



# AGENDA REPORT

**TO:** Steven Falk  
Interim City Administrator

**FROM:** Darren Allison  
Acting Police Chief,  
Oakland Police Department

**SUBJECT:** Cost of Purchasing a Fixed-Wing  
Aircraft

**DATE:** April 20, 2023

City Administrator Approval

Date: 28 April 2023

## RECOMMENDATION

Staff Recommends That The City Council Receive An Informational Report On The Cost Of Purchasing A Fixed-Wing Aircraft Including But Not Limited To: (1) The Estimated Cost For A Down Payment To Purchase A Fixed-Wing Aircraft; (2) Available Financing Options To Purchase A Fixed-Wing Aircraft; (3) The Estimated Cost To Retrofit A Fixed-Wing Aircraft To Meet The City's Needs; (4) Changes To Retrofit The Aircraft To Meet The City's Needs; (5) The Estimated On-Going Maintenance Costs Of A Fixed-Wing Aircraft Compared To The Current Cost Of Maintaining The Helicopters; (6) A Cost-Benefit Comparison Of Only Using A Retrofitted Fixed-Wing Aircraft Versus Using Both The Fixed-Wing Aircraft And Helicopters; (7) Identifying City Funding Sources For The Purchase Of A Fixed-Wing Aircraft; And (8) A Proposal To Reduce And Ultimately Stop The Use Of The Helicopters In Lieu Of The Fixed-Wing Aircraft

## EXECUTIVE SUMMARY

This informational report will cover the information requested in the eight points in the recommendation. This includes identifying costs and proposed funding for a fixed-wing aircraft, including financing and retrofitting costs. Additionally, it also includes comparisons of the cost of maintaining the helicopters to purchasing a new fixed-wing aircraft. There is also a cost benefit comparison of using solely helicopters or a fixed wing aircraft and one helicopter. Last, there is an outlined proposal of how OPD could stop using the helicopters altogether with the purchase of a fixed-wing aircraft.

## BACKGROUND / LEGISLATIVE HISTORY

OPD has presented a recommendation for helicopter maintenance which is related to this discussion about the fixed-wing aircraft. OPD first presented a recommendation for "Adopt A Resolution Authorizing The City Administrator Or Designee To Enter Into A Professional Services Agreement With Rotorcraft Support, Inc. (RSI) To Provide Helicopter Maintenance Services To The Oakland Police Department (OPD) For The Period Of July 1, 2023 To June 30, 2027 In An Amount Not To Exceed Eight Hundred Fifty Thousand Dollars (\$850,000) Per Year For A Total Contract Not To Exceed Three Million, Four Hundred Thousand Dollars

Public Safety Committee  
May 9, 2023

(\$3,400,000)" at December 12, 2022 Public Safety Committee. This item was continued to the January 23, 2023 Public Safety Committee meeting. Subsequent meetings included:

- 1) Supplemental report to February 27, 2023 Public Safety Committee meeting
- 2) Supplemental report to March 28, 2023 Special Public Safety Committee meeting
- 3) Supplemental report to April 18, 2023 City Council meeting

The final resolution which was approved as amended was:

A Resolution Authorizing The City Administrator Or Designee To Enter Into A Professional Services Agreement With Rotorcraft Support, Inc. (RSI) To Provide Helicopter Maintenance Services To The Oakland Police Department (OPD) For Helicopter Use In Assisting Various Departments With Responding To Emergencies Throughout The City, For The Period Of July 1, 2023 To June 30, 2024 In An Amount Not To Exceed Eight Hundred Fifty Thousand Dollars (\$850,000) Per Year, With An Optional Six Month Administrative Extension For A Total Contract Not To Exceed One Million, Two Hundred Seventy Five Thousand Dollars (\$1,275,000).

### **ANALYSIS AND POLICY ALTERNATIVES**

These are OPDs responses for the eight points in the recommendation:

1. The estimated cost for a down payment to purchase a fixed-wing aircraft:
  - a. The down payment would be \$400,000 dollars.
    - i. A down payment is not required if The City finances the airplane.
  - b. What is the total cost of this airplane project?
    - i. One time procurement costs:

1. Airplane	\$2,539,499
2. Mission Equipment	\$1,733,761
3. Training	\$125,000
4. Total	\$4.4 million dollars
  - c. What is the timeline?
    - i. One year from first payment.
    - ii. The first payment could be a deposit or completion of financing contract.
2. Available financing options to purchase a fixed-wing aircraft:
  - a. Two possible options to finance the airplane.
  - b. 4.4 million dollars financed:
    - i. 15-year loan with 4.45% interest rate. 15 annual payments of \$423,210.29
    - ii. 10-year loan with 4.25% interest rate. 10 annual payments of \$569,318.97
  - c. What are the leasing options for a helicopter?
    - i. A helicopter lease involves a vendor. The vendor will purchase a helicopter and then "lease" that helicopter to the City of Oakland.
    - ii. This is not a lease to own. The City of Oakland will have no ownership stake in this leased helicopter.
    - iii. There will be a lease payment cost to the City for use of the helicopter.
    - iv. In addition to the lease payment, The City will also have to pay the cost of fuel and maintenance of the leased helicopter.
    - v. The vendor is a for profit company. It will cost The City more to lease a helicopter than to own a helicopter.

- vi. It will take the vendor a year to purchase a helicopter and then outfit the helicopter with all the equipment: radios, spotlight, cameras, mapping systems, and computers.
  - vii. Leasing a helicopter means OPD will still be operating a helicopter over the City of Oakland. This includes still having the noise and environmental impacts on the people of Oakland.
3. The estimated cost to retrofit a fixed-wing aircraft to meet the City's needs:
- a. After the airplane is delivered, it will need to be "completed. That is the installation of all public safety equipment. See section #4 below.
    - i. Estimated cost to complete the airplane after delivery is \$1,733,761.
  - b. Would there be other agencies in our area who would want to partner?
    - i. No, there are three agencies in Alameda County that have Air Support units. They are CHP, ACSO, and EBRP. None of these agencies were interested in partnering with OPD in the purchase of a new aircraft.
  - c. What is the airplane being proposed for purchase?
    - i. The airplane is a Diamond Aircraft DA62 MPP (Multi-Purpose Platform).
    - ii. The airplane is a carbon composite frame with twin reciprocating jet fuel engines.
    - iii. The manufacturer, Diamond Aircraft, brought the airplane to Oakland and OPD did a test flight.
    - iv. Oakland put out RFQ# 269469 in November 2022.
    - v. That RFQ has expired. OPD is awaiting responses on the new RFQ #271104.
4. Changes to retrofit the aircraft to meet the City's needs:
- a. After the airplane is delivered it will be "completed" with public safety equipment installed including:
    - i. A Technisonic TDFM 7300 Law Enforcement radio
    - ii. A Wescam MX15 camera
    - iii. A Shotover ARS-750 mapping system
    - iv. A Vislink airborne video downlink system
    - v. A computer for access to OPD CAD (computer aided dispatch) system.
  - b. Will OPD need to go to the Privacy Advisory Commission?
    - i. Yes. OPD will work with PAC to create a policy for the airplane.
    - ii. OPD will schedule this item with PAC after this item is presented at the Public Safety Committee and Council.
5. The estimated on-going maintenance costs of a fixed-wing aircraft compared to the current cost of maintaining the helicopters:
- a. The helicopter costs \$600 dollars per flight hour for fuel & maintenance.
  - b. The airplane costs \$150 dollars per flight hour for fuel & maintenance.
  - c. The helicopter operates 1,400 flight hours a year at a cost of \$850,000.
  - d. OPD expects the airplane will operate 2,000 flight hours per year at a cost of \$300,000.
  - e. What is a cost-benefit analysis of using a fixed-wing aircraft instead of helicopters and a cost-benefit analysis of using a fixed wing aircraft in conjunction with helicopters?
    - i. Helicopter-only annual fuel and maintenance costs would be \$850,000.

1. This amount is expected to increase annually due to the age of the helicopters.
    - ii. Airplane and helicopter annual fuel and maintenance costs would be \$425,000.
      1. We expect this amount to remain constant for 10 years because the new airplane will not require unforeseen, age-related maintenance.
    - iii. Airplane only annual fuel and maintenance costs would be \$300,000.
    - iv. Points ii and iii above do not include procurement cost or finance payments for the airplane.
6. A cost-benefit comparison of only using a retrofitted fixed-wing aircraft versus using both the fixed-wing aircraft and helicopters:
  - a. Airplane operation cost is \$150 dollars per flight hour. That includes fuel and maintenance only.
  - b. The helicopter operating cost is \$600 dollars per flight hour. That includes fuel and maintenance only.
  - c. Operating airplane only at 2,000 flight hours per year is \$300,000 annually.
  - d. Reducing helicopter operation to 200 flight hours per year is \$120,000 annually.
  - e. There are two situations when the airplane would not be available:
    - i. When the airplane is in maintenance
    - ii. When the clouds or weather prevents the use of the airplane
  - f. How long would OPD need to keep a helicopter? If a second airplane were eventually purchased, how long would it take to phase out helicopters?
    - i. OPD needs to keep an operational helicopter until another air support unit is put into service.
    - ii. When a second airplane is put into service, the helicopters could be immediately discontinued.
    - iii. During certain weather conditions (mainly low cloud layers) OPD will be without air support.
  - g. How would the timing of the obtaining of the airplane line up with the timing of phasing out the helicopter?
    - i. One year after approval by City Council and first payment is received, the airplane will be deployed full time.
    - ii. When the airplane is deployed full time, the helicopter will immediately be reduced to:
      1. Flying 200 hours annually (4 hours a week)
      2. Flying only for training, airplane maintenance, or a weather condition that prevents the airplane from operating.
7. Identifying City funding sources for the purchase of a fixed-wing aircraft:
  - a. Grant funds cannot be used for finance payments of an airplane.
  - b. Grant funds can continue to be used for fuel and maintenance of the helicopter.
  - c. What happens in the event OPD does not receive grants?
  - d. In the event the Department does not receive anticipated grants, the City will need to identify an alternative funding source or increase the Department's operation and maintenance budget.
  - e. What training will be required?
    - i. OPD will need to retrain helicopter pilots to fly airplanes.
    - ii. It takes less than 6 months to train a helicopter pilot to fly an airplane.

- iii. All training will be completed before the airplane is delivered.
  - iv. It will cost \$125,000 to retrain 5 pilots (\$25,000 each).
  - v. Training cost is included in the financing of the airplane.
  - vi. It is easier, cheaper, and less time consuming to retrain a helicopter pilot than it is to train a new zero-time pilot.
- Funding continued:
- i. Currently OPD spends \$850,000 annually to operate helicopters.
  - ii. OPD can switch from solely using helicopters to a combination of airplane and helicopter and keep the annual budget unchanged at \$850,000.
  - iii. Currently the \$850,000 annual budget is funded by a combination of grants and general funds.
  - iv. Grant funds cannot pay for airplane financing.
  - v. The airplane payment would have to be funded by general funds at \$425,000 a year for 15 years.
  - vi. The fuel and maintenance budget of \$425,000 annually for both the airplane and helicopter can continue to be funded by grants.
8. A proposal to reduce and ultimately stop the use of the helicopters in lieu of the fixed-wing aircraft:
- a. The airplane will be the primary air support aircraft.
  - b. There are two situations when the airplane will not be available:
    - i. When the airplane is in maintenance
    - ii. When the clouds or weather prevents the use of the airplane
  - c. During the above two situations a second air asset is needed.
    - i. The helicopter will only be operated under one of three conditions:
      - 1. Training
      - 2. When the airplane is in maintenance
      - 3. When weather prevents use of the airplane
  - d. Reduce helicopter annual flight time from 1,400 flight hours a year to 200 flight hours.
    - i. 200 annual flight hours is less than 4 flight hours a week.
    - ii. Half of that flight time (100 hours a year) will be used for training and keeping the pilots proficient. This leaves only 100 flight hours a year for patrol operations.
  - e. How do we stop using the helicopter completely? A second airplane would be needed.
    - i. One airplane would fly while the other airplane is out for maintenance.
    - ii. However, this solution will leave OPD with no air support whenever there is a cloud layer that prevents use of the airplane.
  - f. What would be the cost to have a backup or second airplane?
    - i. If the City were to purchase a second airplane, it would cost \$4,275,000 million dollars.
    - ii. The training cost of \$125,000 will not be needed with the second airplane.
  - g. Is there any data about community impact in other cities when they have reduced or stopped using helicopters and started using airplanes?
    - i. Other Law Enforcement agencies have not switched from helicopters to airplanes.
    - ii. Other law enforcement agencies use larger helicopters than the one being used by OPD.

1. These larger helicopters use more fuel, are louder, and cost more to procure and operate than OPDs helicopter.
  2. However, these larger helicopters give those other agencies the ability to conduct rescues and water drops.
  3. OPD does not have the ability to conduct water drops or rescues from its helicopter.
- iii. Oakland can switch from a helicopter to an airplane without losing any functional ability because its helicopter cannot perform rescues or water drops.
- iv. Changing from a helicopter to an airplane will:
1. Reduce noise and trauma on Oakland residents.
    - a. An airplane will be virtually silent at ground level.
  2. Reduce the amount of fuel burned over the community.
    - a. 21,000 gallons less a year
    - b. Avoiding 187 metric tons of CO<sub>2</sub>

### **FISCAL IMPACT**

This item is for informational purposes only and does not have a direct fiscal impact or cost. However, if OPD does receive approval to purchase a fixed-wing aircraft, the City will need to identify a funding source or increase the Department's operation and maintenance budget.

### **PUBLIC OUTREACH / INTEREST**

No outreach was completed for the purpose of this informational report.

### **COORDINATION**

OPD coordinated with the Contract Administration Unit for the purpose of the RFQ process.

### **SUSTAINABLE OPPORTUNITIES**

***Economic:*** There are no economic opportunities associated with this report.

***Environmental:*** Reducing the use of helicopters significantly reduces the consumption of fuel and emissions of CO<sub>2</sub> gases.

***Race & Equity:*** OPD uses helicopters to aid in a variety of patrol operations. Policing operations serve to enhance public safety especially in areas more prone to violent crime. Residents and visitors living in areas with a greater proportion of crime will particularly benefit from reduced usage of helicopters. Using fixed-wing aircraft instead of helicopters will reduce the trauma from the noise of helicopters as they are much quieter. Additionally, with a fixed-wing aircraft, there is a considerable decrease in the emissions of harmful gases.

**ACTION REQUESTED OF THE CITY COUNCIL**

**Staff Recommends That The City Council Receive An Informational Report On The Cost Of Purchasing A Fixed-Wing Aircraft Including But Not Limited To: (1) The Estimated Cost For A Down Payment To Purchase A Fixed-Wing Aircraft; (2) Available Financing Options To Purchase A Fixed-Wing Aircraft; (3) The Estimated Cost To Retrofit A Fixed-Wing Aircraft To Meet The City's Needs; (4) Changes To Retrofit The Aircraft To Meet The City's Needs; (5) The Estimated On-Going Maintenance Costs Of A Fixed-Wing Aircraft Compared To The Current Cost Of Maintaining The Helicopters; (6) A Cost-Benefit Comparison Of Only Using A Retrofitted Fixed-Wing Aircraft Versus Using Both The Fixed-Wing Aircraft And Helicopters; (7) Identifying City Funding Sources For The Purchase Of A Fixed-Wing Aircraft; And (8) A Proposal To Reduce And Ultimately Stop The Use Of The Helicopters In Lieu Of The Fixed-Wing Aircraft**

For questions regarding this report, please contact Sgt. Jonathan Vanerwegen, OPD, Helicopter Unit, at (510) 615-5875.

Respectfully submitted



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