institute of Standards and Testing (NIST), and is a successful participant in the Proficiency Analytical Testing Program (Pat).

# 4.0 POSITIVE ASBESTOS SAMPLE RESULTS AND LOCATION

| Material | Sample Number | Asbestos Content | Location of Material | Friable | Damage |
|---|---|---|---|---|---|
| Drywall and Joint Compound | 01<br>02<br>03 | Trace Chrysotile | Throughout Interior | No | No |
| Vinyl Floor Tile and Mastic | 08 | 2% Chrysotile | Under Vinyl Sheet Flooring | No | No |

# 5.0 NEGATIVE ASBESTOS SAMPLE RESULTS AND LOCATION

| Material | Sample Number | Location of Material | Damage |
|---|---|---|---|
| Ceiling Tile | 04 | Throughout Interior | No |
| Fireproofing | 05 | Garage Area | No |
| Baseboard and Mastic | 06 | Throughout Interior | No |
| Vinyl Sheet Flooring | 07 | Throughout Interior | No |

## 6.0 HAZARD ASSESSMENTS OF (ACM) MATERIALS

| Material | Location of Material | Hazard |
|---|---|---|
| Drywall and Joint Compound | Throughout Interior | Good |
| Vinyl Floor Tile and Mastic | Under Vinyl Sheet Flooring | Good |

**Good** - Material shows little or no damage and requires no remedial action.
**Moderate** - Material is somewhat damaged and is in need of minor repairs.
**Significantly Damaged** - Material is in need of immediate remedial action.

## 7.0 RECOMMENDATIONS

It is Ambient Environmental, Inc's. professional opinion that all Asbestos Containing Building Materials (ACBM) can be managed in place. If the ACBM are to remain at the facility, then a Asbestos Management Program should be implemented. Notification requirements in accordance with AB3713 and AB1564 and posting requirements in accordance with Proposition 65 should also be implemented and maintained.

Maintenance, construction and repair personnel should be made aware of the presence of ACBM, and instructed them not to disturb and/or damage the ACBM. Current federal and state regulations require any repair, renovation and/or demolition of any ACBM shall be conducted only by workers and/or contractors who have been properly trained in the correct handling of asbestos. All asbestos work should proceed under the guidance or direction of an independent State Certified Asbestos Consultant with oversight performed by a State Certified Site Surveillance Technician.

The ACBM identified during this survey are in good condition, and are not likely to pose an environmental or public health risk so long as the material is maintained in it's present condition.

Ambient Environmental Inc. warrants that our services are performed, within the limits prescribed by our client, with the usual thoroughness and competence of the engineering profession.

The recommendations in this report are professional opinions based solely on visual observations and analytical analyses, as described in this report. Because the scope of services was limited to accessible ACBMs, intrusive investigative techniques were not contracted for, it is possible that unrecognized ACBMs may exist in the facilities.

Opinions and recommendations presented herein apply to site conditions existing at the time of our investigation and those reasonably foreseeable, they cannot necessarily apply to site changes of which this office is not aware of and/or has not had the opportunity to evaluate.

# APPENDIX A

# CHAIN OF CUSTODY
# AND BULK SAMPLE LOG

AMBIENT ENVIRONMENTAL, INC.

Asbestos / Lead Field Services
Indoor Air Quality Services
Phase I Site Assessments
Lab Services

1464 6TH STREET
NORCO, CALIFORNIA 92860
* TEL: (951) 272-4730
* FAX: (951) 272-4731

# ASBESTOS BULK SAMPLE LOG

Page 1 of ___

Client Name: OCFA

Project Location: 28891 MODJESKA CANYON ROAD

Date: 9-6-07 Field Technician: John C Payne

Project Number: 07-1629 Priority: ASAP ___ 24 HR ✓ 3-5 Days ___

| SAMPLE NUMBER | SAMPLE LOCATION | MATERIAL DESCRIPTION | SQUARE FOOTAGE |
|---|---|---|---|
| 01 | Restroom | Drywall and Joint compound | |
| 02 | Office | ↓ ↓ | |
| 03 | Closet | | |
| 04 | Kitchen | Ceiling Tile | |
| 05 | Truck Garage | Fire Proofing | |
| 06 | Hallway | Base Board and Mastic | |
| 07 | Kitchen Grey | Vinyl Sheet Floor | |
| 08 | Kitchen Under VSF | Floor Tile and Mastic | |
| | | | |
| | | | |

Chain of Custody Analytical Method: PLM: ___ TEM: ___ Other: ___

| | | | |
|---|---|---|---|
| Sampled By | | Date | Time |
| Relinquished By | | Date | Time |
| Received By | Jo Ann Carrillo | Date 9/7/07 | Time 10:25 AM F/E |
| Relinquished By | | Date | Time |
| Received By | | Date | Time |

# APPENDIX B

# LABORATORY CERTIFICATES OF ANALYSIS

# Bulk Asbestos Analysis

(EPA Method 600/R-93-116, Visual Area Estimation)

Ambient Environmental Inc
J.Payne/J.Lumpkin
1464 6th Street

Norco, CA 92860

**Client ID:** 5697
**Report Number:** B103616
**Date Received:** 09/07/07
**Date Analyzed:** 09/10/07
**Date Printed:** 09/10/07
**First Reported:** 09/10/07

**Job ID/Site:** 07-1679, OCFA, 28891 Modjeska Canyon Road

**Date(s) Collected:** 09/06/2007

**FASI Job ID:** 5697
**Total Samples Submitted:** 8
**Total Samples Analyzed:** 8

| Sample ID | Lab Number | Asbestos Type | Percent in Layer | Asbestos Type | Percent in Layer | Asbestos Type | Percent in Layer |
|---|---|---|---|---|---|---|---|
| **01** | 50410978 | | | | | | |
| Layer: White Drywall | | | **ND** | | | | |
| Layer: Off-White Skimcoat/Joint Compound | | Chrysotile | **2 %** | | | | |
| Layer: Paint | | | **ND** | | | | |
| Total Composite Values of Fibrous Components: | | **Asbestos (Trace)** | | | | | |
| Cellulose (20 %) | | | | | | | |
| **02** | 50410979 | | | | | | |
| Layer: White Drywall | | | **ND** | | | | |
| Layer: Off-White Skimcoat/Joint Compound | | Chrysotile | **2 %** | | | | |
| Layer: Paint | | | **ND** | | | | |
| Total Composite Values of Fibrous Components: | | **Asbestos (Trace)** | | | | | |
| Cellulose (20 %) | | | | | | | |
| **03** | 50410980 | | | | | | |
| Layer: Drywall Tape | | | **ND** | | | | |
| Layer: Off-White Skimcoat/Joint Compound | | Chrysotile | **2 %** | | | | |
| Layer: Paint | | | **ND** | | | | |
| Total Composite Values of Fibrous Components: | | **Asbestos (Trace)** | | | | | |
| Cellulose (65 %) | | | | | | | |
| **04** | 50410981 | | | | | | |
| Layer: Tan Fibrous Material | | | **ND** | | | | |
| Layer: Paint | | | **ND** | | | | |
| Total Composite Values of Fibrous Components: | | **Asbestos (ND)** | | | | | |
| Cellulose (95 %) | | | | | | | |
| **05** | 50410982 | | | | | | |
| Layer: White Fibrous Material | | | **ND** | | | | |
| Total Composite Values of Fibrous Components: | | **Asbestos (ND)** | | | | | |
| Cellulose (99 %) | | | | | | | |
| **06** | 50410983 | | | | | | |
| Layer: Black Non-Fibrous Material | | | **ND** | | | | |
| Layer: Off-White Mastic | | | **ND** | | | | |
| Total Composite Values of Fibrous Components: | | **Asbestos (ND)** | | | | | |
| Cellulose (Trace) | | | | | | | |

# Forensic Analytical

**Client Name:** Ambient Environmental Inc

**Report Number:** B103616
**Date Printed:** 09/10/07

| Sample ID | Lab Number | Asbestos Type | Percent in Layer | Asbestos Type | Percent in Layer | Asbestos Type | Percent in Layer |
|---|---|---|---|---|---|---|---|
| 07 | 50410984 | | | | | | |
| Layer: Black/White Sheet Flooring | | | | | | | |
| Layer: Fibrous Backing | | | **ND** | | | | |
| Layer: Beige Mastic | | | **ND** | | | | |
| Total Composite Values of Fibrous Components: | | | **ND** | | | | |
| Cellulose (20 %) Fibrous Glass (5 %) Synthetic (10 %) | | **Asbestos (ND)** | | | | | |
| 08 | 50410985 | | | | | | |
| Layer: Grey Non-Fibrous Material | | | | | | | |
| Layer: Beige Mastic | | | **ND** | | | | |
| Layer: Brown Tile | | | **ND** | | | | |
| Layer: Black Mastic | | Chrysotile | **3 %** | | | | |
| Total Composite Values of Fibrous Components: | | Chrysotile | **3 %** | | | | |
| Cellulose (Trace) | | **Asbestos (2%)** | | | | | |

Steven Takahashi, Laboratory Supervisor, Rancho Dominguez Laboratory

Note: Limit of Quantification ('LOQ') = 1%. 'Trace' denotes the presence of asbestos below the LOQ. 'ND' = 'None Detected'.

ytical results and reports are generated by Forensic Analytical at the request of and for the exclusive use of the person or entity (client) named on such report. Results, rts or copies of same will not be released by Forensic Analytical to any third party without prior written request from client. This report applies only to the sample(s) tested. Supporting laboratory documentation is available upon request. This report must not be reproduced except in full, unless approved by Forensic Analytical. The client is solely responsible for the use and interpretation of test results and reports requested from Forensic Analytical. This report must not be used by the client to claim product endorsement by NVLAP or any other agency of the U.S. Government. Forensic Analytical is not able to assess the degree of hazard resulting from materials analyzed. Forensic Analytical reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified. All samples were received in acceptable condition unless otherwise noted.

**SECTION 00 0110**

**TABLE OF CONTENTS**

**PROCUREMENT AND CONTRACTING REQUIREMENTS**

**1.01 DIVISION 00 -- PROCUREMENT AND CONTRACTING REQUIREMENTS**

A. 00 0110 - Table of Contents

**SPECIFICATIONS**

**2.01 DIVISION 01 -- GENERAL REQUIREMENTS**

A. 01 6116 - Volatile Organic Compound (VOC) Content Restrictions

B. 01 7419 - Construction Waste Management and Disposal

**2.02 DIVISION 02 -- EXISTING CONDITIONS**

A. 02 4100 - Demolition

**2.03 DIVISION 03 -- CONCRETE**

A. 03 0516 - Underslab Vapor Barrier - Stego Industries

**2.04 DIVISION 04 -- MASONRY**

**2.05 DIVISION 05 -- METALS**

A. 05 5213 - Pipe and Tube Railings

**2.06 DIVISION 06 -- WOOD, PLASTICS, AND COMPOSITES**

A. 06 1000 - Rough Carpentry

B. 06 1053 - Miscellaneous Rough Carpentry

C. 06 4100 - Architectural Wood Casework

**2.07 DIVISION 07 -- THERMAL AND MOISTURE PROTECTION**

A. 07 2100 - Thermal Insulation

**2.08 DIVISION 08 -- OPENINGS**

A. 08 1113 - Hollow Metal Doors and Frames

B. 08 1416 - Flush Wood Doors

C. 08 4411 - Glazed Timber Curtain Walls

D. 08 5113 - Aluminum Windows

**2.09 DIVISION 09 -- FINISHES**

A. 09 2116 - Gypsum Board Assemblies

B. 09 2216 - Non-Structural Metal Framing

C. 09 2236 - Lath

D. 09 2400 - Cement Plastering

E. 09 3000 - Tiling

F. 09 5100 - Acoustical Ceilings

G. 09 6500 - Resilient Flooring

H. 09 6813 - Tile Carpeting

I. 09 9113 - Exterior Painting

J. 09 9123 - Interior Painting

**2.10 DIVISION 10 -- SPECIALTIES**

A. 10 1400 - Signage

B. 10 2600 - Wall and Door Protection

C. 10 2800 - Toilet, Bath, and Laundry Accessories
D. 10 4400 - Fire Protection Specialties
E. 10 5129 - Phenolic Lockers

**2.11 DIVISION 11 -- EQUIPMENT**

**2.12 DIVISION 12 -- FURNISHINGS**

A. 12 2116 - Vertical Louver Blinds

**2.13 DIVISION 13 -- SPECIAL CONSTRUCTION**

**2.14 DIVISION 14 -- CONVEYING EQUIPMENT**

**2.15 DIVISION 21 -- FIRE SUPPRESSION**

A. 21 0500 - Common Work Results for Fire Suppression

**2.16 DIVISION 22 -- PLUMBING**

**2.17 DIVISION 23 -- HEATING, VENTILATING, AND AIR-CONDITIONING (HVAC)**

**2.18 DIVISION 25 -- INTEGRATED AUTOMATION**

**2.19 DIVISION 26 -- ELECTRICAL**

**2.20 DIVISION 27 -- COMMUNICATIONS**

**2.21 DIVISION 28 -- ELECTRONIC SAFETY AND SECURITY**

**2.22 DIVISION 31 -- EARTHWORK**

**2.23 DIVISION 32 -- EXTERIOR IMPROVEMENTS**

**2.24 DIVISION 33 -- UTILITIES**

**2.25 DIVISION 46 -- WATER AND WASTEWATER EQUIPMENT**

**END OF SECTION**

## SECTION 01 6116

## VOLATILE ORGANIC COMPOUND (VOC) CONTENT RESTRICTIONS

### PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Requirements for Indoor-Emissions-Restricted products.

B. Requirements for VOC-Content-Restricted products.

### 1.02 DEFINITIONS

A. VOC-Content-Restricted Products: All products in the following product categories, whether specified or not:
   1. Interior paints and coatings applied on site.
   2. Interior adhesives and sealants applied on site, including flooring adhesives.

B. Interior of Building: Anywhere inside the exterior weather barrier.

C. Adhesives: All gunnable, trowelable, liquid-applied, and aerosol adhesives, whether specified or not; including flooring adhesives, resilient base adhesives, and pipe jointing adhesives.

D. Sealants: All gunnable, trowelable, and liquid-applied joint sealants and sealant primers, whether specified or not; including firestopping sealants and duct joint sealers.

### 1.03 REFERENCE STANDARDS

A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; current edition.

B. ASTM D3960 - Standard Practice for Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings; 2005 (Reapproved 2018).

C. CARB (SCM) - Suggested Control Measure for Architectural Coatings; California Air Resources Board; 2007.

D. GreenSeal GS-36 - Adhesives for Commercial Use; 2013.

E. SCAQMD 1113 - Architectural Coatings; 1977 (Amended 2016).

F. SCAQMD 1168 - Adhesive and Sealant Applications; 1989 (Amended 2017).

G. UL (GGG) - GREENGUARD Gold Certified Products; Current Edition.

### 1.04 SUBMITTALS

A. Product Data: For each VOC-restricted product used in the project, submit evidence of compliance.

### 1.05 QUALITY ASSURANCE

A. VOC Content Test Method: 40 CFR 59, Subpart D (EPA Method 24), or ASTM D3960, unless otherwise indicated.
   1. Evidence of Compliance: Acceptable types of evidence are:
      a. Report of laboratory testing performed in accordance with requirements.

B. Testing Agency Qualifications: Independent firm specializing in performing testing and inspections of the type specified in this section.

### PART 2 PRODUCTS

### 2.01 MATERIALS

A. VOC-Content-Restricted Products: VOC content not greater than required by the following:
   1. Adhesives, Including Flooring Adhesives: SCAQMD 1168 Rule.
   2. Aerosol Adhesives: GreenSeal GS-36.
   3. Joint Sealants: SCAQMD 1168 Rule.
   4. Paints and Coatings: Each color; most stringent of the following:
      a. 40 CFR 59, Subpart D.
      b. SCAQMD 1113 Rule.

c. CARB (SCM).

## PART 3 EXECUTION

### 3.01 FIELD QUALITY CONTROL

A. Owner reserves the right to reject non-compliant products, whether installed or not, and require their removal and replacement with compliant products at no extra cost to Owner.

B. Additional costs to restore indoor air quality due to installation of non-compliant products will be borne by Contractor.

**END OF SECTION**

## SECTION 01 7419

## CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

### PART 1 GENERAL

### 1.01 WASTE MANAGEMENT REQUIREMENTS

A. Owner requires that this project generate the least amount of trash and waste possible.

B. **Cal Green** CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING requirements.- Recycle and/or Salvage for reused a minimum of 65% of the nonhazardous construction and demolition waste in accordance with the following:
   1. Comply with Section 5.408 as follows:
      a. Section 5.408.1: one of the following: 5.408.**1.1**, **OR** 5.408.1.2, **OR** 5.408.1.3.
      b. Section 5.408.1.4 (Documentation)
      c. Section 5.408.1.5 does not apply.

C. Employ processes that ensure the generation of as little waste as possible due to error, poor planning, breakage, mishandling, contamination, or other factors.

D. Minimize trash/waste disposal in landfills; reuse, salvage, or recycle as much waste as economically feasible.

E. Required Recycling, Salvage, and Reuse: The following may **not** be disposed of in landfills or by incineration:
   1. Aluminum and plastic beverage containers.
   2. Corrugated cardboard.
   3. Wood pallets.
   4. Clean dimensional wood.
   5. Land Clearing Debris, including brush, branches, logs, Etc.
   6. Concrete.
   7. Concrete Plaster.
   8. Concrete masonry units/Veneer units.
   9. Metals, including packaging banding, metal studs, sheet metal, structural steel, piping, reinforcing bars, door frames, and other items made of steel, iron, galvanized steel, stainless steel, aluminum, copper, zinc, lead, brass, and bronze.
   10. Glass.
   11. Gypsum drywall and plaster.
   12. Plastic buckets.
   13. Paint.
   14. Windows, doors, and door hardware.
   15. Plumbing fixtures.
   16. Mechanical and electrical equipment.
   17. Fluorescent lamps (light bulbs).
   18. Acoustical ceiling tile and panels.

F. Contractor shall submit periodic Waste Disposal Reports; all landfill disposal, recycling, salvage, and reuse must be reported regardless of to whom the cost or savings accrues; use the same units of measure on all reports.

G. Contractor shall develop and follow a Waste Management Plan designed to implement these requirements.
   1. The Contractor is responsible to obtain and process/develop all required forms included in CalGreen Section 4.408
   2. Forms can be obtained directly from the State of California's web site: http://www.hcd.ca.gov/building-standards/calgreen/cal-green-forms.shtml

H. Methods of trash/waste disposal that are **not** acceptable are:
   1. Burning on the project site.
   2. Burying on the project site.
   3. Dumping or burying on other property, public or private.

4. Other illegal dumping or burying.

I. Regulatory Requirements: Contractor is responsible for knowing and complying with regulatory requirements, including but not limited to Federal, state and local requirements, pertaining to legal disposal of all construction and demolition waste materials.

**1.02 DEFINITIONS**

A. Clean: Untreated and unpainted; not contaminated with oils, solvents, caulk, or the like.

B. Construction and Demolition Waste: Solid wastes typically including building materials, packaging, trash, debris, and rubble resulting from construction, remodeling, repair and demolition operations.

C. Hazardous: Exhibiting the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity or reactivity.

D. Nonhazardous: Exhibiting none of the characteristics of hazardous substances, i.e., ignitibility, corrosivity, toxicity, or reactivity.

E. Nontoxic: Neither immediately poisonous to humans nor poisonous after a long period of exposure.

F. Recyclable: The ability of a product or material to be recovered at the end of its life cycle and remanufactured into a new product for reuse by others.

G. Recycle: To remove a waste material from the project site to another site for remanufacture into a new product for reuse by others.

H. Recycling: The process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for the purpose of using the altered form. Recycling does not include burning, incinerating, or thermally destroying waste.

I. Return: To give back reusable items or unused products to vendors for credit.

J. Reuse: To reuse a construction waste material in some manner on the project site.

K. Salvage: To remove a waste material from the project site to another site for resale or reuse by others.

L. Sediment: Soil and other debris that has been eroded and transported by storm or well production run-off water.

M. Source Separation: The act of keeping different types of waste materials separate beginning from the first time they become waste.

N. Toxic: Poisonous to humans either immediately or after a long period of exposure.

O. Trash: Any product or material unable to be reused, returned, recycled, or salvaged.

P. Waste: Extra material or material that has reached the end of its useful life in its intended use. Waste includes salvageable, returnable, recyclable, and reusable material.

**1.03 SUBMITTALS**

A. Sustainable Design Documentation: Submit Landfill Alternatives Proposal, Waste Management Plan, and Waste Disposal Reports in accordance with procedures as required by CalGreen 2019.

B. Waste Management Plan: Include the following information:
   1. Analysis of the trash and waste projected to be generated during the entire project construction cycle, including types and quantities.
   2. Landfill Options: The name, address, and telephone number of the landfill(s) where trash/waste will be disposed of, the applicable landfill tipping fee(s), and the projected cost of disposing of all project trash/waste in the landfill(s).
   3. Landfill Alternatives: List all waste materials that will be diverted from landfills by reuse, salvage, or recycling.
   4. Meetings: Describe regular meetings to be held to address waste prevention, reduction, recycling, salvage, reuse, and disposal.

5. Materials Handling Procedures: Describe the means by which materials to be diverted from landfills will be protected from contamination and prepared for acceptance by designated facilities; include separation procedures for recyclables, storage, and packaging.
6. Transportation: Identify the destination and means of transportation of materials to be recycled; i.e. whether materials will be site-separated and self-hauled to designated centers, or whether mixed materials will be collected by a waste hauler.

C. Waste Disposal Reports: Submit at specified intervals, with details of quantities of trash and waste, means of disposal or reuse, and costs; show both totals to date and since last report.
1. Submit updated Report with each Application for Progress Payment; failure to submit Report will delay payment.
2. Submit Report on a form acceptable to Owner.
3. Landfill Disposal: Include the following information:
   a. Identification of material.
   b. Amount, in tons or cubic yards (cubic meters), of trash/waste material from the project disposed of in landfills.
   c. State the identity of landfills, total amount of tipping fees paid to landfill, and total disposal cost.
   d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
4. Recycled and Salvaged Materials: Include the following information for each:
   a. Identification of material, including those retrieved by installer for use on other projects.
   b. Amount, in tons or cubic yards (cubic meters), date removed from the project site, and receiving party.
   c. Transportation cost, amount paid or received for the material, and the net total cost or savings of salvage or recycling each material.
   d. Include manifests, weight tickets, receipts, and invoices as evidence of quantity and cost.
   e. Certification by receiving party that materials will not be disposed of in landfills or by incineration.
5. Material Reused on Project: Include the following information for each:
   a. Identification of material and how it was used in the project.
   b. Amount, in tons or cubic yards (cubic meters).
   c. Include weight tickets as evidence of quantity.
6. Other Disposal Methods: Include information similar to that described above, as appropriate to disposal method.

## PART 2 PRODUCTS

## 2.01 PRODUCT SUBSTITUTIONS -NOT USED

## PART 3 EXECUTION

## 3.01 WASTE MANAGEMENT PLAN IMPLEMENTATION

A. Manager: Designate an on-site person or persons responsible for instructing workers and overseeing and documenting results of the Waste Management Plan.

B. Communication: Distribute copies of the Waste Management Plan to job site foreman, each subcontractor, Owner, and Architect.

C. Instruction: Provide on-site instruction of appropriate separation, handling, and recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the project.

D. Meetings: Discuss trash/waste management goals and issues at project meetings.
1. Prebid meeting.
2. Preconstruction meeting.
3. Regular job-site meetings.

E. Facilities: Provide specific facilities for separation and storage of materials for recycling, salvage, reuse, return, and trash disposal, for use by all contractors and installers.
   1. Provide containers as required.
   2. Locate enclosures out of the way of construction traffic.
   3. Provide adequate space for pick-up and delivery and convenience to subcontractors.
   4. Keep recycling and trash/waste bin areas neat and clean and clearly marked in order to avoid contamination of materials.

F. Hazardous Wastes: Separate, store, and dispose of hazardous wastes according to applicable regulations.

G. Recycling: Separate, store, protect, and handle at the site identified recyclable waste products in order to prevent contamination of materials and to maximize recyclability of identified materials. Arrange for timely pickups from the site or deliveries to recycling facility in order to prevent contamination of recyclable materials.

H. Reuse of Materials On-Site: Set aside, sort, and protect separated products in preparation for reuse.

I. Salvage: Set aside, sort, and protect products to be salvaged for reuse off-site.

**END OF SECTION**

## SECTION 02 4100
## DEMOLITION

### PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Selective demolition of built site elements.

B. Selective demolition of building elements for alteration purposes.

C. Documentation of existing Conditions at Site/Building (photo record).

### 1.02 RELATED REQUIREMENTS

A. Section 01 7419 - Construction Waste Management and Disposal: Limitations on disposal of removed materials; requirements for recycling.

### 1.03 SUBMITTALS

A. Site Plan: Showing:
   1. Vegetation to be protected in-place. Irrigation lines to be protected in-place.
   2. Areas for temporary construction, lay-down areas and field offices.
   3. Areas for temporary placement of removed materials.

B. Demolition Plan: Submit demolition plan as specified by OSHA (if required) and local authorities.
   1. Indicate extent of demolition, removal sequence, bracing and shoring, and location and construction of barricades and fences (interior and exterior).
   2. Include a summary of safety procedures for pedestrian, construction workers and vehicle (exterior and interior).

C. Documentation of Existing Conditions:
   1. Contractor to photo document existing site conditions of the following for items being removed/demolished, removed/re-installed, and items/systems to remain.
      a. Exterior site work, hardscape, landscape, signage, etc.
      b. Interior work, finishes, fixtures, etc.
      c. Provide Flash Drive at beginning of work with sufficient quantity Photos showing existing conditions of items/finishes to remain.

D. Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.

### PART 2 PRODUCTS -- NOT USED

### PART 3 EXECUTION

### 3.01 SCOPE

A. Remove paving and curbs as required to accomplish new work and as noted on the Drawings.

B. Remove concrete slabs/paving on grade as indicated on drawings.

C. Remove items noted on the Drawings for demolition.

D. Temporarily remove items when access is needed for removal or construction of materials/systems required for a complete project. Re-install items to original condition after temporary removal.

E. Remove Landscaping as noted on the Drawings.

F. Remove other items indicated, for recycling.

G. Fill excavations, open pits, and holes in ground areas generated as result of removals, using specified fill; compact fill as required so that required rough grade elevations do not subside within one year after completion.

### 3.02 GENERAL PROCEDURES AND PROJECT CONDITIONS

A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.

1. Obtain required permits.
2. Comply with applicable requirements of NFPA 241.
3. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.
4. Provide, erect, and maintain temporary barriers and security devices.
5. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
6. Do not close or obstruct roadways or sidewalks without permit.
7. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
8. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon or limit access to their property.

B. Do not begin removal until receipt of notification to proceed from Owner.

C. Protect existing structures and other elements that are not to be removed.
   1. Provide bracing and shoring.
   2. Prevent movement or settlement of adjacent structures.
   3. Stop work immediately if adjacent structures appear to be in danger.

D. Minimize production of dust due to demolition operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.

E. If hazardous materials are discovered during removal operations, stop work and notify Architect and Owner; hazardous materials include regulated asbestos containing materials, lead, PCB's, and mercury.

F. Perform demolition in a manner that maximizes salvage and recycling of materials.
   1. Comply with requirements of Section 01 7419 - Waste Management.
   2. Dismantle existing construction and separate materials.
   3. Set aside reusable, recyclable, and salvageable materials; store and deliver to collection point or point of reuse.

G. Partial Removal of Paving and Curbs: Neatly saw cut at right angle to surface.

## 3.03 EXISTING UTILITIES

A. Coordinate work with utility companies; notify before starting work and comply with their requirements; obtain required permits.

B. Protect existing utilities to remain from damage.

C. Do not disrupt public utilities without permit from authority having jurisdiction.

D. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Owner.

E. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to Owner.

F. Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.

G. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.

H. Prepare building demolition areas by disconnecting and capping utilities outside the demolition zone; identify and mark utilities to be subsequently reconnected, in same manner as other utilities to remain.

## 3.04 SELECTIVE DEMOLITION FOR ALTERATIONS

A. **Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.**

1. Verify that construction and utility arrangements are as indicated.
2. Report discrepancies to Architect before disturbing existing installation.
3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.

B. Separate areas in which demolition is being conducted from other areas that are still occupied.
1. Provide, erect, and maintain temporary dustproof partitions of construction. .

C. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.

D. Remove existing work as indicated and as required to accomplish new work.
1. Remove items indicated on drawings.

E. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, Telecommunications, and Site Work/Landscaping): Remove existing systems and equipment as indicated.
1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components.
2. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
3. Verify that abandoned services serve only abandoned facilities before removal.
4. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification.

F. Protect existing work to remain.
1. Prevent movement of structure; provide shoring and bracing if necessary.
2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
3. Repair adjacent construction and finishes damaged during removal work.
4. Patch as specified for patching new work.

## 3.05 DEBRIS AND WASTE REMOVAL

A. Remove debris, junk, and trash from site.

B. Remove from site all materials not to be reused on site; comply with requirements of Section 01 7419 - Waste Management.

C. Leave site in clean condition, ready for subsequent work.

D. Clean up spillage and wind-blown debris from public and private lands.

**END OF SECTION**

## SECTION 03 0516

## UNDERSLAB VAPOR BARRIER - STEGO

### PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Sheet vapor barrier under concrete slabs on grade.

### 1.02 SUBMITTALS

A. Product Data: Submit manufacturers' data on manufactured products.

B. Samples: Submit samples of underslab vapor barrier to be used.

C. Manufacturer's Installation Instructions: Indicate installation procedures and interface required with adjacent construction.

### PART 2 PRODUCTS

### 2.01 MATERIALS

A. Underslab Vapor Barrier:
   1. Water Vapor Permeance: Not more than 0.010 perms (0.6 ng/(s m2 Pa)), maximum.
   2. Thickness: 15 mils (0.4 mm).
   3. Basis of Design:
      a. Stego Industries LLC; Stego Wrap Vapor Barrier (15-mil): www.stegoindustries.com.
      b. Substitutions: Previously Approved Equals will be accepted..

B. Accessory Products: Vapor barrier manufacturer's recommended tape, adhesive, mastic, etc., for sealing seams and penetrations in vapor barrier.

### PART 3 EXECUTION

### 3.01 EXAMINATION

A. Verify that surface over which vapor barrier is to be installed is complete and ready before proceeding with installation of vapor barrier.

### 3.02 INSTALLATION

A. Install vapor barrier in accordance with manufacturer's instructions and ASTM E1643.

B. Install vapor barrier under interior slabs on grade; lap sheet over footings and seal to foundation walls.

C. Lap joints minimum 6 inches (150 mm).

D. Seal joints, seams and penetrations watertight with manufacturer's recommended products and follow manufacturer's written instructions.

E. No penetration of vapor barrier is allowed except for reinforcing steel and permanent utilities.

F. Repair damaged vapor retarder before covering with other materials.

**END OF SECTION**

## SECTION 05 5213

## PIPE AND TUBE RAILINGS

### PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Stair railings and guardrails.

B. Free-standing railings at steps.

### 1.02 RELATED REQUIREMENTS

A. Section 09 9113 - Exterior Painting: Paint finish.

### 1.03 REFERENCE STANDARDS

A. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.

B. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; 2018.

C. ASTM E935 - Standard Test Methods for Performance of Permanent Metal Railing Systems and Rails for Buildings; 2013, with Editorial Revision.

D. AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination; 2012.

E. SSPC-Paint 15 - Steel Joist Shop Primer/Metal Building Primer; 1999 (Ed. 2004).

### 1.04 SUBMITTALS

A. Shop Drawings: Indicate profiles, sizes, connection attachments, anchorage, size and type of fasteners, and accessories.

1. Indicate welded connections using standard AWS A2.4 welding symbols. Indicate net weld lengths.

### 1.05 QUALITY ASSURANCE

A. Welder Qualifications: Show certification of welders employed on the Work, verifying AWS qualification within the previous 12 months.

### PART 2 PRODUCTS

### 2.01 RAILINGS - GENERAL REQUIREMENTS

A. Design, fabricate, and test railing assemblies in accordance with the most stringent requirements of applicable local code.

B. Concentrated Loads: Design railing assembly, wall rails, and attachments to resist a concentrated force of 200 pounds (890 N) applied at any point on the top of the assembly and in any direction, without damage or permanent set. Test in accordance with ASTM E935.

C. Allow for expansion and contraction of members and building movement without damage to connections or members.

D. Dimensions: See drawings for configurations and heights.

1. Top Rails and Wall Rails: 1-1/2 inches (38 mm) diameter, round.
2. Intermediate Rails: 1-1/2 inches (38 mm) diameter, round.
3. Posts: 1-1/2 inches (38 mm) diameter, round.

E. Provide anchors and other components as required to attach to structure, made of same materials as railing components unless otherwise indicated; where exposed fasteners are unavoidable provide flush countersunk fasteners.

### 2.02 STEEL RAILING SYSTEM

A. Steel Pipe: ASTM A53/A53M, Grade B Schedule 80, black finish.

B. Welding Fittings: Factory- or shop-welded from matching pipe or tube; seams continuously welded; joints and seams ground smooth.

C. Shop and Touch-Up Primer: SSPC-Paint 15, complying with VOC limitations of authorities having jurisdiction.

D. Finish: All Steel Pipe is to be primed at Shop.
   1. Field apply additional Coat of Primer at all locations where steel is in contact with grout or concrete (and a minimum of 2" above level of concrete). **Owner and/or Owner's designated representative is to inspect primed steel prior to installation.**
   2. Final Prime and Finish Coats are to be applied within 7 days of steel exposed to weather.

**2.03 FABRICATION**

A. Accurately form components to suit specific project conditions and for proper connection to building structure.

B. Fit and shop assemble components in largest practical sizes for delivery to site.

C. Fabricate components with joints tightly fitted and secured. Provide spigots and sleeves to accommodate site assembly and installation.

D. Welded Joints:
   1. Exterior Components: Continuously seal joined pieces by intermittent welds and plastic filler. Drill condensate drainage holes at bottom of members at locations that will not encourage water intrusion.
   2. Interior Components: Continuously seal joined pieces by intermittent welds and plastic filler.
   3. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

A. Verify that field conditions are acceptable and are ready to receive work.

**3.02 PREPARATION**

A. Clean and strip primed steel items to bare metal where site welding is required.

B. Supply items required to be cast into concrete with setting templates, for installation as work of other sections.

**3.03 INSTALLATION**

A. Install in accordance with manufacturer's instructions.

B. Install components plumb and level, accurately fitted, free from distortion or defects, with tight joints.

C. Install railings in compliance with ADA Standards for accessible design at applicable locations.

D. Anchor railings securely to structure.

E. Field weld anchors as indicated on shop drawings. Touch-up welds with primer. Grind welds smooth.

**3.04 TOLERANCES**

A. Maximum Variation From Plumb: 1/4 inch (6 mm) per floor level, non-cumulative.

B. Maximum Offset From True Alignment: 1/4 inch (6 mm).

C. Maximum Out-of-Position: 1/4 inch (6 mm).

**END OF SECTION**

## SECTION 06 1000
## ROUGH CARPENTRY

### PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Rough opening framing for doors, windows, and roof openings.

B. Preservative treated wood materials.

C. Concealed wood blocking, nailers, and supports.

### 1.02 RELATED REQUIREMENTS

A. Section 01 6116 - Volatile Organic Compound (VOC) Content Restrictions.

B. Section 09 2116 - Gypsum Board Assemblies: Gypsum-based sheathing.

### 1.03 REFERENCE STANDARDS

A. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2016a.

B. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2019a.

C. ASTM C557 - Standard Specification for Adhesives for Fastening Gypsum Wallboard to Wood Framing; 2003 (Reapproved 2017).

D. ASTM D3498 - Standard Specification for Adhesives for Field-Gluing Wood Structural Panels (Plywood or Oriented Strand Board) to Wood Based Floor System Framing; 2019a.

E. AWC (WFCM) - Wood Frame Construction Manual for One- and Two-Family Dwellings; 2015.

F. AWPA U1 - Use Category System: User Specification for Treated Wood; 2018.

G. PS 20 - American Softwood Lumber Standard; 2020.

H. WCLIB (GR) - Standard Grading Rules for West Coast Lumber No. 17; 2018.

I. WWPA G-5 - Western Lumber Grading Rules; 2017.

### 1.04 SUBMITTALS

A. Product Data: Provide technical data on wood preservative materials and application instructions.

B. Location of Lumber procurement (State).

### 1.05 DELIVERY, STORAGE, AND HANDLING

A. General: Cover wood products to protect against moisture. Support stacked products to prevent deformation and to allow air circulation.

### 1.06 WARRANTY

A. Correct defective work within a two-year period commencing on Date of Substantial Completion.

### PART 2 PRODUCTS

### 2.01 GENERAL REQUIREMENTS

A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
   1. Species: Douglas Fir-Larch, unless otherwise indicated.
   2. If no species is specified, provide species graded by the agency specified; if no grading agency is specified, provide lumber graded by grading agency meeting the specified requirements.
   3. Grading Agency: Grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee at www.alsc.org, and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.
   4. Lumber of other species or grades is acceptable provided structural and appearance characteristics are equivalent to or better than products specified.

## 2.02 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

A. Sizes: Nominal sizes as indicated on drawings, S4S.

B. Moisture Content: S-dry or MC19.

C. Stud Framing (2 by 2 through 2 by 6 (50 by 50 mm through 50 by 150 mm) ):
   1. Grade: No. 2.

D. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
   1. Lumber: S4S, No. 2 or Standard Grade.
   2. Boards: Standard or No. 3.

## 2.03 ACCESSORIES

A. Fasteners and Anchors:
   1. Metal and Finish: Hot-dipped galvanized steel complying with ASTM A153/A153M for high humidity and preservative-treated wood locations, unfinished steel elsewhere.

B. Die-Stamped Connectors: Hot dipped galvanized steel, sized to suit framing conditions.
   1. For contact with preservative treated wood in exposed locations, provide minimum G185 (Z550) galvanizing complying with ASTM A653/A653M.

C. Construction Adhesives: Adhesives complying with ASTM C557 or ASTM D3498.
   1. Manufacturers:
      a. Franklin International, Inc; Titebond Fast Set Polyurethane Construction Adhesive: www.titebond.com.

D. General Purpose Construction Adhesives:
   1. Manufacturers:
      a. ADFAST Corporation; ADBOND EX 5690: www.adfastcorp.com.

## 2.04 FACTORY WOOD TREATMENT

A. Treated Lumber and Plywood: Comply with requirements of AWPA U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.
   1. Preservative-Treated Wood: Provide lumber and plywood marked or stamped by an ALSC-accredited testing agency, certifying level and type of treatment in accordance with AWPA standards.

# PART 3 EXECUTION

## 3.01 PREPARATION

A. Coordinate installation of rough carpentry members specified in other sections.

## 3.02 INSTALLATION - GENERAL

A. Select material sizes to minimize waste.

B. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.

C. Where treated wood is used on interior, provide temporary ventilation during and immediately after installation sufficient to remove indoor air contaminants.

## 3.03 FRAMING INSTALLATION

A. Set structural members level, plumb, and true to line. Discard/recycle pieces with defects that would lower required strength or result in unacceptable appearance of exposed members.

B. Make provisions for temporary construction loads, and provide temporary bracing sufficient to maintain structure in true alignment and safe condition until completion of erection and installation of permanent bracing.

C. Install structural members full length without splices unless otherwise specifically detailed.

D. Comply with member sizes, spacing, and configurations indicated, and fastener size and spacing indicated, but not less than required by applicable codes and AWC (WFCM) Wood Frame Construction Manual.

E. Construct double joist headers at floor and ceiling openings and under wall stud partitions that are parallel to floor joists; use metal joist hangers unless otherwise detailed.

F. Frame wall openings with two or more studs at each jamb; support headers on cripple studs.

**3.04 BLOCKING, NAILERS, AND SUPPORTS**

A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.

B. In framed assemblies that have concealed spaces, provide solid wood fireblocking as required by applicable local code, to close concealed draft openings between floors and between top story and roof/attic space; other material acceptable to code authorities may be used in lieu of solid wood blocking.

C. In metal stud walls, provide continuous blocking around door and window openings for anchorage of frames, securely attached to stud framing.

D. In walls, provide blocking attached to studs as backing and support for wall-mounted items, unless item can be securely fastened to two or more studs or other method of support is explicitly indicated.

E. Where ceiling-mounting is indicated, provide blocking and supplementary supports above ceiling, unless other method of support is explicitly indicated.

F. Provide the following specific nonstructural framing and blocking:
   1. Cabinets and shelf supports.
   2. Wall brackets.
   3. Grab bars.
   4. Towel and bath accessories.
   5. Wall-mounted door stops.
   6. Joints of rigid wall coverings that occur between studs.

**3.05 TOLERANCES**

A. Framing Members: 1/4 inch (6 mm) from true position, maximum.

B. Variation from Plane, Other than Floors: 1/4 inch in 10 feet (2 mm/m) maximum, and 1/4 inch in 30 feet (7 mm in 10 m) maximum.

**3.06 CLEANING**

A. Waste Disposal: See Section 01 7419 - Construction Waste Management and Disposal.
   1. Comply with applicable regulations.
   2. Do not burn scrap on project site.
   3. Do not burn scraps that have been pressure treated.
   4. Do not send materials treated with pentachlorophenol, CCA, or ACA to co-generation facilities or "waste-to-energy" facilities.

B. Do not leave wood, shavings, sawdust, etc. on the ground or buried in fill.

C. Prevent sawdust and wood shavings from entering the storm drainage system.

**END OF SECTION**

## SECTION 06 4100
## ARCHITECTURAL WOOD CASEWORK

### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

A. Countertops.

#### 1.02 RELATED REQUIREMENTS

A. Section 01 6116 - Volatile Organic Compound (VOC) Content Restrictions.

B. Section 06 1000 - Rough Carpentry: Support framing, grounds, and concealed blocking.

#### 1.03 REFERENCE STANDARDS

A. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards, U.S. Version 3.1; 2017, with Errata (2019).

B. NEMA LD 3 - High-Pressure Decorative Laminates; 2005.

#### 1.04 SUBMITTALS

A. Shop Drawings: Indicate materials, component profiles, fastening methods, jointing details, and accessories.

1. Scale of Drawings: 1-1/2 inch to 1 foot (125 mm to 1 m), minimum.

#### 1.05 QUALITY ASSURANCE

A. Fabricator Qualifications: Company specializing in fabricating the products specified in this section with minimum five years of documented experience.

1. Company with at least one project in the past 5 years with value of woodwork within 20 percent of cost of woodwork for this Project.

#### 1.06 DELIVERY, STORAGE, AND HANDLING

A. Protect units from moisture damage.

#### 1.07 FIELD CONDITIONS

A. During and after installation of custom cabinets, maintain temperature and humidity conditions in building spaces at same levels planned for occupancy.

### PART 2 PRODUCTS

#### 2.01 CABINETS/COUNTERTOPS

A. Quality Standard: Custom Grade, in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), unless noted otherwise.

B. Plastic Laminate Faced Cabinets/Countertops: Custom grade.

#### 2.02 WOOD-BASED COMPONENTS

A. Wood fabricated from old growth timber is not permitted.

#### 2.03 LAMINATE MATERIALS

A. High Pressure Decorative Laminate (HPDL): NEMA LD 3, types as recommended for specific applications.

#### 2.04 COUNTERTOPS

A. Plastic Laminate Countertops: Medium density fiberboard substrate covered with HPDL, post-formed, with coved integral backsplash.

#### 2.05 ACCESSORIES

A. Adhesive: Type recommended by fabricator to suit application.

B. Fasteners: Size and type to suit application.

C. Bolts, Nuts, Washers, Lags, Pins, and Screws: Of size and type to suit application; galvanized or chrome-plated finish in concealed locations and stainless steel or chrome-plated finish in exposed locations.

**2.06 FABRICATION**

A. Edging: Fit shelves, doors, and exposed edges with specified edging. Do not use more than one piece for any single length.

B. Fitting: When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide matching trim for scribing and site cutting.

C. Plastic Laminate: Apply plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes. Fit corners and joints hairline; secure with concealed fasteners. Slightly bevel arises. Locate counter butt joints minimum 2 feet (600 mm) from sink cut-outs.
   1. Cap exposed plastic laminate finish edges with material of same finish and pattern.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

A. Verify adequacy of backing and support framing.

**3.02 INSTALLATION**

A. Set and secure custom cabinets in place, assuring that they are rigid, plumb, and level.

**3.03 CLEANING**

A. Clean casework, counters, and Finishes .

**END OF SECTION**

## SECTION 07 2100
## THERMAL INSULATION

### PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Batt insulation (acoustic) in interior wall construction.

B. Batt insulation (acoustic) above T-bar Ceiling.

C. Batt insulation for filling perimeter window and door shim spaces.

D. Batt insulation (Thermal with Facing) at perimeter exterior walls.

### 1.02 REFERENCE STANDARDS

A. ASTM C665 - Standard Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing; 2017.

B. ASTM E136 - Standard Test Method for Assessing Combustibility of Materials Using a Vertical Tube Furnace at 750°C; 2019a.

### 1.03 SUBMITTALS

A. Product Data: Provide data on product characteristics, performance criteria, and product limitations.

### 1.04 FIELD CONDITIONS

A. Do not install insulation adhesives when temperature or weather conditions are detrimental to successful installation.

### PART 2 PRODUCTS

### 2.01 APPLICATIONS

### 2.02 BATT INSULATION MATERIALS

A. Where batt insulation is indicated, either glass fiber or mineral fiber batt insulation may be used, at Contractor's option.

B. Glass Fiber Batt Insulation (Thermal): Flexible preformed batt or blanket, complying with ASTM C665; friction fit.
   1. Combustibility: Non-combustible, when tested in accordance with ASTM E136, except for facing, if any.
   2. Formaldehyde Content: Zero.
   3. Facing: Aluminum foil, flame spread 25 rated; one side. -**at Exterior Perimeter Walls.**
      a. Thermal Resistance: R-21 minimum
   4. Products:
      a. CertainTeed Corporation; -: www.certainteed.com.
      b. Johns Manville; -: www.jm.com.
      c. Owens Corning Corporation; EcoTouch PINK FIBERGLAS Insulation: www.ocbuildingspec.com.

C. Glass Fiber Batt Insulation (Acoustic):
   1. Wall: provide minimum 3" non-faced sound batt insulation at all new Interior walls
   2. Ceiling: provide miniumum 4" non-faced rockwool insulation (24" wide blankets @ T-bar Ceilings)

D. Glass Fiber Batt Insulation (Thermal):
   1. Ceiling: provide R-21 non-faced above Gypsum Board Ceiling as indicated on Drawings.

### 2.03 ACCESSORIES

A. Tape: Reinforced polyethylene film with acrylic pressure sensitive adhesive.
   1. Application: Sealing of interior circular penetrations, such as pipes or cables.
   2. Width: Are required for application.

B. Tape joints of rigid insulation in accordance with roofing and insulation manufacturers' instructions.

## PART 3 EXECUTION

### 3.01 EXAMINATION

A. Verify that substrate, adjacent materials, and insulation materials are dry and that substrates are ready to receive insulation.

### 3.02 ACOUSTIC BATT INSTALLATION

A. Install insulation in accordance with manufacturer's instructions.

B. Trim insulation neatly to fit spaces. Insulate miscellaneous gaps and voids.

C. Fit insulation tightly in cavities and tightly to exterior side of mechanical and electrical services within the plane of the insulation.

D. Install Acoustic Batt insulation at all new interior walls and interior soffit/ceilings.

E. Use a minimum 3" at 2x4 walls and 5" at 2x6 walls.

### 3.03 PROTECTION

A. Do not permit installed insulation to be damaged prior to its concealment.

**END OF SECTION**

## SECTION 08 1113
## HOLLOW METAL DOORS AND FRAMES

### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

A. Non-Fire Rated Hollow metal frames for wood doors.

B. Fire-rated hollow metal doors and frames.

#### 1.02 RELATED REQUIREMENTS

A. Section 08 7100 - Door Hardware.

B. Section 09 9123 - Interior Painting: Field painting.

#### 1.03 ABBREVIATIONS AND ACRONYMS

A. ANSI: American National Standards Institute.

B. NFPA: National Fire Protection Association.

C. UL: Underwriters Laboratories.

#### 1.04 REFERENCE STANDARDS

A. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.

B. ANSI/SDI A250.4 - Test Procedure and Acceptance Criteria for Physical Endurance for Steel Doors, Frames and Frame Anchors; 2011.

C. ANSI/SDI A250.6 - Recommended Practice for Hardware Reinforcing on Standard Steel Doors and Frames; 2003 (R2009).

D. ANSI/SDI A250.8 - Specifications for Standard Steel Doors and Frames (SDI-100); 2017.

E. ANSI/SDI A250.10 - Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames; 2011.

F. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2019a.

G. ITS (DIR) - Directory of Listed Products; current edition.

H. NAAMM HMMA 840 - Guide Specifications For Receipt, Storage and Installation of Hollow Metal Doors and Frames; 2007.

I. NAAMM HMMA 861 - Guide Specifications for Commercial Hollow Metal Doors and Frames; 2014.

J. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2019.

K. NFPA 105 - Standard for Smoke Door Assemblies and Other Opening Protectives; 2019.

L. NFPA 252 - Standard Methods of Fire Tests of Door Assemblies; 2017.

M. UL (DIR) - Online Certifications Directory; Current Edition.

N. UL 10B - Standard for Fire Tests of Door Assemblies; Current Edition, Including All Revisions.

O. UL 10C - Standard for Positive Pressure Fire Tests of Door Assemblies; Current Edition, Including All Revisions.

P. UL 1784 - Standard for Air Leakage Tests of Door Assemblies; Current Edition, Including All Revisions.

#### 1.05 SUBMITTALS

A. Product Data: Materials and details of design and construction, hardware locations, reinforcement type and locations, anchorage and fastening methods, and finishes; and one copy of referenced standards/guidelines.

B. Shop Drawings: Details of each opening, showing elevations, glazing, frame profiles, and any indicated finish requirements.

C. Installation Instructions: Manufacturer's published instructions, including any special installation instructions relating to this project.

**1.06 QUALITY ASSURANCE**

A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years documented experience.

B. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience.

C. Maintain at project site copies of reference standards relating to installation of products specified.

**1.07 DELIVERY, STORAGE, AND HANDLING**

A. Comply with NAAMM HMMA 840 or ANSI/SDI A250.8 (SDI-100) in accordance with specified requirements.

B. Protect with resilient packaging; avoid humidity build-up under coverings; prevent corrosion and adverse effects on factory applied painted finish.

**PART 2 PRODUCTS**

**2.01 MANUFACTURERS**

A. Hollow Metal Doors and Frames:
   1. Ceco Door, an Assa Abloy Group company; -: www.assaabloydss.com.
   2. Curries, an Assa Abloy Group company; -: www.assaabloydss.com.
   3. Republic Doors, an Allegion brand; -: www.republicdoor.com.
   4. Steelcraft, an Allegion brand; -: www.allegion.com.

**2.02 HOLLOW METAL DOORS**

A. Door Finish: Factory primed and field finished. (Field Finish: Prime and Paint)

B. Fire-Rated Doors:
   1. Based on SDI Standards: ANSI/SDI A250.8 (SDI-100).
      a. Level 2 - Heavy-duty.
      b. Physical Performance Level B, 500,000 cycles; in accordance with ANSI/SDI A250.4.
      c. Model 1 - Full Flush.
      d. Door Face Metal Thickness: 18 gauge, 0.042 inch (1.0 mm), minimum.
      e. Zinc Coating: A60/ZF180 galvannealed coating; ASTM A653/A653M.
   2. Fire Rating: As indicated on Door Schedule, tested in accordance with UL 10C and NFPA 252 ("positive pressure fire tests").
   3. Provide units listed and labeled by UL (DIR) or ITS (DIR).
      a. Attach fire rating label to each fire rated unit.
   4. Smoke and Draft Control Doors (Indicated with letter "S" on Drawings and/or Door Schedule): Self-closing or automatic closing doors in accordance with NFPA 80 and NFPA 105, with fire-resistance-rated wall construction rated the same or greater than the fire-rated doors, and the following;
      a. Maximum Air Leakage: 3.0 cfm/sq ft (0.02 cu m/sec/sq m) of door opening at 0.10 inch w.g. (24.9 Pa) pressure, when tested in accordance with UL 1784 at both ambient and elevated temperatures.
      b. Gasketing: Provide gasketing or edge sealing as necessary to achieve leakage limit.
      c. Label: Include the "S" label on fire-rating label of door.
   5. Door Thickness: 1-3/4 inches (44.5 mm), nominal.
   6. Door Face Sheets: Flush.

**2.03 HOLLOW METAL FRAMES**

A. Comply with standards and/or custom guidelines as indicated for corresponding door in accordance with applicable door frame requirements.

B. Interior Door Frames, Non-Fire Rated: Slip-on type.

1. Frame Metal Thickness: 16 gauge, 0.053 inch (1.3 mm), minimum.
2. Frame Finish: Factory primed and field finished.

C. Door Frames, Fire-Rated: Slip-on type.
1. Fire Rating: Same as door, labeled.

**2.04 FINISHES**

A. Factory Primer: Rust-inhibiting, complying with ANSI/SDI A250.10, door manufacturer's standard. (Field Application of second coat of Field Primer and Finish Coats per Specifications)

**2.05 ACCESSORIES**

A. Door Window Frames: Door window frames with glazing securely fastened within door opening.
1. Size: As indicated on drawings. 43" maximum from floor to glazing.
2. Frame Material: 18 gauge, 0.0478 inch (1.21 mm), stainless steel.
3. Glazing: 1/4 inch (6.4 mm) thick, Fire Rated Glazing, in compliance with requirements of authorities having jurisdiction.
4. Manufacturers:
a. Anemostat, www.anemostat.com.
1) Model FGS-75 Stainless Steel (Rated System)
2) Glazing: 1/4" Fire Rated Safety Glazing (FireLite Plus)

B. Silencers: Resilient rubber, fitted into drilled hole; provide three on strike side of single door, three on center mullion of pairs, and two on head of pairs without center mullions.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

A. Verify existing conditions before starting work.

B. Verify that opening sizes and tolerances are acceptable.

C. Verify that finished walls are in plane to ensure proper door alignment.

**3.02 INSTALLATION**

A. Install doors and frames in accordance with manufacturer's instructions and related requirements of specified door and frame standards or custom guidelines indicated.

B. Install fire rated units in accordance with NFPA 80.

C. Coordinate frame anchor placement with wall construction.

D. Install door hardware as specified in Section 08 7100.
1. Comply with recommended practice for hardware placement of doors and frames in accordance with ANSI/SDI A250.6 or NAAMM HMMA 861.

**3.03 TOLERANCES**

A. Maximum Diagonal Distortion: 1/16 inch (1.6 mm) measured with straight edge, corner to corner.

**3.04 ADJUSTING**

A. Adjust for smooth and balanced door movement.

**END OF SECTION**

## SECTION 08 1416
## FLUSH WOOD DOORS

### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

A. Flush wood doors; flush configuration; non-rated.

#### 1.02 RELATED REQUIREMENTS

A. Section 08 1113 - Hollow Metal Doors and Frames.

#### 1.03 REFERENCE STANDARDS

A. ANSI A208.1 - American National Standard for Particleboard; 2016.

B. AWI/AWMAC/WI (AWS) - Architectural Woodwork Standards; 2014, with Errata (2018).

C. AWMAC/WI (NAAWS) - North American Architectural Woodwork Standards, U.S. Version 3.1; 2017, with Errata (2019).

D. NEMA LD 3 - High-Pressure Decorative Laminates; 2005.

E. UL (DIR) - Online Certifications Directory; Current Edition.

F. WDMA I.S. 1A - Interior Architectural Wood Flush Doors; 2013.

#### 1.04 SUBMITTALS

A. Product Data: Indicate door core materials and construction; veneer species, type and characteristics.

B. Shop Drawings: Show doors and frames, elevations, sizes, types, swings, undercuts, beveling, blocking for hardware, factory machining, factory finishing, cutouts for glazing and other details.

C. Manufacturer's Installation Instructions: Indicate special installation instructions.

D. Manufacturer's Qualification Statement.

E. Installer's Qualification Statement.

F. Warranty, executed in Owner's name.

#### 1.05 QUALITY ASSURANCE

A. Maintain one copy of the specified door quality standard on site for review during installation and finishing.

B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section, with not less than three years of documented experience.

C. Installer Qualifications: Company specializing in performing work of the type specified in this section, with not less than three years of documented experience.

#### 1.06 DELIVERY, STORAGE, AND HANDLING

A. Package, deliver and store doors in accordance with specified quality standard.

B. Accept doors on site in manufacturer's packaging, and inspect for damage.

C. Protect doors with resilient packaging sealed with heat shrunk plastic; do not store in damp or wet areas or areas where sunlight might bleach veneer; seal top and bottom edges with tinted sealer if stored more than one week, and break seal on site to permit ventilation.

#### 1.07 WARRANTY

A. Interior Doors: Provide manufacturer's warranty for the life of the installation.

B. Include coverage for delamination of veneer, warping beyond specified installation tolerances, defective materials, and telegraphing core construction.

## PART 2 PRODUCTS

### 2.01 MANUFACTURERS

A. High Pressure Decorative Laminate (HPDL) Faced Doors: Basis of Design: Oregon Door, Architectural Series
   1. Oregon Door; Architectural Series: www.oregondoor.com.
   2. Masonite Architectural: www.architectural.masonite.com.
   3. VT Industries, Inc; -: www.vtindustries.com.

### 2.02 DOORS AND PANELS

A. Doors: See drawings for locations and additional requirements.
   1. Quality Standard: Custom Grade, Heavy Duty performance, in accordance with AWI/AWMAC/WI (AWS) or AWMAC/WI (NAAWS), unless noted otherwise.
   2. High Pressure Decorative Laminate (HPDL) Faced Doors: 5-ply unless otherwise indicated.

B. Interior Doors: 1-3/4 inches (44 mm) thick unless otherwise indicated; flush construction.
   1. Provide solid core doors at each location.
   2. High pressure decorative laminate (HPDL) finish as indicated on drawings.

### 2.03 DOOR AND PANEL CORES

A. Non-Rated Solid Core Doors: Type particleboard core (PC), plies and faces as indicated.

### 2.04 DOOR FACINGS

A. High Pressure Decorative Laminate (HPDL) Facing for Fire Doors: NEMA LD 3, SGF; Color to be Selected from all available options during Construction; textured, low gloss finish.

B. Facing Adhesive: Type I - waterproof.

C. Door Bottom/Top Finish: Door bottom and top to be sealed (water proof sealer), unless hardware is provided.

### 2.05 DOOR CONSTRUCTION

A. Fabricate doors in accordance with door quality standard specified.

B. Cores Constructed with stiles and rails:
   1. Provide solid blocks at lock edge for hardware reinforcement.
   2. Provide solid blocking for other throughbolted hardware.

C. Factory machine doors for hardware other than surface-mounted hardware, in accordance with hardware requirements and dimensions.

D. Factory fit doors for frame opening dimensions identified on shop drawings, with edge clearances in accordance with specified quality standard.

E. Provide edge clearances in accordance with the quality standard specified.

## PART 3 EXECUTION

### 3.01 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify that opening sizes and tolerances are acceptable.

C. Do not install doors in frame openings that are not plumb or are out-of-tolerance for size or alignment.

### 3.02 INSTALLATION

A. Install doors in accordance with manufacturer's instructions and specified quality standard.

B. Factory-Finished Doors: Do not field cut or trim; if fit or clearance is not correct, replace door.

C. Use machine tools to cut or drill for hardware.

D. Coordinate installation of doors with installation of frames and hardware.

### 3.03 TOLERANCES

A. Comply with specified quality standard for fit and clearance tolerances.

B. Comply with specified quality standard for telegraphing, warp, and squareness.

### 3.04 ADJUSTING

A. Adjust doors for smooth and balanced door movement.

B. Adjust closers for full closure.

**END OF SECTION**

## SECTION 08 5113
## ALUMINUM WINDOWS

### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

A. Extruded aluminum windows with Outswing Casement.

B. Factory glazing.

C. Operating hardware.

D. Insect screens.

#### 1.02 RELATED REQUIREMENTS

A. Section 06 1000 - Rough Carpentry: Rough opening framing.

#### 1.03 REFERENCE STANDARDS

A. AAMA CW-10 - Care and Handling of Architectural Aluminum From Shop to Site; 2015.

B. AAMA 609 & 610 - Cleaning and Maintenance Guide for Architecturally Finished Aluminum (Combined Document); 2015.

#### 1.04 SUBMITTALS

A. Product Data: Provide component dimensions, information on glass and glazing, internal drainage details, and descriptions of hardware and accessories.

B. Shop Drawings: Indicate opening dimensions, framed opening tolerances, method for achieving air and vapor barrier seal to adjacent construction, anchorage locations, fasteners, and installation requirements.

C. Samples: Submit two samples, 12 by 12 inch (300 by 300 mm) in size illustrating typical corner construction, accessories, and finishes.

D. Manufacturer's Qualification Statement.

E. Installer's Qualification Statement.

F. Warranty: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

#### 1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum three years of documented experience.

B. Installer Qualifications: Company specializing in performing work of type specified and with at least three years of documented experience.

#### 1.06 DELIVERY, STORAGE, AND HANDLING

A. Comply with requirements of AAMA CW-10.

B. Protect finished surfaces with wrapping paper or strippable coating during installation. Do not use adhesive papers or sprayed coatings that bond to substrate when exposed to sunlight or weather.

#### 1.07 FIELD CONDITIONS

A. Do not install sealants when ambient temperature is less than 40 degrees F (5 degrees C).

B. Maintain this minimum temperature during and 24 hours after installation of sealants.

#### 1.08 WARRANTY

A. Correct defective Work within a five year period after Date of Substantial Completion.

B. Provide five year manufacturer warranty against failure of glass seal on insulating glass units, including interpane dusting or misting. Include provision for replacement of failed units.

## PART 2 PRODUCTS

### 2.01 MANUFACTURERS

A. Basis of Design: Kawneer.

B. Other Acceptable - Aluminum Windows Manufacturers:
   1. Substitutions: Previously Reviewed and Approved Equals will be Accepted..

### 2.02 ALUMINUM WINDOWS

A. Aluminum Windows: Extruded aluminum frame and sash, factory fabricated, factory finished, with operating hardware, related flashings, and anchorage and attachment devices.
   1. Frame Depth: 3-1/2 inch (89 mm).
   2. Fabrication: Joints and corners flush, hairline, and weatherproof, accurately fitted and secured; prepared to receive anchors; fasteners and attachments concealed from view; reinforced as required for operating hardware and imposed loads.
   3. Perimeter Clearance: Minimize space between framing members and adjacent construction while allowing expected movement.
   4. Movement: Accommodate movement between window and perimeter framing and deflection of lintel, without damage to components or deterioration of seals.
   5. System Internal Drainage: Drain to the exterior by means of a weep drainage network any water entering joints, condensation occurring in glazing channel, and migrating moisture occurring within system.

B. Outswinging Casement Type:
   1. Construction: Thermally broken.
      a. Model: Outswing **Kawneer 8225TL**
   2. Depth: 2 1/4"
   3. Provide screens.
   4. Glazing: Single; clear; low-e.
      a. U-Factor: 0.42 or better
      b. Glass: 1" Insulated Glazed Unit
      c. Glass SHGC: 0.75 or better
      d. Glass Color: Gray (exterior), Clear (interior)
      e. Glass: Tempered.
   5. Exterior/Interior Frame Finish: Class I natural anodized.
   6. Size: As shown on the Drawings with minimum clear opening per Exiting requirements
   7. Accessories:
      a. Full Depth Sills (4 7/8" deep minimum)
      b. Head and Jamb Filler (continuous).
      c. Butt Hinges

### 2.03 HARDWARE

A. Sash lock: Lever handle with cam lock.

B. Operator: Lever action handle fitted to projecting sash arms with limit stops-
   1. **Clear Opening as required for Exiting per Drawings.**

## PART 3 EXECUTION

### 3.01 EXAMINATION

A. Verify that wall openings and adjoining air and vapor seal materials are ready to receive aluminum windows.

### 3.02 INSTALLATION

A. Install windows in accordance with manufacturer's instructions.

B. Attach window frame and shims to perimeter opening to accommodate construction tolerances and other irregularities.

C. Align window plumb and level, free of warp or twist. Maintain dimensional tolerances and alignment with adjacent work.

D. Install sill and sill end angles.

E. Set sill members and sill flashing in continuous bead of sealant.

F. Provide thermal isolation where components penetrate or disrupt building insulation. Pack fibrous insulation in shim spaces at perimeter of assembly to maintain continuity of thermal barrier.

G. Install operating hardware not pre-installed by manufacturer.

**3.03 TOLERANCES**

A. Maximum Variation from Level or Plumb: 1/16 inches every 3 ft (1.5 mm/m) non-cumulative or 1/8 inches per 10 ft (3 mm/3 m), whichever is less.

**3.04 ADJUSTING**

A. Adjust hardware for smooth operation and secure weathertight closure.

**3.05 CLEANING**

A. Remove protective material from factory finished aluminum surfaces.

B. Wash surfaces by method recommended and acceptable to window manufacturer; rinse and wipe surfaces clean.

C. Upon completion of installation, thoroughly clean aluminum surfaces in accordance with AAMA 609 & 610.

D. Remove excess glazing sealant by moderate use of mineral spirits or other solvent acceptable to sealant and window manufacturer.

**END OF SECTION**

**SECTION 08 7101**

**DOOR HARDWARE #14**

## PART 1 - GENERAL

### 1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

### 1.02 SUMMARY

A. This Section includes commercial door hardware for the following:
   1. Swinging doors.

B. Door hardware includes, but is not necessarily limited to, the following:
   1. Mechanical door hardware.
   2. Cylinders specified for doors in other sections.

C. Related Sections:
   1. Division 08 Section "Hollow Metal Doors and Frames".
   2. Division 08 Section "Flush Wood Doors".
   3. Division 08 Section "Aluminum-Framed Entrances and Storefronts".

D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.
   1. ANSI A117.1 - ACCESSIBLE AND USABLE BUILDINGS AND FACILITIES.
   2. ICC/IBC - International Building Code.
   3. NFPA 70 - National Electrical Code.
   4. NFPA 80 - Fire Doors and Windows.
   5. NFPA 101 - Life Safety Code.
   6. NFPA 105 - Installation of Smoke Door Assemblies.
   7. State Building Codes, Local Amendments.

E. Standards: All hardware specified herein shall comply with the following industry standards as applicable. Any undated reference to a standard shall be interpreted as referring to the latest edition of that standard:
   1. ANSI/BHMA Certified Product Standards - A156 Series.
   2. UL10C – Positive Pressure Fire Tests of Door Assemblies.
   3. CAN/ULC-S104 – Standard Method for Fire Tests of Door Assemblies.
   4. ANSI/UL 294 – Access Control System Units.
   5. ULC-S319 - Electronic Access Control Systems.
   6. ULC-60839-11-1, Alarm and Electronic Security Systems - Part 11-1: Electronic Access Control Systems - System and Components Requirements.
   7. CAN-ULC-S132 – Standard Method of Tests for Emergency Exit and Emergency Fire Exit Hardware.
   8. CAN-ULC-S533 - Egress Door Securing and Releasing Devices.
   9. UL 305 – Panic Hardware.
   10. ULC-S132, Emergency Exit and Emergency Fire Exit Hardware.
   11. ULC-S533 – Egress Door Securing and Releasing Devices.
   12. ANSI/UL 437- Key Locks.
   13. ULC-S328, - Burglary Resistant Key Locks.

F. Registrations: All hardware specified herein shall be registered with the following agencies, as applicable:
   1. Federal Communications Commission (FCC).
   2. California State Fire Marshall.

## 1.03 SUBMITTALS

A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.

B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
   1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
   2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.
   3. Content: Include the following information:
      a. Type, style, function, size, label, hand, and finish of each door hardware item.
      b. Manufacturer of each item.
      c. Fastenings and other pertinent information.
      d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
      e. Explanation of abbreviations, symbols, and codes contained in schedule.
      f. Mounting locations for door hardware.
      g. Door and frame sizes and materials.
      h. Warranty information for each product.
   4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.

C. Keying Schedule: After a keying meeting with the owner has taken place prepare a separate keying schedule detailing final instructions. Submit the keying schedule in electronic format. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner must approve submitted keying schedule prior to the ordering of permanent cylinders/cores.

D. Proof of Compliance: (California located Projects): Provide a list of product(s) containing chemicals known to cause cancer or reproductive toxicity as defined by the Office of Environmental Health Hazard Assessment (OEHHA) under Proposition 65 (CA Code of Regulations, Title 27, Section 27001). The list includes the specific chemical(s), if the chemical will be exposed to consumers, the means of warning, and an illustration of the label.

E. Informational Submittals:
   1. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.

F. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Procedures.

## 1.04 QUALITY ASSURANCE

A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.

B. Certified Products: Where specified, products must maintain a current listing in the Builders Hardware Manufacturers Association (BHMA) Certified Products Directory (CPD).

C. Installer Qualifications: A minimum 3 years documented experience installing both standard and electrified door hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

D. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.

E. Source Limitations: Obtain each type and variety of door hardware specified in this section from a single source unless otherwise indicated.
   1. Electrified modifications or enhancements made to a source manufacturer's product line by a secondary or third party source will not be accepted.

F. California Building Code: Provide hardware that complies with CBC Section 11B.
   1. All openings as a part of an accessible route shall comply with CBC Section 11B-404.
   2. The clear opening width for a door shall be 32" minimum. For a swinging door it shall be measured between the face of the door and the stop, with the door open 90 degrees. There shall be no projections into it below 34" and 4" maximum projections into it between 34" and 80" above the finish floor or ground. Door closers and stops shall be permitted to be 78" minimum above the finish floor or ground. CBC Section 11B-404.2.3.
   3. Operable hardware on accessible doors shall comply with CBC Section 11B-309.4 and shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. Operable parts of such hardware shall be 34" minimum and 44" maximum above finish floor or ground. Where sliding doors are in the fully open position, operating hardware shall be exposed and usable from both sides.
   4. Hardware (including panic hardware) shall not be provided with "nightlatch" function for any accessible doors or gates unless the following conditions are met:
      a. Such hardware has a 'dogging' feature and is dogged during the time the facility is open.
      b. All 'dogging' operation is performed only by employees as their job function (non-public use).
   5. The force for pushing or pulling open a door shall be in accordance with CBC Section 11B-404.2.9.
      a. Interior hinged doors, sliding or folding doors, and exterior hinged doors: 5 pounds (22.2 N) maximum. Required fire doors: the minimum opening force allowable by the DSA authority, not to exceed 15 pounds (66.7N). These forces do not apply to the force required to retract latch bolts or disengage other devices that hold the door in a closed position.
      b. The force required for activating any operable parts, such as lever hardware, or disengaging other devices shall be 5 pounds (22.2N) maximum to comply with CBC Section 11B-309.4.
      c. The 5 pound (22.2 N) maximum force shall be validated for the size of the door used. The Building Materials Listing of the California State Fire Marshal shall indicate that the door hardware meets the 5 pound (22.2 N) force and shall also list the largest door that can be used.
   6. Door closing speed shall comply with CBC Section 11B-404.2.8. Closers shall be adjusted so that the required time to move a door from an open position of 90 degrees to a position of 12 degrees from the latch is 5 seconds minimum. Spring hinges shall be adjusted so

that the required time to move a door from an open position of 70 degrees to the closed position is 1.5 seconds minimum.

7. Floor stops shall not be located in the path of travel and 4" maximum from walls.
8. Thresholds shall comply with CBC Section 11B-404.2.5.

G. Each unit to bear third party permanent label demonstrating compliance with the referenced standards.

H. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria into the final keying schedule document:
1. Function of building, purpose of each area and degree of security required.
2. Plans for existing and future key system expansion.
3. Requirements for key control storage and software.
4. Installation of permanent keys, cylinder cores and software.
5. Address and requirements for delivery of keys.

I. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.
1. Prior to installation of door hardware, conduct a project specific training meeting to instruct the installing contractors' personnel on the proper installation and adjustment of their respective products. Product training to be attended by installers of door hardware (including electromechanical hardware) for aluminum, hollow metal and wood doors. Training will include the use of installation manuals, hardware schedules, templates and physical product samples as required.
2. Inspect and discuss electrical roughing-in, power supply connections, and other preparatory work performed by other trades.
3. Review sequence of operation narratives for each unique access controlled opening.
4. Review and finalize construction schedule and verify availability of materials.
5. Review the required inspecting, testing, commissioning, and demonstration procedures

J. At completion of installation, provide written documentation that components were applied to manufacturer's instructions and recommendations and according to approved schedule.

**1.05 DELIVERY, STORAGE, AND HANDLING**

A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.

B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.

C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

**1.06 COORDINATION**

A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.

B. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

**1.07 WARRANTY**

A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of

the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.

B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:
   1. Structural failures including excessive deflection, cracking, or breakage.
   2. Faulty operation of the hardware.
   3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
   4. Electrical component defects and failures within the systems operation.

C. Standard Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.

D. Special Warranty Periods:
   1. Ten years for mortise locks and latches.
   2. Seven years for heavy duty cylindrical (bored) locks and latches.
   3. Five years for exit hardware.
   4. Twenty five years for manual overhead door closer bodies.

**1.08 MAINTENANCE SERVICE**

A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

**PART 2 - PRODUCTS**

**2.01 SCHEDULED DOOR HARDWARE**

A. General: Provide door hardware for each door to comply with requirements in Door Hardware Sets and each referenced section that products are to be supplied under.

B. Designations: Requirements for quantity, item, size, finish or color, grade, function, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Sets at the end of Part 3. Products are identified by using door hardware designations, as follows:
   1. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.

C. Substitutions: Requests for substitution and product approval for inclusive mechanical and electromechanical door hardware in compliance with the specifications must be submitted in writing and in accordance with the procedures and time frames outlined in Division 01, Substitution Procedures. Approval of requests is at the discretion of the architect, owner, and their designated consultants.

**2.02 HANGING DEVICES**

A. Hinges: ANSI/BHMA A156.1 certified butt hinges with number of hinge knuckles and other options as specified in the Door Hardware Sets.
   1. Quantity: Provide the following hinge quantity:
      a. Two Hinges: For doors with heights up to 60 inches.
      b. Three Hinges: For doors with heights 61 to 90 inches.
      c. Four Hinges: For doors with heights 91 to 120 inches.
      d. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.
   2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:
      a. Widths up to 3'0": 4-1/2" standard or heavy weight as specified.
      b. Sizes from 3'1" to 4'0": 5" standard or heavy weight as specified.
   3. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:

a. Exterior Doors: Heavy weight, non-ferrous, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate standard weight.
b. Interior Doors: Standard weight, steel, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate heavy weight.

4. Hinge Options: Comply with the following:
   a. Non-removable Pins: Provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the all out-swinging lockable doors.
5. Manufacturers:
   a. Bommer Industries (BO).
   b. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK).

**2.03 CYLINDERS AND KEYING**

A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.

B. Source Limitations: Obtain each type of keyed cylinder and keys from the same source manufacturer as locksets and exit devices, unless otherwise indicated.

C. Cylinders: Original manufacturer cylinders complying with the following:
   1. Mortise Type: Threaded cylinders with rings and cams to suit hardware application.
   2. Rim Type: Cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
   3. Bored-Lock Type: Cylinders with tailpieces to suit locks.
   4. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
   5. Keyway: Match Facility Standard.

D. Keying System: Each type of lock and cylinders to be factory keyed.
   1. Supplier shall conduct a "Keying Conference" to define and document keying system instructions and requirements.
   2. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.
   3. Existing System: Field verify and key cylinders to match Owner's existing system.

E. Key Quantity: Provide the following minimum number of keys:
   1. Change Keys per Cylinder: Two (2)
   2. Master Keys (per Master Key Level/Group): Five (5).
   3. Construction Keys (where required): Ten (10).

F. Construction Keying: Provide temporary keyed construction cores.

G. Key Registration List (Bitting List):
   1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
   2. Provide transcript list in writing or electronic file as directed by the Owner.

**2.04 KEY CONTROL**

A. Key Control Cabinet: Provide a key control system including envelopes, labels, and tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet. Key control cabinet shall have expansion capacity of 150% of the number of locks required for the project.
   1. Manufacturers:
      a. Lund Equipment (LU).
      b. MMF Industries (MM).
      c. Telkee (TK).

B. Electronic Key Management System: Provide an electronic key control system with Stand-alone Plug and Play features including advanced RFID technology. Touchscreen interface with PIN access for keys individually locked in place. Minimum 1,000 system users and 21 iFobs for

locking receptors. System shall have a minimum 250,000 audit events screen displayed or ability to be exported via USB port.

1. Manufacturers:
   a. Medeco (MC).
   b. Traka (TA).

## 2.05 MECHANICAL LOCKS AND LATCHING DEVICES

A. Mortise Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.13, Series 1000, Operational Grade 1 Certified Products Directory (CPD) listed. Locksets are to be manufactured with a corrosion resistant steel case and be field-reversible for handing without disassembly of the lock body.
   1. Manufacturers:
      a. Corbin Russwin Hardware (RU) – ML2000 Series.

B. Cylindrical Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.2, Series 4000, Operational Grade 1 Certified Products Directory (CPD) listed.
   1. Furnish with solid cast levers, standard 2 3/4" backset, and 1/2" (3/4" at rated paired openings) throw brass or stainless steel latchbolt.
   2. Locks are to be non-handed and fully field reversible.
   3. Extended cycle test: Locks to have been cycle tested in ordinance with ANSI/BHMA 156.2 requirements to 2 million cycles.
   4. Manufacturers:
      a. Corbin Russwin Hardware (RU) – CL3300 Series.

## 2.06 LOCK AND LATCH STRIKES

A. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:
   1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
   2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
   3. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.
   4. Double-lipped strikes: For locks at double acting doors. Furnish with retractable stop for rescue hardware applications.

B. Standards: Comply with the following:
   1. Strikes for Mortise Locks and Latches: BHMA A156.13.
   2. Strikes for Bored Locks and Latches: BHMA A156.2.
   3. Strikes for Auxiliary Deadlocks: BHMA A156.36.
   4. Dustproof Strikes: BHMA A156.16.

## 2.07 CONVENTIONAL EXIT DEVICES

A. General Requirements: All exit devices specified herein shall meet or exceed the following criteria:
   1. At doors not requiring a fire rating, provide devices complying with NFPA 101 and listed and labeled for "Panic Hardware" according to UL305. Provide proper fasteners as required by manufacturer including sex nuts and bolts at openings specified in the Hardware Sets.
   2. Where exit devices are required on fire rated doors, provide devices complying with NFPA 80 and with UL labeling indicating "Fire Exit Hardware". Provide devices with the proper fasteners for installation as tested and listed by UL. Consult manufacturer's catalog and template book for specific requirements.
   3. Except on fire rated doors, provide exit devices with hex key dogging device to hold the pushbar and latch in a retracted position. Provide optional keyed cylinder dogging on devices where specified in Hardware Sets.

4. Devices must fit flat against the door face with no gap that permits unauthorized dogging of the push bar. The addition of filler strips is required in any case where the door light extends behind the device as in a full glass configuration.
5. Flush End Caps: Provide flush end caps made of architectural metal in the same finish as the devices as in the Hardware Sets. Plastic end caps will not be acceptable.
6. Lever Operating Trim: Where exit devices require lever trim, furnish manufacturer's heavy duty escutcheon trim with threaded studs for thru-bolts.
   a. Lock Trim Design: As indicated in Hardware Sets, provide finishes and designs to match that of the specified locksets.
   b. Where function of exit device requires a cylinder, provide a cylinder (Rim or Mortise) as specified in Hardware Sets.
7. Vertical Rod Exit Devices: Where surface or concealed vertical rod exit devices are used at interior openings, provide as less bottom rod (LBR) unless otherwise indicated. Provide dust proof strikes where thermal pins are required to project into the floor.
8. Rim Exit Devices: Exit device rails shall release with less than 5 pounds of pressure per the California Building Code.
9. Narrow Stile Applications: At doors constructed with narrow stiles, or as specified in Hardware Sets, provide devices designed for maximum 2" wide stiles.
10. Dummy Push Bar: Nonfunctioning push bar matching functional push bar.
11. Rail Sizing: Provide exit device rails factory sized for proper door width application.
12. Through Bolt Installation: For exit devices and trim as indicated in Door Hardware Sets.

B. Conventional Push Rail Exit Devices (Heavy Duty): ANSI/BHMA A156.3, Grade 1 Certified Products Directory (CPD) listed panic and fire exit hardware devices furnished in the functions specified in the Hardware Sets. Exit device latch to be stainless steel, pullman type, with deadlock feature.
   1. Manufacturers:
      a. Corbin Russwin Hardware (RU) - ED4000 / ED5000 Series.

## 2.08 DOOR CLOSERS

A. All door closers specified herein shall meet or exceed the following criteria:
   1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers.
   2. Standards: Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.
   3. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the Americans with Disabilities Act, provide units complying with ANSI ICC/A117.1.
   4. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.
   5. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.
   6. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates as required for proper installation. Provide through-bolt and security type fasteners as specified in the hardware sets.

B. Door Closers, Surface Mounted (Heavy Duty): ANSI/BHMA A156.4, Grade 1 Certified Products Directory (CPD) listed surface mounted, heavy duty door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control. Provide non-handed units standard.
   1. Manufacturers:
      a. Norton Door Controls (NO) – 7500 Series.

## 2.09 ARCHITECTURAL TRIM

A. Door Protective Trim
   1. General: Door protective trim units to be of type and design as specified below or in the Hardware Sets.
   2. Size: Fabricate protection plates (kick, armor, or mop) not more than 2" less than door width (LDW) on stop side of single doors and 1" LDW on stop side of pairs of doors, and not more than 1" less than door width on pull side. Coordinate and provide proper width and height as required where conflicting hardware dictates. Height to be as specified in the Hardware Sets.
   3. Where plates are applied to fire rated doors with the top of the plate more than 16" above the bottom of the door, provide plates complying with NFPA 80. Consult manufacturer's catalog and template book for specific requirements for size and applications.
   4. Protection Plates: ANSI/BHMA A156.6 certified protection plates (kick, armor, or mop), fabricated from the following:
      a. Stainless Steel: 300 grade, 050-inch thick.
   5. Options and fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets. Provide countersunk screw holes.
   6. Manufacturers:
      a. Burns Manufacturing (BU).
      b. Hiawatha, Inc. (HI).
      c. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).

## 2.10 DOOR STOPS AND HOLDERS

A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.

B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 certified door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of door stops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.
   1. Manufacturers:
      a. Burns Manufacturing (BU).
      b. Hiawatha, Inc. (HI).
      c. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).

C. Overhead Door Stops and Holders: ANSI/BHMA A156.8, Grade 1 Certified Products Directory (CPD) listed overhead stops and holders to be surface or concealed types as indicated in Hardware Sets. Track, slide, arm and jamb bracket to be constructed of extruded bronze and shock absorber spring of heavy tempered steel. Provide non-handed design with mounting brackets as required for proper operation and function.
   1. Manufacturers:
      a. Rixson Door Controls (RF).
      b. Sargent Manufacturing (SA).

## 2.11 ARCHITECTURAL SEALS

A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.

B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.
   1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.

C. Fire Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL-10C.
   1. Provide intumescent seals as indicated to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies, and NPFA 252, Standard Methods of Fire Tests of Door Assemblies.

D. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated.

E. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.

F. Manufacturers:
   1. Pemko Products; ASSA ABLOY Architectural Door Accessories (PE).
   2. Reese Enterprises, Inc. (RE).

**2.12 FABRICATION**

A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

**2.13 FINISHES**

A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.

B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware

C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

**PART 3 - EXECUTION**

**3.01 EXAMINATION**

A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.

B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

**3.02 PREPARATION**

A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.

B. Wood Doors: Comply with ANSI/DHI A115-W series.

**3.03 INSTALLATION**

A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.
   1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.

B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
   1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
   2. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."

3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.

C. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.

D. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."

E. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

**3.04 FIELD QUALITY CONTROL**

A. Field Inspection (Punch Report): Reference Division 01 Section "Closeout Procedures" for project punch and reporting requirements including compliance with approved submittals and verification door hardware is properly installed, operating and adjusted.

**3.05 ADJUSTING**

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

**3.06 CLEANING AND PROTECTION**

A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.

B. Clean adjacent surfaces soiled by door hardware installation.

C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

**3.07 DEMONSTRATION**

A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

**3.08 DOOR HARDWARE SETS**

A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.
1. Quantities listed are for each pair of doors, or for each single door.
2. The supplier is responsible for handing and sizing all products.
3. Where multiple options for a piece of hardware are given in a single line item, the supplier shall provide the appropriate application for the opening.
4. At existing openings with new hardware the supplier shall field inspect existing conditions prior to the submittal stage to verify the specified hardware will work as required. Provide alternate solutions and proposals as needed.

B. Manufacturer's Abbreviations:

3.09 PART 4 -

1. MK - MCKINNEY
2. RU - CORBIN RUSSWIN
3. OT - OTHER
4. RF - RIXSON
5. NO - NORTON
6. RO - ROCKWOOD
7. PE - PEMKO

## HARDWARE SETS

### SET: 1

DOORS: 02, 03
DESCRIPTION: TYPICAL CORRIDOR DOORS FROM APPARATUS ROOM TO OFFICES, DORMS, AND TOILET ROOMS

| | | | | |
|---|---|---|---|---|
| 3 | HINGE, FULL MORTISE | TA2314 | US32D | MK |
| 1 | FIRE RATED RIM EXIT, CLASSROOM | ED5200A PR955ET M110 5CH | 630 | RU |
| 1 | RIM CYLINDER | MATCH EXISTING SYSTEM | US26D | OT |
| 1 | SURFACE CLOSER | P7500 | 689 | NO |
| 1 | KICK PLATE | K1050 12" CSK BEV | US32D | RO |
| 1 | DOOR STOP | 480ES | US26D | RO |
| 1 | THRESHOLD | 271A MSA | | PE |
| 1 | GASKETING | S88D @ H & J | | PE |
| 1 | DOOR BOTTOM | 420ASL | | PE |

### SET: 2

DOORS: 01, 04
DESCRIPTION: TYPICAL ACCESSIBLE ALL GENDER SHOWER & TOILET ROOM

| | | | | |
|---|---|---|---|---|
| 3 | HINGE, FULL MORTISE | TA2314 | US32D | MK |
| 1 | PRIVACY LOCK | ML2030 PSA ML193 ML194 M34 - OCCUPIED / VACANT - LOCKED/UNLOCKED | 626 | RU |
| 1 | SURFACE CLOSER | CPS7500T | 689 | NO |
| 1 | KICK PLATE | K1050 10" CSK BEV | US32D | RO |
| 1 | THRESHOLD | 171A MSA (AS DETAILED) | | PE |
| 3 | SILENCER | 608-RKW | | RO |
| 1 | COAT HOOK | RM828 | US32D | RO |

### SET: 3

DOORS: 06
DESCRIPTION: TYPICAL STUDY / LACTATION ROOM

| | | | | |
|---|---|---|---|---|
| 3 | HINGE, FULL MORTISE | TA2714 | US26D | MK |
| 1 | DORMITORY LOCK | ML2065 NSA V21 "OCC / VAC" & LOCK/UNLOCKED" X M34 | 630 | RU |
| 1 | RIM CYLINDER | MATCH EXISTING SYSTEM | US26D | OT |
| 1 | SURFACE CLOSER | 7500H | 689 | NO |
| 1 | KICK PLATE | K1050 10" CSK BEV | US32D | RO |
| 1 | DOOR STOP | 441H | US26D | RO |
| 1 | THRESHOLD | 271A MSA | | PE |

| | | | |
|---|---|---|---|
| **1 GASKETING** | **S773D @ H & J** | | **PE** |
| **1 DOOR BOTTOM** | **411APKL** | | **PE** |

**SET: 5**

DOORS: 05
**DESCRIPTION: TYPICAL JANITOR'S CLOSET & STORAGE ROOMS**

| | | | |
|---|---|---|---|
| **3 HINGE, FULL MORTISE** | **TA2314** | **US32D** | **MK** |
| **1 STOREROOM LOCK** | **CL3357 PZD** | **626** | **RU** |
| **1 SURF OVERHEAD STOP** | **9ADJ-336** | **630** | **RF** |
| **1 KICK PLATE** | **K1050 10" CSK BEV** | **US32D** | **RO** |
| **3 SILENCER** | **608-RKW** | | **RO** |

**NOTES: MOUNT KICKPLATE ON PULL SIDE OF THE DOOR.**

**SET: 6**

DOORS: 07
DESCRIPTION: EXTERIOR ENTRY DOOR

| | | | |
|---|---|---|---|
| 1 SURFACE CLOSER | P7500 | **689** | **NO** |

**NOTES: 1. ADJUST EXISTING DOOR CLOSER TO PROPER ADA OPENING FORCE OR INSTALL NEW CLOSER.**
**2. CONFIRM EXISTING THRESHOLD/SILL IS ADA COMPLIANT. REPLACE AS NECESSARY WITH A PEMKO ADA THRESHOLD TO MEET THE CURRENT SILL CONDITION.**

**END OF SECTION**

## SECTION 08 7102

## DOOR HARDWARE #16

### PART 1 GENERAL

### 1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

### 1.02 SUMMARY

A. This Section includes commercial door hardware for the following:
   1. Swinging doors.
   2. Other doors to the extent indicated.

B. Door hardware includes, but is not necessarily limited to, the following:
   1. Mechanical door hardware.
   2. Cylinders specified for doors in other sections.

C. Related Sections:
   1. Division 08 Section "Hollow Metal Doors and Frames".
   2. Division 08 Section "Flush Wood Doors".
   3. Division 08 Section "Aluminum-Framed Entrances and Storefronts".

D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.
   1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
   2. ICC/IBC - International Building Code.
   3. NFPA 70 - National Electrical Code.
   4. NFPA 80 - Fire Doors and Windows.
   5. NFPA 101 - Life Safety Code.
   6. NFPA 105 - Installation of Smoke Door Assemblies.
   7. State Building Codes, Local Amendments.

E. Standards: All hardware specified herein shall comply with the following industry standards as applicable. Any undated reference to a standard shall be interpreted as referring to the latest edition of that standard:
   1. ANSI/BHMA Certified Product Standards - A156 Series.
   2. UL10C – Positive Pressure Fire Tests of Door Assemblies.
   3. CAN/ULC-S104 – Standard Method for Fire Tests of Door Assemblies.
   4. ANSI/UL 294 – Access Control System Units.
   5. ULC-S319 - Electronic Access Control Systems.
   6. ULC-60839-11-1, Alarm and Electronic Security Systems - Part 11-1: Electronic Access Control Systems - System and Components Requirements.
   7. CAN-ULC-S132 – Standard Method of Tests for Emergency Exit and Emergency Fire Exit Hardware.
   8. CAN-ULC-S533 - Egress Door Securing and Releasing Devices.
   9. UL 305 – Panic Hardware.
   10. ULC-S132, Emergency Exit and Emergency Fire Exit Hardware.
   11. ULC-S533 – Egress Door Securing and Releasing Devices.
   12. ANSI/UL 437- Key Locks.
   13. ULC-S328, - Burglary Resistant Key Locks.

F. Registrations: All hardware specified herein shall be registered with the following agencies, as applicable:
   1. Federal Communications Commission (FCC).
   2. Industry Canada (IC).
   3. California State Fire Marshall.
   4. Florida Department of Business & Professional Regulation.
   5. New York State Office of Mental Health (OMH).

## 1.03 SUBMITTALS

A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.

B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
   1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
   2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.
   3. Content: Include the following information:
      a. Type, style, function, size, label, hand, and finish of each door hardware item.
      b. Manufacturer of each item.
      c. Fastenings and other pertinent information.
      d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
      e. Explanation of abbreviations, symbols, and codes contained in schedule.
      f. Mounting locations for door hardware.
      g. Door and frame sizes and materials.
      h. Warranty information for each product.
   4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.

C. Keying Schedule: After a keying meeting with the owner has taken place prepare a separate keying schedule detailing final instructions. Submit the keying schedule in electronic format. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner must approve submitted keying schedule prior to the ordering of permanent cylinders/cores.

D. Proof of Compliance: (California located Projects): Provide a list of product(s) containing chemicals known to cause cancer or reproductive toxicity as defined by the Office of Environmental Health Hazard Assessment (OEHHA) under Proposition 65 (CA Code of Regulations, Title 27, Section 27001). The list includes the specific chemical(s), if the chemical will be exposed to consumers, the means of warning, and an illustration of the label.

E. Informational Submittals:
   1. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.

F. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Procedures.

## 1.04 QUALITY ASSURANCE

A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.

B. Certified Products: Where specified, products must maintain a current listing in the Builders Hardware Manufacturers Association (BHMA) Certified Products Directory (CPD).

C. Installer Qualifications: A minimum 3 years documented experience installing both standard and electrified door hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

D. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.

E. Source Limitations: Obtain each type and variety of door hardware specified in this section from a single source unless otherwise indicated.
   1. Electrified modifications or enhancements made to a source manufacturer's product line by a secondary or third party source will not be accepted.

F. California Building Code: Provide hardware that complies with CBC Section 11B.
   1. All openings as a part of an accessible route shall comply with CBC Section 11B-404.
   2. The clear opening width for a door shall be 32" minimum. For a swinging door it shall be measured between the face of the door and the stop, with the door open 90 degrees. There shall be no projections into it below 34" and 4" maximum projections into it between 34" and 80" above the finish floor or ground. Door closers and stops shall be permitted to be 78" minimum above the finish floor or ground. CBC Section 11B-404.2.3.
   3. Operable hardware on accessible doors shall comply with CBC Section 11B-309.4 and shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. Operable parts of such hardware shall be 34" minimum and 44" maximum above finish floor or ground. Where sliding doors are in the fully open position, operating hardware shall be exposed and usable from both sides.
   4. Hardware (including panic hardware) shall not be provided with "nightlatch" function for any accessible doors or gates unless the following conditions are met:
      a. Such hardware has a 'dogging' feature and is dogged during the time the facility is open.
      b. All 'dogging' operation is performed only by employees as their job function (non-public use).
   5. The force for pushing or pulling open a door shall be in accordance with CBC Section 11B-404.2.9.
      a. Interior hinged doors, sliding or folding doors, and exterior hinged doors: 5 pounds (22.2 N) maximum. Required fire doors: the minimum opening force allowable by the DSA authority, not to exceed 15 pounds (66.7N). These forces do not apply to the force required to retract latch bolts or disengage other devices that hold the door in a closed position.
      b. The force required for activating any operable parts, such as lever hardware, or disengaging other devices shall be 5 pounds (22.2N) maximum to comply with CBC Section 11B-309.4.
      c. The 5 pound (22.2 N) maximum force shall be validated for the size of the door used. The Building Materials Listing of the California State Fire Marshal shall indicate that the door hardware meets the 5 pound (22.2 N) force and shall also list the largest door that can be used.
   6. Door closing speed shall comply with CBC Section 11B-404.2.8. Closers shall be adjusted so that the required time to move a door from an open position of 90 degrees to a position of 12 degrees from the latch is 5 seconds minimum. Spring hinges shall be adjusted so

that the required time to move a door from an open position of 70 degrees to the closed position is 1.5 seconds minimum.

7. Floor stops shall not be located in the path of travel and 4" maximum from walls.
8. Thresholds shall comply with CBC Section 11B-404.2.5.

G. Each unit to bear third party permanent label demonstrating compliance with the referenced standards.

H. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria into the final keying schedule document:

1. Function of building, purpose of each area and degree of security required.
2. Plans for existing and future key system expansion.
3. Requirements for key control storage and software.
4. Installation of permanent keys, cylinder cores and software.
5. Address and requirements for delivery of keys.

I. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.

1. Prior to installation of door hardware, conduct a project specific training meeting to instruct the installing contractors' personnel on the proper installation and adjustment of their respective products. Product training to be attended by installers of door hardware (including electromechanical hardware) for aluminum, hollow metal and wood doors. Training will include the use of installation manuals, hardware schedules, templates and physical product samples as required.
2. Inspect and discuss electrical roughing-in, power supply connections, and other preparatory work performed by other trades.
3. Review sequence of operation narratives for each unique access controlled opening.
4. Review and finalize construction schedule and verify availability of materials.
5. Review the required inspecting, testing, commissioning, and demonstration procedures

J. At completion of installation, provide written documentation that components were applied to manufacturer's instructions and recommendations and according to approved schedule.

## 1.05 DELIVERY, STORAGE, AND HANDLING

A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.

B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.

C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

## 1.06 COORDINATION

A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.

B. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

## 1.07 WARRANTY

A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of

the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.

B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:
   1. Structural failures including excessive deflection, cracking, or breakage.
   2. Faulty operation of the hardware.
   3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
   4. Electrical component defects and failures within the systems operation.

C. Standard Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.

D. Special Warranty Periods:
   1. Ten years for mortise locks and latches.
   2. Seven years for heavy duty cylindrical (bored) locks and latches.
   3. Twenty five years for manual overhead door closer bodies.

**1.08 MAINTENANCE SERVICE**

A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

**PART 2 PRODUCTS**

**2.01 SCHEDULED DOOR HARDWARE**

A. General: Provide door hardware for each door to comply with requirements in Door Hardware Sets and each referenced section that products are to be supplied under.

B. Designations: Requirements for quantity, item, size, finish or color, grade, function, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Sets at the end of Part 3. Products are identified by using door hardware designations, as follows:
   1. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.

C. Substitutions: Requests for substitution and product approval for inclusive mechanical and electromechanical door hardware in compliance with the specifications must be submitted in writing and in accordance with the procedures and time frames outlined in Division 01, Substitution Procedures. Approval of requests is at the discretion of the architect, owner, and their designated consultants.

**2.02 HANGING DEVICES**

A. Hinges: ANSI/BHMA A156.1 certified butt hinges with number of hinge knuckles and other options as specified in the Door Hardware Sets.
   1. Quantity: Provide the following hinge quantity:
      a. Two Hinges: For doors with heights up to 60 inches.
      b. Three Hinges: For doors with heights 61 to 90 inches.
      c. Four Hinges: For doors with heights 91 to 120 inches.
      d. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.
   2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:
      a. Widths up to 3'0": 4-1/2" standard or heavy weight as specified.
      b. Sizes from 3'1" to 4'0": 5" standard or heavy weight as specified.
   3. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:
      a. Exterior Doors: Heavy weight, non-ferrous, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate standard weight.

b. Interior Doors: Standard weight, steel, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate heavy weight.

4. Hinge Options: Comply with the following:
   a. Non-removable Pins: Provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the all out-swinging lockable doors.
5. Manufacturers:
   a. Bommer Industries (BO).
   b. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK).

B. Continuous Geared Hinges: ANSI/BHMA A156.26 Grade 1-600 certified continuous geared hinge. with minimum 0.120-inch thick extruded 6060 T6 aluminum alloy hinge leaves and a minimum overall width of 4 inches. Hinges are non-handed, reversible and fabricated to template screw locations. Factory trim hinges to suit door height and prepare for electrical cut-outs.
   1. Manufacturers:
      a. Pemko Products; ASSA ABLOY Architectural Door Accessories (PE).

**2.03 CYLINDERS AND KEYING**

A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.

B. Source Limitations: Obtain each type of keyed cylinder and keys from the same source manufacturer as locksets and exit devices, unless otherwise indicated.

C. Cylinders: Original manufacturer cylinders complying with the following:
   1. Mortise Type: Threaded cylinders with rings and cams to suit hardware application.
   2. Rim Type: Cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
   3. Bored-Lock Type: Cylinders with tailpieces to suit locks.
   4. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
   5. Keyway: Match Facility Standard.

D. Keying System: Each type of lock and cylinders to be factory keyed.
   1. Supplier shall conduct a "Keying Conference" to define and document keying system instructions and requirements.
   2. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.
   3. New System: Key locks to a new key system as directed by the Owner.

E. Key Quantity: Provide the following minimum number of keys:
   1. Change Keys per Cylinder: Two (2)
   2. Master Keys (per Master Key Level/Group): Five (5).
   3. Construction Keys (where required): Ten (10).

F. Construction Keying: Provide temporary keyed construction cores.

G. Key Registration List (Bitting List):
   1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
   2. Provide transcript list in writing or electronic file as directed by the Owner.

**2.04 KEY CONTROL**

A. Key Control Cabinet: Provide a key control system including envelopes, labels, and tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet. Key control cabinet shall have expansion capacity of 150% of the number of locks required for the project.
   1. Manufacturers:
      a. Lund Equipment (LU).

b. MMF Industries (MM).
c. Telkee (TK).

B. Electronic Key Management System: Provide an electronic key control system with Stand-alone Plug and Play features including advanced RFID technology. Touchscreen interface with PIN access for keys individually locked in place. Minimum 1,000 system users and 21 iFobs for locking receptors. System shall have a minimum 250,000 audit events screen displayed or ability to be exported via USB port.
1. Manufacturers:
a. Medeco (MC).
b. Traka (TA).

## 2.05 MECHANICAL LOCKS AND LATCHING DEVICES

A. Mortise Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.13, Series 1000, Operational Grade 1 Certified Products Directory (CPD) listed. Locksets are to be manufactured with a corrosion resistant steel case and be field-reversible for handing without disassembly of the lock body.
1. Where specified, provide status indicators with highly reflective color and wording for "locked/unlocked" or "vacant/occupied" with custom wording options if required. Indicator to be located above the cylinder with the inside thumb-turn not blocking the visibility of the indicator status. Indicator window size to be a minimum of 2.1" x 0.6" with a curved design allowing a 180 degree viewing angle with protective covering to prevent tampering.
2. Manufacturers:
a. Corbin Russwin Hardware (RU) – ML2000 Series.

B. Cylindrical Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.2, Series 4000, Operational Grade 1 Certified Products Directory (CPD) listed.
1. Furnish with solid cast levers, standard 2 3/4" backset, and 1/2" (3/4" at rated paired openings) throw brass or stainless steel latchbolt.
2. Locks are to be non-handed and fully field reversible.
3. Extended cycle test: Locks to have been cycle tested in ordinance with ANSI/BHMA 156.2 requirements to 2 million cycles.
4. Manufacturers:
a. Corbin Russwin Hardware (RU) – CL3300 Series.

## 2.06 LOCK AND LATCH STRIKES

A. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:
1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
3. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.
4. Double-lipped strikes: For locks at double acting doors. Furnish with retractable stop for rescue hardware applications.

B. Standards: Comply with the following:
1. Strikes for Mortise Locks and Latches: BHMA A156.13.
2. Strikes for Bored Locks and Latches: BHMA A156.2.
3. Strikes for Auxiliary Deadlocks: BHMA A156.36.
4. Dustproof Strikes: BHMA A156.16.

## 2.07 DOOR CLOSERS

A. All door closers specified herein shall meet or exceed the following criteria:
1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers.

2. Standards: Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.
3. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the Americans with Disabilities Act, provide units complying with ANSI ICC/A117.1.
4. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.
5. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.
6. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates as required for proper installation. Provide through-bolt and security type fasteners as specified in the hardware sets.

B. Door Closers, Surface Mounted (Heavy Duty): ANSI/BHMA A156.4, Grade 1 Certified Products Directory (CPD) listed surface mounted, heavy duty door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control. Provide non-handed units standard.
   1. Manufacturers:
      a. Norton Door Controls (NO) – 7500 Series.

**2.08 ARCHITECTURAL TRIM**

A. Door Protective Trim
   1. General: Door protective trim units to be of type and design as specified below or in the Hardware Sets.
   2. Size: Fabricate protection plates (kick, armor, or mop) not more than 2" less than door width (LDW) on stop side of single doors and 1" LDW on stop side of pairs of doors, and not more than 1" less than door width on pull side. Coordinate and provide proper width and height as required where conflicting hardware dictates. Height to be as specified in the Hardware Sets.
   3. Where plates are applied to fire rated doors with the top of the plate more than 16" above the bottom of the door, provide plates complying with NFPA 80. Consult manufacturer's catalog and template book for specific requirements for size and applications.
   4. Protection Plates: ANSI/BHMA A156.6 certified protection plates (kick, armor, or mop), fabricated from the following:
      a. Stainless Steel: 300 grade, 050-inch thick.
   5. Options and fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets. Provide countersunk screw holes.
   6. Manufacturers:
      a. Burns Manufacturing (BU).
      b. Hiawatha, Inc. (HI).
      c. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).

**2.09 DOOR STOPS AND HOLDERS**

A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.

B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 certified door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of door stops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.
   1. Manufacturers:
      a. Burns Manufacturing (BU).
      b. Hiawatha, Inc. (HI).

c. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).

## 2.10 ARCHITECTURAL SEALS

A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.

B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.
   1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.

C. Fire Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL-10C.
   1. Provide intumescent seals as indicated to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies, and NPFA 252, Standard Methods of Fire Tests of Door Assemblies.

D. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated.

E. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.

F. Manufacturers:
   1. Pemko Products; ASSA ABLOY Architectural Door Accessories (PE).
   2. Reese Enterprises, Inc. (RE).

## 2.11 FABRICATION

A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

## 2.12 FINISHES

A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.

B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware

C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

# PART 3 EXECUTION

## 3.01 EXAMINATION

A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.

B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

## 3.02 PREPARATION

A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.

B. Wood Doors: Comply with ANSI/DHI A115-W series.

## 3.03 INSTALLATION

A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.
   1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.

B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
   1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
   2. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
   3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
   4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.

C. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.

D. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."

E. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

## 3.04 FIELD QUALITY CONTROL

A. Field Inspection (Punch Report): Reference Division 01 Section "Closeout Procedures" for project punch and reporting requirements including compliance with approved submittals and verification door hardware is properly installed, operating and adjusted.

## 3.05 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

## 3.06 CLEANING AND PROTECTION

A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.

B. Clean adjacent surfaces soiled by door hardware installation.

C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

## 3.07 DEMONSTRATION

A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

## 3.08 DOOR HARDWARE SETS

A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies,

conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.

1. Quantities listed are for each pair of doors, or for each single door.
2. The supplier is responsible for handing and sizing all products.
3. Where multiple options for a piece of hardware are given in a single line item, the supplier shall provide the appropriate application for the opening.
4. At existing openings with new hardware the supplier shall field inspect existing conditions prior to the submittal stage to verify the specified hardware will work as required. Provide alternate solutions and proposals as needed.

B. Manufacturer's Abbreviations:

**1. MK - MCKINNEY**
**2. PE - PEMKO**
**3. RU - CORBIN RUSSWIN**
**4. OT - OTHER**
**5. NO - NORTON**
**6. RO - ROCKWOOD**

## HARDWARE SETS

### SET: 2

DOORS: **01 , 02**
**DESCRIPTION: TYPICAL ACCESSIBLE ALL GENDER SHOWER & TOILET ROOM**

| | | | |
|---|---|---|---|
| **3 HINGE, FULL MORTISE** | **TA2314** | **US32D** | **MK** |
| **1 PRIVACY LOCK** | **ML2030 PSA ML193 ML194 M34 - OCCUPIED / VACANT - LOCKED/UNLOCKED** | **626** | **RU** |
| **1 SURFACE CLOSER** | **CPS7500T** | **689** | **NO** |
| **1 KICK PLATE** | **K1050 12" CSK BEV** | **US32D** | **RO** |
| **1 THRESHOLD** | **171A MSA (AS DETAILED)** | | **PE** |
| **3 SILENCER** | **608-RKW** | | **RO** |
| **1 COAT HOOK** | **RM828** | **US32D** | **RO** |

### SET: 3

DOORS: **03**
**DESCRIPTION: TYPICAL STUDY / LACTATION ROOM**

| | | | |
|---|---|---|---|
| **3 HINGE, FULL MORTISE** | **TA2714** | **US26D** | **MK** |
| **1 DORMITORY LOCK** | **ML2065 NSA M34 V21 "OCC/VAC" & "LOCK/UNLOCKED"** | **626** | **RU** |
| **1 CYLINDER** | **MATCH EXISTING SYSTEM** | **626** | **OT** |
| **1 SURFACE CLOSER** | **7500H** | **689** | **NO** |
| **1 KICK PLATE** | **K1050 10" CSK BEV** | **US32D** | **RO** |
| **1 DOOR STOP** | **441H** | **US26D** | **RO** |
| **1 THRESHOLD** | **271A MSA** | | **PE** |
| **1 GASKETING** | **S773D @ H & J** | | **PE** |
| **1 DOOR BOTTOM** | **411APKL** | | **PE** |

### SET: 4

DOORS: **04**

**DESCRIPTION: EXISTING ENTRY DOOR**

| | | | | |
|---|---|---|---|---|
| 1 | CONTINUOUS HINGE | CHSHD1 | | PE |
| 1 | CLASSROOM LOCK | CL3355 NZD | 626 | RU |
| 1 | CYLINDER | MATCH EXISTING SYSTEM | 626 | OT |
| 1 | SURFACE CLOSER | CLP7500 | 689 | NO |
| 1 | KICK PLATE | K1050 10" CSK BEV | US32D | RO |
| 1 | THRESHOLD | 172A MSA | | PE |
| 1 | GASKETING | 297AS @ H & J | | PE |
| 1 | RAIN GUARD | 346C JW | | PE |
| 1 | SWEEP | 315CN | | PE |

**NOTES: EXISTING FRAME TO BE RESUED. EXISTING DOOR TO BE RE-HUNG TO SWING OUT. SUPPLY HARDWARE AS NOTED BELOW.**

**END OF SECTION**

## SECTION 08 7103

## DOOR HARDWARE #32

### PART 1 GENERAL

### 1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

### 1.02 SUMMARY

A. This Section includes commercial door hardware for the following:
   1. Swinging doors.
   2. Sliding doors.
   3. Other doors to the extent indicated.

B. Door hardware includes, but is not necessarily limited to, the following:
   1. Mechanical door hardware.
   2. Cylinders specified for doors in other sections.

C. Related Sections:
   1. Division 08 Section "Hollow Metal Doors and Frames".
   2. Division 08 Section "Flush Wood Doors".
   3. Division 08 Section "Aluminum-Framed Entrances and Storefronts".

D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.
   1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
   2. ICC/IBC - International Building Code.
   3. NFPA 70 - National Electrical Code.
   4. NFPA 80 - Fire Doors and Windows.
   5. NFPA 101 - Life Safety Code.
   6. NFPA 105 - Installation of Smoke Door Assemblies.
   7. State Building Codes, Local Amendments.

E. Standards: All hardware specified herein shall comply with the following industry standards as applicable. Any undated reference to a standard shall be interpreted as referring to the latest edition of that standard:
   1. ANSI/BHMA Certified Product Standards - A156 Series.
   2. UL10C – Positive Pressure Fire Tests of Door Assemblies.
   3. CAN/ULC-S104 – Standard Method for Fire Tests of Door Assemblies.
   4. ANSI/UL 294 – Access Control System Units.
   5. ULC-S319 - Electronic Access Control Systems.
   6. ULC-60839-11-1, Alarm and Electronic Security Systems - Part 11-1: Electronic Access Control Systems - System and Components Requirements.
   7. CAN-ULC-S132 – Standard Method of Tests for Emergency Exit and Emergency Fire Exit Hardware.
   8. CAN-ULC-S533 - Egress Door Securing and Releasing Devices.
   9. UL 305 – Panic Hardware.
   10. ULC-S132, Emergency Exit and Emergency Fire Exit Hardware.
   11. ULC-S533 – Egress Door Securing and Releasing Devices.
   12. ANSI/UL 437- Key Locks.
   13. ULC-S328, - Burglary Resistant Key Locks.

F. Registrations: All hardware specified herein shall be registered with the following agencies, as applicable:
   1. Federal Communications Commission (FCC).
   2. Industry Canada (IC).
   3. California State Fire Marshall.
   4. Florida Department of Business & Professional Regulation.

5. New York State Office of Mental Health (OMH).

## 1.03 SUBMITTALS

A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.

B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
   1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
   2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.
   3. Content: Include the following information:
      a. Type, style, function, size, label, hand, and finish of each door hardware item.
      b. Manufacturer of each item.
      c. Fastenings and other pertinent information.
      d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
      e. Explanation of abbreviations, symbols, and codes contained in schedule.
      f. Mounting locations for door hardware.
      g. Door and frame sizes and materials.
      h. Warranty information for each product.
   4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.

C. Keying Schedule: After a keying meeting with the owner has taken place prepare a separate keying schedule detailing final instructions. Submit the keying schedule in electronic format. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner must approve submitted keying schedule prior to the ordering of permanent cylinders/cores.

D. Informational Submittals:
   1. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.

E. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Procedures.

## 1.04 QUALITY ASSURANCE

A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.

B. Certified Products: Where specified, products must maintain a current listing in the Builders Hardware Manufacturers Association (BHMA) Certified Products Directory (CPD).

C. Installer Qualifications: A minimum 3 years documented experience installing both standard and electrified door hardware similar in material, design, and extent to that indicated for this Project

and whose work has resulted in construction with a record of successful in-service performance.

D. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.

E. Source Limitations: Obtain each type and variety of door hardware specified in this section from a single source unless otherwise indicated.
   1. Electrified modifications or enhancements made to a source manufacturer's product line by a secondary or third party source will not be accepted.

F. California Building Code: Provide hardware that complies with CBC Section 11B.
   1. All openings as a part of an accessible route shall comply with CBC Section 11B-404.
   2. The clear opening width for a door shall be 32" minimum. For a swinging door it shall be measured between the face of the door and the stop, with the door open 90 degrees. There shall be no projections into it below 34" and 4" maximum projections into it between 34" and 80" above the finish floor or ground. Door closers and stops shall be permitted to be 78" minimum above the finish floor or ground. CBC Section 11B-404.2.3.
   3. Operable hardware on accessible doors shall comply with CBC Section 11B-309.4 and shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. Operable parts of such hardware shall be 34" minimum and 44" maximum above finish floor or ground. Where sliding doors are in the fully open position, operating hardware shall be exposed and usable from both sides.
   4. Hardware (including panic hardware) shall not be provided with "nightlatch" function for any accessible doors or gates unless the following conditions are met:
      a. Such hardware has a 'dogging' feature and is dogged during the time the facility is open.
      b. All 'dogging' operation is performed only by employees as their job function (non-public use).
   5. The force for pushing or pulling open a door shall be in accordance with CBC Section 11B-404.2.9.
      a. Interior hinged doors, sliding or folding doors, and exterior hinged doors: 5 pounds (22.2 N) maximum. Required fire doors: the minimum opening force allowable by the DSA authority, not to exceed 15 pounds (66.7N). These forces do not apply to the force required to retract latch bolts or disengage other devices that hold the door in a closed position.
      b. The force required for activating any operable parts, such as lever hardware, or disengaging other devices shall be 5 pounds (22.2N) maximum to comply with CBC Section 11B-309.4.
      c. The 5 pound (22.2 N) maximum force shall be validated for the size of the door used. The Building Materials Listing of the California State Fire Marshal shall indicate that the door hardware meets the 5 pound (22.2 N) force and shall also list the largest door that can be used.
   6. Door closing speed shall comply with CBC Section 11B-404.2.8. Closers shall be adjusted so that the required time to move a door from an open position of 90 degrees to a position of 12 degrees from the latch is 5 seconds minimum. Spring hinges shall be adjusted so that the required time to move a door from an open position of 70 degrees to the closed position is 1.5 seconds minimum.
   7. Floor stops shall not be located in the path of travel and 4" maximum from walls.
   8. Thresholds shall comply with CBC Section 11B-404.2.5.

G. Each unit to bear third party permanent label demonstrating compliance with the referenced standards.

H. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria into the final keying schedule document:
   1. Function of building, purpose of each area and degree of security required.
   2. Plans for existing and future key system expansion.
   3. Requirements for key control storage and software.
   4. Installation of permanent keys, cylinder cores and software.
   5. Address and requirements for delivery of keys.

I. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.
   1. Prior to installation of door hardware, conduct a project specific training meeting to instruct the installing contractors' personnel on the proper installation and adjustment of their respective products. Product training to be attended by installers of door hardware (including electromechanical hardware) for aluminum, hollow metal and wood doors. Training will include the use of installation manuals, hardware schedules, templates and physical product samples as required.
   2. Inspect and discuss electrical roughing-in, power supply connections, and other preparatory work performed by other trades.
   3. Review sequence of operation narratives for each unique access controlled opening.
   4. Review and finalize construction schedule and verify availability of materials.
   5. Review the required inspecting, testing, commissioning, and demonstration procedures

J. At completion of installation, provide written documentation that components were applied to manufacturer's instructions and recommendations and according to approved schedule.

**1.05 DELIVERY, STORAGE, AND HANDLING**

A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.

B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.

C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

**1.06 COORDINATION**

A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.

B. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

**1.07 WARRANTY**

A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.

B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship

within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:

1. Structural failures including excessive deflection, cracking, or breakage.
2. Faulty operation of the hardware.
3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
4. Electrical component defects and failures within the systems operation.

C. Standard Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.

D. Special Warranty Periods:
   1. Seven years for heavy duty cylindrical (bored) locks and latches.
   2. Twenty five years for manual overhead door closer bodies.

**1.08 MAINTENANCE SERVICE**

A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

**PART 2 PRODUCTS**

**2.01 SCHEDULED DOOR HARDWARE**

A. General: Provide door hardware for each door to comply with requirements in Door Hardware Sets and each referenced section that products are to be supplied under.

B. Designations: Requirements for quantity, item, size, finish or color, grade, function, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Sets at the end of Part 3. Products are identified by using door hardware designations, as follows:
   1. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.

C. Substitutions: Requests for substitution and product approval for inclusive mechanical and electromechanical door hardware in compliance with the specifications must be submitted in writing and in accordance with the procedures and time frames outlined in Division 01, Substitution Procedures. Approval of requests is at the discretion of the architect, owner, and their designated consultants.

**2.02 HANGING DEVICES**

A. Hinges: ANSI/BHMA A156.1 certified butt hinges with number of hinge knuckles and other options as specified in the Door Hardware Sets.
   1. Quantity: Provide the following hinge quantity:
      a. Two Hinges: For doors with heights up to 60 inches.
      b. Three Hinges: For doors with heights 61 to 90 inches.
      c. Four Hinges: For doors with heights 91 to 120 inches.
      d. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.
   2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:
      a. Widths up to 3'0": 4-1/2" standard or heavy weight as specified.
      b. Sizes from 3'1" to 4'0": 5" standard or heavy weight as specified.
   3. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:
      a. Exterior Doors: Heavy weight, non-ferrous, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate standard weight.
      b. Interior Doors: Standard weight, steel, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate heavy weight.
   4. Hinge Options: Comply with the following:

a. Non-removable Pins: Provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the all out-swinging lockable doors.

5. Manufacturers:
   a. Bommer Industries (BO).
   b. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK).

**2.03 CYLINDERS AND KEYING**

A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.

B. Source Limitations: Obtain each type of keyed cylinder and keys from the same source manufacturer as locksets and exit devices, unless otherwise indicated.

C. Cylinders: Original manufacturer cylinders complying with the following:
   1. Mortise Type: Threaded cylinders with rings and cams to suit hardware application.
   2. Rim Type: Cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
   3. Bored-Lock Type: Cylinders with tailpieces to suit locks.
   4. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
   5. Keyway: Match Facility Standard.

D. Keying System: Each type of lock and cylinders to be factory keyed.
   1. Supplier shall conduct a "Keying Conference" to define and document keying system instructions and requirements.
   2. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.
   3. Existing System: Field verify and key cylinders to match Owner's existing system.

E. Key Quantity: Provide the following minimum number of keys:
   1. Change Keys per Cylinder: Two (2)
   2. Master Keys (per Master Key Level/Group): Five (5).
   3. Construction Keys (where required): Ten (10).

F. Construction Keying: Provide temporary keyed construction cores.

G. Key Registration List (Bitting List):
   1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
   2. Provide transcript list in writing or electronic file as directed by the Owner.

**2.04 KEY CONTROL**

A. Key Control Cabinet: Provide a key control system including envelopes, labels, and tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet. Key control cabinet shall have expansion capacity of 150% of the number of locks required for the project.
   1. Manufacturers:
      a. Lund Equipment (LU).
      b. MMF Industries (MM).
      c. Telkee (TK).

B. Electronic Key Management System: Provide an electronic key control system with Stand-alone Plug and Play features including advanced RFID technology. Touchscreen interface with PIN access for keys individually locked in place. Minimum 1,000 system users and 21 iFobs for locking receptors. System shall have a minimum 250,000 audit events screen displayed or ability to be exported via USB port.
   1. Manufacturers:
      a. Medeco (MC).
      b. Traka (TA).

## 2.05 MECHANICAL LOCKS AND LATCHING DEVICES

A. Mortise Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.13, Series 1000, Operational Grade 1 Certified Products Directory (CPD) listed. Locksets are to be manufactured with a corrosion resistant steel case and be field-reversible for handing without disassembly of the lock body.
   1. Where specified, provide status indicators with highly reflective color and wording for "locked/unlocked" or "vacant/occupied" with custom wording options if required. Indicator to be located above the cylinder with the inside thumb-turn not blocking the visibility of the indicator status. Indicator window size to be a minimum of 2.1" x 0.6" with a curved design allowing a 180 degree viewing angle with protective covering to prevent tampering.
   2. Manufacturers:
      a. Corbin Russwin Hardware (RU) – ML2000 Series.

B. Cylindrical Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.2, Series 4000, Operational Grade 1 Certified Products Directory (CPD) listed.
   1. Furnish with solid cast levers, standard 2 3/4" backset, and 1/2" (3/4" at rated paired openings) throw brass or stainless steel latchbolt.
   2. Locks are to be non-handed and fully field reversible.
   3. Extended cycle test: Locks to have been cycle tested in ordinance with ANSI/BHMA 156.2 requirements to 2 million cycles.
   4. Manufacturers:
      a. Corbin Russwin Hardware (RU) – CL3300 Series.

## 2.06 LOCK AND LATCH STRIKES

A. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:
   1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
   2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
   3. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.
   4. Double-lipped strikes: For locks at double acting doors. Furnish with retractable stop for rescue hardware applications.

B. Standards: Comply with the following:
   1. Strikes for Mortise Locks and Latches: BHMA A156.13.
   2. Strikes for Bored Locks and Latches: BHMA A156.2.
   3. Strikes for Auxiliary Deadlocks: BHMA A156.36.
   4. Dustproof Strikes: BHMA A156.16.

## 2.07 DOOR CLOSERS

A. All door closers specified herein shall meet or exceed the following criteria:
   1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers.
   2. Standards: Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.
   3. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the Americans with Disabilities Act, provide units complying with ANSI ICC/A117.1.
   4. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.
   5. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.

6. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates as required for proper installation. Provide through-bolt and security type fasteners as specified in the hardware sets.

B. Door Closers, Surface Mounted (Heavy Duty): ANSI/BHMA A156.4, Grade 1 Certified Products Directory (CPD) listed surface mounted, heavy duty door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control. Provide non-handed units standard.
   1. Manufacturers:
      a. Corbin Russwin Hardware (RU) – DC6000 Series.
      b. Norton Door Controls (NO) – 7500 Series.

## 2.08 ARCHITECTURAL TRIM

A. Door Protective Trim
   1. General: Door protective trim units to be of type and design as specified below or in the Hardware Sets.
   2. Size: Fabricate protection plates (kick, armor, or mop) not more than 2" less than door width (LDW) on stop side of single doors and 1" LDW on stop side of pairs of doors, and not more than 1" less than door width on pull side. Coordinate and provide proper width and height as required where conflicting hardware dictates. Height to be as specified in the Hardware Sets.
   3. Where plates are applied to fire rated doors with the top of the plate more than 16" above the bottom of the door, provide plates complying with NFPA 80. Consult manufacturer's catalog and template book for specific requirements for size and applications.
   4. Protection Plates: ANSI/BHMA A156.6 certified protection plates (kick, armor, or mop), fabricated from the following:
      a. Stainless Steel: 300 grade, 050-inch thick.
   5. Options and fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets. Provide countersunk screw holes.
   6. Manufacturers:
      a. Burns Manufacturing (BU).
      b. Hiawatha, Inc. (HI).
      c. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).

## 2.09 DOOR STOPS AND HOLDERS

A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.

B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 certified door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of door stops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.
   1. Manufacturers:
      a. Burns Manufacturing (BU).
      b. Hiawatha, Inc. (HI).
      c. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).

C. Overhead Door Stops and Holders: ANSI/BHMA A156.8, Grade 1 Certified Products Directory (CPD) listed overhead stops and holders to be surface or concealed types as indicated in Hardware Sets. Track, slide, arm and jamb bracket to be constructed of extruded bronze and shock absorber spring of heavy tempered steel. Provide non-handed design with mounting brackets as required for proper operation and function.
   1. Manufacturers:
      a. Rixson Door Controls (RF).
      b. Sargent Manufacturing (SA).

## 2.10 ARCHITECTURAL SEALS

A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.

B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.
   1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.

C. Fire Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL-10C.
   1. Provide intumescent seals as indicated to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies, and NPFA 252, Standard Methods of Fire Tests of Door Assemblies.

D. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated.

E. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.

F. Manufacturers:
   1. Pemko Products; ASSA ABLOY Architectural Door Accessories (PE).
   2. Reese Enterprises, Inc. (RE).

## 2.11 FABRICATION

A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

## 2.12 FINISHES

A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.

B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware

C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

# PART 3 EXECUTION

## 3.01 EXAMINATION

A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.

B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

## 3.02 PREPARATION

A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.

B. Wood Doors: Comply with ANSI/DHI A115-W series.

## 3.03 INSTALLATION

A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.
   1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.

B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
   1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
   2. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
   3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
   4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.

C. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.

D. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."

E. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

## 3.04 FIELD QUALITY CONTROL

A. Field Inspection (Punch Report): Reference Division 01 Section "Closeout Procedures" for project punch and reporting requirements including compliance with approved submittals and verification door hardware is properly installed, operating and adjusted.

## 3.05 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

## 3.06 CLEANING AND PROTECTION

A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.

B. Clean adjacent surfaces soiled by door hardware installation.

C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

## 3.07 DEMONSTRATION

A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

## 3.08 DOOR HARDWARE SETS

A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies,

conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.

1. Quantities listed are for each pair of doors, or for each single door.
2. The supplier is responsible for handing and sizing all products.
3. Where multiple options for a piece of hardware are given in a single line item, the supplier shall provide the appropriate application for the opening.
4. At existing openings with new hardware the supplier shall field inspect existing conditions prior to the submittal stage to verify the specified hardware will work as required. Provide alternate solutions and proposals as needed.

B. Manufacturer's Abbreviations:

**1. MK - MCKINNEY**
**2. RU - CORBIN RUSSWIN**
**3. OT - OTHER**
**4. RF - RIXSON**
**5. NO - NORTON**
**6. RO - ROCKWOOD**
**7. PE - PEMKO**

## HARDWARE SETS

### SET: 5

DOORS: **03 , 05**
**DESCRIPTION: TYPICAL JANITOR'S CLOSET & STORAGE ROOMS**

| | | | |
|---|---|---|---|
| **3 HINGE, FULL MORTISE** | **TA2314** | **US32D** | **MK** |
| **1 STOREROOM LOCK** | **CL3357 PZD** | **626** | **RU** |
| **1 SURF OVERHEAD STOP** | **9ADJ-336** | **630** | **RF** |
| **1 KICK PLATE** | **K1050 10" CSK BEV** | **US32D** | **RO** |
| **3 SILENCER** | **608-RKW** | | **RO** |

**NOTES: MOUNT KICKPLATE ON PULL SIDE OF THE DOOR.**

### SET: 7

DOORS: 07
DESCRIPTION: STUDY / LACTATION ROOM

| | | | |
|---|---|---|---|
| 3 HINGE, FULL MORTISE | **TA2714** | **US26D** | **MK** |
| **1 DORMITORY LOCK** | **ML2065 NSA M34 V21 OCC / VAC & LOCK / UNLOCKED** | **626** | **RU** |
| **1 CYLINDER** | **MATCH EXISTING SYSTEM** | | **OT** |
| **1 SURFACE CLOSER** | **7500H** | **689** | **NO** |
| **1 KICK PLATE** | **K1050 10" CSK BEV** | **US32D** | **RO** |
| **1 DOOR STOP** | **441H** | **US26D** | **RO** |
| **1 THRESHOLD** | **271A X MSA** | | **PE** |
| **1 GASKETING** | **S773D @ H & J** | | **PE** |
| **1 DOOR BOTTOM** | **411APKL** | | **PE** |

### SET: 8

DOORS: **01 , 02 , 04**
**DESCRIPTION: TYPICAL ALL GENDER TOILET ROOM**

| | | | | |
|---|---|---|---|---|
| **3** | **HINGE, FULL MORTISE** | **TA2314** | **US32D** | **MK** |
| **1** | **PRIVACY LOCK** | **ML2030 PSA ML193 ML194 M34 - OCCUPIED / VACANT - LOCKED/UNLOCKED** | **626** | **RU** |
| **1** | **SURFACE CLOSER** | **7500H** | **689** | **NO** |
| **1** | **KICK PLATE** | **K1050 10" CSK BEV** | **US32D** | **RO** |
| **1** | **WALL STOP** | **403** | **US26D** | **RO** |
| **1** | **THRESHOLD** | **171A X MSA** | | **PE** |
| **3** | **SILENCER** | **608-RKW** | | **RO** |
| **1** | **COAT HOOK** | **RM828** | **US32D** | **RO** |

**SET: 9**

DOORS: 06

| | | | | |
|---|---|---|---|---|
| 1 | SURFACE CLOSER | **P7500** | **689** | **NO** |
| **1** | **THRESHOLD** | **2727A OR 279A X MSA** | | **PE** |
| **1** | **DECAL** | **661** | | **RO** |

**NOTES: 1. ADJUST EXISTING DOOR CLOSER TO PROPER ADA OPENING FORCE OR INSTALL A NEW CLOSER.**
**2. CONFIRM EXISTING THRESHOLD IS ADA COMPLIANT OR INSTALL NEW THRESHOLD.**
**3. INSTALL SIGNAGE - " THIS DOOR TO REMAIN UNLOCKED WHEN THE BUILDING IS OCCUPIED."**

**END OF SECTION**

**SECTION 08 7104**

**DOOR HARDWARE #53**

## PART 1 GENERAL

### 1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

### 1.02 SUMMARY

A. This Section includes commercial door hardware for the following:
   1. Swinging doors.
   2. Other doors to the extent indicated.

B. Door hardware includes, but is not necessarily limited to, the following:
   1. Mechanical door hardware.
   2. Cylinders specified for doors in other sections.

C. Related Sections:
   1. Division 08 Section "Hollow Metal Doors and Frames".

D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.
   1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
   2. ICC/IBC - International Building Code.
   3. NFPA 70 - National Electrical Code.
   4. NFPA 80 - Fire Doors and Windows.
   5. NFPA 101 - Life Safety Code.
   6. NFPA 105 - Installation of Smoke Door Assemblies.
   7. State Building Codes, Local Amendments.

E. Standards: All hardware specified herein shall comply with the following industry standards as applicable. Any undated reference to a standard shall be interpreted as referring to the latest edition of that standard:
   1. ANSI/BHMA Certified Product Standards - A156 Series.
   2. UL10C - Positive Pressure Fire Tests of Door Assemblies.
   3. CAN/ULC-S104 - Standard Method for Fire Tests of Door Assemblies.
   4. CAN-ULC-S132 – Standard Method of Tests for Emergency Exit and Emergency Fire Exit Hardware.
   5. UL 305 - Panic Hardware.
   6. ULC-S132, Emergency Exit and Emergency Fire Exit Hardware.
   7. ANSI/UL 437- Key Locks.
   8. ULC-S328, - Burglary Resistant Key Locks.

F. Registrations: All hardware specified herein shall be registered with the following agencies, as applicable:
   1. California State Fire Marshall.

### 1.03 SUBMITTALS

A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.

B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
   1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."

2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.
3. Content: Include the following information:
    a. Type, style, function, size, label, hand, and finish of each door hardware item.
    b. Manufacturer of each item.
    c. Fastenings and other pertinent information.
    d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
    e. Explanation of abbreviations, symbols, and codes contained in schedule.
    f. Mounting locations for door hardware.
    g. Door and frame sizes and materials.
    h. Warranty information for each product.
4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.

C. Keying Schedule: After a keying meeting with the owner has taken place prepare a separate keying schedule detailing final instructions. Submit the keying schedule in electronic format. Include keying system explanation, door numbers, key set symbols, hardware set numbers and special instructions. Owner must approve submitted keying schedule prior to the ordering of permanent cylinders/cores.

D. Proof of Compliance: (California located Projects): Provide a list of product(s) containing chemicals known to cause cancer or reproductive toxicity as defined by the Office of Environmental Health Hazard Assessment (OEHHA) under Proposition 65 (CA Code of Regulations, Title 27, Section 27001). The list includes the specific chemical(s), if the chemical will be exposed to consumers, the means of warning, and an illustration of the label.

E. Informational Submittals:
1. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.

F. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Procedures.

**1.04 QUALITY ASSURANCE**

A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.

B. Certified Products: Where specified, products must maintain a current listing in the Builders Hardware Manufacturers Association (BHMA) Certified Products Directory (CPD).

C. Installer Qualifications: A minimum 3 years documented experience installing both standard and electrified door hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

D. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult

with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.

E. Source Limitations: Obtain each type and variety of door hardware specified in this section from a single source unless otherwise indicated.
   1. Electrified modifications or enhancements made to a source manufacturer's product line by a secondary or third party source will not be accepted.

F. California Building Code: Provide hardware that complies with CBC Section 11B.
   1. All openings as a part of an accessible route shall comply with CBC Section 11B-404.
   2. The clear opening width for a door shall be 32" minimum. For a swinging door it shall be measured between the face of the door and the stop, with the door open 90 degrees. There shall be no projections into it below 34" and 4" maximum projections into it between 34" and 80" above the finish floor or ground. Door closers and stops shall be permitted to be 78" minimum above the finish floor or ground. CBC Section 11B-404.2.3.
   3. Operable hardware on accessible doors shall comply with CBC Section 11B-309.4 and shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. Operable parts of such hardware shall be 34" minimum and 44" maximum above finish floor or ground. Where sliding doors are in the fully open position, operating hardware shall be exposed and usable from both sides.
   4. Hardware (including panic hardware) shall not be provided with "nightlatch" function for any accessible doors or gates unless the following conditions are met:
      a. Such hardware has a 'dogging' feature and is dogged during the time the facility is open.
      b. All 'dogging' operation is performed only by employees as their job function (non-public use).
   5. The force for pushing or pulling open a door shall be in accordance with CBC Section 11B-404.2.9.
      a. Interior hinged doors, sliding or folding doors, and exterior hinged doors: 5 pounds (22.2 N) maximum. Required fire doors: the minimum opening force allowable by the DSA authority, not to exceed 15 pounds (66.7N). These forces do not apply to the force required to retract latch bolts or disengage other devices that hold the door in a closed position.
      b. The force required for activating any operable parts, such as lever hardware, or disengaging other devices shall be 5 pounds (22.2N) maximum to comply with CBC Section 11B-309.4.
      c. The 5 pound (22.2 N) maximum force shall be validated for the size of the door used. The Building Materials Listing of the California State Fire Marshal shall indicate that the door hardware meets the 5 pound (22.2 N) force and shall also list the largest door that can be used.
   6. Door closing speed shall comply with CBC Section 11B-404.2.8. Closers shall be adjusted so that the required time to move a door from an open position of 90 degrees to a position of 12 degrees from the latch is 5 seconds minimum. Spring hinges shall be adjusted so that the required time to move a door from an open position of 70 degrees to the closed position is 1.5 seconds minimum.
   7. Floor stops shall not be located in the path of travel and 4" maximum from walls.
   8. Thresholds shall comply with CBC Section 11B-404.2.5.

G. Each unit to bear third party permanent label demonstrating compliance with the referenced standards.

H. Keying Conference: Conduct conference to comply with requirements in Division 01 Section "Project Meetings." Keying conference to incorporate the following criteria into the final keying schedule document:
   1. Function of building, purpose of each area and degree of security required.
   2. Plans for existing and future key system expansion.
   3. Requirements for key control storage and software.
   4. Installation of permanent keys, cylinder cores and software.

5. Address and requirements for delivery of keys.

I. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.
   1. Prior to installation of door hardware, conduct a project specific training meeting to instruct the installing contractors' personnel on the proper installation and adjustment of their respective products. Product training to be attended by installers of door hardware (including electromechanical hardware) for aluminum, hollow metal and wood doors. Training will include the use of installation manuals, hardware schedules, templates and physical product samples as required.
   2. Inspect and discuss electrical roughing-in, power supply connections, and other preparatory work performed by other trades.
   3. Review sequence of operation narratives for each unique access controlled opening.
   4. Review and finalize construction schedule and verify availability of materials.
   5. Review the required inspecting, testing, commissioning, and demonstration procedures

J. At completion of installation, provide written documentation that components were applied to manufacturer's instructions and recommendations and according to approved schedule.

**1.05 DELIVERY, STORAGE, AND HANDLING**

A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.

B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.

C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

**1.06 COORDINATION**

A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.

B. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

**1.07 WARRANTY**

A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.

B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:
   1. Structural failures including excessive deflection, cracking, or breakage.
   2. Faulty operation of the hardware.
   3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
   4. Electrical component defects and failures within the systems operation.

C. Standard Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.

D. Special Warranty Periods:

1. Seven years for heavy duty cylindrical (bored) locks and latches.
2. Twenty five years for manual overhead door closer bodies.

**1.08 MAINTENANCE SERVICE**

A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

**PART 2 PRODUCTS**

**2.01 SCHEDULED DOOR HARDWARE**

A. General: Provide door hardware for each door to comply with requirements in Door Hardware Sets and each referenced section that products are to be supplied under.

B. Designations: Requirements for quantity, item, size, finish or color, grade, function, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Sets at the end of Part 3. Products are identified by using door hardware designations, as follows:
   1. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.

C. Substitutions: Requests for substitution and product approval for inclusive mechanical and electromechanical door hardware in compliance with the specifications must be submitted in writing and in accordance with the procedures and time frames outlined in Division 01, Substitution Procedures. Approval of requests is at the discretion of the architect, owner, and their designated consultants.

**2.02 HANGING DEVICES**

A. Hinges: ANSI/BHMA A156.1 certified butt hinges with number of hinge knuckles and other options as specified in the Door Hardware Sets.
   1. Quantity: Provide the following hinge quantity:
      a. Two Hinges: For doors with heights up to 60 inches.
      b. Three Hinges: For doors with heights 61 to 90 inches.
      c. Four Hinges: For doors with heights 91 to 120 inches.
      d. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.
   2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:
      a. Widths up to 3'0": 4-1/2" standard or heavy weight as specified.
      b. Sizes from 3'1" to 4'0": 5" standard or heavy weight as specified.
   3. Hinge Weight and Base Material: Unless otherwise indicated, provide the following:
      a. Exterior Doors: Heavy weight, non-ferrous, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate standard weight.
      b. Interior Doors: Standard weight, steel, ball bearing or oil impregnated bearing hinges unless Hardware Sets indicate heavy weight.
   4. Hinge Options: Comply with the following:
      a. Non-removable Pins: With the exception of electric through wire hinges, provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the all out-swinging lockable doors.
   5. Manufacturers:
      a. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK) - MacPro Series.
      b. McKinney Products; ASSA ABLOY Architectural Door Accessories (MK).

**2.03 CYLINDERS AND KEYING**

A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy. Manufacturer shall be based in the United States of America.

B. Source Limitations: Obtain each type of keyed cylinder and keys from the same source manufacturer as locksets and exit devices, unless otherwise indicated.

C. Cylinder Types: Original manufacturer cylinders able to supply the following cylinder formats and types:
   1. Threaded mortise cylinders with rings and cams to suit hardware application.
   2. Rim cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
   3. Bored or cylindrical lock cylinders with tailpieces as required to suit locks.
   4. Tubular deadlocks and other auxiliary locks.
   5. International cylinders including Euro profile and Scandinavian Ovals.
   6. Padlock cylinders.
   7. Cam, switch, and other industrial cylinders
   8. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
   9. Keyway: Manufacturer's Standard.Match Facility Standard.Match Facility Restricted Keyway.

D. Keying System: Each type of lock and cylinders to be factory keyed.
   1. Supplier shall conduct a "Keying Conference" to define and document keying system instructions and requirements.
   2. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.
   3. Existing System: Field verify and key cylinders to match Owner's existing system.

E. Key Quantity: Provide the following minimum number of keys:
   1. Change Keys per Cylinder: Two (2)
   2. Master Keys (per Master Key Level/Group): Five (5).
   3. Construction Keys (where required): Ten (10).

F. Construction Keying: Provide temporary keyed construction cores.

G. Key Registration List (Bitting List):
   1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
   2. Provide transcript list in writing or electronic file as directed by the Owner.

## 2.04 KEY CONTROL

A. Key Control Cabinet: Provide a key control system including envelopes, labels, and tags with self-locking key clips, receipt forms, 3-way visible card index, temporary markers, permanent markers, and standard metal cabinet. Key control cabinet shall have expansion capacity of 150% of the number of locks required for the project.
   1. Manufacturers:
      a. Lund Equipment (LU).
      b. MMF Industries (MM).
      c. Telkee (TK).

B. Electronic Key Management System: Provide an electronic key control system with Stand-alone Plug and Play features including advanced RFID technology. Touchscreen interface with PIN access for keys individually locked in place. Minimum 1,000 system users and 21 iFobs for locking receptors. System shall have a minimum 250,000 audit events screen displayed or ability to be exported via USB port.
   1. Manufacturers:
      a. Medeco (MC).
      b. Traka (TA).

## 2.05 MECHANICAL LOCKS AND LATCHING DEVICES

A. Mortise Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.13, Series 1000, Operational Grade 1 Certified Products Directory (CPD) listed. Locksets are to be manufactured with a corrosion resistant steel case and be field-reversible for handing without disassembly of the lock body.

1. Where specified, provide status indicators with highly reflective color and wording for "locked/unlocked" or "vacant/occupied" with custom wording options if required. Indicator to be located above the cylinder with the inside thumb-turn not blocking the visibility of the indicator status. Indicator window size to be a minimum of 2.1" x 0.6" with a curved design allowing a 180 degree viewing angle with protective covering to prevent tampering.
2. Manufacturers:
   a. Corbin Russwin Hardware (RU) - ML2000 Series.

B. Cylindrical Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.2, Series 4000, Operational Grade 1 Certified Products Directory (CPD) listed.
1. Locks shall meet or exceed the requirements of ANSI/BHMA A156.2 Series 4000, Grade 1 with all standard trims, as follows:
   a. Cycle Test: ANSI/BHMA A156.2 Grade 1 requirements with no lever sag.
   b. Abusive Locked Lever Torque: Exceed 3,100 in-lb with no entry; lock to maintain egress functionality in compliance with BHMA certification requirements.
   c. Offset Lever Pull: Exceed 1,600 lbs with no entry (8 times ANSI/BHMA A156.2 requirements).
   d. Latch Retraction with Preload: Exceed 100 lb preload while maintaining ANSI/BHMA requirements for operation in warped doors (2 times ANSI/BHMA A156.2 requirements).
2. Vertical Impact: Exceed 100 vertical impacts (20 times ANSI/BHMA A156.2 requirements).
3. Furnish with solid cast levers, standard 2 3/4" backset, and 1/2" (3/4" at rated paired openings) throw brass or stainless steel latchbolt.
4. Locks are to be non-handed and fully field reversible.
5. Extended cycle test: Locks to have been cycle tested in ordinance with ANSI/BHMA 156.2 requirements to 2 million cycles.
6. Manufacturers:
   a. Corbin Russwin Hardware (RU) - CL3300X Series.

## 2.06 LOCK AND LATCH STRIKES

A. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:
1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
3. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.
4. Double-lipped strikes: For locks at double acting doors. Furnish with retractable stop for rescue hardware applications.

B. Standards: Comply with the following:
1. Strikes for Mortise Locks and Latches: BHMA A156.13.
2. Strikes for Bored Locks and Latches: BHMA A156.2.
3. Strikes for Auxiliary Deadlocks: BHMA A156.36.
4. Dustproof Strikes: BHMA A156.16.

## 2.07 CONVENTIONAL EXIT DEVICES

A. General Requirements: All exit devices specified herein shall meet or exceed the following criteria:
1. At doors not requiring a fire rating, provide devices complying with NFPA 101 and listed and labeled for "Panic Hardware" according to UL305. Provide proper fasteners as required by manufacturer including sex nuts and bolts at openings specified in the Hardware Sets.
2. Where exit devices are required on fire rated doors, provide devices complying with NFPA 80 and with UL labeling indicating "Fire Exit Hardware". Provide devices with the proper

fasteners for installation as tested and listed by UL. Consult manufacturer's catalog and template book for specific requirements.

3. Except on fire rated doors, provide exit devices with hex key dogging device to hold the pushbar and latch in a retracted position. Provide optional keyed cylinder dogging on devices where specified in Hardware Sets.
4. Devices must fit flat against the door face with no gap that permits unauthorized dogging of the push bar. The addition of filler strips is required in any case where the door light extends behind the device as in a full glass configuration.
5. Flush End Caps: Provide flush end caps made of architectural metal in the same finish as the devices as in the Hardware Sets. Plastic end caps will not be acceptable.
6. Lever Operating Trim: Where exit devices require lever trim, furnish manufacturer's heavy duty escutcheon trim with threaded studs for thru-bolts.
   a. Lock Trim Design: As indicated in Hardware Sets, provide finishes and designs to match that of the specified locksets.
   b. Where function of exit device requires a cylinder, provide a cylinder (Rim or Mortise) as specified in Hardware Sets.
7. Rim Exit Devices: Exit device rails shall release with less than 5 pounds of pressure per the California Building Code.
8. Rail Sizing: Provide exit device rails factory sized for proper door width application.
9. Through Bolt Installation: For exit devices and trim as indicated in Door Hardware Sets.

B. Conventional Push Rail Exit Devices (Heavy Duty): ANSI/BHMA A156.3, Grade 1 Certified Products Directory (CPD) listed panic and fire exit hardware devices furnished in the functions specified in the Hardware Sets. Exit device latch to be stainless steel, pullman type, with deadlock feature.
   1. Manufacturers:
      a. Corbin Russwin Hardware (RU) - ED4000 / ED5000 Series.

## 2.08 DOOR CLOSERS

A. All door closers specified herein shall meet or exceed the following criteria:
   1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers.
   2. Standards: Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.
   3. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the Americans with Disabilities Act, provide units complying with ANSI ICC/A117.1.
   4. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.
   5. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.
   6. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates as required for proper installation. Provide through-bolt and security type fasteners as specified in the hardware sets.

B. Door Closers, Surface Mounted (Heavy Duty): ANSI/BHMA A156.4, Grade 1 Certified Products Directory (CPD) listed surface mounted, heavy duty door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron or aluminum alloy body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control. Provide non-handed units standard.
   1. Manufacturers:
      a. Corbin Russwin Hardware (RU) - DC6000 Series.
      b. Norton Door Controls (NO) - 7500 Series.

## 2.09 ARCHITECTURAL TRIM

A. Door Protective Trim
   1. General: Door protective trim units to be of type and design as specified below or in the Hardware Sets.
   2. Size: Fabricate protection plates (kick, armor, or mop) not more than 2" less than door width (LDW) on stop side of single doors and 1" LDW on stop side of pairs of doors, and not more than 1" less than door width on pull side. Coordinate and provide proper width and height as required where conflicting hardware dictates. Height to be as specified in the Hardware Sets.
   3. Where plates are applied to fire rated doors with the top of the plate more than 16" above the bottom of the door, provide plates complying with NFPA 80. Consult manufacturer's catalog and template book for specific requirements for size and applications.
   4. Protection Plates: ANSI/BHMA A156.6 certified protection plates (kick, armor, or mop), fabricated from the following:
      a. Stainless Steel: 300 grade, 050-inch thick.
   5. Options and fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets. Provide countersunk screw holes.
   6. Manufacturers:
      a. Burns Manufacturing (BU).
      b. Hiawatha, Inc. (HI).
      c. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).

## 2.10 DOOR STOPS AND HOLDERS

A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.

B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 certified door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of door stops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.
   1. Manufacturers:
      a. Burns Manufacturing (BU).
      b. Hiawatha, Inc. (HI).
      c. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).

C. Overhead Door Stops and Holders: ANSI/BHMA A156.8, Grade 1 Certified Products Directory (CPD) listed overhead stops and holders to be surface or concealed types as indicated in Hardware Sets. Track, slide, arm and jamb bracket to be constructed of extruded bronze and shock absorber spring of heavy tempered steel. Provide non-handed design with mounting brackets as required for proper operation and function.
   1. Manufacturers:
      a. Rixson Door Controls (RF).
      b. Rockwood Products; ASSA ABLOY Architectural Door Accessories (RO).
      c. Sargent Manufacturing (SA).

## 2.11 ARCHITECTURAL SEALS

A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.

B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.
   1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.

C. Fire Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL-10C.
   1. Provide intumescent seals as indicated to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies, and NPFA 252, Standard Methods of Fire Tests of Door Assemblies.

D. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated.

E. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.

F. Manufacturers:
   1. Pemko Products; ASSA ABLOY Architectural Door Accessories (PE).
   2. Reese Enterprises, Inc. (RE).

**2.12 FABRICATION**

A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

**2.13 FINISHES**

A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.

B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware

C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.

B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

**3.02 PREPARATION**

A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.

B. Wood Doors: Comply with ANSI/DHI A115-W series.

**3.03 INSTALLATION**

A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.
   1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.

B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
   1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
   2. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."

3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.

C. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.

D. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."

E. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

## 3.04 FIELD QUALITY CONTROL

A. Field Inspection (Punch Report): Reference Division 01 Sections "Closeout Procedures". Produce project punch report for each installed door opening indicating compliance with approved submittals and verification hardware is properly installed, operating and adjusted. Include list of items to be completed and corrected, indicating the reasons or deficiencies causing the Work to be incomplete or rejected.
1. Organization of List: Include separate Door Opening and Deficiencies and Corrective Action Lists organized by Mark, Opening Remarks and Comments, and related Opening Images and Video Recordings.
2. Submit documentation of incomplete items in the following formats:
a. PDF electronic file.
b. Electronic formatted file integrated with the Openings Studio™ door opening management software platform.

B. Fire Door Assembly Inspection: Reference Division 01 Sections "Closeout Procedures". Conduct an initial fire door assembly inspection, including documentation reporting, upon completion of door hardware installation according to NFPA 80 Standard for Fire Doors and Other Opening Protectives, paragraph 5.2.4, requirements.

C. Opening Tags: Provide readable, QR-type label with password protected link-out to Openings Studio™ BIM software suite and the installed door and hardware information. Affix label to door frame as instructed by architect or owner.

## 3.05 ADJUSTING

A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

## 3.06 CLEANING AND PROTECTION

A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.

B. Clean adjacent surfaces soiled by door hardware installation.

C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

## 3.07 DEMONSTRATION

A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

## 3.08 DOOR HARDWARE SETS

A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.
   1. Quantities listed are for each pair of doors, or for each single door.
   2. The supplier is responsible for handing and sizing all products.
   3. Where multiple options for a piece of hardware are given in a single line item, the supplier shall provide the appropriate application for the opening.
   4. At existing openings with new hardware the supplier shall field inspect existing conditions prior to the submittal stage to verify the specified hardware will work as required. Provide alternate solutions and proposals as needed.

B. Manufacturer's Abbreviations:

**1. MK - MCKINNEY**
**2. RU - CORBIN RUSSWIN**
**3. OT - OTHER**
**4. RF - RIXSON**
**5. NO - NORTON**
**6. RO - ROCKWOOD**
**7. PE - PEMKO**

**HARDWARE SETS**

**SET: 5**

DOORS: **01**
**DESCRIPTION: TYPICAL JANITOR'S CLOSET & STORAGE ROOMS**

| | | | |
|---|---|---|---|
| **3 HINGE, FULL MORTISE** | **TA2314** | **US32D** | **MK** |
| **1 STOREROOM LOCK** | **CLX3357 PZD** | **626** | **RU** |
| **1 CYLINDER** | **MATCH EXISTING SYSTEM** | | **OT** |
| **1 KICK PLATE** | **K1050 10" CSK BEV** | **US32D** | **RO** |
| **1 DOOR STOP** | **441H** | **US26D** | **RO** |
| **1 GASKETING** | **S773D @ H & J** | | **PE** |
| **1 DOOR BOTTOM** | **420APKL** | | **PE** |

**NOTES: MOUNT KICKPLATE ON PULL SIDE OF THE DOOR.**

**SET: 6**

DOORS: **02 , 03 , 04 , 06**
**DESCRIPTION: TYPICAL SINGLE OCCUPANCY DORM ROOM**

| | | | |
|---|---|---|---|
| **3 HINGE, FULL MORTISE** | **TA2714** | **US26D** | **MK** |
| **1 DORMITORY LOCK** | **ML2065 HPSK M34 V21 " OCC/VAC" & " LOCK/UNLOCKED"** | **630** | **RU** |
| **1 CYLINDER** | **MATCH EXISTING SYSTEM** | | **OT** |
| **1 SURFACE CLOSER** | **7500H** | **689** | **NO** |
| **1 KICK PLATE** | **K1050 10" CSK BEV** | **US32D** | **RO** |
| **1 DOOR STOP** | **441H** | **US26D** | **RO** |
| **1 GASKETING** | **S773D @ H & J** | | **PE** |
| **1 DOOR BOTTOM** | **420APKL** | | **PE** |

**SET: 7**

DOORS: 12
DESCRIPTION: EXISTING DOOR & FRAME

| | | | |
|---|---|---|---|
| 1 | ALL EXISTING HARDWARE | REUSE OR REPLACE PER NOTES | OT |

NOTES: 1. ADJUST DOOR CLOSER TO PROPER ADA OPENING FORCE OR INSTALL NEW CLOSER
2. CONFIRM EXISTING THRESHOLD/SILL IS ADA COMPLIANT. REPLACE AS NECESSARY WITH ADA THRESHOLD TO MATCH THE EXISTING SILL CONDITIONS.

**SET: 8**

DOORS: 11
DESCRIPTION: EXISTING DOOR & FRAME

| | | | |
|---|---|---|---|
| 1 | ALL EXISTING HARDWARE | REUSE OR REPLACE PER NOTES | OT |

NOTES: 1. ADJUST DOOR CLOSER TO PROPER ADA OPENING FORCE OR INSTALL NEW CLOSER.

**SET: 9**

DOORS: **08 , 09**
**DESCRIPTION: ACCESSIBLE ALL GENDER SHOWER AND & TOILET ROOM**

| | | | |
|---|---|---|---|
| **3 HINGE, FULL MORTISE** | **TA2714** | **US26D** | **MK** |
| **1 DORMITORY LOCK** | **ML2065 HPSK M34 V21 " OCC/VAC" & " LOCK/UNLOCKED"** | **630** | **RU** |
| **1 CYLINDER** | **MATCH EXISTING SYSTEM** | | **OT** |
| **1 SURFACE CLOSER** | **7500** | **689** | **NO** |
| **1 KICK PLATE** | **K1050 10" CSK BEV** | **US32D** | **RO** |
| **1 MOP PLATE** | **K1050 6" CSK BEV** | **US32D** | **RO** |
| **1 DOOR STOP** | **441H** | **US26D** | **RO** |
| **1 GASKETING** | **S773D @ H & J** | | **PE** |

**SET: 10**

DOORS: **07**
**DESCRIPTION: EMERGENCY EXIT ONLY**

| | | | |
|---|---|---|---|
| **3 HINGE, FULL MORTISE** | **TA2314** | **US32D** | **MK** |
| **1 EXIT ONLY** | **ED5200 EO M110 M61 5CH** | **630** | **RU** |
| **1 CYLINDER** | **MATCH EXISTING SYSTEM** | | **OT** |
| **1 SURFACE CLOSER** | **PR7500** | **689** | **NO** |
| **1 DOOR STOP** | **466-RKW** | **BLACK** | **RO** |
| **1 THRESHOLD** | **271A VERIFY WITH SILL DETAIL** | | **PE** |
| **1 GASKETING** | **2891AS @ H & J** | | **PE** |
| **1 SWEEP** | **18041CNB** | | **PE** |

**SET: 11**

DOORS: **05**
**DESCRIPTION: STORAGE ROOM - OVERHEAD STOP**

| | | | |
|---|---|---|---|
| **3 HINGE, FULL MORTISE** | **TA2714** | **US26D** | **MK** |
| **1 STOREROOM LOCK** | **CLX3357 PZD** | **626** | **RU** |
| **1 CYLINDER** | **MATCH EXISTING SYSTEM** | | **OT** |

| | | | |
|---|---|---|---|
| 1 SURF OVERHEAD STOP | 10-336 | 630 | RF |
| 1 THRESHOLD | 174C MSA VERIFY WITH SILL DETAIL | | PE |
| 3 SILENCER | 608-RKW | | RO |

SET: 12

DOORS: 10
DESCRIPTION: KITCHEN

| | | | |
|---|---|---|---|
| 3 HINGE, FULL MORTISE | TA2714 | US26D | MK |
| 1 CLASSROOM LOCK | ML2055 PSA | 630 | RU |
| 1 CYLINDER | MATCH EXISTING SYSTEM | | OT |
| 1 SURFACE CLOSER | P7500 | 689 | NO |
| 1 KICK PLATE | K1050 10" CSK BEV | US32D | RO |
| 1 DOOR STOP | 441H | US26D | RO |
| 1 GASKETING | S773D @ H & J | | PE |

END OF SECTION

## SECTION 09 2116
## GYPSUM BOARD ASSEMBLIES

### PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Interior Metal stud wall framing (non-bearing).

B. Gypsum sheathing.

C. Gypsum wallboard.

D. Joint treatment and accessories.

E. Finish: Level 5 Finish (New Rooms: Interior Toilet Rooms, Dorm Rooms, Storage Rooms, Hallways

F. Finish: Textured Finish-matching adjacent existing painted gypsum board finishes.

### 1.02 RELATED REQUIREMENTS

A. Section 01 6116 - Volatile Organic Compound (VOC) Content Restrictions.

B. Section 06 1000 - Rough Carpentry: Building framing and sheathing.

C. Section 07 2100 - Thermal Insulation: Acoustic insulation.

### 1.03 REFERENCE STANDARDS

A. ASTM C475/C475M - Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board; 2017.

B. ASTM C557 - Standard Specification for Adhesives for Fastening Gypsum Wallboard to Wood Framing; 2003 (Reapproved 2017).

C. ASTM C645 - Standard Specification for Nonstructural Steel Framing Members; 2018.

D. ASTM C754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products; 2020.

E. ASTM C840 - Standard Specification for Application and Finishing of Gypsum Board; 2019b.

F. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs; 2018.

G. ASTM C1047 - Standard Specification for Accessories For Gypsum Wallboard and Gypsum Veneer Base; 2019.

H. ASTM C1178/C1178M - Standard Specification for Coated Glass Mat Water-Resistant Gypsum Backing Panel; 2018.

I. ASTM C1396/C1396M - Standard Specification for Gypsum Board; 2017.

J. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber; 2016.

K. ASTM E90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements; 2009 (Reapproved 2016).

L. ASTM E413 - Classification for Rating Sound Insulation; 2016.

M. GA-216 - Application and Finishing of Gypsum Panel Products; 2016.

### 1.04 SUBMITTALS

A. Product Data: Provide data on gypsum board, glass mat faced gypsum board, accessories, and joint finishing system.

### 1.05 QUALITY ASSURANCE

A. Installer Qualifications: Company specializing in performing gypsum board installation and finishing, with minimum Five years of experience.

## PART 2 PRODUCTS

### 2.01 GYPSUM BOARD ASSEMBLIES

A. Provide completed assemblies complying with ASTM C840 and GA-216.

### 2.02 METAL FRAMING MATERIALS

A. Manufacturers - Metal Framing, Connectors, and Accessories:
   1. ClarkDietrich; -: www.clarkdietrich.com.
   2. Jaimes Industries; -: www.jaimesind.com.
   3. Phillips Manufacturing Co; -: www.phillipsmfg.com.
   4. SCAFCO Corporation; -: www.scafco.com.
   5. Cemco: www.cemcosteel.com.

B. Non-structural Framing System Components: ASTM C645; galvanized sheet steel, of size and properties necessary to comply with ASTM C754 for the spacing indicated, with maximum deflection of wall framing of L/120 at 5 psf (L/120 at 240 Pa).
   1. Studs: C-shaped with knurled or embossed faces.
   2. Runners: U shaped, sized to match studs.

C. Partition Head To Structure Connections: Provide track fastened to structure with legs of sufficient length to accommodate deflection, for friction fit of studs cut short and fastened as indicated on drawings. and as required for a complete installation.

### 2.03 BOARD MATERIALS

A. Manufacturers - Gypsum-Based Board:
   1. American Gypsum Company; -: www.americangypsum.com.
   2. CertainTeed Corporation; -: www.certainteed.com.
   3. Georgia-Pacific Gypsum; -: www.gpgypsum.com.
   4. National Gypsum Company; -: www.nationalgypsum.com.
   5. PABCO Gypsum; -: www.pabcogypsum.com.
   6. USG Corporation; -: www.usg.com.

B. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.
   1. Application: Use for vertical surfaces and ceilings, unless otherwise indicated.
   2. At all assemblies: Use Type X board, UL or WH listed.
   3. Thickness:
      a. Vertical Surfaces: 5/8 inch (16 mm).
      b. Ceilings: 5/8 inch (16 mm).
   4. Paper-Faced Products:
      a. American Gypsum Company; FireBloc Type X Gypsum Wallboard: www.americangypsum.com.
      b. CertainTeed Corporation; Type X Drywall: www.certainteed.com.
      c. Continental Building Products; Firecheck Type X: www.continental-bp.com.
      d. Georgia-Pacific Gypsum; ToughRock Fireguard X: www.gpgypsum.com.
      e. National Gypsum Company; Gold Bond BRAND Fire-Shield Gypsum Board: www.nationalgypsum.com.
      f. USG Corporation; USG Sheetrock Brand EcoSmart Panels Firecode X: www.usg.com.

C. Backing Board For Wet Areas: Backing Board for Tile and Epoxy coating systems.
   1. Application: Surfaces behind tile in wet areas including tub and shower surrounds, shower ceilings, and _____.
   2. Glass Mat Faced Board: Coated glass mat water-resistant gypsum backing panel as defined in ASTM C1178/C1178M.
      a. Fire-Resistance-Rated Type: Type X core, thickness 5/8 inch (16 mm).
      b. Products:

1) CertainTeed Corporation; Diamondback 5/8" Type X Tile Backer: www.certainteed.com.
2) Georgia-Pacific Gypsum; DensShield Tile Backer: www.gpgypsum.com.
3) National Gypsum Company; Gold Bond eXP Tile Backer: www.nationalgypsum.com.

D. Acoustical Sound Dampening Wall Board: Two layers of heavy paper-faced, high-density gypsum board separated by a viscoelastic polymer layer and capable of achieving STC rating of 50 or more in typical stud wall assemblies as calculated in accordance with ASTM E413 and when tested in accordance with ASTM E90.
1. Thickness: 5/8 inch (16 mm).
2. Long Edges: Tapered.
3. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
4. Products:
a. CertainTeed Corporation; SilentFX Quick Cut Gypsum Board: www.certainteed.com.
b. CertainTeed Corporation; SilentFX Quick Cut Type X Gypsum Board: www.certainteed.com.
c. National Gypsum Company; Gold Bond SoundBreak XP Gypsum Board: www.nationalgypsum.com.
d. **Location: at walls between Dorm Rooms- Typical.**

## 2.04 GYPSUM WALLBOARD ACCESSORIES

A. Acoustic Insulation: As specified in Section 07 2100.

B. Acoustic Sealant: Acrylic emulsion latex or water-based elastomeric sealant; do not use solvent-based non-curing butyl sealant.
1. Products:
a. Franklin International, Inc; Titebond GREENchoice Professional Acoustical Smoke and Sound Sealant: www.titebond.com.
b. Liquid Nails, a brand of PPG Architectural Coatings; -: www.liquidnails.com.
c. Specified Technologies Inc; Smoke N Sound Acoustical Sealant: www.stifirestop.com.

C. Finishing Accessories: ASTM C1047, galvanized steel or rolled zinc, unless noted otherwise.
1. Types: As detailed or required for finished appearance.
2. Special Shapes: In addition to conventional corner bead and control joints, provide U-bead at exposed panel edges.

D. Joint Materials: ASTM C475/C475M and as recommended by gypsum board manufacturer for project conditions.
1. Fiberglass Tape: 2 inch (50 mm) wide, coated glass fiber tape for joints and corners, except as otherwise indicated.
2. Joint Compound: Setting type, field-mixed.

E. High Build Drywall Surfacer: Vinyl acrylic latex-based coating for spray application, designed to take the place of skim coating and separate paint primer in achieving Level 5 finish.
1. Products:
a. CertainTeed Corporation; Level V Wall and Ceiling Primer/Surfacer with M2Tech: www.certainteed.com/.
b. USG Corporation; USG Sheetrock Brand Tuff-Hide Primer-Surfacer: www.usg.com.

F. Screws for Fastening of Gypsum Panel Products to Cold-Formed Steel Studs Less than 0.033 inches (0.84 mm) in Thickness and Wood Members: ASTM C1002; self-piercing tapping screws, corrosion-resistant.

G. Adhesive for Attachment to Wood, ASTM C557:
1. Products:
a. Franklin International, Inc; Titebond PROvantage Professional Drywall Adhesive: www.titebond.com.
b. Liquid Nails, a brand of PPG Architectural Coatings; -: www.liquidnails.com.

## PART 3 EXECUTION

### 3.01 EXAMINATION

A. Verify that project conditions are appropriate for work of this section to commence.

### 3.02 FRAMING INSTALLATION

A. Metal Framing: Install in accordance with ASTM C754 and manufacturer's instructions.

B. Studs: Space studs at 16 inches on center (at 406 mm on center).
   1. Extend partition framing to structure where indicated and to ceiling in other locations.
   2. Partitions Terminating at Ceiling: Attach ceiling runner securely to ceiling track in accordance with manufacturer's instructions.
   3. Partitions Terminating at Structure: Attach extended leg top runner to structure, maintain clearance between top of studs and structure, and brace both flanges of studs with continuous bridging.

### 3.03 ACOUSTIC ACCESSORIES INSTALLATION

A. Acoustic Insulation: Place tightly within spaces, around cut openings, behind and around electrical and mechanical items within partitions, and tight to items passing through partitions.

B. Acoustic Sealant: Install in accordance with manufacturer's instructions.
   1. Place one bead continuously on substrate before installation of perimeter framing members.
   2. Seal around all penetrations by conduit, pipe, ducts, and rough-in boxes, except where firestopping is provided.

### 3.04 BOARD INSTALLATION

A. Comply with ASTM C840, GA-216, and manufacturer's instructions. Install to minimize butt end joints, especially in highly visible locations.

B. Single-Layer Nonrated: Install gypsum board in most economical direction, with ends and edges occurring over firm bearing.

C. Double-Layer, Nonrated: Use gypsum board for first layer, placed parallel to framing or furring members, with ends and edges occurring over firm bearing. Place second layer perpendicular to framing or furring members. Offset joints of second layer from joints of first layer.

D. Installation on Wood Framing: For nonrated assemblies, install as follows:
   1. Single-Layer Applications: Adhesive application.
   2. Double-Layer Application: Install base layer using screws. Install face layer using screws or adhesive.

### 3.05 INSTALLATION OF TRIM AND ACCESSORIES

A. Control Joints: Place control joints consistent with lines of building spaces and as indicated.

B. Corner Beads: Install at external corners, using longest practical lengths.

C. Edge Trim: Install at locations where gypsum board abuts dissimilar materials.

### 3.06 JOINT TREATMENT

A. Paper Faced Gypsum Board: Use fiberglass joint tape, embed with drying type joint compound and finish with drying type joint compound.

B. Finish gypsum board in accordance with levels defined in ASTM C840, as follows:
   1. Level 5: Walls and ceilings to receive semi-gloss or gloss paint finish and other areas specifically indicated.
   2. Level 1: Fire-resistance-rated wall areas above finished ceilings, whether or not accessible in the completed construction.

C. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
   1. Feather coats of joint compound so that camber is maximum 1/32 inch (0.8 mm).

D. Level 5 Finish at all exposed locations: Spray apply high build drywall surfacer over entire surface after joints have been properly treated; achieve a flat and tool mark-free finish.

**3.07 TOLERANCES**

A. Maximum Variation of Finished Gypsum Board Surface from True Flatness: 1/8 inch in 10 feet (3 mm in 3 m) in any direction.

**END OF SECTION**

## SECTION 09 2216

## NON-STRUCTURAL METAL FRAMING

### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

A. Metal partition framing. (Exterior metal stud non-bearing framing, Station #53)

B. Framing accessories.

#### 1.02 RELATED REQUIREMENTS

A. Section 09 2236 - Lath.

#### 1.03 REFERENCE STANDARDS

A. AISI S100 - North American Specification for the Design of Cold-Formed Steel Structural Members; 2016, with Supplement (2018).

B. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2019a.

C. ASTM C645 - Standard Specification for Nonstructural Steel Framing Members; 2018.

D. ASTM C754 - Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products; 2020.

#### 1.04 SUBMITTALS

A. Product Data: Provide data describing framing member materials and finish, product criteria, and limitations.

B. Product Data: Provide manufacturer's data on partition head to structure connectors, showing compliance with requirements.

### PART 2 PRODUCTS

#### 2.01 MANUFACTURERS

A. Metal Framing, Connectors, and Accessories:
   1. CEMCO; -: www.cemcosteel.com.
   2. ClarkDietrich; -: www.clarkdietrich.com.
   3. SCAFCO Corporation; -: www.scafco.com.
   4. Substitutions: See Section 01 6000 - Product Requirements.

#### 2.02 FRAMING MATERIALS

A. Non-Loadbearing Framing System Components: ASTM C645; galvanized sheet steel, of size and properties necessary to comply with ASTM C754 for the spacing indicated, with maximum deflection of wall framing of L/240 at 5 psf (L/240 at 240 Pa).
   1. Studs: C shaped with knurled or embossed faces.
   2. Runners: U shaped, sized to match studs.

B. Partition Head to Structure Connections: Provide mechanical anchorage devices that accommodate deflection using slotted holes, screws, and anti-friction bushings, preventing rotation of studs while maintaining structural performance of partition.
   1. Structural Performance: Maintain lateral load resistance and vertical movement capacity required by applicable code, when evaluated in accordance with AISI S100.
   2. Material: ASTM A653/A653M steel sheet, SS Grade 50, with G60/Z180 hot-dipped galvanized coating.

#### 2.03 FABRICATION

A. Fabricate assemblies of framed sections to sizes and profiles required.

B. Fit, reinforce, and brace framing members to suit design requirements.

C. Fit and assemble in largest practical sections for delivery to site, ready for installation.

## PART 3 EXECUTION

### 3.01 EXAMINATION

A. Verify existing conditions before starting work.

### 3.02 INSTALLATION OF STUD FRAMING

A. Partitions Terminating at Structure: Attach top runner to structure, maintain clearance between top of studs and structure, and connect studs to track using specified mechanical devices in accordance with manufacturer's instructions; verify free movement of top of stud connections; do not leave studs unattached to track.

B. Install studs vertically at spacing indicated on drawings.

C. Align stud web openings horizontally.

D. Install double studs at wall openings, door and window jambs, not more than 2 inches (50 mm) from each side of openings.

E. Coordinate installation of bucks, anchors, and blocking with electrical, mechanical, and other work to be placed within or behind stud framing.

### 3.03 TOLERANCES

A. Maximum Variation From True Position: 1/8 inch in 10 feet (3 mm in 3 m).

B. Maximum Variation From Plumb: 1/8 inch in 10 feet (3 mm in 3 m).

**END OF SECTION**

## SECTION 09 2236

## LATH

### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

A. Metal lath for cement plaster.

#### 1.02 RELATED REQUIREMENTS

A. Section 09 2400 - Cement Plastering.

#### 1.03 REFERENCE STANDARDS

A. ASTM C841 - Standard Specification for Installation of Interior Lathing and Furring; 2003 (Reapproved 2018).

B. ASTM C847 - Standard Specification for Metal Lath; 2018.

C. ASTM C954 - Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases to Steel Studs From 0.033 in. (0.84 mm) to 0.112 in. (2.84 mm) in Thickness; 2018.

D. ASTM C1002 - Standard Specification for Steel Self-Piercing Tapping Screws for Application of Gypsum Panel Products or Metal Plaster Bases to Wood Studs or Steel Studs; 2018.

#### 1.04 SUBMITTALS

A. Product Data: Provide data on furring and lathing components, structural characteristics, material limitations, and finish.

### PART 2 PRODUCTS

#### 2.01 MANUFACTURERS

A. Metal Lath and Accessories:
   1. Alabama Metal Industries Corporation: www.amico-lath.com.
   2. CEMCO; -: www.cemcosteel.com.
   3. Clarkwestern Dietrich Building Systems LLC; -: www.clarkdietrich.com.
   4. Phillips Manufacturing Co: www.phillipsmfg.com.
   5. Structa Wire Corporation: www.structawire.com.

#### 2.02 LATH

A. Diamond Mesh Metal Lath: ASTM C847, galvanized; self-furring.
   1. Weight: To suit application and as specified in ASTM C841 or ASTM C1063 for framing spacing.

B. Beads, Screeds, Joint Accessories, and Other Trim: Depth governed by plaster thickness, and maximum possible lengths.
   1. Material: Formed galvanized sheet steel, expanded metal flanges.
   2. Casing Beads with Weep Holes: Square edges.

#### 2.03 ACCESSORIES

A. Fasteners: Self-piercing tapping screws; ASTM C1002 or ASTM C954.

B. Tie Wire: Annealed galvanized steel.

### PART 3 EXECUTION

#### 3.01 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify that substrates are ready to receive work and conditions are suitable for application.

C. For exterior plaster and stucco on stud walls, verify that water-resistive barrier has been installed over sheathing substrate completely and correctly.

D. Do not begin until unacceptable conditions have been corrected.

E. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

**3.02 INSTALLATION - GENERAL**

A. Install metal lath and furring for Portland cement plaster in accordance with ASTM C1063.

**3.03 LATH INSTALLATION**

A. Apply lath taut, with long dimension perpendicular to supports.

B. Lap or nest ends of metal lath in accordance with ASTM C841.

C. Continuously reinforce internal angles with corner mesh, except where the metal lath returns 3 inches (75 mm) from corner to form the angle reinforcement; fasten at perimeter edges only.

D. Place corner bead at external wall corners; fasten at outer edges of lath only.

E. Place base screeds at termination of plaster areas; secure rigidly in place.

F. Place lath vertically above each top corner and each side of door frames to 6 inches (150 mm) above ceiling line.

G. Place casing beads at terminations of plaster finish. Butt and align ends. Secure rigidly in place.

H. Place additional strip mesh diagonally at corners of lathed openings. Secure rigidly in place.

**3.04 TOLERANCES**

A. Maximum Variation from True Lines and Levels: 1/8 inch in 10 feet (3 mm in 3 m).

B. Maximum Variation from True Position: 1/8 inch (3 mm).

**END OF SECTION**

## SECTION 09 2400
## CEMENT PLASTERING

### PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Exterior Cement plastering.

B. Misc.

### 1.02 RELATED REQUIREMENTS

A. Section 09 2236 - Lath: Lath, furring, beads, screeds, and joint accessories for plaster base.

B. Section 09 9113 - Exterior Painting.

### 1.03 REFERENCE STANDARDS

A. ASTM C150/C150M - Standard Specification for Portland Cement; 2018.

B. ASTM C926 - Standard Specification for Application of Portland Cement-Based Plaster; 2020.

### 1.04 SUBMITTALS

A. Product Data: Provide data on plaster materials and trim accessories.

B. Samples:
   1. Submit one sample of each type trim accessory.
   2. Submit Two samples of two separate exterior plaster finish.

C. Installer's Qualification Statement.

### 1.05 QUALITY ASSURANCE

A. Installer Qualifications: Company specializing in performing the work of this section with minimum three years documented experience.

B. Copies of Documents at Project Site: Maintain at the project site a copy of each referenced document that prescribes execution requirements.

### 1.06 MOCK-UP

### 1.07 FIELD CONDITIONS

A. Exterior Plaster Work: Do not apply plaster when substrate or ambient air temperature is 40 degrees F (4 degrees C) or lower, or when temperature is expected to drop below 40 degrees F (4 degrees C) within 48 hours of application.

### PART 2 PRODUCTS

### 2.01 CEMENT PLASTER APPLICATIONS

A. Lath Plaster Base: Metal lath.
   1. Plaster Type: Factory prepared plaster mix.
   2. Number of Coats: Three.
   3. First Coat: Apply to a nominal thickness of 3/8 inch (9 mm).
   4. Second Coat: Apply to a nominal thickness of 3/8 inch (9 mm).
   5. Finish Coat: Apply to a nominal thickness of 1/8 inch (3 mm).
      a. Texture: Light Sand.

### 2.02 FACTORY PREPARED CEMENT PLASTER

A. Exterior Portland cement plaster system made of scratch and brown base coat, leveling coat with reinforcing mesh, and acrylic finish coat; install in accordance with ASTM C926.
   1. Manufacturer - Basis of Design:
      a. LaHabra; FastWall 300: www.lahabrastucco.com.

### 2.03 ACCESSORIES

A. Lath: As specified in Section 09 2236.

B. Beads, Screeds, and Joint Accessories: As specified in Section 09 2236.

C. Building Stucco wrap System:
   1. Two (2) layers of Grade D (60 min. each ply) asphalt saturated Kraft building paper:
   2. Henry Two -Ply Super Jumbo Tex 60 min. www.henry.com
   3. Accessories: Henry FortiFlash (all openings and penetrations).
   4. Accessories: Sealant, Henry Moistop Sealant

**END OF SECTION**

## SECTION 09 3000

## TILING

### PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Tile for wall applications.

B. Coated glass mat backer board as tile substrate.

C. Stone thresholds.

D. Non-ceramic trim.

### 1.02 REFERENCE STANDARDS

A. ANSI A108/A118/A136 - American National Standard Specifications for the Installation of Ceramic Tile (Compendium); 2019.

B. ANSI A108.1a - American National Standard Specifications for Installation of Ceramic Tile in the Wet-Set Method, with Portland Cement Mortar; 2017.

C. ANSI A108.1b - American National Standard Specifications for Installation of Ceramic Tile on a Cured Portland Cement Mortar Setting Bed with Dry-Set or Latex-Portland Cement Mortar; 2017.

D. ANSI A108.1c - Specifications for Contractors Option: Installation of Ceramic Tile in the Wet-Set Method with Portland Cement Mortar or Installation of Ceramic Tile on a Cured Portland Cement Mortar Bed with Dry-Set or Latex-Portland Cement; 1999 (Reaffirmed 2016).

E. ANSI A108.2 - American National Standard General Requirements: Materials, Environmental and Workmanship; 2019.

F. ANSI A108.4 - American National Standard Specifications for Installation of Ceramic Tile with Organic Adhesives or Water Cleanable Tile-Setting Epoxy Adhesive; 2009 (Revised).

G. ANSI A108.5 - American National Standard Specifications for Installation of Ceramic Tile with Dry-Set Portland Cement Mortar or Latex-Portland Cement Mortar; 1999 (Reaffirmed 2010).

H. ANSI A108.6 - American National Standard Specifications for Installation of Ceramic Tile with Chemical Resistant, Water Cleanable Tile-Setting and -Grouting Epoxy; 1999 (Reaffirmed 2010).

I. ANSI A108.8 - American National Standard Specifications for Installation of Ceramic Tile with Chemical Resistant Furan Resin Mortar and Grout; 1999 (Reaffirmed 2010).

J. ANSI A108.9 - American National Standard Specifications for Installation of Ceramic Tile with Modified Epoxy Emulsion Mortar/Grout; 1999 (Reaffirmed 2010).

K. ANSI A108.10 - American National Standard Specifications for Installation of Grout in Tilework; 2017.

L. ANSI A108.11 - American National Standard Specifications for Interior Installation of Cementitious Backer Units; 2018.

M. ANSI A108.12 - American National Standard for Installation of Ceramic Tile with EGP (Exterior Glue Plywood) Latex-Portland Cement Mortar; 1999 (Reaffirmed 2010).

N. ANSI A108.13 - American National Standard for Installation of Load Bearing, Bonded, Waterproof Membranes for Thin-Set Ceramic Tile and Dimension Stone; 2005 (Reaffirmed 2016).

O. ANSI A108.19 - American National Standard Specifications for Interior Installation of Gauged Porcelain Tiles and Gauged Porcelain Tile Panels/Slabs by the Thin-Bed Method Bonded with Modified Dry-Set Cement Mortar or Improved Modified Dry-Set Cement Mortar; 2020.

P. ANSI A118.4 - American National Standard Specifications for Modified Dry-Set Cement Mortar; 2012 (Revised).

Q. ANSI A118.7 - American National Standard Specifications for High Performance Cement Grouts for Tile Installation; 2010 (Reaffirmed 2016).

R. ASTM C373 - Standard Test Methods for Determination of Water Absorption and Associated Properties by Vacuum Method for Pressed Ceramic Tiles and Glass Tiles and Boil Method for Extruded Ceramic Tiles and Non-tile Fired Ceramic Whiteware Products; 2018.

S. ASTM C1178/C1178M - Standard Specification for Coated Glass Mat Water-Resistant Gypsum Backing Panel; 2018.

T. TCNA (HB) - Handbook for Ceramic, Glass, and Stone Tile Installation; 2019.

**1.03 ADMINISTRATIVE REQUIREMENTS**

A. Preinstallation Meeting: Convene a preinstallation meeting one week before starting work of this section; require attendance by affected installers.

**1.04 SUBMITTALS**

A. Shop Drawings: Indicate tile layout, patterns, perimeter conditions, junctions with dissimilar materials, control and expansion joints, thresholds, ceramic accessories, and setting details.

B. Installer's Qualification Statement:
   1. Submit documentation of completion of apprenticeship and certification programs.

C. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. Extra Tile: 1 percent of each size, color, and surface finish combination, but not less than 5 of each type.

**1.05 QUALITY ASSURANCE**

A. Maintain one copy of and ANSI A108/A118/A136 and TCNA (HB) on site.

B. Installer Qualifications:
   1. Company and Installing workers specializing in performing tile installation, with minimum of five years of documented experience.

**1.06 DELIVERY, STORAGE, AND HANDLING**

A. Protect adhesives from freezing or overheating in accordance with manufacturer's instructions.

**1.07 FIELD CONDITIONS**

A. Do not install solvent-based products in an unventilated environment.

B. Maintain ambient and substrate temperature above 50 degrees F (10 degrees C) and below 100 degrees F (38 degrees C) during installation and curing of setting materials.

**PART 2 PRODUCTS**

**2.01 TILE**

A. Manufacturers: All products by the same manufacturer.
   1. American Olean Corporation: www.americanolean.com.
   2. Dal-Tile Corporation: www.daltile.com.
   3. Emser Tile, LLC: www.emser.com.

B. Porcelain Tile:
   1. Moisture Absorption: 0 to 0.5 percent as tested in accordance with ASTM C373.
   2. Size: 12x24 inch (305x457 mm), nominal.
   3. Thickness: 3/8 inch (9.5 mm).
   4. Edges: Square.
   5. Surface Finish: Matte glazed.
   6. Color(s): To be selected by Architect from manufacturer's full range.
   7. Products:
      a. **Basis of Design**: Dal-Tile Corporation; Portfolio Colorbody Porcelain: www.daltile.com.

## 2.02 TRIM AND ACCESSORIES

A. Non-Ceramic Trim: Satin natural anodized extruded aluminum, style and dimensions to suit application, for setting using tile mortar or adhesive.
   1. Manufacturers:
      a. Schluter-Systems: www.schluter.com/#sle.
      b. Genesis APS International: www.genesis-aps.com/#sle.

## 2.03 SETTING MATERIALS

A. Provide setting and grout materials from same manufacturer.

B. Latex-Portland Cement Mortar Bond Coat: ANSI A118.4. Wall Tile
   1. Applications: Use this type of bond coat where Large and Heavy Tile (LHT) mortar is indicated.
   2. Products:
      a. ARDEX Engineered Cements; ARDEX X 5: www.ardexamericas.com.
      b. Custom Building Products; ProLite Premium Rapid Setting Large Format Tile Mortar, with Multi-Surface Bonding Primer: www.custombuildingproducts.com.
      c. H.B. Fuller Construction Products, Inc; TEC Ultimate Large Tile Mortar: www.tecspecialty.com.
      d. LATICRETE International, Inc; 257 TITANIUM: www.laticrete.com.
      e. Merkrete, by Parex USA, Inc; Merkrete 735 Premium Flex: www.merkrete.com/#sle.
      f. Sika Corp; SikaTile 300 Set: www.sika.com.

## 2.04 GROUTS

A. Provide setting and grout materials from same manufacturer.

B. High Performance Polymer Modified Grout: ANSI A118.7 polymer modified cement grout.
   1. Applications: Use this type of grout where indicated and where no other type of grout is indicated.
   2. Use sanded grout for joints 1/8 inch (3.2 mm) wide and larger; use unsanded grout for joints less than 1/8 inch (3.2 mm) wide.
   3. Color(s): As selected by Architect from manufacturer's full line.
   4. Products:
      a. ARDEX Engineered Cements; ARDEX FL: www.ardexamericas.com.
      b. Custom Building Products; Prism Color Consistent Grout: www.custombuildingproducts.com.
      c. H.B. Fuller Construction Products, Inc; TEC AccuColor Plus Grout: www.tecspecialty.com.
      d. LATICRETE International, Inc; LATICRETE PERMACOLOR Grout: www.laticrete.com.
      e. Merkrete, by Parex USA, Inc; Merkrete Pro Grout: www.merkrete.com.

## 2.05 MAINTENANCE MATERIALS

A. Tile Sealant: Gunnable, silicone, siliconized acrylic, or urethane sealant; moisture and mildew resistant type.
   1. Applications: Between tile and plumbing fixtures.
   2. Color(s): As selected by Architect from manufacturer's full line.
   3. Products:
      a. ARDEX Engineered Cements; ARDEX SX: www.ardexamericas.com.
      b. Custom Building Products; Commercial 100% Silicone Caulk: www.custombuildingproducts.com.
      c. LATICRETE International, Inc; LATICRETE LATASIL: www.laticrete.com.
      d. Merkrete, by Parex USA, Inc; Merkrete Colored Caulking: www.merkrete.com.
      e. Rust-Oleum Corporation; Merkrete Colored Caulking: www.rustoleum.com.

## 2.06 ACCESSORY MATERIALS

A. Backer Board: Coated glass mat type complying with ASTM C1178/C1178M; Inorganic fiberglass mat on both surfaces and integral acrylic coating vapor retarder.

B. Mesh Tape: 2 inch (50 mm) wide self-adhesive fiberglass mesh tape.

# PART 3 EXECUTION

## 3.01 EXAMINATION

A. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive tile.

## 3.02 PREPARATION

A. Protect surrounding work from damage.

B. Vacuum clean surfaces and damp clean.

C. Seal substrate surface cracks with filler. Level existing substrate surfaces to acceptable flatness tolerances.

D. Install backer board in accordance with ANSI A108.11 and board manufacturer's instructions. Tape joints and corners, cover with skim coat of setting material to a feather edge.

E. Prepare substrate surfaces for adhesive installation in accordance with adhesive manufacturer's instructions.

## 3.03 INSTALLATION - GENERAL

A. Install tile, thresholds, and stair treads and grout in accordance with applicable requirements of ANSI A108.1a through ANSI A108.19 , manufacturer's instructions, and TCNA (HB) recommendations.

B. Request tile pattern. Do not interrupt tile pattern through openings.

C. Cut and fit tile to penetrations through tile, leaving sealant joint space. Form corners and bases neatly. Align floor joints.

D. Place tile joints uniform in width, subject to variance in tolerance allowed in tile size. Make grout joints without voids, cracks, excess mortar or excess grout, or too little grout.

E. Install non-ceramic trim in accordance with manufacturer's instructions.

F. Sound tile after setting. Replace hollow sounding units.

G. Keep control and expansion joints free of mortar, grout, and adhesive.

H. Prior to grouting, allow installation to completely cure; minimum of 48 hours.

I. Grout tile joints unless otherwise indicated. Use standard grout unless otherwise indicated.

J. At changes in plane and tile-to-tile control joints, use tile sealant instead of grout, with either bond breaker tape or backer rod as appropriate to prevent three-sided bonding.

## 3.04 INSTALLATION - WALL TILE

A. Over coated glass mat backer board on studs, install in accordance with TCNA (HB) Method W245.

## 3.05 CLEANING

A. Clean tile and grout surfaces.

## 3.06 PROTECTION

A. Do not permit traffic over finished floor surface for 4 days after installation.

**END OF SECTION**

## SECTION 09 5100
## ACOUSTICAL CEILINGS

### PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Suspended metal grid ceiling system.

B. Acoustical units.

### 1.02 RELATED REQUIREMENTS

A. Section 01 6116 - Volatile Organic Compound (VOC) Content Restrictions.

B. Section 07 2100 - Thermal Insulation: Acoustical insulation.

### 1.03 REFERENCE STANDARDS

A. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures; Most Recent Edition Cited by Referring Code or Reference Standard.

B. ASTM C635/C635M - Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings; 2017.

C. ASTM C636/C636M - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels; 2013.

D. ASTM E580/E580M - Standard Practice for Installation of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Subject to Earthquake Ground Motions; 2020.

E. ASTM E1264 - Standard Classification for Acoustical Ceiling Products; 2019.

### 1.04 ADMINISTRATIVE REQUIREMENTS

A. Sequence work to ensure acoustical ceilings are not installed until building is enclosed, sufficient heat is provided, dust generating activities have terminated, and overhead work is completed, tested, and approved.

B. Do not install acoustical units until after interior wet work is dry.

### 1.05 SUBMITTALS

A. Shop Drawings: Indicate grid layout and related dimensioning.

B. Product Data: Provide data on suspension system components and acoustical units.

C. Samples: Submit two samples 6x6 inch (120x120 mm) in size illustrating material and finish of acoustical units.

D. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.

### PART 2 PRODUCTS

### 2.01 MANUFACTURERS

A. Acoustic Tiles/Panels: Basis of Design: Armstong
   1. Armstrong World Industries, Inc; -: www.armstrongceilings.com.
   2. CertainTeed Corporation; -: www.certainteed.com.
   3. USG Corporation; -: www.usg.com/ceilings.

B. Suspension Systems:
   1. Same as for acoustical units.

### 2.02 PERFORMANCE REQUIREMENTS

A. Seismic Performance: Ceiling systems designed to withstand the effects of earthquake motions determined according to ASCE 7 for Seismic Design Category D, E, or F and complying with the following:

### 2.03 ACOUSTICAL UNITS

A. Acoustical Panels: Painted mineral fiber, with the following characteristics:

1. Classification: ASTM E1264 Type III.
2. Size: 24 by 24 inches (610 by 610 mm).
3. Thickness: 3/4 inch (19 mm).
4. Panel Edge: Square.
5. Tile Edge: Square.
   a. Joint: Kerfed and rabbeted.
6. Color: White.
7. Armstrong Panel: Ultima Lay-in (Mineral Fiber, Fine Texture).
8. Suspension System: Exposed grid.

**2.04 SUSPENSION SYSTEM(S)**

A. Metal Suspension Systems - General: Complying with ASTM C635/C635M; die cut and interlocking components, with perimeter moldings, stabilizer bars, and clips as required.

B. Exposed Suspension System: Hot-dipped galvanized steel grid with aluminum cap.
   1. Application(s): Seismic.
   2. Structural Classification: Intermediate-duty, when tested in accordance with ASTM C635/C635M.
   3. Profile: Tee; 15/16 inch (24 mm) face width.
   4. Finish: Baked enamel.
   5. Color: White.

**2.05 ACCESSORIES**

A. Support Channels and Hangers: Galvanized steel; size and type to suit application, seismic requirements, and ceiling system flatness requirement specified.

B. Hanger Wire: 12 gauge, 0.08 inch (2 mm) galvanized steel wire.

C. Seismic Clips: Manufacturer's standard clips for seismic conditions and to suit application.

D. Perimeter Moldings: Same metal and finish as grid.

E. Acoustical Insulation: Specified in Section 07 2100. (As located in the Drawings -Dorm Rooms)

F. Touch-up Paint: Type and color to match acoustical and grid units.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

A. Verify existing conditions before starting work.

B. Verify that layout of hangers will not interfere with other work.

**3.02 PREPARATION**

A. Install after major above-ceiling work is complete.

B. Coordinate the location of hangers with other work.

**3.03 INSTALLATION - SUSPENSION SYSTEM**

A. Install suspension system in accordance with ASTM C636/C636M, ASTM E580/E580M, and manufacturer's instructions and as supplemented in this section.

B. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:360.

C. Perimeter Molding: Install at intersection of ceiling and vertical surfaces and at junctions with other interruptions.
   1. Use longest practical lengths.
   2. Overlap and rivet corners.

D. Seismic Suspension System, Seismic Design Categories D, E, F: Hang suspension system with grid ends attached to the perimeter molding on two adjacent walls; on opposite walls, maintain a 3/4 inch (19 mm) clearance between grid ends and wall.

E. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.

F. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.

G. Support fixture loads using supplementary hangers located within 6 inches (152 mm) of each corner, or support components independently.

H. Do not eccentrically load system or induce rotation of runners.

**3.04 INSTALLATION - ACOUSTICAL UNITS**

A. Install acoustical units in accordance with manufacturer's instructions.

B. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.

C. Fit border trim neatly against abutting surfaces.

D. Install acoustical units level, in uniform plane, and free from twist, warp, and dents.

E. Cutting Acoustical Units:
   1. Make field cut edges of same profile as factory edges.

F. Where round obstructions occur, provide preformed closures to match perimeter molding.

**3.05 TOLERANCES**

A. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet (3 mm in 3 m).

B. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: 2 degrees.

**END OF SECTION**

## SECTION 09 6500
## RESILIENT FLOORING

### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

A. Resilient tile flooring (VCT).

B. Resilient base.

C. Installation accessories.

#### 1.02 RELATED REQUIREMENTS

A. Section 01 6116 - Volatile Organic Compound (VOC) Content Restrictions.

#### 1.03 REFERENCE STANDARDS

A. ASTM F1066 - Standard Specification for Vinyl Composition Floor Tile; 2004 (Reapproved 2018).

B. ASTM F1861 - Standard Specification for Resilient Wall Base; 2016.

C. RFCI (RWP) - Recommended Work Practices for Removal of Resilient Floor Coverings; 2011.

D. UL 2824 - GREENGUARD Certification Program Method for Measuring Microbial Resistance From Various Sources Using Static Environmental Chambers; Current Edition, Including All Revisions.

#### 1.04 SUBMITTALS

A. Product Data: Provide data on specified products, describing physical and performance characteristics; including sizes, patterns and colors available; and installation instructions.

B. Shop Drawings: Indicate seaming plans and floor patterns.

C. Selection Samples: Submit manufacturer's complete set of color samples for Architect's initial selection.

D. Sustainable Design Submittal: Submit VOC content documentation for flooring and adhesives.

E. Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning, stripping, and re-waxing.

#### 1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing specified flooring with minimum three years experience.

B. Installer Qualifications: Company specializing in installing specified flooring with minimum three years experience.

#### 1.06 DELIVERY, STORAGE, AND HANDLING

A. Upon receipt, immediately remove any shrink-wrap and check materials for damage and the correct style, color, quantity and run numbers.

B. Store all materials off of the floor in an acclimatized, weather-tight space.

C. Maintain temperature in storage area between 55 degrees F (13 degrees C) and 90 degrees F (72 degrees C).

#### 1.07 FIELD CONDITIONS

A. Store materials for not less than **48 hours** prior to installation in area of installation at a temperature of 70 degrees F (21 degrees C) to achieve temperature stability. Thereafter, maintain conditions above 55 degrees F (13 degrees C).

### PART 2 PRODUCTS

#### 2.01 TILE FLOORING

A. Vinyl Composition Tile: Homogeneous, with color extending throughout thickness.
   1. Manufacturers: Basis of Design: Armstrong Flooring

a. Armstrong Flooring, Inc; Standard Execelon Imperial Texture: www.armstrongflooring.com.
b. Johnsonite, a Tarkett Company; -: www.johnsonite.com.

2. Minimum Requirements: Comply with ASTM F1066, of Class corresponding to type specified.
3. Size: 12 by 12 inch (305 by 305 mm).
4. Thickness: 0.125 inch (3.2 mm).
5. Color: To be selected by Architect from manufacturer's full range.

## 2.02 RESILIENT BASE

A. Resilient Base: ASTM F1861, Type TS rubber, vulcanized thermoset; Style B, Cove.
1. Manufacturers:
a. Burke Flooring; Commercial Wall Base - TS: www.burkeflooring.com.
b. Johnsonite, a Tarkett Company; -: www.johnsonite.com.
c. Roppe Corp; -: www.roppe.com.
d. Mannington Commercial: www.manningtoncommercial.com.
2. Height: 4 inch (100 mm).
3. Thickness: 0.125 inch (3.2 mm).
4. Finish: Satin.
5. Length: 4 foot (1.2 m) sections.
6. Color: To be selected by Architect from manufacturer's full range.
7. Accessories: Premolded external corners and internal corners.

## 2.03 ACCESSORIES

A. Primers, Adhesives, and Seam Sealer: Waterproof; types recommended by flooring manufacturer.
1. VOC Content Limits: As specified in Section 01 6116.

# PART 3 EXECUTION

## 3.01 EXAMINATION

A. Verify that surfaces are flat to tolerances acceptable to flooring manufacturer, free of cracks that might telegraph through flooring, clean, dry, and free of curing compounds, surface hardeners, and other chemicals that might interfere with bonding of flooring to substrate.

B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive resilient base.

C. Cementitious Subfloor Surfaces: Verify that substrates are ready for resilient flooring installation by testing for moisture and alkalinity (pH).
1. Obtain instructions if test results are not within limits recommended by resilient flooring manufacturer and adhesive materials manufacturer.

## 3.02 PREPARATION

A. Remove existing resilient flooring and flooring adhesives; follow the recommendations of RFCI (RWP).

B. Prepare floor substrates as recommended by flooring and adhesive manufacturers.

C. Remove subfloor ridges and bumps. Fill minor low spots, cracks, joints, holes, and other defects with subfloor filler to achieve smooth, flat, hard surface.

D. Prohibit traffic until filler is fully cured.

E. Clean substrate.

F. Apply primer as required to prevent "bleed-through" or interference with adhesion by substances that cannot be removed.

## 3.03 INSTALLATION - GENERAL

A. Starting installation constitutes acceptance of subfloor conditions.

B. Install in accordance with manufacturer's written instructions.

C. Adhesive-Applied Installation:
   1. Spread only enough adhesive to permit installation of materials before initial set.
   2. Fit joints and butt seams tightly.
   3. Set flooring in place, press with heavy roller to attain full adhesion.

D. Where type of floor finish, pattern, or color are different on opposite sides of door, terminate flooring under centerline of door.

E. Install edge strips at unprotected or exposed edges, where flooring terminates, and where indicated.

F. Scribe flooring to walls, columns, cabinets, floor outlets, and other appurtenances to produce tight joints.

**3.04 INSTALLATION - TILE FLOORING**

A. Mix tile from container to ensure shade variations are consistent when tile is placed, unless otherwise indicated in manufacturer's installation instructions.

B. Lay flooring with joints and seams parallel to building lines to produce symmetrical pattern.

C. Install loose-laid tile, fit interlocking edges tightly.

**3.05 INSTALLATION - RESILIENT BASE**

A. Fit joints tightly and make vertical. Maintain minimum dimension of 18 inches (45 mm) between joints.

B. Miter internal corners. At external corners, use premolded units. At exposed ends, use premolded units.

C. Install base on solid backing. Bond tightly to wall and floor surfaces.

**3.06 CLEANING**

A. Remove excess adhesive from floor, base, and wall surfaces without damage.

B. Clean in accordance with manufacturer's written instructions.

**3.07 PROTECTION**

A. Prohibit traffic on resilient flooring for 48 hours after installation.

**END OF SECTION**

## SECTION 09 6700

## FLUID-APPLIED FLOORING-WALL COVERING

### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

A. Fluid-applied flooring and integral coved base.

B. Fluid-applied Shower flooring, coved base and wall system.

#### 1.02 RELATED REQUIREMENTS

A. Section 01 61 16 - Volatile Organic Compound (VOC) Content Restrictions.

#### 1.03 REFERENCE STANDARDS

A. ASTM F1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride; 2011.

#### 1.04 SUBMITTALS

A. Product Data: Provide data on specified products, describing physical and performance characteristics; sizes, patterns and colors available.

B. Manufacturer's Installation Instructions: Indicate special procedures.

C. Maintenance Data: Include maintenance procedures, recommended maintenance materials, procedures for stain removal, repairing surface, and suggested schedule for cleaning.

#### 1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum three years documented experience.

B. Applicator Qualifications: Company specializing in performing the work of this section.
   1. Minimum four years of documented experience.

#### 1.06 MOCK UP

A. Construct mock-up(s) of fluid applied flooring to serve as basis for evaluation of texture and workmanship.
   1. Number of Mock-Ups to be Prepared: **ONE for wall and TWO for floor (slip resistant options).**
   2. Use same materials and methods for use in the work.
   3. Minimum Size: 12" x 12" inches (- mm).

B. Obtain approval of mock-up by Architect/Owner before proceeding with work.

C. Approved mock-up may **NOT** remain as part of the Work.

#### 1.07 DELIVERY, STORAGE, AND HANDLING

A. Store resin materials in a dry, secure area.

B. Store materials for three days prior to installation in area of installation to achieve temperature stability.

#### 1.08 FIELD CONDITIONS

A. Maintain minimum temperature in storage area of 55 degrees F (13 degrees C).

B. Store materials in area of installation for minimum period of 24 hours prior to installation.

C. Maintain ambient temperature required by manufacturer 72 hours prior to, during, and 24 hours after installation of materials.

### PART 2 PRODUCTS

#### 2.01 MANUFACTURERS

A. Fluid-Applied Flooring:

1. Everlast Epoxy Systems Inc, which is located at: 637 NW State Road 47 ; Lake City, FL 32025; Tel: 386-719-9979; Fax: 386-719-6982; Email: info@everlastepoxy.com ; Web: www.everlastepoxy.com .
2. Substitutions: Previously Reviewed and Approved Equals are Accepted.

**2.02 FLUID-APPLIED FLOORING/WALL SYSTEMS**

A. Fluid-Applied Flooring: Epoxy, no aggregate.
1. System Overview: 100% SOLIDS EPOXY, marble-chip and quartz aggregate slip resistant flooring and wall sytem, decorative broadcast.
a. Silica Quartz and Marble-chip aggregate
1) Shower: Anti-Skid finish
2) Toilet Room Area: slip resistant finish
b. Base: Three-component, integral troweled base, cove and wall system
c. Finish: Everlast Glaze Two component clear sealer.
d. Color: as selected by Architect from manufacturer's standard color range.
2. Thickness: 1/8" high build, nominal, when dry.
3. Texture: Slip resistant at floor, (tested in wet areas).

**2.03 ACCESSORIES**

A. Base Caps: Stainless Steel with projecting base of 1/8 inch (3 mm); Brushed S.S. color.

B. Cant Strips: Molded material compatible with flooring.

C. Subfloor Filler: Type recommended by fluid-applied flooring manufacturer.

D. Primer/Waterproofer: Type recommended by fluid-applied flooring manufacturer.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

A. Verify that sub-floor surfaces are smooth and flat within the tolerances specified for that type of work and are ready to receive flooring.

B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive flooring.

C. Verify that sub-floor surfaces are dust-free and free of substances that could impair bonding of materials to sub-floor surfaces.

D. Verify that concrete sub-floor surfaces are ready for flooring installation by testing for moisture emission rate and alkalinity; obtain instructions if test results are not within limits recommended by flooring materials manufacturer.

**3.02 PREPARATION**

A. Remove sub-floor ridges and bumps. Fill low spots, cracks, joints, holes, and other defects with sub-floor filler.

B. Apply, trowel, and float filler to achieve smooth, flat, hard surface. Grind irregularities above the surface level. Prohibit traffic until filler is cured.

C. Vacuum clean substrate.

D. Apply primer to surfaces required by flooring manufacturer.

**3.03 INSTALLATION - ACCESSORIES**

A. Install cant strips at base of walls where flooring is to be extended up wall as base.

B. Install terminating cap strip at top of base or shower wall; attach securely to wall substrate.

**3.04 INSTALLATION - FLOORING**

A. Apply in accordance with manufacturer's instructions.

B. Apply each coat to minimum thickness indicated.

C. Finish to smooth level surface and/or sloping to Floor Drains.

D. At movable partitions install flooring under partitions without interrupting floor pattern.

**3.05 PROTECTION**

A. Prohibit traffic on floor finish for 48 hours after installation.

B. Barricade area to protect flooring until fully cured.

**END OF SECTION**

## SECTION 09 6813
## TILE CARPETING

### PART 1 GENERAL

#### 1.01 SECTION INCLUDES

A. Carpet tile, fully adhered.

B. Removal of existing carpet.

#### 1.02 RELATED REQUIREMENTS

A. Section 01 6116 - Volatile Organic Compound (VOC) Content Restrictions.

B. Section 01 7419 - Construction Waste Management and Disposal: Reclamation/Recycling of new carpet tile scrap and removed carpet tile.

#### 1.03 REFERENCE STANDARDS

A. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring; 2019, with Editorial Revision (2020).

B. CRI 104 - Standard for Installation of Commercial Carpet; 2015.

C. CRI (GLP) - Green Label Plus Testing Program - Certified Products; Current Edition.

D. NFPA 253 - Standard Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source; 2019.

#### 1.04 SUBMITTALS

A. Product Data: Provide data on specified products, describing physical and performance characteristics; sizes, patterns, colors available, and method of installation.

B. Shop Drawings: Indicate layout of joints.

C. Samples: Submit THREE full carpet tiles illustrating color and pattern design for each carpet color selected.

D. Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning.

#### 1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing specified carpet tile with minimum three years documented experience.

B. Installer Qualifications: Company specializing in installing carpet tile with minimum three years documented experience and approved by carpet tile manufacturer.

C. Testing Agency Qualifications: Independent firm specializing in performing testing and inspections of the type specified in this section.

### PART 2 PRODUCTS

#### 2.01 MANUFACTURERS

A. Tile Carpeting: Basis of Design: Patcraft
   1. Patcraft; www.patcraft.com.

#### 2.02 MATERIALS

A. Tile Carpeting: _____, manufactured in one color dye lot.
   1. Tile Size: 18 by 18 inch (450 by 450 mm), nominal.

**END OF SECTION**

## SECTION 09 9113
## EXTERIOR PAINTING

### PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Surface preparation.

B. Field application of paints.

C. Materials for backpriming woodwork.

D. Scope: Finish exterior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated, including the following:
   1. Mechanical and Electrical:
      a. On the roof and outdoors, paint equipment that is exposed to weather or to view.
   2. Mechanical and Electrical equipment that is exposed to weather and/or to view without factory applied final finish.
   3. Exterior Cement Plaster
   4. Exterior Metals
   5. Exterior Sheet Metal Flashing
   6. Exterior Exposed Wood (including back painting)

E. Do Not Paint or Finish the Following Items:
   1. Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
   2. Items indicated to receive other finishes.
   3. Items indicated to remain unfinished.
   4. Fire rating labels, equipment serial number and capacity labels, and operating parts of equipment.
   5. Glass.
   6. Concealed pipes, ducts, and conduits.

### 1.02 RELATED REQUIREMENTS

A. Section 01 6116 - Volatile Organic Compound (VOC) Content Restrictions.

### 1.03 REFERENCE STANDARDS

A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; current edition.

B. ASTM D4442 - Standard Test Methods for Direct Moisture Content Measurement of Wood and Wood-Based Materials; 2016.

C. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; Current Edition.

D. SCAQMD 1113 - Architectural Coatings; 1977 (Amended 2016).

E. SSPC-SP 1 - Solvent Cleaning; 2015, with Editorial Revision (2016).

F. SSPC-SP 2 - Hand Tool Cleaning; 1982, with Editorial Revision (2004).

G. SSPC-SP 3 - Power Tool Cleaning; 1982, with Editorial Revision (2004).

### 1.04 SUBMITTALS

A. Product Data: Provide complete list of products to be used, with the following information for each:
   1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
   2. MPI product number (e.g. MPI #47).
   3. Cross-reference to specified paint system(s) product is to be used in; Include description of each system.
   4. Manufacturer's installation instructions.

5. If proposal of substitutions is allowed under submittal procedures, explanation of substitutions proposed.

B. Samples: Submit Two paper "draw down" samples, 8-1/2 by 11 inches (216 by 279 mm) in size, illustrating range of colors available for each finishing product specified.
   1. Where sheen is specified, submit samples in only that sheen.
   2. Where sheen is not specified, submit each color in each sheen available.
   3. Allow 30 days for approval process, after receipt of complete samples by Architect.
   4. Paint color submittals will not be considered until color submittals for major materials not to be painted, such as factory finished metals and Roofing materials, have been approved.

C. Certification: By manufacturer that paints and finishes comply with VOC limits specified.

D. Manufacturer's Instructions: Indicate special surface preparation procedures.

E. Maintenance Data: Submit data including finish schedule showing where each product/color/finish was used, product technical data sheets, material safety data sheets (MSDS), care and cleaning instructions, touch-up procedures, repair of painted and finished surfaces, and color samples of each color and finish used.

F. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. Extra Paint and Finish Materials: 1 gallon (4 L) of each color; from the same product run, store where directed by Owner.
   2. Label each container with color in addition to the manufacturer's label.

**1.05 QUALITY ASSURANCE**

A. Manufacturer Qualifications: Company specializing in manufacturing the products specified, with minimum three years experience.

B. Applicator Qualifications: Company specializing in performing the type of work specified with minimum Three years experience and with minimum Three years documented experience.

**1.06 MOCK-UP**

A. Provide door and frame assembly illustrating paint color, texture, and finish.

B. Locate where directed by Architect.

C. Mock-up may remain as part of the work.

**1.07 DELIVERY, STORAGE, AND HANDLING**

A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.

B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.

C. Paint Materials: Store at minimum ambient temperature of 45 degrees F (7 degrees C) and a maximum of 90 degrees F (32 degrees C), in ventilated area, and as required by manufacturer's instructions.

**1.08 FIELD CONDITIONS**

A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.

B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.

C. Do not apply exterior paint and finishes during rain or snow or windy days, or when relative humidity is outside the humidity ranges required by the paint product manufacturer.

D. Minimum Application Temperatures for Latex Paints: 50 degrees F (10 degrees C) for exterior; unless required otherwise by manufacturer's instructions.

E. Provide lighting level of 80 ft candles (860 lx) measured mid-height at substrate surface.

## PART 2 PRODUCTS

### 2.01 MANUFACTURERS

A. Provide paints and finishes used in any individual system from the same manufacturer; no exceptions.

B. Paints:
   1. Base Manufacturer: Sherwin Williams.
   2. Behr Process Corporation; _____: www.behr.com/#sle.
   3. PPG Paints; _____: www.ppgpaints.com/#sle.
   4. Pratt & Lambert Paints: www.prattandlambert.com/#sle.
   5. Sherwin-Williams Company; _____: www.sherwin-williams.com/#sle.
   6. Valspar Corporation: www.valsparpaint.com/#sle.
   7. Dunn Edwards: www.dunnedwards.com.

### 2.02 PAINTS AND FINISHES - GENERAL

A. Paints and Finishes: Ready mixed, unless required to be a field-catalyzed paint.
   1. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
   2. Supply each paint material in quantity required to complete entire project's work from a single production run.
   3. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.

B. Volatile Organic Compound (VOC) Content: Comply with Section 01 6116.

C. Volatile Organic Compound (VOC) Content:
   1. Provide paints and finishes that comply with the most stringent requirements specified in the following:
      a. 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
      b. SCAQMD 1113 Rule.
      c. Architectural coatings VOC limits of State in which the project is located.
   2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.

D. Flammability: Comply with applicable code for surface burning characteristics.

E. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by Architect from the manufacturer's full line.

F. Colors: As indicated in Color Schedule.
   1. Allow for minimum of three colors for each system, unless otherwise indicated, without additional cost to Owner.

### 2.03 PAINT SYSTEMS - EXTERIOR

A. Exterior Surfaces to be Painted, Unless Otherwise Indicated: Including concrete and Exterior Cement Plaster.
   1. Two top coats and one coat primer. _ Typical unless noted otherwise
   2. **Exterior Cement Plaster**: Primer and Top Coats: Exterior Light Industrial Coating, Water Based.
      a. Products:
         1) Sherwin Williams: Loxon Conditioner. Prime Coat (**One** coat): All Cement Plaster areas (new and old).
         2) Sherwin Williams: Pro Industrial Loxon Acrylic Coating. Finish Coats (**Two** coats).
   3. **Exterior primed/bare Metal, Steel Hand Rails and doors/frames** (including interior side of Steel Windows and Doors):

a. Product: Sherwin Williams
   1) Provide **Additional Primer** (over shop prime) in-field applied (complete re-coat): Pro Industrial, Pro-Cryl Universal Primer **(One** coat).
   2) **Finish Coats:** Pro Industrial, DTM Acrylic Coating. **(Two** Coats).
   3) **DFT** (dry film thickness) per manufacturer's recommendations.

4. **Exterior Exposed Wood: Wood Facia/Trim**
   a. Product: Sherwin Williams
      1) Primer (over new and existing wood): **SW Exterior Latex, B42W08041**
      2) Finish Coats: **SW Resilience Exterior Latex, K43 Satin**

**2.04 PRIMERS**

A. Primers (in addition to items specified): Provide the following unless other primer is required or recommended by manufacturer of top coats.

**2.05 ACCESSORY MATERIALS**

A. Accessory Materials: Provide primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of painted surfaces.

B. Patching Material: Latex filler.

C. Fastener Head Cover Material: Latex filler.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

A. Do not begin application of paints and finishes until substrates have been properly prepared.

B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.

C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially effect proper application.

D. Test shop-applied primer for compatibility with subsequent cover materials.

E. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
   1. Exterior Plaster and Stucco: 12 percent.
   2. Masonry, Concrete, and Concrete Masonry Units: 12 percent.
   3. Exterior Wood: 15 percent, measured in accordance with ASTM D4442.

**3.02 PREPARATION**

A. Clean surfaces thoroughly and correct defects prior to application.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

C. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces for finishing.

D. Seal surfaces that might cause bleed through or staining of topcoat.

E. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.

F. Exterior Plaster:
   1. Brush and Power Wash plaster as recommended by Manufacturer and as required to clean surface. Dry completely prior to painting.
   2. Fill hairline cracks, small holes, and imperfections with exterior patching plaster. Make smooth and flush with adjacent surfaces. Wash and neutralize high alkali surfaces.
   3. Patch larger chips and cracking with Plaster. See Section 09 24 00 Cement Plaster.

G. Galvanized Surfaces:
   1. Remove surface contamination and oils and wash with solvent according to SSPC-SP 1.

H. Ferrous Metal:

1. Solvent clean according to SSPC-SP 1.
2. Remove rust, loose mill scale, and other foreign substances using using methods recommended in writing by paint manufacturer and as required to prepare base material. Protect from corrosion until coated.

I. Exterior Wood Surfaces to Receive Opaque Finish: Remove dust, grit, and foreign matter. Seal knots, pitch streaks, and sappy sections. Fill nail holes with tinted exterior calking compound after prime coat has been applied. **Back prime ALL new wood -concealed surfaces before installation -including cut edges.**

J. Metal Doors to be Painted: Prime metal door top and bottom edge surfaces.

**3.03 APPLICATION**

A. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.

B. Exterior Wood to Receive Opaque Finish: If final painting must be delayed more than 2 weeks after installation of woodwork, apply primer within 2 weeks and final coating within 4 weeks.

C. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".

D. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.

E. Apply each coat to uniform appearance.

F. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.

G. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

**3.04 FIELD QUALITY CONTROL**

A. Owner/Design Team will provide field inspection.

**3.05 CLEANING**

A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

**3.06 PROTECTION**

A. Protect finishes until completion of project.

B. Touch-up damaged finishes after Substantial Completion.

**3.07 COLOR SCHEDULE**

A. Matching Colors shall be verified during Submittals.

B. Contractor should provide the following quantity of differing colors for each material/surface:
1. Cement Plaster: Match Existing Colors
2. Metal (doors/windows): Match Existing Colors
3. Flashing: Match Existing Colors

**END OF SECTION**

## SECTION 09 9123
## INTERIOR PAINTING

### PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Surface preparation.

B. Field application of paints.

C. Scope: Finish **ALL** interior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated.
   1. Both sides and edges of plywood backboards for electrical and telecom equipment before installing equipment.
   2. Automatic Sprinkler piping. Paint piping and supports to the extent allowed by Code/Fire Authority.
   3. Mechanical.
      a. Paint all Exposed spiral ducts and supports. Pre-Finished Grilles at Spiral ducts are to be painted to match custom color of spiral ducts.
      b. Paint wall mounted intake grilles to match adjacent gypsum board surface.

D. Do Not Paint or Finish the Following Items:
   1. Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished.
   2. Items indicated to receive other finishes.
   3. Items indicated to remain unfinished.
   4. Fire rating labels, equipment serial number and capacity labels, bar code labels, and operating parts of equipment.
   5. Floors, unless specifically indicated.
   6. Ceramic and other tiles.
   7. Glass.
   8. Acoustical materials, unless specifically indicated.
   9. Concealed pipes, ducts, and conduits.

### 1.02 RELATED REQUIREMENTS

A. Section 01 6116 - Volatile Organic Compound (VOC) Content Restrictions.

### 1.03 REFERENCE STANDARDS

A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency; current edition.

B. ASTM D16 - Standard Terminology for Paint, Related Coatings, Materials, and Applications; 2016.

C. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual; Current Edition.

D. SCAQMD 1113 - Architectural Coatings; 1977 (Amended 2016).

E. SSPC V1 (PM1) - Good Painting Practice: Painting Manual, Volume 1; 2016.

F. SSPC-SP 1 - Solvent Cleaning; 2015, with Editorial Revision (2016).

G. SSPC-SP 2 - Hand Tool Cleaning; 1982, with Editorial Revision (2004).

H. SSPC-SP 3 - Power Tool Cleaning; 1982, with Editorial Revision (2004).

I. SSPC-SP 6 - Commercial Blast Cleaning; 2007.

### 1.04 SUBMITTALS

A. See Section 01 3000 - Administrative Requirements, for submittal procedures.

B. Product Data: Provide complete list of products to be used, with the following information for each:

1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
2. MPI product number (e.g. MPI #47).
3. Cross-reference to specified paint system(s) product is to be used in; include description of each system.
4. Manufacturer's installation instructions.
5. If proposal of substitutions is allowed under submittal procedures, explanation of substitutions proposed.

C. Samples: Submit three paper "draw down" samples, 8-1/2 by 11 inches (216 by 279 mm) in size, illustrating range of colors available for each finishing product specified.
1. Where sheen is specified, submit samples in only that sheen.
2. Where sheen is not specified, submit each color in each sheen available.
3. Allow 30 days for approval process, after receipt of complete samples by Architect.

D. Certification: By manufacturer that paints and finishes comply with VOC limits specified.

E. Manufacturer's Instructions: Indicate special surface preparation procedures.

F. Maintenance Data: Submit data including finish schedule showing where each product/color/finish was used, product technical data sheets, material safety data sheets (MSDS), care and cleaning instructions, touch-up procedures, repair of painted and finished surfaces, and color samples of each color and finish used.

G. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
1. Extra Paint and Finish Materials: 1 gallon (4 L) of each color; from the same product run, store where directed.
2. Label each container with color in addition to the manufacturer's label.

**1.05 QUALITY ASSURANCE**

A. Manufacturer Qualifications: Company specializing in manufacturing the products specified, with minimum three years documented experience.

B. Applicator Qualifications: Company specializing in performing the type of work specified with minimum Three years experience and approved by manufacturer.

**1.06 MOCK-UP**

A. Provide door and frame assembly illustrating paint color, texture, and finish.

B. Locate where directed by Architect.

C. Mock-up may remain as part of the work.

**1.07 DELIVERY, STORAGE, AND HANDLING**

A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.

B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.

C. Paint Materials: Store at minimum ambient temperature of 45 degrees F (7 degrees C) and a maximum of 90 degrees F (32 degrees C), in ventilated area, and as required by manufacturer's instructions.

**1.08 FIELD CONDITIONS**

A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.

B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.

C. Minimum Application Temperatures for Paints: 50 degrees F (10 degrees C) for interiors unless required otherwise by manufacturer's instructions.

D. Provide lighting level of 80 ft candles (860 lx) measured mid-height at substrate surface.

## PART 2 PRODUCTS

### 2.01 MANUFACTURERS

A. Provide paints and finishes used in any individual system from the same manufacturer; no exceptions.

B. Paints:
   1. Base Manufacturer: Sherwin Williams.
   2. Behr Process Corporation: www.behr.com/#sle.
   3. PPG Paints: www.ppgpaints.com/#sle.
   4. Sherwin-Williams Company: www.sherwin-williams.com/#sle.
   5. Valspar Corporation: www.valsparpaint.com/#sle.
   6. Dunn Edwards: www.dunnedwards.com.

C. Primer Sealers: Same manufacturer as top coats.

### 2.02 PAINTS AND FINISHES - GENERAL

A. Paints and Finishes: Ready mixed, unless intended to be a field-catalyzed paint.
   1. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
   2. Supply each paint material in quantity required to complete entire project's work from a single production run.
   3. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.

B. Volatile Organic Compound (VOC) Content: Comply with Section 01 6116.

C. Flammability: Comply with applicable code for surface burning characteristics.

D. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by Architect from the manufacturer's full line.

E. Colors: To be selected from manufacturer's full range of available colors.
   1. Selection to be made by Architect after award of contract.
   2. Allow for minimum of FOUR colors for each system, unless otherwise indicated, without additional cost to Owner.
   3. Extend colors to surface edges; colors may change at any edge as directed by Architect.
   4. In finished areas, finish pipes, ducts, conduit, and equipment the same color as the wall/ceiling they are mounted on/under. UNLESS INDICATED OTHERWISE DURING SUBMITTAL PROCESS.

### 2.03 PAINT SYSTEMS - INTERIOR

A. Paint I-OP - Interior Surfaces to be Painted, Unless Otherwise Indicated: Including gypsum board and shop primed steel.
   1. Two top coats and one coat primer.
   2. Top Coat(s): Institutional Low Odor/VOC Interior Latex.
      a. Products:
         1) Sherwin-Williams ProMar 200 Zero VOC Interior Latex, Flat.
         2) Sherwin-Williams ProMar 200 Zero VOC Interior Latex, Low Sheen. (MPI #144)
         3) Sherwin-Williams ProMar 200 Zero VOC Interior Latex, Semi-Gloss.
         4) Sherwin-Williams ProMar 200 Zero VOC Interior Latex, EggShell.

B. Paint I-OP-MD-DT - Medium Duty Door/Trim: For surfaces subject to frequent contact by occupants, including metals:
   1. Medium duty applications include Interior doors, door frames, railings, handrails, and guardrails.
   2. Two top coats and one coat primer.
   3. Top Coat(s): Interior Light Industrial Coating, Water Based.
      a. Products:

1) Sherwin-Williams Pro Industrial Acrylic Coating, Semi-Gloss. (MPI #153)

**2.04 ACCESSORY MATERIALS**

A. Accessory Materials: Provide primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of painted surfaces.

B. Patching Material: Latex filler.

C. Fastener Head Cover Material: Latex filler.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

A. Do not begin application of paints and finishes until substrates have been properly prepared.

B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.

C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially effect proper application.

D. Test shop-applied primer for compatibility with subsequent cover materials.

E. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
   1. Gypsum Wallboard: 12 percent.
   2. Plaster and Stucco: 12 percent.

**3.02 PREPARATION**

A. Clean surfaces thoroughly and correct defects prior to application.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

C. Remove or repair existing paints or finishes that exhibit surface defects.

D. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces or finishing.

E. Seal surfaces that might cause bleed through or staining of topcoat.

F. Gypsum Board: Fill minor defects with filler compound. Spot prime defects after repair.

G. Plaster: Fill hairline cracks, small holes, and imperfections with latex patching plaster. Make smooth and flush with adjacent surfaces. Wash and neutralize high alkali surfaces.

H. Ferrous Metal:
   1. Solvent clean according to SSPC-SP 1.
   2. Shop-Primed Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces. Re-prime entire shop-primed item.
   3. Remove rust, loose mill scale, and other foreign substances using using methods recommended in writing by paint manufacturer and blast cleaning according to SSPC-SP 6 "Commercial Blast Cleaning". Protect from corrosion until coated.

I. Metal Doors to be Painted: Prime metal door top and bottom edge surfaces.

**3.03 APPLICATION**

A. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".

B. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.

C. Apply each coat to uniform appearance in thicknesses specified by manufacturer.

D. Dark Colors and Deep Clear Colors: Regardless of number of coats specified, apply as many coats as necessary for complete hide.

E. Sand metal surfaces lightly between coats to achieve required finish.

F. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.

G. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

**3.04 FIELD QUALITY CONTROL**

A. Owner (and/or Owner's Designated Representative) will provide field inspection.

**3.05 CLEANING**

A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.

**3.06 PROTECTION**

A. Protect finishes until completion of project.

B. Touch-up damaged finishes after Substantial Completion.

**END OF SECTION**

## SECTION 10 1400
## SIGNAGE

### PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Room and door signs.

B. Interior directional and informational signs.

C. Emergency evacuation map (Replacement Image).

D. Main Entry decal.

### 1.02 REFERENCE STANDARDS

A. 36 CFR 1191 - Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines; current edition.

B. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.

C. ICC A117.1 - Accessible and Usable Buildings and Facilities; 2017.

D. NFPA 170 - Standard for Fire Safety and Emergency Symbols; 2018.

### 1.03 SUBMITTALS

A. Product Data: Manufacturer's printed product literature for each type of sign, indicating sign styles, font, foreground and background colors, locations, overall dimensions of each sign.

B. Signage Schedule: Provide information sufficient to completely define each sign for fabrication, including room number, room name, other text to be applied, sign and letter sizes, fonts, and colors.

1. When room numbers to appear on signs differ from those on drawings, include the drawing room number on schedule.
2. When content of signs is indicated to be determined later, request such information from Owner through Architect at least 2 months prior to start of fabrication; upon request, submit preliminary schedule.
3. Submit for approval by Owner through Architect prior to fabrication.

C. Samples: Submit two samples of each type of sign, of size similar to that required for project, illustrating sign style, font, and method of attachment.

D. Manufacturer's Installation Instructions: Include installation templates and attachment devices.

E. Manufacturer's Qualification Statement.

### 1.04 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.

### 1.05 DELIVERY, STORAGE, AND HANDLING

A. Package signs as required to prevent damage before installation.

B. Package room and door signs in sequential order of installation, labeled by floor or building.

C. Store tape adhesive at normal room temperature.

### PART 2 PRODUCTS

### 2.01 MANUFACTURERS

A. Flat Signs:

1. Best Sign Systems, Inc; -: www.bestsigns.com.
2. Cosco Industries (ADA signs); ADA Series 1: www.coscoarchitecturalsigns.com/#sle.
3. Inpro; -: www.inprocorp.com.
4. Mohawk Sign Systems, Inc; -: www.mohawksign.com.
5. Seton Identification Products; -: www.seton.com/aec.
6. Brandex: www.brandexmedia.com

## 2.02 SIGNAGE APPLICATIONS

A. Accessibility Compliance: Signs are required to comply with ADA Standards and ICC A117.1, unless otherwise indicated; in the event of conflicting requirements, comply with the most comprehensive and specific requirements.

B. Room and Door Signs: Provide a sign for every doorway, whether it has a door or not, not including corridors, lobbies, and similar open areas.
   1. Sign Type: Flat signs with engraved panel media as specified.
   2. Provide "tactile" signage, with letters raised minimum 1/32 inch (0.8 mm) and Grade II braille.
   3. Character Height: 1 inch (25 mm).
   4. Sign Height: 6 inches (150 mm), unless otherwise indicated.
   5. Doors: Identify with room numbers to be determined later, not the numbers indicated on drawings.

C. Interior Directional and Informational Signs:
   1. Sign Type: Same as room and door signs.

D. Emergency Evacuation Maps:
   1. Update and Replace Existing Map with CAD files supplied by Design Team. Print high resolution graphics on heavy card stock paper.
   2. Modify information as requested by Owner (room names, etc.)

E. Main Entry ADA Accessible Decal:
   1. Adhesive Vinyl Symbol, 5"x5".
   2. Install at Main entrance at Each Fire Station.

## 2.03 SIGN TYPES

A. Flat Signs: Signage media without frame.
   1. Edges: Square.
   2. Corners: Square.
   3. Wall Mounting of One-Sided Signs: Adhesive and/or Stainless Steel Screws.

B. Color and Font: Unless otherwise indicated:
   1. Character Font: Helvetica, Arial, or other sans serif font.
   2. Character Case: Upper case only.
   3. Background Color: To be selected by Manufacturer's available standard colors.
   4. Character Color: Contrasting color.

## 2.04 TACTILE SIGNAGE MEDIA

A. Engraved Panels: Laminated colored plastic; engraved through face to expose core as background color:
   1. Total Thickness: 1/8 inch (3 mm).

## 2.05 ACCESSORIES

A. Exposed Screws: Stainless steel.

B. Tape Adhesive: Double sided tape, permanent adhesive.

C. Frosted sheet plastic for back side of Glass mounted Signs.

# PART 3 EXECUTION

## 3.01 EXAMINATION

A. Verify that substrate surfaces are ready to receive work.

## 3.02 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Install neatly, with horizontal edges level.

C. Protect from damage until Date of Substantial Completion; repair or replace damaged items.

**END OF SECTION**

## SECTION 10 2600
## WALL AND DOOR PROTECTION

### PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Corner guards.

### 1.02 SUBMITTALS

A. Product Data: Indicate physical dimensions, features, wall mounting brackets with mounted measurements, anchorage details, and rough-in measurements.

### 1.03 DELIVERY, STORAGE, AND HANDLING

A. Store products in either horizontal or vertical position, in compliance with manufacturer's instructions.

### 1.04 WARRANTY

A. Correct defective Work within a one year period after Date of Substantial Completion.

### PART 2 PRODUCTS

### 2.01 PRODUCT TYPES

A. Corner Guards - Surface Mounted:
   1. Material: Type 304 stainless steel, No. 4 finish, 20 gauge thick
   2. Width of Wings: 3 inches (76 mm).
   3. Corner: Square.
   4. Length: One piece. 48"
   5. Quantity: Provide six (14) corner guards total (to be distributed between the four Fire Stations).
   6. Location: Final location to be determined by Owner.

### PART 3 EXECUTION

### 3.01 EXAMINATION

A. Verify that substrate surfaces for adhered items are clean and smooth.

### 3.02 INSTALLATION

A. Install components in accordance with manufacturer's instructions, level and plumb, secured rigidly in position to supporting construction.

B. Position corner guard above Rubber Base.

### 3.03 CLEANING

A. Clean wall protection items of excess adhesive, dust, dirt, and other contaminants.

**END OF SECTION**

## SECTION 10 2800

## TOILET, BATH, AND LAUNDRY ACCESSORIES

### PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Commercial toilet accessories.

B. Commercial shower and bath accessories.

C. Under-lavatory pipe supply covers.

### 1.02 REFERENCE STANDARDS

A. ADA Standards - Americans with Disabilities Act (ADA) Standards for Accessible Design; 2010.

B. ASTM B456 - Standard Specification for Electrodeposited Coatings of Copper Plus Nickel Plus Chromium and Nickel Plus Chromium; 2017.

### 1.03 SUBMITTALS

A. Product Data: Submit data on accessories describing size, finish, details of function, and attachment methods.

B. Manufacturer's Installation Instructions: Indicate special procedures and conditions requiring special attention.

### PART 2 PRODUCTS

### 2.01 MANUFACTURERS

A. Commercial Toilet, Shower, and Bath Accessories:
   1. Bobrick, Bobrick Washroom Equipment, Inc. www.bobrick.com. Basis of Design

### 2.02 FINISHES

A. Stainless Steel: Satin finish, unless otherwise noted.

B. Chrome/Nickel Plating: ASTM B456, SC 2, polished finish, unless otherwise noted.

### 2.03 COMMERCIAL TOILET ACCESSORIES

A. Toilet Room Accessories and Equipment
   1. See Drawings for List of Equipment and locations
   2. Submit Information, Cut-Sheets, and Installation Directions for review and approval.

### 2.04 UNDER-LAVATORY PIPE AND SUPPLY COVERS

A. Under-Lavatory Pipe and Supply Covers:
   1. Insulate exposed drainage piping, including hot, cold, and tempered water supplies under lavatories or sinks to comply with ADA Standards.
   2. Exterior Surfaces: Smooth non-absorbent, non-abrasive surfaces.
   3. Construction: 1/8 inch (3.2 mm) flexible PVC.
   4. Color: White.
   5. Fasteners: Reusable, snap-locking fasteners with no sharp or abrasive external surfaces.
   6. Products:
      a. Plumberex Specialty Products, Inc; Plumberex Handy-Shield Maxx: www.plumberex.com/#sle.

### PART 3 EXECUTION

### 3.01 EXAMINATION

A. Verify existing conditions before starting work.

B. Verify exact location of accessories for installation.

C. Verify that field measurements are as indicated on drawings.

### 3.02 PREPARATION

A. Deliver inserts and rough-in frames to site for timely installation.

B. Provide templates and rough-in measurements as required.

**3.03 INSTALLATION**

A. Install accessories in accordance with manufacturers' instructions in locations indicated on drawings.

B. Install plumb and level, securely and rigidly anchored to substrate.

C. Mounting Heights: As required by accessibility regulations, unless otherwise indicated.

**3.04 PROTECTION**

A. Protect installed accessories from damage due to subsequent construction operations.

**END OF SECTION**

## SECTION 10 4400
## FIRE PROTECTION SPECIALTIES

### PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Fire extinguishers.

B. Fire extinguisher cabinets.

C. Accessories.

### 1.02 REFERENCE STANDARDS

A. ASTM E814 - Standard Test Method for Fire Tests of Penetration Firestop Systems; 2013a (Reapproved 2017).

B. NFPA 10 - Standard for Portable Fire Extinguishers; 2017, with Errata (2018).

### 1.03 SUBMITTALS

A. Product Data: Provide extinguisher operational features.

B. Shop Drawings: Indicate locations of cabinets and cabinet physical dimensions.

C. Manufacturer's Installation Instructions: Indicate special criteria and wall opening coordination requirements.

D. Maintenance Data: Include test, refill or recharge schedules and re-certification requirements.

### 1.04 FIELD CONDITIONS

### PART 2 PRODUCTS

### 2.01 MANUFACTURERS

A. Fire Extinguishers:
   1. Ansul, a Tyco Business; -: www.ansul.com.
   2. Kidde, a unit of United Technologies Corp; -: www.kidde.com.
   3. Nystrom, Inc; -: www.nystrom.com/#sle.
   4. Oval Brand Fire Products: www.ovalfireproducts.com.
   5. Potter-Roemer; -: www.potterroemer.com.
   6. Pyro-Chem, a Tyco Business; -: www.pyrochem.com.

B. Fire Extinguisher Cabinets and Accessories:
   1. Basis of Design: Activar Construction Products Group, Inc. - JL Industries; Ambassador Series: www.activarcpg.com.
   2. Kidde, a unit of United Technologies Corp; -: www.kidde.com.
   3. Larsen's Manufacturing Co; -: www.larsensmfg.com.
   4. Nystrom, Inc; -: www.nystrom.com.
   5. Oval Brand Fire Products: www.ovalfireproducts.com.
   6. Potter-Roemer; -: www.potterroemer.com.

### 2.02 FIRE EXTINGUISHERS

A. Fire Extinguishers - General: Comply with product requirements of NFPA 10 and applicable codes, whichever is more stringent.

B. Multipurpose Dry Chemical Type Fire Extinguishers: Carbon steel tank, with pressure gauge.
   1. Class: A:B:C type.
   2. Size: 10 pound (4.54 kg).
   3. Finish: Baked polyester powder coat, red color.

### 2.03 FIRE EXTINGUISHER CABINETS

A. Fire Rating: Listed and labeled in accordance with ASTM E814 requirements for fire resistance rating of walls where being installed.

B. Cabinet Construction: Non-fire rated.

1. Formed primed steel sheet; 0.036 inch (0.9 mm) thick base metal.

C. Cabinet Configuration: Semi-recessed type.
   1. Size to accommodate accessories.
   2. Trim: Flat square edge, with 1.5 +/- inch (- mm) wide face.

D. Door Glazing: Tempered glass, clear, 1/8 inch (3 mm) thick, and set in resilient channel glazing gasket.

E. Cabinet Mounting Hardware: Appropriate to cabinet, with pre-drilled holes for placement of anchors.

F. Finish of Cabinet Exterior Trim and Door: Red baked enamel.

G. Finish of Cabinet Interior: White colored enamel.

**2.04 ACCESSORIES**

A. Lettering: FIRE EXTINGUISHER decal, or vinyl self-adhering, pre-spaced black lettering in accordance with authorities having jurisdiction (AHJ).

**PART 3 EXECUTION**

**3.01 EXAMINATION**

A. Verify rough openings for cabinet are correctly sized and located.

**3.02 INSTALLATION**

A. Install in accordance with manufacturer's instructions.

B. Location: see Drawings for suggested location. Final location to be reviewed by Owner.

C. Secure rigidly in place.

D. Place extinguishers in cabinets.

E. Position cabinet signage at top of Unit.

**END OF SECTION**

## SECTION 10 5129
## PHENOLIC LOCKERS

### PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Custom Fabricated Phenolic Lockers.

### 1.02 REFERENCE STANDARDS

A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2019b.

### 1.03 SUBMITTALS

A. Product Data: Manufacturer's published data on locker construction, sizes and accessories.

B. Shop Drawings: Indicate locker plan layout, numbering plan and combination lock code.

### 1.04 DELIVERY, STORAGE, AND HANDLING

A. Protect locker finish and adjacent surfaces from damage.

### PART 2 PRODUCTS

### 2.01 PHENOLIC LOCKERS

A. Lockers: Factory assembled, made of phenolic core panels with mortise and tenon joints and stainless steel mechanical joint fasteners; fully finished inside and out; each locker capable of standing alone.
   1. Doors: Full overlay, covering full width and height of locker body; square edges.
   2. Panel Core Exposed at Edges: Machine polished, without chips or tool marks; square edge unless otherwise indicated.
   3. Where locker ends or sides are exposed, finish the same as fronts or provide extra panels to match fronts.
   4. Door Color: As selected by Architect; allow for 2 different colors.
   5. Body Color: Manufacturer's standard white or light color.
   6. Fasteners for Accessories and Locking Mechanisms: Tamperproof type.

B. Component Thicknesses:
   1. Doors: 1/2 inch (13 mm) minimum thickness.
   2. Locker Body: One of the following combinations:
      a. Tops, bottoms, and shelves 1/2 inch (13 mm); sides 1/2 inch (13 mm); backs 1/4 inch (6 mm); minimum.
   3. End Panels and Filler Panels: 1/2 inch (13 mm) minimum thickness.
   4. Tops: 1/2 inch (13 mm) minimum thickness.
   5. Toe Kick Plates: 1/2 inch (13 mm) minimum thickness.

C. Phenolic Core Panels: Nonporous phenolic resin and paper core formed under high pressure, with natural colored finished edges, integral melamine surface, matte finish, and uniform surface appearance; glued laminated panels not acceptable.
   1. Surface Burning Characteristics: Flame spread index of 75 or less, and smoke developed index of 450 or less; when tested in accordance with ASTM E84.

D. Hinges: Stainless Steel 5 knuckle overlay or previously approved equal. See Drawings.

E. Louvers: Stainless Steel or Aluminum Casework Louvers
   1. Finish: Brushed S.S. or Painted Aluminum or Anodized Aluminum.
   2. Fasteners: Exposed or hidden tamper proof screws.

F. Coat Hooks: Stainless steel; attached with tamperproof screws. One at each Locker.

G. Number Plates: Manufacturer's standard, minimum 4-digit, permanently attached with adhesive; may be field installed.

H. Locks: Stainless Steel Keyed Locks with master key
   1. Provide separate keying (2 Keys for each locker) and (4) master keys.

2. Manufacturer: Olympus or National or previously approved equal.

## PART 3 EXECUTION

### 3.01 EXAMINATION

A. Verify that prepared bases are in correct position and configuration.

### 3.02 DESIGN

A. See Drawings for Conceptual Locker Design, Layout and Configuration.

B. Provide fasteners as shown on Drawings and as required for sturdy and rigid assembly.

### 3.03 INSTALLATION

A. Install in accordance with manufacturer's instructions.

B. Place and secure on prepared Level base (with rubber base).

C. Install lockers plumb and square.

D. Secure lockers with anchor devices to suit substrate materials. Minimum Pullout Force: 100 pounds (445 N).

E. Bolt adjoining locker units together to provide rigid installation.

F. Install accessories.

G. Replace components that do not operate smoothly.

### 3.04 CLEANING

A. Clean locker interiors and exterior surfaces.

**END OF SECTION**

## SECTION 12 2116
## VERTICAL LOUVER BLINDS

### PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Vertical louver blinds at all New Windows (Fire Station #53).

### 1.02 REFERENCE STANDARDS

A. WCMA A100.1 - Safety of Window Covering Products; 2018.

B. NFPA 701 - Standard Methods of Fire Tests for Flame Propagation of Textiles and Films; 2019.

### 1.03 SUBMITTALS

A. Product Data: Manufacturer's data sheets on each product to be used, including:
   1. Preparation instructions and recommendations.
   2. Storage and handling requirements and recommendations.
   3. Installation methods.

B. Certification: Provide certification that product complies with WCMA A100.1.

C. Shop Drawings: Indicate headrail location and schematic wire diagram of electronic controls and motors.

D. Operation and Maintenance Data: Manufacturer's data on repair and replacement of vanes, chains, and other parts.

E. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
   1. Extra Blind Assemblies: One.

### 1.04 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section, with not less than three years of documented experience.

B. Installer Qualifications: Company specializing in performing work of this type with minimum Three years of experience.

C. Mock-Up: For evaluation of light and privacy characteristics only, provide a mock-up at least 2 feet (900 mm) wide by 3 feet (1000 mm) high of vanes intended for use.
   1. Full-sized mock-up may become part of the final installation.

### 1.05 DELIVERY, STORAGE, AND HANDLING

A. If blinds are delivered early and stored at the project, deliver in unopened containers; handle and store in such a manner to protect them from damage.

### PART 2 PRODUCTS

### 2.01 MANUFACTURERS

A. Vertical Louver Blinds:
   1. Hunter Douglas; -: www.hunterdouglas.com.
   2. Levolor: www.levolor.com/commercial.
   3. Graber, division of Springs Window Fashions; -: www.graberblinds.com.

### 2.02 BLINDS AND BLIND COMPONENTS

A. Vertical Louver Blinds: Horizontal travel, vertical vane louver units complete with tracks, pivot and traversing mechanisms, and accessories, as follows:
   1. Vanes: PVC vanes of the size indicated.
   2. Operation: Manual.
   3. Direction of Travel: to be determined by Owner.
   4. Mounting: Inside (between jambs).
   5. Cord and Chain Operation: Comply with WCMA A100.1.

B. Tracks: Channel tracks as required for type of operation, extruded aluminum with clear anodized finish, with end caps.

1. Vane Rotation: Chain driven direct rotation by activating tilt gear within end cap assembly in turn actuating tilt rod and worm-and-spur gears in carrier trucks.
2. Operating Components: Internally mounted heavy-duty extruded aluminum tilt rod, vane carriers, and other components required for proper performance and designed for smooth, quiet, trouble free operation.
3. Pivot Mechanism: Geared for synchronous 180 degrees rotation of vanes and type of operation indicated.
4. Vane Carriers: Metal carriers with ball-bearing wheels or thermoplastic trucks, equipped with linkages or other devices to ensure positive spacing of vanes.
5. Tilt Chain: Nickel plated brass beaded ball chain, minimum 1/8 inch (3 mm) diameter; locate at drawback side of units as indicated.

C. PVC Vanes: Integrally colored, extruded PVC; flat, 2 inches (50mm) wide.
1. Flammability: Comply with NFPA 701.
2. Color: White.
3. Texture: Smooth.

D. Brackets and Mounting Hardware: As recommended by manufacturer for the mounting configuration and span indicated; provide manufacturer's standard L- bracket with clip for outside mounting and clip only for inside mounting.

E. Valances: To match vane design and color.
1. Style: As selected by Architect from blind manufacturer's full selection.

**2.03 FABRICATION**

A. Field measure finished openings prior to ordering or fabrication.

B. Fabricate blinds to fit openings within specified tolerances.
1. Vertical Dimensions: Fill openings from head to sill with 1/2 inch (13 mm) space between bottom of vanes and finish floor.
2. Horizontal Dimensions - Inside Mounting: Fill openings from jamb to jamb.

C. Dimensional Tolerances: Fabricate blinds to within plus/minus 1/8 inch (3 mm) of intended dimensions.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

A. Do not start installation before openings are finished and all finishes have been completed; do not install until painting is completed.

B. Examine finished openings for deficiencies that may preclude satisfactory installation.

C. Start of installation shall be considered acceptance of substrates.

D. Field measure finished openings prior to ordering or fabrication.

**3.02 PREPARATION**

A. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

B. Coordinate the work with window installation and placement of concealed blocking to support blinds.

**3.03 INSTALLATION**

A. Install in accordance with manufacturer's instructions using mounting style as indicated.

B. Installation Tolerances:
1. Maximum Offset From Level: 1/16 inch (1.5 mm).

C. Adjust blinds for smooth operation.

D. Replace blinds that exceed specified dimensional tolerances at no extra cost to Owner.

**3.04 CLEANING**

A. Clean installed work to like-new condition.

## 3.05 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Date of Substantial Completion.

**END OF SECTION**

## SECTION 21 0500

## COMMON WORK RESULTS FOR FIRE SUPPRESSION-MODIFICATIONS

### PART 1 GENERAL

### 1.01 SECTION INCLUDES

A. Design/Build general scope of work for Proposed modifications to Existing Fire Sprinkler System.

B. Deferred Fire Department/Bldg Department Submittal and Approval requirements.

C. Pipe, fittings, sleeves, escutcheons, seals, and connections for sprinkler systems.

### 1.02 REFERENCE STANDARDS

A. ASTM C592 - Standard Specification for Mineral Fiber Blanket Insulation and Blanket-Type Pipe Insulation (Metal-Mesh Covered) (Industrial Type); 2016.

B. ASTM E814 - Standard Test Method for Fire Tests of Penetration Firestop Systems; 2013a (Reapproved 2017).

C. FM (AG) - FM Approval Guide; current edition.

D. ITS (DIR) - Directory of Listed Products; current edition.

E. NFPA 13 - Standard for the Installation of Sprinkler Systems; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

F. NFPA 14 - Standard for the Installation of Standpipe and Hose Systems; 2016.

G. UL (DIR) - Online Certifications Directory; Current Edition.

### 1.03 SUBMITTALS

A. Provide and submit complete Design/Build submittal package to Design Team prior to formal submittal to local governing authority. Design Team will quickly review for general conformance with design intent.

B. Product Data: Provide manufacturer's catalog information.

C. Shop Drawings: Indicate pipe materials used, jointing methods, supports, and floor and wall penetration seals. Indicate installation, layout, weights, mounting and support details, and piping connections.

D. Plans: Provide Plans showing existing system (as needed for modification to the existing system). A CAD Drawing file will be available with the Floor Plan for Contractors Use. All existing conditions will require verification.

E. Project Record Documents: Record actual locations of all components.

F. Operation and Maintenance Data: Include installation instructions and spare parts lists.

### 1.04 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience.

B. Installer Qualifications: Company specializing in performing work of the type specified in this section.
   1. Minimum three years experience.

C. Conform to FM (AG), UL (DIR), and ITS (DIR) or Warnock Hersey requirements.

D. Valves: Bear FM (AG), UL (DIR), and ITS (DIR) or Warnock Hersey product listing label or marking. Provide manufacturer's name and pressure rating marked on valve body.

E. Products Requiring Electrical Connection: Listed and classified as suitable for the purpose specified and indicated.

F. Clean equipment, pipes, valves, and fittings of grease, metal cuttings, and sludge that may have accumulated from the installation and testing of the system.

## 1.05 DESIGN/BUILD SCOPE OF WORK

A. The sprinkler system design shall be reviewed and approved by authorities having jurisdiction.

B. Water flow test shall be provided by the Owner. Margin of safety for available water flow and pressure: 10 percent, including losses through water-service piping, valves, and backflow preventers (unless more stringent percentage is required by local governing jurisdiction).

C. Sprinkler Occupancy Hazard Classifictation: Light Hazard (unless more stringent percentage is required by local governing jurisdiction).

D. Maximum Protection Area per Sprinkler: Per UL listing.

E. Seismic Performance: Sprinkler piping shall withstand the effects of earthquake motions determined according to NFPA 13 and ASCE/SEI 7 and local governing jurisdictions.

F. Shop Drawings: For wet-pipe sprinkler systems. Including plans, elevations, sections, details, and attachments to other work.
   1. Wiring Diagrams: for power, signal and control wiring
   2. Coordination Drawings: Sprinkler systems, drawn to scale, on which the following items are shown and coordinated with each other, using input from installers of the items involved:
      a. Domestic water piping
      b. HVAC ducting and piping
      c. Light fixtures
      d. Existing and New structural components to remain

G. General Sprinkler Head design:
   1. Sprinkler Head manufacturer: Subject to compliance with requirements, provide products by one of the following: AFAC Inc., Globe Fire Sprinkler Corporation, Reliable Automatic Sprinkler Co., Inc., Tyco Fire & Building Products LP, Venus Fire Protection, Victaulic Company, Viking Corporation.
   2. Sprinkler Head/Escutcheons Finish: match existing system.
   3. At all new/remodeled Areas: At exposed ceilings (hard-lid and acoustical panels) provide semi recessed heads.

## 1.06 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store valves in shipping containers, with labeling in place.

B. Provide temporary protective coating on cast iron and steel valves.

C. Provide temporary end caps and closures on piping and fittings. Maintain in place until installation.

## 1.07 WARRANTY

A. Correct defective Work within a one year period after Date of Substantial Completion.

# PART 2 PRODUCTS

## 2.01 FIRE PROTECTION SYSTEMS

A. Sprinkler Systems: Comply with NFPA 13.

B. Welding Materials and Procedures: Comply with ASME BPVC-IX.

## 2.02 PIPE SLEEVES

A. Plastic, Sheet Metal, or Moisture-Resistant Fiber: Pipe passing through interior walls, partitions, and floors, unless steel or brass sleeves are specified below.

## 2.03 PIPE HANGERS AND SUPPORTS

A. Hangers for Pipe Sizes 1/2 to 1-1/2 inch (15 to 40 mm): Malleable iron, adjustable swivel, split ring.

B. Hangers for Pipe Sizes 2 inches (50 mm) and Over: Carbon steel, adjustable, clevis.

## PART 3 EXECUTION

### 3.01 PREPARATION

A. Ream pipe and tube ends. Remove burrs. Bevel plain end ferrous pipe.

B. Remove scale and foreign material, from inside and outside, before assembly.

C. Prepare piping connections to equipment with flanges or unions.

### 3.02 INSTALLATION

A. Install sprinkler system and service main piping, hangers, and supports in accordance with NFPA 13.

B. Install standpipe piping, hangers, and supports in accordance with NFPA 14.

C. Route piping in orderly manner, plumb and parallel to building structure. Maintain gradient.

D. Install piping to conserve building space, to not interfere with use of space and other work.

E. Group piping whenever practical at common elevations.

F. Install piping at centers of acoustical ceiling panels (where occurs).

G. Install piping to allow for expansion and contraction without stressing pipe, joints, or connected equipment.

H. Pipe Hangers and Supports:
   1. Install hangers to provide minimum 1/2 inch (15 mm) space between finished covering and adjacent work.
   2. Place hangers within 12 inches (300 mm) of each horizontal elbow.
   3. Use hangers with 1-1/2 inch (40 mm) minimum vertical adjustment. Design hangers for pipe movement without disengagement of supported pipe.
   4. Support vertical piping at every other floor. Support riser piping independently of connected horizontal piping.
   5. Where several pipes can be installed in parallel and at same elevation, provide multiple or trapeze hangers.

I. Slope piping and arrange systems to drain at low points. Use eccentric reducers to maintain top of pipe level.

J. Prepare pipe, fittings, supports, and accessories for finish painting. Where pipe support members are welded to structural building framing, scrape, brush clean, and apply one coat of zinc-rich primer to welding.

K. Provide sleeves when penetrating walls and partitions. Seal pipe including sleeve penetrations to achieve fire resistance equivalent to fire separation required.
   1. Aboveground Piping:
      a. Pack solid using mineral fiber complying with ASTM C592.
      b. Fill space with an elastomer caulk to a depth of 0.50 inch (15 mm) where penetrations occur between conditioned and unconditioned spaces.
   2. All Rated Openings: Caulk tight with firestopping material complying with ASTM E814 in accordance with Section 07 8400 to prevent the spread of fire, smoke, and gases.
   3. Caulk exterior wall sleeves watertight with lead and oakum or mechanically expandable chloroprene inserts with mastic-sealed components.

L. Manufactured Sleeve-Seal Systems:
   1. Install manufactured sleeve-seal systems in sleeves located in grade slabs and exterior concrete walls at piping entrances into building.
   2. Provide sealing elements of the size, quantity, and type required for the piping and sleeve inner diameter or penetration diameter.
   3. Locate piping in center of sleeve or penetration.
   4. Install field assembled sleeve-seal system components in annular space between sleeve and piping.
   5. Tighten bolting for a watertight seal.

6. Install in accordance with manufacturer's recommendations.

M. Escutcheons:
   1. Install and firmly attach escutcheons at piping penetrations into finished spaces.
   2. Provide escutcheons on both sides of partitions separating finished areas through which piping passes.
   3. Use chrome plated escutcheons in occupied spaces and to conceal openings in construction.

N. When installing more than one piping system material, ensure system components are compatible and joined to ensure the integrity of the system. Provide necessary joining fittings. Ensure flanges, unions, and couplings for servicing are consistently provided.

**3.03 CLEANING**

A. Upon completion of work, clean all parts of the installation.

B. Clean equipment, pipes, valves, and fittings of grease, metal cuttings, and sludge that may have accumulated from the installation and testing of the system.

**END OF SECTION**

Orange County Fire Authority

# AGENDA STAFF REPORT

**Board of Directors Meeting**
**May 26, 2022**

**Agenda Item No. 2C**
**Consent Calendar**

## Third Quarter Purchasing Report


**Contact(s) for Further Information**

| | | |
|---|---|---|
| Robert Cortez, Assistant Chief<br>Business Services Department | robertcortez@ocfa.org | 714.573.6012 |
| Sara Kennedy, Purchasing<br>Division Manager | sarakennedy@ocfa.org | 714.573.6641 |



**Summary**

This routine agenda item is submitted to provide information regarding purchases made within management authority during the third quarter of FY 2021/22.


**Prior Board/Committee Action**

On June 24, 2021, the Board of Directors approved the content format contained herein for future quarterly purchasing reports.

On May 11, 2022, the Budget and Finance Committee reviewed the proposed agenda item and directed staff to place the item on the Board of Directors agenda by a vote of 6-0 (Directors O'Neill, Hernandez, and Sachs absent).

**RECOMMENDED ACTION(S)**

Receive and file the report.

**Impact to Cities/County**

Not Applicable.

**Fiscal Impact**

Not Applicable.

**Background**

Purchasing Ordinance No. 009 (Ordinance) and the Roles/Responsibilities/Authorities Matrix (Matrix) provides the Chief Procurement Officer (Purchasing Manager) authority to enter into various types of agreements at varying amounts. This authority includes the procurement of items previously approved by the Board of Directors as part of the annual adoption of the budget provided that the contract results from a competitive solicitation. Furthermore, as per Section 1-20 Small Purchases provision of the Ordinance, any contract for the purchase of supplies, equipment, maintenance, and services not exceeding $50,000 may be made by the Chief Procurement Officer in accordance with the small purchase procedures authorized in the Ordinance. For public works projects, the statutory threshold is established by the CA Public Contract Code at $60,000.

The Quarterly Purchasing Report provides a list of all purchase orders and blanket orders entered into under the Purchasing Manager authority during the period of January 1, 2022, through March 31, 2022.

**Attachment(s)**

Third Quarter Purchasing Report – January 1, 2022 to March 31, 2022

**Purchasing Report**
**3rd Quarter - FY 2021/22**

- This report reflects all POs/BOs issued within management authority, including those that may have been cancelled or replaced by another PO or BO. These records will show as duplications in the report, but are in fact replacements.
- Management authority includes the procurement of items previously approved by the Board of Directors as part of the annual adoption of the budget provided that the contract results from a competitive solicitation.
- Amount column reflects the procurement value. Actual expenditures made against the contract may be lower.
- Vendor Name column display of "error" or the phrase "do not use" appears when a vendor has since changed their name or corporation status.
- PO/BO amounts of $0 or $.01 are often issued as place holders to record the terms and conditions of no-cost transactions, or may appear when the POs/BO balance is reduced to zero.
- POs starting with the letter "Q" are issued as part of the fiscal year end process to roll forward encumbrances issued in a prior fiscal year for projects still in progress.

| Date | PO/BO Number | Amount | Department | Vendor Name | Description | Formal Solicitation Number |
|---|---|---|---|---|---|---|
| 1/1/2022 | B01489-9 | $10,000 | Human Resources Department | WEX HEALTH INC | COBRA, FSA DEPENDENT CARE AND HEALTH ADMINISTRATION SERVICES | |
| 1/1/2022 | B01558-7 | $10,000 | Logistics Department | COATS PRODUCTS INC. | AUTOMOTIVE CLEANING PRODUCTS | |
| 1/1/2022 | B01583-7 | $195,000 | Logistics Department | GRAINGER | SERVICE CENTER INVENTORY- MISC. TOOLS AND SUPPLIES | COOPERATIVE AGREEMENT |
| 1/1/2022 | B01823-4 | $26,945 | Human Resources Department | HEALTHEDGE INC | RESERVE FIREFIGHTER BENEFITS PROGRAM THIRD PARTY ADMINISTRATION DENTAL, VISION, AND PASS-THRU LIFE | |
| 1/1/2022 | B01826-4 | $45,000 | Logistics Department | FAILSAFE TESTING | GROUND LADDER INSPECTION & CERTIFICATION SERVICES | JA2223 |
| 1/1/2022 | B02187-1 | $130,000 | Logistics Department | DARTCO TRANSMISSIONS SALES & SERVICE, INC | ALLISON TRANSMISSION PARTS & REPAIR SERVICES | JA2475 |
| 1/1/2022 | B02188-1 | $130,000 | Logistics Department | WESTERN STATES CONVERTERS & TRANSMISSIONS, INC | ALLISON TRANSMISSION PARTS & REPAIR SERVICES | JA2475 |
| 1/1/2022 | B02294 | $175,000 | Logistics Department | KIMBALL MIDWEST | HARDWARE/FASTENER MANAGEMENT & SUPPLY SERVICES | JA2504 |
| 1/1/2022 | B02298 | $830,000 | Logistics Department | VOYAGER FLEET SYSTEMS, INC. | VOYAGER FUEL CREDIT CARDS | COOPERATIVE AGREEMENT |
| 1/1/2022 | B01902-2 | $5,692 | Executive Management | NAVEX GLOBAL | FRAUD HOTLINE SERVICES | |
| 1/1/2022 | B01911-3 | $125,000 | Logistics Department | HC INTEGRATED SYSTEMS, INC | FIRE ALARM INSPECTION, MAINTENANCE, AND REPAIR WITH MONITORING SERVICES. | RO2221 |
| 1/1/2022 | B01959-2 | $3,600 | EMS & Training Department | PROPROFS | QUIZMAKER SOFTWARE FOR TRAINING SECTION | |
| 1/1/2022 | B02116-1 | $75,000 | Logistics Department | DANA INNOVATIONS | IPORT RUGGED SYSTEMS, PARTS AND COMPONENTS | RO2451 |
| 1/1/2022 | B02177-1 | $10,000 | Executive Management | LAWRENCE, PETER H. | CONSULTING SERVICES - ALS REIMBURSEMENT AND BLS COST RECOVERY FEES. | |
| 1/1/2022 | B02179-1 | $5,000 | Logistics Department | BEE BUSTERS | PEST CONTROL SERVICES | |
| 1/1/2022 | B02296 | $175,000 | Logistics Department | LAKEMAN CHASSIS | METAL FABRICATION AND REPAIR SERVICES | RO2521 |
| 1/1/2022 | P013030 | $45,000 | Logistics Department | RSSE STRUCTURAL ENGINEERS INC. | ADDITIONAL STRUCTURAL ENGINEERING SERVICES FOR OCFA STATION 49 | RO2362 |
| 1/1/2022 | B01724-5 | $0 | Human Resources Department | LIEBERT CASSIDY WHITMORE | ORANGE COUNTY EMPLOYMENT RELATIONS CONSORTIUM MEMBERSHIP | |
| 1/1/2022 | B02190-1 | $7,000 | Special Operations Division | CITY OF FULLERTON | JET FUEL FLOWAGE FEES AT FULLERTON AIRPORT | |
| 1/3/2022 | B02192-1 | $30,000 | Logistics Department | POWERWERX INC. | BLUE SEA CHARGERS AND ACCESSORIES | LK2482 |

| Date | PO/BO Number | Amount | Department | Vendor Name | Description | Formal Solicitation Number |
|---|---|---|---|---|---|---|
| 1/3/2022 | P0014576 | $3,996 | Logistics Department | WESTNET | WESTNET SMARTSTATION ALERTING SYSTEM UPDATE | DC1849 |
| 1/3/2022 | P0014577 | $1,085 | Logistics Department | WILLIAMS & MAHER INC | 911 CALL BOX PHONE CABLE RUN & TERMINATION - FS65 | |
| 1/4/2022 | B02064-2 | $130,000 | Logistics Department | LINEGEAR FIRE & RESCUE | WILDLAND FIREFIGHTING BOOTS | SK2409 |
| 1/4/2022 | P0014579 | $611 | EMS & Training Department | LIFE ASSIST, INC. | CPR MANIKIN BAGS | |
| 1/4/2022 | P0014580 | $8,134 | EMS & Training Department | PREMIUM PALLET, INC. | PALLETS NEEDED FOR LIVE FIRE TRAINING - ACADEMY 54 | |
| 1/4/2022 | P0014583 | $9,948 | Logistics Department | MUNICIPAL EMERGENCY SERVICES | VALVES, LATCHES, BRACKETS, AND BATTERIES | |
| 1/4/2022 | P0014578 | $529 | Logistics Department | WILLIAMS & MAHER INC | KITCHEN PHONE CABLE RUN - FS19 | |
| 1/4/2022 | P0014581 | $9,225 | EMS & Training Department | HOME DEPOT | LUMBER FOR DRILL GROUNDS TRAINING - ACADEMY 54 | |
| 1/5/2022 | B02292 | $4,300 | EMS & Training Department | PAPER DEPOT DOCUMENT DESTRUCTION, LLC | DOCUMENT AND ELECTRONIC MEDIA DESTRUCTION | |
| 1/6/2022 | B02293 | $10,000 | Logistics Department | AGAS MANUFACTURING GROUP INC | FLAGS | |
| 1/6/2022 | P0014586 | $4,614 | Logistics Department | OSHKOSH AIRPORT PRODUCTS | OSHKOSH PART FOR UNIT 5160 | |
| 1/6/2022 | P0014588 | $4,163 | Logistics Department | WILLIAMS & MAHER INC | ELECTRICAL UPGRADES FOR WESTNET ALERTING SYSTEM | RO2202 |
| 1/10/2022 | P0014587 | $9,733 | Logistics Department | PACIFIC MOBILE STRUCTURE, INC. | TRAILER RENTALS FOR FS53 | |
| 1/10/2022 | P0014589 | $4,997 | Logistics Department | WILLIAMS & MAHER INC | ALERTING LIGHTS INSTALL FOR FS70, FS71, AND FS76 | |
| 1/10/2022 | P0014591 | $3,390 | Logistics Department | PAINTING & DECOR INC. | PAINTING APP DOORS AT FS19 | |
| 1/11/2022 | B01986-2 | $775,000 | Logistics Department | MUNICIPAL EMERGENCY SERVICES | SCOTT SAFETY SCBA ITEMS | SK2363 |
| 1/12/2022 | B01869-3 | $690,000 | Logistics Department | MERRIMAC ENERGY GROUP | DIESEL FUEL DELIVERY SERVICES | COOPERATIVE AGREEMENT |
| 1/12/2022 | B01922-3 | $19,255 | Logistics Department | ASSETWORKS, INC. | ANNUAL SOFTWARE MAINTENANCE & SUPPORT RENEWAL | |
| 1/12/2022 | P0014592 | $18,626 | Logistics Department | PROFESSIONAL DIVERSIFIED FLOORING | FIRE STATION 73 FLOORING REPLACEMENT | |
| 1/13/2022 | P0014596 | $7,600 | Logistics Department | RSSE STRUCTURAL ENGINEERS INC. | STRUCTURAL ENGINEERING SERVICES FOR OCFA STATION 8 WALL REPAIR | RO2362 |
| 1/13/2022 | P014442 | $5,500 | Logistics Department | INTEGRATED DEMOLITION AND REMEDIATION INC | ASBESTOS ABATEMENT FS08. | |
| 1/13/2022 | B02213 | $18,916 | Human Resources Department | EXIGIS, LLC | THIRD PARTY INSURANCE CERTIFICATE MANAGEMENT | |
| 1/13/2022 | P0014593 | $1,045 | Logistics Department | UNITED RENTALS (NORTH AMERICA), iNC. | EQUIPMENT RENTAL FOR RFOTC | |
| 1/13/2022 | P0014594 | $539 | EMS & Training Department | LIFE ASSIST, INC. | REPLACEMENT PART FOR BP CUFFS | |

| Date | PO/BO Number | Amount | Department | Vendor Name | Description | Formal Solicitation Number |
|---|---|---|---|---|---|---|
| 1/13/2022 | P0014595 | $1,261 | EMS & Training Department | BOSS SAFETY PRODUCTS | PROTOTYPE FOR NEW DRUG BOXES | |
| 1/13/2022 | P0014597 | $3,157 | Logistics Department | DEL CITY WIRE | WIRE LOOM FOR INSTALLS | |
| 1/13/2022 | P0014598 | $475 | Logistics Department | BRIGHTVIEW LANDSCAPE SERVICES, INC. | TRIM TREE IN FRONT OF FS85 AND CREATE CLEARANCE FOR FLAT POLE | |
| 1/13/2022 | P0014599 | $1,132 | Logistics Department | BRIGHTVIEW LANDSCAPE SERVICES, INC. | TRIM TREES THROUGHOUT PROPERTY AT FS55 | |
| 1/14/2022 | B01658-6 | $5,436 | Logistics Department | HOSPITAL ASSOCIATION OF SOUTHERN CALIFORNIA | REDDINET MASTER AGREEMENT | |
| 1/14/2022 | B01744-3 | $25,000 | Logistics Department | 6TH STREET CONSULTING, LLC | AS-NEEDED SHAREPOIT ADVANCED TECHNICAL SUPPORT, SOFTWARE MAINTENANCE AND UPDATES | |
| 1/14/2022 | P0014543 | $6,165 | EMS & Training Department | FIREFIGHTERS RESEARCH & EDUCATION | CANCER, HAZMAT, AND MENTAL HEALTH EXPOSURE TRACKING APPLICATION | |
| 1/14/2022 | P0014602 | $8,081 | Special Operations Division | PRATT & WHITNEY CANADA | DAA LETTER | |
| 1/18/2022 | B02295 | $200,000 | Logistics Department | LASER INNOVATIONS, INC. | METAL FABRICATION SERVICES | RO2521 |
| 1/18/2022 | P0014603 | $20,180 | EMS & Training Department | RED HELMET TRAINING | INSTRUCTORS FOR COMPANY OFFICER TRAINING | |
| 1/19/2022 | P0014604 | $327 | EMS & Training Department | AMERICAN ENGRAVING COMPANY | CANCER AWARENESS MAGNET | |
| 1/19/2022 | P0014605 | $204 | EMS & Training Department | LIFE ASSIST, INC. | REPLACEMENT BATTERIES | |
| 1/20/2022 | B02297 | $50,000 | Logistics Department | LION TOTALCARE, INC | PPE CLEANING, INSPECTION, & REPAIR SERVICES | |
| 1/20/2022 | P0014606 | $9,911 | Logistics Department | MUNICIPAL EMERGENCY SERVICES | WILDLAND PPE FOR UPCOMING ACADEMY 54 | |
| 1/22/2022 | B02062-2 | $75,000 | Logistics Department | BEAR COMMUNICATIONS | RADIO COMMUNICATION EQUIPMENT REPAIR SERVICES | JA2417 |
| 1/25/2022 | P0014608 | $23,579 | Special Operations Division | J.G.W. INTERNATIONAL LTD | RADIATION TRAINING EQUIPMENT FOR HMRT | |
| 1/25/2022 | B01930-3 | $2,495 | Special Operations Division | HAWK ANALYTICS, INC. | CELL TRACKING SOFTWARE FOR INVESTIGATIONS | |
| 1/25/2022 | P0014607 | $1,311 | EMS & Training Department | STRYKER SALES CORPORATION | MAINTENANCE OF GURNEY | |
| 1/26/2022 | P0014609 | $18,371 | Logistics Department | WILLIAMS & MAHER INC | TEMPORARY POWER INSTALLATION AT FIRE STATION 53 | RO2202 |
| 1/26/2022 | B02168-1 | $50,000 | EMS & Training Department | LIFE ASSIST, INC. | ETCO ORAL AND NASAL CANNULA ADULT | |
| 1/26/2022 | P0014612 | $5,110 | Community Risk Reduction Department | RPW SERVICES, INC. | CHEMICAL TREATMENTS FOR INVASIVE TREE PEST MITIGATION GRANT | |
| 1/26/2022 | P0014610 | $4,112 | EMS & Training Department | AMERICAN ENGRAVING COMPANY | PROBATIONARY FIREFIGHTER TASK BOOKS | |
| 1/27/2022 | P0014613 | $9,690 | Human Resources Department | INTERACTION METRICS | SURVEY DESIGN AND ANALYTICS SERVICES | |
| 1/27/2022 | B01628-6 | $10,000 | Logistics Department | POLY-CORR INDUSTRIES | SANDBAGS (EMPTY) | |

| Date | PO/BO Number | Amount | Department | Vendor Name | Description | Formal Solicitation Number |
|---|---|---|---|---|---|---|
| 1/27/2022 | B01725-5 | $2,500 | Logistics Department | INMARK | CUSTOM RUBBER STAMPS, DIES, STENCILS, AND RELATED MATERIALS | |
| 1/27/2022 | B01855-2 | $1,970 | Logistics Department | KAMBRIAN CORPORATION | RED HAT ENTERPRISE LINUX SERVER STD 9X5 SUPPORT | |
| 1/28/2022 | B02132-1 | $30,000 | Logistics Department | LN CURTIS & SONS | FIRECRAFT WILDLAND GLOVES | |
| 1/28/2022 | P0014614 | $6,518 | EMS & Training Department | ALLSTAR FIRE EQUIPMENT | NEW STRUCTURE HELMETS FOR RECRUIT ACADEMY | |
| 1/31/2022 | B02052-2 | $81,000 | Business Services Department | HARRIS & ASSOCIATES, INC. | PROPERTY TAX ANALYSIS AND COMMUNITY REDEVELOPMENT AGENCY PASS-THROUGH ESTIMATION | JA2388 |
| 2/1/2022 | B02171-1 | $10,000 | Logistics Department | BEDDING ACQUISITION LLC | MATTRESS COVERS FOR FIRE STATIONS | |
| 2/1/2022 | B01716-5 | $10,000 | Logistics Department | ORANGE COUNTY PUMPING | SEPTIC TANK MAINTENANCE | |
| 2/1/2022 | B01832-4 | $80,000 | Logistics Department | DAVID WHEELER PEST CONTROL | PEST CONTROL SERVICES | RO2260 |
| 2/1/2022 | B02059-2 | $10,000 | Logistics Department | AMERICA'S INSTANT SIGNS | FABRICATION & INSTALLATION OF FIRE STATION SIGNAGE | |
| 2/1/2022 | B02201-1 | $10,000 | Special Operations Division | WORLD FUEL SERVICES, INC. | AVIATION FUEL CARDS FOR EMERGENCIES | |
| 2/1/2022 | B02103-2 | $5,000 | EMS & Training Department | VEOLIA ES TECHNICAL SOLUTIONS LLC | BIOHAZARD WASTE DISPOSAL SERVICES | |
| 2/1/2022 | P0014615 | $3,566 | Logistics Department | WILLIAMS & MAHER INC | APP BAY LIGHTING FOR FS17 & 46 | RO2202 |
| 2/1/2022 | P0014616 | $4,882 | Logistics Department | WILLIAMS & MAHER INC | APP BAY LIGHTING FOR FS73, FS77 & FS79 | RO2202 |
| 2/1/2022 | P0014617 | $467 | Logistics Department | UNITED RENTALS (NORTH AMERICA), INC. | EQUIPMENT RENTAL FOR FS57 KITCHEN PROJECT | |
| 2/2/2022 | P0014611 | $108,832 | Logistics Department | COMPUDIRECT 3000 INC | COMPUTER HARDWARE FOR REMOTE WORK | RO2536 |
| 2/2/2022 | P0014585 | $100,388 | Logistics Department | R.S. HUGHES COMPANY INC | REPLACEMENT MULTI-RAE UNITS, CALIBRATION GAS, AND SENSORS | LK2526 |
| 2/2/2022 | P0014619 | $15,516 | EMS & Training Department | LIFE ASSIST, INC. | AMBU BLUE SENSOR ELECTRODE | |
| 2/2/2022 | P0014618 | $48,000 | Community Risk Reduction Department | MAP THE POINT | GIS CONSULTING SERVICES FOR TREE PEST GRANT | |
| 2/2/2022 | P0014620 | $58,190 | Logistics Department | PACIFIC PLUMBING COMPANY | INSTALLATION OF UNDERGROUND WASTE LINES | CA PCC STATUTORY THRESHOLD |
| 2/3/2022 | P0014622 | $3,211 | Logistics Department | FIRE ETC | CITRO SQUEEZE 5 GALLON PAIL FOR SERVICE CENTER STOCK | |
| 2/3/2022 | P0014624 | $2,469 | Logistics Department | WILLIAMS & MAHER INC | GPS REPEATER INSTALL FOR FS13 | |
| 2/3/2022 | P0014625 | $4,027 | Logistics Department | LN CURTIS & SONS | FOAM TENDER MONITOR | |
| 2/3/2022 | P0014626 | $15,694 | Logistics Department | SIGNATURE FLOORING, INC. | FIRE STATION 6 FLOORING REPLACEMENT | |
| 2/7/2022 | P0014627 | $8,222 | Logistics Department | ORANGE COAST PETROLEUM EQUIPMENT CO., INC | DISPENSER REPLACEMENT FOR FS22 | |

| Date | PO/BO Number | Amount | Department | Vendor Name | Description | Formal Solicitation Number |
|---|---|---|---|---|---|---|
| 2/7/2022 | P0014628 | $7,939 | Logistics Department | WILLIAMS & MAHER INC | HANGER CABLE RUN FOR FS41 | |
| 2/8/2022 | B01717-5 | $2,000 | Business Services Department | MUNICIPAL SERVICES BUREAU | MERCHANT PROCESSING FEES FOR ELECTRONIC CHECKS | DC2109 |
| 2/8/2022 | P0014629 | $794 | Logistics Department | ACCENT FLAGS AND FLAGPOLES | FLAGPOLE REPAIR FOR FS48 | |
| 2/8/2022 | P0014630 | $7,388 | Logistics Department | COZAD TRAILER SALES INC | REPAIR BRAKE ON AXLE HOUSING UNIT #6148 | |
| 2/8/2022 | P0014632 | $9,732 | Logistics Department | BAILEY'S INC. | RAPCO 100' CARBIDE SAW CHAIN | |
| 2/8/2022 | P0014631 | $2,962 | Logistics Department | SERVICE KING PAINT AND BODY | PAINT AND REPAIR SERVICE FOR UNIT 4337 | |
| 2/8/2022 | P0014633 | $1,154 | Logistics Department | PACIFIC PLUMBING COMPANY | MATERIALS AND INSTALLATION OF SINGLE HANDLE SINK FAUCETS | |
| 2/9/2022 | B02196-1 | $5,000 | Special Operations Division | CULLIGAN OF SANTA ANA | DI WATER FOR AIRCRAFT WASHING AND MAINTENANCE | |
| 2/9/2022 | P0014635 | $7,364 | Logistics Department | FEDERAL SIGNAL CORP | EQ2B AMPLIFIERS FOR STOCK | |
| 2/9/2022 | P0014637 | $1,220 | Special Operations Division | RUGGED VIDEO | HD 19 BULLET CAMERA WITH BUILT-IN CONNECTOR CAMERA EXTENSION CABLE & HOIST CAMERA CLOSURE | |
| 2/10/2022 | B02033-2 | $100,000 | Human Resources Department | NORMAN A. TRAUB & ASSOCIATES | AS-NEEDED INDEPENDENT INTERNAL AFFAIRS INVESTIGATIVE SERVICES | JA2358 |
| 2/10/2022 | B02195-1 | $837 | Logistics Department | DLT SOLUTIONS LLC | ORACLE MAITENANCE RENEWAL | |
| 2/10/2022 | P0014638 | $2,656 | Logistics Department | INNOVATIVE INDUSTRIES INCORPORATED | SLIDE FOR REPAIR TRUCKS 3046 AND 3048 | |
| 2/10/2022 | P0014639 | $6,675 | EMS & Training Department | PERFORM BETTER | FITNESS EQUIPMENT REPLACEMENT FOR FIRE ACADEMIES AND FIRE STATIONS | |
| 2/14/2022 | B01945-3 | $40,000 | EMS & Training Department | NYCANCO, INC | CUSTOM EMS BAGS | |
| 2/16/2022 | P0014642 | $605 | Human Resources Department | DONNOE & ASSOCIATES, INC. | WRITTEN EXAM RENTAL FOR BUSINESS ANALYST RECRUITMENT | |
| 2/16/2022 | P0014643 | $656 | Logistics Department | UNITED RENTALS (NORTH AMERICA), INC. | EQUIPMENT RENTAL FOR FS15 | |
| 2/16/2022 | P0014640 | $3,099 | Logistics Department | HD SUPPLY FACILITIES MAINTENANCE LTD | REPAIRS NEEDED FOR FLOOR SCRUBBER UNIT # 8100 | |
| 2/16/2022 | P0014641 | $46,422 | EMS & Training Department | HOME DEPOT | LUMBER FOR DRILL GROUNDS TRAINING - ACADEMY 54 | COOPERATIVE AGREEMENT |
| 2/17/2022 | B02128-1 | $37,000 | Logistics Department | ALLSTAR FIRE EQUIPMENT | LEATHER TURNOUT BOOTS FOR FIRE FIGHTERS | SK2429 |
| 2/22/2022 | P0014644 | $2,586 | EMS & Training Department | TS PHARM | NITROGLYCERIN SPRAY FOR EMS | |
| 2/22/2022 | P0014645 | $862 | EMS & Training Department | TS PHARM | EPINEPHRINE FOR EMS | |
| 2/23/2022 | P0014646 | $1,853 | Logistics Department | WILLIAMS & MAHER INC | LED LIGHTING INSTALLATIONS - RFOTC | RO2202 |
| 2/23/2022 | P0014648 | $2,075 | Logistics Department | PACIFIC PLUMBING COMPANY | REPLACEMENT OF GATE VALVE FOR OS&Y | RO2501 |

| Date | PO/BO Number | Amount | Department | Vendor Name | Description | Formal Solicitation Number |
|---|---|---|---|---|---|---|
| 2/23/2022 | P0014649 | $4,680 | Community Risk Reduction Department | THE PM GROUP | FLYER PACKETS FOR EDUCATION AND OUTREACH | |
| 2/23/2022 | B01657-6 | $6,000 | Logistics Department | EVISIONS, INC. | EVISIONS SOFTWARE MAINTENANCE / SUPPORT RENEWALS | |
| 2/23/2022 | P0014647 | $1,085 | Logistics Department | WILLIAMS & MAHER INC | FS65 911 CALL BOX REPAIR | |
| 2/24/2022 | B01928-4 | $70,000 | Human Resources Department | CALIFORNIA HAZARDOUS SERVICES, INC. | INSPECTION, MAINTENANCE, AND REPAIR OF FUEL TANKS AND DISPENSING UNITS | RO2320 |
| 2/24/2022 | B01931-3 | $50,000 | Logistics Department | CAL-STATE AUTO PARTS INC. | AC DELCO AND MOTORCRAFT PARTS AS-NEEDED | JA2337 |
| 2/25/2022 | P0014651 | $3,204 | Logistics Department | AMERICAN ENGRAVING COMPANY | WILDLAND TEE SHIRTS FOR UPCOMING ACADEMIES | |
| 2/25/2022 | P0014652 | $2,859 | Logistics Department | NATIONAL FIRE FIGHTER CORP | SAFETY GOGGLES FOR UPCOMING ACADEMIES | |
| 2/25/2022 | P0014653 | $28,231 | Logistics Department | LINEGEAR FIRE & RESCUE | STOCK NEEDED FOR UP COMING ACADEMIES AND FIRE SEASON | |
| 2/28/2022 | P0014654 | $18,500 | Logistics Department | LANDCARE HOLDINGS, INC. | LANDSCAPE MAINTENANCE - FS42 | |
| 2/28/2022 | P0014655 | $5,545 | Logistics Department | C.I. SERVICES, INC. | NEW ROOF/PERGOLA PATIO COVER FS9 | |
| 3/1/2022 | B01837-4 | $140,000 | Special Operations Division | EPIC AVIATION LLC | JET FUEL AT FULLERTON AIRPORT | JA9055 |
| 3/1/2022 | B01845-4 | $10,000 | Logistics Department | STARLITE RECLAMATION ENVIRONMENTAL | HAZARDOUS WASTE DISPOSAL SERVICES | |
| 3/1/2022 | B01933-3 | $75,000 | Logistics Department | WESTRUX INTERNATIONAL | INTERNATIONAL TRUCKS: PARTS, MAINTENANCE & REPAIR | JA2340 |
| 3/1/2022 | B01934-3 | $75,000 | Logistics Department | WESTERN TRUCK EXCHANGE | INTERNATIONAL TRUCKS: PARTS, MAINTENANCE & REPAIR | JA2340 |
| 3/1/2022 | B02067-2 | $80,000 | Logistics Department | SOUTHERN CALIFORNIA FLEET SERVICES INC. | CUMMINS: MAINTENANCE, PARTS & REPAIR SERVICES | RO2405 |
| 3/1/2022 | B02300 | $50,000 | Logistics Department | LN CURTIS & SONS | GLOBE SHADOW XF TURNOUT BOOTS | |
| 3/1/2022 | B02301 | $40,000 | EMS & Training Department | AMBU INC. | AMBU SPUR II BAG RESERVOIRS | |
| 3/1/2022 | B02307 | $20,000 | Business Services Department | THE HOWARD E NYHART CO INC | ACTUARIAL VALUATION SERVICES FOR PENSION AND HEALTH BENEFITS | JA2531 |
| 3/1/2022 | B01581-7 | $10,000 | Logistics Department | HARBOR POINTE A/C & CONTROLS | AIR COMPRESSOR REPAIR AND MAINTENANCE | |
| 3/1/2022 | B02080-2 | $49,999 | Executive Management | INTTERRA CORPORATION | INTTERRA SOFTWARE SUBSCRIPTION | |
| 3/1/2022 | B01738-5 | $6,000 | Special Operations Division | GROUND CONTROL SYSTEMS INC. | GROUND CONTROL SATELLITE BANDWITH SERVICE | |
| 3/1/2022 | B01794-4 | $40,000 | Logistics Department | LN CURTIS & SONS | CLASS A FIREFIGHTING FOAM | |
| 3/1/2022 | B01872-3 | $5,000 | Logistics Department | BESTWAY LAUNDRY SOLUTIONS | REPAIR AND MAINTENANCE - EXTRACTORS & DRYERS | |
| 3/1/2022 | B02073-2 | $35,000 | Logistics Department | MARX BROS. FIRE EXTINGUISHER | FIRE EXTINGUISHER MAINTENANCE AND NEW EXTINGUISHER PURCHASES | JC2415 |

| Date | PO/BO Number | Amount | Department | Vendor Name | Description | Formal Solicitation Number |
|---|---|---|---|---|---|---|
| 3/1/2022 | B02081-2 | $70,000 | Logistics Department | NEX-XOS WORLDWIDE LLC | MEALS READY TO EAT (MRE) - FOR US&R AND SERVICE CENTER STOCK FEMA CACHE NUMBER - LB -0105.00 | JC2416 |
| 3/1/2022 | B02305 | $20,000 | Logistics Department | UNITED RENTALS (NORTH AMERICA), iNC. | EQUIPMENT RENTALS | COOPERATIVE AGREEMENT |
| 3/1/2022 | B02309 | $20,000 | Logistics Department | ASBURY ENVIRONMENTAL SERVICES | BULK/BOTTLED COOLANT AND COOLANT WASTE DISPOSAL | |
| 3/1/2022 | B02310 | $50,000 | Logistics Department | MUNICIPAL EMERGENCY SERVICES | CLASS B FIREFIGHTING FOAM | |
| 3/1/2022 | B01841-4 | $15,000 | Special Operations Division | PRUDENTIAL OVERALL SUPPLY | RENTAL OF UNIFORMS, SHOP TOWELS, AND RELATED ITEMS | COOPERATIVE AGREEMENT |
| 3/2/2022 | B02068-2 | $125,000 | Logistics Department | HARBOR DIESEL AND EQUIPMENT, INC. | CUMMINS MAINTENANCE, REPAIRS, AND PARTS | RO2405 |
| 3/2/2022 | P0014656 | $3,855 | Special Operations Division | AIR COMM SYSTEMS INC | REPAIR OF EQUIPMENT | |
| 3/2/2022 | P0014658 | $552 | Logistics Department | FIRST IN PRODUCTS, INC. | AERIAL LADDER GUIDES | |
| 3/3/2022 | B02304 | $630 | EMS & Training Department | DRFIRST.COM INC | SUBSCRIPTION TO SOFTWARE FOR ELECTRONIC PRESCRIPTIONS | |
| 3/3/2022 | P0014660 | $1,440 | EMS & Training Department | LIFE ASSIST, INC. | SALINE FLUSH | |
| 3/3/2022 | P0014659 | $913 | Logistics Department | KB&AR | APPLIANCE REPAIR FS62 | |
| 3/7/2022 | P0014662 | $9,709 | EMS & Training Department | CONCEPT2 CTS, INC. | REPLACEMENT ROWERS FOR ACADEMY/ STATIONS | |
| 3/7/2022 | P0014665 | $8,725 | EMS & Training Department | COULTER VENTURES LLC | FITNESS EQUIPMENT FOR FIRE ACADEMY/ STATIONS | |
| 3/7/2022 | P0014666 | $34,314 | Logistics Department | SIDDONS MARTIN EMERGENCY GROUP LLC | EQUIPMENT INSTALLATION FOR AIRPORT APPARATUS | |
| 3/7/2022 | P0014661 | $5,175 | EMS & Training Department | CALUMET PACKAGING | TRUFUEL FOR ACADEMY 54 DRILL GROUNDS | |
| 3/7/2022 | P0014663 | $9,786 | Community Risk Reduction Department | S&H TREE LANDSCAPING AND ARBORIST SERVICE LLC | TREE REMOVALS - TRABUCO CANYON | |
| 3/7/2022 | P0014664 | $4,615 | Logistics Department | WILLIAMS & MAHER INC | WI-FI / LAN CONNECTION FOR ATHLETIC OFFICE | RO2202 |
| 3/8/2022 | B01847-4 | $180 | Logistics Department | MILLET SOFTWARE | VISUAL CUT ANNUAL SOFTWARE SUPPORT | |
| 3/8/2022 | B01850-4 | $150 | Logistics Department | AMERICAN REGISTRY FOR INTERNET NUMBERS (ARIN) | MAINTENANCE FOR AUTONOMOUS SYSTEM NUMBER ORG ID: OCFA-1 | |
| 3/9/2022 | B02069-2 | $140,000 | Logistics Department | RINCON TRUCK CENTER | CUMMINS MAINTENANCE, REPAIRS, AND PARTS | RO2405 |
| 3/10/2022 | B01857-4 | $10,000 | Logistics Department | MCMASTER-CARR SUPPLY CO | MCMASTER-CARR HARDWARE AND SUPPLIES | |
| 3/10/2022 | B01932-4 | $50,000 | Logistics Department | PARTS AUTHORITY METRO | AC DELCO AND MOTORCRAFT PARTS AS-NEEDED | JA2337 |
| 3/10/2022 | P0014667 | $65,416 | EMS & Training Department | HOME DEPOT | LUMBER FOR DRILL GROUNDS TRAINING - ACADEMY 54 | COOPERATIVE AGREEMENT |
| 3/11/2022 | P0014670 | $1,460 | Special Operations Division | WHITE CAP CONSTRUCTION SUPPLY | SUPPRESION AND REPAIR SUPPLIES FOR EMERALD FIRE | |

| Date | PO/BO Number | Amount | Department | Vendor Name | Description | Formal Solicitation Number |
|---|---|---|---|---|---|---|
| 3/11/2022 | P0014668 | $400 | EMS & Training Department | TS PHARM | EPINEPHRINE | |
| 3/11/2022 | P0014671 | $13,474 | Special Operations Division | LN CURTIS & SONS | SHORING EQUIPMENT TO AUGMENT THE FEMA CACHE | |
| 3/11/2022 | P0014669 | $21,630 | Special Operations Division | LN CURTIS & SONS | ROPE AND HARDWARE EQUIPMENT | |
| 3/14/2022 | P0014677 | $12,895 | Logistics Department | CURVATURE LLC | 911 NETWORK UPGRADE PROJECT | |
| 3/14/2022 | P0014673 | $15,195 | Logistics Department | MUNICIPAL EMERGENCY SERVICES | CONFINED SPACE EXCAPE PAKS FOR T9, T32, AND T61 | SK2363 |
| 3/14/2022 | P0014674 | $13,143 | Logistics Department | LINEGEAR FIRE & RESCUE | STOCK FOR UPCOMING ACADEMIES AND FIRE SEASON | |
| 3/14/2022 | P0014676 | $1,562 | Logistics Department | THE TINT PROS | APP BAY WINDOW TINTING @ FS04 | |
| 3/14/2022 | P0014672 | $185,942 | Logistics Department | MALLORY CO. | FIRE HOSE FOR STOCK | COOPERATIVE AGREEMENT |
| 3/14/2022 | P0014675 | $2,144 | EMS & Training Department | B & M LAWN & GARDEN CENTER | PARTS FOR ACADEMY DRILL GROUNDS CHAINSAWS | |
| 3/15/2022 | P0014678 | $1,430 | Logistics Department | B & M LAWN & GARDEN CENTER | ROTARY SAW FOR ENGINE 25 | |
| 3/16/2022 | P0014680 | $2,616 | Logistics Department | PACIFIC PLUMBING COMPANY | MOP SINK UPGRADE - FS56 | RO2501 |
| 3/16/2022 | B02308 | $5,000 | Logistics Department | ASBURY ENVIRONMENTAL SERVICES | WASTE OIL HAUL OFF SERVICE | |
| 3/16/2022 | P0014679 | $400 | EMS & Training Department | TS PHARM | EPINEPHRINE | |
| 3/17/2022 | B01925-3 | $7,500 | Special Operations Division | HONEYWELL INTERNATIONAL, INC | FLIGHT FOLLOWING & SATELLITE PHONE SERVICE AIR OPS | |
| 3/17/2022 | P0014681 | $827 | Logistics Department | REVZILLA MOTORSPORTS LLC | DOT APPROVED SAFETY HELMETS/PPE FOR UTV 54 | |
| 3/17/2022 | P0014682 | $4,330 | EMS & Training Department | UNITED RENTALS (NORTH AMERICA), iNC. | VARIABLE REACH FORKLIFT RENTAL | |
| 3/21/2022 | P0014685 | $7,819 | Logistics Department | TUFF SHED, INC. | STORAGE SHED FOR CADET POST - FS82 | |
| 3/21/2022 | P0014684 | $3,023 | Special Operations Division | LN CURTIS & SONS | PARATECH HIGH PRESSURE AIRBAG ACCESSORIES | |
| 3/21/2022 | B01846-4 | $5,600 | Logistics Department | MAIL DELIVERY SYSTEMS, INC. | MAIL PICKUP AND DELIVERY SERVICES | |
| 3/21/2022 | B01861-4 | $1,143 | Logistics Department | PEAK-RYZEX | ANNUAL MAINTENANCE FOR PRINTRONX PRINER | |
| 3/21/2022 | B02040-2 | $320,000 | EMS & Training Department | MCKESSON MEDICAL-SURGICAL | EMS SUPPLIES | SK2379 |
| 3/21/2022 | P0014686 | $312 | EMS & Training Department | LIFE ASSIST, INC. | S-SCORT III SUCTION UNIT BATTERY AND DMS EMT3 6 BAY RIBBON DISPENSER | |
| 3/21/2022 | P0014687 | $8,146 | Logistics Department | ORANGE COAST PETROLEUM EQUIPMENT CO., INC | BULK DEF TOTES FOR FS61, FS58, FS22 & RFOTC | |
| 3/22/2022 | P0014689 | $3,161 | Logistics Department | FEDERAL SIGNAL CORP | EQ2B ELECTRIC SIREN PARTS FOR OCFA STOCK | |

| Date | PO/BO Number | Amount | Department | Vendor Name | Description | Formal Solicitation Number |
|---|---|---|---|---|---|---|
| 3/22/2022 | P0014688 | $9,990 | Logistics Department | HC INTEGRATED SYSTEMS, INC | FIRE ALARM PANEL REPLACEMENT FS32 | |
| 3/22/2022 | P0014691 | $2,175 | Logistics Department | PACIFIC PLUMBING COMPANY | PLUMBING WORK @ FS18 | |
| 3/22/2022 | B01909-3 | $7,000 | Human Resources Department | ACE INDUSTRIES, INC. | BRIDGE CRANE INSPECTIONS AT OCFA STATION # 41 | |
| 3/23/2022 | P0014692 | $3,711 | Executive Management | AMERICAN ENGRAVING COMPANY | COMMUNITY EDUCATION SUPPLIES | |
| 3/23/2022 | P0014693 | $4,451 | Logistics Department | DIAMOND GLASS | SHOWER DOORS - FS61 | |
| 3/24/2022 | B02311 | $15,000 | Human Resources Department | SOLOUTIONS AND INSIGHT INC. | PREVENTATIVE HEALTH SCREENING SERVICES | JA2509 |
| 3/24/2022 | B02312 | $10,000 | Logistics Department | SEEK THERMAL, INC. | SEEK THERMAL IMAGING CAMERA REPAIRS | |
| 3/24/2022 | P0014694 | $1,105 | Executive Management | ON THE WALL INCORPORATED | MAHOGANY FRAMES FOR CAP AWARDS | |
| 3/24/2022 | P0014695 | $6,250 | Logistics Department | SADDLEBACK APPLIANCES | WASHER/DRYER FOR FS47 | |
| 3/25/2022 | P0014696 | $1,266 | Logistics Department | KAMBRIAN CORPORATION | REPLACEMENT TV MONITOR FOR DOC | |
| 3/25/2022 | P0014697 | $4,807 | Logistics Department | CDW GOVERNMENT | MEDIA BACKUP TAPES/ CLEANING TAPES | |
| 3/25/2022 | B01567-7 | $10,000 | Logistics Department | PLATINUM NETWORKS | NORTEL PHONE EQUIPMENT | |
| 3/25/2022 | B01578-7 | $6,600 | Logistics Department | ULTIMATE MAINTENANCE SERVICES | DATA CENTER CLEANING SERVICES | |
| 3/25/2022 | B01972-3 | $440,000 | Logistics Department | PARKHOUSE TIRE INC | TIRES, TUBES, AND RELATED SERVICES | COOPERATIVE AGREEMENT |
| 3/25/2022 | B02200-1 | $7,700 | Logistics Department | PACIFIC MOBILE STRUCTURE, INC. | OFFICE/SLEEPER TRAILER RENTAL FOR STATION 10 | |
| 3/28/2022 | P0014700 | $9,951 | Logistics Department | BRIGHTVIEW LANDSCAPE SERVICES, INC. | IRRIGATION REPAIRS FS09 | |
| 3/28/2022 | P0014701 | $4,901 | Logistics Department | WILLIAMS & MAHER INC | ALERT LIGHT SWITCH AND LIGHTING INSTALL FS25 | RO2202 |
| 3/28/2022 | P0014699 | $734 | Logistics Department | EXECUTIVE APPLIANCE SERVICES | PARTS AND LABOR TO REPAIR OVEN T-STAT @FS19 | |
| 3/29/2022 | P0014703 | $17,472 | Logistics Department | PHOENIX INTERNATIONAL SYSTEMS | ATV OPERATOR/ MECHANIC TRAINING | |
| 3/29/2022 | B02032-2 | $100,000 | Human Resources Department | ATKINSON, ANDELSON, LOYA, RUUD & ROMO | AS-NEEDED INDEPENDENT INTERNAL AFFAIRS INVESTIGATIVE SERVICES. | JA2358 |
| 3/29/2022 | P0014704 | $1,439 | Logistics Department | ALL WAYS TILE INC | SHOWER DAM INSTALL @ FS61 | |
| 3/29/2022 | B01751-5 | $3,000 | Special Operations Division | CRON & ASSOCIATES TRANSCRIPTION, INC. | TRANSCRIPTION SERVICES FOR RECORDED AUDIO | |
| 3/29/2022 | P0014702 | $269 | EMS & Training Department | LIFE ASSIST, INC. | REPLACEMENT BP CUFFS | |
| 3/30/2022 | P0014706 | $2,987 | Logistics Department | BRIGHTVIEW LANDSCAPE SERVICES, INC. | LANDSCAPE AND IRRIGATION MAINTENANCE FS47 | |

| Date | PO/BO Number | Amount | Department | Vendor Name | Description | Formal Solicitation Number |
|---|---|---|---|---|---|---|
| 3/30/2022 | P0014707 | $3,378 | Special Operations Division | MAIN LINE HELICOPTER | HELICOPTER LANDING PLATFORM FOR AIROPS | |
| 3/30/2022 | P0014705 | $2,282 | Logistics Department | CDW GOVERNMENT | SOFTWARE NEEDED FOR BANNER DEVELOPMENT | |

Orange County Fire Authority

# AGENDA STAFF REPORT

**Board of Directors Meeting**
**May 26, 2022**

**Agenda Item No. 2D**
**Consent Calendar**

## Organizational Service Level Assessment Update


**Contact(s) for Further Information**

| | | |
|---|---|---|
| Lori Zeller, Deputy Chief<br>Administration & Support Bureau | lorizeller@ocfa.org | 714.573.6020 |
| Robert Cortez, Assistant Chief<br>Business Services Department | robertcortez@ocfa.org | 714.573.6012 |



**Summary**

This agenda item is submitted to provide a progress update on the Organizational Service Level Assessments (SLAs) for Field Deployment, Emergency Medical Services, Emergency Command Center, Fleet Services, Executive Management/Human Resources, Business Services, and Community Risk Reduction which were completed by Citygate as part of the first and second phase of assessments in 2020 and 2021.


**Prior Board/Committee Action(s)**

At its regular November 15, 2018, meeting, the Executive Committee awarded a Master Consulting Agreement with Citygate Associates, LLC, the number one ranked firm in the OCFA's Request for Qualifications (RFQ) process for as-needed organizational service level review consulting services.

At its regular September 24, 2020, meeting, the Board of Directors approved the recommended actions to receive and file the results and final reports for Field Deployment, Emergency Medical Services, Emergency Command Center, Fleet Services and Executive Leadership/Human Resources. Furthermore, the Board of Directors also approved the issuing of Purchase Orders to Citygate Associates, LLC to conduct SLAs for the Business Services Department and the Community Risk Reduction Department and corresponding budget adjustments.

At its regular January 27, 2022, meeting, the Board of Directors approved the recommended actions to receive and file the Citygate Organizational Service Level assessment update for Field Deployment, Emergency Medical Services, Emergency Command Center, Fleet Services, and Executive Leadership/Human Resources. The Board of Directors also approved to receive and file the Citygate Organizational Service Level Assessment results presentation and final reports for the Business Services Department and the Community Risk Reduction Department.

On May 11, 2022, the Budget and Finance Committee reviewed the proposed agenda item and directed staff to place the item on the Board of Directors agenda by a vote of 6-0 (Directors O'Neill, Hernandez, and Sachs absent).

**RECOMMENDED ACTION(S)**

Receive and file the Organizational Service Level Assessment (SLA) update for Field Deployment, Emergency Medical Services, Emergency Command Center, Fleet Services, Executive Leadership/Human Resources, Business Services, and Community Risk Reduction.

## Impact to Cities/County
Not Applicable.

## Fiscal Impact
None.

## Background
Following a 2018 RFQ process, Citygate Associates, LLC (Citygate) was selected and ultimately awarded a 3-year term agreement, with two additional one-year renewals, to perform as-needed organizational service level review consulting services for OCFA. Citygate, is a public sector firm that provides management consulting to a full array of local government functions, with particular emphasis on fire protection, law enforcement, community development, public works, animal services, and human resources.

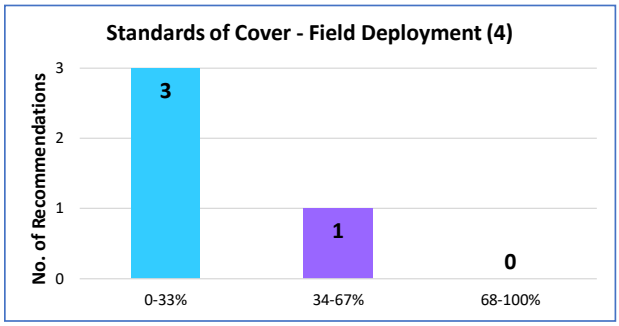
Five organizational SLA areas, also known as cost centers, were identified as part of the first phase of the Citygate SLA project and approved for review by the Budget & Finance Committee and the Board of Directors in 2019. The first phase of the SLAs included: Emergency Command Center (ECC), Emergency Medical Services (EMS), Fleet Services, Field Deployment (Standards of Cover), and Executive Leadership Team/Human Resources. The second phase of the SLAs were approved for review by the Budget & Finance Committee and the Board of Directors in September 2020 and included SLAs for the Business Services Department and the Community Risk Reduction Department. These assessments are intended to accomplish the same objectives as a strategic plan, but in smaller pieces, and allow for progress to be made on identified objectives, while other portions of the organization are still being assessed. Each SLA evaluates, at a forensics data-driven level, the operational performance of the cost centers, not just compared to national and Citygate team best practices, but to the needs of the OCFA, its employees and its agency customers. Each SLA is a stand-alone assessment report, that covers elements assessed, the operational metrics, and describe strengths and areas of opportunity.

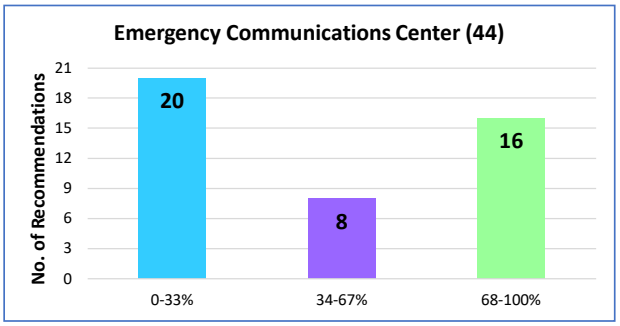
The results of the first phase of the SLA reviews were presented and approved by the Budget & Finance Committee and the Board of Directors at their respective meetings in September of 2020. The second phase of the SLA reviews were presented and approved by the Budget & Finance Committee in November 2021 and the Board of Directors in January of 2022. Since then, staff has been working towards implementing Citygate's recommendations that do not require an increase in costs to the organization. A listing of Citygate SLA recommendations and status updates are provided in the Attachment.

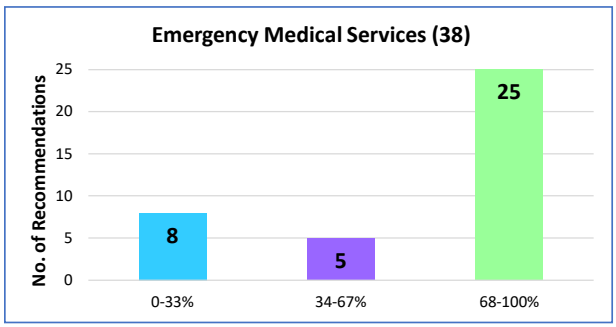
## Attachment
Organizational SLA Recommendations and Status Update May 2022

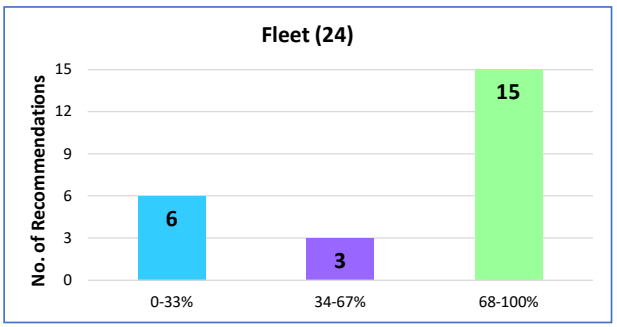
# Orange County Fire Authority
## Organizational Service Level Assessment
## Recommendations Status Summary – May 2022

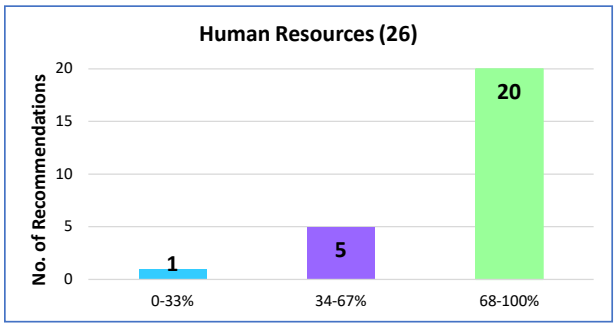
This summary overview provides the status of recommendations within each Service Level Assessment (SLA). Additional details are included in the SLA Recommendations Status Report.

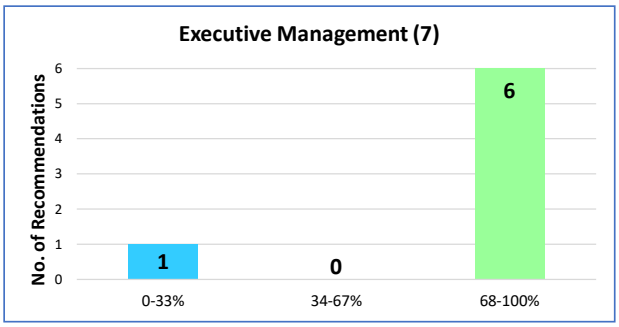


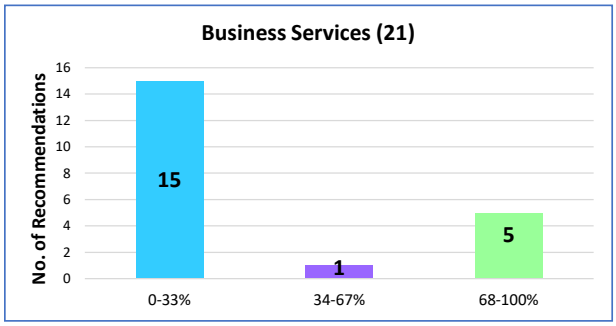



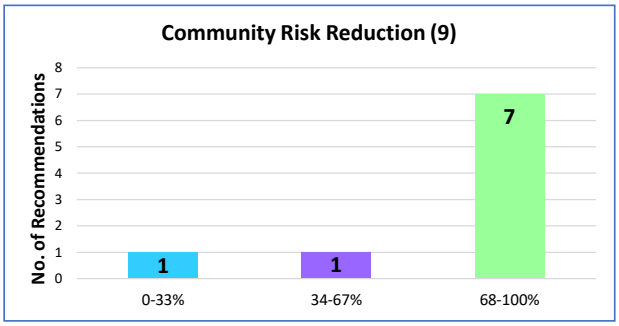

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**ORANGE COUNTY FIRE AUTHORITY**
**Organizational Service Level Assessments**
**Recommendations Status Report – May 2022**

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| No. | Recommendation | # New Positions | New Cost Increase? | Responsible Dept/Bureau | Status / Results | Date Completed | % of Completion |
|---|---|---|---|---|---|---|---|
| ***Standards of Cover – Field Deployment Service Level Assessment*** | | | | | | | |
| **1.1** | Adopt updated Board of Directors deployment measures. (pg. 9) | No | No | Emergency Ops Bureau | While not yet adopted, staff is using the updated deployment measures to evaluate performance. | | 20% |
| **1.2** | Reduce turnout times to 2:00 minutes or less, 90 percent of the time. (pg. 10) | No | No | Field Operations | In progress. | | 50% |
| **1.3** | As soon as finances allow, OCFA should add:<br>• A ladder truck to Station 56 (moving the ladder to Station 32 is a given).<br>• Five float engines (or four engines and one ladder truck) 24/7/365 to support peak-hour, high-activity areas, training backfill, and immediate third alarm strike force or special event staffing. (pg. 10) | <br>12<br><br>60 | <br>Yes<br><br>Yes | Field Operations | <br>• Completed the improvement of ladder truck coverage for Station 32 July 2020 (non-cost item).<br>• Balance of the recommendation is pending future financial feasibility and prioritization. | | <br>15%<br><br>0% |
| ***Additional Field Deployment Service Level Assessment Options*** | | | | | | | |
| **1.4** | Options to Improve Deployment<br>• Relocate Station 10. (pg. 5)<br>• Add Station 12 to improve capacity and coverage west of Station 22. (pg. 5)<br>• Add Station 52 to add coverage. (pg. 5) | <br><br>12<br><br>12 | <br><br>Yes<br><br>Yes | | <br>• Station 10, In progress.<br>• Station 12, In progress.<br>• Station 52, In-progress. | | <br>10%<br>10% |



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**Organizational Service Level Assessments**
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|---|---|---|---|---|---|---|---|
| | • Improved ladder truck coverage for Stations 19, 24, 48, 56, and 32. (pg. 5)<br><br>• Call processing times to 90 percent of the fire and EMS incidents at 1:19 minutes are faster that Citygate's and the National Fire Protection Association's recommendation of 1:30 minutes where no language or location identification barriers exist. (pg.8) | 36<br><br>No | Yes<br><br>No | | • Completed the improvement of ladder truck coverage for Station 32 (see 1.3). Other Stations are pending future financial feasibility and prioritization.<br><br>• Completed, call processing times included with monthly compliance reports. Efforts will be ongoing. | <br><br>7/2019 | 5%<br><br>100% |
| ***Emergency Communications Center (ECC) Service Level Assessment*** | | | | | | | |
| **2.1** | Add 10 new dispatch positions to the ECC. (pg.1) Increased authorized FTE FCD count from 32 to 42 FCDs. Overall, the increase in staff may address:<br>• The ongoing need to backfill shifts and assign overtime.<br>• Decrease overtime to allow the 12-hour shift schedule to be fully realized by staff so that this shift configuration can be fully evaluated as to effectiveness, retention, and performance. (pg. 53) | 10 | Yes | ECC | Pending future financial feasibility and prioritization. | | 0% |

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|---|---|---|---|---|---|---|---|
| **2.2** | Increase supervisor positions from six to seven by eliminating an existing Senior Fire Communication Supervisor classification. (pg. 1) | No | No | ECC | Completed. Reallocation of position is on a temporary basis. | 10/2020 | 100% |
| **2.3** | Reconfigure shift days off in the shift rotation in order to provide the opportunity for all ECC to have some weekend time off. (pg. 2, 57) | No | No | ECC | Negotiation of modified MOU terms with OCEA are currently underway. | | 0% |
| **2.4** | Add a management analyst to the ECC structure to effectively develop and facilitate change-management processes. (pg. 2) | 1 | Yes | ECC | Pending future financial feasibility and prioritization. | | 0% |
| **2.5** | Reconfigure existing personnel, or modify/rotate assignments, to create a more formal CQI Unit. (pg. 3) | No | No | ECC | Completed. However, efforts will be ongoing. ECC Administrative Supervisor assigned to CQI Unit with Nurse Educator and Medical Director. | 10/2020 | 100% |

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| **2.6** | OCFA should source and establish a backup location and equip it with ECC equipment that will facilitate continuity of operations and remote connectivity options. (pg. 4) | No | No | IT | This project had already been approved in the 5-year CIP prior to the Citygate recommendation and is in process for build-out of a back-up dispatch location at the OCFA's US&R Warehouse.<br>ECC is currently working with the vendor Kitchell that has been retained to complete a feasibility study for layout and equipment needed. Once feasibility study is complete, Executive Management will review the project for approval to move forward.<br>Exec Management has approved project to move forward with PHASE 2 to develop design-bid-build docs, plans, solicit bids, choose construction bidder. | | 50% |
| **2.7** | Evaluate the organization and reporting structure for the EPAC unit to identify the need for additional personnel to work under the assigned division chief. (pg. 40) | 1 | Yes | ECC | Pending future financial feasibility and prioritization.<br>The EPAC position requires significant time commitment. The EPAC position will require (1) Full Time Battalion Chief or higher dedicated to this position. | | 5% |
| **2.8** | Establish a role of each position assigned to the division, as well as their reporting relationship(s) and responsibilities. Ensure that collateral duties assigned-such as CTO, incident dispatcher, and acting supervisor-are included. (pg. 40) | No | No | ECC | Classification specs have been established. | | 10% |

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|---|---|---|---|---|---|---|---|
| **2.9** | Develop an ECC orientation program and mentoring guidelines to administer when the Battalion Chiefs rotate. (pg. 40) | No | No | ECC | Duty Officer Handbook and (3) 8-hour observation shifts have been implemented for new duty officers. | 4/2021 | 100% |
| **2.10** | Develop a succession plan for future transitions. Include an analysis of retirement thresholds of existing staff and newly created positions or assignments. (pg. 41) | No | No | ECC | Will be evaluated for future direction. | | 0% |
| **2.11** | Develop career paths for the ECC manager and supervisory staff by creating career-development plans for each and research industry-related (e.g., APCO, NENA, and POST[15]) training courses pursuant to each position. (pg. 41) | No | Yes | ECC | Will be evaluated for future direction. | | 0% |
| **2.12** | Develop a data-tracking mechanism, whether it be CAD incidents or other data sources, to capture radio workload per 24x7 console, to determine the increase/decrease of workload over time as jurisdictions are integrated or omitted from the system. Additionally, set workload thresholds for each workstation to assist in the re-balancing of workload, should agencies be added or subtracted for ECC operations. (pg. 43) | No | No | ECC | Will be evaluated for future direction. | | 0% |
| **2.13** | Consider MCP used a mid-point number for attrition, measure if using the mid-point number achieved the | No | No | ECC | Will be evaluated for future direction. | | 0% |

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| | needed level of staffing, and operational effectiveness and efficiency. (pg. 53) | | | | | | |
| **2.14** | During each shift, ensure that the ECC staff rotates positions so that staff members are not working singular positions for extended periods of time. This wellness provision keeps staff fresh at each position. (pg. 57) | No | No | ECC | This process has updated post COVID Protocols. Staff are rotated to different positions each shift. Whenever possible staff are also rotated to different assignments during their shift assignment. | 3/2022 | 100% |
| **2.15** | Examine vacation time taken so that backfill is minimized and staffing is increased to enable this time to be absorbed in shift numbers. As the ECC staff become more tenured, the amount of vacation time they take will increase. (pg. 57) | No | No | ECC | Vacation hours analysis started with Management Analyst. | | 5% |

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| **2.16** | Develop and institute a Critical Staffing Contingency Plan that is invoked if staffing levels reach critical minimums. This threshold can be identified by the OCFA, but generally, elements include the agency's inability to staff to a minimum level without assigning excessive amounts of overtime (forced or voluntary). Excessive overtime is also agency defined. When manageable staffing levels are reached, which decreases mandatory overtime and backfill, the plan will be discontinued. This plan should include the following, but is not limited to: | | | | Preliminary evaluation of this contingency plan has been completed and efforts are ongoing to fully develop this plan. Currently ECC does evaluate vacancies in the center that can be managed in manner that do not result in excessive overtime for ECC staff. | | 60% |
| | • Consider eliminating the overlap shifts and reassign personnel to strictly the 7:00 a.m. or 7:00 p.m. shifts to establish predictable hours of backfill and a predictable pool of people to allocate time to, easing schedule complexity. | | | | • Considered and not conducive to peak call volumes. | 1/2022 | 100% |
| | • Assign administrative supervisors to a minimum number of hours on predetermined days to provide meal and break relief. | | | | • Completed. Modified from proposal. | 6/2021 | 100% |

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| **2.16** | • Identify average low-call-volume periods and decrease staffing levels to reduce forced and voluntary overtime (determine if radio positions can be combined of whether a call-taker is needed during certain time of day).<br>• Determine if a system that allows at least two days on the upcoming month's schedule where staff will not be forced to work overtime unless it is the last resort. If it is the last resort, a face-to-face explanation needs to be provided to them.<br>• Consult with HR and study the use of earned compensatory time. Under the contingency staffing plan, the ability to earn compensatory time should be suspended in lieu of cash payment to prevent staff from accumulating compensatory time for which it is difficult to provide requisite time off.<br>• Estimate the use of compensatory time and project both staffing and monetary cash-out. Backfilling a position that is earing time-and-a-half that can be banked results in a revolving process that will keep staffing levels low unless staffing strength is increased to fill the vacancy at straight time. (pg. 57, 58) | No | No | ECC | • Completed. Modified from proposal.<br>• Will be evaluated for future direction.<br>• Will be evaluated for future direction.<br>• Will be evaluated for future direction | 6/2021 | 100%<br>0%<br>0%<br>0% |

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| **2.17** | Initiate discussions with regional ECC leaders to gauge interest and feasibility in developing regional training opportunities. (pg. 67) | No | No | ECC | Region 1 ECC's have reestablished quarterly meetings. Training sessions are currently being discussed. | | 50% |
| **2.18** | Ensure that CTO core competencies are being met through the selection process and offer continuing education to CTOs when available. (pg. 67) | No | No | ECC | Completed. However, efforts will be ongoing. CTO program established with certification class. | 1/2020 | 100% |
| **2.19** | Implement formal CTO program oversight and ensure that best practices are being applied in comparison to industry standards. (pg. 67) | No | No | ECC | Completed. However, efforts will be ongoing. | 1/2020 | 100% |
| **2.20** | Review CBD or EMD academy time frames and extend them to maximize role-play and scenario-based testing. Continue to use a building-block approach to ensure student retention and understanding of medical terminology and add new content as a QA program and testing. (pg. 67) | No | No | ECC | Completed. However, efforts will be ongoing and re-evaluated after every academy. | 7/2019 | 100% |
| **2.21** | Revisit broadcast delivery sequencing to ensure that all information has been received in the field and to measure policy compliance. (pg. 75) | No | No | ECC | Will be evaluated for further direction. | | 0% |
| **2.22** | Ensure SOP development is well vetted, approved, trained upon, formally acknowledged (i.e., employee sign-ff) and uniformly enforced, so that compliance can be measured. (pg. 75) | No | No | ECC | Multiple SOP's in ECC have been updated/revised. Training advisories are distributed anytime there has been a change in any operational change in the ECC. | 8/2019 | 100% |
| **2.23** | Engage field operations and regional partners to review existing reginal and/or countywide response | No | No | ECC/Field Operations | Will be evaluated for further direction. | | 0% |

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| | plans (e.g., CAD-to-CAD rules) and develop new plans to further cooperation with allied agencies. (pg. 75) | | | | | | |
| **2.24** | Complete review of the Metro Net Fire EMD Plus program in 2020 and choose to start forward with implementation for the OCFA or go out to the national marketplace to review and procure a different solution for CBD that can be integrated into the CAD software for prompt workflow function as well as meeting patient care needs. (pg. 75) | No | Yes | IT/EMS | In progress. Pre-March 2020, OCFA regularly met with MetroNet to receive updates and feedback on their EMD Plus program. OCFA is currently with IT to develop an electronic EMD program tailored to OCFA's operational, IT, and CAD software environment. EMS/ECC is currently researching automated CBD programs. | | 60% |
| **2.25** | Review the NHTSA model for EMD programs and construct an in-house program that involves all OCFA stakeholders:<br>• Ensure that best practices regarding program administration, duties and responsibilities are detailed and upheld to prevent bad habits from being formed from the start. | No | No | EMS | • Completed. From recruitment of dispatch candidates, during their entire training, while on probation, and during their entire career, dispatchers are given clear duties, expectations, appropriate quality assessment and quality improvement interventions consistent with nationally accepted standards. | 9/2020 | 100% |

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| **2.25** | • Reinforce program administration details with SOPs. | | | | • Completed. Program details and expectations are delineated in the ECC Handbook on which each dispatcher is trained and tested as part of their academy and continuing education and certification. | | 100% |
| | • To the best of the OCFA's ability, ensure countywide alignment to achieve consistent and uniform pre-response patient care. (pg. 75) | | | | • OCFA routinely meets with MetroNet dispatching agency to align dispatching procedures, protocols, and pre-arrival instructions. Due to reduced frequency of meetings due to COVID-19, both agencies are working to re-establish previous ongoing collaborative relationships. | 4/2022 | 100% |
| | • When considering a product for EMD delivery, ensure that proper product support for both manual and automated systems is maintained so that the OCFA continually receives updates, enhancements and protocol changes; such e-PCR or other records management systems (RMS). (pg. 75) | | | | • Completed. OCFA's EMD product is continually updated, and protocols are evaluated in order to comply with OCEMSA, state, and national standards. The EMD interfaces with extant record management systems within the organization. | | 100% |
| **2.26** | MCP recommends two QA/QI specialists, with an evaluation at the six-month mark to determine whether a third person is needed. Ideally, these | 2 | Yes | ECC | Pending future financial feasibility and prioritization. | | 0% |

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**ORANGE COUNTY FIRE AUTHORITY**
**Organizational Service Level Assessments**
**Recommendations Status Report – May 2022**

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| | specialists will provide QZ analysis and feedback to ECC staff on low medical acuity calls and fire dispatch operations. By adding the fire QA processes, low acuity analysis and feedback, and high acuity analysis and feedback from the Nurse Education, these combinations result in the creation of a QA Unit. (pg. 81) | | | | | | |
| **2.27** | MCP recommends the newly formed QA Unit include quality performance measurements via a customer satisfaction instrument. (pg. 81) | No | No | ECC | Will be evaluated for further direction. | | 0% |

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**ORANGE COUNTY FIRE AUTHORITY**
**Organizational Service Level Assessments**
**Recommendations Status Report – May 2022**

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| **2.28** | Ensure that performance indicators are distinguished from measurements and that adjustments are made in alignment with national and local standards. Include the following at a minimum:<br>• Measurement of all fire and medical life-safety call types to indicate PSAP performance. In doing so, develop mechanisms to correlate medical life-safety call types with field-outcome data to identify patient survivability.<br>• Analyze how structure-fire call-processing times are being measured and adjust as needed.<br>• Analyze "call received" benchmarking to determine relevance to total call-processing statistics.<br>• Determine the value of developing qualitative measures for ECC's PSAP. (pg. 81) | No | No | ECC | Completed. However, efforts will be ongoing. ECC prepares monthly reports for ECC compliance with national and state standards. | 1/2020 | 100% |
| **2.29** | Develop annual master in-service training calendars and publish them well in advance of the start date(s). Establish SOPs related to expectations regarding attendance, conduct and effectiveness measurement. (pg. 85) | No | No | ECC | In progress. Monthly training in place. Working on annual calendar for in service training. | | 75% |
| **2.30** | Reestablish the incident communications program. (pg. 85) | No | No | ECC | Completed. However, efforts will be ongoing. ECC achieved completing qualifications for multiple ECC staff members, and many more are in a trainee | 1/2021 | 100% |

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**Organizational Service Level Assessments**
**Recommendations Status Report – May 2022**

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| | | | | | status. Multiple ECC staff members have been deployed to assist with Incident Communications. | | |
| **2.31** | Refine and maintain an ongoing regular program of positive feedback to the telecommunicators, outside of national Telecommunicators week. (pg. 85) | No | No | ECC | In progress. Completed. However, efforts will be ongoing. ECC Staff members receive positive feedback for achievements in call compliance, childbirth and CPR saves (EMD program). This will be an area of constant development and enhancements in the ECC. | 1/2022 | 100% |
| **2.32** | Offer customer-service training three hours each year, at a minimum. (pg. 86) | No | No | ECC | In progress. This is included with updates to CQI program. | | 50% |
| **2.33** | Consider a customer-satisfaction survey or another mechanism for customer input. Collaboratively, develop mechanisms to foster relationships between field personnel and the ECC staff. Extend that effort to ensure that the public can provide input about ECC services. (pg. 86) | No | No | ECC | Completed. However, efforts will be ongoing. Program is managed by Clerk of the Authority. | 9/2021 | 100% |

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| **2.34** | Design, collaborate, develop, and implement a strategic technology master plan for:<br>• Optimizing current ECC equipment, to include the CAD and notification systems, etc.<br>• Evaluating current ECC technology for its necessity, applicability and utility.<br>• Conducting research and development for emerging fire service and communications technology and include it in the technology master plan.<br>• Assessing lifecycles of all technologies used by the OCFA ECC and include a replacement plan for all technologies that impact ECC operations.<br>• Include a CAD SME that could be a lateral FCD assignment who reports to a systems supervisor or an external contractor. (pg. 93) | No | Yes | IT | ECC and IT staff closely collaborate in weekly status meetings on any technology and proposed changes or upgrades are reviewed for applicability and utility. Dedicated IT staff develop technology upgrades and monitor industry changes and advances. A formal strategic technology master plan for ECC will be developed.<br>OCFA IT staff are diligently and continually updating software versions for the ECC computer environment at the desktop and server levels (Windows, SQL, Server, VM Ware) to the most current supported versions, as well as updating CAD, VESTA, and Station Alerting systems. Working with CALOES to implement NG911 technology (new routers installed); developing upgrade for VESTA 911 phone system and VPI 911 logging recording systems. Major CAD version upgrade planned in mid-April 2022 to latest supported version (21.1.2). | | 20% |
| **2.35** | Assess CAD system optimization, maintenance, server capacity and storage, disaster recovery and failover:<br>• Hire a third-party that is vendor agnostic to assess what is good and working well, and what needs improvement and enhancement. Once completed, | No | No | IT | In progress. 3rd party not hired for hardware assessment. Internal reviews and upgrades are an on-going best practice. ECC trains and uses internal SMES's for train-the-trainer. Disaster Recovery sites identified and site improvements in-process to | | 60% |

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| | determine the level of training the ECC staff will need and identify the ECC SMEs to be trained in a "train-the-trainer" format so that they can be individually train staff and/or conduct training in a group setting. (pg. 93) | | | | establish DR capability at FS43 and US&R warehouse.<br>OCFA staff have completed upgrades to FS43 infrastructure with additional power and data lines allowing 911 VESTA and CAD connectivity to RFOTC data center. US&R warehouse updates continuing as detailed in item 2.6. OCFA IT CAD support staff conducting training for ECC SME's. Recently completed developing a core CAD functionality stand-alone system (CADInABox) that can be utilized in the event of a full system and network failure, complete with a rack of dedicated backup laptops. | | |
| **2.36** | To maximize funding to the ECC from the state, do not replace the 911 telephony system unless a catastrophic failure is imminent or occurs between now and the implementation of the NG911 network. (pg. 93) | No | No | ECC | In progress. Waiting on Next Generation 911 and loud based CPE approval. OCFA agrees to await NG911 implementation before acquiring NG911 telephony system. NG911 Network hardware and data lines installation by LUMEN (authorized CALOES vendor) in process. | | 50% |
| **2.37** | Collaborate with relevant stakeholders for the development of governance of the CAD-to-CAD solution. (pg. 93) | No | No | IT | Completed. The CAD2CAD Cost Sharing Agreement was revised Feb 21, 2021 between OCFA, Metronet, Costa Mesa, Laguna Beach for the ongoing licensing and cost sharing. | 2/2021 | 100% |

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**ORANGE COUNTY FIRE AUTHORITY**
**Organizational Service Level Assessments**
**Recommendations Status Report – May 2022**

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| **2.38** | Consult with CentralSquare regarding creation of a relation table that allows a unit field to accommodate a sub-addressing convention and a feature to enable multiple address points for a single structure. (pg. 97) | No | Yes | IT | Scope of system modifications and project timeline will be developed. | | 0% |
| **2.39** | Discuss with CentralSquare increasing mapping updated to address the inconsistency with local applications. (pg. 97) | No | No | IT | Scope of system modifications and project timeline will be developed. | | 0% |
| **2.40** | Consider a succession plan for the ECC GIS specialist. (pg. 97) | No | No | IT/ECC | Currently ECC has 1 FT dispatch position partnering with GIS staff for address maintenance, new addresses, etc. | | 0% |
| **2.41** | Monitor the utilization of each commercial IT link to identify if there is a sufficient capacity to handle traffic if one link fails. This evaluation will determine if enough bandwidth is available to carry the load without degradation of service. (pg. 101) | No | No | IT | Completed. The OCFA uses COGENT which includes 2 circuits (ATT, COX) rated at 500MB each for aggregate 1GB. Either circuit could support OCFA's needs temporarily if the other fails. | 6/2019 | 100% |
| **2.42** | Evaluate specifications and conditions of the existing generator to NFPA 1221, section 4.7.4 and NFPA 70. (pg. 101) | No | Yes | ECC/Property Management | Included in 5 – year capital budget to upgrade generator and add 2nd / backup generator. | | 0% |
| **2.43** | Conduct a cost/benefit analysis for installing a diverse path for AT&T's network into the ECC when the State IP infrastructure is extended to the Orange County area. (pg. 101) | No | No | IT | CALOES is currently installing Next Generation 911 equipment data lines and equipment in OCFA data center. | | 20% |

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**Organizational Service Level Assessments**
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| **2.44** | Source and equip a backup location for the ECC to facilitate continuity of operations and remote connectivity options. (pg. 101) | No | No | IT | Alternative Dispatch locations have been established at Fire Station 43 for short term emergency dispatching and US&R warehouse for long-term emergency dispatching. This includes an AT&T connection to transfer 9-1-1 calls. | | 50% |
| ***Emergency Medical Services (EMS) Service Level Assessment*** | | | | | | | |
| **3.1** | Build a robust quality management program, consistently applied by all CQI reviewers, around three themed:<br>• System evaluation<br>• Quality improvement<br>• Patient safety / sentinel events (pg. 22) | No | No | EMS | Completed. The EMS Department has revised the CQI plan and has developed a standard template for patient care report reviews. | 6/2021 | 100% |
| **3.2** | The Department needs to develop core, tertiary, and ad hoc performance indicators to effectively measure performance. These indicators need to be the foundation of OCFA's quality management program. (pg. 22) | No | No | EMS | In progress. The EMS department is identifying measures to assure CQI is being done consistently among staff members. A presentation to representatives of L3631 is forthcoming in April. | | 80% |
| **3.3** | Design a quality management program and CQI plan that will drive performance evaluation and use evidence-based empirical data to drive decisions in the department. (pg. 22) | No | No | EMS | Completed. The CQI plan has been revised and updated. It has been approved by OCEMS. | 6/2021 | 100% |

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| **3.4** | Build a CQI plan based on state model guidelines, recognizing that the ability to do so is dependent on increasing the personnel resources available to the Department:<br>• CQI team<br>• Technical Advisory Group<br>• Quality Task Force (pg. 22) | No | No | EMS | Completed. The CQI plan has been updated to reflect OCEMS and State guidance. | 6/2021 | 100% |
| **3.5** | Create a Quality Task Force to design evidence-based quality indicators to:<br>• Meet state and local guidelines<br>• Meet best practices using evidence-based indicators<br>• Measure performance (pg. 22) | No | No | EMS | Completed. The EMS Department has been restructured and a Quality Management Division has been established. | 6/2021 | 100% |
| **3.6** | Develop evidence-based indicators that measure the quantity and quality of feedback provided to paramedics. This ensures both positive and constructive feedback is provided consistently. (pg. 22) | No | No | EMS | In progress. A presentation to representatives of L3631 is forthcoming in April. This will include the feedback form. | | 80% |
| **3.7** | Dedicate a data analyst or bio statistician to the quality management program to help build quality indicators and assist in developing presentations of data. This position will assist with root-cause analysis and decision-making models. | 1 | Yes | EMS | Pending future financial feasibility and prioritization. | | 0% |

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| | • The quality management program needs to have a full-time data specialist with knowledge and experience with data structure and how to collect and interpret data.<br>• The Department needs to develop a system/flow where performance issues can be addressed in a systematic, objective manner. (pg. 22) | | | | | | |
| **3.8** | The EMS Department, organized labor, and the Human Resources Department need to work together to develop and implement "just culture" policies and doctrine within OCFA, especially for the high-volume EMS incidents.[11] (pg. 23) | No | No | EMS/HR | In progress. A presentation to representatives of L3631 is forthcoming in April. This will include the feedback form. The program has been designed and initial meetings with labor have taken place. | | 50% |

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| **3.9** | The CQI team needs a robust CQI electronic data system.<br>• OCFA needs to make information technology a priority as it relates to EMS delivery.<br>• The Department needs to bolster its information technology role given its involvement in data-driven decisions.<br>• The Department needs to utilize its ImageTrend electronic patient care report (ePCR) software to maximize its use.<br>• OCFA needs its CQI team to have a full understanding of its ePCR system so it can maximize its use. Include automated functions that audit ePCRs for accuracy and completeness. (pg. 23) | No | No | EMS | In progress. The EMS Department continues to evaluate IT software which can be utilized to enhance the CQI process. | | 80% |
| **3.10** | The Department needs to revise its standards for documentation. These standards should be based on standards of care, best practices, and County policy where applicable. (pg. 23) | No | No | EMS | In progress. A revision to the Documentation SOP has been submitted into the review process in 9/2021 | | 80% |
| **3.11** | The Department needs to develop sound quality indicators to measure patient care documentation to OCFA requirements. Department-wide training and regular publishing the performance data will help | No | No | EMS | In progress. A revision to the Documentation SOP has been submitted into the review process in 9/2021. This is the first step in developing an accurate measure. A presentation to | | 50% |

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| | personnel comprehend the impacts of their work. (pg. 23) | | | | representatives of L3631 is forthcoming in April. This will include the feedback form. | | |
| **3.12** | The EMS Department quality management program should include:<br>• A Quality Manager from suppression with no less than Captain rank, allowing them to communicate and garner trust with the rank-and-file personnel.<br>• The Department should reconfigure the EMS committee to more closely follow state EMS guidelines by utilizing the Quality Task Force Model. The EMS committee should be renamed the EMS Equipment Committee and its role be clearly defined as to its function and its place in the hierarchy.<br>• When input is needed to solve identified issues, the Department needs to utilize the Quality Task Force to make recommendations back to the Technical Advisory Committee.<br>• The Department needs to incorporate field personnel in the CQI process. This can be done through peer review. (pg. 24) | No | No | EMS | Completed. The EMS Department has been restructured to reflect these changes. A Captain now heads the Quality Management Division within EMS and a CQI team has been established. The team will be complete with the arrival of a newly hired EMS Coordinator in 10/2021. | 10/2021 | 100% |
| **3.13** | The Department needs to develop a role for the field providers to play in the implementation of education and training. | No | No | EMS | Completed. An EMS Training Cadre of Paramedics has been established and the cadre is routinely used | 10/2020 | 100% |

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**Recommendations Status Report – May 2022**

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| | • The use of field personnel will integrate them into the process and allow them to feel more like a provider of EMS that a recipient.<br>• The use of field personnel will reduce the burden on the Nurse Educators and will allow them to focus more on training and education development, as well as any roles they are required to conduct in CQI. (pg. 26) | | | | to support training activities and as evaluators for PM accreditations. | | |
| **3.14** | The delivery of training needs to be scheduled in a centralized manner. Schedule training needs to be conducted on a common calendar so both EMS and Operations can view upcoming and scheduled training. (pg. 26) | No | No | EMS/Field Operations | Completed. Operations training and EMS now reside under one Assistant Chief of EMS and Operations Training. This transition has increased the coordination of training between the Departments. | 7/2020 | 100% |
| **3.15** | The decision to alter the training schedule needs to be priority-based. The priority should be established by the Department, not the individuals conducting the training. (pg. 26) | No | No | EMS | Completed. | 7/2020 | 100% |
| **3.16** | The Department quality management program should drive training and education. (pg. 27) | No | No | EMS | Completed. The restructure of the EMS Department has established this as a normal practice. | 10/2020 | 100% |
| **3.17** | EMS supply and logistics needs to be an integral part of the EMS strategic plan. It should be identified as its own division in the Department organization plan, and it must be adequately funded. (pg. 28) | No | No | EMS | No additional staffing has been put in place to achieve this recommendation | | 20% |

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| **3.18** | OCFA should consider two EMS supply provision options:<br>• Complete outsourcing of EMS supply and logistics. The Department should consider utilizing a supplier to manage supply inventory, costs, and caches to provide for just-in-time inventory restocking.<br>• Or, staff EMS logistics with civilian personnel who specialize in logistics delivery and maintenance to ensure that supply best practices are applied and consistently conducted. (pg. 29) | No | Yes | EMS/Business Services/Service Center | EMS recommends to staff EMS Logistics with civilian personnel. Pending future financial feasibility and prioritization. | | 20% |
| **3.19** | The Department needs to review its current controlled drugs policy and re-design practices to meet current regulations and best practices and to take full advantage of current technology. (pg. 29) | No | No | EMS | The Department continues to seek IT solutions for better narcotic tracking. The current SOP meets or exceeds all requirements. | | 50% |
| **3.20** | Through the EMS reorganization, appropriate staff must be solely dedicated to licensure and certification. (pg. 31) | TBD | Yes | EMS | Pending future financial feasibility and prioritization. | | 0% |
| **3.21** | Department budget/fiscal activities such as billing and expenditures need to be conducted by support staff who have expertise in these areas. (pg. 31) | No | No | EMS | Will be evaluated for further direction. | | 50% |
| **3.22** | The Department needs an information technology plan that identifies data collection needs and | No | No | EMS/IT | A contractor has been hired to conduct a needs assessment of the IT within EMS. The contract was approved by the board 9/2021 and started 10/2021. | | 20% |

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| | emphasizes the ability to easily extract reports. (pg. 31) | | | | The uptick in COVID cases during November, December and into January stalled the progress on this project. | | |
| **3.23** | The EMS data system needs to assign each patient a unique identifier. It is critical the Department collect data regarding its patients. (pg. 31) | No | No | EMS | Will be evaluated for further direction. | | 50% |
| **3.24** | Through the OCFA reorganization, an infection control program needs to be created which should be managed by a person who is also responsible for implementing infection control. (pg. 33) | No | No | EMS | Completed. Through the pandemic, infection control program has been enhanced and the infection control policy has been revised. | 8/2021 | 100% |
| **3.25** | The Department should consider outsourcing the vaccination of its personnel. Vaccinations could be conducted by an outside vendor that would focus solely on managing, tracking, and administering vaccinations per the scope designed by OCFA. The process would be managed by the designated infection control officer. (pg. 33) | No | No | EMS | An assessment is being conducted for outsourcing all vaccinations. | | 80% |
| **3.26** | OCFA needs to reaffirm a culture emphasizing the importance of the EMS business line. (pg. 38) | No | No | EMS/Executive Management | Ongoing efforts are being made and the pandemic has elevated the importance of EMS within the organization. | | 80% |
| **3.27** | OCFA needs to develop a clear EMS mission and level of service, supported by a strong quality management program that promotes performance. (pg. 55) | No | No | EMS/Executive Management | Completed. A mission statement for the EMS Department has been developed through an inclusive process with the EMS staff. | 10/2020 | 100% |

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| **3.28** | OCFA needs to promote the culture of EMS being an important business line in new recruits to begin building legacy. Initial hiring and recruit training need to emphasize EMS and its role and importance to the community and OCFA. (pg. 38) | No | No | EMS/Executive Management | Completed. There are ongoing efforts to increase the value of EMS within the organization. A Paramedic Accreditation Academy has been developed which provides more training for PMs. | 2/2019 | 100% |
| **3.29** | The Department needs an internal strategic plan. The plan needs to be a living, breathing document designed to drive decision-making. Once completed, the plan needs to be distributed and regularly identified as the driving force behind decision-making. (pg. 38) | No | No | EMS/Executive Management | Completed. This assessment continues to provide strategic guidance. A new plan will be developed. Efforts will be ongoing. | | 100% |
| **3.30** | In conjunction with labor, OCFA needs to develop stronger incentives to retain staff officers in EMS positions, ideally longer than for the current two-year minimum. (pg. 38) | No | No | EMS/Executive Management | Will be evaluated for further direction. | | 20% |
| **3.31** | When a Battalion Chief or Captain assigned to EMS promotes, OCFA should discuss with the bargaining units if there is any acceptable way to keep that promoted person in EMS until their time commitment is up (without negatively impacting the promotional line). (pg. 38) | No | No | EMS/Executive Management/HR | Completed. Agreements have been established to consider this before a move is made. | 1/2021 | 100% |

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**ORANGE COUNTY FIRE AUTHORITY**
**Organizational Service Level Assessments**
**Recommendations Status Report – May 2022**

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|---|---|---|---|---|---|---|---|
| **3.32** | The Department needs to implement a revised organizational framework (chart). The Department needs to consist of branches and divisions. Supervisors should be given clear work expectations and should be able to interpret those expectations to the people who report them. The organization structure needs to be program-based so work roles and responsibilities are clearly defined. Clear roles and responsibilities will make it easier for supervisors to monitor the performance of their subordinates. (pg. 39) | No | No | EMS/Executive Management/HR | Completed. The EMS Department has been restructured into three divisions. The divisions are Training, Quality Management and Logistics. Workflow has been established. | 10/2020 | 100% |
| **3.33** | The Department should have the existing, capable management analyst work with the team to develop work metrics that will measure where and how work is being performed in the Department. This data will identify gaps in staff hours and can be used to assist in budget preparation for the Department. (pg. 39) | No | No | EMS | Efforts will be ongoing. Will expand the role of the Management Analyst. | | 70% |
| **3.34** | The Department needs to ensure the Nurse Educators are properly placed, understand where they fit in the Department organizational chain of command, and understand how they function within that structure. (pg. 39) | No | No | EMS | Completed. The EMS Department has been restructured into three divisions. The divisions are Training, Quality Management and Logistics. Workflow has been established. | 10/2020 | 100% |
| **3.35** | The nurses need to be as centralized as possible (even for a portion of the workweek) at a common | No | No | EMS | Will be evaluated for further direction. The nurses do, however, meet more regularly with their | | 0% |

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| | facility with their leadership and support team. Currently, the nurses decide where their offices are and spend very little time at headquarters. Centralizing the nurses will provide daily interaction with Department personnel, which will help facilitate and create positive relationships and create the sense of being on a team. (pg. 39) | | | | supervisors due to the reorganization. The decentralized offices for the nurse educators have significant value to the organization as a whole. | | |
| **3.36** | OCFA needs to develop a staffing plan based on operational need for hiring paramedics. The plan should project vacancies and the time lag from the hiring process to time on the job. (pg. 39) | No | No | EMS/Executive Management/HR | The OCFA is in the process of completing an aggressive recruitment of firefighter/paramedics and continues to evaluate options for the recruitment and development of paramedics. Efforts will be ongoing. | 3/2022 | 100% |
| **3.37** | OCFA needs to evaluate all aspects of acquiring new paramedics. This includes hiring already licensed and/or accredited paramedics who, once they have completed the hiring process, fore academy, and probation, can be assessed by the Department and placed into a designated paramedic position. (pg. 39) | No | No | EMS/Executive Management/HR | The OCFA is in the process of completing an aggressive recruitment of firefighter/paramedics. The OCFA continues to evaluate options for the recruitment and development of paramedics. Efforts will be ongoing. | | 80% |
| **3.38** | The Department should be re-organized as shown in the following figure. An additional 12 FTEs are also recommended. (pg. 42) | 12 | Yes | EMS | Pending future financial feasibility and prioritization. The reorganization is mostly complete without the necessary additional staffing. | | 30% |
| ***Fleet Service Level Assessment*** | | | | | | | |
| **4.1** | OCFA should research smaller, more fuel efficient or hybrid/electric light-duty sedans, SUVs, and pickup | No | Yes | Logistics | Complete. As part of the annual CIP budget development for Fleet, Staff will continue to | 6/2020 | 100% |

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| | vehicles and implementing using them where feasible. (pg. 66) | | | | research alternative fuel technologies and vehicle types. Efforts will be ongoing. | | |
| **4.2** | OCFA should consider broader use of motor pool vehicles where operationally reasonable by re-assessing individual vehicle assignments pursuant to current agency policy. (pg. 66) | No | No | Logistics | Complete. As part of the 2020/2021 budget development process, staff assessed individual vehicle assignments and will transition these individuals into pool vehicles. Efforts will be ongoing. | 6/2020 | 100% |
| **4.3** | OCFA should consider the use of smaller, more-fuel efficient or electric/hybrid vehicles in the motor pool to the extent practical. (pg. 66) | No | No | Logistics | Complete. See 4.1 above | 6/2020 | 100% |
| **4.4** | OCFA should annually evaluate the continued use of vehicles beyond their expected useful service life, particularly those vehicles more than 10 percent beyond expected useful service life. (pg. 67) | No | No | Logistics | Completed. As part of the annual CIP process, all vehicles are reviewed to determine their remaining useful life and when they should be removed from frontline to reserve status. Vehicles 10% beyond their useful life are evaluated to determine if they should be surplused or used by Training or the cadet program. Efforts will be ongoing. | 6/2019 | 100% |
| **4.5** | OCFA should budget annual CIP funding sufficient to maintain all frontline response apparatus within expected useful service life and reserve and support apparatus/vehicles to no more than 10 percent past expected useful service life. (pg. 67) | No | No | Logistics | Completed. As part of the annual CIP process, all frontline apparatus (along with reserve / support apparatus) is reviewed to ensure that there is sufficient funding available to replace them based on their useful life. | 6/2019 | 100% |
| **4.6** | OCFA should develop a more strategic approach to vehicle procurement to: (1) ensure procurement of | No | No | Logistics | Complete. Fleet staff has worked collaboratively with the Purchasing Department to streamline the | | 100% |

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| | budgeted vehicles within the fiscal year cycle and (2) provide sufficient procurement capacity to maintain the frontline/surge capacity response fleet within expected useful service life and as much of the reserve and support fleet to no more than 10 percent past expected useful service life as possible. (pg. 67) | | | | fleet procurement process including the purchasing vehicles “off the lot”, purchasing off Cooperative agreements with other agencies, and has initiated use of requests for bids with lease-purchase options. Efforts will be ongoing. | | |
| **4.7** | OCFA should provide 3.0 FTE additional Technician capacity as soon as possible to eliminate the current VRR backlog, maintain preventive service intervals, *and* provide a modest level of surge capacity; Citygate further suggests that any additional shop staffing be considered in context with suggested alternative service model recommendations. (pg. 67) | 3 | Yes | Logistics | Pending future financial feasibility and prioritization. Staff is researching alternative options of increasing productivity such as performing more remote work, moving light duty mechanics to the heavy side and extending work hours. | | 0% |
| **4.8** | The Division should consider a reorganization or redistribution or responsibilities to provide a more equitable span of control among supervisory personnel. (pg. 67) | No | No | Logistics | In progress. With the retirement of the Fleet Coordinator, staff will request that the position be reclassified as a Fleet Supervisor which will create a redistribution of responsibilities and greater depth of supervision. Efforts will remain ongoing. | | 80% |
| **4.9** | The Division should evaluate other potential flexible work schedule alternatives, including swing/night/weekend work shift options, to accommodate employee needs while maintaining or improving shop output. (pg. 67) | No | No | Logistics | Will be evaluated for further direction. Requires additional staff (Equipment Technicians) to accomplish. | | 50% |

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**ORANGE COUNTY FIRE AUTHORITY**
**Organizational Service Level Assessments**
**Recommendations Status Report – May 2022**

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| **4.10** | The Division should modify its current fire apparatus inspection interval to ensure a safety inspection at least every 90 days *and* inspection of all apparatus systems and components at least annually in conformance with industry best practices and recommendations. (pg. 68) | No | No | Logistics | Will be evaluation for further direction. Recommendation would require additional staff (Equipment Technicians) to accomplish. | | 10% |
| **4.11** | The Division should review, validate, and prioritize or cancel all outstanding VRRs and notify the applicable vehicle operator/station of any cancelled VRRs. (pg. 68) | No | No | Logistics | 60% Outstanding Vehicle Repair Requests have been completed | | 65% |
| **4.12** | OCFA should provide additional staffing as determined appropriate to improve overall parts room capacity and efficiency to minimize shop workflow interruptions to the degree possible. (pg. 68) | TBD | Yes | Logistics | See 4.8 above | | 0% |
| **4.13** | The Division should accept a vehicle safety inspection by Santa Ana shop personnel, or an OCFA mobile Field Technician, upon completion of any preventive maintenance or repairs performed by the Santa Ana shop in lieu of inspection at the OCFA shop prior to the vehicle being returned to service. (pg. 68) | No | No | Logistics | Completed. | 7/1/2020 | 100% |

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**Organizational Service Level Assessments**
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| **4.14** | The OCFA Fire Chief and Deputy Chief of Administration & Support Services Bureau should direct the Assistant Chief of Logistics and Fleet Division management to prioritize the recommendations contained in this report, develop a detailed action plan to address each recommendation as part of the upcoming OCFA Strategic Plan, and then report to the Budget and Finance Committee (Audit Committee) on action plan completion. (pg. 68) | No | No | EM/Logistics | Completed. | 6/2020 | 100% |
| **4.15** | The Executive Management Team and Fleet Division management should continue to engage with shop staff as a strategic partner in addressing the issues identified in this report though a labor-management task force to facilitate restoration of trust and to enable the Division to move forward as a cohesive business unit. (pg. 68) | No | No | EM/Logistics | Completed. This will be an ongoing effort and has already produced very positive results | 7/2020 | 100% |
| **4.16** | The Division should review and update all existing shop policy and procedure documents to conform with appropriate OCFA format and content. (pg. 69) | No | No | Logistics | In progress. Existing Fleet policy and procedures are in the process of being updated to conform to the OCFA format. | | 50% |
| **4.17** | All OCFA policies and procedures, and guidelines should be accessible electronically to all employees via intranet/internet. (pg. 69) | No | No | Logistics | Completed. All OCFA Policies and Procedures are available to employees vie the HIVE. | 6/2020 | 100% |

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**Organizational Service Level Assessments**
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| **4.18** | OCFA should provide enhanced technical training and certification of its fleet Technician personnel to include relevant ASE training/certification and CFMA training/certification. (pg. 69) | No | Yes | Logistics | Completed. Additional training courses have been scheduled. A one-week CFMA training course was held the week of November 1, 2021 with five OCFA mechanics attending. Efforts will be ongoing. | 7/2020 | 100% |
| **4.19** | OCFA should consider establishing a career path for Assistant Technicians and Technicians desiring to advance to Senior Technician. (pg. 69) | No | No | Logistics | Completed. OCFA competed a Classification and Compensation study of Fleet Services. Included in the study was the restructuring of the current career path to allow Assistant Technicians progress to Senior Technicians without a loss of salary | 6/2021 | 100% |
| **4.20** | The Division should seek additional vendor training to more effectively utilize the available capabilities of AssetWorks. (pg. 69) | No | Yes | Logistics | In progress. AssetWorks training resources being evaluated by Fleet Business Analyst and Management Analyst Aug – Dec 2021. Implementation of additional application functions planned for Jan. 2022 – June 2022, including data extraction for improved fleet CIP status reporting. | | 30% |
| **4.21** | The Division should coordinate with Information Technology to determine the availability and suitability of a car code reader interface for AssetWorks. (pg. 69) | No | No | Logistics | In progress. Funding will be requested as part of the FY 2022/23 CIP Budget | | 20% |
| **4.22** | The Division should coordinate with Information Technology and shop staff to determine whether tablets/iPads are the most suitable technology solution for Technician needs. (pg. 69) | No | No | Logistics | Complete; Tablets issued to shop staff. | 9/2021 | 100% |

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| **4.23** | OCFA should convert its facility fuel dispensing and management to an automated electronic system with appropriate security features. (pg. 69) | No | Yes | Logistics | In progress. Staff is researching various vendors and technologies. Funding will be requested as part of the FY 2022/23 CIP. | | 20% |
| **4.24** | OCFA should consider upgrading the current Administrative Assistant position to a Business Analyst or other classification appropriate to provide analyst-level administrative support capacity. (pg. 69) | No | No | Logistics | Complete. An analysis of current and future Fleet administrative job duties submitted to Human Resources determined that functions previously performed by the Fleet Services Administrative Assistant position evolved to the job classification of Business Analyst. | 6/2021 | 100% |
| ***Human Resources Service Level Assessment*** | | | | | | | |
| **5.1** | Develop a comprehensive HR Policies and Procedures Manual to act as a centralized source for reference.<br>• The HR Department needs to implement a project that gathers all its information resources, both internal and external, and reviews and assesses them for the purpose of creating a single resource. The use of an outside vendor to complete this task is highly recommended. The goal should be to complete this project within six months. (pg. 16) | No | Yes | HR | 70% of Human Resources Department Standard Operating Procedures have been reviewed and updated. The Personnel & Salary Resolution and the Merit and Selection Rules are currently undergoing a thorough review with an expected completion date of May 2022. | | 70% |
| **5.2** | Develop an Operations Manual that outlines specific steps to complete a task or program.<br>• Use the manual as a training tool and resource for HR employees. The Operations Manual will | No | No | HR | Following the update of the Personnel & Salary Resolution and the Merit and Selection Rules, staff may begin the process developing an Operations Manual for each division. | | 50% |

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| | correspond to the HR Policies and Procedures Manual cited in the Recommendation #1. An Operations Manual can be created within 18 months. (pg. 16) | | | | | | |
| **5.3** | Independently review each examination process and components to measure potential adverse impact. In those cases where review finds that adverse impact exists, evaluate the exam process to ensure it is valid and job-related. (pg. 17) | No | No | HR | Completed. A process is in place. The Promotional and Recruitment Work Group (JLM) continues to evaluate and restructure all safety promotional/recruitment examination/selection processes accordingly. For non-safety recruitments, all examination/selection processes are reviewed and edited with the hiring manager prior to the opening of recruitment. | 9/2021 | 100% |
| **5.4** | Abandon the 80 percent passing score requirement for all examination processes. Independently evaluate each exam process and determine a reasonable cutoff score that minimizes adverse impact. (pg. 17) | No | No | HR | Completed. This has been discussed with the JLM and 80% is the preferred scoring for all safety recruitments. Non-safety score requirements are discussed during the recruitment development phase of each recruitment and the OCFA has remained with the 80% pass point. Exceptions do occur when the examination is pass/fail (Biddle, Dispatcher Select advantage exam, tools assessment exams, etc.) or when a minimum requirement is required (typing speed, memorization, listening skills exam, etc.). | 9/2021 | 100% |

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| **5.5** | Review performance standards and practices for probationary employees, especially for the Fire Recruit academy. (pg. 17) | No | No | HR | Completed. Probationary Firefighter performance is evaluated based on standardized job-related criteria. Information is in the Probationary Firefighter Task Book which include manipulative skill evaluation sheets and company evolution sheets, appraisal forms and videos for training. | 9/2021 | 100% |
| **5.6** | Create a concise mission statement with a vision, core values, and guiding principles, as well as specific and measurable performance objectives that will deliver quality service to OCFA and the public.<br>• Employee probationary periods are often referred to as the last examination process. Much effort and resources are expended to create an eligible list for Fire Recruits, which annually, established to hire 100 new Fire Recruits. It is critical that *as soon as possible,* all new sworn and non-sworn probationary employees be evaluated on valid job-related standards. (pg. 20) | No | No | HR | Will be evaluated for further direction. | | 30% |
| **5.7** | Develop a systematic method of identifying, evaluating, and addressing HR Department issues to minimize disruption in the Department when a crisis does arise. (pg. 20) | No | No | HR | Completed. Bi-weekly meetings take place with all HR Managers and the Assistant Chief/HR Director to discuss projects, issues, goals and objectives that may affect one or more of the divisions. This meeting includes resource identification and management, identifying project leads, and | 9/2021 | 100% |

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| | | | | | mapping out timelines and goals. These meetings ensure collaboration and minimizes redundant efforts. It also ensures consistent communication to the rest of the department. | | |
| **5.8** | Determine the staffing necessary to meet HR service demands by assessing the level of service delivery desired and OCFA priorities. (pg. 20) | No | No | HR | A staffing model was developed that will address service delivery for the Department. This includes hiring the D&I Coordinate, one (1) Senior HR Analyst, and reclassification of two (2) HR Analyst. This staff plan was completed on December 3, 2021. | 12/2021 | 100% |
| **5.9** | Build trust and respect with employee associations through collaborative working relationships while ensuring transparency, Recommended actions include:<br>• The ER Division should take the lead in re-establishing relationships with the employee associations after receiving staffing necessary to support this effort.<br>• The Benefits Division should take the lead in developing an agency-wide philosophy and strategy for implementing a comprehensive classification and compensation plan. (pg. 20) | No | No | HR | The ER Division is fully staffed. The Assistant Chief/HR Director and the ER Manager have spent the better part of the last year strengthening the working relationship with all the bargaining units. Communication is high and many issues are discussed with mutual agreement on how to resolve them. The Benefits Division is in the process of reviewing bids from Class & Comp consultants for strategic plan services to develop a classification and compensation framework. | | 80% |
| **5.10** | Re-initiate the study of the classification in the RM Division to create a professional career path. (pg. 20) | No | No | HR | Completed. The RM Division positions were evaluated. Recommendations to reclassify some positions and retitle others was adopted by the | 7/2021 | 100% |

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| | | | | | Board of Directors. The new organizational structure of the Divisions provides pathways to promotion for staff. | | |
| **5.11** | Hire a Behavioral Health professional to relieve the Risk Manager of directly administering the program with safety personnel, under the direction of the Risk Manager. (pg. 20) | 1 | Yes | HR | The RM Division is working closely with the OCPFA Local 3631 to evaluate the Behavioral Health and Wellness service model to determine was support is needed to properly staff the program. It is expected that any recommendations will be presented as part of the FY 2022/2023 Budget Process. | | 70% |
| **5.12** | Obtain security expertise for protecting facilities and provide the resources necessary to effectively perform the agency's security-related work. Transfer security responsibilities outside of HR. (pg. 21) | No | Yes | HR/Logistics | In progress. Based on the Threat and Vulnerability Assessment of the RFOTC campus prepared by Security Strategies International, and a Physical Security Assessment completed by the Orange County Intelligence Assessment Center (OCIAC), Logistics has engaged a security systems consultant (Triad), resulting the issuance of an RFB for upgrade/replacement of the RFOTC access control system; bids were due on 3/30/2022, and are currently being evaluated for recommendation to award in May 2022. Additionally, meetings with the Ad-Hoc Security Committee have been initiated to arrive at recommendations for award of a replacement Physical Security Services contract for | | 90% |

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| | | | | | consideration by the Board of Directors at their July 6, 2022 meeting. | | |
| **5.13** | Develop specific and measurable performance objectives for employee performance standards. Prepare an annual HR Department performance report that highlights the Department's accomplishments for the year. (pg. 20) | No | No | HR | A Performance Evaluation Committee was formed with representatives from management and labor to review the employee performance evaluation tool. The focus is to ensure that the standards are measurable, specific, and reflective of the day-to-day duties of each position.<br><br>Regarding hiring standards, FPSI has reviewed and validated the assessment criteria for recruits in the academy. Furthermore, the OCFA has started the process to have its FFT academy accredited by American Local Academies (ALA) | | 70% |
| **5.14** | Develop an employee recognition program for the HR Department employees, which can be variable as to frequency and type rather than just one annual award. Recognize and celebrate smaller, significant accomplishment, anniversaries, etc. (pg. 20) | No | No | HR | Completed. The HR Teams holds quarterly all-hands staff meetings which highlight positive news in the department including accomplishments, work anniversaries and other celebratory news. In addition, the department holds small get-togethers to celebrate things like birthdays, births, and other life milestones of individual staff members. | 9/2021 | 100% |

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| **5.15** | Create and implement a strategy for employing a workforce that reflects the community by:<br>• Assessing the workforce and labor market to establish a geographic marketing area for recruiting.<br>• Designing an aggressive outreach plan that can realistically attract quality and diverse job applicants. This work should be performed in collaboration with management and the employee associations.<br>• Creating an outreach recruitment team dedicated to marketing the OCFA as an employer of choice. Funds will be needed to support the recruitment efforts, and employee volunteers will be needed to attend recruitment events. (pg. 22) | No | No | HR | A Diversity and Inclusion Coordinator was on-boarded in May 2021. Part of his responsibilities is to work in collaboration with Recruitment Division, Corporate Communications and Executive Staff to develop a recruitment strategy that reflects the goal of becoming a more inclusive workplace. | | 70% |
| **5.16** | Develop a strategy and process to increase the completion rate of employee performance evaluations. (pg. 23) | No | No | HR | A HR staff member is responsible for running a regular query of outstanding performance evaluations monthly. For staff that are evaluated using NEOGOV, automatic emails are generated to remind supervisors and managers that evaluations are due. As of September 2021, 77% of all evaluations are up to date. While we strive for 100% completion, the current completion rate is positive for an agency our size. | | 80% |

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|---|---|---|---|---|---|---|---|
| **5.17** | Research and develop a plan to expand the use of NEOGOV Perform for all OCFA employees, including new performance evaluation forms, and commit resources for additional staff, if required. (pg. 23) | No | No | HR | The next phase will see the roll-out of the NEOGOV perform module to Chief Officers Associations following the completions of the updates to the COA Performance Appraisal Form | | 70% |
| **5.18** | Develop a required employee performance evaluation training course for supervisors and managers, teaching supervisors and managers how to properly complete the performance evaluation and effectively communicate the ratings in the performance evaluation. (pg. 23) | No | No | HR | A Performance Management module is part of each Academy Curriculum for Company Officers. Additional training resources were identified and a webinar course was made available to all Chiefs, Supervisors and Managers on writing performance evaluations (February 2022) This online option will be deployed annually as a refresher. In person options for training will continue to be evaluated as COVID restrictions are lifted. | 2/2022 | 100% |
| **5.19** | Develop accountability for completion of performance evaluations through the creation of a job performance standard for supervisors. Include the completion of performance evaluations as a factor in determining merit salary increases for supervisors. (pg. 24) | No | No | HR | In progress. | | 50% |

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**ORANGE COUNTY FIRE AUTHORITY**
**Organizational Service Level Assessments**
**Recommendations Status Report – May 2022**

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| No. | Recommendation | # New Positions | New Cost Increase? | Responsible Dept/Bureau | Status / Results | Date Completed | % of Completion |
|---|---|---|---|---|---|---|---|
| **5.20** | Demonstrate strong commitment to the mission and vision of the HR Department by:<br>• Strengthening the HR Department's inclusion in major OCFA decisions.<br>• Planning new OCFA programs or assignments in collaboration with the HR Department to minimize the time the HR Department spends operating in a reactionary mode.<br>• Allowing the HR Department to operate within agency policies and values without interference outside of the chain of command and labor relations discussions.<br>• Relying on the HR Department to provide sound and credible advice. (pg. 26) | No | No | HR | Completed. HR Department staff are key stakeholders in committees engaged in evaluated OCFA operations including the Training and Promotions JLM, Personnel Evaluations Committee, | 9/2021 | 100% |
| **5.21** | Consider studying the transfer of major and sensitive alleged employee misconduct investigations from the Employee Relations Division to a new and separate unit that is accountable to and reports directly to the Fire Chief or a Deputy Chief. (pg. 26) | No | No | HR | Completed. Under the direction of the Assistant Chief/Human Resources Director, major or sensitive alleged employee misconduct investigations may be conducted by an independent 3rd-party investigator to mitigate any conflicts and ensure a fair an unbiased investigation. The Assistant Chief/Human Resources Director reports to the Deputy Chief/Administration and Support Bureau | 9/2021 | 100% |

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|---|---|---|---|---|---|---|---|
| **5.22** | Reinstitute the Organization Development Division and place it under the HR Department. Allow the Division to:<br>• Perform a thorough study of the OCFA's professional training needs and desires. (pg. 27)<br>• Develop a comprehensive training program that supports employee professional development, leadership development, and succession planning. (pg. 27) | No | No | HR | The Training Division under the direction of the Assistant Chief/EMS oversees training and preparation for safety promotions. For non-safety personnel, funds have been set aside for the development of a leadership development program for managers, supervisors and front-line employees. A training and needs assessment it expected to be completed in Summer2022. | | 40% |
| **5.23** | Work with the IT Division within the Logistics Department to develop enhanced protection of employee personnel files so that data can be shared with Risk Management and third-party secure sites to complete required reports in a timely manner. (pg. 28) | No | No | HR/Logistics | Discussions have started to evaluate the use of LaserFiche Document Management System as a secure method for storing personnel files. This would allow for secure access by all HR divisions. IT will be prepared to support HR/Risk Management with implementation. | | 40% |
| **5.24** | Research and implement an automated signature program that will electronically send documents under a secure system to internal parties required to sign any document. (pg. 28) | No | No | HR/Logistics/Business Services | In progress. | | 70% |
| **5.25** | Support the July 2019 implementation of electronic employee time sheets for non-safety personnel. (pg. 28) | No | No | HR/Business Services | Business Services is piloting a program that would allow for digital entry of time and electronic approval. It is expected to be implemented for non-safety personnel in Spring 2022. | | 70% |

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|---|---|---|---|---|---|---|---|
| **5.26** | Study the feasibility of providing exam raters with tablet computers (e.g., iPads) to record exam performance, leading directly to more effectively tabulating scores and retaining examinations records. (pg. 28) | No | No | HR | Completed. iPads are used on a case-by-case basis. We have utilized "iPads" for use during oral interviews and the reviews are mixed. For large scale recruitment (FF), raters prefer the paper copy method as during these interviews candidates are asked to submit additional information and paper score sheets and additional candidate material is easier for multiple interview panels to maintain. Since allowing for Zoom interviews, raters who are participating in Zoom interviews while off site have utilized electronic material with some success. Issues are typically with the rater's ability to utilize electronic technology and in some cases inability to access documents (applications and rating sheets). We have found some success in utilizing electronic testing for candidates and we will continue to utilize when appropriate as the electronic testing has become more prevalent | 9/2021 | 100% |
| **5.27** | Revise the office configuration to house the HR Director within the HR Department. (pg. 29) | No | No | HR | Completed. It was determined that the HR Director would continue to be housed in the Executive Offices to facilitate necessary collaboration and communication with the other Executive Managers. | 9/2021 | N/A |

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|---|---|---|---|---|---|---|---|
| ***Executive Management Service Level Assessment*** | | | | | | | |
| **6.1** | Executive-level coaching by experienced members of an outside consultant with executive-level experience is needed. Team-building exercises and off-site workshops are very valuable in filling the gaps and building trust between Executive Management Team members. (pg. 11) | No | No | EM | Completed. At the time of this review, the Executive Team had been experiencing turnover among team members and was in the process of rebuilding. Bob Roper (former Fire Chief with executive level experience) was retained for development and coaching services. The team has now established stable processes with (1) recurring weekly meetings among the Deputy Chiefs and Fire Chief; (2) weekly meetings of the full Executive Management Team; (3) monthly offsite lunches for the Executive Team; and (4) monthly expanded meetings to include all Executive Management and the Division Chiefs. | 1/2021 | 100% |
| **6.2** | Continue to work on team-building practices and strengthen communication avenues through Executive Management Team members. Consider building a Team interaction agreement to maintain a culture of unified communication and decision-making processes. (pg. 12) | No | No | EM | Completed. See 6.1 above | 1/2021 | 100% |
| **6.3** | Continue to recruit, train, and hire qualified Public Information Officers (PIOs) who will handle routine and emergency communications for OCFA. Ensure | No | No | EM/Corporate Communications | Completed. Effective January 2020, PIO staffing was materially modified and enhanced to transition from a single 40-hour workweek PIO, to three shift PIOs for coverage 24-hours per day, 7 days per | 1/2020 | 100% |

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| | there is a qualified pool of PIOs to spread the commitment and reduce burnout. (pg. 12) | | | | week. In addition, a pool of relief PIOs are available to provide relief for the three shift PIOs when needed. | | |
| **6.4** | Where appropriate, include the Fire Marshal and other non-field operations managers in executive-level policy change discussions and encourage the Field Operations Assistant Chief and Fire Marshal / Assistant Chief to regularly meet. (pg. 12) | No | No | EM/Community Risk | Completed. The Fire Marshal participates in weekly Executive Team meetings, which are also attended by the Operations Assistant Chief for mutual vetting of potential policy or process changes impacting both departments. | 1/2020 | 100% |
| **6.5** | Consider holding the Executive Leadership Team meeting every two weeks. (pg. 13) | No | No | EM | Completed. See 6.1 above | 1/2021 | 100% |
| **6.6** | Develop a process by which non-time-sensitive executive-level issues are vetted through affected Executive Management Team members (pg. 13) | No | No | EM | Completed. See 6.1 above | 1/2021 | 100% |
| **6.7** | Create a Strategic Planning team/process/unit to provide planning expertise and establish sound planning practices throughout the organization. (pg. 13) | No | Yes | EM | Pending future financial feasibility and prioritization. | | 20% |
| ***Business Services Service Level Assessment*** | | | | | | | |

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|---|---|---|---|---|---|---|---|
| **7.1** | Conduct an externally facilitated team building and goals and objectives development session to improve Department cohesiveness, communication, and morale. | No | Yes | BSD | In progress and currently being implemented with internal resources. Two Department Wide team building events have been schedule for the current 2022 calendar year. The 2022-2023 Goals for the Business Services Department and direction for the Department is shared as part of the Division Quarterly Update meetings. | | 25% |
| **7.2** | Implement team-wide meeting schedules throughout the Department, involving division management and team members to maximize communication effectiveness. This would include establishing set times during the week or month so employees can plan around existing work schedules. | No | No | BSD | Completed. Assistant Chief has Bi-weekly one on meetings with Division Managers, bi-weekly Division Manager Team meetings, quarterly Division meetings, and bi-yearly Department all hands team building events. Division Managers conduct bi-weekly meetings with Managers and Managers conduct meetings with staff. | 1/2022 | 100% |
| **7.3** | A Department second-in-command should be identified to ensure business continuity if the Assistant Chief cannot be reached to provide direction (while out of the office, on vacation, sick, etc.). This recommendation relates to the assignment of an existing management staff member to this responsibility. This responsibility could also be rotated between the applicable management staff to assist in succession development. | No | No | BSD | Completed and efforts will be ongoing. Assistant Chief assigns a Division Manager to provide direction when out of the office. This is assigned on a rotational to encourage succession planning. | 9/2021 | 100% |

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|---|---|---|---|---|---|---|---|
| **7.4** | Expand performance measures to include measures specific to all sections of the department. | No | No | BSD | In progress. | | 25% |
| **7.5** | Build a more supportive, integrated, recognized, and valued business services unit by:<br>1. Acknowledging staff concerns and issued when they are raised.<br>2. Using scheduled Department meetings and one-on-ones to engage staff in problem solving, including concerns and issues raised as well as on OCFA-wide issues to which the Department can be of service internally.<br>3. Combining listening and problem-solving components into team building efforts, allowing Department members to be engaged in solutions for business operations issues including those that may touch on improving services to other OCFA departments and services. | No | No | BSD | In progress. Discussions during Division Manager one-on-one meetings, Division Manager all hands meetings, Quarterly all hands Division meetings include the review of Department goals, upcoming large-scale projects, morale, productivity, and performance. Meetings include the opportunity to share and address openly any issues impacting staff and potential resolutions. Meetings also provide all employees an opportunity to share ideas, process improvements, and demonstrate that our employees are valued. | | 25% |
| **7.6** | The fee waiver/revision policy should be amended to set parameters for oversight when it is within policy to waive or revise the collections fees. | No | No | BSD | Completed. Staff reviewed the policy based on Citygate's recommendation and determined the policy is working as intended. | 11/2021 | 100% |
| **7.7** | Update the CAL-Card policy to ensure effective allocation procedures and more specifically | No | No | BSD | In progress. | | 25% |

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|---|---|---|---|---|---|---|---|
| | identified disciplinary consequences of CAL-Card misuse. | | | | | | |
| **7.8** | Complete the current review of CAL-Cards use history and necessity for current cardholders to determine if all cards distributed are necessary. | No | No | BSD | In progress. | | 30% |
| **7.9** | Consolidate the various fund balance policies into a single policy to minimize confusion. | No | No | BSD | Under evaluation as policies are maintained within separate Divisions. | | 10% |
| **7.10** | Establish a process to randomly test the adherence to policies within the Department. | No | No | BSD | In progress. While existing random tests already exist, staff are developing additional methods to test internal policies prior to the external audit. | | 25% |
| **7.11** | Ensure timely reporting of fraud items and disposition to the appropriate body as required by the fraud hotline program. | No | No | BSD/HR | Draft new Fraud Policy is currently under review and builds upon current terms of the fraud hotline. Responsibility of the fraud hotline lies with the Human Resources Department.<br>Treasury Procedures were revised in 2021 to include additional reporting on banking related fraud items. | | 90% |
| **7.12** | Explore expanding the processing time for payroll after the end of the pay period to reduce need for staff duplication of effort to correct errors. | No | No | BSD | In progress. | | 15% |
| **7.13** | Complete the current review for expansion of the processing time for accounts payable to three days prior to the processing of accounts payable checks. | No | No | BSD | Review is complete. Additionally, a draft policy has been prepared and under review. | 11/2021 | 100% |

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|---|---|---|---|---|---|---|---|
| **7.14** | Continue to work with the Human Resources Department to formalize roles and responsibilities between two departments to eliminate duplication of effort related to payroll and Human Resources employee service. | No | No | BSD/HR | Staff will revisit recommendation once staffing shortage is addressed. | | 0% |
| **7.15** | Develop a procedure to standardize billing information input. | No | No | BSD | Under evaluation as development and implementation will require coordination with the Community Risk Reduction Department. | | 5% |
| **7.16** | Determination should be made as to the Information Technology Department staff's understanding of the source code relating to the current staffing and timekeeping systems. Training should be conducted, as necessary, to ensure the systems have multiple levels of support to ensure that, in the case of a major system failure, payroll operations can continue. | No | No | Logistics/BSD | Logistics is working jointly with Business Services/Finance and Operations/Manpower-Staffing on an RFP for professional consulting services to be issued in 2022 to evaluate the current to long-term requirements of OCFA's Staffing and Timekeeping applications and develop a plan for ensuring the systems' continued reliability and technical currency. | | 5% |
| **7.17** | Automate procurement and accounts payable processes within the two separate purchasing and accounts payable functions. The current project relating to the use of the Laserfiche program in the accounts payable function should be revisited to ensure it meets the needs of OCFA. | No | No | BSD | Purchasing component, in progress.<br><br>Finance, Laserfiche project has been evaluated and modified to meet the needs of the OCFA. Subject matter expert testing is currently in progress. | | 10%<br><br>60% |
| **7.18** | Repeat training on the Banner system for all applicable staff. This training should include | No | TBD | BSD | Under evaluation. Currently, training is provided on an as needed basis. | | 15% |

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|---|---|---|---|---|---|---|---|
| | instruction on the modules available on the most recent upgrade of the Banner system. | | | | | | |
| **7.19** | Explore options for implementation of a fully integrated Enterprise Resource Planning system that meets the needs of the Department and OCFA. This would provide the best solution to not only address workload issues caused by the numerous workarounds currently used but would also increase staff efficiency while providing other positives to benefit the organization such as strengthening internal controls, improving policies and procedures, providing comprehensive training programs for staff, increasing staff morale, and reducing overtime to minimize staff burnout. | No | No | BSD | Funding for the new ERP is Included in the proposed 5-year CIP. | | 10% |
| **7.20** | Review the Departments system's support capabilities in the Information Technology Department to ensure they are adequate. | No | No | BSD/Logistics | Pending future financial feasibility and prioritization. | | 10% |
| **7.21** | Department management should continue to work with the Human Resources Department to develop formal professional development and training programs. Once developed, the programs should be presented to Department staff for feedback and revised as appropriate. | No | No | BSD/HR | Under evaluation. This is tied to HR 5.22. | | 10% |

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|---|---|---|---|---|---|---|---|
| ***Community Risk Reduction Service Level Assessment*** | | | | | | | |
| **8.1** | Consider reorganization of the Planning and Development New Construction Section to provide a better ratio or supervisors to subordinates. | No | No | EM/CRR | Reviewed recommendation to better the supervisor to subordinate ratio. New tiering plan has been implemented. | 3/2022 | 100% |
| **8.2** | Develop clear performance goals for the Wildland Pre-Fire Management Division Planning Section. | No | No | CRR | Short term goals have been identified and completed. Long term goals are under development. | 3/2022 | 100% |
| **8.3** | Collaborate with all OCFA member jurisdictions to ensure early CRR involvement in all development discussions to provide early awareness of any CRR concerns or prospective conditions. | No | No | CRR | Liaison team members are assigned to all partner agency Planning Departments to improve collaboration efforts. | 3/2022 | 100% |
| **8.4** | Consider assigning all Environmental Impact Report reviews to a single Planning and Development Section position, with appropriate redundant capacity and skill to ensure consistency of review and response. | No | No | CRR | Training underway to transfer EIR responsibilities to newly recruited CRR Business Analyst. | | 50% |
| **8.5** | Consider adding appropriate internal analyst-level capacity to manage implementation, training, and ongoing overall Orion program coordination and Department-wide data analysis. | No | No | CRR | Completed. Reclassification of three Management Assistants to Business Analyst utilizing funds from a vacant position. Cost neutral. | 3/2022 | 100% |
| **8.6** | Consider providing additional critical IT/GIS support capacity for the CRR Department. | TBD | TBD | CRR/Logistics | Discussions underway to assess CRR needs and IT resource capabilities. | | 20% |

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|---|---|---|---|---|---|---|---|
| | | | | | In-house staffing and contract support services remain at current levels based on budgeted resources. | | |
| **8.7** | Provide appropriate internal CRR capacity to provide overall planning and coordination of all Department training. | No | No | EM/CRR | Completed. Recruited an Assistant Fire Marshal to create and facilitate an annual training program. Funding was already budgeted. | 3/2022 | 100% |
| **8.8** | Provide 6.6 to 13.25 additional estimated FTE staffing capacity as funding permits to resolve identified staffing capacity gaps and single points of failure. | 6.6 to 13.25 | Yes | EM/CRR | Pending future financial feasibility and prioritization. | 3/2022 | 100% |
| **8.9** | Conduct an updated fee study in 2022. | No | No | CRR/BSD | Underway. Expected to go before the Budget and Finance Committee in April. | | 75% |

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Orange County Fire Authority

# AGENDA STAFF REPORT

**Board of Directors Meeting**
**May 26, 2022**

**Agenda Item No. 4A**
**Public Hearing**

## Review of the Fiscal Year 2022/23 Proposed Budget

### Contact(s) for Further Information


| | | |
|---|---|---|
| Lori Zeller, Deputy Chief<br>Administration & Support Bureau | lorizeller@ocfa.org | 714.573.6020 |
| Robert Cortez, Assistant Chief<br>Business Services Department | robertcortez@ocfa.org | 714.573.6012 |
| Tricia Jakubiak, Treasurer | triciajakubiak@ocfa.org | 714.573.6301 |


### Summary


This item presents the Fiscal Year 2022/23 Proposed General Fund and Capital Improvement Program (CIP) Budget for review by the Budget and Finance Committee.


### Prior Board/Committee Action

The CIP Ad Hoc Committee reviewed the Proposed CIP Budget with staff on April 13, 2022, and provided support for moving the CIP Budget forward to the Budget and Finance Committee and Board of Directors for approval.

The City Managers' Budget and Finance Committee reviewed the FY 2022/23 Proposed Budget with staff on April 19, 2022 and recommended that the OCFA Budget and Finance Committee and Board of Directors adopt the FY 2021/22 Budget, as submitted.

On May 11, 2022, the Budget and Finance Committee reviewed the proposed agenda item and directed staff to place the item on the Board of Directors agenda by a vote of 5-1 (Directors O'Neill, Hernandez and Sachs absent and Director Bourne dissenting).

### RECOMMENDED ACTION(S)

1. Conduct a Public Hearing.
2. Adopt the FY 2022/23 Proposed Budget as submitted.
3. Adopt the resolution entitled A RESOLUTION OF THE ORANGE COUNTY FIRE AUTHORITY BOARD OF DIRECTORS ADOPTING AND APPROVING THE APPROPRIATIONS BUDGET FOR THE ORANGE COUNTY FIRE AUTHORITY FOR FISCAL YEAR 2022/23.
4. Approve and authorize the temporary transfer of up to $90 million from the Fund 190 Workers' Compensation Reserve Fund to the General Fund 121 to cover a projected temporary cash flow shortfall for FY 2022/23.
5. Approve and authorize the repayment of $90 million borrowed funds from Fund 121 to Fund 190 along with interest when General Fund revenues become available in FY 2022/23.
6. Approve changes to the Master Position Control list to unfreeze, reclassify and/or add 38 positions as detailed in Attachment 3.
7. Approve transfers from the General Fund 121 to CIP Funds and Settlement Agreement Fund totaling $26,110,226.

## Impact to Cities/County

The FY 2022/23 Proposed Budget results in increases to cash contract cities' base service charges ranging from 1.34% to 2.42%. Total increases for cash contract cities vary, based on selected cities impacted by 4th position phase-in costs such as the cities of Buena Park, San Clemente, and Tustin and varying recapture banks. The dollar impacts by cash contract city are referenced in the Revenue section of the attached budget book on page 31.

## Fiscal Impact

See attached FY 2022/23 Proposed Budget

## Background

We are pleased to present the FY 2022/23 Proposed Budget for your review and consideration. As required by the Fiscal Health Plan and Financial Stability Budget Policy, this proposed General Fund budget meets our policy reserve requirements and is balanced for FY 2022/23 and for all five years of the five-year forecast. Transfers from the General Fund to the CIP Funds and Settlement Agreement Fund are reflected in the proposed budget. The Fiscal Year 2022/23 Proposed Budget includes 1,572 funded positons with 38 new positions to enhance services such as:

- Addition of 24 safety positions for the new Rancho Mission Viejo Fire Station 67
- Addition of Post Position (three Firefighter/Paramedics) for Fire Station 42 in the City of Lake Forest to convert Paramedic Assessment Unit Engine into an ALS Paramedic Engine
- Addition of 8 positions (7 safety and 1 non-safety) to implement the State Fire Training Accreditation and Local Accredited Academy
- Addition of 1 Behavioral Health Coordinator to oversee OCFA's Behavioral Health Program
- Addition of 1 Multimedia Specialist to meet the increased demand for virtual training videos and virtual events
- Converting 1 current limited-term Construction Manager into a permanent position to assist with the increase in capital improvement program projects.

This budget provides a broad array of support to continue enhanced services to OCFA's jurisdictions.

## Attachment(s)

1. Proposed Budget PowerPoint Presentation
2. Proposed Resolution
3. FY 2022/23 Proposed Budget
4. Master Position Control Changes

# Board of Directors

## FY 2022/23 Proposed Budget

## May 26, 2022

## Item 4A

# Agenda

- Proposed 2022/23 General Fund Budget
- Proposed 5-Year Capital Improvement Program
- Updated Five-Year Forecast
- Progress Update – Pension/Retiree Medical Paydown
- Next Steps

# Budget Development Process (7-8 Mos.)

| | |
|---|---|
| Oct. to Nov. 2021: | Staff prepares base assumptions |
| Nov. to Dec. 2021: | Review of financial objectives, budget priorities and budget policies |
| Nov. to Feb. 2022: | Executive Management review of strategic goals and objectives |
| March 2022: | Proposed budget is presented to Executive Management |
| April 2022: | Budget review with CIP Ad Hoc, City Manager's Committee and Labor groups |
| May 2022: | B&FC review and Board adoption of budget |

# Proposed FY 2022/2023
# General Fund Budget

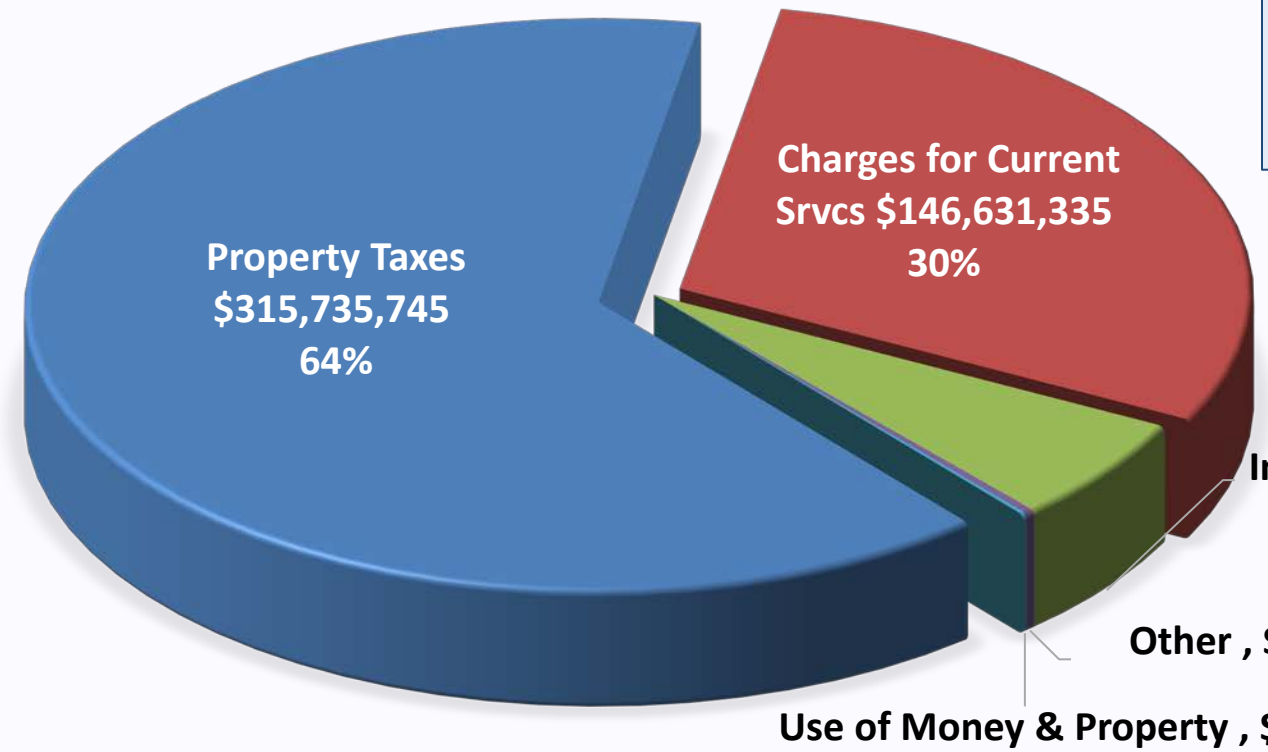
# General Fund Overview

- **Ongoing Revenues are projected at $493.6 million, a 4.66% increase over FY 2021/22**
- **Ongoing Expenditures are projected at $448.4 million, a 1.58% increase over FY 2021/22**
  - Addition of $17.8M to the voluntary pension/retiree medical paydown
  - Addition of $2.7M transfer to the Irvine agreement fund
  - Addition of $1.3M to meet GF 10% Contingency Reserve Policy

***Overall, revenues exceed expenditures and required transfers by $23.4 million, providing funds for capital needs***

# General Fund Revenue

## 4.66% Growth , $493.6M




**Year-Over-Year Highlights:**

- Property Taxes: 5.6%, $16.8M increase
- Cash Contract Charges: 2.13%, $3.1M increase
- CRA Pass-Through: 8.1%, $1.5M increase
- Interest Earnings: 362.2%, $442K increase

# General Fund Revenue

## Property Tax Projections

- **Secured property taxes are projected to grow as follows*:**
  - **2022/23 6.01%**
  - **2023/24 3.79%**
  - **2024/25 2.73%**
  - **2025/26 2.92%**
  - **2026/27 2.92%**

***Average growth rate of 3.67% for the <u>next</u> five years***

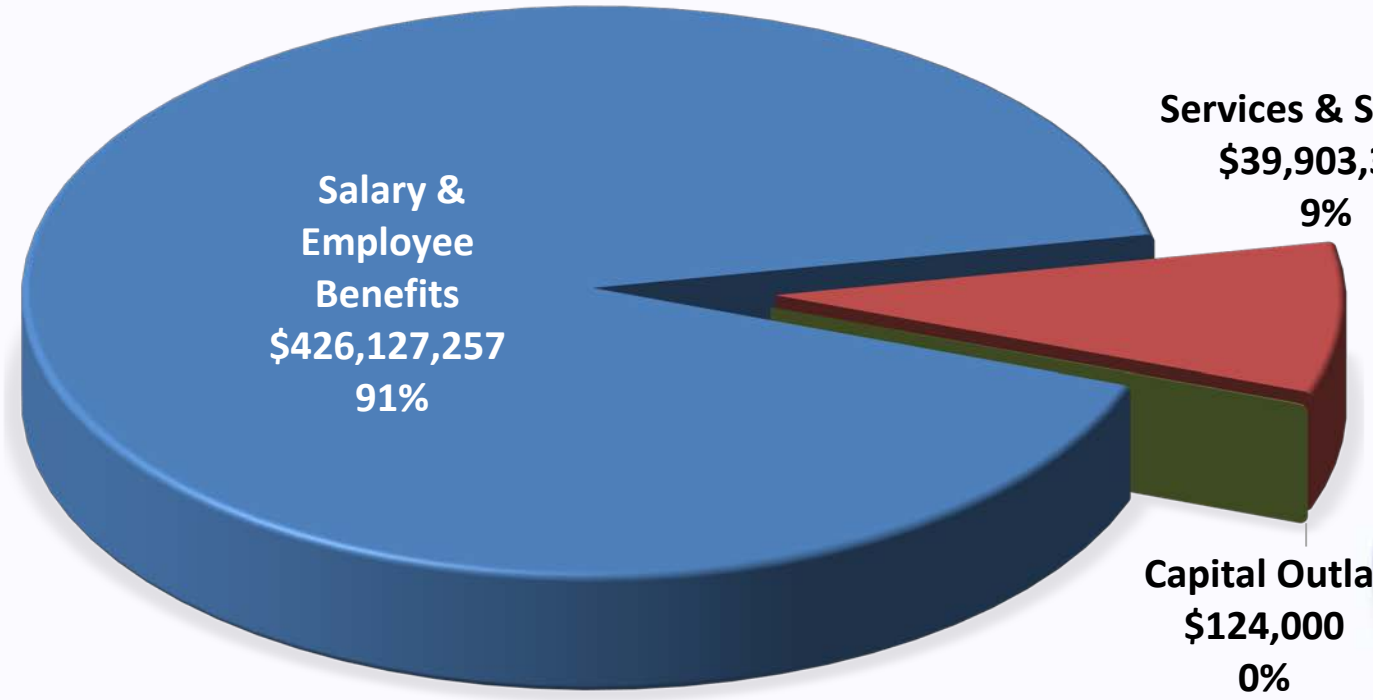
- **For comparison, the past 5 years actual growth has been:**
  - **2017/18 6.58%**
  - **2018/19 6.98%**
  - **2019/20 5.96%**
  - **2020/21 4.62%**
  - **2021/22 4.55% (estimated)**

***Average growth rate of 5.74% for the <u>last</u> five years***

*Based on Harris & Associates consultant property tax projections

# General Fund Expenditures

## 1.58% increase, $448.4M (ongoing expenditures)




**Year-Over-Year Highlights**

- S&EB: 1.3%, $5.2M increase
- Svcs & Supplies: 4.8%, $1.8M increase

**Additional Expenditures:**

- Pension/Retiree Medical Paydown $17.8M
- Settlement Agreement $2.7M

# General Fund Expenditures

**General Fund expenditures reflect the following assumptions during FY 2022/23:**

- Salaries - $10.6M increase primarily due to 38 new positions
- Retirement - $7.3M decrease due to lower retirement rates (offset by increased cost for new positions)
- Health Insurance - $0.9M increase
- Workers Compensation - $0.8M increase
- Services and Supplies - $1.8M increase

**MOU changes:**

- Fire Management (FM) Unit - Longevity Pay and EMT Pay Increases
- Firefighter (FF) Unit, OCFAMA, OCEA - Assumes no salary increases in FY 2022/23. Pending current on-going labor negotiations.

# Addition of New Positions

- **New Rancho Mission Viejo FS67 to open Sept 2022 –** Addition of 24 safety positions to provide constant staffing for a Paramedic Truck and Paramedic Engine. Includes 6 Fire Captains, 6 Fire Apparatus Engineers and 12 Firefighters. 12 of these positions will be paramedics.
- **Additional Post Position for FS42 City of Lake Forest -** Addition of 3 Firefighter/Paramedics to convert Paramedic Assessment Unit Engine into an ALS Paramedic Engine
- **State Fire Training Accreditation & Local Accredited Academy –** Addition of 8 positions including 1 Battalion Chief, 6 Firefighter academy cadre members, and 1 Management Analyst
- **Behavioral Health Program –** Addition of 1 Behavioral Health Coordinator to oversee OCFA's Behavioral Health, Wellness, and Cancer Prevention programs
- **Addition of 2 other non-safety positions:**
  - 1 Multimedia Specialist to meet the increased demand for virtual training videos and virtual events.
  - 1 permanent Construction Manager position converted from a current limited term position.

# General Fund Summary

***Overall, FY 2022/23 revenues exceed expenditures by $23.4 million, the proposed General Fund budget is balanced for the next 5 years, and it is providing an ongoing flow of funds for:***

- Capital Improvement Needs
- Accelerated Pension/Retiree Medical Paydown
- Meet Reserve Requirements

# Proposed Five-Year Capital Improvement Program FY 2022/23 – 2026/27

# CIP Planning Process

- Each year, all known CIP projects are identified for the next 5 years
- Price escalators are built into projections where appropriate
- Associated operating costs are identified for:
  - Inclusion in General Fund budget
  - Inclusion in 5-Year Financial Forecast
- Proposed projects are reviewed by Executive Management Team and plans are refreshed annually

# Funding Sources

## CIP funding sources:

- Operating transfers from the General Fund
- Developer contributions
- Cash contract payments for vehicle replacement
- Interest earnings on CIP Fund balances

## CIP funding goals:

- Accumulate capital reserve balances, as needed, to fund projects
- Timing of CIP revenues and expenses will not typically match

# 5-Year CIP Summary

| Fund | FY 2022/23 | FY 2023/24 | FY 2024/25 | FY 2025/26 | FY 2026/27 | 5-Yr Total |
|---|---|---|---|---|---|---|
| ***Fund 12110*** | | | | | | |
| **General Fund CIP** | $9,009,650 | $9,460,500 | $11,394,000 | $7,676,500 | $8,051,000 | $45,591,650 |
| ***Fund 123*** | | | | | | |
| **Fire Stations and Facilities** | 875,000 | 3,700,000 | 5,200,000 | 24,200,000 | 4,550,000 | 38,525,000 |
| ***Fund 124*** | | | | | | |
| **Communications and Information Systems** | 6,100,000 | 5,100,000 | 1,302,000 | 1,900,000 | 10,000,000 | 24,402,000 |
| ***Fund 133*** | | | | | | |
| **Fire Apparatus** | 11,015,700 | 5,448,360 | 13,312,930 | 15,660,190 | 20,488,210 | 65,925,390 |
| **GRAND TOTAL** | **$27,000,350** | **$23,708,860** | **$31,208,930** | **$49,436,690** | **$43,089,210** | **$174,444,040** |

# 5-Year FY 2022-23 CIP Major Objectives

- **Stations and Facilities Rehabilitation**
  - Supports a **Proactive Strategy** for addressing the needs of OCFA's aging facilities
- **Use of Sustainable Energy**
  - Includes cost-effective Sustainable Energy use projects (Hybrid/Electric vehicles, charging facilities)
- **Supports OCFA Strategic Goals**
  - Streamline the facility repairs and improvements process
- **Addresses the Security Vulnerability Assessment**
  - Existing funded projects, and as determined by the Security Ad Hoc Committee
- **Cost Effective Fleet Replacements**
  - Includes repurposing vehicles prior to surplusing; purchasing used vehicles for special low-volume uses (Incident Management Team)

# CIP Ad Hoc Committee Recommendation

CIP Ad Hoc Committee recommended that the proposed 5-Year CIP for Fiscal Years 2022/23 – 2026/27 be included in the budget development process as presented by staff.

# Five-Year Financial Forecast

# Five-Year Financial Forecast

## Scenario 1 – 0% Salary Increases after MOU Expiration

| | *Adjusted* FY 2021/22 | *Year 1* FY 2022/23 | *Year 2* FY 2023/24 | *Year 3* FY 2024/25 | *Year 4* FY 2025/26 | *Year 5* FY 2026/27 |
|---|---|---|---|---|---|---|
| Beginning Fund Balance | 225,603,692 | 201,455,844 | 218,947,292 | 250,565,138 | 263,992,410 | 271,303,798 |
| General Fund Revenue | 523,896,681 | 493,592,071 | 508,939,170 | 523,861,224 | 541,226,099 | 555,040,714 |
| General Fund Expenditures | 500,767,451 | 451,035,340 | 453,085,775 | 452,892,070 | 438,631,745 | 447,416,545 |
| Paydown of UAAL/Retiree Medical | 14,279,280 | 17,787,217 | 20,772,547 | 21,814,115 | 29,242,631 | 34,647,456 |
| Total General Fund Expenditures | 515,046,731 | 468,822,557 | 473,858,322 | 474,706,185 | 467,874,376 | 482,064,001 |
| **Net General Fund Revenue** | **8,849,950** | **24,769,514** | **35,080,848** | **49,155,039** | **73,351,723** | **72,976,713** |
| Less Incremental Increase in 10% GF Op. Cont. | 2,563,553 | 1,327,288 | 188,648 | - | - | - |
| **General Fund Surplus / (Deficit)** | **6,286,397** | **23,442,226** | **34,892,200** | **49,155,039** | **73,351,723** | **72,976,713** |
| Operating Transfers to CIP Funds | 6,286,397 | 23,442,226 | 34,892,200 | 24,577,520 | 36,675,862 | 36,488,357 |
| Paydown of UAAL/Retiree Med. from GF Surplus | - | - | - | 24,577,520 | 36,675,862 | 36,488,357 |
| CIP Revenue | 9,769,333 | 27,622,670 | 39,868,122 | 29,498,520 | 41,741,082 | 41,805,832 |
| CIP Expenditures | 46,733,157 | 27,000,354 | 23,708,864 | 31,208,934 | 49,436,692 | 43,089,216 |
| **CIP Surplus / (Deficit)** | **(36,963,824)** | **622,316** | **16,159,258** | **(1,710,414)** | **(7,695,610)** | **(1,283,384)** |
| Other Fund Revenue | 32,634,926 | 33,422,757 | 34,999,422 | 36,613,718 | 38,325,941 | 40,124,529 |
| Other Fund Expenditures | 22,382,503 | 17,880,913 | 19,729,482 | 21,476,032 | 23,318,943 | 25,325,076 |
| **Other Fund Surplus / (Deficit)** | **10,252,423** | **15,541,844** | **15,269,940** | **15,137,686** | **15,006,998** | **14,799,453** |
| **Ending CIP Fund Balance** | **7,250,924** | **6,583,955** | **21,285,822** | **17,946,629** | **8,550,871** | **5,495,677** |
| **Ending Fund Balance** | **201,455,844** | **218,947,292** | **250,565,138** | **263,992,410** | **271,303,798** | **284,819,867** |

# Five-Year Financial Forecast

## Scenario 2 – 1% Salary Increases after MOU Expiration

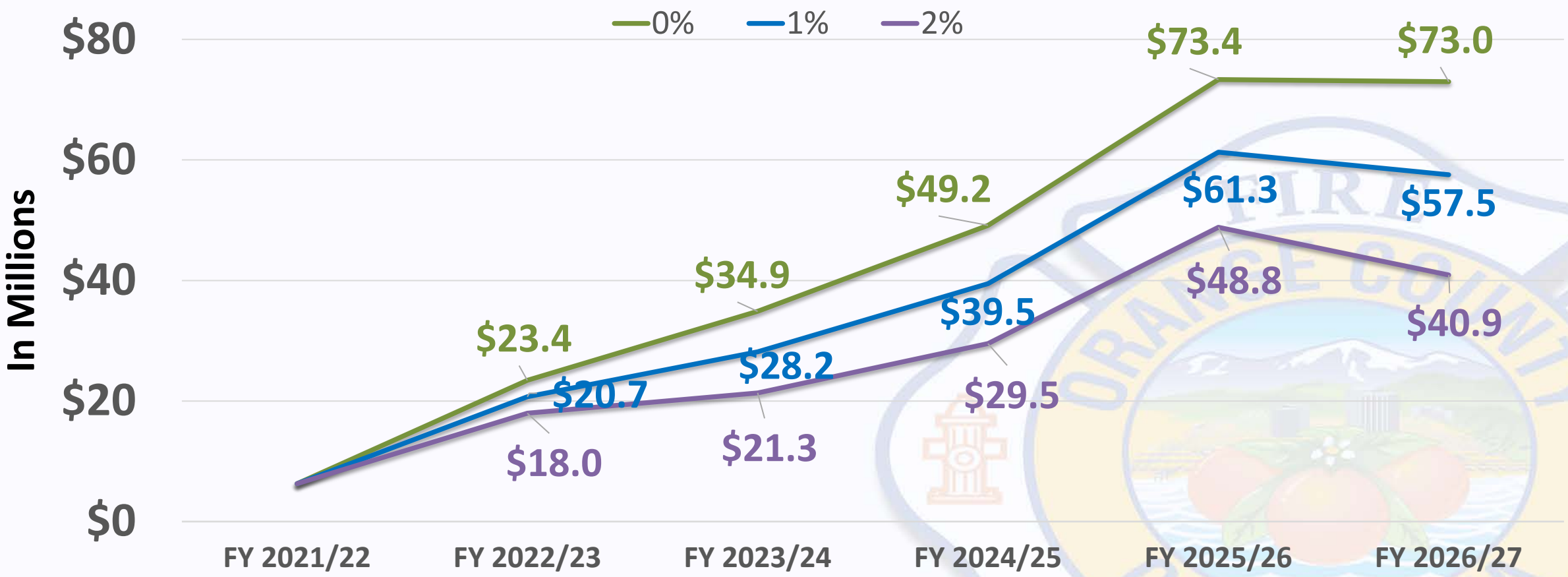
| | *Adjusted* FY 2021/22 | *Year 1* FY 2022/23 | *Year 2* FY 2023/24 | *Year 3* FY 2024/25 | *Year 4* FY 2025/26 | *Year 5* FY 2026/27 |
|---|---|---|---|---|---|---|
| Beginning Fund Balance | 225,603,692 | 201,455,844 | 216,211,512 | 241,641,450 | 270,195,778 | 280,905,788 |
| General Fund Revenue | 523,896,681 | 493,592,071 | 508,941,540 | 523,866,869 | 541,232,686 | 555,047,554 |
| General Fund Expenditures | 500,767,451 | 453,771,120 | 459,213,879 | 462,328,580 | 450,710,627 | 462,805,650 |
| Paydown of UAAL/Retiree Medical | 14,279,280 | 17,787,217 | 20,772,547 | 21,814,115 | 29,242,631 | 34,647,456 |
| Total General Fund Expenditures | 515,046,731 | 471,558,337 | 479,986,426 | 484,142,695 | 479,953,258 | 497,453,106 |
| **Net General Fund Revenue** | **8,849,950** | **22,033,734** | **28,955,114** | **39,724,174** | **61,279,428** | **57,594,448** |
| Less Incremental Increase in 10% GF Op. Cont. | 2,563,553 | 1,327,288 | 800,688 | 232,804 | - | 47,707 |
| **General Fund Surplus / (Deficit)** | **6,286,397** | **20,706,446** | **28,154,426** | **39,491,369** | **61,279,428** | **57,546,741** |
| Operating Transfers to CIP Funds | 6,286,397 | 20,706,446 | 28,154,426 | 39,491,369 | 40,000,000 | 28,773,370 |
| Paydown of UAAL/Retiree Med. from GF Surplus | - | - | - | - | 21,279,428 | 28,773,370 |
| CIP Revenue | 9,769,333 | 24,886,890 | 33,068,174 | 44,392,772 | 45,139,704 | 34,143,452 |
| CIP Expenditures | 46,733,157 | 27,000,354 | 23,708,864 | 31,208,934 | 49,436,692 | 43,089,216 |
| **CIP Surplus / (Deficit)** | **(36,963,824)** | **(2,113,464)** | **9,359,310** | **13,183,838** | **(4,296,988)** | **(8,945,764)** |
| Other Fund Revenue | 32,634,926 | 33,422,757 | 34,999,422 | 36,613,718 | 38,325,941 | 40,124,529 |
| Other Fund Expenditures | 22,382,503 | 17,880,913 | 19,729,482 | 21,476,032 | 23,318,943 | 25,325,076 |
| **Other Fund Surplus / (Deficit)** | **10,252,423** | **15,541,844** | **15,269,940** | **15,137,686** | **15,006,998** | **14,799,453** |
| **Ending CIP Fund Balance** | **7,250,924** | **3,848,175** | **11,800,208** | **23,371,063** | **17,313,892** | **6,553,917** |
| **Ending Fund Balance** | **201,455,844** | **216,211,512** | **241,641,450** | **270,195,778** | **280,905,788** | **286,807,184** |

# Five-Year Financial Forecast

## Scenario 3 – 2% Salary Increases after MOU Expiration

| | *Adjusted* FY 2021/22 | *Year 1* FY 2022/23 | *Year 2* FY 2023/24 | *Year 3* FY 2024/25 | *Year 4* FY 2025/26 | *Year 5* FY 2026/27 |
|---|---|---|---|---|---|---|
| Beginning Fund Balance | 225,603,692 | 201,455,844 | 213,474,046 | 232,653,954 | 251,440,837 | 270,841,108 |
| General Fund Revenue | 523,896,681 | 493,592,071 | 508,943,935 | 523,872,924 | 541,239,927 | 555,057,196 |
| General Fund Expenditures | 500,767,451 | 456,508,586 | 465,403,766 | 471,953,725 | 463,151,968 | 478,811,327 |
| Paydown of UAAL/Retiree Medical | 14,279,280 | 17,787,217 | 20,772,547 | 21,814,115 | 29,242,631 | 34,647,456 |
| Total General Fund Expenditures | 515,046,731 | 474,295,803 | 486,176,313 | 493,767,840 | 492,394,599 | 513,458,783 |
| **Net General Fund Revenue** | **8,849,950** | **19,296,268** | **22,767,622** | **30,105,084** | **48,845,328** | **41,598,413** |
| Less Incremental Increase in 10% GF Op. Cont. | 2,563,553 | 1,327,288 | 1,418,905 | 574,764 | - | 685,760 |
| **General Fund Surplus / (Deficit)** | **6,286,397** | **17,968,980** | **21,348,717** | **29,530,319** | **48,845,328** | **40,912,653** |
| Operating Transfers to CIP Funds | 6,286,397 | 17,968,980 | 21,348,717 | 29,530,319 | 48,845,328 | 40,912,653 |
| Paydown of UAAL/Retiree Med. from GF Surplus | - | - | - | - | - | - |
| CIP Revenue | 9,769,333 | 22,149,424 | 26,199,927 | 34,283,366 | 53,829,965 | 46,235,137 |
| CIP Expenditures | 46,733,157 | 27,000,354 | 23,708,864 | 31,208,934 | 49,436,692 | 43,089,216 |
| **CIP Surplus / (Deficit)** | **(36,963,824)** | **(4,850,930)** | **2,491,063** | **3,074,432** | **4,393,273** | **3,145,921** |
| Other Fund Revenue | 32,634,926 | 33,422,757 | 34,999,422 | 36,613,718 | 38,325,941 | 40,124,529 |
| Other Fund Expenditures | 22,382,503 | 17,880,913 | 19,729,482 | 21,476,032 | 23,318,943 | 25,325,076 |
| **Other Fund Surplus / (Deficit)** | **10,252,423** | **15,541,844** | **15,269,940** | **15,137,686** | **15,006,998** | **14,799,453** |
| **Ending CIP Fund Balance** | **7,250,924** | **1,110,709** | **2,244,901** | **3,825,927** | **6,584,003** | **7,954,077** |
| **Ending Fund Balance** | **201,455,844** | **213,474,046** | **232,653,954** | **251,440,837** | **270,841,108** | **289,472,242** |

# Five-Year Financial Forecast Scenarios
# GF Surplus/(Deficit) – Yellow Line

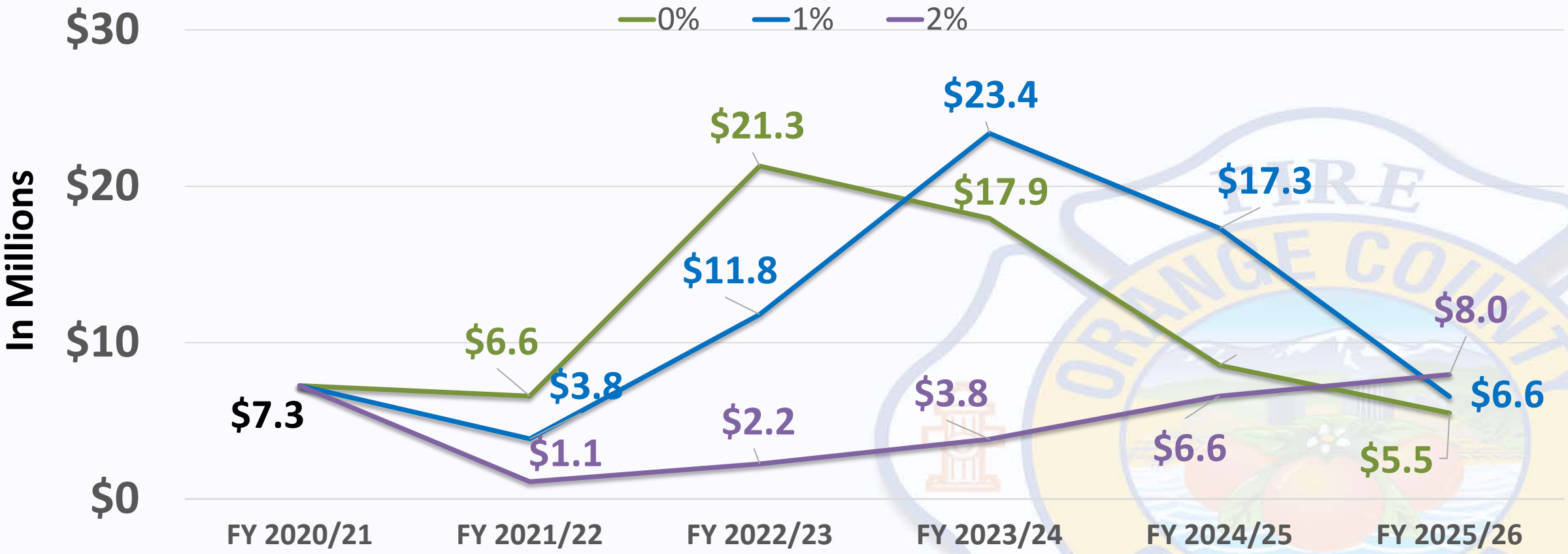



**0% -** 0% Salary Increase After MOU Expires 21/22

**1% -** 1% Salary Increase After MOU Expires 21/22

**2% -** 2% Salary Increase After MOU Expires 21/22

# Five-Year Financial Forecast Scenarios
# CIP Surplus/(Deficit) – Orange Line




**0% -** 0% Salary Increase After MOU Expires 21/22 ($97.7M UAAL paydown from GF Surplus)

**1% -** 1% Salary Increase After MOU Expires 21/22 ($50.1M UAAL paydown from GF Surplus)

**2% -** 2% Salary Increase After MOU Expires 21/22 (No UAAL paydown from GF Surplus)

# Progress Update
# Pension/Retiree Medical
# Paydown Plan

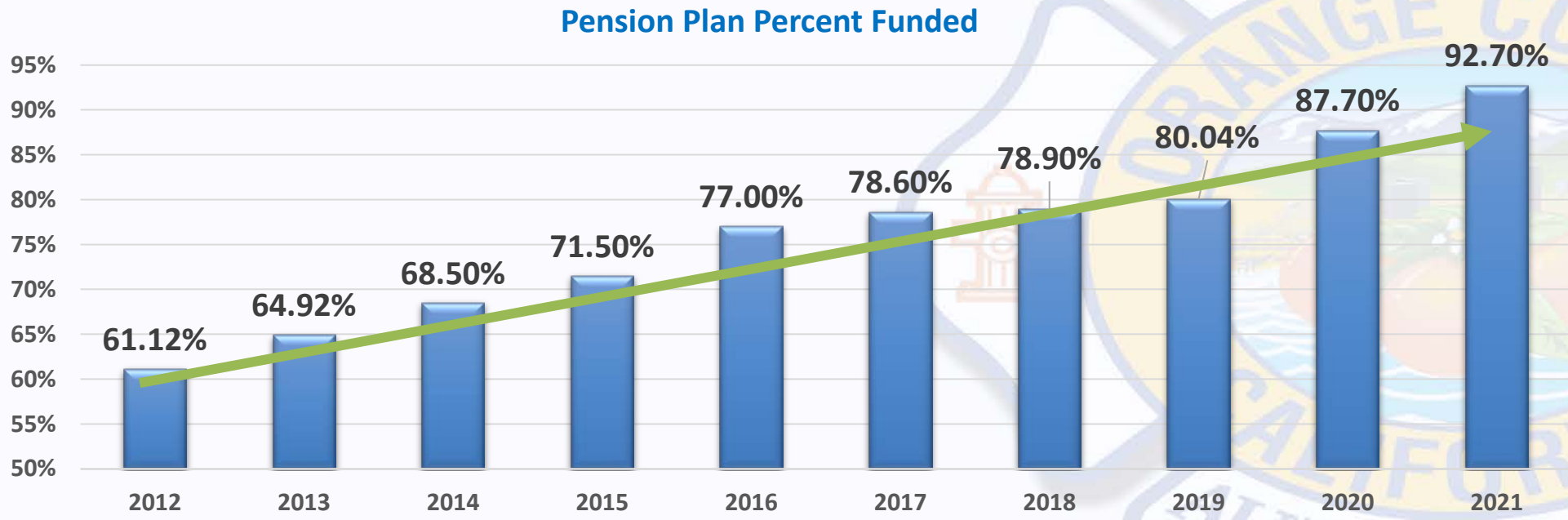
# Pension Paydown Plan

- **In September 2013, the Board of Directors adopted OCFA's Accelerated Pension Paydown Plan** ***("the Snowball Plan")*****:**
  - **At that time, OCFA's unfunded pension liability was $473.7M**
  - **Our original Plan called for voluntary payments totaling $53.5M during the first 8 years that have lapsed since Plan adoption**
  - **Our actual voluntary payments during these 8 years have totaled $124.3M**

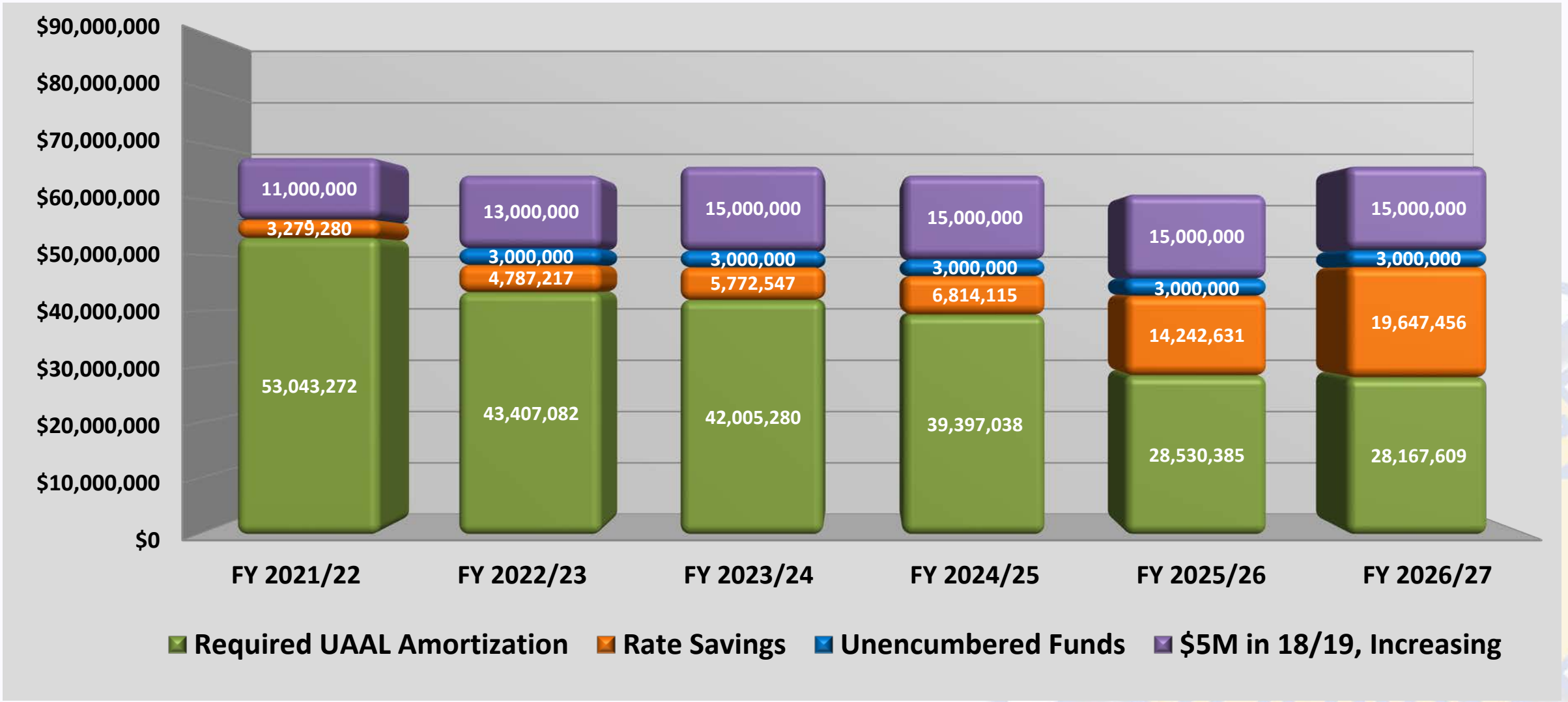
***OCFA has exceeded the original Plan targets by $70.8M in 8 years***

# Pension Paydown Plan

- **The Preliminary December 2021 Actuarial Study indicates:**
  - OCFA's unfunded pension liability decreased to $174.4M
  - OCFA's combined Safety & General pension plans funded status increased to 92.7%
- **OCERS' actuary, The Segal Company report, indicated that OCFA's accelerated payments have produced interest savings totaling $46,800,344 as of December 2020**



# Snowball Plan – Pension/Retiree Medical




**Total required payments above = $234.6M (to fund remaining $174.4M Pension UAAL)**
**Total accelerated payments above = $153.5M (to fund the $106.5M Retiree Medical UAAL)**

# Next Steps

# Budget Calendar

- **Executive Management** (Prelim CIP review) **3/2** ✓
- **Executive Management** (Prelim Budget, SBRs & 5-yr Forecast) **3/16** ✓
- **CIP Ad Hoc Committee Review** **4/13** ✓
- **City Manager Budget & Finance Committee Review** **4/19** ✓
- **Labor Group Budget Briefings** **4/26** ✓
- **OCFA Budget & Finance Committee Review** **5/11** ✓
- **OCFA Board of Directors Budget Adoption** **5/26** ✓

# Proposed FY 2022/23 Budget
# Staff Recommendations

- **Adopt the Proposed FY 2022/23 Budget**
- **Authorize temporary interfund borrowing to smooth the timing of General Fund cashflow, and authorize repayment with interest**
- **Authorize changes to the Master Position Control**
- **Authorize transfers from General Fund to CIP Funds and Settlement Agreement Fund**

# Questions/Comments

**RESOLUTION NO. 2022-XX**

**A RESOLUTION OF THE ORANGE COUNTY FIRE AUTHORITY BOARD OF DIRECTORS ADOPTING AND APPROVING THE APPROPRIATIONS BUDGET FOR THE ORANGE COUNTY FIRE AUTHORITY FOR FISCAL YEAR 2022/23**

*THE ORANGE COUNTY FIRE AUTHORITY BOARD OF DIRECTORS DOES HEREBY RESOLVE AS FOLLOWS:*

The appropriations budget for the Orange County Fire Authority for Fiscal Year 2022/23 is approved and adopted by the Board of Directors as follows:

| | |
|---|---|
| General Fund Operating Appropriations | |
| Salary and Employee Benefits | $408,340,040 |
| Retiree Medical Pay-down to OCERS | $17,787,217 |
| Services and Supplies (including one-time) | $39,903,300 |
| Capital Outlay | $124,000 |
| Total Operating Appropriations | $466,154,557 |
| | |
| Operating Transfers-out of General Funds | |
| To CIP Fund(s) and Settlement Agreement Fund | $26,110,226 |
| | |
| Other Funds Appropriations | |
| Fund 12110 – General Fund CIP | $9,009,650 |
| Fund 123 – Fire Stations and Facilities | $875,000 |
| Fund 124 – Communications and Info. Systems | $6,100,000 |
| Fund 133 – Fire Apparatus | $11,015,700 |
| Fund 139 – Settlement Agreement | $668,000 |
| Fund 190 – Self-Insurance Fund | $17,212,913 |
| Total Other Funds Appropriations | $44,881,263 |
| | |
| Reserves | |
| 10% Operating Contingency | $42,251,013 |
| Appropriation for Contingencies | $3,000,000 |

*PASSED, APPROVED and ADOPTED* this 26th day of May 2022.

_____
MICHELE STEGGELL, CHAIR
OCFA Board of Directors

ATTEST:

_____
MARIA HUIZAR
Clerk of the Authority

Attachment 3

# ORANGE COUNTY FIRE AUTHORITY

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## BOARD OF DIRECTORS
## FY 2022/23
## PROPOSED BUDGET

Business Services Department
Treasury & Financial Planning
May 26, 2022


FIRE
ORANGE COUNTY
CALIFORNIA
AUTHORITY
Est. 1995

# TABLE OF CONTENTS

BOARD OF DIRECTORS

FY 2022/23 PROPOSED GENERAL FUND AND CIP BUDGETS

May 26, 2022


**1 Budget Summary**

- Overview ..... 1
- General Fund Summary ..... 3
- Budget Highlights ..... 4
- Pending Issues ..... 6
- Combined Budget Summary ..... 8
- General Fund by Department ..... 10
- Five-Year Forecast ..... 12
- Five-Year Forecast Assumptions ..... 18
- Salaries & Employee Benefits Assumptions 23
- Fixed & Controlled Assets ..... 27

**2 Revenue**

- Revenue Schedules ..... 29
- Assumptions ..... 33

**3 Business Services ..... 35**

**4 Command and Emergency Planning ..... 43**

**5 Community Risk Reduction ..... 45**

**6 Corporate Communications ..... 53**

**7 Emergency Medical Services & Training 57**

**8 Executive Management ..... 63**

**9 Human Resources ..... 67**

**10 Logistics ..... 75**

**11 Non-Departmental ..... 91**

**12 Operations ..... 93**

**13 Special Operations ..... 103**

**14 Capital Improvement Program Funds**

- Overview ..... 111
- CIP Highlights ..... 112
- CIP Five-Year Plan Summary ..... 113
- Five-Year Plan Project Listing ..... 114
- Station Remodel History ..... 118
- Fund 12110 ..... 119
- Fund 123 ..... 149
- Fund 124 ..... 159
- Fund 133 ..... 171

**15 Other Special Funds**

- Fund 139 ..... 211
- Fund 190 ..... 213


FIRE
ORANGE COUNTY
CALIFORNIA
AUTHORITY
Est. 1995

# Budget Overview

We are pleased to present the FY 2022/23 Proposed Budget for your review and consideration. As required by the Fiscal Health Plan and Financial Stability Budget Policy, this proposed General Fund budget is balanced for FY 2022/23 and meets our policy reserve requirements.

At 64% of our revenues, property taxes are the largest component of our General Fund revenue budget. The OCFA contracts with Harris & Associates to conduct property tax forecasts for the next five fiscal years. The projections, which are updated on an annual basis, are included in the five-year cash flow forecast starting on page 12. Harris & Associates employs conservative assumptions and methodologies. Compared to last year's forecast, the projected FY 2022/23 secured property tax growth rate of 6.01% is 2.31% higher due to a strong housing market fueled by low interest rates, pent-up demand, and record low inventory. The median home price in Orange County has increased from $795,000 in December 2020 to $935,000 in December 2021.

In keeping with Harris & Associates' forecasted trends, we have estimated that property tax revenue dollars will continue to grow. The rate of growth is anticipated to be moderated by high prices and rising interest rates with annual growth rates ranging from 2.73% to 3.79% from FY 2023/24 through FY 2026/27. Given the most current revenue trends, and considering new service delivery needs, we are proposing to add a limited number of positions that are sustainable based on our revenue growth. The FY 2022/23 Proposed Budget includes 1,572 funded positions with 38 new positions as follows:

- 24 safety employees to provide constant staffing for a Paramedic Truck and Paramedic Engine upon the opening of Fire Station 67 in September 2022. This includes 6 Fire Captains, 6 Fire Apparatus Engineers and 12 Firefighters, and of these 24 positions, 12 will also be paramedics.
- 3 Firefighter/Paramedics for an additional post position for Fire Station 42 in the City of Lake Forest. This addition converts a Paramedic Assessment Unit Engine into an Advanced Life Support Paramedic Engine.
- 1 Battalion Chief, 6 Firefighter academy cadre members, and 1 Management Analyst to obtain State Fire Training Accreditation and establish the OCFA's Firefighter Academy as an Accredited Local Academy.
- 1 Behavioral Health Coordinator to oversee the OCFA's Behavioral Health, Wellness, and Cancer Prevention programs.
- 1 Multimedia Specialist to meet the increased demand for virtual training videos and virtual events.
- 1 permanent Construction Manager position converted from a current limited term position.

The budget development process continues to include the following measures:

- ***Vacant/Frozen Positions*** – Funding for frozen positions must be approved by the Board before filling; 4 positions are frozen and are not funded in this proposed budget. As in the past, non-frozen vacant positions are funded and anticipated to be filled during the fiscal year.

- ***Services and Supplies*** – All sections were directed to hold their services and supplies (S&S) budget at the FY 2021/22 level after one-time increases were removed. Requested increases for FY 2022/23 were reviewed and approved on a case-by-case basis. Approved requests or changes are listed on each department summary page.

- ***Salaries –*** The proposed budget includes scheduled salary increases for all positions included in an approved MOU or triggered by provisions that define salary spreads. Merit increases are included for qualifying employees.

- ***Workers' Compensation –*** The workers' compensation annual budget is funded at the 50% confidence level per policy, using actuarial report figures from the Rivelle Consulting Services February 2022 Workers' Compensation Actuarial Study.

- ***Prioritization of Five-Year Capital Improvement Plan –*** The five-year CIP was updated and reviewed by the Executive Management Team which prioritized projects to ensure they contribute to the OCFA's mission of providing a safe, hazard-free work environment and quality service to our members and citizens. Based on the OCFA's projected CIP revenue sources, some CIP projects were moved to later years to coincide with future funding availability.

- ***Snowball Plan –*** The budget includes approximately $17.8M in additional payments, in accordance with Board direction to continue to pay down unfunded liabilities associated with pensions. For FY 2022/23, these snowball dollars are allocated to the unfunded Retiree Medical liability.

Consistent with our approach since the end of the Great Recession, we have employed conservative measures in the development of the FY 2022/23 Proposed Budget, balancing the needs of the agency based on current and anticipated future revenue growth.

**ORANGE COUNTY FIRE AUTHORITY**
FUND 121 - GENERAL FUND
***REVENUE AND EXPENDITURE SUMMARY***
**FY 2022/23 BUDGET**

| | FY 2021/22 Adjusted Budget | FY 2022/23 Draft Proposed Budget | $ Change from FY 2021/22 Adjusted | % Change from FY 2021/22 Adjusted |
|---|---|---|---|---|
| **FUNDING SOURCES** | | | | |
| Property Taxes | $298,984,024 | $315,735,745 | $16,751,721 | 5.60% |
| Intergovernmental | 27,777,462 | 29,289,912 | 1,512,450 | 5.44% |
| Charges for Current Services | 143,571,771 | 146,631,335 | 3,059,564 | 2.13% |
| Use of Money & Property | 182,340 | 627,279 | 444,939 | 244.02% |
| Other | 1,092,353 | 1,307,800 | 215,447 | 19.72% |
| **Subtotal Revenues** | 471,607,950 | 493,592,071 | 21,984,121 | 4.66% |
| One-time/Grant Revenues | 52,288,731 | - | (52,288,731) | -100.00% |
| **Total Revenues** | 523,896,681 | 493,592,071 | (30,304,610) | -5.78% |
| Operating Transfer In | 7,363,014 | - | (7,363,014) | -100.00% |
| Beginning Fund Balance | 46,003,333 | 43,923,725 | (2,079,608) | -4.52% |
| **TOTAL AVAILABLE RESOURCES** | **$577,263,028** | **$537,515,796** | **($39,747,232)** | **-6.89%** |
| **EXPENDITURES** | | | | |
| Salaries & Employee Benefits | $403,176,277 | $408,340,040 | $5,163,763 | 1.28% |
| Services & Supplies | 38,091,893 | 39,903,300 | 1,811,407 | 4.76% |
| Capital Outlay | 124,000 | 124,000 | - | 0.00% |
| Subtotal Expenditures | 441,392,170 | 448,367,340 | 6,975,170 | 1.58% |
| One-Time/Grant Expenditures | 56,707,281 | - | (56,707,281) | -100.00% |
| UAAL Paydowns | 14,279,280 | 17,787,217 | 3,507,937 | 24.57% |
| Total Expenditures & Other Uses | 512,378,731 | 466,154,557 | (46,224,174) | -9.02% |
| Operating Transfer Out | 20,960,572 | 26,110,226 | 5,149,654 | 24.57% |
| Appropriation for Contingencies (1) | 3,000,000 | 3,000,000 | - | 0.00% |
| Ending Fund Balance | 40,923,725 | 42,251,013 | 1,327,288 | 3.24% |
| **TOTAL FUND COMMITMENTS & FUND BALANCE** | **$577,263,028** | **$537,515,796** | **($39,747,232)** | **-6.89%** |

(1) Requires Board approval to spend

# ORANGE COUNTY FIRE AUTHORITY
# FY 2022/23 General Fund
# Budget Highlights
# May 2022

*NOTE: This comparison is the FY 2021/22 Adjusted Budget to the FY 2022/23 Proposed Budget, with one-time increases removed for comparison purposes.*

## *Revenue*
### *$22.0 million or a 4.66% increase*

**Property Taxes** **$16.8M increase**

- Based on 6.01% current secured property tax growth per the Harris & Associates study of April 4, 2022, applied to the current year FY 2021/22 tax ledger, excluding public utility taxes.
- The refund factor is estimated at 1.24% based on historical trends.

**State Reimbursements** **$12K increase**

- Based on the FY 2021/22 estimated contract amount less one-time funding per the Gray Book (CAL FIRE's notice of allocation to the contract counties).

**Federal Reimbursements** **No Change**

**Community Redevelopment Agency (CRA) Pass-Thru** **$1.5M increase**

- Based on projections from the Harris & Associates study of April 4, 2022.

**Cash Contract Charges** **$3.1M increase**

- Based on an estimated increases to cash contract cities' service charges ranging from 1.34% to 2.42%, plus 4$^{th}$ position phase-in costs for Buena Park, San Clemente and Tustin.

**Interest** **$442K increase**

- Based on an estimated annual return of 0.75% for FY 2022/23.

**Community Risk Reduction Fees** **No Change**

- Based on FY 2021/22 projections, prior and current year trends, and input from the CRR staff. Revenue projections will be updated during the mid-year review and pending Board approval of the fee study.

**Miscellaneous Revenue** **$215K increase**

# *Expenditures*

***$7.0 million or a 1.58% increase overall***

**Salaries** **$10.6M increase**

- Includes funding for 38 proposed new positions.
- MOU increases for EMT pay and Longevity Pay included for Chief Officer employee group.
- Assumes no MOU increases for Firefighter, OCFAMA and OCEA employee groups pending current-ongoing negotiations.
- Overtime, which increased by approximately $5.6M, is based on historical expenditures excluding emergency incidents. Overtime usage has been trending higher in recent years.
- FY 2022/23 Proposed Budget includes a $6.8M deduction for average salary savings in the firefighter ranks due to projected vacancies.

**Retirement** **$7.3M decrease**

- Includes retirement cost for 38 proposed new positions.
- FY 2022/23 retirement rates are approximately 7.29% lower for safety and 0.99% lower for non-safety compared to FY 2021/22 rates.

**Benefits** **$1.8M increase**

- Workers' Compensation is budgeted at the 50% confidence level provided by the actuarial study completed in February 2022. Workers' Compensation increased $788K for FY 2022/23.
- Scheduled retiree medical paydown amounts of $14.8M in FY 2021/22 and $17.8M in FY 2022/23 were removed for comparison purposes.
- Firefighter group medical insurance is based on a rate of $2,200 per month with no increase from FY 2021/22.
- Management vision insurance and dental insurance reflect an increase of 5.0% for calendar year 2023.

**Services and Supplies/Equipment** **$1.8M increase**

- The increase in services and supplies expenditures is due to approved base budget increases for selected Departments. Details appear on the Summary pages of each Department's Services & Supplies section.

# ORANGE COUNTY FIRE AUTHORITY
# FY 2022/23 Pending Issues
# May 2022

**Interest Earnings/Interfund Expense**

- The OCFA plans to use interfund borrowing to meet any cash flow needs during FY 2022/23. Under this temporary cash flow mechanism, money is borrowed from the Workers' Compensation Self Insurance Fund, temporarily loaned to the General Fund, then repaid back with interest once property tax revenues are received. Interest earnings estimates for the fund will be calculated as the budget stabilizes towards budget adoption in May. Interest earnings estimates assume a 0.75% interest rate for FY 2022/23.

**Cash Contract City Charges**

- Current increase estimates range from 1.35% to 2.42% for FY 2022/23, pending final budget figures.

**US&R Grants**

- No estimate has been included for the new grant nor unspent funds of current grants.


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**ORANGE COUNTY FIRE AUTHORITY**
COMBINED PROPOSED BUDGET SUMMARY
**FY 2022/23**

| | 121 General Fund | 12110 [1] General Fund CIP | 123 Fire Stations & Facilities | 124 Communications & Information Systems |
|---|---|---|---|---|
| **FUNDING SOURCES** | | | | |
| Property Taxes | 315,735,745 | - | - | - |
| Intergovernmental | 29,289,912 | - | - | - |
| Charges for Current Services | 146,631,335 | - | - | - |
| Use of Money & Property | 627,279 | - | 40,570 | 29,580 |
| Other | 1,307,800 | - | 851,611 | - |
| **Total Revenue & Other Financing Sources** | **493,592,071** | **-** | **892,181** | **29,580** |
| Operating Transfer In | - | 9,500,000 | - | 4,500,000 |
| Beginning Fund Balance | 43,923,725 | 282,673 | 3,574,358 | 2,346,999 |
| **TOTAL AVAILABLE RESOURCES** | **537,515,796** | **9,782,673** | **4,466,539** | **6,876,579** |
| **EXPENDITURES** | | | | |
| Salaries & Employee Benefits | 408,340,040 | - | - | - |
| Services & Supplies | 39,903,300 | 8,409,650 | - | - |
| Capital Outlay | 124,000 | 600,000 | 875,000 | 6,100,000 |
| **Subtotal Expenditures** | **448,367,340** | **9,009,650** | **875,000** | **6,100,000** |
| UAAL / Retiree Medical Paydown | 17,787,217 | - | - | - |
| **Total Expenditures & Other Uses** | **466,154,557** | **9,009,650** | **875,000** | **6,100,000** |
| Appropriation for Contingencies | 3,000,000 | - | - | - |
| Operating Transfer Out | 26,110,226 | - | - | - |
| Ending Fund Balance | 42,251,013 | 773,023 | 3,591,539 | 776,579 |
| **TOTAL FUND COMMITMENTS & FUND BALANCE** | **537,515,796** | **9,782,673** | **4,466,539** | **6,876,579** |

(1) Project related budgets segregated for operational budget clarity purposes.

| 133 Fire Apparatus | 139 Settlement Agreement | 171 SFF Entitlement | 190 Self-Insurance | Total |
|---|---|---|---|---|
| - | - | - | - | 315,735,745 |
| - | - | - | - | 29,289,912 |
| 1,749,288 | - | - | 30,754,757 | 179,135,380 |
| 220,110 | 207,322 | 16,148 | 1,065,815 | 2,206,824 |
| - | - | - | - | 2,159,411 |
| **1,969,398** | **207,322** | **16,148** | **31,820,572** | **528,527,272** |
| 9,442,226 | 2,668,000 | - | - | 26,110,226 |
| 1,046,894 | 25,857,035 | 2,166 | 124,421,994 | 201,455,844 |
| **12,458,518** | **28,732,357** | **18,314** | **156,242,566** | **756,093,342** |
| - | - | - | - | 408,340,040 |
| - | 668,000 | - | 17,212,913 | 66,193,863 |
| 11,015,700 | - | - | - | 18,714,700 |
| **11,015,700** | **668,000** | **-** | **17,212,913** | **493,248,603** |
| - | - | - | - | 17,787,217 |
| **11,015,700** | **668,000** | **-** | **17,212,913** | **511,035,820** |
| - | - | - | - | 3,000,000 |
| - | - | - | - | 26,110,226 |
| 1,442,818 | 28,064,357 | 18,314 | 139,029,653 | 215,947,296 |
| **12,458,518** | **28,732,357** | **18,314** | **156,242,566** | **756,093,342** |

**ORANGE COUNTY FIRE AUTHORITY**
FUND 121 - GENERAL FUND
**FY 2022/23 BUDGET**

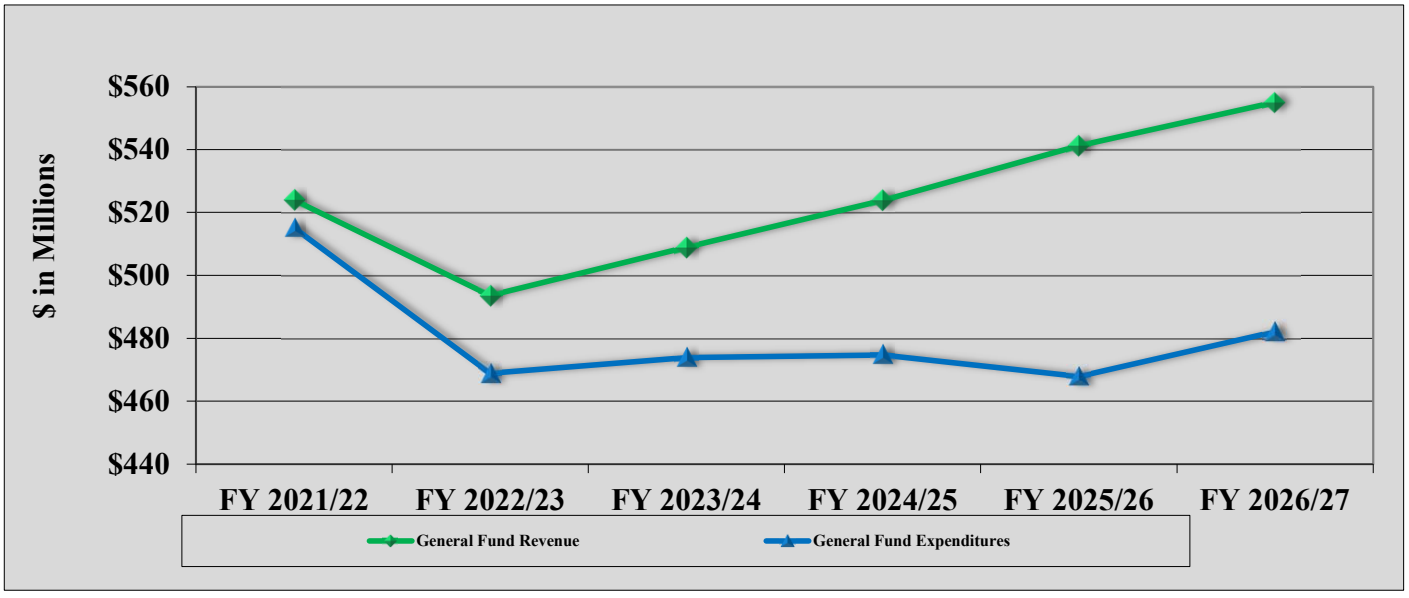
| Account Description | Business Services | Command & Emergency Planning | Community Risk Reduction | Corporate Communications | Emergency Medical Services & Training | Executive Management |
|---|---|---|---|---|---|---|
| **EMPLOYEE SALARIES** | | | | | | |
| **Regular Salaries** | $4,511,265 | $4,148,829 | $7,196,168 | $1,285,990 | $5,100,723 | $3,382,956 |
| **Backfill/Overtime** | 27,618 | 1,252,246 | 123,048 | 173,278 | 480,083 | 26,768 |
| **FLSA Adjustment/Holiday Pay** | - | 52,418 | - | 36,156 | - | - |
| **Extra Help** | - | - | 41,983 | - | - | - |
| **Reserves** | - | - | - | - | - | - |
| **Other Pay** | 102,159 | 606,090 | 227,515 | 179,711 | 738,173 | 64,381 |
| **Sick/Vacation Payoff** | 247,131 | 144,619 | 199,893 | 21,698 | 232,737 | 283,178 |
| **TOTAL SALARIES** | 4,888,173 | 6,204,202 | 7,788,607 | 1,696,833 | 6,551,716 | 3,757,283 |
| **RETIREMENT** | 1,716,204 | 1,823,865 | 2,660,022 | 585,039 | 2,515,537 | 1,499,436 |
| **INSURANCE** | | | | | | |
| **Employee Insurance** | 917,838 | 708,684 | 1,062,282 | 254,375 | 920,217 | 496,708 |
| **Workers' Compensation** | 265,783 | 461,587 | 443,246 | 160,055 | 553,134 | 319,710 |
| **Unemployment Insurance** | 1,000 | 8,500 | 4,000 | - | - | 1,000 |
| **TOTAL INSURANCE** | 1,184,621 | 1,178,771 | 1,509,528 | 414,430 | 1,473,351 | 817,418 |
| **MEDICARE** | 70,829 | 89,954 | 112,936 | 24,535 | 93,206 | 54,047 |
| **RETIREE MEDICAL** | - | - | - | - | - | - |
| **TOTAL S&EB (SALARIES & EMPLOYEE BENEFITS)** | 7,859,827 | 9,296,792 | 12,071,093 | 2,720,837 | 10,633,810 | 6,128,184 |
| **SERVICES & SUPPLIES** | 718,684 | 98,221 | 418,622 | 174,429 | 4,454,051 | 873,059 |
| **EQUIPMENT** | - | - | - | - | - | - |
| **TOTAL BUDGET** | **$8,578,511** | **$9,395,013** | **$12,489,715** | **$2,895,266** | **$15,087,861** | **$7,001,243** |
| **Funded Positions *** | 68 | 45 | 71 | 14 | 40 | 15 |

* 25 of the 68 Business Services positions are Board Members that receive a stipend from OCFA.

| Human Resources | Logistics | Non-Departmental | Operations | Special Operations | TOTAL |
|---|---|---|---|---|---|
| $2,476,749 | $9,695,776 | - | $114,394,026 | $5,763,668 | $157,956,150 |
| 15,788 | 592,763 | - | 43,031,621 | 1,403,821 | 47,127,034 |
| - | - | - | 10,900,745 | 180,319 | 11,169,638 |
| - | - | - | - | - | 41,983 |
| - | - | - | 220,000 | - | 220,000 |
| 43,319 | 657,988 | - | 26,401,820 | 888,552 | 29,909,708 |
| 65,701 | 212,629 | - | 2,799,197 | 233,902 | 4,440,685 |
| 2,601,557 | 11,159,156 | - | 197,747,409 | 8,470,262 | 250,865,198 |
| 891,158 | 3,629,304 | - | 66,980,946 | 3,087,566 | 85,389,077 |
| 534,887 | 1,672,888 | 35,760 | 29,262,112 | 1,768,280 | 37,634,031 |
| 146,533 | 1,034,362 | - | 26,124,910 | 1,245,437 | 30,754,757 |
| 500 | 3,000 | - | 28,000 | 14,000 | 60,000 |
| 681,920 | 2,710,250 | 35,760 | 55,415,022 | 3,027,717 | 68,448,788 |
| 37,589 | 161,513 | - | 2,868,575 | 123,793 | 3,636,977 |
| - | - | 17,787,217 | - | - | 17,787,217 |
| 4,212,224 | 17,660,223 | 17,822,977 | 323,011,952 | 14,709,338 | 426,127,258 |
| 6,885,004 | 21,102,177 | 2,675,048 | 367,585 | 2,136,420 | 39,903,300 |
| - | - | - | - | 124,000 | 124,000 |
| **$11,097,228** | **$38,762,400** | **$20,498,025** | **$323,379,537** | **$16,969,758** | **$466,154,557** |
| 22 | 106 | - | 1,121 | 70 | 1,572 |

**Scenario 1 - 0% Salary Increase After MOU Expirations**
**Orange County Fire Authority**
**Five-Year Financial Forecast**

| | *Adjusted* FY 2021/22 | *Year 1* FY 2022/23 | *Year 2* FY 2023/24 | *Year 3* FY 2024/25 | *Year 4* FY 2025/26 | *Year 5* FY 2026/27 |
|---|---|---|---|---|---|---|
| Beginning Fund Balance | 225,603,692 | 201,455,844 | 218,947,292 | 250,565,138 | 263,992,410 | 271,303,798 |
| General Fund Revenue | 523,896,681 | 493,592,071 | 508,939,170 | 523,861,224 | 541,226,099 | 555,040,714 |
| General Fund Expenditures | 500,767,451 | 451,035,340 | 453,085,775 | 452,892,070 | 438,631,745 | 447,416,545 |
| Paydown of UAAL/Retiree Medical | 14,279,280 | 17,787,217 | 20,772,547 | 21,814,115 | 29,242,631 | 34,647,456 |
| Total General Fund Expenditures | 515,046,731 | 468,822,557 | 473,858,322 | 474,706,185 | 467,874,376 | 482,064,001 |
| **Net General Fund Revenue** | **8,849,950** | **24,769,514** | **35,080,848** | **49,155,039** | **73,351,723** | **72,976,713** |
| Less Incremental Increase in 10% GF Op. Cont. | 2,563,553 | 1,327,288 | 188,648 | - | - | - |
| **General Fund Surplus / (Deficit)** | **6,286,397** | **23,442,226** | **34,892,200** | **49,155,039** | **73,351,723** | **72,976,713** |
| Operating Transfers to CIP Funds | 6,286,397 | 23,442,226 | 34,892,200 | 24,577,520 | 36,675,862 | 36,488,357 |
| Paydown of UAAL from General Fund Surplus | - | - | - | 24,577,520 | 36,675,862 | 36,488,357 |
| CIP Revenue | 9,769,333 | 27,622,670 | 39,868,122 | 29,498,520 | 41,741,082 | 41,805,832 |
| CIP Expenditures | 46,733,157 | 27,000,354 | 23,708,864 | 31,208,934 | 49,436,692 | 43,089,216 |
| **CIP Surplus / (Deficit)** | **(36,963,824)** | **622,316** | **16,159,258** | **(1,710,414)** | **(7,695,610)** | **(1,283,384)** |
| Other Fund Revenue | 32,634,926 | 33,422,757 | 34,999,422 | 36,613,718 | 38,325,941 | 40,124,529 |
| Other Fund Expenditures | 22,382,503 | 17,880,913 | 19,729,482 | 21,476,032 | 23,318,943 | 25,325,076 |
| **Other Fund Surplus / (Deficit)** | **10,252,423** | **15,541,844** | **15,269,940** | **15,137,686** | **15,006,998** | **14,799,453** |
| **Ending CIP Fund Balance** | **7,250,924** | **6,583,955** | **21,285,822** | **17,946,629** | **8,550,871** | **5,495,677** |
| **Ending Fund Balance** | **201,455,844** | **218,947,292** | **250,565,138** | **263,992,410** | **271,303,798** | **284,819,867** |



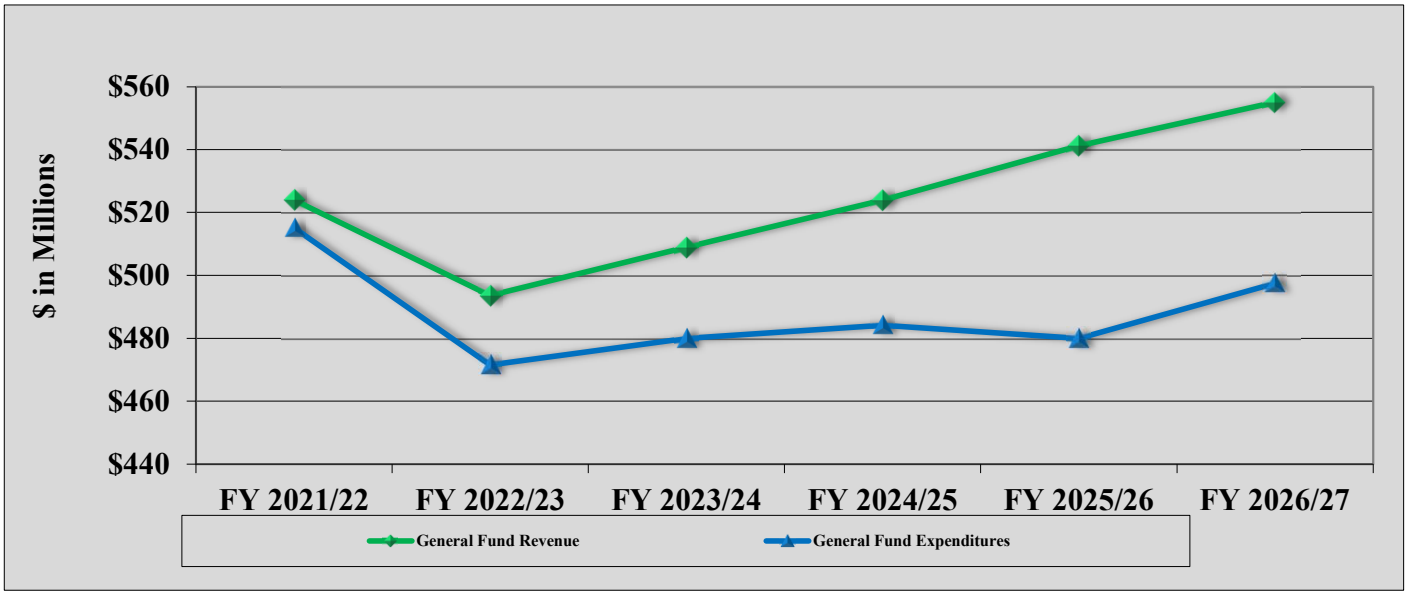

| | FY 2021/22 | FY 2022/23 | FY 2023/24 | FY 2024/25 | FY 2025/26 | FY 2026/27 |
|---|---|---|---|---|---|---|
| General Fund Revenue | $ 523.90 | $ 493.59 | $ 508.94 | $ 523.86 | $ 541.23 | $ 555.04 |
| General Fund Expenditures | $ 515.05 | $ 468.82 | $ 473.86 | $ 474.71 | $ 467.87 | $ 482.06 |

| | Scenario 1 - 0% Salary Increase After MOU Expirations | ADJUSTED FY 2021/22 | PROJECTED FY 2022/23 | PROJECTED FY 2023/24 | PROJECTED FY 2024/25 | PROJECTED FY 2025/26 | PROJECTED FY 2026/27 |
|---|---|---|---|---|---|---|---|
| A. | **BEGINNING FUND BALANCE - All Funds Combined** | **225,603,692** | **201,455,844** | **218,947,292** | **250,565,138** | **263,992,410** | **271,303,798** |
| | **GENERAL FUND Revenue & Expenditures** | | | | | | |
| | Property Taxes | 298,984,024 | 315,735,745 | 327,021,674 | 335,459,222 | 344,730,375 | 354,272,246 |
| | State Reimbursements | 8,011,778 | 9,071,761 | 9,071,761 | 9,071,761 | 9,071,761 | 9,071,761 |
| | Federal Reimbursements | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 |
| | One-Time Grant/ABH/RDA | 51,199,156 | - | - | - | - | - |
| | Community Redevelopment Agency Pass-thru | 18,618,096 | 20,118,151 | 21,109,925 | 24,727,418 | 29,888,333 | 31,164,994 |
| | Cash Contracts | 133,345,035 | 136,290,886 | 139,336,983 | 142,185,580 | 145,100,556 | 148,078,717 |
| | Community Risk Reduction Fees | 5,686,323 | 5,686,323 | 5,686,323 | 5,686,323 | 5,686,323 | 5,686,323 |
| | ALS Supplies & Transport Reimbursement | 4,547,600 | 4,547,600 | 4,547,600 | 4,547,600 | 4,547,600 | 4,547,600 |
| | Interest Earnings | 182,340 | 576,849 | 600,148 | 618,564 | 636,395 | 654,317 |
| | Other Revenue | 3,222,329 | 1,464,756 | 1,464,756 | 1,464,756 | 1,464,756 | 1,464,756 |
| | **General Fund Revenue** | **523,896,681** | **493,592,071** | **508,939,170** | **523,861,224** | **541,226,099** | **555,040,714** |
| | New Positions for New Stations | - | - | - | - | 2,875,042 | 7,057,010 |
| | Service Enhancement | - | - | 771,160 | 1,542,320 | 1,542,320 | 1,542,320 |
| | Employee Salaries | 241,332,754 | 250,865,198 | 250,865,198 | 250,865,198 | 250,865,198 | 250,865,198 |
| | Retirement - Regular Annual Payments | 95,657,088 | 85,389,077 | 83,161,710 | 77,949,545 | 56,346,898 | 55,617,470 |
| | Accelerated Pension / Retiree Medical Paydown | 14,279,280 | 17,787,217 | 20,772,547 | 21,814,115 | 29,242,631 | 34,647,456 |
| | Workers' Compensation (Transfer to Fund 190) | 29,966,926 | 30,754,757 | 32,331,422 | 33,945,718 | 35,657,941 | 37,456,529 |
| | Other Insurance | 36,793,438 | 37,694,031 | 39,979,367 | 42,411,113 | 44,920,605 | 47,594,465 |
| | Medicare | 3,477,787 | 3,636,977 | 3,637,545 | 3,637,545 | 3,637,545 | 3,637,545 |
| | One-Time Grant/ABH Expenditures | 15,371,302 | - | - | - | - | - |
| | Salaries & Employee Benefits | 436,878,575 | 426,127,257 | 431,518,950 | 432,165,555 | 425,088,181 | 438,417,993 |
| | Services & Supplies/Equipment | 41,702,834 | 40,027,300 | 39,671,372 | 39,872,630 | 39,934,890 | 40,537,465 |
| | Irvine Settlement Agreement (Transfer to Fund 139) | 2,668,000 | 2,668,000 | 2,668,000 | 2,668,000 | 2,668,000 | 2,668,000 |
| | New Station/Enhancements S&S Impacts | - | - | - | - | 183,305 | 440,543 |
| | One-Time Grant Expenditures | 33,797,322 | - | - | - | - | - |
| | **General Fund Expenditures** | **515,046,731** | **468,822,557** | **473,858,322** | **474,706,185** | **467,874,376** | **482,064,001** |
| B. | Incremental Increase in GF 10% Contingency | 2,563,553 | 1,327,288 | 188,648 | - | - | - |
| | **GENERAL FUND SURPLUS/(DEFICIT)** | **6,286,397** | **23,442,226** | **34,892,200** | **49,155,039** | **73,351,723** | **72,976,713** |
| C. | Operating Transfer from Operating Contingency | - | - | - | - | - | - |
| | **Transfers to CIP Funds from General Fund Surplus** | **6,286,397** | **23,442,226** | **34,892,200** | **24,577,520** | **36,675,862** | **36,488,357** |
| | One-Time Pension / Retiree Med. Paydown from GF Surplus | - | - | - | 24,577,520 | 36,675,862 | 36,488,357 |
| | **CAPITAL IMPROVEMENT PROGRAM (CIP)** | | | | | | |
| | Interest Earnings | 523,406 | 1,579,545 | 1,808,144 | 2,020,780 | 2,109,325 | 2,198,234 |
| | Cash Contracts | 1,652,957 | 1,749,288 | 1,801,767 | 1,855,820 | 1,911,495 | 1,968,841 |
| | Developer Contributions | 1,261,573 | 851,611 | 1,366,011 | 1,044,400 | 1,044,400 | 1,150,400 |
| | **Operating Transfers into CIP from General Fund Surplus** | 6,286,397 | 23,442,226 | 34,892,200 | 24,577,520 | 36,675,862 | 36,488,357 |
| | Total CIP Revenue | 9,769,333 | 27,622,670 | 39,868,122 | 29,498,520 | 41,741,082 | 41,805,832 |
| | Fund 12110 - General Fund CIP | 10,191,729 | 9,009,650 | 9,460,500 | 11,394,000 | 7,676,500 | 8,051,000 |
| | Fund 123 - Fire Stations and Facilities | 17,818,265 | 875,000 | 3,700,000 | 5,200,000 | 24,200,000 | 4,550,000 |
| | Fund 124 - Communications & Information Systems | 4,466,515 | 6,100,000 | 5,100,000 | 1,302,000 | 1,900,000 | 10,000,000 |
| | Fund 133 - Fire Apparatus | 14,256,648 | 11,015,704 | 5,448,364 | 13,312,934 | 15,660,192 | 20,488,216 |
| | Total CIP Expenses | 46,733,157 | 27,000,354 | 23,708,864 | 31,208,934 | 49,436,692 | 43,089,216 |
| | Lease Purchase Payments | - | - | - | - | - | - |
| D. | **CIP SURPLUS/(DEFICIT) -** Deposit to/withdraw from CIP reserve | **(36,963,824)** | **622,316** | **16,159,258** | **(1,710,414)** | **(7,695,610)** | **(1,283,384)** |
| | **OTHER FUNDS** | | | | | | |
| | Fund 190 - WC Revenue - Transfer from GF | 29,966,926 | 30,754,757 | 32,331,422 | 33,945,718 | 35,657,941 | 37,456,529 |
| | Fund 190 - WC Cashflow Payments per Actuary | 15,640,500 | 17,212,913 | 19,061,482 | 20,808,032 | 22,650,943 | 24,657,076 |
| E. | Deposit to WC Cashflow Reserve | 14,326,426 | 13,541,844 | 13,269,940 | 13,137,686 | 13,006,998 | 12,799,453 |
| | Fund 139 - Irvine Settlement Revenue - Transfer from GF | 2,668,000 | 2,668,000 | 2,668,000 | 2,668,000 | 2,668,000 | 2,668,000 |
| | Fund 139 - Irvine Settlement Expenditures - Per Agreement | 2,193,000 | 668,000 | 668,000 | 668,000 | 668,000 | 668,000 |
| F. | Deposit to PARS - Pension Reserve | 475,000 | 2,000,000 | 2,000,000 | 2,000,000 | 2,000,000 | 2,000,000 |
| G. | Fund 171 - SFFEF Expenditures | 4,549,003 | - | - | - | - | - |
| | **ENDING FUND BALANCE (Note) - All Funds Combined** | **201,455,844** | **218,947,292** | **250,565,138** | **263,992,410** | **271,303,798** | **284,819,867** |
| | Ending Balance by Fund | | | | | | |
| | Operating Contingency (10% of Expenditures) | 43,448,725 | 44,776,013 | 44,964,661 | 44,964,661 | 44,964,661 | 44,964,661 |
| | Reserve for Cash Contract City Station Maintenance | 475,000 | 475,000 | 475,000 | 475,000 | 475,000 | 475,000 |
| | Structural Fire Fund Entitlement Fund (Fund 171) | 2,166 | 18,314 | 18,314 | 18,314 | 18,314 | 18,314 |
| | Irvine Settlement Agreement (Fund 139) | 25,857,035 | 28,064,357 | 30,301,684 | 32,566,920 | 34,843,777 | 37,132,305 |
| | **CIP FUND BALANCE** | **7,250,924** | **6,583,955** | **21,285,822** | **17,946,629** | **8,550,871** | **5,495,677** |
| | Workers' Compensation Cashflow Reserve (Fund 190) | 124,421,994 | 139,029,653 | 153,519,658 | 168,020,887 | 182,451,174 | 196,733,909 |
| | Total Fund Balances | 201,455,844 | 218,947,292 | 250,565,138 | 263,992,410 | 271,303,798 | 284,819,867 |

Note: Ending Fund Balance is calculated by adding rows A+B+C+D+E+F-G, and excludes row [a] since unencumbered fund balance is already included in the Beg. Fund Balance

**Scenario 2 - 1% Salary Increase After MOU Expirations**
**Orange County Fire Authority**
**Five-Year Financial Forecast**

| | *Adjusted* FY 2021/22 | *Year 1* FY 2022/23 | *Year 2* FY 2023/24 | *Year 3* FY 2024/25 | *Year 4* FY 2025/26 | *Year 5* FY 2026/27 |
|---|---|---|---|---|---|---|
| Beginning Fund Balance | 225,603,692 | 201,455,844 | 216,211,512 | 241,641,450 | 270,195,778 | 280,905,788 |
| General Fund Revenue | 523,896,681 | 493,592,071 | 508,941,540 | 523,866,869 | 541,232,686 | 555,047,554 |
| General Fund Expenditures | 500,767,451 | 453,771,120 | 459,213,879 | 462,328,580 | 450,710,627 | 462,805,650 |
| Paydown of UAAL/Retiree Medical | 14,279,280 | 17,787,217 | 20,772,547 | 21,814,115 | 29,242,631 | 34,647,456 |
| Total General Fund Expenditures | 515,046,731 | 471,558,337 | 479,986,426 | 484,142,695 | 479,953,258 | 497,453,106 |
| **Net General Fund Revenue** | **8,849,950** | **22,033,734** | **28,955,114** | **39,724,174** | **61,279,428** | **57,594,448** |
| Less Incremental Increase in 10% GF Op. Cont. | 2,563,553 | 1,327,288 | 800,688 | 232,804 | - | 47,707 |
| **General Fund Surplus / (Deficit)** | **6,286,397** | **20,706,446** | **28,154,426** | **39,491,369** | **61,279,428** | **57,546,741** |
| Operating Transfers to CIP Funds | 6,286,397 | 20,706,446 | 28,154,426 | 39,491,369 | 40,000,000 | 28,773,370 |
| Paydown of UAAL from General Fund Surplus | - | - | - | - | 21,279,428 | 28,773,370 |
| CIP Revenue | 9,769,333 | 24,886,890 | 33,068,174 | 44,392,772 | 45,139,704 | 34,143,452 |
| CIP Expenditures | 46,733,157 | 27,000,354 | 23,708,864 | 31,208,934 | 49,436,692 | 43,089,216 |
| **CIP Surplus / (Deficit)** | **(36,963,824)** | **(2,113,464)** | **9,359,310** | **13,183,838** | **(4,296,988)** | **(8,945,764)** |
| Other Fund Revenue | 32,634,926 | 33,422,757 | 34,999,422 | 36,613,718 | 38,325,941 | 40,124,529 |
| Other Fund Expenditures | 22,382,503 | 17,880,913 | 19,729,482 | 21,476,032 | 23,318,943 | 25,325,076 |
| **Other Fund Surplus / (Deficit)** | **10,252,423** | **15,541,844** | **15,269,940** | **15,137,686** | **15,006,998** | **14,799,453** |
| **Ending CIP Fund Balance** | **7,250,924** | **3,848,175** | **11,800,208** | **23,371,063** | **17,313,892** | **6,553,917** |
| **Ending Fund Balance** | **201,455,844** | **216,211,512** | **241,641,450** | **270,195,778** | **280,905,788** | **286,807,184** |



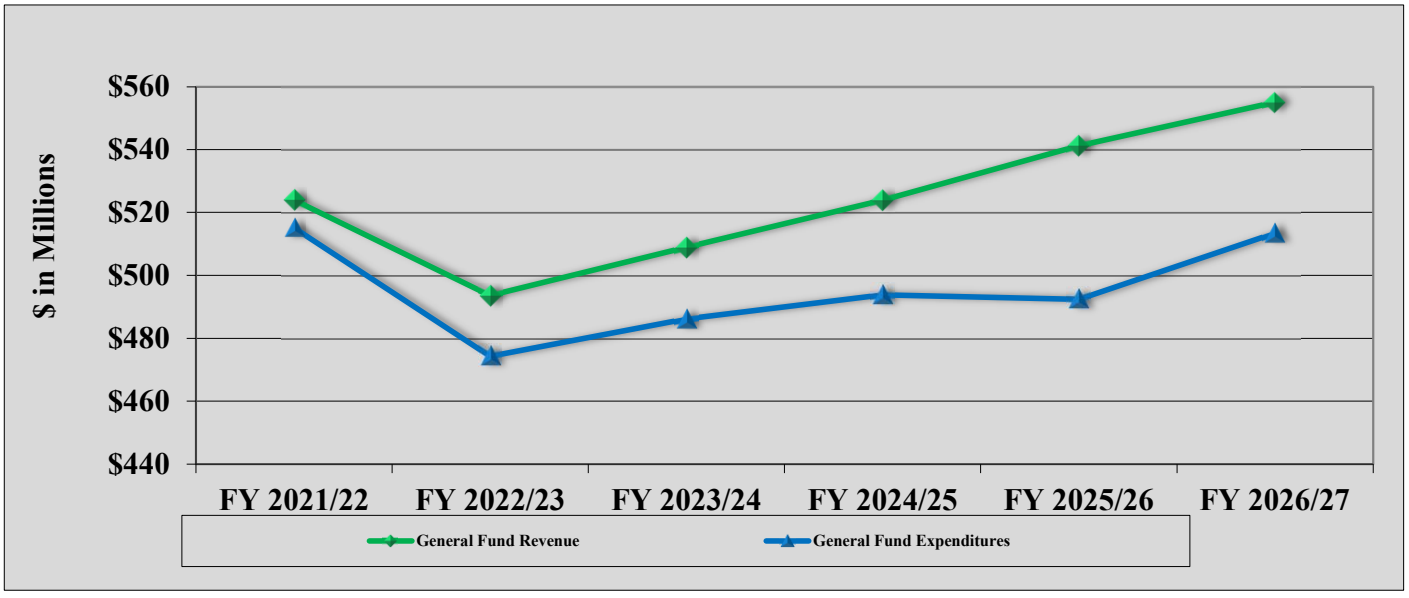

| | FY 2021/22 | FY 2022/23 | FY 2023/24 | FY 2024/25 | FY 2025/26 | FY 2026/27 |
|---|---|---|---|---|---|---|
| General Fund Revenue | $ 523.90 | $ 493.59 | $ 508.94 | $ 523.87 | $ 541.23 | $ 555.05 |
| General Fund Expenditures | $ 515.05 | $ 471.56 | $ 479.99 | $ 484.14 | $ 479.95 | $ 497.45 |

| | Scenario 2 - 1% Salary Increase After MOU Expirations | ADJUSTED FY 2021/22 | PROJECTED FY 2022/23 | PROJECTED FY 2023/24 | PROJECTED FY 2024/25 | PROJECTED FY 2025/26 | PROJECTED FY 2026/27 |
|---|---|---|---|---|---|---|---|
| A. | **BEGINNING FUND BALANCE - All Funds Combined** | **225,603,692** | **201,455,844** | **216,211,512** | **241,641,450** | **270,195,778** | **280,905,788** |
| | **GENERAL FUND Revenue & Expenditures** | | | | | | |
| | Property Taxes | 298,984,024 | 315,735,745 | 327,021,674 | 335,459,222 | 344,730,375 | 354,272,246 |
| | State Reimbursements | 8,011,778 | 9,071,761 | 9,071,761 | 9,071,761 | 9,071,761 | 9,071,761 |
| | Federal Reimbursements | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 |
| | One-Time Grant/ABH/RDA | 51,199,156 | - | - | - | - | - |
| | Community Redevelopment Agency Pass-thru | 18,618,096 | 20,118,151 | 21,109,925 | 24,727,418 | 29,888,333 | 31,164,994 |
| | Cash Contracts | 133,345,035 | 136,290,886 | 139,336,983 | 142,185,580 | 145,100,556 | 148,078,717 |
| | Community Risk Reduction Fees | 5,686,323 | 5,686,323 | 5,686,323 | 5,686,323 | 5,686,323 | 5,686,323 |
| | ALS Supplies & Transport Reimbursement | 4,547,600 | 4,547,600 | 4,547,600 | 4,547,600 | 4,547,600 | 4,547,600 |
| | Interest Earnings | 182,340 | 576,849 | 602,518 | 624,209 | 642,982 | 661,157 |
| | Other Revenue | 3,222,329 | 1,464,756 | 1,464,756 | 1,464,756 | 1,464,756 | 1,464,756 |
| | **General Fund Revenue** | **523,896,681** | **493,592,071** | **508,941,540** | **523,866,869** | **541,232,686** | **555,047,554** |
| | New Positions for New Stations | - | - | - | - | 2,931,316 | 7,230,091 |
| | Service Enhancement | - | - | 778,872 | 1,565,532 | 1,565,532 | 1,565,532 |
| | Employee Salaries | 241,332,754 | 252,883,035 | 255,411,791 | 257,965,855 | 260,545,482 | 263,150,927 |
| | Retirement - Regular Annual Payments | 95,657,088 | 86,078,892 | 84,668,793 | 80,156,803 | 58,523,102 | 58,343,739 |
| | Accelerated Pension / Retiree Medical Paydown | 14,279,280 | 17,787,217 | 20,772,547 | 21,814,115 | 29,242,631 | 34,647,456 |
| | Workers' Compensation (Transfer to Fund 190) | 29,966,926 | 30,754,757 | 32,331,422 | 33,945,718 | 35,657,941 | 37,456,529 |
| | Other Insurance | 36,793,438 | 37,694,031 | 39,980,159 | 42,413,537 | 44,923,150 | 47,597,137 |
| | Medicare | 3,477,787 | 3,665,105 | 3,703,471 | 3,740,505 | 3,777,909 | 3,815,688 |
| | One-Time Grant/ABH Expenditures | 15,371,302 | - | - | - | - | - |
| | Salaries & Employee Benefits | 436,878,575 | 428,863,037 | 437,647,054 | 441,602,065 | 437,167,063 | 453,807,098 |
| | Services & Supplies/Equipment | 41,702,834 | 40,027,300 | 39,671,372 | 39,872,630 | 39,934,890 | 40,537,465 |
| | Irvine Settlement Agreement (Transfer to Fund 139) | 2,668,000 | 2,668,000 | 2,668,000 | 2,668,000 | 2,668,000 | 2,668,000 |
| | New Station/Enhancements S&S Impacts | - | - | - | - | 183,305 | 440,543 |
| | One-Time Grant Expenditures | 33,797,322 | - | - | - | - | - |
| | **General Fund Expenditures** | **515,046,731** | **471,558,337** | **479,986,426** | **484,142,695** | **479,953,258** | **497,453,106** |
| B. | Incremental Increase in GF 10% Contingency | 2,563,553 | 1,327,288 | 800,688 | 232,804 | - | 47,707 |
| | **GENERAL FUND SURPLUS/(DEFICIT)** | **6,286,397** | **20,706,446** | **28,154,426** | **39,491,369** | **61,279,428** | **57,546,741** |
| C. | Operating Transfer from Operating Contingency | - | - | - | - | - | - |
| | **Transfers to CIP Funds from General Fund Surplus** | **6,286,397** | **20,706,446** | **28,154,426** | **39,491,369** | **40,000,000** | **28,773,370** |
| | One-Time Pension / Retiree Med. Paydown from GF Surplus | - | - | - | - | 21,279,428 | 28,773,370 |
| | **CAPITAL IMPROVEMENT PROGRAM (CIP)** | | | | | | |
| | Interest Earnings | 523,406 | 1,579,545 | 1,745,969 | 2,001,182 | 2,183,809 | 2,250,840 |
| | Cash Contracts | 1,652,957 | 1,749,288 | 1,801,767 | 1,855,820 | 1,911,495 | 1,968,841 |
| | Developer Contributions | 1,261,573 | 851,611 | 1,366,011 | 1,044,400 | 1,044,400 | 1,150,400 |
| | **Operating Transfers into CIP from General Fund Surplus** | 6,286,397 | 20,706,446 | 28,154,426 | 39,491,369 | 40,000,000 | 28,773,370 |
| | Total CIP Revenue | 9,769,333 | 24,886,890 | 33,068,174 | 44,392,772 | 45,139,704 | 34,143,452 |
| | Fund 12110 - General Fund CIP | 10,191,729 | 9,009,650 | 9,460,500 | 11,394,000 | 7,676,500 | 8,051,000 |
| | Fund 123 - Fire Stations and Facilities | 17,818,265 | 875,000 | 3,700,000 | 5,200,000 | 24,200,000 | 4,550,000 |
| | Fund 124 - Communications & Information Systems | 4,466,515 | 6,100,000 | 5,100,000 | 1,302,000 | 1,900,000 | 10,000,000 |
| | Fund 133 - Fire Apparatus | 14,256,648 | 11,015,704 | 5,448,364 | 13,312,934 | 15,660,192 | 20,488,216 |
| | Total CIP Expenses | 46,733,157 | 27,000,354 | 23,708,864 | 31,208,934 | 49,436,692 | 43,089,216 |
| | Lease Purchase Payments | - | - | - | - | - | - |
| D. | **CIP SURPLUS/(DEFICIT) -** Deposit to/withdraw from CIP reserve | **(36,963,824)** | **(2,113,464)** | **9,359,310** | **13,183,838** | **(4,296,988)** | **(8,945,764)** |
| | **OTHER FUNDS** | | | | | | |
| | Fund 190 - WC Revenue - Transfer from GF | 29,966,926 | 30,754,757 | 32,331,422 | 33,945,718 | 35,657,941 | 37,456,529 |
| | Fund 190 - WC Cashflow Payments per Actuary | 15,640,500 | 17,212,913 | 19,061,482 | 20,808,032 | 22,650,943 | 24,657,076 |
| E. | Deposit to WC Cashflow Reserve | 14,326,426 | 13,541,844 | 13,269,940 | 13,137,686 | 13,006,998 | 12,799,453 |
| | Fund 139 - Irvine Settlement Revenue - Transfer from GF | 2,668,000 | 2,668,000 | 2,668,000 | 2,668,000 | 2,668,000 | 2,668,000 |
| | Fund 139 - Irvine Settlement Expenditures - Per Agreement | 2,193,000 | 668,000 | 668,000 | 668,000 | 668,000 | 668,000 |
| F. | Deposit to PARS - Pension Reserve | 475,000 | 2,000,000 | 2,000,000 | 2,000,000 | 2,000,000 | 2,000,000 |
| G. | Fund 171 - SFFEF Expenditures | 4,549,003 | - | - | - | - | - |
| | **ENDING FUND BALANCE (Note) - All Funds Combined** | **201,455,844** | **216,211,512** | **241,641,450** | **270,195,778** | **280,905,788** | **286,807,184** |
| | Ending Balance by Fund | | | | | | |
| | Operating Contingency (10% of Expenditures) | 43,448,725 | 44,776,013 | 45,576,701 | 45,809,505 | 45,809,505 | 45,857,212 |
| | Reserve for Cash Contract City Station Maintenance | 475,000 | 475,000 | 475,000 | 475,000 | 475,000 | 475,000 |
| | Structural Fire Fund Entitlement Fund (Fund 171) | 2,166 | 18,314 | 18,314 | 18,314 | 18,314 | 18,314 |
| | Irvine Settlement Agreement (Fund 139) | 25,857,035 | 28,064,357 | 30,293,523 | 32,556,187 | 34,842,821 | 37,138,253 |
| | **CIP FUND BALANCE** | **7,250,924** | **3,848,175** | **11,800,208** | **23,371,063** | **17,313,892** | **6,553,917** |
| | Workers' Compensation Cashflow Reserve (Fund 190) | 124,421,994 | 139,029,653 | 153,477,704 | 167,965,709 | 182,446,256 | 196,764,488 |
| | Total Fund Balances | 201,455,844 | 216,211,512 | 241,641,450 | 270,195,778 | 280,905,788 | 286,807,184 |

Note: Ending Fund Balance is calculated by adding rows A+B+C+D+E+F-G, and excludes row [a] since unencumbered fund balance is already included in the Beg. Fund Balance

**Scenario 3 - 2% Salary Increase After MOU Expirations**
**Orange County Fire Authority**
**Five-Year Financial Forecast**

| | *Adjusted* FY 2021/22 | *Year 1* FY 2022/23 | *Year 2* FY 2023/24 | *Year 3* FY 2024/25 | *Year 4* FY 2025/26 | *Year 5* FY 2026/27 |
|---|---|---|---|---|---|---|
| Beginning Fund Balance | 225,603,692 | 201,455,844 | 213,474,046 | 232,653,954 | 251,440,837 | 270,841,108 |
| General Fund Revenue | 523,896,681 | 493,592,071 | 508,943,935 | 523,872,924 | 541,239,927 | 555,057,196 |
| General Fund Expenditures | 500,767,451 | 456,508,586 | 465,403,766 | 471,953,725 | 463,151,968 | 478,811,327 |
| Paydown of UAAL/Retiree Medical | 14,279,280 | 17,787,217 | 20,772,547 | 21,814,115 | 29,242,631 | 34,647,456 |
| Total General Fund Expenditures | 515,046,731 | 474,295,803 | 486,176,313 | 493,767,840 | 492,394,599 | 513,458,783 |
| **Net General Fund Revenue** | **8,849,950** | **19,296,268** | **22,767,622** | **30,105,084** | **48,845,328** | **41,598,413** |
| Less Incremental Increase in 10% GF Op. Cont. | 2,563,553 | 1,327,288 | 1,418,905 | 574,764 | - | 685,760 |
| **General Fund Surplus / (Deficit)** | **6,286,397** | **17,968,980** | **21,348,717** | **29,530,319** | **48,845,328** | **40,912,653** |
| Operating Transfers to CIP Funds | 6,286,397 | 17,968,980 | 21,348,717 | 29,530,319 | 48,845,328 | 40,912,653 |
| Paydown of UAAL from General Fund Surplus | - | - | - | - | - | - |
| CIP Revenue | 9,769,333 | 22,149,424 | 26,199,927 | 34,283,366 | 53,829,965 | 46,235,137 |
| CIP Expenditures | 46,733,157 | 27,000,354 | 23,708,864 | 31,208,934 | 49,436,692 | 43,089,216 |
| **CIP Surplus / (Deficit)** | **(36,963,824)** | **(4,850,930)** | **2,491,063** | **3,074,432** | **4,393,273** | **3,145,921** |
| Other Fund Revenue | 32,634,926 | 33,422,757 | 34,999,422 | 36,613,718 | 38,325,941 | 40,124,529 |
| Other Fund Expenditures | 22,382,503 | 17,880,913 | 19,729,482 | 21,476,032 | 23,318,943 | 25,325,076 |
| **Other Fund Surplus / (Deficit)** | **10,252,423** | **15,541,844** | **15,269,940** | **15,137,686** | **15,006,998** | **14,799,453** |
| **Ending CIP Fund Balance** | **7,250,924** | **1,110,709** | **2,244,901** | **3,825,927** | **6,584,003** | **7,954,077** |
| **Ending Fund Balance** | **201,455,844** | **213,474,046** | **232,653,954** | **251,440,837** | **270,841,108** | **289,472,242** |




| | FY 2021/22 | FY 2022/23 | FY 2023/24 | FY 2024/25 | FY 2025/26 | FY 2026/27 |
|---|---|---|---|---|---|---|
| General Fund Revenue | $ 523.90 | $ 493.59 | $ 508.94 | $ 523.87 | $ 541.24 | $ 555.06 |
| General Fund Expenditures | $ 515.05 | $ 474.30 | $ 486.18 | $ 493.77 | $ 492.39 | $ 513.46 |

| Scenario 3 - 2% Salary Increase After MOU Expirations | ADJUSTED FY 2021/22 | PROJECTED FY 2022/23 | PROJECTED FY 2023/24 | PROJECTED FY 2024/25 | PROJECTED FY 2025/26 | PROJECTED FY 2026/27 |
|---|---|---|---|---|---|---|
| **A. BEGINNING FUND BALANCE - All Funds Combined** | **225,603,692** | **201,455,844** | **213,474,046** | **232,653,954** | **251,440,837** | **270,841,108** |
| **GENERAL FUND Revenue & Expenditures** | | | | | | |
| Property Taxes | 298,984,024 | 315,735,745 | 327,021,674 | 335,459,222 | 344,730,375 | 354,272,246 |
| State Reimbursements | 8,011,778 | 9,071,761 | 9,071,761 | 9,071,761 | 9,071,761 | 9,071,761 |
| Federal Reimbursements | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 |
| One-Time Grant/ABH/RDA | 51,199,156 | - | - | - | - | - |
| Community Redevelopment Agency Pass-thru | 18,618,096 | 20,118,151 | 21,109,925 | 24,727,418 | 29,888,333 | 31,164,994 |
| Cash Contracts | 133,345,035 | 136,290,886 | 139,336,983 | 142,185,580 | 145,100,556 | 148,078,717 |
| Community Risk Reduction Fees | 5,686,323 | 5,686,323 | 5,686,323 | 5,686,323 | 5,686,323 | 5,686,323 |
| ALS Supplies & Transport Reimbursement | 4,547,600 | 4,547,600 | 4,547,600 | 4,547,600 | 4,547,600 | 4,547,600 |
| Interest Earnings | 182,340 | 576,849 | 604,913 | 630,264 | 650,223 | 670,799 |
| Other Revenue | 3,222,329 | 1,464,756 | 1,464,756 | 1,464,756 | 1,464,756 | 1,464,756 |
| **General Fund Revenue** | **523,896,681** | **493,592,071** | **508,943,935** | **523,872,924** | **541,239,927** | **555,057,196** |
| New Positions for New Stations | - | - | - | - | 2,988,397 | 7,406,507 |
| Service Enhancement | - | - | 786,583 | 1,588,898 | 1,588,898 | 1,588,898 |
| Employee Salaries | 241,332,754 | 254,902,104 | 260,004,319 | 265,208,750 | 270,517,446 | 275,932,494 |
| Retirement - Regular Annual Payments | 95,657,088 | 86,769,161 | 86,191,056 | 82,408,226 | 60,764,877 | 61,180,045 |
| Accelerated Pension / Retiree Medical Paydown | 14,279,280 | 17,787,217 | 20,772,547 | 21,814,115 | 29,242,631 | 34,647,456 |
| Workers' Compensation (Transfer to Fund 190) | 29,966,926 | 30,754,757 | 32,331,422 | 33,945,718 | 35,657,941 | 37,456,529 |
| Other Insurance | 36,793,438 | 37,694,031 | 39,980,951 | 42,415,976 | 44,925,711 | 47,599,826 |
| Medicare | 3,477,787 | 3,693,233 | 3,770,063 | 3,845,527 | 3,922,503 | 4,001,021 |
| One-Time Grant/ABH Expenditures | 15,371,302 | - | - | - | - | - |
| Salaries & Employee Benefits | 436,878,575 | 431,600,503 | 443,836,941 | 451,227,210 | 449,608,404 | 469,812,775 |
| Services & Supplies/Equipment | 41,702,834 | 40,027,300 | 39,671,372 | 39,872,630 | 39,934,890 | 40,537,465 |
| Irvine Settlement Agreement (Transfer to Fund 139) | 2,668,000 | 2,668,000 | 2,668,000 | 2,668,000 | 2,668,000 | 2,668,000 |
| New Station/Enhancements S&S Impacts | - | - | - | - | 183,305 | 440,543 |
| One-Time Grant Expenditures | 33,797,322 | - | - | - | - | - |
| **General Fund Expenditures** | **515,046,731** | **474,295,803** | **486,176,313** | **493,767,840** | **492,394,599** | **513,458,783** |
| **B.** Incremental Increase in GF 10% Contingency | 2,563,553 | 1,327,288 | 1,418,905 | 574,764 | - | 685,760 |
| **GENERAL FUND SURPLUS/(DEFICIT)** | **6,286,397** | **17,968,980** | **21,348,717** | **29,530,319** | **48,845,328** | **40,912,653** |
| **C.** Operating Transfer from Operating Contingency | - | - | - | - | - | - |
| **Transfers to CIP Funds from General Fund Surplus** | **6,286,397** | **17,968,980** | **21,348,717** | **29,530,319** | **48,845,328** | **40,912,653** |
| One-Time Pension / Retiree Med. Paydown from GF Surplus | - | - | - | - | - | - |
| **CAPITAL IMPROVEMENT PROGRAM (CIP)** | | | | | | |
| Interest Earnings | 523,406 | 1,579,545 | 1,683,432 | 1,852,826 | 2,028,742 | 2,203,243 |
| Cash Contracts | 1,652,957 | 1,749,288 | 1,801,767 | 1,855,820 | 1,911,495 | 1,968,841 |
| Developer Contributions | 1,261,573 | 851,611 | 1,366,011 | 1,044,400 | 1,044,400 | 1,150,400 |
| **Operating Transfers into CIP from General Fund Surplus** | 6,286,397 | 17,968,980 | 21,348,717 | 29,530,319 | 48,845,328 | 40,912,653 |
| Total CIP Revenue | 9,769,333 | 22,149,424 | 26,199,927 | 34,283,366 | 53,829,965 | 46,235,137 |
| Fund 12110 - General Fund CIP | 10,191,729 | 9,009,650 | 9,460,500 | 11,394,000 | 7,676,500 | 8,051,000 |
| Fund 123 - Fire Stations and Facilities | 17,818,265 | 875,000 | 3,700,000 | 5,200,000 | 24,200,000 | 4,550,000 |
| Fund 124 - Communications & Information Systems | 4,466,515 | 6,100,000 | 5,100,000 | 1,302,000 | 1,900,000 | 10,000,000 |
| Fund 133 - Fire Apparatus | 14,256,648 | 11,015,704 | 5,448,364 | 13,312,934 | 15,660,192 | 20,488,216 |
| Total CIP Expenses | 46,733,157 | 27,000,354 | 23,708,864 | 31,208,934 | 49,436,692 | 43,089,216 |
| Lease Purchase Payments | - | - | - | - | - | - |
| **D. CIP SURPLUS/(DEFICIT) -** Deposit to/withdraw from CIP reserve | **(36,963,824)** | **(4,850,930)** | **2,491,063** | **3,074,432** | **4,393,273** | **3,145,921** |
| **OTHER FUNDS** | | | | | | |
| Fund 190 - WC Revenue - Transfer from GF | 29,966,926 | 30,754,757 | 32,331,422 | 33,945,718 | 35,657,941 | 37,456,529 |
| Fund 190 - WC Cashflow Payments per Actuary | 15,640,500 | 17,212,913 | 19,061,482 | 20,808,032 | 22,650,943 | 24,657,076 |
| **E.** Deposit to WC Cashflow Reserve | 14,326,426 | 13,541,844 | 13,269,940 | 13,137,686 | 13,006,998 | 12,799,453 |
| Fund 139 - Irvine Settlement Revenue - Transfer from GF | 2,668,000 | 2,668,000 | 2,668,000 | 2,668,000 | 2,668,000 | 2,668,000 |
| Fund 139 - Irvine Settlement Expenditures - Per Agreement | 2,193,000 | 668,000 | 668,000 | 668,000 | 668,000 | 668,000 |
| **F.** Deposit to PARS - Pension Reserve | 475,000 | 2,000,000 | 2,000,000 | 2,000,000 | 2,000,000 | 2,000,000 |
| **G.** Fund 171 - SFFEF Expenditures | 4,549,003 | - | - | - | - | - |
| **ENDING FUND BALANCE (Note) - All Funds Combined** | **201,455,844** | **213,474,046** | **232,653,954** | **251,440,837** | **270,841,108** | **289,472,242** |
| Ending Balance by Fund | | | | | | |
| Operating Contingency (10% of Expenditures) | 43,448,725 | 44,776,013 | 46,194,918 | 46,769,683 | 46,769,683 | 47,455,443 |
| Reserve for Cash Contract City Station Maintenance | 475,000 | 475,000 | 475,000 | 475,000 | 475,000 | 475,000 |
| Structural Fire Fund Entitlement Fund (Fund 171) | 2,166 | 18,314 | 18,314 | 18,314 | 18,314 | 18,314 |
| Irvine Settlement Agreement (Fund 139) | 25,857,035 | 28,064,357 | 30,285,315 | 32,528,506 | 34,794,787 | 37,083,972 |
| **CIP FUND BALANCE** | **7,250,924** | **1,110,709** | **2,244,901** | **3,825,927** | **6,584,003** | **7,954,077** |
| Workers' Compensation Cashflow Reserve (Fund 190) | 124,421,994 | 139,029,653 | 153,435,507 | 167,823,407 | 182,199,321 | 196,485,436 |
| Total Fund Balances | 201,455,844 | 213,474,046 | 232,653,954 | 251,440,837 | 270,841,108 | 289,472,242 |

Note: Ending Fund Balance is calculated by adding rows A+B+C+D+E+F-G, and excludes row [a] since unencumbered fund balance is already included in the Beg. Fund Balance

# Forecast Assumptions – FY 2022/23 Budget

**Basic Assumptions**

The FY 2021/22 Adopted Budget approved by the Board of Directors on June 24, 2021 forms the basis for this financial forecast with the following adjustments:

- Updated total beginning fund balance from the FY 2020/21 audited financial statements.
- All approved budget adjustments that have occurred since the adoption of the budget.
- Approved FY 2021/22 mid-year adjustments.
- Proposed 5-Year CIP Plan for FY 2022/23 - FY 2026/27.

**General Fund Revenues**

- ***Secured Property Taxes*** – The Harris & Associates Final 2022 Report Typical Scenario provides the growth factors assumed for the forecast. The following are projections of current secured property tax growth:

| | |
|---|---|
| FY 2021/22 | 4.55% |
| FY 2022/23 | 6.01% |
| FY 2023/24 | 3.79% |
| FY 2024/25 | 2.73% |
| FY 2025/26 | 2.92% |
| FY 2026/27 | 2.92% |

- ***Public Utility, Unsecured, Homeowners Property Tax Relief, and Supplemental Delinquent Taxes –*** All of these categories of property taxes are projected to remain constant during the forecast period.
- ***State Reimbursements –*** State reimbursements are expected to remain constant, pending more details from CAL FIRE.
- ***Federal Reimbursements –*** This revenue is projected to remain constant.
- ***One-Time Grant/ABH/RDA Proceeds*** – These are one-time only revenues that vary significantly from year to year and therefore are not forecasted beyond the current year. Board actions to date and proposed mid-year adjustments have increased the FY 2021/22 Adopted Budget by $51.2M for one-time increases in grants and assistance by hire.
- ***Community Redevelopment Agency Pass-thru Revenue –*** Harris & Associates completed a Redevelopment Area Excess Revenue Analysis of pass-thru and residual revenues from the dissolution of the redevelopment agencies dated April 4, 2022. The forecast figures come from this report.
- ***Cash Contracts –*** The forecast calculations are based on the Joint Powers Agreement and subsequent amendments and year-over-year changes are estimated between 1.35% and 2.42% per year. In addition, this revenue category includes John Wayne Airport contract proceeds with year-over-year increases between 0.33% and 4.00% per year.

- ***Community Risk Reduction Fees –*** Community Risk Reduction Fees are projected to remain constant through the forecast period from FY 2022/23 through FY 2026/27, pending any changes approved by the Board.
- ***ALS Supplies & Transport Reimbursements –*** This revenue is estimated to remain flat, pending any changes approved by the Board. Staff is currently in the process of reviewing medical supplies reimbursement rates.
- ***Interest Earnings –*** Assumes an annual return of 0.75% for FY 2022/23 and subsequent years.
- ***Other Revenue –*** This revenue source includes various items such as reimbursements for training and cost recovery for the firefighter handcrew and is projected to remain flat over the forecast period.

**General Fund Expenditures**

- ***Salaries & Employee Benefits –*** S&EB is composed of the following factors:
  - ✓ ***New Positions for New Stations –*** The forecast assumes that vehicles will be in service beginning 9/1/2022 for Station 67 and 7/1/2025 for Station 12.
  - ✓ ***Employee Salaries –*** Projected salaries reflect increases consistent with the approved labor group MOUs.
  - ✓ ***Retirement –*** Retirement costs reflect projected employer retirement rates, which are based on the OCERS provided rates for FY 2022/23. The projected employer rates in the outer years of the forecast are based on a Segal Consulting study dated July 9, 2021 provided by OCERS. FY 2022/23 rates are approximately 7.29% lower for safety and 0.99% lower for non-safety compared to FY 2021/22 rates.

| FY | Safety | General | Source |
|---|---|---|---|
| 2021/22 | 53.50% | 36.92% | FY 2021/22 and FY 2022/23 based on OCERS provided rates. Outer years based on Segal Consulting Study dated July 9, 2021. Effective rates adjusted to remove impact of additional OCFA UAAL contributions. |
| 2022/23 | 46.21% | 35.93% | |
| 2023/24 | 42.61% | 33.63% | |
| 2024/25 | 39.81% | 31.93% | |
| 2025/26 | 28.41% | 23.93% | |
| 2026/27 | 28.01% | 23.73% | |

*Note: employer rates shown in the table above do not include the portion of the employee rate that is paid by OCFA.*

In accordance with the Updated Snowball Strategy presented to the board in November 2015, the forecast includes the following projected unfunded liability paydowns:

- Contributing additional funds each year using projected savings that will be realized under new Public Employees' Pension Reform Act (PEPRA) of $4.8M in FY 2022/23 and continuing in different amounts until payment is complete.
- Contributing an additional $1M each year starting in FY 2016/17 and increasing by $2M each year until it reaches $15M and continuing at $15M thereafter.

- Contributing $1 million per year from surplus fund balance available in the Workers' Compensation Self-Insurance Fund from FY 2016/17 through FY 2020/21.
- Beginning in FY 2017/18 at mid-year, if CIP is sufficiently funded, allocate 50% of the General Fund surplus, if any, to UAAL with the remaining 50% used to fund CIP.

✓ ***Workers' Compensation –*** FY 2022/23 assumes a 50% confidence level for ongoing Workers' Compensation costs. The 50% confidence level is assumed throughout the forecast period. Workers' Compensation costs in the forecast period are based on projected payments in the Rivelle Consulting Services February 2022 Study.

✓ ***Other Insurance –*** Medical insurance rates for firefighters are assumed to increase by 5% in outer years of the forecast. For staff members, it is projected to grow by 10% annually. This category also includes $60,000 for unemployment insurance in FY 2022/23.

✓ ***Medicare –*** Annual amounts are calculated at 1.45% of projected salaries.

- ***One-Time Grant/ABH Expenditures*** – These are one-time only expenditures that vary significantly from year to year and therefore are not forecasted beyond FY 2021/22.
- ***Services and Supplies (S&S)*** – S&S is held flat unless a new fire station is built, specific increases have been identified by section managers, or one-time grant proceeds have been received.

**Net General Fund Revenue**
This figure equals the General Fund Revenue minus the General Fund Expenditures.

**Incremental Increase in General Fund 10% Contingency**
This is the amount needed to add to the General Fund 10% Contingency each year to maintain this category of fund balance at the required policy level of 10% of General Fund expenditures (less one-time expenditures).

**Transfer to Fund 139 from General Fund Surplus**
This is the amount needed to pay for City of Irvine Settlement Agreement costs.

**General Fund Surplus/(Deficit)**
This figure is equal to the Net General Fund Revenue less the incremental increase in the General Fund 10% Contingency and the transfer out to Fund 139. In years when there is a surplus, unless an exception is triggered, 50% is transferred to the CIP funds and 50% is used to paydown unfunded liabilities as outlined in the Financial Stability Budget Policy. In years when there is a deficit, the deficit amount must be drawn from the 10% Contingency, and once those are exhausted, from fund balance for CIP.

**Capital Improvement Program/Other Funds Revenue**

- ***Interest Earnings*** – Assumes an annual return of 0.75% for FY 2022/23 and subsequent years.
- ***State/Federal Reimbursement*** – The forecast assumes no State/Federal reimbursement revenue in the forecast period.
- ***Cash Contracts*** – The forecast calculations are based on the Joint Powers Agreement and subsequent amendments.
- ***Developer Contributions*** – The forecast assumes we will receive developer contributions to fund fire stations and vehicles in all years through FY 2026/27.
- ***Workers' Compensation Transfer*** – These amounts equal the General Fund Workers' Compensation budget.
- ***Fund 139 Transfer*** – These amounts are transferred from the General Fund to pay for various expenditures required under the City of Irvine Settlement Agreement.
- ***Operating Transfer In*** – This figure equals the Operating Transfer Out from the General Fund.

**Capital Improvement Program/Other Funds Expenditures**

Expenditures for each CIP fund are based on the CIP Budget.

- ***Irvine Settlement (Fund 139)*** – Budgeted expenditures in Fund 139 are based on the City of Irvine Settlement Agreement.
- ***Structural Fire Fund Entitlement (Fund 171)*** – The forecast period assumes no Structural Fire Fund Entitlement expenditures beyond FY 2021/22.
- ***Self-Insurance Fund (Fund 190)*** – Self-Insurance Fund expenditures are based on projected payments in the Rivelle Consulting Services February 2022 Workers' Compensation Actuarial Study.

**Fund Balances**

- ***Operating Contingency*** – Reflects policy of 10% of the General Fund expenditures each year (less one-time expenditures and UAAL payments). General Fund deficits (if applicable) are deducted from this category of fund balance.

***Assigned Fund Balances***

- ***Irvine Settlement (Fund 139)*** – Funding is set aside for City of Irvine Settlement Agreement costs, including the 115 Trust.
- ***Self-Insurance Fund (Fund 190)*** – Funding is set aside for Workers' Compensation outstanding claims at the 50% confidence level per Board policy. The required amount is based on the actuarial report for Estimated Outstanding Losses as of the last full fiscal year prior to report issuance. The required funding levels are maintained by retaining funds in

fund balance that reflect the difference between the workers' compensation transfer and Fund 190 expenditures.

- ***Capital Improvement Program*** – This fund balance includes funding for future capital replacements and is reduced annually by the cost of capital assets and increased in years when there are Operating Transfers into the CIP.

# ORANGE COUNTY FIRE AUTHORITY
## Salaries & Employee Benefits Assumptions
## May 2022

## *Salaries*

**Vacant Positions**

- Vacant unfrozen positions are budgeted as follows:
  - ✓ Firefighter – step 1
  - ✓ Fire Apparatus Engineer – step 10
  - ✓ Captain – step 10
  - ✓ Fire Battalion Chief – middle of range
  - ✓ Staff positions – step 5 for entry level positions, and step 10 for positions with promotional opportunities within the same occupational class series. Mid-range assumed for Administrative Manager positions.

- The following 4 frozen positions are not funded in the proposed FY 2022/23 Budget:
  - ✓ 1 Administrative Fire Captain (Division IV)
  - ✓ 1 Communications Installer I/II, Full-Time (IT)
  - ✓ 1 Communications Installer I/II, Part-Time (IT)
  - ✓ 1 Organizational & Development Training Program Manager (Human Resources)

**New Positions**

- 6 Fire Captains, 6 Fire Apparatus Engineers, and 12 Firefighters to staff 1 Paramedic Truck and 1 Paramedic Engine anticipated to become operational in September 2022 with the opening of Station 67.
- 3 Firefighter/Paramedic positions added to Engine 42 to convert a Paramedic Assessment Unit Engine into an Advanced Life Support Paramedic Engine.
- 1 Battalion Chief, 6 Firefighters, 1 Management Analyst added to Operations Training & Safety to assist with State fire training accreditation
- 1 Multimedia Specialist added to Corporate Communications.
- 1 Behavioral Health and Wellness Program Coordinator added to Risk Management.
- 1 Construction Project Manager added to Property Management.

**Merit Increases for Eligible Employees**

- Firefighter Unit and OCEA: 2 ½ steps or 6.875% up to step 12.
- Administrative Management and Executive Management: up to 5.5% merit/step increase in August 2022, not to exceed top step.

**MOU Changes**

- Fire Management
  - ✓ Includes EMT pay increase from 6.25% to 6.50% effective July 2022.
  - ✓ Includes 3% Chief Officer Longevity Pay effective July 2022.

- Firefighter Unit
  - ✓ Assumes no salary increases in FY 2022/23 pending current-ongoing negotiations.
  - ✓ New employees hired on or after 1/1/2013 assumed to be under 2.7% @ 57 retirement plan; employee contributions vary based on age of entry.
- Administrative Management
  - ✓ Assumes no salary increases in FY 2022/23 pending current-ongoing negotiations.
  - ✓ New employees hired on or after 1/1/2013 assumed to be under 2.5% @ 67 retirement plan; employee contributions vary based on age of entry.

- Orange County Employees Association (OCEA)
  - ✓ Assumes no salary increases in FY 2022/23 pending current-ongoing negotiations.
  - ✓ New employees hired on or after 1/1/2013 assumed to be under 2.5% @ 67 retirement plan; employee contributions vary based on age of entry.

- Executive Management
  - ✓ Deputy Chief and Assistant Chief salary ranges are adjusted based on FY 2020/21 Fire Management MOU negotiated changes, if triggered by the provisions that define the calculated salary spreads.

The following table shows the expiration date of the latest MOU for each labor group:

| | |
|---|---|
| Chief Officers Association | June 30, 2023 |
| Professional Firefighters Association | August 31, 2022 |
| Management Association | June 24, 2021 |
| Orange County Employees Association | August 22, 2021 |

**Backfill/Holiday/FLSA Adjustment**

- Backfill is estimated at $47,127,034 for FY 2022/23.
- Estimate is allocated to divisions/sections based on historical usage ratios.
- Holiday pay and FLSA adjustment are budgeted on a per employee basis.

**Reserve Firefighters**

- Based on FY 2022/23 projected usage.

**Other Pay**

- The following Other Pays were calculated on a per employee basis:
  Supplemental Assignment Pay, Supplemental Incentive Pay, Air Pack Certification Bonus Pay, Education Incentive Pay, Emergency Medical Technician (EMT) Bonus, Plan Review Pay, Duty Officer Compensation, Bilingual Pay, Executive Management Car Allowance, FAE/PM Incentive Pay, Manpower Coordinator Pay, Aircraft Rescue Fire Fighting (ARFF) Pay, ARFF Crane Operator Pay, Hazardous Duty Pay, Chief Officer Longevity Pay, and Admin Manager Deferred Compensation.

- The following Other Pays were calculated based on historical costs:
  ECC Move-Up Supervisor Pay, ECC Night Differential Pay, Emergency Medical Dispatch (EMD) Pay, On-Call Pay, Urban Search and Rescue (US&R) Pays, Hazardous Materials Pay, Paramedic Bonus Pay, Dispatch Trainer Pay, Plan Review Pay, and Canine Program Pay.

**Vacation/Sick Payoff**

- Vacation/Sick Payoff is estimated at $6,427,170 for FY 2022/23 including retirement and Medicare benefits.
- Based on projected trends.
- Allocated to divisions/sections based on historical usage ratios.

**Salary Savings**

- Salary savings for vacancies are estimated at $8,617,320 for FY 2022/23 including retirement and Medicare benefits based on projected vacancies in the Firefighter, Fire Apparatus Engineer, and Fire Captain ranks.

## *Benefits*

**Group Medical**

- Firefighter Unit – based on FF Health Plan Agreement rates of $2,200 per month effective 1/1/2021 – no change from prior year.
- OCEA – based on OCEA MOU rate of $1,089 per month effective 1/1/2022 and $1,167 per month effective 1/1/2023.

**Health & Welfare**

- OCEA - $52.20 per month per position – no change from prior years.
- Firefighter Unit – based on the FF Health Plan Agreement, the Health and Welfare will no longer be separately calculated but included as part of the Firefighter Unit Group Medical rate.

**Management Insurance**

- Includes Management Optional Benefits – no change.
- Assumes no changes to Life, AD&D and Disability Insurance rates.
- Dental rates are estimated to increase by 5.00% beginning 1/1/2023.
- Vision rates are estimated to increase by 5.00% beginning 1/1/2023.

| **Retirement** | **FY 2022/23 Rate** |
|---|---|
| General (OCEA) | 38.24% |
| FF Unit | 51.11% |
| Management (safety) | 49.18% |
| Management (non-safety) | 38.24% |
| Supported Employment | 46.82% |

- The above retirement rates represent rates for employees hired prior to 7/1/2011, and are net of employee contributions.
- New hires employed after 1/1/2013 are subject to the PEPRA Plan with a lower retirement rate.
- Retirement costs are net of savings related to the prepayment to OCERS of $1,929,208.

**Workers' Compensation**

- FY 2022/23 amount of $30,754,757 represents the projected expenditures at the 50% confidence level based on the actuarial report dated February 2022.
- Third Party Administrator (TPA) and excess insurance costs are included in Services and Supplies.

**Unemployment Insurance**

- Budgeted at $60,000 for FY 2022/23 based on historical data.

**Medicare**

- 1.45% of salary for employees hired after 4/1/1986.
- Calculated effective rates are applied to Backfill/Overtime, Other Pays, Vacation/Sick Payoffs, and Salary Savings.

# Fixed & Controlled Assets

**Definition**

Assets are property, plant and equipment with an estimated useful life greater than one year. A Fixed Asset has an original cost greater than or equal to $5,000. These assets are reported and depreciated in audited financial statements.

**Roles/Responsibilities/Authorities Matrix (Matrix)**

- The Matrix provides that the Board of Directors delegates the authority to purchase fixed assets identified in the Adopted Budget to the Chief Procurement Officer with its annual adoption of the budget, provided that the selection process follows that which is outlined in OCFA Ordinance 9 (Purchasing Ordinance).

- The Matrix also provides that the Board of Directors delegates authority to the Executive Committee to award contracts for the purchase of those fixed assets which exceed the line item amount identified in the Adopted Budget by 15% or $100,000 (whichever is less).

**Procurement of Fixed and Controlled Assets**

- Significant Fixed Asset purchases are identified annually in the Capital Improvement Program (CIP) budget. These itemized line items include project-specific accounting, item descriptions, and respective budgeted amounts, and are approved by the Board of Directors as part of the Budget Process.

- Lower-value, as-needed miscellaneous Fixed and Controlled Assets are included in the General Fund Department budgets and not reflected in the CIP. Given the nature of these low value fixed and controlled assets, it is practical for departments to aggregate their anticipated spend into a single line item budget in-lieu of itemizing each miscellaneous purchase. Therefore, approval and adoption of the General Fund Department budgets includes the approval of the as-needed purchase of miscellaneous fixed and controlled assets within the amounts allocated in each Department budget.


FIRE
ORANGE COUNTY
CALIFORNIA
AUTHORITY
Est. 1995

**ORANGE COUNTY FIRE AUTHORITY**
FUND 121 - GENERAL FUND
***REVENUE SUMMARY***
**FY 2022/23**

| DESCRIPTION | FY 2021/22 Adjusted Budget [1] | FY 2022/23 Draft Proposed Budget | $ Change from FY 2021/22 Adjusted Budget | % Change from FY 2021/22 Adjusted Budget |
|---|---|---|---|---|
| PROPERTY TAXES [2] | $298,984,024 | $315,735,745 | $16,751,721 | 5.60% |
| INTERGOVERNMENTAL | 27,777,462 | 29,289,912 | 1,512,450 | 5.44% |
| CHARGES FOR CURRENT SVCS | 143,571,771 | 146,631,335 | 3,059,564 | 2.13% |
| USE OF MONEY AND PROPERTY [3] | 182,340 | 627,279 | 444,939 | 244.02% |
| OTHER | 1,092,353 | 1,307,800 | 215,447 | 19.72% |
| **SUBTOTAL REVENUE** | **471,607,950** | **493,592,071** | **21,984,121** | **4.66%** |
| ONE-TIME REVENUE [4] | 52,288,731 | - | (52,288,731) | -100.00% |
| **TOTAL REVENUE** | **$523,896,681** | **$493,592,071** | **($30,304,611)** | **-5.78%** |

[1] The FY 2021/22 Adjusted Budget includes all Board approved adjustments to date.
[2] Property Taxes are based on Harris & Associates final study dated April 4, 2022.
[3] Projected interest earnings are based on an annual return of 0.75% for FY 2022/23.
[4] One-Time Revenue includes one-time grants, reimbursements, and other revenue that is non-recurring in nature.

**ORANGE COUNTY FIRE AUTHORITY**
FUND 121 - GENERAL FUND
***REVENUE DETAIL***
**FY 2022/23**

| DESCRIPTION | FY 2021/22 Adjusted Budget | FY 2022/23 Draft Proposed Budget | $ Change from FY 2021/22 Adjusted Budget | % Change from FY 2021/22 Adjusted Budget |
|---|---|---|---|---|
| ***TAXES*** | | | | |
| Property Taxes, Current Secured | $283,836,220 | $300,543,887 | $16,707,667 | 5.89% |
| Property Taxes, Current Unsecured | 8,687,843 | 8,687,843 | - | 0.00% |
| Property Taxes, Prior Unsecured | 106,769 | 106,770 | 1 | 0.00% |
| Property Taxes, Supplemental | 4,871,056 | 4,871,190 | 134 | 0.00% |
| Delinquent Supplemental | 182,942 | 242,581 | 59,639 | 32.60% |
| Homeowner Property Tax | 1,299,194 | 1,283,474 | (15,720) | -1.21% |
| **TOTAL PROPERTY TAXES** | **298,984,024** | **315,735,745** | **16,751,721** | **5.60%** |
| ***INTERGOVERNMENTAL*** | | | | |
| **State** | | | | |
| SRA-Wild lands (CAL FIRE Contract) | 8,008,846 | 8,008,846 | - | 0.00% |
| SRA-Wildlands (CAL FIRE Contract) - GGRF | 840,520 | 852,915 | 12,395 | 1.47% |
| Assistance by Hire (State) | 200,000 | 200,000 | - | 0.00% |
| Helicopters' Billing - CAL FIRE | 10,000 | 10,000 | - | 0.00% |
| **SUBTOTAL** | **9,059,366** | **9,071,761** | **12,395** | **0.14%** |
| **Federal** | | | | |
| Assistance by Hire (Federal) | 100,000 | 100,000 | - | 0.00% |
| **SUBTOTAL** | **100,000** | **100,000** | **-** | **0.00%** |
| **CRA Pass-Through** | | | | |
| Mission Viejo Pass-Through | 1,596,354 | 1,698,031 | 101,677 | 6.37% |
| Cypress Pass-Through | 1,627,332 | 1,764,251 | 136,919 | 8.41% |
| Irvine Pass-Through | 3,589,170 | 3,898,668 | 309,498 | 8.62% |
| La Palma Pass-Through | 439,383 | 463,346 | 23,963 | 5.45% |
| Lake Forest Pass-Through | 1,562,272 | 1,610,810 | 48,538 | 3.11% |
| San Juan Capistrano Pass-Through | 1,756,451 | 1,853,216 | 96,765 | 5.51% |
| County of Orange Pass-Through | 4,691,571 | 5,305,210 | 613,639 | 13.08% |
| Yorba Linda Pass-Through | 3,355,563 | 3,524,619 | 169,056 | 5.04% |
| **SUBTOTAL** | **18,618,096** | **20,118,151** | **1,500,055** | **8.06%** |
| **TOTAL INTERGOVERNMENTAL** | **27,777,462** | **29,289,912** | **1,512,450** | **5.44%** |

**ORANGE COUNTY FIRE AUTHORITY**
FUND 121 - GENERAL FUND
***REVENUE DETAIL***
**FY 2022/23**

| DESCRIPTION | FY 2021/22 Adjusted Budget | FY 2022/23 Draft Proposed Budget | $ Change from FY 2021/22 Adjusted Budget | % Change from FY 2021/22 Adjusted Budget |
|---|---|---|---|---|
| ***CHARGES FOR CURRENT SERVICES*** | | | | |
| **Cash Contracts*** | | | | |
| Facility Maintenance Charges | 300,000 | 465,000 | 165,000 | 55.00% |
| Tustin | 9,496,408 | 9,802,956 | 306,548 | 3.23% |
| Seal Beach | 6,191,037 | 6,340,860 | 149,823 | 2.42% |
| Stanton | 5,072,061 | 5,194,805 | 122,744 | 2.42% |
| Santa Ana | 45,713,065 | 46,649,773 | 936,708 | 2.05% |
| JWA Contract | 5,627,666 | 5,646,191 | 18,525 | 0.33% |
| Buena Park | 13,237,636 | 13,634,721 | 397,085 | 3.00% |
| San Clemente | 10,346,348 | 10,673,280 | 326,932 | 3.16% |
| Westminster | 12,812,857 | 13,122,928 | 310,071 | 2.42% |
| Garden Grove | 24,432,073 | 24,760,372 | 328,299 | 1.34% |
| **SUBTOTAL** | **133,229,151** | **136,290,886** | **3,061,735** | **2.30%** |
| **Community Risk Reduction Fees** | | | | |
| AR Late Payment Penalty | 19,000 | 19,000 | - | 0.00% |
| Inspection Services Revenue | 1,742,323 | 1,742,323 | - | 0.00% |
| Planning & Development Fees | 3,900,000 | 3,900,000 | - | 0.00% |
| False Alarm | 25,000 | 25,000 | - | 0.00% |
| **SUBTOTAL** | **5,686,323** | **5,686,323** | **-** | **0.00%** |
| **Other Charges for Services** | | | | |
| Haz. Mat. Response Subscription Program | 6,012 | 6,526 | 514 | 8.54% |
| Charge for Crews &Equipment Services | 100,000 | 100,000 | - | 0.00% |
| Mutual Aid Response Charges | 2,685 | - | (2,685) | -100.00% |
| **SUBTOTAL** | **108,697** | **106,526** | **(2,172)** | **-2.00%** |
| **Ambulance Reimbursements** | | | | |
| Ambulance Supplies Reimbursement | 1,230,100 | 1,230,100 | - | 0.00% |
| ALS Transport Reimbursement | 3,317,500 | 3,317,500 | - | 0.00% |
| **SUBTOTAL** | **4,547,600** | **4,547,600** | **-** | **0.00%** |
| **TOTAL CHGS FOR CURRENT SVCS** | **143,571,771** | **146,631,335** | **3,059,564** | **2.13%** |

* Based on updated Cash Contract Cities' charge estimates as of April 6th. Final charge letters will be sent after budget adoption.

**ORANGE COUNTY FIRE AUTHORITY**
FUND 121 - GENERAL FUND
***REVENUE DETAIL***
**FY 2022/23**

| DESCRIPTION | FY 2021/22 Adjusted Budget | FY 2022/23 Draft Proposed Budget | $ Change from FY 2021/22 Adjusted Budget | % Change from FY 2021/22 Adjusted Budget |
|---|---|---|---|---|
| ***USE OF MONEY AND PROPERTY*** | | | | |
| **Interest** | | | | |
| Interest | 135,340 | 576,849 | 441,509 | 326.22% |
| **SUBTOTAL** | **135,340** | **576,849** | **441,509** | **326.22%** |
| **Other** | | | | |
| RFOTC Cell Tower Lease Agreement | 47,000 | 50,430 | 3,430 | 7.30% |
| **SUBTOTAL** | **47,000** | **50,430** | **3,430** | **7.30%** |
| **TOTAL USE OF MONEY/PROPERTY** | **182,340** | **627,279** | **444,939** | **244.02%** |
| ***REVENUE - OTHER*** | | | | |
| **Miscellaneous Revenue** | | | | |
| Other Revenue | 13,000 | 13,000 | - | 0.00% |
| Miscellaneous Revenue | 212,357 | 160,000 | (52,357) | -24.66% |
| Restitution | 3,000 | 5,800 | 2,800 | 93.33% |
| Witness Fees | 5,500 | 4,000 | (1,500) | -27.27% |
| Joint Apprenticeship Comm (CFFJAC) | 400,000 | 450,000 | 50,000 | 12.50% |
| Santa Ana College Agreement | 450,000 | 600,000 | 150,000 | 33.33% |
| Sales of Surplus | 75,000 | 75,000 | - | 0.00% |
| **TOTAL OTHER REVENUE** | **1,092,353** | **1,307,800** | **215,447** | **19.72%** |
| **SUBTOTAL REVENUE** | **471,607,950** | **493,592,071** | **21,984,121** | **4.66%** |
| **ONE-TIME REVENUE** | **52,288,731** | **-** | **(52,288,731)** | **-100.00%** |
| **TOTAL REVENUE** | **$523,896,681** | **$493,592,071** | **($30,304,611)** | **-5.78%** |

# ORANGE COUNTY FIRE AUTHORITY
# FY 2022/23 Revenue Assumptions
# May 2022

## *Property Taxes*

**Current Secured**

- Based on projected growth in current secured property tax of 6.01% for FY 2022/23 per Harris & Associates final study dated April 4, 2022, applied to the FY 2021/22 tax ledger and an estimated 1.24% refund factor.
- Public utility taxes (PUT) are based on historical averages and the 2021/22 tax ledger. These are taxes that are imposed on property owned or used by railway, telegraph, and telephone companies as well as companies transmitting or selling gas or electricity.

**Current Unsecured**

- Based on 0% growth factor as provided by Harris & Associates.
- Based on the FY 2021/22 tax ledger and an estimated 7.01% refund factor.
- Unsecured property includes boats, aircraft, improvements on real estate, business property, and mining rights.

**Supplemental**

- This category of revenue is inconsistent from year to year and thus budgeted at a consistent level and adjusted annually as part of the mid-year budget adjustment.

**Homeowner Property Tax Relief**

- Based on the FY 2021/22 tax charge and a reduction factor of 1.21% for FY 2022/23, which reflects historical trends.

## *Intergovernmental*

**State Responsibility Area (SRA) – Wildlands CAL FIRE Contract**

- Based on the FY 2021/22 contract amount less one-time funding per the Gray Book (CAL FIRE's notice of allocation to the contract counties).

**Assistance by Hire – State**

- This category of revenue is inconsistent from year to year and thus budgeted at a consistent level and adjusted annually as part of the mid-year budget adjustment.

**Assistance by Hire – Federal**

- This category of revenue is inconsistent from year to year and thus budgeted at a consistent level and adjusted annually as part of the mid-year budget adjustment.

**Community Redevelopment Agency (CRA) Pass-thru**

- The proposed budget is based on projections from the Harris & Associates final report dated April 4, 2022.

### *Charges for Current Services*

**Cash Contract Cities**

- Based on budget increases of 1.34% to 2.42% for FY 2022/23.
- Based on the 20-year JPA agreement.
- FY 2022/23 includes the fourth year of the 4th Post Position Phase-In Costs for the cities of Buena Park, San Clemente and Tustin.

**John Wayne Airport Contract**

- Based on the FY 2022/23 final charge.

**Community Risk Reduction Fees**

- Based on FY 2021/22 projections, prior and current year trends, and input from the CRR staff. Revenue projections will be updated during the mid-year review and pending Board approval of the fee study.

**Advance Life Support (ALS) Transport and Supplies Reimbursements**

- Based on the FY 2021/22 projection.

### *Use of Money and Property*

**Interest**

- Projected interest earnings are based on an estimated annual return of 0.75% for FY 2022/23.

### *Other Revenue*

**Miscellaneous Revenue**

- Based on prior year actuals, FY 2021/22 projections, and various lease agreements as applicable.

**ORANGE COUNTY FIRE AUTHORITY**

*BUSINESS SERVICES DEPARTMENT S&S SUMMARY*

**FY 2022/23 BUDGET**

| Divisions/Sections | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| **JPA Board of Directors** | | | |
| JPA Board of Directors | 35,328 | 35,328 | - |
| **Total JPA Board of Directors** | 35,328 | 35,328 | - |
| **Clerk of the Authority** | | | |
| Clerk | 12,869 | 12,869 | - |
| **Total Clerk of the Authority** | 12,869 | 12,869 | - |
| **Finance Division [1]** | | | |
| Financial Services | 271,708 | 263,708 | (8,000) |
| **Total Finance Division** | 271,708 | 263,708 | (8,000) |
| **Purchasing** | | | |
| Purchasing | 48,842 | 48,842 | - |
| **Total Purchasing** | 48,842 | 48,842 | - |
| **Treasury and Financial Planning** | | | |
| Treasury & Financial Planning | 212,312 | 212,312 | - |
| **Total Treasury and Financial Planning** | 212,312 | 212,312 | - |
| **Legislation Division** | | | |
| Legislation Division | 145,625 | 145,625 | - |
| **Total Legislation Division** | 145,625 | 145,625 | - |
| **Department Total** | **726,684** | **718,684** | **(8,000)** |

Grant funding and one-time items are not included in the FY 2021/22 base budget.

[1] Expenses for Financial Services Controlled previously budgeted under Finance Division are now budgeted under Non-Departmental.

**BUSINESS SERVICES DEPARTMENT**
*JPA BOARD OF DIRECTORS*
**ORG 9951**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| **Account 1101 - Food** | | | |
| Food for Board Meetings | 17,378 | 17,378 | - |
| Food for Special Meetings | 750 | 750 | - |
| **Subtotal** | **18,128** | **18,128** | **-** |
| **Account 1801`1810 - Office Expense** | | | |
| Name Plates/Badges | 1,000 | 1,000 | - |
| **Subtotal** | **1,000** | **1,000** | **-** |
| **Account 2401`2409 - Special Department Expense** | | | |
| Commemorations | 3,000 | 3,000 | - |
| Employee Recognition | 3,000 | 3,000 | - |
| **Subtotal** | **6,000** | **6,000** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| Executive Committee Reimbursement | 1,800 | 1,800 | - |
| Standing Committees Reimbursement | 8,400 | 8,400 | - |
| **Subtotal** | **10,200** | **10,200** | **-** |
| **Total S&S: JPA Board of Directors** | **35,328** | **35,328** | **-** |

**BUSINESS SERVICES DEPARTMENT**
*CLERK OF THE AUTHORITY*
**ORG 3311**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| **Account 1601 - Memberships** | | | |
| Professional Memberships | 1,400 | 1,400 | - |
| **Subtotal** | **1,400** | **1,400** | **-** |
| **Account 1801`1810 - Office Expense** | | | |
| Office Supplies | 1,780 | 1,780 | - |
| Minor Office Equipment | 4,239 | 4,239 | - |
| **Subtotal** | **6,019** | **6,019** | **-** |
| **Account 2001 - Publications and Legal Notices** | | | |
| Legal Publications (Public Hearings/Notices) | 2,000 | 2,000 | - |
| **Subtotal** | **2,000** | **2,000** | **-** |
| **Account 2401`2409 - Special Department Expense** | | | |
| Special Transportation Needs | 450 | 450 | - |
| **Subtotal** | **450** | **450** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| Training/Seminars | 3,000 | 3,000 | - |
| **Subtotal** | **3,000** | **3,000** | **-** |
| **Total S&S: Clerk of Authority** | **12,869** | **12,869** | **-** |

**BUSINESS SERVICES DEPARTMENT**
*FINANCE DIVISION*
**ORG 3310**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| **Account 1601 - Memberships** | | | |
| AGA/AICPA/State Board | 250 | 250 | - |
| American Payroll Association | 500 | 750 | 250 |
| CSMFO | 550 | 550 | - |
| GFOA | 700 | 700 | - |
| **Subtotal** | **2,000** | **2,250** | **250** |
| **Account 1801`1810 - Office Expense** | | | |
| Office Supplies | 10,000 | 10,000 | - |
| Postage Expense | 500 | 500 | - |
| Printing Costs | 2,000 | 2,000 | - |
| Office Equipment | 1,000 | 1,000 | - |
| Office Furniture | 1,500 | 1,500 | - |
| **Subtotal** | **15,000** | **15,000** | **-** |
| **Account 1901`1908 - Prof. and Specialized Services** | | | |
| Workflow Improvement/Compliance Reporting | 17,000 | 17,000 | - |
| SB90 Claims Consultant | 2,000 | 2,500 | 500 |
| Collection Agency Fees | 6,000 | 6,000 | - |
| Miscellaneous Professional Services | 28,208 | 27,708 | (500) |
| AP Workflow Project | 31,800 | 31,800 | - |
| OPTI Source Imaging | 6,000 | - | (6,000) |
| Internal Control Reviews | 30,000 | 25,000 | (5,000) |
| Public Accounting | 70,000 | 73,000 | 3,000 |
| **Subtotal** | **191,008** | **183,008** | **(8,000)** |
| **Account 2101 - Rents and Leases- Equipment** | | | |
| Document Destruction | 1,000 | 1,000 | - |
| Post Office Box Rental - Accounts Receivable | 1,000 | 1,000 | - |
| **Subtotal** | **2,000** | **2,000** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| CSMFO/GFOA/League Training/Conferences | 10,000 | 10,000 | - |
| AICPA/CSMFO/GFOA Webcast | 3,000 | 3,000 | - |
| APA/AICPA/State CPA/SCT Tech. Training | 5,000 | 5,000 | - |
| Banner/SCT Payroll/Finance Training | 43,700 | 43,450 | (250) |
| **Subtotal** | **61,700** | **61,450** | **(250)** |
| **Total S&S: Finance Division** | **271,708** | **263,708** | **(8,000)** |

**BUSINESS SERVICES DEPARTMENT**
*PURCHASING*
**ORG 3335**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| **Account 1601 - Memberships** | | | |
| CA Assoc. of Public Purchasing Officers (CAPPO) | 650 | 650 | - |
| Nat'l Institute of Govt. Purchasing (NIGP) | 550 | 550 | - |
| National Purchasing Institute (NPI) | 90 | 90 | - |
| **Subtotal** | **1,290** | **1,290** | **-** |
| **Account 1801`1810 - Office Expense** | | | |
| Miscellaneous Books & Subscriptions | 400 | 400 | - |
| Miscellaneous Supplies | 1,332 | 1,332 | - |
| Printing | 200 | 200 | - |
| **Subtotal** | **1,932** | **1,932** | **-** |
| **Account 1901`1908 - Prof. and Specialized Services** | | | |
| Planet Bids Base Software - Annual Fee | 14,600 | 14,600 | - |
| Planet Bids Emerg. Ops - Annual Fee | 4,500 | 4,500 | - |
| Planet Bids Insurance Certification - Annual Fee | 3,225 | 3,225 | - |
| Planet Bids Add-on - Annual Fee | 2,625 | 2,625 | - |
| Planet Bids RFP Module - Annual Fee | 4,250 | 4,250 | - |
| Planet Bids Commodity Code Licensing | 800 | 800 | - |
| **Subtotal** | **30,000** | **30,000** | **-** |
| **Account 2001 - Publications and Legal Notices** | | | |
| Advertising Formal Bids | 1,000 | 1,000 | - |
| **Subtotal** | **1,000** | **1,000** | **-** |
| **Account 2401`2409 - Special Department Expense** | | | |
| Achievement of Excellence Award | 400 | 400 | - |
| **Subtotal** | **400** | **400** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| CAPPO Annual Conference | 3,000 | 3,000 | - |
| CAPPO Chapter Meetings | 500 | 500 | - |
| Professional Development Seminars | 10,720 | 10,720 | - |
| **Subtotal** | **14,220** | **14,220** | **-** |
| **Total S&S: Purchasing** | **48,842** | **48,842** | **-** |

**BUSINESS SERVICES DEPARTMENT**
*TREASURY AND FINANCIAL PLANNING*
**ORG 3333**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| **Account 1301`1302 - Maintenance/Repair - Equipment** | | | |
| Investment Software - Annual Support | 4,113 | 4,318 | 205 |
| **Subtotal** | **4,113** | **4,318** | **205** |
| **Account 1601 - Memberships** | | | |
| Cal Municipal Treasurer's Association | 155 | 190 | 35 |
| CSMFO | 660 | 660 | - |
| GFOA | 600 | 600 | - |
| FEI | 499 | 499 | - |
| NAGDCA | 600 | 600 | - |
| **Subtotal** | **2,514** | **2,549** | **35** |
| **Account 1704 - Interest Expense** | | | |
| Interest Expense for Interfund Borrowing | 35,000 | 35,000 | - |
| **Subtotal** | **35,000** | **35,000** | **-** |
| **Account 1901`1908 - Prof. and Specialized Services** | | | |
| Cash Management Fees | 80,000 | 80,000 | - |
| Harris & Associates Tax Study | 81,000 | 81,000 | - |
| **Subtotal** | **161,000** | **161,000** | **-** |
| **Account 2401`2409 - Special Department Expense** | | | |
| Annual Prop Tax Roll - County Assessor | 2,500 | 2,500 | - |
| **Subtotal** | **2,500** | **2,500** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| CSMFO/GFOA Seminars | 7,185 | 6,945 | (240) |
| **Subtotal** | **7,185** | **6,945** | **(240)** |
| **Total S&S: Treasury & Financial Planning** | **212,312** | **212,312** | **-** |

**BUSINESS SERVICES DEPARTMENT**
*LEGISLATION DIVISION*
**ORG 3360**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| **Account 1601 - Memberships** | | | |
| California Fire Chiefs Association | 125 | 125 | - |
| **Subtotal** | **125** | **125** | **-** |
| **Account 1901`1908 - Prof. and Specialized Services** | | | |
| Government Consulting Services (State) | 69,000 | 69,000 | - |
| Legislative Consultant (Federal) | 57,000 | 57,000 | - |
| State Net | 2,500 | 2,500 | - |
| Association of Contract Counties (consultant) | 3,000 | 7,000 | 4,000 |
| **Subtotal** | **131,500** | **135,500** | **4,000** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| Travel | 14,000 | 10,000 | (4,000) |
| **Subtotal** | **14,000** | **10,000** | **(4,000)** |
| **Total S&S: Legislation Division** | **145,625** | **145,625** | **-** |


FIRE
ORANGE COUNTY
CALIFORNIA
AUTHORITY
Est. 1995

**ORANGE COUNTY FIRE AUTHORITY**

*COMMAND & EMERGENCY PLANNING DIVISION S&S SUMMARY*

**FY 2022/23 BUDGET**

| Divisions/Sections | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| **Emergency Command Center** | | | |
| Emergency Command Center | 98,221 | 98,221 | - |
| **Total Emergency Command Center** | 98,221 | 98,221 | - |
| **Department Total** | **98,221** | **98,221** | **-** |

Grant funding and one-time items are not included in the FY 2021/22 base budget.

**COMMAND AND EMERGENCY PLANNING DIVISION**
*EMERGENCY COMMAND CENTER*
**ORG 4420**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| **Account 1301`1302 - Maintenance/Repair - Equipment** | | | |
| Logistics Trailer Support | 3,800 | 3,300 | (500) |
| Comm. Center Maintenance | 21,000 | 20,000 | (1,000) |
| Headset Repairs | 5,500 | 5,280 | (220) |
| ECC A/V Maintenance | 5,500 | 5,000 | (500) |
| **Subtotal** | **35,800** | **33,580** | **(2,220)** |
| **Account 1601 - Memberships** | | | |
| APCO | 480 | 2,100 | 1,620 |
| OCFA Communications Officers | 35 | 535 | 500 |
| NENA/CALNENA | 500 | 1,600 | 1,100 |
| Cal Chiefs Communication Division | 100 | 100 | - |
| **Subtotal** | **1,115** | **4,335** | **3,220** |
| **Account 1801`1810 - Office Expense** | | | |
| DOC Equipment & Supplies | 2,700 | 2,700 | - |
| Lamination Supplies | 1,800 | 1,800 | - |
| Minor Office Equipment | 1,400 | 1,400 | - |
| Miscellaneous Mapping Supplies | 800 | 800 | - |
| Printing Costs (Handbooks/Training Material) | 4,500 | 3,500 | (1,000) |
| Printer/Fax Supplies | 2,000 | 1,500 | (500) |
| Software | 1,000 | 1,000 | - |
| EMD/CBD | 4,642 | 4,642 | - |
| Miscellaneous Office Supplies | 7,974 | 7,974 | - |
| **Subtotal** | **26,816** | **25,316** | **(1,500)** |
| **Account 1901`1908 - Prof. and Specialized Services** | | | |
| Miscellaneous Services | 4,000 | 4,000 | - |
| **Subtotal** | **4,000** | **4,000** | **-** |
| **Account 2401`2415 - Special Department Expenses** | | | |
| Miscellaneous Services | 11,000 | 11,000 | - |
| **Subtotal** | **11,000** | **11,000** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| Dispatcher Training & Travel | 19,490 | 19,990 | 500 |
| **Subtotal** | **19,490** | **19,990** | **500** |
| **Total S&S: Emergency Command Center** | **98,221** | **98,221** | **-** |

**ORANGE COUNTY FIRE AUTHORITY**

*COMMUNITY RISK REDUCTION DEPARTMENT S&S SUMMARY*

**FY 2022/23 BUDGET**

| Sections/Programs | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| **Planning & Development** | | | |
| Plan Review Program | 175,030 | 157,158 | (17,872) |
| New Construction Inspection Program | 12,752 | 8,752 | (4,000) |
| **Total Planning & Development** | 187,782 | 165,910 | (21,872) |
| **Prevention Field Services** | | | |
| Prevention Field Services Program | 44,649 | 18,317 | (26,332) |
| **Total Prevention Field Services** | 44,649 | 18,317 | (26,332) |
| **Wildland Pre-Fire Management** | | | |
| Wildland Planning | 102,000 | 94,500 | (7,500) |
| Community Wildland Mitigation | 49,571 | 37,071 | (12,500) |
| Community Risk Reduction Training [1] [2] | - | 102,824 | 102,824 |
| **Total Wildland Pre-Fire Management** | 151,571 | 234,395 | 82,824 |
| **Department Total** | **384,002** | **418,622** | **34,620** |

Grant funding and one-time items are not included in the FY 2021/22 base budget.

[1] Proposed new program in FY 2022/23. Total budget for CRR Training will reside in this program.

[2] Increase of $35K for office supplies is offset by a corresponding decrease in S&EB due to a position deletion.

**COMMUNITY RISK REDUCTION DEPARTMENT**
*PLANNING AND DEVELOPMENT*
**ORG 4438 & 4439**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| Plan Review Program (Org 4438) | | | |
| **Account 1601 - Memberships** | | | |
| NFPA | 341 | 341 | - |
| OCFPO | 200 | 200 | - |
| SOCALFPO | 400 | 400 | - |
| OC Empire ICC | 300 | 300 | - |
| ICC | 300 | 300 | - |
| SFPE | 300 | 300 | - |
| **Subtotal** | **1,841** | **1,841** | **-** |
| **Account 1801`1810 - Office Expense** | | | |
| Miscellaneous Petty Cash Reimbursement | 1,600 | 1,600 | - |
| Miscellaneous Office Supplies | 2,039 | 2,039 | - |
| Map Reproductions | 1,000 | 1,000 | - |
| Brochure/Pamphlet Reproduction & Postage | 800 | 800 | - |
| Computers/Technology | 1,500 | 1,500 | - |
| Code Books | 2,600 | 2,600 | - |
| NFPA Subscription Service Update | 6,700 | 6,700 | - |
| **Subtotal** | **16,239** | **16,239** | **-** |
| **Account 1902`1908 - Prof. and Specialized Services** | | | |
| Plan Review Contracts | 139,078 | 139,078 | - |
| **Subtotal** | **139,078** | **139,078** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| Code Conferences and Hearings | 5,500 | - | (5,500) |
| Miscellaneous Training Travel Mileage | 4,040 | - | (4,040) |
| Inspector Training | 8,332 | - | (8,332) |
| **Subtotal** | **17,872** | **-** | **(17,872)** |
| **S&S: Plan Review Program** | **175,030** | **157,158** | **(17,872)** |

**COMMUNITY RISK REDUCTION DEPARTMENT**
*PLANNING AND DEVELOPMENT*
**ORG 4438 & 4439**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| New Construction Inspection Program (Org 4439) | | | |
| **Account 1601 - Memberships** | | | |
| OCFPO | 200 | 200 | - |
| Miscellaneous Memberships (CAFAA, CALBO etc.) | 100 | 100 | - |
| **Subtotal** | **300** | **300** | **-** |
| **Account 1801`1810 - Office Expense** | | | |
| Miscellaneous Petty Cash Reimbursements | 400 | 400 | - |
| Miscellaneous Office Supplies | 2,952 | 2,952 | - |
| Computers/Technology | 1,000 | 1,000 | - |
| Code Books | 4,100 | 4,100 | - |
| **Subtotal** | **8,452** | **8,452** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| Code Conferences and Hearings | 1,500 | - | (1,500) |
| Inspector Training | 2,500 | - | (2,500) |
| **Subtotal** | **4,000** | **-** | **(4,000)** |
| **S&S: New Construction Inspection Program** | **12,752** | **8,752** | **(4,000)** |
| **Total S&S: Wildland Pre-Fire Management** | **187,782** | **165,910** | **(21,872)** |

**COMMUNITY RISK REDUCTION DEPARTMENT**
*PREVENTION FIELD SERVICES PROGRAM*
**ORG 4460**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| **Account 1601 - Memberships** | | | |
| IFCI | 150 | 150 | - |
| OCFPO | 700 | 700 | - |
| Other | 200 | 200 | - |
| **Subtotal** | **1,050** | **1,050** | **-** |
| **Account 1801`1810 - Office Expense** | | | |
| Miscellaneous Petty Cash Reimbursements | 775 | 775 | - |
| Miscellaneous Office Supplies | 4,783 | 4,783 | - |
| Implement Annual Permit Process | 109 | 109 | - |
| Code Books/Publications | 7,500 | 7,500 | - |
| Subscription - Miscellaneous California Codes | 2,100 | 2,100 | - |
| Paper for Printing FIFs, Notices etc. | 2,000 | 2,000 | - |
| **Subtotal** | **17,267** | **17,267** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| Inspector Training | 10,000 | - | (10,000) |
| Specialized Training | 11,358 | - | (11,358) |
| Training & Seminars | 4,974 | - | (4,974) |
| **Subtotal** | **26,332** | **-** | **(26,332)** |
| **Total S&S: Prevention Field Services Program** | **44,649** | **18,317** | **(26,332)** |

**COMMUNITY RISK REDUCTION DEPARTMENT**
*WILDLAND PRE-FIRE MANAGEMENT*
**ORG 4554 & 4556**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| Wildland Planning (Org 4554) | | | |
| **Account 1101 - Food** | | | |
| Food | 250 | 250 | - |
| **Subtotal** | **250** | **250** | **-** |
| **Account 1301 - Maintenance/Repair - Equipment** | | | |
| Other Maintenance/Repair - Miscellaneous | 16,000 | 16,000 | - |
| **Subtotal** | **16,000** | **16,000** | **-** |
| **Account 1601 - Memberships** | | | |
| Memberships | 750 | 750 | - |
| **Subtotal** | **750** | **750** | **-** |
| **Account 1801`1810 - Office Expense** | | | |
| Miscellaneous Office Supplies | 10,000 | 10,000 | - |
| **Subtotal** | **10,000** | **10,000** | **-** |
| **Account 1902`1908 - Prof. and Specialized Services** | | | |
| Miscellaneous Professional and Specialized Services | 2,500 | 2,500 | - |
| **Subtotal** | **2,500** | **2,500** | **-** |
| **Account 2101 - Rents and Leases - Equipment** | | | |
| Miscellaneous Rental Expense | 45,000 | 45,000 | - |
| **Subtotal** | **45,000** | **45,000** | **-** |
| **Account 2401`2409 - Special Department Expense** | | | |
| Special Department Expense | 10,000 | 10,000 | - |
| Sand | 10,000 | 10,000 | - |
| **Subtotal** | **20,000** | **20,000** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| Miscellaneous Training | 7,500 | - | (7,500) |
| **Subtotal** | **7,500** | **-** | **(7,500)** |
| **S&S: Wildland Planning** | **102,000** | **94,500** | **(7,500)** |

**COMMUNITY RISK REDUCTION DEPARTMENT**

*WILDLAND PRE-FIRE MANAGEMENT*

**ORG 4554 & 4556**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| Community Wildland Mitigation (Org 4556) | | | |
| **Account 1601 - Memberships** | | | |
| Memberships | 750 | 750 | - |
| **Subtotal** | **750** | **750** | **-** |
| **Account 1801`1810 - Office Expense** | | | |
| Miscellaneous Office Supplies | 17,871 | 17,871 | - |
| **Subtotal** | **17,871** | **17,871** | **-** |
| **Account 1902`1908 - Prof. and Specialized Services** | | | |
| Miscellaneous Professional and Specialized Services | 900 | 900 | - |
| **Subtotal** | **900** | **900** | **-** |
| **Account 2401`2409 - Special Department Expense** | | | |
| Special Department Expense | 17,550 | 17,550 | - |
| **Subtotal** | **17,550** | **17,550** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| Travel and Training Expense | 12,500 | - | (12,500) |
| **Subtotal** | **12,500** | **-** | **(12,500)** |
| **S&S: Community Wildland Mitigation** | **49,571** | **37,071** | **(12,500)** |

**COMMUNITY RISK REDUCTION DEPARTMENT**

*WILDLAND PRE-FIRE MANAGEMENT*

**ORG 4554 & 4556**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| Community Risk Reduction Training (Org TBD) | | | |
| **Account 1801`1810 - Office Expense** | | | |
| Miscellaneous Office Supplies | - | 34,620 | 34,620 |
| **Subtotal** | **-** | **34,620** | **34,620** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| Code Conferences and Hearings | - | 13,832 | 13,832 |
| Inspector Training | - | 8,040 | 8,040 |
| Travel Mileage | - | 11,358 | 11,358 |
| Specialized Training | - | 4,974 | 4,974 |
| Training & Seminars | - | 7,500 | 7,500 |
| Miscellaneous Travel and Training Expense | - | 22,500 | 22,500 |
| **Subtotal** | **-** | **68,204** | **68,204** |
| **S&S: Community Risk Reduction Training** | **-** | **102,824** | **102,824** |
| **Total S&S: Wildland Pre-Fire Management** | **151,571** | **234,395** | **82,824** |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ORANGE COUNTY
CALIFORNIA
AUTHORITY
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**ORANGE COUNTY FIRE AUTHORITY**

*CORPORATE COMMUNICATIONS DEPARTMENT S&S SUMMARY*

**FY 2022/23 BUDGET**

| Divisions/Sections | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| **Corporate Communications** | | | |
| Multimedia | 39,000 | 39,000 | - |
| Public Information Office | 8,775 | 8,775 | - |
| Community Education | 115,654 | 115,654 | - |
| RFOTC Open House | 11,000 | 11,000 | - |
| **Total Corporate Communications** | 174,429 | 174,429 | - |
| **Department Total** | **174,429** | **174,429** | **-** |

Grant funding and one-time items are not included in the FY 2021/22 base budget.

**CORPORATE COMMUNICATIONS DEPARTMENT**
*CORPORATE COMMUNICATIONS*
**ORG 1450, 1460, 4449 and H800**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| Multimedia (Org 1450) | | | |
| **Account 1301`1302 - Maintenance/Repair - Equipment** | | | |
| Audio Visual Equipment Repair | 1,500 | 1,500 | - |
| Miscellaneous Maintenance | 1,000 | 1,000 | - |
| **Subtotal** | **2,500** | **2,500** | **-** |
| **Account 1801`1809 - Office Expense** | | | |
| Software | 7,000 | 7,000 | - |
| **Subtotal** | **7,000** | **7,000** | **-** |
| **Account 2101 - Rents and Leases - Equipment** | | | |
| Audio Visual Equipment Rental | 2,000 | 2,000 | - |
| **Subtotal** | **2,000** | **2,000** | **-** |
| **Account 2401`2409 - Special Department Expense** | | | |
| Blank Videos, CDs and DVDs | 1,000 | 1,000 | - |
| Photo Printing and Scanning | 3,500 | 3,500 | - |
| Miscellaneous Audio Visual Supplies | 7,000 | 7,000 | - |
| Upgraded Audio Visual Equipment and Computer | 5,500 | 5,500 | - |
| Music License | 3,500 | 3,500 | - |
| Social Media Posts | 5,000 | 5,000 | - |
| **Subtotal** | **25,500** | **25,500** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| Audio Visual Specialist Training | 2,000 | 2,000 | - |
| **Subtotal** | **2,000** | **2,000** | **-** |
| **S&S: Multimedia** | **39,000** | **39,000** | **-** |

**CORPORATE COMMUNICATIONS DEPARTMENT**
*CORPORATE COMMUNICATIONS*
**ORG 1450, 1460, 4449 and H800**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| Public Information Office (Org 1460) | | | |
| **Account 1601 - Memberships** | | | |
| So. California Public Information Officers Association | 75 | 75 | - |
| California Association of Public Information Officers | 525 | 525 | - |
| State Fire Chief's Association/AFSS | 150 | 150 | - |
| National Information Officers Association | 225 | 225 | - |
| **Subtotal** | **975** | **975** | **-** |
| **Account 1801`1810 - Office Expense** | | | |
| Media (Subscriptions/Guides) | 750 | 750 | - |
| Miscellaneous Supplies | 1,450 | 1,450 | - |
| **Subtotal** | **2,200** | **2,200** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| California State Fire Marshall Classes | 2,000 | 2,000 | - |
| California Specialized Training Institute | 1,200 | 1,200 | - |
| Miscellaneous Training | 2,400 | 2,400 | - |
| **Subtotal** | **5,600** | **5,600** | **-** |
| **S&S: Public Information Office (PIO)** | **8,775** | **8,775** | **-** |

**CORPORATE COMMUNICATIONS DEPARTMENT**
*CORPORATE COMMUNICATIONS*
**ORG 1450, 1460, 4449 and H800**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| Community Education (Org 4449) | | | |
| **Account 1301`1302 - Maintenance/Repair - Equipment** | | | |
| Miscellaneous Maintenance | 2,000 | 2,000 | - |
| **Subtotal** | **2,000** | **2,000** | **-** |
| **Account 1601 - Memberships** | | | |
| Memberships | 500 | 500 | - |
| **Subtotal** | **500** | **500** | **-** |
| **Account 1801`1810 - Office Expense** | | | |
| Office Expense | 5,000 | 5,000 | - |
| **Subtotal** | **5,000** | **5,000** | **-** |
| **Account 1902`1908 - Prof. and Specialized Services** | | | |
| Miscellaneous Professional and Specialized Services | 3,000 | 3,000 | - |
| **Subtotal** | **3,000** | **3,000** | **-** |
| **Account 2401`2409 - Special Department Expense** | | | |
| Smoke Alarm Program | 3,554 | 3,554 | - |
| Marketing/Education Materials | 54,600 | 54,600 | - |
| Materiel for Various Events | 17,000 | 17,000 | - |
| Drowning Prevention Program | 25,000 | 25,000 | - |
| **Subtotal** | **100,154** | **100,154** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| Travel and Training Expense | 5,000 | 5,000 | - |
| **Subtotal** | **5,000** | **5,000** | **-** |
| **S&S: Community Education Program** | **115,654** | **115,654** | **-** |
| RFOTC Open House (Org H800) | | | |
| **Account 2401`2409 - Special Department Expense** | | | |
| Special Department Expense | 11,000 | 11,000 | - |
| **S&S: RFOTC Open House** | **11,000** | 11,000 | **-** |
| **Total S&S: Corporate Communications** | **174,429** | **174,429** | **-** |

**ORANGE COUNTY FIRE AUTHORITY**

*EMERGENCY MEDICAL SERVICES & TRAINING DEPARTMENT S&S SUMMARY*

**FY 2022/23 BUDGET**

| Sections | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| **Emergency Medical Services** | | | |
| Emergency Medical Services [1] | 1,627,080 | 1,805,615 | 178,535 |
| WEFIT Program | 1,346,955 | 1,346,955 | - |
| **Total Emergency Medical Services** | 2,974,035 | 3,152,570 | 178,535 |
| **Operations Training and Safety [2]** | 882,981 | 1,282,981 | 400,000 |
| **Operations Training and Promotions** | 18,500 | 18,500 | - |
| **Department Total** | **3,875,516** | **4,454,051** | **578,535** |

Grant funding and one-time items are not included in the FY 2021/22 base budget.

[1] Increase due to costs for Zoll Software ($139K), ePCR system ($25K), and Personal Exposure Reporting System ($15K).

[2] Increase due to costs related to increased fire academy volume, higher material costs, and higher training and tuition fees.

**EMERGENCY MEDICAL SERVICES & TRAINING DEPARTMENT**
*EMERGENCY MEDICAL SERVICES*
**ORG 1441, 3354**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| Emergency Medical Services (Org 1441) | | | |
| **Account 1101 - Food** | | | |
| Miscellaneous Food | 1,000 | 1,000 | - |
| Food for Panel Interviews | 2,000 | 2,000 | - |
| **Subtotal** | **3,000** | **3,000** | **-** |
| **Account 1301`1302 - Maintenance/Repair - Equipment** | | | |
| Durable Medical Equipment Maintenance | 2,500 | 2,500 | - |
| **Subtotal** | **2,500** | **2,500** | **-** |
| **Account 1501`1509 - Medical Supplies and Equipment** | | | |
| Pharmaceuticals/Vaccines | 300,000 | 300,000 | - |
| Medical Supplies | 725,920 | 725,920 | - |
| Medical Equipment | 70,243 | 70,243 | - |
| Miscellaneous Supplies & Equipment | 115,456 | 115,456 | - |
| **Subtotal** | **1,211,619** | **1,211,619** | **-** |
| **Account 1801`1810 - Office Expense** | | | |
| Office Supplies including Texts | 18,886 | 18,886 | - |
| **Subtotal** | **18,886** | **18,886** | **-** |
| **Account 1901`1908 - Prof. and Specialized Services** | | | |
| Zoll EMS Software | - | 138,535 | 138,535 |
| Personal Exposure Reporting System | - | 15,000 | 15,000 |
| ImageTrend Elite ePCR System | - | 25,000 | 25,000 |
| Annual TB Testing | 92,000 | 92,000 | - |
| Miscellaneous Professional Services | 20,600 | 20,600 | - |
| **Subtotal** | **112,600** | **291,135** | **178,535** |
| **Account 2401`2409 - Special Department Expense** | | | |
| Paramedic Certification | 7,000 | 7,000 | - |
| Paramedic Accreditation | 5,000 | 5,000 | - |
| Paramedic Recertification | 30,100 | 30,100 | - |
| EMT Recertification | 34,000 | 34,000 | - |
| Controlled Medication Management System | 52,000 | 52,000 | - |
| UCI Training | 2,500 | 2,500 | - |
| Miscellaneous Expenditures | 30,000 | 30,000 | - |
| Service Pins and Plaques | 500 | 500 | - |
| **Subtotal** | **161,100** | **161,100** | **-** |

**EMERGENCY MEDICAL SERVICES & TRAINING DEPARTMENT**

*EMERGENCY MEDICAL SERVICES*

**ORG 1441, 3354**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| Paramedic Tuition | 113,375 | 113,375 | - |
| Out of County Travel | 3,000 | 3,000 | - |
| Miscellaneous Travel & Training | 1,000 | 1,000 | - |
| **Subtotal** | **117,375** | **117,375** | **-** |
| **S&S: Emergency Medical Services** | **1,627,080** | **1,805,615** | **178,535** |
| WEFIT Program (Org 3354) | | | |
| **Account 1001`1002 - Clothing & Personal Supplies** | | | |
| Clothing and Personal Supplies | 15,000 | 15,000 | - |
| **Subtotal** | **15,000** | **15,000** | **-** |
| **Account 1301`1302 - Maintenance/Repair - Equipment** | | | |
| Exercise Equipment Maintenance | 30,000 | 30,000 | - |
| **Subtotal** | **30,000** | **30,000** | **-** |
| **Account 1601 - Memberships** | | | |
| Commercial Fitness Center Memberships | 11,000 | 11,000 | - |
| **Subtotal** | **11,000** | **11,000** | **-** |
| **Account 1801`1810 - Office Expense** | | | |
| Health/Fitness Educational Material | 1,500 | 1,500 | - |
| **Subtotal** | **1,500** | **1,500** | **-** |
| **Account 1901`1908 - Prof. and Specialized Services** | | | |
| Physical Exams and Fitness Testing | 1,164,319 | 1,164,319 | - |
| **Subtotal** | **1,164,319** | **1,164,319** | **-** |
| **Account 2401`2409 - Special Department Expense** | | | |
| Exercise Equipment | 105,136 | 105,136 | - |
| **Subtotal** | **105,136** | **105,136** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| Fitness Training/Classes | 20,000 | 20,000 | - |
| **Subtotal** | **20,000** | **20,000** | **-** |
| **S&S: WEFIT Program** | **1,346,955** | **1,346,955** | **-** |
| **Total S&S: Emergency Medical Services** | **2,974,035** | **3,152,570** | **178,535** |

**EMERGENCY MEDICAL SERVICES & TRAINING DEPARTMENT**
*OPERATIONS TRAINING & SAFETY*
**ORG 1440 & 1448**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| Ops Training and Safety (Org 1440) | | | |
| **Account 1001 - Clothing and Personal Supplies** | | | |
| Live Fire Burn Helmets, Shields & Flash Hoods | - | 11,000 | 11,000 |
| **Subtotal** | **-** | **11,000** | **11,000** |
| **Account 1101 - Food** | | | |
| Training Seminar Meals/FF Graduations | 13,000 | 18,000 | 5,000 |
| **Subtotal** | **13,000** | **18,000** | **5,000** |
| **Account 1301'1305 Maintenance/Repair Equipment** | | | |
| Fire Training Prop Service/Repair | - | 10,000 | 10,000 |
| **Subtotal** | **-** | **10,000** | **10,000** |
| **Account 1601 - Memberships** | | | |
| Memberships | 771 | 981 | 210 |
| **Subtotal** | **771** | **981** | **210** |
| **Account 1801`1809 - Office Expense** | | | |
| Subscriptions | 3,500 | 3,500 | - |
| Miscellaneous Office Supplies | 28,782 | 12,700 | (16,082) |
| **Subtotal** | **32,282** | **16,200** | **(16,082)** |
| **Account 1901`1908 - Prof. and Specialized Services** | | | |
| Miscellaneous Professional Services | 1,191 | 12,000 | 10,809 |
| **Subtotal** | **1,191** | **12,000** | **10,809** |
| **Account 2101 - Rents and Leases - Equipment** | | | |
| Miscellaneous Equipment Rental | - | 38,000 | 38,000 |
| **Subtotal** | **-** | **38,000** | **38,000** |
| **Account 2401`2409 - Special Department Expense** | | | |
| Academy Supplies | - | 300,000 | 300,000 |
| Television | 3,000 | 3,000 | - |
| Training Video, CDs, and Slides | 4,500 | 4,500 | - |
| Digital Media | 2,500 | 2,500 | - |
| Miscellaneous Special Expenses | 12,000 | 12,000 | - |
| **Subtotal** | **22,000** | **322,000** | **300,000** |

**EMERGENCY MEDICAL SERVICES & TRAINING DEPARTMENT**

*OPERATIONS TRAINING & SAFETY*

**ORG 1440 & 1448**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| California Training Officer's Conference | 6,100 | 6,100 | - |
| Various NFA Courses | 3,750 | 3,700 | (50) |
| Santa Ana College Tuition | 150,000 | 180,000 | 30,000 |
| Target Solutions | 75,000 | 100,000 | 25,000 |
| Training Opportunities - Other | 95,887 | 80,000 | (15,887) |
| **Subtotal** | **330,737** | **369,800** | **39,063** |
| **Account 2801' 2805 - Utilities** | | | |
| Live Fire Prop Supplies | 33,000 | 35,000 | 2,000 |
| **Subtotal** | **33,000** | **35,000** | **2,000** |
| **S&S: Ops Training and Safety** | **432,981** | **832,981** | **400,000** |

CA FF Joint Apprenticeship Committee (CFFJAC) (Org 1448)

| | | | |
|---|---|---|---|
| **Account 2401`2409 - Special Department Expense** | | | |
| Miscellaneous Expenditures | 450,000 | 450,000 | - |
| **Subtotal** | **450,000** | **450,000** | **-** |
| **S&S: CFFJAC** | **450,000** | **450,000** | **-** |
| **Total S&S: Ops Training and Safety** | **882,981** | **1,282,981** | **400,000** |

**EMERGENCY MEDICAL SERVICES & TRAINING DEPARTMENT**
*OPERATIONS TRAINING & PROMOTIONS*
**ORG 6000**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| **Account 1101 - Food** | | | |
| Miscellaneous Expenditures | 1,000 | 1,000 | - |
| **Subtotal** | **1,000** | **1,000** | **-** |
| **Account 1601 - Memberships** | | | |
| Miscellaneous Memberships | 1,000 | 1,000 | - |
| **Subtotal** | **1,000** | **1,000** | **-** |
| **Account 1801`1809 - Office Expense** | | | |
| Miscellaneous Office Expenses | 2,500 | 2,500 | - |
| **Subtotal** | **2,500** | **2,500** | **-** |
| **Account 1901`1908 - Prof. and Specialized Services** | | | |
| Miscellaneous Expenditures | 4,500 | 4,500 | - |
| **Subtotal** | **4,500** | **4,500** | **-** |
| **Account 2401`2409 - Special Department Expense** | | | |
| Miscellaneous Special Expenditures | 1,500 | 1,500 | - |
| **Subtotal** | **1,500** | **1,500** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| California Training Officer's Conference | 8,000 | 8,000 | - |
| **Subtotal** | **8,000** | **8,000** | **-** |
| **Total S&S: Ops Training & Promotions** | **18,500** | **18,500** | **-** |

**ORANGE COUNTY FIRE AUTHORITY**

*EXECUTIVE MANAGEMENT DEPARTMENT S&S SUMMARY*

**FY 2022/23 BUDGET**

| Divisions/Sections | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| **Executive Management** | | | |
| Executive Management | 700,816 | 700,816 | - |
| Executive Management Support | 70,368 | 70,368 | - |
| Fire Chief Training Opportunities | 101,875 | 101,875 | - |
| **Total Executive Management** | 873,059 | 873,059 | - |
| **Department Total** | **873,059** | **873,059** | **-** |

Grant funding and one-time items are not included in the FY 2021/22 base budget.

**EXECUTIVE MANAGEMENT**
*EXECUTIVE MANAGEMENT*
**ORG 9901, 9905 and 9908**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| Executive Management (Org 9901) | | | |
| **Account 1101 - Food** | | | |
| Food for Special Meetings | 400 | 400 | - |
| **Subtotal** | **400** | **400** | **-** |
| **Account 1601 - Memberships** | | | |
| Association of California Cities, Orange County | 10,000 | 10,000 | - |
| International Association of Fire Chiefs | 1,350 | 1,350 | - |
| California Fire Chiefs' Association | 2,000 | 2,000 | - |
| National Fire Protection Association | 300 | 300 | - |
| Administrative Fire Services Section (AFSS) | 100 | 100 | - |
| **Subtotal** | **13,750** | **13,750** | **-** |
| **Account 1801'1810 - Office Expense** | | | |
| Office Supplies | 947 | 947 | - |
| **Subtotal** | **947** | **947** | **-** |
| **Account 1901`1908 - Prof. and Specialized Services** | | | |
| Legal Counsel Services | 528,769 | 528,769 | - |
| Consultant Services | 20,000 | 20,000 | - |
| Labor Negotiation Services | 70,000 | 70,000 | - |
| **Subtotal** | **618,769** | **618,769** | **-** |
| **Account 2401`2409 - Special Department Expense** | | | |
| Special Department Expense | 22,500 | 22,500 | - |
| **Subtotal** | **22,500** | **22,500** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| Meetings with State Officials | 37,950 | 37,950 | - |
| Seminars & Workshops | 6,500 | 6,500 | - |
| **Subtotal** | **44,450** | **44,450** | **-** |
| **S&S: Executive Management** | **700,816** | **700,816** | **-** |

**EXECUTIVE MANAGEMENT**
*EXECUTIVE MANAGEMENT*
**ORG 9901, 9905 and 9908**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| Executive Management Support (Org 9905) | | | |
| **Account 1001`1003 - Clothing and Personal Supplies** | | | |
| Badges | 28,086 | 28,086 | - |
| **Subtotal** | **28,086** | **28,086** | **-** |
| **Account 1601 - Memberships** | | | |
| California Fire Chiefs' Association | 365 | 365 | - |
| International Association of Fire Chiefs | 731 | 731 | - |
| California League of Cities | 365 | 365 | - |
| **Subtotal** | **1,461** | **1,461** | **-** |
| **Account 1801'1810 - Office Expense** | | | |
| Office Supplies | 2,739 | 2,739 | - |
| **Subtotal** | **2,739** | **2,739** | **-** |
| **Account 1901`1908 - Prof. and Specialized Services** | | | |
| Honor Guard/Pipes & Drums | 3,652 | 3,652 | - |
| **Subtotal** | **3,652** | **3,652** | **-** |
| **Account 2401`2409 - Special Department Expense** | | | |
| Ribbons, etc. for Protocol/Ceremony | 15,300 | 15,300 | - |
| **Subtotal** | **15,300** | **15,300** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| Travel for Honor Guard/Pipes & Drums | 10,000 | 10,000 | - |
| Miscellaneous - Executive Management Support | 9,130 | 9,130 | - |
| **Subtotal** | **19,130** | **19,130** | **-** |
| **S&S: Executive Management Support** | **70,368** | **70,368** | **-** |
| Fire Chief Training Opportunities (Org 9908) | | | |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| Various Training Courses | 101,875 | 101,875 | - |
| **Subtotal** | **101,875** | **101,875** | **-** |
| **S&S: Fire Chief Training Opportunities** | **101,875** | **101,875** | **-** |
| **Total S&S: Executive Management** | **873,059** | **873,059** | **-** |


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**ORANGE COUNTY FIRE AUTHORITY**

*HUMAN RESOURCES DEPARTMENT S&S SUMMARY*

**FY 2022/23 BUDGET**

| Divisions/Sections | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| **Benefits** | | | |
| Benefits | 368,925 | 368,925 | - |
| **Total Benefits** | 368,925 | 368,925 | - |
| **Employee Relations** | | | |
| Employee Relations | 147,266 | 147,266 | - |
| **Total Employee Relations** | 147,266 | 147,266 | - |
| **Recruitment** | | | |
| Recruitment | 796,165 | 796,165 | - |
| **Total Recruitment** | 796,165 | 796,165 | - |
| **Risk Management** | | | |
| Risk Management [1] | 1,904,349 | 2,004,349 | 100,000 |
| Risk Management Controlled [2] | 2,351,299 | 3,568,299 | 1,217,000 |
| **Total Risk Management** | 4,255,648 | 5,572,648 | 1,317,000 |
| **Department Total** | **5,568,004** | **6,885,004** | **1,317,000** |

Grant funding and one-time items are not included in the FY 2021/22 base budget.

[1] Increase due to increased usage of behavioral health services by personnel.

[2] Increase due to ongoing funding for insurance premiums ($700K), insurance deductibles ($275K), state workers' compensation program funding ($200K), and aircraft liability ($42K).

**HUMAN RESOURCES DEPARTMENT**
*BENEFITS*
**ORG 3351**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| **Account 1101 - Food** | | | |
| Orientation/Onboarding Events | - | 1,500 | 1,500 |
| **Subtotal** | **-** | **1,500** | **1,500** |
| **Account 1201 - Insurance** | | | |
| OCPFA GBT Survivor Benefit | 38,000 | 36,500 | (1,500) |
| **Subtotal** | **38,000** | **36,500** | **(1,500)** |
| **Account 1601 - Memberships** | | | |
| Benefit Membership and Certifications | 2,500 | 2,500 | - |
| **Subtotal** | **2,500** | **2,500** | **-** |
| **Account 1901`1908 - Prof. and Specialized Services** | | | |
| Class and Compensation Services | 80,000 | 73,250 | (6,750) |
| Discovery Benefits COBRA & FSA | 9,570 | 9,570 | - |
| Management Physicals | 4,466 | 4,466 | - |
| Health Screening Services | - | 5,000 | 5,000 |
| Banking Fee for RFF Dental and Vision TPA | 300 | 300 | - |
| ACA Reporting Software and Submission Fees | - | 1,750 | 1,750 |
| Health and Wellness Benefits Fair | 3,000 | 3,000 | - |
| Bilingual Testing | 1,875 | 1,875 | - |
| **Subtotal** | **99,211** | **99,211** | **-** |
| **Account 2401'2409 - Special Department Expense** | | | |
| Tuition Reimbursement | 185,000 | 185,000 | - |
| **Subtotal** | **185,000** | **185,000** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| CalPELRA & PELRAC | 4,000 | 4,000 | - |
| Various Trainings | 4,250 | 4,250 | - |
| CSU Fullerton Leadership Development Program | 10,484 | 10,484 | - |
| Future Leadership Development Program | 19,230 | 19,230 | - |
| LCW Annual Conference | 1,950 | 1,950 | - |
| CalPERS Benefit Conference | 3,100 | 3,100 | - |
| Spark Training | 1,200 | 1,200 | - |
| **Subtotal** | **44,214** | **44,214** | **-** |
| **Total S&S: Benefits** | **368,925** | **368,925** | **-** |

**HUMAN RESOURCES DEPARTMENT**
*EMPLOYEE RELATIONS*
**ORG 3385**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| **Account 1601 - Memberships** | | | |
| Orange County HR Consortium | 250 | 250 | - |
| Orange County HR Consortium LCW & Law Library | 4,150 | 4,150 | - |
| CalPELRA | 2,600 | 2,600 | - |
| PELRAC | 1,050 | - | (1,050) |
| Women in Fire | 525 | 525 | - |
| **Subtotal** | **8,575** | **7,525** | **(1,050)** |
| **Account 1801`1810 - Office Expense** | | | |
| Miscellaneous Books and Subscriptions | 8,470 | 8,470 | - |
| Office Supplies | 2,585 | 2,585 | - |
| **Subtotal** | **11,055** | **11,055** | **-** |
| **Account 1901`1908 - Prof. and Specialized Services** | | | |
| Legal Services | 10,000 | 10,000 | - |
| Customized Training & Crisis Management | 23,000 | 23,000 | - |
| External Investigation Services | 73,636 | 73,636 | - |
| **Subtotal** | **106,636** | **106,636** | **-** |
| **Account 2001 - Publications and Legal Notices** | | | |
| Federal Notices | 1,500 | 1,500 | - |
| Subscriptions | 1,000 | 1,000 | - |
| **Subtotal** | **2,500** | **2,500** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| CalPELRA | 10,000 | 10,000 | - |
| Burstein Prihar Advocacy Workshop | 2,800 | - | (2,800) |
| LCW Annual Conference | 3,000 | 3,000 | - |
| Webinars | 1,500 | 1,500 | - |
| Miscellaneous Training | 1,200 | 5,050 | 3,850 |
| **Subtotal** | **18,500** | **19,550** | **1,050** |
| **Total S&S: Employee Relations** | **147,266** | **147,266** | **-** |

**HUMAN RESOURCES DEPARTMENT**
*RECRUITMENT*
**ORG 3390**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| **Account 1101 - Food** | | | |
| Recruitment & Promotions Interviews/Assessment Center | 21,050 | 21,050 | - |
| **Subtotal** | **21,050** | **21,050** | **-** |
| **Account 1301 - Maintenance/Repair - Equipment** | | | |
| NEOGOV Insight | 10,081 | 10,081 | - |
| NEOGOV Performance Appraisal | 30,248 | 30,248 | - |
| NEOGOV Onboarding | 16,405 | 16,405 | - |
| OPAC Pre-Employment Testing | 5,245 | 5,245 | - |
| CritiCall Dispatcher Pre-Employment Testing | 1,575 | 1,575 | - |
| **Subtotal** | **63,554** | **63,554** | **-** |
| **Account 1601 - Memberships** | | | |
| SHRM | 219 | 219 | - |
| Personnel Testing Council of Southern California | 80 | 80 | - |
| IPMA Agency | 1,005 | 1,005 | - |
| **Subtotal** | **1,304** | **1,304** | **-** |
| **Account 1801`1810 - Office Expense** | | | |
| Miscellaneous Supplies | 2,500 | 2,500 | - |
| Postage | 100 | 100 | - |
| Printing | 500 | 500 | - |
| Document Destruction | 960 | 960 | - |
| **Subtotal** | **4,060** | **4,060** | **-** |
| **Account 1901`1908 - Prof. and Specialized Services** | | | |
| Exam Development and Test Materials | 110,161 | 75,161 | (35,000) |
| Fingerprint Services | 20,128 | 20,128 | - |
| Pre-Employment Background Investigations | 268,500 | 268,500 | - |
| Employment Physicals | 282,924 | 282,924 | - |
| Diversity, Equity and Inclusion Programs | - | 35,000 | 35,000 |
| **Subtotal** | **681,713** | **681,713** | **-** |

**HUMAN RESOURCES DEPARTMENT**

*RECRUITMENT*

**ORG 3390**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| **Account 2201 - Rents & Leases - Facilities** | | | |
| Safety Exams | 8,184 | 8,184 | - |
| Non-Safety Exams | 2,000 | 2,000 | - |
| **Subtotal** | **10,184** | **10,184** | **-** |
| **Account 2401'2409 - Special Department Expense** | | | |
| Recruitment Advertising and Job Fairs | 8,000 | 8,000 | - |
| **Subtotal** | **8,000** | **8,000** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| NEOGOV | 5,500 | 5,500 | - |
| HR Staff Training | 800 | 800 | - |
| **Subtotal** | **6,300** | **6,300** | **-** |
| **Total S&S: Recruitment** | **796,165** | **796,165** | **-** |

**HUMAN RESOURCES DEPARTMENT**
*RISK MANAGEMENT*
**ORG 3355, 3349**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| Risk Management (Org 3355) | | | |
| **Account 1601 - Memberships** | | | |
| Public Agency Risk Management Association | 150 | 150 | - |
| American Society of Safety Engineers | 180 | 180 | - |
| Public Risk Management Association | 385 | 385 | - |
| Public Safety Management Association | 75 | 75 | - |
| Council of Self-Insured Public Agencies | 100 | 100 | - |
| **Subtotal** | **890** | **890** | **-** |
| **Account 1801`1810 - Office Expense** | | | |
| Office Supplies | 3,212 | 3,212 | - |
| **Subtotal** | **3,212** | **3,212** | **-** |
| **Account 1901`1908 - Prof. and Specialized Services** | | | |
| Drug Testing (DOT and Non-EOT) | 5,000 | 5,000 | - |
| Occupation Medical Services | 39,935 | 39,935 | - |
| Risk Management Technical Services | 30,025 | 30,025 | - |
| Self-Insurance TPA - Workers' Comp | 696,238 | 696,238 | - |
| RFOTC 24/7 Uniformed Security Guard | 166,488 | 166,488 | - |
| Workers' Compensation Claims Auditor | 23,000 | 23,000 | - |
| Workers' Compensation User Funding Assessment | 650,000 | 650,000 | - |
| Annual Workers' Compensation Actuarial | 7,650 | 7,650 | - |
| Certificate of Insurance Tracking | 12,000 | 12,000 | - |
| Sergeant at Arms for Board Meetings | 8,000 | 8,000 | - |
| Counseling for Behavioral Health & Wellness Services | 150,000 | 250,000 | 100,000 |
| **Subtotal** | **1,788,336** | **1,888,336** | **100,000** |
| **Account 2401`2409 - Special Department Expense** | | | |
| HAZMAT Removal | 15,000 | 15,000 | - |
| Compliance Permits | 65,000 | 65,000 | - |
| **Subtotal** | **80,000** | **80,000** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| Training and Conferences | 31,911 | 31,911 | - |
| **Subtotal** | **31,911** | **31,911** | **-** |
| **S&S: Risk Management** | **1,904,349** | **2,004,349** | **100,000** |

**HUMAN RESOURCES DEPARTMENT**

*RISK MANAGEMENT*

**ORG 3355, 3349**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| Risk Management Controlled (Org 3349) | | | |
| **Account 1201 - Insurance** | | | |
| Aircraft Liability | 222,000 | 264,000 | 42,000 |
| Liability/Property Insurance | 1,359,632 | 2,059,632 | 700,000 |
| Insurance Deductibles | 50,000 | 325,000 | 275,000 |
| Insurance Broker Fees | 27,500 | 27,500 | - |
| Self-Insured Property Claim Loss | 15,000 | 15,000 | - |
| Vehicle Verifier Bond | 150 | 150 | - |
| WC Self-Insurance Excess Loss Premium | 677,017 | 877,017 | 200,000 |
| **Subtotal** | **2,351,299** | **3,568,299** | **1,217,000** |
| **S&S: Risk Management Controlled** | **2,351,299** | **3,568,299** | **1,217,000** |
| **Total S&S: Risk Management** | **4,255,648** | **5,572,648** | **1,317,000** |


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**ORANGE COUNTY FIRE AUTHORITY**

*LOGISTICS DEPARTMENT S&S SUMMARY*

**FY 2022/23 BUDGET**

| Divisions/Sections | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| **Fleet Services** | | | |
| Fleet Services | 125,390 | 125,390 | - |
| Automotive Stock | 3,284,419 | 5,343,000 | 2,058,581 |
| **Total Fleet Services** [1] | 3,409,809 | 5,468,390 | 2,058,581 |
| **Information Technology** | | | |
| Communications & IT Infrastructure | 2,065,827 | 2,413,141 | 347,314 |
| Systems Development & Support | 1,368,280 | 1,488,735 | 120,455 |
| Communications & Workplace Support | 1,546,619 | 1,655,232 | 108,613 |
| GIS & Mapping | 186,170 | 186,170 | - |
| **Total Information Technology** [2] | 5,166,896 | 5,743,278 | 576,382 |
| **Property Management** | | | |
| Property Management [3] | 5,026,494 | 6,876,800 | 1,850,306 |
| **Total Property Management** | 5,026,494 | 6,876,800 | 1,850,306 |
| **Service Center** | | | |
| Service Center | 46,070 | 51,095 | 5,025 |
| Service Center Inventory | 2,689,820 | 2,962,614 | 272,794 |
| **Total Service Center** [4] | 2,735,890 | 3,013,709 | 277,819 |
| **Department Total** | **16,339,089** | **21,102,177** | **4,763,088** |

Grant funding and one-time items are not included in the FY 2021/22 base budget.

[1] Increase due to ongoing increase in volume and cost of equipment/repairs ($1,040,180) and fuel ($1,010,400). Also due to maintenance and fuel increases for new vehicles for Academy Accreditation ($8,000).

[2] Increase due to cost increases in Microsoft Software Enterprise Agreement licensing costs ($120,455), mobile telephone expenses ($108,603), data line service ($175,000), 800 MHz partnership costs ($138,419), station alerting maintenance costs ($27,792) and new IT equipment and licensing costs for Academy Accreditation ($6,100).

[3] Increase due to ongoing increases in volume and cost of equipment/repairs for household items ($148,150), equipment/repairs for fire stations ($214,300), maintenance/repairs for buildings ($632,370), and utilities ($700,500). Also included in this increase, is an increase of $154,986 in the facilities maintenance budget for the cash contract cities to the maximum $15,000 per station.

[4] Increase due to one-time only cost of PPE for FS 67 staffing ($222,168), FS 42 enhancement ($27,771) and Academy Accreditation ($3,180). Also included is ongoing PPE costs for Academy Accreditation ($24,700).

**LOGISTICS DEPARTMENT**
*FLEET SERVICES*
**ORG 4450 & 4459**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| Fleet Services (Org 4450) | | | |
| **Account 1001 - Clothing and Personal Supplies** | | | |
| Uniform Service | 12,400 | 12,400 | - |
| **Subtotal** | **12,400** | **12,400** | **-** |
| **Account 1301`1302 - Maintenance/Repair - Equipment** | | | |
| Miscellaneous Shop Equipment | 5,200 | 5,200 | - |
| Fleet Services Software Maintenance | 15,000 | 15,000 | - |
| **Subtotal** | **20,200** | **20,200** | **-** |
| **Account 1601 - Memberships** | | | |
| Miscellaneous Memberships (i.e. MEMA & Cal Fire) | 340 | 340 | - |
| **Subtotal** | **340** | **340** | **-** |
| **Account 1801`1810 - Office Expense** | | | |
| Miscellaneous Office Expense | 6,060 | 6,060 | - |
| **Subtotal** | **6,060** | **6,060** | **-** |
| **Account 1901`1908 - Prof. and Specialized Services** | | | |
| Drive Off Service | 5,000 | 5,000 | - |
| Parts Washer Service | 2,000 | 2,000 | - |
| Reclamation Environmental Services | 6,360 | 6,360 | - |
| **Subtotal** | **13,360** | **13,360** | **-** |
| **Account 2301'2309 - Small Tools and Instruments** | | | |
| Tool Reimbursement | 26,050 | 26,050 | - |
| **Subtotal** | **26,050** | **26,050** | **-** |
| **Account 2401`2409 - Special Department Expense** | | | |
| Department of Motor Vehicles (DMV) Fees | 1,800 | 1,800 | - |
| **Subtotal** | **1,800** | **1,800** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| Training | 45,180 | 45,180 | - |
| **Subtotal** | **45,180** | **45,180** | **-** |
| **S&S: Fleet Services** | **125,390** | **125,390** | **-** |

**LOGISTICS DEPARTMENT**
*FLEET SERVICES*
**ORG 4450 & 4459**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| Automotive Stock (Org 4459) | | | |
| **Account 1301`1302 - Maintenance/Repair - Equipment** | | | |
| Air Utility Services | 1,500 | 2,400 | 900 |
| Antifreeze | 13,500 | 21,300 | 7,800 |
| DEF | 10,000 | 15,800 | 5,800 |
| Auto Glass Service | 1,300 | 2,100 | 800 |
| Batteries (Vehicle) | 95,000 | 149,700 | 54,700 |
| Gel Cell batteries | 15,100 | 23,800 | 8,700 |
| Car Wash/Detailing | 13,000 | 20,500 | 7,500 |
| Starter/Alternator Repairs | 15,450 | 24,350 | 8,900 |
| Chevrolet Engine/Body Parts (Light) | 45,000 | 70,900 | 25,900 |
| Code 3 Equipment/Light Bar | 25,000 | 38,400 | 13,400 |
| Diesel Engine Service & Repair | 38,000 | 59,850 | 21,850 |
| Dozer Parts & Service | 28,000 | 44,100 | 16,100 |
| Ford Parts & Repairs | 115,000 | 181,100 | 66,100 |
| Generator Parts | 3,000 | 4,750 | 1,750 |
| Heavy & Light Apparatus PM | 305,000 | 480,300 | 175,300 |
| Fire Truck Maintenance Parts | 180,000 | 283,500 | 103,500 |
| Miscellaneous Shop Equipment | 28,840 | 45,450 | 16,610 |
| Oil | 50,000 | 78,750 | 28,750 |
| Parts (Heavy) | 39,000 | 61,450 | 22,450 |
| Parts (Light) | 50,000 | 78,750 | 28,750 |
| Miscellaneous Parts & Service | 40,000 | 69,000 | 29,000 |
| Radiator | 20,000 | 31,500 | 11,500 |
| Smog | 3,000 | 4,750 | 1,750 |
| Suspension/Brakes (Heavy) | 75,000 | 118,250 | 43,250 |
| Tires Parts & Labor | 431,129 | 679,000 | 247,871 |
| Towing Heavy/Light | 6,000 | 9,500 | 3,500 |
| Transmission Repairs & Services | 60,000 | 94,500 | 34,500 |
| Upholstery | 8,000 | 12,600 | 4,600 |
| International Truck Parts | 70,000 | 110,250 | 40,250 |
| Battery Chargers/Electric | 25,000 | 39,400 | 14,400 |
| **Subtotal** | **1,809,819** | **2,856,000** | **1,046,181** |
| **Account 1901`1908 - Prof. and Specialized Services** | | | |
| Aerial Recertification | 36,450 | 36,450 | - |
| Drive Off Service | 550 | 550 | - |
| Parts Washer Service | 3,000 | 3,000 | - |
| **Subtotal** | **40,000** | **40,000** | **-** |

**LOGISTICS DEPARTMENT**

*FLEET SERVICES*

**ORG 4450 & 4459**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| **Account 2601`2602 - Transportation** | | | |
| Diesel Fuel | 630,000 | 1,075,750 | 445,750 |
| Fuel Credit Cards | 435,000 | 741,400 | 306,400 |
| Gasoline | 369,600 | 629,850 | 260,250 |
| **Subtotal** | **1,434,600** | **2,447,000** | **1,012,400** |
| **S&S: Automotive Stock** | **3,284,419** | **5,343,000** | **2,058,581** |
| **Total S&S: Fleet Services** | **3,409,809** | **5,468,390** | **2,058,581** |

**LOGISTICS DEPARTMENT**
*INFORMATION TECHNOLOGY*
**ORG 3380, 4350, 4423 and 4355**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| Communications & IT Infrastructure (Org 3380) | | | |
| **Account 1051 - Communications** | | | |
| Utility Service for Phone Lines/Data Circuit | 625,000 | 800,000 | 175,000 |
| Cell/PC/tablet/landline | 9,810 | 9,810 | - |
| Cable Services | 8,210 | 8,210 | - |
| Satellite TV Services | 2,000 | 2,000 | - |
| Language Line | 100 | 100 | - |
| US&R Warehouse | 2,400 | 2,400 | - |
| **Subtotal** | **647,520** | **822,520** | **175,000** |
| **Account 1301`1302 - Maintenance/Repair - Equipment** | | | |
| Network Router/switch Maintenance | 101,000 | 101,000 | - |
| Server Operating Sys. Software | 19,590 | 19,590 | - |
| Remote Connection Maintenance | 15,000 | 15,000 | - |
| Contract Services | 14,820 | 14,820 | - |
| Internet Service Providers | 52,800 | 52,800 | - |
| Anti-Virus/Anti-Spam | 36,000 | 36,000 | - |
| Server Hardware | 52,000 | 52,000 | - |
| Storage Area Network | 43,000 | 43,000 | - |
| Maintenance for RFOTC Telephone Systems | 50,000 | 50,000 | - |
| County of Orange-800 MHz Partnership | 437,190 | 575,609 | 138,419 |
| Antivirus Maintenance | 13,000 | 13,000 | - |
| 911 Voice Recording Maintenance | 11,000 | 11,000 | - |
| Offsite Data Storage | 19,000 | 19,000 | - |
| Email Enterprise backup | 35,000 | 35,000 | - |
| VPN Maintenance | 38,000 | 38,000 | - |
| Virtualization Maintenance | 25,000 | 25,000 | - |
| Telephone Maintenance | 25,000 | 25,000 | - |
| Fire Station Alerting System Maintenance | 96,000 | 123,792 | 27,792 |
| CLETS Data line (for Investigations) | 13,500 | 13,500 | - |
| Radio Emergency Comm.(Genwatch Support) | 18,000 | 18,000 | - |
| Network/Server Monitoring (SolarWinds Supp) | 16,000 | 16,000 | - |
| **Subtotal** | **1,130,900** | **1,297,111** | **166,211** |
| **Account 1801`1810 - Office Expense** | | | |
| IT Office Supplies & Software ($865 is one-time only) | 24,567 | 30,670 | 6,103 |
| **Subtotal** | **24,567** | **30,670** | **6,103** |
| **Account 1901`1908 - Prof. and Specialized Services** | | | |
| Computer Room Maintenance | 7,970 | 7,970 | - |
| Network Engineering Services | 50,000 | 50,000 | - |
| Storage of Network Backup | 5,000 | 5,000 | - |
| Station Alerting Custom Programming | 25,000 | 25,000 | - |
| Station Alerting Electrical Repairs | 83,990 | 83,990 | - |
| **Subtotal** | **171,960** | **171,960** | **-** |

**LOGISTICS DEPARTMENT**
*INFORMATION TECHNOLOGY*
**ORG 3380, 4350, 4423 and 4355**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| **Account 2401`2409 - Special Department Expense** | | | |
| Telephone Parts | 35,000 | 35,000 | - |
| Network & Equipment Room Parts & Supplies | 30,000 | 30,000 | - |
| **Subtotal** | **65,000** | **65,000** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| Training/Travel | 16,000 | 16,000 | - |
| Staff Technical Training | 9,880 | 9,880 | - |
| **Subtotal** | **25,880** | **25,880** | **-** |
| **S&S: Communications & IT Infrastructure** | **2,065,827** | **2,413,141** | **347,314** |

Systems Development & Support (Org 4350)

| | | | |
|---|---|---|---|
| **Account 1301`1302 - Maintenance/Repair - Equipment** | | | |
| RMS Maintenance | 20,000 | 20,000 | - |
| RMS Report Software | 10,770 | 10,770 | - |
| Internet/Intranet Support | 21,710 | 21,710 | - |
| Database Software Maintenance | 48,230 | 48,230 | - |
| Fleet STMS Maintenance | 17,000 | 17,000 | - |
| Compiler Maintenance | 1,450 | 1,450 | - |
| HRMS Consulting Services | 55,000 | 55,000 | - |
| HRMS System Maintenance | 100,000 | 100,000 | - |
| AVL, CAD2CAD Maintenance | 75,000 | 75,000 | - |
| SharePoint Admin Maintenance | 8,500 | 8,500 | - |
| Staffing Database Maintenance | 1,200 | 1,200 | - |
| CAD Software Maintenance | 386,010 | 386,010 | - |
| Smartphone Incident Notification Application | 2,400 | 2,400 | - |
| HRMS Compiler Maintenance | 1,000 | 1,000 | - |
| HRMS Utilities Maintenance | 960 | 960 | - |
| Apple Developer Enterprise | 430 | 430 | - |
| **Subtotal** | **749,660** | **749,660** | **-** |
| **Account 1801`1810 - Office Expense** | | | |
| IT Office Supplies & Software | 12,570 | 12,570 | - |
| Microsoft Software Enterprise Agreement | 425,000 | 545,455 | 120,455 |
| Pulsepoint Maintenance Contract | 40,000 | 40,000 | - |
| **Subtotal** | **477,570** | **598,025** | **120,455** |
| **Account 1901`1908 - Prof. and Specialized Services** | | | |
| Public Safety Systems Programming | 50,000 | 50,000 | - |
| Intranet/Internet Calendar Development | 50,000 | 50,000 | - |
| **Subtotal** | **100,000** | **100,000** | **-** |

**LOGISTICS DEPARTMENT**
*INFORMATION TECHNOLOGY*
**ORG 3380, 4350, 4423 and 4355**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| Travel/Training | 29,050 | 29,050 | - |
| Staff Technical Training | 12,000 | 12,000 | - |
| **Subtotal** | **41,050** | **41,050** | **-** |
| **S&S: Systems Development & Support** | **1,368,280** | **1,488,735** | **120,455** |

Communications & Workplace Support (Org 4423)

| | | | |
|---|---|---|---|
| **Account 1051 - Communications** | | | |
| Mobile Telephone Service ($7,612 is one-time only) | 699,789 | 808,402 | 108,613 |
| Paging Services - County of Orange | 38,400 | 38,400 | - |
| BC Conference Lines | 8,490 | 8,490 | - |
| On-Line Meeting Service | 12,520 | 12,520 | - |
| **Subtotal** | **759,199** | **867,812** | **108,613** |
| **Account 1301`1302 - Maintenance/Repair - Equipment** | | | |
| Communication Equipment Maintenance | 144,800 | 144,800 | - |
| High Speed Printer Maintenance | 6,230 | 6,230 | - |
| Help Desk Software Maintenance | 22,000 | 22,000 | - |
| QPCS - AVL System Management Service | 6,630 | 6,630 | - |
| **Subtotal** | **179,660** | **179,660** | **-** |
| **Account 1801`1810 - Office Expense** | | | |
| Packing & Office Supplies/Equipment Storage | 67,570 | 67,570 | - |
| Annual Software and Small Equipment Purchases | 20,000 | 20,000 | - |
| **Subtotal** | **87,570** | **87,570** | **-** |
| **Account 1901`1908 - Prof. and Specialized Services** | | | |
| Staffing Timekeeping Maintenance | 351,500 | 351,500 | - |
| Comm. Installation/Vehicle Replacement | 190 | 190 | - |
| **Subtotal** | **351,690** | **351,690** | **-** |
| **Account 2201 - Rents and Leases - Facilities** | | | |
| CHF Repeater Site Leases | 7,000 | 7,000 | - |
| **Subtotal** | **7,000** | **7,000** | **-** |
| **Account 2301`2309 - Small Tools and Instruments** | | | |
| Miscellaneous Parts/Tech Tools/Supplies | 5,500 | 5,500 | - |
| **Subtotal** | **5,500** | **5,500** | **-** |

**LOGISTICS DEPARTMENT**
*INFORMATION TECHNOLOGY*
**ORG 3380, 4350, 4423 and 4355**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| **Account 2401`2409 - Special Dept. Expense** | | | |
| Fabrication and Supplies | 150,000 | 150,000 | - |
| **Subtotal** | **150,000** | **150,000** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| Training | 6,000 | 6,000 | - |
| **Subtotal** | **6,000** | **6,000** | **-** |
| **S&S: Communications & Workplace Support** | **1,546,619** | **1,655,232** | **108,613** |
| GIS & Mapping (Org 4355) | | | |
| **Account 1301`1302 - Maintenance/Repair - Equipment** | | | |
| Miscellaneous Software Maintenance | 3,970 | 3,970 | - |
| Win 2 Data Subscription | 1,000 | 1,000 | - |
| Geospatial Software Maintenance | 85,000 | 85,000 | - |
| Digital Pen | 750 | 750 | - |
| **Subtotal** | **90,720** | **90,720** | **-** |
| **Account 1801`1810 - Office Expense** | | | |
| Office/Printer Supplies | 13,160 | 13,160 | - |
| Compucom | 1,110 | 1,110 | - |
| **Subtotal** | **14,270** | **14,270** | **-** |
| **Account 1901`1908 - Prof. and Specialized Services** | | | |
| ESRI Professional Services | 10,000 | 10,000 | - |
| Geospatial Professional Services | 50,000 | 50,000 | - |
| **Subtotal** | **60,000** | **60,000** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| Travel | 10,000 | 10,000 | - |
| Training | 11,180 | 11,180 | - |
| **Subtotal** | **21,180** | **21,180** | **-** |
| **S&S: GIS & Mapping** | **186,170** | **186,170** | **-** |
| **Total S&S: Information Technology** | **5,166,896** | **5,743,278** | **576,382** |

**LOGISTICS DEPARTMENT**
*PROPERTY MANAGEMENT*
**SUB-FUND 12150 - ORG 3365 and M Orgs**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| Property Management (Org 3365) | | | |
| **Account 1151 - Household Expenses** | | | |
| Appliances Replacement | 25,000 | 99,075 | 74,075 |
| Furniture Replacement | 25,000 | 99,075 | 74,075 |
| **Subtotal** | **50,000** | **198,150** | **148,150** |
| **Account 1301`1302 - Maintenance/Repair - Equipment** | | | |
| Air Compressor Maintenance & Repairs | 5,000 | 9,050 | 4,050 |
| Exhaust Collection System Maintenance | 75,000 | 135,800 | 60,800 |
| Fire Alarm Systems Maintenance | 25,000 | 45,250 | 20,250 |
| Appliances - Service and Repairs | 30,000 | 54,300 | 24,300 |
| Generator Maintenance & Repairs | 49,500 | 89,600 | 40,100 |
| AST Fuel Maintenance & Repairs | 40,000 | 72,400 | 32,400 |
| Fire Props | 35,000 | 63,350 | 28,350 |
| Miscellaneous Equipment Maintenance | 5,000 | 9,050 | 4,050 |
| **Subtotal** | **264,500** | **478,800** | **214,300** |
| **Account 1402 - Building Maintenance/Repair** | | | |
| Apparatus Doors Service and Repairs | 120,000 | 158,950 | 38,950 |
| Building Systems Service and Repairs | 150,000 | 198,680 | 48,680 |
| Electrical Repairs | 50,000 | 66,230 | 16,230 |
| Plumbing Repairs | 150,000 | 198,690 | 48,690 |
| Flooring Repairs | 35,000 | 46,360 | 11,360 |
| One-time Purchase Orders & Direct Pays | 230,000 | 304,650 | 74,650 |
| Painting (Partial Interior and Exterior) | 30,000 | 39,740 | 9,740 |
| Roof Systems Service and Repairs | 40,000 | 52,980 | 12,980 |
| Repair and Maintenance | 230,225 | 304,955 | 74,730 |
| Scheduled Maintenance, Renovation & Replacement | 350,000 | 463,600 | 113,600 |
| Fire Station Alterations & Improvements | 250,000 | 331,140 | 81,140 |
| **Subtotal** | **1,635,225** | **2,165,975** | **530,750** |
| **Account 1406 - Building Services** | | | |
| RFOTC Maintenance & Custodial Services | 175,000 | 231,800 | 56,800 |
| Pest Control | 40,000 | 52,980 | 12,980 |
| **Subtotal** | **215,000** | **284,780** | **69,780** |
| **Account 1407 - Grounds** | | | |
| Grounds Maintenance | 90,000 | 119,215 | 29,215 |
| Signage | 1,000 | 1,330 | 330 |
| Surface Repairs | 2,000 | 2,650 | 650 |
| Fencing and Gates Repairs | 5,000 | 6,650 | 1,650 |
| **Subtotal** | **98,000** | **129,845** | **31,845** |

**LOGISTICS DEPARTMENT**
*PROPERTY MANAGEMENT*
**SUB-FUND 12150 - ORG 3365 and M Orgs**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| **Account 1801`1810 - Office Expense** | | | |
| Office Supplies | 1,233 | 1,230 | (3) |
| **Subtotal** | **1,233** | **1,230** | **(3)** |
| **Account 1901`1908 - Prof. and Specialized Services** | | | |
| US&R Warehouse-Security Service | 3,000 | 3,000 | - |
| US&R Warehouse-Common Area Maintenance (CAM) | 20,000 | 20,000 | - |
| **Subtotal** | **23,000** | **23,000** | **-** |
| **Account 2201 - Rents and Leases - Facilities** | | | |
| Station# 6, & 36 - Irvine | 2 | - | (2) |
| Station# 13 - La Palma | 1 | - | (1) |
| Station# 17 - Tri-Cities | 1 | - | (1) |
| Station# 18 - Trabuco | 1 | - | (1) |
| Station# 37 & 43 - Tustin | 2 | - | (2) |
| Station# 41 - Fullerton, Hangar Lease | 85,000 | 85,000 | - |
| Station# 41 - Fullerton, Tower | 25,000 | 25,000 | - |
| Station# 44 & 48 - Seal Beach | 2 | - | (2) |
| Station# 46 - Stanton | 1 | - | (1) |
| Station# 50, 59 & 60 - San Clemente | 3 | - | (3) |
| Station# 61, 62 & 63 - Buena Park | 3 | - | (3) |
| Station# 64, 65 & 66 - Westminster | 3 | - | (3) |
| Station# 70, 71, 72, 73, 74, 75, 76, 77, 78 & 79-Santa Ana | 10 | 10 | - |
| Station# 80, 81, 82, 83, 84, 85, 86 - Garden Grove | 7 | 10 | 3 |
| **Subtotal** | **110,036** | **110,020** | **(16)** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| Staff Development and Training | 1,000 | 1,000 | - |
| **Subtotal** | **1,000** | **1,000** | **-** |
| **Account 2801`2805 - Utilities** | | | |
| Liquid Propane Gas (LPG) | 8,500 | 11,110 | 2,610 |
| Trash Collection | 180,000 | 235,340 | 55,340 |
| Gas | 90,000 | 117,670 | 27,670 |
| Electricity | 1,700,000 | 2,222,645 | 522,645 |
| Water | 300,000 | 392,235 | 92,235 |
| **Subtotal** | **2,278,500** | **2,979,000** | **700,500** |
| **Account 3701 - Taxes and Assessments** | | | |
| Sewer Assessment | 30,000 | 30,000 | - |
| **Subtotal** | **30,000** | **30,000** | **-** |
| **S&S: Property Management** | **4,706,494** | **6,401,800** | **1,462,056** |

**LOGISTICS DEPARTMENT**
*PROPERTY MANAGEMENT*
**SUB-FUND 12150 - ORG 3365 and M Orgs**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| Cash Contract Cities - John Wayne Airport (Org M033) | | | |
| **Account 1402 - Building Maintenance/Repair** | | | |
| Cash Contract Cities - JWA FS33 | 10,000 | 10,000 | - |
| **Subtotal** | **10,000** | **10,000** | **-** |
| Cash Contract Cities - Tustin (Org M200) | | | |
| **Account 1402 - Building Maintenance/Repair** | | | |
| Cash Contract Cities - Tustin | 20,000 | 30,000 | 10,000 |
| **Subtotal** | **20,000** | **30,000** | **10,000** |
| Cash Contract Cities - Seal Beach (Org M300) | | | |
| **Account 1402 - Building Maintenance/Repair** | | | |
| Cash Contract Cities - Seal Beach | 20,000 | 30,000 | 10,000 |
| **Subtotal** | **20,000** | **30,000** | **10,000** |
| Cash Contract Cities - Stanton (Org M400) | | | |
| **Account 1402 - Building Maintenance/Repair** | | | |
| Cash Contract Cities - Stanton | 10,000 | 15,000 | 5,000 |
| **Subtotal** | **10,000** | **15,000** | **5,000** |
| Cash Contract Cities - San Clemente (Org M500) | | | |
| **Account 1402 - Building Maintenance/Repair** | | | |
| Cash Contract Cities - San Clemente | 30,000 | 45,000 | 15,000 |
| **Subtotal** | **30,000** | **45,000** | **15,000** |
| Cash Contract Cities - Buena Park (Org M600) | | | |
| **Account 1402 - Building Maintenance/Repair** | | | |
| Cash Contract Cities - Buena Park | 30,000 | 45,000 | 15,000 |
| **Subtotal** | **30,000** | **45,000** | **15,000** |

**LOGISTICS DEPARTMENT**
*PROPERTY MANAGEMENT*
**SUB-FUND 12150 - ORG 3365 and M Orgs**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| Cash Contract Cities - Westminster (Org M700) | | | |
| **Account 1402 - Building Maintenance/Repair** | | | |
| Cash Contract Cities - Westminster | 30,000 | 45,000 | 15,000 |
| **Subtotal** | **30,000** | **45,000** | **15,000** |
| Cash Contract Cities - Santa Ana (Org M800) | | | |
| **Account 1402 - Building Maintenance/Repair** | | | |
| Cash Contract Cities - Santa Ana | 100,000 | 150,000 | 50,000 |
| **Subtotal** | **100,000** | **150,000** | **50,000** |
| Cash Contract Cities - Garden Grove (Org M810) | | | |
| **Account 1402 - Building Maintenance/Repair** | | | |
| Cash Contract Cities - Garden Grove | 70,000 | 105,000 | 35,000 |
| **Subtotal** | **70,000** | **105,000** | **35,000** |
| **Total S&S: Property Management** | **5,026,494** | **6,876,800** | **1,850,306** |

**LOGISTICS DEPARTMENT**
*SERVICE CENTER*
**ORG 4410 & 4419**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| Service Center (Org 4410) | | | |
| **Account 1301`1302 - Maintenance/Repair - Equipment** | | | |
| Air Fill Station Repair | 9,000 | 9,000 | - |
| Lift Truck Maintenance | 2,000 | 2,000 | - |
| Welding Gases | 1,600 | 1,600 | - |
| **Subtotal** | **12,600** | **12,600** | **-** |
| **Account 1601 - Memberships** | | | |
| Costco Memberships | 170 | 170 | - |
| SAFER Memberships | 50 | 75 | 25 |
| **Subtotal** | **220** | **245** | **25** |
| **Account 1801`1810 - Office Expense** | | | |
| Office Equipment Controlled | 3,000 | 3,000 | - |
| **Subtotal** | **3,000** | **3,000** | **-** |
| **Account 1901`1908 - Prof. and Specialized Services** | | | |
| Quantitative SCBA Fit Testing | 25,000 | 30,000 | 5,000 |
| **Subtotal** | **25,000** | **30,000** | **5,000** |
| **Account 2301`2309 - Small Tools and Instruments** | | | |
| Miscellaneous Small Tools | 1,000 | 1,000 | - |
| **Subtotal** | **1,000** | **1,000** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| Transportation/Travel (Safer Meetings) | 250 | 250 | - |
| Training Registration Fees | 2,000 | 2,000 | - |
| Miscellaneous Training | 2,000 | 2,000 | - |
| **Subtotal** | **4,250** | **4,250** | **-** |
| **S&S: Service Center** | **46,070** | **51,095** | **5,025** |

**LOGISTICS DEPARTMENT**
*SERVICE CENTER*
**ORG 4410 & 4419**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| Inventory - Service Center (Org 4419) | | | |
| **Account 1001`1003 - Clothing and Personal Supplies** | | | |
| Boot Reimbursement | 15,000 | 15,000 | - |
| Rain Suits | 1,500 | 1,500 | - |
| Safety Clothing - Academy ($253,119 is one-time only) | 226,420 | 507,714 | 281,294 |
| Safety Clothing - Structure | 290,000 | 320,000 | 30,000 |
| Safety Clothing - Wildland | 70,000 | 70,000 | - |
| Safety Clothing - Gloves, FF PPE Ensemble | 8,000 | 8,000 | - |
| Safety Clothing - FF Structural Gloves | 68,500 | 68,500 | - |
| Turnout Cleaning & Repair | 143,000 | 143,000 | - |
| Helmets | 60,000 | 60,000 | - |
| Uniforms | 567,000 | 567,000 | - |
| Uniforms - City of Irvine HCFF | 18,700 | 18,700 | - |
| **Subtotal** | **1,468,120** | **1,779,414** | **311,294** |
| **Account 1101 - Food** | | | |
| Food - In County Incidents | 23,000 | 30,000 | 7,000 |
| Emergency Food Supplies | 12,000 | 15,000 | 3,000 |
| **Subtotal** | **35,000** | **45,000** | **10,000** |
| **Account 1151 - Household Expenses** | | | |
| Household Supplies | 158,910 | 158,910 | - |
| Miscellaneous Household | 10,000 | 10,000 | - |
| Mattress Pads | 2,000 | 2,000 | - |
| **Subtotal** | **170,910** | **170,910** | **-** |
| **Account 1301`1302 - Maintenance/Repair - Equipment** | | | |
| Breathing Apparatus Repair Parts/Service | 65,000 | 65,000 | - |
| SCBA Cylinder Hydrostatic Testing | 12,000 | 12,000 | - |
| Fire Extinguisher Service | 10,000 | 10,000 | - |
| Hurst Tool Repair | 20,000 | 20,000 | - |
| Safety Ladder Inspection & Testing | 35,000 | 35,000 | - |
| Small Engine Repair | 15,000 | 15,000 | - |
| Vehicle Wax | 14,000 | 14,000 | - |
| Thermal Imaging Camera Repair/Battery Replacement | 30,000 | 30,000 | - |
| **Subtotal** | **201,000** | **201,000** | **-** |
| **Account 1501`1509 - Medical Supplies and Equipment** | | | |
| Medical Oxygen | 10,000 | 10,000 | - |
| **Subtotal** | **10,000** | **10,000** | **-** |

**LOGISTICS DEPARTMENT**
*SERVICE CENTER*
**ORG 4410 & 4419**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| **Account 1801`1810 - Office Expense** | | | |
| Business Cards | 6,500 | 6,000 | (500) |
| Business Forms | 1,000 | 1,000 | - |
| Copy Paper | 25,000 | 25,000 | - |
| Engraving | 1,000 | 1,000 | - |
| Envelopes | 5,000 | 5,000 | - |
| FAX Supplies | 500 | 500 | - |
| Office Supplies | 15,000 | 15,000 | - |
| Printer Supplies | 6,830 | 6,830 | - |
| Rubber Stamps | 1,000 | 500 | (500) |
| Thomas Bros. Maps | 500 | 500 | - |
| **Subtotal** | **62,330** | **61,330** | **(1,000)** |
| **Account 2301`2309 - Small Tools and Instruments** | | | |
| Batteries | 3,000 | 7,500 | 4,500 |
| Miscellaneous Small Tools | 2,000 | 2,000 | - |
| Replacement Flashlights | 5,000 | 5,000 | - |
| **Subtotal** | **10,000** | **14,500** | **4,500** |
| **Account 2401`2409 - Special Department Expense** | | | |
| Hose - All Sizes | 291,460 | 291,460 | - |
| Miscellaneous Fire Equipment | 117,500 | 117,500 | - |
| Sand Bags | 9,000 | 5,000 | (4,000) |
| Miscellaneous Supplies | 1,500 | 1,500 | - |
| SCBA Voice Amplifiers | 52,000 | 45,000 | (7,000) |
| Scott Air Pack Cylinder Replacement | 150,000 | 150,000 | - |
| Sign Material | 11,000 | 20,000 | 9,000 |
| Thermal Imaging Cameras | 100,000 | 50,000 | (50,000) |
| **Subtotal** | **732,460** | **680,460** | **(52,000)** |
| **S&S: Inventory - Service Center** | **2,689,820** | **2,962,614** | **272,794** |
| **Total S&S: Service Center** | **2,735,890** | **3,013,709** | **277,819** |


FIRE
ORANGE COUNTY
CALIFORNIA
AUTHORITY
Est. 1995

**ORANGE COUNTY FIRE AUTHORITY**

*NON-DEPARTMENTAL S&S SUMMARY*

**FY 2022/23 BUDGET**

| Divisions/Sections | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| **Financial Services Controlled** | | | |
| Financial Services Controlled [1] | 2,667,048 | 2,675,048 | 8,000 |
| **Total Financial Services Controlled** | 2,667,048 | 2,675,048 | 8,000 |
| **Non-Departmental Total** | **2,667,048** | **2,675,048** | **8,000** |

Grant funding and one-time items are not included in the FY 2021/22 base budget.

[1] Expenses in Financial Services Controlled previously budgeted under Business Services - Finance.

**NON-DEPARTMENTAL**

*Financial Services Controlled*

**ORG 3379**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| **Account 1801`1810 - Office Expense** | | | |
| Office Supplies | 15,000 | 25,000 | 10,000 |
| Postage Expense | 40,000 | 20,000 | (20,000) |
| Equipment Maintenance (mailing/folding machines) | 3,000 | 3,000 | - |
| Reproduction/Printing (excl. copiers) | 28,000 | 25,000 | (3,000) |
| **Subtotal** | **86,000** | **73,000** | **(13,000)** |
| **Account 1901`1908 - Prof. and Specialized Services** | | | |
| County Islands | 199,839 | 199,839 | - |
| Property Tax Admin Fee | 2,000,000 | 2,000,000 | - |
| **Subtotal** | **2,199,839** | **2,199,839** | **-** |
| **Account 2101 - Rents and Leases - Equipment** | | | |
| Copier Rental | 184,000 | 190,000 | 6,000 |
| **Subtotal** | **184,000** | **190,000** | **6,000** |
| **Account 2601`2602 - Transportation** | | | |
| Private Mileage | 195,000 | 210,000 | 15,000 |
| **Subtotal** | **195,000** | **210,000** | **15,000** |
| **Account 3701 - Taxes and Assessments** | | | |
| State Board of Equalization - Fuel Storage Tax | 2,209 | 2,209 | - |
| **Subtotal** | **2,209** | **2,209** | **-** |
| **Total S&S: Financial Services Controlled** | **2,667,048** | **2,675,048** | **8,000** |

**ORANGE COUNTY FIRE AUTHORITY**

*OPERATIONS DEPARTMENT S&S/EQUIPMENT SUMMARY*

**FY 2022/23 BUDGET**

| Divisions/Sections | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| **Division 1** | | | |
| Division 1 - Administration | 16,269 | 16,269 | - |
| **Total Division 1** | 16,269 | 16,269 | - |
| **Division 2** | | | |
| Division 2 - Administration | 198,374 | 198,374 | - |
| **Total Division 2** | 198,374 | 198,374 | - |
| **Division 3** | | | |
| Division 3 - Administration | 25,743 | 25,743 | - |
| **Total Division 3** | 25,743 | 25,743 | - |
| **Division 4** | | | |
| Division 4 - Administration | 40,784 | 40,784 | - |
| Community Volunteer Services [1] | 27,820 | 34,596 | 6,776 |
| **Total Division 4** | 68,604 | 75,380 | 6,776 |
| **Division 5** | | | |
| Division 5 - Administration | 15,065 | 15,065 | - |
| **Total Division 5** | 15,065 | 15,065 | - |
| **Division 6** | | | |
| Division 6 - Administration [2] | 14,900 | 19,900 | 5,000 |
| **Total Division 6** | 14,900 | 19,900 | 5,000 |
| **Division 7** | | | |
| Division 7 - Administration | 16,854 | 16,854 | - |
| **Total Division 7** | 16,854 | 16,854 | - |
| **Department Total** | **355,809** | **367,585** | **11,776** |

Grant funding and one-time items are not included in the FY 2021/22 base budget.

[1] Increase due to increased cost of Reserve Fire Fighter Program Service Award.

[2] Increase due to increased office supply costs.

**OPERATIONS DEPARTMENT**
*DIVISION 1*
**ORG 0111**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| **Account 1402 - Maintenance/Repair - Buildings** | | | |
| Cal-Card | 10,470 | 10,470 | - |
| **Subtotal** | **10,470** | **10,470** | **-** |
| **Account 1801`1810 - Office Expense** | | | |
| Office Supplies | 3,399 | 3,399 | - |
| **Subtotal** | **3,399** | **3,399** | **-** |
| **Account 2401`2409 - Special Department Expense** | | | |
| Miscellaneous Expense | 2,400 | 2,400 | - |
| **Subtotal** | **2,400** | **2,400** | **-** |
| **Total S&S: Division 1** | **16,269** | **16,269** | **-** |

**OPERATIONS DEPARTMENT**
*DIVISION 2*
**ORG 0112 & 1033**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| Division 2 (Admin) (Org 0112) | | | |
| **Account 1402 - Maintenance/Repair - Buildings** | | | |
| Cal-Card | 11,000 | 11,000 | - |
| **Subtotal** | **11,000** | **11,000** | **-** |
| **Account 1801`1809 - Office Expense** | | | |
| Office Supplies | 4,161 | 4,161 | - |
| **Subtotal** | **4,161** | **4,161** | **-** |
| **Account 2401`2409 - Special Department Expense** | | | |
| Miscellaneous Expense | 2,435 | 2,435 | - |
| **Subtotal** | **2,435** | **2,435** | **-** |
| **S&S: Division 2 (Admin)** | **17,596** | **17,596** | **-** |
| Aircraft Rescue Firefighting (ARFF) (Org 1033) | | | |
| **Account 1001- Clothing and Personal Supplies** | | | |
| Proximity Suits Repair/Replacement | 17,170 | 17,170 | - |
| Hi Visibility Impact Gloves | 413 | 413 | - |
| **Subtotal** | **17,583** | **17,583** | **-** |
| **Account 1301`1302 - Maintenance/Repair - Equipment** | | | |
| SCBA Service | 1,000 | 1,000 | - |
| Crane/Tug Accessories | 750 | 750 | - |
| **Subtotal** | **1,750** | **1,750** | **-** |
| **Account 1601 - Memberships** | | | |
| ARFF Working Group | 185 | 185 | - |
| **Subtotal** | **185** | **185** | **-** |
| **Account 1801`1810 - Office Expense** | | | |
| Miscellaneous Office Expense/Subscriptions | 750 | 750 | - |
| **Subtotal** | **750** | **750** | **-** |

**OPERATIONS DEPARTMENT**
*DIVISION 2*
**ORG 0112 & 1033**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| **Account 2401`2409 - Special Department Expense** | | | |
| Specialty Equipment | 2,000 | 2,000 | - |
| **Subtotal** | **2,000** | **2,000** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| Annual FAA Training | 73,080 | 73,080 | - |
| Certifications - Crane, ARFF, EVOC-24, etc. | 85,430 | 85,430 | - |
| **Subtotal** | **158,510** | **158,510** | **-** |
| **S&S: Aircraft Rescue Firefighting** | **180,778** | **180,778** | **-** |
| **Total S&S and Equipment: Division 2** | **198,374** | **198,374** | **-** |

**OPERATIONS DEPARTMENT**
*DIVISION 3*
**ORG 0113**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| **Account 1402 - Maintenance/Repair - Buildings** | | | |
| Cal Card | 14,000 | 14,000 | - |
| **Subtotal** | **14,000** | **14,000** | **-** |
| **Account 1801`1810 - Office Expense** | | | |
| Office Supplies | 9,551 | 9,551 | - |
| **Subtotal** | **9,551** | **9,551** | **-** |
| **Account 2401`2409 - Special Department Expense** | | | |
| Miscellaneous Expense | 2,192 | 2,192 | - |
| **Subtotal** | **2,192** | **2,192** | **-** |
| **Total S&S: Division 3** | **25,743** | **25,743** | **-** |

**OPERATIONS DEPARTMENT**
*DIVISION 4*
**ORG 0114 & 1160**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| Division 4 (Admin) (Org 0114) | | | |
| **Account 1402 - Maintenance /Repair - Buildings** | | | |
| Cal Card | 13,000 | 13,000 | - |
| **Subtotal** | **13,000** | **13,000** | **-** |
| **Account 1801`1810 - Office Expense** | | | |
| Office Supplies | 7,528 | 7,528 | - |
| **Subtotal** | **7,528** | **7,528** | **-** |
| **Account 2401`2409 - Special Department Expense** | | | |
| Chaplain's Stipend | 14,400 | 14,400 | - |
| Chaplain's Program | 785 | 785 | - |
| Fire Explorer Program | 5,071 | 5,071 | - |
| **Subtotal** | **20,256** | **20,256** | **-** |
| **S&S: Division 4 (Admin)** | **40,784** | **40,784** | **-** |
| Community Volunteer Services (CVS) (Org 1160) | | | |
| **Account 2401`2409 - Special Department Expense** | | | |
| PERS Volunteer Length of Service Award | 14,224 | 21,000 | 6,776 |
| Miscellaneous Expense | 13,596 | 13,596 | - |
| **Subtotal** | **27,820** | **34,596** | **6,776** |
| **S&S: Community Volunteer Services** | **27,820** | **34,596** | **6,776** |
| **Total S&S: Division 4** | **68,604** | **75,380** | **6,776** |

**OPERATIONS DEPARTMENT**
*DIVISION 5*
**ORG 0116**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| **Account 1001'1002 - Clothing and Personal Supplies** | | | |
| Cal Card | 100 | 100 | - |
| **Subtotal** | **100** | **100** | **-** |
| **Account 1101 - Food** | | | |
| Cal Card | 100 | 100 | - |
| **Subtotal** | **100** | **100** | **-** |
| **Account 1111 - Household Expenses** | | | |
| Cal Card | 700 | 700 | - |
| **Subtotal** | **700** | **700** | **-** |
| **Account 1301'1305 - Maintenance/Repair - Equipment** | | | |
| Cal Card | 100 | 100 | - |
| **Subtotal** | **100** | **100** | **-** |
| **Account 1402 - Maintenance/Repair - Buildings** | | | |
| Cal Card | 6,000 | 6,000 | - |
| **Subtotal** | **6,000** | **6,000** | **-** |
| **Account 1801`1810 - Office Expense** | | | |
| Office Supplies | 3,800 | 3,800 | - |
| **Subtotal** | **3,800** | **3,800** | **-** |
| **Account 2301'2309 - Small Tools and Instruments** | | | |
| Cal Card | 200 | 200 | - |
| **Subtotal** | **200** | **200** | **-** |
| **Account 2401`2409 - Special Department Expense** | | | |
| Miscellaneous Expense | 3,065 | 3,065 | - |
| **Subtotal** | **3,065** | **3,065** | **-** |
| **Account 2701'2703 - Travel, Training, and Meetings** | | | |
| Cal Card | 1,000 | 1,000 | - |
| **Subtotal** | **1,000** | **1,000** | **-** |
| **Total S&S: Division 5** | **15,065** | **15,065** | **-** |

**OPERATIONS DEPARTMENT**
*DIVISION 6*
**ORG 0117**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| **Account 1402 - Maintenance/Repair - Buildings** | | | |
| Cal Card | 10,000 | 10,000 | - |
| **Subtotal** | **10,000** | **10,000** | **-** |
| **Account 1801`1810 - Office Expense** | | | |
| Office Supplies | 4,900 | 9,900 | 5,000 |
| **Subtotal** | **4,900** | **9,900** | **5,000** |
| **Total S&S: Division 6** | **14,900** | **19,900** | **5,000** |

**OPERATIONS DEPARTMENT**
*DIVISION 7*
**ORG 0115**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| **Account 1402 - Maintenance/Repair - Buildings** | | | |
| Cal Card | 7,000 | 7,000 | - |
| **Subtotal** | **7,000** | **7,000** | **-** |
| **Account 1801`1810 - Office Expense** | | | |
| Miscellaneous Expense | 7,854 | 7,854 | - |
| **Subtotal** | **7,854** | **7,854** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| Training and Travel | 2,000 | 2,000 | - |
| **Subtotal** | **2,000** | **2,000** | **-** |
| **Total S&S: Division 7** | **16,854** | **16,854** | **-** |


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CALIFORNIA
AUTHORITY
Est. 1995

**ORANGE COUNTY FIRE AUTHORITY**

*SPECIAL OPERATIONS DIVISION S&S/EQUIPMENT SUMMARY*

**FY 2022/23 BUDGET**

| Divisions/Sections | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| **Special Operations Division Admin** | | | |
| Special Operations Division Admin | 41,042 | 41,042 | - |
| **Total Special Operations Division Admin** | 41,042 | 41,042 | - |
| **Air & Wildland Operations** | | | |
| Air Operations [1] | 1,068,646 | 1,592,646 | 524,000 |
| Drone Program | 35,000 | 35,000 | - |
| Wildland Operations Admin | 10,000 | 10,000 | - |
| Crews & Equipment | 71,931 | 71,931 | - |
| **Total Air & Wildland Operations** | 1,185,577 | 1,709,577 | 524,000 |
| **Urban Search & Rescue** | | | |
| Urban Search & Rescue | 112,457 | 112,457 | - |
| **Total Urban Search & Rescue** | 112,457 | 112,457 | - |
| **Hazardous Materials Program** | | | |
| Hazardous Materials Program | 130,381 | 130,381 | - |
| **Total Hazardous Materials Program** | 130,381 | 130,381 | - |
| **Investigations** | | | |
| Investigations | 266,963 | 266,963 | - |
| **Total Investigations Program** | 266,963 | 266,963 | - |
| **Department Total** | **1,736,420** | **2,260,420** | **524,000** |

Grant funding and one-time items are not included in the FY 2020/21 base budget.
[1] Increase to cover one-time cost of 5-year inspection and maintenance for HC1.

**SPECIAL OPERATIONS DIVISION**

*SPECIAL OPERATIONS DIVISION ADMIN*

**ORG 0118**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| **Account 1001- Clothing and Personal Supplies** | | | |
| Clothing and Personal Supplies | 2,000 | 2,000 | - |
| **Subtotal** | **2,000** | **2,000** | **-** |
| **Account 1101 - Food** | | | |
| Emergency Food | 15,042 | 15,042 | - |
| **Subtotal** | **15,042** | **15,042** | **-** |
| **Account 1801`1810 - Office Expense** | | | |
| Miscellaneous Office Expense/Subscriptions | 3,000 | 3,000 | - |
| **Subtotal** | **3,000** | **3,000** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| FIRESCOPE / CICCS / IMT Travel and Training | 21,000 | 21,000 | - |
| **Subtotal** | **21,000** | **21,000** | **-** |
| **Total S&S: Special Operations Division Admin** | **41,042** | **41,042** | **-** |

**SPECIAL OPERATIONS DIVISION**
*AIR & WILDLAND OPERATIONS*
**ORG 1167, 1191, 1153, 1150 & 1152**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| Air Operations (Org 1167) | | | |
| **Account 1001 - Clothing and Personal Supplies** | | | |
| Flight Safety Equipment | 42,000 | 42,000 | - |
| Shop Rags/Uniforms (Service) | 1,117 | 1,117 | - |
| **Subtotal** | **43,117** | **43,117** | **-** |
| **Account 1301`1302 - Maintenance/Repair - Equipment** | | | |
| Miscellaneous Aviation Parts | 502,099 | 1,026,099 | 524,000 |
| Supplemental Maintenance Cost | 19,673 | 19,673 | - |
| Waste Oil & Fuel Disposal | 1,000 | 1,000 | - |
| Parts Cleaner Solvent Tank | 1,197 | 1,197 | - |
| Component Overhaul | 35,000 | 35,000 | - |
| Avionics Repair | 10,144 | 10,144 | - |
| **Subtotal** | **569,113** | **1,093,113** | **524,000** |
| **Account 1402 - Maintenance/Repair - Buildings** | | | |
| Miscellaneous Maintenance | 1,000 | 1,000 | - |
| **Subtotal** | **1,000** | **1,000** | **-** |
| **Account 1601 - Memberships** | | | |
| Helicopter Association | 1,000 | 1,000 | - |
| **Subtotal** | **1,000** | **1,000** | **-** |
| **Account 1801`1810 - Office Expense** | | | |
| Subscription & Manual | 5,042 | 5,042 | - |
| Office Supplies & Equipment | 3,000 | 3,000 | - |
| **Subtotal** | **8,042** | **8,042** | **-** |
| **Account 2301`2309 - Small Tools and Instruments** | | | |
| Specialized Maintenance Tools | 8,250 | 8,250 | - |
| Hand Tools & Shop Equipment | 1,500 | 1,500 | - |
| **Subtotal** | **9,750** | **9,750** | **-** |
| **Account 2401`2409 - Special Department Expense** | | | |
| Fire Retardants | 1,500 | 1,500 | - |
| Safety Management System Template | 6,000 | 6,000 | - |
| Helicopter Camera System | 4,000 | 4,000 | - |
| Ropes & Rigging, Body Harness | 15,000 | 15,000 | - |
| **Subtotal** | **26,500** | **26,500** | **-** |
| **Account 2601`2602 - Transportation** | | | |
| Jet A Fuel | 137,123 | 137,123 | - |
| Jet Fuel Credit Cards | 5,000 | 5,000 | - |
| **Subtotal** | **142,123** | **142,123** | **-** |

**SPECIAL OPERATIONS DIVISION**
*AIR & WILDLAND OPERATIONS*
**ORG 1167, 1191, 1153, 1150 & 1152**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| Travel for Helicopter Training | 9,694 | 9,694 | - |
| Flight Safety Training | 134,307 | 134,307 | - |
| **Subtotal** | **144,001** | **144,001** | **-** |
| **S&S: Air Operations** | **944,646** | **1,468,646** | **524,000** |
| ***EQUIPMENT EXPENSE:*** | | | |
| Air Operations (Org 1167) | | | |
| **Account 4000 Equipment** | | | |
| Helicopter Components | 124,000 | 124,000 | - |
| **Subtotal** | **124,000** | **124,000** | **-** |
| **Equipment: Air Operations** | **124,000** | **124,000** | **-** |
| **Total S&S and Equipment: Air Operations** | **1,068,646** | **1,592,646** | **524,000** |
| Drone Program (Org 1191) | | | |
| **Account 2301~2309 Small Tools and Instruments** | | | |
| Drone Program - Hardware Acquisition | 25,000 | 25,000 | - |
| **Subtotal** | **25,000** | **25,000** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| Drone Program - Expertise Training | 10,000 | 10,000 | - |
| **Subtotal** | **10,000** | **10,000** | **-** |
| **Total S&S: Drone Program** | **35,000** | **35,000** | **-** |
| Wildland Operations Admin (Org 1153) | | | |
| **Account 2401`2409 - Special Department Expense** | | | |
| Special Department Expense | 10,000 | 10,000 | - |
| **Subtotal** | **10,000** | **10,000** | **-** |
| **Total S&S: Wildland Operations Admin** | **10,000** | **10,000** | **-** |
| *Santiago Crew (Org 1152)* | | | |
| **Account 1001 - Clothing and Personal Supplies** | | | |
| Crew Protective Clothing | 10,300 | 10,300 | - |
| **Subtotal** | **10,300** | **10,300** | **-** |
| **Account 1101 - Food** | | | |
| Hydration for Staff | 3,000 | 3,000 | - |
| **Subtotal** | **3,000** | **3,000** | **-** |

**SPECIAL OPERATIONS DIVISION**

*AIR & WILDLAND OPERATIONS*

**ORG 1167, 1191, 1153, 1150 & 1152**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| **Account 1301`1305 - Maintenance/Repair - Equipment** | | | |
| Other Equipment Maintenance/Repair | 10,000 | 10,000 | - |
| **Subtotal** | **10,000** | **10,000** | **-** |
| **Account 1801`1810 - Office Expense** | | | |
| Miscellaneous Office Supplies | 128 | 128 | - |
| **Subtotal** | **128** | **128** | **-** |
| **Account 2101 - Rents and Leases - Equipment** | | | |
| Miscellaneous Rental Expense | 1,000 | 1,000 | - |
| **Subtotal** | **1,000** | **1,000** | **-** |
| **Account 2301`2309 - Small Tools and Instruments** | | | |
| Hand Tools | 22,000 | 22,000 | - |
| **Subtotal** | **22,000** | **22,000** | **-** |
| **Account 2401`2409 - Special Department Expense** | | | |
| Special Department Expense | 10,000 | 10,000 | - |
| **Subtotal** | **10,000** | **10,000** | **-** |
| **S&S: Santiago Crew** | **56,428** | **56,428** | **-** |
| *Heavy Fire Equipment (Org 1150)* | | | |
| **Account 1301`1305 - Maintenance/Repair - Equipment** | | | |
| Maintenance - Specialized Equipment | 5,000 | 5,000 | - |
| **Subtotal** | **5,000** | **5,000** | **-** |
| **Account 2301`2309 - Small Tools and Instruments** | | | |
| Miscellaneous Small Tools | 10,503 | 10,503 | - |
| **Subtotal** | **10,503** | **10,503** | **-** |
| **S&S: Heavy Fire Equipment** | **15,503** | **15,503** | **-** |
| **Total S&S: Crews and Equipment** | **71,931** | **71,931** | **-** |
| **Total S&S and Equipment: Air & Wildland Operations** | **1,185,577** | **1,709,577** | **524,000** |

**SPECIAL OPERATIONS DIVISION**
*URBAN SEARCH & RESCUE*
**ORG 1165 & 1171**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| Urban Search and Rescue (Org 1165 - Funded by OCFA) | | | |
| **Account 1001 - Clothing and Personal Supplies** | | | |
| Safety Clothing | 15,400 | 15,400 | - |
| **Subtotal** | **15,400** | **15,400** | **-** |
| **Account 1301`1302 - Maintenance/Repair - Equipment** | | | |
| Calibration-Monitor & Equip | 1,200 | 1,200 | - |
| Miscellaneous Equipment Repairs | 5,000 | 5,000 | - |
| Fabrication Materials/Supply | 3,000 | 3,000 | - |
| **Subtotal** | **9,200** | **9,200** | **-** |
| **Account 2301`2309 - Small Tools and Instruments** | | | |
| Small Tool Purchase/Replacement | 32,000 | 32,000 | - |
| **Subtotal** | **32,000** | **32,000** | **-** |
| **Account 2401`2409 - Special Department Expense** | | | |
| Miscellaneous Special Department Expense | 3,300 | 3,300 | - |
| **Subtotal** | **3,300** | **3,300** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| US&R Meetings and Training | 23,450 | 23,450 | - |
| **Subtotal** | **23,450** | **23,450** | **-** |
| **S&S: US&R** (Funded by OCFA) | **83,350** | **83,350** | **-** |
| Swift Water Rescue (Org 1171) | | | |
| **Account 1001 - Clothing and Personal Supplies** | | | |
| Replacement | 1,500 | 1,500 | - |
| **Subtotal** | **1,500** | **1,500** | **-** |
| **Account 2401`2409 - Special Department Expense** | | | |
| Miscellaneous Special Department Expense | 23,607 | 23,607 | - |
| **Subtotal** | **23,607** | **23,607** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| Transportation & Travel | 4,000 | 4,000 | - |
| **Subtotal** | **4,000** | **4,000** | **-** |
| **S&S: Swift Water Rescue** | **29,107** | **29,107** | **-** |
| **Total S&S: Urban Search & Rescue** | **112,457** | **112,457** | **-** |

**SPECIAL OPERATIONS DIVISION**
*HAZARDOUS MATERIALS PROGRAM*
**ORG 1170**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| **Account 1001- Clothing and Personal Supplies** | | | |
| Safety Supply America Corp | 4,058 | 4,058 | - |
| Safety West | 3,044 | 3,044 | - |
| Biological Protective Equipment/WMD PPE | 15,216 | 15,216 | - |
| HMT Level "A" Suits | 12,232 | 12,232 | - |
| **Subtotal** | **34,550** | **34,550** | **-** |
| **Account 1301`1302 - Maintenance/Repair - Equipment** | | | |
| Repair/Maintenance of Haz Mat Equipment | 40,213 | 40,213 | - |
| **Subtotal** | **40,213** | **40,213** | **-** |
| **Account 1501`1509 - Medical Supplies and Equipment** | | | |
| Lab Supplies | 9,900 | 9,900 | - |
| **Subtotal** | **9,900** | **9,900** | **-** |
| **Account 1801`1810 - Office Expense** | | | |
| TOMES Database Program Subscription | 3,080 | 3,080 | - |
| **Subtotal** | **3,080** | **3,080** | **-** |
| **Account 2301`2309 - Small Tools and Instruments** | | | |
| Small Tools & Equipment | 1,141 | 1,141 | - |
| Tetracore Biological Tickets | 3,964 | 3,964 | - |
| **Subtotal** | **5,105** | **5,105** | **-** |
| **Account 2401`2409 - Special Department Expense** | | | |
| In-Suit Radios | 6,480 | 6,480 | - |
| **Subtotal** | **6,480** | **6,480** | **-** |
| **Account 2701`2703 - Travel, Training and Meetings** | | | |
| HMT Transportation and Travel | 6,000 | 6,000 | - |
| HMT Technician/Specialist Training | 23,253 | 23,253 | - |
| Ontario Training | 1,800 | 1,800 | - |
| **Subtotal** | **31,053** | **31,053** | **-** |
| **Total S&S: Hazardous Materials Program** | **130,381** | **130,381** | **-** |

**SPECIAL OPERATIONS DIVISION**
*INVESTIGATIONS*
**ORG 4320**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 Base Budget |
|---|---|---|---|
| ***SERVICES & SUPPLIES:*** | | | |
| **Account 1001`1003 - Clothing and Personal Supplies** | | | |
| Protection Clothing and Polo Shirts | 8,000 | 8,000 | - |
| **Subtotal** | **8,000** | **8,000** | **-** |
| **Account 1301`1305 - Maintenance/Repair - Equipment** | | | |
| Equipment Repair and Calibration | 1,000 | 1,000 | - |
| Investigation Equipment | 1,000 | 1,000 | - |
| **Subtotal** | **2,000** | **2,000** | **-** |
| **Account 1601 - Memberships** | | | |
| CA Conf. of Arson Investigators | 360 | 360 | - |
| 6 Fire Arson Group, OCFCA | 225 | 225 | - |
| International Assoc. of Arson Investigators | 900 | 900 | - |
| **Subtotal** | **1,485** | **1,485** | **-** |
| **Account 1801`1810 - Office Expense** | | | |
| Miscellaneous Office Supplies | 2,734 | 2,734 | - |
| Office Supplies (former EPAC supplies) | 3,350 | 3,350 | - |
| **Subtotal** | **6,084** | **6,084** | **-** |
| **Account 1902`1908 - Prof. and Specialized Services** | | | |
| Sheriff - Range & Ammo Fees | 800 | 800 | - |
| Expert Services | 8,194 | 8,194 | - |
| Irvine Arson Abatement Officer Contract | 190,000 | 190,000 | - |
| Sheriff - CLET Fees | 600 | 600 | - |
| **Subtotal** | **199,594** | **199,594** | **-** |
| **Account 2401`2409 - Special Department Expense** | | | |
| Small Tools and Equipment | 9,200 | 9,200 | - |
| Books, Legal Updates | 2,000 | 2,000 | - |
| Miscellaneous Small Tools (former EPAC supplies) | 1,100 | 1,100 | - |
| Canine Expenses and Equipment | 10,500 | 10,500 | |
| **Subtotal** | **22,800** | **22,800** | **-** |
| **Account 2701`2703 Travel, Training and Meetings** | | | |
| Officer Safety | 8,000 | 8,000 | - |
| CCAI Conference | 4,000 | 4,000 | - |
| Specialized Training | 15,000 | 15,000 | - |
| **Subtotal** | **27,000** | **27,000** | **-** |
| **Total S&S: Investigations** | **266,963** | **266,963** | **-** |

# Capital Improvement Plan Overview

## Introduction

The Orange County Fire Authority's Capital Improvement Program (CIP) has been reviewed and updated through FY 2026/27 to coincide with the FY 2022/23 Budget. The proposed FY 2022/23 CIP budget is $27.0M.

The proposed CIP budget for FY 2022/23 reflects an increase of $5.9M compared to the prior five-year CIP budget of $21.1M. Projects scheduled for FY 2022/23 include fire station alarm upgrades ($3.0M), the OCFA disaster recovery co-location facility ($2.9M), station bathroom inclusive facilities ($2.1M), various fire station remodels and upgrades ($1.4M), replacement of the CRR IFP records management system ($1.3M), development of the EMS enterprise computer system ($1.3M), purchase of four Type I engines ($3.1M), 47 support vehicles ($3.0M), two Type III engines ($1.4M), and eight BC command vehicles ($1.3M).

## CIP Funds

The OCFA's five-year CIP is organized into four funds. A description of each fund is located in each section. Major funding sources for the CIP include operating transfers from the General Fund, developer contributions, contracts with member cities, and interest earnings. Lease Purchase Financing Agreements can also provide cash flow funding for the CIP when used. Currently, projects are primarily funded through General Fund transfers and fund balance.

# CIP Highlights

## Fund 12110 – General Fund CIP

**FY 2022/23 Budget Request - $9.0M includes:**

- $3.0M for fire station alarm system upgrades
- $2.1M for station bathroom inclusive facilities
- $750K for three to five fire station remodels and upgrades
- $678K for all-band mobile and portable radios
- $500K for enterprise phone and public address system upgrade
- $350K for data storage and servers replacement

## Fund 123 – Fire Stations and Facilities

**FY 2022/23 Budget Request - $0.9M includes:**

- $300K for upgrades to Fire Station 18 (Trabuco Canyon)
- $250K for RFOTC training grounds expansion and upgrade
- $200K for infrastructure security enhancements

## Fund 124 – Communications & Information Systems

**FY 2022/23 Budget Request - $6.1M includes:**

- $2.9M for OCFA disaster recovery co-location facility
- $1.3M for EMS enterprise system development
- $1.3M for CRR automation-IFP records management system
- $400K for OCFA enterprise audio visual upgrades

## Fund 133 – Fire Apparatus

**FY 2022/23 Budget Request - $11.0M includes:**

- Emergency vehicles include four Type I engines ($3.1M), two Type III engines ($1.4M), eight BC command vehicles ($1.3M), four technical rescue support vehicles ($550K), two paramedic squads ($459K), and five full-size SUVs ($385K)
- Support vehicles include 42 vehicles for support staff ($3.0M)

**ORANGE COUNTY FIRE AUTHORITY**
CAPITAL IMPROVEMENT PROGRAM
**FIVE-YEAR PLAN SUMMARY FY 2022/23 - FY 2026/27**

| Fund | FY 2022/23 | FY 2023/24 | FY 2024/25 | FY 2025/26 | FY 2026/27 | 5-Yr Total |
|---|---|---|---|---|---|---|
| ***Fund 12110*** **General Fund CIP** | $9,009,650 | $9,460,500 | $11,394,000 | $7,676,500 | $8,051,000 | $45,591,650 |
| ***Fund 123*** **Fire Stations and Facilities** | 875,000 | 3,700,000 | 5,200,000 | 24,200,000 | 4,550,000 | 38,525,000 |
| ***Fund 124*** **Communications and Information Systems** | 6,100,000 | 5,100,000 | 1,302,000 | 1,900,000 | 10,000,000 | 24,402,000 |
| ***Fund 133*** **Fire Apparatus** | 11,015,700 | 5,448,360 | 13,312,930 | 15,660,190 | 20,488,210 | 65,925,390 |
| **GRAND TOTAL** | $27,000,350 | $23,708,860 | $31,208,930 | $49,436,690 | $43,089,210 | $174,444,040 |

**ORANGE COUNTY FIRE AUTHORITY**

CAPITAL IMPROVEMENT PROGRAM

**FIVE-YEAR PLAN PROJECT LISTING**

| Item No. | Project Priority | Project | Adjusted FY 2021/22 |
|---|---|---|---|
| | | GENERAL FUND CIP - FUND 12110 | |
| | | ***IT-Communications and IT Infrastructure*** | |
| 1 | A | Data Storage and Servers Replacement | 83,655 |
| 2 | A | Fire Station Alarm System Upgrades | 1,680,661 |
| 3 | A | RFOTC and Fire Station Data Network Upgrades | 357,629 |
| 4 | A | Enterprise Phone and Public Address Systems Upgrade | 1,399,555 |
| 5 | CY | RFOTC Uninterruptible Power System (UPS) Replacement | 459,438 |
| | | ***IT-Communications and Workplace Support*** | |
| 6 | A | All-Band Mobile and Portable Radios | 347,578 |
| 7 | A | Small Equipment/Personal Communications | 96,559 |
| 8 | A | Personal Computer (PC)/Tablets/Printer Replacements | 295,329 |
| 9 | A | Mobile Data Computer (MDC) System | 565,824 |
| 10 | A | VHF Radios | 1,541,043 |
| | | ***IT-Geographic Information System*** | |
| 11 | B | Digital Orthophotography | 17,725 |
| | | ***Property Management*** | |
| 12 | A | Station Bathroom Inclusive Facilities | 2,194,552 |
| 13 | CY | Fire Station 53 (Yorba Linda) Dormitory Privacy | 212,821 |
| 14 | A | Fire Station 41 (Air Ops) Dorm. Privacy, Training Room and Kitchen | - |
| 15 | CY | Fire Apparatus Shelters | 200,000 |
| 16 | A | Fire Station Remodels (3-5 per year) | - |
| 17 | A | IT-GIS and HelpDesk Workstation Furniture Replacement | - |
| 18 | A | Fire Station All Appliances Replacement (3-5 per year) | - |
| 19 | A | Fire Stations and Facilities Concrete and Asphalt Repair | - |
| | | ***Service Center*** | |
| 20 | A | Body Armor Replacement | - |
| 21 | A | Fire Shelters | 100,000 |
| 22 | A | Self-Contained Breathing Apparatus (SCBA) | - |
| 23 | A | Chainsaws | 75,000 |
| 24 | CY | Gas Powered Exhaust Fans | 50,000 |
| 25 | A | Portable Fire Pumps | - |
| 26 | A | High-Pressure Air Bags | 29,854 |
| | | ***Emergency Medical Services*** | |
| 27 | CY | WMD Protective Suits/Air Purifying Respirator Canisters | 334,505 |
| 28 | A | Duo-Dote Auto-Injectors | - |
| 29 | A | Cardiac Monitors/Defibrillators | - |
| 30 | A | Suction Units | - |
| 31 | A | Remote Rescue Packs | - |
| 32 | A | AED Plus | - |
| | | ***Special Operations*** | |
| 33 | CY | Hazmat Air Monitors | 150,000 |
| 34 | A | Carbon Monoxide Monitors | - |
| | | ***Total - Fund 12110*** | **10,191,728** |

**Project Priority: A=Essential; B=Important; C=Could Defer; CY=Current Year's project**

**Adjusted FY 2021/22 Budget includes mid-year budget adjustments**

| Item No. | FY 2022/23 | FY 2023/24 | FY 2024/25 | FY 2025/26 | FY 2026/27 | 5-Year TOTAL |
|---|---|---|---|---|---|---|
| 1 | 350,000 | 350,000 | 50,000 | 50,000 | 100,000 | 900,000 |
| 2 | 3,000,000 | 1,400,000 | - | - | - | 4,400,000 |
| 3 | 100,000 | 100,000 | 100,000 | 100,000 | 100,000 | 500,000 |
| 4 | 500,000 | 750,000 | - | - | - | 1,250,000 |
| 5 | - | - | - | - | - | - |
| 6 | 678,500 | 640,000 | 640,000 | 640,000 | 640,000 | 3,238,500 |
| 7 | 40,000 | 40,000 | 40,000 | 40,000 | 40,000 | 200,000 |
| 8 | 155,150 | 150,000 | 150,000 | 250,000 | 250,000 | 955,150 |
| 9 | 240,000 | 240,000 | 240,000 | 240,000 | 240,000 | 1,200,000 |
| 10 | 64,000 | 64,000 | 64,000 | 64,000 | 64,000 | 320,000 |
| 11 | 80,000 | - | 80,000 | - | - | 160,000 |
| 12 | 2,100,000 | 1,745,000 | 1,875,000 | 1,700,000 | 1,700,000 | 9,120,000 |
| 13 | - | - | - | - | - | - |
| 14 | 300,000 | - | 1,500,000 | 750,000 | - | 2,550,000 |
| 15 | - | - | - | - | - | - |
| 16 | 750,000 | 750,000 | 750,000 | 750,000 | 750,000 | 3,750,000 |
| 17 | 200,000 | - | - | - | - | 200,000 |
| 18 | 125,000 | 125,000 | 125,000 | 125,000 | 125,000 | 625,000 |
| 19 | 175,000 | 175,000 | - | - | - | 350,000 |
| 20 | - | - | 350,000 | - | - | 350,000 |
| 21 | 140,000 | - | - | - | - | 140,000 |
| 22 | - | 2,750,000 | 2,750,000 | - | - | 5,500,000 |
| 23 | - | - | - | 75,000 | - | 75,000 |
| 24 | - | - | - | - | - | - |
| 25 | 12,000 | - | - | - | - | 12,000 |
| 26 | - | - | - | 55,000 | - | 55,000 |
| 32 | - | - | - | - | - | - |
| 28 | - | - | 180,000 | - | - | 180,000 |
| 29 | - | - | 2,500,000 | 2,500,000 | 4,042,000 | 9,042,000 |
| 30 | - | 82,500 | - | - | - | 82,500 |
| 31 | - | 49,000 | - | - | - | 49,000 |
| 32 | - | - | - | 337,500 | - | 337,500 |
| 33 | - | - | - | - | - | - |
| 34 | - | 50,000 | - | - | - | 50,000 |
| | **9,009,650** | **9,460,500** | **11,394,000** | **7,676,500** | **8,051,000** | **45,591,650** |

| Item No. | Project Priority | Project | Adjusted FY 2021/22 |
|---|---|---|---|
| FIRE STATIONS & FACILITIES - FUND 123 | | | |
| 1 | A | RFOTC Training Grounds Expansion and Upgrade | 225,780 |
| 2 | A | Infrastructure Security Enhancements | 1,346,597 |
| 3 | CY | Retrofit Existing Station Fire Life Safety Systems | 1,248,350 |
| 4 | A | Replacement of Fire Station 10 (Yorba Linda) | 1,000,000 |
| 5 | A | Construction of New Fire Station 12 (Laguna Woods) | - |
| 6 | CY | Replacement of Fire Station 24 (Mission Viejo) | 13,000,000 |
| 7 | A | Replacement of Fire Station 9 (Mission Viejo) | - |
| 8 | B | RFOTC 2nd Emergency Power Generator | - |
| 9 | CY | Fire Station 49 Apparatus Bay Floor Reconstruction | 997,538 |
| 10 | A | Solar Power Facilities for RFOTC and Fire Stations | - |
| 11 | A | Upgrades to Fire Station 18 (Trabuco Canyon) | - |
| | | ***Total - Fund 123*** | **17,818,265** |
| COMMUNICATIONS & INFORMATION SYSTEMS - FUND 124 | | | |
| | | ***IT-Communications and IT Infrastructure*** | |
| 1 | B | OCFA Enterprise Audio Visual Upgrades | 631,728 |
| 2 | CY | RFOTC Data Ctr Fire Suppression Sys Upgrade | 873,362 |
| 3 | B | OCFA Disaster Recovery Co-Location Facility | 1,338,804 |
| | | ***IT-Systems Development & Support*** | |
| 4 | A | Community Risk Reduction Automation - IFP Replacement | 1,214,551 |
| 5 | A | EMS Enterprise System | 250,000 |
| 6 | B | TheHIVE Cloud Upgrade | - |
| 7 | CY | Incident Reporting Application Replacement | 140,170 |
| 8 | A | Property Management Application | - |
| 9 | CY | Next Generation CAD2CAD | 17,900 |
| 10 | A | Enterprise Resource Planning (ERP) System | - |
| 11 | A | Fleet Services Fuel Management Tracking System | - |
| 12 | A | 911 Voice Recording System | - |
| | | ***Total - Fund 124*** | **4,466,515** |
| FIRE APPARATUS - FUND 133 | | | |
| 1 | A/B | Emergency Vehicles | 11,074,692 |
| 2 | A | Developer Funded Vehicles | 2,100,956 |
| 3 | A | Grant Funded Vehicles | - |
| 4 | A/B | Support Vehicles | 781,000 |
| 5 | A/B | Vehicle Outfitting | 300,000 |
| | | ***Total - Fund 133*** | **14,256,648** |
| | | ***GRAND TOTAL - ALL CIP FUNDS*** | **46,733,156** |

**Project Priority: A=Essential; B=Important; C=Could Defer; CY=Current Year's project**

*** Adjusted FY 2021/22 Budget includes proposed mid-year budget adjustments**

| Item No. | FY 2022/23 | FY 2023/24 | FY 2024/25 | FY 2025/26 | FY 2026/27 | 5-Year TOTAL |
|---|---|---|---|---|---|---|
| 1 | 250,000 | 1,500,000 | 1,500,000 | 1,850,000 | - | 5,100,000 |
| 2 | 200,000 | 100,000 | 100,000 | 50,000 | 50,000 | 500,000 |
| 3 | - | - | - | - | - | - |
| 4 | - | - | - | 14,000,000 | 2,000,000 | 16,000,000 |
| 5 | - | 1,600,000 | 1,600,000 | 4,800,000 | - | 8,000,000 |
| 6 | - | - | - | - | - | - |
| 7 | - | - | 1,000,000 | 3,000,000 | 2,000,000 | 6,000,000 |
| 8 | - | - | 500,000 | - | - | 500,000 |
| 9 | - | - | - | - | - | - |
| 10 | 125,000 | 500,000 | 500,000 | 500,000 | 500,000 | 2,125,000 |
| 11 | 300,000 | - | - | - | - | 300,000 |
| | **875,000** | **3,700,000** | **5,200,000** | **24,200,000** | **4,550,000** | **38,525,000** |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | 400,000 | 500,000 | 200,000 | - | - | 1,100,000 |
| 2 | - | - | - | - | - | - |
| 3 | 2,850,000 | - | - | 900,000 | 1,000,000 | 4,750,000 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 4 | 1,250,000 | - | - | - | - | 1,250,000 |
| 5 | 1,250,000 | 1,250,000 | 500,000 | - | - | 3,000,000 |
| 6 | - | 3,000,000 | - | - | - | 3,000,000 |
| 7 | - | - | - | - | - | - |
| 8 | - | 350,000 | - | - | - | 350,000 |
| 9 | - | - | - | - | - | - |
| 10 | - | - | - | 1,000,000 | 9,000,000 | 10,000,000 |
| 11 | - | - | 602,000 | - | - | 602,000 |
| 12 | 350,000 | - | - | - | - | 350,000 |
| | **6,100,000** | **5,100,000** | **1,302,000** | **1,900,000** | **10,000,000** | **24,402,000** |

| | | | | | | |
|---|---|---|---|---|---|---|
| 1 | 7,978,900 | 5,170,960 | 10,844,970 | 14,292,740 | 19,734,250 | 58,021,820 |
| 2 | - | - | - | 1,000,080 | - | 1,000,080 |
| 3 | 30,000 | - | - | - | - | 30,000 |
| 4 | 3,006,800 | 277,400 | 2,467,960 | 367,370 | 753,960 | 6,873,490 |
| 5 | - | - | - | - | - | - |
| | **11,015,700** | **5,448,360** | **13,312,930** | **15,660,190** | **20,488,210** | **65,925,390** |

| | | | | | | |
|---|---|---|---|---|---|---|
| | **27,000,350** | **23,708,860** | **31,208,930** | **49,436,690** | **43,089,210** | **174,444,040** |

## Station Maintenance Cost History (prior 5 years)

| Station # | Partner Agency | Location | Ownership | CCC | Sq. Ft. | Year Built | Age | Year Remodel | Avg. Annual | 5-Year Total |
|---|---|---|---|---|---|---|---|---|---|---|
| Station 2 | Los Alamitos | 3642 Green Ave | OCFA | | 4,103 | 1972 | 50 | 1999 | $53,004 | $265,021 |
| Station 4 | Irvine | #2 California Ave | OCFA | | 10,500 | 1968 | 54 | 2000 | $18,952 | $94,759 |
| Station 5 | Laguna Niguel | 23600 Pacific Island Dr | OCFA | | 5,904 | 1993 | 29 | N/A | $9,024 | $45,118 |
| Station 6 | Irvine | 3180 Barranca Pky. | OCFA | | 10,803 | 1996 | 26 | N/A | $52,790 | $263,951 |
| Station 7 | San Juan Capistrano | 31865 Del Obispo | OCFA | | 5,614 | 1973 | 49 | 2001 | $9,338 | $46,691 |
| Station 8 | County | 10631 Skyline Dr | OCFA | | 3,742 | 1977 | 45 | 2000 | $8,698 | $43,491 |
| Station 9 | Mission Viejo | #9 Shops Blvd | OCFA | | 4,810 | 1974 | 48 | 2001 | $10,891 | $54,454 |
| Station 10 | Yorba Linda | 18422 East Lemon Dr | OCFA | | 4,148 | 1972 | 50 | 1999 | $14,023 | $70,114 |
| Station 11 | County | 259 Emerald Bay | Other | | 1,850 | 1965 | 57 | 2017 | $26,997 | $134,987 |
| Station 13 | La Palma | 7822 Walker St | OCFA | | 4,474 | 1975 | 47 | 2022 | $24,300 | $121,498 |
| Station 14 | County | 29402 Silverado Canyon Rd | OCFA | | 2,992 | 1980 | 42 | N/A | $46,478 | $232,388 |
| Station 15 | County | 27172 Silverado Canyon Rd | Other | | 4,600 | 2006 | 16 | N/A | $11,063 | $55,315 |
| Station 16 | County | 28891 Modjeska Canyon Rd | OCFA | | 3,426 | 1965 | 57 | N/A | $31,569 | $157,844 |
| Station 17 | Cypress | 4991 Cerritos Ave | OCFA | | 10,000 | 2010 | 12 | N/A | $5,304 | $26,522 |
| Station 18 | County | 30942 Trabuco Canyon Rd | OCFA | | 1,445 | 1999 | 23 | N/A | $90,191 | $450,956 |
| Station 19 | Lake Forest | 23022 El Toro Rd | OCFA | | 9,209 | 2004 | 18 | N/A | $22,380 | $111,900 |
| Station 20 | Irvine | 7050 Corsair | OCFA | | 7,305 | 2018 | 4 | N/A | $31,386 | $156,930 |
| Station 21 | County | 1241 Irvine Blvd | OCFA | | 6,539 | 1966 | 56 | 2001 | $18,722 | $93,609 |
| Station 22 | Laguna Woods | 24001 Paseo de Valencia | OCFA | | 11,556 | 1996 | 26 | 1998 | $10,283 | $51,413 |
| Station 23 | Villa Park | 5020 Santiago Canyon Rd | OCFA | | 4,330 | 1961 | 62 | 2000 | $7,469 | $37,346 |
| Station 24 | Mission Viejo | 25862 Marguerite Pkwy | OCFA | | 4,510 | 1970 | 52 | 2000 | $18,571 | $92,856 |
| Station 25 | County | 8171 Bolsa Ave | OCFA | | 3,156 | 1952 | 71 | 2002 | $12,235 | $61,173 |
| Station 26 | Irvine | 4691 Walnut Ave | OCFA | | 5,039 | 1976 | 46 | 1999 | $18,587 | $92,934 |
| Station 27 | Irvine | 12400 Portola Springs Rd | OCFA | | 8,360 | 2008 | 14 | N/A | $29,520 | $147,602 |
| Station 28 | Irvine | 17862 Gillette Ave | OCFA | | 5,039 | 1976 | 46 | 1999 | $36,224 | $181,121 |
| Station 29 | Dana Point | 26111 Victoria Blvd | OCFA | | 9,012 | 2007 | 15 | N/A | $31,285 | $156,427 |
| Station 30 | Dana Point | 23831 Stonehill Dr | OCFA | | 5,573 | 1977 | 45 | 2001 | $26,353 | $131,766 |
| Station 31 | Mission Viejo | 22426 Olympiad Rd | OCFA | | 5,105 | 1988 | 34 | N/A | $9,375 | $46,877 |
| Station 32 | Yorba Linda | 20990 Yorba Linda Blvd | OCFA | | 4,563 | 1982 | 40 | N/A | $17,852 | $89,258 |
| Station 33 | County | 374 Paularino | OCFA | Y | 16,880 | 2005 | 17 | N/A | $5,999 | $29,996 |
| Station 36 | Irvine | 301 E. Yale Loop | Other | | 7,742 | 1992 | 30 | N/A | $3,162 | $15,812 |
| Station 37 | Tustin | 15011 Kensington Park Dr | City | Y | 9,613 | 2013 | 9 | N/A | $24,601 | $123,006 |
| Station 38 | Irvine | 26 Parker | OCFA | | 9,437 | 2007 | 15 | N/A | $15,724 | $78,618 |
| Station 39 | Laguna Niguel | 24241 Avila Rd | OCFA | | 8,586 | 2007 | 15 | N/A | $11,199 | $55,994 |
| Station 40 | County | 25082 Vista del Verde | OCFA | | 8,274 | 1984 | 38 | N/A | $6,135 | $30,674 |
| Station 41 | OCFA Air Ops | 3900 Artesia Ave | OCFA | | 46,175 | 2010 | 47 | 2015 | $41,956 | $209,780 |
| Station 42 | Lake Forest | 19150 Ridgeline Rd | OCFA | | 6,655 | 1988 | 34 | N/A | $217,084 | $1,085,419 |
| Station 43 | Tustin | 11490 Pioneer Way | City | Y | 8,651 | 1994 | 28 | N/A | $33,914 | $169,572 |
| Station 44 | Seal Beach | 718 Central Ave | City | Y | 3,489 | 1960 | 63 | N/A | $4,373 | $21,866 |
| Station 45 | Rancho Santa Margarita | 30131 Aventura | OCFA | | 8,809 | 1987 | 35 | N/A | $10,098 | $50,492 |
| Station 46 | Stanton | 7871 Pacific St | City | Y | 4,393 | 2010 | 12 | N/A | $35,860 | $179,302 |
| Station 47 | Irvine | 47 Fossil | OCFA | | 8,843 | 2005 | 17 | N/A | $15,793 | $78,967 |
| Station 48 | Seal Beach | 3131 North Gate Rd | City | Y | 7,305 | 2008 | 14 | N/A | $14,892 | $74,462 |
| Station 49 | Laguna Niguel | 31461 St of Golden Lantern | OCFA | | 8,642 | 1991 | 31 | 2002 | $41,142 | $205,711 |
| Station 50 | San Clemente | 670 Camino de Los Mares | City | Y | 7,200 | 1990 | 32 | N/A | $13,395 | $66,974 |
| Station 51 | Irvine | 18 Cushing | OCFA | | 9,143 | 2000 | 22 | N/A | $27,028 | $135,142 |
| Station 53 | Yorba Linda | 25415 E. La Palma | OCFA | | 7,170 | 1990 | 32 | N/A | $52,749 | $263,747 |
| Station 54 | Lake Forest | 19811 Pauling Ave | OCFA | | 9,492 | 1992 | 30 | N/A | $40,971 | $204,855 |
| Station 55 | Irvine | 4955 Portola Parkway | OCFA | | 4,563 | 2008 | 14 | N/A | $21,767 | $108,837 |
| Station 56 | County | 56 Sendero Way | OCFA | | 9,543 | 2015 | 7 | N/A | $21,644 | $108,220 |
| Station 57 | Aliso Viejo | 57 Journey | OCFA | | 9,384 | 1992 | 30 | N/A | $11,614 | $58,071 |
| Station 58 | County | 58 Station Way | OCFA | | 15,363 | 2003 | 19 | N/A | $68,207 | $341,037 |
| Station 59 | San Clemente | 59 Avenida La Pata | City | Y | 7,745 | 2006 | 16 | N/A | $9,681 | $48,403 |
| Station 60 | San Clemente | 121 Avenida Victoria | City | Y | 15,454 | 2011 | 11 | N/A | $23,190 | $115,948 |
| Station 61 | Buena Park | 7440 La Palma | City | Y | 17,890 | 1967 | 55 | 2007 | $27,471 | $137,353 |
| Station 62 | Buena Park | 7780 Artesia Blvd | City | Y | 4,424 | 1970 | 52 | 2017 | $24,523 | $122,616 |
| Station 63 | Buena Park | 9120 Holder St | City | Y | 3,621 | 1975 | 47 | 2017 | $36,455 | $182,274 |
| Station 64 | Westminster | 7351 Westminster Blvd | City | Y | 14,242 | 1982 | 40 | 2016 | $54,516 | $272,582 |
| Station 65 | Westminster | 6061 Hefley St | City | Y | 5,905 | 1980 | 42 | 1998 | $13,846 | $69,231 |
| Station 66 | Westminster | 15061 Moran St | City | Y | 6,105 | 1963 | 60 | N/A | $11,289 | $56,444 |
| Station 70 | Santa Ana | 2301 Old Grande St North | City | Y | 3,780 | 1970 | 52 | N/A | $17,527 | $87,635 |
| Station 71 | Santa Ana | 1029 West 17th St | City | Y | 11,571 | 2002 | 20 | N/A | $14,745 | $73,726 |
| Station 72 | Santa Ana | 1668 East 4th St | City | Y | 4,100 | 1967 | 55 | 2016 | $14,862 | $74,308 |
| Station 73 | Santa Ana | 419 South Franklin St | City | Y | 3,763 | 1962 | 61 | N/A | $9,300 | $46,501 |
| Station 74 | Santa Ana | 1427 South BRdway | City | Y | 8,190 | 1978 | 44 | N/A | $11,796 | $58,982 |
| Station 75 | Santa Ana | 120 West Walnut | City | Y | 22,000 | 1953 | 70 | N/A | $17,137 | $85,687 |
| Station 76 | Santa Ana | 950 West MacArthur | City | Y | 5,044 | 1974 | 48 | N/A | $53,795 | $268,975 |
| Station 77 | Santa Ana | 2317 South Greenville | City | Y | 6,076 | 1960 | 63 | N/A | $3,757 | $18,786 |
| Station 78 | Santa Ana | 501 North Newhope | City | Y | 4,014 | 1961 | 62 | N/A | $5,838 | $29,188 |
| Station 79 | Santa Ana | 1320 East Warner | City | Y | 13,854 | 1988 | 34 | N/A | $8,759 | $43,795 |
| Station 80 | Garden Grove | 14162 Forsyth Lane | City | Y | 2,694 | 1971 | 51 | 2019 | $67,108 | $335,541 |
| Station 81 | Garden Grove | 11261 Acacia Parkway | City | Y | 14,414 | 1971 | 51 | N/A | $26,696 | $133,480 |
| Station 82 | Garden Grove | 11805 Gilbert St | City | Y | 4,480 | 1957 | 66 | N/A | $52,078 | $260,388 |
| Station 83 | Garden Grove | 12132 Trask Ave | City | Y | 4,480 | 1958 | 65 | N/A | $23,139 | $115,693 |
| Station 84 | Garden Grove | 12191 Valley View St | City | Y | 4,480 | 1958 | 65 | N/A | $18,511 | $92,553 |
| Station 85 | Garden Grove | 12751 Western Ave | City | Y | 4,792 | 1974 | 48 | N/A | $23,174 | $115,869 |
| Station 86 | Garden Grove | 12232 West St | City | Y | 7,680 | 2018 | 4 | N/A | $24,853 | $124,265 |

# Fund 12110
# General Fund - CIP

This fund is a sub-fund of the General Fund used to account for financial activity associated with maintenance and improvement projects that while considered capital in nature, do not meet the criteria to be included in a Capital Project Fund. This fund's primary sources of revenue are operating transfers from the General Fund.


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## DATA STORAGE AND SERVERS REPLACEMENT

**Project Priority:** A
**Org Number:** P339
**Project Total:** Ongoing
**Project Type:** Equipment Replacement
**Project Management:** IT - Communications and IT Infrastructure



**Project Description:** This item is an ongoing project to upgrade and/or replace OCFA's computer servers, including increasing virtualized server-based centralized storage of critical department information. Over the next two years, much of the current hardware will be reaching end-of-service-life and will require replacement.

The OCFA servers host all of the business systems including Microsoft Exchange (E-mail), records management systems (IRIS and ORION), computer aided dispatch (CAD), CAD2CAD Regional Hub, geographic information systems (GIS), SharePoint intranet (TheHIVE), the fire operations staffing application, and the Finance/Human Resources enterprise system; and in the future, new Emergency Medical Services (EMS) and Property/Facilities Management systems.

The expected useful service life of network/application servers, storage area networks (SAN), and other related hardware is five to seven years. The Five–Year Capital Improvement Program (CIP) supports all computer hardware being replaced within its expected lifecycle.

**Project Status:** Ongoing

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | $350,000 | $350,000 | $50,000 | $50,000 | $100,000 | $900,000 |

**Impact on Operating Budget:** The replacement of servers helps control maintenance costs in the operating budget and improves both network and application performance and reliability.

# FIRE STATION ALARM SYSTEM UPGRADES

**Project Priority:** A
**Org Number:** P334
**Project Total:** $9,691,000
**Project Type:** Equipment Replacement
**Project Management:** IT - Communications and IT Infrastructure




**Project Description:** The OCFA is upgrading and replacing legacy fire station alerting systems at all OCFA fire stations with the Westnet, Inc. (Westnet) fire station digital electronic alerting technology, known as the SmartStation. Westnet was selected through a Request For Proposal process in 2013 with the objective of integrating OCFA fire stations and their existing legacy alerting systems with the existing TriTech CAD system.

**Fire Station Alerting/Sound Systems**
The legacy station alerting systems currently utilize electro-mechanical relays and amplifiers, and will be upgraded with the digital electronic SmartStation, extending the alerting systems' lives by fifteen years. The cost per fire station upgrade varies substantially depending on the size of the fire station, number of crew, and apparatus that are deployed. The average cost for the 32 fire stations upgraded to date is approximately $108,000. All OCFA Fire Stations are expected to be completed by January 1, 2024.




When a new fire station is constructed, the Westnet SmartStation will be included in the new station costs.

**Project Status:** Ongoing

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | $3,000,000 | $1,400,000 | | | | $4,400,000 |

**Impact on Operating Budget:** The replacement and upgrade of the station alerting systems will result in increased annual maintenance contract costs as we transition from basic coverage of the MCU (Master Control Unit) to the full SmartStation contract cost which varies per station on the complexity and number of devices installed.

# RFOTC AND FIRE STATION DATA NETWORK UPGRADES

**Project Priority:** A
**Org Number:** P337
**Project Total:** $2,308,262
**Project Type:** Equipment Replacement/New Technology
**Project Management:** IT - Communications and IT Infrastructure

**Project Description:** This project replaces core network infrastructure components installed at the RFOTC and OCFA fire stations. Prior year's funding was used for replacement of numerous major components, including 15,000 feet of aging fiber optic cabling installed with construction of the RFOTC facilities.



All OCFA fire stations will have their OCFA wireless computer networks upgraded in FY 2022/23, with ongoing upgrades in future years as older network components reach the end of their useful service life.

The network equipment being installed is expected to last up to 10 years before needing replacement.

**Project Status:** Ongoing

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | $100,000 | $100,000 | $100,000 | $100,000 | $100,000 | $500,000 |

**Impact on Operating Budget:** Replacement of the hardware helps to control maintenance costs included in the operating budget.

# ENTERPRISE PHONE SYSTEM AND PUBLIC ADDRESS / PAGING SYSTEM UPGRADE FOR RFOTC AND FIRE STATIONS

**Project Priority:** A
**Org Number:** P408
**Project Total:** $2,750,000
**Project Type:** New Equipment
**Project Management:** IT - Communications and IT Infrastructure



**Project Description:** This project replaces OCFA's telephone system, placed in service in 2004, with a new Voice over Internet Protocol (VoIP) system. In addition to the functional and administrative advantages of a digital-based system, the upgrade will play a key role in improving physical security for the Regional Fire Operations and Training Center (RFOTC) and fire stations by adding public address/paging functionality. The new phones will be capable of receiving simultaneous broadcasted messages at all fire stations, RFOTC offices, and facilities equipped with phones. The enterprise phone system and public address/paging VoIP systems are expected to last 10 to 15 years before needing replacement.

*Phones at OCFA RFOTC*
Replacement of the current phone system with a VoIP based system was scheduled to start in in 2022, but due to delays related to COVID-19, will begin in FY 2022/23.

*Phones at OCFA Fire Stations*
Installation of the new VoIP phone systems at the fire stations will proceed following completion of the RFOTC phase of the project, starting in late FY 2022/23, and continuing through FY 2023/24. The fire stations will be fully integrated with the RFOTC's VoIP phone system yet retain the capability to operate independently if the data connection to the RFOTC fails.

**Project Status:** The RFOTC phase of the project is in-process, with the fire stations phase anticipated to begin late in FY 2022/23.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | $500,000 | $750,000 | | | | $1,250,000 |

**Impact on Operating Budget:** Ongoing annual maintenance costs are included in the General Fund. OCFA will utilize 3rd party professional services to assist in the installation of the new phone systems.

## ALL-BAND MOBILE AND PORTABLE RADIOS



**Project Priority:** A
**Org Number**: P332
**Project Total:** Ongoing
**Project Type:** Equipment Additions & Replacements
**Project Management:** IT – Communications & Workplace Support

**Project Description:** This budget is for new all-band mobile and portable radios that include the 800MHz and VHF frequencies to be installed in new OCFA apparatus, and for use in training, academies, and supplying equipment caches. Mobile and portable radio purchases also synchronize with the vehicle replacement plan. Current pricing per mobile all-band radio averages $7,000. Portable all-band radios cost approximately $9,000 each.

All new radios are compatible with P25, the public safety standard, while also 100% compatible with the 800MHz radio countywide coordinated communication system (800MHz CCCS) that was upgraded in 2019. Estimated quantity of units is 40 mobile and 40 portables per year. FY 2022/23 includes additional one-time increase for seven new radios for academy accreditation.

**Project Status:** Ongoing

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | $678,500 | $640,000 | $640,000 | $640,000 | $640,000 | $3,200,000 |

**Impact on Operating Budget:** Adding new all-band radios to the total active radio count will result in increased annual operational expense of approximately $25,000 (80 new radios).

## SMALL EQUIPMENT / PERSONAL COMMUNICATIONS

**Project Priority:** A
**Org** Number: P330
**Project Total:** Ongoing
**Project Type:** Equipment Replacement
**Project Management:** IT – Communications & Workplace Support

**Project Description:** The OCFA utilizes numerous devices for personal communications, including pagers, smartphones, vehicle intercom headsets, and portable radio lapel microphones. Replacement is required every three to five years due to normal wear and exposure factors.





**Project Status:** Ongoing

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | $40,000 | $40,000 | $40,000 | $40,000 | $40,000 | $200,000 |

**Impact on Operating Budget:** No anticipated impact.

## PERSONAL COMPUTER (PC)/TABLETS/PRINTER REPLACEMENTS

**Project Priority:** A
**Org Number:** P331
**Project Total:** Ongoing
**Project Type:** Equipment Replacement
**Project Management:** IT – Communications & Workplace Support

**Project Description:** The PC replacement budget is based on $1,500 per unit, which includes replacement of associated printers and peripherals, as well as the purchase of ruggedized iPad tablets. Funding also covers replacement of department-authorized mission-critical computers and tablets on an as-needed basis.

The replacement cycle is every three to four years for iPad tablets and up to six years for desktop PCs.





**Project Status:** Ongoing

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | $155,150 | $150,000 | $150,000 | $250,000 | $250,000 | $950,000 |

**Impact on Operating Budget:** Deferral of PC and tablet replacements beyond four years (beyond warranty period ) will increase repair and maintenance costs.

# MOBILE DATA COMPUTER (MDC) SYSTEM

**Project Priority:** A
**Org Number:** P303
**Project Total:** Ongoing
**Project Type:** Equipment Replacement
**Project Management:** IT – Communications & Workplace Support



**Project Description:** The mobile data computers (MDC) provide emergency incident information such as location/address, patient status, and premise information from the computer aided dispatch (CAD) system for Operations personnel in OCFA apparatus.

Operations personnel also use Apple iPads inside OCFA apparatus for patient care reporting, accessing GIS data, special area maps, and numerous other computer applications. The OCFA's CAD vendor does not yet support full functionality of their CAD system on Apple iPads, so it is necessary to continue operating CAD on Windows MDCs pending the availability of full support for operating CAD on Apple iPads.



A new ruggedized Windows tablet type MDC has been selected to replace the current "legacy" Windows MDCs, which were installed in 2012, and are no longer produced by the manufacturer. Replacements using the ruggedized Windows tablet MDC units are scheduled for deployment beginning in FY 2022/23 at a rate of 40 per year, which will include installation in all new emergency apparatus.

The cost of the ruggedized Windows tablets with associated mounting accessories and AVL modems is approximately $6,000 per unit.

**Project Status:** Ongoing

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | $240,000 | $240,000 | $240,000 | $240,000 | $240,000 | $1,200,000 |

**Impact on Operating Budget:** Replacing the existing MDCs with ruggedized computer tablets will result in lower capital expense to purchase new MDCs as well as lower ongoing maintenance costs.

# VHF RADIOS

**Project Priority:** A
**Org Number:** P333
**Project Total:** Ongoing
**Project Type:** Equipment Replacement
**Project Management:** IT – Communications & Workplace Support




**Project Description:** This project is for the purchase and replacement of VHF portable radios to be installed in new OCFA apparatus as well as replacing existing VHF radios that are becoming obsolete. These radios are used for state and mutual aid communications with agencies that are not part of the County 800MHz radio system and are installed in all OCFA emergency apparatus. Use of VHF radios ensures communication and enhances the safety of firefighters on automatic and mutual aid responses with the California Department of Forestry and Fire Protection (CAL FIRE), and the United States Forest Service (USFS) in state and federal responsibility areas.

VHF mobile radios are being replaced by new all-band Motorola radios that include both VHF and 800MHz in the same unit. This project is to purchase portable VHF radios only.

Expected useful life of all new VHF radios is nine to ten years.

**Project Status:** Ongoing

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | $64,000 | $64,000 | $64,000 | $64,000 | $64,000 | $320,000 |

**Impact on Operating Budget:** The replacement of radios helps to limit future maintenance costs.

## DIGITAL ORTHOPHOTOGRAPHY

**Project Priority:** B
**Org Number:** P341
**Project Total:** Ongoing
**Project Type:** Equipment Replacement
**Project Management:** IT - Geographic Information System

**Project Description:** Digital orthophotography provides an accurate aerial record of all physical data that exists in the County and area of service at a given point in time. It is important to the OCFA as a management tool for the effective and efficient operation of a number of business needs and for spatial data capture and verification. Some of the OCFA business needs supported by digital orthophotography include:



- Special Area Maps and preplans to guide first responders into difficult areas such as apartment complexes and shopping centers.
- Provide dispatchers a visual record to facilitate response assignments.
- Establish a default map viewing context for the Automatic Vehicle Location System (AVL).
- Facilitate vehicle routing to target locations.
- Assist in reconstructing and investigating crimes.
- More effectively manage urban and wildland interfaces.
- Verify pre-existing or non-conforming conditions for inspections.
- Include aerial imagery of new developments.

**Project Status:** New orthophotography of Orange County is purchased biennially which is sufficient to capture new developments and growth.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | $80,000 | | $80,000 | | | $160,000 |

**Impact on Operating Budget:** No anticipated impact.

## STATION BATHROOM INCLUSIVE FACILITIES

**Project Priority:** A
**Project Org:** P413
**Project Total:** $11,665,376
**Project Type:** Facilities/Site Repair
**Project Management:** Property Management

**Project Description:** An evaluation of all bathrooms located in the OCFA fire stations began in FY 2019/20. Based on the results of the evaluation, a comprehensive and multi-year project plan was developed to modify or enhance bathroom facilities in fire stations where the changes are needed.

**Project Status:** The project is a multi-year plan to modify or enhance bathroom facilities in the fire stations which began in FY 2019/20. Fire Stations 13, 14, 16, and 32 are currently in various stages of progress.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | $2,100,000 | $1,745,000 | $1,875,000 | $1,700,000 | $1,700,000 | $9,120,000 |

**Impact on Operating Budget**: No anticipated impact.

## FIRE STATION 41 (Air Ops) DORMITORY PRIVACY, TRAINING ROOM, and KITCHEN

**Project Priority:** A
**Project Org:** P417
**Project Total:** $2,644,872
**Project Type:** Facilities/Site Repair
**Project Management:** Property Management

**Project Description:** Since the air operations program went to a 24/7 operation, there have not been adequate areas to sleep the crews. This project would address the 24/7 operation in addition to another day shift crew and upstaffing when necessary. The project involves significant design, engineering, and construction to accommodate the operation.

**Project Status:** Needs assessment is being evaluated; OCFA is in process of contracting with an architect for design work and plan check through the City of Fullerton.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | $300,000 | | $1,500,000 | $750,000 | | $2,550,000 |

**Impact on Operating Budget:** No anticipated impact.

## FIRE STATION REMODELS

**Project Priority:** A
**Project Org:** TBD
**Project Total:** Ongoing
**Project Type:** Facilities/Site Repair
**Project Management:** Property Management

**Project Description:** The 77 fire stations owned and/or operated by the OCFA range in age from 4 to over 70 years. The average station age based on construction date is over 35 years, including numerous aging stations that have received only minor renovations.



The objective of this project is to identify priority station remodel needs, and complete three to five station remodels annually. Depending on the station's condition, projects will include dorm and kitchen remodels, appliances, reroofing, apparatus bay doors, as well as flooring, paint, cabinetry, and plumbing fixture replacement.

**Project Status:** Station needs assessment, project design, and project bidding will be initiated in FY 2022/23, and completion of three to five station remodels annually will continue as needed to ensure fire stations meet OCFA's facilities condition standards.

| Fiscal Years: | 2022/23 | 2023/24 | 2023/24 | 2024/25 | 2025/26 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | $750,000 | $750,000 | $750,000 | $750,000 | $750,000 | $3,750,000 |

**Impact on Operating Budget:** An undetermined repair cost savings will be achieved by replacing older station fixtures.

## IT-GIS & HELPDESK WORKSTATION REPLACEMENT

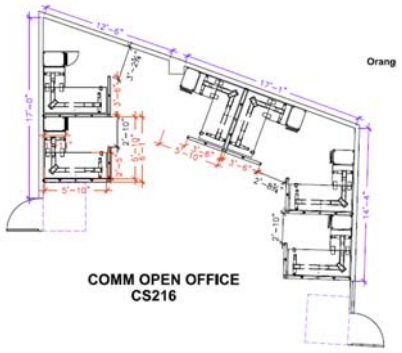
**Project Priority:** A
**Org Number:** TBD
**Project Total:** $200,000
**Project Type:** Facilities Upgrade
**Project Management:** IT and Property Management



**Project Description:**
This project will upgrade and replace existing workstation furniture for 26 employees in the Geographic Information Systems, Application Development, and IT Helpdesk sections.



A shortage of workstations currently available for the above-mentioned staff require the use of common work areas that are insufficient for staff needs or are located in other departments. The new floorplan will increase the number of workstations to provide individual workspaces for each employee and allow all section staff to work in the same area. In addition, the new workspaces are designed to meet employee health and safety guidelines.




Currently, access to IT Helpdesk personnel by OCFA staff needing assistance is restricted due to their current location within the secure 'B' building. This project will include relocating Helpdesk personnel to the adjacent 'C' building in the Communications Services area where they will be readily accessible to all OCFA employees. This will also improve security by limiting access to building 'B' staff and will improve customer service by allowing IT Helpdesk and Communications staff to work more closely together to support the growing communications and technology used by OCFA employees. The six new Helpdesk workstations will also meet employee health and safety guidelines. In addition to the new workstations, the project costs include painting, carpet, and data wiring upgrades.

**Project Status:** Project to commence in FY 2022/23.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | $200,000 | | | | | $200,000 |

**Impact on Operating Budget:** No anticipated impact.

## FIRE STATION ALL APPLIANCES REPLACEMENT

**Project Priority:** A
**Org Number:** TBD
**Project Total:** Ongoing
**Project Type:** Facilities Upgrade
**Project Management:** Property Management



**Project Description:**
All appliances at the fire stations experience high volume use, and replacements are recommended in order to avoid high-cost repairs and reduce equipment down-time.

This project will upgrade and replace appliances that have reached the end of their serviceable life and represents an ongoing funding requirement.

**Project Status:** Project to commence in FY 2022/23.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | $125,000 | $125,000 | $125,000 | $125,000 | $125,000 | $625,000 |

**Impact on Operating Budget:** Timely replacements will prevent excessive appliance repair costs.

## FIRE STATION AND FACILITIES CONCRETE AND ASPHALT REPAIR AND REPLACEMENT

**Project Priority:** A
**Org Number:** TBD
**Project Total:** Ongoing
**Project Type:** Facilities Renovation
**Project Management:** Property Management



**Project Description:** Fire station exterior concrete and asphalt driveways, walkways, and storage/general use pads experience intensive use, requiring repair and/or replacement over time. This project will repair and replace existing concrete flat work at Fire Stations 28, 22, 57 and 26, and additional facilities as determined by Property Management and Operations management staff.

**Project Status:** Project to commence in FY 2022/23.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | $175,000 | $175,000 | | | | $350,000 |

**Impact on Operating Budget:** No anticipated impact.

## BODY ARMOR REPLACEMENT

**Project Priority**: A
**Project Org:** P427
**Project Total:** Ongoing
**Project Type**: Service Replacement
**Project Management:** Service Center

**Project Description:** In late 2018 the OCFA took possession of new grant funded body armor that was distributed to our field personnel. The body armor purchased with the grant will need to be replaced by FY 2024/25 as well.

**Project Status:** Purchase is scheduled for FY 2024/25.



| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | | | $350,000 | | | $350,000 |

**Impact on Operating Budget:** No anticipated impact.

## FIRE SHELTERS

**Project Priority**: A
**Project Org:** P412
**Project Total:** $240,000
**Project Type**: Service Enhancement/Replacement
**Project Management**: Operations




**Project Description:** The majority of OCFA's current supply of 1,000 shelters were purchased between 2008 and 2012. The shelters have a shelf life of 10 years. The Operations Department began replacing all of OCFA's Fire Shelters in FY 2019/20 with completion anticipated in FY 2022/23.

Fire Shelter cost per unit is approximately $300.

The purchase of the requested fire shelters is based on current need. Priority for replacement will be as follows:

1. Oldest units
2. Worn out units

The replacement was originally scheduled to begin in FY 2018/19; however, the manufacturer was in the process of introducing an improved version of the fire shelter to the market. As a result, the replacement schedule was pushed out to ensure that the shelters procured meet the highest standard of safety.

**Project Status:** Completion of the replacements is anticipated in FY 2022/23.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2024/25 | 2025/26 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | $140,000 | | | | | $140,000 |

**Impact on Operating Budget:** Potential cost with equipment failure after one year warranty expiration.

## SELF-CONTAINED BREATHING APPARATUS (SCBA)

**Project Priority**: A
**Project Org:** TBD
**Project Total:** $5,500,000
**Project Type**: Service Enhancement/Replacement
**Project Management:** Operations

**Project Description:** The OCFA's Operations Department currently uses 833 Self-Contained Breathing Apparatus. The Operations Department projects a need for service enhancement and replacement at the 10-year use of life in FY 2023/24. The expected life of the SCBA peaked in 2020 and 2021. The additional years the units are in service will allow staff to perform a comprehensive needs analysis and prepare a Request for Proposal (RFP) to ensure that we procure the most current equipment that incorporates the latest in firefighter safety technology. Service enhancements of the SCBA have already occurred and will likely increase before our next replacement, giving us the ability to incorporate increased temperature tolerance on the face-mask piece, clearer use of the heads-up display, increased visibility of the remote air use gauge, and a more ergonomic harness for the user. The need for replacement is planned to occur in FY 2023/24.



The SCBA total is based on current need. Additional SCBA might be needed over the next three to five years due to expansion of the OCFA with addition of new fire stations.

**Project Status:** Project is scheduled to begin in FY 2023/24.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | | $2,750,000 | $2,750,000 | | | $5,500,000 |

**Impact on Operating Budget:** No anticipated impact.

## CHAINSAWS

**Project Priority**: A
**Project Org:** P432
**Project Total:** Ongoing
**Project Type**: Service Enhancement/Replacement
**Project Management:** Service Center




**Project Description**: The OCFA has 17 truck companies that are staffed daily to help mitigate emergencies throughout the county. Each of the truck companies has three chainsaws that are primarily used to provide ventilation on structure fires.

The wholesale replacement of these saws would allow us to utilize some of the older better condition saws for training purposes and for Battalion level loaners.

**Project Status**: Purchase is scheduled to occur in FY 2025/26.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | | | | $75,000 | | $75,000 |

**Impact on Operating Budget:** No anticipated impact.

## PORTABLE FIRE PUMPS

**Project Priority**: A
**Project Org:** TBD
**Project Total:** $12,000
**Project Type**: Service Enhancement/Replacement
**Project Management**: Operations

**Project Description:** OCFA purchased the current supply of 20 Waterax Mini-Striker pumps in 2012. The fire pumps have an estimated service life of 10 years. The Operations Department projects a need to replace all OCFA's portable fire pumps in FY 2022/23.

The Waterax Mini-Striker pump pairs a reliable single stage pump end with the Honda 4-stroke 2.5 HP engine to achieve pressures of up to 85 PSI (5.9 BAR) and offer volume supply of up to 80 GPM (303 L/Min). Extremely portable and lightweight, this mini powerhouse performs well when used by itself or in tandem with other pumps. It is also particularly suited to some of the latest fire control techniques where small, lightweight equipment is a requirement.



Cost of each portable pump is approximately $600 plus tax.

The purchase of the requested portable fire pumps is based on current need and is planned to occur in FY 2022/23. Priority for replacement will be as follows:

1. Worn out units
2. Oldest units

**Project Status:** Purchase is scheduled to occur in FY 2022/23.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | $12,000 | | | | | $12,000 |

**Impact on Operating Budget:** Potential cost with equipment failure after 90-day warranty expiration.

## HIGH-PRESSURE AIR BAGS

**Project Priority**: A
**Project Org:** P410
**Project Total**: $225,000
**Project Type**: Service Enhancement/Replacement
**Project Management**: Operations

**Project Description:** The Operations Department projects a need to replace the aging high-pressure air bags based on current need. Priority is placed on truck companies. A small amount of additional air bags are also needed for engines stationed in remote locations with a high probability of traffic collisions, such as Ortega Highway.



The air bags needed are made in different sizes. Each size has different overall dimensions. This allows flexibility in their use. Larger air bags are ideal for lifting vehicles and heavy equipment. Smaller air bags are needed for more detailed rescue operations. As such, each OCFA truck will be receiving a set of six air bags, differing in size.

**Project Status:** Project scheduled to begin in FY 2025/26.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | | | | $55,000 | | $55,000 |

**Impact on Operating Budget:** Potential cost with equipment failure after one-year warranty expiration.

## DUO-DOTE AUTO-INJECTORS

**Project Priority**: A
**Project Org:** P430
**Project Total:** Ongoing
**Project Type**: Service Replacement
**Project Management**: Emergency Medical Services

**Project Description:** The Orange County Fire Authority received a grant to purchase the initial inventory of Duo-Dote Auto-Injectors, and they are now in need of replacement. The Duo-Dote Auto-Injectors are used as an initial treatment of the symptoms of an organophosphorus insecticide or a chemical weapon nerve agent poisoning. They are used primarily to treat first responders but may also be used for victims of a chemical agent attack.




This request will replace the current inventory with approximately 2,000 auto-injectors.

**Project Status:** Purchase to occur in FY 2024/25.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | | | $180,000 | | | $180,000 |

**Impact on Operating Budget:** Potential replacement cost if used prior to expiration date.

## CARDIAC MONITORS/DEFIBRILLATORS

**Project Priority**: A
**Project Org:** P402
**Project Total:** Ongoing
**Project Type**: Service Replacement
**Project Management**: Emergency Medical Services



**Project Description:** The Orange County Emergency Medical Service has mandated that all Advanced Life Support (ALS) units carry a cardiac monitor/defibrillator. The service life for these highly technical and mission critical pieces of equipment is approximately six to eight years. Technology is changing rapidly and the OCFA should anticipate the need to replace the current inventory of cardiac monitors with new and updated versions in FY 2024/25. This would be the seventh year of service on our current fleet of cardiac monitors.

The plan is to replace the current inventory of approximately 140 cardiac monitors with the latest model determined through an RFP process. The cost is an estimate based on the current value of monitors, the current number needed and inflation.

**Project Status:** Project to commence in FY 2024/25.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | | | $2,500,000 | $2,500,000 | $4,042,000 | $9,042,000 |

**Impact on Operating Budget:** Potential cost with equipment failure after one year warranty expiration.

## SUCTION UNITS




**Project Priority**: A
**Project Org:** TBD
**Project Total:** $82,500
**Project Type**: Service Replacement
**Project Management**: Emergency Medical Services

**Project Description:** To provide life-saving emergency medical care, suction units are mandated to be on each Basic Life Support (BLS) or Advanced Life Support (ALS) unit. Suction units are small vacuums used to control the patient's airway, clear obstructions, and assist in airway management. They are used each time our personnel perform CPR, treat seizures, and aid in severe vomiting.

Due to frequency of use, wear and tear, battery life, motor life, and sanitation needs, the life span of suction units is approximately five years and will require replacement in FY 2023/24. EMS anticipates replacing the fleet of 150 suction units through an RFP process. The $550 estimate per unit is based on the current price of suction units, the current quantity needed and inflation.

**Project Status:** Purchase to occur in FY 2023/24.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | | $82,500 | | | | $82,500 |

**Impact on Operating Budget:** Potential cost with equipment failure after one-year warranty expiration.

## REMOTE RESCUE PACKS

**Project Priority**: A
**Project Org:** TBD
**Project Type**: Service Replacement
**Project Management**: Emergency Medical Services




**Project Description:** Fourteen OCFA stations serve urban interface areas where Advance Life Support (ALS) supplies can be needed on hiking trails or other areas not reachable by vehicles. When this occurs, OCFA personnel use a remote rescue pack, a backpack equipped with ALS medical supplies (trauma supplies, drugs, AED plus, etc.), to hike to patients.

The remote rescue packs make it feasible to respond efficiently to remote patients, but there is wear and tear on the backpack itself and a lifespan to the supplies inside the backpack. These factors necessitate replacement approximately every five years. The current remote rescue packs will require replacement in FY 2023/24. The $3,500 per unit cost is an estimate based on the current price of the bags and supplies, the current quantity needed and inflation.

**Project Status:** Purchase to occur in FY 2023/24.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | Total |
|---|---|---|---|---|---|---|
| Budget: | | $49,000 | | | | $49,000 |

**Impact on Operating Budget:** No anticipated impact.

## AED PLUS

**Project Priority**: A
**Project Org:** TBD
**Project Total:** $337,500
**Project Type**: Service Replacement
**Project Management**: Emergency Medical Services




**Project Description:** When cardiac arrest occurs, rapid treatment with an automated external defibrillator (AED) can save lives. The AED Plus device analyzes a heart rhythm and, when necessary, uses an electrical shock to restore normal rhythm. To facilitate immediate care, OCFA stocks AED Plus devices throughout RFOTC, in Operations' staff vehicles, and in Division Chief or Battalion Chief staffed stations. There are 225 units in circulation that were purchased in 2017.

Every five to eight years, the AED Plus devices need replacement and recalibration, slotting replacement in FY 2025/26. EMS anticipates replacing these units through an RFP process. The $1,500 per unit cost is an estimate based on the current price of the AED Plus devices, the current quantity needed and inflation.

**Project Status:** Project to commence in FY 2025/26.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | | | | $337,500 | | $337,500 |

**Impact on Operating Budget:** No anticipated impact.

## CARBON MONOXIDE MONITORS

**Project Priority**: A
**Project Org:** TBD
**Project Total:** $50,000
**Project Type**: Service Enhancement/Replacement
**Project Management:** Operations

**Project Description:** This is the replacement of carbon monoxide monitors on each OCFA fire apparatus. The current carbon monoxide detectors are projected to have a five-year life cycle concluding in FY 2023/24.




Carbon monoxide is an insidious, colorless, odorless gas undetectable by the senses. During 2010-2015 a total of 2,224 deaths nationwide resulted from carbon monoxide poisoning. Sources of carbon monoxide include faulty heating and cooking appliances in homes and buildings. The ability to rapidly detect carbon monoxide by OCFA fire units is a valuable capability.

**Project Status:** Purchase is scheduled to occur in FY 2023/24.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | | $50,000 | | | | $50,000 |

**Impact on Operating Budget:** No anticipated impact.

# Fund 123
# Fire Stations and Facilities

This fund is a capital projects fund to be used for the significant acquisition, improvement, replacement, or construction of fire stations and facilities. Significant funding sources include operating transfers from the General Fund, and contributions or reimbursements from developers responsible for a share of new fire station development costs.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## RFOTC TRAINING GROUNDS EXPANSION AND UPGRADE

**Project Priority:** A
**Project Org:** P251
**Project Total:** $7,625,000
**Project Type:** Facilities/Site Repair
**Project Management:** Property Management

**Project Description:** The RFOTC Training Grounds requires expansion and upgrade to accommodate OCFA's growth in recent years which has occurred since the grounds were originally constructed. The current tower was out of service greater than 50% of the time in FY 2016/17, and the service vendor struggled to find timely solutions. The live-burn training system, designed in 1992, is obsolete and no longer has repair parts available. Exacerbating the down time issues is that the system was designed so that when any one of seven burn props goes down, the whole system is inoperable.

The OCFA has also increased the size of our recruit academies from an average of 30 recruits in 2010 to 50 recruits today. Large academies result in more instructors (5:1 ratio) and a greater need for office space, classroom space, and bathrooms.

To address these shortcomings, the project will be handled in stages.

- In FY 2019/20, classrooms were installed on the training grounds and supplied with temporary power.
- In FY 2023/24, the plan is to build a new three-story training tower; modify the existing strip mall training prop; develop the north end of the property; install additional training props, safety sensor system, and computer operating system in the current tower; replace the burn props; install permanent power to the classrooms; and expand power supply capabilities.

**Project Status:** Temporary classrooms were installed in FY 2019/20, and solicited bids pending award include electrical improvements at the drill grounds and fire training structure improvements. An environmental study is in process for the FY 2023/24 improvements described above. Project will continue subject to plan reviews and approvals with the City of Irvine.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | $250,000 | $1,500,000 | $1,500,000 | $1,850,000 | | $5,100,000 |

**Impact on Operating Budget:** Annual maintenance contracts for burn props at approximately $40,000 per year.

# INFRASTRUCTURE SECURITY ENHANCEMENTS

**Project Priority:** A
**Project Org:** P247
**Project Total:** $2,013,927
**Project Type:** Facilities/Site Repair
**Project Management:** Property Management
**Note:** The sequencing of the security enhancements outlined herein are subject to potential timing changes, based on recommendations that may be provided by the Security Ad Hoc Committee.

**Project Description:** This project is comprised of multiple components to implement various security measures at RFOTC based on a report by a staff security advisory panel, and a security vulnerability assessment performed by the Orange County Intelligence Assessment Center (OCIAC) in November 2021.



Prior years' funding is currently being utilized to upgrade and replace the Control Access System (door card readers, video surveillance). Projects planned for implementation during FY 2022/23 through 2026/27 include various building and site improvements recommended by the November 2021 OCIAC security assessment.



Separate but related projects completed or in process include potentially enhanced contract physical security services at RFOTC, and a phone system upgrade with alerting capabilities.

Security enhancements provided by this project will add to existing features and systems which assist in safeguarding the OCFA staff, physical assets and critical infrastructure.

**Project Status:** This project began in FY 2020/21 and will continue through FY 2026/27.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| **Budget:** | $200,000 | $100,000 | $100,000 | $50,000 | $50,000 | $500,000 |

**Impact on Operating Budget:** No anticipated impact.

## REPLACEMENT OF FIRE STATION 10 (YORBA LINDA)

**Project Priority:** A
**Project Org:** P503
**Project Total:** $17,340,607
**Project Type:** Replacement Fire Station Construction
**Project Management:** Property Management

**Project Description:** This project contemplates planning, design, demolition, and replacement of Fire Station 10, constructed in 1972, along with the adjacent Old Fire Station 10, constructed in 1938. Both facilities currently occupy a combined site comprising 0.74 of an acre, anticipated to be exchanged for a replacement one acre site a quarter of a mile from the current station's location. The project will be consistent with a general renewal of Historic Old Town Yorba Linda currently in process with the City of Yorba Linda. The project includes all demolition of current sites; planning, design, and construction of a temporary fire station; grading and planning design; and construction of an approximately 15,000 square foot, two company, three apparatus bay fire station with added standard modules to support a Division Chief and a station training room.

**Project Status:** The project delivery is anticipated to be Design-Build. Historic Architectural Review Reporting will be required for compliance with the California Environmental Quality Act and permitting is in process.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | | | | $14,000,000 | $2,000,000 | $16,000,000 |

**Impact on Operating Budget:** Replacement of Fire Station 10 (Yorba Linda) will improve Division 4 operational control and service delivery.

## CONSTRUCTION OF NEW FIRE STATION 12 (LAGUNA WOODS)

**Project Priority:** A
**Project Org:** P553
**Project Total:** $8,000,000
**Project Type:** New Fire Station Construction
**Project Management:** Property Management

**Project Description:** This project contemplates planning, design, and construction of a new Fire Station 12. Station size and equipment complement to be determined by Operations.

**Project Status:** Available sites are being evaluated in the geographical area for construction.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | | $1,600,000 | $1,600,000 | $4,800,000 | | $8,000,000 |

**Impact on Operating Budget:** Construction of Fire Station 12 (Laguna Woods) will require additional personnel and operating budget to ensure facility is maintained.

## REPLACEMENT OF FIRE STATION 9 (MISSION VIEJO)

**Project Priority:** A
**Project Org:** P536
**Project Total:** $8,051,920
**Project Type:** Replacement Fire Station Construction
**Project Management:** Property Management

**Project Description:** This project contemplates the comprehensive remodeling of Fire Station 9, constructed in 1974. The project will provide interior improvements, including the dormitories, kitchen, and restroom facilities. It will also provide exterior renovation including roofing, painting, flatwork, ADA accessibility, and landscaping.

**Project Status:** Project design and construction will commence in FY 2045/25.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | | | $1,000,000 | $3,000,000 | $2,000,000 | $6,000,000 |

**Impact on Operating Budget:** Remodel and improvements to Fire Station 9 will improve the operational readiness of the station and lower current maintenance costs associated with older fire stations.

# RFOTC 2ND EMERGENCY POWER GENERATOR

**Project Priority:** B
**Project Org**: TBD
**Project Total:** $500,000
**Project Type:** Facilities/Site Repair
**Project Management:** Property Management

**Project Description:** This project is to add a second backup Emergency Power Generator to supply critical emergency power to the RFOTC facilities in the case of a long-term power outage. The RFOTC facilities currently have one Emergency Power Generator that supplies emergency power in the case of a power outage to the RFOTC 'B' building, including the 9-1-1 Dispatch Emergency Command Center (ECC), the Data Center, and other designated power outlets throughout the RFOTC facilities. The current Emergency Power Generator was installed during the construction of the RFOTC in 2004. Space for a second generator is available next to the existing unit.



If there is a mechanical or other issue with the current Emergency Power Generator during a power outage, the Data Center and 9-1-1 ECC would be inoperable until a portable generator could be brought in from a supplier; a process that could take several hours at minimum.

This project will provide critical redundancy to the current Emergency Power Generator in the case of a prolonged outage, ensuring ongoing emergency operations capability for the 9-1-1 ECC Dispatch center and the OCFA Data Center, as well as supplying emergency power to additional offices and classrooms at the RFOTC.

The budget is a preliminary estimate and may need revision as requirements are further developed.

**Project Status:** This purchase is scheduled to occur in FY 2024/25.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | | | $500,000 | | | $500,000 |

**Impact on Operating Budget:** No anticipated impact.

## SOLAR POWER FACILITIES FOR RFOTC AND FIRE STATIONS

**Project Priority:** A
**Project Org**: TBD
**Project Total:** Ongoing
**Project Type:** New Facilities
**Project Management:** Property Management





**Project Description:** This project is to initiate the feasibility, design, and installation of photovoltaic facilities and equipment at OCFA facilities.

The first phase of this project will provide installation of charging stations for eight plug-in/hybrid support vehicles at the RFOTC. In addition, a consultant will be engaged to perform a feasibility study and cost/benefit analysis of solar energy systems at OCFA fire stations and RFOTC. Possible infrastructure could include roof-top panels, installation of carports with solar panels/charging ports, and battery storage for optimization of peak period energy use and alternative emergency power.

The budget is a preliminary estimate and may require revision as the project scope is further developed.

**Project Status:** Purchases are scheduled to commence in FY 2022/23.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| **Budget:** | $125,000 | $500,000 | $500,000 | $500,000 | $500,000 | $2,125,000 |

**Impact on Operating Budget:** Projects to be undertaken using this funding will be implemented based on their ability to 1) provide off-setting cost savings over time through reduced power and fuel costs, after taking into account all inclusive life-time cost of ownership, and 2) increase OCFA's continuity of operations capabilities.

## UPGRADES TO FIRE STATION 18 (TRABUCO CANYON)

**Project Priority:** A
**Org Number:** TBD
**Project Total:** $300,000
**Project Type:** Facilities Upgrade
**Project Management:** Property Management

**Project Description:** This project is for the purchase and installation of a manufactured building and new generator at Fire Station 18 Trabuco Canyon. Due to the increase in Hand Crew personnel staffed at Station 18, there is a need for additional housing and training space that cannot be accommodated with the current available space at the station. The addition of a generator is required to supply power to the new building due to the lack of power capacity available with the current power sources at the station.

**Project Status:** Purchase to occur in FY 2022/23.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | $300,000 | | | | | $300,000 |

**Impact on Operating Budget:** No anticipated impact.

# Fund 124
# Communications & Information Systems

This fund is a capital projects fund used for the significant acquisition, improvement, or replacement of specialized communications and information systems and/or equipment. Its primary funding sources are the operating transfers from the General Fund and the use of reserves.


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# OCFA ENTERPRISE AUDIO VISUAL UPGRADES

**Project Priority:** B
**Org Number:** P350
**Project Total:** $1,880,000
**Project Type:** Equipment Replacement / New Technology
**Project Management:** IT – Communications and IT Infrastructure

**Project Description:** In 2017, the OCFA upgraded the audio-visual (AV) systems in the boardroom and five training classrooms located at the Regional Fire Operations Training Center (RFOTC). This new project will upgrade AV systems in the Urban Search and Rescue (US&R) warehouse, and also install a video wall in the Emergency Command Center (ECC) that will integrate with the existing wide-screen televisions installed in the adjacent Department Operations Center (DOC). Project funding will also be used to upgrade AV systems in 15 conference rooms at the RFOTC and training rooms in fire stations serving as Battalion and Division headquarters. Project phases include:



- Phase I - Upgrade the US&R warehouse AV systems (started in 2020; expected to be completed in 2022)
- Phase II - Upgrade the Emergency Communications Center (ECC) and Department Operations Center (DOC) AV systems (FY 2022/23)
- Phase III - Upgrade RFOTC and fire station conference rooms A/V systems (FY 2022/23 – FY 2024/25)



Upgrading AV systems at all OCFA conference rooms, the ECC/DOC, and OCFA Battalion and Division stations will enable RFOTC staff and fire station crews to access video and other electronic training materials more efficiently, utilize video conferencing with other fire stations and RFOTC, and minimize the time crews have to leave their response areas for training or meetings.

**Project Status:** Project scheduled to occur in various years.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | $400,000 | $500,000 | $200,000 | | | $1,100,000 |

**Impact on Operating Budget:** The budget amount represents a preliminary estimate and may need revision as requirements are further developed.

# OCFA DISASTER RECOVERY CO-LOCATION FACILITY

**Project Priority:** A
**Org Number:** P349
**Project Total:** $6,729,100
**Project Type:** New Technology
**Project Management:** IT – Communications and IT Infrastructure

**Project Description:** This project has two major parts including establishing an in-county data recovery/co-location (DR/Co-Lo) capability for OCFA's 911 dispatch function, and to establish an out-of-county DR/Co-Lo for OCFA's critical business systems and data. Both project components are critically important to maintain continuity of operations for OCFA in a crisis situation where the OCFA Emergency Command Center (ECC) or data center at the RFOTC are not accessible or functional.



OCFA reviewed numerous facilities as potential candidates for the in-county DR/Co-Lo facilities, including several OCFA fire stations, the Urban Search & Rescue (US&R) warehouse, and various Orange County public and commercial facilities, resulting in Operations department management selecting the OCFA US&R warehouse located in Foothill Ranch as the primary location to establish an in-county DR/Co-Lo 911 dispatching capability. OCFA staff are currently working with engineering firms to analyze and make necessary modifications to the US&R warehouse to support backup dispatch functions.

OCFA staff are continuing an evaluation of out-of-county DR/Co-Lo sites, including out of state locations, for dispatching and data center co-location capability.

**Project Status:** The project is in process and expected to continue through FY2026/27.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | $2,850,000 | | | $900,000 | $1,000,000 | $4,750,000 |

**Impact on Operating Budget:** Annual maintenance and licensing costs for backup CAD, fire station alerting, and dispatch radio consoles are estimated at $100,000 beginning in FY 2024/25. Annual costs for out of county DR/Co-Lo hosting assuming facility lease costs, energy, and additional licensing is estimated at $600,000 beginning in FY 2026/27.

## COMMUNITY RISK REDUCTION AUTOMATION – IFP REPLACEMENT

**Project Priority:** A
**Org Number:** P326
**Project Total:** $3,239,157
**Project Type:** Application Replacement
**Project Management:** IT – Systems Development & Support

**Project Description:** This project is to replace the Integrated Fire Prevention (IFP) system utilized by the Community Risk Reduction department; the final phase of the larger Records Management Systems (RMS) replacement project. The core RMS application, developed to meet OCFA's specific needs using commercial off-the-shelf (COTS) Microsoft technology and modern web-enabled design elements, went live in July 2019.

In-house development of the IFP replacement system, ORION, was initiated in May 2020, and is 40% complete as of December 2021. ORION's user interface will provide a look and feel consistent with the recently deployed Incident Reporting and Investigation System (IRIS). The phased project go-live is anticipated to start in the summer of 2022.

**Project Status:** Project is anticipated to be competed in FY 2022/23.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | $1,250,000 | | | | | $1,250,000 |

**Impact on Operating Budget: A**nnual maintenance, licensing, and user fees for enterprise applications typically range from 20-25% of the total system cost. Since the IFP replacement system will be developed with in-house resources augmented by third party professional services, and will use COTS Microsoft technology, the annual maintenance, license, and user fees will be substantially less, and are projected to be approximately $50,000 starting in FY 2024/25.

## EMERGENCY MEDICAL SYSTEMS (EMS) ENTERPRISE SYSTEM

**Project Priority:** A
**Org Number:** P353
**Project Total:** $3,250,000
**Project Type:** Application Replacement
**Project Management:** IT – Systems Development & Support

**Project Description:** This project is to replace and automate OCFA's outdated and complicated mix of applications utilized to manage Emergency Medical Systems (EMS) activity, consisting of Microsoft Excel spreadsheets, SharePoint (OCFA – Intranet) InfoPath forms, and manual processes. The project's objective is to deploy a modern enterprise-class computer solution that combines mobile web-compatible applications with a modern user interface. The desired solution will utilize commercial off the shelf Microsoft technology (Windows, .NET, SQL, etc.).

The new EMS enterprise-class computer system will manage all OCFA EMS activities including: tracking OCFA patient data, OCFA personnel immunizations, training and certification records; managing the inventory of OCFA controlled medications; managing EMS equipment; ensuring compliance with all applicable State and Federal EMS reporting and data exchange requirements including the California Health Information Exchange (HIE).

Staff estimates the project will require two to three years to complete, and consist of several phases including:

1) Utilize third-party subject matter experts to complete a needs analysis of the OCFA's EMS technology requirements (currently in process)
2) Develop a Request for Proposal (RFP) for a formal solicitation of an EMS enterprise computer system technology that will meet the needs of the EMS section.
3) Develop and implement the new EMS enterprise system.

**Project Status:** Project scheduled to occur in various years.

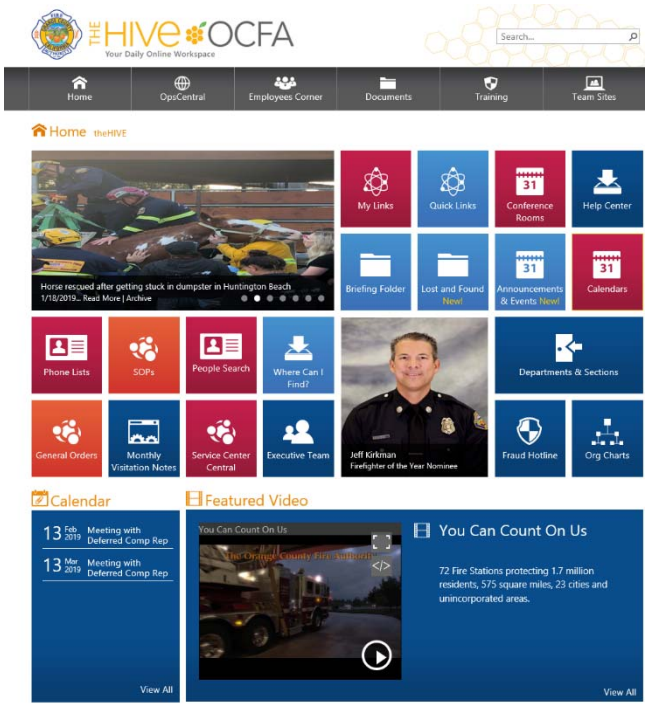
| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | $1,250,000 | $1,250,000 | $500,000 | | | $3,000,000 |

**Impact on Operating Budget:** Application maintenance/licensing costs cannot be determined at this time, but are expected to have an impact on the operating budget following implementation of the project in FY 2024/25.

# THEHIVE CLOUD UPGRADE

**Project Priority:** B
**Org Number:** TBD
**Project Total:** $3,000,000
**Project Type:** Application Replacement
**Project Management:** IT – Systems Development & Support

**Project Description:** The OCFA intranet, TheHIVE, is a critical system/tool used by all OCFA departments and was last upgraded in 2015. It is highly integrated with many OCFA systems providing important data storage, reports, and workflows.




TheHIVE utilizes Microsoft SharePoint technology, and is hosted on-premises at the RFOTC. This project includes redesigning and upgrading the user interface and user experience (UI/UX) utilizing best practice design elements, and potentially migrating to hosting the application in the Cloud.

Primary goals of the project include improving usability, search accuracy, integrating with other OCFA systems, improving redundancy, and zero downtime. Because of the high level of integration of this project with many existing OCFA systems, this project is expected to be complex and will require multiple years to complete.

**Project Status:** Project to commence in FY 2023/24.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | | $3,000,000 | | | | $3,000,000 |

**Impact on Operating Budget:** Application maintenance and licensing costs are largely included under the OCFA's existing Microsoft Enterprise Agreement. Any increase in the agreement will be included in the Information Technology operating budget.

## PROPERTY MANAGEMENT APPLICATION

**Project Priority:** A
**Org Number:** TBD
**Project Total:** $350,000
**Project Type:** Computer Application Purchase and Implementation
**Project Management:** IT - Systems Development & Support

**Project Description:** This project is for the purchase and implementation of an application for use by Property Management. The expectation is to purchase a commercial off-the-shelf (COTS) Microsoft technology solution specifically developed for use by property management departments with modules for work order processing and management, preventative/recurring maintenance management and scheduling, budgeting, vendor management and procurement, as well as fixed asset and equipment management, and integration with OCFA's existing implementation of AssetWorks.

The project objective is to develop and sustain a highly strategic approach to managing OCFA's numerous facilities and equipment, including fire station buildings, HVAC systems, emergency power generators, and major appliances, to name a few. This will include optimized procurement of contract services and replacement equipment, and improving the accuracy of both the Property Management annual operating budget and the five-year Capital Improvement Plan (CIP).




The project budget includes software licensing, implementation consulting services, and training. Initial work on the project will begin in FY 2022/23, and included development of a request for vendor qualifications, review and analysis of proposals, and if funded, purchase of the application in FY 2023/24.

**Project Status:** Purchase to occur in FY 2023/24.

| Fiscal Year: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | | $350,000 | | | | $350,000 |

**Impact on Operating Budget:** Annual software support and licensing fees are estimated at $25,000.

## ENTERPRISE RESOURCE PLANNING (ERP) SYSTEM

**Project Priority:** A
**Org Number:** TBD
**Project Total:** $10,000,000
**Project Type:** Application Replacement
**Project Management:** Business Services Department in collaboration with IT (Systems Development & Support) and the Human Resources Department




**Project Description:** The OCFA seeks a fully integrated Enterprise Resource Planning (ERP) solution for the Business Services Department with modules for Human Resources and other OCFA Department needs. The new ERP will provide all functions of the financial system inclusive of general accounting, accounts receivable, accounts payable, purchasing, budgeting and forecasting, HRMS/payroll/timekeeping/staffing system, position control, enhanced reporting and dashboards, and other functionality will enhance productivity, create efficiencies and streamline manual business processes. It is highly desirable that the new ERP be cloud and mobile device capable and utilize Commercial-off-the-Shelf (COTS) technology as much as possible.

The current HRMS/Payroll Finance system has been in use for over 20 years. It uses separate program modules for human resources, accounts receivable, accounts payable, general accounting, and purchasing. It manages and processes the $400,000,000 plus annual payroll that supports numerous earning and deduction/benefit types for emergency and administrative staff.

Core function requirements of the new ERP must include all elements associated with: general ledger, project accounting, fixed assets/inventory, accounts receivable/cash receipts, accounts payable, purchasing, budget development and forecasting, human resources/payroll/timekeeping/staffing, position control, financial reporting, dashboards, and records management.

This project is expected to include the following phases:

1. Full needs analysis of the current systems and technology utilized by the OCFA's Business Services Department, Human Resources Department and other OCFA Departmental needs.
2. Development of a Request for Proposal (RFP).
3. Vendor/technology selection and contract negotiations.
4. Implementation of the new ERP solution.

**Project Status:** The project is scheduled to start in FY 2025/26 with needs analysis, RFP development, and vendor selection. Contract award is expected in FY 2026/27, and system implementation will require up to three years to complete, including a comprehensive parallel testing period.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | | | | $1,000,000 | $9,000,000 | $10,000,000 |

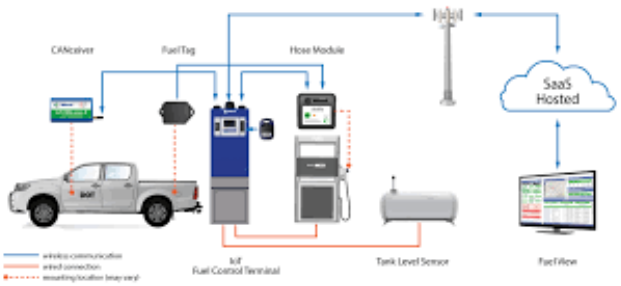
**Impact on Operating Budget:** Maintenance/License Costs estimated at $750,000 beginning in FY 2028/29.

# FLEET SERVICES FUEL MANAGEMENT TRACKING SYSTEM

**Project Priority:** A
**Org Number:** TBD
**Project Total:** $602,000
**Project Type:** Application Replacement
**Project Management:** IT – Systems Development & Support

**Project Description:** This project is to add fuel management functionality to OCFA's Fleet Management system through the addition and integration of a Fuel Module.

The current Fleet Management system has the capability to track the fuel usage of all OCFA vehicles and monitor fuel dispensing. It requires adding a software module to the Fleet system, as well as additional hardware for the fuel 'islands' and tracking devices on each OCFA vehicle. Professional services for installation and testing are included in the project budget.




Implementation of this module will improve accountability for fuel utilization, provide pump control and fuel card lockout, and result in overall fuel consumption savings.

**Project Status:** Purchase scheduled to occur in FY 2024/25.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | | | $602,000 | | | $602,000 |

**Impact on Operating Budget:** Application maintenance and licensing costs are estimated at $60,000 annually beginning in FY 2025/26.

## 911 VOICE RECORDING SYSTEM UPGRADE

**Project Priority:** A
**Org Number:** TBD
**Project Total:** $350,000
**Project Type:** Equipment Replacement
**Project Management:** IT - Systems Development & Support

**Project Description:**
This project will replace the existing 911 voice recording systems with a state-of-the-art multimedia 911 recording system. The new 911 voice recording system will log analog, digital, Voice Over Internet Protocol (VoIP) calls, radio traffic, text-to-911, videos, computer-aided dispatch (CAD) data and locations from geographic information systems (GIS), and RapidSOSk (smartphone geolocating), as well as integrate with other sources.




The current 911 voice recording system was installed 17 years ago and was most recently upgraded in 2015. The legacy technology is complex, making recordings difficult to extract when needed. The system has since been transferred to new ownership, and further development of the system has ended.

The new 911 voice recording system will provide OCFA with much needed capabilities, including comprehensive information necessary for incident management. It will capture and synchronize the numerous input channels that 911 calls are received on. It has enhanced reporting and investigative tools that will improve the context of the incident to measure effectiveness of 911 call answering, improve investigations, and ensure policy compliance.

**Project Status:** Purchase to occur in FY 2022/23.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | 5 Year Total |
|---|---|---|---|---|---|---|
| Budget: | $350,000 | | | | | $350,000 |

**Impact on Operating Budget:** Annual maintenance costs will increase by approximately $30,000 (new total cost of $41,000) starting in FY 2023/24.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# Fund 133
# Fire Apparatus

This fund is a capital projects fund used for the planned acquisition, improvement, or replacement of fire apparatus, including vehicles, trailers, and helicopters. Funding sources for this fund include operating transfers from the General Fund, contributions from cash contract member cities, and proceeds from lease purchase agreements.


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**ORANGE COUNTY FIRE AUTHORITY**
FUND 133 - FIRE APPARATUS
***LIST OF VEHICLES TO BE REPLACED***

| Existing Vehicle Number | Current Vehicle Type | Dept/Section Assigned to: | FY 2022/23 | FY 2023/24 | FY 2024/25 | FY 2025/26 | FY 2026/27 | 5-Year Total |
|---|---|---|---|---|---|---|---|---|
| EMERGENCY VEHICLES | | | | | | | | |
| **Air Utility Vehicle** | | | | | | | | |
| 5415 | Air Utility Vehicle | Operations | - | - | - | 672,200 | - | 672,200 |
| **Battalion Chief Command Vehicle** | | | | | | | | |
| 2185 | BC Command Vehicle | Operations | 165,000 | - | - | - | - | 165,000 |
| 2186 | BC Command Vehicle | Operations | 165,000 | - | - | - | - | 165,000 |
| 2187 | BC Command Vehicle | Operations | 165,000 | - | - | - | - | 165,000 |
| 2188 | BC Command Vehicle | Operations | 165,000 | - | - | - | - | 165,000 |
| 2189 | BC Command Vehicle | Operations | 165,000 | - | - | - | - | 165,000 |
| 2190 | BC Command Vehicle | Operations | 165,000 | - | - | - | - | 165,000 |
| NEW | BC Command Vehicle | Cadre | 165,000 | - | - | - | - | 165,000 |
| NEW | BC Command Vehicle | Cadre | 165,000 | - | - | - | - | 165,000 |
| 2191 | BC Command Vehicle | Operations | - | 173,300 | - | - | - | 173,300 |
| 2192 | BC Command Vehicle | Operations | - | 173,300 | - | - | - | 173,300 |
| 2193 | BC Command Vehicle | Operations | - | 173,300 | - | - | - | 173,300 |
| 2194 | BC Command Vehicle | Operations | - | 173,300 | - | - | - | 173,300 |
| **Battalion Utility Vehicle** | | | | | | | | |
| 3645 | Battalion Utility | Operations | - | - | 88,100 | - | - | 88,100 |
| 3646 | Battalion Utility | Operations | - | - | 88,100 | - | - | 88,100 |
| 3647 | Battalion Utility | Operations | - | - | 88,100 | - | - | 88,100 |
| 3648 | Battalion Utility | Operations | - | - | 88,100 | - | - | 88,100 |
| 3649 | Battalion Utility | Operations | - | - | 88,100 | - | - | 88,100 |
| 3650 | Battalion Utility | Operations | - | - | 88,100 | - | - | 88,100 |
| 3651 | Battalion Utility | Operations | - | - | - | 92,500 | - | 92,500 |
| 3652 | Battalion Utility | Operations | - | - | - | 92,500 | - | 92,500 |
| 3653 | Battalion Utility | Operations | - | - | - | 92,500 | - | 92,500 |
| 3654 | Battalion Utility | Operations | - | - | - | 92,500 | - | 92,500 |
| 3655 | Battalion Utility | Operations | - | - | - | 92,500 | - | 92,500 |
| 3659 | Battalion Utility | Operations | - | - | - | 92,500 | - | 92,500 |
| **Compressed Air Foam System Patrol Vehicle - Type 6** | | | | | | | | |
| 3687 | CAFS-Patrol Veh.-Type 6 | Operations | - | - | - | - | 194,720 | 194,720 |
| 3689 | CAFS-Patrol Veh.-Type 6 | Operations | - | - | - | - | 194,720 | 194,720 |
| 3686 | CAFS-Patrol Veh.-Type 6 | Operations | - | - | - | - | 194,720 | 194,720 |
| 3688 | CAFS-Patrol Veh.-Type 6 | Operations | - | - | - | - | 194,720 | 194,720 |
| 3795 | CAFS-Patrol Veh.-Type 6 | Operations | - | - | - | - | 194,720 | 194,720 |
| 3690 | CAFS-Patrol Veh.-Type 6 | Operations | - | - | - | - | 194,720 | 194,720 |
| 3684 | CAFS-Patrol Veh.-Type 6 | Operations | - | - | - | - | 194,720 | 194,720 |
| **Dozer Tender Vehicle** | | | | | | | | |
| 3033 | Dozer Tender | Operations | 165,000 | - | - | - | - | 165,000 |
| 3034 | Dozer Tender | Operations | 165,000 | - | - | - | - | 165,000 |
| **Truck/Ladder Truck (TBD by Apparatus Committee)** | | | | | | | | |
| 5080 | Truck | Operations | - | - | 2,182,950 | - | - | 2,182,950 |
| 5093 | Truck | Operations | - | - | 2,182,950 | - | - | 2,182,950 |
| 5230 | Truck | Operations | - | - | 2,182,950 | - | - | 2,182,950 |
| 5065 | Truck | Operations | - | - | - | 2,292,200 | - | 2,292,200 |
| 5077 | Truck | Operations | - | - | - | 2,292,200 | - | 2,292,200 |
| 5078 | Truck | Operations | - | - | - | 2,292,200 | - | 2,292,200 |
| 5079 | Truck | Operations | - | - | - | 2,292,200 | - | 2,292,200 |
| 5231 | Truck | Operations | - | - | - | - | 2,406,700 | 2,406,700 |
| 5232 | Truck | Operations | - | - | - | - | 2,406,700 | 2,406,700 |
| 5234 | Truck | Operations | - | - | - | - | 2,406,700 | 2,406,700 |
| 5235 | Truck | Operations | - | - | - | - | 2,406,700 | 2,406,700 |

**ORANGE COUNTY FIRE AUTHORITY**
FUND 133 - FIRE APPARATUS
***LIST OF VEHICLES TO BE REPLACED***

| Existing Vehicle Number | Current Vehicle Type | Dept/Section Assigned to: | FY 2022/23 | FY 2023/24 | FY 2024/25 | FY 2025/26 | FY 2026/27 | 5-Year Total |
|---|---|---|---|---|---|---|---|---|
| **Engine - Type I** | | | | | | | | |
| 5151 | Engine - Type I | Operations | 774,520 | - | - | - | - | 774,520 |
| 5153 | Engine - Type I | Operations | 774,520 | - | - | - | - | 774,520 |
| 5154 | Engine - Type I | Operations | 774,520 | - | - | - | - | 774,520 |
| 5267 | Engine - Type I | Operations | 774,520 | - | - | - | - | 774,520 |
| 5159 | Engine - Type I | Operations | - | 813,240 | - | - | - | 813,240 |
| 5084 | Engine - Type I | Operations | - | 813,240 | - | - | - | 813,240 |
| 5215 | Engine - Type I | Operations | - | 813,240 | - | - | - | 813,240 |
| 5218 | Engine - Type I | Operations | - | 813,240 | - | - | - | 813,240 |
| 5225 | Engine - Type I | Operations | - | - | 853,900 | - | - | 853,900 |
| 5263 | Engine - Type I | Operations | - | - | 853,900 | - | - | 853,900 |
| 5264 | Engine - Type I | Operations | - | - | 853,900 | - | - | 853,900 |
| NEW | Engine - Type I | Operations | - | - | 853,900 | - | - | 853,900 |
| 5228 | Engine - Type I | Operations | - | - | - | 896,570 | - | 896,570 |
| 5229 | Engine - Type I | Operations | - | - | - | 896,570 | - | 896,570 |
| 5089 | Engine - Type I | Operations | - | - | - | - | 941,400 | 941,400 |
| 5124 | Engine - Type I | Operations | - | - | - | - | 941,400 | 941,400 |
| 5227 | Engine - Type I | Operations | - | - | - | - | 941,400 | 941,400 |
| 5210 | Engine - Type I | Operations | - | - | - | - | 941,400 | 941,400 |
| 5214 | Engine - Type I | Operations | - | - | - | - | 941,400 | 941,400 |
| 5221 | Engine - Type I | Operations | - | - | - | - | 941,400 | 941,400 |
| **Engine - Type III** | | | | | | | | |
| NEW | Engine - Type III | Operations | 720,710 | - | - | - | - | 720,710 |
| NEW | Engine - Type III | Operations | 720,710 | - | - | - | - | 720,710 |
| 5140 | Engine - Type III | Operations | - | - | - | 834,300 | - | 834,300 |
| 5141 | Engine - Type III | Operations | - | - | - | 834,300 | - | 834,300 |
| 5144 | Engine - Type III | Operations | - | - | - | - | 876,020 | 876,020 |
| 5147 | Engine - Type III | Operations | - | - | - | - | 876,020 | 876,020 |
| 5149 | Engine - Type III | Operations | - | - | - | - | 876,020 | 876,020 |
| **Investigator Truck 3/4 Ton Minimum** | | | | | | | | |
| 3028 | Pickup Utility 3/4 Ton | Operations | - | - | - | 87,000 | - | 87,000 |
| 3656 | Pickup Utility 3/4 Ton | Operations | - | - | - | 87,000 | - | 87,000 |
| 3665 | Pickup Utility 3/4 Ton | Operations | - | - | - | 87,000 | - | 87,000 |
| 3666 | Pickup Utility 3/4 Ton | Operations | - | - | - | 87,000 | - | 87,000 |
| 3667 | Pickup Utility 3/4 Ton | Operations | - | - | - | 87,000 | - | 87,000 |
| **Paramedic Squad Vehicle** | | | | | | | | |
| 3662 | Paramedic Squad | Operations | 229,500 | - | - | - | - | 229,500 |
| 3664 | Paramedic Squad | Operations | 229,500 | - | - | - | - | 229,500 |
| 3661 | Paramedic Squad | Operations | - | 241,000 | - | - | - | 241,000 |
| 3663 | Paramedic Squad | Operations | - | 241,000 | - | - | - | 241,000 |
| 3660 | Paramedic Squad | Operations | - | 241,000 | - | - | - | 241,000 |
| **Pickup Utility 3/4 Ton Minimum** | | | | | | | | |
| NEW | Pickup Utility 3/4 Ton | Air Ops | 68,250 | - | - | - | - | 68,250 |
| NEW | Pickup Utility 3/4 Ton | Air Ops | 68,250 | - | - | - | - | 68,250 |
| 3677 | Pickup Utility 3/4 Ton | Operations | - | - | 88,200 | - | - | 88,200 |
| 3041 | Pickup Utility 3/4 Ton | Crews/Equipment | - | - | 88,200 | - | - | 88,200 |
| 3043 | Pickup Utility 3/4 Ton | Crews/Equipment | - | - | 88,200 | - | - | 88,200 |
| 3339 | Pickup Utility 3/4 Ton | Investigations | - | - | 87,320 | - | - | 87,320 |
| **Pickup Utility 4X4 1 Ton Minimum** | | | | | | | | |
| NEW | Pickup Utility 4X4 1 Ton | Crews/Equipment | 82,500 | - | - | - | - | 82,500 |
| **SUV Full-Size 4x4 Vehicle** | | | | | | | | |
| 2321 | SUV Full Size 4x4 | Operations | 77,000 | - | - | - | - | 77,000 |
| 2322 | SUV Full Size 4x4 | Ops Support | 77,000 | - | - | - | - | 77,000 |
| 2323 | SUV Full Size 4x4 | Operations | 77,000 | - | - | - | - | 77,000 |
| 2324 | SUV Full Size 4x4 | Operations | 77,000 | - | - | - | - | 77,000 |

**ORANGE COUNTY FIRE AUTHORITY**
FUND 133 - FIRE APPARATUS
***LIST OF VEHICLES TO BE REPLACED***

| Existing Vehicle Number | Current Vehicle Type | Dept/Section Assigned to: | FY 2022/23 | FY 2023/24 | FY 2024/25 | FY 2025/26 | FY 2026/27 | 5-Year Total |
|---|---|---|---|---|---|---|---|---|
| 2331 | SUV Full Size 4x4 | Operations | 77,000 | - | - | - | - | 77,000 |
| 2354 | SUV Full Size 4x4 | Operations | - | 80,850 | - | - | - | 80,850 |
| 2351 | SUV Full Size 4x4 | Operations | - | 80,850 | - | - | - | 80,850 |
| 2355 | SUV Full Size 4x4 | Operations | - | 80,850 | - | - | - | 80,850 |
| 2356 | SUV Full Size 4x4 | Operations | - | 80,850 | - | - | - | 80,850 |
| 2320 | SUV Full Size 4x4 | ECC | - | - | - | - | 93,590 | 93,590 |
| 2325 | SUV Full Size 4x4 | ECC | - | - | - | - | 93,590 | 93,590 |
| 2327 | SUV Full Size 4x4 | Operations | - | - | - | - | 93,590 | 93,590 |
| 2329 | SUV Full Size 4x4 | Operations | - | - | - | - | 93,590 | 93,590 |
| 2330 | SUV Full Size 4x4 | ECC | - | - | - | - | 93,590 | 93,590 |
| **Superintendent Vehicle** | | | | | | | | |
| NEW | Superintendent Vehicle | Operations | - | 178,400 | - | - | - | 178,400 |
| **Swift Water Vehicle** | | | | | | | | |
| 3803 | Swift Water Vehicle | Operations | 88,200 | - | - | - | - | 88,200 |
| 3806 | Swift Water Vehicle | Operations | 88,200 | - | - | - | - | 88,200 |
| **Technical Rescue Support Vehicle** | | | | | | | | |
| NEW | Pickup Utility Heavy Duty | Technical Rescue | 137,500 | - | - | - | - | 137,500 |
| NEW | Pickup Utility Heavy Duty | Technical Rescue | 137,500 | - | - | - | - | 137,500 |
| NEW | Pickup Utility Heavy Duty | Technical Rescue | 137,500 | - | - | - | - | 137,500 |
| NEW | Pickup Utility Heavy Duty | Technical Rescue | 137,500 | - | - | - | - | 137,500 |
| **Total Emergency Vehicles** | | | **7,978,900** | **5,170,960** | **10,844,970** | **14,292,740** | **19,734,250** | **58,021,820** |
| DEVELOPER FUNDED VEHICLES | | | | | | | | |
| **Engine - Type I** | | | | | | | | |
| Station 52 | Engine - Type I | Operations | - | - | - | 1,000,080 | - | 1,000,080 |
| **Total Developer Funded Vehicles** | | | **-** | **-** | **-** | **1,000,080** | **-** | **1,000,080** |
| USAR GRANT FUNDED VEHICLES | | | | | | | | |
| **Utility Task Vehicle (UTV)** | | | | | | | | |
| NEW | Utility Task Vehicle | US&R | 30,000 | - | - | - | - | 30,000 |
| **Total Grant Funded Vehicles** | | | **30,000** | **-** | **-** | **-** | **-** | **30,000** |
| SUPPORT VEHICLES | | | | | | | | |
| **Floor Scrubber** | | | | | | | | |
| FFS1 | Floor Scrubber | Air Operations | 5,000 | - | - | - | - | 5,000 |
| **Forklift** | | | | | | | | |
| 9642 | Forklift | Service Center | 20,000 | - | - | - | - | 20,000 |
| FFL7 | Forklift | Comm Srvcs | 11,000 | - | - | - | - | 11,000 |
| NEW | Forklift | Crews/Equipment | 50,000 | - | - | - | - | 50,000 |
| FFL1 | Forklift | Support | - | 11,600 | - | - | - | 11,600 |
| FFL2 | Forklift | Air Operations | - | 11,600 | - | - | - | 11,600 |
| FFL5 | Forklift | Crews/Equipment | - | 11,600 | - | - | - | 11,600 |
| 9625 | Forklift | US&R | - | 11,600 | - | - | - | 11,600 |
| **Fuel Tender Vehicle** | | | | | | | | |
| 5313 | Fuel Tender | Fleet Services | 550,000 | - | - | - | - | 550,000 |
| **Golf Cart/Utility Cart Vehicle** | | | | | | | | |
| NEW | Trailers for Carts | Service Center | 25,000 | - | - | - | - | 25,000 |
| NEW | Golf Cart/Utility Cart | Service Center | 14,300 | - | - | - | - | 14,300 |

**ORANGE COUNTY FIRE AUTHORITY**
FUND 133 - FIRE APPARATUS
***LIST OF VEHICLES TO BE REPLACED***

| Existing Vehicle Number | Current Vehicle Type | Dept/Section Assigned to: | FY 2022/23 | FY 2023/24 | FY 2024/25 | FY 2025/26 | FY 2026/27 | 5-Year Total |
|---|---|---|---|---|---|---|---|---|
| **Mid-Size 4-Door Sedan/SUV - Hybrid/Electric** | | | | | | | | |
| NEW | Mid-Size 4-Door/Hybrid | Pool | 58,000 | - | - | - | - | 58,000 |
| NEW | Mid-Size 4-Door/Hybrid | Pool | 58,000 | - | - | - | - | 58,000 |
| NEW | Mid-Size 4-Door/Hybrid | Pool | 58,000 | - | - | - | - | 58,000 |
| NEW | Mid-Size 4-Door/Hybrid | Pool | 58,000 | - | - | - | - | 58,000 |
| NEW | Mid-Size 4-Door/Hybrid | Pool | 58,000 | - | - | - | - | 58,000 |
| NEW | Mid-Size 4-Door/Hybrid | Pool | 58,000 | - | - | - | - | 58,000 |
| NEW | Mid-Size 4-Door/Hybrid | Pool | 58,000 | - | - | - | - | 58,000 |
| NEW | Mid-Size 4-Door/Hybrid | Pool | 58,000 | - | - | - | - | 58,000 |
| **Mid-Size Pickup 1/2 Ton Minimum** | | | | | | | | |
| TBD | Mid-Size Pickup 1/2 Ton | Admin Captains | 48,400 | - | - | - | - | 48,400 |
| TBD | Mid-Size Pickup 1/2 Ton | Admin Captains | 48,400 | - | - | - | - | 48,400 |
| TBD | Mid-Size Pickup 1/2 Ton | Admin Captains | 48,400 | - | - | - | - | 48,400 |
| TBD | Mid-Size Pickup 1/2 Ton | Admin Captains | 48,400 | - | - | - | - | 48,400 |
| TBD | Mid-Size Pickup 1/2 Ton | Admin Captains | 48,400 | - | - | - | - | 48,400 |
| NEW | Mid-Size Pickup 1/2 Ton | Pool | 44,000 | - | - | - | - | 44,000 |
| NEW | Mid-Size Pickup 1/2 Ton | Pool | 44,000 | - | - | - | - | 44,000 |
| NEW | Mid-Size Pickup 1/2 Ton | Training (GG) | 44,000 | - | - | - | - | 44,000 |
| NEW | Mid-Size Pickup 1/2 Ton | Training Cadre | 60,500 | - | - | - | - | 60,500 |
| NEW | Mid-Size Pickup 1/2 Ton | Training Cadre | 60,500 | - | - | - | - | 60,500 |
| NEW | Mid-Size Pickup 1/2 Ton | Training Cadre | 60,500 | - | - | - | - | 60,500 |
| NEW | Mid-Size Pickup 1/2 Ton | Training Cadre | 60,500 | - | - | - | - | 60,500 |
| NEW | Mid-Size Pickup 1/2 Ton | Training Cadre | 60,500 | - | - | - | - | 60,500 |
| NEW | Mid-Size Pickup 1/2 Ton | Training Cadre | 60,500 | - | - | - | - | 60,500 |
| NEW | Mid-Size Pickup 1/2 Ton | Training Cadre | 60,500 | - | - | - | - | 60,500 |
| NEW | Mid-Size Pickup 1/2 Ton | Training Cadre | 60,500 | - | - | - | - | 60,500 |
| NEW | Mid-Size Pickup 1/2 Ton | Training Cadre | 60,500 | - | - | - | - | 60,500 |
| NEW | Mid-Size Pickup 1/2 Ton | Training Cadre | 60,500 | - | - | - | - | 60,500 |
| NEW | Mid-Size Pickup 1/2 Ton | Training Cadre | 60,500 | - | - | - | - | 60,500 |
| NEW | Mid-Size Pickup 1/2 Ton | Training Cadre | 60,500 | - | - | - | - | 60,500 |
| NEW | Mid-Size Pickup 1/2 Ton | Training Cadre | 60,500 | - | - | - | - | 60,500 |
| NEW | Mid-Size Pickup 1/2 Ton | Training Cadre | 60,500 | - | - | - | - | 60,500 |
| NEW | Mid-Size Pickup 1/2 Ton | Training Cadre | 60,500 | - | - | - | - | 60,500 |
| NEW | Mid-Size Pickup 1/2 Ton | Training Cadre | 60,500 | - | - | - | - | 60,500 |
| NEW | Mid-Size Pickup 1/2 Ton | Training Cadre | 60,500 | - | - | - | - | 60,500 |
| NEW | Mid-Size Pickup 1/2 Ton | Training Cadre | 60,500 | - | - | - | - | 60,500 |
| NEW | Mid-Size Pickup 1/2 Ton | Training Cadre | 60,500 | - | - | - | - | 60,500 |
| 3138 | Mid-Size Pickup 1/2 Ton | ECC | - | 46,200 | - | - | - | 46,200 |
| 3133 | Mid-Size Pickup 1/2 Ton | EMS | - | 46,200 | - | - | - | 46,200 |
| 3140 | Mid-Size Pickup 1/2 Ton | EMS | - | 46,200 | - | - | - | 46,200 |
| 3468 | Mid-Size Pickup 1/2 Ton | Fleet Services | - | 46,200 | - | - | - | 46,200 |
| 3142 | Mid-Size Pickup 1/2 Ton | Ops Support | - | 46,200 | - | - | - | 46,200 |
| 2175 | Mid-Size Pickup 1/2 Ton | CRR | - | - | 48,510 | - | - | 48,510 |
| 2176 | Mid-Size Pickup 1/2 Ton | CRR | - | - | 48,510 | - | - | 48,510 |
| 3118 | Mid-Size Pickup 1/2 Ton | CRR | - | - | 48,510 | - | - | 48,510 |
| 3117 | Mid-Size Pickup 1/2 Ton | CRR | - | - | 48,510 | - | - | 48,510 |
| 3119 | Mid-Size Pickup 1/2 Ton | CRR | - | - | 48,510 | - | - | 48,510 |
| 3112 | Mid-Size Pickup 1/2 Ton | CRR | - | - | 48,510 | - | - | 48,510 |
| 3114 | Mid-Size Pickup 1/2 Ton | CRR | - | - | 48,510 | - | - | 48,510 |
| 2160 | Mid-Size Pickup 1/2 Ton | CRR | - | - | 48,510 | - | - | 48,510 |
| 3225 | Mid-Size Pickup 1/2 Ton | CRR | - | - | 48,510 | - | - | 48,510 |
| 2307 | Mid-Size Pickup 1/2 Ton | CRR-Wildfire | - | - | 48,510 | - | - | 48,510 |
| 2305 | Mid-Size Pickup 1/2 Ton | CRR-Field Services | - | - | 48,510 | - | - | 48,510 |
| 2308 | Mid-Size Pickup 1/2 Ton | CRR-Field Services | - | - | 48,510 | - | - | 48,510 |
| 2310 | Mid-Size Pickup 1/2 Ton | CRR-Field Services | - | - | 48,510 | - | - | 48,510 |
| 2311 | Mid-Size Pickup 1/2 Ton | CRR-Field Services | - | - | 48,510 | - | - | 48,510 |
| 2314 | Mid-Size Pickup 1/2 Ton | CRR-Field Services | - | - | 48,510 | - | - | 48,510 |
| 2306 | Mid-Size Pickup 1/2 Ton | CRR-P&D | - | - | 48,510 | - | - | 48,510 |
| 2309 | Mid-Size Pickup 1/2 Ton | CRR-P&D | - | - | 48,510 | - | - | 48,510 |
| 2312 | Mid-Size Pickup 1/2 Ton | CRR-P&D | - | - | 48,510 | - | - | 48,510 |
| 2313 | Mid-Size Pickup 1/2 Ton | CRR-P&D | - | - | 48,510 | - | - | 48,510 |
| 2315 | Mid-Size Pickup 1/2 Ton | CRR-P&D | - | - | 48,510 | - | - | 48,510 |

**ORANGE COUNTY FIRE AUTHORITY**
FUND 133 - FIRE APPARATUS
***LIST OF VEHICLES TO BE REPLACED***

| Existing Vehicle Number | Current Vehicle Type | Dept/Section Assigned to: | FY 2022/23 | FY 2023/24 | FY 2024/25 | FY 2025/26 | FY 2026/27 | 5-Year Total |
|---|---|---|---|---|---|---|---|---|
| 3143 | Mid-Size Pickup 1/2 Ton | CRR-Pre-Fire | - | - | 48,510 | - | - | 48,510 |
| 3139 | Mid-Size Pickup 1/2 Ton | Operations | - | - | 48,510 | - | - | 48,510 |
| 3137 | Mid-Size Pickup 1/2 Ton | Operations | - | - | 48,510 | - | - | 48,510 |
| 3130 | Mid-Size Pickup 1/2 Ton | Operations | - | - | 48,510 | - | - | 48,510 |
| 3127 | Mid-Size Pickup 1/2 Ton | Operations | - | - | 48,510 | - | - | 48,510 |
| 3134 | Mid-Size Pickup 1/2 Ton | Operations | - | - | 48,510 | - | - | 48,510 |
| 3124 | Mid-Size Pickup 1/2 Ton | Operations | - | - | 48,510 | - | - | 48,510 |
| 2302 | Mid-Size Pickup 1/2 Ton | Pool | - | - | - | - | 53,500 | 53,500 |
| 2303 | Mid-Size Pickup 1/2 Ton | Fleet | - | - | - | - | 53,500 | 53,500 |
| 2304 | Mid-Size Pickup 1/2 Ton | Fire Prevention | - | - | - | - | 53,500 | 53,500 |
| 2318 | Mid-Size Pickup 1/2 Ton | EMS | - | - | - | - | 53,500 | 53,500 |
| 2319 | Mid-Size Pickup 1/2 Ton | Property Management | - | - | - | - | 53,500 | 53,500 |
| 2341 | Mid-Size Pickup 1/2 Ton | Pool | - | - | - | - | 53,500 | 53,500 |
| **Pickup Crew Cab 1/2 Ton Minimum** | | | | | | | | |
| NEW | Pickup Crew Cab 1/2 Ton | Pool | - | - | 48,510 | - | - | 48,510 |
| NEW | Pickup Crew Cab 1/2 Ton | Pool | - | - | 48,510 | - | - | 48,510 |
| NEW | Pickup Crew Cab 1/2 Ton | Pool | - | - | 48,510 | - | - | 48,510 |
| **Pickup Crew Cab 3/4 Ton Minimum** | | | | | | | | |
| 3203 | Pickup Crew Cab 3/4 Ton | Training | - | - | 66,700 | - | - | 66,700 |
| **Pickup - Stake Bed/Cargo 1 Ton Minimum** | | | | | | | | |
| NEW | Stake Bed 1 Ton | Service Center | 99,000 | - | - | - | - | 99,000 |
| NEW | Stake Bed 1 Ton | Service Center | 99,000 | - | - | - | - | 99,000 |
| **Service Truck - Light** | | | | | | | | |
| 3047 | Service Truck - Light | Fleet Srvcs | - | - | - | - | 216,480 | 216,480 |
| 3048 | Service Truck - Light | Fleet Srvcs | - | - | - | - | 216,480 | 216,480 |
| **SUV Full-Size 4X4 Vehicle** | | | | | | | | |
| NEW | SUV Full-Size 4x4 | Pool | - | - | 84,890 | - | - | 84,890 |
| NEW | SUV Full-Size 4x4 | Pool | - | - | 84,890 | - | - | 84,890 |
| NEW | SUV Full-Size 4x4 | Pool | - | - | 84,890 | - | - | 84,890 |
| NEW | SUV Full-Size 4x4 | Pool | - | - | 84,890 | - | - | 84,890 |
| 3143 | SUV Full-Size 4x4 | Pre-Fire Management | - | - | - | 89,130 | - | 89,130 |
| **SUV Mid-Size 4x4 Vehicle** | | | | | | | | |
| 2159 | SUV Mid-Size 4x4 | Operations Pool | - | - | 60,640 | - | - | 60,640 |
| 2162 | SUV Mid-Size 4x4 | Operations Pool | - | - | 60,640 | - | - | 60,640 |
| 2163 | SUV Mid-Size 4x4 | Operations Pool | - | - | 60,640 | - | - | 60,640 |
| 2164 | SUV Mid-Size 4x4 | Operations Pool | - | - | 60,640 | - | - | 60,640 |
| 2165 | SUV Mid-Size 4x4 | Operations Pool | - | - | 60,640 | - | - | 60,640 |
| 2166 | SUV Mid-Size 4x4 | Operations Pool | - | - | 60,640 | - | - | 60,640 |
| 2167 | SUV Mid-Size 4x4 | Operations Pool | - | - | 60,640 | - | - | 60,640 |
| 2168 | SUV Mid-Size 4x4 | Operations Pool | - | - | 60,640 | - | - | 60,640 |
| 2169 | SUV Mid-Size 4x4 | Operations Pool | - | - | 60,640 | - | - | 60,640 |
| 2170 | SUV Mid-Size 4x4 | Operations Pool | - | - | 60,640 | - | - | 60,640 |
| **Van-Transit** | | | | | | | | |
| 4103 | Transit Connect | Plan Dev | - | - | - | 34,780 | - | 34,780 |
| 4328 | Transit Connect | EMS | - | - | - | 34,780 | - | 34,780 |
| 4329 | Transit Connect | EMS | - | - | - | 34,780 | - | 34,780 |
| 4330 | Transit Connect | EMS | - | - | - | 34,780 | - | 34,780 |
| 4331 | Transit Connect | EMS | - | - | - | 34,780 | - | 34,780 |
| 4332 | Transit Connect | EMS | - | - | - | 34,780 | - | 34,780 |
| 4333 | Transit Connect | EMS | - | - | - | 34,780 | - | 34,780 |
| 4334 | Transit Connect | EMS | - | - | - | 34,780 | - | 34,780 |
| **Scissor Lift Vehicle** | | | | | | | | |
| NEW | Scissor Lift | Property Management | 25,000 | - | - | - | - | 25,000 |
| **Total Support Vehicles** | | | **3,006,800** | **277,400** | **2,467,960** | **367,370** | **753,960** | **6,873,490** |
| **TOTAL VEHICLES** | | | **$11,015,700** | **$5,448,360** | **$13,312,930** | **$15,660,190** | **$20,488,210** | **$65,925,390** |

# AIR UTILITY VEHICLE (EMERGENCY)

**Project Priority:** A
**Project Type:** Vehicle Replacement
**Project Management:** Fleet Services




**Project Description:** The air utility vehicle brings to the fire scene a cache of self-contained breathing apparatus and air cylinders. It also provides on-scene lighting. This apparatus has a built-in compressor that can fill the self-contained breathing apparatus cylinders at the emergency scene. This project is for the replacement of one air utility vehicle in FY 2025/26.

Vehicle replacement evaluation is based on the following criteria:

- Actual miles of the vehicles
- Actual years of operation compared to expected years
- Evaluation of mechanical condition by the Fleet Services Manager
- Evaluation of the maintenance costs by the Fleet Services Manager

The age and mileage targets for air utility vehicles are 15 years and/or 120,000 miles. The projection for the replacement of this vehicle is based on age. However, mileage will be reviewed before a purchase is made, and the purchase may be deferred if warranted.

**Project Status:** Purchase to occur in FY 2025/26.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | Total |
|---|---|---|---|---|---|---|
| Budget: | | | | $672,200 | | $672,200 |

**Impact on Operating Budget:** The replacement of older vehicles with high mileage reduces maintenance costs in the operating budget.

## BATTALION CHIEF (BC) COMMAND VEHICLE (EMERGENCY)

**Project Priority:** A
**Project Type:** Vehicle Replacement
**Project Management:** Fleet Services

**Project Description:** Each of the 10 battalions is assigned a BC command vehicle. Approximately forty percent of the vehicle cost is for equipment which includes cell phones, Mobile Data Computers (MDCs), and a slide-out working station to manage any large incident. This project is for 12 command vehicles: eight in FY 2022/23 and four in 2023/2024.




Vehicle replacement evaluation is based on the following criteria:

- Actual miles of the vehicles
- Actual years of operation compared to expected years
- Evaluation of mechanical condition by the Fleet Services Manager
- Evaluation of the maintenance costs by the Fleet Services Manager

The age and mileage targets for BC command vehicles are five years and/or 120,000 miles. The projections for the replacement of these vehicles are based on age. However, mileage will be reviewed before a purchase is made, and the purchase may be deferred if warranted.

**Project Status:** Purchases to occur in FY 2022/23 and FY 2023/24.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2024/25 | 2025/26 | Total |
|---|---|---|---|---|---|---|
| Budget: | $1,320,000 | $693,200 | | | | $2,013,200 |

**Impact on Operating Budget:** The replacement of older vehicles with high mileage reduces downtime and maintenance costs in the operating budget.

# BATTALION UTILITY VEHICLE (EMERGENCY)

**Project Priority:** A
**Project Type:** Vehicle Replacement
**Project Management:** Fleet Services



**Project Description:** Each of the ten battalions is assigned a utility vehicle. Approximately forty percent of the vehicle cost is for equipment which includes cell phones, Mobile Data Computers (MDCs), and a slide-out working station to manage any large incident. This project is for the replacement of six units in FY 2024/25, and six additional units in FY 2025/26.

Vehicle replacement evaluation is based on the following criteria

- Actual miles of the vehicles
- Actual years of operation compared to expected years
- Evaluation of mechanical condition by the Fleet Services Manager
- Evaluation of the maintenance costs by the Fleet Services Manager

The age and mileage targets for BC utility vehicles are five years and/or 120,000 miles. The projections for the replacement of these vehicles are based on age. However, mileage will be reviewed before a purchase is made, and the purchase may be deferred if warranted.

**Project Status:** Purchases to occur in FY 2024/25 and FY 2025/26.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | Total |
|---|---|---|---|---|---|---|
| Budget: | | | $528,600 | $555,000 | | $1,083,600 |

**Impact on Operating Budget:** The replacement of older vehicles with high mileage reduces downtime and maintenance costs in the operating budget. Once off warranty, the annual estimated maintenance cost is estimated at $2,000 per unit.

## COMPRESSED AIR FOAM SYSTEM (CAFS) PATROL VEHICLE – TYPE 6 (EMERGENCY)

**Project Priority:** A
**Project Type:** Vehicle Replacement
**Project Management:** Fleet Services




**Project Description:** The CAFS unit carries hose, water, and a skid mounted pump. The system injects air making a very rich foam allowing the crews to pretreat buildings and vegetation in the line of fire. This unit also has the ability to pump and roll. The CAFS unit is primarily for urban interface firefighting and rescue operations. These units are smaller by design to maneuver on truck trails and rural areas.

Vehicle replacement evaluation is based on the following criteria:

- Actual miles of the vehicles
- Actual years of operation compared to expected years
- Evaluation of mechanical condition by the Fleet Services Manager
- Evaluation of the maintenance costs by the Fleet Services Manager

The age and mileage targets for CAFS units are 20 years and/or 120,000 miles. The projections for the replacement of these vehicles are based on age. However, mileage will be reviewed before a purchase is made, and the purchase may be deferred if warranted.

**Project Status:** Purchase to occur in FY 2026/27.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | Total |
|---|---|---|---|---|---|---|
| Budget: | | | | | $1,363,040 | $1,363,040 |

**Impact on Operating Budget:** The replacement of older vehicles with high mileage reduces downtime and maintenance costs in the operating budget.

## DOZER TENDER VEHICLE (EMERGENCY)

**Project Priority:** B
**Project Type:** Vehicle Replacement
**Project Management:** Fleet Services




**Project Description:** The dozer tender vehicle has a multitude of uses for Crews and Equipment. The primary use is to support and supervise the hand crews with fire line construction and brush clearing operations. These units are also sent out of the county to support the section on large campaign fires.

Replacement evaluation is based on the following criteria:

- Actual miles of the vehicles
- Actual years of operation compared to expected years
- Evaluation of mechanical condition by the Fleet Services Manager
- Evaluation of the maintenance costs by the Fleet Services Manager

The age and mileage targets for service trucks are 10 years and/or 120,000 miles. The projection for the replacement of this vehicle is based on age. However, mileage will be reviewed before a purchase is made, and the purchase may be deferred if warranted.

**Project Status:** Purchase to occur in FY 2022/23.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | Total |
|---|---|---|---|---|---|---|
| Budget: | $330,000 | | | | | $330,000 |

**Impact on Operating Budget:** The replacement of older vehicles with high mileage reduces downtime and maintenance costs in the operating budget.

## TRUCK/LADDER TRUCK (EMERGENCY)

**Project Priority:** A
**Project Type:** Vehicle Replacement
**Project Management:** Fleet Services




**Project Description:** The Truck/Ladder Truck Apparatus is used to provide search and rescue, roof ventilation, elevated water streams, salvage, and overhaul operations. These vehicles also carry all the applicable tools needed for these tasks. Depending on the station assignment and requirements determined by the Apparatus Committee, OCFA Truck Apparatus may be configured with or without tiller steering, a mid or rear-mount ladder with arial reach of approximately 100 feet, a 300-gallon or greater capacity water tank, and a fire pump similar to a fire engine.

Vehicle replacement evaluation is based on the following criteria:

- Actual miles of the vehicles
- Actual years of operation compared to expected years
- Evaluation of mechanical condition by the Fleet Services Manager
- Evaluation of the maintenance costs by the Fleet Services Manager

**Project Status:** Purchases to occur in various years.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | Total |
|---|---|---|---|---|---|---|
| Budget: | | | $6,548,850 | $9,168,800 | $9,626,800 | $25,344,450 |

**Impact on Operating Budget:** The replacement of older vehicles with high mileage reduces maintenance costs in the operating budget. Once off warranty, the estimated annual maintenance cost will be $7,000 per unit.

## ENGINE – TYPE I (EMERGENCY)



**Project Priority:** A
**Project Type:** Vehicle Replacement
**Project Management:** Fleet Services

**Project Description:** The Type I engine carries hose, water, and a pump used primarily for structure fires. Most fire stations contain one or more of these units.

Vehicle replacement evaluation is based on the following criteria:

- Actual miles of the vehicles
- Actual years of operation compared to expected years
- Evaluation of mechanical condition by the Fleet Services Manager
- Evaluation of the maintenance costs by the Fleet Services Manager

The age and mileage targets for Type I engines are 13 years and/or 120,000 miles. The projections for the replacement of these vehicles are based on age. However, mileage will be reviewed before a purchase is made, and the purchase may be deferred if warranted.

**Project Status:** Purchases to occur annually.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | Total |
|---|---|---|---|---|---|---|
| Budget: | $3,098,080 | $3,252,960 | $3,415,600 | $1,793,140 | $5,648,400 | $17,208,180 |

**Impact on Operating Budget:** The replacement of older vehicles with high mileage reduces downtime and maintenance costs in the operating budget.

## ENGINE – TYPE III (EMERGENCY)




**Project Priority:** A
**Project Type:** Vehicle Replacement
**Project Management:** Fleet Services

**Project Description:** The Type III engine carries hose, water and a skid mounted pump, giving the apparatus the capability to pump while driving. The unit's primary objective is for off-road wildland firefighting and rescue operations. These engines are smaller by design to maneuver on truck trails and rural areas.

Vehicle replacement evaluation is based on the following criteria:

- Actual miles of the vehicles
- Actual years of operation compared to expected years
- Evaluation of mechanical condition by the Fleet Services Manager
- Evaluation of the maintenance costs by the Fleet Services Manager

The age and mileage targets for Type III engines are 20 years and/or 120,000 miles. The projections for the replacement of these vehicles are based on age. However, mileage will be reviewed before a purchase is made, and the purchase may be deferred if warranted.

**Project Status:** Purchases to occur in various years.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | Total |
|---|---|---|---|---|---|---|
| Budget: | $1,441,420 | | | $1,668,600 | $2,628,060 | $5,738,080 |

**Impact on Operating Budget:** The replacement of older vehicles with high mileage reduces maintenance costs in the operating budget.

## INVESTIGATOR TRUCK ¾ TON (EMERGENCY)

**Project Priority:** A
**Project Type:** Vehicle Replacement
**Project Management:** Fleet Services



**Project Description:** The Investigator Truck is a pickup utility ¾ ton (minimum) unmarked unit that is used for daily operations in the investigations section and for undercover operations when needed.

Future replacement evaluation is based on the following criteria:

- Actual miles of the vehicles
- Actual years of operation compared to expected years
- Evaluation of mechanical condition by the Fleet Services Manager
- Evaluation of the maintenance costs by the Fleet Services Manager

The age and mileage targets for pickup utility ¾ ton vehicles are seven years and/or 120,000 miles. The projections for the replacement of these vehicles are based on age. However, mileage will be reviewed before a purchase is made, and the purchase may be deferred if warranted.

**Project Status:** Purchase to occur in FY 2025/26.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | Total |
|---|---|---|---|---|---|---|
| Budget: | | | | $435,000 | | $435,000 |

**Impact on Operating Budget:** The addition of a vehicle will increase maintenance costs in the operating budget. Once off warranty, the annual estimated maintenance cost will be $2,000 per unit. The replacement of older vehicles with high mileage reduces downtime and maintenance costs in the operating budget.

## PARAMEDIC SQUAD VEHICLE (EMERGENCY)

**Project Priority:** A
**Project Type:** Vehicle Replacement
**Project Management:** Fleet Services




**Project Description:** This unit carries a full complement of advanced life support (ALS) paramedic equipment. This project is for the replacement of five paramedic squads, two scheduled to be purchased in FY 2022/23, and three in FY 2023/24.

Vehicle replacement evaluation is based on the following criteria:

- Actual miles of the vehicles
- Actual years of operation compared to expected years
- Evaluation of mechanical condition by the Fleet Services Manager
- Evaluation of the maintenance costs by the Fleet Services Manager

The age and mileage targets for paramedic squads are five years and/or 120,000 miles. The projections for the replacement of these vehicles are based on age. However, mileage will be reviewed before a purchase is made, and the purchase may be deferred if warranted.

**Project Status:** Purchases to occur in FY 2022/23 and FY 2023/24.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | Total |
|---|---|---|---|---|---|---|
| Budget: | $459,000 | $723,000 | | | | $1,182,000 |

**Impact on Operating Budget:** The replacement of older vehicles with high mileage reduces downtime and maintenance costs in the operating budget.

## PICKUP UTILITY ¾ TON (EMERGENCY)

**Project Priority:** A
**Project Type:** Vehicle Replacement and Additions
**Project Management:** Fleet Services

**Project Description:** The pickup utility ¾ ton unit is used by Operations as a support vehicle.



Future replacement evaluation is based on the following criteria:

- Actual miles of the vehicles
- Actual years of operation compared to expected years
- Evaluation of mechanical condition by the Fleet Services Manager
- Evaluation of the maintenance costs by the Fleet Services Manager

The age and mileage targets for pickup utility ¾ ton vehicles are seven years and/or 120,000 miles. The projections for the replacement of these vehicles are based on age. However, mileage will be reviewed before a purchase is made, and the purchase may be deferred if warranted.

**Project Status:** Purchases to occur in various years.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | Total |
|---|---|---|---|---|---|---|
| Budget: | $136,500 | | $351,920 | | | $488,420 |

**Impact on Operating Budget:** The addition of a vehicle will increase maintenance costs in the operating budget. Once off warranty, the annual estimated maintenance cost will be $2,000 per unit. The replacement of older vehicles with high mileage reduces downtime and maintenance costs in the operating budget.

## PICKUP UTILITY 4X4 1 TON (EMERGENCY)

**Project Priority:** A
**Project Type:** Vehicle Addition
**Project Management:** Fleet Services

**Project Description:** The pickup utility 4x4 1 ton (minimum) vehicle has a multitude of uses for emergency support. The primary function is for support of the hand crews with fire line construction and brush clearing operations. These units are also sent out of the county to support their designated sections on large campaign fires.




Replacement evaluation is based on the following criteria:

- Actual miles of the vehicles
- Actual years of operation compared to expected years
- Evaluation of mechanical condition by the Fleet Services Manager
- Evaluation of the maintenance costs by the Fleet Services Manager

The age and mileage targets for service trucks are 10 years and/or 120,000 miles. The projection for the replacement of this vehicle is based on age. However, mileage will be reviewed before a purchase is made, and the purchase may be deferred if warranted.

**Project Status:** Purchase to occur in FY 2022/23.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | Total |
|---|---|---|---|---|---|---|
| Budget: | $82,500 | | | | | $82,500 |

**Impact on Operating Budget:** The replacement of older vehicles with high mileage reduces downtime and maintenance costs in the operating budget.

# SUV FULL-SIZE 4X4 VEHICLE (EMERGENCY)

**Project Priority:** A
**Project Type:** Vehicle Replacement
**Project Management:** Fleet Services




**Project Description:** The full-size 4-door vehicle is used by all Executive Management, as well as for fire station support and as part of the vehicle pool.

Future replacement evaluation is based on the following criteria:

- Actual miles of the vehicles
- Actual years of operation compared to expected years
- Evaluation of mechanical condition by the Fleet Services Manager
- Evaluation of the maintenance costs by the Fleet Services Manager

The age and mileage targets for full-size 4-door vehicles are seven years and/or 120,000 miles. The projections for the replacement of these vehicles are based on age. However, mileage will be reviewed before a replacement is made and may be deferred if warranted.

**Project Status:** Purchases to occur in various years.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | Total |
|---|---|---|---|---|---|---|
| Budget: | $385,000 | $323,400 | | | $467,950 | $1,176,350 |

**Impact on Operating Budget:** The addition of this vehicle to the fleet will increase maintenance costs in the operating budget. Once off warranty, the annual estimated maintenance cost will be $2,000 per unit.

## SUPERINTENDENT VEHICLE (EMERGENCY)

**Project Priority:** A
**Project Type:** Vehicle Replacement
**Project Management:** Fleet Services




**Project Description:** The superintendent vehicle has a multitude of uses for Crews and Equipment. The primary use is to support and supervise the hand crews with fire line construction and brush clearing operations. These units are also sent out of the county to support the section on large campaign fires.

Replacement evaluation is based on the following criteria:

- Actual miles of the vehicles
- Actual years of operation compared to expected years
- Evaluation of mechanical condition by the Fleet Services Manager
- Evaluation of the maintenance costs by the Fleet Services Manager

The age and mileage targets for service trucks are 10 years and/or 120,000 miles. The projection for the addition of this vehicle is based on operational needs.

**Project Status:** Purchase to occur in FY 2023/24.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | Total |
|---|---|---|---|---|---|---|
| Budget: | | $178,400 | | | | $178,400 |

**Impact on Operating Budget:** Following expiration of the vehicle warranty period, annual maintenance and repair costs are estimated at $2,000.

## SWIFT WATER VEHICLE (EMERGENCY)

**Project Priority:** A
**Project Type:** Vehicle Replacement
**Project Management:** Fleet Services




**Project Description:** The Swift Water Vehicle is used is to support swift water rescues throughout the county.

Replacement evaluation is based on the following criteria:

- Actual miles of the vehicles
- Actual years of operation compared to expected years
- Evaluation of mechanical condition by the Fleet Services Manager
- Evaluation of the maintenance costs by the Fleet Services Manager

The age and mileage targets for swift water vehicles are 10 years and/or 120,000 miles. The projection for the replacement of this vehicle is based on age. However, mileage will be reviewed before a purchase is made, and the purchase may be deferred if warranted.

**Project Status:** Purchase to occur in FY 2022/23.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | Total |
|---|---|---|---|---|---|---|
| Budget: | $176,400 | | | | | $176,400 |

**Impact on Operating Budget:** The replacement of older vehicles with high mileage reduces downtime and maintenance costs in the operating budget.

## TECHNICAL RESCUE SUPPORT VEHICLE (EMERGENCY)

**Project Priority:** A
**Project Type:** Addition
**Project Management:** Fleet Services

**Project Description:** The technical rescue support vehicle is a heavy-duty ¾ ton (minimum) crew-cab service body pickup utility unit. This vehicle is used by emergency operations to respond to rescue incidents including trapped persons, large transportation vehicle incidents, and removal/rescue from precarious locations.




Future replacement evaluation is based on the following criteria:

- Actual miles of the vehicles
- Actual years of operation compared to expected years
- Evaluation of mechanical condition by the Fleet Services Manager
- Evaluation of the maintenance costs by the Fleet Services Manager

The age and mileage targets for heavy-duty pickup utility vehicles are seven years and/or 120,000 miles. The projections for the replacement of these vehicles are based on age. However, mileage will be reviewed before a purchase is made, and the purchase may be deferred if warranted.

**Project Status:** Purchase is scheduled to occur in FY 2022/23.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | Total |
|---|---|---|---|---|---|---|
| Budget: | $550,000 | | | | | $550,000 |

**Impact on Operating Budget:** The addition of a vehicle will increase maintenance costs in the operating budget. Once off warranty, the annual estimated maintenance cost will be $2,000 per unit. The replacement of older vehicles with high mileage reduces downtime and maintenance costs in the operating budget.

## ENGINE-TYPE 1 (DEVELOPER FUNDED)

**Project Priority:** A
**Project Type:** Vehicle Addition
**Project Management:** Fleet Services

**Project Description:** The Type 1 engine carries hose, water, and a pump used primarily for structure fires. Most fire stations contain one or more of these units. This apparatus is the same as our replacement Type I engines; however, this apparatus is funded by a local developer including hose and other equipment. This project is for the purchase of one Type 1 engine for Fire Station 52 (Irvine Business District).



**Project Status:** Purchase to occur in FY 2025/26.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | Total |
|---|---|---|---|---|---|---|
| Budget: | | | | $1,000,080 | | $1,000,080 |

**Impact on Operating Budget:** The addition of a Type 1 engine to the vehicle fleet is considered a significant, non-recurring expenditure, which will increase annual service and maintenance costs in the operating budget by approximately $3,500 per year during the five-year warranty period. After the warranty period, the annual service and maintenance costs are expected to increase to approximately $7,000 per year.

## UTILITY TASK VEHICLE (GRANT FUNDED)



**Project Priority:** A
**Project Type:** Addition
**Project Management:** Fleet Services

**Project Description:** This support vehicle is utilized for on-site transportation of personnel and supplies in support of US&R operations.

Future replacement evaluation is based on the following criteria:

- Actual years of operation compared to expected years
- Evaluation of mechanical condition by the Fleet Services Manager
- Evaluation of the maintenance costs by the Fleet Services Manager

The replacement age target for UTV units is 10 years. However, the service and repair costs will be reviewed before a replacement is made and may be deferred if warranted.

**Project Status:** Purchase to occur in FY 2022/23.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | Total |
|---|---|---|---|---|---|---|
| Budget: | $30,000 | | | | | $30,000 |

**Impact on Operating Budget:** The addition of these units to the fleet will increase maintenance costs in the operating budget. The annual maintenance cost will be approximately $1,000.

## FLOOR SCRUBBER (SUPPORT)



**Project Priority:** B
**Project Type:** Vehicle Replacement
**Project Management:** Fleet Services

**Project Description:** The floor scrubber is used to keep the hangar at the Fullerton airport clean. The current scrubber is 22 years old.

Future replacement evaluation is based on the following criteria:

- Actual hours of use
- Actual years of operation compared to expected years
- Evaluation of mechanical condition by the Fleet Services Manager
- Evaluation of the maintenance costs by the Fleet Services Manager

**Project Status:** Purchase to occur in FY 2022/23.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | Total |
|---|---|---|---|---|---|---|
| Budget: | $5,000 | | | | | $5,000 |

**Impact on Operating Budget:** The replacement of an older unit reduces downtime and maintenance costs in the operating budget.

## FORKLIFT (SUPPORT)

**Project Priority:** A
**Project Type:** Vehicle Replacement and Purchase
**Project Management:** Fleet Services

**Project Description:** The forklifts currently in the OCFA fleet get used for support in the Service Center, Fleet Services, Crews and Equipment, Air Operations, and Communication Services.



All six current Fleet Services forklifts need replacement due to age. Two additional units are needed to support warehouse facilities, which will prevent the need for long term rentals.

Future replacement evaluation is based on the following criteria:

- Actual hours of the vehicles
- Actual years of operation compared to expected years
- Evaluation of mechanical condition by the Fleet Services Manager
- Evaluation of the maintenance costs by the Fleet Services Manager

The age target for a forklift is 10 years. However, the service and repair costs will be reviewed before a replacement is made and may be deferred if warranted.

**Project Status:** Purchases to occur in various years.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | Total |
|---|---|---|---|---|---|---|
| Budget: | $81,000 | $46,400 | | | | $127,400 |

**Impact on Operating Budget:** The replacement of older units reduces downtime and maintenance costs in the operating budget.

## FUEL TENDER VEHICLE (SUPPORT)



**Project Priority:** A
**Project Type:** Vehicle Replacement
**Project Management:** Fleet Services

**Project Description:** The fuel tender carries five hundred gallons of gasoline and five hundred gallons of diesel fuel. This unit is used for emergency and remote fueling of aircraft, vehicles and apparatus. This replacement fuel tender will be used in air operations.

Vehicle replacement evaluation is based on the following criteria:

- Actual miles of the vehicles
- Actual years of operation compared to expected years
- Evaluation of mechanical condition by the Fleet Services Manager
- Evaluation of the maintenance costs by the Fleet Services Manager

The age and mileage targets for fuel tenders are 18 years and/or 120,000 miles. The projection for the replacement of this vehicle is based on age. However, mileage will be reviewed before a purchase is made, and the purchase may be deferred if warranted.

**Project Status:** Purchase to occur in FY 2022/23.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | Total |
|---|---|---|---|---|---|---|
| Budget: | $550,000 | | | | | $550,000 |

**Impact on Operating Budget:** The replacement of older vehicles with high mileage reduces downtime and maintenance costs in the operating budget.

## GOLF CART/UTILITY CART VEHICLE (SUPPORT)

**Project Priority:** B
**Project Type:** New and Replacement Vehicles
**Project Management:** Fleet Services

**Project Description:**
This vehicle is utilized for on-site transportation of personnel, supplies, and small equipment in support Service Center operations, and for use by security personnel at the RFOTC. These units may also be transported for temporary use at large incident command centers.



Future replacement evaluation is based on the following criteria:

- Actual years of operation compared to expected years
- Evaluation of mechanical condition by the Fleet Services Manager
- Evaluation of the maintenance costs by the Fleet Services Manager

The replacement age target for utility/golf carts is 10 years; however the service and repair costs will be reviewed before a replacement is made and may be deferred if warranted.

**Project Status:** Purchase to occur in FY 2022/23.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | Total |
|---|---|---|---|---|---|---|
| Budget: | $39,300 | | | | | $39,300 |

**Impact on Operating Budget:** The addition of units to the fleet will increase maintenance costs in the operating budget. The annual maintenance cost, once off warranty, will be approximately $1,000.

## MID-SIZE 4-DOOR SEDAN/SUV- HYBRID/ELECTRIC (SUPPORT)

**Project Priority:** A
**Project Type:** Vehicle Replacement
**Project Management:** Fleet Services

**Project Description:** The mid-size 4-door vehicle is used by a variety of management and supervisory staff that need the versatility of a 4-door vehicle to complete their specific assignments and support the operations of their respective sections. Based on a needs assessment, eight replacement pool vehicles are needed for FY 2022/23. The body and drive type for mid-size 4-door vehicles is updated beginning in FY 2022/23 to include plug-in hybrid or all-electric, and either sedan or SUV, depending on cost effectiveness and availability.

Vehicle replacement evaluation is based on the following criteria:

- Actual miles of the vehicles
- Actual years of operation compared to expected years
- Evaluation of mechanical condition by the Fleet Services Manager
- Evaluation of the maintenance costs by the Fleet Services Manager



The age and mileage targets for mid-size 4-door vehicles are seven years and/or 120,000 miles. The projections for the replacement of these vehicles are based on age. However, mileage will be reviewed before a purchase is made, and the purchase may be deferred if warranted.

**Project Status:** Purchase to occur in FY 2022/23.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | Total |
|---|---|---|---|---|---|---|
| Budget: | $464,000 | | | | | $464,000 |

**Impact on Operating Budget:** The replacement of older vehicles with high mileage reduces downtime and maintenance costs in the operating budget. Once off warranty, the estimated annual maintenance cost will be $1,300 per unit.

## MID-SIZE PICKUP 1/2 TON (SUPPORT)

**Project Priority:** A
**Project Type:** Vehicle Replacement
**Project Management:** Fleet Services




**Project Description:** The mid-size ½ ton (minimum) pickup vehicle is primarily used by staff in Fire Prevention, Property Management, and Community Education to conduct off-site inspections and education programs.

Vehicle replacement evaluation is based on the following criteria:

- Actual miles of the vehicles
- Actual years of operation compared to expected years
- Evaluation of mechanical condition by the Fleet Services Manager
- Evaluation of the maintenance costs by the Fleet Services Manager

The age and mileage targets for mid-size pickup 1/2 ton vehicles are seven years and/or 120,000 miles. The projections for the replacement of these vehicles are based on age. However, mileage will be reviewed before a purchase is made, and the purchase may be deferred if warranted.

**Project Status:** Purchases to occur in various years.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | Total |
|---|---|---|---|---|---|---|
| Budget: | $1,644,500 | $231,000 | $1,309,770 | | $321,000 | $3,506,270 |

**Impact on Operating Budget:** The replacement of older vehicles with high mileage reduces downtime and maintenance costs in the operating budget.

# PICKUP CREW CAB 1/2 TON (SUPPORT)

**Project Priority:** A
**Project Type:** Vehicle Replacement
**Project Management:** Fleet Services



**Project Description:** The pickup crew cab ½ ton (minimum) vehicle is used by management and supervisory staff in a variety of positions that need the versatility of a 4-door vehicle to complete their specific assignments and support the emergency operations of their respective sections.

Vehicle replacement evaluation is based on the following criteria:

- Actual miles of the vehicles
- Actual years of operation compared to expected years
- Evaluation of mechanical condition by the Fleet Services Manager
- Evaluation of the maintenance costs by the Fleet Services Manager

The age and mileage targets for these 4-door vehicles are seven years and/or 120,000 miles. The projections for the replacement of these vehicles are based on age. However, mileage will be reviewed before a purchase is made, and the purchase may be deferred if warranted.

**Project Status:** Purchase to occur in FY 2024/25.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | Total |
|---|---|---|---|---|---|---|
| Budget: | | | $145,530 | | | $145,530 |

**Impact on Operating Budget:** The replacement of older vehicles with high mileage reduces maintenance costs in the operating budget.

## PICKUP CREW CAB ¾ TON (SUPPORT)



**Project Priority:** A
**Project Type:** Vehicle Replacement
**Project Management:** Fleet Services

**Project Description:** The pickup crew cab ¾ ton (minimum) is used by Fleet Services, Service Center, and IT/ Communications staff for support, as well as the Training Division.

Future replacement evaluation is based on the following criteria:

- Actual miles of the vehicles
- Actual years of operation compared to expected years
- Evaluation of mechanical condition by the Fleet Services Manager
- Evaluation of the maintenance costs by the Fleet Services Manager

The age and mileage targets for pickup utility ¾ ton vehicles are seven years and/or 120,000 miles. The projections for the replacement of these vehicles are based on age. However, mileage will be reviewed before a purchase is made, and the purchase may be deferred if warranted.

**Project Status:** Purchase to occur in FY 2024/25.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | Total |
|---|---|---|---|---|---|---|
| Budget: | | | $66,700 | | | $66,700 |

**Impact on Operating Budget:** The addition of a vehicle will increase maintenance costs in the operating budget. Once off warranty, the annual estimated maintenance cost will be $2,000 per unit. The replacement of older vehicles with high mileage reduces downtime and maintenance costs in the operating budget.

## PICKUP - STAKE BED/CARGO 1 TON (SUPPORT)

**Project Priority:** A
**Project Type:** Addition
**Project Management:** Fleet Services Manager




**Project Description:** The one-ton (minimum) stake bed truck is used by the Service Center for ground support. This project is for the purchase of two units.

Future replacement evaluation is based on the following criteria:

- Actual miles of the vehicles
- Actual years of operation compared to expected years
- Evaluation of mechanical condition by the Fleet Services Manager
- Evaluation of the maintenance costs by the Fleet Services Manager

The age and mileage targets for stake bed trucks are seven years and/or 120,000 miles. The projections for the replacement of these vehicles are based on age. However, mileage will be reviewed before a purchase is made, and the purchase may be deferred if warranted.

**Project Status:** Purchase was originally scheduled to occur in FY 2021/22, and due to supply shortages, has been rescheduled to occur in FY 2022/23.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | Total |
|---|---|---|---|---|---|---|
| Budget: | $198,000 | | | | | $198,000 |

**Impact on Operating Budget:** The addition of the two stake bed vehicles will increase maintenance costs in the operating budget. Once off warranty, the annual estimated maintenance cost will be $2,000 per unit.

## SERVICE TRUCK - LIGHT (SUPPORT)

**Project Priority:** B
**Project Type:** Vehicle Replacement
**Project Management:** Fleet Services



**Project Description:** Service truck – light duty vehicle is used for field service for both heavy and light apparatus by Fleet Services and IT-Communication Services. These units are also sent out of county if technicians are requested on large campaign fires.

Vehicle replacement evaluation is based on the following criteria:

- Actual miles of the vehicles
- Actual years of operation compared to expected years
- Evaluation of mechanical condition by the Fleet Services Manager
- Evaluation of the maintenance costs by the Fleet Services Manager

The age and mileage targets for service truck - light vehicles are 10 years and/or 120,000 miles. The projection for the replacement of this vehicle is based on age. However, mileage will be reviewed before a purchase is made, and the purchase may be deferred if warranted.

**Project Status:** Purchase to occur in FY 2026/27.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | Total |
|---|---|---|---|---|---|---|
| Budget: | | | | | $432,960 | $432,960 |

**Impact on Operating Budget:** The replacement of older vehicles with high mileage reduces downtime and maintenance costs in the operating budget.

# SUV FULL-SIZE 4X4 VEHICLE (SUPPORT)

**Project Priority:** A
**Project Type:** Vehicle Addition/Replacement
**Project Management:** Fleet Services

**Project Description:** The full-size 4-door SUV vehicle is used for fire station support and various Operations support.




Future replacement evaluation is based on the following criteria:

- Actual miles of the vehicles
- Actual years of operation compared to expected years
- Evaluation of mechanical condition by the Fleet Services Manager
- Evaluation of the maintenance costs by the Fleet Services Manager

The age and mileage targets for full-size 4-door vehicles are seven years and/or 120,000 miles. The projections for the replacement of these vehicles are based on age. However, mileage will be reviewed before a replacement is made, and may be deferred if warranted.

**Project Status:** Purchases to occur in FY 2024/25 and FY 2025/26.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | Total |
|---|---|---|---|---|---|---|
| Budget: | | | $339,560 | $89,130 | | $428,690 |

**Impact on Operating Budget:** The addition of these vehicles to the fleet will increase maintenance costs in the operating budget. Once off warranty, the annual estimated maintenance cost will be $1,300 per unit. The replacement of older vehicles with high mileage reduces downtime and maintenance costs in the operating budget

## SUV MID-SIZE 4X4 VEHICLE (SUPPORT)

**Project Priority:** A
**Project Type:** Vehicle Replacement
**Project Management:** Fleet Services



**Project Description:** The mid-size 4-door vehicle is used by management and supervisory staff in a variety of positions that need the versatility of a 4-door vehicle to support the operations of their respective sections.

Vehicle replacement evaluation is based on the following criteria:

- Actual miles of the vehicles
- Actual years of operation compared to expected years
- Evaluation of mechanical condition by the Fleet Services Manager
- Evaluation of the maintenance costs by the Fleet Services Manager

The age and mileage targets for mid-size 4-door vehicles are seven years and/or 120,000 miles. The projections for the replacement of these vehicles are based on age. However, mileage will be reviewed before a purchase is made, and the purchase may be deferred if warranted.

**Project Status:** Purchase to occur in FY 2024/25.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | Total |
|---|---|---|---|---|---|---|
| Budget: | | | $606,400 | | | $606,400 |

**Impact on Operating Budget:** The replacement of older vehicles with high mileage reduces maintenance costs in the operating budget.

## VAN – TRANSIT (SUPPORT)

**Project Priority:** B
**Project Type:** Vehicle Replacement
**Project Management:** Fleet Services



**Project Description:** The transit connect cargo vans will be used to replace existing fleet vehicles that have gone beyond life cycle. These are used for support services in IT, Communications, and EMS.

Future replacement evaluation is based on the following criteria:

- Actual miles of the vehicles
- Actual years of operation compared to expected years
- Evaluation of mechanical condition by the Fleet Services Manager
- Evaluation of the maintenance costs by the Fleet Services Manager

The age and mileage targets for these transit vans are ten years and/or 120,000 miles. The projections for the replacement of these vehicles are based on age. However, mileage will be reviewed before a replacement purchase is made and may be deferred if warranted.

**Project Status:** Purchase to occur in FY 2025/26.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | Total |
|---|---|---|---|---|---|---|
| Budget: | | | | $278,240 | | $278,240 |

**Impact on Operating Budget:** The replacement of older vehicles with high mileage reduces downtime and maintenance costs in the operating budget.

## SCISSOR LIFT VEHICLE (SUPPORT)

**Project Priority:** A
**Project Type:** New and Replacement Vehicles
**Project Management:** Fleet Services

**Project Description:** The Scissor Lift is used to move personnel and equipment in a vertical direction for accessing and servicing facilities at RFOTC and fire stations. The unit will support multiple OCFA sections, including Fleet Services, Property Management, and Service Center.



Future replacement evaluation is based on the following criteria:

- Actual hours of the vehicles
- Actual years of operation compared to expected years
- Evaluation of mechanical condition by the Fleet Services Manager
- Evaluation of the maintenance costs by the Fleet Services Manager

The age target for a scissor lift is 15 years, however, a review of actual service and repair costs will be used determine if replacement can be deferred.

**Project Status:** Purchase to occur in FY 2022/23.

| Fiscal Years: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | 2026/27 | Total |
|---|---|---|---|---|---|---|
| Budget: | $25,000 | | | | | $25,000 |

**Impact on Operating Budget:** No anticipated impact.


FIRE
ORANGE COUNTY
CALIFORNIA
AUTHORITY
Est. 1995

**ORANGE COUNTY FIRE AUTHORITY**

*FUND 139 - Settlement Agreement*

**FY 2022/23 BUDGET**

| Sections/Programs | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 |
|---|---|---|---|
| **Drone Program** | 500,000 | 500,000 | - |
| **Training of Irvine PD EMTs** | 50,000 | 50,000 | - |
| **Full-time CERT Coordinator** | 118,000 | 118,000 | - |
| **FUND 139 TOTAL** | **668,000** | **668,000** | **-** |

**ORANGE COUNTY FIRE AUTHORITY**

*FUND 139 - SETTLEMENT AGREEMENT*

**FY 2022/23 BUDGET**

| Item Description | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 |
|---|---|---|---|
| Drone Program (Org I002) | | | |
| **Account 2401`2409 - Special Department Expense** | | | |
| Contribution to Irvine | 500,000 | 500,000 | - |
| Subtotal | 500,000 | 500,000 | - |
| **Total Drone Program** | **500,000** | **500,000** | **-** |
| Training of Irvine PD EMTs (Org I004) | | | |
| **Account 2401`2409 - Special Department Expense** | | | |
| Contribution to Irvine | 50,000 | 50,000 | - |
| Subtotal | 50,000 | 50,000 | - |
| **Total Training of Irvine PD EMTs** | **50,000** | **50,000** | **-** |
| Full-time CERT Coordinator (Org I005) | | | |
| **Account 2401`2409 - Special Department Expense** | | | |
| Contribution to Irvine | 118,000 | 118,000 | - |
| Subtotal | **118,000** | **118,000** | **-** |
| **Total Full-time CERT Coordinator** | **118,000** | **118,000** | **-** |
| **FUND 139 TOTAL** | **668,000** | **668,000** | **-** |

**ORANGE COUNTY FIRE AUTHORITY**
*FUND 190 - Self-Insurance*
**FY 2022/23 BUDGET**

| Sections/Programs | 2021/22 Base Budget | 2022/23 Request | $ Change fr 2021/22 |
|---|---|---|---|
| **Self-Insurance** | 15,640,500 | 17,212,913 | 1,572,413 |
| **FUND 190 TOTAL** | **15,640,500** | **17,212,913** | **1,572,413** |

**ORANGE COUNTY FIRE AUTHORITY**

*FUND 190 - Self-Insurance*

**FY 2022/23**

| Item Description | 2021/22 Budget | 2022/23 Request | $ Change fr 2021/22 |
|---|---|---|---|
| Self-Insurance (Org 998) | | | |
| **Account 1901`1911 Professional and Specialized Services** | | | |
| Workers' Compensation | 15,640,500 | 17,212,913 | 1,572,413 |
| Subtotal | 15,640,500 | 17,212,913 | 1,572,413 |
| **Total Self-Insurance** | **15,640,500** | **17,212,913** | **1,572,413** |
| **FUND 190 TOTAL** | **15,640,500** | **17,212,913** | **1,572,413** |

# OCFA -- MASTER POSITION CONTROL LIST

Changes for FY 2022/23 Budget

| Position(s) to Unfreeze: | Reclassify to: | Assignment: | Number: |
|---|---|---|---|
| Firefighter (Former Placentia) | -- | Operations Division 3 (Station 67) | 12 |
| Fire Apparatus Engineer (Former Placentia) | -- | Operations Division 3 (Station 67) | 6 |
| Fire Captain (Former Placentia) | -- | Operations Division 3 (Station 67) | 6 |
| Firefighter | -- | Operations Division 5 (E42 Service Enhancement) | 3 |
| Office Services Specialist | Multimedia Specialist | Corporate Communications | 1 |
| | | **Total Positions Unfrozen** | **28** |

| Position(s) to Add: | Assignment: | Number: |
|---|---|---|
| Battalion Chief | Ops Training & Safety | 1 |
| Firefighter | Ops Training & Safety | 6 |
| Management Analyst | Ops Training & Safety | 1 |
| Behavioral Health Coordinator | Risk Management | 1 |
| | **Total Added Positions** | **9** |

| Position(s) to Reclassify: | Reclassify to: | Assignment: | Number: |
|---|---|---|---|
| Limited Term Construction Manager | Construction Manager | Property Management | 1 |
| | | **Total Positions Reclassified** | **1** |

**Orange County Fire Authority**
**AGENDA STAFF REPORT**

**Concurrent Joint Special Meetings** | **Agenda Item No. 5A**
**May 26, 2022** | **Discussion Calendar**

# Findings Required by AB 361 for the Continued Use of Teleconferencing for Meetings

## Contact(s) for Further Information

David E. Kendig, General Counsel Dkendig@wss-law.com 714.415.1083

## Summary

In order for the Board of Directors and Committees to continue meeting via teleconference during the pandemic, AB 361 requires the local legislative bodies to make specified findings at least every thirty (30) days.

## Prior Board/Committee Action

At the October 28, 2021 meeting, the Board of Directors approved the legally required findings and directed staff to schedule concurrent Special Joint Meetings of the Board of Directors, Executive Committee, Budget and Finance Committee, and Human Resources Committee with regular or special meetings of the Board of Directors whenever necessary to address the requirement to make the required findings at least every thirty (30) days, and to minimize the need for separate Board or committee meetings to address this new requirement of the Brown Act.

## RECOMMENDED ACTION(S)

**Option #1:**

Make the following findings by majority votes of the Board of Directors, Executive Committee, Budget and Finance Committee and Human Resource Committee:

a. A state of emergency has been proclaimed by California's Governor due to the COVID-19 pandemic and continues in effect; and
b. The Board of Directors and each Committee has reconsidered the circumstances of the emergency; and
c. State and local officials continue to recommend measures to promote social distancing to slow the spread of COVID-19.

**Option #2:**

Make the following findings by majority votes of the Board of Directors, Executive Committee, Budget and Finance Committee and Human Resource Committee:

a. Although a state of emergency has been proclaimed by California's Governor due to the COVID-19 pandemic and continues in effect, the OCFA Board of Directors and each Committee has reconsidered the circumstances of the emergency and no longer finds a need for the legislative body to continue the use of teleconferencing for its meetings.

## Impact to Cities/County

Not Applicable.

## Fiscal Impact

Nominal software licensing costs to continue to use Zoom Webinar to stream meetings in a manner that allows online public comments.

## Background

Assembly Bill 361 was signed into law by the Governor on September 16, 2021. A portion of AB 361 enacted amendments to California Government Code section 54953 regarding teleconference meetings.

Those amendments authorize local agencies like the Fire Authority to continue to conduct meetings by teleconference during a Governor-proclaimed state of emergency[1] provided that certain findings are made by the legislative body, and provided that certain procedural requirements are met regarding public access to the meetings.

A new requirement in AB 361 requires particular findings be made by the Board of Directors and each of the OCFA's legislative bodies and requires that the new findings must be reaffirmed at least every thirty (30) days thereafter in order for the legislative body to continue to use teleconferencing.

## The Required Findings

The teleconference provisions in AB 361 may only be utilized as long as a Governor-proclaimed state of emergency remains active, and while state or local officials have recommended measures to promote social distancing.

To continue to teleconference using the new provisions of AB 361, each legislative body must make the following findings by majority vote at least every 30 days:

(A) The legislative body has reconsidered the circumstances of the state of emergency; and

(B) Either of the following circumstances exist:
  (i) The state of emergency continues to directly impact the ability of the members to meet safely in person; or
  (ii) State or local officials continue to impose or recommend measures to promote social distancing.[2]

To comply with that requirement, the recommended action would have the Board of Directors and each Committee find each of the following:

a. A state of emergency has been proclaimed by California's Governor due to the COVID-19 pandemic and continues in effect; and
b. The Board of Directors and each Committee has reconsidered the circumstances of the emergency; and
c. State and local officials continue to recommend measures to promote social distancing to slow the spread of COVID-19.

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[1] For purposes of AB 361 "…'state of emergency' means a state of emergency proclaimed pursuant to Section 8625 of the California Emergency Services Act…" Cal. Gov't Code sec. 54953(e)(4). Section 8625 of CESA in turn refers to a state of emergency proclaimed by the Governor.

[2] Cal. Gov't Code sec. 54953(e)(3).

Although there are fewer "social distancing" recommendations in effect today than there have been in the recent past, it remains the case that State and County officials continue to recommend measures to promote social distancing, including but not limited to the following:

- Cal/OSHA Emergency Temporary Standards (ETS) "exclusion rules" currently in effect require, among other things, exclusion from the workplace of employees who had a close contact with an individual with COVID unless the employee is fully vaccinated, does not develop symptoms, wears a face covering, and maintains six feet of distance from others at the workplace for 14 days following the close contact. 8 CCR 3205(c)(9)(B)(1)-(3). See also 8 CCR 3205(c)(10)(D).

- Cal/OSHA ETS also require employers to provide training and instruction that includes "the fact that particles containing the virus can travel more than six feet, especially indoors, so physical distancing, face coverings, increased ventilation indoors, and respiratory protection decrease the spread of COVID-19, but are most effective when used in combination." 8 CCR 3205(c)(5)(D).

- The County of Orange Health Officer continues to "strongly recommend" that "the older a person is, the more health conditions a person has, and the more severe the conditions, the more important it is to take preventive measures for COVID-19 such as getting vaccinated, including boosters, social distancing and wearing a mask when around people who don't live in the same household, and practicing hand hygiene."

**Potential Consequence of Not Making the Findings Every 30 Days**

AB 361 does not expressly state what happens if a legislative body fails to make the required findings "every 30 days." However, it expressly requires the timely reapproval of the findings "in order to continue to teleconference" in the manner that AB 361 authorizes.

As a result, if a legislative body does not adopt the required findings every 30 days, then it may be precluded from continuing to teleconference thereafter, perhaps even if it were later willing to adopt the findings at a later date. For this reason, if the Board of Directors and Committees wish to continue having the option to teleconference, then General Counsel recommends that the Board of Directors and Committees adopt the required findings at this time and at least every 30 days thereafter, as provided with Option #1 under the Recommended Actions. Alternatively, in consultation with Chair Steggell, this agenda staff report offers an Option #2 under the Recommended Actions which includes findings that the Board of Directors and Committees may adopt if they wish to decide as a *permanent* matter that it will no longer permit teleconferencing at all (e.g., regardless of whether the state of emergency worsens).

**Attachment(s)**
None.