COUNTY JUDGE
Fort Bend County, Texas

Robert E. Hebert
County Judge

(281) 341-8608
Fax (281) 341-8609

February 6, 2018

Robert Patrick, Regional Administrator
Federal Transit Administration, Regional VI

Via Electronic Mail

Subject: Fort Bend County Request for Letter of No Prejudice (LONP) to Continue Design Activities and Commence Construction Activities for Transit Administration and Operations Facility

Dear Mr. Patrick:

On June 28, 2016, Fort Bend County requested the Federal Transit Administration's issuance of a Letter of No Prejudice (LONP) that was approved on October 18, 2016 (*see Attachment A: Federal Transit Authority Letter of No Prejudice Approval Letter)*. Subsequently, FTA requested that Fort Bend County conduct a Noise and Vibration analysis with regards to the impending construction activities for the new Transit Administration and Operations Facility. The Noise and Vibration analysis was completed on May 30, 2017, and recommended that a noise wall be constructed.

Fort Bend County was asked to update our request to Federal Transit Administration's issuance of a Letter of No Prejudice allowing the County to incur a total project cost of $28,345,990. All cost are related to environmental analysis, design and construction. Attached for your review is an updated cost estimate and adjusted schedule for the entire project as well as a copy of the Noise and Vibration analysis previously reviewed by FTA.

If you have any questions please contact Paulette Shelton, Transportation Director, at 281-243-6701 or via email at Paulette.Shelton@Fortbendcountytx.gov. Your attention to this request is much appreciated.

Sincerely,

Robert E. Hebert
Fort Bend County Judge

Cc: : Cheryle Tyson, FTA Region VI General Engineer, Melissa Foreman, FTA Region VI Community Planner, Don Kioski, FTA Region VI Director of Planning & Program Development, Paulette Shelton, FBCPT Director, Jon McGuff, FBC Facilities, Richard Stolleis, FBC Engineer, Ed Sturdivant, FBC Auditor, Jeff Thomas, Design Engineer, LAN, Yvette Maldonado, FBCPT, Finance & Administration Manager

Enclosures: ATTACHMENT A: Federal Transit Administration Letter of No Prejudice Approval Letter

2-9-2018 Two (2) originals sent to Dalia Sister, Public Transportation dept.

U.S. Department
of Transportation
**Federal Transit
Administration**

REGION VI Arkansas,
Louisiana, New Mexico,
Oklahoma, Texas

819 Taylor St. Room 14A02
Fort Worth, TX 76102
817-978-0550
817-978-0575 (fax)

October 18, 2016

Honorable Robert E. Hebert
Fort Bend County Judge
401 Jackson Street
Richmond, TX 77469

Re: Approval of Authority to Incur Costs Prior to Grant Approval – to continue design activities and commence construction activities for a Transit Administration and Operations Facility project in the City of Rosenberg in Fort Bend County, Texas

Dear Judge Hebert:

The Federal Transit Administration (FTA) has completed its review of a letter requesting a Letter of No Prejudice (LONP) allowing it to proceed to incur costs to continue design activities and commence construction activities for a Transit Administration and Operations Facility (the Project) in the City of Rosenberg in Fort Bend County, Texas. The letter was dated June 28, 2016, and supporting documentation was received on the following dates;

- July 6, 2016 - Original documentation submitted to FTA,
- September 12, 2016 – Correction made to the original documentation,
- September 20, 2016 – Correction made to the budget of the LONP,
- October 7, 2016 – Real Estate Appraisal and Review submitted to FTA,
- October 12, 2016 – Modification of the Project Cost submitted to FTA.

The LONP request includes construction management, construction materials, construction materials testing, construction activities, furniture, fixtures and equipment associated with the build out of the Project not to exceed the estimated project cost of $23,000,000. The Project will consist of approximately 30 acres located on a 209 acre tract of land owned by Fort Bend County. The property is located in the City of Rosenberg on the corner of Stella and Cottonwood School Road, approximately 730 yards west of I-69. The Project will have accommodations for administrative activities, reservations, scheduling, customer service, dispatch, traffic management, fare sales and collections, and driver work/break area. The fueling island will include; a bus wash facility, parts wash station and a fare collection station. The maintenance building will accommodate bus and service vehicle repair as well as inventory storage for parts, tires, batteries, etc.

FTA approved a Categorical Exclusion for the project on September 2, 2015. Additionally, the Project was originally identified in the approved FY2015-FY 2018 Houston-Galveston MPO (HGAC) TIP on May 23, 2014, as well as identified in the approved FY2017-FY2020 HGAC TIP on May 3, 2016.

This approval allows Fort Bend County to incur costs for the project described above and retains the project's eligibility for future FTA grant assistance. As with all pre-award authority, all Federal requirements must be met prior to incurring costs in order to retain eligibility of the costs for future FTA grant assistance. Real Estate acquisition costs are considered project costs and are covered in the LONP. FTA understands that Fort Bend County will use local funds to acquire the property in accordance with FTA requirements, but will not seek reimbursement of the local funds with future FTA grant assistance. The authority to incur costs provided in this letter does not constitute an FTA commitment that future Federal dollars will be approved for this project. This LONP expires on October 18, 2021.

Please contact Melissa Foreman, FTA Region 6 Community Planner at 817-978-0554 or Mel issa.Foreman(a)dot.gov, with any questions you may have about proceeding under the authority to incur costs provided in this letter.

Sincerely,

Robert C. Patrick
Regional Administrator

Exhibit A

Fort Bend County Public Transportation Administration/Operations Facility

Projects Budget - Updated January 2018

Project Expenditures ('000s)	Fiscal Year (Sept 1 - Aug 31)								Project Total
	2017 & Prior	2018	2019	2020	2021	2022	2023	2024	
Planning/Environmental	261,900	22,000							**283,900**
Design Facility & Access Road	1,121,569	42,073							**1,163,641**
Geotechnical Services	30,000								**30,000**
Related Services as Required (LONP, Peer Review, etc.)	8,800								**8,800**
Construct Admin & Maintenance Facility		13,686,810							**13,686,810**
Site Paving, Bus Canopies, Utilities & Foundations		5,868,002							**5,868,002**
Construct Bus Wash, Fuel Island, etc		2,245,330							**2,245,330**
Construct Access Road		1,218,482							**1,218,482**
Construct Noise/Sound Wall		349,800							**349,800**
Construction Materials Testing (Ninyo)		274,800							**274,800**
Construction Management (HZ)		1,111,178							**1,111,178**
Other: Constructability Rev, Bid Serv, Proj. Admin (HZ)		115,450							**115,450**
Other: Contingency/Coordination (HZ)		52,700							**52,700**
Construction Contingency		1,229,345							**1,229,345**
Dedication of Bamore / Tract T		2,000							**2,000**
Furniture, Fixtures & Equipment		447,055							**447,055**
FFE Turnkey (LAN)		46,430							**46,430**
Other: Project Costs (permitting etc)		212,267							**212,267**
Land** (donated)		---							---
Total Expenditures	**1,422,269**	**26,923,721**	**---**	**---**	**---**	**---**	**---**	**---**	**28,345,990**

Project Funding ('000s)	2016 & Prior	2017	2018	2019	2020	2021	2022	2023	2024	Funding Total
HGAC Enhancement Funding*			2,800,000		14,400,000					**17,200,000**
Future Federal Funding				2,223,391						**2,223,391**
TxDOT Federal	4,379									**4,379**
TxDOT State	27,708									**27,708**
FTA Federal	1,746,386	*930,012*								**2,676,398**
Local - Bond**			2,227,302		3,263,928					**5,491,230**
Local - Donated Land***			**437,792*							---
Local - General Revenue	46,888			*675,995*						**722,884**
Total Funding	**1,825,361**	**930,012**	**5,027,302**	**2,899,387**	**17,663,928**	**-**	**-**	**-**	**-**	**28,345,990**

*FHWA Flex funds will be transferred to FTA oversight.

Total LONP Request **26,520,629**

**Everything related to Bamore (construction, construction mgmt & contingency) is budgeted for with 100% County Bond funds.

***This project will use County owned and donated land with an estimated value of $437,792. This leverages $2,188,960 federal dollars at 100%.

Exhibit B

Project Schedule	
Date	**Task**
February 28, 2018	Design Changes for sound Wall
March 5, 2018	Begin Advertising RFP
March 13, 2018	Pre-RFP Conference
April 3, 2018	Received Proposals
April 5, 2018	Evaluate Proposals
April 10, 2018	Court Authorization to Negotiate
May 1, 2018	Approve Contract
May 14, 2018	Construction Start
300 Working Days	Completion

Cross-Spectrum Acoustics

Cross-Spectrum Acoustics Inc.

25A Granby Street
East Longmeadow, MA 01028

699 E. South Temple, Suite 201B
Salt Lake City, UT 84102

DRAFT TECHNICAL MEMORANDUM

To: Jeffrey R. Thomas, Lockwood, Andrews & Newnam, Inc.

From: David Towers, Scott Edwards and Joelle Suits, Cross-Spectrum Acoustics Inc.

Date: August 8, 2017

Project Reference: Noise Study for the Fort Bend County Bus Maintenance Facility in Rosenberg, TX
CSA Project No. J2017-1220

This technical memorandum summarizes a noise impact assessment conducted by Cross-Spectrum Acoustics Inc. (CSA) for the proposed Fort Bend County Bus Maintenance Facility in Rosenberg, TX. The assessment was carried out in accordance with U.S. Federal Transit Administration (FTA) guidelines (*Transit Noise and Vibration Impact Assessment*, Final Report FTA-VA-90-1003-06, May 2006). In addition to the noise assessment, a basic screening assessment for vibration impact was also conducted in accordance with FTA guidelines. A discussion of noise basics and criteria is provided in Section 1, the existing noise conditions are described in Section 2, the assessment methodology and results are presented in Section 3 and potential mitigation is outlined in Section 4.

1. NOISE BASICS AND CRITERIA

Sound is defined as small changes in air pressure above and below the standard atmospheric pressure, and noise is usually considered to be unwanted sound. The three parameters that define noise are as follows:

- Level: The level of sound is the magnitude of air pressure change above and below atmospheric pressure, and is expressed in decibels (dB). Typical sounds fall within a range between 0 dB (the approximate lower limit of human hearing) and 120 dB (the highest sound level that might be experienced in the environment). A 3-dB change in sound level is perceived as a barely noticeable change outdoors and a 10-dB change in sound level is perceived as a doubling (or halving) of the loudness of a sound.
- Frequency: The frequency (pitch or tone) of sound is the rate of air pressure change and is expressed in cycles per second, or Hertz (Hz). Human ears can detect a wide range of frequencies from about 20 Hz to 20,000 Hz. However, human hearing is less sensitive at high and low frequencies, and the A weighting system (dBA) is used to account for this by providing a single-number descriptor that correlates with human response to noise. The A-weighted sound level has been widely adopted by acousticians as the most appropriate descriptor for environmental noise. As an example, Figure 1 shows typical maximum A-weighted sound levels for various noise sources.
- Time Pattern: Because environmental noise is constantly changing, it is common to condense all of this information into a single number, called the "equivalent" sound level (Leq). The Leq represents the changing sound level over a period of time, typically 1 hour or 24-hours in transit noise assessments. For residential land use, the Day-Night Sound Level (Ldn) is the most common noise descriptor used, and has been adopted by many agencies as the best way to describe how people respond to noise in their environment. Ldn is a 24-hour cumulative A-weighted noise level that includes all noises that occur over a 24-hour day, with a 10-dB penalty for nighttime noise (10 PM to 7 AM). This nighttime penalty means that any noise event at night is equivalent to ten similar events during the day. Typical Ldn values for various environments and sources are shown in Figure 2.

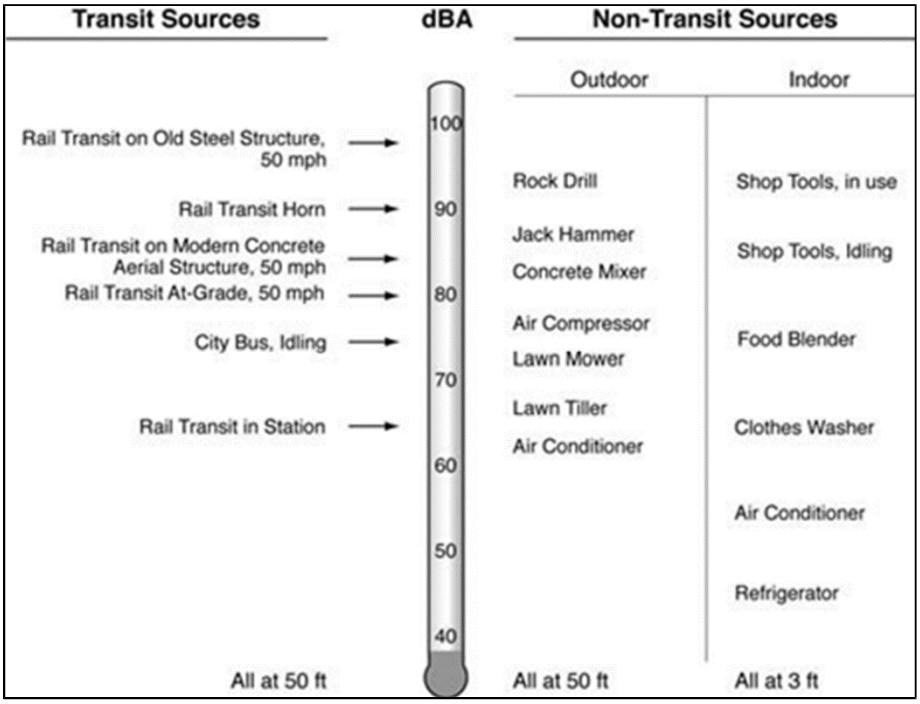

Figure 1. Typical A-Weighted Sound Levels

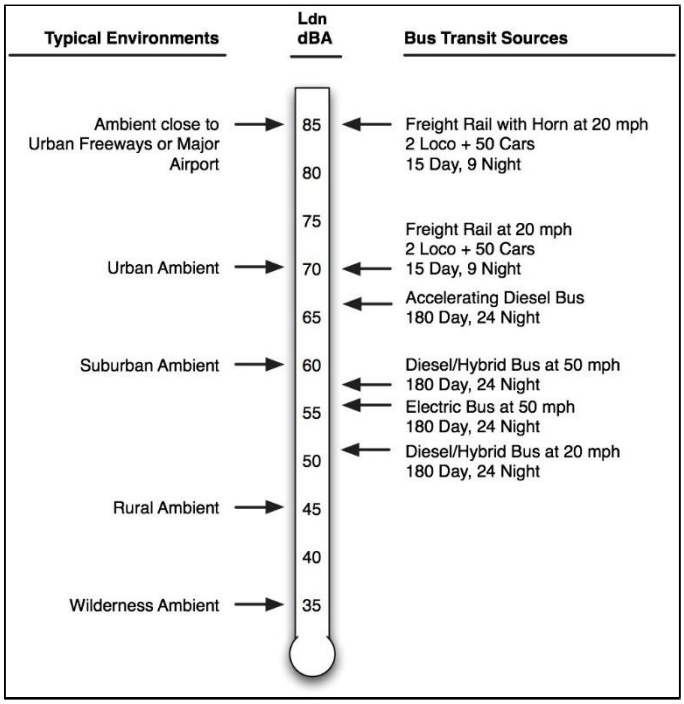

Figure 2. Cumulative Noise Levels from Transportation Sources

The noise impact criteria used for the project are based on the information contained in Chapter 3 of the FTA noise and vibration guidance manual (*Transit Noise and Vibration Impact Assessment,* Final Report FTA-VA-90-1003-06, May 2006). The FTA noise impact criteria are based on well-documented research on community response to noise and are based on both the existing level of noise and the change in noise exposure due to a project. The FTA noise criteria compare the project noise with the existing noise (not the no-build noise).

The FTA noise criteria are based on the land use category of the sensitive receptor. As shown in Table 1, the criteria use Ldn for locations where people sleep (Category 2) and Leq for locations with daytime and/or evening use (Category 1 or 3).

Table 1. Land Use Categories and Metrics for Transit Noise Impact Criteria

Land Use Category	Noise Metric (dBA)	Land Use Category
1	Outdoor $L_{eq}(h)^*$	Tracts of land where quiet is an essential element in their intended purpose. This category includes lands set aside for serenity and quiet, such as outdoor amphitheaters, concert pavilions, and National Historic Landmarks with significant outdoor use.
2	Outdoor L_{dn}	Residences and buildings where people normally sleep. This category includes homes and hospitals, where nighttime sensitivity to noise is of utmost importance.
3	Outdoor $L_{eq}(h)^*$	Institutional land uses with primarily daytime and evening use. This category includes schools, libraries, and churches, where it is important to avoid interference with such activities as speech, meditation, and concentration. Buildings with interior spaces where quiet is important, such as medical offices, conference rooms, recording studios, and concert halls fall into this category, as well as places for meditation or study associated with cemeteries, monuments, and museums. Certain historical sites, parks, and recreational facilities are also included.

* L_{eq} for the noisiest hour of transit-related activity during hours of noise sensitivity.
Source: FTA, 2006.

The noise impact criteria are defined by the two curves shown in Figure 3 below. These criteria allow increasing project noise as existing noise levels increase, up to a point at which impact is determined based on project noise alone. As illustrated in Figure 3, the FTA noise impact criteria include three levels of impact. These levels of impact include:

- No Impact: In this range, the project is considered to have no impact since, on average, the introduction of the project will result in an insignificant increase in the number of people highly annoyed by the new project noise.
- Moderate Impact: In the moderate impact range, changes in the cumulative noise level are noticeable to most people, but may not be sufficient to cause strong, adverse reactions from the community. In this transitional area, other project-specific factors must be considered to determine the magnitude of the impact and the need for mitigation, such as the existing noise level, predicted level of increase over existing noise levels and the types and numbers of noise-sensitive land uses affected.
- Severe Impact: In the severe impact range, a significant percentage of people would be highly annoyed by the new project noise. Severe noise impacts are considered to be "significant" under the National Environmental Policy Act and should be avoided if possible. Noise mitigation should be applied for severe impacts where feasible.

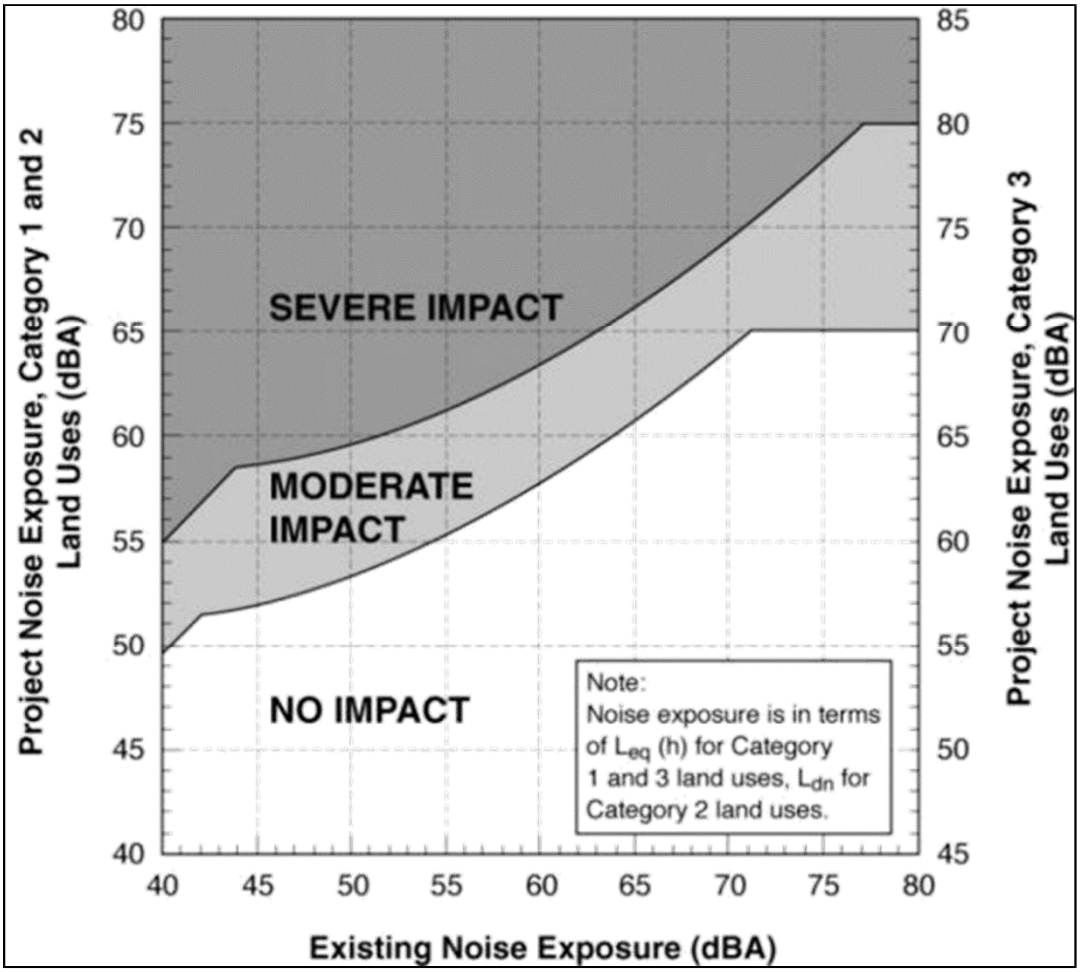

Figure 3. FTA Noise Impact Criteria

2. EXISTING NOISE CONDITIONS

To characterize the existing conditions, an ambient noise measurement was conducted over a full 24-hour period in the back yard of the residence at 806 Coffee Mill Creek Lane, located adjacent to the facility site in the Cottonwood housing development to represent the residences in the community to the north of the proposed project. The measurement consisted of continuous monitoring of the A-weighted sound levels between 15:00 on Tuesday May 30 and 15:00 on Wednesday May 31, 2017. The measurement location (LT-1) is detailed in Table 2, and shown in Figure 4, along with a site plan of the proposed bus maintenance facility.

Table 2. Summary of Existing Ambient Noise Measurement Results

Site No.	Measurement Location Description	Start of Measurement		Meas. Duration (hrs)	Noise Exposure Ldn (dBA)
		Date	Time		
LT-1	806 Coffee Mill Creek Lane	5/30/17	15:00	24	51

The noise measurements were performed with a NTi Audio model XL2 noise monitor that conforms to American National Standard Institute (ANSI) Standard S1.4 for Type 1 (precision) sound level meters. Calibrations, traceable to the U.S. National Institute of Standards and Technology (NIST), were conducted before and after the measurements using an acoustical calibrator. The noise monitor was set to continuously monitor and record multiple noise level metrics, as well as to obtain audio recordings during the measurement period.

Based on the noise measurement results, the existing noise exposure was determined to be 51 dBA in terms of Ldn. For this existing noise level, the FTA criteria described above indicate project Ldn impact thresholds of 54 dBA for moderate noise impact and 60 dBA for severe noise impact at the residences adjacent to the facility site.

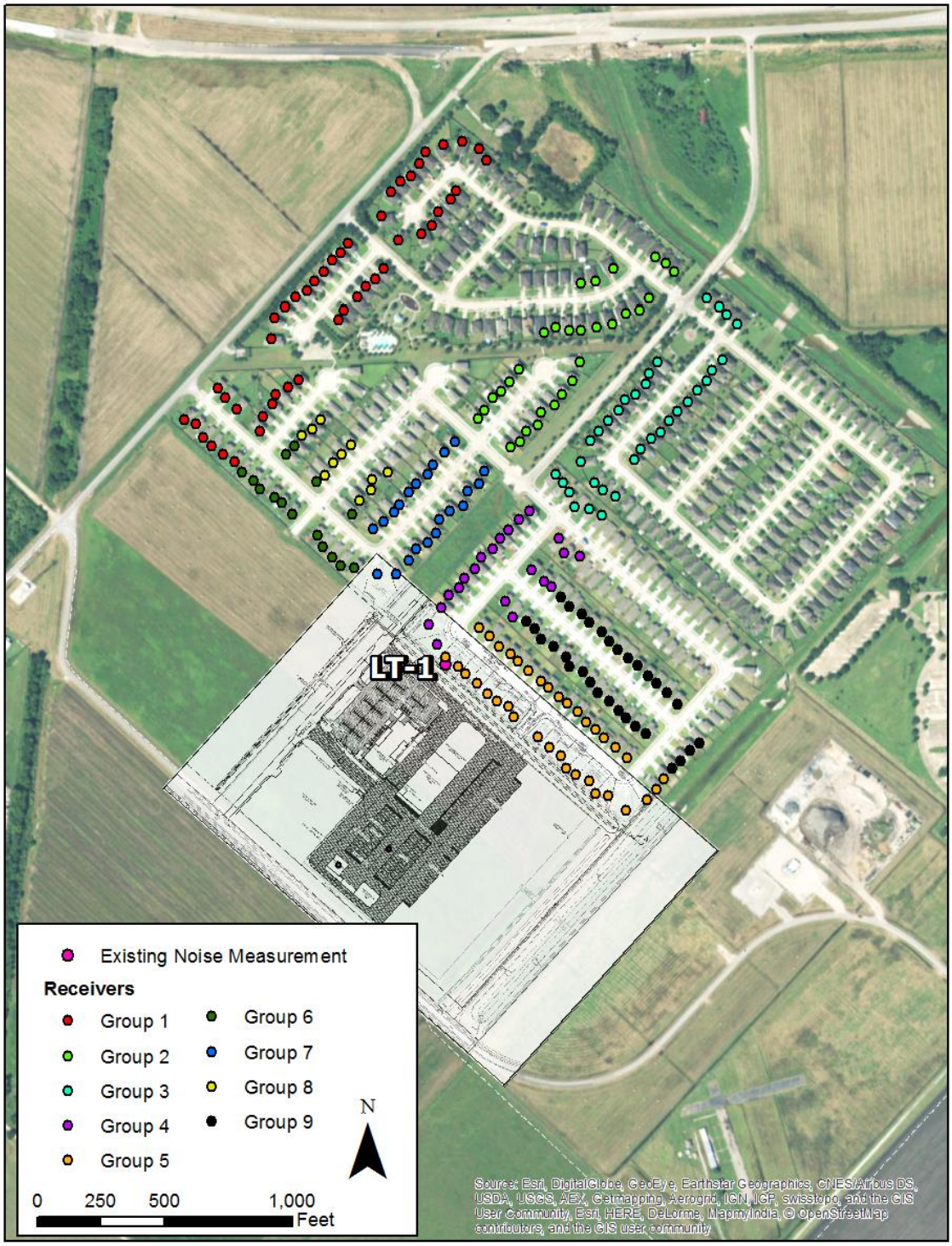

Figure 4. Bus Maintenance Facility Site Plan and Noise Measurement Location

3. IMPACT ASSESSMENT

3.1. NOISE

Noise impact has been assessed in accordance with guidelines contained in the U.S. Federal Transit Administration (FTA) guidelines (*Transit Noise and Vibration Impact Assessment*, Final Report FTA-VA-90-1003-06, May 2006). Noise impacts were evaluated using the Detailed Noise Assessment methodology contained in Chapter 6 of this guidance manual. The noise assessment included the following steps:

- Identify noise-sensitive land uses near the project site using aerial photography, geographic information system (GIS) data, and field surveys, typically within 500 feet of the proposed Fort Bend County Bus Maintenance Facility and proposed bus routes.
- Characterize the existing noise levels at nearby sensitive receptors by measurement (see Section 2).
- Predict project noise levels from bus operations (including noise from bus service routes, vehicle washing, and vehicle idling) at a reference distance of 50 feet, using preliminary project engineering plans and information on speeds, schedules and hours of operation (FTA's definition of "project noise" is noise exclusively due to new transit sources).
- Calculate the project noise level at each noise-sensitive receptor based on the distance to each project noise source.
- Determine noise impact by comparing the total project noise level at each noise-sensitive receptor to the FTA noise impact criteria thresholds for moderate and severe noise impact (see Section 1).
- Recommend mitigation at locations where predicted project noise levels exceed the FTA impact criteria.

Noise-sensitive land uses for the impact assessment were identified based on aerial photography, project drawings, and a site survey. The noise-sensitive land uses in the study area include the single-family residences in the Cottonwood housing development.

The noise impact assessment is based on the following operating plan for the project:

- The proposed maintenance facility will service a total of 100 buses.
- Buses will idle for a maximum period of five minutes prior to departing the maintenance facility.
- Bus operating speeds will range from 30 mph near the proposed maintenance facility and Cottonwood neighborhood to as much as 40 mph along Cottonwood School Road, based on posted speed limits.
- The operating hours and number of bus departures/arrivals are as follows:
    - Early morning (4:00 AM to 7:00 AM): 91 bus departures
    - Morning (7:00 AM to 12:00 PM): 36 bus arrivals
    - Afternoon (12:00 PM to 5:00 PM): 45 bus departures
    - Evening (5:00 PM to 10:00 PM): 100 bus arrivals
- The bus operations will be split evenly amongst the three service routes shown in Figure 5 during the morning, afternoon, and evening hours. During the early morning hours (before 7 AM), the buses will depart as follows:
    - Route 1: 40%
    - Route 2: 60%
    - Route 3: 0%
- All buses will be washed for a maximum period of three minutes every day between 11:45 AM and 10:30 PM.
- The reference sound exposure levels (SELs) taken from the FTA guidance manual are as follows:
    - 82 dBA at 50 feet and 50 mph for diesel bus operations
    - 111 dBA at 50 feet and one-hour in duration for idling diesel buses
    - 111 dBA at 50 feet and one-hour in duration for car wash operations

Additionally, the maintenance and administrative building structures would provide a small amount shielding from bus idling and car wash noise to the receivers on the western half of Coffee Mill Creek Lane.

The results of the noise impact assessment indicate that there would be 10 moderate noise impacts due to the proposed maintenance facility and bus route operations. The noise impacts are predominantly caused by the idling of buses in the early morning hours. The results of the noise impact assessment are summarized below in Table 3, and the locations of the noise impacts are shown in Figure 5. The results shown in Table 3 are for the receiver in each group with the highest project noise level.

Table 3. Summary of Noise Impact Assessment

Group	Distance to Noise Source (ft)			Project Source Noise Levels, Ldn (dBA)			Total Project Noise Level Ldn (dBA)	Existing Noise Level Ldn (dBA)	FTA Impact Criteria Ldn (dBA)		Number of Impacts	
	Closest Bus Rte	Car Wash	Bus Idling	Closest Bus Rte	Car Wash	Bus Idling			Mod.	Sev.	Mod.	Sev.
1	79	1629	1633	53	40	50	53	51	54	60	0	0
2	110	1770	1646	45	24	35	47	51	54	60	0	0
3	70	1679	1525	47	25	36	48	51	54	60	0	0
4	68	945	823	47	40	51	53	51	54	60	0	0
5	219	889	714	45	45	57	58	51	54	60	10	0
6	281	1163	1108	41	41	51	52	51	54	60	0	0
7	114	1150	1079	45	38	50	52	51	54	60	0	0
8	426	1426	1368	38	30	40	44	51	54	60	0	0
9	368	1190	1008	45	36	48	50	51	54	60	0	0

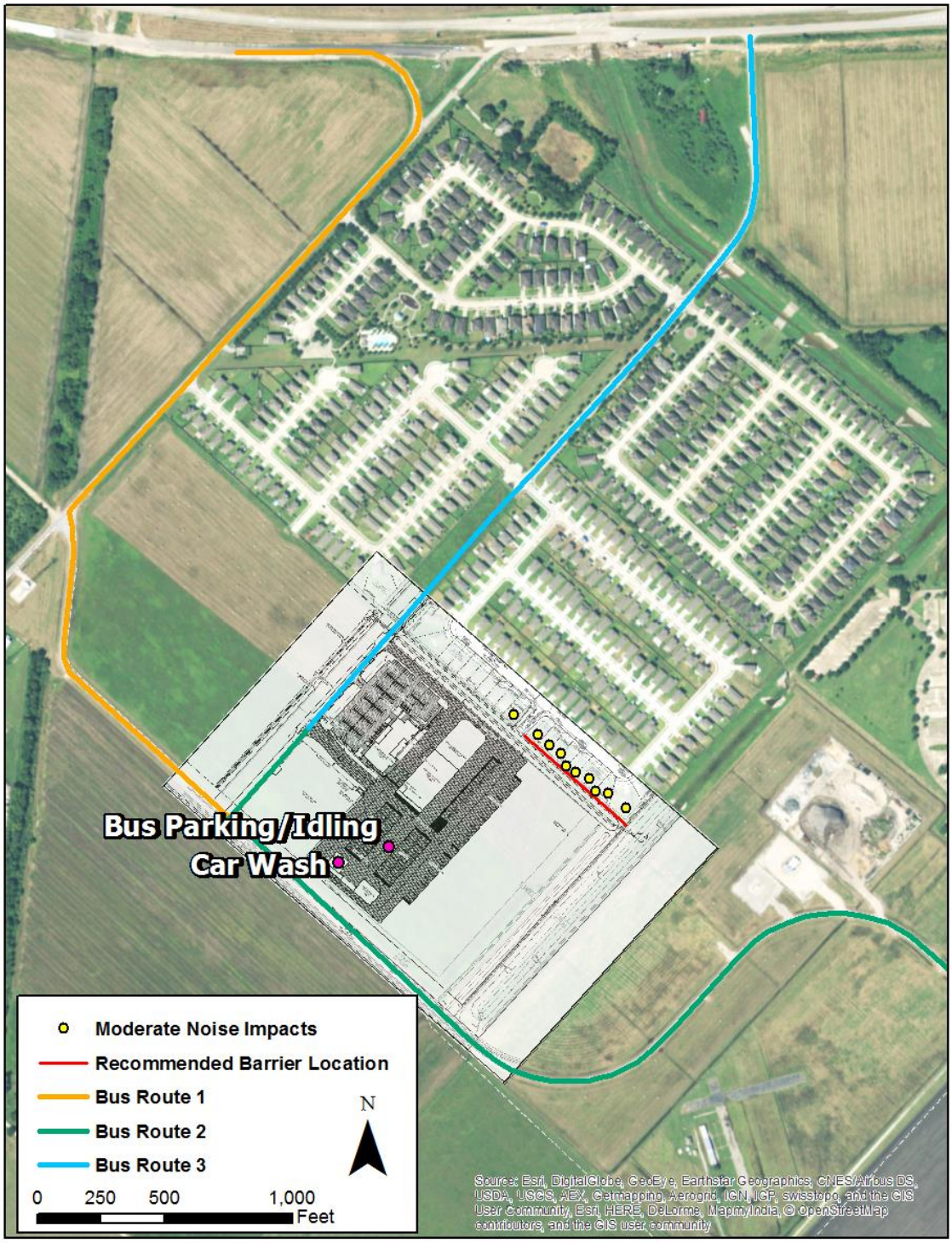

Figure 5. Noise Impact and Mitigation Locations

3.2. VIBRATION

Vibration impact has been assessed in accordance with guidelines specified in the U.S. Federal Transit Administration guidelines (*Transit Noise and Vibration Impact Assessment*, Final Report FTA-VA-90-1003-06, May 2006). Vibration impacts were evaluated using the Vibration Screening Assessment methodology contained in Chapter 9 of this guidance manual. For bus and rubber-tire transit projects, the FTA vibration impact screening distance for residential land use is 50 feet. There are no residences located within 50 feet of any project vibration source, and therefore no vibration impacts are anticipated from the proposed bus maintenance facility.

4. MITIGATION

The results of the assessment described above in Section 3 indicate that moderate noise impact is predicted at 10 residences in the Cottonwood development due to the project. No vibration impacts are anticipated.

Potential noise mitigation measures include modification of bus operations to reduce bus idling during the early morning hours (before 7 AM). If this approach is not feasible, an alternative would be to construct a sound barrier adjacent to the affected residences to reduce noise from the bus idling. It is roughly estimated that a 10-foot high sound barrier located as shown in Figure 5 could reduce project noise at the affected homes by 5 decibels (on average) and eliminate all but one impact. However, it is recommended that a detailed barrier analysis be carried out during project design prior to implementing this mitigation measure.