ORANGE COUNTY FIRE AUTHORITY

AGENDA

BOARD OF DIRECTORS REGULAR MEETING

Thursday, June 25, 2020
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

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 Budget and Finance Committee 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

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.

NOTICE REGARDING PUBLIC PARTICIPATION
DURING COVID-19 EMERGENCY

During the Statewide COVID-19 Emergency, the public is not permitted to convene in person for this public meeting. However, the public may still view and comment on the meeting as follows:

- **To watch the meeting online, please go to website at www.OCFA.org**
- **To submit an e-comment, please email to PublicComments@ocfa.org.**

You may comment on items on the agenda or not on the agenda. Your comments will be forwarded electronically and immediately to the members of the Committee. Comments related to a particular agenda item will only be considered prior to the close of public comments on that item.

CALL TO ORDER

INVOCATION by OCFA Chaplain Kent Kraning

PLEDGE OF ALLEGIANCE by Director Harrington

ROLL CALL

1. PRESENTATIONS
No items.

PUBLIC COMMENTS

Resolution No. 97-024 established rules of decorum for public meetings held by the Orange County Fire Authority. Resolution No. 97-024 is available from the Clerk of the Authority.

Any member of the public may address the Board on items within the Board's subject matter jurisdiction, but which are not listed on this agenda during PUBLIC COMMENTS. However, no action may be taken on matters that are not part of the posted agenda. We request comments made on the agenda be made at the time the item is considered and that comments be limited to three minutes per person. Please address your comments to the Board and do not engage in dialogue with individual Board Members, Authority staff, or members of the audience.

The Agenda and Minutes are now available through the Internet at www.ocfa.org . You can access upcoming agendas on the Monday before the meeting. The minutes are the official record of the meeting and are scheduled for approval at the next regular Board of Directors meeting.

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

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 matters will prejudice the position of the Agency in existing and anticipated litigation:

CS1. CONFERENCE WITH LABOR NEGOTIATOR

Chief Negotiator:	Peter Brown, Liebert Cassidy Whitmore
Employee Organizations:	Orange County Professional Firefighters' Association, Local 3631 and Chief Officers Association
Authority:	Government Code Section 54957.6

CS2. CONFERENCE WITH LEGAL COUNSEL – ANTICIPATED LITIGATION
Significant exposure to litigation pursuant to subdivision (b) of Section 54956.9

RECONVENE TO OPEN SESSION

CLOSED SESSION REPORT - The General Counsel will report on any action(s) taken.

REPORTS

A. Report from the Budget and Finance Committee Chair

B. Report from the Fire Chief:
- Fire season update
  - Wildfire Preparedness campaign
- Academy 50 Graduation Demonstration
- 4th of July press conference

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 from the May 28, 2020, Regular Meeting of the Board of Directors
Submitted by: Maria D. Huizar, Clerk of the Authority

Recommended Action:
Approve as submitted.

B. Updated Cost Reimbursement Rates
Submitted by: Julie Kaufman Nemes, Finance Manager

Budget and Finance Committee Recommendation: Approve

Recommended Action: Review the proposed agenda item and approve the updated Cost Reimbursement Rate schedules to be effective July 1, 2020.

C. FY 2019/20 Year End Budget Adjustment
Submitted by: Robert Cortez, Assistant Chief/Business Services Department

Budget and Finance Committee Recommendation: Approve

Recommended Action: Approve and authorize FY 2019/20 budget adjustments to increase net revenues by $3,596,095 and net appropriations by $5,081,734 as further described in this staff report.

D. Quarterly Status Report Placentia Fire and Emergency Medical Services
Submitted by: Brian Fennessy, Fire Chief

Recommended Action:
Receive and file report.

E. Amendment to County Island Fire and Medical Services Agreements with the City of Anaheim
Submitted by: Robert Cortez, Assistant Chief/Business Services Department

Recommended Action:
Approve and authorize the Board Chair to sign the Sixth Amendment to the Agreement with the city of Anaheim extending the term through June 30, 2025, for the purpose of providing fire and medical services to county unincorporated areas (county islands) located within, or adjacent to, the boundaries of the cities.

3. DISCUSSION

A. Fire Integrated Real-time Intelligence System (FIRIS) 2.0 Program
Submitted by: Brian Fennessy, Fire Chief and Robert Cortez, Assistant Chief/Business Services Department

Recommended Actions:
1. Approve and authorize the Board Chair to accept Disaster Readiness for Safer Communities (D-RiSC) reimbursement funding in the amount of $7,706,525 for the implementation of the FIRIS 2.0 Program and SCOUT system improvements.
2. Approve and authorize a budget adjustment to increase revenue and appropriations in FY 2020/21 General Fund (121) budget by $8,206,525 tied to $7,706,525 in new D-RiSC funding allocation and the rebudget of $500,000 of fund balance from the 2019 FIRIS Pilot Program.
3. Approve and authorize the Purchasing Manager to execute a Professional Services Agreement with AEVEX for aviation services in an amount not to exceed $4,809,138.
4. Approve and authorize the Purchasing Manager to execute a Service Agreement with UCSD/WIFIRE in a form substantially consistent with the attached form using the sole source provision of the Purchasing Ordinance for fire behavior modeling and other related services in an amount not to exceed $1,000,000.
5. Approve and authorize the Purchasing Manager to enter into new Professional Services Agreements with the Air Tactical Group Supervisors at annual amounts not to exceed $250,000 each for an aggregate total not to exceed $1,080,000.
6. Approve and authorize the Purchasing Manager to enter into a new Professional Service Agreement with Intterra, using the special procurement provision in the Purchasing Ordinance, for consulting, wildfire simulation services and improvements to the SCOUT system for an amount not to exceed $800,000.
7. Approve and authorize the Fire Chief and Purchasing Manager to enter into cost reimbursement agreements for project management and support services acceptable to

the Fire Chief and in a form approved by General Counsel with (a) the Los Angeles Fire Department in an amount not to exceed $120,000 and (b) another entity to assist at the Sacramento base in an amount not to exceed $200,000.

8. Approve and authorize the Fire Chief and Purchasing Manager to enter into agreements acceptable to the Fire Chief and in a form approved by General Counsel providing for the use of the Los Alamitos Joint Forces Training Base and McClellan Air Force Base by OCFA and its contractors to store aircraft and conduct air operations (including take offs and landings) from the respective facilities in an aggregate amount not to exceed $100,000.

4. PUBLIC HEARING

No Items.

BOARD MEMBER COMMENTS

ADJOURNMENT – The next regular meeting of the Orange County Fire Authority Board of Directors is scheduled for Thursday, July 23, 2020, 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 Training and Operations Center, 1 Fire Authority Road, Irvine, CA, not less than 72 hours prior to the meeting. Dated this 19th day of June, 2020.

Martha Halvorson, CMC
Assistant Clerk of the Authority

UPCOMING MEETINGS:

Budget and Finance Committee Meeting	Wednesday, July 8, 2020, 12 noon
Executive Committee Meeting	Thursday, July 23, 2020, 5:30 p.m.
Board of Directors Meeting	Thursday, July 23, 2020, 6:00 p.m.

MINUTES
ORANGE COUNTY FIRE AUTHORITY

Board of Directors Regular Meeting
Thursday, May 28, 2020
6:00 P.M.

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

CALL TO ORDER
A regular meeting of the Orange County Fire Authority Board of Directors was called to order on May 28, 2020, at 6:37 p.m. by Chair Hasselbrink.

INVOCATION
Chaplain Devon Chase offered the invocation.

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

ROLL CALL

Chair, Shelley Hasselbrink, Los Alamitos	Vice Chair, Vince Rossini, Villa Park*
Lisa Bartlett, County of Orange*	Letitia Clark, Tustin*
Sergio Farias, San Juan Capistrano*	Carol Gamble, Rancho Santa Margarita
Dave Harrington, Aliso Viejo*	Ed Sachs, Mission Viejo*
Gene Hernandez, Yorba Linda*	Robert Johnson, Cypress*
Anthony Kuo, Irvine	Kathleen Ward, San Clemente*
Thomas Moore, Seal Beach*	Joseph Muller, Dana Point
John R. O'Neill, Garden Grove*	Sandy Rains, Laguna Niguel*
Don Sedgwick, Laguna Hills*	Dave Shawver, Stanton*
Michele Steggell, La Palma*	Elizabeth Swift, Buena Park*
Tri Ta, Westminster*	Mark Tettemer, Lake Forest
Juan Villegas, Santa Ana	Donald P. Wagner, County of Orange*

Absent: Noel Hatch, Laguna Woods

Also present were:

Fire Chief Brian Fennessy	Deputy Chief Pokey Sanchez
Deputy Chief Lori Zeller	Assistant Chief Randy Black
Assistant Chief Robert Cortez	Assistant Chief Kenny Dossey
Assistant Chief Jim Ruane	General Counsel David Kendig
Communications Director Colleen Windsor	
Clerk of the Authority Maria Huizar	

**Board of Director Members participating via Teleconferencing*

1. **PRESENTATIONS**
   No items.

PUBLIC COMMENTS (FILE: 11.11)

Craig Green, Placentia City Council Member, provided a letter on behalf of the City of Placentia regarding the impacts to the County Island and the City of Yorba Linda without Automatic Aid Agreement.

REPORTS

- **REPORT FROM THE BUDGET AND FINANCE COMMITTEE CHAIR** (FILE: 11.12)
  Budget and Finance Committee Chair Gene Hernandez reported at the May 13, 2020, regular meeting, the Committee voted unanimously to receive and file the Harris & Associates Final Property Tax Revenue Projections, and forward the Third Quarter Financial Newsletter and the Monthly Investment Reports to the Executive Committee for its approval. The Committee was also presented the Review of the Fiscal Year 2020/21 Proposed Budget. After lengthy discussion, the Committee directed staff to place the item on the agenda for the Board of Directors meeting of May 28, 2020, with the Budget and Finance Committee's recommendation that staff research the following and report back to the Budget and Finance Committee at its June meeting: (1) Suspend the snowball pension pay down plan until further notice. (2) Review the ability to suspend the 4.5% increase to cash contract city charges, and, (3) Take a look at the proposed budget with these effects in mind and present to the Board or the Budget and Finance Committee what the budget would look like under those conditions. In addition, the Committee indicated that staff may provide a less formal budget presentation to the Board of Directors at its May 28 meeting, while informing the Board of staff's pending research and of staff's expected return to the Budget and Finance Committee in June prior to the Board adopting the budget.

- **REPORT FROM THE FIRE CHIEF** (FILE: 11.14)
  Fire Chief Fennessy reported Fire Academy No. 50's Graduation was held last week, 37 recruits graduated, unusual graduation because of COVID-19 and social distancing. Families were not able to be present, however it was broadcasted on Facebook live, with over 14,000 views.

AGENDA ITEM CONSIDERED OUT OF ORDER - DISCUSSION ITEM

A. Appointment of the Clerk for the Orange County Fire Authority (FILE 17.10B1)

General Counsel Kendig reported that he had a personal financial Conflict of Interest because he is married to the applicant. He further noted that he had not participated in any discussion on the matter, recused himself and left the Boardroom during the deliberation of said item.

Chair Hasselbrink indicated that Peter Brown of Liebert Cassidy Whitmore was available to answer any questions on the matter.

On motion of Director Swift and second by Director Johnson, and following a roll call vote, declared passed 23-0 (Directors Hatch and Wagner absent) to approve and adopt Resolution No. 2020-03 entitled A RESOLUTION OF THE ORANGE COUNTY FIRE AUTHORITY, ORANGE COUNTY, CALIFORNIA APPOINTING MARIA D. HUIZAR AS THE CLERK FOR THE ORANGE COUNTY FIRE AUTHORITY.

Chair Hasselbrink recessed the Open Session meeting to Closed Session at 6:54 p.m. Director Hatch joined the meeting at 6:54 P.M.

CLOSED SESSION

CS1. CONFERENCE WITH LABOR NEGOTIATOR (FILE 11.15)
Chief Negotiator: Peter Brown, Liebert Cassidy Whitmore
Employee Organizations: Orange County Professional Firefighters' Association, Local 3631 and Chief Officers Association
Authority: Government Code Section 54957.6

CS2. CONFERENCE WITH LABOR NEGOTIATOR (FILE 11.15)
Chief Negotiators: Board Chair Hasselbrink, Vice Chair Rossini, and Immediate Past Board Chair Muller
Position: Fire Chief
Authority: Government Code Section 54957.6

CS3. CONFERENCE WITH LEGAL COUNSEL – ANTICIPATED LITIGATION (FILE 11.15)
Significant exposure to litigation pursuant to subdivision (b) of Section 54956.9

Chair Hasselbrink reconvened the meeting from Closed Session at 8:41 p.m. with Director Hatch absent and remainder of members present.

CLOSED SESSION REPORT (FILE: 11.15)

General Counsel David Kendig reported that the Board of Directors provided its negotiators direction; there were no other reportable actions.

2. CONSENT CALENDAR

On motion of Director Hernandez and second by Director Johnson, and following a roll call vote, declared passed 21-0 (Directors Rains, Hatch, Sachs, Ward and Wagner absent) to approve Items 2A thru 2E as submitted.

A. Minutes from the April 23, 2020, Regular Meeting of the Board of Directors (FILE 11.06)

Action: Approve as submitted.

B. State Standard Agreement for Fire Protection Services of State Responsibility Areas (FILE 21.13A)

Action: Approve and authorize the Board Chair to sign the Assignment of a three-year Cooperative Fire Protection Agreement between the State of California Department of Forestry and Fire Protection and the County of Orange to OCFA.

C. Compensation Agreement for Disposition of San Juan Capistrano Former Redevelopment Agency Property (FILE 10.03)

Action: Approve and authorize the Board Chair to sign the final Master Agreement for Taxing Entity Compensation between the Orange County Fire Authority and the City of San Juan Capistrano in a form substantially in conformance with the attached.

D. Third Amendment to the Advanced Life Support Billing/Reimbursement Agreements (FILE 18.05A4)

Action: Approve and authorize the Board Chair to sign the third amendment to the Advanced Life Support Billing Agreement to extend the term for an additional five years.

E. Annexation Property Tax Pass-Through Agreement with the City of Santa Ana (FILE 15.10A)

Action: Approve and execute the submitted Annexation Property Tax Pass-Through Agreement with the City of Santa Ana, effective November 13, 2019.

Director Sachs left the meeting at 8:01 p.m. and did not return.

3. DISCUSSION CALENDAR

A. Agenda Item Considered Out of Order

B. Resolution Authorizing Payment of the Non-Base Building Merit Increase Delineated in the Fire Chief's May 23, 2019, Employment Agreement (FILE 17.10A)

Chief Fennessy reported that he had a personal financial Conflict of Interest recused himself and left the boardroom during the deliberation of said item.

On motion of Director Muller and second by Director Ku, and following a roll call vote, declared passed 23-0 (Directors Hatch and Sachs absent) to approve Resolution No. 2020-05 entitled A RESOLUTION OF THE ORANGE COUNTY FIRE AUTHORITY BOARD OF DIRECTORS AUTHORIZING PAYMENT OF THE NON-BASE BUILDING MERIT INCREASE AS PROVIDED IN THE FIRE CHIEF'S MAY 23, 2019, EMPLOYMENT AGREEMENT.

4. PUBLIC HEARING(S)

A. Review and Adoption of the Fiscal Year 2020/21 Proposed Budget (FILE 15.04)

Based on the motion by the Budget and Finance Committee at its May 13, 2020, meeting, the nature of the motion requiring an amendment to the Joint Powers Authority (JPA) Agreement and given the short timeline to adopt the budget, staff respectfully provides the following three options for consideration by the Board. Staff recommends Option B.

Option A – Budget and Finance Committee's Recommendation
As motioned by the Budget and Finance Committee, direct staff to provide additional budget and JPA analysis to the Budget and Finance Committee at its June 10, 2020, meeting, to seek further input and recommendations that may be considered by the Board in conjunction with the adoption of the proposed FY 2020/21 Budget at its June 25, 2020, meeting.

Option B – Staff's Original Recommendation
Review the proposed FY 2020/21 Budget agenda item, take the following actions 1 through 8 listed below, and direct staff to continue to work with the Budget and Finance Committee to explore recommendations that may be implemented during the course of the fiscal year. *This option would allow the Board to continue to fulfill the requirements of the JPA as currently adopted and provide additional time to vet recommendations thoroughly.*

1. Conduct a Public Hearing.
2. Adopt the proposed FY 2020/21 Budget as submitted.

3. Adopt Resolution No. 2020-04 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 2020/21.
4. Approve and authorize the temporary transfer of up to $85 million from the following funds to cover a projected temporary cash flow shortfall for FY 2020/21:
   a. Fund 123 Fire Stations and Facilities - $5 million.
   b. Fund 133 Fire Apparatus - $10 million.
   c. Fund 190 Workers' Compensation Reserve Fund - $70 million.
5. Approve and authorize the repayment of $85 million borrowed funds from Fund 121 to the above funds along with interest when General Fund revenues become available in FY 2020/21.
6. Approve an update to the Financial Stability Budget Policy included as Attachment 4 that clarifies how the 10% contingency reserve will be calculated.
7. Approve changes to the Master Position Control list to add a limited term Construction Manager.
8. Approve transfers from the General Fund 121 to CIP Funds and Settlement Agreement Fund totaling $22,788,603.

Option C – Hybrid of Budget and Finance Committee's & Staff's Recommendations: Review the proposed FY 2020/21 Budget agenda item, take actions 1 through 8 listed above in Option B, direct staff to delay the timing for when OCFA remits the FY 2020/21 Snowball pension paydown plan payment to OCERS until further direction is provided by the Board, and remove the Snowball pension paydown payment from the cash contract city charge calculation in order to provide relief from future on-going increases. *This option would allow the Board to continue to fulfill the requirements of the JPA as currently adopted, commit to a review of the Snowball pension paydown plan, and set in motion relief for cash contract cities that would be reflected going forward starting with FY 2021/22.*

Lengthy discussion ensued. Two motions considered and failed.

On motion of Director Shawver and second by Director Villegas, and following a roll call vote, declared passed 15-7 (Directors Muller, Kuo, Rains, Tettemer, Gamble, Bartlett, and Hasselbrink dissented; and Directors Hatch and Sachs absent) to approve Option C – Hybrid of Budget and Finance Committee's & Staff's Recommendations: Review the proposed FY 2020/21 Budget agenda item, take actions 1 through 8 listed above in Option B, direct staff to delay the timing for when OCFA remits the FY 2020/21 Snowball pension paydown plan payment to OCERS until further direction is provided by the Board, and remove the Snowball pension paydown payment from the cash contract city charge calculation in order to provide relief from future on-going increases. *This option would allow the Board to continue to fulfill the requirements of the JPA as currently adopted, commit to a review of the Snowball pension paydown plan, and set in motion relief for cash contract cities that would be reflected going forward starting with FY 2021/22.*

BOARD MEMBER COMMENTS (FILE: 11.13)
The Board Members offered no comments.

ADJOURNMENT – Chair Hasselbrink adjourned the meeting at 10:31 p.m. The next regular meeting of the Orange County Fire Authority Board of Directors is scheduled for Thursday, June 25, 2020, at 6:00 p.m.

Maria D. Huizar, CMC
Clerk of the Authority

Orange County Fire Authority

AGENDA STAFF REPORT

Board of Directors Meeting
June 25, 2020

Agenda Item No. 2B
Consent Calendar

Updated Cost Reimbursement Rates

Contact(s) for Further Information

Robert Cortez, Assistant Chief Business Services Department	robertcortez@ocfa.org	714.573.6012
Julie Nemes, Finance Manager/Auditor	julienemes@ocfa.org	714.573.6304

Summary

This item is submitted to request approval of the proposed update to the Cost Reimbursement rates.

Prior Board/Committee Action

At its regular June 10, 2020 meeting, the Budget and Finance Committee reviewed the proposed agenda item and unanimously recommended approval of this item.

RECOMMENDED ACTION(S)

Approve and adopt the proposed Cost Reimbursement Rate schedules to be effective July 1, 2020.

Impact to Cities/County

Not Applicable.

Fiscal Impact

The fiscal impact of the new rates will be based on the number of incidents that occur throughout the year and will be incorporated into the mid-year budget update.

Background

The California Fire and Rescue Mutual Aid System Operating Plan outlines the methodologies and formulas participating agencies (including OCFA) are required to use when developing cost reimbursement rates. These rates will be used when OCFA resources are ordered by various Federal (Cleveland National Forest Service) and State (Cal Fire) agencies. The California Office of Emergency Services (Cal OES) requires a different method to calculate reimbursement rates for non-suppression personnel only. Both methods are designed to only reimburse OCFA for the marginal cost of providing the resources and are calculated in three separate components, the indirect (overhead) cost rate, personnel rate, and equipment rate.

Reimbursement Rate Calculation (Other than Cal OES)

FY 2020/21 proposed Indirect Cost Rate is 14.27%, decreasing 1.24% from the current rate of 15.51%. This change is attributable to the marginal increase of direct cost from labor contracts, overtime, and backfill cost offset by a significant decrease in indirect cost of the Countywide-Coordinated Communications System replacement payment to the Orange County Sheriff Department. The full list of proposed reimbursement rates by position (including the indirect cost rate) is listed on Attachment 1A.

OCFA adopts the Cal OES California Fire Assistance Agreement (CFAA) and Federal Emergency Management Agency (FEMA) approved equipment rates, except for the helicopter rates, to seek reimbursement for equipment use. Cal OES fire vehicles rates for fire engines, patrol, and water tender as well as the daily rates for support vehicles also increased significantly. The rate increase is due to Cal OES not adjusting its rates since 2017 and this increase now captures the necessary adjustments to bring the rates in alignment with 2020 rates. FEMA equipment reimbursement rates increase by 7.2% from the last update in August 2019. The OCFA helicopter rates were calculated using the four-year average on operating costs. Increased operating cost such as maintenance and insurance premium caused a 5.41% rate increase for the Bell Super Huey helicopter (acquired as federal excess property and placed in service in 1996) and a 20.61% rate increase for the Bell 412 helicopter. (Attachment 2)

Cal OES Reimbursement Rates

The Cal OES rate calculation differs in that it blends all specialty pays (i.e. paramedic, hazmat, hazmat specialist, and technical rescue truck pays) with base salary to develop one average hourly rate for each suppression classification. For non-suppression staff, both regular and overtime reimbursement rates are calculated. The Workers' Compensation and Unemployment Insurance rates are required to be included in the base hourly rates calculation starting from May 2020. The Cal OES personnel reimbursement rates are listed as Attachment 1B to this staff report.

Civilian Position Rates

The civilian position reimbursement rates are used for task force members responding to national and regional disasters on search and rescue missions. The reimbursement rate for affiliate member is based on the top step rate for OCFA's Battalion Chief position. All other civilian positions' rates are obtained from a salary survey within the California task forces and remain unchanged. Civilian position rates are included in the Cal OES reimbursement schedule (Attachment 1B).

Mutually Beneficial Hourly Rates (Hand crew and Dozer Operator)

These rates, with a **methodology** originally approved in 2010, are updated annually and used to recover only base salary costs of the hand crew and dozer operators when projects are deemed by OCFA to be beneficial to both the requesting entity and OCFA.

Summary

Upon approval of the proposed rates included as Attachment 1A, 1B and 2, OCFA's Finance/Cost Recovery Section will use the approved rates for the following activities or programs:

- Assistance by Hire (ABH) rates for services provided in response to CAL FIRE, Cal OES, Cleveland National Forest Service (CNF) Fire/Incident response, and other agency requests.
- Fire/Incident Restitution
- Special Event Stand-By
- Other Miscellaneous Billing

Attachment(s)

1. Proposed Cost Reimbursement Rates – Personnel
   a. Proposed Cost Reimbursement Rates – All Agencies except Cal OES
   b. Proposed Cost Reimbursement Rates – Cal OES
2. Proposed Cost Reimbursement Rates – Equipment

Attachment 1A

ORANGE COUNTY FIRE AUTHORITY
COST REIMBURSEMENT RATES FOR ALL BILLING AGENCIES (EXCEPT CAL OES)
PERSONNEL
EFFECTIVE JULY 1, 2020

CLASSIFICATION	2019/20 ADOPTED RATES	2020/21 PROPOSED RATE with ICRP	$ CHANGE	% CHANGE	
SUPPRESSION PERSONNEL					
FIRE DIVISION CHIEF	$181.57	**$184.05**	$2.48	1.37%	
FIRE BATTALION CHIEF (SHIFT)	$111.86	**$112.00**	$0.14	0.13%	
FIRE BATTALION CHIEF (STAFF)	$156.28	**$160.66**	$4.38	2.80%	
FIRE CAPTAIN (FC)	$81.38	**$80.51**	($0.87)	-1.07%	
FC/HAZMAT	$86.13	**$85.23**	($0.89)	-1.04%	
FC/HAZMAT PARAMEDIC	$92.45	**$91.53**	($0.92)	-1.00%	
FC/HAZMAT SPECIALIST	$87.71	**$86.81**	($0.90)	-1.03%	
FC/PARAMEDIC	$90.87	**$89.95**	($0.92)	-1.01%	
FC/TECH RESCUE TRUCK	$86.13	**$85.23**	($0.89)	-1.04%	
FIRE APPARATUS ENGINEER (FAE)	$69.90	**$69.95**	$0.05	0.07%	
FAE/HAZMAT	$74.65	**$74.67**	$0.02	0.03%	
FAE/HAZMAT PARAMEDIC	$80.97	**$80.97**	($0.00)	0.00%	
FAE/HAZMAT SPECIALIST	$76.23	**$76.25**	$0.02	0.02%	
FAE/PARAMEDIC	$79.39	**$79.39**	$0.00	0.00%	
FAE/TECH RESCUE TRUCK	$74.65	**$74.67**	$0.02	0.03%	
FIREFIGHTER (FF)	$60.02	**$58.74**	($1.28)	-2.13%	
FF/HAZMAT	$64.76	**$63.46**	($1.30)	-2.01%	
FF/HAZMAT PARAMEDIC	$71.08	**$69.76**	($1.33)	-1.87%	
FF/HAZMAT SPECIALIST	$66.34	**$65.04**	($1.31)	-1.97%	
FF/PARAMEDIC	$69.50	**$68.18**	($1.32)	-1.90%	
FF/TECH RESCUE TRUCK	$64.76	**$63.46**	($1.30)	-2.01%	
HAND CREW (FIREFIGHTER)	$42.44	**$40.12**	($2.32)	-5.46%	(1)
HAND CREW SUPERVISOR (FIRE CAPTAIN)	$83.05	**$82.67**	($0.39)	-0.46%	
HAND CREW SUPERVISOR (FIRE APP. ENGINEER)	$70.93	**$70.62**	($0.32)	-0.44%	
HAND CREW SUPERVISOR (FIREFIGHTER)	$63.24	**$62.96**	($0.28)	-0.45%	
HEAVY FIRE EQUIPMENT OPERATOR	$110.21	**$115.74**	$5.54	5.02%	
FIRE PILOT	$85.85	**$95.44**	$9.59	11.17%	
NON-SUPPRESSION PERSONNEL					
ACCOUNTANT	$75.51	**$79.13**	$3.62	4.80%	
ACCOUNTING MANAGER	n/a	**$90.49**	n/a	n/a	(2)
ASST. IT MANAGER	$92.76	**$95.38**	$2.62	2.82%	(2)
ASST. FIRE APPARATUS TECHNICIAN	$46.85	**$50.86**	$4.01	8.55%	
ASST. FIRE MARSHAL	$111.42	**$110.13**	($1.30)	-1.16%	
ASST. PURCHASING AGENT	$83.08	**$86.41**	$3.33	4.01%	
BUYER	$60.77	**$56.38**	($4.38)	-7.22%	
COMMUNICATIONS TECHNICIAN	$64.94	**$66.01**	$1.07	1.65%	
COMMUNICATIONS SERVICE SUPERVISOR	$87.65	**$98.32**	$10.66	12.16%	
DEPUTY FIRE MARSHAL	$89.96	**$90.49**	$0.53	0.59%	(2)
EMERGENCY COMM CENTER MANAGER	$77.33	**$82.09**	$4.76	6.16%	(2)
FINANCE MANAGER	$102.54	**$89.25**	($13.29)	-12.96%	(2)
FIRE APPARATUS TECHNICIAN	$72.30	**$73.11**	$0.81	1.12%	
FIRE COMM RELAT/ED SPECIALIST	$66.71	**$68.25**	$1.54	2.31%	
FIRE COMM RELAT/ED SUPERVISOR	$72.60	**$73.05**	$0.46	0.63%	
FIRE COMMUNICATIONS DISPATCHER	$66.69	**$63.90**	($2.79)	-4.19%	
FIRE COMMUNICATIONS SUPERVISOR	$76.86	**$78.15**	$1.29	1.68%	
FIRE HELICOPTER TECHNICIAN	$74.46	**$78.66**	$4.20	5.64%	
FIRE PREVENTION ANALYST	$97.23	**$100.70**	$3.47	3.57%	
FIRE PREVENTION SERVICES SPECIALIST	n/a	**$33.12**	n/a	n/a	
FIRE PREVENTION SPECIALIST	$80.00	**$81.26**	$1.27	1.58%	
FIRE PREVENTION TRAINEE	$57.79	**$58.77**	$0.97	1.68%	

Notes:

(1) 5% EMT specialty pay is inlcuded in Hand Crew FF average rate

(2) Adjustment to management positions to reflect overtime as straight time rather than 1.5 x hourly rate.

Attachment 1A

ORANGE COUNTY FIRE AUTHORITY
COST REIMBURSEMENT RATES FOR ALL BILLING AGENCIES (EXCEPT CAL OES)
PERSONNEL
EFFECTIVE JULY 1, 2020

CLASSIFICATION	2019/20 ADOPTED RATES	2020/21 PROPOSED RATE with ICRP	$ CHANGE	% CHANGE	
FIRE SAFETY ENGINEER	$117.48	**$118.19**	$0.71	0.61%	
FLEET SERVICES COORDINATOR	$82.80	**$83.26**	$0.46	0.56%	
FLEET SERVICES SUPERVISOR	$88.32	**$88.37**	$0.05	0.06%	
GENERAL LABORER	$35.80	**$35.81**	$0.01	0.04%	
GIS ANALYST	$105.70	**$95.49**	($10.21)	-9.66%	
GIS SUPERVISOR	$120.85	**$128.36**	$7.51	6.21%	
GIS TECHNICIAN	n/a	**$63.38**	n/a	n/a	
INFORMATION TECHNOLOGY ANALYST	$105.70	**$106.34**	$0.64	0.61%	
INFORMATION TECHNOLOGY SPECIALIST	$84.56	**$83.31**	($1.25)	-1.48%	
INFORMATION TECHNOLOGY SUPERVISOR	$127.59	**$128.36**	$0.78	0.61%	
INFORMATION TECHNOLOGY TECHNICIAN	$76.15	**$79.60**	$3.45	4.53%	
MEDICAL DIRECTOR	$102.54	**$103.16**	$0.62	0.60%	(2)
PURCHASING MANAGER	$96.22	**$96.79**	$0.57	0.59%	(2)
RESERVE FIREFIGHTER	$2.41	**$2.17**	($0.25)	-10.20%	
RISK MANAGEMENT ANALYST	$68.13	**$70.23**	$2.10	3.08%	(2)
RISK MANAGEMENT SAFETY OFFICER	$75.07	**$65.45**	($9.62)	-12.82%	(2)
RISK MANAGEMENT SPECIALIST	$62.37	**$56.27**	($6.10)	-9.78%	
RISK MANAGER	n/a	**$96.79**	n/a	n/a	(2)
SERVICE CENTER LEAD	$76.32	**$61.90**	($14.43)	-18.90%	
SERVICE CENTER SUPERVISOR	$93.62	**$93.72**	$0.11	0.11%	
SERVICE CENTER TECHNICIAN	$42.16	**$41.70**	($0.46)	-1.10%	
SR. ACCOUNTANT	$74.56	**$75.40**	$0.83	1.11%	(2)
SR. ACCT. SUPPORT SPEC.	$59.31	**$60.50**	$1.19	2.00%	
SR. COMMUNICATIONS TECHNICIAN	$66.38	**$72.47**	$6.09	9.18%	
SR. FIRE APPARATUS TECHNICIAN	$74.20	**$70.81**	($3.39)	-4.57%	
SR. FIRE COMMUNICATIONS SUPV.	$87.47	**$87.98**	$0.51	0.58%	
SR. FIRE HELICOPTER TECHNICIAN	$106.28	**$106.41**	$0.12	0.12%	
SR. FIRE PREVENTION SPECIALIST	$92.27	**$87.16**	($5.11)	-5.54%	
SR. INFO TECHNOLOGY ANALYST	$112.88	**$116.97**	$4.09	3.62%	
SR. SERVICE CENTER TECHNICIAN	$62.04	**$56.13**	($5.91)	-9.53%	
US&R WAREHOUSE & LOGISTICS SPECIALIST	$62.04	**$53.31**	($8.73)	-14.07%	
WILDLAND RESOURCE PLANNER	$82.60	**$90.18**	$7.58	9.18%	
MUTUALLY BENEFICIAL RATES:					
HAND CREW (FIREFIGHTER)	$21.85	**$21.01**	($0.84)	-3.84%	
HAND CREW SUPERVISOR (STAFF FIRE CAPTAIN)	$42.76	**$43.29**	$0.53	1.24%	
HAND CREW SUPERVISOR (STAFF FIRE APP. ENGINE	$36.52	**$36.98**	$0.46	1.26%	
HAND CREW SUPERVISOR (STAFF FIREFIGHTER)	$32.56	**$32.97**	$0.41	1.26%	
HEAVY FIRE EQUIPMENT OPERATOR	$56.74	**$60.61**	$3.87	6.82%	
SWAMPER/HAND CREW FF	$21.85	**$21.01**	($0.84)	-3.84%	

Notes:

(1) 5% EMT specialty pay is inlcuded in Hand Crew FF average rate

(2) Adjustment to management positions to reflect overtime as straight time rather than 1.5 x hourly rate.

Attachment 1B

ORANGE COUNTY FIRE AUTHORITY
COST REIMBURSEMENT RATES FOR CAL OES BILLINGS ONLY
PERSONNEL
EFFECTIVE JULY 1, 2020

CLASSIFICATION	2019/20 ADOPTED RATE					2020/21 PROPOSED RATE	$ CHANGE	% CHANGE	
SUPPRESSION POSITIONS									
FIRE DIVISION CHIEF	$181.57					**$183.81**	$2.25	1.24%	
FIRE BATTALION CHIEF	$134.08					**$136.15**	$2.08	1.55%	
FIRE CAPTAIN	$88.24					**$86.60**	($1.63)	-1.85%	(1)
FIRE APPARATUS ENGINEER	$74.93					**$74.97**	$0.04	0.05%	(1)
FIREFIGHTER	$65.67					**$64.46**	($1.21)	-1.84%	(1)
HAND CREW (FIREFIGHTER)	$42.44					**$40.07**	($2.37)	-5.58%	(2)
HAND CREW SUPERVISOR (FIRE CAPTAIN)	$83.05					**$82.56**	($0.49)	-0.59%	
HAND CREW SUPERVISOR (FIRE APP. ENGINEER)	$70.93					**$70.53**	($0.41)	-0.57%	
HAND CREW SUPERVISOR (FIREFIGHTER)	$63.24					**$62.88**	($0.36)	-0.57%	
HEAVY FIRE EQUIPMENT OPERATOR	$110.21					**$115.59**	$5.39	4.89%	
FIRE PILOT	$85.85					**$95.32**	$9.47	11.03%	
NON-SUPPRESSION POSITIONS									
CLASSIFICATION	**2019/20 ADOPTED REGULAR RATE**	**2020/21 PROPOSED REGULAR RATE**	**$ CHANGE**	**% CHANGE**	**2019/20 ADOPTED OT RATE**	**2020/21 PROPOSED OT RATE**	**$ CHANGE**	**% CHANGE**	
ACCOUNTANT	$76.05	$79.81	$3.76	4.95%	$75.51	**$79.08**	$3.57	4.73%	
ACCOUNTING MANAGER	n/a	$141.68	n/a	n/a	n/a	**$90.43**	n/a	n/a	
ASST. IT MANAGER	$143.29	$148.39	$5.10	3.56%	$92.76	**$95.32**	$2.56	2.76%	(3)
ASST. FIRE APPARATUS TECHNICIAN	$50.77	$54.79	$4.03	7.93%	$46.85	**$50.77**	$3.92	8.36%	
ASST. FIRE MARSHAL	$108.63	$107.99	($0.64)	-0.59%	$111.42	**$110.06**	($1.37)	-1.23%	
ASST. PURCHASING AGENT	$82.92	$86.42	$3.50	4.22%	$83.08	**$86.36**	$3.28	3.95%	
BUYER	$62.68	$59.12	($3.56)	-5.69%	$60.77	**$56.35**	($4.42)	-7.27%	
COMMUNICATIONS TECHNICIAN	$66.45	$67.88	$1.43	2.15%	$64.94	**$65.97**	$1.03	1.59%	
COMMUNICATIONS SERVICES SUPERVISOR	$87.07	$97.25	$10.18	11.69%	$87.65	**$98.25**	$10.60	12.09%	
DEPUTY FIRE MARSHAL	$139.46	$141.68	$2.22	1.59%	$89.96	**$90.43**	$0.48	0.53%	(3)
EMERGENCY COMM CENTER MANAGER	$122.21	$130.14	$7.92	6.48%	$77.33	**$82.04**	$4.71	6.09%	(3)
FINANCE MANAGER	$156.65	$139.97	($16.69)	-10.65%	$102.54	**$89.20**	($13.35)	-13.01%	(3)
FIRE APPARATUS TECHNICIAN	$73.87	$75.03	$1.16	1.58%	$72.30	**$72.98**	$0.68	0.94%	
FIRE COMM RELAT/ED SPECIALIST	$68.07	$69.92	$1.85	2.72%	$66.71	**$68.21**	$1.50	2.24%	
FIRE COMM RELAT/ED SUPERVISOR	$73.41	$74.28	$0.87	1.18%	$72.60	**$73.01**	$0.41	0.57%	
FIRE COMMUNICATIONS DISPATCHER	$68.05	$65.96	($2.10)	-3.08%	$66.69	**$63.86**	($2.83)	-4.25%	
FIRE COMMUNICATIONS SUPV.	$77.27	$78.91	$1.64	2.12%	$76.86	**$78.10**	$1.24	1.61%	
FIRE HELICOPTER TECHNICIAN	$75.82	$80.07	$4.25	5.61%	$74.46	**$78.52**	$4.06	5.45%	
FIRE PREVENTION ANALYST	$95.76	$99.41	$3.65	3.81%	$97.23	**$100.64**	$3.40	3.50%	
FIRE PREVENTION SERVICES SPECIALIST	n/a	$37.98	n/a	n/a	n/a	**$33.10**	n/a	n/a	
FIRE PREVENTION SPECIALIST	$80.12	$81.75	$1.63	2.03%	$80.00	**$81.21**	$1.21	1.52%	
FIRE PREVENTION TRAINEE	$59.71	$61.03	$1.31	2.20%	$57.79	**$58.76**	$0.96	1.66%	
FIRE SAFETY ENGINEER	$114.12	$115.32	$1.19	1.05%	$117.48	**$118.11**	$0.64	0.54%	
FLEET SERVICES COORDINATOR	$82.67	$83.56	$0.90	1.08%	$82.80	**$83.21**	$0.41	0.50%	
FLEET SERVICES SUPERVISOR	$88.39	$88.90	$0.51	0.58%	$88.32	**$88.22**	($0.11)	-0.12%	
GENERAL LABORER	$40.74	$41.13	$0.39	0.95%	$35.80	**$35.75**	($0.05)	-0.13%	
GIS ANALYST	$103.44	$94.69	($8.75)	-8.46%	$105.70	**$95.43**	($10.27)	-9.71%	
GIS SUPERVISOR	$117.19	$124.56	$7.37	6.29%	$120.85	**$128.28**	$7.43	6.15%	
GIS TECHNICIAN	n/a	$65.22	n/a	n/a	n/a	**$63.37**	n/a	n/a	
INFORMATION TECHNOLOGY ANALYST	$103.44	$104.54	$1.10	1.06%	$105.70	**$106.27**	$0.57	0.54%	
INFORMATION TECHNOLOGY SPECIALIST	$83.99	$83.34	($0.65)	-0.78%	$84.56	**$83.30**	($1.27)	-1.50%	
INFORMATION TECHNOLOGY SUPERVISOR	$123.29	$124.56	$1.27	1.03%	$127.59	**$128.28**	$0.69	0.54%	
INFORMATION TECHNOLOGY TECHNICIAN	$76.36	$79.96	$3.61	4.73%	$76.15	**$79.59**	$3.44	4.52%	

Notes:

(1) HazMat ($2.47/hr), HazMat Paramedic ($5.77/hr), HazSpecialist ($3.3/hr), Paramedic ($4.95/hr), and Tech Rescue Truck ($2.47/hr) specialty pays are now included in

(2) 5% EMT specialty pay is inlcuded in Hand Crew FF average rate

(3) Adjustment to management positions to reflect overtime as straight time rather than 1.5 x hourly rate.

ORANGE COUNTY FIRE AUTHORITY
COST REIMBURSEMENT RATES FOR CAL OES BILLINGS ONLY
PERSONNEL
EFFECTIVE JULY 1, 2020

CLASSIFICATION	2019/20 ADOPTED RATE					2020/21 PROPOSED RATE	$ CHANGE	% CHANGE	
MEDICAL DIRECTOR	$156.65	$159.08	$2.43	1.55%	$102.54	**$103.09**	$0.55	0.54%	(3)
PURCHASING MANAGER	$148.00	$150.32	$2.32	1.57%	$96.22	**$96.73**	$0.51	0.53%	(3)
RESERVE FIREFIGHTER	$1.76	$1.59	($0.17)	-9.39%	$2.41	**$2.16**	($0.25)	-10.45%	
RISK MANAGEMENT ANALYST	$109.64	$113.83	$4.20	3.83%	$68.13	**$70.18**	$2.05	3.01%	(3)
RISK MANAGEMENT SAFETY OFFICER	$119.11	$107.27	($11.84)	-9.94%	$75.07	**$65.41**	($9.66)	-12.87%	(3)
RISK MANAGEMENT SPECIALIST	$64.14	$59.02	($5.12)	-7.98%	$62.37	**$56.24**	($6.14)	-9.84%	
RISK MANAGER	n/a	$150.32	n/a	n/a	n/a	**$96.73**	n/a	n/a	(3)
SERVICE CENTER LEAD	$76.79	$64.14	($12.64)	-16.47%	$76.32	**$61.86**	($14.47)	-18.95%	
SERVICE CENTER SUPERVISOR	$93.19	$93.77	$0.58	0.62%	$93.62	**$93.56**	($0.06)	-0.06%	
SERVICE CENTER TECHNICIAN	$46.52	$46.47	($0.05)	-0.10%	$42.16	**$41.63**	($0.54)	-1.27%	
SR. ACCOUNTANT	$118.43	$120.94	$2.51	2.12%	$74.56	**$75.35**	$0.78	1.05%	(3)
SR. ACCT. SUPPORT SPEC.	$61.35	$62.86	$1.51	2.47%	$59.31	**$60.46**	$1.15	1.94%	
SR. COMMUNICATIONS TECHNICIAN	$67.76	$73.76	$5.99	8.84%	$66.38	**$72.43**	$6.05	9.11%	
SR. FIRE APPARATUS TECHNICIAN	$75.58	$72.95	($2.63)	-3.48%	$74.20	**$70.69**	($3.51)	-4.73%	
SR. FIRE COMMUNICATIONS SUPV.	$86.90	$87.85	$0.95	1.09%	$87.47	**$87.92**	$0.45	0.52%	
SR. FIRE HELICOPTER TECHNICIAN	$104.68	$105.30	$0.62	0.59%	$106.28	**$106.22**	($0.06)	-0.06%	
SR. FIRE PREVENTION SPECIALIST	$91.25	$87.10	($4.15)	-4.55%	$92.27	**$87.10**	($5.16)	-5.60%	
SR. INFO TECHNOLOGY ANALYST	$109.95	$114.20	$4.25	3.87%	$112.88	**$116.90**	$4.02	3.56%	
SR. SERVICE CENTER TECHNICIAN	$64.55	$59.60	($4.95)	-7.67%	$62.04	**$56.03**	($6.01)	-9.69%	
US&R WAREHOUSE & LOGISTICS SPECIALIST	$64.55	$57.03	($7.51)	-11.64%	$62.04	**$53.22**	($8.82)	-14.22%	
WILDLAND RESOURCE PLANNER	$82.49	$89.85	$7.37	8.93%	$82.60	**$90.12**	$7.52	9.11%	

CIVILIAN POSITIONS

AFFILIATED MEMBER	$59.24					**$60.52**	$1.28	2.16%	
CANINE SPECIALIST	$37.50					**$37.50**	$0.00	0.00%	
DOCTOR	$90.38					**$90.38**	$0.00	0.00%	
HEAVY RIGGING SPECIALIST	$40.00					**$40.00**	$0.00	0.00%	
STRUCTURE SPECIALIST	$70.95					**$70.95**	$0.00	0.00%	

Notes:

(1) HazMat ($2.47/hr), HazMat Paramedic ($5.77/hr), HazSpecialist ($3.3/hr), Paramedic ($4.95/hr), and Tech Rescue Truck ($2.47/hr) specialty pays are now included in

(2) 5% EMT specialty pay is inlcuded in Hand Crew FF average rate

(3) Adjustment to management positions to reflect overtime as straight time rather than 1.5 x hourly rate.

Attachment 2

ORANGE COUNTY FIRE AUTHORITY
COST REIMBURSEMENT RATES
EQUIPMENT
EFFECTIVE July 1, 2020

DESCRIPTION	2019/20 RATE	2020/21 RATE	$ CHANGE	% CHANGE	SOURCE	Hourly / Daily
TYPE 1 ENGINE	$78.90	**$140.00**	$61.10	77.44%	Cal OES	Hourly
TYPE 2 ENGINE	$68.00	**$132.00**	$64.00	94.12%	Cal OES	Hourly
TYPE 3 ENGINE	$68.00	**$126.50**	$58.50	86.03%	Cal OES	Hourly
TRUCK/QUINT	$78.90	**$81.10**	$2.20	2.79%	FEMA	Hourly
AIR/LIGHT UTILITY	$23.84	**$35.42**	$11.58	48.57%	FEMA	Hourly
AIRPORT CRASH UNIT	$78.90	**$81.10**	$2.20	2.79%	FEMA	Hourly
CHIPPER	$24.31	**$24.89**	$0.58	2.39%	FEMA	Hourly
COMPACT TRACK LOADER	$36.05	**$38.72**	$2.67	7.41%	FEMA	Hourly
CREW CARRYING VEHICLE	$20.95	**$21.60**	$0.65	3.10%	FEMA	Hourly
DOZER	$93.74	**$98.77**	$5.03	5.37%	FEMA	Hourly
DOZER MODULE (DOZER+TRANSPORT)	$160.64	**$168.46**	$7.82	4.87%	FEMA	Hourly
DOZER TENDER	$17.65	**$17.91**	$0.26	1.47%	FEMA	Hourly
DOZER TRAILER	$15.50	**$18.49**	$2.99	19.29%	FEMA	Hourly
DOZER TRANSPORT	$66.90	**$69.69**	$2.79	4.17%	FEMA	Hourly
DUMP TRUCK	$75.50	**$77.50**	$2.00	2.65%	FEMA	Hourly
FIRE COMMAND UNIT	$20.95	**$21.60**	$0.65	3.10%	FEMA	Hourly
FUEL TENDER	$28.70	**$31.05**	$2.35	8.19%	FEMA	Hourly
GRADER	$46.50	**$63.63**	$17.13	36.84%	FEMA	Hourly
LOADER	$43.85	**$46.17**	$2.32	5.29%	FEMA	Hourly
MECHANIC SERVICE TRUCK	$96.00	**$230.00**	$134.00	139.58%	Cal OES	Daily
MEDIC UNIT	$96.00	**$230.00**	$134.00	139.58%	Cal OES	Daily
PATROL UNIT (Type 6/ Swift Water Rescue)	$68.00	**$120.00**	$52.00	76.47%	Cal OES	Hourly
PICKUP (less than 3/4 ton)	$86.00	**$140.00**	$54.00	62.79%	Cal OES	Daily
SEDAN	$47.00	**$119.00**	$72.00	153.19%	Cal OES	Daily
SPORT UTILITY VEHICLE	$96.00	**$205.00**	$109.00	113.54%	Cal OES	Daily
VAN	$109.00	**$194.00**	$85.00	77.98%	Cal OES	Daily
WATER TENDER	$28.70	**$102.67**	$73.97	257.74%	Cal OES	Hourly
OTHER (3/4 ton and above)	$96.00	**$230.00**	$134.00	139.58%	Cal OES	Daily
HAZMAT (Unit 4)	$78.90	**$81.10**	$2.20	2.79%	FEMA	Hourly
HAZMAT (Unit 79)	$78.90	**$81.10**	$2.20	2.79%	FEMA	Hourly
HAZMAT (Unit 204)	$20.60	**$25.46**	$4.86	23.59%	FEMA	Hourly
HELICOPTER - BELL SUPER HUEY (1)	$1,482.23	**$1,562.37**	$80.14	5.41%	OCFA	Hourly
HELICOPTER - BELL 412 (1)	$3,954.61	**$4,769.66**	$815.05	20.61%	OCFA	Hourly

Notes:
1. Helicopter rates are based on 20 years useful life without the pilot and crew chief (Captain). The new rate reflects average usage for the past four years.

Orange County Fire Authority

AGENDA STAFF REPORT

Board of Directors Meeting
June 25, 2020

Agenda Item No. 2C
Consent Calendar

FY 2019/20 Year End Budget Adjustment

Contact(s) for Further Information

Robert Cortez, Assistant Chief Business Services Department	robertcortez@ocfa.org	714.573.6012
Tricia Jakubiak, Treasurer	triciajakubiak@ocfa.org	714.573.6301

Summary

This item is submitted to request approval to adjust revenues, expenditures and transfers to reflect changes identified after the FY 2019/20 Mid-Year Budget Adjustment was approved in March 2020.

Prior Board/Committee Action

At its regular June 10, 2020 meeting, the Budget and Finance Committee reviewed the proposed agenda item and unanimously recommended approval of this item.

A comprehensive mid-year financial review was presented to the Budget and Finance Committee and the Board of Directors in January 2020, highlighting proposed mid-year changes that were needed to the FY 2019/20 budget based on events that have occurred since the budget was adopted. The Board directed staff to return in March with the technical budget adjustments required to implement the proposed changes.

At its regular March 11, 2020, meeting, the Budget and Finance Committee reviewed and unanimously recommended approval of this item. At its regular March 26, 2020, meeting, the Board of Directors also reviewed and approved this item.

Subsequent to the Board's approval of the mid-year budget adjustments, there were additional adjustments to both revenues and expenditures that require Board approval prior to year-end. As outlined below, the financial impacts of OCFA's response to the COVID 19 pandemic are also included in these adjustments. OCFA anticipates the federal government will reimburse some of these costs.

RECOMMENDED ACTION(S)

Approve and authorize FY 2019/20 budget adjustments to increase net revenues by $3,596,095 and net appropriations by $5,081,734 as further described in this staff report.

Impact to Cities/County

Not applicable.

Fiscal Impact

Not applicable.

Background

Proposed 2019/20 Year End Budget Adjustment
Since the mid-year budget adjustment was approved by the Board in March 2020, additional changes to the budget have become necessary. The proposed adjustment is to increase revenues in the net amount of $3,596,095 and to increase expenditures in the net amount of $5,081,734. These adjustments are comprised of the following:

FY 2019/20 Revenue Adjustments - $3.6 million

General Fund (121) - $4,175,695 net increase to revenues. This includes an initial $3.5 million increase to Disaster Relief for anticipated COVID-19 reimbursement requests. Additional COVID-19 reimbursement requests are anticipated next fiscal year. The revenue adjustment also includes $520,602 increase to Cal Fire SRA-Wildlands Contract revenue and $888,606 SAFER Grant carryover from FY 2018/19. In addition, the adjustment includes a $769,206 decrease in Inspection Service Fees due to COVID-19 restrictions. Other revenue adjustments totaling a net $35,693 increase account for cash contract city maintenance charges, interest revenue, false alarm fees, and other miscellaneous revenue adjustments.

Capital Improvement Program, Settlement Agreement and Self-Insurance Funds – $579,600 decrease in revenues primarily due to lower interest earnings.

- Fire Stations and Facilities (Fund 123) - $27,600
- Communications and Information Systems (Fund 124) - $12,000
- Fire Apparatus (Fund 133) - $50,000
- Settlement Agreement (Fund 139) - $90,000
- Self-Insurance Fund (190) - $400,000

FY 2019/20 Expenditure Adjustments - $5.1 million

General Fund (121) - $4,941,734 increase to expenditures. This includes $2,695,000 increase to Overtime and $2,715,800 increase to Services & Supplies for COVID-19 related costs that staff will seek future reimbursement. Other expenditure adjustments include increases to Miscellaneous Expenses for Interfund Borrowing expense, and Cash Contract Cities Facilities Maintenance expenditures totaling $681,148.

Offsetting the General Fund expenditure increases is a $1,150,214 decrease to expenditures from the revised March Mid-Year Budget Adjustment. Subsequent to the Board's approval of the March Mid-Year Budget Adjustment, staff determined that the staff report and one of the attachments had an incorrect expenditure figure that needed to be revised lower to accurately reflect the intended adjustment for Board consideration. Therefore, the amended redline version of the Mid-Year Budget Adjustment staff report and attachment are provided to correct the expenditure adjustment.

Fund 190 (Self-Insurance) - $140,000 increase to expenditures

Attachment(s)

A. Redlined FY2019/20 Mid-Year Budget Adjustments Staff Report
B. Redlined FY2019/20 Mid-Year Budget Adjustments Attachment 1

Orange County Fire Authority

AGENDA STAFF REPORT

Board of Directors Meeting
March 26, 2020

Agenda Item No. 2C
Consent Calendar

FY 2019/20 Mid-Year Budget Adjustment

Contact(s) for Further Information

Robert Cortez, Assistant Chief Business Services Department	robertcortez@ocfa.org	714.573.6012
Tricia Jakubiak, Treasurer	triciajakubiak@ocfa.org	714.573.6301

Summary

This item is submitted to request approval to adjust revenues, expenditures and transfers to reflect changes identified after adoption of the FY 2019/20 budget.

Prior Board/Committee Action

Budget and Finance Committee Recommendation: *APPROVE*

A comprehensive mid-year financial review was presented to the Budget and Finance Committee and the Board of Directors in January, highlighting proposed mid-year changes that are needed to the FY 2019/20 budget based on events that have occurred since the budget was adopted last May. The Board directed staff to return in March with the technical budget adjustments required to implement the proposed changes.

At its regular March 11, 2020, meeting, the Budget and Finance Committee reviewed and unanimously recommended approval of this item.

RECOMMENDED ACTION(S)

Authorize the proposed mid-year budget adjustments and transfers.

Impact to Cities/County

The proposed mid-year adjustments to the FY 2019/20 budget will have no impact to cash contract city charges in the current fiscal year. Future increases for cash contract cities are currently estimated at 4.5% per year for FYs 2020/21 and 2021/22 based on the Five-Year Financial Forecast.

Fiscal Impact

Financial impact is detailed in the report.

Background

This report is submitted to request approval of the technical budget adjustments following the January mid-year financial review. The following is a summary of the significant changes being requested (See Attachment 1 for the total proposed adjustment for each Fund).

The following are estimated changes to the General Fund budget that are needed, since the adoption of the FY 2019/20 budget in May 2019. Overall the currently proposed changes in the General Fund result in an estimated total revenue increase of approximately $10.7 million and an estimated

total expenditure increase of ~~$11.4~~ 10.2 million. Of the ~~$11.4~~ 10.2 million in expenditure increases, $5.3 million are cost neutral as they are offset by corresponding sources of revenue. These adjustments are further described below:

FY 2019/20 Potential Revenue Adjustments - $10.7 million

Property Taxes: Based on secured tax billings provided by the Auditor/Controller, preliminary projections indicate an approximate $2,265,000 increase over budget. **$2,265,000**

Assistance by Hire (ABH): ABH is the term used when OCFA responds to requests for assistance to incidents outside our area of responsibility, on a reimbursement basis. Current year activity is $4.4 million greater than budget due to various out-of-county responses. Staff will be monitoring this source of revenue for additional reimbursements. An expenditure adjustment is also proposed to the overtime/backfill category to cover the costs associated with providing the ABH services. **$4,431,475**

Grant/Other Reimbursements: This category represents reimbursements for grants or other programs, such as California Fire Fighter Joint Apprenticeship Committee (CFFJAC), where expenditures are reimbursed once incurred. **$605,040**

Miscellaneous: This category of revenue adjustments includes the following: re-categorization of CAL FIRE contract revenues, updates to cash contract city maintenance charges; witness fees, miscellaneous revenue, revenue from SCE, and restitution. **$3,440,042**

FY 2019/20 Potential Expenditure Adjustments - $10.2 million

Assistance by Hire/Emergency Incident Costs: As mentioned under Revenue for Assistance by Hire, an adjustment of approximately $4.7 million is needed for out-of-county responses, primarily in the overtime/backfill category, but also for response-related supplies. This category also comprises the expenditures for up-staffing of Strike Teams that occurred during the wind events in the first half of the fiscal year. Of this $4.7 million expenditure increase for ABH and up staffing of strike teams, the offsetting revenue reimbursement is currently estimated at $4.4 million. An additional portion of these expenditures may still be determined to be reimbursable, as staff continues the process of reviewing cost details and submitting eligible costs for reimbursement. **$4,699,835[(1)]**

Adjustment for Workers' Compensation Updated Actuarial: The latest Workers' Compensation Actuarial Study was completed end of February and includes payroll and claim data through December 31, 2019. A $1.7 million adjustment is needed to augment the required funding level for the present value of ultimate limited losses. **$1,718,921**

Supplies/Equipment/Professional Services: This category captures one-time costs which have increased since budget development, or were unknown at budget development, including fuel ($300,000), incident management team costs ($150,000), suppression personal protective equipment ($500,000), phone lines/data circuits ($272,700), communication installations in vehicles ($250,000), and Irvine reimbursement using Maruchan funds ($507,495). **$2,431,574**

CAL FIRE Augmentation Funds: This expenditure category represents the final appropriation of CAL FIRE restricted funds already received from CAL FIRE (the restricted revenue was previously recognized in the budget, but the associated expenditures were not yet included in the budget). The funds are restricted to purposes determined by CAL FIRE to be supportive of the mission related to drought augmentation. **$762,878**

Expenditures with Revenue Offset: These expenditure items are completely offset by a corresponding revenue adjustment and include CFFJAC, US&R 2018 Grant supplement and CAL FIRE defensible space inspection tablets. **$605,040[1]**

Interfund Borrowing: At the time of budget development, staff was in the process of analyzing if OCFA's cash flow needs could be met with interfund borrowing in lieu of issuing a Tax and Revenue Anticipation Note. When the budget was adopted in May, the analysis had been completed and the Board approved interfund borrowing as our temporary cash flow management mechanism in FY 2019/20. For interfund borrowing, money is borrowed from the Capital Improvement Program (CIP) and Workers' Compensation (W/C) Self-Insurance funds, temporarily loaned to the General Fund, then repaid back with interest once property tax revenues are received. The interest is reflected as a cost to the General Fund. This adjustment funds the interest owed from the General Fund to the CIP and W/C funds associated with the borrowing. **$600,000**

[1] This expenditure increase is cost neutral, offset by a corresponding revenue source.

General Fund and Capital Improvement Program Funds –and Budget Transfer Adjustments

- **Budgeted beginning fund balances:** As part of the annual mid-year adjustment, budgeted beginning fund balances will be adjusted in accordance with the FY 2018/19 year-end audit. These increases resulted primarily from additional revenue received in the fiscal year, as well as salary savings and S&S savings in the General Fund. The beginning fund balance adjustments for Capital Improvement Program (CIP) Funds largely result from the timing for completion of projects. Funds for projects that did not get completed were carried-over to FY 2019/20.

  Following the review of the Workers' Compensation Actuarial Study provided in February 2020, staff will hold off on making the $5.5 million transfer from Self-Insurance Fund 190 to the General Fund CIP Fund 12110 and the Fire Stations and Facilities Fund 123 in the amount of $2.75 million each. The purpose of the transfer is to provide funding for modifying existing fire stations to enhance gender accommodations. The possibility of the transfer will be reevaluated as part of year end.

- **Fund 12110 – General Fund CIP:** An adjustment increasing expenditures in the amount of $377,878 is needed for the following projects: Fire Station (FS) 32 requires new security fencing and a gate, bathroom improvements at FS 14, 16 and 32, and Dormitory Privacy at FS 53.

- **Fund 123 – Fire Stations and Facilities:** An adjustment increasing revenue by $578,000 is needed to reflect developer contributions.

- **Fund 124 – Communications and Information Systems:** An adjustment to increase revenue by $40,000 is needed to reflect interest earnings and an adjustment decreasing expenditures in the amount of $180,000 is needed in the Fund. The OCFA Enterprise Audio Video Improvements Project is being deferred to subsequent fiscal years, while a new Emergency Medical Services (EMS) Immunization Tracking Program is being initiated.

- **Fund 139 – Settlement Agreement:** An adjustment of $55,000 is needed to increase revenue from interest earnings and an adjustment increasing expenditures in the amount of $10,000 is needed to accommodate Trustee and Public Agency Retirement Services (PARS) fees for administering the 115 Trust. In addition, $507,495 of Maruchan Funds are being transferred back to the General Fund.
- **Fund 190 - Self Insurance:** A net revenue adjustment of $2,492,104 is needed to reflect the workers' compensation payroll adjustment, described above, as well as an adjustment to expected earnings in the fund.

The attached Combined Budget Summary (Attachment 2) represents the total adjusted budget for the OCFA and details the revenue and expenditure budgets in each fund assuming these proposed adjustments are approved.

Attachment(s)

1. FY 2019/20 Mid-Year Budget Adjustments
2. Combined Budget Summary

Attachment 1

FY 2019/2020 Mid-Year Budget Adjustments

The following adjustments to the FY 2019/20 budget are requested:

General Fund (Fund 121)
Revenues: $10,741,557 increase
Expenditures: $~~11,392,727~~ 10,242,513 increase

General Fund CIP (Fund 12110)
Expenditures: $377,878 increase

Fire Stations and Facilities Fund (Fund 123)
Revenues: $578,000 increase

Communications and Information Systems Fund (Fund 124)
Revenues: $40,000 increase
Expenditures: $180,000 decrease

Fire Apparatus Fund (Fund 133)
Revenues: $98,000 decrease

Irvine Settlement Agreement Fund (Fund 139)
Revenues: $55,000 increase
Expenditures: $497,495 decrease

Structural Fire Fund Entitlement Fund (Fund 171)
Revenues: $4,000 increase

Self-Insurance Fund (Fund 190)
Revenues: $2,492,104 increase

Orange County Fire Authority

AGENDA STAFF REPORT

Board of Directors Meeting | **Agenda Item No. 2D**
June 25, 2020 | **Consent Calendar**

Quarterly Status Report
Placentia Fire and Emergency Medical Services

Contact(s) for Further Information

Brian Fennessy, Fire Chief | brianfennessy@ocfa.org | 714.573.6010

Summary

This agenda item is submitted to provide a quarterly status briefing regarding the transition of Fire and Emergency Medical Services (EMS) from the Orange County Fire Authority (OCFA) to the City of Placentia.

Prior Board/Committee Action

At its June 27, 2019, meeting the Board of Directors was presented an overview of the City of Placentia's Fire/Emergency Medical Services (EMS) Transition Plan. Staff was directed to provide quarterly status updates regarding the transition of services. Prior updates were provided on September 26, 2019, January 23, 2020, and March 26, 2020.

RECOMMENDED ACTION(S)

Receive and file the report.

Impact to Cities/County

Not Applicable.

Fiscal Impact

The City of Placentia's withdrawal from OCFA effective July 1, 2020, will result in an estimated $7.1 million reduction to annual cash contract revenue, with a corresponding $6.1 million reduction to expenditures. Note that the expenditure reduction is less than the revenue reduction since a portion of the operational resources currently within the City (Truck 34) will be relocated to a neighboring OCFA city and continue to serve other areas of OCFA's jurisdiction.

Background

On June 4, 2019, the Placentia City Council voted to proceed in establishing a Placentia Citywide Fire Protection & EMS Department, effective July 1, 2020. At the OCFA Board of Directors June 27, 2019, meeting, staff was directed to provide quarterly reports on the transition, including any policy matters that may require Board action. Below are updates to transition activities that have occurred since the March 26 update was provided.

1) **Movement of Truck 34**: Truck 34, currently positioned at Fire Station 34/Placentia, is being moved to Fire Station 32/Yorba Linda where it will continue to serve OCFA's regional jurisdiction. The transition is scheduled to be completed by June 25, 2020.

2) **Movement of Battalion 2 Headquarters**: The headquarters for OCFA's Battalion 2 is being moved from Fire Station 34/Placentia to Fire Station 53/Yorba Linda. The transition will be completed by July 1, 2020.

3) **Temporary Implementation of 2-Person Medic Unit**: Following transition of services on July 1, a temporary 2-person medic unit will be positioned at Fire Station 10/Yorba Linda while we assess the demand and delivery of emergency medical services under the changed deployment in this region. We don't anticipate the need to staff this unit for an extended duration, and we intend to closely monitor need, and timing to conclude the temporary use.

4) **Absorption of Personnel**: In addition to Truck 34, OCFA also has 24 full-time positions assigned to staffing of Engines 34 and 35 in Placentia. Employees in these 24 positions are transitioning to vacant-funded positions in other areas of OCFA's service jurisdiction, effective July 1, 2020.

5) **OCPFA, Local 3631**: The Orange County Professional Firefighters Association, Local 3631 (OCPFA) previously requested to meet and confer with OCFA management regarding the impact to employees referenced above who were being moved to different stations as a result of Placentia's withdrawal from OCFA. In addition, they requested to bargain over any management decisions impacting the health and safety of their members. We completed the impact bargaining early in our discussions, with mutual agreement as to the movement of personnel. We have been engaged in ongoing dialogue regarding management decisions, specifically focused on provision of mutual aid to Placentia and firefighter safety. Discussions have been collaborative, and we expect this dialogue to continue as we proceed through transition and for several months post-transition.

6) **Fire Station Transition:** OCFA staff has continued meeting with Placentia personnel regularly for transition of facilities, communications, and information technology functions at Fire Stations 34 and 35. OCFA staff, in conjunction with Placentia personnel, have agreed upon a transition plan including a detailed list of assets that will remain at the stations (city-owned) and assets that OCFA will remove (OCFA-purchased).

7) **Proposed Mutual Aid Agreement**: Chief Fennessy met with the Placentia Fire Chief on June 1, 2020, and provided a draft-proposed Mutual Aid Agreement for consideration of the terms in which OCFA is offering aid to Placentia and in return from Placentia to OCFA. A detailed discussion of the content was completed in a collaborative manner, and Chief Van Gieson agreed to continue his review and consideration. On June 6, 2020, Chief Fennessy provided the Placentia Fire Chief the final Mutual Aid Agreement (Attachment 1). If by June 11, 2020, the Placentia Fire Chief does not agree to entering into a mutual aid agreement, then OCFA will be compelled to formally notice the City of Placentia of the terms and conditions of our providing emergency aid. There is no legal requirement to provide mutual aid; the provision of aid to another jurisdiction is always voluntary. However, with or without an executed agreement, we are committed to providing emergency aid to the citizens of Placentia under the terms and conditions identified in the final Mutual Aid Agreement.

8) **CAD-to-CAD Agreement:** On May 28, 2020, OCFA and Placentia entered into a Letter Agreement regarding Connection to CAD-to-CAD System (Attachment 2). It is OCFA's understanding that the City of Placentia has their contract CAD-to-CAD provider (Tellus)

designing and constructing the Placentia CAD interface. Information provided to the Orange County Fire Chiefs Association (OCFCA) by the Placentia Fire Chief indicate that it may be August 2020 before interface testing is completed and is fully functional. Until CAD-to-CAD communications are available, requests for aid will be made by telephone as it occurs now with several Orange County fire agencies and nearly every fire agency in California. Once the Placentia CAD interface is functional, it is expected that mutual aid resource requests will be exchanged via CAD-to-CAD.

9) **Ongoing Firefighter Safety Concerns:** All of the previously reported firefighter safety concerns (reported in prior quarterly updates) have been shared with the Placentia Fire Chief by the OCFCA members. To date, none of these concerns have been adequately mitigated and remain a serious concern. The OCFA-proposed Mutual Aid Agreement identifies the specific firefighter safety concerns. The other Orange County fire agencies share these concerns. Listed within the OCFA Mutual Aid Agreement aid are actions to be taken by the Placentia Fire & Life Safety Department (PFLSD) that would address and mitigate these firefighter safety concerns in a manner consistent with OCFCA expectations.

Much work and discussion has occurred over this last quarter, and in particular, the last 45 days. While we understand that we are essentially on the "eve" of transition, we anticipate that substantial work will continue as all fire departments serving as neighbors to Placentia, including OCFA, become more familiar with the operations of this new agency.

Attachment(s)

1. Mutual Aid Agreement
2. Letter Agreement – Connection to CAD-to-CAD System
3. Frequently Asked Questions

MUTUAL AID/ASSISTANCE-BY-HIRE AGREEMENT FOR FIRE, EMS & EMERGENCY SERVICES

DATE: As of July 1, 2020, and through June 30, 2021

PARTIES: CITY OF PLACENTIA
(Hereinafter referred to as "CITY")
c/o City of Placentia Fire Department
401 Chapman Avenue
Placentia, California 92870; and

ORANGE COUNTY FIRE AUTHORITY
(Hereinafter referred to as "AUTHORITY")
1 Fire Authority Road
Irvine, California 92602

RECITALS

A. AUTHORITY has submitted a proposal to CITY, whereby AUTHORITY will upon request, provide fire, emergency medical services (EMS) and all-hazard emergency services in CITY's service area, on a mutual aid, assistance-by-hire and case-by-case basis.

B. AUTHORITY has submitted a proposal to CITY, whereby AUTHORITY desires the CITY to provide AUTHORITY initial fire and EMS services in its DIRECT PROTECTION AREA, hereinafter referred to as "DPA", which includes its HAMER, on a mutual aid, assistance-by-hire and case-by-case basis.

TERMS:

1. This Agreement shall be for a term of one (1) year, commencing July 1, 2020, and ending June 30, 2021 unless terminated sooner as stipulated in Paragraph 24, below. This Agreement may be extended for additional one-year periods, provided the parties hereto have mutually agreed, in writing, to such an extension.

2. Either party may elect not to respond to a request for mutual aid assistance if a response may negatively affect the jurisdiction's ability to provide adequate fire, EMS or all-hazards emergency protection to their service area(s).

3. AUTHORITY, may provide fire, EMS and all-hazard emergency services, as hereinafter provided below, to the CITY, on a mutual aid, assistance-by-hire and case-by-case basis:

a. Structure Fire Responses
   i. Residential
   ii. Commercial/Apartment
   iii. High-Rise
b. Traffic Collision Responses
   i. TC-Injury
   ii. TC Fire
   iii. Cut/Rescue
   iv. TC V Bus
   v. TC V Train
c. Hazmat Responses
   i. CHEMIN – PROPT – TSPILL
   ii. SUSPICIOUS
   iii. SUSPICIOUS PACKAGE A
   iv. CHEM
d. Vegetation Fire Responses
e. Medical Responses
   i. ALS
f. Specialty Responses
   i. PLANE DOWN
   ii. TRAIN DERAIL
   iii. ACTIVE SHOOTER
   iv. BOMB
g. Rescue Responses
   i. Technical
   ii. Swift Water
   iii. Water
   iv. Confined Space
   v. Structure

4. AUTHORITY, as the authority-having-jurisdiction (AHJ), will continue to provide fire, EMS and all-hazard emergency services in the unincorporated County of Orange island known as the “Hamer” island, hereinafter referred to as "HAMER", and located within the CITY’s boundary.

   Said HAMER island is a specific geographic area within the CITY as shown on the HAMER island map, a copy of which is attached hereto as attachment “A” and made a part hereof.

5. CITY will furnish to the AUTHORITY, and to the HAMER island within AUTHORITY DPA, the necessary response resources requested by the AUTHORITY on a mutual aid, assistance-by-hire and case-by-case basis.

6. CITY will request all AUTHORITY fire, EMS and all-hazard emergency resources through the Orange County Operational Area Fire and Rescue Coordinator, hereinafter referred to as the OPERATIONAL AREA.

7. Mutual aid/assistance-by-hire resource requests by CITY will be processed and prioritized by the OPERATIONAL AREA for dispatch to areas within the CITY's geographic boundary and as the AUTHORITY has identified for the HAMER County island.

8. Mutual aid resource requests by the AUTHORITY will be made to the Placentia Police Department Dispatch Center for emergency response to AUTHORITY DPA.

9. AUTHORITY emergency response resources responding to the HAMER County island will not be downgraded or cancelled by CITY.

10. The Parties shall ensure each fire apparatus responding pursuant to this agreement has a minimum crew of three (3) career (FTE) trained firefighters, including a full-time paid career (FTE) company officer, and a full complement of equipment according to the National Fire Protection Association (NFPA) standards as stated in NFPA Pamphlet 1901. In addition, response personnel shall each be trained in their assigned positions in accordance with Sections 5.2 and 5.3 of NFPA 1500.

11. When the Parties are dispatching emergency resources to structure fires, they shall order the applicable initial full alarm assignment capabilities identified in Section 5.2.4 (Deployment), in the 2020 edition of NFPA 1710 (*Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments*):

    a. Section 5.2.4.1 Single-Family Dwelling Assignment Capability.
    b. Section 5.2.4.2 Open-Air Strip Shopping Center Assignment Capability.
    c. Section 5.2.4.3 Apartment Assignment Capability.
    d. Section 5.2.4.4 High-Rise Initial Assignment Capability.

12. When deploying resources pursuant to this Agreement, The Parties shall comply with the 2020 NFPA 1710 Section 5.2.4 (Deployment) Standard with only career (FTE) fire officers and firefighters included in the count towards meeting the NFPA 1710, Section 5.2.4 (Deployment) Standard. The Parties shall not include Reserve or Part-time fire officers or firefighters in their NFPA 1710 Section 5.2.4 (Deployment) structure fire response head count.

13. AUTHORITY fire officers and firefighters will not operate in Immediate Danger to Life and Health (IDLH) atmospheres without an AUTHORITY or non-CITY OPERATIONAL AREA Chief Officer at scene. Defensive exterior attack strategies and *preparation* for entry into an IDLH atmosphere are approved in

advance of AUTHORITY or non-CITY OPERATIONAL AREA Chief Officer(s) arriving at scene.

14. The Parties will ensure that whenever firefighters have been assigned and/or are working within an IDLH atmosphere on a CITY incident, that "Rapid Intervention Crew(s) (RIC)" have been assigned. Specifically, CITY will ensure that dedicated crew(s) of at least one career (FTE) officer and three career (FTE) firefighters are positioned as a RIC outside the IDLH, trained and equipped as specified in NFPA 1407, and who are assigned for rapid deployment to rescue lost or trapped members. The Parties shall not include Reserve or Part-time fire officers or firefighters as RIC or IRIC team members.

15. The Parties will ensure that per 2020 NFPA 1407 Section 5.2.2.3, an incident safety officer shall be deployed upon confirmation of a structural fire, at a special operations incident or when significant risk is present to the member due to the nature of an incident. In addition, per 2020 NFPA 1407 Section 5.2.2.3.1, the incident safety officer, meeting the requirements as specified for the incident safety officer in *NFPA 1521: Standard for Fire Department Safety Officer Professional Qualifications*, shall have the expertise to evaluate hazards and provide direction with respect to the overall safety of personnel.

16. The Senior Officer of the fire department of the requesting service shall assume full charge of a cross-boundary operation (i.e., Incident Commander). Chief Officers from assisting agencies will be integrated into the incident command structure. If an incident represents a threat to either parties' jurisdiction, then command will be unified (i.e. Unified Command)

17. OPERATIONAL AREA will assign AUTHORITY or non-CITY Chief Officer(s) to all CITY requests for AUTHORITY mutual aid.

18. CITY may assign Chief Officer(s) to all OCFA requests for CITY mutual aid.

19. AUTHORITY and other non-CITY OPERATIONAL AREA Chief Officer(s) will not be downgraded or cancelled by CITY when AUTHORITY resources are assigned and/or responding to an incident.

20. Prior to July 1, 2020 the CITY's dispatch office will provide to the OPERATIONAL AREA it's Firefighter MAYDAY protocols in writing and a record of training on MAYDAY procedures. Competency in MAYDAY procedures shall need to be demonstrated to the OPERATIONAL AREA in advance of July 1, 2020. AUTHORITY firefighters shall not engage in IDLH atmosphere operations without first having been provided the MAYDAY protocols in writing, a written record of training on the procedure and the City having demonstrated competency to the OPERATIONAL AREA.

21. CITY agrees to indemnify, defend and hold the AUTHORITY, its officers, agents and employees harmless against any and all losses, claims, demands, damages or judgments arising from any negligent act, error or omission in the discharge of this Agreement by its officers, agents, and employees.

22. For emergency fire, EMS and all-hazard emergency services rendered pursuant to this Agreement by OCFA during Fiscal Years 2020-2021, CITY agrees to pay AUTHORITY the most current assistance-by-hire (ABH) rate on file with the Governor's Office of Emergency Services (Cal OES). For purposes of this Agreement, the fiscal year shall be that period of time which commences on July 1 and which terminates on June 30. Payments shall be made within 30-days of receipt of invoice.

23. For emergency fire, EMS and all-hazard services rendered pursuant to this Agreement by CITY during Fiscal Years 2020-2021, AUTHORITY agrees to pay CITY the most current assistance-by-hire (ABH) rate on file with the Governor's Office of Emergency Services (Cal OES).

24. This Agreement may be terminated by either party for any reason upon written notice provided to the other party not less than sixty (60) days in advance of the termination date. The terminating party shall deliver written notification to the other party at the address set forth at the outset of this Agreement (entitled "PARTIES"). Such notice will be directed to the other jurisdiction's Fire Chief and also to the Clerk of the AUTHORITY or the City Clerk of CITY.

25. Rights and Obligations under this Agreement. By entering into this Agreement, the Parties do not intend to create any obligations express or implied other than those set out herein; further, except as expressly set forth herein, this Agreement shall not create any rights in any party, individual or entity not a signatory hereto.

26. Attorney Fees. In case suit shall be brought to interpret or to enforce this Agreement, or because of the breach of any other covenant or provision herein contained, the prevailing party in such action shall be entitled to recover their reasonable attorneys' fees in addition to such costs as may be allowed by the court.

27. Jurisdiction. This Agreement shall be administered and interpreted under the laws of the State of California. Jurisdiction of litigation arising from this Agreement shall be in the State of California, in the County of Orange.

28. Nothing in this Agreement is intended by the Parties to diminish, waive or otherwise affect the privileges and immunities conferred upon the parties by operation of law.

29. Each party to this Agreement shall provide Worker's Compensation coverage as required by State or Federal law, as applicable, for its own employees and volunteers, without cost to the other party. Neither party shall be required to pay for salaries, benefits, other compensation, or employment benefits for the employees of the other party as a result of any work or services performed pursuant to this Agreement. Nothing in this agreement shall cause the employees of one party to become, or be deemed to be, employees of the other.

30. Each party shall be fully responsible for all repairs, maintenance and upkeep, including gas, oil, lubrication, parts replacement, and repair of casualty damage of its own equipment, which is used, pursuant to this Agreement, outside of its normal jurisdiction or municipal boundaries. However, during prolonged (eight hours or more) suppression activities, the requesting agency shall replenish fuel as needed and provide necessary minor maintenance on responding equipment to keep it operational during the event.

31. Any chemical agents or expendable supplies used during the incident by the responding party shall be replenished by the requesting party.

32. Nothing in this Agreement shall limit the Parties from participating in other existing agreements with other fire jurisdictions and this Agreement shall have no effect upon the existing Orange County Operational Area Emergency Operations Plan. Should any Party withdraw for any reason from the existing Orange County Operational Area Emergency Operations Plan, this Agreement is automatically terminated upon the effect date of such withdrawal.

33. Entire Agreement. This Agreement constitutes the entire agreement between the AUTHORITY and CITY and is the final expression of the AUTHORITY and CITY with respect to the subject matter hereof, and as a complete and exclusive statement of the terms and conditions of the agreement. AUTHORITY and CITY acknowledge that any prior agreements, promises, negotiations or representations related to the subject matter hereof and not expressly set forth in this Agreement are of no force and effect, except that the OCFA Amended Joint Powers Agreement, as amended through the date of this Agreement, shall remain in full force and effect, and subject to the provisions therein regarding the CITY's withdrawal. Any amendment to this Agreement shall be of no force and effect unless it is in writing and signed by AUTHORITY and CITY.

34. Modification. No amendments to or changes to this Agreement may be made, except by a writing expressly authorized and signed by AUTHORITY and CITY.

35. Insurance. AUTHORITY and CITY are both political subdivisions of the State of California that are self-insured for all forms of legal liability. CITY shall, throughout the duration of this Agreement, maintain such insurance covering all operations of CITY, its agents, representatives, and employees, performed in

connection with this Agreement. Upon execution of this Agreement, CITY shall provide evidence of such insurance, in a form satisfactory to the AUTHORITY, demonstrating coverage sufficient to meet the limits provided in this section:

a. General Liability Combined Single Limit coverage of $1,000,000 per occurrence and $2,000,000 aggregate.
b. Automobile Liability (owned/non-owned), combined single limit per occurrence of $1,000,000.
c. Worker's Compensation coverage at the statutory limits.

36. Severability. If any part of this Agreement is found to be in conflict with applicable laws, such part shall be inoperative, null and void insofar as it is in conflict with said laws, but the remainder of the Agreement shall continue to be in full force and effect.

37. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall be deemed an original, but all of which together shall constitute a single agreement. Signed counterparts may be transmitted via U.S. Mail, messenger, or via PDF attached to email and, once transmitted, such counterpart shall constitute an original.

38. Warranty of Authority. Each party represents and warrants that it has the right, power, and authority to enter into this Agreement. Each party further represents and warrants that it has given any and all notices, and obtained any and all consents, powers, and authorities necessary to permit it, and the persons entering into this Agreement for it, to enter into this Agreement. Although the parties are bound hereunder, no individual shall have personal liability for executing this Agreement.

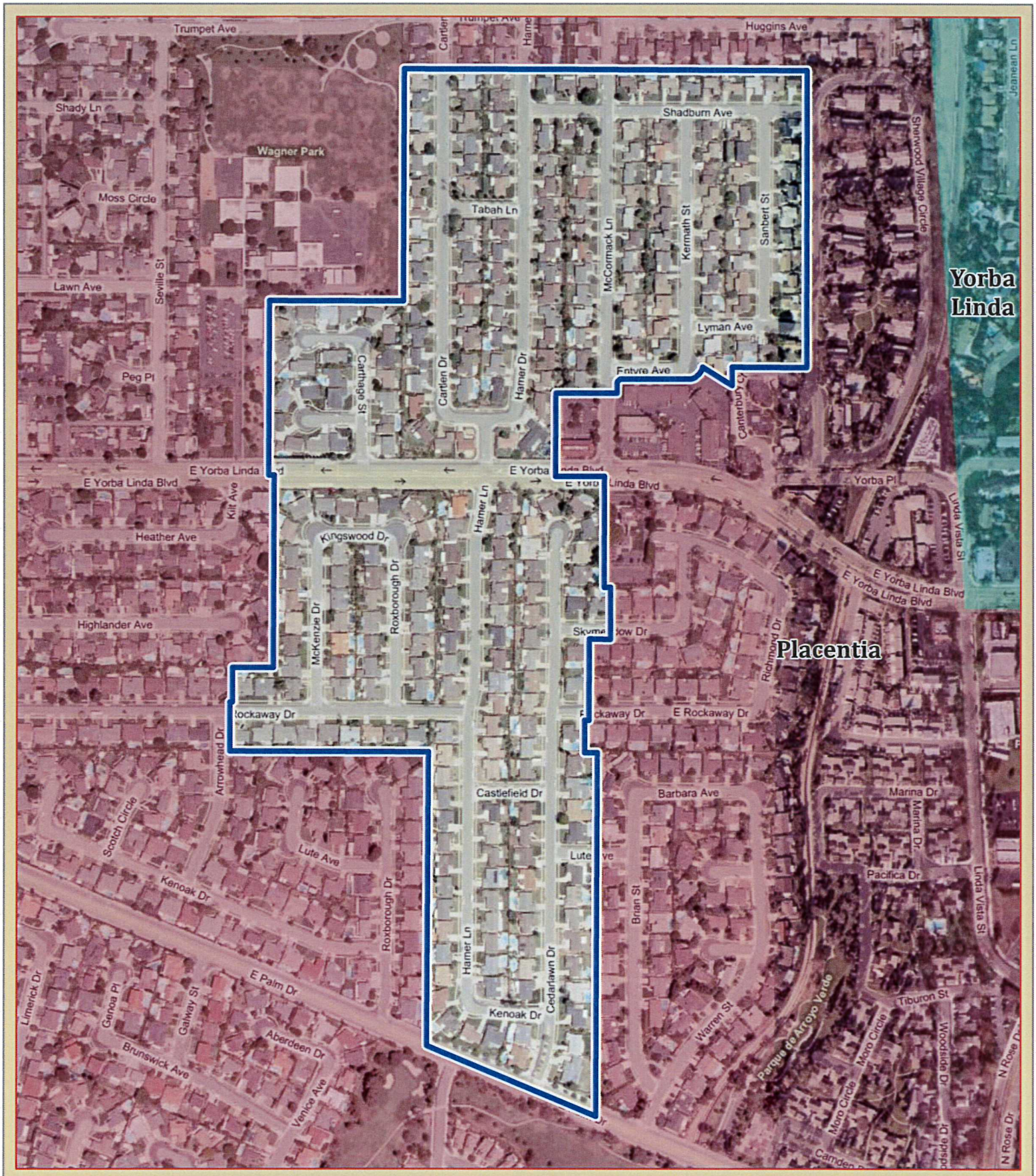
Dated_____ day of _____, 2020.

City of Placentia
Fire & Life Safety Services

_____
John Van Gieson, Fire Chief
City of Placentia

Orange County Fire Authority

_____
Brian Fennessy, Fire Chief
Orange County Fire Authority



City of Placentia
Hamer Island

Hamer Island

0 320 640 1,280 Feet

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Aerial imagery courtesy of Bing

ORANGE COUNTY FIRE AUTHORITY
P.O. Box 57115, Irvine, CA 92619-7115 • 1 Fire Authority Road, Irvine, CA 92602
Brian Fennessy, Fire Chief **(714) 573-6000** **www.ocfa.org**

May 22, 2020

Damien R. Arrula, City Administrator
City of Placentia
401 E. Chapman Avenue
Placentia, California 92870

Re: Letter Agreement re Connection to CAD-to-CAD System

Dear Mr. Arrula:

As you know, the City of Placentia ("City") has requested that its consultant, Tellus Safety Solutions ("Tellus"), be permitted to establish a CAD-to-CAD connection between the CAD system operated by the Orange County Fire Authority (OCFA) and the City's CAD system. In order to expedite the process of establishing the connection, the City has requested that Tellus be allowed to proceed with the work notwithstanding that CAD-to-CAD agreements with other agencies have not yet been concluded.

In response to the City's request, OCFA authorizes Tellus to commence coordination with OCFA staff as needed in preparation to establish a connection with the CAD-to-CAD system operated by OCFA, which connection shall not be actually installed nor activated except in accordance with the following terms and conditions, effective upon the City's written acceptance of the following:

1. The City acknowledges that this Agreement does not constitute a commitment by OCFA or City to provide automatic vehicle location (AVL) automatic aid to one another. Commitments between the two agencies to provide automatic aid (with or without AVL), if any, may be set forth in a future agreement between OCFA and the City;

2. The services needed to establish the connection will be performed at the City's sole cost;

3. The City warrants that it will, at its sole cost, and prior to commencing work on the actual connection to/through the CAD-to-CAD "Hub" operated by OCFA, obtain the approval of all permits, licenses, consents and agreements, including but not limited to cost-sharing agreements (collectively "Permits"), if any, that are required by any software or other company, governmental agency or organization of government agencies to connect to the CAD-to-CAD system operated by OCFA. Any CAD-to-CAD connection that enables sharing of data with a city or entity not a member of the OCFA (i.e., Metro Cities Fire Authority, Laguna Beach Fire Department, and Costa Mesa Fire & Rescue) will need the approval of that individual entity;

4. The City of Placentia agrees that prior to our connection to the Central Square Hub, the vendor will ensure that our connection will not delay the connection process of Costa Mesa Fire & Rescue Department or their communications center to the Hub. If Central Square determines that proceeding with Placentia's connection will result in a delay for Costa Mesa, then the City will wait until such time that the vendor determines that proceeding does not negatively impact Costa Mesa Fire & Rescue Department's connection;

5. An agreement for the shared costs of operating and maintaining the CAD-to-CAD system shall be established with the four existing OCFCA Fire/Rescue agency ECC's prior to actual connection or activation;

6. Activation of a connection in a manner that will allow Placentia's and OCFA's CAD systems to view one another's AVL information, or to auto-AVL dispatch, will not occur until a future agreement between OCFA and Placentia is approved by both agencies. CAD-to-CAD activations for other agencies will need to be approved and activated in coordination with each individual agency;

7. To the extent technically feasible, the ability for City to utilize the CAD-to-CAD connection to view another agency's AVL information, or to auto-AVL dispatch from one or more other such agencies, may be activated when, and only as to each agency with which, City enters into a written automatic aid agreement. Alternatively, and to the extent technically feasible, such AVL information and auto-AVL dispatch functions will be activated with regard to an agency if the Fire Chief of that agency delivers written direction to the OCFA to activate AVL data sharing and/or auto-AVL dispatch functions between that agency and the City. City shall be solely responsible for all costs of achieving such system functionality to the extent it does not already exist, and shall reimburse OCFA within thirty (30) days after submittal of an invoice for costs incurred by OCFA in connection therewith, except to the extent reimbursement of such costs is directly addressed in the cost-sharing agreement referred to in Section 5 above;

8. City and Tellus will cause the work on, and operation of, the connection to be performed in a professional manner that ensures it will not disrupt the proper functioning of the CAD-to-CAD system;

9. Except as expressly stated herein, this Agreement contains no representations or warranties about the operation of the CAD-to-CAD system or any future connection; and

10. This Agreement contains all agreements and representations of the parties hereto with respect to the subject matter hereof, and supersedes any and all prior written or oral representations or agreements with respect hereto.

Please let me know if you would like to request any changes to this Agreement, or if you have any questions. If not, please sign below and return one signed original to my attention at the address above. Thank you.

Sincerely,

ORANGE COUNTY FIRE AUTHORITY

By: _____
Brian Fennessy, Fire Chief

IT IS SO AGREED.

CITY OF PLACENTIA

By: _____
Damien R. Arrula, City Administrator

Orange County Fire Authority
Mutual Aid Agreement

Frequently Asked Questions

What is a Mutual Aid?

Mutual Aid is a voluntary reciprocal exchange of resources and services for mutual benefit. In Mutual Aid, the fire departments have basically agreed to give each other assistance across jurisdictional boundaries during incidents where the local department's resources are insufficient. This occurs only if the requested agencies have enough resources to help others when needed. Mutual Aid is voluntary and may not occur if the requested agencies are dealing with incidents of their own and/or do not have enough equipment or firefighters to share at the time. Fire agencies can charge other jurisdictions its actual costs for the provision of Mutual Aid. Requests for mutual aid can be made by telephone, intercom, or CAD-to-CAD (if applicable).

What is an Automatic Aid?

Automatic Aid is a form of Mutual Aid, usually between contiguous border agencies that have agreed to send pre-identified resources. It is a standing agreement for cooperative emergency management on a continuing basis, generally ensuring that resources are always dispatched from the nearest fire station, regardless of which side of the jurisdictional boundary the incident is on. Requests for Automatic Aid can be made by telephone, intercom, or CAD-to-CAD (if applicable).

Is resource exchange delayed if assistance is provided via mutual aid and not provided via automatic aid?

No. The provision of mutual aid is not a lesser, nor is it a slower level of service than automatic aid.

Are CAD-to-CAD capabilities required to exchange resources via automatic or mutual aid?

No. There is no correlation between the type of aid provided and the agencies that exchange resources between computer-aided dispatch (CAD) systems. Some agencies have agreed to "*automated*" automatic aid. Automated automatic aid removes human intervention from the resource deployment decision-making. This lack of human intervention can cause an entire neighboring jurisdiction to be stripped of its resources leaving the assisting jurisdiction exposed if an emergency were to occur within its own city. Resource exchange via CAD-to-CAD requests that are <u>not</u> "*automated*" are also common. This allows the receiving communications center to quickly receive and then quickly decide which resources to assign to assist the requesting agency without negatively affecting a contiguous border jurisdiction. Automated CAD-to-CAD dispatching is not demonstrably faster than direct requests for assistance made via CAD-to-CAD. The third and most common method in California and the U.S. is communications centers calling one another by phone when mutual or automatic aid is necessary to mitigate an emergency.

Is Automatic Aid possible between OCFA and the Placentia Fire and Life Safety Department (PFLSD)?

Automatic Aid is not possible. Placentia's Fire and EMS delivery model(s) is a lesser level of service and Placentia will not be able to provide the number or type of reciprocal (like services) resources as OCFA. Absent resource reciprocity, OCFA can only provide assistance via mutual aid.

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What is meant by "*reciprocity*"?

In the context of mutual or automatic aid, reciprocity of resource exchange is the basis for determining which type of aid may be voluntarily provided to a requestor. Reciprocity has nothing to do with equity or balance in the number of incident resource exchange between jurisdictions. Emergency aid that is not reciprocal either due to the **type** or **number** of resources being requested, or the type of resource needs the requesting agency is unable to reciprocally provide (i.e. helicopters, handcrews, bulldozers, etc.) the assisting agency, is considered Mutual Aid.

For example, beginning July 1, Placentia will not have the number of resources or firefighters available on duty each day to safely respond to and suppress a residential room and contents, single-family dwelling (less than 2,000 sq. ft.) structure fire without needing significant resource assistance from contiguous border jurisdictions. The neighboring jurisdictions (not only contiguous border agencies) will have to subsidize the Placentia FLSD with resources that Placentia FLSD will not be able to provide (reciprocate) in return. Beginning July 1, Placentia FLSD will be the only fire agency in Orange County that cannot reciprocate type and number of resources necessary to be considered reciprocal as understood by fire agencies statewide.

Concerning emergency medical response, the City of Placentia has hired a private for-profit ambulance company to provide non-fire-based advanced life support (ALS) services within its city. They have determined that they cannot afford to provide their citizens the higher level of ALS services that OCFA currently provides. The City of Placentia's decision to deliver to its citizens a lesser level of ALS services than anywhere else in Orange County is their choice. However, as a result, Placentia's ALS services cannot be considered "reciprocal". The capabilities and staffing of a fire-based ALS paramedic response significantly exceeds that of a two single-role private paramedic ambulance response.

What if the Placentia FLSD is unwilling to be signatory to a Mutual Aid Agreement with OCFA?

If Placentia FLSD does not agree to a Mutual Aid Agreement with OCFA, the OCFA will be compelled to provide written notice to the Placentia FLSD on the terms and conditions of OCFA resource exchange. There is no legal requirement that the two agencies must have an aid agreement in place to provide mutual aid to one another. Mutual Aid Agreements are always voluntary.

Why are mutual aid services only available on a case-by-case basis?

An agency may elect not to respond to a request for Mutual Aid assistance if a response may negatively affect the jurisdiction's ability to provide adequate fire, EMS, or all-hazards emergency protection to their service area(s).

What are "all-hazards" services?

These are emergency services beyond the provision of just fire suppression and emergency medical services (EMS) delivery. An "All Hazards" fire department represents every level of a hazard response whether it is trench rescue, hazardous materials, confined space, building collapse, rope rescue, fire extinguishment, dive rescue, swift water, vehicle extraction, etc.

What is Assistance-by-Hire (ABH)?

There are an array of agreements at various levels of government and between agencies that allow for and provide assistance during times of emergencies. These agreements may provide assistance in the

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form of Mutual Aid, where assistance will be paid for (reimbursed) by the user. Fire agencies in California are able to charge one another for actual cost for the provision of Mutual Aid."

Placentia is not the only city in California that must rely upon its neighboring jurisdictions to provide emergency services that they themselves have chosen to no longer provide. It is expected that OCFA and other fire agencies' engine and truck companies will be less available to serve their own communities due to now having to respond to emergencies in Placentia at a far greater rate than ever before.

When neighboring jurisdictions have to subsidize a city that by choice has reduced service levels, then emergency services provided by these jurisdictions come at a cost. Usually, that cost is in the form of an annual flat fee or in the form of an "assistance-by-hire" (ABH) rate. Neighboring jurisdictions must recoup the actual cost of their taxpayer funded resources that were used to subsidize a city needing emergency services they were unable to provide themselves. It is not a fair expectation that neighboring jurisdictions' taxpayers should shoulder the costs of providing services that the requesting city once provided for themselves but have chosen to reduce.

What are the ABH rates?

The California Office of Emergency Services (Cal OES) coordinates the California Fire and Rescue Mutual Aid System Operating Plan which outlines the methodologies and formulas participating agencies (including OCFA) are required to use when developing cost reimbursement rates (also known as ABH rates). These ABH rates are used when OCFA resources are ordered by various federal and state agencies. These reimbursement rates are designed to only reimburse OCFA for the **marginal cost** of providing the resources and are calculated in three separate components, the indirect (overhead) cost rate, personnel rate, and equipment rate.

Additionally, OCFA adopts the Cal OES California Fire Assistance Agreement (CFAA) and Federal Emergency Management Agency (FEMA) approved equipment rates to seek reimbursements for equipment use.

ABH rates are reviewed and approved annually by the OCFA Board of Directors. OCFA plans to use these Board-approved ABH rates to seek reimbursement for mutual aid services requested by Placentia and provided by OCFA.

Why is ABH necessary?

Placentia FLSD will not be delivering reciprocal or like services.

Do any other California fire departments charge another fire department as a result of an agency not being able to afford the level of service desired?

Yes. As an example, the County of Monterey provides and charges for fire and EMS services to the City of Salinas. The same occurs between the City of Oakland and the City of Emeryville. Both the City of Salinas and the City of Emeryville have chosen to pay for the other fire agency services on an annual flat fee basis.

By way of background, there are no mandatory federal or state regulations directing the level of fire service response times and outcomes. The level of service and resultant costs is a local community choice in the United States. The body of regulations on the fire service provides that *if fire services are provided, they must be done with the safety of the firefighters and citizens in mind*. There is a constructive tension between the desired level of fire services and the level that can actually be funded. Thus, some

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communities like Placentia elect to fund other priorities at the expense of the level of fire and EMS services they may desire.

What is the HAMER county island?

The Hamer island is an Orange County unincorporated island of approximately 76 acres contained within the sphere of influence of the City of Placentia. The island includes approximately 326 single-family detached units, 20 other dwellings and an estimated 1,045 residents. The island is located to the north of east Palm Drive and west of Rose Drive. The island currently receives fire protection and prevention services from the Orange County Fire Authority.

What is a Direct Protection Area (DPA)?

Basically, Direct Protection Area (DPA) is described as an area delineated by boundaries regardless of statutory responsibility and the protection is assumed by the agency with the direct protection responsibility, known as the Protecting Agency.

What type of emergency incidents is OCFA willing to respond into Placentia?

a. Structure Fire Responses
b. Traffic Collision Responses
c. Hazmat Responses
d. Vegetation Fire Responses
e. Medical Responses
    i. ALS
f. Specialty Responses
g. Rescue Responses

What is an "AHJ"?

Authority Having Jurisdiction (AHJ) means such county and municipal entities and officers who are charged with the enforcement of state and municipal laws.

Why will OCFA continue to provide emergency services to the County of Orange island known as the "Hamer" island?

To ensure the citizens living within the County island continue to receive the high level of emergency services they are currently provided. Placentia's EMS delivery model is considered a lesser level of service.

When will Placentia FLSD be requested by OCFA to respond to the "Hamer" island?

Although the level of EMS services that the Placentia FLSD has chosen to deliver beginning July 1 is a lesser level of service than the current OCFA fire-based EMS services, it is possible that one of Placentia's two private for-profit contract paramedic ambulances may be geographically closer to the Hamer County Island when OCFA receives a 911 call for service from a resident of this island. On these occasions, the OCFA will contact Placentia Police Dispatch Center and request a location of their closest ambulance. If closer than the responding OCFA resources, a mutual aid response from Placentia PFLD will be requested. OCFA fire and fire-based ALS resources will also be responding to incidents within the Hamer county island and will assume command upon arrival and turnover with Placentia FLSD units so that their units are made available to respond to other emergencies.

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What is the difference between fire-based EMS and contract ambulance provided Advanced Life Support emergency services?

There are significant differences between the two ALS service delivery models. Fire-based advanced life support (ALS or paramedic) care is delivered via fire engines, ladder trucks, and a few squads. By County policy, each fire-based apparatus is staffed with a minimum of two paramedics. Placentia will be contracting a private for-profit paramedic ambulance company to provide paramedic services. The ambulance(s) will be staffed with two (2) single role paramedics.

Another significant difference is that private company paramedics employed by for-profit businesses have a very limited operational scope and even more limited skills capacity. Firefighter EMS personnel are comprehensive emergency responders who are not only highly educated and trained medical professionals, but they are also cross-trained, certified, and legally authorized, equipped, and prepared to function in all hazardous environments and to perform myriad types of rescue operations including, but not limited to, fire suppression and rescue, vehicle extrication/heavy rescue, swift water rescue, confined space rescue, high/low-angle rescue, air operations, arson response and investigation, hazardous materials response, high-rise building rescue, tactical EMS response, etc.

The differences between these two types of paramedics are significant in their ability to work in, and around, complex and dangerous emergency scenes. Dual-function, firefighter/paramedics spend countless hours training to handle a multitude of emergency scenes. The start of their career, including a 16-week academy, involves training in all-hazard, all-risk environments. Firefighters, after years of developing experience in the field, then go to paramedic school to expand on the emergency medical aspect of their training. Paramedic school is a natural transition and expansion to the medical training of firefighters who are already trained to work in and around hazardous environments.

Additionally, fire service agencies in Orange County and California do not have recruitment or retention problems or challenges. In the private sector, especially with single-function paramedics, there is steady turnover and attrition. This is especially true in the "for-profit" environment because of the constant battle with the bottom line. Private companies are forced to maintain low-pay, low-benefits, and maintain very slim management. There simply are not broad personnel development growth opportunities for such a job which is so demanding and stressful at the entry level. The following links are to EMS industry news articles that provide insight into the challenges of retaining private for-profit ambulance company single-role paramedics:

https://www.jems.com/articles/2018/11/recruitment-and-retention-a-perennial-problem-in-ems.html

https://www.ems1.com/2018-ems-trend-report/articles/solutions-for-ems-recruitment-and-retention-are-hiding-in-plain-sight-oqhCYvVYmZsBh5uI/

https://www.ems1.com/paramedic-chief/articles/how-to-recruit-engage-and-retain-emts-and-paramedics-JrR3e7xuYlcRMci6/

There are significant differences in the physical number of personnel responding to an emergency medical services (EMS) response. In 2010, the National Institute for Standards & Technology (NIST) studied for the first time the effects of varying crew configurations for first responders, the apparatus assignment of ALS personnel, and the number of ALS personnel on scene and on the task completion times for ALS level incidents.

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The results and conclusions directly informed the NFPA 1710 and NFPA 1720 Technical Committees, who are responsible for developing industry operational and deployment standards. Report results quantify the effectiveness of crew size, ALS configuration, and the number of ALS personnel on the start, duration, and completion time of all tasks delineated. Conclusions are drawn from statistically significant results.

The results establish a technical basis for the effectiveness of first responder crews and ALS configuration with ALS level providers on first responder crews. When assessing crews for their ability to increase on-scene operational efficiency by completing tasks simultaneously, crews with an ALS provider on the engine and one ALS provider on the ambulance completed all required tasks 45 seconds faster than crews with a BLS engine and two ALS providers on the ambulance.

Regardless of ALS configuration, crews responding with four first responders completed all cardiac tasks from the 'at patient time' to completion of packaging 2 minutes and 40 seconds faster than ambulance crews with two persons. Additionally, after the patient arrested, an assessment of time to complete remaining tasks revealed that first responders with four-person crews completed all required tasks 50 seconds faster than three-person crews and 1.4 minutes (1 minute 25 seconds) faster than two-person crews.

Since 1970, the residents of Orange County have enjoyed the expert protection and compassionate care of a highly effective and efficient Emergency Medical Services (EMS) system led by the various public safety, not-for-profit, Fire Service agencies. The men and women who comprise the Orange County Fire Service provide both Basic Life Support (BLS) level emergency medical care by Firefighter EMTs (Emergency Medical Technicians), and Advanced Life Support (ALS) level emergency medical care by dual-role Firefighter Paramedics. The following videos provide historical perspective on the evolution of paramedic services becoming fire based, and how our firefighters are trained for all-hazards.

https://vimeo.com/17772333

https://vimeo.com/42160158

The provision of both BLS and ALS level care by fire-based EMS agencies, following the same internal Standard Operating Procedures, overseen by the same command staff / management team, that uses the same quality assurance and improvement mechanisms, and that utilizes the same standardized EMS equipment and supplies by the same highly trained medical professionals, substantially enhances operational efficiency (i.e., command, control, coordination, communication) and ensures the strongest possible quality and ***continuum of patient care*** that is absolutely imperative to achieve optimal patient outcome.

Long before the California EMS Authority (CA EMSA) or local EMS agencies like the County of Orange Health Care Agency's (HCA) EMS Division even existed, the California Fire Service led the way in providing emergency medical care for the sick and injured in the prehospital setting and, to this day, the Fire Service continues to be the primary provider of prehospital EMS throughout the State of California.

What is the percentage of emergency incidents that a private paramedic crew would not be able to take initial action in comparison to a firefighter/paramedic crew?

Frequently, calls for service involve multiple hazards that create medical emergencies and add to the complexity of a routine medical call. The economy and utility of using dual-function, firefighter / paramedics is clear on every emergency incident but is vividly illustrated during calls of this complexity and type.

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These emergency incidents include rescuing victims from traffic accidents where patients need to be extricated using various mechanical devices (Jaws-of-life), structural collapses, trenches which have collapsed, low-angle and high-angle rescues using ropes and rappelling gear, OSHA regulated confined spaces, and OSHA regulated IDLH (immediately dangerous to life and health) environments including burning buildings. Many of these situations require firefighter/paramedics to begin assessing and treating the patient long before the patient is removed to a safe location where single-function, private paramedics, would be able to begin treatment. This includes high visibility emergencies such as Active Shooter Incidents, where firefighter/paramedics are trained as part of incident command and control to enter hostile environments and immediately begin treatment for patients, who will perish without immediate lifesaving interventions such as tourniquets, pressure dressings, and hemorrhage control measures.

One of the most important processes in arriving on scene of an emergency is assessing the situation for safety to the responders and the public. This includes the ability to rapidly render the scene safe. Firefighter/paramedics arriving on any emergency scene in a fire engine or truck as members of an intimately trained crew of professionals, medical in nature or otherwise, are vastly better prepared to operate safely than single-function private paramedics. The analogy of the Swiss army knife for the firefighter/paramedic is apropos compared to the single blade of a private paramedic.

Historical data demonstrates that a large percentage of emergency calls in Placentia required the immediate intervention of the fire department to effectively initiate scene safety, stabilization, and mitigate risks. These types of incidents include traffic accidents, assaults, children locked in vehicles, gunshot wounds, car crashes with fire, animal attacks/bites, psychiatric emergencies, water rescues, car accidents into buildings, etc. These and similar calls for service requiring the command and control of the fire department account for approximately 18% of the medical aids in Placentia and 26% of all calls could not be handled by private paramedics without the assistance of fire department personnel.

Representatives from the City of Placentia and their private for-profit contract ambulance provider have publicly claimed that the model of EMS service delivery to be delivered in Placentia is the predominant model in 56 of 58 California counties. Is this factually accurate?

No. Nearly every county in California utilizes a fire-based EMS system that requires the fire agencies to be the critical provider, if not the lead provider, in the delivery of first response in their jurisdictions, including ALS Level Services. There are very few county EMS systems in California that are managed solely by a private provider.

Why is Los Angeles and Orange County the only two in California that do not utilize private contract paramedic ambulances for 911 ALS emergency response?

These counties make up 33.60% of the state population, so a full 1/3 of the state population have been receiving this higher level of care for many years. It is likely cost prohibitive for other counties to provide this same level of service. When compared to the other California counties, Orange and Los Angeles County fire agencies provide the highest level of EMS services in California.

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County	Total	
Los Angeles	10,172,951	
Orange	3,194,332	
Combined	13,367,283	33.60%
California	39,782,870	

Is the use of private for-profit contract paramedic ambulances something new?

No. Private for-profit contract paramedics have been a part of the EMS system throughout the country and in California for many years. However, changes over the last decade have made the use of private paramedics costlier than in the past, and the use of private paramedics has limited the ability of the cities, counties, and protection districts (through the fire departments) to recover the cost of providing EMS first response to their jurisdictions.

Over the last decade, two major international companies have emerged and now operate in most of the market. These companies have bought and consolidated most of the small companies in the country and California. As these international companies bid on providing ambulance service (BLS & ALS) included in their cost proposals is the shareholder profit margin that have made their pricing the same, if not more, than that of fire service agencies that manage and deliver fire-based EMS services.

Are there emergency incident types that dual-role firefighter/paramedics can respond and operate and where private for-profit contract paramedic ambulances cannot?

Yes. The below incidents require trained and experienced firefighter paramedics to respond. Private for-profit contract paramedics cannot deliver services until rendered safe by on-scene firefighters.

There are some very basic differences between fire-based EMS and private EMS. First is the fact that most fire-based systems are 'all-hazard' and categorized as public safety employees. Public safety agencies are able to render aid and treat patients in immediate danger to life and health (IDLH) environments. Private contract paramedics are not trained thus not permitted to operate in IDLH atmospheres.

MOTOR VEHICLE ACCIDENT
Extrication Required
MCI-Medical Group Sup, Treatment Unit Leader
MCI-Triage, treat, transport
Trauma victims-care
Fuel Spill
Other Emergencies with Medical Component
Swift Water Rescue
Water Rescue
Cliff Rescue/Backcountry

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Ocean Rescue
Hi Angle/Low Angle Rescue
Fireline or Tactical Medical
Confined Space
Off Road, Over Edge TC
Helicopter Hoist
Active Shooter
Trench Rescue
HAZARDOUS MATERIALS with Medical Component
IDLH Conditions
Gas / Chemical Leak or Spill
Electrical Hazard
Radiation Hazard
CBRNE Event/Decon
FIRE (ALL CIRCUMSTANCES)
All fire types
Rehab

Why does Placentia FLSD have to order mutual aid resources from the Orange County Operational Area Fire and Rescue Coordinator (Op Area) Command Center?

It is standard procedure for all agencies needing mutual aid assistance to request through their Cal OES Fire & Rescue Operational Area.

Why does the Op Area need to assess and then prioritize mutual aid resource requests made by the Placentia FLSD?

The Operational Area needs to determine that the resources the Op Area provides will not negatively affect the assisting jurisdiction's ability to provide adequate fire, EMS or all-hazards emergency protection within their own jurisdiction.

Why would OCFA need to make mutual aid resource requests with the Placentia Police Department Dispatch Center?

When a non-Placentia fire agency has a need for Placentia FLSD services, requests are made to the assisting agency(s). In this case, the Operational Area Command Center will request Placentia FLSD resources through the Placentia Police Department Dispatch Center when a need exists.

What is "NFPA"?

The National Fire Protection Association (NFPA) is an international nonprofit organization devoted to eliminating death, injury, property and economic loss due to fire, electrical and related hazards. In 2018, the NFPA claims to have 50,000 members and 9,000 volunteers working with the organization through its 250 technical committees.

NFPA® codes, standards, recommended practices, and guides ("NFPA Standards"), are developed through a consensus standards development process approved by the American National Standards Institute. This

process brings together volunteers representing varied viewpoints and interests to achieve consensus on fire and other safety issues. While the NFPA administers the process and establishes rules to promote fairness in the development of consensus, it does not independently test, evaluate, or verify the accuracy of any information or the soundness of any judgments contained in NFPA Standards.

Is NFPA compliance a requirement?

NFPA is widely known as a codes and standards organization. The NFPA is not a regulatory agency, but their best practice standards are utilized by most fire service agencies.

The NFPA has no power, nor does it undertake, to police or enforce compliance with the contents of NFPA Standards. Nor does the NFPA list, certify, test, or inspect products, designs, or installations for compliance.

Why is OCFA requiring that Placentia FLSD Dispatch Center order the applicable initial full alarm assignments to structure fires identified in Section 5.2.4 (Deployment), in the 2020 edition of NFPA 1710?

Firefighter safety. The quantity of staffing and the arrival time frame can be critical in a serious fire. Fires in older and/or multiple-story buildings could well require the initial firefighters needing to rescue trapped or immobile occupants. If a lightly staffed force arrives, it cannot simultaneously conduct rescue and firefighting operations.

If fewer firefighters arrive, most likely the search team would be delayed, as would ventilation. The attack lines would only consist of two firefighters, which does not allow for rapid movement above the first-floor deployment. Rescue is conducted with only two-person teams; thus, when rescue is essential, other tasks are not completed in a simultaneous, timely manner. Effective deployment is about the **speed** *(travel time)* and the **weight** *(firefighters)* of the attack.

For a typical house fire, minimum best practices recommend a force of 16 (17 with aerial device) or more firefighters, with at least one Chief Officer for command/safety functions. However, the Orange County Fire Service serves a metropolitan area consisting of many diverse risk types. A typical Effective Response Force (ERF) for a building fire is four engines, two ladder trucks, and two Battalion Chiefs for an ERF total of **26 personnel**. The following table shows what a force of 26 can accomplish. The larger the force (weight of attack), the faster the tasks are completed.

Company Level Tasks
First Arriving Engine and Ladder
1. Stretch the 200-foot, 1¾-inch hose line to the point of access for search and rescue.
2. Operate the pump to supply water and attach hydrant supply line.
3. Assume command of initial operations.
4. Conduct search and rescue.
Second Arriving Engine
1. If necessary, lay in a hydrant supply line.
2. Stretch a second 200-foot hose line as a back-up line and for fire attack.
3. Establish two-in/two-out safety team
Third Arriving Engine, Second Ladder
1. Forcible entry if needed, primary rescue search if needed
2. Ladder the building.
3. Ventilation of the structure.

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Fourth Arriving Engine
1. Assist with rescue as/if needed. Secure utilities.
2. Staff the Rapid Intervention Crew
3. Remove any obstructions or debris that would hinder fire ground operations.
First Arriving Battalion Chief
1. Establish exterior command and initial scene safety.
Second Arriving Battalion Chief
1. Scene Safety Officer or Division Group Supervisor.

Grouped together, these duties form an Effective Response Force (ERF) or First Alarm Assignment. These tasks must be performed simultaneously and effectively to achieve the desired outcome; arriving on-scene does not stop the escalation of the emergency. While firefighters accomplish these tasks, the incident progression clock keeps running.

Fire spread in a structure can double in size during its *free-burn* period before firefighting starts. Many studies have shown that a small fire can spread to engulf an entire room in less than 6:00 to 8:00 minutes after free burning has started. Once the room is completely superheated and involved in fire (known as flashover), the fire will spread quickly throughout the structure and into the attic and walls. For this reason, it is imperative that fire attack and search commence before the flashover point occurs if the outcome goal is to keep the fire damage in or near the room of origin. In addition, flashover presents a serious danger to both firefighters and any occupants of the building.

Fires and complex medical incidents require that the other units arrive in time to complete an effective intervention. Time is one factor that comes from *proper station placement*. Good performance also comes from *adequate staffing* and training. In the critical tasks identified previously, OCFA can perform well in terms of staffing.

Previous critical task studies conducted by the National Institute of Standards and Technology (NIST), and NFPA Standard 1710 find that all units must arrive with 15 or more firefighters within 11:30 minutes from the time of call at a room-and-contents structure fire to be able to *simultaneously and effectively* perform the tasks of rescue, fire attack, and ventilation. This cannot be done without neighboring jurisdictions subsidizing the City of Placentia for the resources it chose to no longer fund.

Why doesn't the Placentia FLSD Department meet the definition of a "*career*" fire department as described in the 2020 NFPA 1710 Standard?

The total seven (7) Placentia career (FTE) firefighters on duty each day does not comprise the 50 percent of an initial full alarm assignment. Thus, Placentia must rely on its neighboring jurisdictions to subsidize the emergency services that the City of Placentia has chosen to reduce in order to meet the below definition of an initial full alarm assignment:

NFPA 1710 Section 3.3.40 defines an "Initial Full Alarm Assignment" as "*those personnel, equipment, and resources ordinarily dispatched upon notification of a structure fire.*" Per NFPA 1710 Section 5.2.4.1.1, the initial full alarm assignment to a structure fire in a typical 2000 ft2 (186 m2), two-story single-family dwelling without basement and with no exposures shall provide for the following:

- At a minimum, an initial rapid intervention crew (IRIC) assembled (2) from the initial attack crew and, as the initial alarm response arrives, a full and sustained rapid intervention crew (RIC) established (4)
- Total effective response force with a minimum of 16 (17 if an aerial device is used)

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Why is it important that when deploying resources, only "career" (FTE) firefighters be included in the structure fire response head count?

Firefighter safety. When deploying resources, including only career (FTE) firefighters ensures that enough full-time trained and experienced firefighters are requested to meet the NFPA 1710 applicable initial full alarm assignment requirement by the OCFCA.

Anything can occur at any time on the fireground especially when it involves offensive interior firefighting. The survivability profile of a Mayday or multiple Maydays requires practiced action plans that have been trained on. All fires progress in different ways in a fast-paced dynamic environment which lead to many kinds of possible events from just simple disorientation to structural collapse entrapping firefighters. These events also apply to those who are rescuing their fellow firefighters. Therefore, it is important to have adequate resources and staffing on the scene at any given firefight whether offensive or defensive.

What is the City of Placentia's firefighter to citizen per capita assuming a daily staffing of seven (7) career firefighters?

According to the State of California Department of Finance website, the City of Placentia's population is estimated at 51,494 as of January 2020. Given that Placentia will have a daily staffing of seven* career firefighters as of July 1, 2020, the daily staffing firefighter per capita for Placentia will be 1.36 per every 10,000 residents. Comparable Orange County cities of similar population size with a city Fire Department have a daily staffing firefighter per capita ranging from 2.33 to 3.29.

*Per the June 4, 2019, Placentia City Council Agenda Report.

Firefighter Per Capita for Orange County Non-OCFA Jurisdictions

City/County	No. of Stations	Population*	Daily Staffing**	Firefighter Per 10,000
Placentia	2	51,494	7	1.36
Anaheim	11	357,325	60	1.68
Fullerton	6	141,863	24	1.69
Huntington Beach	8	201,281	41	2.04
Costa Mesa	6	114,778	24	2.09
Fountain Valley	2	55,878	13	2.33
La Habra***	4	63,371	15	2.37
Orange	8	140,065	35	2.50
Brea	4	45,629	15	3.29
Newport Beach	8	85,780	36	4.20
Laguna Beach	4	22,343	12	5.37

* Population figures based on State of California Department of Finance website as of May 2020

** Daily staffing figures based on city websites, annual plans, statistical information, staff reports, and budget documents

*** Fire Services provided by Los Angeles County Fire

Is there any known lower firefighter to citizen per capita for a local government fire service agency in California?

No. Placentia has the lowest firefighter to citizen per capita in California.

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Why does the OCFA Mutual Aid Agreement require that Placentia FLSD ensure that dedicated crew(s) of at least one career (FTE) officer and three career (FTE) members are positioned outside the IDLH, trained and equipped as specified in NFPA 1407, and who are assigned for rapid deployment to rescue lost or trapped members?

Firefighter safety. When Maydays occur requiring deployments of rapid intervention operations, all fire department resources, communication systems and training will be challenged determining the saving of a lost, trapped, or distressed firefighter and possibly incidents involving multiple firefighters.

While the standards of such documents like NFPA 1407 provide insight to qualified personnel to perform such rescues, the techniques and the maneuvers themselves, of which are many, are not truly identifiable in such a document. What it does require is that every department provides a standard operating guideline that includes the presence of a rapid intervention crew at all fireground operations, while also entailing deployments of a rapid intervention crew at incidents and a rapid intervention crew's ability to establish an action plan from the beginning of an incident through its termination.

NFPA 1407 establishes many guidelines in attempting to provide to departments a base for success at these incidents as well as providing just some proactive behaviors in avoiding them. Departments need to start with a sound and comprehensive training program providing objectives and hands-on skills that may be needed for several different presenting situations regarding firefighters in distress and their rescues. This entails an incredible amount of proven and practiced techniques and maneuvers to all involved on the fireground. Firefighters throughout all ranks including chief officers should have a thorough understanding of rapid intervention and all that it entails. This may seem like an extreme burden for everyone, but it is the only way the OCFCA can ensure increased safety, proactive behaviors, and reactive actions that bring our members home alive after each structural fire event.

NFPA 1407, is the *Standard for Training Fire Service Rapid Intervention Crews*. It was developed to provide a standard for highly disciplined operational capability to rescue firefighters who become lost, injured, trapped, incapacitated, or disoriented in the course of an emergency scene or training operation.

Requirements are consistent with NFPA 1710, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments;* NFPA 1720, *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Volunteer Fire Departments;* and NFPA 1500, *Standard on Fire Department Occupational Safety and Health Program.*

What is the difference between a "career" firefighter and "reserve" or "part-time firefighters?

A career firefighter is an individual that is a full-time equivalent (FTE) employee of a fire service agency and that meets and/or exceeds all training and experience requirements for the position. The hour and experience requirements of a career firefighter significantly exceed those of a reserve or part-time firefighter. For example, in order for Placentia FLSD firefighters to meet the State Fire Marshal's Office requirements for Firefighter II certification, it requires 344 hours of training. Professional career firefighters are put through 2-3 times as many initial training hours to achieve a Firefighter II certification. Reserve and part-time firefighters lack the education, training and experience necessary to operate safely on the fireground independently. They cannot be included in the NFPA 1710 head count or as members of an Initial Rapid Intervention Crew (IRIC) or Rapid Intervention Crew (RIC) team(s).

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Reserve and part-time firefighters provide a valuable service to their communities and in a supporting role, assist career firefighters at a variety of emergencies. Most reserve and part-time firefighters are aspiring to become full-time career firefighters.

Why is it imperative that a Self-Contained Breathing Apparatus (SCBA) compatible coupling be included in an agency's Rapid Intervention Crew (RIC) equipment?

A universally standard coupling compatible across all new and existing SCBA gear ensures firefighters will not have to remove their facepiece during an air supply malfunction or failure. Plus, fire departments and personnel can become thoroughly familiar with one standardized system and how it works. This ensures connectability of all air-line couplings that may need to be connected or disconnected in the event of an emergency.

SCBA is a critical component in the personal protective equipment (PPE) used by firefighters and emergency personnel. Regardless of rank and tenure, firefighters can encounter a problem with their gear. When seconds matter most, emergency procedures such as the buddy breather has significant influence on firefighter safety. And with a universal coupling system, the chance of survival only increases for firefighters.

What is a MAYDAY?

Webster's Dictionary defines MAYDAY as "an international radiotelephone signal word used as a distress call, to introduce a distress message, or by distress traffic." Some fire departments concisely define when to transmit a MAYDAY. These definitions include "indication of imminent collapse; structural collapse has occurred; unconscious firefighter; life-threatening injuries or even missing members" as the *FDNY Communications Manual* states.

There is the potential for a MAYDAY anytime and anywhere personnel operate. Local conditions and level of service provided by fire departments will determine the potential risk that members are exposed to on any given day. The availability of on-scene resources will govern the need for additional help.

There is no other call more challenging to fireground operations than a Mayday call — the unthinkable moment when a firefighter's personal safety is in imminent danger. Firefighter fatality data compiled by the United States Fire Administration have shown that firefighters "becoming trapped and disoriented represent the largest portion of structural fire ground fatalities." The incidents in which firefighters have lost their lives, or lived to tell about it, have a consistent theme — inadequate situational awareness put them at risk.

Firefighters don't plan to be lost, disoriented, injured or trapped during a structure fire or emergency incident. But fires are unpredictable, volatile and ruthless – and they will not go according to your plans. What a firefighter knows about a fire before entering a blazing building may radically change within minutes once inside the structure. Smoke, low visibility, lack of oxygen, structural instability, and an unpredictable fireground can cause even the most seasoned firefighter to be overwhelmed in an instant. It's not a matter of IF the Mayday happens, it's WHEN.

Why does the OCFA Mutual Aid Agreement require that Placentia FLSD demonstrates its dispatch center is staffed appropriately and has trained its dispatchers to a level of competence for MAYDAY situations?

Firefighter safety. Placentia should have a well-written training program and well-written policies regarding action plans that are not only reactive but proactive in place before OCFA and other Orange

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County fire agencies permit their firefighters to enter IDLH atmospheres. . Without such training, dispatchers do not have the practiced skills to rely on IF and WHEN a firefighter gets into trouble. It is imperative that all dispatchers be prepared if the unfortunate happens.

This is important to ensure that training for Mayday prevention and Mayday operations are consistent between all firefighters, company officers, chief officers, and dispatchers. Everyone must be trained to perform potentially life-saving actions if a firefighter(s) becomes lost, disoriented, injured, low on air or trapped.

What will it take to resolve the many OCFA firefighter safety concerns?

Placentia participating in joint training and their having experience in actual fireground operations with other Orange County Operational Area fire agencies.

If this occurs and the OCFA is no longer concerned with firefighter safety, will this change the aid agreement(s) from "mutual" to "automatic" aid?

No. The issue of reciprocity in the context of mutual/automatic aid will not change.

Why is it important that the Senior Officer of the fire department requesting aid assume full charge of a cross-boundary operation (i.e., Incident Commander)?

The Senior Officer of the fire department of the agency requesting aid represents the jurisdiction as the "authority-having-jurisdiction" (AHJ).

Why is it important that the Operational Area assign non-Placentia FLSD Operational Area Chief Officer(s) to all Placentia FLSD requests for Mutual Aid?

Firefighter safety. Commanding complex incidents requires considerable training and experience and until this has been demonstrated by way of actual fireground operations with Operational Area fire agencies, the OCFCA members will continue to have firefighter safety concerns.

Why would Placentia FLSD want to assign a Placentia FLSD Chief Officer(s) to all Mutual Aid requests for Placentia FLSD resources?

This would be "mutual" in terms of agreements and will allow for more opportunities to work with Placentia FLSD chief officers to build the confidence necessary before non-Placentia Operational Area Chief Officers are no longer automatically responding to emergency incidents in Placentia.

Why won't non-Placentia FLSD Operational Area Chief Officer(s) be downgraded or cancelled by Placentia FLSD when non-Placentia FLSD mutual aid resources are assigned and/or responding to an incident?

Firefighter safety. Commanding complex incidents requires considerable training and experience and until this has been demonstrated by way of actual fireground operations with Operational Area fire agencies, the OCFCA members will continue to have firefighter safety concerns.

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Why is it important that both Operational Area and Placentia FLSD participate in annual joint training exercises?

Firefighter safety. To build the confidence necessary between Placentia and the other Operational Area fire agencies. Until this has been demonstrated by way of training and actual fireground operations with Operational Area fire agencies, the OCFCA members will continue to have firefighter safety concerns.

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ORANGE COUNTY FIRE AUTHORITY
COST REIMBURSEMENT RATES FOR ALL BILLING AGENCIES (EXCEPT CAL OES)
PERSONNEL
EFFECTIVE JULY 1, 2020

CLASSIFICATION	2019/20 ADOPTED RATES	2020/21 PROPOSED RATE with ICRP	$ CHANGE	% CHANGE	
SUPPRESSION PERSONNEL					
FIRE DIVISION CHIEF	$181.57	**$184.05**	$2.48	1.37%	
FIRE BATTALION CHIEF (SHIFT)	$111.86	**$112.00**	$0.14	0.13%	
FIRE BATTALION CHIEF (STAFF)	$156.28	**$160.66**	$4.38	2.80%	
FIRE CAPTAIN (FC)	$81.38	**$80.51**	($0.87)	-1.07%	
FC/HAZMAT	$86.13	**$85.23**	($0.89)	-1.04%	
FC/HAZMAT PARAMEDIC	$92.45	**$91.53**	($0.92)	-1.00%	
FC/HAZMAT SPECIALIST	$87.71	**$86.81**	($0.90)	-1.03%	
FC/PARAMEDIC	$90.87	**$89.95**	($0.92)	-1.01%	
FC/TECH RESCUE TRUCK	$86.13	**$85.23**	($0.89)	-1.04%	
FIRE APPARATUS ENGINEER (FAE)	$69.90	**$69.95**	$0.05	0.07%	
FAE/HAZMAT	$74.65	**$74.67**	$0.02	0.03%	
FAE/HAZMAT PARAMEDIC	$80.97	**$80.97**	($0.00)	0.00%	
FAE/HAZMAT SPECIALIST	$76.23	**$76.25**	$0.02	0.02%	
FAE/PARAMEDIC	$79.39	**$79.39**	$0.00	0.00%	
FAE/TECH RESCUE TRUCK	$74.65	**$74.67**	$0.02	0.03%	
FIREFIGHTER (FF)	$60.02	**$58.74**	($1.28)	-2.13%	
FF/HAZMAT	$64.76	**$63.46**	($1.30)	-2.01%	
FF/HAZMAT PARAMEDIC	$71.08	**$69.76**	($1.33)	-1.87%	
FF/HAZMAT SPECIALIST	$66.34	**$65.04**	($1.31)	-1.97%	
FF/PARAMEDIC	$69.50	**$68.18**	($1.32)	-1.90%	
FF/TECH RESCUE TRUCK	$64.76	**$63.46**	($1.30)	-2.01%	
HAND CREW (FIREFIGHTER)	$42.44	**$40.12**	($2.32)	-5.46%	(1)
HAND CREW SUPERVISOR (FIRE CAPTAIN)	$83.05	**$82.67**	($0.39)	-0.46%	
HAND CREW SUPERVISOR (FIRE APP. ENGINEER)	$70.93	**$70.62**	($0.32)	-0.44%	
HAND CREW SUPERVISOR (FIREFIGHTER)	$63.24	**$62.96**	($0.28)	-0.45%	
HEAVY FIRE EQUIPMENT OPERATOR	$110.21	**$115.74**	$5.54	5.02%	
FIRE PILOT	$85.85	**$95.44**	$9.59	11.17%	
NON-SUPPRESSION PERSONNEL					
ACCOUNTANT	$75.51	**$79.13**	$3.62	4.80%	
ACCOUNTING MANAGER	n/a	**$90.49**	n/a	n/a	(2)
ASST. IT MANAGER	$92.76	**$95.38**	$2.62	2.82%	(2)
ASST. FIRE APPARATUS TECHNICIAN	$46.85	**$50.86**	$4.01	8.55%	
ASST. FIRE MARSHAL	$111.42	**$110.13**	($1.30)	-1.16%	
ASST. PURCHASING AGENT	$83.08	**$86.41**	$3.33	4.01%	
BUYER	$60.77	**$56.38**	($4.38)	-7.22%	
COMMUNICATIONS TECHNICIAN	$64.94	**$66.01**	$1.07	1.65%	
COMMUNICATIONS SERVICE SUPERVISOR	$87.65	**$98.32**	$10.66	12.16%	
DEPUTY FIRE MARSHAL	$89.96	**$90.49**	$0.53	0.59%	(2)
EMERGENCY COMM CENTER MANAGER	$77.33	**$82.09**	$4.76	6.16%	(2)
FINANCE MANAGER	$102.54	**$89.25**	($13.29)	-12.96%	(2)
FIRE APPARATUS TECHNICIAN	$72.30	**$73.11**	$0.81	1.12%	
FIRE COMM RELAT/ED SPECIALIST	$66.71	**$68.25**	$1.54	2.31%	
FIRE COMM RELAT/ED SUPERVISOR	$72.60	**$73.05**	$0.46	0.63%	
FIRE COMMUNICATIONS DISPATCHER	$66.69	**$63.90**	($2.79)	-4.19%	
FIRE COMMUNICATIONS SUPERVISOR	$76.86	**$78.15**	$1.29	1.68%	
FIRE HELICOPTER TECHNICIAN	$74.46	**$78.66**	$4.20	5.64%	
FIRE PREVENTION ANALYST	$97.23	**$100.70**	$3.47	3.57%	
FIRE PREVENTION SERVICES SPECIALIST	n/a	**$33.12**	n/a	n/a	
FIRE PREVENTION SPECIALIST	$80.00	**$81.26**	$1.27	1.58%	
FIRE PREVENTION TRAINEE	$57.79	**$58.77**	$0.97	1.68%	

Notes:

(1) 5% EMT specialty pay is inlcuded in Hand Crew FF average rate

(2) Adjustment to management positions to reflect overtime as straight time rather than 1.5 x hourly rate.

ORANGE COUNTY FIRE AUTHORITY
COST REIMBURSEMENT RATES FOR ALL BILLING AGENCIES (EXCEPT CAL OES)
PERSONNEL
EFFECTIVE JULY 1, 2020

CLASSIFICATION	2019/20 ADOPTED RATES	2020/21 PROPOSED RATE with ICRP	$ CHANGE	% CHANGE	
FIRE SAFETY ENGINEER	$117.48	**$118.19**	$0.71	0.61%	
FLEET SERVICES COORDINATOR	$82.80	**$83.26**	$0.46	0.56%	
FLEET SERVICES SUPERVISOR	$88.32	**$88.37**	$0.05	0.06%	
GENERAL LABORER	$35.80	**$35.81**	$0.01	0.04%	
GIS ANALYST	$105.70	**$95.49**	($10.21)	-9.66%	
GIS SUPERVISOR	$120.85	**$128.36**	$7.51	6.21%	
GIS TECHNICIAN	n/a	**$63.38**	n/a	n/a	
INFORMATION TECHNOLOGY ANALYST	$105.70	**$106.34**	$0.64	0.61%	
INFORMATION TECHNOLOGY SPECIALIST	$84.56	**$83.31**	($1.25)	-1.48%	
INFORMATION TECHNOLOGY SUPERVISOR	$127.59	**$128.36**	$0.78	0.61%	
INFORMATION TECHNOLOGY TECHNICIAN	$76.15	**$79.60**	$3.45	4.53%	
MEDICAL DIRECTOR	$102.54	**$103.16**	$0.62	0.60%	(2)
PURCHASING MANAGER	$96.22	**$96.79**	$0.57	0.59%	(2)
RESERVE FIREFIGHTER	$2.41	**$2.17**	($0.25)	-10.20%	
RISK MANAGEMENT ANALYST	$68.13	**$70.23**	$2.10	3.08%	(2)
RISK MANAGEMENT SAFETY OFFICER	$75.07	**$65.45**	($9.62)	-12.82%	(2)
RISK MANAGEMENT SPECIALIST	$62.37	**$56.27**	($6.10)	-9.78%	
RISK MANAGER	n/a	**$96.79**	n/a	n/a	(2)
SERVICE CENTER LEAD	$76.32	**$61.90**	($14.43)	-18.90%	
SERVICE CENTER SUPERVISOR	$93.62	**$93.72**	$0.11	0.11%	
SERVICE CENTER TECHNICIAN	$42.16	**$41.70**	($0.46)	-1.10%	
SR. ACCOUNTANT	$74.56	**$75.40**	$0.83	1.11%	(2)
SR. ACCT. SUPPORT SPEC.	$59.31	**$60.50**	$1.19	2.00%	
SR. COMMUNICATIONS TECHNICIAN	$66.38	**$72.47**	$6.09	9.18%	
SR. FIRE APPARATUS TECHNICIAN	$74.20	**$70.81**	($3.39)	-4.57%	
SR. FIRE COMMUNICATIONS SUPV.	$87.47	**$87.98**	$0.51	0.58%	
SR. FIRE HELICOPTER TECHNICIAN	$106.28	**$106.41**	$0.12	0.12%	
SR. FIRE PREVENTION SPECIALIST	$92.27	**$87.16**	($5.11)	-5.54%	
SR. INFO TECHNOLOGY ANALYST	$112.88	**$116.97**	$4.09	3.62%	
SR. SERVICE CENTER TECHNICIAN	$62.04	**$56.13**	($5.91)	-9.53%	
US&R WAREHOUSE & LOGISTICS SPECIALIST	$62.04	**$53.31**	($8.73)	-14.07%	
WILDLAND RESOURCE PLANNER	$82.60	**$90.18**	$7.58	9.18%	

MUTUALLY BENEFICIAL RATES:				
HAND CREW (FIREFIGHTER)	$21.85	**$21.01**	($0.84)	-3.84%
HAND CREW SUPERVISOR (STAFF FIRE CAPTAIN)	$42.76	**$43.29**	$0.53	1.24%
HAND CREW SUPERVISOR (STAFF FIRE APP. ENGINE	$36.52	**$36.98**	$0.46	1.26%
HAND CREW SUPERVISOR (STAFF FIREFIGHTER)	$32.56	**$32.97**	$0.41	1.26%
HEAVY FIRE EQUIPMENT OPERATOR	$56.74	**$60.61**	$3.87	6.82%
SWAMPER/HAND CREW FF	$21.85	**$21.01**	($0.84)	-3.84%

Notes:

(1) 5% EMT specialty pay is inlcuded in Hand Crew FF average rate

(2) Adjustment to management positions to reflect overtime as straight time rather than 1.5 x hourly rate.

ORANGE COUNTY FIRE AUTHORITY
COST REIMBURSEMENT RATES
EQUIPMENT
EFFECTIVE July 1, 2020

DESCRIPTION	2019/20 RATE	2020/21 RATE	$ CHANGE	% CHANGE	SOURCE	Hourly / Daily
TYPE 1 ENGINE	$78.90	**$140.00**	$61.10	77.44%	Cal OES	Hourly
TYPE 2 ENGINE	$68.00	**$132.00**	$64.00	94.12%	Cal OES	Hourly
TYPE 3 ENGINE	$68.00	**$126.50**	$58.50	86.03%	Cal OES	Hourly
TRUCK/QUINT	$78.90	**$81.10**	$2.20	2.79%	FEMA	Hourly
AIR/LIGHT UTILITY	$23.84	**$35.42**	$11.58	48.57%	FEMA	Hourly
AIRPORT CRASH UNIT	$78.90	**$81.10**	$2.20	2.79%	FEMA	Hourly
CHIPPER	$24.31	**$24.89**	$0.58	2.39%	FEMA	Hourly
COMPACT TRACK LOADER	$36.05	**$38.72**	$2.67	7.41%	FEMA	Hourly
CREW CARRYING VEHICLE	$20.95	**$21.60**	$0.65	3.10%	FEMA	Hourly
DOZER	$93.74	**$98.77**	$5.03	5.37%	FEMA	Hourly
DOZER MODULE (DOZER+TRANSPORT)	$160.64	**$168.46**	$7.82	4.87%	FEMA	Hourly
DOZER TENDER	$17.65	**$17.91**	$0.26	1.47%	FEMA	Hourly
DOZER TRAILER	$15.50	**$18.49**	$2.99	19.29%	FEMA	Hourly
DOZER TRANSPORT	$66.90	**$69.69**	$2.79	4.17%	FEMA	Hourly
DUMP TRUCK	$75.50	**$77.50**	$2.00	2.65%	FEMA	Hourly
FIRE COMMAND UNIT	$20.95	**$21.60**	$0.65	3.10%	FEMA	Hourly
FUEL TENDER	$28.70	**$31.05**	$2.35	8.19%	FEMA	Hourly
GRADER	$46.50	**$63.63**	$17.13	36.84%	FEMA	Hourly
LOADER	$43.85	**$46.17**	$2.32	5.29%	FEMA	Hourly
MECHANIC SERVICE TRUCK	$96.00	**$230.00**	$134.00	139.58%	Cal OES	Daily
MEDIC UNIT	$96.00	**$230.00**	$134.00	139.58%	Cal OES	Daily
PATROL UNIT (Type 6/ Swift Water Rescue)	$68.00	**$120.00**	$52.00	76.47%	Cal OES	Hourly
PICKUP (less than 3/4 ton)	$86.00	**$140.00**	$54.00	62.79%	Cal OES	Daily
SEDAN	$47.00	**$119.00**	$72.00	153.19%	Cal OES	Daily
SPORT UTILITY VEHICLE	$96.00	**$205.00**	$109.00	113.54%	Cal OES	Daily
VAN	$109.00	**$194.00**	$85.00	77.98%	Cal OES	Daily
WATER TENDER	$28.70	**$102.67**	$73.97	257.74%	Cal OES	Hourly
OTHER (3/4 ton and above)	$96.00	**$230.00**	$134.00	139.58%	Cal OES	Daily
HAZMAT (Unit 4)	$78.90	**$81.10**	$2.20	2.79%	FEMA	Hourly
HAZMAT (Unit 79)	$78.90	**$81.10**	$2.20	2.79%	FEMA	Hourly
HAZMAT (Unit 204)	$20.60	**$25.46**	$4.86	23.59%	FEMA	Hourly
HELICOPTER - BELL SUPER HUEY (1)	$1,482.23	**$1,562.37**	$80.14	5.41%	OCFA	Hourly
HELICOPTER - BELL 412 (1)	$3,954.61	**$4,769.66**	$815.05	20.61%	OCFA	Hourly

Notes:

1. Helicopter rates are based on 20 years useful life without the pilot and crew chief (Captain). The new rate reflects average usage for the past four years.

Orange County Fire Authority

AGENDA STAFF REPORT

Board of Directors Meeting
June 25, 2020

Agenda Item No. 2E
Consent Calendar

Amendment to County Island Fire and Medical Services Agreements with the City of Anaheim

Contact(s) for Further Information

Robert Cortez, Assistant Chief Business Services Department	robertcortez@ocfa.org	714.573.6012
Phil Johnson, Division Chief Command and Emergency Planning	phillipjohnson@ocfa.org	949.236.1716

Summary

This agenda items seeks approval of a Sixth Amendment to the Agreement with the city of Anaheim for the purpose of providing fire and medical services to county unincorporated areas (county islands) located within, or adjacent to, the boundaries of the cities.

Prior Board/Committee Action(s)

At the June 25, 2015, Board of Directors meeting, the Board approved the Fifth Amendment to the Agreements with the cities of Anaheim and Fountain Valley for the provision of fire and medical services to county unincorporated areas (county islands) located within.

At the May 25, 2017, Board of Directors meeting, the Board approved a modification to the Fifth Amendment to include terms, such as services to be provided by Anaheim, services to be retained by Orange County Fire Authority (OCFA), and compensation.

RECOMMENDED ACTION(S)

Approve and authorize the Board Chair to sign the Sixth Amendment to the Agreement with the city of Anaheim extending the term through June 30, 2025, for the purpose of providing fire and medical services to county unincorporated areas (county islands) located within, or adjacent to, the boundaries of the cities.

Impact to Cities/County

If approved, fire and medical services will continue to be provided to county unincorporated areas in the city of Anaheim.

Fiscal Impact

The estimated cost to OCFA of the City of Anaheim's contract is $130,910, which is included in the FY 20/21 budget.

Background

The OCFA contracts with cities to protect county unincorporated areas that are not within the service distance from existing OCFA fire stations. Providing services in this manner is the most cost-effective way to meet OCFA's obligations to service county islands.

The City of Anaheim has provided fire and medical services to adjacent county islands since January 1, 1998. The existing contracts will expire June 30, 2020.

Agreement Amendment

This Sixth Amendment extends the term for an additional five years through June 30, 2025, or until the county island is annexed, whichever comes first. All other terms and conditions of the agreement remain in place.

This amendment has been reviewed and approved by the OCFA's General Counsel, is recommended for approval by staff, and will be forwarded to the City of Anaheim for their approval. Both parties will honor the terms of the current amendment until a new amendment to the agreement is fully executed.

Attachment(s)

County Island Sixth Amendment Agreement for Anaheim

A G R E E M E N T

THIS AGREEMENT, dated for purposes of identification only this _____ day of _____, 2020, is made and entered into by and between the

CITY OF ANAHEIM, a municipal corporation,
hereinafter referred to as “ANAHEIM,”

A
N
D

ORANGE COUNTY FIRE AUTHORITY, a County agency,
hereinafter referred to as "OCFA."

ANAHEIM and OCFA are sometimes individually referred to herein as "Party" and collectively as "Parties."

W I T N E S S E T H:

WHEREAS, ANAHEIM is a municipal corporation duly organized and validly existing under the laws of the State of California with the power to carry on its business as it is now being conducted under the statutes of the State of California and the Charter of the City of Anaheim; and

WHEREAS, OCFA is a California Joint Powers Authority , and the successor agency to the Orange County Fire Department, which provides fire protection and medical services to unincorporated areas of Orange County; and

WHEREAS, OCFA and ANAHEIM previously entered into an Agreement, dated March 12, 1996 , and four separate amendments thereafter to provide fire and emergency medical services to the unincorporated county area bordering southwest Anaheim, north of Ball Road, as indicated on the map attached as Exhibit A ("SERVICE AREA");

WHEREAS, OCFA and ANAHEIM previously then entered into a new Agreement dated July 11, 2017, which superseded and extinguished the March 12, 1996 agreement and all amendments thereto, in order to revise the compensation rate to equal sixty-five percent (65%) of the secured Structural Fire Fund revenue generated in the SERVICE AREA, and set a term for the Agreement through June 30, 2020.

WHEREAS, OCFA and ANAHEIM wish to enter into this Agreement to supersede and extinguish the July 11, 2017 Agreement and any amendments thereto, in order to

bring the terms and conditions of the Agreement up to date and to reflect current needs and expectations between the Parties including extending the term thereof through June 30, 2025.

NOW, THEREFORE, FOR AND IN CONSIDERATION OF THE MUTUAL PROMISES, COVENANTS AND CONDITIONS HEREIN CONTAINED, THE PARTIES HERETO AGREE AS FOLLOWS:

1. SERVICES TO BE PROVIDED BY ANAHEIM

1.1 ANAHEIM shall provide fire and emergency medical services and ambulance services to that unincorporated territory of Orange County which is the SERVICE AREA denoted in Exhibit A.

1.2 Initial Response to structure and other fires, medical, and other emergencies in the SERVICE AREA shall be the responsibility of ANAHEIM. The amount and type of equipment to respond will be based upon the normal deployment that Anaheim deploys to calls in their own jurisdiction, and are in alignment with the Orange County Fire Service Annex, dictated by mutual agreement of the OCFA Director of Fire Services and the Fire Chief of ANAHEIM.

1.3 In the event of an emergency in the SERVICE AREA that exceeds the ability of ANAHEIM fire services to control, and ANAHEIM has committed equipment equivalent to a structure fire response, then ANAHEIM shall notify OCFA, which shall dispatch additional equipment and manpower.

1.4 Where mutual aid is required in the SERVICE AREA, ANAHEIM's Fire Chief or his designee shall make such request through the County Mutual Aid Fire System.

1.5 ANAHEIM shall make periodic test of fire hydrants in the SERVICE AREA using the normal procedures used within ANAHEIM or as mutually agreed between the OCFA Director of Fire Services and the Fire Chief of ANAHEIM, provided that charges for water usage, if any, will be the responsibility of OCFA.

1.6 ANAHEIM shall not be liable or responsible for charges for fire hydrant repair or rental in the SERVICE AREA.

1.7 ANAHEIM shall furnish OCFA reports on fire and rescue service, as requested.

1.8 Burning permits for the SERVICE AREA will be issued by OCFA. If OCFA issues a burn permit in the SERVICE AREA, it will send a copy of the permit to the ANAHEIM Fire Marshall's office and to the Metro Net Fire Communications Center at least 24 hours prior to the allowed burn time.

2. SERVICES TO BE RETAINED BY OCFA

Except as otherwise provided herein, OCFA agrees to retain the responsibility for administrative work, including fire investigations and building inspections in the SERVICE AREA.

3. TERM

The term of this Agreement is for five years. It shall commence on July 1, 2020, and shall terminate on June 30, 2025 unless terminated earlier as set forth in Section 7 herein ("Term"). Renewal beyond June 30, 2025, shall require the approval of the OCFA Board of Directors and the ANAHEIM City Council.

4. COMPENSATION

As consideration for the services set forth in this Agreement, OCFA agrees to pay ANAHEIM the following amounts:

4.1 An amount equal to sixty-five percent (65%) of the secured Structural Fire Fund revenue generated in the SERVICE AREA. Said annual payment will be calculated using the following formula: NSAV x BASIC TAX LEVY RATE x 0.10512781 x 0.65= Annual Payment.

The above formula is based upon the following:

NSAV is the sum of the Net Secured Assessed Value of all parcels in the SERVICE AREA as reported by the Orange County Assessor for the then current fiscal year;

BASIC TAX LEVY RATE is the amount of that rate, which, at one percent (1%) is represented as 0.01 in the formula.

0.10512781 is the Average Structural Fire Fund Tax Rates for the Tax Rate Areas that include the SERVICE AREA (TRAs 71-004, 71-008, 71-010, and 71-012) at the time of the execution of this contract.

0.65 represents the pass through rate (65%) to ANAHEIM in this Agreement.

4.2 Said yearly payment shall be paid to ANAHEIM in two equal installments on December 1 and March 1 each year, starting Dec. 1, 2020. Thirty days (30 days) before each due date, the OCFA will report this calculation to the City and the City shall then submit an invoice for each installment.

4.3 OCFA shall not be liable for the direct payment of any wages or other compensation to any officer, employee, or agent of ANAHEIM performing any services under this Agreement. OCFA shall not be liable to any officer, employee, or agent of ANAHEIM for any sickness or injury incurred by such person in the course of performing services under this Agreement. ANAHEIM shall be solely responsible for all personnel actions relating to ANAHEIM employees utilized in the performance of this Agreement.

5. ADMINISTRATION

This Agreement will be administered in ANAHEIM by Anaheim Fire & Rescue. The employees of Anaheim Fire & Rescue shall be authorized to take the following actions pursuant to this Agreement:

(i) ANAHEIM's Fire Chief, is authorized to take any and all actions on behalf of ANAHEIM as set forth herein and to terminate services in accordance with Section 7 of this Agreement.

6. NOTICES

All notices, demands or other writings to be made, given or sent hereunder, or which may be so given or made or sent by either ANAHEIM or OCFA to the other shall be deemed to have been given when in writing and personally delivered or if mailed on the third (3rd) day after being deposited in the United States mail, certified or registered, postage prepaid, and addressed to the respective Parties at the following addresses:

If to ANAHEIM:

City Clerk
City of Anaheim
200 S. Anaheim Boulevard, 2nd Floor
Anaheim, California 92805
FAX No. (714) 765-4105

With copies to:

Anaheim Fire & Rescue
201 S. Anaheim Blvd, Suite 300
Anaheim, CA 92805
Attention: Fire Chief
Telephone Number: (714) 765-4001
FAX No. (714) 765-4008

If to OCFA:

Orange County Fire Authority
P.O. Box 57115
Irvine, CA 92619-7115
Attention: Fire Chief
Telephone Number: (714) 573-6010
FAX Number: (714) 368-8800

7. ENFORCEMENT OF AGREEMENT

7.1 Events of Default.

For purposes of this Section 7, the word "Default" shall mean the failure of either OCFA or ANAHEIM to perform any of either Party's respective duties or obligations or the breach by OCFA or ANAHEIM of any of the terms and conditions set forth in this Agreement. Notwithstanding the foregoing, neither OCFA nor ANAHEIM shall not be deemed to be in Default in the performance of any obligation required to be performed by either Party hereunder unless and until the non-performing Party has failed to perform such obligation for a period of thirty (30) days after receipt of written notice from the other Party specifying in reasonable detail the nature and extent of any such failure; provided, however, that if the nature of the obligation is such that more than thirty (30) days are required for its performance, then the non-performing party shall not be deemed to be in Default if it shall commence to cure such performance within such thirty (30) day period and thereafter diligently prosecute the same to completion.

7.2 Immediate Termination for Default. In the event of any Default by either OCFA or ANAHEIM, the non-defaulting Party may immediately terminate this

Agreement. Such termination shall be effective immediately upon receipt by the defaulting Party of written notice from the non-defaulting Party. In such event, the defaulting Party shall have no further rights hereunder, and the non-defaulting Party shall have all other rights and remedies as provided by law.

7.3 Termination Without Cause. This Agreement may be terminated without the necessity of cause by either Party on June 30 of any year by giving written notice of termination of at least six (6) months prior to said termination date.

8. COMPLIANCE WITH ALL LAWS

OCFA shall at its own cost and expense comply with all statutes, ordinances, regulations and requirements of all governmental entities, including federal, state, county or municipal, whether now in force or hereinafter enacted. In addition, all work prepared by OCFA shall conform to applicable local, county, state and federal laws, rules, regulations and permit requirements and be subject to approval of the Project Administrator.

9. INDEMNIFICATION

Each Party shall indemnify and hold harmless the other Party, and its officials, officers, agents and employees from any and all losses, liability, damages, claims, suits, action and administrative proceedings, and demands relating to acts or omissions of the indemnitor, its officials, officers, agents or employees arising out of or incidental to the performance of any of the provisions of this Agreement or any other acts or omissions of the indemnitor, its officers, agents or employees. Neither Party assumes liability for the acts or omissions of persons other than each party's respective officials, officers, agents or employees. In the event judgment is entered against both Parties because of joint or concurrent negligence of both Parties, or their officials, officers, agents or employees, an apportionment of liability to pay such judgment shall be made by a court of competent jurisdiction and neither Party shall be entitled to a jury apportionment.

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10. WAIVER

A waiver by either Party of any breach, of any term, covenant or condition contained herein shall not be deemed to be a waiver of any subsequent breach of the same or any other term, covenant or condition contained herein, whether of the same or a different character.

11. INTEGRATED CONTRACT

This Agreement and the exhibits hereto contain the entire agreement of ANAHEIM and OCFA with respect to the matters covered hereby, and no agreement, statement or promise made by either ANAHEIM or OCFA which is not contained herein, shall be valid or binding. No prior agreement, understanding or representation pertaining to any such matter shall be effective for any purpose.

12. CONFLICTS OR INCONSISTENCIES

In the event there are any conflicts or inconsistencies between this Agreement and the Exhibits or any other attachments attached hereto, the terms of this Agreement shall govern.

13. INTERPRETATION

Each Party acknowledges that he / she / it has had the benefit of advice of competent legal counsel with respect to its decision to enter this Agreement. The provisions of this Agreement shall be interpreted to give effect to their fair meaning and shall be construed as prepared by both Parties.

14. AMENDMENTS

This Agreement may be modified or amended only by a written document executed by both OCFA and ANAHEIM and approved as to form by the City Attorney and General Counsel.

15. SEVERABILITY

If any term or provision of this Agreement or the application thereof to any person or circumstance shall, to any extent, be held invalid or unenforceable, the remainder of this Agreement, or the application of its terms and provisions to persons and circumstances other than those to which it has been held invalid or unenforceable shall not be affected thereby,

and each term and provision of this Agreement shall be valid and enforceable to the fullest extent permitted by law.

16. REMEDIES CUMULATIVE

The remedies given to ANAHEIM and OCFA herein shall be cumulative and are given without impairing any other rights given ANAHEIM or OCFA by statute or law now existing or hereafter enacted and the exercise on any one (1) remedy by ANAHEIM or OCFA shall not exclude the exercise of any other remedy.

17. NO THIRD PARTY BENEFICIARIES

The Parties intend that no rights nor remedies be granted to any third party as a beneficiary of this Agreement or of any covenant, duty, obligation or undertaking established herein.

18. CONTROLLING LAW AND VENUE

The laws of the State of California shall govern this Agreement and all matters relating to it and any action brought relating to this Agreement shall be adjudicated in a court of competent jurisdiction in the County of Orange.

19. AUTHORITY

Each individual executing this Agreement on behalf of a corporation, nonprofit corporation, partnership or other entity or organization, represents and warrants the he or she is duly authorized to execute and deliver this Agreement on behalf of such entity or organization and that this Agreement is binding upon the same in accordance with its terms. OCFA shall, at ANAHEIM's request, deliver a certified copy of it governing board's resolution or certificate authorizing or evidencing such execution.

20. EFFECTIVE DATE

This Agreement shall be effective on the date on which this Agreement is executed by ANAHEIM ("Effective Date"), and it provisions shall be effective as of July 1, 2020.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed on the dates hereinafter respectively set forth.

Date of Execution

_____

CITY OF ANAHEIM
a municipal corporation

By: _____
Harry Sidhu, Mayor

"ANAHEIM"

ATTEST:

By: _____
City Clerk

APPROVED AS TO FORM:
ROBERT FABELA, CITY ATTORNEY

By: _____
Robert J. Tyson
Deputy City Attorney

Dated: _____

Date of Execution

_____

ORANGE COUTNY FIRE AUTHORITY
a California joint powers authority

By: _____

Printed Name:_____

Title:_____

"OCFA"

ATTEST:

By: _____
Clerk of the Authority

APPROVED AS TO FORM:
OCFA GENERAL COUNSEL

By: _____

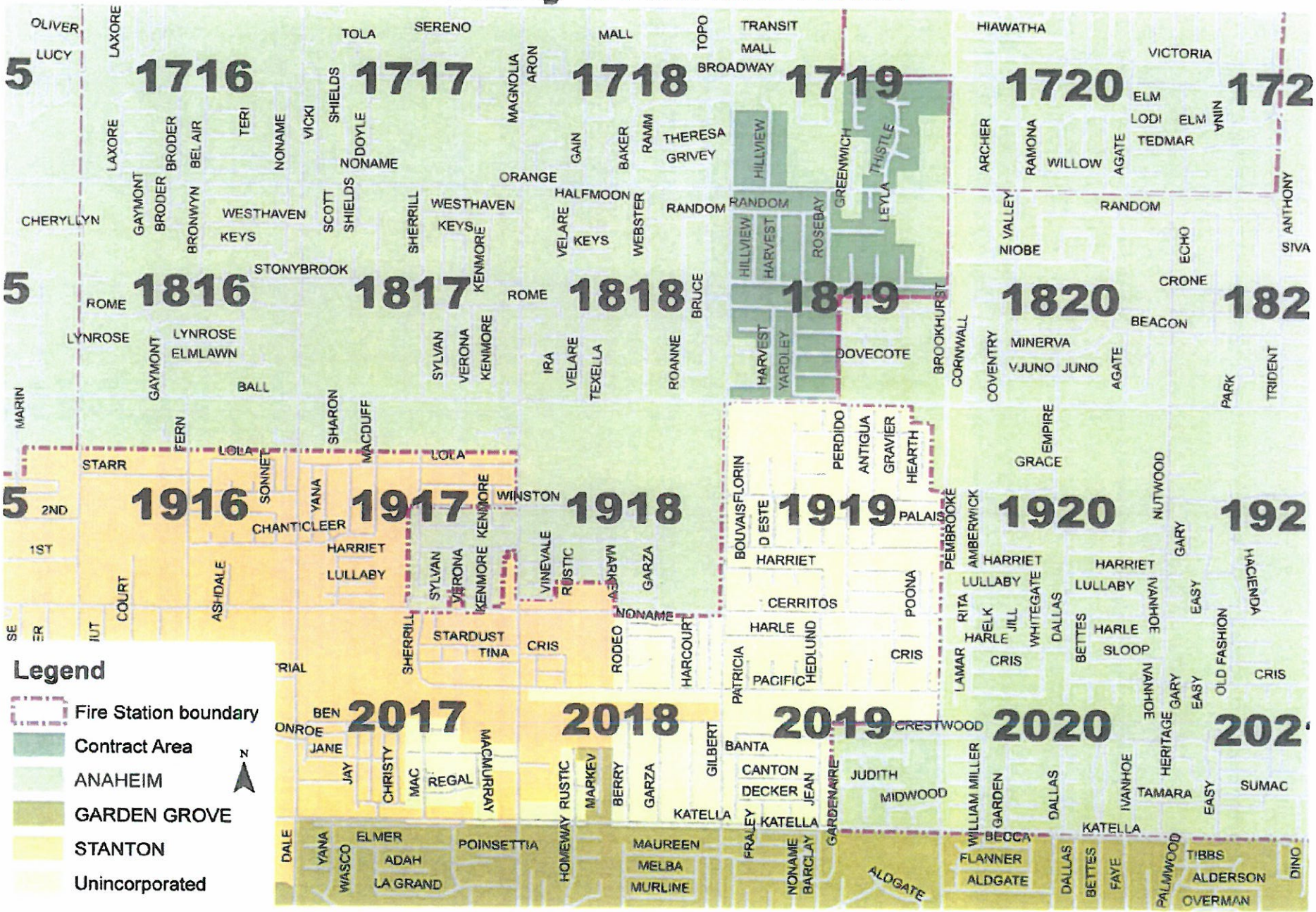
Dated: _____

138123
Attachments: Exhibit A – Map of Service Area

EXHIBIT A

MAP OF SERVICE AREA

County Contract Area



Orange County Fire Authority

AGENDA STAFF REPORT

Board of Directors Meeting | **Agenda Item No. 3A**
June 25, 2020 | **Discussion Calendar**

Fire Integrated Real-time Intelligence System (FIRIS) 2.0 Program

Contact(s) for Further Information

Brian Fennessy, Fire Chief	brianfennessy@ocfa.org	714.573.6010
Robert Cortez, Assistant Chief Business Services Department	robertcortez@ocfa.org	714.573.6012

Summary

This agenda item is submitted for approval of the Orange County Fire Authority (OCFA) Fire Integrated Real-time Intelligence System (FIRIS) 2.0 Program, which is designed to enhance regional wildfire situational awareness for first responders during the 2020 wildfire season. It is anticipated that the program will commence on July 1, 2020, and have a duration of approximately 180 days.

Prior Board/Committee Action

On June 27, 2019, the Board of Directors authorized the execution of professional services agreements for Air Tactical Group Supervisors (ATGS) in amounts up to $120,000 each.

On August 22, 2019, the Board of Directors authorized the FIRIS Pilot Program, which included approval for: the receipt of $4,500,000 from the State of California, use of the Los Alamitos Joint Forces Training Base, and agreements with vendors for the implementation of the 2019 FIRIS Pilot Program.

On December 5, 2019, the Executive Committee authorized an increase to the ATGS professional services agreements to $200,000 each.

RECOMMENDED ACTION(S)

1. Approve and authorize the Board Chair to accept Disaster Readiness for Safer Communities (D-RiSC) reimbursement funding in the amount of $7,706,525 for the implementation of the FIRIS 2.0 Program and SCOUT system improvements.
2. Approve and authorize a budget adjustment to increase revenue and appropriations in FY 2020/21 General Fund (121) budget by $8,206,525 tied to $7,706,525 in new D-RiSC funding allocation and the rebudget of $500,000 of fund balance from the 2019 FIRIS Pilot Program.
3. Approve and authorize the Purchasing Manager to execute a Professional Services Agreement with AEVEX for aviation services in an amount not to exceed $4,809,138.
4. Approve and authorize the Purchasing Manager to execute a Service Agreement with UCSD/WIFIRE in a form substantially consistent with the attached form using the sole source provision of the Purchasing Ordinance for fire behavior modeling and other related services in an amount not to exceed $1,000,000.

5. Approve and authorize the Purchasing Manager to enter into new Professional Services Agreements with the Air Tactical Group Supervisors at annual amounts not to exceed $250,000 each for an aggregate total not to exceed $1,080,000.
6. Approve and authorize the Purchasing Manager to enter into a new Professional Service Agreement with Intterra, using the special procurement provision in the Purchasing Ordinance, for consulting, wildfire simulation services and improvements to the SCOUT system for an amount not to exceed $800,000.
7. Approve and authorize the Fire Chief and Purchasing Manager to enter into cost reimbursement agreements for project management and support services acceptable to the Fire Chief and in a form approved by General Counsel with (a) the Los Angeles Fire Department in an amount not to exceed $120,000 and (b) another entity to assist at the Sacramento base in an amount not to exceed $200,000.
8. Approve and authorize the Fire Chief and Purchasing Manager to enter into agreements acceptable to the Fire Chief and in a form approved by General Counsel providing for the use of the Los Alamitos Joint Forces Training Base and McClellan Air Force Base by OCFA and its contractors to store aircraft and conduct air operations (including take offs and landings) from the respective facilities in an aggregate amount not to exceed $100,000.

Impact to Cities/County

The FIRIS program will enhance aerial wildfire response and situational awareness throughout California during the 2020 wildfire season.

Fiscal Impact

Authorization of the Budget Adjustment will increase revenue and appropriations in the FY 2020/21 General Fund (121) budget by $8,206,525 tied to $7,706,525 in new Disaster Readiness for Safer Communities (D-RiSC) funding allocation and the rebudget of $500,000 of fund balance from the 2019 FIRIS Pilot Program.

Background

On June 11, 2020, the D-RiSC Coalition gave OCFA preliminary approval of $7,706,525 in cost reimbursement funds for the FIRIS 2.0 Program and the Coalition is expected to complete the final approval process prior to June 30, 2020. The D-RiSC Coalition is under a tight timeline to commit funds by June 30, 2020, and failure to do so will cause the funding to revert to the State. Therefore, OCFA staff has prepared the primary agreements to secure vendors and services for the FIRIS 2.0 Program, however, other agreements such as cost reimbursement agreements for project management and rental of air base facilities are currently in development. Due to the tight timeline, Staff is recommending the Board's prior authorization for the remaining necessary agreements (subject to cost caps as summarized in recommendations 7 and 8 above) in order to ensure that this vital program funded by the State will be established in time for the July 1st commencement of the program.

FIRIS PROGRAM

Wildland fire remains the most significant threat to life and property in California; lives, property, and natural resources are threatened on a 24-hour basis. A risk assessment conducted by the California Department of Forestry and Fire Protection (CAL FIRE) concluded that an estimated 11 million residents, or the equivalent of 1 in 4 Californians live in areas considered to be high risk of a wildfire. As a regional fire agency, the OCFA plays a key role in wildfire mitigation and suppression in Southern California and OCFA was designated as the lead agency in the State-funded FIRIS Pilot Program for the 2019 fire season.

The recently released FIRIS After-Action-Report (AAR) documents the success of last year's pilot program and identifies areas of improvement. Overall, the AAR made clear that first responders, command and control centers, policymakers, etc., now expect an incident awareness and assessment (IAA) aerial platform to respond to wildland fires during initial attack. Another benefit of the 2019 Pilot Program was the ability for real-time information being integrated into the state's common operating picture platform, the SCOUT program. The full AAR is available at the following link:

https://www.ocfa.org/Uploads/NewsAndEvents/OCFA%20FIRIS%20After-Action%20Report.pdf

Due to the success of the 2019 FIRIS Pilot Program and the need to provide OCFA and all fire agencies enhanced situation awareness, the OCFA has secured $7,706,525 in funding from the state funded Disaster Readiness for Safer Communities (D-RiSC) program. The D-RiSC Coalition is made up of the leadership from the California Fire Chiefs Association, California Professional Firefighters, California State Firefighters Association, Fire Districts Association of California, FIRESCOPE, League of California Cities, Metropolitan Fire Chiefs of California, and the California Special Districts Association.

The coalition was successful in securing state funding in fiscal year 2018-19 specifically for the State of California Governor's Office of Emergency Services (Cal OES) to assist local agencies prepare for and respond to climate-driven wildfires, floods, mudslides and other natural disasters. D-RiSC funding will allow for a statewide expansion of the FIRIS 2.0 Program and provide for two base of operations that will be strategically located in both Southern and Northern California. OCFA will perform as the lead agency for the program in both regions during the 2020 fire season.

To further complicate emergency response, the OCFA and all statewide fire agencies are faced with determining how to handle upcoming wildfires during the COVID-19 pandemic. It is anticipated that fire agencies will have limited resources to battle fires as their emergency workforce will dedicate much of their efforts to address COVID-19, and some fire agency employees will be recovering from the virus. In addition, some agencies may be reluctant to send resources into fire camps where their crews may potentially be exposed to COVID-19. Further, citizens may be less responsive to evacuation orders for fear of contracting the virus. The public may rightly be anxious about leaving the safety of their homes for an evacuation center that may not be as prepared to manage evacuees as they were before COVID-19. There is now a clear connection with how we must fight wildfires to protect life and property while at the same time dealing with the coronavirus.

With the new reality that fire agencies will have to adapt wildland fire suppression activities as a result of COVID-19, the FIRIS incident, awareness and assessment platform is even more important to ensure that more limited fire resources are deployed in a strategic manner and evacuations occur in a more efficient and effective manner. Last year's pilot program proved that these unique capabilities saved lives and property.

While the public and many agencies remain focused on the response and operations related to COVID-19, wildfire emergencies will soon be upon us. State and local agencies must plan for this reality. FIRIS 2.0 is further along than any other program being utilized by the fire service. FIRIS is also the only program that is focused on initial and extended attack wildland fires and that has demonstrated a level of success and ability to be operational statewide.

SCOUT Program Upgrade

The California deployment of the Next-Generation Incident Command System (NICS) software is called Situation Awareness and Collaboration Tool (SCOUT). SCOUT was initially deployed in April 2016 by Cal OES in partnership with CAL FIRE and through strategic partnership with the Department of Homeland Security (DHS) Science & Technology Directorate. SCOUT provides an information-sharing environment for wildland fire response, small to extreme scale homeland security and emergency management incidents. It provides the California first responder community and supporting agencies a web-based tactical and operational response platform to assist in communication, coordination and collaboration within incident management for all hazards, whether natural or human-made.

Furthermore, SCOUT's information-sharing environment helps to facilitate operational and tactical incident collaboration among California emergency responders and provides interagency situational awareness for local, tribal, state, and federal partners on small to extreme scale homeland security incidents, such as natural disasters, technological hazards, intentional attacks, and human-caused emergencies.

SCOUT will be used exclusively by OCFA and all California fire agencies to receive FIRIS 2.0 IAA integrated information. The current software version of SCOUT will provide the common operating picture necessary for the FIRIS 2.0 Program, but needs to be updated to improve interagency data exchange functionality. The D-RiSC Coalition has provided funding to OCFA so that the scope of work within OCFA's existing contract with Intterra can be expanded to accomplish improvements to the SCOUT system.

Program Functionality

The FIRIS Program utilizes aerial resources with enhanced IAA technology to provide ground-based Incident Commanders (IC), Emergency Operations Centers (EOC), Emergency Command/Communications Centers (ECC), policymakers, etc., the critical information they need during the onset of incidents and disasters. There is no greater value to the decision-makers on the ground and in the air, than having an aerial resource dedicated to the delivery of a real-time fire perimeter map, high definition color and infra-red video and continuous wildland fire spread modeling during a wildland fire.

The FIRIS Program is unique in that it integrates cutting edge technologies such as artificial intelligence (AI) provided through aerial infra-red (IR) computerized mapping and the University of California San Diego (UCSD) WIFIRE wildland fire spread technology into a common, decision support platform. The key objectives of the FIRIS program are to:

- Provide initial attack real-time fire perimeter mapping within 5 minutes of aircraft arrival at incident.
- Provide ground-based incident personnel and other facilities that support incident activities beyond the horizon fire spread projection modelling via UCSD's Supercomputer WIFIRE Program (https://wifire.ucsd.edu/).

The FIRIS 2.0 Program will utilize two multi-engine fixed-wing aircraft provided by AEVEX, one based in Northern California at McClellan Air Force Base in Sacramento and one based in Southern California at the Los Alamitos Joint Forces Training Base. The aircraft are equipped with onboard technology that allow for the gathering and downlink of IAA intelligence into the FIRIS environment. Similar to the 2019 Pilot Program, OCFA will partner with UCSD WIFIRE and Air Tactical Group Supervisors (ATGS's) for the implementation of the statewide program. UCSD WIFIRE will utilize the intelligence gathered by the fixed wing aircraft to incorporate fire behavior

predictions into the FIRIS environment. The ATGS's will be responsible for managing the incident airspace and coordinating fixed and rotary-wing aircraft operations.

The exchange and display of data provided by the AEVEX aircraft and WIFIRE fire predictions, along with real-time intelligence data, predictive models, and local weather conditions, will be rapidly disseminated to firefighters to improve warning, decrease response time, and improve firefighting effectiveness. The sharing and exchange of data with other State systems will ensure statewide situational awareness. Fire agencies throughout the State may request the use of the FIRIS aircraft.

Improved communications and real-time technologies will give firefighters, incident commanders, ECCs and EOCs better and faster information about fast-paced disasters. There is no better way to reduce risk and mitigate the impacts of climate-driven disasters than to optimize real-time situational awareness to fight fires and other disasters within the first hour.

CONTRACTOR SELECTION

SPECIAL OPERATIONS SOLUTIONS, LLC, dba AEVEX

Due to the highly technical and specialized nature of the services, staff utilized a two-step solicitation method, as authorized by the OCFA Purchasing Ordinance. On March 5, 2020, staff issued Request for Statements of Qualifications (RFSQ) SK2434a, which was due on March 24, 2020. Seven responsive statements were received and a panel of subject matter experts (internal and external panelist) evaluated the respective firms' qualifications and experience (40 points), and the aircraft, available technology and resources (60 points). The panel held interviews with the three highest ranked firms, AEVEX, Tenax Aerospace, and Bode Aviation. All were deemed qualified by the panel and invited to participate in the second step of the solicitation process.

As part of the second step of the solicitation process, on April 24, 2020, staff issued a Request for Proposal (RFP) SK2434b to solicit competitive proposals from the three qualified firms. Proposals were due on May 11, 2020 and AEVEX, Tenax Aerospace, and Bode Aviation submitted responsive proposals. The panel evaluated proposals based on method of approach (20 points), qualifications & experience (35 points), communications & resources (20 points), and proposed costs (25 points). AEVEX emerged as the top-ranked firm by submitting both the highest scoring and lowest priced proposal. AEVEX offers extensive services with experienced personnel, specialized equipment, and innovative solutions when providing FIRIS related services. Additional information regarding the RFSQ and RFP evaluation and scoring is provided in Attachment 2.

UCSD/WIFIRE

The UCSD/WIFIRE Lab is a consortium of University of California San Diego organizations and a number of partnerships including the university collaborators, industry partners, fire departments, utilities, Cal OES, and the California Public Utilities Commission. The platform that the WIFIRE fire behavior modeling software resides on is proprietary and currently has the only infrastructure that can provide integrated capability. Furthermore, the UCSD/WIFIRE Lab is a neutral data resource and partner to the FIRIS Program. The host hardware is the Super Computer of UC San Diego; there are no comparable options currently available on the market.

AIR TACTICAL GROUP SUPERVISORS (ATGS's)

At the June 27, 2019 Board of Directors meeting, the Board authorized professional services agreements to individuals qualified to perform the ATGS role. Staff is now requesting to issue new agreements so that these highly qualified individuals may also be utilized for the 2020 FIRIS 2.0 Program.

INTTERRA

In November of 2018, staff was notified that the Western Fire Chiefs Association approved OCFA's grant application for data analysis software and ownership of a one-year subscription to Intterra's software modules was transferred to the OCFA for trial. During the preliminary planning stages of the 2019 FIRIS Pilot Program, it was determined that the Intterra software being trialed by OCFA could also be utilized to provide the software platform needed for the Pilot Program. Due to the success of the common operating platform that Intterra provided for the Pilot Program, the D-RiSC Coalition requested that Intterra provide the necessary upgrades to the SCOUT system so that it may effectively facilitate the interagency data exchange necessary for the FIRIS 2.0 Program.

Program Budget

The table below details the estimated budget for the 2020 FIRIS 2.0 Program:

Funding Source	**Funding Description**	**Amount**
D-RiSC	New funding award – Reimbursement Basis	$7,706,525
2019 Pilot Program Fund Balance	Re-allocation of remaining State funds (est.)	$500,000
	Total Project Funding	**$8,206,525**
Service Contracts and Other Expenses	**Services/Equipment**	**Amount**
AEVEX - North & South Operations Aircraft*	Daily availability for 180-days with flight hours for primary turbine commander aircraft.	$4,809,138
UCSD/WIFIRE	Enhanced situational awareness/fire modeling and other related services	$1,000,000
Air Tactical Group Supervisors	12-hr Shifts for 180-days	$1,080,000
Intterra	Enhanced mapping, coordination and consulting services; Includes SCOUT system improvements.	$800,000
Project Management & Support – Sacramento and LAFD	Project support for 180 days	$320,000
Air Base – North & South Operations	Airfield to serve as home base for aircraft	$100,000
OCFA	Project administration, communications, and other needs	$97,387
	Total Project Cost	**$8,206,525**

**Daily availability: 12hrs North Operations and 24hrs South Operations*

Recommendation

Staff is recommending approval to enter into agreements as stated in the recommended actions for the provision of services related to the FIRIS 2.0 Program. Work related to the program will not commence until D-RiSC funding has been secured and awarded to OCFA.

Attachment(s)

1. Executive Summary – Selection of AEVEX
2. AEVEX Professional Services Agreement (on file with the Clerk)
3. UCSD/WIFIRE Services Agreement (on file with the Clerk)
4. UCSD/WIFIRE Sole Source Request Form
5. Sample ATGS Agreements
6. Intterra Professional Services Agreement (on file with the Clerk)
7. Intterra Special Procurement Request Form

EXECUTIVE SUMMARY – SK2434a & SK2434

Because of the highly technical and specialized nature of the services, staff elected to utilize a two-step solicitation method, as authorized by the OCFA Purchasing Ordinance:

Request for Statement of Qualifications (RFSQ) SK2434a Evaluation

An evaluation team consisting of one OCFA staff member and two external subject matter experts evaluated the seven responsive qualifications received. Qualifications were evaluated based on the criteria and point structure as defined in the RFSQ: Qualification and experience (40 points), and aircraft, available technology and resources (60 points). Following the written evaluations, the evaluation committee conducted in-person interviews with representatives from the three highest ranked firms, AEVEX, Tenax Aerospace, and Bode Aviation. All three firms were deemed qualified by the panel and were invited to participate in the second step of the solicitation process. Final qualification scores are shown in the table below:

	Bode Aviation, Inc			**Courtney Aviation, Inc,**			**Mountain Aviation Enterprises LTD**			**Mountain Aviation, Inc.**		
Evaluators	1	2	3	1	2	3	1	2	3	1	2	3
A. Aircraft, technological abilities, and available resources (60 Points)	54	54	42	18	36	36	12	24	0	48	48	42
B. Qualifications and Relevant Experience (40 Points)	40	36	34	36	40	32	20	16	16	20	36	32
Sum of Proposal Ratings	94	90	76	54	76	68	32	40	16	68	84	74
Ranking	**2**	**1**	**3**	**6**	**5**	**6**	**7**	**6**	**7**	**3**	**3**	**4**
Sum of Ranking (Presentation & Written)	6			17			20			10		
Overall Rank	**2**			**6**			**7**			**4**		

	SciFly, LLC			**Special Operations Solutions (AEVEX)**			**Tenax Aerospace**		
Evaluators	1	2	3	1	2	3	1	2	3
A. Aircraft, technological abilities, and available resources (60 Points)	48	24	48	48	54	42	60	48	42
B. Qualifications and Relevant Experience (40 Points)	20	16	24	20	36	36	40	36	38
Sum of Proposal Ratings	68	40	72	68	90	78	100	84	80
Ranking	**3**	**6**	**5**	**3**	**1**	**2**	**1**	**3**	**1**
Sum of Ranking (Presentation & Written)	14			6			5		
Overall Rank	**5**			**2**			**1**		

Request for Proposals (RFP) SK2434b Evaluation

RFP SK2434b was issued to solicit competitive proposals for FIRIS related services from the three pre-qualified firms. An evaluation team consisting of one OCFA staff member and two external subject matter experts evaluated the three responsive proposals received. Proposals were evaluated based on the criteria and point structure as defined in the RFP: Method of approach (20 points), qualifications & experience (35 points), communications & resources (20 points), and proposed costs (25 points). Upon completion of the written evaluations, AEVEX's proposal was ranked number one overall and also provided the lowest cost. Final evaluation scores are shown in the table below:

	Bode Aviation, Inc $6,326,021			**Special Operations Solutions (AEVEX) $2,866,172**			**Tenax Aerospace $4,850,472**		
Evaluators	1	2	3	1	2	3	1	2	3
A. Method of Approach (20 points)	10	20	18	20	20	19	20	10	17
B. Qualifications and Relevant Experience (35 Points)	35	31.5	28	35	35	31.5	35	17.5	26.25
C. Communications and Resources (20 Points)	10	18	18	10	20	18	20	16	16
D. Pricing (25 Points)	11.33	11.33	11.33	25	25	25	14.77	14.77	14.77
Sum of Proposal Ratings (No Cost)	55	69.5	64	65	75	68.5	75	43.5	59.25
Ranking (No Cost)	**3**	**2**	**2**	**2**	**1**	**1**	**1**	**3**	**3**
Sum of Proposal Ratings (with Cost)	66.33	80.83	75.33	90	100	93.5	89.77	58.27	74.02
Ranking (with Cost)	**3**	**2**	**2**	**1**	**1**	**1**	**2**	**3**	**3**
Sum of Ranking	**7**			**3**			**8**		
Overall Rank	**2**			**1**			**3**		

Recommendation

Based upon the results of the solicitation process, staff concurs with the evaluation panel recommendation to award the agreement to Special Operations Solutions LLC, dba AEVEX.

ORANGE COUNTY FIRE AUTHORITY
PROFESSIONAL SERVICES AGREEMENT

THIS AGREEMENT FOR PROFESSIONAL SERVICES ("Agreement") is made and entered into this 25th day of June, 2020 by and between the Orange County Fire Authority, a public agency, hereinafter referred to as "OCFA", and Special Operations Solutions, LLC., DBA AEVEX Engineering & Technology, a Corporation hereinafter referred to as "Firm". OCFA and Firm are sometimes individually referred to herein as a "Party" and collectively as the "Parties".

RECITALS

WHEREAS, OCFA requires the services of a qualified firm to provide aircraft and intelligence, surveillance and reconnaissance services as requested in RFP SK2434b, hereinafter referred to as "Project"; and

WHEREAS, Firm has submitted to OCFA a Proposal dated May 10, 2020, a copy of which is attached hereto as Exhibit "A" and is incorporated herein by this reference ("Proposal"); and

WHEREAS, based on its experience and reputation, Firm is qualified to provide the necessary services for the Project and desires to provide such services; and

WHEREAS, OCFA desires to retain the services of Firm for the Project.

NOW, THEREFORE, in consideration of the promises and mutual agreements contained herein, OCFA agrees to employ and does hereby employ Firm and Firm agrees to provide professional services as follows:

AGREEMENT

1. PROFESSIONAL SERVICES

1.1 Scope of Services

In compliance with all terms and conditions of this Agreement, Firm shall provide those services specified in Firm's Proposal attached hereto as Exhibit "A." The Scope of Services includes by reference and by addendum: (1) OCFA's Request for Proposal, RFP SK2434b, dated May 10, 2020 ("RFP"), (2) Firm's Proposal, as modified by Firm's Best and Final Offer dated May 22, 2020, and (3) any amendments, addendums, change orders, or modifications mutually agreed upon by the parties hereto ("Services" or "Work"). Firm warrants that all Services shall be performed in a competent, professional and satisfactory manner in accordance with all standards prevalent in the same profession in the State of California. Firm represents and warrants that it and all employees, subconsultants and subcontractors providing any Services pursuant to this

agreement shall have a sufficient skill and experience to perform the Services. All Services shall be completed to the reasonable satisfaction of the OCFA. In the event of any inconsistency between the terms contained in the Firm's Proposal, OCFA's RFP and/or the terms set forth in the main body of this Agreement, the terms set forth in the main body of this Agreement and then the RFP shall govern, in that order.

1.2 Compliance with Law

All Services rendered hereunder shall be provided in accordance with all laws, ordinances, resolutions, statutes, rules, and regulations of OCFA and any federal, state or local governmental agency of competent jurisdiction.

1.3 Licenses and Permits

Firm shall obtain at its sole cost and expense such licenses, permits and approvals as may be required by law for the performance of the Services required by this Agreement.

1.4 Familiarity with Work

By executing this Agreement, Firm warrants that Firm (a) has thoroughly investigated and considered the Work to be performed, (b) has investigated the site of the Work and become fully acquainted with the conditions there existing, (c) has carefully considered how the Work should be performed, and (d) fully understands the facilities, difficulties and restrictions attending performance of the Work under this Agreement. Should the Firm discover any latent or unknown conditions materially differing from those inherent in the Work or as represented by OCFA, Firm shall immediately inform OCFA of such fact and shall not proceed with any Work except at Firm's risk until written instructions are received from the Contract Officer.

1.5 Care of Work

Firm shall adopt and follow reasonable procedures and methods during the term of the Agreement to prevent loss or damage to materials, papers or other components of the work, and shall be responsible for all such damage until acceptance of the work by OCFA, except such loss or damages as may be caused by OCFA's own negligence.

1.6 Additional Services

Firm shall perform services in addition to those specified in the Proposal when directed to do so in writing by the Contract Officer, provided that Firm shall not be required to perform any additional services without compensation. Any additional compensation not exceeding ten percent (10%) of the original Agreement sum must be approved in writing by the Contract Officer. Any greater increase must be approved in writing by the Purchasing Manager.

2. TIME FOR COMPLETION

The time for completion of the Services to be performed by Firm is an essential condition of this Agreement. Firm shall prosecute regularly and diligently the work of this Agreement according to the schedules set forth in Firm's proposal. Firm shall not be accountable for delays in the progress of its work caused by any condition beyond its control and without the fault or negligence of Firm. Delays shall not entitle Firm to any additional compensation regardless of the party responsible for the delay.

3. COMPENSATION OF FIRM

3.1 Compensation of Firm

For the Services rendered pursuant to this Agreement, Firm shall be compensated and reimbursed, in accordance with the Firm's Best and Final Offer dated May 22, 2020 set forth in Exhibit "A."

3.2 Method of Payment

In any month in which Firm wishes to receive payment, Firm shall no later than the fifth working day of such month, submit to OCFA in the form approved by OCFA's Director of Finance, an invoice for Services rendered prior to the date of the invoice. OCFA shall pay Firm for all expenses stated thereon which are approved by OCFA consistent with this Agreement, within thirty (30) days of receipt of Firm's invoice.

3.3 Changes

In the event any change or changes in the work is requested by OCFA, the parties hereto shall execute an addendum to this Agreement, setting forth with particularity all terms of such addendum, including, but not limited to, any additional fees. Addenda may be entered into:

A. To provide for revisions or modifications to documents or other work product or work when documents or other work product or work is required by the enactment or revision of law subsequent to the preparation of any documents, other work product or work;

B. To provide for additional services not included in this Agreement or not customarily furnished in accordance with generally accepted practice in Firm's profession.

3.4 Appropriations

This Agreement is subject to and contingent upon funds being appropriated therefore by the OCFA Board of Directors for each fiscal year covered by the Agreement. If such appropriations are not made, this Agreement shall automatically terminate without penalty to OCFA.

4. PERFORMANCE SCHEDULE

4.1 Time of Essence

Time is of the essence in the performance of this Agreement.

4.2 Schedule of Performance

All Services rendered pursuant to this Agreement shall be performed within the time periods prescribed in Firm's Proposal, attached hereto as Exhibit "A". The extension of any time period specified in Exhibit "A" must be approved in writing by the Contract Officer.

4.3 Force Majeure

The time for performance of Services to be rendered pursuant to this Agreement may be extended because of any delays due to unforeseeable causes beyond the control and without the fault or negligence of the Firm, including, but not restricted to, acts of God or of a public enemy, acts of the government, fires, earthquakes, floods, epidemic, quarantine restrictions, riots, strikes, freight embargoes, and unusually severe weather if the Firm shall within ten (10) days of the commencement of such condition notify the Contract Officer who shall thereupon ascertain the facts and the extent of any necessary delay, and extend the time for performing the Services for the period of the enforced delay when and if in the Contract Officer's judgment such delay is justified, and the Contract Officer's determination shall be final and conclusive upon the parties to this Agreement.

4.4 Term

This agreement shall continue in full force and effect for six months (initial term) unless earlier terminated in accordance with Sections 8.5 or 8.6 of this Agreement. The contract may extended upon mutual written agreement between OCFA and the Firm.

5. COORDINATION OF WORK

5.1 Representative of Firm

The following principal of the Firm is hereby designated as being the principal and representative of Firm authorized to act in its behalf with respect to the work specified herein and make all decisions in connection therewith: **Ron Trosclair**

It is expressly understood that the experience, knowledge, capability and reputation of the foregoing principal is a substantial inducement for OCFA to enter into this Agreement. Therefore, the foregoing principal shall be responsible during the term of this Agreement for directing all activities of Firm and devoting sufficient time to personally supervise the Services hereunder. The foregoing principal may not be changed by Firm without the express written approval of OCFA.

5.2 Contract Officer

The Contract Officer shall be **Robert Cortez**, unless otherwise designated in writing by OCFA. It shall be the Firm's responsibility to keep the Contract Officer fully informed of the progress of the performance of the Services and Firm shall refer any decisions that must be made by OCFA to the Contract Officer. Unless otherwise specified herein, any approval of OCFA required hereunder shall mean the approval of the Contract Officer.

5.3 Prohibition Against Subcontracting or Assignment

5.3.1 No Subcontracting Without Prior Approval. The experience, knowledge, capability and reputation of Firm, its principals and employees, and the Firm Representative were a substantial inducement for OCFA to enter into this Agreement. Therefore, Firm shall not contract with any other entity to perform in whole or in part the Services required hereunder without the express written approval of OCFA.

5.3.2 Provisions in the Event Subcontractor(s) Are Authorized. If Firm is authorized to subcontract any part of the Services as provided in Section 5.3.1, Firm shall be responsible to OCFA for the acts and omissions of its subcontractor(s) and subconsultant(s) in the same manner as it is for persons directly employed. For purposes of this Agreement, all persons engaged in the performance of Services will be considered employees of Firm. OCFA will deal directly with and will make all payments to Firm. Nothing contained in this Agreement shall create any contractual relationships between any subcontractor and OCFA. Firm shall ensure that all subcontractor insurance requirements set forth in Section 6 below (including its subsections) are complied with prior to commencement of Services by each subcontractor.

5.3.2.1 Withholding Payment for Non-Authorized Subcontractors. OCFA shall have the right to withhold payment from Firm

for Services performed by any subcontractor or subconsultant performing Services but not authorized in writing by OCFA, or regarding which the insurance or other requirements under this Agreement have not been satisfied.

5.3.3 Assignments. Neither this Agreement nor any interest herein may be assigned, transferred, conveyed, hypothecated, or encumbered voluntarily or by operation of law, whether for the benefit of creditors or otherwise, without the prior written approval of OCFA. Transfers restricted hereunder shall include the transfer to any person or group of persons acting in concert of more than twenty five percent (25%) of the present ownership and/or control of Firm, taking all transfers into account on a cumulative basis. In the event of any such unapproved transfer, including any bankruptcy proceeding, this Agreement shall be void. No approved transfer shall release Firm or any surety of Firm from any liability hereunder without the express written consent of OCFA.

5.4 Independent Contractor

5.4.1 The legal relationship between the Parties is that of an independent contractor, and nothing herein shall be deemed to make Contractor, or any of its personnel, an OCFA employee. During the performance of this Agreement, Firm and its officers, employees, and agents shall act in an independent capacity and shall not act as OCFA officers or employees. Firm will determine the means, methods and details of performing the Services subject to the requirements of this Agreement. The personnel performing the Services under this Agreement on behalf of Firm shall at all times be under Firm's exclusive direction and control. Neither OCFA nor any of its officials, officers, employees, agents or volunteers shall have control over the conduct of Firm or any of its officers, employees, or agents, except as set forth in this Agreement. Firm, its officers, employees or agents, shall not maintain a permanent office or fixed business location at OCFA's offices. OCFA shall have no voice in the selection, discharge, supervision, or control of Firm's officers, employees, representatives or agents or in fixing their number, compensation, or hours of service. Firm shall pay all wages, salaries, and other amounts due its employees in connection with the performance of Services under this Agreement and shall be responsible for all reports and obligations respecting them, including but not limited to social security income tax withholding, unemployment compensation, workers' compensation, and other similar matters. OCFA shall not in any way or for any purpose be deemed to be a partner of Firm in its business or otherwise a joint venturer or a member of any joint enterprise with Firm.

5.4.2 Firm shall not incur or have the power to incur any debt, obligation, or liability against OCFA, or bind OCFA in any manner.

5.4.3 No OCFA benefits shall be available to Firm, its officers, employees, or agents, in connection with the performance of any Work or Services under this Agreement. Except for professional fees paid to Firm as provided for in this Agreement, OCFA shall not pay salaries, wages, or other compensation to Firm for the performance of any Work or Services under this Agreement. OCFA shall not be liable for

compensation or indemnification to Firm, its officers, employees, or agents, for injury or sickness arising out of performing any Work or Services hereunder. If for any reason any court or governmental agency determines that the OCFA has financial obligations, other than pursuant to Section 2 herein, of any nature relating to salary, taxes, or benefits of Firm's officers, employees, representatives, agents, or subconsultants or subcontractors, Firm shall defend, indemnify, and hold harmless OCFA from and against all such financial obligations.

5.6 Employee Retirement System Eligibility Indemnification

5.6.1 In the event that Firm or any employee, agent, or subcontractor of Firm providing any Work or Services under this Agreement claims or is determined by a court of competent jurisdiction to be eligible for enrollment in an employee retirement system as an employee of the OCFA, Firm shall indemnify, defend, and hold harmless OCFA against: (1) all such claim(s) and determination(s); (2) for the payment of any employee and/or employer contributions for employee retirement system benefits on behalf of Firm or its employees, agents or subcontractors; and (3) the payment of any penalties and interest on such contributions which would otherwise be the responsibility of the OCFA.

5.6.2 Notwithstanding any other agency, state or federal policy, rule, regulation, law or ordinance to the contrary, Contractor and any of its employees, agents, and subcontractors providing any Work or Services under this Agreement shall not qualify for or become entitled to, and hereby agree to waive any claims to, any compensation, benefit, or any incident of employment by OCFA, including but not limited to eligibility to enroll in PERS as an employee of OCFA and entitlement to any contribution to be paid by OCFA for employer contribution and/or employee contributions for PERS benefits.

6. INSURANCE AND INDEMNIFICATION

6.1 Compliance with Insurance Requirements. Firm 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. Firm shall not commence any 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 Firm's existing insurance policies do not meet the insurance requirements set forth herein, Firm agrees to amend, supplement or endorse the policies to meet all requirements herein.

6.2 Types of Insurance Required. Without limiting the indemnity provisions set forth in this Agreement, Firm shall obtain and maintain in full force and effect during the term of this Agreement, including any extension thereof, the following policies of insurance:

6.2.1 Aviation Liability Insurance. Firm shall obtain and maintain, in full force and effect throughout the term of this Agreement, Aviation Liability insurance on an "occurrence" basis, including products and completed operations, property damage, and bodily injury limits no lower than one million dollars ($1,000,000.00) each occurrence and two million dollars ($2,000,000.00) aggregate. Covered professional services shall specifically include all Services to be performed under the Agreement and the policy shall be endorsed to delete any exclusions that may exclude coverage for claims within the minimum PLI Limits for the Services to be performed under this Agreement.

6.2.2 Commercial General Liability Insurance. Firm shall obtain and maintain, in full force and effect throughout the term of this Agreement, Insurance Services Office (ISO) Form CG 00 01 covering CGL on an "occurrence" basis, including property damage, bodily injury and personal & advertising injury with limits no less than one million dollars ($1,000,000.00) per occurrence and two million dollars ($2,000,000.00) aggregate. If a general aggregate limit applies, the general aggregate limit shall be no less than two million dollars ($2,000,000.00). Coverage for products and completed operations is required with limits no less than two million dollars ($2,000,000.00 aggregate. CGL insurance shall be provided on an occurrence-based coverage form; a "claims made" CGL policy is not acceptable. Firm shall maintain CGL insurance with per-claim, aggregate and products and operations completed limits no lower than the minimum CGL coverage limits set forth above. Defense costs shall be paid in addition to the limits. The policy shall contain no endorsements or provisions limiting coverage for any of the following: (1) contractual liability; (2) cross liability exclusion for claims or suits by one insured against another; or (3) any other exclusion contrary to this Agreement.

6.2.3 Automobile Liability Insurance. Firm shall obtain and maintain, in full force and effect throughout the term of this Agreement, a policy of Automobile liability insurance 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, disease and property damage. Defense costs shall be paid in addition to the policy limits. The policy shall specifically include coverage for owned, non-owned, leased, and hired automobiles, and be endorsed to eliminate any exclusion applicable to any of them.

6.2.4 Workers' Compensation Insurance. Firm shall obtain and maintain, in full force and effect throughout the term of this Agreement, a policy of Workers' Compensation Insurance with limits no less than one million dollars ($1,000,000.00), and in compliance with all other statutory requirements applicable in the State of California. Firm hereby waives on its own behalf, and shall obtain an endorsement from its workers' compensation insurer waiving on the insurance company's behalf, all rights of subrogation against the OCFA, its board members, officials, officers, employees, agents and volunteers.

6.2.4.1 If subconsultants or subcontractors are used, Firm shall require each of its subconsultants and subcontractors, if any, to waive all rights of

subrogation, and to obtain endorsements from the subconsultants'/subcontractors' workers' compensation insurers waiving all rights of subrogation, against the OCFA, its board members, officials, officers, employees, agents and volunteers.

6.2.4.2 Firm and each of its subconsultants and subcontractors shall also maintain, in full force and effect throughout the term of this Agreement, Employer's Liability Insurance with limits of at least one million dollars ($1,000,000.00) per injury or illness.

6.3 Acceptability of Insurers. Each insurance policy required by this section shall be issued by a licensed company authorized to transact business 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 Services to be performed under this Agreement creates an increased or decreased risk of loss to the OCFA, the Firm agrees that the minimum limits of the insurance policies may be changed accordingly upon receipt of written notice from the OCFA.

6.3.1 Firm shall immediately replace any insurer whose A.M. Best rating drops below the levels specified herein with an insurer that meets the minimum requirements herein.

6.4 Specific Insurance Provisions and 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 Firm shall provide endorsements on forms approved by the OCFA to add the following provisions to the insurance policies:

6.4.1 CGL and Auto Liability Endorsements. The policy or policies of insurance required by this Agreement for CGL and Automobile Liability Insurance shall be endorsed as follows:

6.4.1.1 Additional Insured: The OCFA, its board members, officials, officers, employees, agents and volunteers, shall be additional insureds; and

6.4.1.1.1 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 Firm, (4) contain any other exclusions contrary to the Agreement; or (5) contain special limitations on the scope of protection afforded to additional insureds.

6.4.1.2 Primary, Non-Contributing. Each CGL and Auto Liability insurance policy shall be endorsed to be primary and any other insurance, deductible, or self-insurance maintained by the OCFA, its board members, officials, officers, employees, agents or volunteers, shall not contribute with the primary insurance.

6.4.2 Notice of Cancellation: Each policy of any type shall be endorsed to provide 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 has been provided to the OCFA. Notwithstanding the foregoing, if coverage is to be suspended, voided, or cancelled because of Firm's failure to pay the insurance premium, the notice provided by the insurer to OCFA shall be by not less than ten (10) days prior written notice. (A statement that notice will be provided "in accordance with the policy terms" or words to that effect is inadequate to meet the requirements of this Section).

6.4.2.1 Pre-Payment of Policy Premium. If for any reason an insurer declines to issue an endorsement certifying that it will notify OCFA in accordance with section 6.4.2, Firm shall either obtain insurance from another insurer who will provide the required notice endorsement or shall provide evidence satisfactory to OCFA that the entire policy premium for the full term of that policy has been pre-paid such that the risk of non-payment of premiums during the term of the policy has been eliminated.

6.4.3 ACORD Forms Will Not Be Accepted in Lieu of Endorsements. By executing this Agreement, Firm certifies that it has – prior to execution of this Agreement - confirmed that its insurance company will issue each of the endorsements required by this Agreement. Firm also certifies that it understands that "ACORD" Certificate of Liability Insurance forms will not be accepted in lieu of required endorsements.

6.5 Deductibles and Self-Insured Retentions. Any deductible or self-insured retention must be approved in writing by the OCFA in advance. The decision whether to approve or withhold approval of a deductible or self-insured retention shall be made by the OCFA in the OCFA's sole and absolute discretion. (Firm may request pre-approval from OCFA of a deductible or self-insured retention prior to submitting Firm's Proposal).

6.6 Waiver of Subrogation. All policies of Commercial General Liability and Automobile Liability Insurance shall contain or be endorsed to waive subrogation against the OCFA, its officials, officers, employees, agents and volunteers, or shall specifically allow Firm 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. Firm hereby agrees to waive its own right of subrogation against the OCFA, its officials, officers, employees, agents and volunteers.

6.6.1 Waivers of Subrogation: Subconsultants and Subcontractors. If OCFA approves the use of subconsultants or subcontractors for the performance of any portion of the Services, then Firm shall obtain from each subconsultant and subcontractor, and make available to OCFA upon request, written express waivers by each subconsultant and subcontractor of the right of subrogation against the OCFA, its officials, officers, employees, agents and volunteers, and policy endorsements of each of its subconsultants' and subcontractors' insurance policies waiving any rights of subrogation against the OCFA, its officials, officers, employees, agents and volunteers insurer. All such waivers and endorsements shall be obtained prior to commencement of any Services by each subconsultant or subcontractor.

6.7 Evidence of Coverage. Concurrently with the execution of the Agreement, Firm shall deliver certificates of insurance together with original endorsements affecting each of the insurance policies required to be maintained by Firm by this Section 5. Firm 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.

6.7.1 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.

6.7.2 Authorized Signatures. The certificates of insurance and original endorsements for each insurance policy shall be signed by a person authorized by that insurer to bind coverage on its behalf.

6.7.3 Renewal/Replacement Policies. At least fifteen (15) days prior to the expiration of any policy required by this Agreement, 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, Firm 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 has been provided through another insurance company or companies meeting all requirements of this Agreement.

6.8 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. The insurance obligations under this Agreement shall be: (1) all the insurance coverage and/or limits carried by or available to Firm; or (2) the minimum insurance coverage requirements and/or limits shown in this Agreement; whichever is greater. Any insurance proceeds in excess of or broader than the minimum required coverage and/or minimum required limits, which are applicable to a given loss, shall be available to the OCFA. No representation is made that the minimum insurance requirements of this Agreement are sufficient to cover the obligations of Firm under this Agreement. Nothing

in this section shall be construed as limiting in any way the indemnification provision contained in this Agreement, or the extent to which Consultant may be held responsible for losses of any type or amount.

6.9 Enforcement of Agreement (Non-Estoppel). Firm acknowledges and agrees that actual or alleged failure on the part of the OCFA to inform Firm of any non-compliance with any of the insurance requirements set forth in this Agreement imposes no additional obligation on the OCFA nor does it waive any rights hereunder.

6.10 Insurance for Subconsultants. If OCFA approves the use of subconsultants or subcontractors for the performance of any portion of the Services, then Firm shall be responsible for causing each approved subconsultant and subcontractor to procure and maintain insurance in the same types and amounts required for Firm, and in full compliance with the insurance requirements set forth in this Agreement, except as otherwise authorized in writing by the Contract Manager.

6.10.1 Delivery of Evidence of Subcontractor Insurance. Upon request of OCFA, Firm shall deliver to OCFA all certificates of insurance and endorsements required from subcontractors and subconsultants. (Note: Firm's duty to obtain all required insurance for subcontractors and subconsultants required under this Agreement applies whether or not OCFA requests delivery of evidence of such coverage.)

6.11 Other Insurance Requirements. The following terms and conditions shall apply to the insurance policies required of Firm and its subconsultants and subcontractors, if any, pursuant to this Agreement:

6.11.1 Firm shall provide immediate written notice to OCFA if (1) any of the insurance policies required herein are terminated, cancelled, suspended, or non-renewed (2) the limits of any of the insurance coverages required herein are reduced; (3) any required insurance coverage is reduced below the required minimum limits through claims or otherwise, or (4) the deductible or self-insured retention is increased.

6.11.2 All insurance coverage and limits required under 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.

6.11.3 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.

6.11.4 Certificates of insurance will not be accepted in lieu of required endorsements, and submittal of certificates without required endorsements may

delay the Project. It is Firm's obligation to ensure timely compliance with all insurance submittal requirements as provided herein and Firm agrees to reimburse OCFA for any losses resulting from its failure, or its subconsultants' or subcontractors' failure, to timely comply with the requirements of this Agreement.

6.11.5 Firm agrees to ensure that subconsultants and subcontractors, if any, and any other parties involved with the Project who are brought onto or involved in the Project by Firm, provide the same minimum insurance coverage required of Firm. Firm 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. Firm agrees that upon request, all agreements with, and evidence of insurance from, subconsultants and subcontractors and others engaged in performing any Services will be submitted to the OCFA for review.

6.11.6 Firm agrees to provide immediate written notice to OCFA of any claim, demand or loss arising out of the Services performed under this Agreement and for any other claim, demand or loss which may reduce the insurance available to an amount less than required by this Agreement.

6.12 Indemnification.

To the fullest extent permitted by law, Firm shall defend (at Firm's sole cost and expense with legal counsel reasonably acceptable to OCFA), indemnify and hold the OCFA, its board members, officials, officers, employees, agents and volunteers, free and harmless from any and all claims, demands, orders, causes of action, costs, expenses, liabilities, losses, penalties, judgments, arbitration awards, settlements, damages or injuries of any kind, in law or in equity, including but not limited to property or persons, including wrongful death, (collectively "Claims") in any manner arising out of, pertaining to, related to, or incident to any alleged acts, errors or omissions, or willful misconduct of Firm, its officers, directors, employees, subconsultants, subcontractors, agents or invitees in connection with performance under this Agreement, or in any manner arising out of, pertaining to, related to, or incident to an alleged breach of this Agreement, including without limitation the payment of all consequential damages, expert witness fees and attorneys' fees and other related costs and expenses.

Notwithstanding the foregoing, and only to the extent that the Services performed by Firm are subject to California Civil Code Section 2782.8, the above indemnity shall be limited, to the extent required by Civil Code Section 2782.8, to claims that arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the Firm.

Under no circumstances shall the insurance requirements and limits set forth in this Agreement be construed to limit Firm's indemnification obligation or other liability hereunder. Notwithstanding the foregoing, such obligation to defend, hold harmless and indemnify the OCFA, its board members officials, officers, employees,

agents and volunteers, shall not apply to the extent that such Claims are caused by the sole negligence or willful misconduct of that indemnified party.

7. RECORDS AND REPORTS

7.1 Reports

Firm shall periodically prepare and submit to the Contract Officer such reports concerning the performance of the Services required by this Agreement as the Contract Officer shall require.

7.2 Records

Firm shall keep such books and records as shall be necessary to properly perform the Services required by this Agreement and enable the Contract Officer to evaluate the performance of such Services. Except as provided in Section 7.5, the Contract Officer shall have full and free access to such books and records at all reasonable times, including the right to inspect, copy, audit and make records and transcripts from such records.

7.3 Ownership of Documents

Except as provided in Section 7.5, all drawings, specifications, reports, records, documents and other materials prepared by Firm in the performance of this Agreement shall be the property of OCFA and shall be delivered to OCFA upon request of the Contract Officer or upon the termination of this Agreement, and Firm shall have no claim for further employment or additional compensation as a result of the exercise by OCFA of its full rights or ownership of the documents and materials hereunder. Firm may retain copies of such documents for its own use. Firm shall have an unrestricted right to use the concepts embodied therein.

7.4 Release of Documents

All drawings, specifications, reports, records, documents and other materials prepared by Firm in the performance of Services under this Agreement shall not be released publicly without the prior written approval of the Contract Officer.

7.5 Confidential Materials

Notwithstanding anything to the contrary in this Agreement, the Firm shall be the sole owner of Firm's work papers and of any other documents, data or information which are required to be maintained confidential from OCFA by one or more rules of professional conduct governing the Firm's profession(s) (collectively, the "Confidential Materials"). Neither the OCFA nor the Contract Officer shall have access to the Confidential Materials except as may otherwise be required by order issued by a court of competent jurisdiction.

8. ENFORCEMENT OF AGREEMENT

8.1 California Law

This Agreement shall be construed and interpreted both as to validity and to performance of the parties in accordance with the laws of the State of California. Legal actions concerning any dispute, claim or matter arising out of or in relation to this Agreement shall be instituted in the Superior Court of the County of Orange, State of California, or any other appropriate court in such county, and Firm covenants and agrees to submit to the personal jurisdiction of such court in the event of such action.

8.2 Waiver

No delay or omission in the exercise of any right or remedy of a non-defaulting party on any default shall impair such right or remedy or be construed as a waiver. No consent or approval of OCFA shall be deemed to waiver or render unnecessary OCFA's consent to or approval of any subsequent act of Firm. Any waiver by either party of any default must be in writing and shall not be a waiver of any other default concerning the same or any other provision of this Agreement.

8.3 Rights and Remedies are Cumulative

Except with respect to rights and remedies expressly declared to be exclusive in this Agreement, the rights and remedies of the parties are cumulative and the exercise by either party of one or more of such rights or remedies shall not preclude the exercise by it, at the same or different times, of any other rights or remedies for the same default or any other default by the other party.

8.4 Legal Action

In addition to any other rights or remedies, either party may take legal action, in law or in equity, to cure, correct or remedy any default, to recover damages for any default, to compel specific performance of this Agreement, to obtain injunctive relief, a declaratory judgment, or any other remedy consistent with the purposes of this Agreement.

8.5 Termination Prior to Expiration of Term

OCFA reserves the right to terminate this Agreement at any time, with or without cause, upon thirty (30) days written notice to Firm, except that where termination is due to the fault of the Firm and constitutes an immediate danger to health, safety and general welfare, the period of notice shall be such shorter time as may be appropriate. Upon receipt of the notice of termination, Firm shall immediately cease all Services hereunder except such as may be specifically approved by the Contract Officer. Firm shall be entitled to compensation for all Services rendered prior to receipt of the notice of termination and for any Services authorized by the Contract Officer thereafter.

Firm may terminate this Agreement, with or without cause, upon thirty (30) days written notice to OCFA.

8.6 Termination for Default of Firm

If termination is due to the failure of the Firm to fulfill its obligations under this Agreement, OCFA may take over the work and prosecute the same to completion by contract or otherwise, and the Firm shall be liable to the extent that the total cost for completion of the Services required hereunder exceeds the compensation herein stipulated, provided that OCFA shall use reasonable efforts to mitigate damages, and OCFA may withhold any payments to the Firm for the purpose of set-off or partial payment of the amounts owed to OCFA.

8.7 Attorneys' Fees

If either party commences an action against the other party arising out of or in connection with this Agreement or its subject matter, the prevailing party shall be entitled to recover reasonable attorneys' fees and costs of suit from the losing party.

9. OCFA OFFICERS AND EMPLOYEES; NON-DISCRIMINATION

9.1 Non-Liability of OCFA Officers and Employees

No officer or employee of OCFA shall be personally liable to the Firm, or any successor-in-interest, in the event of any default or breach by OCFA or for any amount which may become due to the Firm or its successor, or for breach of any obligation of the terms of this Agreement.

9.2 Covenant Against Discrimination

Firm covenants that, by and for itself, its heirs, executors, assigns, and all persons claiming under or through them, that there shall be no discrimination or segregation in the performance of or in connection with this Agreement regarding any person or group of persons on account of race, color, creed, religion, sex, marital status, national origin, or ancestry. Firm shall take affirmative action to insure that applicants and employees are treated without regard to their race, color, creed, religion, sex, marital status, national origin, or ancestry.

10. MISCELLANEOUS PROVISIONS

10.1 Confidentiality

Information obtained by Firm in the performance of this Agreement shall be treated as strictly confidential and shall not be used by Firm for any purpose other than the performance of this Agreement without the written consent of OCFA.

10.2 Notice

Any notice, demand, request, consent, approval, or communication either party desires or is required to give to the other party or any other person shall be in writing and either served personally or sent by pre-paid, first-class mail to the address set forth below. Either party may change its address by notifying the other party of the change of address in writing. Notice shall be deemed communicated forty-eight (48) hours from the time of mailing if mailed as provided in this Section.

Orange County Fire Authority
Attention: Sara Kennedy
1 Fire Authority Road
Irvine, CA 92602

WITH COPY TO:
David E. Kendig, General Counsel
Woodruff, Spradlin & Smart
555 Anton Blvd. Suite 1200
Costa Mesa, CA 92626

To Firm:

Special Operations Solutions, LLC.,
DBA AEVEX Engineering & Technology
Attention: Kathy Clark
440 Stevens Ave. Suite 150
Solana Beach, CA 92075

10.2 Integrated Agreement

This Agreement contains all of the agreements of the parties and cannot be amended or modified except by written agreement.

10.3 Amendment

This Agreement may be amended at any time by the mutual consent of the parties by an instrument in writing.

10.4 Severability

In the event that any one or more of the phrases, sentences, clauses, paragraphs, or sections contained in this Agreement shall be declared invalid or unenforceable by valid judgment or decree of a court of competent jurisdiction, such invalidity or unenforceability shall not affect any of the remaining phrases, sentences, clauses, paragraphs, or sections of this Agreement, which shall be interpreted to carry out the intent of the parties hereunder.

10.5 Corporate Authority

The persons executing this Agreement on behalf of the parties hereto warrant that they are duly authorized to execute this Agreement on behalf of said parties and that by so executing this Agreement the parties hereto are formally bound to the provisions of this Agreement.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the dates stated below.

"OCFA"

ORANGE COUNTY FIRE AUTHORITY

Date:_____ By:_____

Sara Kennedy, CPPB
Purchasing Manager

APPROVED AS TO FORM.

By:_____
David E. Kendig
General Counsel

Date: 6/17/2020

ATTEST:

_____
Maria Huizar
Clerk of the Board

"FIRM"

SPECIAL OPERATIONS SOLUTIONS, LLC., DBA AEVEX ENGINEERING & TECHNOLOGY

Date: 8 June 2020 By:_____
Kathy Clark
Senior Contracts Administrator

Digitally signed by Kathy Clark
Date: 2020.06.08 18:10:51 -07'00'

Date: 9 June 2020 By:_____
Paul Stewart
Vice President, General Manager

Digitally signed by Paul F. Stewart, Jr.
DN: cn=Paul F. Stewart, Jr., email=pstewart@aevex.com, c=US
Date: 2020.06.09 09:59:55 -07'00'

EXHIBIT "A"
Scope of Services

A1. FIRM QUALIFICATIONS

Firm shall obtain interagency pilot and aircraft inspection and carding upon aircraft delivery at the start of operations.

A2. FIRM PROPOSAL

In addition to the requirements stated in RFP SK2434b, the services to be provided include those stated in Firm's proposal, below:

RFP No: SK2434b | Date Submitted: May 10, 2020

Orange County Fire Authority (OCFA)
Remote Sensing Aircraft: Fire Integrated Real-time Intelligence System (FIRIS) Program

Response to Request for Proposal (RFP)

Submitted To:
Orange County Fire Authority (OCFA)
1 Fire Authority Road, Building C
Irvine, CA 92602
ATTN: Sara Kennedy, Assistant Purchasing Agent
Telephone: (714) 573-6643
Email: sarakennedy@ocfa.org

Submitted By:
Special Operations Solutions, LLC
Doing Business As: **AEVEX Engineering & Technology**
329 Lucy Drive, Harrisonburg, VA 22801
CAGE Code: 51BG6 | DUNS Number: 809642239
www.AEVEX.com

AEVEX AEROSPACE

AEVEX Point of Contact:
Kathy Clark, Sr. Contract Administrator
Telephone: (858) 204-0700
Email: kclark@AEVEX.com

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1. Transmittal Letter

AEVEX AEROSPACE
ENGINEERING & TECHNOLOGY

10 May 2020

Orange County Fire Authority
Purchasing Department
1 Fire Authority Road, Building C
Irvine, CA 92602

Attention: Sara Kennedy

Subject: Proposal AET20-04
Remote Sensing Aircraft: Fire Integrated Real-time Intelligence System Program

Reference: RFP SK2434b dated 24 April 2020

Enclosures: 1) AEVEX Response to RFP SK2434b dated 10 May 2020
2) AEVEX Response to RFP SK2434b Cost File
3) AEVEX Response to RFP SK2434b Cost Breakdown

Dear Ms. Kennedy,

Special Operations Solutions, LLC doing business as AEVEX Engineering & Technology (AEVEX) is pleased to provide this Firm Fixed Price (FFP) proposal to Orange County Fire Authority (OCFA) in response to the referenced request for Remote Sensing Aircraft: Fire Integrated Real-time Intelligence System (FIRIS) Program.

AEVEX and its long-time industry partner, Dynamic Aviation Group, Inc. (Dynamic Aviation) comprise Team AEVEX. Dynamic Aviation is a leading provider of modified special-mission aircraft with more than two decades of experience conducting firefighting operations.

Team AEVEX provides OCFA with the expertise, equipment, innovation and leadership to successfully support FIRIS 2.0 for California's 2020 fire season and beyond. Our mission-proven remote sensing platform, paired with the King Air and highly qualified aircrew, is specifically tailored to maximize aerial firefighting effectiveness while minimizing program costs and risks.

440 Stevens Avenue, Suite 150
Solana Beach, CA 92075

AEVEX.COM

In the following technical proposal, OCFA will discover Team AEVEX's clear conception of the FIRIS 2.0 mission to support 12-hour and/or 24-hour schedules at up to two locations within California. The period of performance is understood to be a period of 180 days with an anticipated start date of 1 July 2020. Dynamic Aviation will deploy and operate one or two Beechcraft King Air 200 aircraft, modified and specially equipped for fire surveillance. Each aircraft accommodates a crew of four and hold 4.5 hours' useable fuel. AEVEX's GeoFOCIS software provides full spectrum intelligence, surveillance, and reconnaissance (ISR) solutions to conduct fire surveillance and mapping. Data collected will provide actionable intelligence to end users engaged in firefighting efforts.

Our experienced sensor operators are intimately involved in the software and hardware development process, providing intimate knowledge of the equipment's functionality and capabilities. Our hardware and software engineers have field experience as well, ensuring support from engineers who understand the mission and are continuously pursuing technological advancement and innovation.

Team AEVEX provides flight-ready aircraft that meet National Type 1 Air Tactical Group Supervisor (ATGS) platform requirements, currently inspected and carded, and equipped with all technological requirements defined in RFP Section 2.2, including remote sensing equipment with all required attributes such as moving map software/hardware, beyond horizon data transmission capabilities, and fire perimeter outputs. Installation specifications will meet stated FAA requirements and records will be available for review by OCFA and interagency officials. Pilots are Interagency wildland fire carded and qualified for the FIRIS 2.0 program.

Team AEVEX Offers a Best Value Approach

Feature	OCFA Benefit
Proven, in place Team. Years of collaboration, lessons learned, and successful execution.	Provides a team built specifically for this mission. Lowers risk to schedule and offers lessons learned from similar programs.
In-house turn-key solution for software, hardware, and people.	Lowers cost, risk, lead time, and downtime. Provides sensor operators who are embedded in the software and hardware development processes and field-proven hardware and software developers for continuity and opportunity for continuous innovation.
AEVEX is built to perform end-to-end ISR solutions.	Offers agility, flexibility, passion, and all-hands-on-deck customer service mentality of a small business, but with the resources, depth, and experience of a large business.
Integrated management processes and controls specifically designed for this effort.	Keeps commitments; ensures no surprises to the delivery schedule or proposed solution. Provides quality products that meet capability requirements and performs to all objectives.
Tailored processes. Experienced people using a proven Concept of Operations (CONOPs).	Reduces cost, minimizes impact to schedule, and overall lowers risk across the total program.
Fully customizable software, curated for similar operational environments.	Offers a level of flexibility for current and future mission requirements. No waiting for off-the-shelf vendors to meet immediate needs or desires.

Team AEVEX's proposal shall remain valid and in effect through November 11, 2020.

440 Stevens Avenue, Suite 150
Solana Beach, CA 92075

AEVEX.COM

We appreciate the opportunity to provide this proposal for OCFA's consideration. Inquiries may be directed to Kathy Clark, kclark@aevex.com or 858-204-0700.

Sincerely,

Wayne Miller

Digitally signed by Wayne Miller
Date: 2020.05.07 16:04:57 -04'00'

Wayne Miller
Vice President, Contracts

440 Stevens Avenue, Suite 150
Solana Beach, CA 92075

AEVEX.COM

2. Firm's Detailed Information

Special Operations Solutions, LLC doing business as (dba) AEVEX Engineering & Technology (AEVEX), is a company that specializes in the rapid design, development, and delivery of tailored solutions for airborne operations. Our company was founded in 2008 and we have been in business for almost 13 years. Our headquarters is in Harrisonburg, VA, where we maintain an AS9100D and ISO 9001:2015 certified Production Facility. We also have a Software & Systems Laboratory located in Quincy, MA. Our services include systems and software design/engineering, rapid prototyping and fabrication, sensor integration, custom hardware/electronics, and technical/operational support. Additionally, AEVEX's two (2) other business units – AEVEX Flight Operations and AEVEX Intelligence Solutions – enable our organization to provide full spectrum Intelligence, Surveillance, and Reconnaissance (ISR) solutions from aircraft procurement and design to post-mission analysis. Between our three (3) business units, AEVEX employs over 580 full-time technical, operational, and programmatic experts currently supporting 25 clients around the globe.

AEVEX has partnered with Dynamic Aviation Group, Inc. (Dynamic Aviation) to provide seamless, one-voice operations for over a decade. Dynamic Aviation, a leading provider of modified special-mission aircraft, brings over 26 years of experience operating King Air platforms, including 22 years conducting aerial firefighting operations. Located in Bridgewater, VA near AEVEX's Production Facility, Dynamic Aviation owns and operates a public airport and U.S. Federal Aviation Administration (FAA)-approved Part 145 Repair Station with a fleet of 140 aircraft, including 28 King Airs. Additionally, they possess hangar space and aircraft in Los Alamitos, CA. Dynamic Aviation's staff includes 650+ aviation professionals who have amassed over 700,000 total flight hours supporting aerial data collection. To maximize our OCFA solution, Dynamic Aviation will provide the aircraft, pilots, mechanics, and flight operations support.

AEVEX is pleased to provide **Appendix A – Offeror's Information** in the following page.

Appendix A – Offeror's Information

Orange County Fire Authority RFP No. SK2434b

APPENDIX A - OFFEROR'S INFORMATION

Please complete and/or provide all requested information. If the proposal is submitted by a corporation, please 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 proposal if by a partnership or a joint venture, state the names and addresses of all general partners and joint venture parties. If the respondent is a sole proprietorship or another entity that does business under a fictitious name, the proposal 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.

The undersigned, as respondent, declares that all documents regarding this proposal have been examined and accepted and that, if awarded, will enter into a contract with the Orange County Fire Authority.

Business Legal Name Special Operations Solutions, LLC doing business as AEVEX Engineering & Technology		
Business Parent or Ownership Madison Dearborn Partners		
Address: 329 Lucy Drive, Harrisonburg, VA 22801		
Business Telephone No 858-704-4125	Business Fax No 202-204-1368	
Business Tax I D Number: 37-1562178	CSLB License Number: N/A	DIR Registration Number: N/A
Legal form of company (partnership, corporation, joint venture) Corporation		
Length of time your business has been in business 12 years 6 months	Length of time at current location 1 year	
Number of employees and Number of Current Clients 580+ employees, 25+ active current clients, 60+ distinct contract vehicles		

Management person responsible for direct contact with the Orange County Fire Authority and service required for this Request for Proposal (RFP).

Name: Kathy Clark	Title Senior Contract Administrator
Telephone No 858-204-0700	E-mail kclark@aevex.com

Person responsible for the day-to-day servicing of the account:

Name Ron Trosclair	Title Program Director
Telephone No 469-978-0523	E-mail rtrosclair@aevex.com

Please indicate if you are subject to the Party and Participant disclosure requirements. ~~Yes~~ No

If yes, you are required to submit form/s (see Appendix F).

****For additional information please see page 12 "Campaign Contribution Disclosure".***

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3. Relevant Experience

Since 2008, AEVEX has designed, built, and deployed end-to-end airborne ISR solutions integrating a wide variety of aircraft (manned/unmanned, fixed/rotary wing), multi-INT sensors, mapping systems, and communication systems to provide actionable intelligence to end users. Our customer base includes the U.S. Department of Agriculture's (USDA) U.S. Forest Service (USFS), Department of State's (DoS), National Oceanic and Atmospheric Administration (NOAA), many U.S. Department of Defense (DoD) organizations, to include the U.S. Special Operations Command (USSOCOM), as well as several commercial and international organizations. We have supported USFS fire operations since 2016 and bring experience with U.S. military remote sensing programs such as Night Eagle (2008 – present), Desert Owl (2010 – 2014), Saturn Arch (2009 – present), and ARL-E (2016 – present). On these programs, AEVEX is responsible for the development, testing, sustainment, and operation of multi-sensor, fixed-wing platforms. Our long history with the defense community carries a theme of uninterrupted, 24/7 operations for several decade-long programs. This experience and knowledge base of public agency needs, coupled with our proven, real-world fire solution, positions us to meet the Orange County Fire Authority's (OCFA's) needs for initial and extended attack in response to fire incidents.

USFS NightWatch – In April 2016, AEVEX and Dynamic Aviation—Team AEVEX— began operations for the USFS Region 5 NightWatch program. For this ongoing effort, AEVEX is responsible for the engineering, integration, software development, field service support, and sensor operators, while Dynamic Aviation provides the aircraft, pilots, mechanics, and flight operations support. Our team provides a King Air B200 with a FLIR Star SAFIRE 380-HDc sensor, operator workstation, and AEVEX's GeoFOCIS software to conduct fire surveillance and mapping. Historically, the USFS NightWatch Program was created to solve a unique need and problem set that was highlighted by the Station Fire Incident. In 2009, the California Station Fire spread rapidly overnight, charring nearly 160,000 acres without notice, as the USFS had previously banned nighttime surveillance flights. The Station Fire catastrophe led California lawmakers to successfully lobby for night flights in 2012. Four (4) years later, NightWatch became the only U.S. program that combines a nighttime air attack unit with an analytical situation awareness suite for nighttime fire intelligence. Team AEVEX's solution now provides the USFS with a previously unseen perspective, providing aerial supervision to active nighttime assets and enabling near real time tactical responses. Since actively supporting NightWatch, our team has amassed 700 operational days with a 98.8% availability rate, 550+ missions to active fires with over 1,200 hours of flight time and counting. The successful night operations in Region 5 resulted in a contract modification requiring 24-hour staffing of the aircraft and extending our operational reach beyond the initial Region 5 requirement.

The AEVEX and Dynamic Aviation long standing partnership and proven track record creates a low risk, seamless operation for OCFA.

The current NightWatch crew consists of a pilot who simultaneously complies with Air Traffic Control (ATC) guidance and supports both the Air Tactical Group Supervisor (ATGS) and sensor operator's mission objectives; an ATGS responsible for the deconfliction and tasking of the aircraft while also supporting ground firefighting personnel; and a sensor operator who assists the ATGS with situational awareness and aerial data collection. Together with the USFS, AEVEX helped create the initial operational concept and to continuously improve the standards for the directed mission deliverables or "intelligence packages." The typical intelligence package we provide to USFS end users consists of narrated videos, identified fire perimeters, and overview snapshots. Recorded using AEVEX's proprietary geospatial analytic software GeoFOCIS, the video clip has imbedded Intercommunications System (ICS) audio which allows

the ATGS to provide a scripted narration describing both general fire status as well as any specific details necessary for ground personnel. GeoFOCIS also provides unique analytic tools for the sensor operator to easily and accurately delineate the current fire perimeter, as well as any identified hot spots with the HDIR (High Definition Infrared) sensor. Both can be exported as either Keyhole Markup Language (KML) or Shapefiles to accommodate end user file preferences. **Figure 1** provides an example of the full-motion video (FMV) feed projected on the 3D globe with high-resolution elevation data, satellite imagery, and the incident map from "ftp.nifc.gov" to provide a holistic level of operational awareness and context to accurately delineate the fire perimeter. The third element of the intelligence package is the Snapshot Overview which gives users a quick, strategic look at the current status of the entire fire incident. A key detail is that initial attacks, extended attacks, or revisits can be differentiated by color so end users can quickly identify growth of the fire perimeter against previously mapped data. This is just one of the many custom features requested by the Forest Service that our in-house software team was able to rapidly develop and implement.

Figure 1. GeoFOCIS 3D Live FMV Projection onto Incident Map GeoPDF.

Figure 2. GeoFOCIS Snapshot Overview Examples from Mission on 2018 Ferguson Fire.

Throughout the program, NightWatch has provided intelligence support to fires ranging in both size and complexity, including the Detwiler, Ferguson, Woolsey, and Saddleridge events. With this experience, AEVEX has seen firsthand that even with standardized analytical process and intelligence packages, each fire event is unique. With this unique context, AEVEX prioritizes tailored, robust, and flexible communication with its operational end users. Fire perimeters and aerial imagery provide elements of essential data, but operationally relevant analysis, whether manual or automatic, is the actual key to answering crucial tactical questions such as distance from containment lines, size of slop overs, location of fire crews, and much more. On NightWatch, AEVEX learned that even with the delivery of sophisticated intelligence products, the addition of either a specific software capability and/or a real-time operator interaction often proved necessary to underwrite operational success. Examples include referencing water drop sites, identifying vehicles of interest, assisting with search and rescue efforts, and directing smokejumpers to cargo drops. In **Figure 3**, we depict imagery from a mission where ground personnel were communicating with the NightWatch aircraft and were successfully "walked on" to the location of their cargo – identifying themselves with only a handheld Bic lighter.

Figure 3. Imagery of Small Heat Signature from Smokejumper's Lighter and Equipment.

In this scenario, the smokejumpers were surrounded by tall thick brush, and after their air dropped equipment landed, a few pieces could not be located. The live FLIR 380HDc imagery feed enabled the aerial sensor operator to quickly geo-reference both the fire crew and equipment and provide an accurate distance and bearing for the team to retrieve their critical gear. It was also insightful for the USFS to know that the FLIR 380HDc is capable of such high-fidelity imagery - *detecting the flame from a three (3) inch lighter.*

Although the NightWatch period of performance corresponds with the California 180-day fire season, AEVEX's support efforts are year-round, customer-focused, and based on shared operational experience. Through daily out-briefs and annual after-action reports, Team AEVEX works directly with the end-user to develop improved procedures and capabilities to support the USFS's aerial fire efforts. This results in a customer Needs and Wants list that our Software Engineering Team uses to develop innovative technical solutions in the off season. Led by one of our key personnel, Darren Butler's, Ph.D. vast knowledge of remote sensing and computer vision applications coupled with his constant, direct involvement with the NightWatch effort ensures that evolving USFS operational needs are able to be addressed with deliberate GeoFOCIS technical customization. These mission-specific upgrades are provided at no additional cost to the customer and all new GeoFOCIS features are coordinated with the Aerial Supervision Program Manager to confirm both development and testing effectiveness and reliability. **GeoFOCIS is uniquely suited for aerial firefighting and continuously improved upon by the firefighters who depend on it**. AEVEX's customization efforts also include the development and implementation of our GeoFOCIS Web (GFW) online application to allow for wide dissemination of intelligence packages within a 3D environment as well as applicable geospatial analytical tools.

USFS FireWatch – In 2017, AEVEX's success on the NightWatch program resulted in a request to support the USFS FireWatch program. FireWatch consists of two (2) Bell 209 AH-1 Cobra helicopters also equipped with FLIR 380-HD series gimbals used as daytime helitack assets. To overcome the unique rotary wing challenges on FireWatch, led by another key personnel, Travis Johnson, AEVEX purchased, integrated, installed, maintained, and provided training in support both helicopters and two (2) data vans equipped with Persistent Systems MPU5 transceivers. Mr. Johnson's extensive experience in aerospace design was essential for these types of modifications on such a unique asset for aerial firefighting. As a Helitack asset, the Cobras are not a high flying, quick transit aircraft, thus they're typically assigned to an incident. Understanding the needs and the technical restrictions of a rotary wing asset led us to this mesh network device solution. The MPU5 transceivers allow the ATGS onboard the

helicopter to focus on helitack and stream the live feed and products generated in the air to a GIS team on the ground for additional analysis. We also provided 10 dismounted kits to enable ground-based firefighters and other surveillance aircraft to create mesh network communications during incident response operations and locally disseminate the live feeds. With the implementation of this air-to-ground communication solution, FireWatch was able to successfully prove their assets even more useful for incident support.

Sensor solutions, air-to-ground communications, and GeoFOCIS integration – the tools needed to support OCFA's objective – are AEVEX's area of expertise and differentiator. We have been providing similar tailored solutions for U.S. military ISR programs since inception, with our most recent example below:

Special Operations Command – Europe (SOCEUR) – Both AEVEX and Dynamic Aviation – Team AEVEX – provided airborne ISR services in Europe for U.S. Special Operations Forces (SOF) from 2017 to 2020. AEVEX procured, integrated, and operated specialized radar systems for Synthetic Aperture Radar (SAR) imagery mapping and Ground Moving Target Indicator (GMTI) collection coupled with Electro-Optical (EO) / IR sensors. These were all ingested into GeoFOCIS to provide an all-source Common Operating Picture (COP) on the aircraft as well as on the ground for processing, exploitation, and dissemination. To enable air-to-ground connectivity, AEVEX implemented the necessary data and communications architecture for both line-of-sight (LOS) and beyond line-of-sight (BLOS) Ku/S/L-band data links, including SATCOM systems with connectivity to the SOCEUR Global Broadcast Service (GBS) and the DISA Unified Video Dissemination System (UVDS). Similar to our efforts with USFS, AEVEX identified additional non-required features, here related to STANAG 7023/4607 GMTI streaming capabilities that we developed and implemented to allow for visualization and enhanced command and control at no additional cost to the client. Our Hardware Engineering Team, led by another key personnel, Director of Hardware, Jordan Barker, developed all workstation and rack designs, hardware, data distribution units, and cabling in-house. Mr. Barker's *decade of experience at AEVEX* alone has accumulated an immense knowledge base for intricate integrations like OCFA's requirements, enabling us to provide a proven solution. AEVEX sensor operators/technicians and Dynamic Aviation pilots/mechanics deployed with the platform to support long-endurance airborne ISR missions and were on-call 24/7/365 to support no-notice tasking. Team AEVEX personnel also performed technical support and maintenance of all fielded systems to ensure high operational readiness rates even with a very fluid beddown concept. Over three (3) years, the platform was based in five (5) different European countries to meet specific military objectives. Despite these operational and logistical challenges, as well as intricacy of the required solution itself, AEVEX demonstrated our team's ability to provide the uniquely flexible and responsive services necessary for mission success.

U.S. Army Night Eagle - AEVEX has an extensive history of continued support across industries, providing this type of uninterrupted, 24/7 airborne ISR operations of a multi-payload integration with data link communications as clearly shown by the U.S. Army Night Eagle program which AEVEX has supported across multiple contracts since 2008. Night Eagle is a uniquely modified King Air A200 platform conducting reconnaissance and exploitation missions in CENTCOM, equipped with an L3-Sonoma 2111X EO/IR FMV sensor system. AEVEX's work on this program has included end-to-end engineering and systems integration of the Night Eagle sensor system, workstation, data storage systems, and data link communications systems onto the platform. AEVEX performed sensor and mission equipment integration and testing; implemented data links and complex networks architectures; and performed sensor fusion, image and signal processing, image compression and aided/automatic target recognition using thermal imaging. Our exceptional performance on this program was recognized by receiving the Night Vision and Electronics Sensors Directorate (NVESD) Technical Logistical, and

Operational Excellence Award. AEVEX continues to support the Night Eagle platform with both sensor operators and intelligence analyst personnel.

Additional Project Examples – Team AEVEX brings robust experience coupled with in-house resources and expertise to provide OCFA with a turn-key remote sensing platform tailored for firefighting operations. In addition to the projects highlighted above, Dynamic Aviation has been performing firefighting services for the USFS and Bureau of Land Management (BLM) since 1998. They have provided modified aircraft, testing, certified mechanics, carded pilots, and 24/7 reach-back resources for numerous firefighting operations. AEVEX has been conducting global 24/7 airborne ISR and mapping operations since our founding in 2008, providing pilots, sensor operators, engineers, and programmatic experts as well as cutting-edge remote sensing technology solutions. Additional project examples from our team are provided in **Figure 4.**

Figure 4. Team AEVEX Project Examples.

U.S. Army Geospatial Center – Buckeye II – High-Fidelity Large-Scale Mapping (AEVEX)
• Supported the sensor integration, imagery processing, and system maintenance for Buckeye II's high altitude EO imagery mapping system coupled with LiDAR sensor systems • Deployed on fixed-wing aircraft for urban mapping missions. Collected high-accuracy elevation data supports the ortho-rectification of imagery, generating 10-15 cm GSD ortho-photos from imagery collected over 25,000 ft above ground level (AGL) • Installed and configured three (3) post-processing hubs, defined standard operating procedures, and trained end users
U.S. Army, Airborne Reconnaissance Low Systems Operations and Sustainment (AEVEX)
• Played a key role in the design, development, integration, and fielding of the Saturn Arch fixed-wing, multi-sensor aircraft platform • Designed/implemented a large-scale, ground processing, exploitation, and dissemination center • Performed technical engineering and integration services for airborne and ground systems and equipment from system design to fielding • Provided sensor operators and field service technicians who operate and sustain visible/optical, IR, synthetic aperture radar, FMV, and hyperspectral sensors as well as ground systems
North Dakota State University – High Precision Agriculture Mapping (AEVEX)
• Supported the integration, acquisition, and processing of the VisionMap A3 Edge Digital Mapping System for a large-scale agricultural project commissioned by North Dakota State University • Captured up to 1,000 sq.km per hour of high-resolution imagery for agriculture and land management applications from an altitude of 4,000 ft. AGL • Delivered 3-4cm GSD orthophotos from near-infrared (NIR) imagery in combination with EO imagery • Generated digital surface and elevation models through automated photogrammetric derivation, yielding densities up to 400 points per square meter
USFS R3/R6- Exclusive Use Fixed Wing Aircraft Air Tactical Type 1 Platform (Dynamic Aviation)
• Provided one (1) King Air E90 outfitted with ATGS Type 1 avionics and one (1) dedicated Field Technical Representatives (FTR) to maintain the aircraft in the field. Maintained and operated under Part 135 certificate • Modified the E90 with bubble and eyebrow windows for the mission observer • Performed quick-response flight operations, while ensuring aircraft reliability and availability • Worked closely with the customer to ensure compliance with the contract and that FTRs and pilots remained on schedule and meet customer requirements
Bureau of Land Management (BLM) Aerial Supervision Module (ASM) – Multiengine Turbine Aircraft (Dynamic Aviation)
• Supported BLM firefighting activities with a low-level lead plan and air attack missions • Performed resource management, passenger and cargo transportation, and administrative activities. Operations were based out of Boise, ID; Grand Junction, CO; and Lancaster, CA • Provided three (3) King Air E90s compliant with FAA standards and modified for fire operations. Supplied two (2) aircraft on a call when needed basis

- Provided FTRs with A&P certification who maintained the aircraft and maintenance records
- Flew a total 7,223 flight hours and maintained an operational availability/reliability rate of 99%

Department of the Interior, BLM Lead Planes (Dynamic Aviation)

- **Provided one (1) turboprop aircraft and two (2) jet aircraft for BLM lead plane operations**
- **Obtained the necessary standard airworthiness certificate for the aircraft, as well as ensured all manuals and records were in accordance with the proper Code of Federal Regulations**
- **Provided A&P mechanics and parts and spares in support of firefighting operations. Employed dedicated FTRs who hold A&P certification and maintain the aircraft to FAA standards**

4. Appendix C - Proposal Questionnaire

4.1. Method of Approach

AEVEX is qualified and ready to execute our approach described in this questionnaire. Our company was formed to respond to the growing need for quick response, airborne intelligence, and we specialize in end-to-end aerial solutions. Our user-customized capabilities span the spectrum of both technical and operational capability, from aircraft selection and sensor integration to sustained global operations and intelligence analysis. We currently manage more than 60 airborne programs, with personnel operating nationwide and in over 20 countries around the world. Both AEVEX and Dynamic Aviation meet all minimum requirements:

- The proposed King Air 200 aircraft will be equipped with an ATGS National Type 1 avionics suite; flight test meter; cargo restraints; safety belts and harnesses; and safety/first aid equipment.
- Most of our proposed pilots are currently wildland fire carded with the remaining few to be carded by 31 May 2020; well before contract award and mission execution.
- Both AEVEX and Dynamic Aviation have extensive experience working with multi-disciplinary teams in support of firefighting operations (air attack, lead plane) and aerial data collection efforts (ISR management, aerial mapping).
- Our proposed project team possesses the requisite certifications, training, and technical/operational experience to conduct operationally relevant aerial data collection, as demonstrated by the resumes and licenses provided within our response.
- Both AEVEX and Dynamic Aviation are aircraft providers and have the required insurance policies in place in accordance with the RFP. Copies of our Certificate of Insurance will be provided upon contract award.
- Both AEVEX and Dynamic Aviation have a successful track record supporting U.S. Government customers, with no instances of suspensions or debarment.

In the following sections, we describe how AEVEX Aerospace will deliver OCFA a turn-key, fully customizable, robust solution to ensure the continued success of the Fire Integrated Real-time Intelligence System (FIRIS) program. Our team offers a mission-proven remote sensing platform tailored to maximize aerial firefighting effectiveness and customer support, while minimizing program costs and risks. **Figure 5** provides an overview of our team's approach to equip, deliver, and operate the FIRIS 2.0 remote sensing platforms.

Figure 5. The AEVEX Team Solution Overview.

Key Personnel

Program Director/ Principal
Ron Trosclair

Project Manager/ Technical Lead
Travis Johnson

Hardware Engineering Director
Jordan Barker

Software Engineering Director & Chief Scientist
Darren Butler Ph.D.

The AEVEX Team Solution

Concept of Operations (CONOPS)

Pre-Award Activities	Contract Award, Plan and Design	Operational Customization	Aircraft Delivery, Carding	180 Days- Mission Execution
• Conduct Procurement Planning • Develop Conceptual Renderings	• Mobilize Project Team • Optimize Project Requirements	• Finalize Conceptual Engineering Package • Procure Required Systems/Equipment • Integrate Mission Systems and Equipment	• Conduct Flight Acceptance Test • Operational Briefing and Mission Planning	• Generate Fire Perimeters • Create Incident Maps and Video Narrations clips • Disseminate Intelligence Package and Video Streaming to Ground Users • Maintain Platform/Systems to Ensure Operational Readiness

Partner

Dynamic Aviation

Vendors

OVERWATCH
PERSISTENT SYSTEMS
Viasat
FLIR

Why AEVEX?

- In-house turn-key solution for software, hardware, and people
- Flexible for continuous innovation to meet customer's desires
- Flexible for current and future mission requirements
- Our company is built to perform end-to-end ISR solutions
- "All-hands-on-deck" customer service

1. Provide specific project-related information demonstrating competence in the services to be provided; including supporting evidence of available technology, operation plans, and overall approach to the provision of services as described.

Overall Approach. To provide OCFA with fixed-wing, multi-engine, turbine-powered aircraft for airborne data collection, Team AEVEX proposes up to two (2) King Air 200 aircraft equipped for fire surveillance operations. The aircraft are available for 12- to 24-hours per day for a minimum of 180 days, with one (1) aircraft based in Northern California (location TBD by the customer) and the second based in Southern California (Los Alamitos, CA). Our staffing approach includes qualified aircrew to support either a 12-hour or 24-hour day with the shifts outlined in RFP Section 2.1.3. Team AEVEX scales up or down as needed to meet OCFA objectives; we currently have 208 pilots, 247 mechanics, and 56 sensor operators on staff and routinely provide personnel to respond to short-notice mission requirements. Additionally, the majority of our proposed staff have extensive experience with aircraft integration and flight operations for firefighting efforts, including several personnel who have supported the USFS NightWatch program since its inception in 2016. This experience provides a unique level of understanding of OCFA's mission and allows for AEVEX to be postured to deliver and employ the FIRIS 2.0 aircraft in time for the 2020 fire season. For OCFA, AEVEX integrates each aircraft for remote sensing as outlined in **Figure 6**, providing the required sensors, communications, and software systems to enable real-time fire data collection, analysis, and dissemination. This solution is proven through both U.S. military ISR programs as well as through USFS air attack operations. Since 2016, we have refined and customized this solution specifically for fire measurement, prediction, and analysis utilizing specific feedback from USFS personnel. Similarly, we further optimize the platform system to meet OCFA's specific requirements and FIRIS 2.0 objectives. As the prime contractor supporting fire missions, AEVEX is responsible for all project management, systems engineering, aircraft integration, software engineering, airborne sensor operations, and oversight of all flight operations. Our subcontractor Dynamic Aviation is responsible for providing the aircraft platform, pilots, maintenance crews, and aircraft spares/equipment. Our collective technical, operational, and management approaches are detailed in the following sections.

Figure 6. FIRIS Platform.

Team AEVEX FIRIS 2.0 Platform	
Robust Imaging & Mapping	• FLIR Star SAFIRE 380-HDc • Overwatch TK-9 HD
3D Visualization & Fire Analysis	• GeoFOCIS Software • Operator Workstation
Real-Time Data Dissemination	• GeoFOCIS Web Application • Viasat GAT-5518 SATCOM • Wave Relay® MPU5 • Dual LTE Cellular connectivity

Figure 7. Dynamic Aviation King Air 200.

Aircraft Platform (SOW 2.2.1). Team AEVEX proposes two (2) Beechcraft King Air 200 aircraft. These platforms are owned and operated by Dynamic Aviation, a company with 26+ years of specialized experience with overhauling, maintaining, equipping, modifying, and testing King Air platforms. AEVEX provides qualified sensor operators to operate the remote sensing equipment and produce mission products. The King Air 200, a C-12 class aircraft,

has a maximum gross weight (MGW) of up to 14,000 lbs. and offers a 2,991 km/1,615 nm range. To enhance loiter time and aircraft range, extended fuel tanks are an available modification to the 200. Additionally, the King Air 200's dual engine configuration offers increased safety margins. It has an ample, climate-controlled cabin, ideal for real-time, in-flight data analysis, and a fully integrated cabin intercom system for mission crews and operators/observers to freely and effectively conduct both aircraft internal and air-to-ground communications. For OCFA, the King Air 200 aircraft will be configured to accommodate four (4) crew members and house all mission systems and associated equipment while meeting mission profile requirements. Aircraft specifications are provided in **Figure 8.**

Figure 8. Aircraft Specifications.

King Air 200 Specifications	
Dimensions	44 ft. Length | 15 ft. Height | 57 ft. Wingspan
Total Mission Time	6 hrs.
Max. Range	1,375 nm
Useful Load	6,030 lbs.
Cruise Speed (TAS)	257 kts.
Conditions: Altitude: 20,000 ft. AGL | Temp: ISA+10C Total Mission Time: The max flying time available while still landing with 1-hour reserve Max Range: Distance able to be flown with a cruise altitude of FL200 and 1-hour reserve	

ATGS Compliance. Both platforms comply with National Type 1 ATGS requirements. The aircraft includes an avionics suite as outline in **Figure 9.** All avionics installed in the aircraft have been installed in accordance with manufacturer installation data, and applicable FAA guidance.

Figure 9. Aircraft Avionics.

King Air 200 Avionics Suite	
• Air tactical avionics	• TSO approved VOR/Localizer
• Additional VHF-AM radios	• TSO approved Glideslope
• VHF-FM radios & Programming Ports	• TSO approved DME
• Push to Talk cord for observer & instructor	• TSO approved 3 light marker beacon system
• Aft Audio Control	• Satellite weather system
• Aeronautical GPS	• Provisions for IFR operations
• Traffic Advisory System	• Master volume control
• Autopilot	• Individual volume control
• Radar Altimeter	• TWO ACS-296
• Multi-Function Display	• Auxiliary power source
• Dual USB Ports	• Turboprop
• Multi engine	• Pressurized
• Low Wing	• Relief pilot
• Air Conditioning	• Mountainous Terrain Flights

Additionally, the aircraft have the following capabilities that meet ATGS Type 1 requirements:

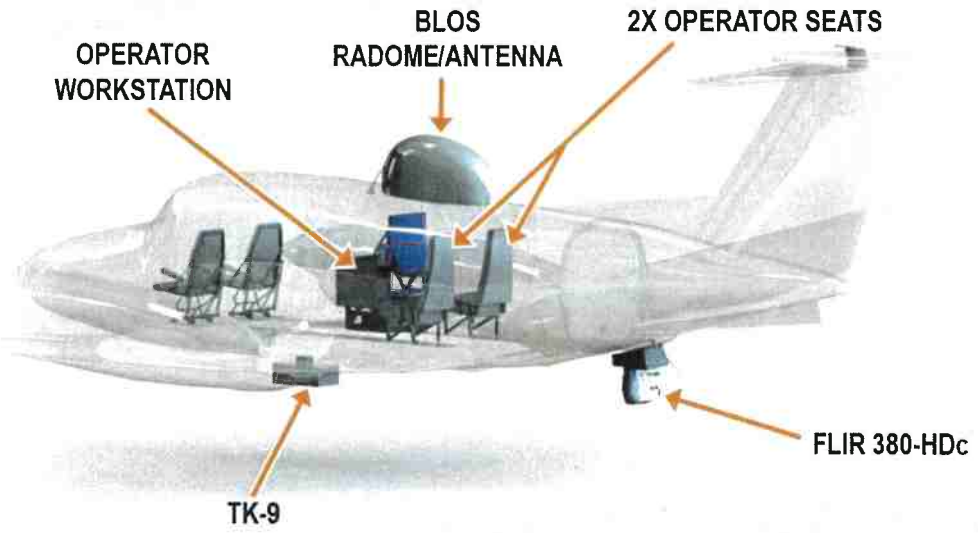
- Flight hour meter recording accurate flight time from takeoff to landing in hours/tenths.
- Cargo restraints, including FAA approved tie downs, nets, and cargo straps.
- Safety belts that meet the FAA requirements and will be worn by crew members during takeoff and landing. Front seats possess the FAA approved shoulder harness.

The following equipment is accessible to the pilots: adhesive bandage compresses (minimum 3 inches), antiseptic wipes, bandage compresses, triangular bandage compresses, roller bandage, adhesive tape, bandage scissors, and body fluids barrier kit. As required by Part 135, each aircraft contains a fire extinguisher.

Remote Sensing Equipment (SOW 2.2.2). In the sections below we address specific SOW requirements related to remote sensing equipment.

Installation (SOW 2.2.2.1 & SOW 2.2.2.2). AEVEX's Hardware and Software Engineering Teams are responsible for platform design, engineering, integration, and testing. They integrate the FLIR Star SAFIRE 380-HDc onto the approved tail mount (same as that used on USFS NightWatch) and TK-9 system onto the belly of the aircraft. The BLOS systems will be integrated onto the aircraft using the approved Adaptive Aerospace radome. The installation effort will be led by our Project Manager, Mr. Travis Johnson, who is an experienced Lead Design Engineer with 16+ years of mechanical and aerospace engineering experience. Travis brings design experience on platforms such as USFS NightWatch, USFS FireWatch, and several other U.S. Army fixed-wing ISR aircraft. He will lead a dedicated team of engineers experienced with King Air modification and integration, including designing and installing various types of EO/IR, hyperspectral, and 3D mapping camera systems. This is the same AEVEX team responsible for USFS NightWatch sensor installation, workstation design and installation, and GIS system integration. **Figure 10** provides an overview of our proposed platform design for FIRIS 2.0.

Figure 10. Team AEVEX's Remote Sensing Platform.



AEVEX has installation experience on over 200+ sensor systems, including 75+ installations onto King Air 200 platforms. We have integrated a variety of sensor systems such as EO/IR turrets, FMV cameras, large format digital mapping cameras, analog mapping cameras, LiDAR scanners, radars, and more. AEVEX engineers routinely design and fabricate sensor mounts, custom enclosures and racks, cabling/wiring, power conditioning and distribution, and antenna installations. Additionally, our partner Dynamic Aviation has a FAA-approved Part 145 Repair Station in Bridgewater, VA and extensive experience with aircraft modification and integration. AEVEX and Dynamic Aviation's long, successful history of program collaboration is enhanced by our proximal locations in northern Virginia.

All AEVEX designs follow an AS9100D/ISO 9001:2015 approved configuration management process throughout the project lifecycle. Designs undergo Preliminary Design Review (PDR) and Critical Design Review (CDR), and any revisions use AEVEX's rigorous Engineering Change Process. Our team supplies all installation drawings for Outer Mold Line (OML) equipment, including antennas and gimbal installations. All drawings adhere to AS9100D/ISO 9001:2015 drawing standards. All installations will be approved via FAA Form 337 with 8110-3 or STC, and all Designated Engineering Representative (DER) supporting engineering substantiations are developed by our in-house DER. Designs with no STC are field approved with conformity inspections by completing FAA Form 337 in conjunction with FAA Form 8110-3. AEVEX's DERs prepare, submit, and facilitate FAA approvals. Per the FAA Federal Aviation Regulations and guidelines, the FAA Forms 8110-3 and 337 are used to substantiate and confirm the design and its implementation.

Pertinent data Review. AEVEX ensures that drawings and supporting documentation are available for review by OCFA and interagency carding officials prior to contract award.

EO/IR Sensor (SOW 2.2.2.3). AEVEX proposes the FLIR Star SAFIRE 380-HDc sensor, which is an electro-optical/infrared (EO/IR) camera system featuring 1080p color performance for the finest detail, combined with a shortwave IR (SWIR), high-definition (HD) mid-wave IR (MWIR), and a low-light (LL) color sensor for night imaging. Its continuous zoom lenses for thermal, color, and LL offers uninterrupted viewing during missions. The 380-HDc provides OCFA with a robust imaging capability that is ideal for firefighting operations, with four (4) sensor types including the LL for night operations and SWIR for imaging through smog, smoke, and haze. Blending is a built-in feature with our EO/IR sensor. The capability improves awareness by providing the capability for operators to overlay EO, LL, or SWIR video on the MWIR video. This feature greatly enhances sensor operator awareness. An example is blending a SWIR and MWIR image. This allows the operator to see through the smoke with the SWIR but also see the thermal characteristics of the fire with the MWIR. The system delivers HD imagery/video in a compact, low profile package, capturing four times more detail than other conventional systems. A 15-inch gimbal enables focal lengths up to 500 mm

Figure 11. FLIR Star SAFIRE 380-HDc Sensor for USFS Fire Missions.

"I am impressed with the capabilities of your system...the aircraft and sensor package were a great combination and made for an excellent experience."
- Region 5 Aerial Supervision Program Mgr.

for MWIR, up to 985 mm SWIR, and up to 340 mm for color imagery. AEVEX employed the 380-HDc system on the USFS NightWatch program from 2016-2020 where it proved to be a highly effective imaging system for fire mapping missions. The Star SAFIRE 380-HDc features a dual view capability allowing for setting one (1) camera simultaneous to wide field-of-view for awareness and close-in zoom for details, while zooming in on the detail with another camera. **Figure 12** outlines system specifications, demonstrating how the sensor meets or exceeds all OCFA requirements.

Figure 12. FLIR Specifications.

FLIR Star SAFIRE 380-HDc Specifications	
OCFA Requirement	**Star SAFIRE 380-HDc**
1.1. 360-degree horizontal plane and up-down ranging gimbal mounted EO/IR Sensor.	360-degree coverage with EO and IR with continuous zoom HD optics. 1080p color EO sensor with 40° to 1.2° continuous zoom
1.2. Sensor must be capable of withstanding an aircraft operating speed of 250 knots indicated air speed or faster, altitude operating parameter 25 thousand feet or less.	250 KIAS, 0-50,000 ft.
1.3. Gimbal diameter will range in the 14 to 20 inch in size with appropriate color optical focal length.	15-inch gimbal diameter. Focal lengths: • MWIR: 25 mm – 500 mm • Color: 8.5 mm – 340 mm • Low-light color: 8.5 mm – 340 mm • SWIR: 16.5 mm - 985 mm
1.4. Signal to multi-functional display must be 1080 pixel or greater (+High Definition). Video Output will be in NTSC format.	1080p HD and NTSC/PAL video output
1.5. Video and audio signal output from the EO/IR sensor must be digital. Video output must have thermal imagery and color video.	Output video contains HD thermal imagery and HD color imagery. In addition, audio is outputted from the ICS and recorded in conjunction with the video feed.
1.6. Imager must recover and display GEO-referenced location data (WGS 84 Datum, Latitude/Longitude Degrees Decimal Minutes), (display imager pointing location in Latitude/Longitude Degrees Decimal Minutes). Geo Point reference data must be based off the internal navigation unit and system data, not processed through a method of external systems triangulation.	Displaying georeferenced location data is a built-in functionality with sensor symbology overlays. System includes a 150 mW (Class 3b) laser pointer and laser range finder up to 30 km, Class 1 (eye safe).
1.7. Sensor must have map integration capability to create fire perimeters. The format of the perimeter data must be viewable as a shape file (ESRI SHP file format).	AEVEX's GeoFOCIS software provides map integration and the ability to provide perimeter data as an ESRI SHP file.
1.8. Sensor must have blending of HD EO or HD LL and HD IR video capability.	HD EO, LL, and IR are built-in functionality
1.9. Video output must be in MPEG-2 transport stream with KLV metadata.	MPEG-2 transport stream with KLV metadata is a built-in functionality
1.10. Video output must be recordable by a digital recorder (Video).	Raw video is encoded then recorded by GeoFOCIS
1.11. Sensor must have GEO Point/Locking capability.	Integrated IMU and GPS for geo-pointing and locking
1.12. Sensor must be all weather capable.	Sensor is all weather capable and qualified to MIL-STD-810E (Environmental Test Methods and Engineering Guidelines) and MIL-STD-461F standards

FLIR Star SAFIRE 380-HDc Specifications	
1.13. Gimbal must have a minimum of 4 axis stabilization or better.	Built-in, 4-axis stabilization
1.14. EO/IR sensor must be able to run continuously throughout the entire mission if the ATGS requires it.	The turret is powered at all times by aircraft power supplying the AEVEX power distribution unit (PDU)
1.15. Sensor control unit (or units) will be located as to provide access for both the sensor operators and co-pilots position. This may be accomplished with a single handheld unit located at the sensor operator station if the cord can accommodate the co-pilots position (front seat).	The sensor hand controller will be located at the sensor operator workstation and will have enough cord length to accommodate the co-pilot position
1.16. Gimbal must weigh 150lbs or less.	Approx. 62 lbs.
1.17. Vendor must provide stability specifications.	Pointing Accuracy: 2.5 mrad Angular Stability: 10 µrad
1.18. Sensor must have a High Definition MWIR Thermal Imager with zoom.	HD MWIR thermal imagery with 40° to 1.0° degrees' continuous zoom
1.19. Sensor must have a High Definition SWIR Thermal Imager with zoom.	HD SWIR thermal imagery with 33° to 0.25° step zoom
1.20. Sensor must have a High Definition (1080P minimum), Low Light Color Electro Optical Sensor with continuous zoom, and low light/near IR adjustability.	Dedicated HD (1080P) dedicated LL EO sensor for night imaging. 40° to 1.2° continuous zoom. Includes manual and adjustable gain and level to optimize image as well as pre-set modes, auto histogram equalization, and adaptive local area processing.
1.21. Sensor must have a laser pointer (Target Illuminator) (NVG Compatible)	System includes 150 mW (Class3b) Laser Point / Illuminator (LP) – Target Illuminator – providing the ability to illuminate a target that is only visible through the HDLL or night vision goggles (NVGs), allowing crew and ground personnel wearing NVGs to identify specific target locations coincident with the IR Imager Line of Sight. Additionally, an Eye-Safe Laser Rangefinder (LRF) providing the ability to safely and accurately determine the range to a target up to 30 km.
1.22. Sensor software has elevation data correction of ten meters or less.	Elevation terrain data can be adjusted up and down and at 10 meters or less
1.23. Sensor has GEO referencing laser range finder with minimum effective response distance of 12KM.	System includes a 150 mW (Class 3b) laser pointer and laser range finder up to 30 km, Class 1 (eye safe).
1.24. Sensor has target-image tracking capability.	Built-in target-image tracking capability.

Moving-Map Software/Hardware (SOW 2.2.2.4). Developed by AEVEX, GeoFOCIS is an advanced mission system and *true* 3D moving map display. It is operationally proven by the USFS for fire mapping, USSOCOM for ISR operations, and the DoS for unmanned surveillance missions. For the USFS, GeoFOCIS provides situational awareness and accurate, real-time information on fire size, location, burn rate, and more. For the DoS, in addition to situational awareness, it provides video enhancement, transcoding and low latency streaming over satellite and commercial terrestrial internet to the operations center for real-time analysis and actioning. GeoFOCIS' key capabilities include:

- ✓ Real-time data/aircraft tracking on a 2D/3D globe with customizable map layers
- ✓ Real-time video transcoding/dissemination in multiple formats and resolutions
- ✓ Digital video recording (DVR), including pausing/rewinding with no loss of live data
- ✓ Visually correlated products from multiple assets and data sources
- ✓ Searchable database with live and historical video and products
- ✓ Unified data model easily extended to support new sensors and data formats
- ✓ Analysis tools and workflows for product generation

Figure 13. GeoFOCIS Displays/Records Multiple Data Feeds without Loss of Performance.

GeoFOCIS interfaces directly with the FLIR Star SAFIRE 380-HDc system and captures its position, orientation, and uncompressed HD digital video from all its cameras. Unlike similar systems, GeoFOCIS is not limited to one (1) or two (2) video feeds and can simultaneously record, display, and geo-locate up to four (4) separate data feeds without loss of performance. Its user interface is fully customizable and has been customized for simplicity and usability in flight. Sensor operators can hide, cycle, dock or float the video feeds onto any display based on their current mission requirements and can easily send commands to the gimbal to geo-point it or steer it to hot-spots and other points of interest without using the hand controller. GeoFOCIS is capable of consuming, processing, and visualizing data from multiple sensors, transponders, and data feeds to provide a comprehensive operational view of the entire wildfire incident. GeoFOCIS ingests and visualizes imagery, video, radar, moving target indicators, Automatic Identification System (AIS), ADS-B, Cursor-on-Target and more. Another unique capability is the system's embedded, searchable geospatial database that enables the sensor operator to correlate historic operational data such as ortho-mosaics, videos, and fire perimeters, with the live sensor feeds in order to more accurately assess fire activity and the effects of ongoing containment efforts.

Uploading User Specific (Incident) Files. GeoFOCIS natively supports a variety of imagery and vector formats. GeoTIFF, KML, ESRI shapefiles, and world file images and videos can all be loaded simply by dragging and dropping them on to the map. Additionally, it is possible to automatically load any new image that appears within specific folders, such as those uploaded via the data link or created by the TK9 mapping sensor. To maximize performance, GeoFOCIS will automatically optimize GeoTIFF files the first time they are loaded and uses the optimized version thereafter. **Figure 13** shows how the brightness, clarity, transparency, and visualization order of the loaded images can be quickly adjusted in GeoFOCIS's layer list. Notably, any visible layers are included when the sensor operator exports the map of the incident.

Topographic and Street Data. Like other mission systems, GeoFOCIS includes all the necessary map and elevation data for flight operations within the lower 48 US states. The data sets that other providers commonly include, however, are inadequate for the wildfire mission. In cooperation with the USFS, AEVEX has created and optimized additional data

layers including high-resolution topographic maps, satellite imagery, elevation data, and forestry specific maps with forest access roads that do not typically appear in street maps. The need for high-resolution elevation data is critical for not only accurate burn rate calculations but also for correctly rendering ridgelines and determining the location of hotspots on the sides of mountains. It is essential, therefore, regardless of whether the mission system is in 2D or 3D mode, that the underlying calculations are *truly* 3D with depth occlusions, as they are with GeoFOCIS. Other systems render lines and labels in 2D without consideration of depth or terrain. While this can be adequate for flat roads, ridgelines, and other labelled features for mountains behind the foreground mountain will be visible "through" the mountain. This is confusing for the sensor operator and can lead to misdirection of the ground responders.

Figure 14. GeoFOCIS Provides Capability to Monitor Fire Growth.

GeoFOCIS also has unique capabilities for augmented reality—the imagery is augmented with vector data produced from products and geospatial data, displayed on the live feed or post mission in a playback mode. For example, geospatial data of roads, infrastructure, personnel locations, hotspots, etc. are geo-referenced in real time into the field of view and remain visible as the camera pans and sweeps. Using this view, sensor operators can precisely measure the fire perimeter, taking into consideration the elevation changes, ridgelines, and valleys directly on the video. Sensor operators can also visualize, track, and annotate retardant drops, an see their location overlaid on the map, as shown in **Figure 14**. The data is displayed from any perspective or projection and tracks the terrain through valleys—even when the valley is not visible in the image.

GeoFOCIS' user-friendly interface is customized for fighting fires both day and night. Problematically, topographic maps are light in color, which makes light colored buttons difficult to see and operate in an aircraft. Additionally, at night, bright colors and displays are especially harsh and lead to eye fatigue. GeoFOCIS never obscures the video and contains a variety of different themes, colors, and layouts that can be customized according to the operator's needs. AEVEX developers consulted directly with the USFS operators and changed the layout of the buttons, colored them in alternating red-blue colors, and used a dark modern theme to support user-friendly operations. AEVEX also added tools for creating fire perimeter polygons, fire behavior lines, and aerial drop footprint polygons using the required colors, styles, and symbols for dissemination to incident commanders and the Enterprise Geospatial Portal (EGP). Because GeoFOCIS is AEVEX-developed we can work with OCFA to ensure it is rapidly tailorable to current operations and continuously evolves to

Figure 15. GeoFOCIS Allows Operators to Draw Fire Perimeters on the Terrain.

meet future needs. AEVEX leadership and software developers are fully committed to the program and provide on-call support to ensure any issues are immediately addressed.

Video enhancement capabilities are included for the video captured by the FLIR 380HDc, or any sensor, should the video not be optimized for the specific features (e.g. retardant drops) that the sensor operator is trying to locate. The contrast may be too small; the image too soft; or the gain for the red, green, and blue channels too low. Additionally, the metadata with the sensor's position and orientation may be too noisy. To mitigate these issues, GeoFOCIS provides real-time video and metadata enhancements to help the sensor operator stabilize the frame and draw out the features of interest. Furthermore, using the inbuilt DVR operators can pause, rewind and review the live video frame-by-frame while continuing to record. They can then mark up the feature, create snapshots and products and then return to the live feed.

For tracking and data dissemination, GeoFOCIS publishes its position and the FLIR 380-HDc's location at frequent intervals using CoT messages (Platform Position Message and Sensor Point-of-Interest). With the addition of a data link, these messages can flow in real time directly to CoT-enabled devices on the ground, including ATAK tablets and other GeoFOCIS installations. Additionally, those devices can send CoT messages back to the aircraft and integrate within GeoFOCIS. This bi-directional messaging allows the sensor operator to guide ground personnel with ATAK devices to hotspots detected by either sensor, as well as to track their locations in real time. Additionally, GeoFOCIS supports messaging between aircraft to enable shared positions, sensor points-of-interest, and detected hotspots. This real-time dissemination will be enabled by our robust data link solution, a hybrid SATCOM, mesh, and Long-Term Evolution (LTE) data link enabling messaging even when ground personnel are not within the range of LTE towers.

GeoFOCIS includes high-performance DVR controlled from within the user interface or from any other station or user on the network. Recording can be started or stopped from anywhere (i.e. in the aircraft or on the ground) and the recorder publishes its status so each station can monitor its health. The recorder will create video clips in STANAG 4609 format (MPEG-2 transport stream, MISB 0601 KLV metadata) and can optionally include or exclude the audio from the ICS system. It supports both H.264 and H.265 (2 x times the quality of H.264 with the same file size) encoding and includes software-only, CUDA and QuickSync hardware compression engines. Additionally, it can adaptively encode the Video-in-Command digital output and transmit it over the hybrid data link in real time with minimal latency. The GeoFOCIS recorder supports recording to multiple storage devices including internal, external and USB 2.0 drives. A key advantage of the GeoFOCIS DVR is that it can be configured to record the same feed to multiple locations without using additional compression engines and without impacting performance. It can even use different file formats such as MP4, MPEG-2 transport stream, and MKV for the outputs. This additional redundancy minimizes the risk of data loss. Furthermore, it allows video clips for previous missions to remain on the aircraft, which enables the sensor operator to correlate them with the live video and more accurately gauge changes in the wildfire.

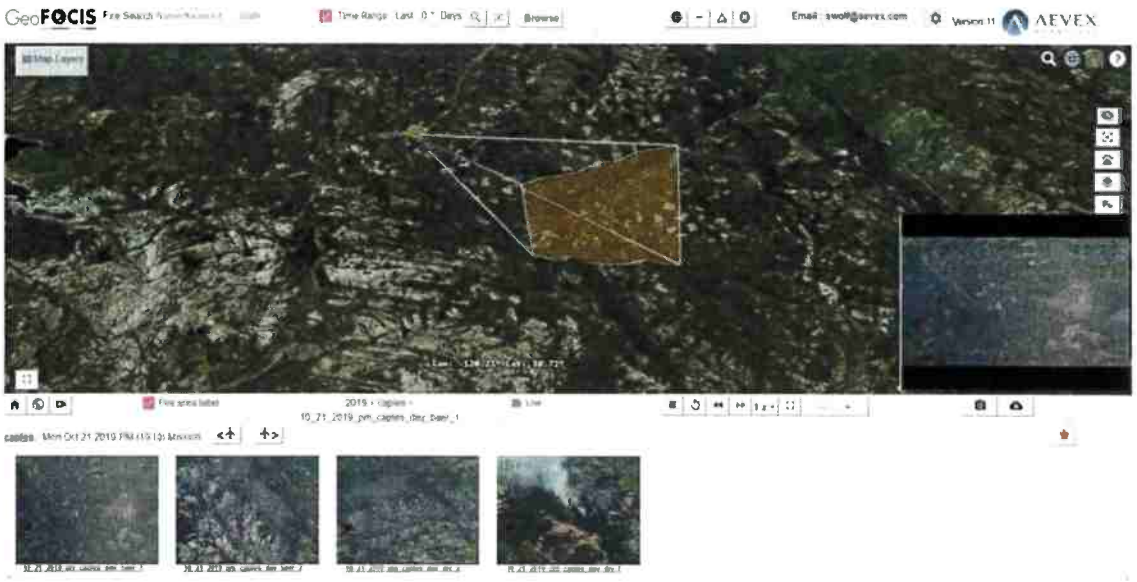
With ruggedized, customizable hardware, GeoFOCIS can be integrated into a multitude of form factors to meet the needs of the environment. The mission computer for the OCFA aircraft is specifically designed to minimize size, weight and power (SWaP) without sacrificing performance. It uses lightweight aluminum construction, weighs less than 10 lbs., and was engineered to perform in extreme airborne environments. It uses MIL standard locking connections and has been tested to meet DO-160G requirements for vibration, shock, humidity, dust, and EMI/EMC and carries MIL-STD-461F, DO-160G and MIL-STD-810G certifications. It is not limited to lower performing embedded or mobile

graphics but enables a fluid user experience and rendering on a multitude of displays by employing the latest highest performing graphics cards. Finally, it uses the latest NVMe removable technology to provide storage read/write speeds up to three times faster than SATA. It is these factors that enables GeoFOCIS to record the multiple redundant video feeds in multiple formats while simultaneously recording directly to USB 2.0 without degradation in performance.

AEVEX's commitment to evolve and provide the best value for its customers is evident in its embracing of the EGP from Intterra. Over the past year, AEVEX worked with Intterra and the USFS to develop a plugin to allow GeoFOCIS to interface directly with EGP's Amazon S3 storage buckets. Additionally, AEVEX implemented every product required by the EGP that could be created with the USFS's system in the format and style prescribed by the EGP interface control document (ICD). With the data link, GeoFOCIS will upload its position, video clips, and incident products, including those from the TK-9, as they are generated.

AEVEX's GeoFOCIS Web (GFW) online application provides OCFA personnel access to mission data on the ground, as depicted in **Figure 16**. GFW was purposely built to couple with the onboard GeoFOCIS Desktop software to enhance analytics and improve video dissemination. GeoFOCIS Desktop uses the data link to push the live video and products to the GFW application for databasing, visualization, and re-broadcasting in real time. GFW generates HTTP live streams from the video that enables authenticated users to view the live video on their desktop or mobile device with very little latency. It uses adaptive encoding and transparently provides the user with the best quality stream that their device and internet connection will support. This is a highly complementary capability to the EGP, which consolidates video clips and snapshots after a delay and only shows the platform position in close to real-time. GFW also provides historic hosting and capabilities for post-mission analysis and product dissemination.

Figure 16. GFW Allows OCFA Ground Users to Receive Mission Data in Real-Time.



Map Database. GFW provides an intuitive user interface with an interactive map, video playback and on-terrain corner point projection (**Figure 16**). Its database supports keyword, temporal, and spatial searching of fire and video products. Analysts and users can browse

the data through time and view it side-by-side to gain insight into the movement of the fire. Hosted on Microsoft Azure GCC High, the secure cloud solution for U.S. Government and contractors, data always remains on servers hosted within the continental United States, a requirement of the National Institute of Standards and Technology (NIST) and Federal Risk and Authorization Management Program (FEDRAMP).

AEVEX integrates a sensor operator workstation onto each King Air 200, including full airborne architecture, processing nodes, data management, and data storage. As depicted in **Figure 10** Team AEVEX's Remote Sensing Platform, the sensor operator workstation is installed in the cabin at the sensor operator position and a touchscreen tablet is installed at the co-pilot position. The operator workstations are equipped with the GeoFOCIS software system, which provides command and control, situational awareness, and intelligent data collection capabilities. This will enable operators to view the moving map, infrared and EO imagery using an input selector. The video display information in GeoFOCIS demonstrates the pointing attitude of the sensor. The workstation includes the necessary hardware and software to enable operators to effectively conduct airborne surveillance and serves as the primary operational interface to the sensors, aircraft, and communications systems.

AEVEX's operator workstation is fully certified, with all pull testing and structural certification, and it comes with FAA 8110-3 paperwork as an off-the-shelf product. The workstations include dual 20-inch Boland Daybrite displays as well as a 9-inch Boland Daybrite full-motion video (FMV) display for live video feeds from the sensor. Each operator workstation also features a mouse and keyboard for ease of operation. A 1080p touchscreen tablet will also be mounted near the co-pilot seat, which can be used as a handheld device or stowed away when required. Our proposed workstation design and example of a completed workstation are depicted in **Figure 17**.

Figure 17. AEVEX Operator Workstation.

AEVEX has extensive experience integrating and installing operator workstations in support of airborne surveillance operations; for example, we were responsible for all operator workstations on U.S. Army ISR King Air 200 and DHC-8 aircraft platforms. We also designed and integrated the a mounted, stowable touchscreen tablet for the USFS NightWatch operator, which has proven effective for fire missions.

Mapping Sensor. AEVEX provides an Earthwatch TK-9 HD, manufactured by Overwatch Imaging, to enable step-stare, real-time mapping capabilities. The system meets all requirements as outlined RFP Section 2.2.2.4, paragraphs (j) to (q). GeoFOCIS integrates seamlessly with the TK-9. GeoFOCIS is a full GIS system and includes native support for over 50 data formats, including those created by the TK-9 sensor. It directly loads the orthomosaics, KML perimeters, and ground overlays from the TK-9 and seamlessly uses them with the FLIR 380HDc feeds. The perimeters can be overlaid on the video, the video on the orthomosaics, or vice versa in real time. Any discrepancy between the two is then self-evident to the sensor operator and can be corrected within seconds resulting in higher quality products being disseminated.

A compelling feature of the TK-9 is its ability to detect hotspots and send those as Cursor-on-Target (CoT) messages. GeoFOCIS has native support for sending and receiving CoT messages and it will consume the TK-9 messages and render them on the map with the correct MIL-STD symbol. The sensor operator can then slew the sensor from the map and zoom in on the hotspot to confirm it before creating high-resolution snapshots for dissemination. The effortless coordination between the two (2) complementary sensors by a single operator is a standout feature of GeoFOCIS. **Figure 19** outlines system specifications, demonstrating how the sensor meets or exceeds all OCFA requirements.

Figure 18. GeoFOCIS natively can ingest and visualize TK-9 mapping data.

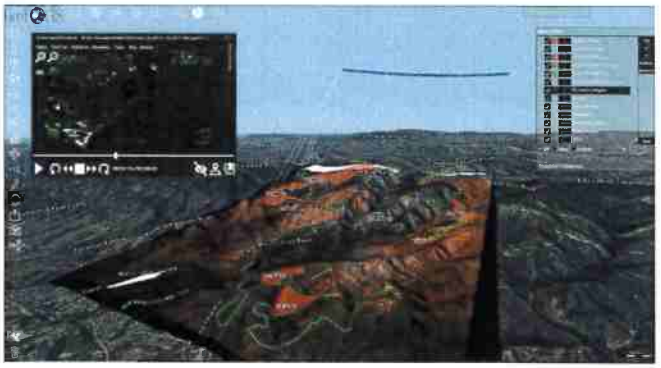


Figure 19. TK-9 Specifications.

Overwatch Imaging, Earthwatch TK-9 HD Specifications	
OCFA Requirement	**TK-9 HD**
j. The aircraft must include an Earthwatch TK-7 or TK-9 with step-stare, real-time mapping capabilities.	TK-9 HD with step-stare, real-time mapping capabilities integrated on each aircraft.
k. System must be capable of automatically generating fire perimeter data files without user input.	Automatic detection, generation and alert of fire perimeter, heat intensity and hot spots.
l. Fire perimeters should be available to transmit within 5 minutes of data collection.	Initial fire perimeter is generated in near real-time. A refined perimeter with increase accuracy is available within 2-3 minutes.
m. System must provide fire perimeters, and hotspots in GIS ready .SHP or Google .KML format	Generates fire perimeters and hot spots in GIS ready formats .KML and .SHP
n. System must be capable of producing a 4-band (RGBN) orthophoto basemap from downward facing imagery. Image tiles should be provided in .TIFF, or Superoverlay .KML format.	System has seven (7) bands, EO (three (3) bands – RGB), NIR, SWIR, MWIR, LWIR and can generate 4-band (RGBN) orthophotos exported as either .TIFF or Superoverlay .KML.
o. System must be capable of full bit depth (>8 bit) data collection.	12- or 14-bit depth (>8 bit) for collected imagery.

Overwatch Imaging, Earthwatch TK-9 HD Specifications	
p. System must be capable of scanning 50,000 acres per hour at normal operating profiles (5000' AGL and 140kts.)	Mapping coverage rates capable of scanning at least 50,000 acres at normal operation profiles (5000' AGL and 140kts).
q. System must automatically compress files (lossless format) for data transfer to minimize bandwidth and transfer times.	System output is automatically zipped (lossless compression format) to minimize bandwidth and transfer times.

Beyond Horizon Data Transmission (SOW 2.2.2.5). AEVEX has extensive experience installing and operating both line-of-sight (LOS) and beyond-horizon datalinks through our work with the DoD. True universal connectivity for sustained data transmission with high data-rates and low latency from *any altitude* and *any airspeed* is only possible with a satellite system. LOS datalinks provide high data rates and are relatively inexpensive but require a ground antenna in the vicinity of the area of operations to receive the transmission. Similarly, LTE (cellular) networks provide high data rates but require nearby cell towers and are only capable of sporadic connectivity up to 5,000 ft. AGL. AEVEX's proposed beyond horizon solution, the Viasat GAT-5518 (G-18) in Ka-band frequency, provides reliable connectivity at any altitude/airspeed. The Ka system is newer and is less congested that Ku, while also pervasive throughout the continental United States. The GAT-5518 (G-18) is a complete airborne satellite terminal with an 18-inch antenna and lightweight equipment that delivers broadband internet protocol (IP) communications on the move. With this mobile terminal and Viasat's worldwide network and broadband service, operators can send live HD FMV over the horizon. The terminal is FAA and Joint Interoperability Test Command (JITC) certified for installation and secure network operation. Equipped with integrated technologies and robust waveforms, this solution has been proven to support streaming data rates at 2 Mbps. The system will be integrated on the aircraft using the Adaptive Aerospace approved radome. **Figure 21** details the GAT-5518 (G-18) key specifications.

Figure 20. The GAT-5518 (G-18) provides near real-time data.

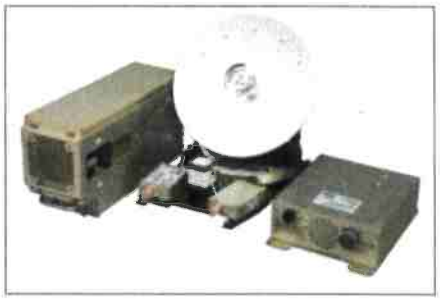
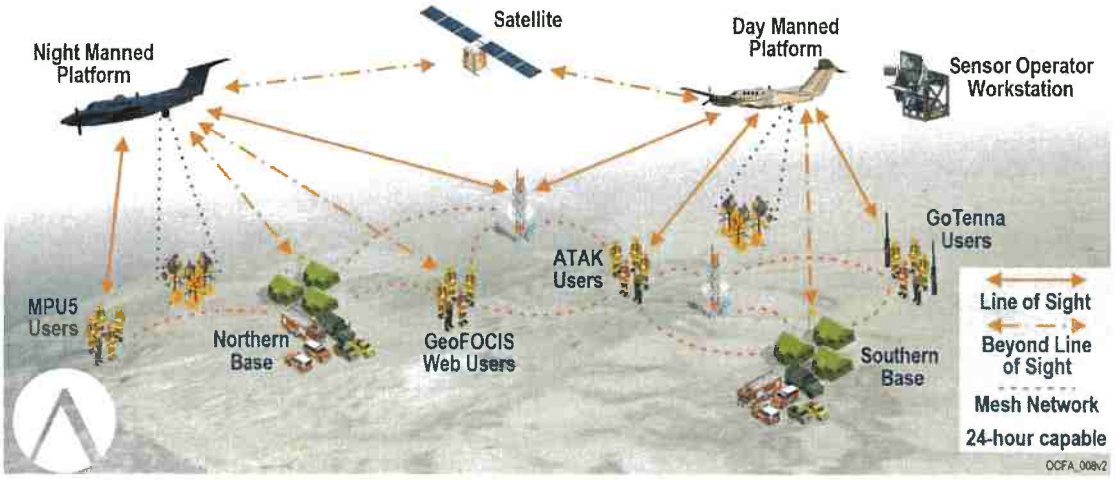


Figure 21. Viasat Specifications.

Viasat GAT-5518 (G-18) Specifications	
Operating Transmitting Frequency	27.5 to 31.0 GHz
Transmission Rate	2 Mbps
Coverage	360 degrees
Antenna Band	Ka-band

SATCOM capability, however, only addresses off-boarding of data and video from the aircraft. For USFS personnel to receive the data, they also require internet connectivity, which they may not have if they are not near a cell tower. AEVEX has addressed this problem for the USFS by creating a mesh network using Persistent Systems' Wave Relay® receivers. To meet OCFA's mission needs, AEVEX proposes to install a hybrid datalink system that seamlessly combines all the benefits of LOS, LTE and SATCOM systems.

Figure 22. Beyond Horizon Solution for Real-Time Data Dissemination.



The hybrid datalink system integrates LTE with SATCOM and supports both FirstNet (a dedicated network for first responders from AT&T and Verizon). At low altitudes when near LTE towers, the system transmits using the LTE networks. If either network degrades below the required data transmission rate, the datalink will fail-over to the other LTE network. At higher altitudes and airspeeds or when the aircraft is out-of-range of available LTE networks, it will fail-over to the SATCOM system. The fail-over happens automatically and is completely transparent to both the sensor operator and the incident personnel. Based on AEVEX's experience fighting fires with the USFS, we also integrate the Wave Relay® aircraft architecture and antennas into the hybrid datalink. Any ground personnel with the appropriate handheld devices are then be able to receive the aircraft's video and location data regardless of their internet connectivity. Furthermore, as GeoFOCIS has built-in support for the Wave Relay® mesh network, the sensor operator can track the location of the ground personnel on the map in real time. They can use the same network to send the ground personnel their own position, sensor points of interest, and any hotspots detected by the TK-9 and FLIR 380-HDc.

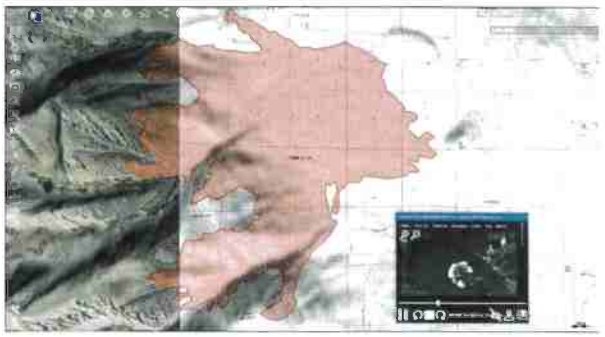
Figure 23. goTenna Devices for Data Anywhere.

The ability to not only transmit live video, products, and points of interest to disconnected firefighters, but to also track their location in real-time, is a key differentiator of AEVEX's solution. We take this one step further by including an additional goTenna mesh network for ground personnel. The goTenna devices (**Figure 23**) are small, lightweight, and affordable. Once coupled with the Android Tactical Assault Kit (ATAK) on a mobile device, those users are tracked and able to send/receive points of interest and messages from the aircraft. The goTenna messages are transmitted to the Wave Relay® ground hub and then up to the aircraft or vice versa. For future planning, should the OCFA choose to supply ground personnel with Wave Relay® and goTenna devices, the aircraft and software has the necessary infrastructure to immediately integrate those users into the network.

As described above in our section on the moving-map display, GeoFOCIS captures, records, and plays back STANAG 4609 compliant video streams (MPEG-2 transport streams with H.264/265 compressed video and MISB 0601 KLV metadata) with minimal latency. It also consolidates the outputs from the TK-9 and enables the operator to create, correlate and refine highly accurate fire products from both sensors, very quickly with minimal effort. The images, videos, and fire products are standardized as required by the EGP interface (GeoTIFF, MPEG2 transport stream, MP4, KML and ESRI SHP shapefiles). GeoFOCIS has already been internally validated with the EGP interface on the USFS NightWatch program. With the addition of the hybrid datalink, GeoFOCIS is able disseminate this intelligence package directly to the EGP S3 Bucket. Additionally, it is able to update the Aircraft Position KML every 30 seconds so the aircraft's location can be tracked, and products can be viewed in a single web portal.

Fire Perimeter Outputs (SOW 2.2.2.6). AEVEX software developers have flown many operational missions as sensor operators with the USFS to gain the knowledge required to continually customize GeoFOCIS for fighting wildfires. As a result, GeoFOCIS now includes specialized tools for marking fire perimeters, correlating them with previous activity, and generating accurate products simply and quickly. The fire perimeter can be created in a few different ways according to the operator's preference. It can be drawn manually in a few seconds by clicking (or touching) on the map or the video and dragging around its boundary. It can be traced by sweeping the sensor's center point around its boundary using the handle controller. Finally, computer vision algorithms have been developed to automatically detect and extract the boundary. In all cases, the operator can easily refine the perimeter by dragging or adding new points.

Figure 24. GeoFOCIS Displays Fire Perimeters on Terrain, Topographic Map, and Satellite Data.

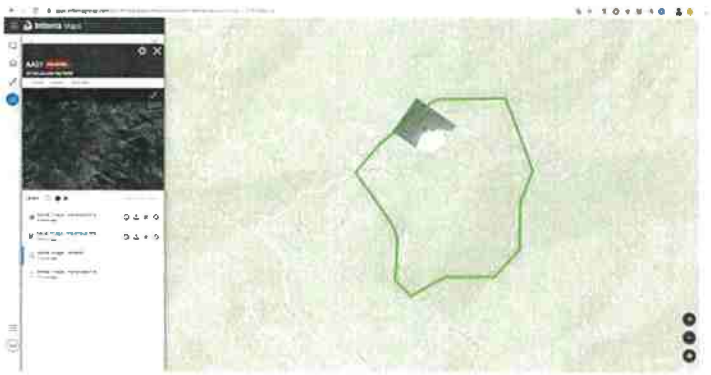


GeoFOCIS includes native support for the fire perimeters and for the ortho-mosaics produced by the TK-9 system. GeoFOCIS can monitor a folder and automatically load the products as they are generated. The sensor operator can then quickly validate the data against the data produced by the FLIR 380-HDc. This enables any discrepancies to be addressed prior to dissemination and ensures a higher quality product without appreciably sacrificing the speed of delivery. GeoFOCIS supports both local and database storage of its video, image, and vector incident products. AEVEX consulted with Intterra and formatted/styled according to the EGP ICD. Furthermore, a data exchange mechanism for EGP's Amazon S3 bucket was developed enabling sensor operators to upload their curated products directly. During a mission, the following products are generated:

a. Mission Designator File – signifies that a mission is underway
b. Aircraft Position KML – updates aircraft position every 30 seconds
c. Active Fire Line KML – polyline of the active fire front
d. Fire Perimeter KML – polyline of the perimeter of the fire
e. EO Image – PNG+AUX and GeoTIFF of the sensor's color image
f. IR Image – PNG+AUX and GeoTIFF of the sensor's infrared system
g. Map Images – PNG+AUX and GeoTIFF of the map with customizable map layers
h. Video Clip – MP4 video with audio and a KML designating the video location
i. Video Clip – MPEG2 transport stream, KLV metadata and audio (STANAG 4609)

GeoFOCIS is distributed with low-resolution elevation data, low-resolution satellite imagery, and street maps and river networks for the entire world. For the Continental United States, it includes high-resolution elevation data (DTED Level 2) and augments this with high-resolution satellite imagery, sectional maps, topographic maps (with mountains, rivers, lakes, canyons and state and county lines), and forest visitor maps for the area of operation. The forest visitor maps include private unmarked roads which are not included on most street maps but are often vital for directing fire fighters. Additional vector layers with mountains, rivers, lakes, canyons, administrative regions, private roads, and previous fire boundaries can be easily added to the operator's workspace. All or some of the layers can be included with the exported map products.

Figure 25. GeoFOCIS Directly Uploads Data to EGP.



The average imagery volume for an incident intelligence package, including a satellite map, topography map, forest map, and video frames as compressed JPEGs or GeoTIFFs is 12 Megabytes. The size of the fire perimeter in KMZ format is negligible at only 5 kilobytes. The hybrid data link solution we propose provides a sustained transmission rate on and off the aircraft at ***any location, altitude, and airspeed*** **in the continental United States of 2 Megabits per second.** At this rate, the intelligence package can be **transferred in 48 seconds** *if the streaming video is interrupted.* As this is undesirable, we **can throttle the data rate to 500 Kilobits per second** which provides **ample bandwidth for high quality streaming video while allowing the package to be transferred in under 3.5 minutes.**

Operations Plan. AEVEX uses proven standard operating procedures (SOPs) that are then tailored to meet the customer and mission needs. Each mission includes an aircrew consisting of one (1) Pilot-in-Command (PIC) and one (1) Sensor Operator. Due to safety and crew limitations, the PIC rotates every 12 days and sensor operators will rotate approximately every 21 days. In order to minimize impacts to OCFA's objectives and ensure continuous operations, there is a 1-3 day overlap of the outgoing and incoming operators. This overlap ensures the incoming operator is fully current on the situation and operations. While on site, the Sensor Operator serves as the Site Lead, interfacing and coordinating OCFA stakeholders to gather mission requirements, plan mission execution, and liaison with all on-site team members. Our personnel proposed for FIRIS 2.0 have extensive experience deploying across the globe to support ISR operations, as well as nationally in support of aerial firefighting operations. These personnel are accustomed to operating at remote locations and on a rotational schedule. They are also experienced in responding to short-notice, urgent mission requirements such as through our work supporting USFS NightWatch air attack operations as well as U.S. military ISR. For FIRIS 2.0, our aircrew performs the following:

Mission Planning. Team AEVEX's aircrew will conduct daily stand ups with OCFA stakeholders to review mission requirements and develop flight and mission plans. This includes ensuring recent incident data is ingested into the GeoFOCIS database for situational awareness. A pre-mission brief will also be held before each mission. At this brief,

mission objectives, weather, routes, no-fly, quiet hours, etc. are discussed in detail and the mission is planned in order to best meet customer requirements while operating as efficiently and safely as possible. A post flight debrief with the team will also be held to continuously monitor safety, mission details and ways to improve mission support.

Mission Execution. During flight, the sensor operator will operate the sensor systems, using GeoFOCIS to ingest and/or generate active fire perimeters, areas of intense heat, and locations of spot fires. Adjusted to the type of tasking, whether initial attack of a new burn or extended attack of an already complex incident, the ATGS and AEVEX operator communicate a specific flight path or orbit to the pilot in order to support the key objectives of the mission. These fire perimeters will be used to generate updated incident maps (or Snapshot Overviews) overlaying the just created fire perimeters onto topography, satellite imagery, and forest maps, each of which provides unique context and insight to the fire. Having these multiple datasets with the video projected on the true 3D terrain allows for the operator to create a narrated video describing the fire overview and any highlighted features. This is all executed while simultaneously streaming products and feed via data link to OCFA stakeholders on the ground.

Figure 26. NightWatch ATGS Mission Execution.

Mission Readiness. During project performance, one (1) FTR is present 24/7 to provide on-site maintenance support. The FTR can always be reached. The FTR is equipped with a maintenance vehicle containing the necessary parts and tools to maintain the aircraft remotely. The FTR ensures the aircraft platform maintains operational readiness to respond to short-notice mission requirements. In addition, many of our proposed pilots hold an A&P certification and are qualified to support maintenance items. Team AEVEX is familiar with providing on-site maintenance support to sustain high availability rates—on the USFS NightWatch program, we have maintained a 98.8% aircraft availability rate. With 22 years of experience in firefighting operations, Dynamic Aviation has hangars on the West Coast.

2. Explain how your Firm keeps abreast of the latest changes in current related aviation and communications technology, fire-related air operations, and other requirements.

The AEVEX Engineering and Technology business unit is specifically focused on advancing technology. We do this by implementing deliberate business practices, empowering our people, and working as a partner with our customers. Our experience as engineers, software developers, mechanics, pilots, and former customers within the U.S. Government on several similar programs provides OCFA with a force multiplier capability in solutions that enhance current and future operations.

> ***"Amazing what [AEVEX] can do with our ideas."***
> Region 5 Aerial Supervision Program Mgr.

Our approach for assessing and providing recommendations to our customers on the technical viability and use of new/enhanced capabilities begins with building/maintaining collaborative relationships across a broad spectrum of local, state, Government, academia, commercial, and industry stakeholders. This collaborative approach is critical to being on the leading edge of trends and changes to identify new, high pay-off technologies,

including developmental or commercial-derivative technologies supporting innovation efforts.

Our core business practices promote collaboration at all levels. Our three (3) business units' Vice Presidents, Chief Strategy Officer (CSO), and Chief Technology Officer (CTO) communicate weekly about industry updates across state, local, and Government wide efforts. Additionally, our program directors and managers communicate and collaborate across the enterprise to identify innovative solutions for our customers. AEVEX's programs do not work in silos, they offer feedback and collaboration among all the programs and are tuned in to the successes and lessons learned not just within their own business unit but also across the entire AEVEX enterprise. This collaboration among our team ultimately benefits our customers, as we will gather and apply lessons learned, innovations, and relevant data from **all** AEVEX programs to the FIRIS 2.0 project.

To maintain an understanding of the technology landscape to identify capabilities that can complement, leverage, or enhance current assets and meet common architecture or interoperability profiles, AEVEX personnel attend and often present at venues such as trade shows, conferences, industry events, technology forums (e.g., GEOINT, AUSA, AAAA, AFA, AUVSI, Geospatial World Forum, and Aerial Fire Fighting), and working groups. For example, recently, AEVEX was selected by Special Operations Forces Acquisition, Technology, & Logistics (SOF AT&L) to participate in a USSOCOM Technical Experimentation to showcase our GeoFOCIS software. Our personnel also stay abreast of tactics, techniques, and procedures (TTPs), trends, advancements, and new technology by leveraging relevant connections with Program Offices, Operational Commands, Government laboratories, and other DoD organizations to socialize concepts and foster collaborative relationships.

3. Provide information on any innovative or unique methods used that distinguish your Firm from other agencies providing services.

> **"[AEVEX] is a shining example of an organization that is creating dynamic solutions that arm firefighters with the real-time data needed for mission success. Whether it's wildfires in California or Nevada, [AEVEX's] GeoFOCIS solution fills a critical data and innovation need that ultimately saves lives."**
>
> Mladen Stojic, President
> Hexagon's Geospatial Division

AEVEX was built to be a leading provider of full-spectrum, mission-critical airborne ISR solutions for the global remote sensing community. This has required us to distinguish AEVEX from other organizations providing similar services. We do this by offering in-house, turn-key solutions for software, hardware, and personnel to lower customers' cost, risk, lead time, and down time. Where our competitors are offering off-the-shelf solutions, we are offering fully customizable software and hardware, customized for similar operational environments and flexible for both current and future requirements. AEVEX does not have to wait for off-the-shelf vendors to meet immediate needs—we do it all in-house! Furthermore, our staff brings a passion and commitment to making the world a safer place by serving our customer's mission, striving for continuous improvement, and seeking the most efficient and effective methods.

Innovative or unique methods used that distinguish AEVEX are:

GeoFOCIS has provided the tools for operators to accurately and efficiently delineate the fire perimeter, representing the nearest real time location of the active fire boundary, as well as any hot spots identified with the IR sensor. With GeoFOCIS, operators ingest a wide variety of GIS file formats to allow for the most recent and relevant data for accurate

situational awareness to the truth of the fire incident. GeoFOCIS strives to always work with industry standard formats (currently supporting over 50 standard formats), which allows for users to integrate with other GIS systems and platforms to eliminate challenges with seamless data integration across the fire response. For example, a GeoFOCIS product can easily be "dragged and dropped" into Google Earth. This is a capability that sets us apart from our competitors.

AEVEX received the following awards for our pioneering work on GeoFOCIS:

- ***Hexagon's Geospatial Division Shaping Change Award*** – Announced at HxGN LIVE 2018, Hexagon's annual conference, the Shaping Change Recognition Program is Hexagon's highest customer award, acknowledging organizations that consistently make significant contributions to the businesses and industries they serve. AEVEX was recognized with this award for our efforts tailoring GeoFOCIS for firefighters.
- ***Luciad Geospatial Excellence Award for Top Developer*** – Announced at the Luciad INTERACT 2017 User Conference in 2017, the Luciad Geospatial Excellence Awards acknowledge and celebrates the most ground-breaking applications of geospatial technology. The award was accepted by our Chief Scientist, Darren Butler, Ph.D. who leads the GeoFOCIS product line.

Figure 27. AEVEX's Award-Winning GeoFOCIS Software Suite Provides Unique Capabilities for Aerial Firefighting.

Integrated Software Development Approach. Another unique aspect of AEVEX's solution is that our sensor operators are embedded in the software and hardware development process, and our hardware and software engineers have field experience. This will ensure OCFA receives continuity of support from engineers who understand the mission and provides opportunities for continuous innovation. For example, after the 2018 fire season, AEVEX created a web-based version of GeoFOCIS for dissemination and hosting of USFS products. This web version records and visualizes live mission data (if a datalink is integrated) and provides historical hosting for post-mission analysis and product dissemination. Its database includes keyword, temporal, or spatial searches of historic acquisitions, allowing users to have a side-by-side visual comparison of both old and new data sets. It provides situational context to the video clips by using the video, audio, and metadata to create a consolidated visual and analytical perspective. For example, by combining the video footprint, frame path, and four corner point frame projection, users can not only capture the vantage point and perspective of the acquisition but also gain insight into the current status and movement of the fire.

Collaboration Approach. As another example, during the 2019 fire season, the USFS asked AEVEX to work with Intterra to disseminate products to the EGP. Intterra provided AEVEX with an interface control document that detailed the required data formats, styles, and naming conventions. They further provided AEVEX with a test portal, credentials, and S3 bucket to validate the products. AEVEX implemented the required products and transformations and developed a direct data upload module accordingly. The solution was tested with real data from the 2019 season and is ready for full implementation in the 2020 fire season. For the 2020 fire season, the USFS has asked us to integrate a BLOS

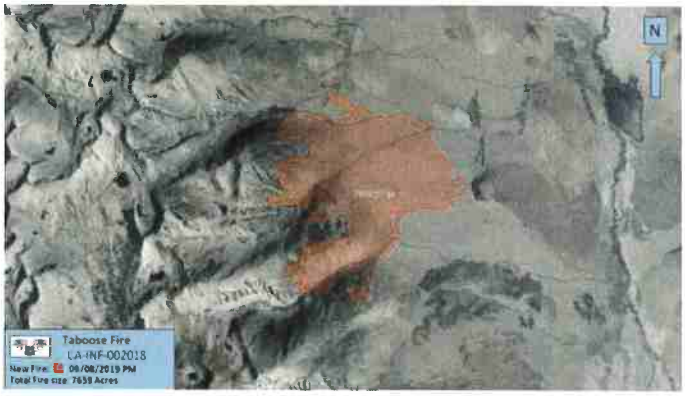
capability. This will allow mission products from the aircraft to be disseminated from anywhere in California and at any operational airspeed and altitude. Team AEVEX gladly accepted the request and plans to integrate a Ka-band SATCOM system from Viasat. AEVEX has partnered with Viasat since 2010, integrating numerous SATCOM solutions for various DoD customers supporting missions in the United States, Middle East, Africa, Europe, and South America. Equipped with integrated technologies and robust waveforms, this solution has been proven performance streaming data rates at 2 Mbps.

Throughout the years Team AEVEX has welcomed the challenge of meeting our customer's needs and desires. Our in-house capability and innovative culture enable us to move forward without limits and our dedication to continually improve creates endless possibilities for our customers and our mission. Our uniqueness lies within our collaborative methods and our passion to continue offering unparallel customer service.

4. Provide sample of previous related services completed. Include any related imaging and analysis work for relevant projects and other work for consideration. What additional deliverable documentation would you provide for the tasks that you perform?

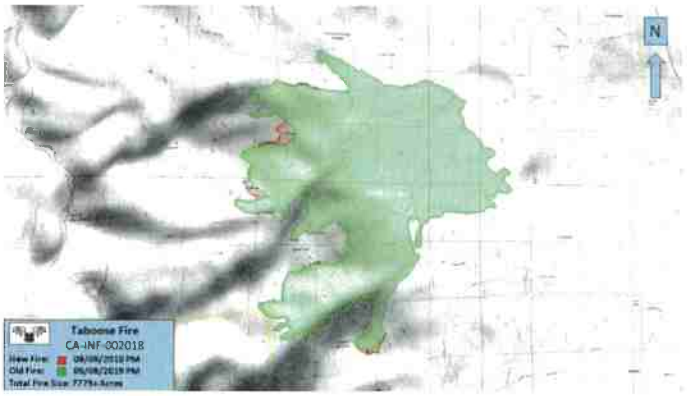
Team AEVEX has delivered intelligence packages for more than 550 active fire missions consisting of tailored fire perimeters, snapshot overviews, and narrated video products.

Figure 28. Snapshot Overview, Satellite Imagery Report.



The Snapshot Overview is a 'birds' eye' view, overlaid onto terrain, with the fire perimeter created real-time onboard the aircraft. The overview is delivered as a package of three (3) reporting outputs consisting of satellite imagery, topography, and forest map layers. This provides unique situational awareness of the incident. Shown in **Figure 28** is the Snapshot Overview with satellite imagery layers. The bottom left corner of the report provides specific details such as the name of the fire (Taboose Fire), type of visit (New Fire), the date and time of day (9/8/2019 PM), and the fire size (7659 Acres).

Figure 29. Snapshot Overview, Topographic Map Report.

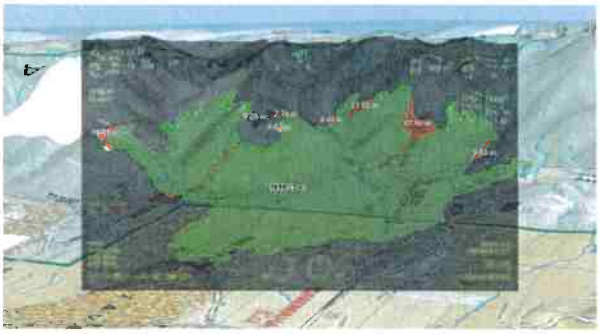


In support of the Taboose Fire project, the platform returned to the location the next day (9/9/2019 PM) to determine fire progression. When a platform returns to an incident, GeoFOCIS converts the previous fire perimeter to green and keeps new growth in red. These color standards follow EGP specifications for consistency within the industry. **Figure 29** is the Snapshot Overview with topographic map layers. Whether

generated from TK-9 automated process or derived by an FMV analysts, the fire perimeter is exported as both .KML and .SHP.

Additionally, the Sensor Operators provide a 3D visualization of the fire perimeter with GeoFOCIS's augmented reality view called "Eye View". **Figure 30** displays the same fire perimeter from 9/9/2019 overlaid onto the forest map allowing the end-user to quickly conceptualize the new growth locations with reference to the terrain.

Figure 30. Eye View with Forest Map Overlay.



A key element to creating a COP display is data ingestion as well as data export. This allows a seamless integration with the customer's workflow and a variety of end-user types. GeoFOCIS automatically generates a .TIFF and KML for both map and video feed snapshot using the high-resolution terrain model in the 3D platform. This allows end users to bring these products into other GIS software such as Google Earth, ESRI ArcMap, QGIS and more, without losing of high value metadata.

Figure 31. RGBN Orthophoto Using GeoFOCIS.

Team AEVEX offers several photogrammetry deliverables when flying with a mapping system such as the Earthwatch TK-9 HD. **Figure 31** displays a 4-band RGBN orthophoto generated from a TK system that can be seen using GeoFOCIS.

The process of creating an orthophoto includes key procedures such as aerial triangulation, ortho-rectification, and radiometric corrections. This is done 'behind the scenes' to provide the user a high-resolution product. This is delivered as both .TIFF and .KML Superoverlay options to accommodate the desired end-user workflow. The true 3D nature of GeoFOCIS allows for the users to take advantage of the rich imagery and meta-data with seamless projection onto terrain with any relevant vector data directly overlaid on the orthophoto as shown in **Figure 32**.

Figure 32. TK Sensor Orthophoto Overlayed on 3D Terrain.

5. What are your Firm's plans to acquire or obtain spare aircraft or equipment if necessary? Please provide details.

Figure 33. Our FTRs are Fully Equipped to Sustain Aircraft in the Field and Maintain Availability.

Our partner Dynamic Aviation will provide complete maintenance of the aircraft to ensure sustained operational availability. Their proven approach includes providing timely maintenance by having an FTR on site at all times during mission operations. All FTRs supporting this contract are FAA A&P certified and will be available 24 hours per day, 7 days a week for any maintenance or repair required. This reduces the need for spare aircraft, as this will keep the current aircraft flying and reduce any downtime. For example, on the Nightwatch Program Team AEVEX has maintained a 98.9% availability rate over the last 4 (four) years. The FTR will have a fully equipped mobile maintenance vehicle containing necessary parts and tools for remotely maintaining aircraft. Additionally, Dynamic Aviation's Bridgewater, VA facility is an FAA-approved Part 145 Repair Station. Under this regulation, the FAA has approved and accepted Dynamic Aviation's maintenance and quality processes/procedures to ensure that only trained and qualified personnel perform maintenance on aircraft. Their maintenance capabilities include Production & Maintenance (consisting of airframe teams, air conditioning shop, component shop, avionics team, electrical team, and engine shop) and Structures & Modifications (consisting of sheet metal shop, composite shop, machine/welding shop, and paint shop).

As part of their maintenance program, Dynamic Aviation provides 24/7 support, including weekend parts support to the on-site FTR. Additionally, Dynamic Aviation has an inventory of over 100,000-line items for the King Air aircraft and its Pratt and Whitney engines which are used in support of contracted aircraft. Aircraft on Ground items will be sent through counter-to-counter services through U.S. Airways or other air carriers which typically are shipped same day. To promote uninterrupted mission performance, Dynamic Aviation's Flight Operations department includes a Systems Operations Center (SOC) and Maintenance Control Center (MCC) staffed 24/7 to provide flight tracking, technical support, troubleshooting, and expedited parts shipping.

General maintenance procedures are accomplished in accordance with the relevant portions of Section 10 of Dynamic Aviation's FAA approved 135 Operations Manual. The aircraft will be maintained to FAR 135 standards regarding all manufacturer recommendations for maintenance to include life limits, recommended overhaul intervals, as well as mandatory service bulletins on airframe, engines, propellers, appliances, and emergency equipment. Dynamic Aviation operates on an approved Time Before Overhaul (TBO) extension program and owns the aircraft, operating in accordance with the extension. Dynamic Aviation will ensure that the Interagency Airplane Data Record Card is posted inside the aircraft at all times. While on contract, Dynamic Aviation ensures that a copy of the current maintenance record required by 14 CFR 91.417 is kept at their base of operation in Bridgewater, VA. To support their maintenance program, Dynamic Aviation implements a comprehensive Enterprise Resource Planning (ERP) system called Pentagon. This system manages inventory, logistics, maintenance tasks, and flight logging.

Aside from the aircraft maintenance plan, Team AEVEX also uses its AS9100D/ISO 9001:2015 certified Harrisonburg facility for reach back support for all cabling needs. As well

as any quick turn machining and fabrication needs for any repairs. Team AEVEX also uses its business relationships with OEM partners should the need arise for any repair or replacement systems.

4.2. Staffing

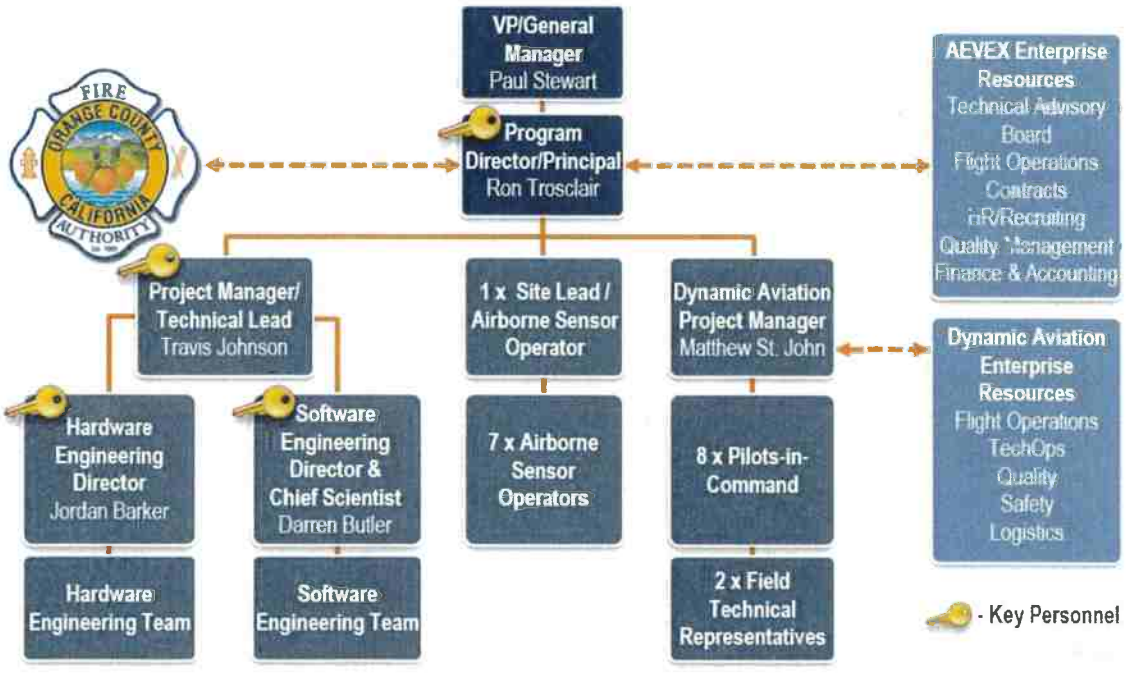
6. Provide the name of the principal or project manager in the firm who will have direct and continued responsibility for the project.

Team AEVEX has the resources in place now to effectively manage both aircraft operational customization and aerial data collection. Our culture is founded on providing highly qualified, mission-focused personnel coupled with proven infrastructure and processes to deliver agile and responsive project management support. Our Program Director Mr. Ron Trosclair brings 30 years of experience managing large-scale aviation programs and is PMP certified. Ron chose Mr. Travis Johnson as our Project Manager. Travis brings 16 years of experience leading complex aircraft engineering/integration efforts. Detailed background information about Ron and Travis can be found in **Figure 38. Key Personnel.** Their resumes can be found in **6) below.**

7. Please describe how your firm will fulfill the services requirements called for in this RFP. Indicate your ability to commit resources through the term of a project. Indicate whether you have contracts with resources to ensure their long-term availability for projects.

AEVEX assembled a project team to provide streamlined, synchronized support with clear lines of responsibility and communication and dedicated management oversight. This team is supported by AEVEX enterprise resources such as our Operations, Contracts, HR/Recruiting, Finance and Accounting (F&A), Safety, Quality, and Security departments. These departments provide dedicated oversight, back-office support, and reach-back capability to ensure responsive and effective customer service. **Figure 34** shows how our organization communicates seamlessly with each other and most importantly with OCFA.

Figure 34. Team AEVEX Organizational Structure.



The airborne operations team shown in this structure is the required crew to operate and sustain two (2) aircraft platforms based at two (2) separate locations in California, with 24-hour availability. To support a 24-hour availability at one (1) site and a 12-hour availability schedule at a second site, we would scale this team down to six (6) Sensor Operators, six (6) Pilots-in-Command, and two (2) Field Technical Representatives (FTRs).

Team AEVEX successfully provides qualified personnel on airborne programs that span across multiple years and follow-on contracts. For example, both AEVEX and Dynamic Aviation have performed on the U.S. Army Night Eagle ISR program since its inception in 2008. This experience demonstrates our ability to ensure consistent staffing on complex programs with no degradation of service and with agile, responsive customer support. Based on our experience performing other airborne collection efforts, we understand the skills, experience, and caliber of personnel required to execute FIRIS 2.0. **Figure 35** outlines our proposed project team and their duties and responsibilities.

Figure 35. Project Team Roles & Responsibilities.

Program Director/ Principal **Ron Trosclair** 	• Responsible for all planning, management, and completion of contract activities and directs the overall execution of operations • Ensures contract compliance and performance quality with respect to deliverables, schedules, budgets, and technical performance • Interfaces with OCFA stakeholders to ensure customer satisfaction, serving as primary point of contact and submit reports as required • Oversees processes and procedures to ensure effective deployment and task execution to meet all program requirements
Project Manager/ Technical Lead **Travis Johnson** 	• Oversees aircraft integration activities to design, develop, and integrate the FIRIS 2.0 sensors and mission systems • Ensures engineering designs and manufacturing adheres to ANSI, ASME, ISO, and MIL-STD standards and requirements • Prepares design drawings and diagrams, system schematics, electrical load analyses, and other design documentation and facilitates the PDR/CDR process and AEVEX's Engineering Change Process for any revisions during design and manufacturing
Subcontractor Project Manager **Matthew St. John** 	• Interfaces with and reports to the AEVEX management team on a regular basis regarding performance, manning, cost, and schedule • Engages and coordinates corporate and operational resources within their organization to support the FIRIS 2.0 project • Oversees subcontractor staff and ensures compliance with AEVEX and OCFA requirements and performance standards • Ensures a qualified workforce is maintained to rapidly respond to customer needs and requirements
Hardware Engineering Director Jordan Barker 	• Oversees the procurement, fabrication, installation, testing, and integration of all hardware systems and components • Translates component-level schematics into an overall installation drawing serving as the baseline for integration activities • Enforces corporate AS9100D and ISO 9001:2015 policies and procedures to ensure consistent, high quality engineering
Software Engineering Director & Chief Scientist Darren Butler, Ph.D. 	• Oversees all development, installation, testing, and integration activities to implement the moving-map display and sensor system software • Develops software requirements documentation, roadmaps, and schematics to implement GIS systems/software • Directs the Software Engineering Team in configuring the GeoFOCIS database and ingesting OCFA fire symbology • Ensures all base elevation data, base raster layers, and base vector layers are loaded for OCFA fire operations

8 x Pilots-in-Command	• Conducts on-demand aerial firefighting flights in an ATGS role in response to regional needs • Performs on-demand repositioning flights and operates per Part 135 regulations, operations specifications, and policies/procedures • Performs ground duties to include training, reports, and other paperwork; regulatory requirements; and aircraft maintenance • Responsible for the safety of the aircraft and passengers, as well as loading/unloading of occupants and cargo • Ensures compliance with Government directions as well as applicable federal or state regulations and contract provisions
8 x Sensor Operators (7 SOs and 1 Lead SO)	• Coordinates with flight crew and customer stakeholders to ensure successful mission completion • Contributes to pre and post mission briefing with flight crew to ensure required mission data is collected successful • Performs equipment maintenance and mission preparation; checks radios and mission equipment; develops and loads flight plans • Serves as system lead during the mission, operating sensors/software to collect and analyze data. • Generates real-time fire perimeters, incident maps, and video products and then disseminates intelligence package and video streaming to ground users
2 x Field Technical Representative	• Performs all scheduled/unscheduled maintenance on assigned aircraft assuring aircraft is available for flight missions on an ongoing basis • Maintains parts inventory and service vehicle, including driving from one location to another at the customer's request • Establishes relationship with FBOs and other service providers at each location the plane is stationed • Responsible for providing aircraft status, maintenance paperwork, daily location and activities to corporate flight management personnel.
Hardware Engineering Team	• Performs the design, fabrication, manufacturing, engineering, integration, testing, and FAA approval coordination/documentation for aircraft modifications and mission systems installation. • Delivers innovative airborne solutions and technologies, with the in-house expertise and resources to deliver customized systems and equipment, without the need to outsource
Software Engineering Team	• Develops the design, programming, and implementation of the GeoFOCIS software system, GIS architecture, and sensor system software. • Performs programming, server software operations, custom programs and workflows for OCFA, database development, user interface design, and quality/configuration control. • Assists with aircraft integration, our developers provide 24/7 technical support to the FIRIS 2.0 project team to quickly resolve any issues and address customer needs.
Flight Operations Team	• Ensures adherence to all FAA regulations and customer standards • Provides flight tracking, technical support, troubleshooting, and expedited parts shipping • Manages and schedules all aircraft modifications and testing • Performs sensor modifications, phase inspections, and troubleshooting.

8. Describe your firm's ability to provide personnel with the aviation knowledge, technical knowledge and qualifications outlined in the position requirements without any loss of service or performance levels to the OCFA.

Fully Qualified, Technically Knowledgeable FIRIS 2.0 Staff. Team AEVEX is fully staffed with pilots, sensor operators, mechanics, engineers, and software developers who have multiple years of experience with USFS and BLM aerial firefighting. They will leverage this expertise to ensure FIRIS 2.0 operations are executed in accordance with OCFA and national interagency standards, without any loss of service or performance levels. Additionally, many of our proposed staff have performed on DoD ISR programs where they operate, maintain, and deliver intelligence products in support of highly sensitive, no-fail mission requirements. Demonstrating Team AEVEX's dedication to our customers' mission, both AEVEX and Dynamic Aviation have supported the USFS NightWatch program together since 2016 and the U.S. Army Night Eagle/Saturn Arch ISR programs since their inception in 2008/2009, playing a key role in their transition from design to programs of record.

Our proposed staff is supported by Team AEVEX collective 39 years of experience in aviation, aircraft engineering and integration, and aerial data collection, with 1,230 professionals on staff specializing in these fields. We bring over 2.6 million operational hours supporting global aviation and intelligence operations and have delivered over 98 aircraft platforms to special mission customers. Our FIRIS 2.0 staff will be supported by this broad bench of expertise that has successfully execute global aviation programs for customers such as the U.S. Air Force, U.S. Army, U.S. Navy, U.S. Special Operations Command, and U.S. Department of State.

Technical Advisory Board. Team AEVEX consists of aviation, technical, and programmatic experts with distinguished careers in senior leadership and operational roles within the U.S. DoD, primarily within the ISR community. For FIRIS 2.0, we have selected some of these experts to establish a Technical Advisory Board (**Figure 36**) to advise and assist project personnel during planning and execution. This board will help facilitate the implementation of best practices, efficiencies, and innovative approaches as well as expedite problem resolution and ensure customer satisfaction throughout project performance.

Figure 36. Technical Advisory Board.

Technical Advisory Board	
AEVEX Engineering & Technology Vice President & General Manager Paul Stewart	20+ years of experience leading personnel, projects, and programs to deliver complex technical solutions. Prior to AEVEX, served as Director of Programs at ZMicro, Inc. where he provided strategic direction for new product development, and was an early employee of ForceX (now L-3 ForceX) serving as a key member of the senior leadership team. Holds an MBA, B.S. in Information Technology, A.A.S in Avionics Systems Technology; and an A.S. in Electronical Engineering Technology.
AEVEX Aerospace Chief Technology Officer (CTO) Manan Patel	13+ years of experience leading and ensuring the successful completion of airborne engineering and operational efforts. Prior to AEVEX, served as founder and CEO of Special Operations Solutions, which grew to support several global, high-profile ISR programs. Also served as an Electronics Engineer with the U.S. Army where he developed, implemented, and enhanced innovative technologies for ISR operations. Holds an M.S. in Electrical Engineering and a B.S. in Electrical Engineering.

AEVEX Aerospace Chief Pilot Bruce Maxwell	17+ years of experience in manned and unmanned aircraft operations, test and evaluation, and program management. Previous roles include Chief Pilot, Instructor Pilot, Test Pilot, Flight Operations Chief, and Site Manager. Track record of over 2,350 total manned flight time hours, including 2,130 hours as PIC. U.S. Navy veteran and graduate of the National Test Pilot School. Holds an M.S. in Flight Test and Evaluation and a B.S. in Professional Aeronautics.
AEVEX Aerospace Senior Software Architect Don Burns	32+ years of experience of experience in software development and real-time 3D visualization, with experience on 3D map projects, including mission critical augmented reality maps integrated with live video. Portfolio includes developing the precursor to Google Earth and playing a key development role in OpenSceneGraph. Prior to AEVEX, served as CTO of AeroComputers, Inc. and as Senior Embedded Software Engineer at Nvidia Corp. Holds a Master's degree in Software Engineering.
Dynamic Aviation Director of Business Development Technical Solutions Jason Burkholder	20+ years of experience in aircraft maintenance and modification, currently serving as Dynamic Aviation's primary subject matter expert for formulating and discussing potential solutions to customer requirements. Prior roles include serving in a number of capacities including as an A&P Mechanic, Maintenance Manager, Maintenance Operations Manager, and Director of Special Projects.

9. Explain how your Firm selects and retains resources with current, high-quality skill sets.

While Team AEVEX already employs the personnel required to mobilize and execute FIRIS 2.0, in the event that there is a position vacancy or change in scope, AEVEX implements a continuous and deliberate recruiting process to quickly meet operational staffing needs. As a large business that executes with the agility of a small, our process is designed to rapidly source, vet, and onboard employees. Our approach goes beyond the position's minimum requirements to assess the customer, task, professional community, and operating environment and determine the optimal staffing solution based on experience, education, temperament, and past accomplishments. Our process has been proven and refined over the past decade, enabling us to successfully provide a disciplined, professional, and experienced cadre of aviation and remote sensing experts. Our partner Dynamic Aviation has been staffing qualified pilots for aerial firefighting, aerial mapping, and other special missions for over 22 years. With our team's experience supporting USFS and BLM aerial firefighting operations, we understand what it takes to work a project such as FIRIS, how to identify the right personnel, and how to build a cohesive team working as a good partner to our customer.

AEVEX seeks talented individuals whose personalities and values fit with those of our customer, as well as within AEVEX's core values of Excellence, Integrity, Accountability, Tenacity, and Service and empowering people to make the world a safer place. Our recruiting and retention approach is summarized in **Figure 37** below.

Figure 37. Recruiting and Retention.

Recruiting. Our candidates undergo careful vetting and a rigorous pre-screening process, specifically tailored to the project. Our full-time Human Resources (HR)/Recruiting department executes the AEVEX Talent Selection Process, leveraging a suite of tools to identify suitable candidates that match the specific program requirements (Predictive Index), maintain an in-house data base of potential talent and manage the hiring process (Lever), on-board and manage employee benefits (Zenefits). These tools are described below:

- ***Predictive Index (PI)*** - The PI compares candidates against pre-defined behavioral and cognitive job requirements. After defining the specifics of the position, the PI software guides us through setting behavioral and cognitive job targets. The candidates complete a self-assessment and then PI assists AEVEX in developing targeted interview questions based on the candidate's behavioral pattern.
- ***Lever –*** Lever is an applicant tracking system to streamline our hiring process. It stores resumes and candidate information, routes candidates to the appropriate hiring manager to review, and tracks a candidate's progression through the hiring process.
- ***Zenefits –*** Zenefits is our HR system that ingests data from Lever and facilitates our onboarding process. The platform includes all employee onboarding documentation and a self-service benefits management portal.

AEVEX selects candidates with current, high-quality skill sets through a number of resources. Our employee referral program is the source for approximately 25% of our hires and these referred candidates are typically the highest performing assets we possess. Another source is job boards such as Diversity Jobs, LinkedIn, Indeed, Clearance Jobs, JSfirm, and Guard Reserve Jobs. These databases ensure AEVEX's open positions are distributed to a diverse population where we can select the most qualified applicants. As matter of practice, we maintain a bench for positions that we regularly staff such as sensor operators for aerial firefighting operations. Our HR/Recruiting department screens candidates and maintains contact to stay updated on availability and qualification for future use on our programs. Availability dates, qualifications, and PI results are all maintained for these candidates so that they are available to hire and deploy at a moment's notice.

Retention. AEVEX recognizes that our employees are our most critical asset and places high importance on the human and cultural dynamics that influence an agile professional culture. We take an integrated management approach to attract, motivate, and retain a highly qualified workforce meeting the needs and expectations of our customers. To sustain our competitiveness in the labor market, we maintain flexibility in our total compensation

strategy, policies, and practices. Our HR team continually reviews and enhances our total compensation plan to ensure we remain competitive in today's aviation, technology, and intelligence sectors where aggressive compensation and benefit plans are critical for attracting and retaining the best talent. We combine competitive compensation and comprehensive benefits with non-monetary incentives and awards to create an environment that values the skills and contributions of each employee. Additionally, we have resources in place to provide a clear path for employee professional development. Our total compensation plan results in a stable and loyal workforce that mitigates risk to execution due to loss of knowledge, relationships, or from inefficiencies due to training new personnel. Our retention success is demonstrated by our staff's tenure with AEVEX—many members of our technical team proposed for OCFA have been with AEVEX for 5 to 10 years.

10. Provide information regarding assigned persons regarding experience in providing services as described. Include resumes for each of your assigned team members including specific knowledge, expertise and experience in providing services as described. Pilot carding, certifications, experience in the specific services required. Include a description of training for team members including initial training program and any ongoing training/monitoring. Identify all licenses/certifications currently held.

AEVEX has identified project personnel who are qualified and ready to perform upon contract award. To manage FIRIS 2.0, we have selected key personnel who bring a depth of experience overseeing and/or conducting airborne engineering and flight operations supporting U.S. Government customers, to include the USFS. Highlights of key personnel qualifications and experience are provided in **Figure 38**.

Figure 38. Key Personnel.

AEVEX Key Personnel

Program Director/Principal – Ron Trosclair

Ron Trosclair is the Director of Programs for AEVEX Engineering and Technology. He has over 30 years of experience leading military, civilian and contractor teams, both large and small, across all facets of aviation for the U.S. Department of Defense and other aviation customers. Most of his time has been spent managing ISR aviation programs and other discrete capabilities for worldwide customers. At AEVEX, he is responsible for directing engineering and operational programs and cross-functional resources across AEVEX. Furthermore, Ron oversees and manages AEVEX's USFS NightWatch program and the personnel conducting aerial fire missions. Prior to joining AEVEX, Ron was the Deputy Director of Special Programs for the USAF's acquisition division, Big Safari, in Greenville, TX. He was responsible for leading and managing a highly motivated team to execute urgent needs, aircraft acquisition, aircraft modification, and worldwide sustainment support. Previously, Ron retired from a 20-year distinguished career as an aircraft maintenance and munitions Air Force officer. He is PMP certified with a B.S. degree in Electrical Engineering and is a candidate for a Master's degree in Aerospace Management and Safety from Embry Riddle University. Additionally, Ron serves as an AEVEX mentor, a Dallas Chapter of Project Management Institute mentor, and he serves as the Dallas/Fort Worth Military Liaison.

Project Manager/Technical Lead – Travis Johnson

Travis Johnson has 16 years of experience in the aerospace engineering and manufacturing field, currently serving as AEVEX's Senior Design Engineer and Project Manager. Prior to AEVEX, he served as Engineering Design Manager at Leidos/SAIC and as Lead Mechanical Designer at Numatics Actuator where he has provided design and engineering support for various special project integration programs. Travis has worked on high-profile U.S. military airborne remote sensing programs such as U.S. Army Saturn Arch and ARL-E, as well as for USFS NightWatch, ensuring the on-time delivery and schedule/cost control throughout each project. His skills include creating concept designs and detailed fabrication, assembly, and installation drawing packages for various airframes, ensuring compliance with manufacturing and ANSI standards. He is adept in Solidworks, Inventor, AutoCAD, AutoCAD Mechanical, Synergis Adept, TurboNest CNC code writer, and GeoMagic. Travis holds

AEVEX Key Personnel

a Geometric Dimensioning and Tolerancing certification and an A.A.S degree with a Design Engineering Technology Certificate.

Hardware Engineering Director – Jordan Barker

Jordan Barker has 10 years of experience leading hardware engineering and integration, flight test, and rapid prototyping teams. He is responsible for planning, executing, and overseeing complex engineering and systems integration projects. Jordan is a skilled engineer across a variety of scientific, mathematic, and technological disciplines and is experienced at designing, fabricating, integrating, testing, and maintaining various technology and equipment in support of airborne programs. For example, Jordan developed AEVEX's MC Control data acquisition system, which has been instrumental in several U.S. government aircraft receiving AWRs. His experience includes serving as Assistant Technical Lead for system testing of airborne sensor equipment and ISR sensors on the U.S. Army Saturn Arch aircraft. He has also served as Lead Instrumentation and Flight Test Engineer for a U.S. Army rotary platform upgrade program. He holds a B.S. in Integrated Science and Technology and is a certified LabVIEW Associate Developer.

Software Engineering Director & Chief Scientist – Darren Butler, Ph.D.

Dr. Darren Butler has 19 years of experience in software engineering with proven experience as a Lead Designer/Developer. He is AEVEX's Chief Scientist and the developer of our GeoFOCIS product suite and currently serves as Chief Scientist for the maintenance and enhancement of the software. Darren has led the customization of GeoFOCIS for firefighting operations. Prior to AEVEX, he served as Lead Developer and Technical Lead for projects such as VideoQuest™ (an extension of ESRI ArcGIS Desktop) and the TerraSight™ product suite. He is skilled in numerous programming languages and has extensive experience with GIS systems such as ESRI ArcGIS Desktop, Server, Engine; ArcSDE; ArcGIS Online; Oracle Spatial, Access, Microsoft SQL Server, MySQL, and PostgreSQL/PostGIS; and various other databases, tool kits, frameworks, and applications. He holds a Ph.D. in Image and Video Processing; a Bachelor's degree in Electrical and Electronic Systems Engineering; and another Bachelor's degree in Information Technology.

Initial Training. All proposed staff are currently trained/qualified for the FIRIS 2.0 project, including several personnel who are experienced conducting flight and sensor operations for aerial firefighting. This is demonstrated in the resumes provided in **6) Proposed Individuals' Resumes for Services.**

Ongoing Training/Monitoring. Throughout project performance, AEVEX's key personnel track and ensure project personnel maintain proficiency and remain qualified to perform their duties. For new hire and refresher training, a technical representative from our Software and/or Hardware Engineering Teams will conduct training on topics such as: Introduction to Systems, Operating Systems, Configuring/Operating Software, and Maintaining Systems. When a new hardware or software change/update is implemented, FIRIS 2.0 operators will receive the necessary training materials and instruction to maintain continuity of operations on the project. AEVEX incorporates OEM personnel, equipment, and materials into our training to minimize costs and deliver in depth training. Additionally, our partner Dynamic Aviation also maintains a Flight and Maintenance Training department to ensure crewmembers are thoroughly trained and knowledgeable of the concept of operations and maintain their qualification.

4.3. Customer Service

Team AEVEX has the resources in place now to effectively manage both aircraft missionization and aerial data collection operations. Our culture is founded on providing highly qualified, mission-focused personnel coupled with proven infrastructure and processes to deliver agile and responsive project management support. Our Program

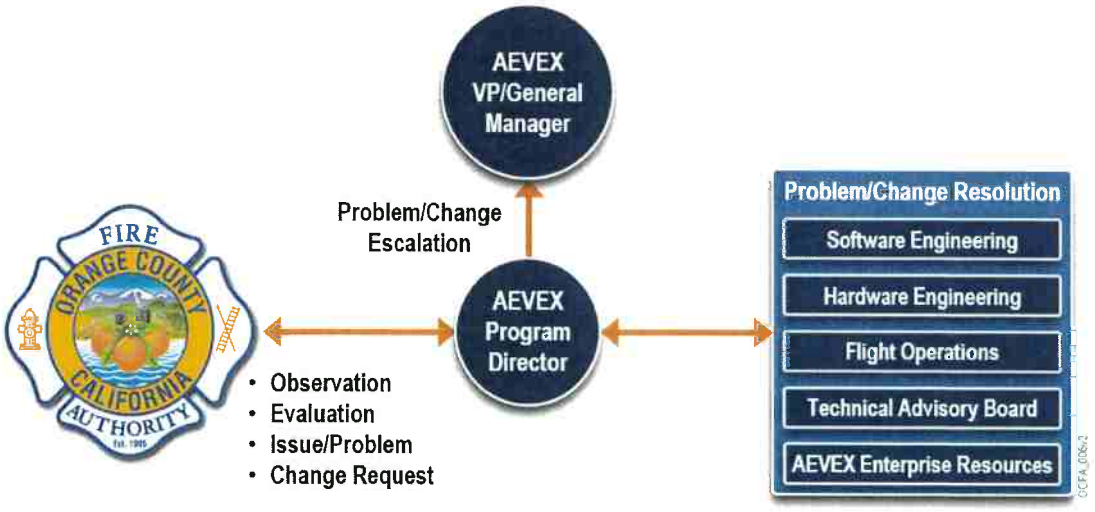
Director Mr. Ron Trosclair brings 30 years of experience managing large-scale aviation programs and is PMP certified. Our Project Manager Mr. Travis Johnson brings 16 years of experience leading complex aircraft engineering/integration efforts. This management team is supported by AEVEX enterprise resources such as our Operations, Contracts, HR/Recruiting, Finance and Accounting (F&A), Safety, Quality, and Security departments. These departments provide dedicated oversight, back-office support, and reach-back capability to ensure responsive and effective customer service.

11. Describe the level of customer service that will be provided, including procedure that will ensure consistency and problem escalation and resolution. The description should include: customer service organizational structure, contact process, follow up process, other internal procedures.

Our company is built to perform end-to-end ISR solutions with the agility, flexibility, passion, and all-hands-on-deck customer service mentality of a small business, but with the resources, depth, and experience of a large business. Team AEVEX's approach to ensuring quality customer service includes implementing management processes and controls based on Project Management Body of Knowledge (PMBOK) best practices and lessons learned gained from our companies combined 39+ years managing airborne programs. In the following sections we outline how AEVEX provides customer service support and manage the FIRIS 2.0 project. Upon contract award, we will work with OCFA to refine and tailor our approach to specific needs and requirements.

Problem Escalation and Resolution. During project performance, AEVEX provides OCFA with 24/7 access to our Program Director to respond to any issues, problems, or needs. Mr. Trosclair is responsible for identifying deficiencies via observations, reporting, and customer feedback and implementing problem resolution actions to correct or prevent deficiencies. Additionally, he establishes and trains project personnel on processes for preventing problems, quality metrics/indicators, and problem escalation procedures. Both Mr. Trosclair and Mr. Johnson maintain open communication with OCFA for feedback and collaboration, to include solicitating a customer satisfaction survey on monthly basis, or as desired by OCFA. All issues or concerns are handled at the lowest appropriate level with the visibility and support of our Technical Advisory Board, enterprise resources, and senior AEVEX leadership. **Figure 39** outlines our customer service organization and problem/change response procedures.

Figure 39. Customer Service Organization.



For any change request, software/hardware customizations, or other customer needs related to project performance, our Program Director engages the appropriate team to quickly implement the change per OCFA requirements. Telephone, email, video conferences are conducted to request feedback from the customer as well as receive feedback. The feedback is entered and managed through our issues tracking process until resolved. Periodic updates on issues are communicated at regularly scheduled meetings or more frequently as required by the customer.

Project Consistency. We maintain project consistency using a methodology of centralized planning and decentralized control via reporting. The Program Director and Project Manager will work together to develop a Project Management Plan (PMP) that includes a Work Breakdown Structure (WBS) and Integrated Master Schedule (IMS). Throughout each project phase, they will monitor and control to ensure deliverable, schedule, budget, and technical performance compliance and customer satisfaction. This includes measuring schedule and costs against baselines and taking corrective actions as necessary, holding project status meetings, providing reviews and reports, and managing risks.

The OCFA project team is supported by our F&A department, who assist with project control measures and implement planning, review, control, execution, and closeout processes. This includes developing reports that present project status and work valuation, preparing estimates to complete, and auditing existing expenditures to ensure billed costs are suitably aligned. Our Contracts department maintains, monitors, and revises configuration control of the contract and project documentation, as well as oversees and audits to ensure contract compliance. AEVEX uses Unanet time and attendance software to record and track labor hours. Our project management team maintains awareness of all resources being used on the project, tracks all costs, and reallocates resources as needed.

The following sections describe our other internal procedures that facilitate communications, contract and follow up, and quality, subcontractor, risk/safety, and logistics resource management for optimal customer service support.

Communications Management (Contract and Follow up). Upon contract award, AEVEX's Program Director and Project Manager will coordinate with OCFA to schedule and conduct a project kick-off meeting. This meeting will review OCFA requirements, AEVEX's technical approach, personnel and manning status, aircraft and equipment status, project schedule, risk management issues, and other topics as coordinated with OCFA. To enable consistent communication during the project, AEVEX's Program Director will work with OCFA to establish a briefing and reporting cycle and provide information sharing that facilitates innovation, improvement, and customer satisfaction. AEVEX will submit a status report, as directed, providing the status of on-site personnel and those in rotation, aircraft status, etc. as well as submit any other required deliverables. The Program Director and Project Manager will also conduct site visits, as desired, to interface with OCFA, addressing any concerns/issues and ensuring needs/goals are being met

To facilitate internal Team AEVEX communications, we will conduct weekly team meetings, regular reporting and reviews, and timely, impromptu communications as needed to address any issue that impacts project performance and our customer. Project personnel are responsible for weekly reporting to the Project Manager, who then submits weekly reports to the Program Director, summarizing project status, deliverable accomplishments, major updates, and any new requirements. This includes reporting on finances, submitted and upcoming deliverables, potential risks, resources required, problem resolution,

anticipated changes, schedules, and personnel status. This reporting serves as a key layer of cost, schedule, and quality surveillance.

Online Project Portal – AEVEX uses a Microsoft SharePoint-based project management portal that provides on demand awareness of project elements and documentation, configuration and change management, deliverable and report tracking, and project team communication. This tool helps ensure common understanding of project requirements and standards to maintain quality and continuity.

Quality Management. AEVEX's Production Facility in Harrisonburg, VA is both AS9100D and ISO 9001:2015 certified, with a Quality Management System (QMS) and documented policies and procedures for quality assurance (QA) and quality control (QC). We have a dedicated Quality Management Representative Ms. Brittany Tucker who ensures that processes needed for the QMS are established, implemented, and maintained and reports to AEVEX management on a regular basis regarding quality performance and areas for improvement. AEVEX's QMS is designed with a focus on enhancing customer satisfaction, ensuring that:

- Customer and applicable statutory and regulatory requirements are determined, understood, and consistently met
- Risks and opportunities that can affect conformity of products and services are addressed. The ability to enhance customer satisfaction is determined and addressed
- Product and service conformity and on-time delivery performance are measured, and appropriate actions taken to meet objectives and standards

Additionally, our partner Dynamic Aviation maintains a Quality Department at their headquarters/airport in Bridgewater, VA. This includes an FAA-approved inspection program to ensure all work, parts, processes etc. meet customer and industry standards. These inspections encompass parts fabrication, engineering, logistics, and maintenance work.

Subcontractor Management. The AEVEX Program Director is responsible for subcontractor performance, in conjunction with our Project Manager and technical/site leads. Dynamic Aviation is incorporated into project planning and regular reports to AEVEX on performance through scheduled meetings, status reporting, and frequent informal communications. Our approach, built on clear goals and common program processes, ensures our subcontractors remain focused and compliant with project requirements, to include cost, risk, quality, and schedule. Our methods for integrating, controlling, and managing subcontractors ensures our subcontractor has defined responsibilities, clear lines of communication, and measures for performance. Our subcontract management methods include:

- A Teaming Agreement defining work to be performed with specific cross-references to the SOW to ensure clear understanding of roles
- A Subcontract Agreement with the flow-down of contract general terms, conditions, and special provisions. Includes linking subcontractor's performance incentives to those of AEVEX and cross-references to the SOW

- A Project Kick-Off Meeting to ensure our subcontractor understands AEVEX's management procedures and standards as well as OCFA project-specific requirements, procedures, and standards.
- A Subcontractor Performance Plan that establishes performance measures and metrics correlating to the subcontractor's aspect of the work and deliverables. Identify and incorporate lessons learned for continuous improvement
- Integrated Planning and Regular Reporting to optimize solutions and customer support and monitor technical, cost, and schedule performance

We integrate our subcontractors into the project, and their employees operate as essential members of Team AEVEX. Dynamic Aviation has dedicated a Project Manager Mr. Matthew St. John who will be held accountable for the integration of Dynamic Aviation corporate resources and employees into the FIRIS 2.0 project.

Risk and Safety Management. AEVEX's Program Director and Project Manager are responsible for identifying and analyzing potential risks to technical performance, schedule, and cost; planning and implementing mitigating/avoidance actions to reduce the likelihood of occurrence; and monitoring and tracking risks, adapting to changing contract circumstances to control program risks. This includes overseeing the risk management process, evaluating program risks, continually assessing the program for root causes, monitoring risk status, and managing risk mitigation activities. They are supported by our Technical Advisory Board and enterprise resources to help identify, track, and manage project risks.

The Program Director will implement a project-specific Health and Safety Plan that addresses site-specific conditions and hazards and includes procedures for complying with applicable Government published safety requirements and regulations. We use the Health and Safety Plan and Activity Hazard Analysis to plan policies, procedures, and actions needed to assure safety. Recently, in response to the COVID-19 pandemic, AEVEX worked with the USFS to develop and implement aircraft disinfection procedures, as defined by the National Business Aviation Association. AEVEX implements health and safety plans with inspections and controls in place to assure that the plans are followed. Safety nonconformance is measured by our inspections and audits or observations by external organizations.

Our partner Dynamic Aviation has a proven safety record with 700,000+ hours flown.

For Flight Safety, Dynamic Aviation staffs a Safety Officer who implements a comprehensive Safety Management System (SMS) that includes risk assessment procedures; risk tracking and reporting; and safety occurrence reporting to catalogue minor/major operational issues for analysis and safety awareness/mitigation. By leveraging technology, Dynamic Aviation has created an interactive database and robust user portal that supports their SMS. They have been able to resolve reoccurring issues, streamline safety processes, and pinpoint trouble areas quickly and efficiently due to these technologies.

Logistics Management. Team AEVEX specializes in global logistics and supply chain management. This includes assisting with system deployment and logistics; spares and inventory management; and coordinating with OEMs to ensure the appropriate tools, equipment, and documentation. Our logisticians maintain and/or advise on inventories for repairable items, spares, and replenishment parts as well as maintain logs, records, and archives of all system information. We develop integrated logistics support (ILS) plans,

including sparing packages and maintenance organizational development. We develop these plans based on our operational experience accommodating high operational availability requirements. Additionally, our partner Dynamic Aviation has a Logistics department that maintains inventory control, tracks outstanding material, and performs product handling through a variety of shipping methods, ensuring all customer assets are handled with absolute integrity.

Streamlined procurement is achieved through our network of well-established, ISO-certified industry suppliers. Our QMS requires all approved suppliers to pass an initial evaluation as well as monthly performance evaluations to ensure the supplier continues to provide timely service and high-quality parts. Our network of approved suppliers enables us to reduce costs and scheduling risks through optimal pricing and lead times. AEVEX uses a procurement software tool called Spendmap to track all vendors and purchases, which includes built-in workflows and approvals to facilitate the purchasing process and ensure we remain on schedule/within budget. AEVEX is experienced procuring items such as sensor systems, GIS software, operator consoles, airborne equipment racks and servers, camera and radar control units, remote data terminals, tracking antennas, tactical and mesh network radio systems, communication relays, ground control stations, and other ancillary ground support equipment. We also have extensive experience and expertise procuring fixed-wing and rotary-wing aircraft.

12. Provide a sample of completed reports and documentation presenting the system capabilities as offered.

Daily Situation Report (SITREP). As part of Team AEVEX's SOPs, our sensor operators disseminate a SITREP at the end of every shift. The SITREP offers both a high-level overview of the aircraft and system as well as a detailed status of each component. Status is shown using a green, yellow, red report indicating whether the mission equipment is Fully Mission Capable (FMC), Partially Mission Capable (PMC), or Not Mission Capable (NMC). An example of the SITREP is provided in **Figure 40**.

Figure 40. Example SITREP.

Mission Equipment Status		Status
Communications	SATCOM	FMC
	WaveRelay	FMC
	LTE	FMC
	mIRC Chat	FMC
	Radios	FMC
Rack/Monitor	Workstation	FMC
	Observer	FMC
	Monitors	FMC
Payloads	FLIR 380HDc	FMC
	TK-9 HD	FMC
ASE	GPU	FMC
	Tug	FMC
Aircraft	B200	FMC
REMARKS:		
NSTR		

The daily SITREP also includes essential elements to pinpoint any issues that may arise and recommended troubleshooting methods, as displayed in **Figure 41** below.

SITREPS are provided from each shift, whether the aircraft flies or not. The accumulation of historical SITREPS has provided Team AEVEX unique insight to the reliability of components, allowing us to enhance the system in new iterations as well as ensure necessary spares and replacements are readily available.

The last component of the SITREP contains the details of the mission itself, highlighting flight time and incident tasking details. With the dissemination of the SITREP and products our team conducts a secondary quality control of products to confirm accuracy and consistency.

Figure 41. Example SITREP details.

		NMC	PMC	FMC	Criteria
GeoFOCIS					
	Maps/Coverages			X	Appropriate maps loaded for AOR
	DTED			X	Appropriate DTED loaded for AOR
	Encoding			X	Encoder IP set and multicasting video to 4 sources
	Command FLIR			X	Geopoint FLIR with GeoFOCIS software
	Recorder+RestartonCrah			X	Command window populates and ready automatically
	Record FMV			X	Record 3 streams (VIC, HDIR, and EON)
	Metadata			X	Receive/record metadata from FMV
FLIR					
	380 HDc Turret			X	FLIR installed and properly connected
	HDIR			X	Mid-wave IR sensor operational
	HDEO			X	HDEO sensor operational
	HDLL			X	HDLL sensor operational
	SWIR			X	Shortwave IR sensor operational
	Blending			X	Sensor feed blending capabilities operational
	LRF			X	Laser range finder operational
	LP			X	Laser point / target illuminator operational
	GPS/NAV			X	Receiving GPS and navigation
SATCOM					
	ViaSat 18in			X	Connection with ViaSat antenna.
	Router/Switch			X	Router and network switch connectivity
	mIRC			X	Chat via mIRC
	Multicast FMV			X	Stream FMV to UVDS at 720p resolution
WaveRelay					

Service Desk Capabilities. Team AEVEX uses an online Service Desk platform which allows for users to issue a feature request, report a bug, or solicit general support. The Service Desk is accessible to internal and external users. The resolution of each submission enters a "knowledge base" for users to access as a reference tool. Internally, Team AEVEX uses the Service Desk to generate a variety of reports to allow continuous improvements. Examples of these reports are "time to resolution" to view our reaction time, "user workload" to see what is actively being resolved by our Service Desk, and "customer satisfaction" to get direct feedback from end users.

5. Appendix B - List of References

AEVEX is pleased to provide our list of five (5) references in Appendix B – List of References. A detailed description of the projects is also provided in section **3) Relevant Experience.**

APPENDIX B - REFERENCES

Describe fully at least three contracts performed by your firm that demonstrate your ability to provide the services included with the scope of the specifications. Attach additional pages if needed. OCFA reserves the right to contact each of the references listed for additional information regarding their experience with your company.

Customer Agency Name	USFS, Region 5
Contact Individual & Title	Walter Bunt, National Aerial Supervision Program Manager
E-mail/Telephone number	walter.bunt@usda.gov | 530-226-2714
Date of Project & Description of services provided including contract amount	**11 Apr 2016 – 31 Jul 2020 (expected) - $2,662,981.31 (AEVEX)** King Air B200 integration with FLIR 380 HDc and GeoFOCIS for nighttime fire mapping mission and intelligence packages collection and dissemination.
Customer Agency Name	USFS, Pacific Southwest Region, Regional Air Group
Contact Individual & Title	Philip Hawkins, FireWatch Program Manager
E-mail/Telephone number	philip.hawkins@usda.gov | 530-226-2790
Date of Project & Description of services provided including contract amount	**1 Oct 2017 – 1 Jun 2018 - $431,599.28 (AEVEX)** Integrated, installed, maintained, and provided training in support of two USFS Bell 209 helicopters and two data vans equipped with Persistent Systems MPU5 transceivers to conduct fire surveillance missions.
Customer Agency Name	USFS, Region 3/6
Contact Individual & Title	Ben McGrane, Contract Specialist
E-mail/Telephone number	bmcgrane@fs.fed.us | 541-410-5714
Date of Project & Description of services provided including contract amount	**1 Apr 2015 – 1 Apr 2020 - $2,667,027 (Dynamic Aviation)** King Air E90 outfitted with ATGS Type 1 avionics, and one dedicated FTR to maintain the aircraft in the field, operated and maintained under a Part 135 certificate with FTR ensuring the aircraft's reliability and availability.
Customer Agency Name	**Department of the Interior, Bureau of Land Management**
Contact Individual & Title	John Hedeen, Contracting Officer
E-mail/Telephone number	john_hedeen@ibc.doi.gov | 208-433-5016|
Date of Project & Description of services provided including contract amount	**1 Jan 2014 – 1 Apr 2018 - $1,026,574 (Dynamic Aviation)** One turboprop aircraft and 2 jet aircraft and certified A&P mechanics,spares in support of firefighting operations. With BLM projects, we have flown a total of 23,848 successful mission hours a 99% average reliability/availability rate.
Customer Agency Name	Special Operations Command Europe (SOCEUR)
Contact Individual & Title	Russ Erath, Program Manager
E-mail/Telephone number	rerath@dynamicaviation.com | 607-768-0511
Date of Project & Description of services provided including contract amount	**1 Apr 2017 – 1 Apr 2020 - $8,248,810 (AEVEX)** King Air B200 design, integration, operation of Radar (Synthetic Aperture Radar Mapping and Ground Moving Target Indicator) and FMV payload with GeoFOCIS for ISR collect and real time global dissemination.

6. Proposed Individuals' Resumes for Services

Team AEVEX's proposed personnel qualifications are summarized in **Figure 42**. Detailed resumes for all proposed personnel are provided below. The resumes provide detailed information on personnel's qualifications, experience, education, training, expertise, and certifications. Additionally, we provide pilot licenses and cards.

Figure 42. Personnel Qualifications.

Team AEVEX Personnel Qualifications				
Position	**Name**	**Experience**	**Firefighting**	**ISR**
Program Director	Ron Trosclair, PMP	30 Years	Yes	Yes
Project Manager	Travis Johnson	16 Years	Yes	Yes
Subcontract Project Manager	Matthew St. John	1 Year	No	No
Hardware Engineering Director	Jordan Barker	10 Years	Yes	Yes
Software Engineering Director & Chief Scientist	Darren Butler, Ph.D.	19 Years	Yes	Yes
Pilot-in-Command 1	Oakley Armstrong	5 Years	Yes	No
Pilot-in-Command 2	Jan Kubic	32 Years	Yes	No
Pilot-in-Command 3	Benjamin Fung	6 Years	No	Yes
Pilot-in-Command 4	Peter Cain	4 Years	Yes	No
Pilot-in-Command 5	Sean Laycox	32 Years	Yes	Yes
Pilot-in-Command 6	Wesley Kinter	14 Years	No	Yes
Pilot-in-Command 7	Brian Perry	13 Years	No	No
Pilot-in-Command 8	Josiah Grindrod	7 Years	Yes	No
Sensor Operator 1	Erik Rodriguez	15 Years	Yes	Yes
Sensor Operator 2	Matthew Hedman	16 Years	No	Yes
Sensor Operator 3	Ryan Becker	21 Years	Yes	No
Sensor Operator 4	Peter Jockimo	25 Years	No	Yes
Sensor Operator 5	Elijah Leonardo	8 Years	No	Yes
Sensor Operator 6	Jay Barrowman	21 Years	No	Yes
Sensor Operator 7	Cesar Alveraz	16 Years	Yes	Yes
Sensor Operator 8	Charlie Saelee	10 Years	Yes	Yes
FTR 1	Stewart Meek	29 Years	No	Yes
FTR 2	Nathan Hawkins	4 Years	No	No
		Total Years of Experience		**354**

Team AEVEX's resumes for all proposed personnel, demonstrating our ability to provide a qualified project team on Day 1 of contract award, are provided below. Each resume provides information on personnel's experience, education, training, and certifications. We also provide pilot's licenses and carding documentation for all pilots-in-command.

Ron Trosclair

Position	Name	Length of Time with Firm
Program Director/Principal	**Ron Trosclair**	**1 Year**

Education/Training

MS, Aerospace Management/Safety candidate, Embry-Riddle Aeronautical University
BS, Electronic Engineering, South Dakota State University
AS, Electronics Technician, Community College of the Air Force
AS, General Studies, Black Hills State University

Hands-on Work Experience

Director of Programs; 2019 – Present

- Responsible for directing a multitude of programs from requirement, proposal creation, negotiating, execution and contract close out
- Aligned strategic direction of programs with the corporate strategy for continuous improvements, new business pursuits, and team professional development
- Mentored personnel in and out of business area in program management, aviation management, and general career development
- Built annual budgets, forecasted quarterly and annual revenue and expenses
- Led multiple aircraft lease, purchase, and employment from aircraft identification, generating cost, schedule, and return on investment projections

Deputy Director Special Programs, Riverside Research; 2007 – 2018

- Led all scheduling, pricing and technical performance of multi-million-dollar Government contracts for major aircraft modification, annual services, and logistics
- Acted as integrated project team lead for quick reaction capability contracts to solve urgent user requirements with highly technical solutions
- Led program management reviews including customers, contractors and military leaders
- Directed multiple service and subcontractor integration for large-scale efforts
- Managed engineering, manufacturing, test, depot maintenance, supply and field service contracts for worldwide operations
- Evaluated contractor proposals for ability to meet military customer requirements
- Evaluated work breakdown structure effectiveness and efficiencies
- Validated manpower contract field maintenance contract proposals for worldwide efforts
- Evaluated subcontractor efforts for suitability to achieve customer requirements
- Managed 17 annual contracts for aircraft maintenance/modifications and field teams supporting 32 aircraft world-wide
- Interacted with numerous senior military leaders, acquisition executives and senior contractor executives including prime contractor chief executive officers
- Apply extensive security knowledge of specialized functions to highly classified contracts
- Managed multiple major a/c modification contracts each in the tens of millions of dollars
- Led program office efforts for new aircraft fielded to middle east locations

Program Manager, USAF; 1986 – 2006

- PM, Predator MQ1/MQ9 Special Programs
- Deputy PM, Compass Call (C-130)
- Deputy PM, Commando Solo (C-130)
- Chief of Depot Operations, imbedded within industry with L3 in Waco Tx

Certifications/Awards/Recognitions

- PMP Certification
- Program Management Level II, Acquisition Logistics Leve II, and Aircraft Test Level I, from DoD Acquisition University
- Aircraft Safety Investigation Course, Air Force Safety Center
- Six Sigma Training, DoD Acquisition University
- Extensive formal leadership and management training during 20-year active duty USAF career

Skills/Areas of Expertise

- Microsoft Project suite of software
- Program Management and Leadership
- Aviation Safety Board Member (USAF)
- Aviation Accident Investigation

Travis Johnson

Position	Name	Length of Time with Firm
Project Manager/Technical Lead	**Travis Johnson**	**4 Years**

Education/Training

AAS, Design Engineering, Northwest Shoals Community College, 2006
Computer Aided Drafting/Design Certificate, Northwest Shoals Community College, 2006

Hands-on Work Experience

Project Manager/Technical Lead, AEVEX Aerospace; 2016 – Present

- Plan and perform engineering research, design development, and other assignments m conformance with design, engineering, and customer specifications
- Coordinates the activities of engineers assigned to specific projects
- Provide Design and Engineering support for various projects using Solidworks and designing to ANSI and MIL-STD
- Assist in technical aspects of proposal generation
- Create aircraft detail fabrication, assembly, and installation drawings for various ISR programs
- Provide leadership, and direction for projects involving contracted Aircraft modifications, inspections, and delivery

Engineering Design Manager, Leidos; 2013 – 2016

- Successfully manage a team of Engineers and Designers, designing various components on special integration programs using Solidworks and Inventor, ensuring schedule and cost is met on each project
- Creating concept designs, detail fabrication, assembly and installation drawing packages for various airframes in a QRC environment
- Manage spend plans, LOEs and BOEs for proposals along with conceptual design for proposals
- Review of drawings for compliance for manufacturing and ANSI standards

Engineering Designer 4, Leidos; 2011 – 2013

- Provide Design and Engineering support for various special project integration programs using Inventor and Solidworks, designing to MIL-STD specifications and ANSI standards
- Provide reverse engineering support with Faro and Surphaser scanners, experience in geometric exploitation and modeling from scan data
- Create aircraft detail fabrication, assembly, and installation drawings
- Create ECRs, ECNs and Engineering Authorizations for designs as needed

Certifications/Awards/Recognitions

- Geometric Dimensioning and Tolerance (GD&T) Certification
- On Engineering team that won the SAIC ASPIRE award

Skills/Areas of Expertise

- Program Management and Leadership
- Solidworks 3-d Design
- 16 years of experience designing to ANSI, ASME, ISO, & MIL-STD for both aerospace and manufacturing
- ISR Platforms
- Solutions Development
- 16 years of experience with diverse types of CAD software

Jordan Barker

Position	Name	Length of Time with Firm
Hardware Engineer Director	**Jordan Barker**	**9 Years**

Education/Training

B.S. Integrated Science and Technology May 2011 (ABET accreditation), Dual Concentration in Energy and Instrumentation & Measurement, James Madison University, 2011

Hands-on Work Experience

Hardware Engineering Director; May 2011 – Present

- Director of the Hardware Engineering team responsible for all hardware products designed and built by AEVEX E&T
- Managed the AS9100D and ISO 9001-2015 approved production facility
- Lead Engineer and developer of AEVEX's airborne remote sensing and data acquisition units
- Extensive experience in aircraft flight test instrumentation and mission system design
- Designed and fabricated ruggedized electrical enclosures for flight testing, structural health monitoring, Power Distribution Units and various customized electrical components
- Assistant Technical Lead for mission system testing of mission equipment and ISR sensors for Saturn Arch 'Yogi 7' aircraft

Certifications/Awards/Recognitions

- Certified LabVIEW Associates Developer
- Certified Wescam MX series Trainer

Skills/Areas of Expertise

- National Instruments (NI) LabVIEW Software
- NI Data Acquisition Hardware
- Printed Circuit Board Design and Fabrication
- Power conditioning design
- Digital Electronics
- Aircraft data busses

Darren Butler

Position	Name	Length of Time with Firm
Chief Scientist & Software Engineering Director	**Darren Butler**	**7 Years**

Education/Training

Ph.D., Computer Vision, Queensland University of Technology, Brisbane, Australia, 2005
B.Eng (Hons 1), Queensland University of Technology, Brisbane, Australia, 2000
B.InfoTech (Distinction), Queensland University of Technology, Brisbane, Australia, 2000

Hands-on Work Experience

Director of Software Engineering & Chief Scientist, AEVEX Aerospace; 2013 – Present

- Director of the Software Systems Laboratory and manager for the GeoOpsis Software Services subsidiary in Bangalore India. Management of all software development and machine learning activities within the AEVEX Aerospace.
- Architect and lead developer for the GeoFOCIS suite of products. Designed and implemented extensions for surveilling wildfires and disseminating products for the USFS Nightwatch Program. Implemented command and control modules for various aerial cameras. Also developed real-time digital video recording and dissemination capabilities using STANAG 4609.

Senior Computer Scientist, SRI International; 2011 – 2013

- Technical Lead for the Double Eagle counter-IED air-force program. Double Eagle provides near real-time fully automatic IED detection for Predator MQ1 and MQ9 UAVs. Unlike similar systems, Double Eagle must process compressed video that is transmitted in real-time from the UAV with little to no loss in detection performance and false alarm rate due to compression.
- Technical Lead for the EO/IR capture and dissemination component of the Desert Owl platform. Desert Owl provides a one-pass counter IED solution using synthetic aperture radar. Four streams of EO/IR video are captured at full frame rate (720P, 60Hz) and are H.264 compressed and multiplexed with MISB 0601.X KLV metadata into MPEG2 transport streams. One or more of the transport streams is then transmitted to the ground over an IP datalink.

Owner, Perceptive Research & Engineering; 2010 – 2011

- Designer and lead developer for GeoFOCIS, a system that fuses SIGINT, HUMINT and IMINT from multiple sources into a single view of the battlespace. The system further provides simple analysis tools and workflows for exploiting the intelligence sources and building, disseminating and archiving products.

Technology Leader, Sarnoff Corporation; 2005 – 2010

- Technical Lead for VideoQuest™, an extension for ESRI's ArcGIS Desktop product which adds advanced aerial and ground surveillance video management. Using the extension, analysts are able to search, browse and analyze video as part of their existing workflow. The video is geo-spatially registered and can be draped over the map or terrain as an additional layer.
- Key Developer for TerraSight™, a product suite designed for reconnaissance, surveillance and targeting that performs real-time video acquisition, stabilization, geo-registration and moving target detection and tracking. TerraSight Manager™ is highly configurable and adaptable and is a key component of many deployed systems.
- Technical Lead for the "Spatio-Temporal Analysis and Reasoning" (STAR) project. STAR was funded by the IARPA Video Analysis & Content Extraction (VACE) program and provides an end-to-end solution for the capture, storage, analysis, management, exploitation and dissemination of video.

Certifications/Awards/Recognitions

- Australian Postgraduate Award

Skills/Areas of Expertise

- Software Development/Engineering
- Network Engineering
- Image & Video Processing
- Computer Vision & Machine Learning
- Geospatial Information Systems (GIS)
- Aerial Video Surveillance

Matthew W. St. John

Position	Name	Length of Time with Firm
Subcontract Project Manager	**Matthew W. St. John**	**1 Year**

Education/Training

B.S. Aeronautical Science, Embry Riddle Aeronautical University

Training
Airline Transport Pilot Certification Multi-Engine Land and Instrument Airplane.
Media and Public Relations Training – Goodyear Tire and Rubber Co. Carson, CA
Media and Public Relations Training – MetLife, NY, NY
Media and Public Relations Training Anheuser-Busch, St. Louis, MO

Hands-on Work Experience

Manager Pubic Health & Safety, Dynamic Aviation; 2019 – Present
- Provide daily leadership to PH&S base managers, Fire Management Pilots, and support staff.
- Review financial statements and budgets for accuracy and review with each of the base managers.
- Ensure compliance with all appropriate FAA and Dynamic Aviation regulations, policies and procedures.
- Ensure each program is adequately staffed and actively lead all hiring efforts with Human Resources.
- Fly as captain on PH&S projects as required.
- Consistently review all local, state, or Federal requirements for each program and support each base manager's compliance with all requirements.
- Review PH&S flight logs and reliability data to ensure accuracy.

Chief Pilot, Goodyear Tire and Rubber Co.; 2006- 2019
- Manage Flight Operations administrative functions including process improvement and development.
- Perform HR and Administrative Functions for twenty-two direct reports, including hiring and performance reviews.
- Conduct interviews for local and national print, television and radio outlets.
- Develop and manage department performance standards matrices.
- Create and sustain customer relationships.
- Ensure compliance with all appropriate regulations, policies and procedures.
- Act as a liaison and responsible authority for private approach and departure procedure agreements with the FAA.
- Management and improve Flight Operations documentation and record keeping.
- Manage a 1.8 Million annual budget and implemented procedures to decrease overtime by 54%, lowering AOP for subsequent years allowing more efficient financial planning.

Pilot-In-Charge, The Lightship Group; 1999 - 2005
- Manage a crew of 12 directly reporting associates composed of pilots, mechanics, and broadcast technicians.
- Coordinate 50-week cross-country schedule incorporating television commitments.
- Act as a primary media contact for MetLife, conducting media interviews in multifaceted outlets.
- Participate in national airshows and worked with major networks to provide aerial coverage of sporting events such as MLB World Series, US Open Golf, and PGA Championship.
- Provide home office with budget, ground support and airship status with specific reports.
- Responsible for training airship guidelines and theories to student pilots on an international scale.
- Lead monthly programs to maintain crew morale for a group that lives and works together on the road.

Oakley Armstrong

Position	Name	Length of Time with Firm
Pilot-in-Command 1	Oakley Armstrong	2 Years

Education/Training

B.S., Aerospace Management (Flight Operations Concentration) and History, Averett University

Hands-on Work Experience

Pilot in Command – King Air BE90/BE200, Dynamic Aviation; 2018 – Present
- Communicate efficiently and frequently with client to maintain good relations and complete flights.
- Coordinate with ATC and other services to ensure best chance of survey completion.
- Track upcoming inspections and maintenance items for continued airworthiness and minimize downtime on aircraft.
- Responsible for safe and efficient flight operations.
- Plan cross country reposition flights and coordinate with fixed base operators to confirm customer equipment needs are met.

Pilot in Command – C-208B, Air Choice One; Feb 2017 – Mar 2018
- Responsible for safe and efficient flight operations. Supervised and assigned First Officer tasks.
- Maintained thorough and working knowledge of aircraft systems, instrument operations and company standards.
- Obtained/maintained a quality weather briefing and made decisions accordingly for safety of flight.
- Ensured constant compliance with FAA and TSA regulations.

Second in Command – C-208B, Air Choice One; Oct 2015 - Feb 2017
- Completed weight and balance forms per flight.
- Supervised loading and unloading of passengers.
- Conducted pre- and post-flight inspections.
- Exercised effective and continuous CRM while demonstrating safe decision making.

Airport Operation Tower Technician, City of Danville; Nov 2014 - Jun 2015
- Provided airport traffic and weather advisory service to pilots.
- Logged data of arriving and departing aircraft in contact log.
- Maintained airport safety and security by watching for hazards, debris, or failed gates.

Certifications/Awards/Recognitions

- Wild Card License (Expires 06/30/2020)
- Commercial Pilot, Multi-Engine, Instrument Rating
- CompTIA A+ Certification

Flight Time Qualifications

Total:	2,564.5	**PIC:**	1,524.2
Single Engine Turbine:	2,072.8	**Cross Country**	1,989.9
Multi-Engine Land:	466.0	**Actual:**	231.9
Turbine:	2,287.8	**Night:**	266.0
Part 135:	1,804.0	**Complex:**	481.3

Contract Aircraft (If Applicable) BE - 90

Limitations

( ) OTHER

( ) OTHER

( ) OTHER

JAS POINT-TO-POINT

AUTHORIZED MISSIONS

Contract/ARA No.(s): AG - OVHI - C-16-9900

JAS ( ) Low Level (below 500' AGL) JAS Air Tactical

JAS Resource Reconnaissance JAS Mountainous Terrain

( ) Category IV Airstrip ( ) Airtanker PIC

( ) Smokejumper PIC ( ) Airtanker Initial Attack

( ) Smokejumper SIC ( ) Airtanker SIC

( ) Paracargo ( ) SEAT Pilot-Level

( ) Unprepared Landing Site ( ) Infrared Operations

Name: OAKLEY ARMSTRONG

Company: DYNAMIC AVIATION
AUTHORIZED OPERATIONS

VFR: SEL / MEL JAS SES / MES /

IFR: ME JAS SE Turbine / SE Piston /

Single Pilot w/Autopilot JAS w/SIC JAS

Issued by J.A. SLEZNICK
(print name) (signature)

Agency: USFS Card Expires: 6/30/20

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AIRPLANE PILOT
QUALIFICATION CARD

AMD-30A (07/06)

USDA Forest Service

FS-5700-20 (05/2015)
OMB 0596-0015 Exp. 5/2014

AIRPLANE PILOT QUALIFICATIONS AND APPROVAL RECORD
(Reference FSH 5709.16)

SECTION I – PILOT INFORMATION (Fill in the blanks)

1. Name (Last, First, Middle Initial) Armstrong, Oakley T.	2. Date of Birth 11/08/1991	3. Home Telephone No. 540-255-1120	
4. Home Address (Street, City, State & Zip Code) 122 South Main St, Apt 206, Harrisonburg VA, 22801			
5. Employed By Cygnaic Aviation	6. Address 1402 Airport Rd, Bridgewater VA, 22812	7. Telephone No. 540-828-6070	8. Employed since 04-01-2019
9. Previous Employer Air Choice One	10. Address 12300 Old Tesson Rd, Suite 2002, St Louis MO, 63128	11. Telephone No	12. Period Employed Oct-2015 Mar-2019
13. Previous Employer	14. Address	15. Telephone No.	16. Period Employed
17. Medical Certificate a. Class 2nd b. Date 07/30/2019	18. Airman Certificate (Circle) a. Number 3619943 b. ATP (c) Com (d) Instrument (e) SEL (f) MEL g. SES h. MES i. CFI j. Type Ratings	19. Aircraft To Be flown (a) 1. BE-90 2. BE-200 3.	Total PIC Hours (b) 791.1 446.3

Flight Type	Hours
20. Total Pilot Time (Airplane)	2921.9
21. Pilot-in-Command (PIC) Airplane	1909.3
22. Total X-Country	2024.6
23. Total Night	339.2
24. Instrument, in Flight	285.4 237.8 ok
25. Instrument, Actual	233.9
26. Instrument, Simulated	52.6
27. PIC Airplane, Last 12 Months	446.3
28. PIC Airplane, Last 60 Days	80.1
29. PIC "Low Level" Ops (<500 AGL)	0
30. PIC "Mountainous Terrain"	412.1
31. PIC Aircraft over 12,500 # Gr. Wt.	0
32. PIC Airtanker/Dispensing Operations	0
33. PIC, Single Engine Airplane – Land	919.7
33. PIC, Single Engine Airplane – Sea	0
34. PIC, Multi-Engine Airplane – Land	837.2
34. PIC, Multi-Engine Airplane – Sea	0

PART 135 FLIGHT CHECKS

	Date	Make/Model A/C	VFR	IFR	IFR W/AP
35.	05/03/2019	BE-90	✓	✓	✓
36.	10/24/2019	BE-200	✓	✓	✓
37.					
38.					

Note: 135 Flight Checks Must Cover Type of Operations Required By Contract.

39. Date of Previous Agency Card Approval a. AMD N/A b. USFS 06/11/2019

40. Date of Last Agency Flight Check a. AMD N/A b. USFS N/A

41. Aircraft Accidents/FAA Violations Filed Within Last 5 Years: Y ___ No ___ Yes
(If yes, Attach Date and Explanation)

42. Previous AMD or USFS Approval Denied, Suspended, or Revoked:
Y ___ No ___ Yes (If yes, Attach Date and Explanation)

43. PIC "Air Tactical" Operations: Number of Missions in the Last 24 Months: ___

44. Airtanker Operations Only:
a. Date Last PIC IFR Check in Type ___ b. Date Last FAR 61.55 SIC Check ___
c. No. of Takeoff/Landings Last 90 Days ___ d. No. of Night Takeoff/Landings Last 90 Days ___

I certify that the information listed on this form is true and correct. In addition, I certify that I have read the statements on the back of this form covering information pursuant to Public Law 93-579 (Privacy Act of 1974) and any amendment thereto.

45. Signature (Pilot) [signature] 46. Date 11/01/2019

SECTION II – For Inspectors Use Only (Initial appropriate Missions)

1. Missions Approved For (Inspector shall initial)

a. ( ) Low Level	g. ( ) Mountainous Terrain	m. ( ) SEAT Pilot-Level ___
b. ( ) Resource Recon	h. ( ) Category 4 Airstrip	n. ( ) Infrared Operations
c. ( ) Air Tactical	i. ( ) Unprepared (Airstrip) Landings	o. ( ) Point-To-Point
d. ( ) Smokejumper PIC	j. ( ) Airtanker PIC	p. ( ) Other ___
e. ( ) Smokejumper SIC	k. ( ) Airtanker Initial Attack	q. ( ) Other ___
f. ( ) Paracargo	l. ( ) Airtanker SIC	r. ( ) Other

2. SEL ___ 3. SES ___ 4. MEL ___ 5. MES ___ 6. IFR, W/SIC ___ 7. IFR, Single Pilot ___ 8. Single Engine IFR ___

9. Type Aircraft Approved For:

10. Print Name (Inspector)	11. Signature (Inspector)	12. Agency	13. Date	14. Expiration Date

15. Aircraft/Contract Rental Agreement No(s).

16. Remarks

Jan Kubic

Position	Name	Length of Time with Firm
Pilot-in-Command 2	**Jan Kubic**	**2 Years**

Education/Training

B.A., Political Science, Reed College
A.S., Aviation, Emery College of Aviation

Hands-on Work Experience

Captain, Dynamic Aviation; 2018 – Present
- Captain: King Air (C-12 & U-21)
- Part 135 and Part 91 Operations for Public Health & Safety and Airborne Data Acquisition programs including Air Attack missions for the U.S. Forest Service

Law Enforcement Sergeant/Chief Pilot, Multnomah County Sheriff's Office; 1994 – 2018
- Sergeant in Charge of the Special Investigations Unit
- Chief Pilot of the Sheriff's Office Aviation Support Unit.

Captain, Sports Air Travel; 1991 – 1994
- Part 135 single pilot freight operations in Oregon and Washington.

Captain, Taughannock Aviation, Ithaca, NY; 1989 - 1991
- Part 135 and Part 91 passenger operations throughout the eastern US and Canada

Captain, Wiggins Airways, Norwood, MA; 1989 - 1989
- Part 135 Single Pilot Freight Operations in Northeastern US and Canada

Captain, Sports Air Travel, Troutdale, OR; 1988
- Part 135 Single Pilot Freight Operations in Oregon and Washington

Flight Instructor, Hillsboro Aviation, Hillsboro, OR; 1986 – 1988
- Flight Instructor for private, instrument, commercial, and multi-engine airplane students

Certifications/Awards/Recognitions

- US Forest Service Air Attack Pilot Wild Card License
- Airline Transport Pilot: AMEL | Commercial Privileges: ASEL
- Type Rating: CE-500
- FCC Restricted Radio Telephone Operators Permit
- Certified Flight Instructor: Airplane Single & Multi-engine; instrument airplane
- FFA First Class Medical Certificate

Flight Time Qualifications

Total:	5,800	**Multi-Engine PIC:**	3,300
PIC:	5,600	**Night PIC:**	1,200
Turbojet PIC:	300	**Turbojet SIC:**	100
Turboprop PIC:	850	**Total Turbine:**	1,250
Actual Instrument PIC:	850		

AUTHORIZED MISSIONS

( ) Low Level (Below 500' AGL)
(✓) Resource Reconnaissance
( ) Category IV Airstrip
( ) Smokejumper PIC
( ) Smokejumper SIC
( ) Paracargo
( ) Unprepared Landing Site
( ) Air Tactical
( ) Mountainous Terrain
( ) Airtanker PIC
( ) Airtanker Initial Attack
( ) Airtanker SIC
( ) SEAT Pilot-Level
( ) Infrared Operations

Contract/ARA No.(s): AG-02YB-C-16-9500

( ) OTHER
( ) OTHER
( ) OTHER
POINT-TO-POINT

Limitations: None

Contract Aircraft (If Applicable): BE20

Name: Jan Kubic
Company: Dynamic Aviation
AUTHORIZED OPERATIONS
VFR: SEL — MEL ✓ SES — MES —
IFR: ME ✓ SE Turbine — SB Piston —
Single Pilot w/Autopilot ✓ w/SIC ✓
Issued by: John C Lilka (print name) (signature)
Agency: USFS Card Expires: 5/31/20

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QUALIFICATION CARD

Benjamin Fung

Position	Name	Length of Time with Firm
Pilot-in-Command 3	Benjamin Fung	4 Years

Education/Training

B.S., Aeronautical Science, LeTourneau University

Hands-on Work Experience

Quick Response Pilot, Dynamic Aviation; 2019 – Present
- Captain: King Air (C-12 & U-21)
- Part 135 and Part 91 Operations for Public Health & Safety and Airborne Data Acquisition programs including Air Attack missions for the U.S. Forest Service

First Officer, WestJet Encore – Calgary, AB; 2018 – 2019
- Operated Bombardier Dash8 Q400 in a CAR705 airline environment.
- Work included preflight, pilot flying and pilot monitoring duties as second in command.

Contract Pilot, Kaizen Automotive Group – Calgary, AB; 2017 – 2018
- Operated Piaggio Avanti II as a co-pilot.
- Work included preflight, loading, and other flight duties as well as assisting the captain.

Captain/A&P Mechanic, Dynamic Aviation; 2015 – 2017
- Operated King Air 200 aircraft as a captain and A&P mechanic.
- Conducted aerial survey operations in the United States and Canada.
- Work included managing required aircraft maintenance, working with customers to ensure their goals are met, and responsibility for the safety and legal operation of all survey flights.

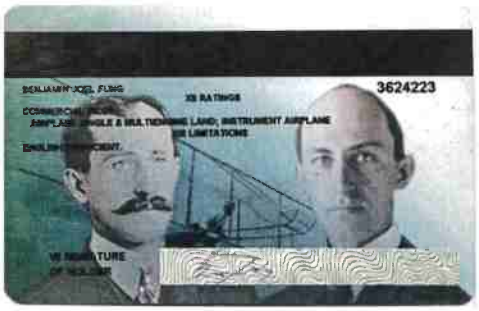
First Officer/A&P Mechanic, Dynamic Aviation; Bridgewater, VA; 2014 – 2016
- Operated King Air 90 and King Air 200 aircraft as a First Office and A&P mechanic.
- Conducted aerial survey operations in the United States and Canada.
- Work included managing required maintenance and other flight duties.

Certifications/Awards/Recognitions

- FFA Commercial Single and Multi-engine land, instrument rating
- FFA Aircraft Mechanic – Airframe and Power Plant ratings
- TC Commercial Single and Multi-engine land, Group 1 instrument rating, IATRA

Flight Time Qualifications

Total:	1,830	**Multi-Engine Total:**	1,730
PIC:	1,075	**CAR 705 Total Time:**	750
Multi-Engine PIC:	860		



Peter Cain

Position	Name	Length of Time with Firm
Pilot-in-Command 4	**Peter Cain**	**4 Years**

Education/Training

B.S., Missionary Aviation Technology, Moody Bible Institute

Hands-on Work Experience

Airborne Data Acquisition Pilot/Mechanic, Dynamic Aviation; 2016 - Present

- Responsible for the safe outcome of the flights. Carried the responsibility for the mission, performing preflight inspections, gathering weather information for the flight, flying lines using various customer supplied pilot guidance systems, loading and unloading aircraft, safety briefings, coordinating with ATC, flight logs and other tasks associated with a normal flight day, and mentoring FOs
- Assisted crew with carrying out various types of Data Acquisition missions through performing preflight inspections, gathering weather information for the flight, flying lines using various customer supplied pilot guidance systems, loading and unloading aircraft, safety briefings, coordinating with ATC, flight logs and other tasks associated with a normal flight day.
- Maintained aircraft performing both scheduled and unscheduled maintenance when necessary while on project as well as working on aircraft at Head Quarters in Bridgewater, VA.

Certifications/Awards/Recognitions

- Wild Card License
- Private Pilot License
- Commercial Pilot License
- A&P Mechanic License
- FAA First Class Medical Certificate

Flight Time Qualifications

Multi-Engine Land:	1,355	**Instrument Rating IMC:**	80
Single-Engine Land:	380	**Instrument Rating Sim IMC:**	85

Contract/ARA No.(s): AG-04H1-C-16-9900

AUTHORIZED MISSIONS

~~( ) Low Level (Below 500' AGL)~~ JAS Air Tactical
JAS Resource Reconnaissance JAS Mountainous Terrain
~~( ) Category IV Airstrip~~ ~~( ) Airtanker PIC~~
~~( ) Smokejumper PIC~~ ~~( ) Airtanker Initial Attack~~
~~( ) Smokejumper SIC~~ ~~( ) Airtanker SIC~~
~~( ) Paracargo~~ ~~( ) SEAT Pilot Level~~
~~( ) Unprepared Landing Site~~ ~~( ) Infrared Operations~~

JAS POINT-TO-POINT
~~( ) OTHER~~
~~( ) OTHER~~
~~( ) OTHER~~

Limitations

Contract Aircraft (If Applicable) BE-90

Name: PETER J. CAIN
Company: DYNAMIC AVIATION
AUTHORIZED OPERATIONS
VFR: SEL / MEL JAS SES / MES /
IFR: ME JAS SE Turbine / SE Piston /
Single Pilot w/Autopilot JAS w/SIC JAS

Issued by JAMES SLEZNICK (print name) [signature] (signature)
Agency: USFS Card Expires: 5/31/20

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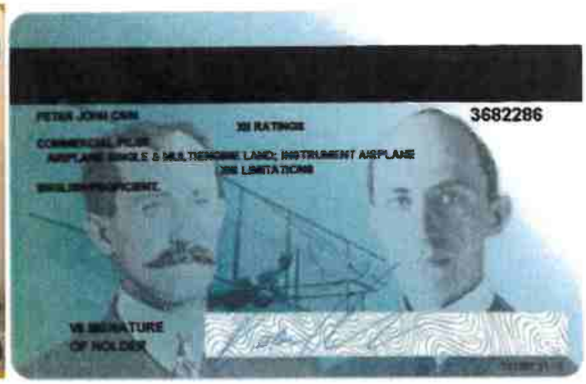
AIRPLANE PILOT QUALIFICATION CARD

AMD-30A (07/08)



Sean R Laycox

Position	Name	Length of Time with Firm
Pilot-in-Command 5	Sean R Laycox	2 Years

Education/Training

B.S., Aviation Management, Southern Illinois University (SIU)

Training
Advanced Aircraft Investigation, Federation Aviation Administration (FAA)
Airplane and Helicopter accident investigation, USC
Aviation Safety Officer, U.S. Army Aviation Center
Airplane Instructor Pilot Course (B-200), U.S. Army Aviation Center
Helicopter Instructor Pilot Course (BV-234), U.S. Army Aviation Center
Instrument Flight Examiner Course, U.S. Army Aviation Center
Helicopter Mountain Instructor Pilot, High Altitude Army Aviation Training Site

Hands-on Work Experience

Captain, Flight (Fire Management), Dynamic Aviation; 2018 – Present
- Captain: King Air (C-12 & U-21)
- Part 135 and Part 91 Operations for Public Health & Safety and Airborne Data Acquisition programs including Air Attack missions for the U.S. Forest Service

Contract Pilot; 2014 - 2020
- Flying the Citation 550 conducting air ambulance flights throughout the west coast

Carded Pilot/Instructor, U.S. Forest Service, Nevada Division of Forestry; 2012-2020
- Conduct Fire Fighting, long line vertical reference missions, reconnaissance flights and wildlife support missions flying the Bell 205.

Chief Pilot and Aviation Safety/Accident Investigator, Nevada National Guard; 1994-2013
- As Chief Pilot, managed a fulltime Flight Operations section with Instructor Pilots, Safety Officers, Aviation Life Support and Flight Operations personnel assigned.
- Responsible for training and evaluating instructor pilots and flight crews flying the King Air (BE-200), Chinook (BV-234), Blackhawk (UH-60) and Lakota (UH-72) aircraft.
- As Aviation Safety/Accident Investigator for Aviation accidents and incidents; represented the organization on all state, national, and local safety and standardization councils. Multiple flying assignments throughout the U.S., Southwest Asia, Canada and Europe.

Pilot-In-Command, U.S. Army Intelligence, Surveillance and Reconnaissance; 1988-1994
- Flew airplanes (BE90/RU-21) and helicopters. Planned, coordinated and executed single and multi-ship missions for both tactical and administrative flights. Missions ranged from cross-country passenger and cargo flights, search and rescue mission in the Rocky Mountains and aerial reconnaissance operations throughout the U.S. and Central America.

Certifications/Awards/Recognitions

- Aviation Safety and Security Certificate, University of Southern California (USC)
- ATP: Airplane – multi-engine
- ATP: Helicopter
- Airplane: CFII, MEI; type rating B-200
- Helicopter: CFI, CFII; type rating BV-234
- FAA Class 2 Medical
- FCC Radiotelephone Operator Permit
- Wild Card License

Flight Time Qualifications

Total:	7,700	Night	904
Pilot In Command	6,200	NVG	586
Instruction Given	3,200	Instrument	377
Multi-Engine	2,300	Cross Country	5,700
Helicopter	5,100		

Contract/ARA No.(s): AG-04H1-C-15-9901

AUTHORIZED MISSIONS

- ( ) ~~Low Level (Below 500 AGL)~~ (X) Air Tactical
- (X) Resource Reconnaissance (X) Mountainous Terrain
- ( ) ~~Category IV Airstrip~~ ( ) ~~Airtanker PIC~~
- ( ) ~~Smokejumper PIC~~ ( ) ~~Airtanker Initial Attack~~
- ( ) ~~Smokejumper SIC~~ ( ) ~~Airtanker SIC~~
- ( ) ~~Paracargo~~ ( ) ~~SEAT Pilot Level~~
- ( ) ~~Unprepared Landing Site~~ ( ) ~~Infrared Operations~~

Contract Aircraft (If Applicable) BE9L / N-21 EB

Limitations

- ( ) ~~OTHER~~
- ( ) ~~OTHER~~
- ( ) ~~OTHER~~
- (X) POINT-TO-POINT

Name: SEAN LAYCOX

Company: DYNAMIC AVIATION

AUTHORIZED OPERATIONS

VFR: ~~SEL~~ MEL EL ~~SES~~ ~~MES~~

IFR: ME EL ~~SE Turbine~~ ~~SE Piston~~

Single Pilot w/Autopilot EL w/SIC EL

Issued by ERIC SHILLING (print name) [signature] (signature)

Agency: USFS Card Expires: 4/30/2020

USDA
INTERAGENCY
USDI

AIRPLANE PILOT QUALIFICATION CARD

AMD-30A (07/04)

FS-5700-20 (03/2008)
OMB 0596-0015 (Omission of Exp. Date approved by OMB)

AIRPLANE PILOT QUALIFICATIONS AND APPROVAL RECORD
(Reference FSH 5709.16)

SECTION I – PILOT INFORMATION *(Fill in the blanks)*

1 Name *(Last, First, Middle Initial)* Leycox, Sean R	2 Date of Birth June 16, 1969	3 Home Telephone No 775-340-2394	
4 Home Address *(Street, City, State & Zip Code)* 1721 Burrweed Circle, Reno, NV 89521			
5 Employed by Dynamic Aviation	6 Address 1402 Airport Rd, Bridgewater, VA 22812	7 Telephone No 540-447-6738	8 Employed since 07/2019
9 Previous Employer U.S. Army	10 Address 20000 Army Aviation Drive, Reno, NV 89506	11 Telephone No 775-673-2793	12 Period Employed 05/1994 -07/2019
13 Previous Employer	14 Address	15 Telephone No	16 Period Employed

17 Medical Certificate a Class 2 b Date 03/01/2019	18 Airmen Certificate (Circle) a Number 3503507 b ATP x c Com x d Instrument x e SEL x f MEL x g SES h MES i CFI x j Type Ratings BE-300, BV-234	19 Aircraft To Be flown (a) / Total PIC Hours (b) 1 BE-90 1400 2 3	

Flight Type		Hours
20 Total Pilot Time *(Airplane)*		2610
21 Pilot-in-Command *(PIC)* Airplane		2125
22 Total X-Country		4800
23 Total Night		1139
24 Instrument: In Flight		385
25 Instrument: Actual		385
26 Instrument: Simulated		450
27 PIC Airplane: Last 12 Months		107
28 PIC Airplane: Last 60 Days		5
29 PIC "Low Level" Opns *(~500 AGL)*		1385
30 PIC "Mountainous Terrain"		3500
31 PIC Aircraft over 12,500 # Gr Wt		4400
32 PIC Airtanker/Dispensing Operations		0
33 PIC, Single Engine Airplane	Land	213
	Sea	0
34 PIC, Multi-Engine Airplane	Land	2425
	Sea	0

PART 135 FLIGHT CHECKS

Date	Make/Model A/C	VFR	IFR	IFR W/AP
35 3/6/2019	U21 / BE-90	X	X	X
36				
37				
38				

Note: 135 Flight Checks Must Cover Type of Operations Required By Contract

39 Date of Previous Agency Card Approval
a AMD b USFS 4/4/2018

40 Date of Last Agency Flight Check
a AMD b USFS 4/4/2018

41 Aircraft Accidents/FAA Violations Filed Within Last 5 Years: ___X___ No _____ Yes
(If yes, Attach Date and Explanation)

42 Previous AMD or USFS Approval Denied, Suspended, or Revoked
X No Yes *(If yes, Attach Date and Explanation)*

43 PIC "Air Tactical" Operations: Number of Missions in the Last 24 Months ____0____

44 Airtanker Operations Only
a Date Last PIC IFR Check in Type _____ b Date Last FAR 61.55 SIC Check _____
c No. of Takeoff/Landings Last 90 Days _____ d No. of Night Takeoff/Landings Last 90 Days _____

I certify that the information listed on this form is true and correct. In addition, I certify that I have read the statements on the back of this form covering information pursuant to Public Law 93-579 *(Privacy Act of 1974)* and any amendment thereto.

45 Signature *(Pilot)* Sean R Leycox

46 Date 3/20/2019

SECTION II – For Inspectors Use Only *(Initial appropriate Missions)*

1 Missions Approved For: *(Inspector shall initial)*

a. ( ) Low Level	g. ( ) Mountainous Terrain	m. ( ) SEAT Pilot-Level ____
b. ( ) Resource Recon	h. ( ) Category 4 Airstrip	n. ( ) Infrared Operations
c. ( ) Air Tactical	i. ( ) Unprepared *(Airstrip)* Landings	o. ( ) Point-To-Point
d. ( ) Smokejumper PIC	j. ( ) Airtanker PIC	p. ( ) Other _____
e. ( ) Smokejumper SIC	k. ( ) Airtanker Initial Attack	q. ( ) Other _____
f. ( ) Paracargo	l. ( ) Airtanker SIC	r. ( ) Other _____

2 SEL _____ 3 SES _____ 4 MEL _____ 5 MES _____ 6 IFR, W/SIC _____ 7 IFR, Single Pilot _____ 8 Single Engine IFR _____

9 Type Aircraft Approved For:

10 Print Name *(Inspector)*	11 Signature *(Inspector)*	12 Agency	13 Date	14 Expiration Date

15 Aircraft/Contract Rental Agreement No(s)

16 Remarks

USDA FOREST SERVICE
PACIFIC NORTHWEST REGION – 2019
OPERATIONS AND SAFETY INFORMATION
FOR PILOTS

***** CERTIFICATION STATEMENT *****

It is important for Contract pilots be familiar with the Contract specifications. Inspector pilot operational safety briefings will emphasize the following areas:

Mission Approval
Flight Below 500 Feet AGL
Aircraft Maintenance
Personal Protective Equipment
Flight and Duty Limitations
Incident Communications
Flight Plans
Pilot Responsibilities
Mishap Reporting
Weight and Balance
Flight Following
Passengers
SafeComs

I certify that I have reviewed the Contract and shall comply with the Operations and Safety Information specifications contained wherein.

Sean R Laycox of Dynamic Aviation
Pilot Name (print) **Company Name**

Sean R Laycox 3/20/2019
Pilot Signature **Date**

Wesley Kinter

Position	Name	Length of Time with Firm
Pilot-in-Command 6	**Wesley Kinter**	**12 Years**

Education/Training

B.S., Aerospace, Middle Tennessee State University

Training
CRJ-200 FMS Training Course, Middle Tennessee State University

Hands-on Work Experience

Pilot/Captain, Dynamic Aviation; 2008 – Present

- Captain: King Air (C-12 & U-21)
- Part 135 and Part 91 Operations for Public Health & Safety and Airborne Data Acquisition programs including Air Attack missions for the U.S. Forest Service
- Operate and hold responsibility for the safe and efficient operation of the aircraft and for the safety of all persons on board. Familiar with the mission requirements and determine, in conjunction with the customer, a planned route of flight to conduct the mission.
- Ensure completion of pre- and post-flight inspection of the aircraft before and after each mission according to company procedure. Collaborate with customer's scheduling requests to maximize satisfaction with flight schedules.
- Possess working knowledge of customer's systems. Communicate effectively and routinely with customer, System Operations Center, and PM, informing of potential issues with the customer, aircraft, weather, or other issues that may compromise mission accomplishment.

Flight Instructor, Middle Tennessee State University; 2006 - 2008

- Part 141 School (100% Student Checkride Pass Rate)
- Instructed students to FAA standards and school syllabus
- Ensured students were educated and knowledgeable of the fundamentals of flight

Aircraft Maintenance Technician, Middle Tennessee State University, 2005 – 2008

- Maintained aircraft to FAA standards
- Ensured timely maintenance of the aircraft
- Troubleshoot issues and resolve in a timely manner

Certifications/Awards/Recognitions

- Wild Card License

Contract/ARA No.(s): AG-04H1-C-16-9900

AUTHORIZED MISSIONS

~~( ) Low Level (Below 500' AGL)~~	(X) Air Tactical
(X) Resource Reconnaissance	(X) Mountainous Terrain
~~( ) Category IV Airstrip~~	~~( ) Airtanker PIC~~
~~( ) Smokejumper PIC~~	~~( ) Airtanker Initial Attack~~
~~( ) Smokejumper SIC~~	~~( ) Airtanker SIC~~
~~( ) Paracargo~~	~~( ) SEAT Pilot Level~~
~~( ) Unprepared Landing Site~~	~~( ) Infrared Operations~~

(X) POINT-TO-POINT
~~( ) OTHER~~
~~( ) OTHER~~
~~( ) OTHER~~

Limitations

Contract Aircraft (If Applicable) BE-90

Name: WESLEY KINTNER

Company: DYNAMIC AVIATION
AUTHORIZED OPERATIONS

VFR: SEL / MEL SES / MES /

IFR: ME ER SE Turbine / SE Piston /

Single Pilot w/Autopilot ER w/SIC /

Issued by ERIC SHILLING (print name) [signature] (signature)

Agency: UXFS Card Expires: 5/31/20

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AIRPLANE PILOT QUALIFICATION CARD

AMD-30A (07/06)

Brian J. Perry

Position	Name	Years of Experience
Pilot-in-Command 7	**Brian J. Perry**	**5 Months**

Education/Training

Trainings:
ATP MEL, Shebley's, 2012
1900 SIC, ATS, 2010
Float Rating, Traverse Air, 2009
Flight Instructor, Pontiac Flight 101, 2008
Flight Instructor, Livingston Flight Inc, 2008
Multi-Engine, Traverse Air, 2007
Instrument Commercial, Take Flight Alaska, 2007

Hands-on Work Experience

Captain, Flight, Dynamic Aviation; 2020 - Present
- Captain: King Air (C-12 & U-21)
- Part 135 and Part 91 Operations for Public Health & Safety and Airborne Data Acquisition programs including Air Attack missions for the U.S. Forest Service
- Operate and hold responsibility for the safe and efficient operation of the aircraft and for the safety of all persons on board. Familiar with the mission requirements and determine, in conjunction with the customer, a planned route of flight to conduct the mission.
- Ensure completion of pre- and post-flight inspection of the aircraft before and after each mission according to company procedure. Collaborate with customer's scheduling requests to maximize satisfaction with flight schedules.
- Possess working knowledge of customer's systems. Communicate effectively and routinely with customer, System Operations Center, and PM, informing of potential issues with the customer, aircraft, weather, or other issues that may compromise mission accomplishment.

Pilot, Guardian Flight; 2016 – 2020
- Dual-qualified: PC-12 & C90 / Medevac

Pilot, Peninsula Airways; 2013 – 2016
- Saab 340

Pilot, Alaska Seaplanes; 2013 – 2013
- PA-32 / C208B (Seasonal Position)

Pilot, Bering Air; 2001 – 2006
- B-1900 / C-208B

U.S. Navy; 2001 – 2006
- Law Enforcement Specialist Education

Certifications/Awards/Recognitions

- ATP Multi-engine land, Commercial Single Engine Land / Sea, Instrument Airplane, BE-1900, SF-340
- 1st Class Medical – July 2019
- Restricted Radio Operator License
- Complex, High Altitude, High Performance, Tail Wheel
- PA-28, C-150, C-172, C-172RG, C-152, DA-42, PA-23, BE-200, DA-40, C-206, BE-23, PA-30, 7ECA, PA-125, B-1900, C-207, PA-32, BE-95, C-208, SF-340, PC-12, S7, B90
- Russian Visa

Josiah Grindrod

Position	Name	Length of Time with Firm
Pilot-in-Command 8	**Josiah Grindrod**	**4 Years**

Education/Training

B.S., Aeronautical Science: Professional Flight, LeTourneau University, Longview, TX
A.S., Aeronautical Science: Air Traffic Control, LeTourneau University, Longview, TX

Hands-on Work Experience

Captain, Dynamic Aviation; 2013 – Present

- Captain (March 2016 – Present)
- First Officer (October 2013 – March 2016)
- King Air (C-12 & U-21)
- Part 135 and Part 91 Operations for Public Health & Safety and Airborne Data Acquisition programs including Air Attack missions for the U.S. Forest Service

Technical Services Senior / Technology Life cycle Administrator, LeTourneau University; 2008-2013

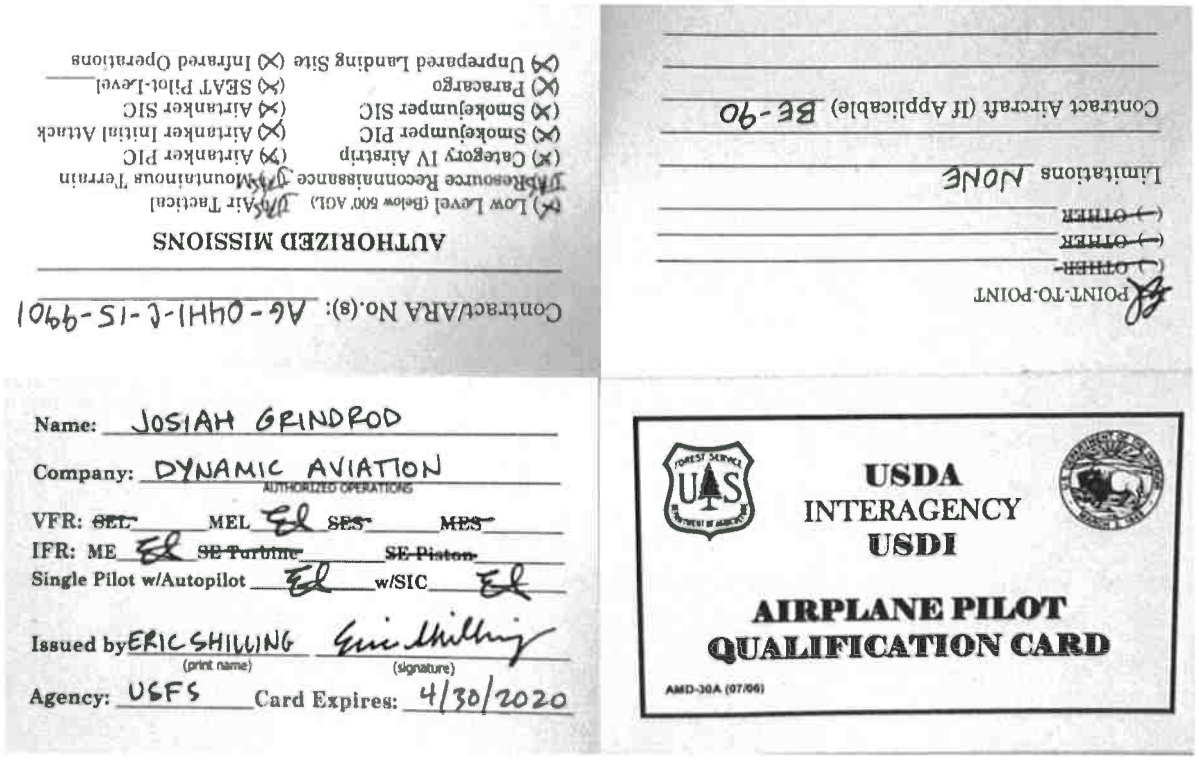
- Full-time staff position responsible for purchasing, repairing, updating, and maintaining faculty and staff computers, as well as the computer labs on campus.
- Helpdesk technician, student worker position repairing faculty and staff computers.

Certifications/Awards/Recognitions

- Wild Card License

Skills/Areas of Expertise

- Commercial Multi-engine Land
- Commercial Single Engine Land
- Instrument
- Tail Wheel endorsement



USDA
INTERAGENCY
USDI

AIRPLANE PILOT
QUALIFICATION CARD

AMD-30A (07/06)

Name: JOSIAH GRINDROD

Company: DYNAMIC AVIATION
AUTHORIZED OPERATIONS

VFR: ~~SEL~~ MEL SES ~~MES~~

IFR: ME ~~SE Turbine~~ ~~SE Piston~~

Single Pilot w/Autopilot w/SIC

Issued by ERIC SHILLING (print name) (signature)

Agency: USFS Card Expires: 4/30/2020

Contract/ARA No.(s): AG-0UHI-C-15-9901

AUTHORIZED MISSIONS

(X) Low Level (Below 500' AGL) (X) Air Tactical
(X) Resource Reconnaissance (X) Mountainous Terrain
(X) Category IV Airstrip (X) Airtanker PIC
(X) Smokejumper PIC (X) Airtanker Initial Attack
(X) Smokejumper SIC (X) Airtanker SIC
(X) Paracargo (X) SEAT Pilot-Level
(X) Unprepared Landing Site (X) Infrared Operations

POINT-TO-POINT

~~( ) OTHER~~
~~( ) OTHER~~
~~( ) OTHER~~

Limitations NONE

Contract Aircraft (If Applicable) BE-90

USDA Forest Service

FS-5700-20 (05/2015)
OMB 0596-0015 Exp. 5/2014

AIRPLANE PILOT QUALIFICATIONS AND APPROVAL RECORD
(Reference FSH 5709.16)

SECTION I – PILOT INFORMATION *(Fill in the blanks)*

1. Name *(Last, First, Middle Initial)* **Grindrod, Josiah T**	2. Date of Birth **12/14/1988**	3. Home Telephone No. **(315)456-8475**
4. Home Address *(Street, City, State & Zip Code)* **1730 S Dogwood Dr Apt A Harrisonburg VA 22801**		

5. Employed by **Dynamic Aviation**	6. Address **1402 Airport Rd Bridgewater VA 22812**	7. Telephone No. **(540)828-6070**	8. Employed since **2013**
9. Previous Employer **LeTourneau University**	10. Address **2100 S Mobbery Ave Longview TX 75602**	11. Telephone No. **(903)233-358**	12. Period Employed **2008-2013**
13. Previous Employer **NA**	14. Address	15. Telephone No	16. Period Employed

17. Medical Certificate a. Class **First** b. Date **09/2018**	18. Airman Certificate *(Circle)* a. Number: **3420341** b. ATP c. Com d. Instrument e. SEL f. MEL g. SES h. MES i. CFI j. Type Ratings	19. Aircraft To Be flown *(a)* / Total PIC Hours *(b)* 1. **King Air 90** ____ 2. **King Air 200** ____ 3. ____

Flight Type	Hours	PART 135 FLIGHT CHECKS Date	Make/Model A/C	VFR	IFR	IFR W/AP
20. Total Pilot Time *(Airplane)*	2567	35. 3/5/2019	King Air 90	✓	✓	✓
21. Pilot-in-Command *(PIC)* Airplane	1875	36. 7/20/2019	King Air 200	✓	✓	✓
22. Total X-Country	659	37.				
23. Total Night	703	38.				
24. Instrument: In Flight	450					
25. Instrument: Actual	420					
26. Instrument: Simulated	30					
27. PIC Airplane: Last 12 Months	314					
28. PIC Airplane: Last 90 Days	8					
29. PIC "Low Level" Opns *(-500 AGL)*	60					
30. PIC "Mountainous Terrain"	489					
31. PIC Aircraft over 12,500 # Gr. Wt.	700					
32. PIC Airtanker/Dispensing Operations						
33. PIC, Single Engine Airplane: Land	69					
33. PIC, Single Engine Airplane: Sea						
34. PIC, Multi-Engine Airplane: Land	1806					
34. PIC, Multi-Engine Airplane: Sea						

Note: 135 Flight Checks Must Cover Type of Operations Required By Contract.

39. Date of Previous Agency Card Approval: a. AMD ____ b. USFS **7-25-2018**

40. Date of Last Agency Flight Check: a. AMD ____ b. USFS **4-10-2018**

41. Aircraft Accidents/FAA Violations Filed Within Last 5 Years: ____ No ____ Yes
(If yes, Attach Date and Explanation)

42. Previous AMD or USFS Approval Denied, Suspended, or Revoked:
No ____ Yes *(If yes, Attach Date and Explanation)*

43. PIC "Air Tactical" Operations: Number of Missions in the Last 24 Months: **72**

44. Airtanker Operations Only:
a. Date Last PIC IFR Check in Type ____ b. Date Last FAR 61.55 SIC Check ____
c. No. of Takeoff/Landings Last 90 Days ____ d. No. of Night Takeoff/Landings Last 90 Days ____

I certify that the information listed on this form is true and correct. In addition, I certify that I have read the statements on the back of this form covering information pursuant to Public Law 93-579 *(Privacy Act of 1974)* and any amendment thereto.

45. Signature *(Pilot)* [signature] — 46. Date 3-25-2019

SECTION II – For Inspectors Use Only *(Initial appropriate Missions)*

1. Missions Approved For: *(Inspector shall initial)*

a. ( ) Low Level	g. ( ) Mountainous Terrain	m. ( ) SEAT Pilot-Level ____
b. ( ) Resource Recon	h. ( ) Category 4 Airstrip	n. ( ) Infrared Operations
c. ( ) Air Tactical	i. ( ) Unprepared *(Aerstrip)* Landings	o. ( ) Point-To-Point
d. ( ) Smokejumper PIC	j. ( ) Airtanker PIC	p. ( ) Other ____
e. ( ) Smokejumper SIC	k. ( ) Airtanker Initial Attack	q. ( ) Other ____
f. ( ) Paracargo	l. ( ) Airtanker SIC	r. ( ) Other ____

2. SEL ____ 3. SES ____ 4. MEL ____ 5. MES ____ 6. IFR, W/SIC ____ 7. IFR, Single Pilot ____ 8. Single Engine IFR ____

9. Type Aircraft Approved For:

10. Print Name *(Inspector)*	11. Signature *(Inspector)*	12. Agency	13. Date	14. Expiration Date

15. Aircraft/Contract Rental Agreement No(s).

16. Remarks

USDA Forest Service

FS-5700-20 (05/2015)
OMB 0596-0015 Exp. 5/2014

SECTION III – Pilot Evaluation/Qualification Check *(To be filled out by Inspector)*		
1. Type of Evaluation *(X appropriate box)* ☐ Interim ☐ Initial ☐ Recurrent ☐ Post-Accident		2. Date
3. Name *(last, First, Middle Initial)*	4. Knowledge Make and Model	5. Competency Make and Model
6. Employed By	7. Location of Check	8. Flight Time

Insert one of the following letters below each Section *(IV thru VI)*, if applicable
D – Demonstrated Ability K – Knowledge U - Unsatisfactory

SECTION IV *Equipment Exam – (Oral/Written)*		7. Approach/Landing	
1. Aircraft / Pilot Documents		a. Wind Evaluation	
2. Weight and Balance *(Down Loading)*		b. Helispot Evaluation *(H)*	
3. Fuel Requirements		c. Normal *(Wheel / Stall)*	
4. Systems Operation		d. Crosswind/Slip Approach	
5. Emergency Procedures		e. Short / Soft Field Landings *(A)*	
6. Emergency / Survival Equipment		f. Rejected Landing/Go-Around	
7. Operation/Safety Briefing		g. Winter / Ski Operations/Snow Landings	
SECTION V – Preflight		h. STOL Operations *(A)*	
1. Aircraft Documents		i. Pinnacle or Platform *(H)*	
2. Manifest and Flight Plan		j. Confined Area *(H)*	
3. Weight and Balance		k. Slope Landing *(H)*	
4. Preflight Procedure		8. Emergency Procedures	
5. Use of Check List		a. Engine Failure After Takeoff	
SECTION VI – Flight Check		b. Maneuvering with Engine Out	
1. Starting Procedure		c. V-Speeds *(A)*	
2. Communication and Navigation Equipment Check		d. Approach and Landing, One Engine Out	
3. Hover Taxi/Ground Taxi		e. System Emergencies	
4. Run-up/Power Check		f. Autorotation / Forced Landings	
5. Take-off Operations		g. Antitorque Failure *(H)*	
a. Normal		h. Hydraulic Failure	
b. Crosswind		9. Instrument Procedures	
c. Maximum Performance		a. Equipment Check	
d. Short/Soft *(A)*		b. ATC Procedures	
e. Aborted		c. Navigation/Orientation	
6. Air-Work Maneuvers		d. Holding	
a. Smoke-Helipot Jumping / Rappeling		e. Approach – NDB, VOR, DME, LOC, ILS	
b. App. To Stall, Slow Flight		f. Missed Approach / Circling Approach	
c. Mountain Flying Technique		g. Speed, Heading Altitudes	
d. Sling Operation/External Load		h. Automatic Pilot/Single Pilot *(A)*	
e. Water / Retardant Dropping		i. Crew Coordination	
f. Aerial Hunting		10. Water Operations	
g. Offshore Navigation		a. Taxiing, Sailing, Docking	
h. Horse and Game Hrdg / Cntg *(H)*		b. Step Taxi and Turns *(A)*	
i. Night Operation		c. Glassy Water / Rough Water	
j. Low-Level Operations		d. Takeoff and Landings	
k. Fire Reconnaissance		11. Judgment	
l. Steep Turns		12. Shutdown Checklist	
m. En Route Procedures			

13. Remarks / Limitations

14. Pilot Qualification Card Issued For

Pilot Statement: I have been briefed on the reason for this evaluation flight and understand that I will remain as pilot-in-command of the aircraft during the check and that I may refuse to attempt any maneuver that, in my opinion, may be hazardous or unsafe.

15. Signature *(pilot, Sign Prior to Flight)*	16. Type of Flight Check Passed _____ IFR _____ VFR

17. *(X appropriate answer)*	18. Expiration Date(s)	19. Signature *(Inspector)*

Erik Rodriguez

Position	Name	Length of Time with Firm
Sensor Operator	**Erik Rodriguez**	**8 Years**

Education/Training

High School Diploma

Training:
Shadow UAS Technician Training
Military Intelligence Systems Maintainer/Integrator Training

Hands-on Work Experience

Sensor Operator, AEVEX Aerospace; 2012 – Present
- Applies technical knowledge of electronics principles in determining equipment malfunctions and restoring systems operation
- Assists with system deployment and reintegration in OCONUS settings
- Performs preventive maintenance, checks, and services on systems of various types and manufacturers. Performs system tests to ensure correct system installation and configuration
- Develops reports, updates drawings, and maintains inventories for equipment assigned to the technical team

Senior Electrical Test Specialist, AAI Corporation; 2010 – 2012
- Managed and maintained software and hardware updates on multiple unmanned ground control systems for engineering testing
- Built and maintained a Shadow TCDL unmanned aerial vehicle (UAV) simulator, which was used for further software and hardware testing of ground systems, reducing flight-time requirements and overall costs to the customer
- Assisted with the setup of software and hardware required for system capability demonstrations

MI Systems Maintainer/Integrator, U.S. Army
- Served as Crew Chief and maintainer for the Shadow 200 UAV platform
- Served as Unit Trainer, creating and implementing a training regimen for over 20 soldiers
- Managed and maintained over $10M worth of equipment

Certifications/Awards/Recognition

- Army Achievement Medal
- Army Commendation Medal
- Non-Commissioned Officer Professional Development Ribbon

Skills/Areas of Expertise

- Electronics Principles and Techniques
- Electronics Systems Maintenance and Repair
- Airborne and Ground Sensor Systems
- Sensor Operation / Mission Command
- Training and Instruction
- Unmanned Aerial Systems
- Test and Evaluation

Matthew Hedman

Position	Name	Length of Time with Firm
Sensor Operator	**Matthew Hedman**	**9 Years**

Education/Training

General Studies, Salt Lake Community College

Training
United States Navy
Aviation Electrician Systems and Repair School
P3-C Orion-specific Repair School
Basic Electronics Course School

Hands-on Work Experience

System Engineer and Site Technical Lead, AEVEX Aerospace; 2011 - Present

- Provide system administration for users on a sensitive network.
- Ensure security is implemented and procedures are followed by users and administrators. Perform WSUS and ensure other security updates and protocols are in place to ensure a secure network.
- Install Sensors, design necessary improvements, run wires, and perform operational checks. Prepare Engineering Change Proposals and Software Upgrade Requests. Document all hardware and software installations, upgrades, and changes
- Train system operators on the proper use of sensor system equipment. Assign maintenance actions to team members. Serve as a main point-of-contact throughout the mission for any technical questions and issues.
- Serve as the Subject Matter Expert for new systems such as the Long Wave INfraRed Sensor and the Hyperspectral Sensor.
- Enforce Preventative Maintenance Inspection (PMI) requirements, equipment checklists, and Standard Operating Procedures (SOPs). Conduct quality checks on all work completed to ensure that all PMIs, SOPs, and checklists are completed.
- Plan maintenance, conduct briefings, and create technical reports.
- Complete all required pre- and post-flight aircraft preparations are completed. Perform pre-flight troubleshooting to enable aircraft to fly functionally and on time. Load crypto on aircraft systems.
- Protect classified equipment, data and documents related to technical operations.
- Interact with Government and customer to meet flight requirements

Lead Electronic Digital Computer Mechanic, Department of the Army; 2010 – 2011

- Reviewed schematic and wiring diagrams for full understanding of the systems. Utilized multimeters, and oscilloscopes to test equipment.
- Directed the activities of the team. Trained team members on proper procedures for testing, troubleshooting, repairs, technical documentation, and reporting.
- Successfully repaired 56 percent of repairs that entered the shop. Raised departmental productivity even when the employee base was reduced by 75 percent.
- Increased the number of working test stations from 1 to 4 stations.
- Responsible for destroying classified hard drives within Government guidelines.

Electronic Test Specialist, AAI Corporation; 2009 – 2010

- Repaired and maintained communication systems, optic systems, and automatic flight systems. Collected data and performed quality control procedures. Created workloads that ensured all maintenance was completed with no negative effect on flight schedules.
- Supported NET (New Equipment Training) activities for National Guard. Performed technical installation, operation, and maintenance for all hardware and software. Scheduled, tracked, and monitored tools and test equipment calibration.
- Served as the Maintenance Instructor training soldiers how to maintain, launch and recover the Shadow UAV. Evaluated soldiers to become a Qualified Crew Chief on UAV equipment.
- Regularly communicated with the customer, building rapport and cultivating solid working relationships while gathering technical requirements and offering status updates on current projects.
- Managed administrative and operational duties such as inventory management, project and system documentation, data management, and report-writing.

Position	Name	Length of Time with Firm
Sensor Operator	**Matthew Hedman**	**9 Years**

Electrical Technician Supervisor, United States Navy; 2002 – 2008

- Tested, installed, and maintained state-of-the-art equipment. Performed electrical troubleshooting operations with a wide variety of electrical measuring equipment. Repaired electrical and instrumental systems, automatic flight controls, and engine systems. Performed quality control and maintained a record of zero defects on repairs.
- Managed team of up to 20 subordinates on 24/7 schedules at several locations. Trained staff members and supervised team activities to ensure that team members accomplished set objectives.

Skills/Areas of Expertise

- Electro Optical
- LongWave Infrared Sensors and Hyperspectral Sensors
- Microsoft Office Suite

Ryan Becker

Position	Name	Length of Time with Firm
Sensor Operator	Ryan Becker	Contingent Hire

Education/Training

B.A. Physics, Pamona College

Training:
Aviation Safety Management Systems, University of Southern California, 2007

Hands-on Work Experience

Principal Consultant, Becker Support Services LLC; 2019 – Present
- Founded independent consulting firm to facilitate matching Government needs with contractor capabilities from a third-party perspective.
- Established relationships with Brazilian Air Force and US Air National Guard and facilitated a formal agreement to share engineering data related to aerial firefighting.
- Developed a business plan to help facilitate introduction of an advanced mobile mapping and communication tool to wildland firefighting organizations for a small technology company.
- Develope requirements, a business plan, and lead customers for an organically developed mobile, modular, immersive, collaborative air/ground wildland fire simulator.

Manager, Coulson Aviation USA; 2019 – Present
- Established and managed a competitive sourcing process for aerial mapping and real-time intelligence equipment for jetpowered fixed-wing and rotor-wing aircraft.
- Defined requirements for first-ever mixed-role leadplane and mapping capabilities in the same aircraft, during the same mission.
- Developed, tested and operationalized a real-time mapping, intelligence and streaming video downlink service for helicopter operations in urban areas.
- Maintained and expanded real-time fleet location and event tracking services.

National UAS Program Manager, US Forest Service; 2018 – Present (Temporary Promotion)
- Authored comprehensive program strategy and implementation plan. Developed National Operations and Safety plans.
- Created first nationwide operational budget request, which established an initial $4M/year funding level. Rewrote US Forest Service policy to integrate UAS.
- Led nationwide implementation of Unmanned Aircraft Systems pilot training and qualification program.

Aerial Firefighting Use and Effectiveness Study Project Manager, US Forest Service; 2012 - 2019
- Established study objectives, scope, and methods. Led nationwide field engagement campaign. Developed comprehensive, multiyear implementation plan and multimillion-dollar budget request.
- Led hiring efforts and supervised staff. Coordinated and authored Congressional responses. Negotiated participation and data sharing with other Federal and State organizations, including Province of British Columbia and Australian State of Victoria.
- Worked directly with aircraft vendors to ensure accuracy and reliability of onboard data collection systems. Led development of analysis and reporting strategy.

Aerial Delivery Program Leader, US Forest Service; 2003 - 2016
- Developed test plans, negotiated cost-reimbursement agreements, onboarded and trained temporary test personnel, and directed daily test activities.
- Led data analysis and provided technical advice to engineering activities of aircraft system developers. Authored test reports and provided recommendations to US Interagency Airtanker Board for Boeing 747, 737, Lockheed DC-10, British Aerospace Bae-146 (five variants), McDonnell-Douglas MD-87, Military Aerial Firefighting System (MAFFS), Precision Containerized Aerial Delivery System, and Beriev BE-200.
- Supported Victorian Government (Australia) with field observations and evaluation of DC-10 operations during 2010 fire season. Provided ongoing information and advice on the state of the airtanker industry.

Mechanical Engineer Project Leader, US Forest Service; 1999 – 2003
- Coordinated and oversaw wildland firefighting water handling equipment first article testing in support of nationwide, interagency procurement programs worth in excess of $100M/year.
- Developed a process to improve post-wildfire revegetation of severely burned landscapes. Investigated techniques to monitor and inventory fish passage at potential manmade barriers in remote, austere locations.
- Developed and demonstrated a contracting and operational process for employing UAS to survey the extent and spread of invasive vegetative species in areas inaccessible to ground survey methods.

Position	Name	Length of Time with Firm
Sensor Operator	**Ryan Becker**	**Contingent Hire**

Certifications/Awards/Recognitions

Published in

- Legendre, Dominique; Becker, Ryan; Alméras, Elise; Chassagne, Amélie (2013) Air tanker drop patterns. International Journal of Wildland Fire 23, 272-280
- Skeen, Bob; Becker, Ryan (2007) Helimulching—Equipment and Techniques. 0757 1305P. San Dimas, CA: U.S. Department of Agriculture, Forest Service, San Dimas Technology and Development Center. 6 p.
- Becker, Ryan (2001) Effective Aerial Reseeding Methods: Market Search Report. 0151 1204. San Dimas, CA: U.S. Department of Agriculture, Forest Service, San Dimas Technology and Development Center. 24 p.

Skills/Areas of Expertise

- Program management
- Interdisciplinary team leadership
- Government contracting and procurement strategy
- Strategic planning
- Communications and negotiation

Peter Jockimo

Position	Name	Years of Experience
Sensor Operator	Peter Jockimo	7 Months

Education/Training

B.S., Aeronautical Science, Embry-Riddle Aeronautical University

Training
MARSS/MAISR Mission Commander
FAA Medical Certificate, Class III
Flight physiology/ altitude chamber certification
Master Training Specialist Mentor
Master Training Specialist, Curriculum Developer
NEC7841 P3C Update III Acoustic Sensor 1 Operator
NEC-9502 Instructor
2F140, 2F179, Forward-Deployed Trainer and 14B53 Flight Simulator Instructor

Hands-on Work Experience

Mission Commander/ Sensor Operator, AEVEX Aerospace; 2019 - Present
- Mission Commander on MC-12 aircraft, supervising multiple aircrew in demanding, high-intensity surveillance operations
- Operates both IMaster RADAR system and MX-15 electro-optic system.
- Coordinates tactics and operations with flight crew, directing aircraft movements as necessary.

Mission Systems Operator, Momentum Air Group; 2015 - 2019
- Over 2,500 hours as Mission Systems Operator/Mission Commander.
- Extensive experience in MARSS/MAISR/SSAISR Operations.

Airborne Surviellance Operator, Sierra Nevada Corporation; 2014 - 2015
- Multiple deployments to Afghanistan theater, Kandahar Air Base.
- Operated MX-15 electro-optical system in conjunction with various COMINT and SIGINT equipment in demanding combat environment.
- Qualified mission commander for C12 aircraft.
- Experienced user of MiRC, PRC-117 communication systems.

Naval Air Crewman (Operator): United States Navy; 1993 - 2013
- Acoustics and surveillance operator on P-3C ORION patrol/reconnaissance aircraft
- Completed multiple, world-wide deployments in wide range of operational environments
- Operated AVX-1, ASX-6, Cast Glance, and Cluster Ranger electro-optic systems
- Conducted counter-drug, anti-submarine, counter-terrorism, and counter-smuggling operations
- Qualified in-flight, simulator, and classroom instructor on P-3C systems and operations
- 20 years and 3,600 hours in type

Skills/Areas of Expertise

- 20 years/3600 hours as a P-3C Sensor Operator, with over 500 hours operating electro-optic sensors.
- Active DoD Top Secret/SCI Eligible
- 13 years as an instructor, in classroom, one-on-one, simulator, and group-paced environments.

Elijah Leonardo

Position	Name	Length of Time with Firm
Sensor Operator	Elijah Leonardo	2 Years

Education/Training

A.S., Civil Engineering, Springfield Technical Community College, 2008

Training
Water Survival Refresher Training, 2 days, Oak Harbor, WA (2016)
Advanced Survival Evasion Resistance Escape school, 1 week, Spokane, WA (2014)
Acoustic Warfare Operator "C" School, 23 weeks, Jacksonville, FL (2013)
P-3 Airborne Observer school, 5 weeks, Jacksonville, FL (2013)
Survival Evasion Resistance Escape school, 2 weeks, San Diego, CA (2012)
Aviation Warfare Operator "A" School, 17 weeks, Pensacola, FL (2012)
Water Survival Training, 4 days, Pensacola, FL (2012)
Naval Aircrew Candidate School, 3 weeks, Pensacola, FL (2012)
Recruit Training, 8 weeks, Great Lakes, MI (2012)

Hands-on Work Experience

- Flown 1,288 flight hours on 235 sorties in 11 areas of operations around the globe, operating 4 tactical systems aboard 2 variations of the P-3C aircraft (2012-2018)
- 6 years as an acoustic, radar, and EO/IR sensor operator (2012-2018)
- Worked in support of US Special Operations (2016 & 2017)
- 2 deployments totaling 12 months in the 5th Fleet/CENTCOM & AFRICOM AOR 2(2015 & 2017)
- 2 deployment totaling 10 months in the 7th Fleet/PACOM AOR (2014 & 2016)
- Worked as an intelligence specialist creating post mission products using Microsoft Office, Google Earth, and other applicable Windows applications (2017-2018)
- Planned and wrote 821 daily and 42 weekly flight schedules for over 3 years in a complex dynamic environment, coordinating with every department to ensure mission, training and qualification requirements are met (2015-2018)
- Trained, mentored and evaluated 17 junior operators and directed 54 upgrader tactical flights and simulations culminating in a 100% successful qualification rate (2016-2018)

Skills/Areas of Expertise

- Current Top Secret/SCI clearance
- EO/IR sensor operator
- Squadron instructor
- Experience working with SOF forces
- Safety of flight radar operator
- CRM-Facilitator

Jay Barrowman

Position	Name	Length of Time with Firm
Sensor Operator	**Jay Barrowman**	**8 Years**

Education/Training

Associates Air & Space Operations Technology, Community College of the Air Force
BS Project Management, Embry Riddle Aeronautical University, Ongoing
Aircrew Safety Systems Technology, Community College of the Air Force

Hands-on Work Experience

MQ-9 ISO Tactical Lead, AEVEX Aerospace; 2018 - Present
- Worked closely with Tactical Lead Pilots to develop most effective/efficient ISR/ tactical approach to best meet needs of customer
- Provided real-time 24/7/H65 motion video exploitation in a shift work environment

MQ-9 Instructor/Sensor Operator, AEVEX Aerospace; 2018 - Present
- Instructed aircrew duties to execute High Headquarters missions requiring persistent armed reconnaissance & close air support
- Maintained/instructed multi-theater proficiency in ROE/TTP to conduct ISR operations in world's most demanding combat environments

MQ-9 Sensor Operator/Flight Chief, AEVEX Aerospace; 2012 - Present
- Collaborated effectively with other NGA NSG, ASG and Service imagery and geospatial analysts, as well as other intelligence analysts and engineers
- Operated remotely controlled electro-optical and infrared sensors providing full motion video for tactical/actionable intelligence

Aircrew Flight Equipment Craftsman, Air Force; 1999 - Jul 2012
- Maintain aircrew lifesaving equipment for H2 aircraft and 900 flight pers
- Lead quality assurance supervisor responsible 100% equipment pass rate

Sensor Operator, AEVEX Aerospace; Jan 2019 - Present
- Provided real-time 24/7 full motion video exploitation in a shift work environment.
- Flew 200+ ISR missions - accumulated 800+ hrs
- Flew 5 manned operations with Night Watch - conducted IR mapping, FMV, and operational intelligence

Skills/Areas of Expertise

- FLIR Star Safire H80 HDc
- mIRC
- Google EARTH
- WAVE
- MTS-B Payload Operation
- GeoFocis Mapping System
- SkyNet
- Zeus
- ARC-210
- Lynx SAR

Cesar Alveraz

Position	Name	Length of Time with Firm
Sensor Operator	Cesar Alveraz	2 Years

Education/Training

Hawthorne High School 1995 Hawthorne, CA
Computer Education Institute Lake Forest, CA

Hands-on Work Experience

AEVEX Aerospace, GeoFOCIS Sensor Operator; 2019 - Present

- Provide Full motion video/Real time data of the dynamic fire area operating GeoFOCIS and the FLIR 380HDc sensor.
- Assist the Air Tactical Group Supervisor with situational awareness and gathering incident data to produce end of mission intel deliverables consisting of narrated video, power point slides, shape and kml files.

AEVEX Aerospace Remotely Piloted Aircraft Sensor Operator; 2018 - Present

- Qualified Launch/Recovery and mission ready sensor operator for the MQ-9 Reaper. Operation Supervisor qualified. Over 2000 mission hours in the MQ-9 Reaper.
- Provide Intelligence Surveillance and Reconnaissance assessment of various areas using full motion video. Operates the payload of the MQ-9 Reaper in support of customer requirements Coordinates and actively participate in flight operation efforts including mission planning, execution and briefing, debriefing, aircrew resource management and safety.
- Defines, plans, organizes and executes unusually complex flight profiles in a tactical environment in support of customer requirements.
- Ensures compliance with service guidance, company policy and procedures. Interacts directly with customer in the employment of aircraft on matters of importance to include the collection of data, tactical situation.

California Air National Guard, Remotely Piloted Aircraft Sensor Operator/Imagery Analyst; 2008 - Present

- Qualified combat mission ready sensor instructor for the MQ-1 Predator/MQ-9 Reaper. Provide flight and academic instruction to incoming Sensor Operators.
- Develop instructor upgrade program. Sensor Shift Supervisor. Conduct real time battle damage assessments after kinetic strike events.
- Analyze post-strike kinetic events and conduct after action reports. 975 flight mission hours in the MQ-1 Predator and 833 flight mission hours in the MQ-9 Reaper.
- Maintain and update Weapons and Tactics library. Conducts Imagery Intelligence using full motion video reconnaissance and surveillance of potential targets and areas of interest. Detects, analyzes and discriminates between valid and invalid targets using electro-optical, low-light, and infrared full-motion video imagery, and other active or passive acquisition and tracking systems.
- Assists in air navigation, Air Order of Battle integration, fire control planning, and determining effective weapons control and delivery tactics to achieve overall mission objectives. Receives target briefs for (9-liners) for weapons delivery. Responsible for terminal weapons guidance. Understanding in tactics, techniques, and procedures for friendly and enemy AOB assets.

Raytheon, Information Systems Security Officer; 2013 - 2018

- Supports multiple programs in administering the Information Assurance duties for Information Systems processing Classified Information.
- Coordinate duties with the Systems Administrator and /or Information Technology staff to ensure all NISPOM requirements are implemented and functional.
- Perform weekly audits of Classified Information Systems consisting of various computer hardware and multiple operating systems' software both in a stand-alone environment and in LAN/WAN configurations. Conduct briefings/training for users on Classified Information Systems.
- Provide customer support activities and functions to a broad IT user environment.

BOSH Global Services, System Administrator/Communications System Analyst; 2013 - Oct 2013

- Military C4ISR (Command, Control, Computers, Communication, Intelligence, Surveillance, and Reconnaissance) experience working with Remotely Piloted Aircraft (RPA) Operations Center. Working with NIPRNet, SIPRNet, JWICS, internal/external voice communication systems, VoIP, NSTS phone system, Video Teleconference Center, and video dissemination.
- Administration of Windows Vista/7/2003, both servers and workstations plus Microsoft Exchange, Microsoft Internet Information Server, VMware, and Sharepoint.
- Operate, maintain, and manage communications and network systems; Asynchronous Transfer Mode (ATM), IP routers and switches, Type I encryption (KG-75A, KG-175). Provide reports, complete request for new service, configure changes to switches, trunks, links, and circuits.

Position	Name	Length of Time with Firm
Sensor Operator	Cesar Alveraz	2 Years

Quantum Dynamics, Information Systems Security Officer; 2013 - 2013

- Supports the oversight of all aspects of day-to-day operations, ensuring that the security posture is sustained and that the residual level of risk is always at an acceptable level. Ensure no attempt is made to strain or test security mechanisms, perform network line monitoring, or keystroke monitoring without appropriate authorization.
- Ensure that confidentiality, integrity, and availability of the data and the protection level of the system are provided. Ensure all users have the requisite security clearances, authorization, and need-to know, and are aware of their security responsibilities before granting access to information systems.
- Provide Information Assurance Awareness (IAA) training to all Information Assurance (IA) personnel.
- Ensure information systems (at the local site) are operated, maintained, and disposed of in accordance with internal security policies and practices outlined in pertinent information systems CONOPS and the local System Security Authorization Agreements (SSAA).
- Conduct periodic reviews to ensure compliance with the SSAA. Ensure all security-relevant information system software, hardware, and firmware is maintained and documented IAW pertinent Configuration Management Plans.

California Air National Guard, Information Technology Specialist; Sep 2006 - 2008

- Manage all customer support issues and assign all jobs to appropriate office as help desk supervisor. Analyze probable areas of interaction between proposed and existing systems to facilitate in mission accomplishment.
- Work with Air Force, Air National Guard, and commercial of the shelf technology in a Local and Wide Area network with multiple operating system client server configurations.
- Ensure network is operating within DOD, AF, and NGB policies, standards and directives.
- Install hardware/software; maintain network operations and resolves problems/inquiries concerning networks, computers, peripherals and services. Administer LAN/WAN system; performs network system security functions; provides technical assistance/training to users.
- Analyze and operate automated and manual systems. Gather data to use for benchmark and performance measurement.

California Air National Guard, System Administrator; 2005 - 2006

- Manage GCCS, C2IPS, and other classified systems and configure for access to the domain.
- Document, configure, and manage classified automated information systems. Track and update all classified computer systems to make certain all systems were in network compliance on ANG classified network using TCNO tracking database.
- Troubleshoot and manage classified workstations and associated network equipment. Performed site surveys and assisted with the site accreditation package. Installed and maintained hardware and software on classified systems. Created new user accounts and provided training for all users.

SYS Technologies, Customer Service Representative; 2003 - 2005

- Implementation and support Local Area and Campus Area Network hardware and software.
- Analyze and design network infrastructure and computer equipment to adapt to customer growing need of automated information systems. Analyze performance problems and recommend solutions to enhance functionality, reliability, and/or usability.
- Integrate commercial of the shelf network hardware, software. Evaluated automated data processing programs and equipment. Implement operational support standards and procedures related to change management, performance management, and security. Worked with HTML, and VBScript programming techniques to help maintain Trouble ticket webpage. techniques Perform diagnostics and analysis on computer and network equipment.
- Perform periodic and corrective maintenance on installed equipment and respond to service calls based on priority. Modify and update network equipment, parts and materials.
- Ensure proper inventory of network equipment, parts, and materials using database.

Charlie Saelee

Position	Name	Length of Time with Firm
Sensor Operator	Charlie Saelee	10 Years

Education/Training

Training
ISR Tactical Controller Course –Fort Bragg, NC
Airman Leadership School – Nellis AFB, NV
MQ-9 Sensor Operator Course – Holloman AFB, NV
MQ-1B Sensor Operator Course – Creech AFB, NV
Imagery Analysis Course – Goodfellow AFB, TX
Basic Military Training – Lackland AFB, TX

Hands-on Work Experience

ISR Collection Manager/Mission Manager; 2017 - Present

- Developed and executed MULTI-INT ISR collection plans that support real world operations and accomplished coalition commander's collection requirements by managing, selecting, planning, scheduling and employing ISR assets across the intelligence disciplines.
- Created and executed daily ISR Scheme of Maneuver in support of convoy over-watch and mission managed assets as J2 CUOPS (Intelligence Current Operations) at the tactical level for 10x units in support of Kabul City security.
- Exploited real-time Full Motion Video from multiple ISR platforms; provided first phase, analysis; reviewed and summarized ISR missions throughout the entire city of Kabul.
- Managed an airborne team of 3x Remotely Piloted Aircraft (RPA) and 1x Ground-based sensor to ensure efforts align with mission objectives.
- Mentored Kabul-based U.S. and Coalition Partners on effective C5ISR Tasking, Collection, Processing, Exploitation, and Dissemination (TCPED) methods that linked strategy-to-tasks to improve ISR asset use in a retrograde era.
- Conducted complex analysis on airborne intelligence datasets linked to Insurgent Networks with limited imperfect data, used to influence tactical decisions.

Testing and Evaluation Sensor Operator; 2016 - 2017

- Provided sensor control operations and analytical expertise to support real-time tactical exploitation of FMV and high-definition motion imagery in both E/O and IR modes
- Coordinated aircraft positioning to maximize FMV potential while minimizing risks to aircraft
- Refined collection requirements and requests for information as directed
- Managed multiple tasks in a dynamic environment and complete assignments with little or no supervision
- Maintained Falconview local point target databases, target draw files, reference imagery flipbooks, and other mission-essential documentation and references
- Conducted research and review of recorded data to support real-time operations
- Operated multiple camera systems simultaneously while maintaining positive identification of target
- Liaison between customer and crewmembers to increase productivity and effectivity of platform

ISR Collection Manager/Full-Motion Video Analyst; 2014 – 2016

- Managed and controlled the ISR collection of up to ten manned and unmanned aircraft simultaneously as an ISR Collection Manager for nearly 2,000 hours and contributed to overall Intelligence, Surveillance, and Reconnaissance mission management by transforming broad guidance into a resolute collection plan which aided in the success of over 55 missions
- Provided more than 1,500 hours of near real time full-motion video exploitation and geospatial data analysis from satellite and airborne systems in direct support of nearly 200 intelligence operations
- Produced in excess of 200 imagery derived, fused geospatial products and detailed text reports; assembled nearly 1,000 images using both electro-optical and infrared imagery while adhering to strict deadlines which resulted in the delivery of timely, accurate analyses
- Selected as a team trainer from among his peers based on the consistent superior quality his products; ensured new hires performed to troop and company standards and created training aids in order to assist in efficient training and ensure the continued success of trainees
- Entrusted by leadership to be one of the first analysts to test new software during the initial phases of development in order to identify potential improvements and later train additional analysts on the functionality of the new software

Position	Name	Length of Time with Firm
Sensor Operator	Charlie Saelee	10 Years

- Deployed for up to 120 days to high-risk locations based on mission requirements; facilitated communication between the Tactical Operations Center and airborne platforms which enable the implementation of effective intelligence collection strategies

Full-Motion Video Analyst, 9th Intelligence Squadron; 2012 – 2014

- Directed communication between analysts, aircrew and supported units during MQ-1/9 and MC-12 combat missions
- Managed a team of 15 analysts during the exploitation of 120 near-real-time missions
- Analyzed over 2,000 video hours in support of US, NATO, and Special Operations Forces
- Performed full-motion video analysis, imagery product creation, and intelligence dissemination in support of the Global War on Terrorism
- Used tactical and National imagery platforms to answer time critical requests for information

Geospatial Intelligence Analyst, 13th Intelligence Squadron; 2012 – 2014

- Supported over 50 major operations and US Central Command contingency planning efforts
- Exploited 1,800 images collected by Global Hawk, U-2s, and national assets for deployed forces world-wide
- Extensive experience analyzing full-motion video, electro-optical, infrared, radar, hyperspectral and composite imagery
- Comprehensive knowledge of counter-narcotics, humanitarian, counterinsurgency and major combat operations

MQ-9 Sensor Operator, 17th and 42nd Reconnaissance Squadron; 2010 – 2012

- Maintained dual qualifications as an MQ-1B and MQ-9 Sensor Operator
- Expert knowledge in crew resource management, aircrew disciplines, technical manipulation, and weapon employment tactics
- Engaged fixed, moving, and time-critical targets using simultaneous multi-ship precision-attack weapons and tactics to support non-traditional ISR operations; real world experience with terminally guiding two precise AGM-114 hellfire strikes and one GBU-12 on multiple enemy combatants
- Logged 2,000 flight hours during 300 combat support mission in support of Operation Iraqi Freedom and Operation Enduring Freedom by coordinating search plans, building situational awareness, and meeting ground commanders' intent with zero friendly casualties
- Provided armed overwatch and provided raid intelligence and coordinated threat warnings to ground forces via airborne radio for more than 35 troops in contact events and nearly 50 ground missions
- Supported non-traditional ISR, close air support, and combat search and rescue operations and enhanced force protection by collecting and disseminating infrared, low-light and electro-optical video

MQ-1B Instructor Sensor Operator, 15th and 18th Recon. Squadron; 2008 – 2010

- Flew in excess of 400 combat sorties at Balad AFB in support of Operation Iraqi Freedom; performed launch, handover, and recovery procedures and provided local base defense
- Trained and evaluated unqualified aircrew in MQ-1B operations via classroom academics and flight instruction which lead to a 100% success rate
- Trained more than 20 students to theater-level standards requirements; including ISR, troops in contact, combat search and rescue, and close air support principles
- Selected as the flight senior Instructor Sensor Operator who managed 21 sensor operators and advised the Operations Supervisor in daily execution of 14 combat missions
- Maintained qualification as an MQ-1B Instructor Sensor Operator

Certifications/Awards/Recognitions

- 14 Aerial Achievement Medals
- Joint Service Commendation Medal
- AF Commendation Medal
- Two AF Achievement Medals
- Combat Readiness Medal
- Iraq Campaign Medal
- War on Terrorism Service Medal
- Two AF Good Conduct Medals
- Airman "Below the Zone"

Skills/Areas of Expertise

Position	Name	Length of Time with Firm
Sensor Operator	**Charlie Saelee**	**10 Years**
• AIMES • Imagery Exploitation Support System (IESS) • SOCET GXP • mIRC • FalconView • MAAS • Microsoft Office Suite • GoogleEarth • iKena • ZEUS • ArcGIS	• VideoBank • Skynet • ITK • Q2 • NGDS • Palantir • WAVE • RemoteView • Time-Lapsed Viewer • OMAR • PRISM • Unicorn	

Stewart D. Meek

Position	Name	Length of Time with Firm
Field Technical Representative (FTR) 1	Stewart D. Meek	1 Year

Education/Training

Aviation Maintenance Technology, Delaware Technical & Community College; Georgetown, DE
Aviation Maintenance Degree Program, Somerset Community College; Somerset, KY

Hands-on Work Experience

Field Technical Representative Mechanic, Dynamic Aviation; 2019 – Present

- Performs all scheduled and unscheduled maintenance on assigned aircraft.
- Maintains on-site parts inventory and follows inventory control and aircraft records' procedures. Communicates aircraft status and site conditions with Maintenance Control on all operational days.
- Coordinates work schedules / assignments in conjunction with Maintenance Control and customer flight schedule. Provides all operational reporting requirements as assigned.

Maintenance Base Manager, Piedmont Airlines; 2018 – 2019

- Overall maintenance operation at the respective bases.
- Directing Maintenance Supervisors in workload scheduling, facilities use, and work performance standards.
- Coordinating with Maintenance Supervisors to ensure aircraft maintenance is accomplished safely and on time.
- Ensuring conformance to policies and procedures when necessary.
- Coordinating with Maintenance management to accomplish shop work in a safe and timely manner
- Ensuring facilities, support equipment and publications are properly maintained and are accessible to personnel when performing their duties.
- Establishing and maintaining a work schedule to ensure efficient utilization of assigned personnel.
- Direct and maintain the Identification Stamp program at his base under the direction of the Director of Maintenance.
- Control and management of the Disposition of Removed Aircraft Parts program at his base.
- Actively promote and support the corporate safety policy.
- Perform company mandated SMS functions.

Maintenance Supervisor, Piedmont Airlines; 2017 – 2018

- Efficient and economical performance of all assigned personnel and tasks.
- Ensuring all maintenance is performed in accordance with the appropriate manuals and established policies and procedures
- Applying proper execution of the MEL/CDL program.
- Directing maintenance activities to ensure safety, discipline, efficient utilization of assigned personnel and quantity of production, and cleanliness of facilities during work shifts.
- Maintaining a log of carried over work and performing proper inter-shift turnover.
- Supervising assigned maintenance personnel to ensure safe, on-time completion of all work assigned and providing airworthy, on-time aircraft for scheduled operations.
- Ensuring personnel are qualified to perform the maintenance functions assigned.
- Ensuring all safety regulations are complied with.
- Performing on-the-job training as needed.
- Approval of Engineering Orders (EO) with limitation as stated in 13.4.6, "EO/FCD Approval Procedure"

A&P Mechanic, Piedmont Airlines; 2017 – 2017

- Performing Maintenance work on aircraft, in and about company shops maintenance bases and Line stations, Including, but not limited to periodic aircraft service checks, dismantling, overhauling, repairing, assembling and erecting all parts or aircraft components.
- Performing all assigned duties in accordance with the company maintenance manuals, policies and procedures in accordance with FAA rules and regulations.
- Applying proper execution of MEL/CDL program
- Signing for my own work in aircraft flight log and maintenance documents.

Mechanical Systems Mechanic, Aloft Aero Architects / Pat's Aircraft, LLC; 2015 – 2016

- Responsible for the completion of daily aircraft related tasks including heavy repair, maintenance, servicing and movement, while ensuring the safety, training and production of team members with minimal supervision.

Position	Name	Length of Time with Firm
Field Technical Representative (FTR) 1	Stewart D. Meek	1 Year

- Accomplish and oversee complex aircraft tasks including troubleshooting, removal, installation and rigging and testing of flight controls, landing gears, etc.
- Train employees in work methods and procedures, strictly in accordance with engineering drawings, manufacturer's specifications, PATS Process Standards and Airplane Maintenance Manuals.
- Read interpret and follow Service Bulletins, Airworthiness Directives and drawings for modifications.
- Fill in for the Lead Mechanic as needed.

Assistant Site Manager – DAFB, Starlight Corporation Contracting; 2011-2015

- Perform cleaning services for C-5, C-17 & KC-135 aircraft
- Responsible for creating and managing work schedules for 20 employees
- Overseeing corrosion control process
- Towing heavy aircraft
- Oversee aircraft and personnel safety
- Ensure compliance OSHA and EPA requirements
- Coordinate with military supervision to ensure contract standards are met
- Comply with all required paperwork and GO81 input
- Responsible for all lock-out/tag-out procedures
- Travel to other AFB sites as required, performing site manager duties and overseeing corrosion control process
- Collaborate with corporate officers to establish new contract at Westover AFB
- **C-5 Aircraft Flight Engineer, United States Air Force; 2002 – 2005**
- Systems expert for the free world's largest transport aircraft
- Performed aircraft inspections and determined airworthiness
- Maintained all aircraft forms and records
- Instituted emergency procedures to ensure safety of flight and crew during training and annual flight simulator exercises.
- Operates and monitors engine and aircraft systems including hydraulic, fuel, electrical, air conditioning, communication, navigation and others
- Compute and apply aircraft weight, balance and performance data

Maintenance Supply Production Shift Chief, United States Air Force; 2000 - 2002

- Responsible for training, supervising and mentoring four airmen
- Maintenance/supply liaison responsible for expediating and controlling over $50,000 in aircraft assets a day
- Effectively stocked and maintained over 10,000 inventory items totaling over $1 million dollars
- Identified and processed over 75 quality deficiency reports a year saving the Air Force an estimated $100,000 a year

Flying Crew Chief, United States Air Force; 1996 - 2000

- Responsible for maintaining a C-5 airframe while performing a mission away from self-sufficient bases of operations
- Communicated effectively with aircraft commander and flight engineer to rectify problems and perform routine servicing actions
- Troubleshoot and repaired maintenance discrepancies to return aircraft to flying status
- Communicate requirements to foreign agencies in order to complete mission
- Entered all servicing actions and maintenance discrepancies into aircraft forms ensuring proper record of aircraft flight
- Performed many tasks outside of primary specialty ensuring return of aircraft to mission capable status
- Trained on all aircraft systems and their impact on flight

Aircraft Pneudraulics Systems Journeyman, United States Air Force; 1991 – 1996

- Assumed team leader position of several extended maintenance periods, all resulting in return of aircraft to mission capable status
- Troubleshoot, replaced and/or repaired hydraulics system components using all basic hand tools, some specialized tools, technical orders, job guides and checklists
- Train newly assigned personnel on tasks pertaining to hydraulic specialty
- Performed leak and pressure checks on hydraulic components using test equipment
- Adjusted components to ensure compliance with blueprint specifications

Position	Name	Length of Time with Firm
Field Technical Representative (FTR) 1	**Stewart D. Meek**	**1 Year**
Certifications/Awards/Recognitions		
• FAA Airframe & Power Plant Certified • Licensed Helicopter Pilot (Private & Instrument) • Advanced Systems Training C5 • Active Secret Security Clearance		
Skills/Areas of Expertise		
• Windows and Microsoft Office Programs		

Nathan Hawkins

Position	Name	Length of Time with Firm
Field Technical Representative Mechanic (FTR) 2	Nathan Hawkins	4 Years

Education/Training

A&P License, Liberty University, Lynchburg, VA

Hands-on Work Experience

Field Technical Representative Mechanic and A&P Mechanic, Dynamic Aviation; 2016 – Present

- experience A&P Mechanic who has been with Dynamic Aviation for 4 years
- Performs all scheduled and unscheduled maintenance on assigned aircraft.
- Maintains on-site parts inventory and follows inventory control and aircraft records' procedures. Communicates aircraft status and site conditions with Maintenance Control on all operational days.
- Coordinates work schedules / assignments in conjunction with Maintenance Control and customer flight schedule. Provides all operational reporting requirements as assigned.

Metal/Electro Polisher, Industrial Plating Corporation; 2014

- Worked with Zinc Chromate placing line for steel parts and also did Electro polishing of stainless-steel parts.

Student Worker, Liberty University – Engineering Department; 2014

- Responsibilities included installing software programs on school computers and overseeing and supervising student use of the engineering computer lab.

Warehouse Worker, Justice Tire; 2010 – 2013

- Responsibilities included organizing a large inventory for ease of order fulfillment and loaded/unloaded tractor trailer trucks full of tires and then moved them into storage. Filled customer orders by loading box trucks that delivered orders throughout Virginia.

7. Appendix D & E - Offer/Cost Proposal

AEVEX's offer/cost proposal, including Appendix D – Pricing Page and Appendix E – Certification of Proposal, is provided as a separate file titled "**AEVEX_Response to RFP SK2434b_Cost Proposal_20200510.pdf.**"

Additionally, the supporting cost information is provided in the attachment titled "**AEVEX_Response to RFP SK2434b_ Cost Breakdown_20200510.xlsx**."

8. W-9

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.
Special Operations Solutions, LLC dba AEVEX Engineering & Technology

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) ▶ P

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.
440 Stevens Ave, STE 150

Requester's name and address (optional)

6 City, state, and ZIP code
Solana Beach, CA 92075

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: 37-1562178

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 ▶ _____ Date ▶ MAY 7, 2020

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)

9. Appendix F - Party Participant and Agent Disclosure Forms

Orange County Fire Authority RFP No. SK2434b

ORANGE COUNTY FIRE AUTHORITY
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 on page 12 of this solicitation.

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 the 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 venture(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.

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.

E. 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."

F. To determine whether a campaign contribution of more than $250 has been made by you,

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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 venture(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.

G. A list of the members and alternates of the Board of Directors is attached.

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.*

Orange County Fire Authority RFP No. SK2434b

ORANGE COUNTY FIRE AUTHORITY
PARTY DISCLOSURE FORM

Party's Name: Special Operations Solutions, LLC d/b/a AEVEX Engineering & Technology

Party's Address: 329 Lucy Drive, Harrisonburg, VA 22801

Party's Telephone: 858-704-4125

Solicitation Title and Number: Remote Sensing Aircraft: Fire Integrated Real-time Intelligence System, SK2434b

Based on the party disclosure information provided, are you or your business subject to party disclosures?

No [X] If no, check the box and sign below. Yes [ ] If yes, check the box, sign below and complete the form.

Date: May 8, 2020

Kathy Clark Digitally signed by Kathy Clark Date: 2020.05.08 08:02:33 -07'00'

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) or Alternate(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):

Name of Member:
Name of Contributor (if other than Party):
Date(s):
Amount(s):

Orange County Fire Authority RFP No. SK2434b

ORANGE COUNTY FIRE AUTHORITY
PARTY DISCLOSURE FORM

Party's Name: Dynamic Aviation Group, Inc.

Party's Address: 1402 Airport Road, PO Box 7
Bridgewater, VA 22812

Party's Telephone: 540-828-6070

Solicitation Title and Number: Remote Sensing Aircraft: Fire Integrated Real-time Intelligence System Program; RFP Number SK2434b

Based on the party disclosure information provided, are you or your business subject to party disclosures?

No [X] If no, check the box and sign below. Yes [ ] If yes, check the box, sign below and complete the form.

Date: 05/01/2020

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) or Alternate(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):

Name of Member:
Name of Contributor (if other than Party):
Date(s):
Amount(s):

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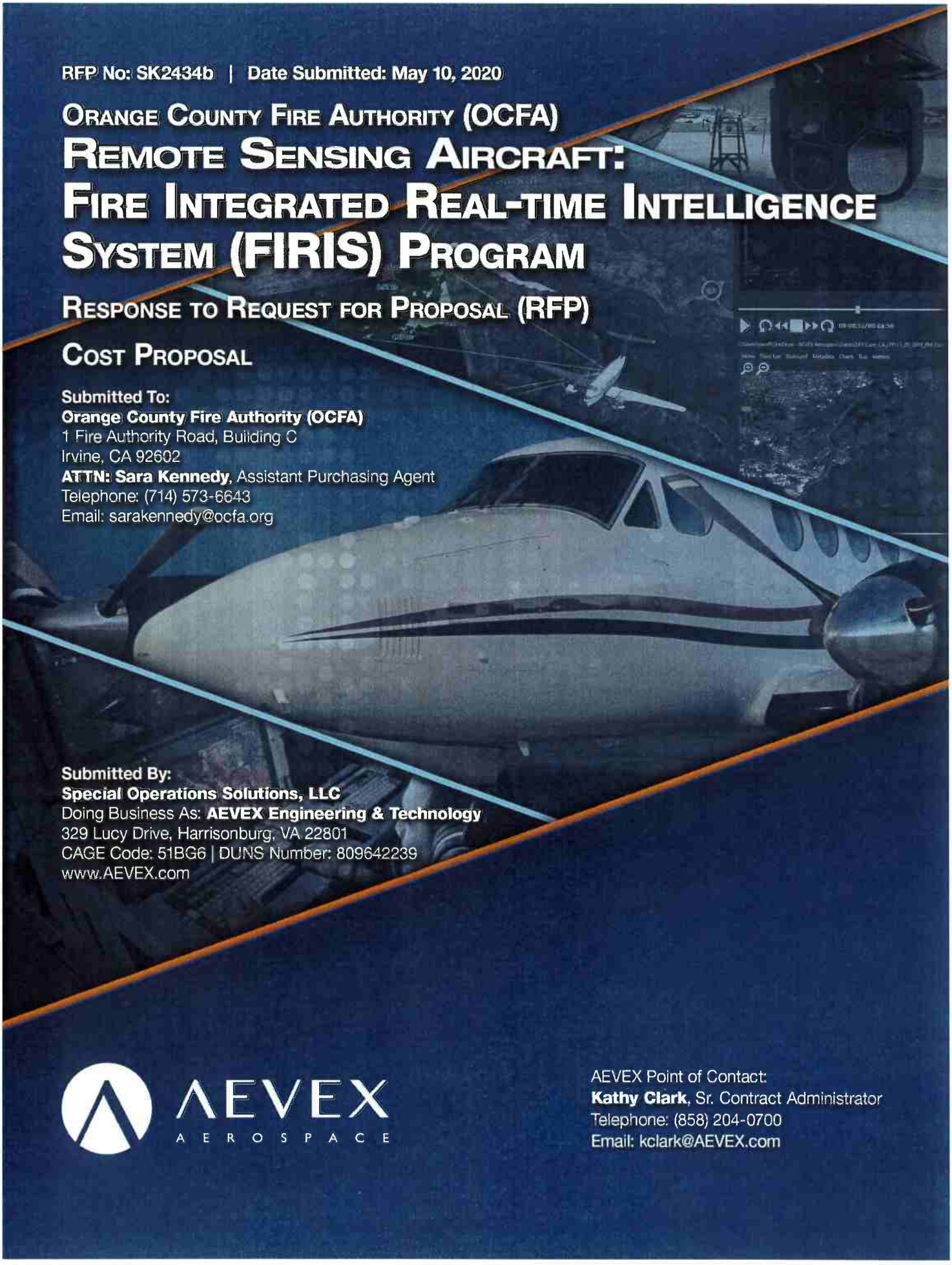
RFP No: SK2434b | Date Submitted: May 10, 2020

Orange County Fire Authority (OCFA)
Remote Sensing Aircraft: Fire Integrated Real-time Intelligence System (FIRIS) Program

Response to Request for Proposal (RFP)

Cost Proposal

Submitted To:
Orange County Fire Authority (OCFA)
1 Fire Authority Road, Building C
Irvine, CA 92602
ATTN: Sara Kennedy, Assistant Purchasing Agent
Telephone: (714) 573-6643
Email: sarakennedy@ocfa.org



Submitted By:
Special Operations Solutions, LLC
Doing Business As: **AEVEX Engineering & Technology**
329 Lucy Drive, Harrisonburg, VA 22801
CAGE Code: 51BG6 | DUNS Number: 809642239
www.AEVEX.com

AEVEX AEROSPACE

AEVEX Point of Contact:
Kathy Clark, Sr. Contract Administrator
Telephone: (858) 204-0700
Email: kclark@AEVEX.com

Table of Contents

ORIGINAL

APPENDIX D - PRICING PAGE (UPDATED)

PROPOSAL COSTS – Team AEVEX is pleased to provide the proposed Costs.

Costs for 24 Hour Project Services as Described		
DESCRIPTION OF SERVICES	**Unit Cost**	**Estimated Cost (180 days)**
Standby Hours	$448.91	$1,939,273.74
Flight-time Cost per Hour	$1,495.00	$926,900.00
Other (Please Describe)		
Total Cost for 24-Hour Services as Described:	$2,866,173.74	

Costs for 12 Hour Project Services as Described (Optional)			
DESCRIPTION OF SERVICES	**12H Day Unit Cost**	**12H Night Unit Cost**	**Estimated Cost (180 days)**
Standby Hours	$681.11	$688.11	$1,471,187.81
Extended Standby Cost per hour (up to two daily)	$193.71	$193.71	
Flight-time Cost per Hour	$1,590.00	$1,590.00	$492,900.00
Other (Please Describe)			
Total Cost for 12-Hour Services as Described:	$1,964,087.81		

Provide details of what is included in the total cost listed above. Travel and incidentals should be included in the total cost.

AEVEX costs include Integration Support (non-recurring labor), Operations Support (recurring labor), Hardware, Material, Warranties, Software, Maintenance, Travel – Lodging (Orange County/State Rate), Airfare, Per Diem, and Rental Car. Assumed 620 flight hours per year for the 24-hour aircraft and 310 flight hours for the 12-hour aircraft. Please refer to ***AEVEX_Response to RFP SK2434b_ Cost Breakdown_20200510*** for AEVEX's proposal cost sheet and rates.

Provide what factors will be considered for pricing in subsequent contract years. (i.e. Consumer Price Index).

U.S. Bureau of Labor Statistics, National Compensation Survey – Employment Cost Index (Dec 2019) – Professional, Scientific, and Technical Services (2.2%)

Term of Offer: It is understood and agreed that this offer may not be withdrawn for a period of one hundred eighty days (180) from the Proposal Submittal Deadline, and at no time in case of successful Offeror.

1. Any additional information you would like OCFA to consider.

Team AEVEX is pleased to propose a cost-savings if both aircraft are awarded to Team AEVEX. Please refer to Attachment 1 of this document for further details.

Attachment 1

2020 Discounted Costs for Two Aircraft (One 24 Hour and One 12 Hour)		
DESCRIPTION OF SERVICES	**Unit Cost**	**Estimated Cost (180 days)**
Standby Hours	$ 1,073.51	$ 3,239,938.47
Extended Standby Cost per hour (up to two daily)	$ 184.02	
Flight-time Cost per Hour	$ 1,450.33	$ 1,348,810.00
Other (Please Describe)		
Total Costs for Two Aircraft (One 24 Hour and One 12 Hour)		$4,588,748.47

ORIGINAL

APPENDIX E - CERTIFICATION OF PROPOSAL

In responding to **RFP SK2434b – Remote Sensing Aircraft: Fire Integrated Real-time Intelligence System Program**, the undersigned offeror(s) agrees to provide services for OCFA per the specifications. Offeror further agrees to the terms and conditions specified herein the following terms and conditions that are a part of this proposal and the resulting Maintenance Services Agreement. ***If there are any exceptions to the terms and conditions or contract, they must be stated in an attachment included with the offer.*** 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.

A. The Offeror hereby certifies that the individual signing the submittal is an authorized agent for the Offeror and has the authority to legally bind the Offeror to the Contract. Signature below verifies that the Offeror has read, understands, and agrees to the conditions contained herein and on all of the attachments and agenda.
B. The submission of the offer did not involve collusion or other anti-competitive practices.
C. The Offeror has not given, offered to give, nor intends to give at any time hereafter, any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, meal or service to a public servant in connection with the submitted offer.
D. ***The Offeror has submitted the Party, Participant (Agent) Disclosure Form if applicable.***
E. The Offeror shall not discriminate against any employee or applicant for employment in violation of Federal or State law.
F. The Offeror complies fully with the Federal Debarment Certification regarding debarment suspension, ineligibility and voluntary exclusion.

Independent Price Determination: I certify that this offer is made without prior understanding, arrangement, agreement, or connection with any corporation, firm or person submitting an offer for the same services, and is in all respects fair and without collusion or fraud. I certify that I have not entered into any arrangement or agreement with any Orange County Fire Authority public officer. I understand collusive bidding is a violation of State and Federal law and can result in fines, prison sentences, and civil damage awards. I agree to abide by all conditions of this offer and certify that I am authorized to sign this agreement for the Offeror.

TO THE ORANGE COUNTY FIRE AUTHORITY:
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.

Special Operations Solutions, LLC d/b/a AEVEX Engineering & Technology
Name of Firm

329 Lucy Drive
Address

Harrisonburg	VA	22801
City	State	Zip

Wayne Miller — Digitally signed by Wayne Miller Date: 2020.05.07 16:05:27 -04'00'
Signature of Person Authorized to Sign

7 May 2020
Date

Wayne Miller
Printed Name

Vice President, Contracts
Title

REQUEST FOR BEST AND FINAL OFFER

RFP SK2434b – Remote Sensing Aircraft: Fire Integrated Real-Time Intelligence System Program

DATE BEST AND FINAL OFFER REQUESTED: MAY 21, 2020

DUE DATE FOR BEST AND FINAL OFFER: MAY 26, 2020 AT 5:00 P.M.

Special Operations Solutions, LLC. (AEVEX) submitted a proposal in response to the above referenced Request for Proposal (RFP) issued by the Orange County Fire Authority (OCFA).

As part of the evaluation/negotiation process, the OCFA is exercising the right to request a best and final offer from the top-ranking firm for further evaluation and consideration. The purpose of the Best and Final Offer is to allow both OCFA and the respondent to make any modifications to the terms of the contract before making the final decision in the award.

OCFA would like additional consideration on the following items:

- ***During your team's interview, it was mentioned that Aviation Liability Insurance is required for this project and that Dynamic Aviation, Inc. would be acting as a subcontractor. Please provide OCFA with current Certificates of Insurance for both AEVEX and Dynamic Aviation in accordance with the RFP requirements and inclusive of Aviation Liability Insurance for review.***
- ***OCFA may be interested in tasking AEVEX to provide additional services after the initial project has been completed. Please provide OCFA with rates for as-needed services that AEVEX offers for additional consideration.***
- ***Additionally, OCFA may be interested in tasking AEVEX to estimate structure fire loss in a given area (example: within a fire perimeter). Please let us know if this is possible using the proposed contract hardware and provide additional information regarding this need.***

OCFA intends to use the standard Professional Services Agreement (PSA) that was provided in the RFP once the contract is awarded. No exceptions were identified in your submitted proposal

Please complete the attached best and final pricing page and provide a response to the questions. Best and Final Offers must be received by the Orange County Fire Authority - Purchasing Section no later than the deadline specified above. Please submit your response to this request via e-mail to: rothchildong@ocfa.org.

Thank you for your interest in doing business with Orange County Fire Authority.

Sincerely,

Rothchild Ong
Assistant Purchasing Agent

BEST AND FINAL PRICING PAGE

Please complete the requested information below and submit via e-mail to: rothchildong@ocfa.org.

Costs for Project Services as Described			
DESCRIPTION OF SERVICES	**Unit Cost**	**Original Offer (180 Days)**	**BAFO**
24H Standby Hours	$448.91	$1,939,273.74	$1,939,273.74
24H Flight-time Cost per Hour	$1,495.00	$926,900.00	$926,900.00
Total Cost for 24H Services as Described:		**$2,866,173.74**	$2,866,173.74

12H Standby Hours	$681.11	$1,471,187.81	$1,471,187.81
12H Extended Standby Cost per hour	$193.71		$193.71
Flight-time Cost Per Hour	$1,590.00	$492,900.00	$492,900.00
Total Cost for 12H Services as Described:		**$1,964,087.81**	$1,964,087.81

Two Aircraft (24H aircraft/12H aircraft) Standby Hours	$1,073.51	$3,239,938.47	$3,239,938.47
Two Aircraft (24H aircraft/12H aircraft) 12H Extended Standby Cost per hour	$184.02		$184.02
Two Aircraft (24H aircraft/12H aircraft) Flight-time Cost Per Hour	$1,450.33	$1,348,810.00	$1,348,810.00
Total Cost for 24H/12H Services as Described:		**$4,588,748.47**	$4,588,748.47

1. Please provide a rate schedule for "As-Needed Services" to be part of the Best and Final offer as proposed.

   AEVEX will provide a detailed rate schedule by Labor Category in a separate submittal by the requested deadline of 5:00 p.m. on Tuesday, May 26, 2020.

2. Please provide information regarding the service to estimate structure fire loss in a given area. Please let us know if this is possible using the proposed contract hardware and provide additional information regarding this need.

   AEVEX will provide a written technical estimate for these services in a separate submittal by the requested deadline of 5:00 p.m. on Tuesday, May 26, 2020.

BEST AND FINAL OFFER

RFP SK2434b – Remote Sensing Aircraft: Fire Integrated Real-Time Intelligence System (FIRIS) Program

TO THE ORANGE COUNTY FIRE AUTHORITY:

The Undersigned hereby amends the original proposal as indicated in this Best and Final Offer and shall provide online payment processing services with all terms, scope of work, conditions, specifications, and amendments in the Request for Proposal which is incorporated by reference as if fully set forth herein. The representations herein are made under penalty of perjury.

Special Operations Solutions, LLC d/b/a AEVEX Engineering & Technology (AEVEX)
Name of Company

440 Stevens Avenue, Suite 150, Solana Beach, CA 92075
Address

Kathy Clark Digitally signed by Kathy Clark Date: 2020.05.22 15:48:03 -07'00'
Signature of Person Authorized to Sign

22 May 2020
Date

Kathy Clark
Printed Name

Senior Contracts Administrator
Title

AEVEX
AEROSPACE
ENGINEERING & TECHNOLOGY

26 May 2020

Orange County Fire Authority
RFP: SK2434b - Best and Final Offer (BAFO)
Remote Sensing Aircraft: Fire Integrated Real-Time Intelligence System Program

Reference: OCFA may be interested in tasking AEVEX to estimate structure fire loss in a given area (example within a fire perimeter). Please let us know if this is possible using the proposed contract hardware and provide additional information regarding this need.

AEVEX Response:

Phase One of estimating fire structure loss is the ability to visualize parcel data on the map and full motion video feed. AEVEX's GeoFOCIS software is capable of visualizing vector data on its moving map display, including street names and fire perimeters. AEVEX engineers will accomplish the addition of parcel data in our visualization suite by contract award. The user can view parcel information within the GeoFOCIS map and overlaid on the full motion video.

Phase Two of estimating fire structure loss uses computer vision algorithms to identify structures on a parcel. AEVEX proposes using satellite imagery and object detection algorithms to locate various structures such as buildings, houses, sheds, etc., within each parcel of land. This phase requires software development and access to satellite imagery and is completed in approximately two (2) months.

Phase Three is automation. AEVEX combines the results of Phases One and Two with imagery from the TK-9 and FLIR-380HDc. We develop another set of computer vision algorithms which combine the fire perimeter map with parcel and structure data to give an automated estimation of the structure loss within each parcel. We combine the losses for each parcel for a specific fire perimeter to determine an aggregate fire structure loss. This requires additional software development and is achieved approximately two (2) months after Phase Two is completed.

AEVEX can begin software development as described above upon contract award. AEVEX will provide a demonstration to OCFA once development is complete. Once accepted, AEVEX will provide the solution as a module add-on to GeoFOCIS. If OCFA is interested in using the module, AEVEX will provide an official cost estimate. This approach reduces the risk to OCFA and allows AEVEX to provide accurate pricing at the time of the estimate.

329 Lucy Drive
Harrisonburg, VA 22801

AEVEX.COM

AEVEX AEROSPACE
ENGINEERING & TECHNOLOGY

26 May 2020

Orange County Fire Authority
RFP: SK2434b - Best and Final Offer (BAFO)
Remote Sensing Aircraft: Fire Integrated Real-Time Intelligence System Program

Reference: OCFA may be interested in tasking AEVEX to provide additional services after the initial project has been completed. Please provide OCFA with rates for as-needed services that AEVEX offers for additional consideration.

AEVEX Response:

Line #	Labor Category	Hourly T&M Labor Rate
1	Electronics Technician I	$56.76
2	Electronics Technician III	$74.14
3	Mechanical Engineer III	$113.79
4	Senior Hardware Engineer	$143.43
5	Applications Engineer	$81.72
6	Instrumentation Engineer	$66.40
7	Systems Engineer II	$74.12
8	Mechanical Engineer II	$84.68
9	Network Engineer IV	$118.46
10	Software Developer, Junior	$78.41
11	Chief Scientist	$186.99
12	Technician/ASO	$107.39
13	ASO	$86.06
14	Pilot	$86.49
15	Rescue Specialist	$87.35
16	Sensor Mx FSR	$59.30
17	IA Maintenance	$65.42
18	A&P Mechanic	$56.79
19	AVT Mechanic	$56.79
20	AGE Mechanic	$49.40
21	Logistics Support	$49.40
22	Tool Room	$43.24
23	Junior Analyst	$64.93
24	Senior Analyst	$68.18

Note: Hourly Labor Rate includes labor only. Travel, if required, is not included in the labor rates.

329 Lucy Drive
Harrisonburg, VA 22801

AEVEX.COM

UNIVERSITY OF CALIFORNIA, SAN DIEGO UCSD

BERKELEY • DAVIS • IRVINE • LOS ANGELES • MERCED • RIVERSIDE • SAN DIEGO • SAN FRANCISCO SANTA BARBARA • SANTA CRUZ

SERVICE AGREEMENT

This Service Agreement ("Agreement") is entered into by and between **The Regents of the University of California on behalf of the University of California, San Diego**, a public, not-for-profit, educational institution located at 9500 Gilman Drive, La Jolla, California 92093 ("UCSD") and the **Company** whose name and address appear on Exhibit A, attached hereto and incorporated by reference herein ("Company").

In consideration of the mutual covenants set forth herein, the parties agree as follows:

1. **Scope of Work**. UCSD will perform the services set forth on Exhibit A, Services, attached hereto and incorporated by reference herein ("Services").
2. **Deliverables**. UCSD will provide to the Company the deliverables set forth on Exhibit A, incorporated by reference herein.
3. **Cost**. As consideration for UCSD's performance of the Services, the Company will pay UCSD the costs set forth on Exhibit A, incorporated by reference herein.
4. **Payment**.
   - 4.1. **Schedule**. The Company shall pay UCSD the compensation on the dates or milestones set forth on Exhibit A, incorporated by reference herein.
   - 4.2. **Remittance**. Checks are to be made payable to The Regents of the University of California and sent to the address set forth in Exhibit A.
5. **Term of Agreement**. This Agreement will begin and end on the dates set forth on Exhibit A.
6. **UCSD Contact**. All inquiries and notices with respect to this Agreement shall be sent to the UCSD contact whose name and related information are set forth on Exhibit A.
7. **Responsibilities**. The Company shall provide to UCSD those items listed in Exhibit A, if any, in a timely and secure manner so as to allow UCSD to perform its work. The parties agree to comply with any and all applicable laws, rules, regulations, and policies.
8. **Termination**. Either party may terminate this Agreement upon thirty (30) days' written notice. If the Company terminates this Agreement, the Company will pay UCSD for all costs and any non-cancelable obligations incurred up to the effective date of termination.
9. **Insurance**. Each party shall, at its sole cost, insure its activities and indemnification obligations in connection with this Agreement from its inception and shall keep in force and maintain insurance or self-insurance as follows: general liability, business automobile liability, and workers' compensation and such other insurance as may be necessary to provide coverage for its performance under this Agreement. If the insurance is written on a claims-made form, it shall continue for a period of three years following termination of this Agreement. The coverage required herein shall not in any way limit the liability of either party.
10. **Indemnification**. Each party shall defend, indemnify and hold the other party, its officers, employees, and agents harmless from and against any and all liability, loss, expense (including attorneys' fees), and claims for injury or damages arising out of the performance of this Agreement, but only in proportion to and to the extent such liability, loss, expense, attorneys' fees, or claims for injury (including death) or damages are caused by or result from the negligent or intentional acts or omissions of the indemnifying party, its officers, employees, or agents.
11. **Patent Infringement Indemnification**. The Company shall indemnify, defend, and hold harmless UCSD, its officers, agents, and employees against all losses, damages, liabilities, costs, and expenses (including but not limited to attorneys' fees) resulting from any judgment or proceeding in which it is determined, or any settlement agreement arising out of the allegation, that the Company's furnishing or supplying UCSD with parts, goods, components, programs, practices, or methods under this Agreement or UCSD's use of such parts, goods, components, programs, practices, or methods supplied by the Company under this Agreement constitutes an infringement of any patent, copyright, trademark, trade name, trade secret, or other proprietary or contractual right of any third party. UCSD shall inform the Company as soon as practicable of the suit or action alleging such infringement. The Company shall not settle such suit or action without the consent of UCSD. UCSD retains the right to participate in the defense against any such suit or action.
12. **Limitation of Liability.** EXCEPT WITH REGARD TO ITS INDEMNIFICATION OBLIGATIONS, UCSD WILL NOT BE LIABLE TO THE OTHER PARTY FOR ANY INDIRECT, SPECIAL, INCIDENTAL, EXEMPLARY OR CONSEQUENTIAL DAMAGES, OR COSTS, INCLUDING, BUT NOT LIMITED TO, ANY LOST PROFITS OR REVENUES, EVEN IF SUCH PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES AND REGARDLESS OF THE LEGAL THEORY UNDER WHICH SUCH DAMAGES ARE SOUGHT. **UCSD DISCLAIMS ALL WARRANTIES, EXPRESS AND IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL UCSD'S TOTAL LIABILITY UNDER THIS AGREEMENT EXCEED THE AMOUNT PAID BY THE COMPANY FOR THE SERVICES.**
13. **Company's Ownership of Deliverables**. The Company will own the deliverables upon payment in full of the cost of the Services.
14. **Use of UCSD Name**. California Education Code Section 92000 prohibits use of the University of California, San Diego's name to suggest that UCSD endorses a product or service. The Company will not use The University of California's name, or any acronym thereof, including UCSD, without UCSD's prior written approval.
15. **Excusable Delay**. In the event of a delay caused by inclement weather, fire, flood, strike or other labor dispute, acts of God, acts of Governmental officials or agencies, or any other cause beyond the control of UCSD, UCSD's performance is excused hereunder for the periods of time attributable to such a delay, which may extend beyond the time lost due to one or more of the causes mentioned above.

The Company's duty to pay for past or continuing costs is not suspended hereunder.

16. **Non-Interference.** Notwithstanding any other provision contained herein, the use of UCSD facilities and/or UCSD personnel in support of this Agreement can only be authorized to the extent that it will not interfere with work related to the prime missions of UCSD and/or the Department (e.g., education and research). Accordingly, Company's exclusive remedy for failure by either UCSD or persons acting on its behalf to perform services or furnish information or data hereunder at any particular time or in any specific manner, is limited to reimbursement of any unexpended payments under this Agreement.
17. **Non-Exclusive Nature of Services.** The Services herein are being offered to Company on a non-exclusive basis. Nothing herein shall be construed as granting Company any exclusive right(s) to the Service(s) referenced herein, and UCSD retains the right to offer and perform similar or identical Services for others.
18. **Notice**. Any notice or communication required by this Agreement shall be in writing and shall be deemed to have been duly given if delivered personally, or sent by overnight mail, or prepaid registered mail, or confirmed facsimile transmission, addressed to the other party at the address set forth on Exhibit A, or at such other address as such party hereto may hereafter specify in writing to the other party.
19. **Status of Parties**. This Agreement is not intended to create, nor shall it be construed to be, a joint venture, association, partnership, franchise, or other form of business relationship. Neither party shall have, nor hold itself out as having, any right, power or authority to assume, create, or incur any expenses, liability, or obligation on behalf of the other party, except as expressly provided herein.
20. **Third-Party Beneficiary**. There are no intended third-party beneficiaries to this Agreement.
21. **Severability**. If any provision of this Agreement is held invalid, illegal or unenforceable in any respect, such provision shall be treated as severable, leaving the remaining provisions unimpaired, provided that such does not materially prejudice either party in their respective rights and obligations contained in the valid terms, covenants, or conditions.
22. **Non-Waiver**. The failure of either party to require the performance of any of the terms of this Agreement or the waiver by either party of any default under this Agreement shall not prevent a subsequent enforcement of such term, nor be deemed a waiver of any subsequent breach.
23. **Modification of Agreement**. This Agreement shall be changed only by written agreement of the parties.
24. **Applicable Law**. This Agreement shall be governed by the laws of the State of California without regard to its conflict of laws provisions.
25. **Signatures, Counterparts and Copies**. This Agreement may be executed in counterparts, all of which, when taken together, shall constitute one contract with the same force and effect as if all signatures had been entered on one document. Signatures may be made electronically, and such electronic signatures shall be valid and binding upon the parties making them, and shall serve in all respects as original signatures. Signatures may be delivered among and between the parties by facsimile or electronic means. Thereafter, the parties further agree that electronic copies of this Agreement may be used for any and all purposes for which the original may have been used.
26. **Arbitration**. In the event of any dispute, claim, question, or disagreement arising from or relating to this Agreement or the breach thereof, the parties hereto shall use their best efforts to settle the dispute, claim, question, or disagreement. To this effect, they shall consult and negotiate with each other in good faith and recognizing their mutual interests, attempt to reach a just and equitable solution satisfactory to both parties. If they do not reach solution within a period of sixty (60) days, then upon notice by either party to the other, all disputes, claims, questions, or disagreements shall be finally settled in accordance with the provisions of the American Arbitration Association ("AAA") and proceed under the provisions of Title 9 of the California Code of Civil Procedure Sections 1280 through and including 1294.2. The discovery provisions of the California Code of Civil Procedure Section 1283.05 shall be applicable to this Agreement. Each party shall bear its own costs.
27. **Headings and Captions**. Headings and captions in this Agreement are to facilitate reference only, do not form a part of this Agreement, and shall not in any way affect the interpretation hereof.
28. **Authority**. Both parties represent that each has the full authority to perform its obligations under this Agreement and that the person executing this Agreement has the authority to bind it.
29. **Survival**. Provisions of this Agreement, which by their express terms, or by necessary implication, apply for period of time other than specified herein, shall be given effect, notwithstanding termination or expiration.
30. **Company's Representations and Warranties**. Company hereby represents and warrants that, except as expressly provided for herein, no obligations are imposed upon UCSD as a result of any other agreement(s) involving Company to which UCSD is not a party.
31. **Export Control.** No ITAR or export controlled materials shall be delivered to UCSD pursuant to this agreement.
32. **Personally Identifiable Information.** Customer agrees that no Personally Identifiable Information ("PII") as defined by California privacy laws (including California Civil Code sections 56-56.37) or Protected Health Information ("PHI") as defined by the Health Insurance Portability & Accountability Act of 1996 ("HIPAA", 45CFR Parts 160 and 164) shall be transmitted to SDSC under this agreement. Transmission of either PHI or PII by customer to SDSC shall be grounds for immediate termination of this agreement. Comingling of data that is PHI or PII with data that is not PHI or PII is prohibited under this agreement. If customer finds it necessary to begin transmission of PHI or PII, customer agrees to contact SDSC before transmission, in order to enter into a new agreement for services that cover the appropriate security measures as required by State and Federal laws including HIPAA/HITECH.
33. **Entire Agreement**. This Agreement, including Exhibit A made a part hereof, sets forth the entire agreement of the parties with respect to the subject matter herein and supersedes any prior agreements, oral and written, and all other communications between the parties with respect to such subject matter. Any terms and conditions contained in the Company's purchase order, and any NDA or separate scope of work or similar document shall have no force and effect. Any changes or additions to Sections 1-33 inclusive, of this Agreement are invalid, unless approved in writing by the UCSD representative identified in Exhibit A, Paragraph 7.

IN WITNESS WHEREOF, the parties have executed this Agreement on the dates set forth below.

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA ON BEHALF OF THE SAN DIEGO CAMPUS	**Company Name:** **ORANGE COUNTY FIRE AUTHORITY**
By:_____	By:_____
Name:	Name:
Title:	Title:
Date:	Date:

EXHIBIT A -- SERVICES

COMPANY:

Orange County Fire Authority
Principal place of business located at 1 Fire Authority Road, Irvine, CA 92602
Attention: Robert Cortez
Telephone: 714-573-6012
Email: RobertCortez@ocfa.org

1. SCOPE OF WORK:

The services will be performed by the San Diego Supercomputer Center as set forth below or in accordance with the attachment hereto and incorporated by reference herein. The Company may issue a purchase order for each Service, however, any terms and conditions set forth on the purchase other are of no force and effect and only the terms and conditions set forth in this Agreement shall apply to the Services hereunder.

WIFIRE Lab will provide fire modeling products to enhance decision maker awareness. The predictive modeling products and services WIFIRE will work on developing and providing include predictive fire growth models and templates in advance of fire ignition, near real-time predictive modeling following fire ignition, and participation in the South and North Fusion Center operations. WIFIRE will also ensure access to the 24x7 connectivity and cyberinfrastructure needed to perform the work.

2. DELIVERABLES:

The San Diego Supercomputer Center will provide one (1) analyst per Fusion Center on site or remotely as needed to support the operations on both daily and extended availability rates. Analyst will ensure connectivity to network and data updates necessary to provide accurate fire modeling. Analyst will provide fire modeling products to enhance decision maker awareness through the FIRIS 2.0 communication channels.

Required product types and services will include, but not limited to, the following:

1. Predictive fire growth models and templates in advance of fire ignition.
2. Near real-time predictive modeling following fire ignition.
3. Participation in the South and North Fusion Center operations.

Predictive modeling products are expected to interoperate with the following:

- SCOUT
- Intterra
- AEVEX Aerospace data products
- OCFA GIS and response team platform

3. COST: Total $1,000,000

4. PAYMENT

4.1 SCHEDULE:

The payment schedule will be as below

For Period: 07/15/2020 to 08/14/2020 $150,000 due 08/31/2020
08/15/2020 to 09/14/2020 $150,000 due 09/30/2020
09/15/2020 to 10/14/2020 $150,000 due 10/31/2020
10/15/2020 to 11/14/2020 $150,000 due 11/30/2020
11/15/2020 to 12/14/2020 $150,000 due 12/31/2020
12/15/2020 to 01/14/2021 $250,000 due 01/31/2021

4.1.1 Invoices will be submitted in accordance with the payment schedule.

4.2 **REMITTANCE**: Checks are to be made payable to **The Regents of the University of California** and sent to:

University of California, San Diego
Attention: Cashier's Office
9500 Gilman Drive Mail Code 0009
La Jolla, California 92093-0009

5. **TERM OF AGREEMENT**: This Agreement will begin on **July 1st, 2020 and end on June 30th, 2021** including a 6 month fully staffed active operational period. Operational period is extensible by an additional 90 days if needed. AGREEMENT MAY BE EXTENDED FOR TWO, ONE YEAR TERMS BY MUTUAL AGREEMENT OF THE PARTIES.

6. **UCSD CONTACT**:

Ilkay Altintas, PhD
University of California, San Diego
9500 Gilman Drive Mail Stop 0505
La Jolla, California 92093-0505
Telephone: (858) 822-5453
Fax: ( )
Email: altintas@sdsc.edu

7. **PER SECTION 33 OF THE AGREEMENT, THE UCSD REPRESENTATIVE RESPONSIBLE FOR APPROVING CHANGES OR ADDITIONS TO THIS AGREEMENT**: Service Agreement Contract Officer - MC 0934; UCSD-Provided-Svcs@ucsd.edu.

END OF EXHIBIT A

OCFA Sole Source Request Form

The Purchasing Ordinance of the Orange County Fire Authority requires competitive bids and proposals for service and commodity contracts. ***A sole source is defined as a product or service that is available from only one known supplier as a result of unique performance capabilities, manufacturing processes, compatibility requirements or market conditions. The using department requesting a sole source shall provide written clear and convincing evidence to support a sole source determination, meaning that only one source exists to fulfill the requirements. This form is to be submitted with the purchase requisition to Purchasing with any sole source requests.***

SECTION I - INSTRUCTIONS

1. Written justification on this form will be completed by the requesting department and submitted with the purchase requisition.
2. The request must be approved by the section manager and assistant chief prior to submitting the request to the purchasing manager.
3. All sole source forms must be submitted to the Purchasing Manager for approval. Based on the new ordinance the Fire Chief is not required to approve the sole source form. The sole source request may be submitted to Assistant Chief of Business Services by the Purchasing Manager for concurrence as required.
4. All sole source contracts exceeding $50,000 (life of contract) require Executive Committee approval. In this case, the sole source request form must be submitted to the Executive Committee as an attachment to the staff report.
5. The approved sole source justification form will be included in the contract file.

SECTION II – REQUEST INFORMATION

Department/Section: Operations	**Requested By:** Robert Cortez	**Date:** 6/5/2020
Recommended Vendor: University of California, San Diego	**Vendor Contact:** Jessica Block	**Vendor's E-mail Address:** j.block@eng.ucsd.edu
Vendor Address: 9500 Gilman Drive Mail Stop 0505, La Jolla, CA 92093-0505		**Vendor's Telephone #:** (209) 532-2345
Type of Contract: ☐ One-time ☐ Multi-Year ☐ Renewal ☐ Amendment ☐ Increase	**Contract Term (Dates):** 7/1/2020 - 6/30/2021	**Contract Amount:** 1,000,000
If the contract type is a Renewal, Amendment or Increase, please provide previous contract information with this request (PO, BO, previous approval date, Chief approval or EC approval, and dollar amount).		**Attachments:** ■ Yes ☐ No

SECTION III – JUSTIFICATION

1. **Provide a detailed description of the product or service requested. Describe what it is.** *Attach additional sheet if necessary.*

The 2020 Fire Integrated Real-time Intelligence System (FIRIS) program will build upon the developments made in the 2019 FIRIS pilot program to enhance California wildfire situational awareness for first responders by providing real-time fire perimeter intelligence and fire behavior modeling. UCSD will provide the WIFIRE predictive modeling service.

2. **Please state why the recommended vendor is the only one capable of providing the required services and/or commodities. Provide a summary of findings (research and analysis) including any supporting documentation which validates your recommendation (e.g., attach a manufacturer's letter verifying patented design and direct sale with no distributors) and demonstrates the sole source nature of this request.** *Attach additional sheet if necessary.*

WIFIRE's fire behavior modeling is provided through a collaboration between government agencies, with the host being the San Diego Super Computer of UC San Diego. The platform that the WIFIRE fire behavior modeling software resides on is proprietary and currently has the only infrastructure that can provide integrated capability.There are no

SECTION III – JUSTIFICATION (*continued*)

comparable options available on the market currently.

3. **Pricing - What efforts were made to get the best pricing (e.g., did you simply request a quote, negotiate with the vendor, did the vendor provide a discount)?** *Please provide the quote with your sole source request.*

Funding for the FIRIS program is allocated by the D-RiSC Coalition and is intended to be cost neutral to OCFA. Staff is collaborating with UCSD to ensure that the program costs, including all ancillary fees, will not exceed the funding provided by the D-RiSC Coalition.

4. **Will this purchase obligate the OCFA to future purchases (maintenance, licensing or continuing needs)?** (If yes, please explain how and what the future costs will be.)

The 2020 FIRIS program is intended to have an operational period of a minimum of 180 days. At the conclusion, program performance will be reviewed and it may be determined that the services should be extended. Should that occur, additional approvals to extend the Sole Source will be sought.

Sole Source Request Submitted by:

REQUESTORS NAME	SIGNATURE	DATE
Robert Cortez, Assistant Chief		6/18/20
DIVISION CHIEF/SECTION MANAGER NAME	**SIGNATURE**	**DATE**
ASSISTANT CHIEF NAME	**SIGNATURE**	**DATE**
Brian Fennessy, Fire Chief		6/19/20

***Purchasing Manager's Comments*:**

PURCHASING MANAGER'S APPROVAL	DATE
Sara Kennedy	6/19/2020
ASSISTANT CHIEF/BUSINESS SERVICES CONCURRENCE	**DATE**
	6/18/20

Executive Committee Approval Required ☑ **Yes** ☐ **No** **Sole Source over $50,000**

Executive Committee Approved: ☐ ***Yes*** ☐ ***No*** ***Date approved*** _____

UNIVERSITY OF CALIFORNIA, SAN DIEGO

BERKELEY · DAVIS · IRVINE · LOS ANGELES · MERCED · RIVERSIDE · SAN DIEGO · SAN FRANCISCO

SANTA BARBARA · SANTA CRUZ

SAN DIEGO SUPERCOMPUTER CENTER
(858) 534-5000
http://www.sdsc.edu

9500 GILMAN DRIVE
LA JOLLA, CALIFORNIA 92093-0505

To whom it may concern,

WIFIRE fire modeling software is developed exclusively at the University of California, San Diego in the San Diego Supercomputer Center. It was originally developed with grant funding from the National Science Foundation and has been subsequently funded by the University. UCSD is the sole source of WIFIRE software as it is not licensed for re sale by any other entity.

Sincerely,

Fritz Leader
Chief Administrative Office
San Diego Supercomputer Center, UCSD

ORANGE COUNTY FIRE AUTHORITY
PROFESSIONAL SERVICES AGREEMENT

THIS AGREEMENT FOR PROFESSIONAL SERVICES ("Agreement") is made and entered into this 25th day of June, 2020 by and between the Orange County Fire Authority, a joint powers agency created pursuant to the California Joint Exercise of Powers Act (Gov't Code §§ 6500 *et seq.*) ("OCFA"), and _____, an individual ("Contractor"). OCFA and Contractor are sometimes individually referred to herein as a "Party" and collectively as the "Parties".

RECITALS

WHEREAS, OCFA requires the services of a qualified Contractor to provide Air Tactical Group Supervisor services in support of incident goals and objectives, hereinafter referred to as "Project"; and

WHEREAS, Contractor is fully qualified and certified to provide the necessary services for the Project and desires to provide such services; and

WHEREAS, OCFA desires to retain the services of Contractor for the Project.

NOW, THEREFORE, in consideration of the promises and mutual agreements contained herein, OCFA agrees to employ and does hereby retain Contractor and Contractor agrees to provide professional services as follows:

AGREEMENT

1. PROFESSIONAL SERVICES

1.1 Scope of Services

In compliance with all terms and conditions of this Agreement, Contractor shall provide those services specified in the Scope of Services, attached hereto as Exhibit "A", which includes by reference and by addendum any amendments, addendums, change orders, or modifications mutually agreed upon by the parties hereto ("Services" or "Work"). Contractor warrants that all Services shall be performed in a competent, professional and satisfactory manner in accordance with all standards prevalent in the same profession in the State of California. Contractor represents and warrants that he/she possesses a sufficient skill and experience to perform the Services. All Services shall be completed to the reasonable satisfaction of the OCFA. In the event of any inconsistency between the terms contained in the Scope of Services, and/or the terms set forth in the main body of this Agreement, the terms set forth in the main body of this Agreement and then the Scope of Services shall govern, in that order.

1.2 Compliance with Law

All Services rendered hereunder shall be provided in accordance with all laws, ordinances, resolutions, statutes, rules, and regulations of OCFA and any federal, state or local governmental agency of competent jurisdiction.

1.3 Licenses and Permits

Contractor shall obtain at its sole cost and expense such licenses, permits and approvals as may be required by law for the performance of the Services required by this Agreement.

1.4 Familiarity with Work

By executing this Agreement, Contractor warrants that he/she (a) has thoroughly investigated and considered the Work to be performed, (b) has carefully considered how the Work should be performed, and (c) fully understands the facilities, difficulties and restrictions attending performance of the Work under this Agreement.

1.5 Care of Work

Contractor shall adopt and follow reasonable procedures and methods during the term of the Agreement to prevent loss or damage to materials, papers or other components of the Work, and shall be responsible for all such damage until acceptance of the work by OCFA, except such loss or damages as may be caused by OCFA's own negligence.

1.6 Additional Services

Contractor shall perform services in addition to those specified in the Scope of Services when directed to do so in writing by the OCFA Purchasing Manager, provided that Contractor shall not be required to perform any additional services without compensation. Any additional compensation not exceeding fifteen percent (15%) of the agreement amount must be approved in writing by the OCFA Purchasing Manager. Any greater increase must be approved in writing by the Executive Committee of the OCFA Board of Directors.

2. TIME FOR COMPLETION

The time for completion of the Services to be performed by Contractor is an essential condition of this Agreement. Contractor shall prosecute regularly and diligently the Work of this Agreement according to the schedules set forth in the Scope of Services. Contractor shall not be accountable for delays in the progress of its Work caused by any condition beyond its control and without the fault or negligence of Contractor. Delays shall not entitle Contractor to any additional compensation regardless of the party responsible for the delay.

3. COMPENSATION OF CONTRACTOR

3.1 Compensation of Contractor

For the Services rendered pursuant to this Agreement, Contractor shall be compensated and reimbursed, in accordance with the pricing set forth in the Scope of Services (Exhibit "A") in an amount not to exceed Two Hundred Fifty Thousand Dollars ($250,000).

3.2 Method of Payment

In any month in which Contractor wishes to receive payment, he/she shall no later than the first working day of such month, submit to OCFA in the form approved by OCFA's Finance Manager, an invoice for Services rendered prior to the date of the invoice. OCFA shall pay Contractor for all expenses stated thereon which are approved by OCFA consistent with this Agreement, within thirty (30) days of receipt of Contractor's invoice.

3.3 Changes

In the event any change or changes in the work is requested by OCFA, the parties hereto shall execute an addendum to this Agreement, setting forth with particularity all terms of such addendum, including, but not limited to, any additional fees. Addenda may be entered into:

A. To provide for revisions or modifications to documents or other work product or work when documents or other work product or work is required by the enactment or revision of law subsequent to the preparation of any documents, other work product or work;

B. To provide for additional services not included in this Agreement or not customarily furnished in accordance with generally accepted practice in Contractor's profession.

3.4 Appropriations

This Agreement is subject to and contingent upon funds being appropriated therefore by the OCFA Board of Directors for each fiscal year covered by the Agreement. If such appropriations are not made, this Agreement shall automatically terminate without penalty to OCFA.

4. PERFORMANCE SCHEDULE

4.1 Time of Essence

Time is of the essence in the performance of this Agreement.

4.2 Schedule of Performance

All Services rendered pursuant to this Agreement shall be performed within the time periods prescribed in the Scope of Services (Exhibit "A"). The extension of any time period specified in Exhibit "A" must be approved in writing by the Contract Officer.

4.3 Force Majeure

The time for performance of Services to be rendered pursuant to this Agreement may be extended because of any delays due to unforeseeable causes beyond the control and without the fault or negligence of the Contractor, including, but not restricted to, acts of God or of a public enemy, acts of the government, fires, earthquakes, floods, epidemic, quarantine restrictions, riots, strikes, freight embargoes, and unusually severe weather if the Contractor shall within ten (10) days of the commencement of such condition notify the Contract Officer who shall thereupon ascertain the facts and the extent of any necessary delay, and extend the time for performing the Services for the period of the enforced delay when and if in the Contract Officer's judgment such delay is justified, and the Contract Officer's determination shall be final and conclusive upon the parties to this Agreement.

4.4 Term

This Agreement shall continue in full force and effect for one year (initial term) unless earlier terminated in accordance with Sections 8.5 or 8.6 of this Agreement. The contract may be renewed up to two (2) additional one-year terms upon mutual written agreement between OCFA and the Contractor.

5. COORDINATION OF WORK

5.1 [Reserved]

5.2 Contract Officer

The Primary Contract Officer shall be Phil Johnson, Division Chief – Emergency Command Center, and the Secondary Contract Officer shall be Brian Fennessy, Fire Chief, unless otherwise designated in writing by OCFA. It shall be the Contractor's responsibility to keep the Contract Officer fully informed of the progress of the performance of the Services and Contractor shall refer any decisions that must be made by OCFA to the Contract Officer. Unless otherwise specified herein, any approval of OCFA required hereunder shall mean the approval of the Contract Officer.

5.3 Prohibition Against Subcontracting or Assignment

5.3.1 No Subcontracting Without Prior Approval. The experience, knowledge, capability and reputation of the Contractor were a substantial

inducement for OCFA to enter into this Agreement. Therefore, Contractor shall not contract with any other individual or entity to perform in whole or in part the Services required hereunder.

5.4 Independent Contractor

5.4.1 The legal relationship between the Parties is that of an independent contractor, and nothing herein shall be deemed to make Contractor, an OCFA employee. During the performance of this Agreement, Contractor shall act in an independent capacity and shall not act as an OCFA officer or employee. Contractor will determine the means, methods and details of performing the Services subject to the requirements of this Agreement. Neither OCFA nor any of its officials, officers, employees, agents or volunteers shall have control over the conduct of Contractor, except as set forth in this Agreement. Contractor, shall not maintain a permanent office or fixed business location at OCFA's offices. OCFA shall not in any way or for any purpose be deemed to be a partner of Contractor in its business or otherwise a joint venturer or a member of any joint enterprise with Contractor.

5.4.2 Contractor shall not incur or have the power to incur any debt, obligation, or liability against OCFA, or bind OCFA in any manner.

5.4.3 No OCFA benefits shall be available to Contractor in connection with the performance of any Work or Services under this Agreement. Except for professional fees paid to Contractor as provided for in this Agreement, OCFA shall not pay salaries, wages, or other compensation to Contractor for the performance of any Work or Services under this Agreement. OCFA shall not be liable for compensation or indemnification to Contractor for injury or sickness arising out of performing any Work or Services hereunder.

5.6 Employee Retirement System Eligibility Indemnification

5.6.1 [Reserved]

5.6.2 Notwithstanding any other agency, state or federal policy, rule, regulation, law or ordinance to the contrary, Contractor shall not qualify for or become entitled to, and hereby agree to waive any claims to, any compensation, benefit, or any incident of employment by OCFA, including but not limited to eligibility to enroll in any employee retirement system as an employee of OCFA and entitlement to any contribution to be paid by OCFA for employer contribution and/or employee contributions for employee retirement system benefits.

6. INSURANCE AND INDEMNIFICATION

6.1 Compliance with Insurance Requirements. 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 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 meet all requirements herein.

6.2 Types of Insurance Required. Without limiting the indemnity provisions set forth in this Agreement, 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:

6.2.1 Professional Liability/Technology Errors and Omissions Insurance ("PLI"). Contractor shall obtain and maintain PLI insurance applicable to each licensed profession practiced by Contractor. Contractor shall maintain PLI insurance with per-claim and aggregate limits no lower than one million dollars ($1,000,000.00) each occurrence and two million dollars ($2,000,000.00) aggregate. Covered professional services shall specifically include all Services to be performed under the Agreement and the policy shall be endorsed to delete any exclusions that may exclude coverage for claims within the minimum PLI Limits for the Services to be performed under this Agreement.

6.2.1.1 The PLI policy shall be endorsed to delete any Contractual Liability Exclusion. The PLI shall include contractual liability coverage applicable to this Agreement. The policy must "pay on behalf of" the insured, and include a provision establishing the insurer's duty to defend the insured.

6.2.1.2 If the PLI policy of insurance is written on a "claims-made" basis, the policy shall be continued in full force and effect at all times during the term of this Agreement, and for a period of three (3) years from the date of the completion of all Services provided hereunder (the "PLI Coverage Period"). If any PLI policy is replaced, cancelled, non-renewed, discontinued, or otherwise terminated, or if the limits of a PLI policy are reduced or the available coverage depleted below the required minimum coverage amounts for any reason during the PLI Coverage Period, ATGS shall immediately obtain replacement PLI coverage meeting the requirements of this Section 6.2.1. Such replacement coverage shall satisfy all requirements herein, and shall include coverage for the prior acts or omissions of ATGS during the time period during which any Services were performed. The coverage shall be evidenced by either a new policy evidencing no gap in coverage, or by obtaining separate extended "tail" coverage with the present or new carrier or other insurance arrangements providing for complete coverage, either of which shall be subject to the written approval by the OCFA.

6.2.1.3 If the PLI policy is written on an "occurrence" basis, the policy shall be continued in full force and effect during the term of this Agreement, or until completion of the Services provided for in this Agreement, whichever is later. In the event of termination of the PLI policy during this period, new coverage shall immediately

be obtained, and written evidence of the policy shall be immediately provided to OCFA, to ensure PLI coverage during the entire course of performing the Services.

6.2.1.4 Contractor shall not perform any Services at any time during which required types or amounts of PLI insurance are not in effect, and OCFA shall have no obligation to pay Contractor for Services performed while required PLI insurance is not in effect.

6.2.2 Automobile Liability Insurance. Contractor shall maintain, in full force and effect throughout the term of this Agreement, a policy of personal Automobile liability insurance in compliance with all statutory requirements applicable in the State of California.

6.3 Acceptability of Insurers. Each insurance policy required by this section shall be issued by a licensed company authorized to transact business 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 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.

6.3.1 Contractor shall immediately replace any insurer whose A.M. Best rating drops below the levels specified herein with an insurer that meets the minimum requirements herein.

6.4 Specific Insurance Provisions and 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 on forms approved by the Contractor to add the following provisions to the insurance policies:

6.4.1 [Reserved]

6.4.2 Notice of Cancellation: Each policy of any type shall be endorsed to provide 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 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 by the insurer to OCFA shall be by not less than ten (10) days prior written notice. (A statement that notice will be provided "in accordance with the policy terms" or words to that effect is inadequate to meet the requirements of this Section).

6.4.2.1 Pre-Payment of Policy Premium. If for any reason an insurer declines to issue an endorsement certifying that it will notify OCFA in accordance with section 6.4.2, Contractor shall either obtain insurance from another insurer who will provide the required notice endorsement or shall provide evidence satisfactory to OCFA that the entire policy premium for the full term of that policy has been pre-paid such that the risk of non-payment of premiums during the term of the policy has been eliminated.

6.4.3 ACORD Forms Will Not Be Accepted in Lieu of Endorsements. By executing this Agreement, Contractor certifies that it has – prior to execution of this Agreement - confirmed that its insurance company will issue each of the endorsements required by this Agreement. Contractor also certifies that it understands that "ACORD" Certificate of Liability Insurance forms will not be accepted in lieu of required endorsements.

6.5 Deductibles and Self-Insured Retentions. Any deductible or self-insured retention must be approved in writing by the OCFA in advance. The decision whether to approve or withhold approval of a deductible or self-insured retention shall be made by the OCFA in the OCFA's sole and absolute discretion.

6.6 [Reserved]

6.7 Evidence of Coverage. Concurrently with the execution of the Agreement, Contractor shall deliver certificates of insurance together with original endorsements affecting each of the insurance policies required to be maintained by Contractor by this Section 6. 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.

6.7.1 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.

6.7.2 Authorized Signatures. The certificates of insurance and original endorsements for each insurance policy shall be signed by a person authorized by that insurer to bind coverage on its behalf.

6.7.3 Renewal/Replacement Policies. At least fifteen (15) days prior to the expiration of any policy required by this Agreement, 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 has

been provided through another insurance company or companies meeting all requirements of this Agreement.

6.8 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 losses of any type or amount.

6.9 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 Agreement imposes no additional obligation on the OCFA nor does it waive any rights hereunder.

6.10 [Reserved]

6.11 Other Insurance Requirements. The following terms and conditions shall apply to the insurance policies required of Contractor pursuant to this Agreement:

6.11.1 Contractor shall provide immediate written notice to OCFA if (1) any of the insurance policies required herein are terminated, cancelled, suspended, or non-renewed (2) the limits of any of the insurance coverages required herein are reduced; (3) any required insurance coverage is reduced below the required minimum limits through claims or otherwise, or (4) the deductible or self-insured retention is increased.

6.11.2 All insurance coverage and limits required under 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.

6.11.3 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.

6.11.4 Certificates of insurance will not be accepted in lieu of required endorsements, and submittal of certificates without required endorsements may delay the Project. It is Contractor's obligation to ensure timely compliance with all insurance submittal requirements as provided herein and Contractor agrees to reimburse

OCFA for any losses resulting from its failure to timely comply with the requirements of this Agreement.

6.11.5 [Reserved]

6.11.6 Contractor agrees to provide immediate written notice to OCFA of any claim, demand or loss arising out of the Services performed under this Agreement and for any other claim, demand or loss which may reduce the insurance available to an amount less than required by this Agreement.

7. RECORDS AND REPORTS

7.1 Reports

Contractor shall periodically prepare and submit to the Contract Officer such reports concerning the performance of the Services required by this Agreement as the Contract Officer shall require.

7.2 Records

Contractor shall keep such books and records as shall be necessary to properly perform the Services required by this Agreement and enable the Contract Officer to evaluate the performance of such Services. Except as provided in Section 7.5, the Contract Officer shall have full and free access to such books and records at all reasonable times, including the right to inspect, copy, audit and make records and transcripts from such records.

7.3 Ownership of Documents

Except as provided in Section 7.5, all drawings, specifications, reports, records, documents and other materials prepared by Contractor in the performance of this Agreement shall be the property of OCFA and shall be delivered to OCFA upon request of the Contract Officer or upon the termination of this Agreement, and Contractor shall have no claim for further employment or additional compensation as a result of the exercise by OCFA of its full rights or ownership of the documents and materials hereunder. Contractor may retain copies of such documents for its own use. Contractor shall have an unrestricted right to use the concepts embodied therein.

7.4 Release of Documents

All drawings, specifications, reports, records, documents and other materials prepared by Contractor in the performance of Services under this Agreement shall not be released publicly without the prior written approval of the Contract Officer.

7.5 Confidential Materials

Notwithstanding anything to the contrary in this Agreement, the Contractor shall be the sole owner of Contractor's work papers and of any other documents, data or information which are required to be maintained confidential from OCFA by one or more rules of professional conduct governing the Contractor's profession(s) (collectively, the "Confidential Materials"). Neither the OCFA nor the Contract Officer shall have access to the Confidential Materials except as may otherwise be required by order issued by a court of competent jurisdiction.

8. ENFORCEMENT OF AGREEMENT

8.1 California Law

This Agreement shall be construed and interpreted both as to validity and to performance of the parties in accordance with the laws of the State of California. Legal actions concerning any dispute, claim or matter arising out of or in relation to this Agreement shall be instituted in the Superior Court of the County of Orange, State of California, or any other appropriate court in such county, and Contractor covenants and agrees to submit to the personal jurisdiction of such court in the event of such action.

8.2 Waiver

No delay or omission in the exercise of any right or remedy of a non-defaulting party on any default shall impair such right or remedy or be construed as a waiver. No consent or approval of OCFA shall be deemed to waiver or render unnecessary OCFA's consent to or approval of any subsequent act of Contractor. Any waiver by either party of any default must be in writing and shall not be a waiver of any other default concerning the same or any other provision of this Agreement.

8.3 Rights and Remedies are Cumulative

Except with respect to rights and remedies expressly declared to be exclusive in this Agreement, the rights and remedies of the parties are cumulative and the exercise by either party of one or more of such rights or remedies shall not preclude the exercise by it, at the same or different times, of any other rights or remedies for the same default or any other default by the other party.

8.4 Legal Action

In addition to any other rights or remedies, either party may take legal action, in law or in equity, to cure, correct or remedy any default, to recover damages for any default, to compel specific performance of this Agreement, to obtain injunctive relief, a declaratory judgment, or any other remedy consistent with the purposes of this Agreement.

8.5 Termination Prior to Expiration of Term

OCFA reserves the right to terminate this Agreement at any time, with or without cause, upon thirty (30) days written notice to Contractor, except that where termination is due to the fault of the Contractor and constitutes an immediate danger to health, safety and general welfare, the period of notice shall be such shorter time as may be appropriate. Upon receipt of the notice of termination, Contractor shall immediately cease all Services hereunder except such as may be specifically approved by the Contract Officer. Contractor shall be entitled to compensation for all Services rendered prior to receipt of the notice of termination and for any Services authorized by the Contract Officer thereafter.

Contractor may terminate this Agreement, with or without cause, upon thirty (30) days written notice to OCFA.

8.6 Termination for Default of Contractor

[Reserved]

8.7 Attorneys' Fees

[Reserved]

9. OCFA OFFICERS AND EMPLOYEES; NON-DISCRIMINATION

9.1 Non-Liability of OCFA Officers and Employees

No officer or employee of OCFA shall be personally liable to the 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 the Contractor or its successor, or for breach of any obligation of the terms of this Agreement.

9.2 Covenant Against Discrimination

Contractor covenants that, by and for itself, its heirs, executors, assigns, and all persons claiming under or through them, that there shall be no discrimination or segregation in the performance of or in connection with this Agreement regarding any person or group of persons on account of race, color, creed, religion, sex, marital status, national origin, or ancestry.

10. MISCELLANEOUS PROVISIONS

10.1 Confidentiality

Information obtained by Contractor in the performance of this Agreement shall be treated as strictly confidential and shall not be used by Contractor for any purpose other than the performance of this Agreement without the written consent of OCFA.

10.2 Notice

Any notice, demand, request, consent, approval, or communication either party desires or is required to give to the other party or any other person shall be in writing and either served personally or sent by pre-paid, first-class mail to the address set forth below. Either party may change its address by notifying the other party of the change of address in writing. Notice shall be deemed communicated forty-eight (48) hours from the time of mailing if mailed as provided in this Section.

Orange County Fire Authority Attention: Sara Kennedy 1 Fire Authority Road Irvine, CA 92602	**WITH COPY TO**: David E. Kendig, General Counsel Woodruff, Spradlin & Smart 555 Anton Blvd. Suite 1200 Costa Mesa, CA 92626
To Contractor:	Name Attn: Address:

10.2 Integrated Agreement

This Agreement contains all of the agreements of the parties and cannot be amended or modified except by written agreement.

10.3 Amendment

This Agreement may be amended at any time by the mutual consent of the parties by an instrument in writing.

10.4 Severability

In the event that any one or more of the phrases, sentences, clauses, paragraphs, or sections contained in this Agreement shall be declared invalid or unenforceable by valid judgment or decree of a court of competent jurisdiction, such invalidity or unenforceability shall not affect any of the remaining phrases, sentences, clauses, paragraphs, or sections of this Agreement, which shall be interpreted to carry out the intent of the parties hereunder.

10.5 Corporate Authority

The persons executing this Agreement on behalf of the parties hereto warrant that they are duly authorized to execute this Agreement on behalf of said parties and that by so executing this Agreement the parties hereto are formally bound to the provisions of this Agreement.

[Signatures on Following Page]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the dates stated below.

"OCFA"

ORANGE COUNTY FIRE AUTHORITY

Date:_____ By:_____
Sara Kennedy, CPPB
Purchasing Manager

APPROVED AS TO FORM.

By:_____
David E. Kendig
General Counsel

Date:_____

ATTEST:

_____
Maria D. Huizar
Clerk of the Board

"CONTRACTOR"

NAME

Date:_____ By:_____
Name

EXHIBIT "A"
Scope of Services

A1. Air Tactical Group Supervisor (ATGS) Position

A1.1 Position Overview

A1.1.1 As described in the "Standards for Aerial Supervision", as published by the National Wildfire Coordinating Group, "The ATGS coordinates incident airspace and manages incident air traffic. The ATGS is an airborne firefighter who coordinates, assigns, and evaluates the use of aerial resources in support of incident objectives. The ATGS is the link between ground personnel and incident aircraft. The ATGS must collaborate with ground personnel to develop and implement tactical and logistical missions on an incident. The ATGS must be proactive in communicating current and expected fire and weather conditions. The ATGS must provide candid feedback regarding the effectiveness of aviation operations and overall progress toward meeting incident objectives. The ATGS must also work with dispatch staff to coordinate the ordering, assignment, and release of incident aircraft in accordance with the needs of fire management and incident command personnel.

A1.1.2 On Initial Attack (IA) incidents (Type 4 and 5), the ATGS will size up, prioritize, and coordinate the response of aerial and ground resources until a qualified Incident Commander (IC) arrives. On complex incidents (Type 1, 2, or 3), the ATGS will coordinate and prioritize the use of aircraft between several divisions or groups while maintaining communications with operations personnel and aircraft bases (fixed- or rotor-wing).

A1.1.3 In the Incident Command System (ICS), the ATGS works for the IC on initial attack and the Operations Section Chief (OSC), Air Operations Branch Director, or operational designee on extended attack. The ATGS supervises the Leadplane Pilot (LPIL), Aerial Supervision Module (ASM), and the Helicopter Coordinator (HLCO) positions when activated. The ATGS may operate from an airplane or helicopter.

A1.2 Position Requirements

At a minimum, ATGS must possess previously held fire chief officer status and possess and maintain wildland Incident Qualifications and Certification System (IQCS) qualifications for the position of Division Supervisor and/or Air Tactical Group Supervisor.

A.2 ATGS Responsibilities

A2.1 Incident Response

A2.1.1 The ATGS will respond as part of the aircrew with the aircraft to wildland and all-hazards incidents. The ATGS will perform the duties described above

and contained within the “Standards for Aerial Supervision”, as published by the National Wildfire Coordinating Group, in coordination with the Primary or Secondary Contract Officer and/or third parties providing air operations services, as directed by OCFA. The ATGS must be available at the site of the aircraft.

A2.1.2 The ATGS will provide wildland fire subject matter expertise for pre-attack, initial attack, and extended attack functions. Pre-attack services include evaluation of staffing, familiarization with maps, identification of potential cooperators, and other readiness activities.

A2.1.3 As delegated by OCFA, the ATGS will ensure day to day contract compliance on assigned aircraft and is responsible for communicating any discrepancies or recommendations to the Primary and/or Secondary Contract Officer.

A2.2 Communications

A2.2.1 As required by OCFA, the ATGS may serve as the primary point-of-contract (POC) with the OCFA Emergency Command Center for daily status and dispatching to initial attack response.

A2.2.2 The ATGS is responsible for developing and delivering pre and post incident briefings and After Action Reviews (AAR) for the air crews. Pre-incident briefings may include weather updates, incident status, pending orders, and other information as may be necessary to ensure all crew members required to deploy are able to.

A2.2.3 The ATGS is responsible for inter cockpit Crew Resource Management (CRM) with OCFA and third party provider crews, as applicable, for the purpose of fostering cohesive team function during the execution of incident objectives.

A2.3 Deliverables

The ATSG will assist with the development of Incident Awareness and Assessment (IAA) deliverables for fire incidents. Deliverables may include maps, files for the Geographic Information Systems section, and infrared video, which will be provided to the incident. The ATSG will ensure the deliverables meet the specifications of what is required by the incident.

A2.4 Training

As requested by OCFA, provide informal and formal National Wildfire Coordinating Group (NWCG) wildland fire instruction. Informal training will be delivered during the course of the daily shift. Formal, classroom-style training will be scheduled and delivered outside the standard shift schedule.

A2.5 Additional Services

As requested by OCFA, Contractor shall make presentations, attend meetings, and provide briefings on program-specific information. Contractor will also provide on-call availability for remote oversight of agreed-upon aviation platforms at no charge, as requested by OCFA and agreed upon by both parties.

A2.5 Schedules

A2.5.1 Daily Shift. The daily shift is twelve (12) hours, and will be coordinated through the Primary or Secondary Contract Officer.

A2.5.2 FIRIS 2.0. Contractor services will be utilized in the FIRIS 2.0 program, which operates from two locations. The operation located at the Joint Forces Training Base in Los Alamitos, California will provide twenty-four (24) hour availability. The operation located at McClellan Air Force Base in Mather, California will provide twelve (12) hour availability. The ATGS must be available on site at the designated military base, or other location as directed, for the duration of the daily shift.

A2.5.3 Staffing Coordination. The ATGS is responsible for coordinating all contract aircrew availability to ensure staffing is sufficient to meet the respective daily twelve (12) hour or twenty-four (24) hour availability requirements. The ATGS must communicate schedules and proposed changes to schedules to the Primary or Secondary Contract Officer.

A3. Compensation

A3.1 Daily Rate

A3.1.1 Standard Shift. The daily rate for the standard twelve (12) hour shift is $2,000 and includes, but is not limited to, all staffing coordination activities, ATGS duties, informal training provided during the shift, formal training, and full day support for additional services as requested by OCFA. Contractor is responsible for travel to and from the work location, food, and lodging. Hours worked totaling less than the daily rate will be compensated at one twelfth (1/12) the daily rate at one hundred sixty-six dollars ($166) per hour.

A3.1.2 Holdover. In the event that holdover beyond the standard shift is required due to incident activity, services provided in excess of twelve (12) hours on reimbursable incidents will be charged at one hundred sixty-six dollars ($166) per hour. There will be no charge for services provided in excess of twelve (12) hours on non-reimbursable incidents.

A3.1.3 Additional Services. The rate for additional services including, but not limited to, remote oversight of aviation platforms, and attendance at

meetings, presentations, and other similar events will be charged at one hundred sixty-six dollars ($166) per hour.

A3.1.4 Travel Policy. Travel related to the provision of additional services must be approved in advance by OCFA. All approved travel-related expenses will be reimbursed and must be documented on the ATGS Expense Form. The ATGS Form must be submitted to OCFA and be accompanied by itemized receipts for lodging, transportation, and meals. Meals will be reimbursed in the amount of fifteen dollars for breakfast, fifteen dollars for lunch, and thirty-five dollars for dinner with a maximum reimbursement of sixty-five dollars per day. Reimbursement for purchases of alcohol is prohibited.

A3.1.5 ATGS Expense Form. A sample of the ATGS form follows below:

TRAVEL EXPENSE CLAIM REPORT

1 Fire Authority Road Irvine, CA 92602
(714) 573-6012

Please e-mail this form and receipts to Robert Cortez. **Email:** Robertcortez@ocfa.org

Required fields are in blue. Other data entry cells are in yellow.

Date:

Name:

Purpose:

Mailing Address:

Travel Dates:

All itemized receipts are to be provided with travel expense forms.

1. Transportation:	Trans Exp.
Airline: (Attach booking itinerary with cost)	
Airport Parking Fee:	
Taxi, Uber, Lyft: (Attach receipt)	
Rental vehicle: (Attach receipt)	
Transportation Total	-

2. Lodging: *Provide detailed receipts*	Lodging Exp.
Lodging Total	-

3. Food/Meals: *Provide detailed receipts*				Meals Exp.
Date	Breakfast ($15 max)	Lunch ($15 max)	Dinner ($35 max)	(Max $65.00/day)
				-
				-
				-
				-
				-
			Meals Total	-
4. Miscellaneous/Registrations/etc *Provide detailed receipts*				
			Misc. Total	-
			Total Expenses	-

Explanatory Notes

I certify the above were all actual and necessary expenses to attend and participate in this meeting.

Submitted by: (Travelers name & signature)

Approved by: (Signature)/Date:

Robert Cortez, Assistant Chief, Business Services

ORANGE COUNTY FIRE AUTHORITY
PROFESSIONAL SERVICES AGREEMENT

THIS AGREEMENT FOR PROFESSIONAL SERVICES ("Agreement") is made and entered into this 25th day of June, 2020 by and between the Orange County Fire Authority, a public agency, hereinafter referred to as "OCFA", and Intterra, hereinafter referred to as "Firm". OCFA and Firm are sometimes individually referred to herein as a "Party" and collectively as the "Parties".

RECITALS

WHEREAS, OCFA requires the services of a qualified firm to provide services for the Fire Integrated Real-time Intelligence System (FIRIS) 2.0 Program, hereinafter referred to as "Project"; and

WHEREAS, Firm has submitted to OCFA a proposal dated June 18, 2020, a copy of which is attached hereto as Exhibit "A" and is incorporated herein by this reference ("Proposal"); and

WHEREAS, based on its experience and reputation, Firm is qualified to provide the necessary services for the Project and desires to provide such services; and

WHEREAS, OCFA desires to retain the services of Firm for the Project.

NOW, THEREFORE, in consideration of the promises and mutual agreements contained herein, OCFA agrees to employ and does hereby employ Firm and Firm agrees to provide professional services as follows:

AGREEMENT

1. PROFESSIONAL SERVICES

1.1 Scope of Services

In compliance with all terms and conditions of this Agreement, Firm shall provide those services specified in Firm's Proposal attached hereto as Exhibit "A." The Scope of Services includes by reference and by addendum: (1) Firm's Proposal, and (2) any Supplements, amendments, addendums, change orders, or modifications mutually agreed upon by the parties hereto ("Services" or "Work"). Firm warrants that all Services shall be performed in a competent, professional and satisfactory manner in accordance with all standards prevalent in the same profession in the State of California. Firm represents and warrants that it and all employees, subconsultants and subcontractors providing any Services pursuant to this Agreement shall have a sufficient skill and experience to perform the Services. All Services shall be completed to the reasonable satisfaction of the OCFA. In the event of any inconsistency between the terms contained

in the Firm's Proposal and/or the terms set forth in the main body of this Agreement, the terms set forth in the main body of this Agreement and then the Firm's Proposal shall govern, in that order.

1.2 Compliance with Law

All Services rendered hereunder shall be provided in accordance with all laws, ordinances, resolutions, statutes, rules, and regulations of OCFA and any federal, state or local governmental agency of competent jurisdiction.

1.3 Licenses and Permits

Firm shall obtain at its sole cost and expense such licenses, permits and approvals as may be required by law for the performance of the Services required by this Agreement.

1.4 Familiarity with Work

By executing this Agreement, Firm warrants that Firm (a) has thoroughly investigated and considered the Work to be performed, (b) has investigated the site of the Work and become fully acquainted with the conditions there existing, (c) has carefully considered how the Work should be performed, and (d) fully understands the facilities, difficulties and restrictions attending performance of the Work under this Agreement. Should the Firm discover any latent or unknown conditions materially differing from those inherent in the Work or as represented by OCFA, Firm shall immediately inform OCFA of such fact and shall not proceed with any Work except at Firm's risk until written instructions are received from the Contract Officer.

1.5 Care of Work

Firm shall adopt and follow reasonable procedures and methods during the term of the Agreement to prevent loss or damage to materials, papers or other components of the work, and shall be responsible for all such damage until acceptance of the work by OCFA, except such loss or damages as may be caused by OCFA's own negligence.

1.6 Additional Services

Firm shall perform services in addition to those specified in the Scope of Services when directed to do so in writing by the OCFA Purchasing Manager, provided that Firm shall not be required to perform any additional services without compensation. Any additional compensation not exceeding fifteen percent (15%) of the agreement amount must be approved in writing by the OCFA Purchasing Manager. Any greater increase must be approved in writing by the Executive Committee of the OCFA Board of Directors.

2. TIME FOR COMPLETION

The time for completion of the Services to be performed by Firm is an essential condition of this Agreement. Firm shall prosecute regularly and diligently the work of this Agreement according to the schedules set forth in Firm's proposal. Firm shall not be accountable for delays in the progress of its work caused by any condition beyond its control and without the fault or negligence of Firm. Delays shall not entitle Firm to any additional compensation regardless of the party responsible for the delay.

3. COMPENSATION OF FIRM

3.1 Compensation of Firm

For the Services rendered pursuant to this Agreement, Firm shall be compensated and reimbursed, in accordance with the pricing set forth in Exhibit "A," in an amount not to exceed Eight Hundred Thousand Dollars ($800,000).

3.2 Method of Payment

In any month in which Firm wishes to receive payment, Firm shall no later than the first working day of such month, submit to OCFA in the form approved by OCFA's Director of Finance, an invoice for Services rendered prior to the date of the invoice. OCFA shall pay Firm for all expenses stated thereon which are approved by OCFA consistent with this Agreement, within thirty (30) days of receipt of Firm's invoice.

3.3 Changes

In the event any change or changes in the work is requested by OCFA, the parties hereto shall execute an addendum to this Agreement, setting forth with particularity all terms of such addendum, including, but not limited to, any additional fees. Addenda may be entered into:

A. To provide for revisions or modifications to documents or other work product or work when documents or other work product or work is required by the enactment or revision of law subsequent to the preparation of any documents, other work product or work;

B. To provide for additional services not included in this Agreement or not customarily furnished in accordance with generally accepted practice in Firm's profession.

3.4 Appropriations

This Agreement is subject to and contingent upon funds being appropriated therefore by the OCFA Board of Directors for each fiscal year covered by the Agreement. If such appropriations are not made, this Agreement shall automatically terminate without penalty to OCFA.

4. PERFORMANCE SCHEDULE

4.1 Time of Essence

Time is of the essence in the performance of this Agreement.

4.2 Schedule of Performance

All Services rendered pursuant to this Agreement shall be performed within the time periods prescribed in Firm's Proposal, attached hereto as Exhibit "A". The extension of any time period specified in Exhibit "A" must be approved in writing by the Contract Officer.

4.3 Force Majeure

The time for performance of Services to be rendered pursuant to this Agreement may be extended because of any delays due to unforeseeable causes beyond the control and without the fault or negligence of the Firm, including, but not restricted to, acts of God or of a public enemy, acts of the government, fires, earthquakes, floods, epidemic, quarantine restrictions, riots, strikes, freight embargoes, and unusually severe weather if the Firm shall within ten (10) days of the commencement of such condition notify the Contract Officer who shall thereupon ascertain the facts and the extent of any necessary delay, and extend the time for performing the Services for the period of the enforced delay when and if in the Contract Officer's judgment such delay is justified, and the Contract Officer's determination shall be final and conclusive upon the parties to this Agreement.

4.4 Term

This Agreement shall continue in full force and effect for one year (initial term) unless earlier terminated in accordance with Sections 8.5 or 8.6 of this Agreement. The contract may be renewed up to two (2) additional one-year terms upon mutual written agreement between OCFA and the Firm.

5. COORDINATION OF WORK

5.1 Representative of Firm

The following principal of the Firm is hereby designated as being the principal and representative of Firm authorized to act in its behalf with respect to the work specified herein and make all decisions in connection therewith: **Brian Collins**

It is expressly understood that the experience, knowledge, capability and reputation of the foregoing principal is a substantial inducement for OCFA to enter into this Agreement. Therefore, the foregoing principal shall be responsible during the term of this Agreement for directing all activities of Firm and devoting sufficient time to personally supervise the Services hereunder. The foregoing principal may not be changed by Firm without the express written approval of OCFA.

5.2 Contract Officer

The Primary Contract Officer shall be Phil Johnson, Division Chief – Emergency Command Center, and the Secondary Contract Officer shall be Brian Fennessy, Fire Chief, unless otherwise designated in writing by OCFA. It shall be the Firm's responsibility to keep the Contract Officer fully informed of the progress of the performance of the Services and Firm shall refer any decisions that must be made by OCFA to the Contract Officer. Unless otherwise specified herein, any approval of OCFA required hereunder shall mean the approval of the Contract Officer.

5.3 Prohibition Against Subcontracting or Assignment

5.3.1 No Subcontracting Without Prior Approval. The experience, knowledge, capability and reputation of Firm, its principals and employees, and the Firm Representative were a substantial inducement for OCFA to enter into this Agreement. Therefore, Firm shall not contract with any other entity to perform in whole or in part the Services required hereunder without the express written approval of OCFA.

5.3.2 Provisions in the Event Subcontractor(s) Are Authorized. If Firm is authorized to subcontract any part of the Services as provided in Section 5.3.1, Firm shall be responsible to OCFA for the acts and omissions of its subcontractor(s) and subconsultant(s) in the same manner as it is for persons directly employed. For purposes of this Agreement, all persons engaged in the performance of Services will be considered employees of Firm. OCFA will deal directly with and will make all payments to Firm. Nothing contained in this Agreement shall create any contractual relationships between any subcontractor and OCFA. Firm shall ensure that all subcontractor insurance requirements set forth in Section 6 below (including its subsections) are complied with prior to commencement of Services by each subcontractor.

5.3.2.1 Withholding Payment for Non-Authorized Subcontractors. OCFA shall have the right to withhold payment from Firm for Services performed by any subcontractor or subconsultant performing Services but not authorized in writing by OCFA, or regarding which the insurance or other requirements under this Agreement have not been satisfied.

5.3.3 Assignments. Neither this Agreement nor any interest herein may be assigned, transferred, conveyed, hypothecated, or encumbered voluntarily or by operation of law, whether for the benefit of creditors or otherwise, without the prior written approval of OCFA. Transfers restricted hereunder shall include the transfer to any person or group of persons acting in concert of more than twenty five percent (25%) of the present ownership and/or control of Firm, taking all transfers into account on a cumulative basis. In the event of any such unapproved transfer, including any bankruptcy proceeding, this Agreement shall be void. No approved transfer shall release Firm or any surety of Firm from any liability hereunder without the express written consent of OCFA.

5.4 Independent Contractor

5.4.1 The legal relationship between the Parties is that of an independent contractor, and nothing herein shall be deemed to make Contractor, or any of its personnel, an OCFA employee. During the performance of this Agreement, Firm and its officers, employees, and agents shall act in an independent capacity and shall not act as OCFA officers or employees. Firm will determine the means, methods and details of performing the Services subject to the requirements of this Agreement. The personnel performing the Services under this Agreement on behalf of Firm shall at all times be under Firm's exclusive direction and control. Neither OCFA nor any of its officials, officers, employees, agents or volunteers shall have control over the conduct of Firm or any of its officers, employees, or agents, except as set forth in this Agreement. Firm, its officers, employees or agents, shall not maintain a permanent office or fixed business location at OCFA's offices. OCFA shall have no voice in the selection, discharge, supervision, or control of Firm's officers, employees, representatives or agents or in fixing their number, compensation, or hours of service. Firm shall pay all wages, salaries, and other amounts due its employees in connection with the performance of Services under this Agreement and shall be responsible for all reports and obligations respecting them, including but not limited to social security income tax withholding, unemployment compensation, workers' compensation, and other similar matters. OCFA shall not in any way or for any purpose be deemed to be a partner of Firm in its business or otherwise a joint venturer or a member of any joint enterprise with Firm.

5.4.2 Firm shall not incur or have the power to incur any debt, obligation, or liability against OCFA, or bind OCFA in any manner.

5.4.3 No OCFA benefits shall be available to Firm, its officers, employees, or agents, in connection with the performance of any Work or Services under this Agreement. Except for professional fees paid to Firm as provided for in this

Agreement, OCFA shall not pay salaries, wages, or other compensation to Firm for the performance of any Work or Services under this Agreement. OCFA shall not be liable for compensation or indemnification to Firm, its officers, employees, or agents, for injury or sickness arising out of performing any Work or Services hereunder. If for any reason any court or governmental agency determines that the OCFA has financial obligations, other than pursuant to Section 2 herein, of any nature relating to salary, taxes, or benefits of Firm's officers, employees, representatives, agents, or subconsultants or subcontractors, Firm shall defend, indemnify, and hold harmless OCFA from and against all such financial obligations.

5.6 Employee Retirement System Eligibility Indemnification

5.6.1 In the event that Firm or any employee, agent, or subcontractor of Firm providing any Work or Services under this Agreement claims or is determined by a court of competent jurisdiction to be eligible for enrollment in an employee retirement system as an employee of the OCFA, Firm shall indemnify, defend, and hold harmless OCFA against: (1) all such claim(s) and determination(s); (2) for the payment of any employee and/or employer contributions for employee retirement system benefits on behalf of Firm or its employees, agents or subcontractors; and (3) the payment of any penalties and interest on such contributions which would otherwise be the responsibility of the OCFA.

5.6.2 Notwithstanding any other agency, state or federal policy, rule, regulation, law or ordinance to the contrary, Contractor and any of its employees, agents, and subcontractors providing any Work or Services under this Agreement shall not qualify for or become entitled to, and hereby agree to waive any claims to, any compensation, benefit, or any incident of employment by OCFA, including but not limited to eligibility to enroll in PERS as an employee of OCFA and entitlement to any contribution to be paid by OCFA for employer contribution and/or employee contributions for PERS benefits.

6. INSURANCE AND INDEMNIFICATION

6.1 Compliance with Insurance Requirements. Firm 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. Firm shall not commence any 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 Firm's existing insurance policies do not meet the insurance requirements set forth herein, Firm agrees to amend, supplement or endorse the policies to meet all requirements herein.

6.2 Types of Insurance Required. Without limiting the indemnity provisions set forth in this Agreement, Firm shall obtain and maintain in full force and effect during the term of this Agreement, including any extension thereof, the following policies of insurance:

6.2.1 Professional Liability/Technology Errors and Omissions Insurance ("PLI"). Firm shall obtain and maintain PLI insurance applicable to each licensed profession practiced by Firm. Firm shall maintain PLI insurance with per-claim and aggregate limits no lower than one million dollars ($1,000,000.00) each occurrence and two million dollars ($2,000,000.00) aggregate. Covered professional services shall specifically include all Services to be performed under the Agreement and the policy shall be endorsed to delete any exclusions that may exclude coverage for claims within the minimum PLI Limits for the Services to be performed under this Agreement.

6.2.1.1 The PLI policy shall be endorsed to delete any Contractual Liability Exclusion. The PLI shall include contractual liability coverage applicable to this Agreement. The policy must “pay on behalf of” the insured, and include a provision establishing the insurer’s duty to defend the insured.

6.2.1.2 If the PLI policy of insurance is written on a “claims-made” basis, the policy shall be continued in full force and effect at all times during the term of this Agreement, and for a period of three (3) years from the date of the completion of all Services provided hereunder (the "PLI Coverage Period"). If any PLI policy is replaced, cancelled, non-renewed, discontinued, or otherwise terminated, or if the limits of a PLI policy are reduced or the available coverage depleted below the required minimum coverage amounts for any reason during the PLI Coverage Period, Firm shall immediately obtain replacement PLI coverage meeting the requirements of this Section 6.2.1. Such replacement coverage shall satisfy all requirements herein, and shall include coverage for the prior acts or omissions of Firm during the time period during which any Services were performed. The coverage shall be evidenced by either a new policy evidencing no gap in coverage, or by obtaining separate extended “tail” coverage with the present or new carrier or other insurance arrangements providing for complete coverage, either of which shall be subject to the written approval by the OCFA.

6.2.1.3 If the PLI policy is written on an “occurrence” basis, the policy shall be continued in full force and effect during the term of this Agreement, or until completion of the Services provided for in this Agreement, whichever is later. In the event of termination of the PLI policy during this period, new coverage shall immediately be obtained, and written evidence of the policy shall be immediately provided to OCFA, to ensure PLI coverage during the entire course of performing the Services.

6.2.1.4 Firm shall not perform any Services at any time during which required types or amounts of PLI insurance are not in effect, and OCFA shall have no obligation to pay Firm for Services performed while required PLI insurance is not in effect.

6.2.2 Commercial General Liability Insurance. Firm shall obtain and maintain, in full force and effect throughout the term of this Agreement, Insurance Services Office (ISO) Form CG 00 01 covering CGL on an “occurrence” basis, including property damage, bodily injury and personal & advertising injury with limits no less than

one million dollars ($1,000,000.00) per occurrence and two million dollars ($2,000,000.00) aggregate. If a general aggregate limit applies, the general aggregate limit shall be no less than two million dollars ($2,000,000.00). Coverage for products and completed operations is required with limits no less than two million dollars ($2,000,000.00 aggregate. CGL insurance shall be provided on an occurrence-based coverage form; a "claims made" CGL policy is not acceptable. Firm shall maintain CGL insurance with per-claim, aggregate and products and operations completed limits no lower than the minimum CGL coverage limits set forth above. Defense costs shall be paid in addition to the limits. The policy shall contain no endorsements or provisions limiting coverage for any of the following: (1) contractual liability; (2) cross liability exclusion for claims or suits by one insured against another; or (3) any other exclusion contrary to this Agreement.

6.2.3 Automobile Liability Insurance. Firm shall obtain and maintain, in full force and effect throughout the term of this Agreement, a policy of Automobile liability insurance 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, disease and property damage. Defense costs shall be paid in addition to the policy limits. The policy shall specifically include coverage for owned, non-owned, leased, and hired automobiles, and be endorsed to eliminate any exclusion applicable to any of them.

6.2.4 Workers' Compensation Insurance. Firm shall obtain and maintain, in full force and effect throughout the term of this Agreement, a policy of Workers' Compensation Insurance with limits no less than one million dollars ($1,000,000.00), and in compliance with all other statutory requirements applicable in the State of California. Firm hereby waives on its own behalf, and shall obtain an endorsement from its workers' compensation insurer waiving on the insurance company's behalf, all rights of subrogation against the OCFA, its board members, officials, officers, employees, agents and volunteers.

6.2.4.1 If subconsultants or subcontractors are used, Firm shall require each of its subconsultants and subcontractors, if any, to waive all rights of subrogation, and to obtain endorsements from the subconsultants'/subcontractors' workers' compensation insurers waiving all rights of subrogation, against the OCFA, its board members, officials, officers, employees, agents and volunteers.

6.2.4.2 Firm and each of its subconsultants and subcontractors shall also maintain, in full force and effect throughout the term of this Agreement, Employer's Liability Insurance with limits of at least one million dollars ($1,000,000.00) per injury or illness.

6.3 Acceptability of Insurers. Each insurance policy required by this section shall be issued by a licensed company authorized to transact business 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 Services to be performed under this Agreement creates an increased or decreased risk of loss to the OCFA, the Firm agrees that the minimum limits of the insurance policies may be changed accordingly upon receipt of written notice from the OCFA.

6.3.1 Firm shall immediately replace any insurer whose A.M. Best rating drops below the levels specified herein with an insurer that meets the minimum requirements herein.

6.4 Specific Insurance Provisions and 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 Firm shall provide endorsements on forms approved by the OCFA to add the following provisions to the insurance policies:

6.4.1 CGL and Auto Liability Endorsements. The policy or policies of insurance required by this Agreement for CGL and Automobile Liability Insurance shall be endorsed as follows:

6.4.1.1 Additional Insured: The OCFA, its board members, officials, officers, employees, agents and volunteers, shall be additional insureds; and

6.4.1.1.1 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 Firm, (4) contain any other exclusions contrary to the Agreement; or (5) contain special limitations on the scope of protection afforded to additional insureds.

6.4.1.2 Primary, Non-Contributing. Each CGL and Auto Liability insurance policy shall be endorsed to be primary and any other insurance, deductible, or self-insurance maintained by the OCFA, its board members, officials, officers, employees, agents or volunteers, shall not contribute with the primary insurance.

6.4.2 Notice of Cancellation: Each policy of any type shall be endorsed to provide 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 has been provided to the OCFA. Notwithstanding the foregoing, if coverage is to be suspended, voided, or cancelled because of Firm's failure to pay the insurance premium, the notice provided by the insurer to OCFA shall be by not less than ten (10) days prior written notice. (A statement that notice will be provided "in accordance with the policy terms" or words to that effect is inadequate to meet the requirements of this Section).

6.4.2.1 Pre-Payment of Policy Premium. If for any reason an insurer declines to issue an endorsement certifying that it will notify OCFA in accordance with section 6.4.2, Firm shall either obtain insurance from another insurer who will provide the required notice endorsement or shall provide evidence satisfactory to OCFA that the entire policy premium for the full term of that policy has been pre-paid such that the risk of non-payment of premiums during the term of the policy has been eliminated.

6.4.3 ACORD Forms Will Not Be Accepted in Lieu of Endorsements. By executing this Agreement, Firm certifies that it has – prior to execution of this Agreement - confirmed that its insurance company will issue each of the endorsements required by this Agreement. Firm also certifies that it understands that "ACORD" Certificate of Liability Insurance forms will not be accepted in lieu of required endorsements.

6.5 Deductibles and Self-Insured Retentions. Any deductible or self-insured retention must be approved in writing by the OCFA in advance. The decision whether to approve or withhold approval of a deductible or self-insured retention shall be made by the OCFA in the OCFA's sole and absolute discretion. (Firm may request pre-approval from OCFA of a deductible or self-insured retention prior to submitting Firm's Proposal).

6.6 Waiver of Subrogation. All policies of Commercial General Liability and Automobile Liability Insurance shall contain or be endorsed to waive subrogation against the OCFA, its officials, officers, employees, agents and volunteers, or shall specifically allow Firm 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. Firm hereby agrees to waive its own right of subrogation against the OCFA, its officials, officers, employees, agents and volunteers.

6.6.1 Waivers of Subrogation: Subconsultants and Subcontractors. If OCFA approves the use of subconsultants or subcontractors for the performance of any portion of the Services, then Firm shall obtain from each subconsultant and subcontractor, and make available to OCFA upon request, written express waivers by each subconsultant and subcontractor of the right of subrogation against the OCFA, its officials, officers, employees, agents and volunteers, and policy endorsements of each of its subconsultants' and subcontractors' insurance policies waiving any rights of subrogation against the OCFA, its officials, officers, employees, agents and volunteers insurer. All such waivers and endorsements shall be obtained prior to commencement of any Services by each subconsultant or subcontractor.

6.7 Evidence of Coverage. Concurrently with the execution of the Agreement, Firm shall deliver certificates of insurance together with original endorsements affecting each of the insurance policies required to be maintained by Firm by this Section 5. Firm 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.

6.7.1 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.

6.7.2 Authorized Signatures. The certificates of insurance and original endorsements for each insurance policy shall be signed by a person authorized by that insurer to bind coverage on its behalf.

6.7.3 Renewal/Replacement Policies. At least fifteen (15) days prior to the expiration of any policy required by this Agreement, 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, Firm 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 has been provided through another insurance company or companies meeting all requirements of this Agreement.

6.8 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. The insurance obligations under this Agreement shall be: (1) all the insurance coverage and/or limits carried by or available to Firm; or (2) the minimum insurance coverage requirements and/or limits shown in this Agreement; whichever is greater. Any insurance proceeds in excess of or broader than the minimum required coverage and/or minimum required limits, which are applicable to a given loss, shall be available to the OCFA. No representation is made that the minimum insurance requirements of this Agreement are sufficient to cover the obligations of Firm under this Agreement. Nothing in this section shall be construed as limiting in any way the indemnification provision contained in this Agreement, or the extent to which Consultant may be held responsible for losses of any type or amount.

6.9 Enforcement of Agreement (Non-Estoppel). Firm acknowledges and agrees that actual or alleged failure on the part of the OCFA to inform Firm of any non-compliance with any of the insurance requirements set forth in this Agreement imposes no additional obligation on the OCFA nor does it waive any rights hereunder.

6.10 Insurance for Subconsultants. If OCFA approves the use of subconsultants or subcontractors for the performance of any portion of the Services, then Firm shall be responsible for causing each approved subconsultant and subcontractor to procure and maintain insurance in the same types and amounts required for Firm, and in full compliance with the insurance requirements set forth in this Agreement, except as otherwise authorized in writing by the Contract Manager.

6.10.1 Delivery of Evidence of Subcontractor Insurance. Upon request of OCFA, Firm shall deliver to OCFA all certificates of insurance and endorsements required from subcontractors and subconsultants. (Note: Firm's duty to obtain all required insurance for subcontractors and subconsultants required under this Agreement applies whether or not OCFA requests delivery of evidence of such coverage.)

6.11 Other Insurance Requirements. The following terms and conditions shall apply to the insurance policies required of Firm and its subconsultants and subcontractors, if any, pursuant to this Agreement:

6.11.1 Firm shall provide immediate written notice to OCFA if (1) any of the insurance policies required herein are terminated, cancelled, suspended, or non-renewed (2) the limits of any of the insurance coverages required herein are reduced; (3) any required insurance coverage is reduced below the required minimum limits through claims or otherwise, or (4) the deductible or self-insured retention is increased.

6.11.2 All insurance coverage and limits required under 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.

6.11.3 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.

6.11.4 Certificates of insurance will not be accepted in lieu of required endorsements, and submittal of certificates without required endorsements may delay the Project. It is Firm’s obligation to ensure timely compliance with all insurance submittal requirements as provided herein and Firm agrees to reimburse OCFA for any losses resulting from its failure, or its subconsultants' or subcontractors' failure, to timely comply with the requirements of this Agreement.

6.11.5 Firm agrees to ensure that subconsultants and subcontractors, if any, and any other parties involved with the Project who are brought onto or involved in the Project by Firm, provide the same minimum insurance coverage required of Firm. Firm 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. Firm agrees that upon request, all agreements with, and evidence of insurance from, subconsultants and subcontractors and others engaged in performing any Services will be submitted to the OCFA for review.

6.11.6 Firm agrees to provide immediate written notice to OCFA of any claim, demand or loss arising out of the Services performed under this Agreement and for any other claim, demand or loss which may reduce the insurance available to an amount less than required by this Agreement.

6.12 Indemnification.

To the fullest extent permitted by law, Firm shall defend (at Firm's sole cost and expense with legal counsel reasonably acceptable to OCFA), indemnify and hold the OCFA, its board members, officials, officers, employees, agents and volunteers, free and harmless from any and all claims, demands, orders, causes of action, costs, expenses, liabilities, losses, penalties, judgments, arbitration awards, settlements, damages or injuries of any kind, in law or in equity, including but not limited to property or persons, including wrongful death, (collectively "Claims") in any manner arising out of, pertaining to, related to, or incident to any alleged acts, errors or omissions, or willful misconduct of Firm, its officers, directors, employees, subconsultants, subcontractors, agents or invitees in connection with performance under this Agreement, or in any manner arising out of, pertaining to, related to, or incident to an alleged breach of this Agreement, including without limitation the payment of all consequential damages, expert witness fees and attorneys' fees and other related costs and expenses.

Notwithstanding the foregoing, and only to the extent that the Services performed by Firm are subject to California Civil Code Section 2782.8, the above indemnity shall be limited, to the extent required by Civil Code Section 2782.8, to claims that arise out of, pertain to, or relate to the negligence, recklessness, or willful misconduct of the Firm.

Under no circumstances shall the insurance requirements and limits set forth in this Agreement be construed to limit Firm's indemnification obligation or other liability hereunder. Notwithstanding the foregoing, such obligation to defend, hold harmless and indemnify the OCFA, its board members officials, officers, employees, agents and volunteers, shall not apply to the extent that such Claims are caused by the sole negligence or willful misconduct of that indemnified party.

7. RECORDS AND REPORTS

7.1 Reports

Firm shall periodically prepare and submit to the Contract Officer such reports concerning the performance of the Services required by this Agreement as the Contract Officer shall require.

7.2 Records

Firm shall keep such books and records as shall be necessary to properly perform the Services required by this Agreement and enable the Contract Officer to

evaluate the performance of such Services. Except as provided in Section 7.5, the Contract Officer shall have full and free access to such books and records at all reasonable times, including the right to inspect, copy, audit and make records and transcripts from such records.

7.3 Ownership of Documents

Except as provided in Section 7.5, all drawings, specifications, reports, records, documents and other materials prepared by Firm in the performance of this Agreement shall be the property of OCFA and shall be delivered to OCFA upon request of the Contract Officer or upon the termination of this Agreement, and Firm shall have no claim for further employment or additional compensation as a result of the exercise by OCFA of its full rights or ownership of the documents and materials hereunder. Firm may retain copies of such documents for its own use. Firm shall have an unrestricted right to use the concepts embodied therein.

7.4 Release of Documents

All drawings, specifications, reports, records, documents and other materials prepared by Firm in the performance of Services under this Agreement shall not be released publicly without the prior written approval of the Contract Officer.

7.5 Confidential Materials

Notwithstanding anything to the contrary in this Agreement, the Firm shall be the sole owner of Firm's work papers and of any other documents, data or information which are required to be maintained confidential from OCFA by one or more rules of professional conduct governing the Firm's profession(s) (collectively, the "Confidential Materials"). Neither the OCFA nor the Contract Officer shall have access to the Confidential Materials except as may otherwise be required by order issued by a court of competent jurisdiction.

8. ENFORCEMENT OF AGREEMENT

8.1 California Law

This Agreement shall be construed and interpreted both as to validity and to performance of the parties in accordance with the laws of the State of California. Legal actions concerning any dispute, claim or matter arising out of or in relation to this Agreement shall be instituted in the Superior Court of the County of Orange, State of California, or any other appropriate court in such county, and Firm covenants and agrees to submit to the personal jurisdiction of such court in the event of such action.

8.2 Waiver

No delay or omission in the exercise of any right or remedy of a non-defaulting party on any default shall impair such right or remedy or be construed as a waiver. No consent or approval of OCFA shall be deemed to waiver or render unnecessary OCFA's consent to or approval of any subsequent act of Firm. Any waiver by either party of any default must be in writing and shall not be a waiver of any other default concerning the same or any other provision of this Agreement.

8.3 Rights and Remedies are Cumulative

Except with respect to rights and remedies expressly declared to be exclusive in this Agreement, the rights and remedies of the parties are cumulative and the exercise by either party of one or more of such rights or remedies shall not preclude the exercise by it, at the same or different times, of any other rights or remedies for the same default or any other default by the other party.

8.4 Legal Action

In addition to any other rights or remedies, either party may take legal action, in law or in equity, to cure, correct or remedy any default, to recover damages for any default, to compel specific performance of this Agreement, to obtain injunctive relief, a declaratory judgment, or any other remedy consistent with the purposes of this Agreement.

8.5 Termination Prior to Expiration of Term

OCFA reserves the right to terminate this Agreement at any time, with or without cause, upon thirty (30) days written notice to Firm, except that where termination is due to the fault of the Firm and constitutes an immediate danger to health, safety and general welfare, the period of notice shall be such shorter time as may be appropriate. Upon receipt of the notice of termination, Firm shall immediately cease all Services hereunder except such as may be specifically approved by the Contract Officer. Firm shall be entitled to compensation for all Services rendered prior to receipt of the notice of termination and for any Services authorized by the Contract Officer thereafter.

Firm may terminate this Agreement, with or without cause, upon thirty (30) days written notice to OCFA.

8.6 Termination for Default of Firm

If termination is due to the failure of the Firm to fulfill its obligations under this Agreement, OCFA may take over the work and prosecute the same to completion by contract or otherwise, and the Firm shall be liable to the extent that the total cost for completion of the Services required hereunder exceeds the compensation herein stipulated, provided that OCFA shall use reasonable efforts to mitigate damages, and

OCFA may withhold any payments to the Firm for the purpose of set-off or partial payment of the amounts owed to OCFA.

8.7 Attorneys' Fees

If either party commences an action against the other party arising out of or in connection with this Agreement or its subject matter, the prevailing party shall be entitled to recover reasonable attorneys' fees and costs of suit from the losing party.

9. OCFA OFFICERS AND EMPLOYEES; NON-DISCRIMINATION

9.1 Non-Liability of OCFA Officers and Employees

No officer or employee of OCFA shall be personally liable to the Firm, or any successor-in-interest, in the event of any default or breach by OCFA or for any amount which may become due to the Firm or its successor, or for breach of any obligation of the terms of this Agreement.

9.2 Covenant Against Discrimination

Firm covenants that, by and for itself, its heirs, executors, assigns, and all persons claiming under or through them, that there shall be no discrimination or segregation in the performance of or in connection with this Agreement regarding any person or group of persons on account of race, color, creed, religion, sex, marital status, national origin, or ancestry. Firm shall take affirmative action to insure that applicants and employees are treated without regard to their race, color, creed, religion, sex, marital status, national origin, or ancestry.

10. MISCELLANEOUS PROVISIONS

10.1 Confidentiality

Information obtained by Firm in the performance of this Agreement shall be treated as strictly confidential and shall not be used by Firm for any purpose other than the performance of this Agreement without the written consent of OCFA.

10.2 Notice

Any notice, demand, request, consent, approval, or communication either party desires or is required to give to the other party or any other person shall be in writing and either served personally or sent by pre-paid, first-class mail to the address set forth below. Either party may change its address by notifying the other party of the change of address in writing. Notice shall be deemed communicated forty-eight (48) hours from the time of mailing if mailed as provided in this Section.

Orange County Fire Authority
Attention: Sara Kennedy
1 Fire Authority Road
Irvine, CA 92602

WITH COPY TO:
David E. Kendig, General Counsel
Woodruff, Spradlin & Smart
555 Anton Blvd. Suite 1200
Costa Mesa, CA 92626

To Firm:

Intterra
Attention: Molly Hausmann
3740 Dacoro Lane
Castle Rock, CO 80109

10.2 Integrated Agreement

This Agreement contains all of the agreements of the parties and cannot be amended or modified except by written agreement.

10.3 Amendment

This Agreement may be amended at any time by the mutual consent of the parties by an instrument in writing.

10.4 Severability

In the event that any one or more of the phrases, sentences, clauses, paragraphs, or sections contained in this Agreement shall be declared invalid or unenforceable by valid judgment or decree of a court of competent jurisdiction, such invalidity or unenforceability shall not affect any of the remaining phrases, sentences, clauses, paragraphs, or sections of this Agreement, which shall be interpreted to carry out the intent of the parties hereunder.

10.5 Corporate Authority

The persons executing this Agreement on behalf of the parties hereto warrant that they are duly authorized to execute this Agreement on behalf of said parties and that by so executing this Agreement the parties hereto are formally bound to the provisions of this Agreement.

[Signatures on Following Page]

IN WITNESS WHEREOF, the parties have executed this Agreement as of the dates stated below.

"OCFA"

ORANGE COUNTY FIRE AUTHORITY

Date:_____ By:_____
Sara Kennedy, CPPB
Purchasing Manager

APPROVED AS TO FORM.

By:_____
David E. Kendig
General Counsel

Date:_____

ATTEST:

_____
Maria D. Huizar
Clerk of the Board

"FIRM"

INTTERRA

Date: 19 June 2020 By:_____
Molly Hausmann
Chief Operations Officer

_____
Brian Collins
Chief Executive Officer

EXHIBIT “A”

Quote for Intterra Services: Pricing valid through July 15, 2020
Client/System: Orange County Fire Authority

Scope of Work: This Professional Services agreement is presented to supply technical planning, coordination, and development expertise in support of FIRIS alongside the use of the Intterra Operations & Incident Management modules. This engagement differs from services provided for the SaaS (Software as a Service) as it encompasses the coordination activities necessary to achieve the statewide and region deployment of the FIRIS 2020 initiative.

Task 1: FIRIS 2020 Common Operating Platform Technical Support.

- Task 1A: Subject Matter Expertise, Technical Coordination, and Data Sharing
  - Provide technical expertise in support of the OCFA Wildfire Intel Pilot ("FIRIS") during 2020.
    - Support the leadership team and coordinating agencies with wildfire technical and operational knowledge related to technical architecture to support a shared Common Operational Platform.
    - Develop, manage, and lead the technical architecture for the FIRIS 2020 program.
    - Coordinate data sharing and exchange among regional and state participants.
    - Seek and coordinate sources of additional IAA and intelligence data.
  - Manage Common Operational Platform for FIRIS project to support FIRIS use across the state of California
    - Provide a single FIRIS Common Operating Platform for one-stop access to FIRIS data.
    - Provide training, user management and outreach for FIRIS Users.
    - Monitor and manage data exchange between systems within FIRIS project and with systems operated by adjacent and partner agencies.
  - Collect and compile all information related to the pilot effort to measure and publish the outcome of the pilot. Including but not limited to:
    - Meeting notes.
    - Planning components.
    - Training materials.
    - Scoping and strategy documentation.
    - Pilot outcomes.
- Task 1B: Update FIRIS 2019 Common Operational Platform for FIRIS 2020 Operations.
  - Develop and manage workflow for FIRIS operations within the Common Operating Platform
    - Update user tools within Common Operating Platform to support multi-regional use of shared data sources and the WIFIRE model.
    - Update data layers and data exchange APIs to reflect data sharing agreements with participating agencies and systems.
  - Connect new sensors and sources (aircraft, camera, satellite detection) to platform
    - Adapt FIRIS for new aircraft sensors selected by FIRIS project.
    - Adapt FIRIS to for sensors provided by agency partners.

Task 2: SCOUT 2020/Next-generation Situational Awareness Portal.

- Task 2A: Deploy a SCOUT 2020 portal to provide an all-hazard decision support capability to OES in support of initial and extended response to evolving incidents.
  - Initial Operating Capability
    - Provide a single, seamless data framework to view and manage multiple intelligence feeds.

- Provide resource managers with visual incident occurrence and analysis of drive-time estimates for available resources.
- Provide a data exchange framework to store, exchange, and manage the sharing of data between SCOUT 2020, FIRIS and Federal, State, and Locally deployed response systems (EGP, VSAT, etc.)

- Full Operating Capability
  - Provide alerting tools to ensure responders have access to timely and relevant information.
  - Provide responding resources with preplanning information and real-time updates to improve on-scene situational awareness.
  - Provide emergency managers the earliest information on evolving events as well as detailed preplanning information to make fast, effective evacuation decisions.

Task	Duration	Resources	Billing
Task 1	1 July 2020 – 1 March 2021	$300,000 billed monthly based on Task 1A activities and Task 1B deliveries. Types of activities planned for each phase: • Strategy Kickoff, Project Mgmt (PM), Portal (7/1) • PM, Data Sharing & Sensor Integration (8/1) • PM, Tech Strategy, Workflow Improvements (10/1) • PM, Tech Strategy, Workflow Improvements (11/1) • PM, Workflow/Tool/Data Improvements (12/1) • PM, Workflow/Tool/Data Improvements (1/1) • PM, Pilot outcomes (2/1) • PM, Pilot outcomes (3/1)	$70,000 (7/1/2020) $50,000 (8/1/2020) $30,000 (9/1/2020) $30,000 (10/1/2020) $30,000 (11/1/2020) $30,000 (12/1/2020) $20,000 (1/1/2021) $20,000 (2/1/2021) $20,000 (3/1/2021)
Task 2	Initial Operating Capability – (define/dates) Full Operating Capability – (define/dates)	$500,000 billed based on deployment of Portal, IOC and FOC • Portal - $250,000 • IOC - $125,000 • FOC - $125,000	$250,000 (7/1/2020) $125,000 (10/1/2020) $125,000 (12/1/2020)

Approved by:

Molly Hausmann
Chief Operations Officer
18 June 2020

<Approver Client Name>
<Approver Title>
<Date>

OCFA Special Procurement Justification Form

The Purchasing Ordinance of the Orange County Fire Authority requires competitive bids and proposals for service and commodity contracts. ***A special procurement is defined as a purchase, where due to unusual or special circumstances, it would be in the best interest of the OCFA to accomplish the procurement without compliance with the competitive bidding requirements. Special Procurements are not applicable to construction services. The using department requesting a special procurement shall provide written evidence to support a special procurement determination. This form is to be submitted with the purchase requisition to Purchasing with any special procurement requests.***

SECTION I - INSTRUCTIONS

1. Written justification on this form will be completed by the requesting department and submitted with the purchase requisition.
2. The request must be approved by the section manager and assistant chief prior to submitting the request to the purchasing manager.
3. All special procurement forms must be submitted to the Purchasing Manager and then reviewed and approved by the Assistance Chief, Business Services.
4. All special procurements exceeding $50,000 annually require Executive Committee approval. In this case, the special procurement form must be submitted to the Executive Committee as an attachment to the staff report.
5. The approved special procurement justification form will be included in the contract file.

SECTION II – REQUEST INFORMATION

Department/Section: Operations	**Requested By:** Robert Cortez	**Date:** 6/17/2020
Recommended Vendor: Intterra	**Vendor Contact:** Molly Hausmann	**Vendor's E-mail Address:** molly.hausmann@intterragroup.com
Vendor Address: 3740 Dacoro Lane, Castle Rock, CO 80109		**Vendor's Telephone #:** (303) 489-6070
Type of Contract: ☒ One-time ☐ Multi-Year ☐ Renewal ☐ Amendment ☐ Increase	**Contract Term (Dates):** June 25 2020 - June 24, 2021	**Contract Amount:** $800,000
If the contract type is a Renewal, Amendment or Increase, please provide previous contract information with this request (PO, BO, previous approval date, Chief approval or EC approval, and dollar amount).		**Attachments:** ☐ Yes ☒ No

SECTION III – JUSTIFICATION

1. **Provide a detailed description of the product or service requested. Describe what it is.** *Attach additional sheet if necessary.*

The 2020 Fire Integrated Real-time Intelligence System (FIRIS) program will build upon the developments made in the 2019 FIRIS pilot program to enhance California wildfire situational awareness for first responders by providing real-time fire perimeter intelligence and fire behavior modeling. Intterra will provide upgrades to the SCOUT common operating platform.

2. **Please state the reasoning for the special procurement and the special circumstances of why it would be in the best interest of OCFA to accomplish the procurement without a competitive bidding process. Provide a summary of findings (research and analysis) including any supporting documentation which validates your recommendation and demonstrates the nature of this request.** *Attach additional sheet if necessary.*

The Intterra software modules currently used by OCFA were successfully utilized in the 2019 FIRIS pilot program. As such, the D-RiSC Coalition is requesting that Intterra provide their expertise on the FIRIS 2.0 project and provide

SECTION III – JUSTIFICATION (*continued*)

upgrades to the SCOUT system so that it may effectively facilitate interagency data exchange and provide the common operating picture necessary for the FIRIS 2.0 Program.

3. **Pricing - What efforts were made to get the best pricing (e.g., did you simply request a quote, negotiate a better price with the vendor, did the vendor provide a discount)?** *Please provide the quote with your special procurement request.*

Funding for the FIRIS 2.0 program is allocated by the D-RiSC Coalition and is intended to be cost neutral to OCFA. Staff is collaborating with Intterra to ensure that the program costs will not exceed the funding provided.

4. **Will this purchase obligate the OCFA to future purchases (maintenance, licensing or continuing needs)?** (If yes, please explain how and what the future costs will be.)

The FIRIS 2.0 program is intended to have an operational period of a minimum of 180 days. At the conclusion, program performance will be reviewed and it may be determined that the services should be extended. Should that occur, additional approvals to extend the Special Procurement will be sought.

Special Procurement Request Submitted by:

REQUESTORS NAME	SIGNATURE	DATE
Robert Cortez, Assistant Chief		6/18/20
DIVISION CHIEF/SECTION MANAGER NAME	**SIGNATURE**	**DATE**
ASSISTANT CHIEF NAME	**SIGNATURE**	**DATE**
Brian Fennessy, Fire Chief		6/19/20

***Purchasing Manager's Comments*:**

PURCHASING MANAGER'S APPROVAL	DATE
Sara Kennedy	6/19/2020
ASSISTANT CHIEF BUSINESS SERVICES APPROVAL	**DATE**
	6/18/20

Executive Committee Approval Required ☑ **Yes** ☐ **No** **Special Procurement over $50,000**

Executive Committee Approved: ☐ ***Yes*** ☐ ***No*** ***Date approved*** _____