

### HUD Noise Screening Analysis

The project does not involve new stationary noise sources and the effect of four residences on mobile source noise generation is negligible. The project would generate noise temporarily during construction, but no significant construction noise impacts are anticipated because of the scale and type of construction involved (e.g. interior rehabilitation of existing buildings).

The following sections assess the existing noise exposure of the site at 324 Fourth Street, Jersey City, NJ. The analysis is consistent with 24 CFR Part 51 and the HUD Noise Guidebook.

### Airports

Newark Liberty International Airport is located 5.6 miles southwest of the project site. LaGuardia Airport is located 8.9 miles northeast at the project site. The noise contours for both airports were reviewed and show the project site is far from even the 60 DNL contour. This indicates airport noise would be negligible contributor to overall noise levels at this site given the levels of roadway traffic noise in an urban area.<sup>1</sup>

### Railroads

The PATH system enters a tunnel just west of Interstate 78. Interstate 78 would be a much more predominant source of noise in comparison to PATH (in other words the traffic noise level would so much higher than the rail that the rail level has no effect). Therefore, railroad noise levels do not need to be quantified.

### Roadway Traffic

Table 1 and Figure 1 summarize the location of the major roadways in the vicinity of the project site and available traffic data. The input and output from HUD's "Site DNL Calculator" for the traffic noise analysis is also provided below. The combined roadway traffic DNL is 67.1 dBA, which exceeds the 65 DNL HUD threshold for "normally unacceptable" exterior noise.

**Table 1: Traffic Data**

Roadway	Effective	AADT	Functional	Percent	Percent	Percent
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<sup>1</sup> <http://www.boeing.com/commercial/noise/ewr2003contour.jpg>  
<http://www.boeing.com/commercial/noise/lga2003contour.jpg>

	<b>Distance</b>		<b>Class</b>	<b>Auto</b>	<b>Med</b>	<b>Heavy</b>
<b>I-78</b>	1,470	91,065	Urban Interstate	91.61	2.89	5.5
<b>Newark Ave.</b>	455	18,638	Urban Minor Arterial	97.82	2.18	0.66
<b>4<sup>th</sup> St</b>	25	3,378 (assumed based on data for 9th st)	Urban Minor Arterial	97.82	2.18	0.66

Sources:

I-78 AADT from FHWA HMPS shapefile <http://www.fhwa.dot.gov/policyinformation/hpms/shapefiles.cfm>

Other AADT from NJDOT- <http://www.state.nj.us/transportation/refdata/roadway/traffic.shtm>

Vehicle classification based on average by functional class for count region 1, see <http://www.state.nj.us/transportation/refdata/roadway/pdf/TravelActivityVehTypeByRegion.pdf>

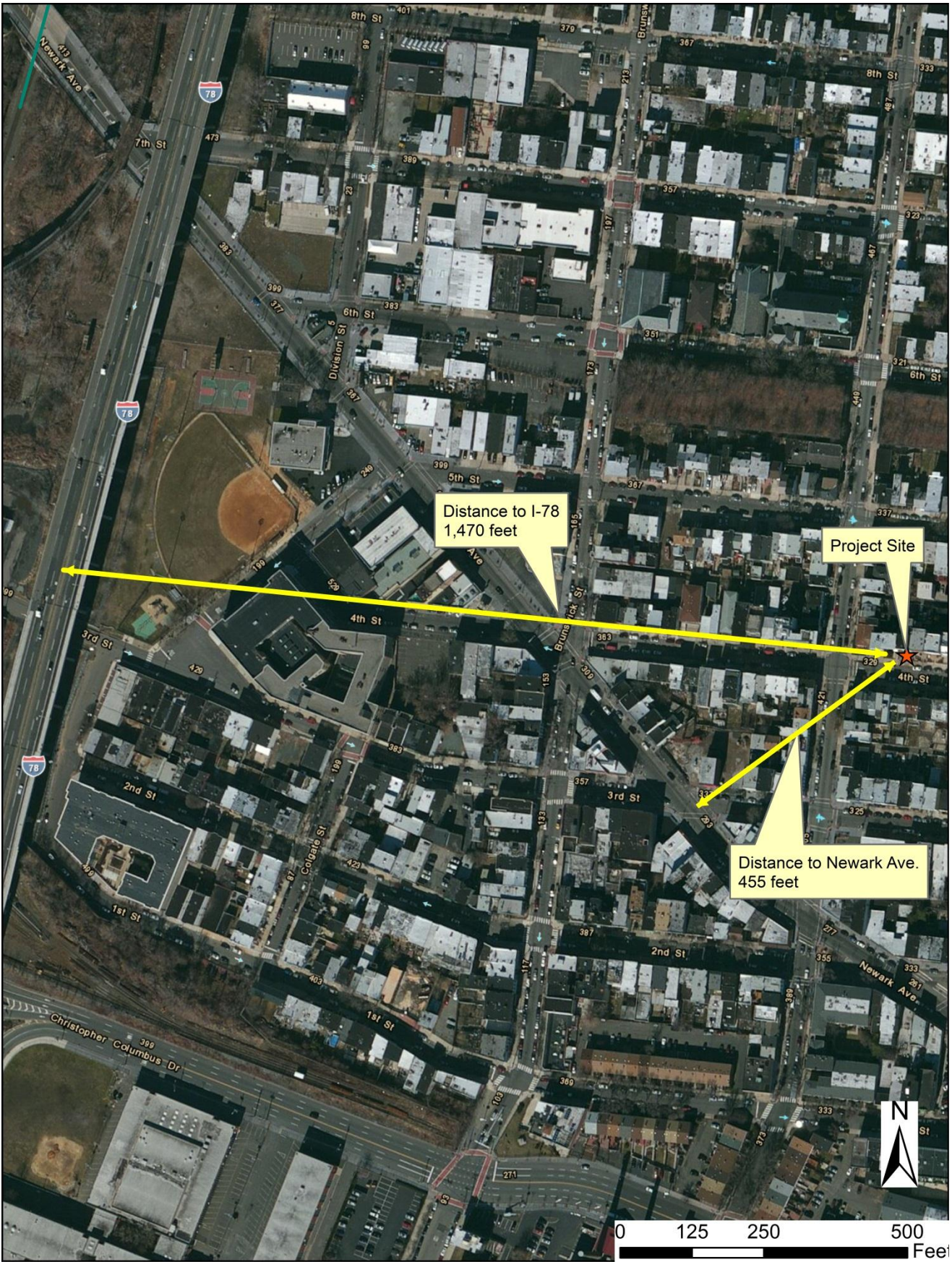


Figure 1- Distance to Roadways

Road # 1 Name: I-78

Road #1			
Vehicle Type	Cars <input checked="" type="checkbox"/>	Medium Trucks <input checked="" type="checkbox"/>	Heavy Trucks <input checked="" type="checkbox"/>
Effective Distance	1470	1470	1470
Distance to Stop Sign			
Average Speed	65	65	65
Average Daily Trips (ADT)	83425	2632	5009
Night Fraction of ADT	15	15	15
Road Gradient (%)			0
Vehicle DNL	56.8721	41.862	60.5565
Calculate Road #1 DNL	62.196	Reset	

Road # 2 Name: Newark Ave.

Road #2			
Vehicle Type	Cars <input checked="" type="checkbox"/>	Medium Trucks <input checked="" type="checkbox"/>	Heavy Trucks <input checked="" type="checkbox"/>
Effective Distance	455	455	455
Distance to Stop Sign			
Average Speed	35	35	35
Average Daily Trips (ADT)	18232	539	123
Night Fraction of ADT	15	15	15
Road Gradient (%)			0
Vehicle DNL	52.5302	37.2378	49.84
Calculate Road #2 DNL	54.5179	Reset	

Road # 3 Name: 4th St.

Road #3			
Vehicle Type	Cars <input checked="" type="checkbox"/>	Medium Trucks <input checked="" type="checkbox"/>	Heavy Trucks <input checked="" type="checkbox"/>
Effective Distance	25	25	25
Distance to Stop Sign			
Average Speed	30	30	30
Average Daily Trips (ADT)	3304	98	22
Night Fraction of ADT	15	15	15
Road Gradient (%)			0
Vehicle DNL	62.6744	47.3963	61.2665
Calculate Road #3 DNL	65.0929	Reset	

## Mitigation

As discussed above, the noise screening analysis shows the 65 DNL criterion for acceptable noise would be exceeded at the project site due to traffic noise. The most appropriate noise mitigation in this case is to incorporate building sound insulation measures into rehabilitation project or to confirm that the existing materials in the building provide sufficient noise attenuation. The maximum interior noise level per HUD regulation is 45 DNL. However, HUD regulations also require at least 5 dB of additional attenuation over that provided by typical construction practices if the predicted exterior sound level is above 65 dB, but not exceeding 70 dB (24 CFR 51.104). Based on these requirements, the required Sound Transmission Class (STC) for this project is 25. During the design of the project, the project architect should use HUD's "Sound Transmission Classification Assessment Tool" to ensure the building wall, window and door materials meet the required 25 dB attenuation (the existing materials may already meet this requirement, but that needs to be confirmed).<sup>2</sup> Incorporation of this mitigation measure in project specifications will ensure no significant noise impact occurs.

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<sup>2</sup> [http://portal.hud.gov/hudportal/HUD?src=/program\\_offices/comm\\_planning/environment/stracat](http://portal.hud.gov/hudportal/HUD?src=/program_offices/comm_planning/environment/stracat)