

MD 355 at Cedar Lane Phase 4 BRAC Improvements

Environmental Update for Walter Reed BRAC
Integration Committee (BIC) Meeting
March 19, 2013

National Environmental Policy Act (NEPA) Status

- Due to federal funding, the project must comply with the National Environmental Policy Act (NEPA), Section 106 of the National Historic Preservation Act of 1966, Section 4(f) of the U.S. Department of Transportation Act, the Clean Air Act, the SHA/FHWA Noise Policy, among other federal requirements;
- Phases 1-3 were studied between 2009-2011 and a Categorical Exclusion (CE) was signed by FHWA in December 2011;
- Phase 4 is currently being studied and SHA anticipates the project to be classified as a Categorical Exclusion.

Noise Analysis

- A noise analysis was completed in July 2012 which involved developing existing conditions models and predicting future sound levels;
- A total of 15 monitoring receptors and 7 modeling-only receptors within 7 Noise Sensitive Areas were used;
- The determination of traffic noise impacts is based on the relationship between the ambient noise levels and the established noise abatement criteria for noise sensitive areas.



Map 3.1
 MD 355 at Cedar Lane
 Noise Sensitive Areas

Noise Analysis

- All of the developed land evaluated fell into Activity Categories B, C, and E;

Noise Abatement Criteria (NAC) Hourly A-Weighted Sound Level in Decibels (dBA)

Activity Category	Activity Criteria	SHA Approach Criteria	Evaluation Location	Activity Description
A	57	56	Exterior	Lands on which serenity and quiet are of extraordinary significance, etc.
B	67	66	Exterior	Residential
C	67	66	Exterior	Active sport areas, day care centers, hospitals, libraries, places of worship, playgrounds, etc.
D	52	51	Interior	Auditoriums, medical facilities, places of worship, day care centers, etc.
E	72	71	Exterior	Hotels, motels, offices, restaurants/bars, and other developed lands/activities not included in A-D or F.
F/G				F=Agriculture, airports, industrial, etc. G=Undeveloped lands that are not permitted.

Noise Analysis

Common Outdoor Noise Examples	Noise Level (Decibels)	Common Indoor Noise Examples
	110	Rock Band
Jet Flyover at 1,000 feet	100	Inside Subway Train (NY)
Diesel Truck at 50 feet	90	Food Blender at 3 feet
Noisy Urban Daytime	80	Garbage Disposal at 3 feet
Grass Lawn Mower at 100 feet	70-60	Normal Speech at 3 feet
Quiet Urban Daytime	50	Dishwasher, Next Room
Quiet Urban Nighttime	40-30	Library
Quiet Suburban Nighttime	30-20	Bedroom at Night

Adapted from Guide on Evaluation and Attenuation of Traffic Noise. AASHTO. 1974

Noise Analysis- Results

- Noise monitoring was performed on March 1, 2012, March 6, 2012, and April 25 2012 at 15 receptor sites;
- All measurements were performed between 7:40 am and 8:35 am;
- After noise measurements and traffic counts were obtained, the Traffic Noise Model (TNM) was developed inputting all pertinent roadways, terrain, and shielding elements that adequately represent the study area's noise environment.

TNM Analysis Results for 2012 Build Conditions

Receptor Number	Residence Address	NAC Activity Category	Predicted 2012 Conditions Sound Level PM Peak	Receptor Impacted? (Yes)	(No)
R1	9301 Rockville Pike	B	64		X
R2	9309 Rockville Pike	B	65		X
R3	9405 Locust Hill Road	B	58		X
R4	5001 Cedar Croft Lane	C	65		X
R5	5010 Cedar Croft Lane	B	57		X
R6	4900 Cedar Croft Lane	B	66	X	
R7	9190 Rockville Pike	C	64		X
R8	9211 Cedar Way	B	59		X
R9	4905 Cedar Lane	B	64		X
R10	9000 North Drive	E	66		X
R11	9101 Rockville Pike	C	65		X
R12	9101 Rockville Pike	C	61		X
R13	9407 Locust Hill Road	B	59		X
R14	9419 Locust Hill Road	B	57		X
R15	9400 Rockville Pike	C	62		X
M1	9200 Rockville Pike	B	61		X
M2	9307 Rockville Pike	B	59		X
M3	9306 Elmhirst Drive	B	57		X
M4	9205 Cedar Way	B	60		X
M5	9405 Rockville Pike	B	61		X
M6	9406 Locust Hill Road	B	51		X
M7	9410 Locust Hill Road	B	52		X

Noise Analysis- Results

- The Traffic Noise Model using 2012 Build Conditions predicted receptor R-6 would experience noise levels that approach or exceed the NAC;
- A barrier along the southbound side of MD 355 with a length of 349 feet and an average height of 18 feet was found feasible but not reasonable;
- With only two benefited residences, the square footage per benefited residence is 3,141 square feet, which exceeds the threshold of 2,700 square feet as outlined in SHA/FHWA's Noise Policy;
- In addition, the existing pedestrian walkway that connects the residences to MD 355 would be eliminated.

Air Quality Analysis

- A *draft* air quality technical report was completed in March 2013;
- The study's intent is to evaluate the project level air quality impacts of the proposed improvements;
- The evaluation of air quality is being completed to meet the requirements of NEPA, the Clean Air Act (CAA), and the Clean Air Act Amendments of 1990 (CAAA).

Air Quality Analysis-Background

- The Environmental Protection Agency (EPA) established National Ambient Air Quality Standards (NAAQS) for certain pollutants, known as criteria pollutants;
- To date, the EPA has established NAAQS for six criteria pollutants: ozone (O₃), carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), particulate matter (PM), and lead;
- To satisfy the requirements of the CAA and CAAA90, an air quality analysis must be completed to demonstrate that the project will not cause a new violation of the NAAQS or lead to an increase in an existing violation;
- Of the six criteria pollutants only two, CO and PM, are required to be analyzed at the project level by the project sponsors. This was done for the MD 355 project.

Air Quality Analysis- Background

- The remaining criteria pollutants act over a wider area than the project study area and are analyzed by the local Metropolitan Planning Organization (MPO) as part of their regional air quality analysis;
- The MPO for the region containing MD 355 is the National Capital Region Transportation Planning Board (NCRTPB), which is part of Metropolitan Washington Council of Governments (MWCOCG);
- EPA also regulates Mobile Source Air Toxics (MSAT) however, standards have not been set by EPA yet.

Air Quality Analysis- Results

Carbon Monoxide/Particulate Matter:

- The air quality studies done for MD 355/Cedar were completed in conformance with applicable EPA and FHWA regulations and guidance to demonstrate that the CO and PM_{2.5} (Fine Particulate Matter <2.5 microns) NAAQS will *not* be exceeded at communities adjacent to the project corridor and that the project conforms to the requirements of the CAA and CAAA90;
- The MD 355/Cedar Lane project is not considered a Project of Air Quality Concern.

Air Quality Analysis- Results

Conformity:

- On the regional level, a project is considered to conform with the CAA if it is a part of a conforming Transportation Improvement Program (TIP) and Constrained Long Range Plan (CLRP);
- MD 355/Cedar, known as ***BRAC Intersections near National Naval Medical Center, Bethesda***, is listed in the December 19, 2012 Air Quality Conformity Update of the 2012 CLRP (Project ID 2620) and the FY 2013-2018 TIP (Project ID 5998) for the Washington Metropolitan Region with Completion Date of 2012;
- An updated regional conformity analysis covering both the TIP and CLRP was adopted on July 18, 2012.

Air Quality Analysis- Results

Mobile Source Air Toxics:

- A qualitative assessment of MSAT was included in the draft report in conformance with FHWA guidance, as approved by EPA, and included an analysis of the Project as a “Project with No Meaningful Potential for MSAT Effects”, per the referenced guidance;
- The draft Air Quality Technical Report was sent to the Interagency Consultation Group (FHWA/EPA/MDE) on March 12, 2013 for a 15 day comment period. The report will be posted on SHA’s webpage for public comment once the interagency consultation is complete.

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