

EXHIBIT A

Noise and Operations Monitoring System

Los Angeles World Airports Noise and Operations
Monitoring System (NOMS) Scope of Work
Document

EXHIBIT A

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1 Introduction

This Scope of Work provides the details for the Los Angeles World Airports Noise and Operations Monitoring System (NOMS) Replacement. To the extent this Exhibit A is inconsistent with or contradicts any other provision in the main body of this Agreement, the main body of the Agreement will prevail.

The project is a replacement of all 7 noise monitoring terminals at VNY and 26 noise monitoring terminals at LAX. It is currently planned to reuse the existing infrastructure (foundations and masts) but a complete review of all infrastructure will be performed and provided to LAWA for agreement before NMT's are upgraded. All upgraded NMT's will be connected to the respective existing ANOMS systems for LAX & VNY. In addition to upgrading the NMT's, 14 existing NMT's around LAX will be decommissioned and the site works completed to return each location as close to its original condition as possible. There is optional scope to add additional noise monitoring terminals and that work can be requested and completed either during the project or maintenance phase of the contract.

The ANOMS software will remain largely unchanged, with focus around enhancing the ATC recording, playback and usability of the software.

2 Definitions and Abbreviations

Definition/ Abbreviation	Description
ANOMS	Airport Noise and Operations Monitoring System
EVS	Envirosuite
CEO	Chief Executive Officer or his or her designee
LAWA	Los Angeles World Airports
NMT	Noise Monitoring Terminal
VNY	Van Nuys Airport
LAX	Los Angeles International Airport
GIS	Geographical Information System
CMS	Complaint Management System
Agreement	This contract between Los Angeles World Airports and Envirosuite Inc.

3 Project Scope of Work

3.1 Project Planning

EVS will deliver the following items as outlined below during the initial project planning phase. Within one week after the NTP is issued, EVS will conduct a formal project kickoff meeting to present and discuss items below. EVS will propose and LAWA must approve final plans prior to commencement of work as noted.

1. NMT Site Evaluation Report – EVS will conduct an evaluation of each NMT site to determine need for full infrastructure replacement and deliver this report to LAWA within 2 weeks of project kickoff.
2. NMT Replacement/Demolition Plan – Based on results of site evaluation, EVS will prepare a detailed NMT replacement and demolition plan for delivery to LAWA within 2 weeks of providing the NMT Site Evaluation Report. This plan includes the overall strategy; approval process for proceeding with work (including a checklist for each NMT site and for NMT demolition); any site coordination, planning or permitting; a detailed description of side-by-side testing; final approval process of NMT work; etc. LAWA will review and provide feedback prior to LAWA providing approval of the plan.
3. Detailed Project Schedule – EVS will deliver the proposed detailed project schedule along with the NMT Replacement/Demolition Plan. LAWA will review and provide feedback prior to LAWA providing approval of the plan.
4. Final Acceptance Plan/Sign Off Document – EVS will deliver this plan to LAWA before the commencement of any site work for LAWA review and approval. This will include final acceptance testing for all project scope as approved by LAWA including NMT replacement/demolition, ANOMS software, and additional modules.
5. Title 21 Certification Plan – EVS will deliver this plan to LAWA for review and approval before commencement of any site work, which will include a description of the process and all required documentation.

3.2 Noise Monitoring Terminal Installations

3.2.1 Replacement of Noise Monitoring Terminals

The NMTs shall meet all performance requirements described in this scope of work, as well as all requirements of 14 CFR Part 150 and Title 21. The NMT system shall deliver reliable real-time data measurements over its service life with only regularly scheduled routine maintenance and replacement of consumable parts such as batteries and windscreens. The system shall alert LAWA to system faults automatically. The NMTs shall have software functionality that allows for configuration of the NMTs remotely, and that produces charts and reports on NMT status and performance in a form

or forms acceptable to LAWA. All configuration settings, including calibration, shall be capable of being performed remotely. The NMTs shall work seamlessly not only with ANOMS but also with other software solutions, including any successor aircraft noise monitoring system purchased and deployed by LAWA. Contractor understands and agrees that the noise monitors, although produced by the Contractor, are not being provided as a single source NMT for use only with ANOMS. The NMTs shall be constructed and configured in a manner that their functionality shall survive termination or expiration of this Agreement, allowing LAWA to have access to real-time data produced by the NMTs. NMTs shall be designed for continuous independent outdoor monitoring with continuous data transfer into ANOMS, any successor aircraft noise monitoring system purchased and deployed by LAWA, or any other third-party software used by LAWA. Contractor understands and agrees that LAWA owns the NMTs and the data derived therefrom and that such data shall be available and delivered to LAWA servers in real-time even if LAWA is no longer using ANOMS as its aircraft noise monitoring software solution.

Within two weeks of receiving the project NTP, EVS will perform a thorough site assessment and analysis to ensure the structural integrity of all mast and foundations during initial phase of project for the 33 NMT's listed in Table 3.2.1. EVS will provide LAWA with a report, including recommendation on which NMT's need complete infrastructure replacement (mast and base) and which NMT's do not.

For the permanent noise monitoring terminal locations listed in the table below that need the mast and base replaced, EVS will complete a full upgrade including the following:

1. Replacement of mast and base includes but is not limited to demolition, removal and disposal of old mast, base and other equipment or debris; coordination with local and government agencies for permits and approvals, and generation of any required site plans or surveys; coordination with local utility companies for power disconnects, new line runs as needed to complete installation.
2. Replacement of NMT hardware includes but is not limited to noise monitor, microphone, and necessary mounting accessories and wiring
3. All NMT's will maintain current power structure. For solar powered sites EVS will upgrade complete solar solution (panel, battery, controller, wires, mounting hardware and accessories)
4. LAWA staff will be responsible for coordinating access with LAWA Operations for access to airfield NMT110. EVS will be responsible for providing LAWA with any applications or other documents required for FAA and/or the Coastal Commission permits/approvals. LAWA staff will be responsible for coordinating with FAA and the Coastal Commission. EVS will be responsible for coordinating with city Planning and Building and Safety or other agencies as needed for other permits/approvals as required.

For the permanent noise monitoring terminal locations listed in the table below that do not need the mast and base replaced, EVS will complete a full upgrade including the following:

1. Replacement of NMT hardware including but not limited to noise monitor, microphone, and necessary mounting accessories and wiring (not including electrical wiring to mast).

2. All NMT's will maintain current power structure. For solar powered sites EVS will upgrade complete solar solution (panel, battery, controller, wires, mounting hardware and accessories)
3. LAWA staff will be responsible for coordinating access with LAWA Operations for access to airfield NMT110. EVS will be responsible for providing LAWA with any applications or other required documents required for FAA, and/or the Coastal Commission permits/approvals. EVS will be responsible for coordinating with other agencies as needed for other permits/approvals as required, however, LAWA staff will be responsible for coordinating with FAA and the Coastal Commission.

After the installation of each NMT, EVS will perform the following activities:

1. Title 21 compliant calibration of NMT and microphone
2. Documentation of all serial numbers and photos taken of installation
3. Title 21 certificate will be completed for inclusion into the Title 21 binder.

Once all NMT's are installed , EVS shall perform the following activities:

1. Provide LAWA with Title 21 binder for submission to the State of California for each airport (LAX and VNY). Binder will consist of:
 - i. Title 21 certificate for each NMT location
 - ii. Factory Certified Certificates of Conformance for all hardware
 - iii. Documentation for each Title 21 requirement that installed NMT's meet the requirement.
2. Perform threshold analysis on all locations to provide to LAWA.
3. Provide initial threshold analysis results to HMMH for peer review and LAWA for approval.
4. Complete Title 21 threshold documentation for submission to the State of California and provide LAWA with 2 Title 21 Threshold documents to submit to the State.

Table 3.2.1

Type	Description	Manufacturer	Model	Location
LAX NMTs				
110	Noise Monitoring Terminal	Envirosuite	EMU 3680	50 ft east of VOR Transmitter Bldg., S runway complex, Playa del Rey, CA 90293
111	Noise Monitoring Terminal	Envirosuite	EMU 3680	255 Waterview St., Playa Del Rey, CA 90293
112	Noise Monitoring Terminal	Envirosuite	EMU 3680	216 Sunridge St., Playa Del Rey, CA 90293
114	Noise Monitoring Terminal	Envirosuite	EMU 3680	745 W Mariposa Ave., El Segundo, CA 90245
115	Noise Monitoring Terminal	Envirosuite	EMU 3680	425 W Sycamore Ave., El Segundo, CA 90245
116	Noise Monitoring Terminal	Envirosuite	EMU 3680	649 Sheldon St., El Segundo, CA 90245
118	Noise Monitoring Terminal	Envirosuite	EMU 3680	On edge of baseball field across from 727 California St., Inglewood, CA 90245

119	Noise Monitoring Terminal	Envirosuite	EMU 3680	11877 Judah Ave., Del Air, CA 90250
121	Noise Monitoring Terminal	Envirosuite	EMU 3680	8821 Villanova Ave., Westchester, CA 90045
122	Noise Monitoring Terminal	Envirosuite	EMU 3680	6547 W. 87 St., Westchester, CA 90045
124	Noise Monitoring Terminal	Envirosuite	EMU 3680	9131 Airport Blvd., Los Angeles, CA 90045
125	Noise Monitoring Terminal	Envirosuite	EMU 3680	8816 Ramsgate Ave., Los Angeles, CA, 90045
126	Noise Monitoring Terminal	Envirosuite	EMU 3680	944 S. Eucalyptus Ave., Inglewood, CA 90301
127	Noise Monitoring Terminal	Envirosuite	EMU 3680	215 W Kelso St., Inglewood, CA 90301
128	Noise Monitoring Terminal	Envirosuite	EMU 3680	800 La Brea Dr., (Near Tamarack Ave), Inglewood, CA 90301
130	Noise Monitoring Terminal	Envirosuite	EMU 3680	Yukon Ave., Inglewood, CA (Near 102nd) Pole # 1055561E (3560 W. Century Blvd., Inglewood, CA 90303)
133	Noise Monitoring Terminal	Envirosuite	EMU 3680	9601 6TH Ave., Inglewood, CA (near 2721 W Hardy St., Inglewood, CA 90305)
134	Noise Monitoring Terminal	Envirosuite	EMU 3680	10706 Buford Ave., Lennox, CA 90304
135	Solar and Noise Monitoring Terminal	Envirosuite	EMU 3680	10126 Buford Avenue, Lennox, CA 90304
136	Solar Noise Monitoring Terminal	Envirosuite	EMU 3680	11034 Dalerose Ave., Lennox, CA 90304
137	Noise Monitoring Terminal	Envirosuite	EMU 3680	10820 Larch Ave., Lennox, CA 90304
140	Noise Monitoring Terminal	Envirosuite	EMU 3680	1147 W 97th St., Los Angeles, CA 90044
141	Noise Monitoring Terminal	Envirosuite	EMU 3680	2058 W. 84 th Pl., Los Angeles, CA 90047
143	Noise Monitoring Terminal	Envirosuite	EMU 3680	On West 106th Street and next to 10525 S. Manhattan Pl., Los Angeles, CA 90047
145	Noise Monitoring Terminal	Envirosuite	EMU 3680	On alleyway behind 814 Century Blvd., South Los Angeles, CA 90044
147	Noise Monitoring Terminal	Envirosuite	EMU 3680	Next to 9605 Wall St., South Los Angeles, CA 90003
VNY NMTs				
203	Noise Monitoring Terminal	Envirosuite	EMU 3680	8624 Odesa Ave., North Hills, CA 91343
205	Solar Noise Monitoring Terminal	Envirosuite	EMU 3680	16310 Shoenborn St., North Hills, CA 91343
207	Noise Monitoring Terminal	Envirosuite	EMU 3680	16133 Cantlay St., Van Nuys, CA 91406
208	Solar Noise Monitoring Terminal	Envirosuite	EMU 3680	7117 1/2 De Celis Pl., Van Nuys, CA 91406
210	Noise Monitoring Terminal	Envirosuite	EMU 3680	16225 1/2 Kittridge St., Van Nuys, CA 91406
212	Noise Monitoring Terminal	Envirosuite	EMU 3680	16441 1/2 Gilmore St., Van Nuys, CA 91406
213	Solar Noise Monitoring Terminal	Envirosuite	EMU 3680	6335 Woodley Ave., Van Nuys, CA 91436

3.2.2 Decommissioning of Noise Monitoring Terminals

EVS will decommission 14 sites (listed in the Table 3.2.2 below) including all devices, poles, foundations, and any other equipment, and return the site to the state as if the NMT was never installed. One (1) solar-powered NMT is located on the airfield and will require coordination with LAWA Airfield Operations.

1. LAWA staff will be responsible for cancelling power and communications, except for wireless cellular services currently managed by EVS, on all decommissioned sites.
2. LAWA staff will be responsible for coordinating access with LAWA Operations for decommissioning of airfield NMT. EVS will be responsible for coordinating with the FAA or other agencies as needed for other permits/approvals as required. LAWA can provide assistance where required.

Table 3.2.2

Type	Description	Manufacturer	Model	Location
LAX NMTs				
103	GRU1	Lochard	EMU 2300	On airport property at LAX
113	Solar and Noise Monitoring Terminal	Lochard	EMU 2300	8151 Tuscany Ave., Playa Del Rey, CA 90293
117	Noise Monitoring Terminal	Lochard	EMU 2300	Inside Water Tower Facility at 333 Lomita St., El Segundo, CA 90245
120	Noise Monitoring Terminal	Lochard	EMU 2300	7321 W. 85 th Street, Los Angeles, CA 90045. In alleyway adjacent to 7314 W. 85 th Street
123	Noise Monitoring Terminal	Lochard	EMU 2300	6431 84TH Pl., Los Angeles, CA 90045
129	Noise Monitoring Terminal	Lochard	EMU 2300	439 E 98TH, Inglewood, CA 90301
131	Noise Monitoring Terminal	Lochard	EMU 2300	11210 Doty Ave. Inglewood, CA, 90303
132	Noise Monitoring Terminal	Lochard	EMU 2300	Next to 3301 West 81st St., Inglewood, CA 90305 (8000 10th Avenue)
139	Solar Noise Monitoring Terminal	Lochard	EMU 2300	On parking lot of Woodcrest Library located at 1340 West 106th Street, Athens, CA 90044
142	Noise Monitoring Terminal	Lochard	EMU 2300	On West 91st St. and next to 8956 S. Gramercy Place, South Los Angeles, CA 90047
144	Noise Monitoring Terminal	Lochard	EMU 2300	On alleyway behind 1515 W. 79th St., South Los Angeles, CA 90047

Type	Description	Manufacturer	Model	Location
146	Noise Monitoring Terminal	Lochard	EMU 2300	On field next to 8715 Regina Ct., South Los Angeles, CA 90044
148	Noise Monitoring Terminal	Lochard	EMU 2300	403 104th St., South Los Angeles, CA 90003
149	Noise Monitoring Terminal	Lochard	EMU 2300	South Los Angeles Next to 8022 McKinley Ave., South Los Angeles, CA 90001

3.2.3 Addition of Noise Monitoring Terminals – Optional to be performed during project or maintenance period

EVS will install two new NMT's at locations approved by LAWA. Before recommending a final location EVS will perform the following activities:

1. Work with HMMH to provide a list of proposed monitoring locations to LAWA staff for review.
2. Perform two-week portable noise monitoring measurements at each proposed location provided by LAWA staff, up to a maximum of four locations. Portable noise measurements at additional locations can be performed for an additional fee.
3. EVS to provide report for each portable monitoring location including noise and flight track data to LAWA.
4. EVS to provide site survey report, In a form acceptable to LAWA, for each proposed location.

Once LAWA selects final locations, EVS will complete a full installation of a permanent noise monitoring terminal including the following:

1. EVS will be responsible for identifying the required construction permit(s) and for the cost of all permits associated to construct the new NMT's. EVS's responsibilities include, but are not limited to, obtaining permits for new electrical service, building permits and approvals, license agreements and any required site plans or surveys. EVS will obtain all permits, license and approvals for the ongoing operation of the installations in the LAWA's name. Additional fees to run electric power to new masts will be charged to LAWA on a T&M basis.
2. All new infrastructure including base, mast, noise monitoring terminals, solar solution, microphone, and all necessary accessories.
3. Title 21 compliant calibration once hardware is installed.
4. Provide LAWA with Title 21 paperwork for each location.
5. Provide LAWA recommendations on threshold levels.

3.3 General NOMS System Requirements

1. EVS will keep the existing 2 ANOMS systems currently in place at LAX and VNY and include two separate user interfaces, WebClient and SmartClient.

- i. **Web Client.** WebClient operates within any commercially available web browsersweb browser and provides easy access to the essential elements of ANOMS. The software shall provide an intuitive and easy to use workflow, increasing efficiency around the most common tasks of noise management, flight track investigation, complaint resolutions, and reports. Since the system is browser-based it can be used on any standard laptop or other device with internet access inside/outside of the LAWA network.

Smart Client. SmartClient shall include functionality that enables LAWA Noise staff to conduct more detailed investigations and analysis in order to resolve ad-hoc queries coming in from communities and regulators. Smart Client shall provide a series of interlinked data browsers and a high-performance 3D map display, which enables large sets of data to be reviewed and analyzed in flexible ways. Working from a single, consistent dataset SmartClient delivers a wide range of analysis such as penetration charts, selection zones, gates, corridors, track densities, flight track statistics. These analytics can be used to help resolve queries from the community such as understanding if aircraft have changed the way they use airspace over time, how this impacts communities on the ground, are aircraft getting louder (or lower) and if so, why, identify outliers and investigate the reasons.

2. The NOMS system delivered will meet the LAWA IT requirement outlined in Exhibit A-1 below).
3. EVS will provide a cloud-based Service (SaaS) solution NOMS. Except for the existing LAWA owned antenna and existing ATC radios, no additional hardware will reside on LAWA premises. ATC data will be stored in the cloud and not on existing hard drives current installed at LAWA. Existing ATC hard drives will be removed as part of project.
4. LAWA provided hardware to run the ANOMS client will meet the following minimum specifications:
 - i. Processor – Intel Core i7
 - ii. RAM – 16 Gb
 - iii. Disk - 500 Gb
 - iv. Video Card – 1G with support for OpenGL
 - v. OS – Windows 10 64 bit

5. EVS will provide a solution with the following access levels. LAWA will provide access levels required for each user.
 - i. Admin – access to all parts of ANOMS. User has full control and can edit or change data.
 - ii. Operator – access to a major portion of ANOMS functionality. Some critical editing features, such as NMT Editor, are restricted.
 - iii. Complaints Analyst – access to all browsers and analysis functions, can run one-off reports but cannot make scheduled reports, cannot edit any data other than Complaints/Enquiries, and can also run matching for newly entered complaints.
 - iv. View Only User – can view data, and present reports, but cannot make any changes to data or enter new data.
 - v. Realtime Viewer User – greatest restriction, allowing the user to view real-time information only
6. EVS will keep 10 years of data in the system online plus one additional calendar year of LAWA's choice.
7. EVS can archive older data and an additional annual fee has been included in the optional pricing section. In the event this option is not selected older data may be deleted. EVS will retain the last 10 years of data archived in the ANOMS. Any data prior to the last 10 rolling years will be deleted. The only exception is the one additional year LAWA selects per item 6 above.
8. EVS will provide accounts that are provisioned on a least-privilege basis where accounts are only created with the level of privilege required to perform their task.
9. EVS is not allowed to remove Personally Identifiable Information (PII) data records from storage in the United States without following due process to obtain permission. The permission to perform support tasks is received in conjunction with both the Service Delivery Manager and LAWA. The actions of the system administrators and database management is recorded by the Privileged Access Management System (PAM).
10. The ANOMS database will be encrypted at rest and data accesses from the smart client is encrypted in transit across the Internet,
11. EVS will ensure certificates for data access are replaced annually as part of the maintenance cycle.
12. EVS will ensure protection using a unified Firewall / Intrusion Prevention System where traffic is analyzed for malware, systems within the Virtual Private Cloud (VPC) are also protected using an industry standard anti-virus product.
13. EVS will ensure local data storage capability of 15 days when the NMT is offline from the central host.
14. EVS will provide less than 1 second clock drift

15. At the conclusion of the project phase and start of the maintenance services, EVS will enable the System Health Checks feature for both hardware and software that are monitored 24 hours a day by the Systems Management Console (SMC). Access to Health Check data will be provided to LAWA staff via interactive dashboard during project.
16. EVS will provide a Title 21 compliant system and provide necessary paperwork to achieve Title 21 certification from the State of California.
17. EVS will provide a system that can be upgraded with additional hardware, users or functionality as required. Additional fees may apply and EVS will provide LAWA pricing and obtain LAWA approval in advance of any work commencing.

3.4 Data Acquisition and Processing Requirements

1. EVS will provide a NOMS system that auto-exports HMMH RealContours.
2. EVS will provide a NOMS system that auto-exports to the LAWA Noise Portals (both LAX and VNY)

3.4.1 Noise Monitoring Capabilities

1. EVS will provide NMT hardware, EVS Bruel & Kjaer Type 3680, that measure "A" frequency weighting, filter characteristics, and "slow response" characteristics as defined in International Electrotechnical Commission (IEC) Publication No. 179 and meet all performance requirements for a Type 1 Sound Level Meter (SLM) as set forth in American National Standards Institute (ANSI) S1.4-1983 (R2006) / ANSI S1.4a-1985 (R2006).
2. EVS will provide NMT hardware that meets all CCR Title 21 requirements, including Articles 7 and 8, Noise Monitoring System Requirements and Specifications. These sections describe the requirements related to the placement of noise monitors in the community, system performance specifications, field calibration, as well as address environmental precautions and requirements, among other things.
3. NMTs will be compatible and swappable with cellular communications/modems from any of the major carriers (i.e. Verizon, AT&T, T-Mobile, etc.).
4. The NOMS system will automatically obtain and integrate noise measurement data collected from fixed NMT installations to adequately measure aircraft noise at all NMT locations. NOMS will have accessible noise-event discrimination parameters for each NMT and other capability to correlate and identify/differentiate aircraft noise from community noise events.
5. The NOMS system will continuously monitor and record one-second Leq data as well as other noise data necessary to calculate all noise metrics commonly used in the measurement of outdoor and aircraft noise (e.g., Lmax, SENEL, HNL, CNEL, etc.) and for the NOMS to summarize and report all pertinent noise statistics.

6. The NOMS system will measure, store, and report C-weighted and one-third octave band sound levels for analysis and correlation within the NOMS in a manner that meets all related performance requirements of IEC 61260 "Octave Band and Fractional Band Analyzers."
7. The NOMS system will allow real-time audio recording of noise events at each NMT that will be downloaded, stored and accessed through the NOMS.
8. EVS will provide all necessary equipment, recording devices, and media for audio recording. ANOMS System will store audio data for a minimum of one year for all noise events. Older audio recordings may be deleted.
9. EVS will provide cellular communications from a mix of the major carriers (i.e. Verizon, AT&T, T-Mobile, etc.) to ensure maximum upload/download speeds and reliability in connection for each NMT. Once cellular communication is in place, EVS will inform LAWA staff to terminate existing DSL communications at each monitoring location. It is the responsibility of LAWA staff to terminate such communications.
10. EVS will establish all necessary agreements with cellular providers and pay for ongoing cellular data monthly fees for the term of the agreement.
11. EVS will provide fixed NMTs with secure, weatherproof enclosures and conduit to house all electrical components.
12. The NOMS system will allow for a process to fully integrate data collected from portable noise monitors. Portable noise monitors are available for rental through EVS Los Angeles Office. Weekly pricing for rental has been provided in optional pricing table and rental includes:
 - i. EVS supply complete portable noise monitoring terminal, including modem, SIM card and all data transmission fees
 - ii. Deployment of portable NMT by EVS staff at location provided by LAWA
 - iii. Integration of portable noise monitoring data into ANOMS (and available on WebTrak if LAWA requests)
 - iv. Removal of hardware from monitoring location by EVS staff at conclusion of rental period.

3.4.2 Aircraft Operations Identification and Track Building

1. The NOMS system will automatically collect, load, and seamlessly integrate augmented and accurate flight track and operations data from the FAA's most current data feed (e.g. System Wide Information Management (SWIM)) for LAX and VNY. Data for each airport, LAX and VNY, must be at least a 65-nautical mile (NM) radius of each Airport's Reference Points, with a cut-off ceiling of not less than 25,000 feet MSL.
2. The NOMS system will include accurate aircraft flight data, including high level of accuracy with flight tracks, and identification of aircraft, operator, arrivals or

departures with their associated runways, overflights, or as local operations from any of the various airports in the surrounding areas, as well as the ability to identify particular procedures flown, etc.

3. The NOMS system will accurately identify helicopters, and determine which established helicopter route is being flown into and out of VNY
 - i. EVS will provide a custom detection routine to specifically target discrepancies associated with the high 1200 and Helicopter usage at VNY.
4. The NOMS will be able to specifically identify aircraft operators using registration/tail numbers for internal use only (not for display in the public flight tracking system).
5. The NOMS system will meet system accuracy limits as listed below:
 - i. Percent of flights with operating transponders tracked
 1. 99% or greater
 - ii. Percent of aircraft, operator, and flight plan data captured for flights with operating transponders
 1. 96% or greater
 - iii. Percent of tracked LAX/VNY operations associated with the proper runway at LAX/VNY
 1. LAX will exceed 99% accuracy from automated assignment
 2. VNY will exceed 95% accuracy from automated assignment
 - iv. Percent of broken tracks of LAX/VNY operations. Broken tracks define a situation when a single flight is represented by one or more separate track segments caused when the tracking algorithm detects missing track points for an extended window of time sufficient to prevent joining the segments into a single track.
 1. Less than 1%
6. The NOMS system will integrate flight track, flight identification, flight schedule, and aircraft owner information available from various sources into the database for every flight operation acquired. The radar feeds will be fused and streamed into ANOMS and WebTrak in real time. The below radar feeds, or equivalent, will be provided:
 - i. FAA SWIM Radar Data
 - ii. LNRS
 - iii. FAA Aircraft Registry
 - iv. JetNet

7. The NOMS system will allow system operators to enter missing flight plan, aircraft, and/or owner/operator identification data, and to edit any automatically or manually entered values of these types.
8. The NOMS system will allow LAWA the capability to view the raw radar track points used by the smoothing algorithm.
9. The NOMS system will integrate aircraft operator information from third-party resources, including LAWA created data sets, that can be prioritized separately for each airport and used to generate notifications for noise management programs.
10. The NOMS system will utilize existing flight data and runway utilization information to determine what air traffic flow is in use, when it occurs, and be able to record this information for use in system analyses.
11. The NOMS system will automatically import airport operations data from the Airport Security and Operations Compliance (ASOCS) database for LAX that includes runway status and air traffic flow, etc. The NOMS will integrate/correlate the ASOCS information to the flight data to allow for easy verification of operational conditions at any given time or based on selection of particular flight tracks.
 - i. LAWA will provide access of the ASOCS data to EVS but EVS will be responsible for integrating directly into the ANOMS solution.

3.5 Data Analysis and Reporting Capabilities

1. The NOMS system will have the following query functions:
 - i. The system browser query which provides flexible and ready access to flight, noise, complaints, weather, system event data with quick select query options that allow users to access yesterdays, last week, month or year's data. With additional options allowing filtering on fields including but not limited to time of day, airport, runway, aircraft type, operation type, noise events as well as complaint & complainer details.

The query can be commenced from a single click, and if required cancelled easily with a single click. Once run, the system browser query will extract and load data into either a single browser or all relevant browsers that are open. With that data also available for display on the supporting map, providing easy and ready access to all data.
 - ii. Spatial queries enable users to filter data on a map using geographic zones, corridors, gates or the track filter which provides filtering using a cylinder, hemisphere or inverted cone. The Inverted cone aligns with research from the UK CAA's on human perception of overflight contained within CAP1498 providing a more representative overflight count.
 - iii. Advanced Queries via Query Generator provides an easy to use graphical interface to the ANOMS database. Enabling users to create bespoke queries quickly and easily for personal or team use. Data can be loaded into the system browsers and map display, extracted into Microsoft Excel or.csv files,

or, directly into user created templates. Allowing users to setup their own customized reports which can then be re-produced within a couple of clicks.

2. The NOMS will have a high user-friendly graphic user interface ("GUI"), including a GIS-style map allowing users to adjust the displayed symbols and select which layers are shown on the screen while assuring the layers are properly aligned with the flight track data.
3. The NOMS will provide "replay" capabilities for analysis of noise, flight track, complaint, and other information. The replay feature will also allow for the synchronized listening of ATC recordings.
4. EVS will provide a NOMS that has data correlation with the following requirements:
 - i. Flight plans to flight tracks using a robust algorithm that considers a range of factors to link the plan to the flight track. This includes a broad consideration of the operational time to take account of potential delays.
 - ii. Noise events to flight tracks considering a range of variables designed to identify the likely source of the recorded noise event. This includes:
 1. The time of the point of closest approach to the NMT,
 2. The ground distance and altitude at the time of maximum level (allowing for sound propagation time),
 3. Expected noise from the aircraft by type,
 4. Rate of climb or descent,
 5. Directivity of noise radiated from the aircraft at time of maximum level, and the
 6. FAR 36 Noise Values.
 - iii. By considering all of those factors the most likely aircraft is assigned the noise event and multiple noise events can be assigned to a single operation. But if two or more aircraft are considered likely, the event is flagged as a multiple aircraft event. If the event is likely due to a community source, wind noise or an equipment malfunction the event is classified accordingly.
 - iv. **Aircraft Noise Event Extraction Methodology (ANEEM).** The ANEEM algorithm, included as part of ANOMS, shall provide the most accurate correlations technique used to match aircraft tracks to noise events. ANEEM will replace the existing threshold-based noise event detection at as many sites as feasible. EVS will work directly with LAWA to submit updated ANEEM threshold settings to obtain Title 21 certifications at all locations to be changed. The configured ANEEM will be taken into production once the optimum configuration has been determined. If requested by LAWA, historical data analysis and other data processing related to the deployment of ANEEM will be proposed as part of environmental services (optional

pricing).

- v. Complaints are correlated to flight tracks using time and distance-based settings which can be changed in the client. In addition, rules can be created and tuned to allocate the complaint to the aircraft which was most likely to have caused the disturbance at the complainant's location. Multiple complaints can be assigned to a single (or multiple) operations.
5. EVS will provide a NOMS where all collected data is stored in that cloud database and while back-ups and duplicates are made for system resilience purposes, historical data is never archived or stored offline (with the exception of clauses 3.3.6 & 3.3.7)
 6. EVS will provide a NOMS system with the ability for aircraft operations analysis - allow users to perform flight track analyses and querying of flight tracks using the point of closest approach to physical locations on the ground, or gate, corridor, or other spatial query tools.
 7. EVS will provide a NOMS system with the ability for noise data analysis - identify and classify noise sources, discriminate between noise sources generated by single flights, multiple flights, community events, etc.
 8. EVS will provide a NOMS system with the ability for Reporting - provide comprehensive report generation capabilities, including recurring and ad hoc reports. Describe capabilities for reports to be saved and scheduled to automatically run at user-defined times.
 - i. 4 Automated reporting dashboards that will automatically refresh providing access to insights and data within a click, with cross-filtering enabling data investigation.
 - ii. Standardized reporting which, within a few clicks, provides insights on operations, noise, complaints, violations trends, tailored reports and bespoke letters. These reports can be run on demand or scheduled to be produced on a regular basis. When paired with the Print Report option, the report can be generated to pdf when the user arrives in the office.
 - iii. User-setup queries and reporting templates provide data directly into system browsers, Microsoft Excel and Microsoft Word templates, with map-based data available for export in GIS/AutoCAD formats. Nearly 1,000 user setup queries in the Los Angeles International and Van Nuys Airport System.

3.6 Air Traffic Control Data Integration

3.6.1 Air Traffic Control Data Integration Utilizing Existing Hardware

EVS will deliver an ATC system that utilizes the existing DLI hardware that is installed at LAX and VNY. The current systems utilized by LAWA at LAX and VNY comprises of:

- 16-Radio Channel Recorders
- Power Controllers
- Cavity Filters
- Antennas
- Server equipment (power supplies, battery backups, infrastructure equipment)

The current DLI system's capabilities include ATC frequencies are monitored and recordings are collected, stored, and integrated into ANOMS. The existing system through the DLI hardware allows integration into ANOMS to playback complete, clear, and easily understandable audio transmissions between Air Traffic Control and aircraft.

EVS's ATC solution allows ANOMS users the ability to query ATC audio through a dedicated ATC browser by airport, date, and radio frequency channel. ATC playback is also available in ANOMS through the Replay feature that allows users the ability to select a time period to replay aircraft operations and to select then play radio frequency channels to playback during the Replay.

The main difference in the solution as it operates today, and the new solution, is the ATC recordings will be stored in an EVS data center and not on the hard drives currently installed on LAWA premises. The ATC will still integrate directly into ANOMS and due to it being stored in an offsite data center it will be accessible outside the LAWA network.

1. In advance of the project kickoff meeting EVS will perform a site visit with DLI staff to both LAX and VNY. During this site visit a formal inspection of all hardware, including antenna, will be performed. EVS will present the finding to LAWA staff via a recommendation of work to be performed via the resulting site inspection report.
2. Following the site inspection EVS will work with LAWA staff to ensure the LAWA owned antenna is operating correctly on all frequencies. In the event LAWA determines the antenna needs to be relocated EVS will coordinate with the appropriate personnel at LAWA to perform the work. (Based on recommendation from DLI site inspection). As the existing antenna is LAWA owned, all costs associated with relocating the antenna will be billed to LAWA.
3. EVS will redirect the ATC recordings coming from the existing radios installed at LAWA facilities to send the data to the EVS data center. This data will then be integrated into ANOMS to allow for playback of ATC recordings directly from ANOMS. EVS will work through the following three options (in this order) for data transmission of recordings from LAWA facilities to EVS data center.
 - i. Cellular communications (assuming reasonable data transmission fees as determined by EVS and LAWA can be achieved)

- ii. Addition of a direct internet connection to LAWA facilities fully paid for by EVS.
 - iii. A direct connection utilizing LAWA existing building internet. EVS understand this is the least desirable option and will only use as a last option. In the event this option is require EVS will adhere to all LAWA IT policy requirements and will work directly with LAWA IT to deploy solution.
4. Upon successful integration of the ATC data through the EVS data center and into ANOMS, EVS will remove the hard drives currently installed at LAWA offices.
 5. EVS will support the ATC radios installed at LAWA for the duration of the agreement.

3.6.2 Air Traffic Control Data Integration Utilizing Web-based ATC Solution – Optional to be Implemented at LAWA Descretion

EVS will deliver an ATC solution that utilizes a web-based ATC data feed from a third-party vendor. The ATC recordings will be stored in an EVS data center, and not on the hard drives currently installed on LAWA premises. The ATC will still integrate directly into ANOMS and due to it being stored in an offsite data center it will be accessible outside the LAWA network.

1. EVS will work with LAWA staff to ensure sample ATC recordings are operating correctly on all frequencies as outlined in the RFP. EVS will provide recordings for the 16 channels required for LAX and the 10 channels required for VNY. In the event a channel frequency is changed by the FAA, or other entity, EVS will work with the third-party supplier to ensure the frequencies are replaced. Where available EVS will integrate additional frequencies as request by LAWA (additional fees may apply).
2. EVS will work to integrate ATC recordings into the EVS data center. This data will then be integrated into ANOMS to allow for playback of ATC recordings directly from ANOMS.
3. Upon successful integration of the ATC data through the EVS data center and into ANOMS, EVS will remove the hard drives and existing ATC infrastructure currently installed at LAWA offices.
4. EVS will support the ATC solution for the duration of the agreement.

3.7 Weather Data Integration

1. EVS will provide a NOMS system that collects weather data from a variety of sources including the airport's digital Automatic Terminal Information Service (D-ATIS), Meteorological Terminal Air Report (METAR), inversion layer data from the South Coast AQMD (SCAQMD - https://www.aqmd.gov/assets/forecast_today.txt) and from a national rainfall radar system

2. All collected data will be streamed in real-time into the ANOMS system, with the D-ATIS and METAR updates incorporated as soon as the information is updated.
3. Users can access the weather reports using the dedicated weather browser where the collected information can be viewed and analyzed in date order.
4. The rainfall layer will be shown through replaying the operational data on the map.
5. The same replay functionality is also available in public facing flight tracking and engagement tools.

3.8 Complaint Management System

EVS will have two complaint management systems, one for each airport (LAX and VNY), that will integrate directly with the respective airport ANOMS system. The CMS (complaint management system) is a community facing tool that is utilized to collect, manage, and respond to community concerns. Listed below are the required functionality of the CMS systems that will be provided within this contract:

1. The CMS (Complaint Management System) will capture complaints via the following methods:
 - i. Mobile App supplied by EVS
 - ii. Web-Form integrated with Public Flight Tracking System
 - iii. Telephone Calls
 - iv. Third Party API
2. The CMS will provide auto transcription of voice to text data into the NOMS, the ability to store the voicemail's audio file within NOMS for easy access
3. LAWA can request additional work, including integrating the Noise Portal with the CMS. This work would be part of the environmental services budget in the optional pricing. A formal proposal will be provided and approved by LAWA before performing work.
4. The CMS will allow staff to enter data manually when communicating directly with a caller.
5. The NOMS and CMS will protect personally identifiable complainant information, collected or transferred by the NOMS, per U.S. and applicable foreign laws related to data privacy.
6. EVS will employ most up-to-date industry standards of cybersecurity in protecting data and detecting and responding to breach of any kind.
7. The NOMS will correlate complaints to flight tracks.
8. The CMS will determine the identity of the complainant and maintain that identity information to access complainants noise complaint history.

9. The CMS will determine the numbers of individuals, complaints and specific contact method for each complaint.
10. The CMS will flag complaints for investigation and response, generate complaint responses from operator-selected prepared forms or templates and provide easy electronic responses to complainants.
11. The NOMS and CMS will allow users to perform data analysis to support users in correlating the noise complaint with the responsible noise and aircraft event
12. The NOMS and CMS will provide interactive real-time noise comment summary and trend analyses, the ability to query complaint information based on a specific time period and/or types of disturbances reported, and easily produce charts, graphs, tables, etc., as well as periodic

3.9 Public Flight Tracking System

1. EVS will provide two public flight tracking systems, one for each airport (LAX and VNY).
2. The public flight tracking systems will
 - i. Provide a public display of all live **flight** operations
 - ii. Provide a public display of historical **flight** operations for up to a maximum of the last 120 days. Note: the current historical view for tracks is set to 90 days for both LAX and VNY public flight tracking systems and does not need to be changed.
 - iii. Provide a public display of all live **noise** data
 - iv. Provide a public display of historical **noise** data for up to a maximum of the last 120 days. Note: the current historical view for noise is set to 90 days for both LAX and VNY public flight tracking systems and does not need to be changed.
3. Provide a webform for public complaint submission
4. Integrate with the CMS and NOMS so all complaints entered via the public flight tracking webform are automatically correlated with a flight and included in NOMS.

3.10 NOMS Acceptance and Training

1. For the delivery of ANOMS to Los Angeles World Airports the following training program will be delivered:
 - i. Core ANOMS/Viewpoint Training
Custom modules based on the type of ANOMS installation. The training will be a mixture of lectures, demonstrations and hands-on practice. Each

participant will be given the opportunity to practice the new knowledge to reinforce concepts. Training will be conducted on a dedicated platform and using live or historical data if the system feeds are available (noise, radar, flight plans and weather).

Item	Course	Location	Days	Timing
1	Four, 1-hour introductory webinars (delivered remotely or live)	Customer	.5	Pre-SAD
2	ANOMS, WebTrak and Viewpoint (delivered remotely or live by EVS trainer)	Customer	5	Pre-SAD

- ii. Custom Specialist Training focusing on specific workflows for the noise and operation staff. This training will be delivered by the subject matter expert via webinar and will be designed to provide in depth knowledge on best practices.

Item	Course	Location	Days	Timing
1	Complaint management	Customer	1	Pre-SAD
2	Data Grooming techniques and tools	Customer	1	Pre-SAD
3	Reports	Customer	1	Pre-SAD

- iii. There is no limit to the number of attendees at the training. LAWA will provide a final count 1 week before training is performed to ensure EVS completes necessary training preparation.
 - iv. EVS will provide a document detailing the process to install the ANOMS client on LAWA PC's. Additionally, EVS staff will be available to come onsite and assist with installation of ANOMS on any client PC's.
 - v. EVS will provide LAWA staff access to the FOCUS user support portal where additional training information is available.
2. EVS will deliver a final acceptance plan to LAWA before the commencement of any site work for LAWA review and approval. This will include final acceptance testing for all project scope as agreed upon including NMT replacement/demolition, ANOMS software, ATC solution and additional modules. This information will be provided in advance of the project kickoff meeting. LAWA will approve final acceptance plan before any site work will commence.
 3. Following complete system installation EVS will schedule a final acceptance meeting with LAWA staff. During meeting EVS will review system installation documentation, including all Title 21 documentation and perform a review of installed software.

4. At the conclusion of a successful final acceptance meeting CEO, at his or her sole discretion, will sign the formal acceptance document. This signature officially ends the project phase and signifies acceptance before commencement of the services and maintenance contract.

3.11 Project Timeline

Project timeline below does not include optional replacement of infrastructure and each noise monitoring terminal location. Following the analysis performed by Envirosuite on each location, LAWA will make a final determination on all infrastructure that needs to be replaced. In event everything is replaced, the project would expand with an expected close date 12 months following NTP.

Description	Duration*
Notice to Proceed (NTP)	TBD
(VNY) - Replace 7 NMTs <ul style="list-style-type: none"> • Planning & Design • Product Procurement • Equipment Staging • Installation/Testing/Commissioning 	NTP + 90 Days
(LAX) - Replace 26 NMTs & 2 New NMTs <ul style="list-style-type: none"> • Planning & Design • Product Procurement • Equipment Staging • Installation/Testing/Commissioning 	NTP + 180 Days
LAWA - LAX/VNY Two ANOMS <ul style="list-style-type: none"> • General System Requirements • Data Acquisition & Processing • Aircraft Operations ID & Track Building • Data Analysis & Reporting • Air Traffic Control Integration • Weather Data Integration • Viewpoint – Complaint Management • WebTrak – Public Flight Tracking System 	NTP + 90 Days
Acceptance - Certification – Warranty <ul style="list-style-type: none"> ▪ Equipment Testing ▪ Training 	NTP + 180 Days

<ul style="list-style-type: none"> ▪ ANOMS Documentation & Warranty ▪ Decommission and Removal 14 sites ▪ Acceptance Testing ▪ Final Acceptance 	
<p><i>*Duration is based on working days (M-F excluding public holidays) and based on removal and replacement of monitoring equipment on existing infrastructure.</i></p>	
<ul style="list-style-type: none"> • A detailed project schedule will be provided to LAWA during the Project Planning Phase. 	

4 Services Definitions

Term	Definition
Agreement	this Environment Office Services Agreement.
Radar Activation Date	date that System is connected to a new flight track data feed listed in Schedule C.4 Data Subscriptions
Customer Country	United States of America
Hosted Systems	the Customer equipment and applications listed in the table “System Hosting Services” in Schedule D.3.
NMT	Noise Monitoring Terminal
Reference Data	the list of reference information shown Schedule C.6
Responsible Party	the person(s) or organisation responsible to address a specific issue of fault with the System. This could be a Customer contact or, depending on the scope of the Services, it could be a Supplier contact or a third-party contact.
SDM	Service Delivery Manager - the Supplier-appointed person assigned to act as a single point of contact for matters relating to the provision of the Services.
Service Fees	the fees specified in Schedule F:
Service Levels	the performance levels defined in Schedule E:
Services	the services provided by Supplier including subcontractors under this Agreement.
Special Clauses	the obligations and liabilities defined in Schedule G:
Specifications	the manuals, system descriptions or other published documentation describing the functionality and performance of the Supplier Hardware, Supplier Software, Subscribed Applications, or Subscribed Data.
Subcontractor	third party engaged by the Supplier to provide all or part of the Services

Subscribed Applications	the list of applications listed in Schedule C.5
Subscribed Data	the list of data services listed in Schedule C.4
Supplier Software	software listed in Schedule C.3 as having Envirosuite as the author.
Supplier Spare Parts	the list of System components shown in Schedule C.2
Support Request	a request in writing from Customer to Supplier for work to be performed under this Agreement as defined and in the form described in Clause 6.2 below
System	the hardware, software, on site spares, subscribed applications and subscribed data listed in Schedule C:
System Component	one of the items comprising the System.
System Upgrade	once off hardware and software upgrade of the System
Termination Services	The services described in Schedule A.1.
Third Party Software	software listed in Schedule C.3 as having an author other than Envirosuite.
Noise Forum	user group meeting, which Supplier may organize from time to time, to discuss technical issues related to airport noise and the use of Supplier products and services.
Working Day	Monday through Friday inclusive, excluding Customer public holidays and Australian public holidays.
Working Hours	between 8:30am and 5:30pm local time in the main place of business of Customer on any Working Day.

5 Services Scope of Work

- a The Services shall be provided according to the applicable Service Levels.
- b The Services apply only to the System. Correct operation of the System may depend on correct operation of other systems (including data feeds, power supplies, and communication links), some of which could require actions from other entities. Supplier's obligations under this Agreement shall be excused if, and to the extent that, the System does not work correctly as a result of the failure of these other systems and the supplier is doing everything in their ability to resolve the issue.
- c If the Customer becomes aware of an interruption to a system or service which is likely to cause interruption to the System or Services which are the subject of this Agreement, Customer shall notify Supplier where reasonably practical to do so:
 - (i) Seven (7) calendar days in advance of any planned outage; and
 - (ii) Within four (4) Working Hours of an unplanned outage.

6 Service Management

6.1 Service Reporting

- a Supplier has an assigned SDM and shall advise Customer of the name of the assigned SDM. Customer shall be notified in writing prior to any changes to the assigned SDM in the future.
- b Supplier shall provide access to the Supplier ticket management system via a customer web portal. Supplier shall provide a quarterly report on the utilization of The Services provided under this agreement and the performance against the service levels.

6.2 System Support

- a Supplier shall provide support in the form of advice by telephone or email in response to a telephone call or email from Customer in relation to the operation of the System.
- b Supplier's telephone/email support services shall operate during Working Hours.
- c Support requests shall be advised to Supplier by email to the contact details for Customer Support listed in Schedule B:. When advising requests, the following information shall be provided:
 - (i) Request title, which will be used as the "Title" of the request for subsequent tracking.
 - (ii) Customer reference number (if any)
 - (iii) Customer contact details, including email address, phone number etc.
 - (iv) The Airport and location of items which are the subject of the request
 - (v) Date and time of the request
 - (vi) A description of the request including, as attachments, any screenshots, error logs, etc. as may be useful to assist in Supplier response.
 - (vii) An indication of the urgency or severity of the request; for example; 1= Urgent – Data Loss, 2= Major Loss of Function, 3= Loss of Function, 4= Minor Anomaly, 5=Request for Assistance.
- d Supplier will enter this information into the Supplier's ticket management system and a reply will be sent acknowledging the request and identifying the unique ticket number that is to be used in all future communication concerning this request.

6.3 Customer Visits

- a The SDM or a delegated alternate shall meet with Customer at least as often as specified in Schedule D.1. Such meetings shall be at a location and have an agenda and duration

mutually agreed upon and predetermined by Customer and Supplier. Each day of such meetings shall be for a maximum of eight (8) hours per day.

6.4 Noise Forum

- a On request from Customer, Supplier will provide the number of tickets specified in Schedule D.2 each year of this Agreement to a Noise Forum.
- b Customer shall be responsible for the travel expenses (transportation, lodging etc.) and meal expenses (except for meals provided as part of the official Noise Forum activities) of its attendees at Noise Forums.

7 Maintenance Services

7.1 Fault Management

- a Supplier will rectify faults in the System during the term of this Agreement and as required to return the System to operating within substantial conformity with the Specifications.
- b Any faults found by Customer shall be advised to Supplier by email to the contact details for Customer Support listed in Schedule B: and in the form described in Clause 6.2 above.
- c Supplier will enter this information into the Supplier's ticket management system and a reply will be sent identifying the unique ticket number that is to be used in all future communication concerning this fault report.
- d If requested, Customer shall explain how the fault prevents substantial conformity of the System with the Specifications.
- e Supplier shall carry out remedial work either remotely or on Customer locations at Supplier's discretion and in accordance with the Service Levels.
- f Supplier will use best efforts to resolve all faults and requests in a fast and efficient manner with a minimum disruption to Customer's operation.

7.2 Software Upgrades and Patches

- a Customer shall be entitled, at no additional license fee, to patches and upgrades to the Supplier Software that Supplier shall, from time to time, develop and make available where such patches and upgrades relate to features of the Supplier Software currently supplied and/or licensed to Customer.
- b Supplier shall notify Customer of upgrades to Supplier Software when they are made available for general distribution. Customer may or may not choose to install the upgrade. Supplier shall not make any modifications to the Supplier Software version installed at

Customer's location without prior written notification to and consent from Customer. Supplier will install the upgrade only after receiving Customer approval in writing.

- c Supplier shall ensure that any installed patches and upgrades to the Supplier Software do not remove any existing functions or capabilities currently in use by LAWA that are not planned to be changed by the upgrades, do not excessively delay ongoing data collection and processing, do not affect the operation of any previously installed standard or custom reports not planned to be changed by the upgrade, do not result in loss of any previously collected data, and do not change any previously calculated results or report outputs.
- d When an upgrade to Supplier Software requires an upgrade to Third Party Software, Supplier will advise Customer accordingly.
- e Customer acknowledges that an upgrade or new version of Third Party Software during the term of this Agreement, may require new or upgraded hardware and any additional cost of new hardware or software to support the upgrade is not included in this Agreement.
- f Customer acknowledges that the application of an upgrade to Supplier Software or Third Party Software may require engineering effort, additional hardware, travel expenses, or end user training and that, unless specified elsewhere in this Agreement, costs associated with the provision of these items are not included in the scope of this Agreement.
- g On request from Customer, Supplier shall provide a quotation for the works described in Clause 7.2.e and the rates applicable for that work shall be as defined in Schedule 0.
- h Supplier may declare a particular upgrade or set of upgrades to Supplier Software to be a new general release of the Supplier Software. Supplier reserves the right to cease supporting versions of Supplier Software that are more than two general releases older than the current general release or only to offer such support at increased Service Fees.
- i Nothing in this Clause 7.2 shall imply that Customer is entitled to any software except the Supplier Software. In particular, Supplier may provide additional functionality as a new, and separately licensable, module of the Supplier Software, in which case the new module may be offered to Customer as defined in Clause 12

7.3 Hardware Repair

- a The System hardware as defined in Schedule C.1 requiring physical repair will be repaired by return of the items to Supplier for repair unless explicitly stated otherwise.
- j Supplier shall determine whether, in order to deliver the Services, it is necessary to return a System Component or part(s) of a System Component.
- k Supplier shall repair or replace the item(s) according to the Service Levels and shall return the item(s) to Customer at Supplier's expense.
- l Supplier will be responsible for repairing or replacing the faulty equipment with the Supplier's spares. This would include all transport, preparation and installation costs.

7.4 Specific Exclusions

- a The following faults are not included in the scope of this Agreement and will not be rectified by Supplier
 - (i) Faults in power connections to equipment, except Hosted Systems.
 - (ii) Faults caused by abnormal events, such as vandalism, lightning strikes and damage outside of Supplier's control, except components of Hosted Systems.

8 System Management Services

8.1 System Monitoring

- a Supplier shall monitor the System for abnormal conditions, including incomplete data downloads and out-of-band calibration results, and shall advise the Responsible Party of any detected abnormal conditions.
- b Customer shall advise Supplier of the Responsible Party for various abnormal conditions where Supplier is not the Responsible Party.

8.2 System Administration

- a Supplier shall provide system administration services as defined in, and at the frequency stated in, Schedule D.4 System Administration Services.
- b Supplier may carry out system administration services at any time during the normal business hours of Customer. Supplier may carry out system administration tasks outside of those hours by mutual agreement.

8.3 Periodic Hardware Services

- a Supplier shall provide qualified, trained service personnel for performing system maintenance, and provide repair and replacement services in the event of ANOMS or computer failure
- b Supplier shall provide hardware services as defined in, and at the frequency stated in, Schedule D.5 Periodic Hardware Services.
- c Periodic hardware service shall be completed within 20 working days from start of hardware inspections.
- d Supplier shall immediately report "Major Faults" discovered during Periodic Hardware Services to the Customer and shall work to resolve major faults in accordance with Service Levels.
- e Within 30 days of the completion of each periodic hardware service, Supplier shall present a report to Customer on the status of the units, and any issues needing to be

addressed. Supplier shall present maintenance report to Customer for each noise monitor to provide documentation, including appropriate pictures, calibration and site inspection results that comply with Title 21 and LAWA's Noise Monitoring Plans. In addition to a report for each monitor, the Supplier will also provide a summary page(s) listing each monitor, the calibration results showing compliance at the time of inspection, and whether any site maintenance is required to keep obstructions from the sound field. The report will also note any issues needing to be addressed and propose a plan to correct/resolve the issues.

8.4 Supplier Spares

- a Supplier shall provide the Supplier Spare Parts at Suppliers expense, to be located in Supplier Southern California office premises and available to be used in fault rectification as required.
- b On termination of this Agreement, Supplier retains ownership of Supplier Spare Parts.

8.5 System Hosting

- a Supplier shall, in its own facilities, maintain, administer, and operate the Hosted Systems consistent with the applicable Service Levels.
- b Supplier shall report performance against the Service Levels according to Clause 6.1 and shall also make recommendations on any actions or upgrades which might be necessary to improve or secure performance of the Hosted Systems.
- c Supplier shall take all necessary precautions to safeguard Customer data and Customer network security; Hosted System shall meet or exceed Customer network security protocols per Exhibit C of RFP.
- d Supplier shall notify Customer within two Working Days of any confirmed security or data breach of the Hosted Systems.
- e Customer shall at all times have full ownership of the collected {raw noise} data.

8.6 Backup and Restoration

- a The responsibility and frequency of system backup is stated in Schedule D.8. System Backup.
- b In the event of complete system failure, Supplier will restore the System from the latest available system backup.

9 Information Management Services

9.1 Data Processing Services

- a Supplier shall provide data processing services as defined in, and at the frequency stated in, Schedule D.6 Data Processing Services.
- b Supplier will maintain a log of data processing services tasks undertaken and make that log available to Customer as part of regular service reporting.

9.2 Report Production Services

- a Supplier shall provide report production services as defined in, and at the frequency stated in, Schedule D.7 Report Production Services.

10 Subscription Services

10.1 Application Subscription

- a Supplier will provide the Subscribed Applications to Customer according to the Specifications and according to the Service Level. As required, Supplier will provide application patches and upgrades as well as hardware upgrades in Supplier's application infrastructure.
- b For the term of this Agreement, Customer will have a non-exclusive right to use the Subscribed Applications.C.5Application Subscriptions
- c Subscribed Applications remain the exclusive property of Supplier.
- d Customer will not use, or cause others to use, the Subscribed Applications or the information derived from the Subscribed Applications for the real-time control or navigation of aircraft, or for any purpose related to the real-time control or navigation of aircraft.
- e The information contained within the Subscribed Application is a combination of data from a variety of sources and may include information derived from Customer and from third party sources. Supplier does not warrant the accuracy or availability of the information within the Subscribed Applications.
- f Supplier and Customer agree to abide by the terms of any third-party data agreements that are required in order to provide the Subscribed Applications.

10.2 Data Subscription

- a Supplier will provide the Subscribed Data to Customer according to the Specifications and according to the Service Levels.
- b For the term of this Agreement, Customer will have a non-exclusive right to use the Subscribed Data subject to any limitation on use specified in Schedule C.4.
- c Customer will not use, or cause others to use, the Subscribed Data or information derived from the Subscribed Data for the real-time control or navigation of aircraft, or for any purpose related to the real-time control or navigation of aircraft.
- d Supplier and Customer agree to abide by the terms of any third-party data agreements that are required in order to provide the Subscribed Data.
- e Additional costs incurred to Supplier from changes in third party data agreements during the Term will be passed on in accordance with Schedule F.5.

10.3 Reference Data

- a Supplier shall provide updates to the Reference Data at the frequency as shown in Schedule C.6.
- b Customer has exclusive right to System data including fields populated with Reference Data.

11 Professional Services

- a Supplier will provide Environmental Services per annum for the term of the contract to be used at any time within the contract term, as per Schedule G.5. An Environmental Services budget has been included as optional pricing within pricing table.
- b No additional services shall be performed unless Supplier provides a written quotation, which is approved in writing by Customer prior to Supplier providing such services.
- c On request from Customer for additional services, Supplier shall provide a quotation for the additional services. Where applicable, the quotation shall be based on the rates shown in Schedule O.

12 New Modules

- a Supplier shall notify Customer of new module(s) applicable to the System when they are made available for general distribution along with the applicable additional license fees, installation fees, and/or additional Service Fees applicable to such new module(s).
- b The installation fees and/or any increase in Service Fees applicable to the new module(s) shall, where applicable, be based on the rates shown in Schedule O.
- c The new module(s) will only be made available to Customer following Customer's written acceptance of the additional license fees, installation fees, and or additional Service Fees applicable to the new module(s).

13 Obsolescence

- a Supplier may undertake a review of the System three (3) years after the Effective Date of this Agreement and annually thereafter and may recommend the replacement of obsolete Customer-owned equipment or Customer-owned equipment not meeting specifications. Any such replacement recommendation shall be reasonable and justified.
- b If Customer does not accept the recommendations within 6 months, Supplier may cease to provide Services for the System or may only offer such support at increased Service Fees.

14 Customer Obligations

14.1 Compliance with License terms

- a Customer's use of the System shall, at all times, be consistent with any license terms which apply to the System or any System Component.
- b Supplier Software is licensed to Customer under the standard Envirosuite End User License Agreement.

14.2 Physical and Electronic Access:

- a Customer shall maintain a secure means (such as a virtual private network) to connect Customer workstations to Supplier's Hosted System. Supplier shall assist with information where necessary to establish this link.
- b On request from Supplier and in a timely manner, Customer shall provide all user IDs and passwords to Supplier as shall be reasonably required by Supplier to perform the Services.
- c Customer shall provide Supplier's service personnel with full and safe access to the System at all reasonable times for the purpose of providing the services required by this Agreement. Customer shall also provide suitable vehicle parking areas.
- d The access shall include unhampered working facilities, adequate light, heating, cooling, ventilation, suitable electrical outlets and computer network connections to enable Supplier to meet its obligations under this Agreement.
- e Customer shall provide Supplier's service personnel with all information, facilities, services and accessories reasonably required by Supplier to meet its obligations under this Agreement. Customer shall arrange and pay the fees for site specific permits, permissions and certificates required by Customer for site access by Supplier's personnel required for site access, including site specific training if required. At Supplier request, Customer will provide a cherry picker for NMT maintenance.
- f Customer shall provide, on request, a suitably qualified or informed representative to accompany Supplier's service personnel and to advise Supplier on access or any other matter within Customer's knowledge or control that will assist Supplier in meeting its obligations under this Agreement.

Schedule A: Summary of Services Provided

The following table, which summarizes the services to be provided under this agreement, is included to aid understanding of the scope of those services. The Services are defined in the body of this Agreement and in the Schedules and, in the event of conflict between this table and the rest of this Agreement, the rest of this Agreement will take precedence.

Service Line Item	Clause	Schedule	Status
Service Management			
Service Reporting	6.1	B	Included
System Support	6.2	B	Included
Customer Visits	6.3	D.1	Included
Noise Forum	6.4	D.2	Included
Maintenance Services			
Fault Management	7.1	C	Included
Software Upgrades and Patches	7.2	C.3	Included
Hardware Repair	7.3	C.1	Included
Technology Management Services			
System Monitoring	8.1	C	Included
System Administration	8.2	D.4	Included
Periodic Hardware Services	8.3	D.5	Included
Supplier Spares	8.4	C.2	Included
System Hosting	8.5	D.3	Included
Backup and Restoration	8.6	D.8	Included
Information Management Services			
Data Processing Services	9.1	D.6	Included
Report Production Services	9.2	D.7	Included (Optional)
Subscription Services			
Application Subscription	10.1	C.5	Included
Data Subscription	10.2	C.4	Included
Reference Data	10.3	C.6	Included
Professional Services			
Professional Services	11		Included
Environmental Services		G.5	Included (Optional)

Schedule B: Contacts

Supplier Contacts

Formal Notices	Name	Operations Manager – North America
	Address	2330 East Bidwell St., Suite 210, Folsom, CA 95630
	Telephone	+1 916 265 7700
	e-mail	cms@envirosuite.com
Routine and operational communications	Name	Service Delivery Manager
	Address	2330 East Bidwell St., Suite 210, Folsom, CA 95630
	Telephone	+1 916 265 7700
	e-mail	cms@envirosuite.com
Suppliers Bank Account	Account Name	EMS Brüel & Kjær
	Account Number	921258885
	Bank	JPMorgan Chase Bank, N.A.
	Bank Address	Chicago, IL (No Street Address needed) Routing Number 071000013
Customer Support Centre	Telephone	(866) 583 0280
	Address	Level 12, 432 St Kilda Road Melbourne VIC 3004 Australia
	Email Support Requests	cms@envirosuite.com

Customer Contacts

Formal Notices	Name	Kathryn Pantoja Airport Environmental Manager II
	Address	Los Angeles World Airports Environmental Services Division 7301 World Way West, Rm. 312 Los Angeles, CA 90045
	Telephone	424-646-6501
	e-mail	kpantoja@lawa.org
Routine and operational communications	Name	Dan Yeung Environmental Supervisor

Customer Contacts

	Address	Los Angeles World Airports Environmental Services Division 7301 World Way West, Rm. 312 Los Angeles, CA 90045
	Telephone	424-646-6503
	e-mail	dyeung@lawa.org
Address for Invoices	Name	Attn: Invoicing
	Address	Los Angeles World Airports Environmental Programs Division 7301 World Way West, 7 th Floor Los Angeles, CA 90045
	Telephone	424-646-6500
	e-mail	epginvoice@lawa.org

Schedule C: System Elements

C.1. Hardware –

Type	Description	Manufacturer	Model	Serial#	Location	Repair Type	Owner
LAX NMTs							
110	Noise Monitoring Terminal	Envirosuite	EMU 3680		50 ft east of VOR Transmitter Bldg., S runway complex, Playa del Rey, CA 90293	Onsite	Customer
111	Noise Monitoring Terminal	Envirosuite	EMU 3680		255 Waterview St, Playa Del Rey, CA 90293	Onsite	Customer
112	Noise Monitoring Terminal	Envirosuite	EMU 3680		216 Sunridge St., Playa Del Rey, CA 90293	Onsite	Customer
114	Noise Monitoring Terminal	Envirosuite	EMU 3680		745 W. Mariposa Ave., El Segundo, CA 90245	Onsite	Customer
115	Noise Monitoring Terminal	Envirosuite	EMU 3680		425 W. Sycamore Ave., El Segundo, CA 90245	Onsite	Customer
116	Noise Monitoring Terminal	Envirosuite	EMU 3680		649 Sheldon St., El Segundo, CA 90245	Onsite	Customer
118	Noise Monitoring Terminal	Envirosuite	EMU 3680		On edge of baseball field across from 727 California St., Inglewood, CA 90245	Onsite	Customer
119	Noise Monitoring Terminal	Envirosuite	EMU 3680		11877 Judah Ave., Del Air, CA 90250	Onsite	Customer
121	Noise Monitoring Terminal	Envirosuite	EMU 3680		8821 Villanova Ave. Westchester, CA 90045	Onsite	Customer
122	Noise Monitoring Terminal	Envirosuite	EMU 3680		6547 W. 87 St., Westchester, CA 90045	Onsite	Customer

Type	Description	Manufacturer	Model	Serial#	Location	Repair Type	Owner
124	Noise Monitoring Terminal	Envirosuite	EMU 3680		9131 Airport Blvd., Los Angeles, CA 90045	Onsite	Customer
125	Noise Monitoring Terminal	Envirosuite	EMU 3680		8816 Ramsgate Ave., Los Angeles, CA 90045	Onsite	Customer
126	Noise Monitoring Terminal	Envirosuite	EMU 3680		944 S. Eucalyptus Ave., Inglewood, CA 90301	Onsite	Customer
127	Noise Monitoring Terminal	Envirosuite	EMU 3680		215 W. Kelso St., Inglewood, CA 90301	Onsite	Customer
128	Noise Monitoring Terminal	Envirosuite	EMU 3680		800 La Brea Dr., (Near Tamarack Ave.), Inglewood, CA 90301	Onsite	Customer
130	Noise Monitoring Terminal	Envirosuite	EMU 3680		Yukon Ave., Inglewood, CA (NEAR 102nd) Pole # 1055561E (3560 W. Century Blvd., Inglewood, CA 90303)	Onsite	Customer
133	Noise Monitoring Terminal	Envirosuite	EMU 3680		9601 6TH Ave., Inglewood, CA 90305 (near 2721 W. Hardy St., Inglewood, CA 90305)	Onsite	Customer
134	Noise Monitoring Terminal	Envirosuite	EMU 3680		10706 Buford Ave., Lennox, CA 90304	Onsite	Customer
135	Solar and Noise Monitoring Terminal	Envirosuite	EMU 3680		10126 Buford Ave., Lennox, CA 90304	Onsite	Customer
136	Solar Noise Monitoring Terminal	Envirosuite	EMU 3680		11034 Dalerose Ave., Lennox, CA 90304	Onsite	Customer
137	Noise Monitoring Terminal	Envirosuite	EMU 3680		10820 Larch Ave., Lennox, CA 90304	Onsite	Customer
140	Noise Monitoring Terminal	Envirosuite	EMU 3680		1147 W 97 th St. Los Angeles, CA 90044	Onsite	Customer

Type	Description	Manufacturer	Model	Serial#	Location	Repair Type	Owner
141	Noise Monitoring Terminal	Envirosuite	EMU 3680		2058 W. 84 th Pl., Los Angeles, CA 90047	Onsite	Customer
143	Noise Monitoring Terminal	Envirosuite	EMU 3680		On West 106th Street and next to 10525 S. Manhattan Pl., Los Angeles, CA 90047	Onsite	Customer
145	Noise Monitoring Terminal	Envirosuite	EMU 3680		On alleyway behind 814 Century Blvd., South Los Angeles, CA 90044	Onsite	Customer
147	Noise Monitoring Terminal	Envirosuite	EMU 3680		Next to 9605 Wall St., South Los Angeles, CA 90003	Onsite	Customer
VNY NMTs							
203	Noise Monitoring Terminal	Envirosuite	EMU 3680		8624 Odesa Ave., North Hills, CA 91343	Onsite	Customer
205	Solar Noise Monitoring Terminal	Envirosuite	EMU 3680		16310 Shoenborn St., North Hills, CA 91343	Onsite	Customer
207	Noise Monitoring Terminal	Envirosuite	EMU 3680		16133 Cantlay St., Van Nuys, CA 91406	Onsite	Customer
208	Solar Noise Monitoring Terminal	Envirosuite	EMU 3680		7117 1/2 De Celis Pl., Van Nuys, CA 91406	Onsite	Customer
210	Noise Monitoring Terminal	Envirosuite	EMU 3680		16225 1/2 Kittridge St., Van Nuys, CA 91406	Onsite	Customer
212	Noise Monitoring Terminal	Envirosuite	EMU 3680		16441 1/2 Gilmore St., Van Nuys, CA 91406	Onsite	Customer
213	Solar Noise Monitoring Terminal	Envirosuite	EMU 3680		6335 Woodley Ave., Van Nuys, CA 91436	Onsite	Customer

Type	Description	Manufacturer	Model	Serial#	Location	Repair Type	Owner
DIGITAL LOGGER							
Digital Logger	Digital Loggers Aircraft Voice Recording System	Digital Loggers Incorporated	16 Channel Logger		LAX	On-site	Customer
Digital Logger	Digital Loggers Aircraft Voice Recording System	Digital Loggers Incorporated	16 Channel Logger		VNY	On-site	Customer

C.2. Supplier Spares Parts

Type	Description	Manufacturer	Location
3680 (quantity x 2)	Noise Monitoring Terminal	Envirosuite	Envirosuite Office
4952 (quantity x 2)	Outdoor Microphone	Brüel & Kjaer	Envirosuite Office
4231	Acoustic Calibrator	Brüel & Kjaer	Envirosuite Office
SIM Cards (quantity x 2)	SIM cards for cellular communication	Verizon	Envirosuite Office
3655 (quantity x 2)	Portable Noise Monitoring Terminal	Envirosuite	Envirosuite Office

All spare parts listed above will be kept at EVS local office in Southern California.

C.3. Software

Item	Author	Licence Number	User Count
ANOMS 9 (Airports) LAX & VNY	Envirosuite	TBA	2
ANOMS 9 Clients	Envirosuite	TBA	20
Crystal Reports	Business Objects	TBA	2

C.4. Data Subscriptions

Type	Description of Data	Restrictions	Service Levels
Flight Data Feed	Aircraft position data derived from interface to radar data, fused and tracked as required, and correlated with plan data and, where possible, Mode S information not available from radar sources.	Data may be used as input to any Supplier Proprietary Applications, such as ANOMS and WebTrak.	Schedule E.3

Type	Description of Data	Restrictions	Service Levels
Airport Weather	Weather data from numerous sources, including LAWA's digital Automatic Terminal Information Service (D-ATIS), Meteorological Terminal Air Report (METAR), and local weather stations (optional)	Data may be used as input to any Supplier Proprietary Applications, such as ANOMS and WebTrak.	Schedule E.3

C.5. Application Subscriptions

Type	Description	Restrictions	Service Levels
WebTrak (LAX and VNY independent systems)	Web-based application providing the public and/or other stakeholders with access to noise and track information for historic and near-real-time operations.	Unlimited users at Customer's airports	Schedule E.2
Viewpoint (LAX and VNY independent systems)	A set of modules that provide an efficient and comprehensive complaints capture, complaints flow insight, and efficient identity handling in the ANOMS backend.		Schedule E.2

C.6. Reference Data

Description	Author	Frequency	Notes
FAA Aircraft Register	FAA	At least Annual full update; incremental update will be monthly	New tail numbers active at LAX or VNY will be added within one week of the first flight being detected
Vector Maps	Mapbox	As available	Street view and satellite imagery is provided as a subscription service from MapBox
International Registry (Customer to provide data)	JetNet	Every 2 weeks	When data is provided to Envirosuite by LAWA
Aircraft Register (formerly Buchair/JPFleets data set)	LNRS	At least monthly update, or as data is updated by LNRS author	
Flight Schedule Data	FAA	Daily	Real-time data included in flight track data feed

Schedule D: Service Elements

D.1. Mandatory Customer Support Visits

Number of Site Visits per Year: Four (4), one (1) per quarter (duration of two (2) days each)

D.2. Noise Forum Attendees

Number of included Noise Forum Attendees at the North American Noise Forum per forum: Three (3)

D.3. System Hosting Services

Hosted Item	Task Description
ANOMS Application	Hosting of Customer’s ANOMS at Supplier US data centre, hosted on Supplier servers, providing access to Customer airports, including database tuning

D.4. System Administration Services

Applies To	Task Description	Frequency
Hosted Servers	(i) Apply patches as recommended by third party supplier	As recommended by Supplier after informing Customer
	(ii) Apply upgrades and releases to the application software	
	(iii) Install updated Reference Data	
	(iv) Database archiving	
	(v) Test and apply upgrades to software components listed in Schedule C.3 to the latest version, including but not limited to Oracle, Crystal Reports, etc.	
Hosted Servers	(i) Perform System recovery in the event of a failure	As required
	(ii) Activate redundant System in Melbourne Data Center (or equivalent) for Customer use in the event of a disaster at US Data Center. If US Data Center expected to be offline for an extended period, Supplier shall retrieve and load historical noise and flight track data to the Melbourne Data Center. Extended period is defined as anything that will result in a system outage of 5 working days or greater.	
DLI Logging System	On-site Service by DLI technicians, subcontracted local service when possible	Work week Daily On-demand

D.5. Periodic Hardware Services

Applies To	Task Description	Frequency
All Installed NMTs	(iii) Perform visual inspection for problems / corrosion.	Annually (interval between services not to exceed 365 days)
	(iv) Check operation on site.	
	(v) Acoustic calibration of the unit.	
	(vi) Update of NMT firmware if necessary	
	(vii) Download and update of the configuration files	
	(viii) Check of batteries (including those at solar sites) (Note that replacement of NMT batteries is not included as part of this Service)	
	(ix) Replacement of bird spikes and windshields as needed	
	(x) Microphone silica gel desiccant to be replaced at each visit	
	(xi) Inspect weather sensors	
	Inspect and clean solar equipment.	
	All Server Hardware	

D.6. Data Processing Services

Task	Task Description	Frequency
Data Completeness Processing	(i) Check status of downloads from NMTs and re-initiate downloads as necessary.	Daily (Automatic nightly processing to be completed by 7:00AM local time)
	(ii) Check completeness of radar/plan information from overnight processing and re-initiate as necessary.	
	(iii) Re-initiate batch processing as required based on data downloads. <ul style="list-style-type: none"> Document all lost or missing data including causes, specific work done and remedies made in Supplier ticket management system. 	

D.7. Report Production Services

Task	Task Description	Frequency
Interactive Reports	Reports may vary in complexity and effort, as a guide this effort should produce 1 interactive report per annum, during the term of the contract to be used at any time within the contract term.	Defined in Schedule G.6

D.8. System Backup

Task	Task Description Responsible	Frequency
Backup of system software and database(s)	Supplier to perform backups (full and incremental)	Full backups will be done weekly. Incremental backups will be done daily.

Schedule E: Service Levels

E.1. Service Requests and Fault Resolution

Category	Description	Response	Resolution Time	Target Achievement
1: Major Fault	<ul style="list-style-type: none"> Loss of collection of time perishable data. Faults that may lead to data loss or data corruption. Unable to start the system Loss of unrecoverable data Noise monitor calibration error (acoustic) 	4 hours	2 working days	95% of all tickets to meet target response times 85% of all tickets to meet target resolution times.
2: Major Fault	<ul style="list-style-type: none"> Key function inoperable Noise monitor calibration error (electrostatic) 	8 hours	5 days	
3: Minor Fault	<ul style="list-style-type: none"> Reproducible loss of functionality 	2 days	1 month *Automatically escalates to "2: Major Fault" if same fault occurs more than 3x/month, 5x/quarter, or 10x/year.	
4: Minor Fault	<ul style="list-style-type: none"> Minor software issues that do not affect day to day operation of NOMS 	2 days	1 month – fixes agreed within scope of a future software upgrade	
5: Minor Fault	<ul style="list-style-type: none"> Non-reproducible abnormalities 	2 days	Ticket closed within 30 days if abnormality not reproduced	
Request	<ul style="list-style-type: none"> "How do I?" questions. 	1 day		

Response and resolution times to be determined from the time that Supplier detects or is notified of the request or fault.

* Except for outages in Clause 4.4a

E.2. WebTrak and Viewpoint Subscribed Application Service

Area	Service Definition	Measurement (Monthly)	Target Achievement
Application Availability	Application is available if it can be loaded and the map displayed from a working internet connection which is remote from the data centre where the application is hosted.	<p>Accessible hours / available hours</p> <p>Available hours are 24 x days per month less Planned Outage and excludes Non-Application Outage.</p> <p>Planned Outage must have 7 days of notice and be less than 4 hours.</p> <p>Non-Application Outage is outages with ISPs and/or individual client workstations</p>	96.0%
Access Reliability	The number of times the application is unavailable in any month.	Number of failures where the application is unavailable for greater than fifteen minutes	2

E.3. Subscribed Data Service

Area	Service Definition	Measurement (Monthly)	Target Achievement
Availability	Service is available if data is being provided to the target system (such as ANOMS, WebTrak and Viewpoint)	<p>Available hours / Expected Hours</p> <p>Expected Hours are 24hrs x days per month – Radar Downtime</p> <p>Radar Downtime are the periods when no source data is being provided to Earth from flight data feed.</p>	96.0%
Reliability	The number of times data unavailable in any month.	Number of failures where the data is unavailable for greater than fifteen minutes,	1

Schedule F: Service Fees

F.1. Termination Services

At the request of Customer, all stored data shall be returned via digital transfer to Customer and/or to vendor designated by Customer. All supporting documentation including metadata, system diagrams, Entity Relationship Diagram, etc., shall be provided for ease of integration and use of data in other noise and operations monitoring system software solution.

F.2. Initial Service Fees

For Specified Services, Contractor shall be compensated pursuant to the terms of this Agreement, in the following amounts:

Description	Qty	Unit Price	Fixed Fee	T&M	Year 1 Annual Service Fee
NMT Replacement (VNY)					
NMT	7	\$ 14,500.00	\$ 101,500.00		\$ -
New Infrastructure Mains Power (Mast/Foundation/Utilities)	4	\$ 9,500.00		\$ 38,000.00	\$ -
New Infrastructure Solar Power (Mast/Foundation/Solar)	3	\$ 11,000.00		\$ 33,000.00	\$ -
Installation & Retrofit	7	\$ 2,200.00	\$ 15,400.00		\$ -
Weather Station (6 Parameter)	1	\$ 5,500.00		\$ 5,500.00	\$ -
Engineered Drawings (2 Typ)	2	\$ 2,500.00	\$ 5,000.00		\$ -
Planning & Permits & Site Coordination	7	\$ 2,750.00	\$ 19,250.00		\$ -
Side by Side Testing (7)	3	\$ 2,375.00	\$ 7,125.00		\$ -
		Sub Total	\$ 148,275.00	\$ 76,500.00	\$ -
NMT Replacement (LAX)					
NMT	26	\$ 14,500.00	\$ 377,000.00		\$ -
New Infrastructure Mains Power (Mast/Foundation/Utilities)	24	\$ 9,500.00		\$ 228,000.00	\$ -
New Infrastructure Solar Power (Mast/Foundation/Solar)	2	\$ 11,000.00		\$ 22,000.00	\$ -
Installation & Retrofit	26	\$ 2,200.00	\$ 57,200.00		\$ -
Weather Station (6 Parameter)	1	\$ 5,500.00		\$ 5,500.00	\$ -
Engineered Drawings (2 Typ)	2	\$ 2,500.00	\$ 5,000.00		\$ -
Planning & Permits & Site Coordination	26	\$ 2,750.00	\$ 71,500.00		\$ -
Side by Side Testing (3)	7	\$ 2,375.00	\$ 16,625.00		\$ -
Demolish/Remove/Remediate Existing	14	\$ 4,750.00	\$ 66,500.00		\$ -
		Sub Total	\$ 593,825.00	\$ 255,500.00	\$ -
ANOMS					
ANOMS for LAX (cloud based)					\$ 105,000.00
ANOMS for VNY (cloud based)					\$ 35,000.00
Radar Data Acquisition & Processing					
EVS Earth Flight Track Radar Data Feed LAX					\$ 11,250.00
EVS Earth Flight Track Radar Data Feed VNY					\$ 3,750.00
Real Contours for AEDT export			\$ -		\$ -
Noise Portal - Title 21 Quarterly Reporting & Analytics			\$ 3,500.00		\$ 5,000.00
Reporting					
Airport Metrics			\$ 5,000.00		\$ 20,000.00
Complaints & Operations Dashboards			\$ -		\$ 10,000.00
ATC Integration					
Maintain Radios, Live feed, 12 months data storage (LAX/VNY)			\$ 2,500.00		\$ 10,000.00
Cloud Based Data Storage (LAX/VNY)					\$ 4,000.00
Weather Integration					
			\$ -		\$ -
Complaints (Viewpoint)					
LAX			\$ -		\$ 20,000.00
VNY			\$ -		\$ 12,000.00
Public Flight Tracking (WebTrak)					
LAX			\$ -		\$ 20,000.00
VNY			\$ -		\$ 12,000.00
Training					
Project			\$ 1,000.00		\$ -
Ongoing (Quarterly/Forum/Workshops)			\$ -		\$ 6,000.00
Acceptance Testing/Documentation					
			\$ -		\$ -
NMT Support & Maintenance & Warranty LAX (5 Years)					
Communications (Modems and Cellular Service)	26	\$ 1,200.00	\$ -		\$ 31,200.00
Equipment Warranty	26	\$ 500.00	\$ -		\$ 13,000.00
(Mast/Foundation/Electrical)	26	\$ 750.00	\$ -		\$ 19,500.00
Field Support (Level 1 - Break Fix Visits)	26	\$ 1,200.00	\$ -		\$ 31,200.00
Field Support (Level 2)	26	\$ 800.00	\$ -		\$ 20,800.00
Annual Preventative Maintenance	26	\$ 500.00	\$ -		\$ 13,000.00
NMT Support & Maintenance & Warranty VNY (5 Years)					
Communications (Modems and Cellular Service)	7	\$ 1,200.00	\$ -		\$ 8,400.00
Equipment Warranty	7	\$ 500.00	\$ -		\$ 3,500.00
(Mast/Foundation/Electrical)	7	\$ 750.00	\$ -		\$ 5,250.00
Field Support (Level 1 - Break Fix Visits)	7	\$ 1,200.00	\$ -		\$ 8,400.00
Field Support (Level 2)	7	\$ 800.00	\$ -		\$ 5,600.00
Annual Preventative Maintenance	7	\$ 500.00	\$ -		\$ 3,500.00
		TOTAL	\$ 754,100.00	\$ 332,000.00	\$ 437,350.00

F.3. Additional Services

For Additional Services, Contractor's compensation for Additional Services shall be as approved in writing by LAWA prior to Contractor providing Additional Services. Contractor shall be paid upon completion to the CEO's satisfaction, for Additional Services per the following fee schedule:

Description	Qty	Unit Price	Fixed Fee	T&M	Total Optional Services Year 1-5
Optional Additional Services					
<u>LAX</u>					
Two New NMTs Solar or AC Power (One time fee)	2	\$ 27,000.00	\$ 54,000.00		\$ 54,000.00
Portable monitoring and threshold analysis (One time fee)	2	\$ 7,500.00		\$ 15,000.00	\$ 15,000.00
Planning, Permits & Drawings (One time fee)	2	\$ 2,500.00	\$ 5,000.00		\$ 5,000.00
NMT Support & Maintenance & Warranty (5 Years)	10	\$ 4,200.00		\$ 42,000.00	\$ 42,000.00
<u>LAX & VNY (75% of each fee is for LAX; 25% for VNY)</u>					
Additional ATC Enhancements and Integration (5 Years)	5	\$ 12,000.00		\$ 60,000.00	\$ 60,000.00
ATC, Antenna Improvements (One time fee)	1	\$ 10,000.00	\$ 10,000.00		\$ 10,000.00
As needed Environmental Services (Per Year)	5	\$ 43,700.00		\$ 218,500.00	\$ 218,500.00
Portable Noise Monitoring Services (Per Week)	25	\$ 750.00		\$ 18,750.00	\$ 18,750.00
Historical Data Storage (Per year beyond year 10)	5	\$ 5,000.00	\$ 25,000.00		\$ 25,000.00
Custom BI Reports (Per Report)	5	\$ 5,000.00		\$ 25,000.00	\$ 25,000.00
ANOMS ANEEM 20+ monitors (5 years)	5	\$ 27,475.00	\$ 137,375.00		\$ 137,375.00
Project Implementation (One time fee)	1	\$ 4,680.00	\$ 4,680.00		\$ 4,680.00
TOTAL					\$ 615,305.00

Total of LAX Options	\$ 490,478.75
Total of VNY Options	\$ 124,826.25

F.4. Total Contract Value - Not to Exceed Amounts

Total Amount Payable: The Authority makes no assurance that the Contractor will be paid any minimum amount for Specified Services.

Phases	Not to Exceed Contract Value (LAX)	Not to Exceed Contract Value (VNY)	Not to Exceed Contract Values (LAX & VNY)
Project Phase	\$ 868,880.00	\$ 217,220.00	\$ 1,086,100.00
Year 1 ANOMS Services			
Year 2 ANOMS Services*			
Year 3 ANOMS Services*	\$ 1,706,990.22	\$ 568,996.74	\$ 2,275,986.96
Year 4 ANOMS Services*			
Year 5 ANOMS Services*			
Option 1 ANOMS Services* (Year 1 of 3 Years)	\$ 362,152.30	\$ 120,717.43	\$ 482,869.74
Option 1 ANOMS Services* (Year 2 of 3 Years)	\$ 369,395.35	\$ 123,131.78	\$ 492,527.13
Option 1 ANOMS Services* (Year 3 of 3 Years)	\$ 376,783.26	\$ 125,594.42	\$ 502,377.68
Option 2 ANOMS Services* (Year 1 of 3 Years)	\$ 384,318.92	\$ 128,106.31	\$ 512,425.23
Option 2 ANOMS Services* (Year 2 of 3 Years)	\$ 392,005.30	\$ 130,668.43	\$ 522,673.73
Option 2 ANOMS Services* (Year 3 of 3 Years)	\$ 399,845.41	\$ 133,281.80	\$ 533,127.21
Optional Additional Services	\$ 490,478.75	\$ 124,826.25	\$ 615,305.00
Contingency	\$ 526,754.45	\$ 175,584.82	\$ 702,339.27
Total Not to Exceed Contract Value (by Airport)	\$ 5,877,603.97	\$ 1,848,127.99	
Total Not to Exceed Contract Value	\$		7,725,731.96

* Based on annual (2%) adjustment.

Federal excise taxes, State taxes, or Customer sales taxes will not be included in the invoiced amount providing Customer furnishes a tax exemption certificate upon request.

F.5. Service Fee Increases

Supplier shall be entitled to increase the Service Fees one year after the Effective Date and each year thereafter on the anniversary of the Effective Date. Such Variations are to be specified in writing to LAWA and shall be increased by 2% annually.

F.6. Invoicing Payment Milestones

EVS will provide a summary report with each invoice that confirms the exact work completed for LAWA review. The Summary Report will include the following:

1. Invoice 1: Copies of all documents that will be provided during the project kick-off phase.
2. Invoice 2: Copies of documentation that all hardware has been received at the EVS office. Final hardware installation details, including engineering drawings for NMT installation.
3. Invoice 3: Documentation that confirms installation of all noise monitoring terminals and software upgrade.

4. Invoice 4: Signed copy of system acceptance document.

5. Invoice 5: Details for all T&M work, including sites work was performed. Also included will be the LAWA approval to perform the work.

	Milestones	LAX Fees	VNY Fees	Invoice Amount	Annual Total
Project Phase	Invoice # 1 - NTP/Project Kickoff/Project Planning	\$ 150,820.00	\$ 37,705.00	\$ 188,525.00	
	Invoice # 2 - Project Design/Product Orders/Procurement	\$ 241,312.00	\$ 60,328.00	\$ 301,640.00	
	Invoice # 3 - Product Installation/Software Upgrades/Deployment	\$ 150,820.00	\$ 37,705.00	\$ 188,525.00	
	Invoice # 4 - System Acceptance & Certification	\$ 60,328.00	\$ 15,082.00	\$ 75,410.00	
	Invoice # 5 - T&M Services (Not to Exceed - As Needed)	\$ 265,600.00	\$ 66,400.00	\$ 332,000.00	\$ 1,086,100.00
Year 1 ANOMS Services	Invoice # 6 - Year One Quarterly Services and Warranty (Q1)	\$ 82,003.13	\$ 27,334.38	\$ 109,337.50	
	Invoice # 7 - Year One Quarterly Services and Warranty (Q2)	\$ 82,003.13	\$ 27,334.38	\$ 109,337.50	
	Invoice # 8 - Year One Quarterly Services and Warranty (Q3)	\$ 82,003.13	\$ 27,334.38	\$ 109,337.50	
	Invoice # 9 - Year One Quarterly Services and Warranty (Q4)	\$ 82,003.13	\$ 27,334.38	\$ 109,337.50	\$ 437,350.00
Year 2 ANOMS Services*	Invoice # 10 - Year Two Quarterly Services and Warranty (Q1)	\$ 83,643.19	\$ 27,881.06	\$ 111,524.25	
	Invoice # 11 - Year Two Quarterly Services and Warranty (Q2)	\$ 83,643.19	\$ 27,881.06	\$ 111,524.25	
	Invoice # 12 - Year Two Quarterly Services and Warranty (Q3)	\$ 83,643.19	\$ 27,881.06	\$ 111,524.25	
	Invoice # 13 - Year Two Quarterly Services and Warranty (Q4)	\$ 83,643.19	\$ 27,881.06	\$ 111,524.25	\$ 446,097.00
Year 3 ANOMS Services*	Invoice # 14 - Year Three Quarterly Services and Warranty (Q1)	\$ 85,316.05	\$ 28,438.68	\$ 113,754.74	
	Invoice # 15 - Year Three Quarterly Services and Warranty (Q2)	\$ 85,316.05	\$ 28,438.68	\$ 113,754.74	
	Invoice # 16 - Year Three Quarterly Services and Warranty (Q3)	\$ 85,316.05	\$ 28,438.68	\$ 113,754.74	
	Invoice # 17 - Year Three Quarterly Services and Warranty (Q4)	\$ 85,316.05	\$ 28,438.68	\$ 113,754.74	\$ 455,018.94
Year 4 ANOMS Services*	Invoice # 18 - Year Four Quarterly Services and Warranty (Q1)	\$ 87,022.37	\$ 29,007.46	\$ 116,029.83	
	Invoice # 19 - Year Four Quarterly Services and Warranty (Q2)	\$ 87,022.37	\$ 29,007.46	\$ 116,029.83	
	Invoice # 20 - Year Four Quarterly Services and Warranty (Q3)	\$ 87,022.37	\$ 29,007.46	\$ 116,029.83	
	Invoice # 21 - Year Four Quarterly Services and Warranty (Q4)	\$ 87,022.37	\$ 29,007.46	\$ 116,029.83	\$ 464,119.32
Year 5 ANOMS Services*	Invoice # 22 - Year Five Quarterly Services and Warranty (Q1)	\$ 88,762.82	\$ 29,587.61	\$ 118,350.43	
	Invoice # 23 - Year Five Quarterly Services and Warranty (Q2)	\$ 88,762.82	\$ 29,587.61	\$ 118,350.43	
	Invoice # 24 - Year Five Quarterly Services and Warranty (Q3)	\$ 88,762.82	\$ 29,587.61	\$ 118,350.43	
	Invoice # 25 - Year Five Quarterly Services and Warranty (Q4)	\$ 88,762.82	\$ 29,587.61	\$ 118,350.43	\$ 473,401.71
Option 1 ANOMS Services* (Year 1 of 3 Years)	Invoice # 26 - Option 1 ANOMS Services (Year 1 of 3 Years) Quarterly Services and Warranty (Q1)	\$ 90,538.08	\$ 30,179.36	\$ 120,717.43	
	Invoice # 27 - Option 1 ANOMS Services (Year 1 of 3 Years) Quarterly Services and Warranty (Q2)	\$ 90,538.08	\$ 30,179.36	\$ 120,717.43	
	Invoice # 28 - Option 1 ANOMS Services (Year 1 of 3 Years) Quarterly Services and Warranty (Q3)	\$ 90,538.08	\$ 30,179.36	\$ 120,717.43	
	Invoice # 29 - Option 1 ANOMS Services (Year 1 of 3 Years) Quarterly Services and Warranty (Q4)	\$ 90,538.08	\$ 30,179.36	\$ 120,717.43	\$ 482,869.74
Option 1 ANOMS Services* (Year 2 of 3 Years)	Invoice # 30 - Option 1 ANOMS Services (Year 2 of 3 Years) Quarterly Services and Warranty (Q1)	\$ 92,348.84	\$ 30,782.95	\$ 123,131.78	
	Invoice # 31 - Option 1 ANOMS Services (Year 2 of 3 Years) Quarterly Services and Warranty (Q2)	\$ 92,348.84	\$ 30,782.95	\$ 123,131.78	
	Invoice # 32 - Option 1 ANOMS Services (Year 2 of 3 Years) Quarterly Services and Warranty (Q3)	\$ 92,348.84	\$ 30,782.95	\$ 123,131.78	
	Invoice # 33 - Option 1 ANOMS Services (Year 2 of 3 Years) Quarterly Services and Warranty (Q4)	\$ 92,348.84	\$ 30,782.95	\$ 123,131.78	\$ 492,527.13
Option 1 ANOMS Services* (Year 3 of 3 Years)	Invoice # 34 - Option 1 ANOMS Services (Year 3 of 3 Years) Quarterly Services and Warranty (Q1)	\$ 94,195.81	\$ 31,398.60	\$ 125,594.42	
	Invoice # 35 - Option 1 ANOMS Services (Year 3 of 3 Years) Quarterly Services and Warranty (Q2)	\$ 94,195.81	\$ 31,398.60	\$ 125,594.42	
	Invoice # 36 - Option 1 ANOMS Services (Year 3 of 3 Years) Quarterly Services and Warranty (Q3)	\$ 94,195.81	\$ 31,398.60	\$ 125,594.42	
	Invoice # 37 - Option 1 ANOMS Services (Year 3 of 3 Years) Quarterly Services and Warranty (Q4)	\$ 94,195.81	\$ 31,398.60	\$ 125,594.42	\$ 502,377.68
Option 2 ANOMS Services* (Year 1 of 3 Years)	Invoice # 38 - Option 2 ANOMS Services (Year 1 of 3 Years) Quarterly Services and Warranty (Q1)	\$ 96,079.73	\$ 32,026.58	\$ 128,106.31	
	Invoice # 39 - Option 2 ANOMS Services (Year 1 of 3 Years) Quarterly Services and Warranty (Q2)	\$ 96,079.73	\$ 32,026.58	\$ 128,106.31	
	Invoice # 40 - Option 2 ANOMS Services (Year 1 of 3 Years) Quarterly Services and Warranty (Q3)	\$ 96,079.73	\$ 32,026.58	\$ 128,106.31	
	Invoice # 41 - Option 2 ANOMS Services (Year 1 of 3 Years) Quarterly Services and Warranty (Q4)	\$ 96,079.73	\$ 32,026.58	\$ 128,106.31	\$ 512,425.23
Option 2 ANOMS Services* (Year 2 of 3 Years)	Invoice # 42 - Option 2 ANOMS Services (Year 2 of 3 Years) Quarterly Services and Warranty (Q1)	\$ 98,001.33	\$ 32,667.11	\$ 130,668.43	
	Invoice # 43 - Option 2 ANOMS Services (Year 2 of 3 Years) Quarterly Services and Warranty (Q2)	\$ 98,001.33	\$ 32,667.11	\$ 130,668.43	
	Invoice # 44 - Option 2 ANOMS Services (Year 2 of 3 Years) Quarterly Services and Warranty (Q3)	\$ 98,001.33	\$ 32,667.11	\$ 130,668.43	
	Invoice # 45 - Option 2 ANOMS Services (Year 2 of 3 Years) Quarterly Services and Warranty (Q4)	\$ 98,001.33	\$ 32,667.11	\$ 130,668.43	\$ 522,673.73
Option 2 ANOMS Services* (Year 3 of 3 Years)	Invoice # 46 - Option 2 ANOMS Services (Year 3 of 3 Years) Quarterly Services and Warranty (Q1)	\$ 99,961.35	\$ 33,320.45	\$ 133,281.80	
	Invoice # 47 - Option 2 ANOMS Services (Year 3 of 3 Years) Quarterly Services and Warranty (Q2)	\$ 99,961.35	\$ 33,320.45	\$ 133,281.80	
	Invoice # 48 - Option 2 ANOMS Services (Year 3 of 3 Years) Quarterly Services and Warranty (Q3)	\$ 99,961.35	\$ 33,320.45	\$ 133,281.80	
	Invoice # 49 - Option 2 ANOMS Services (Year 3 of 3 Years) Quarterly Services and Warranty (Q4)	\$ 99,961.35	\$ 33,320.45	\$ 133,281.80	\$ 533,127.21
	Subtotal	\$ 4,860,370.77	\$ 1,547,716.92	\$ 6,408,087.69	
	Grand Total				\$ 6,408,087.69

* Based on annual (2%) Consumer Price Indexation (CPI) adjustment.

** Invoicing plan excludes "Optional Additional Services" and "Contingency" amounts

F.7. Additional Service Fee Basis - Contingency

Item	Amount (USD)
Software Engineer, Customer Support, Consulting, Training, Programming, and other labour.	237 USD per hour Environmental Specialist I
	195 USD per hour Aviation Specialist I
	155 USD per hour Environmental Analyst
Third Party software, hardware and services costs	At Cost plus 15%
Travel, accommodation, meals, disbursements and other expenses.	At Cost per City of Los Angeles Policy
New Modules added to The System:	Annual Maintenance Fee:
Hardware	12% of Hardware Price
Software	12% of Module Licence Fee

Schedule G: Special Clauses

G.1. Noise Forum Travel Expenses

- i) N/A

G.2. Compliance with CALTRANS Title 21 and Airport Noise Monitoring Plans

- a. Upon final installation of NMT hardware Supplier will submit to LAWA necessary documentation for California Title 21 Certification.
- b. On a quarterly basis supplier will provide CNEL calculations per Title 21 NMT based on Caltrans rolling 12 month requirements for comparison to ANOMS calculations.
- c. Supplier shall use its best endeavours in supplying the Services to ensure that the System remains in compliance with CALTRANS Title 21 requirements and continues to meet all applicable noise monitoring requirements associated with the LAX and VNY Noise Monitoring Plans.

G.3. Wireless Communication

- a. Supplier will establish, pay for and manage wireless communication services with agreed upon wireless service provider for up to thirty-five (35) wireless modems.

G.4. Contingency

- a. Before any additional Services, or additional or replacement Goods are commenced pursuant to a Contingency, Supplier shall supply the Contract Administrator with a written estimate for all charges expected to be incurred, which estimate shall be reviewed by the Contract Administrator and a final amount for Supplier's compensation shall be approved in writing by CEO prior to commencement.
- b. Subsequent to Customer issuing a Contingency pursuant to this article, Contract Administrator will issue a Notice to Proceed for those authorized tasks under the Contingency. Supplier shall not commence any work until after receipt of the Contract Administrator's Notice to Proceed.
- c. All Contingencies shall contain, as a minimum, the following information and requirements:
 - (i) A description of the work to be undertaken, expenses to be incurred, and/or Goods to be acquired and a statement of the method of compensation.
 - (ii) A time established for completion of the Services undertaken by Supplier or for the submission to Supplier of documents, reports, and other information.
 - (iii) Any other additional instructions or provisions.
 - (iv) Contingencies shall be dated, serially numbered, and signed.
- d. At the conclusion of the Term of this Agreement, no further Contingencies shall be issued, and the Supplier shall complete all Services in accordance with the schedule for completion.

G.5. Environmental Services

Envirosuite provides a variety of scalable Environment Office services relating to noise and environmental management to handle overload situations, special projects or to implement new reporting or technical solutions to remove effort and increases your own teams'

productivity. Our Environment team can share their expertise to supplement training of new staff and provide access to the knowledge of our internationally experienced experts.

Our Environment Office services can supplement your day-to-day operation, analyzing data to provide reports to quantify noise impact, satisfying regulatory reporting requirements, or help answer ad-hoc questions and requests that arise.

Our Professional Services team enable you to achieve your strategic objectives, leveraging its consulting approach and industry best practice to solve problems, shape strategy, tailor current and future Envirosuite solutions and optimize your operation.

Our offer includes: Technology Management Services, Subscription Services, Maintenance Services and Field Service Management. All of these services will be tailored according to your need via our Service Delivery Manager with the work agreed and scoped following the LAWA IT agile methodology project delivery model.

G.6. Interactive Reporting

Envirosuite specializes in creating customized interactive reports. Interactive reports are used by our clients all over the world. For our international customer base we have created a variety of reporting dashboards, videos and web widgets that enable analysts, managers, and corporate leadership to extract key insights and identify actions to track against measurable outcomes.

Dashboards need not be just for internal use as our team is experienced in developing community facing dashboards that establish trust through transparency and answers from clear messaging. Our teams are adept at creating tools which are easy to use and adaptable, providing information to suit varying levels of interest and technical understanding.

The demands for data, insights and actionable outcomes change over time and our Professional services team will work with you to develop these and help evolve them as your corporate leadership, civic authorities and community will expect.

Schedule H: Site Survey

LAWA Existing NMT Locations

Site Number	Site Name	Address	Lat/Long	Retain	Comm Type	Weather	Solar?	Pole Type	Recommend Approach	Optional Approach
103	GRU1	On airport property at LAX. Adjacent to FedEx facility.	33.946120, -118.4227730	Decommission	Wireless	No	Yes	Metal	D	-
110	AIR1	On airport property at LAX. 50 ft east of VOR Transmitter Bldg., S runway complex, Playa del Rey, CA 90293	33.933795, -118.4318300	Yes	Wireless	No	No	Wood	B	-
111	PDR1	200 block of Waterview St., Playa Del Rey, CA 90293	33.951734, -118.443282	Yes	DSL	<u>Yes</u>	No	Wood	A	B, C
112	PDR2	200 block of Sunridge St., Playa De Rey, CA 90293 (Pole # 283533M)	33.956459, -118.445831	Yes	DSL	No	No	Wood	A	B, C
113	PDR3	8100 block of Tuscany Ave., Playa Del Rey, CA 90293	33.960748, -118.440739	Decommission	Wireless	No	Yes	Metal	D	-
114	ESG1	700 block of W MARIPOSA AV, EL SEGUNDO	33.923677, -118.426005	Yes	DSL	<u>Yes</u>	No	Metal	A	-
115	ESG2	400 block of W SYCAMORE AV, EL SEGUNDO	33.928031, -118.420831	Yes	DSL	No	No	Wood	A	B, C
116	ESG3	600 block of SHELDON, EL SEGUNDO	33.925292, -118.411315	Yes	DSL	No	No	Wood	A	B, C
117	ESG4	Inside Water Tower Facility at 333 Lomita St., El Segundo, CA 90245	33.921355, -118.407584	Decommission	Wireless	No	No	Metal	D	-
118	ESG5	On edge of baseball field across from 700 block of California St., Inglewood, CA 90245	33.925937, -118.402229	Yes	DSL	No	No	Wood	A	B, C
119	DEL1	Judah Avenue, next to 5500 block of 119th Street, Del Aire, CA 90250	33.925886, -118.376642	Yes	DSL	No	No	Metal	A	-
120	WCH1	Alleyway adjacent to 7300 block of W. 85th Street, Los Angeles, CA 90045	33.961021, -118.423272	Decommission	DSL	No	No	Wood	D	-
121	WCH2	8800 block of Villanova Ave. Westchester, CA 90045	33.956981, -118.422299	Yes	Wireless	No	No	Wood	A	B, C
122	WCH3	6500 block of W. 87th Street Westchester, CA 90045	33.958954, -118.403675	Yes	Wireless	No	No	Wood	A	B, C
123	WCH4	6400 block of 84TH PL, LA	33.96263, -118.400311	Decommission	DSL	No	No	Wood	D	-
124	WCH5	9100 block of AIRPORT BL, LA (in front of US Post Office. Behind bushes)	33.953809, -118.386007	Yes	DSL	No	No	Metal	A	-

Site Number	Site Name	Address	Lat/Long	Retain	Comm Type	Weather	Solar?	Pole Type	Recommend Approach	Optional Approach
125	WCH6	8800 block of RAMSGATE AV, Los Angeles, CA 90045 (in alley behind)	33.957284, -118.382133	Yes	DSL	No	No	Wood	A	B, C
126	ING1	900 block of S. EUCALYPTUS AV, INGLEWOOD	33.950899, -118.358561	Yes	DSL	No	No	Metal	A	-
127	ING2	200 block W KELSO, INGLEWOOD	33.960467, -118.357954	Yes	DSL	No	No	Metal	A	-
128	ING3	800 block of E. La Palma DR (Formerly La Brea Drive) (NEAR TAMARACK AV)	33.955775, -118.350782	Yes	DSL	No	No	Metal	A	-
129	ING4	400 block of E 98TH, INGLEWOOD	33.94737, -118.349452	Decommission	DSL	No	No	Wood	D	-
130	ING6	10200 block of South Yukon Avenue, Inglewood, CA Pole # 1055561E (near Costco)	33.94347, -118.33501	Yes	Wireless	No	No	Wood	A	B, C
131	ING5	11000 block of Doty Ave., Inglewood, CA 90303	33.934902, -118.339023	Decommission	Wireless	<u>Yes</u>	No	Metal	D	-
132	ING7	3300 block of West 81st St., Inglewood, CA 90305	33.985362, -118.328737	Decommission	Wireless	No	No	Metal	D	-
133	ING8	9600 block of 6TH AV, INGLEWOOD (near 2700 block of Hardy St., Pole # 830578H)	33.949059, -118.323755	Yes	Wireless	No	No	Wood	A	B, C
134	LNX1	10700 block of BUFORD AV, LENNOX, CA	33.93914, -118.363485	Yes	DSL	No	No	Wood	A	B, C
135	LNX2	10100 block of Buford Avenue, Lennox Ca 90304	33.944045, -118.363577	Yes	Wireless	No	Yes	Metal	A	-
136	LNX3	11000 block of Dalerose Ave., Lennox, CA 90304	33.9349, -118.360146	Yes	Wireless	No	Yes	Metal	A	-
137	LNX4	10800 block of Larch Avenue, Lennox, CA	33.937501, -118.350296	Yes	DSL	No	No	Wood	A	B, C
139	ATH1	1300 block of West 106th Street, Athens, CA 90044 (In parking lot of Woodcrest Library)	33.939542, -118.2995420	Decommission	Wireless	No	Yes	Metal	D	-
140	ATH2	1100 block of West 97th Street, Los Angeles, CA	33.94782, -118.295491	Yes	DSL	No	No	Wood	A	B, C
141	SLA1	2000 block of West 84th Place, Los Angeles, CA	33.961368, -118.315515	Yes	DSL	No	No	Wood	A	B, C
142	SLA2	8900 block of S. Gramercy Place, South Los Angeles, CA 90047 (On West 91st St.)	33.954596, -118.312844	Decommission	Wireless	No	No	Wood	D	-
143	SLA3	10500 block of S. Manhattan Pl Los Angeles, CA 90047 (On West 106th Street)	33.94009, -118.310695	Yes	DSL	No	No	Wood	A	B, C
144	SLA4	1500 block of W. 79th St., South Los Angeles, CA 90047 (In alleyway behind)	33.967746, -118.303043	Decommission	DSL	No	No	Wood	D	-

Site Number	Site Name	Address	Lat/Long	Retain	Comm Type	Weather	Solar?	Pole Type	Recommend Approach	Optional Approach
145	SLA5	800 block of Century Blvd., South Los Angeles, CA 90044 (In alleyway behind)	33.945067, -118.289817	Yes	DSL	No	No	Wood	A	B, C
146	SLA6	8700 block of Regina Ct., South Los Angeles, CA 90044 (On field next to)	33.958037, -118.284874	Decommission	DSL	No	No	Wood	D	-
147	SLA7	9600 block of Wall St., South Los Angeles, CA 90003.	33.948779, -118.27176	Yes	DSL	No	No	Wood	A	B, C
148	SLA8	400 block of E. 104th St, South Los Angeles, CA 90003 (on Towne Ave)	33.942342, -118.267274	Decommission	DSL	No	No	Wood	D	-
149	SLA9	8000 block of McKinley Ave., South Los Angeles, CA 90001	33.966012, -118.260725	Decommission	DSL	No	No	Wood	D	-
201	VNY01	16534 Tupper St., Los Angeles, CA 91343	34.239415, -118.492917	Decommissioned	N/A	No	No	Wood	D	-
202	VNY02	8907 Debra Ave., Los Angeles, CA 91343	34.232496, -118.490516	Decommissioned	N/A	No	No	Wood	D	-
203	VNY03	8600 block of Odessa Ave., North Hills, CA 91343	34.22705, -118.491633	Yes	DSL	<u>Yes</u>	No	Metal	A	-
204	VNY04	16600 Chase St., Los Angeles, CA 91343	34.224882, -118.494494	Decommissioned	N/A	No	No	Wood	D	-
205	VNY05	16300 block of Shoenborn St., North Hills, CA 91343 (around the corner on Sophia Ave)	34.222008, -118.488087	Yes	Wireless	No	Yes	Metal	A	-
206	VNY06	7437 Ruffner Ave., Los Angeles, CA 91406	34.205952, -118.49668	Decommissioned	N/A	No	No	Wood	D	-
207	VNY07	Los Angeles, CA 91406	34.202309, -118.484838	Yes	DSL	No	No	Wood	A	B, C
208	VNY08	7100 block of DE CELIS PL, VAN NUYS	34.199776, -118.494639	Yes	Wireless	No	Yes	Metal	A	-
209	VNY09	16698 Archwood St., Los Angeles, CA 91406	34.19286, -118.496205	Decommissioned	N/A	No	No	Wood	D	-
210	VNY10	16200 block of KITTRIDGE, VAN NUYS (EMU on golf course, access thru gate on Kittridge)	34.190433, -118.487009	Yes	DSL	<u>Yes</u>	No	Wood	A	B, C
211	VNY11	16042 Kittridge St., Los Angeles, CA 91406	34.190339, -118.482944	Decommissioned	N/A	No	No	Wood	D	-
212	VNY12	16400 block of GILMORE, VAN NUYS (in alley)	34.187933, -118.491804	Yes	DSL	No	No	Wood	A	B, C
213	VNY13	6300 block of Woodley Avenue, Van Nuys, CA 91406 (on golf course access road near Woodley and Victory)	34.185178, -118.488947	Yes	Wireless	<u>Yes</u>	Yes	Metal	A	-
214	VNY14	5075 Woodley Ave., Los Angeles, CA 91436	34.161962, -118.483551	Decommissioned	N/A	No	No	Wood	D	-

Notes:

A = Mast/infrastructure remains in place

B = Remove and replace mast/infrastructure

C = Hybrid installation with new equipment and mast installed adjacent to existing mast, receiving power from existing mast

D = Remove infrastructure

Additional Notes:

- All recommendations for sites are pending a qualified mast inspection and certification
- GRU1 and AIR1 are located within airport property at LAX, and LAWA will provide the necessary escort to these sites.
- ESG4 is located within the City of El Segundo's Water Tower facility, and may require coordination with the City to access the site.
- ATH1 is located in the parking lot of the Woodcrest Library. LAWA has an agreement with the Library, and will require close coordination with them to make sure there is access, and that there is no disruption to library operations.
- VNY13 is in a right of way owned by the Army Corp of Engineers. LAWA has an agreement with the (COE), and must provide them with proper notification prior to doing any work at the site.