

**AMENDMENT TO AGREEMENT  
BETWEEN THE COUNTY OF SAN MATEO AND  
VECTOR AIRPORT SYSTEMS**

THIS AMENDMENT TO THE AGREEMENT, entered into this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_\_, by and between the COUNTY OF SAN MATEO, hereinafter called "County," and VECTOR AIRPORT SYSTEMS, hereinafter called "Contractor";

W I T N E S S E T H:

WHEREAS, pursuant to Government Code Section 31000, County may contract with independent contractors for the furnishing of such services to or for County or any Department thereof;

WHEREAS, the parties entered into an Agreement for the purpose of providing an on-airport camera system and installation, on January 16, 2017; and

WHEREAS, the parties wish to amend the Agreement to configure server hardware, monitoring and image processing system, integrate PlaneNoise data, purchase annual maintenance and licensing, extend the term of the Agreement to June 30, 2020, and increase the total fiscal obligation of the Agreement by \$213,790, for a new total fiscal obligation of \$313,665.

**NOW, THEREFORE, IT IS HEREBY AGREED BY THE PARTIES HERETO AS FOLLOWS:**

**1. Section 3 of the agreement is amended to read as follows:**

In consideration of the services provided by Contractor in accordance with all terms, conditions, and specifications set forth in this Agreement and in Exhibit A, County shall make payment to Contractor based on the rates and in the manner specified in Exhibit B. County reserves the right to withhold payment if County determines that the quantity or quality of the work performed is unacceptable. In no event shall County's total fiscal obligation under this Agreement exceed **Three Hundred Thirteen Thousand Six Hundred Sixty Five Dollars (\$313,665)**. In the event that the County makes any advanced payments, Contractor agrees to refund any amounts in excess of the amount owed by the County at the time of contract termination or expiration. Contractor is not entitled to payment for work not performed as required by this Agreement.

**2. Section 4 of the agreement is amended to read as follows:**

Subject to compliance with all terms and conditions, the term of this Agreement shall be from January 16, 2017 through **June 30, 2020**.

**3. Original Exhibit A is amended to include:**

In accordance with Contractor's Proposal – Phase 2, Contractor shall provide server hardware configuration and PlaneNoise data integration. Additionally, Contractor shall provide annual maintenance – Annual operation, processing, maintenance, and monitoring (OPM&M) of all system hardware, PlaneNoise connector maintenance; and software licensing for Vector's Noise and Operations Management System (VNOMS)."

Phase 2 will include the setup and configuration of the server, monitoring and image processing system, as well as connecting the server to the Airport's internet connection.

**Server Hardware Configuration and PlaneNoise data integration:**

Contractor will install and configure the hardware for an integrated automated aircraft identification and VNOMS system. This infrastructure integration includes the setup of the Microsoft Azure platform for hosting all online servers, databases, and infrastructure.

NOTE: While Contractor currently uses Microsoft's Azure server hosting platform to provide excellent security, redundancy, and scalability among other features, Contractor shall not be bound to use Microsoft Azure specifically going forward. Although Contractor has no plans as of signing this agreement to change server hosting vendors from Microsoft Azure, should Contractor elect to do so, all references to Microsoft and Azure in this agreement may be substituted with a similar service as long as there is no negative material impact to the services provided by Contractor to the County.

Contractor will provide the configuration for the PlaneNoise data integration.

Contractor's hosted aircraft identification and counting system is comprised of a combination of on-field hardware, software, and hosted network, server, storage and database servers. Contractor's web-based application is served directly from the Microsoft Azure servers over the Internet.

Contractor will also configure the Airport's server.

**Licensing:**

**Vector's Airport Portal:** Contractor will provide County with access to The Airport Portal, a web-based portal to access, view, analyze, report, and export operations and identification data from the Vector System.

**Vector's Noise and Operations Management System (VNOMS):** Contractor will provide licensing of the VNOMS application. This license will allow the Airport to import flight tracking data, correlate the track data with the identification data, and to visualize this data as identified flight tracks on a map.

**Maintenance:**

**Backup of Data:** All virtual machines as well as customer and proprietary data will be backed up by Microsoft on a scheduled basis to geo-redundant storage that is replicated to additional locations in the United States. Contractor will perform regular off-system backups of all data in the event of a large-scale outage.

**Annual System Operation, Processing, Monitoring and Maintenance (OPM&M):** The Vector System will include transporting all data from the Airport System, processing all the data including the complex processing of aircraft image data, fusing of data from multiple sources, migrating the data to the Airport Portal, and keeping data available during the project life for historical analysis.

Contractor will continuously monitor each piece of equipment at SQL, and in the event of a failure notice (notice happens usually with five minutes of the event), Contractor will coordinate with Airport staff to briefly visit the site and visually inspect the equipment for obvious damage.

If the repair is more complicated than a simple power cycle, Contractor will guide Airport staff in repairing the System and will provide spare parts at no cost to the Airport, while the System is under support. Since most of the components are in Contractor's stock, Contractor will quickly configure and ship them to Airport staff for on-site replacement. If the problem is more significant, Contractor will dispatch a service technician to the site to fix the issue. As long as the system is under maintenance, no additional charge will be levied to refresh the equipment. Contractor will replace any failed equipment and will periodically perform an equipment refresh, at the election of the Contractor and as technology improvements warrant an upgrade.

Contractor is responsible for failure of and damage to equipment due to normal wear and tear and due to normal weather. Damage to Contractor-provided equipment shall be the responsibility of the County if due to unusual circumstances such as but not limited to vandalism, vehicle collision, flying objects (i.e., rocks from lawn mowers, thrown/blown snow/ice), destruction by animals, flooding, and severe storms among others. Such damage will be repaired through cooperation of Contractor and County staff and the cost of such repair will be borne by the County.

**Training:** County support will start with proper training of users on the software and systems and will continue by through ongoing support.

The initial training will acquaint Airport users with the capabilities of the Vector System and with the web-based Airport Portal, and its reporting, viewing, and data export capabilities. Airport staff training on the web portal is typically conducted sometime starting after the first or second week of System operation. This delay allows time for Contractor staff to review and tune the System to its optimal configuration.

Training on the Airport Portal will be done either onsite or remotely and will require a minimum of 60 minutes of interactive instruction. The following is an outline of the training topics covered:

- A. The Vector Airport Portal
  - 1. Activity Viewer
    - Aircraft images
      - Time required from aircraft operation to aircraft identification
      - Unknown aircraft
    - Aircraft Details Page
      - Source Explanations
      - Aircraft Identity Search
  - 2. Aircraft Activity Searches
  - 3. Fusion of tracking aircraft operations with image capture aircraft operations (if applicable)
  - 4. Data exporting.vector.us.com
  - 5. Based list management
- B. Reports
  - 1. Activity Report
  - 2. Operator Activity Report
  - 3. Aircraft Model Report
  - 4. Curfew reporting options

Basic instruction on the on-field hardware will be conducted onsite during the equipment installation to familiarize the Airport's operations and maintenance staff with the equipment so that they can perform rudimentary maintenance, help diagnose issues, and work with Contractor support via phone to help triage a repair so Contractor can respond as quickly as possible with replacement parts and services.

VNOMS training requires a minimum of 120 minutes of either remote or onsite instruction and builds on the Airport Portal training, which is a prerequisite. Users are trained to complete typical functions such as noise complaint correlation and report production. Someone familiar with the operation of a

NOMS will require less time as the concepts will not be new, just the software. The following is an outline of the training topics covered:

- A. The Vector Airport Portal
  1. Aircraft Tracking
    - Searching for operations
    - Arrivals, departures, and overflights
    - Time window searches
    - Ceiling, engine type, etc.
  2. Map Manipulation
    - Zooming and panning
    - Base map choices
    - Layers and features
  3. Gates and Corridors
    - Defining gates
    - Defining corridors
    - Showing compliant and non-compliant operations
  4. Noise Complaints
    - Manual complaint entry/automated transfer from PlaneNoise
    - Automated flight track correlation
    - Flight track investigation
    - Complaint reporting
    - Complaint sorting and filtering
    - Plotting of complaints on base map
  5. Reporting
    - Built-in report generation
    - Exporting data for custom reports in Excel
  6. Noise Monitoring
    - Creating a noise monitoring site
    - Managing site details
    - Analysis of noise monitor results
    - Categorizing noise events as aircraft
  7. Public Portal
    - Configuring portal
    - Training the public
    - Handling of typical questions

**Ongoing User Support:** Users will have live Contractor support available to them during the hours of 8:00 a.m. to 6:00 p.m. EST (5:00 a.m. to 3:00 p.m. PST), and can use this support to navigate the Vector System, get help with the Airport Portal or to determine if there are issues with the System overall.

Contractor will provide each user with a User Guide, to help the users become familiar with the System and to use as a reference. Contractor also provides an online Frequently Asked Questions list to further speed the training process.

**6. Original Exhibit B is amended to include:**

In consideration of the services provided by Contractor described in Exhibit A and subject to the Phase 2.

Phase 1:	\$99,875
Phase 2 (including Year 1 Maintenance and Licensing):	\$75,800
<b>Total Year 1 Cost:</b>	<b>\$175,675</b>
Year 2 Optional:	\$68,320
Year 3 Optional:	\$69,670
<b>Contract Total:</b>	<b>\$313,665</b>

**Breakdown:**

**One-time Charges (Server Installation and Integration):**

*Software, network, and system configuration	\$6,300
**PlaneNoise Integration and transfer of data	\$2,500
<b>Total One-Time Charges for Server Installation/Configuration</b>	<b>\$8,800</b>

**Recurring Annual Fees (Annual Maintenance and Software Licensing):**

Recurring annual fees are separate and due when the System becomes operational; then annually on the anniversary of the System becoming operational thereafter. Contractor will ensure that the System is fully functional, including replacement of non-functioning items, including batteries, and a periodic hardware refresh, as long as OPM&M fees have been paid and are current.

<b>Annual Maintenance and Software Licensing (First Year)</b>	<b>Unit Price</b>	<b>Quantity</b>	<b>Extended Price</b>	<b>Total</b>
***Base System OPM&M	\$14,000	1	\$14,000	\$14,000
***Per Pod OPM&M	\$2,400	5	\$12,000	\$12,000
***Third-party Flight Track Data	\$15,00	1	\$15,000	\$15,000
***PlaneNoise Feed On-going Support	\$6,000	1	\$6,000	\$6,000
<b>First Year Annual Maintenance Subtotal</b>				<b>\$47,000</b>
VNOMS Annual License	\$20,000	1	\$20,000	\$20,000
First year annual recurring subtotal				
<b>First Year Annual Licensing Subtotal</b>				<b>\$20,000</b>
<b>Phase 2 First Year Total</b>				<b>\$67,000</b>

Options Years 2 and 3

<b>Annual Maintenance and Software Licensing</b>	<b>Escalation %</b>	<b>Base Price</b>	<b>Option Year 2</b>	<b>Option Year 3</b>
Base System OPM&M	1.5	\$14,000	\$14,210	\$14,423
Pod OPM&M \$2,400 x5	1.5	\$12,000	\$12,180	\$12,363
Third Party Flight Track Data	3.0	\$15,000	\$15,450	\$15,914
Plane Noise Feed On-Going Support	3.0	\$6,000	\$6,180	\$6,365
<b>Years 2 and 3 Maintenance Subtotal</b>			<b>\$48,020</b>	<b>\$49,065</b>
VNOMS Annual License	1.5	\$20,000	\$20,300	\$20,605
<b>Years 2 and 3 Annual Licensing Subtotal</b>			<b>\$20,300</b>	<b>\$20,605</b>
<b>Total by Option Year</b>			<b>\$68,320</b>	<b>\$69,670</b>

Should the County wish to add additional pods to the System, Contractor shall charge a per pod price of \$17,000 each, fully installed, plus an additional \$2,400 per year for OPM&M, escalated annually at 1.5%. Contractor's wireless network and server infrastructure can handle up to ten additional pods without requiring any additional infrastructure, so there are no other charges for adding pods.

\*Phase 2 includes the setup and configuration of the server, monitoring and image processing system, as well as connecting the server to the Airport's Internet connection.

\*\*This one-time charge is required by PlaneNoise to setup and initiate the transfer of noise complaint data into the System.

\*\*\*Includes annual PlaneNoise integration support fee of \$6,000 per year and \$15,000 per year for the third-party flight track data.

\*\*\*\*Annual Maintenance and Software Licensing includes the price of an annual subscription to the VNOMS software. VNOMS has no initial setup expense; but the annual software license fee escalates at 1.5% per year per based on cost of living increases.

In any event, the total payment for services of Contractor shall not exceed Three Hundred Thirteen Thousand Six Hundred Sixty Five Dollars (\$313,665) and the County shall have the right to withhold payment if the County determines that the quantity and/or quality of the work performed is unacceptable.

Should the County wish to use the V-Bill Full Service Management Solution for the collection of fees, Vector Airport Services shall provide Aircraft tracking, billing, service, collection, and reporting services at a rate of 20 percent of collected revenue provided to the Airport on a monthly basis. Vector Airport Systems will make every effort to protect and safeguard the information from unauthorized use. Both County and Contractor reserve the right to renegotiate collections service fee charges by January 16 of each year.

**7. All other terms and conditions of the agreement dated January 16, 2017, between the County and Contractor shall remain in full force and effect.**

In witness of and in agreement with this Agreement's terms, the parties, by their duly authorized representatives, affix their respective signatures:

**VECTOR AIRPORT SYSTEMS**

\_\_\_\_\_  
Contractor Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Contractor Name (please print)

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