

Documented Categorical Exclusion

Bladensburg Bus Garage

June 18, 2019

Grant Applicant: Washington Metropolitan Area Transit Authority (WMATA)

Proposed Project: Bladensburg Bus Garage

Date: June 14, 2019

**INFORMATION REQUIRED FOR PROBABLE
CATEGORICAL EXCLUSION
(SECTION 771.118(d))**

- A. DETAILED PROJECT DESCRIPTION: See Attachment Part A and Appendix 1.
- B. LOCATION (INCLUDING ADDRESS): See Attachment Part B.
- C. METROPOLITAN PLANNING AND AIR QUALITY CONFORMITY: Project will not affect air quality conformity, see Appendix 2.
- D. ZONING: No change to zoning will occur.
- E. TRAFFIC IMPACTS: See Attachment Part C and Appendix 3.
- F. CO HOT SPOTS: Project will not affect carbon monoxide hot spots.
- G. CULTURAL RESOURCES: Project will not affect cultural resources, see Attachment Part G and Appendix 4.
- H. NOISE: No change to operating noise impacts will occur.
- I. VIBRATION: No change to operating vibration will occur.
- J. ACQUISITIONS & RELOCATIONS REQUIRED: See Attachment Part J.
- K. HAZARDOUS MATERIALS: See Attachment Part D and Appendix 5.
- L. COMMUNITY DISRUPTION AND ENVIRONMENTAL JUSTICE: See Attachment Part E.
- M. PUBLIC PARKLAND AND RECREATION AREAS: Project will not impact parks or recreation areas.
- N. IMPACTS ON WETLANDS: Project will not impact wetlands.
- O. FLOODPLAIN IMPACTS: Project will not impact floodplains.

- ✓ P. IMPACTS ON WATER QUALITY, NAVIGABLE WATERWAYS, & COASTAL ZONES: Project will not impact water quality, navigable waterways, or coastal zones.
- ✓ Q. IMPACTS ON ECOLOGICALLY-SENSITIVE AREAS AND ENDANGERED SPECIES: Project will not impact ecologically-sensitive areas or endangered species.
- ✓ R. IMPACTS ON SAFETY AND SECURITY: No change to safety or security will occur.
- ✓ S. IMPACTS CAUSED BY CONSTRUCTION: See Attachment Part S.

APPENDIX 1: Figures

APPENDIX 2: TIP Amendment

APPENDIX 3: Transportation Technical Memorandum

APPENDIX 4: Cultural Resources Correspondence

APPENDIX 5: Hazardous Materials Surveys

**Bladensburg Bus Garage Facility
Documented Categorical Exclusion
Attachment**

A. Detailed Project Description: WMATA plans to demolish the existing Bladensburg Bus Garage to upgrade maintenance and support facilities at the division. The Bladensburg Bus Garage is located on a 17.59-acre site in northeast Washington, DC, which will increase to 18.61 acres upon completion of the proposed project. The garage is bounded by 25th Place NE, Douglas Street NE, Bladensburg Road NE, and a CSX railroad line. The existing site consists of 246 parking spaces for 40-foot-long buses and 36 parking spaces for articulated buses.

The planned development will create 200 parking spaces for 40-foot-long buses, 100 spaces for articulated buses, and 560 spaces for employee parking (including 62 dedicated spaces for non-revenue vehicles). The current garage facility only provides on-site parking for buses and non-revenue vehicles. The new facility will continue to provide service such as cleaning (interior and exterior), inspections, running repairs, heavy repairs and service, parts storage, crew reporting and dispatching, and employee service and welfare areas. A detailed project concept is shown in **Figure 1** (see **Appendix 1**).

The demolition of the existing garage and construction of the new garage will occur in three phases. During construction, off-site parking for WMATA buses and employee vehicles will be provided in the northwest corner lot at the intersection of Bladensburg Road NE and Montana Avenue NE (see **Figure 2** in **Appendix 1**). During Phases I and II of construction, 100 parking spaces for 100-foot-long buses and 187 parking spaces for employee vehicles will be provided at the off-site location. Similarly, during Phase III construction, 33 parking spaces for 40-foot-long buses and 187 parking spaces for employee vehicles will be provided at the off-site location.

B. Location Including Address: The Bladensburg Bus Garage Facility is located at 2251 26th Street NE, Washington DC 20018; as shown in **Figure 3** (see **Appendix 1**).

C. Metropolitan Planning and Air Quality Conformity: The project is included in the conforming Regional Transportation Improvement Program (TIP) Amendment No. 5867, as shown in **Appendix 2**. Because the District of Columbia is not currently a non-attainment area for Carbon Monoxide or Particular Matter, project-level air quality conformity requirements do not apply.

D. Zoning: The site is zoned as PDR-1 – Production, Distribution, and Repair, which permits moderate-density commercial and PDR activities employing a large workforce and requiring some heavy machinery under controls that minimize any adverse impacts on adjacent, more restrictive zones. This project will maintain the current zoning designation.

E. Traffic Impacts: This project is not anticipated to create unacceptable conditions on the regional roadway network. The Levels of Service at two of six intersections will show a moderate, but acceptable, decrease in performance. Another two of six intersections will be closed under future built (with improvements) conditions.

Table 1: Summary Traffic Impact Results

Intersection Name	Future Background Traffic LOS (AM / PM)	Future Build with Improvements Traffic LOS (AM / PM)
Bladensburg Road/25 th PI/V St	C / C	D / C
Bladensburg Road/26 th St	B / B	(does not exist)
Bladensburg Rd/Channing St	A / A	B / B
Bladensburg Rd/28 th St	A / A	(does not exist)
Bladensburg Rd/Douglas St	A / A	A / A
Douglas St/28 th St	A / A	A / A

For a full transportation technical memorandum and analysis, refer to **Appendix 3**.

WMATA anticipates preparation of DDOT transportation study which will review traffic loads and signals in the vicinity of the re-constructed parking garage.

F. CO Hot Spots: Traffic from the proposed improvements is not predicted to affect the Level of Service at the closest intersections beyond acceptable planning standards, as stated in Part F. Therefore, no carbon monoxide (CO) hot spot analysis at nearby intersections was conducted.

G. Cultural Resources: WMATA anticipates a Conditional No Adverse Effect determination for the project. No eligible historic architectural resources exist in the area of potential affect (APE) for the Bladensburg Bus Garage Facility. FTA initiated a Section 106 consultation with the District of Columbia State Historic Preservation Office (DC SHPO) in June 2019. WMATA and FTA continue its coordination with the DC SHPO. A copy of the DC SHPO correspondence and FTA Section 106 Project Initiation Package and DC SHPO response is provided in **Appendix 4**. The Clark Mill foundry, where the statue *Freedom* was cast, was sited at this location. The statue *Freedom* now sits atop the Capitol dome. The Conditional No Adverse Effect determination from the DC SHPO is expected to require an archaeologist on site during demolition activities in the vicinity of the former foundry.

H. Noise: This project is not expected to create an exceedance of the FTA thresholds for *moderate* or *severe* impact criteria, or WMATA noise impact criteria. Noise levels are expected to be similar to noise levels at the existing bus garage facility.

I. Vibration: Vibration levels are expected to be similar to those from activities at the existing facility. Moreover, rubber-tired vehicles rarely result in elevated vibration levels due to the nature of bus suspension systems and no vibration-sensitive receptors are located within the FTA screening distance of 200 feet of the proposed improvements.

J. Acquisitions and Relocations Required: As part of this project, WMATA will acquire the terminal cul-de-sac portion of Douglas Street NE, the adjacent parcel(s) bounded by Douglas Street NE and 28th Street NE, and 28th Street NE between Bladensburg Road and Douglas Street. WMATA will close and acquire this street in conformance with the Code of the District of Columbia, Title 9, Chapter 2, *Street and Alley Closing Procedures*. As necessary, WMATA will acquire real property through the provisions of the *Uniform Relocation Assistance*

and Real Property Acquisition Act of 1970, as amended, and through negotiations with property owners based on property appraisals.

K. Hazardous Materials: A variety of hazardous materials are currently present at the Bladensburg Bus Garage Facility. A summary of these hazards is provided below:

- Asbestos-containing materials:
 - Non-friable black, white, green, and pink/coral 9-inch by 9-inch floor tile and associated mastic, located in the second-floor locker room and recreation area;
 - Friable mudded fittings/elbows on fiberglass-insulated pipe, located throughout the building;
 - Friable tan 12-inch by 12-inch wall tile and associated mastic, located in the second floor MTPD area in the storage room, telephone closet, and computer room;
 - Non-friable white 9-inch by 9-inch floor tile and associated mastic, located in the stairwells of Buildings 2 and 3;
 - Non-friable blue, green, and off-white 9-inch by 9-inch and 12-inch by 12-inch (patches) floor tile and associated mastics, located in the basement storage area outside of the PLNT office;
 - Non-friable orange, light green, and dark green 9-inch by 9-inch floor tile and associated mastic, located in the second-floor areas including offices, the drivers' lounge area, training room, depot office, and operator locker room;
 - Non-friable black mastic beneath non-ACM blue 12-inch by 12-inch floor tile, located in Building 3 offices, hallway, and entry areas on the ground floor, the hallway and lobby leading between Buildings 2 and 3, and the base of the stairway in Building 2; and
 - Non-friable fire doors, located throughout the facility.
- Lead paint:
 - Beige paint and coating, located in the second floor lounge and vending machine area.

These materials have the greatest potential risk to be disturbed during demolition and construction activities, potentially exposing workers to contamination. WMATA will treat, handle, and dispose of these materials in accordance with the label instructions and regulatory requirements established by WMATA, the Occupational Safety and Health Administration (OSHA), the US Environmental Protection Agency (EPA), and other applicable regulatory authorities.

WMATA will require the contractor to conduct a Phase I Environmental Site Assessment (ESA) for all property acquisitions (see **Section J**).

Asbestos-containing-material and lead paint surveys conducted at Bladensburg Bus Garage are included in **Appendix 5**.

L. Community Disruptions and Environmental Justice: While minority and low-income populations are present within a one-quarter-mile radius of the Bladensburg Bus Garage Facility, the adverse impacts of the project identified do not rise to the level of significant effects

and will not result in disproportionately high and adverse human health or environmental effects to those populations, which is the threshold for environmental justice impacts in Executive Order 12898. Most project impacts will occur during construction phases as described in **Section S (Impacts Caused by Construction)**.

WMATA will hold a WMATA Compact public hearing.

M. Public Parkland and Recreation Areas: No impact to public parkland or any recreational area has been identified. No park or recreational area will be used for the project. The District of Columbia owns a triangle park adjacent to the site. No impact to this park has been identified.

N. Wetland Impacts: No naturally occurring water features, including wetlands or waters of the United States are present.

O. Floodplain Impacts: No impact to floodplains will occur and the facility is not located within a floodplain (Flood Insurance Rate Map, Community Panel Number 1100010036C, effective September 27, 2010; this flood insurance rate map was reviewed and confirmed on June 5, 2019).

P. Impacts to Water Quality, Navigable Waterways, and Coastal Zones: No impact to water quality is anticipated as a result of the project. Surface water runoff from new impervious surface cover will be managed in accordance with the Clean Water Act, as well as other federal and local regulations. Water quality practices currently in place at the bus garage will be used for this project, and new stormwater best management practices (BMPs) will be constructed to accommodate the proposed improvements.

There is no navigable waterway in the bus garage facility property. Therefore, no impact to navigable waterways will occur.

As the District is not part of the Federal Coastal Zone Management Program, no Federal Coastal Zone Management Program Consistency Determination request was made for this project.

Q. Impacts on Ecologically-Sensitive Areas and Endangered Species: No impact to federally-protected species or habitat is expected as a result of this project, as no federally proposed or listed endangered or threatened species is known to exist within the project area.

R. Impacts on Safety and Security: The proposed improvements at the Bladensburg Bus Garage Facility are not anticipated to cause any negative impact to the safety or the security of the adjacent community, or at the bus garage facility itself. The proposed facility will be fully enclosed by exterior fencing and will have controlled access points using gates and guards, restricting access to authorized personnel only.

S. Impacts Caused by Construction:

Noise: Construction will be limited to the hours stipulated by the District Department of Consumer and Regulatory Affairs (DCRA) in DC Municipal Regulation (DCMR) 20, Sec. 2700.1; that is, Monday through Saturday from 7 am to 7 pm. Any work outside of these hours will be conducted only after receiving an after-hours permit from DCRA. Construction activities will follow the noise criteria specified in Section 16.7 of the *WMATA Manual of Design Criteria*.

Utilities: The Design Builder will coordinate through utility survey to determine the location of utilities on-site. Construction operations are not anticipated to result in the disruption of any energy utility to commercial, industrial, or residential customers at the project site.

Disposal of Debris, Solid Waste, and Hazardous Materials: The Bladensburg Bus Garage Facility will be designed and constructed under LEED “Platinum” design standards. This standard requires that debris from the construction process be minimized and that materials be reused wherever feasible. Any unusable construction debris will be disposed of in local construction-debris landfills. No waste will be disposed of or incinerated on site.

Water Quality: During construction, stormwater runoff will be managed in compliance with federal and DC regulations. A stormwater management plan and erosion and sediment control plan will be prepared for use during construction activities. A stormwater pollution prevention plan will be developed, detailing the methods to manage construction waste, such as building materials, garbage, and debris, and to implement controls to minimize the exposure of these materials to stormwater. Temporary management facilities for the control of construction stormwater runoff will be erected and the Design Builder will obtain all appropriate permits and approvals.

Access and Distribution of Traffic: The proposed improvements at the Bladensburg Bus Garage Facility will involve the permanent closure of portions of Douglas Street NE. The transportation technical memorandum (see **Appendix 3**) offers management strategies for closures. Construction vehicles will access the site via 25th Place, NE.

Air Quality: Construction activities at the facility may cause nuisance dust and construction equipment emissions. These increases are not expected to adversely impact air quality either locally or regionally. Control measures may include minimizing the length of exposure of disturbed lands, sprinkling water and/or wood chips on exposed earth, and using tarpaulins on loaded trucks.

WMATA will require the contractor to utilize the best available mitigation measures to prevent excessive emissions or particulates and carbon monoxide from the operation of machinery. Generally, such measures include the prohibition of unnecessary idling and operation of equipment, and appropriate pollution control equipment.

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APPENDICES

APPENDIX 1: FIGURES

Figure 1: Detailed Project Concept (Proposed Conditions)

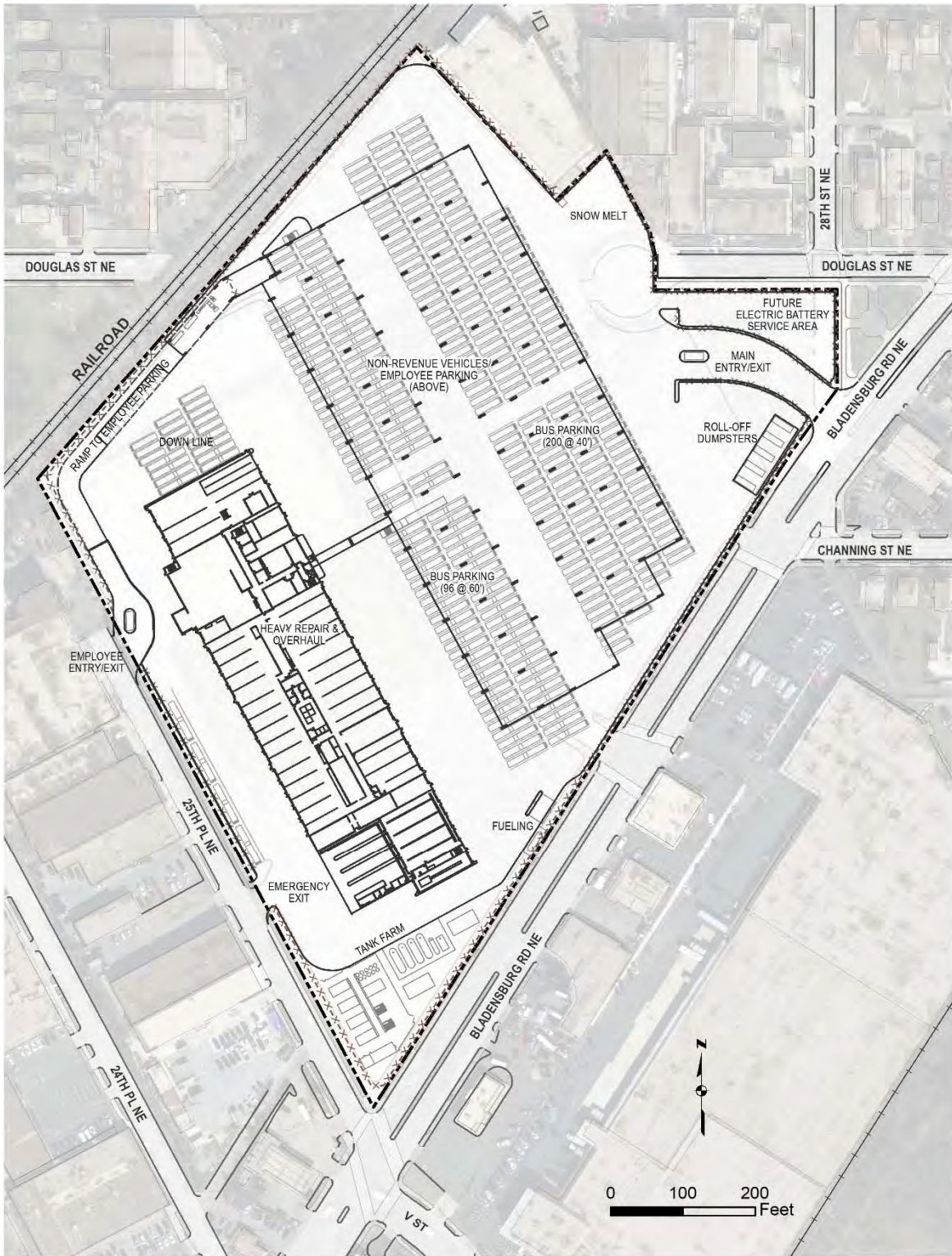
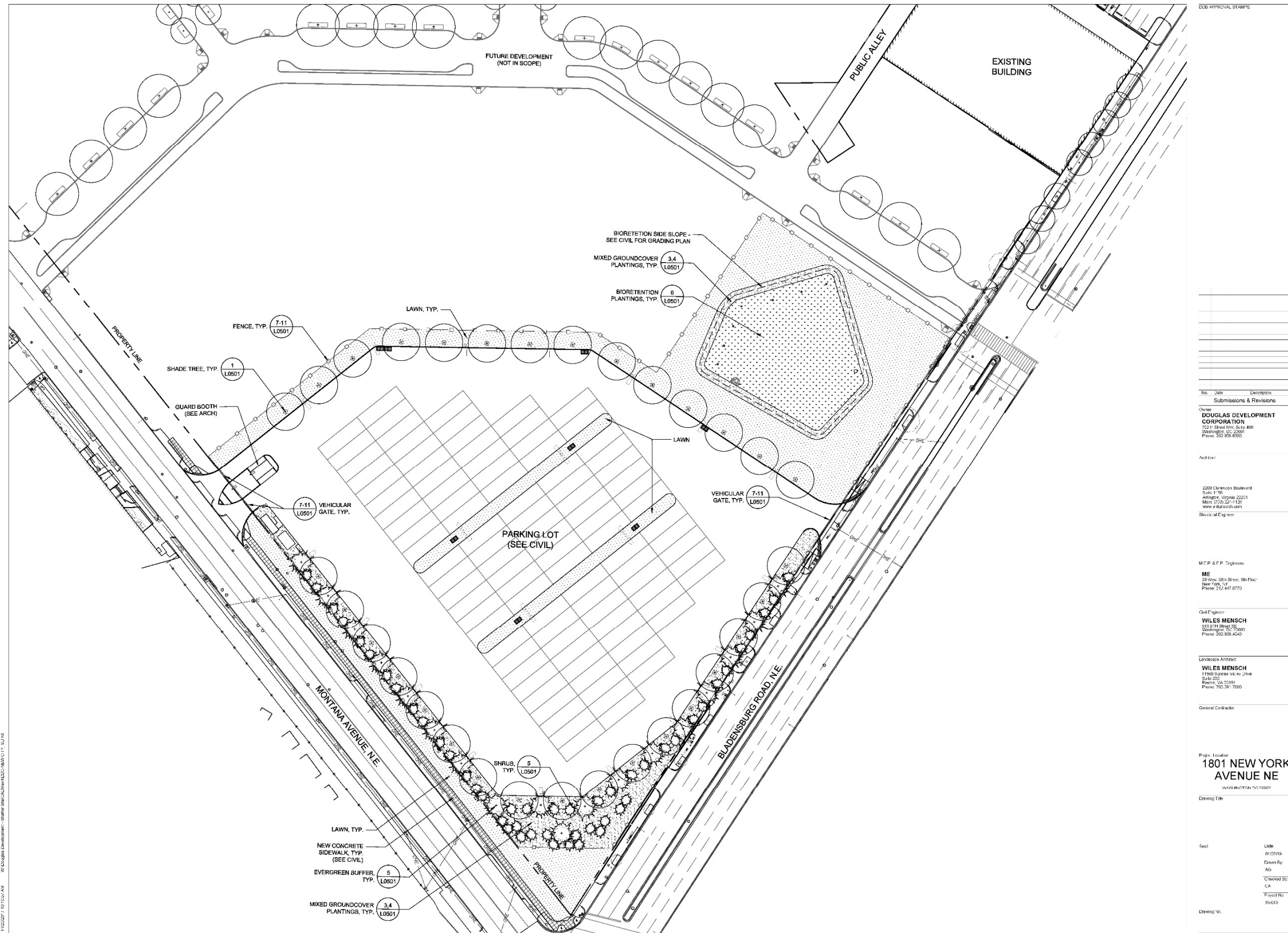


Figure 2: Off-Site Project Parking Location



DCB APPROVAL STAMP

No.	Date	Description
		Submissions & Revisions

Owner
DOUGLAS DEVELOPMENT CORPORATION
 2221 Wilson Blvd., Suite 400
 Arlington, VA 22201
 Phone: 703.838.8300

Architect
 2200 Clarendon Boulevard
 Suite 1100
 Arlington, Virginia 22201
 Main: 703.221.1120
 www.rhforch.com
 Rhforch.com

M.C.P. & P.P. Engineers
ME
 28100 36th Street, 9th Floor
 New York, NY
 Phone: 718.487.6775

Civil Engineer
WILES MENSCH
 310 S. 19th Street, Suite 200
 Washington, DC 20001
 Phone: 202.391.4540

Landscaping Architect
WILES MENSCH
 11900 Sully Road, Suite 400
 Fairfax, VA 22031
 Phone: 703.591.7880

General Contractor

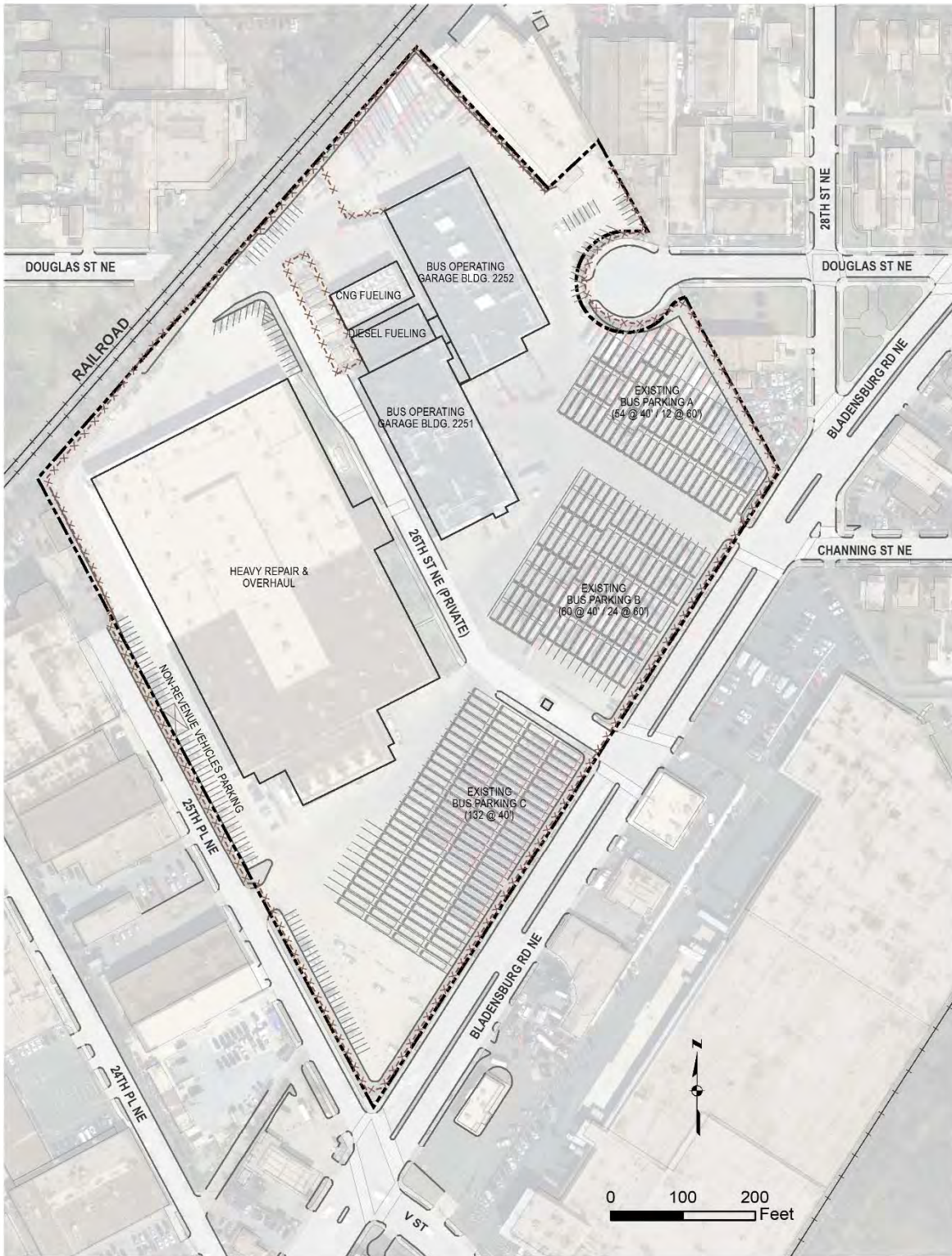
Project Location
1801 NEW YORK AVENUE NE
 WASHINGTON, DC 20002

Drawing Title

Scale

DATE
 01/25/15
 DRAWN BY
 AG
 CHECKED BY
 CA
 PROJECT NO.
 15-043
 DRAWING NO.

Figure 3: Site Map (Existing Conditions)



APPENDIX 2: REGIONAL TRANSPORTATION IMPROVEMENT PROGRAM AMENDMENT
NUMBER 5867

FY 2019-2024 TRANSPORTATION IMPROVEMENT PROGRAM

for the National Capital Region

APPROVED

October 17, 2018



APPENDIX A

FY 2019-2024 TIP PROJECT TABLES

Approved
10/17/2018

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY
FY 2019-2024 TRANSPORTATION IMPROVEMENT PROGRAM
CAPITAL COSTS (in \$1,000)

Source		Fed/St/Loc	Previous Funding	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	Source Total
TIP ID: 5856 Agency ID:		Title: Rail Line Segment Rehabilitation								
Facility:	Local	0/0/100		97,130 e	50,867 e	145,366 e	50,702 e	47,594 e	38,909 e	430,568
From:										
To:	PRIIA	50/0/50		58,899 e	125,696 e					184,595
	Sect. 5337-SGR	80/0/20		10,250 e			19,000 e	10,038 e	5,091 e	44,379
	WIP	0/0/100		8,000 e	5,500 e	4,000 e				17,500
Total Funds: 677,042										

Description: a. Provides funds for rehabilitation of segments of Metrorail system, particularly the Red, Orange and Blue lines.
b. Preventative Maintenance for rail system infrastructure rehabilitation.

TIP ID: 5857 Agency ID:		Title: Bus Garages - Systemwide Maintenance, Expansion, Rehabilitation, and Replacement								
Facility:	Local	0/0/100		15,000 e	93,595 e	65,257 e	99,635 e	75,335 e	47,313 e	396,135
From:										
To:	Sect. 5307	80/0/20		15,000 e						15,000
Total Funds: 411,135										

Description: Provides funds for:
a. Rehabilitation and Replacement of Bus Garages: upgrades, rehabilitation, and/or replacement of bus garages and maintenance facilities, including the rehabilitation of the Bladensburg bus facility and the replacement of the Southern Avenue, Royal Street (Cinder Bed Road), Shepard Parkway bus garages.
b. Maintenance of Bus Garages: maintenance of bus garages/maintenance facilities.
c. Expansion of Bus Garages: expansion of bus garages to meet storage and maintenance needs of growing fleet.

TIP ID: 5858 Agency ID:		Title: Systems and Technology								
Facility:	Local	0/0/100		84,305 e	101,548 e	109,606 e	134,877 e	128,911 e	115,508 e	674,755
From:										
To:										
Total Funds: 674,755										

Description: Provides funds for
a. Rail Power Systems: upgrade of rail system's power supply.
b. Operations Support Software: purchase and/or replacement of software that supports the transit system.
c. Business Support Software & Equipment: purchase and/or replacement of software and equipment that supports the agency's mission.
d. Rail Fare Equipment: purchase and/or replacement of fare equipment for the transit system.

APPENDIX 3: TRANSPORTATION TECHNICAL MEMORANDUM

WMATA BLADENSBURG BUS GARAGE FACILITY

Traffic Impact Study

DRAFT

**PREPARED FOR: WASHINGTON METROPOLITAN
AREA TRANSIT AUTHORITY**

600 5TH STREET NW
WASHINGTON, D.C. 20001



PREPARED BY:



1015 HALF STREET, SE
SUITE 650
WASHINGTON, D.C. 20003

MARCH 2019



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1. INTRODUCTION

This report documents the conditions associated with the traffic impact study that has been prepared for the Washington Metropolitan Area Transit Authority (WMATA). WMATA is evaluating the traffic impacts of rebuilding an existing bus garage facility to provide parking spaces for the buses and employees of WMATA Bladensburg Bus Division. The study evaluates traffic operations at the bus and employee parking entrances, and relocation of the traffic signal at the existing entrance (Bladensburg Road, NE at 26th Street, NE), to the new bus entrance (Bladensburg Road, NE at 28th Street/Channing Street NE). This chapter documents the existing conditions in the vicinity of the site, and incorporates a summary of traffic data, observations, operational analyses, local circulation, parking, transit amenities, and bicycle and pedestrian amenities. All locations in this report are referenced in the northeast (NE) quadrant of Washington, DC. A separate report is provided as part of this overall evaluation to discuss the other site considered – WMATA Northern Bus Division.

1.1 PROJECT DESCRIPTION

1.1.1 PROPOSED PROJECT

WMATA is planning the demolition of the existing bus maintenance and parking garage to increase the number of parking spaces at the WMATA Bladensburg Bus Division in Washington, D.C. The planned development will repurpose 200 parking spaces for 40-foot-long buses, 100 spaces for articulated buses, and 560 spaces for employee parking. The current garage facility does not provide on-site employee parking. The new facility will provide services such as site security (fencing and lighting), cleaning (interior and exterior), inspections, running repairs, heavy repairs and service, parts storage, crew reporting and dispatching, employee service and welfare areas, and employee parking. The demolition of the existing and construction of the new garage is proposed in three phases. During construction, off-site parking for the WMATA buses and employee vehicles is proposed in the northwest corner lot at the intersection of Bladensburg Road and Montana Avenue. During Phases I and II construction, 100 parking spaces for 40-foot buses and 187 parking spaces for employee vehicles will be provided at the off-site location. Similarly, during Phase III construction, 33 parking spaces for 40-foot buses and 187 parking spaces for employee vehicles will be provided at the off-site location.

Figure 1 shows the site location for the WMATA Bladensburg Bus Division, and **Figure 2** shows the proposed site layout and access points.

1.1.2 PROPOSED LOCATION

WMATA's Bladensburg Bus Division is located in Ward 5 on the west side of Bladensburg Road, nestled between 25th Place, Douglas Street, and a CSX railroad line. The existing site consists of 246 parking spaces for 40-foot buses and 36 parking spaces for articulated bus. The site is currently zoned PDR-1, which permits moderate-density commercial use development. The site is adjacent to medium-density commercial developments on all sides.

1.2 STUDY AREA AND APPROACH

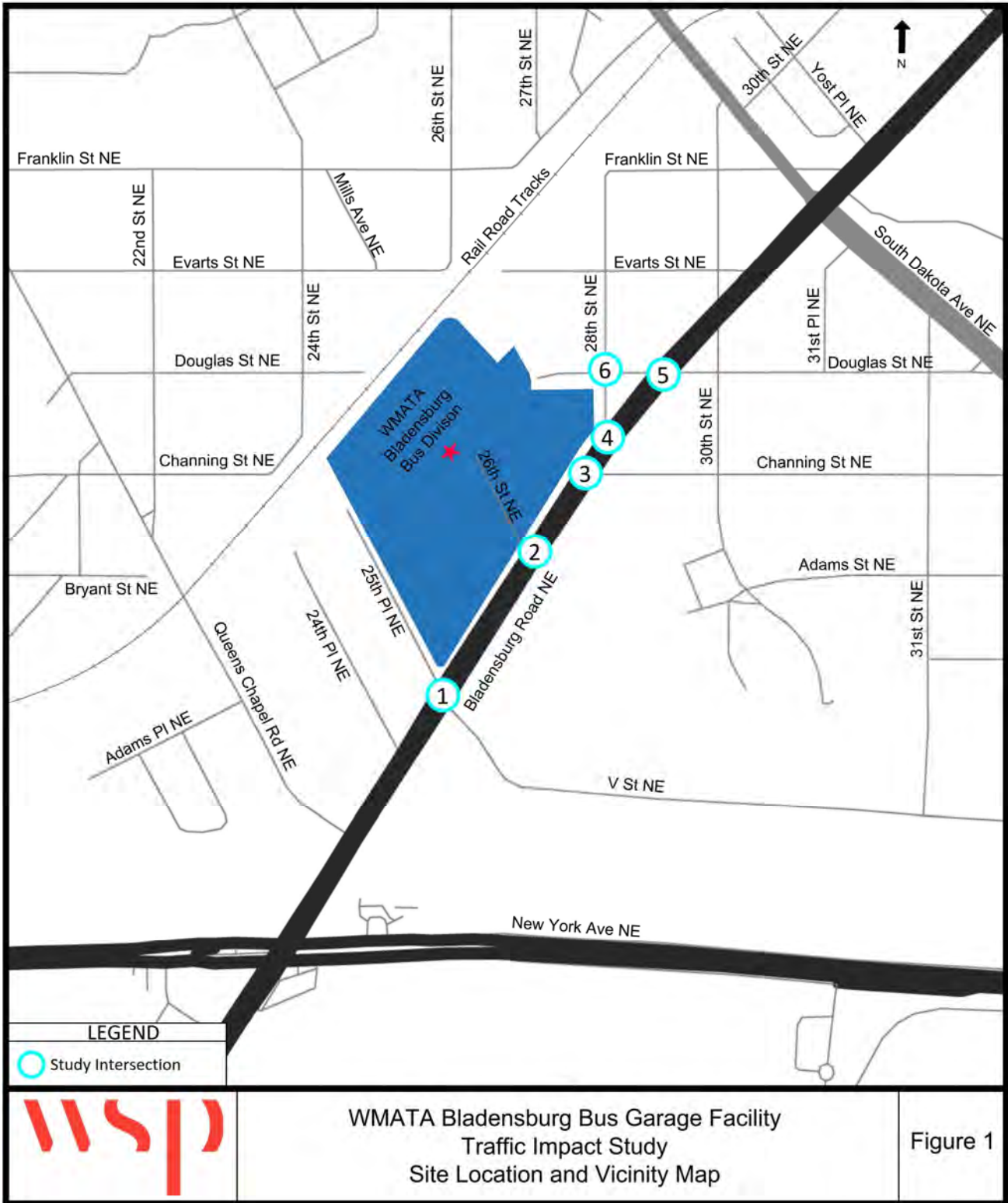
The study area for this analysis was developed based on the possible access routes to and from the site. The following two signalized and four unsignalized intersections (mapped above in **Figure 1**) were evaluated to determine the potential traffic-related impacts of the proposed parking spaces and traffic patterns surrounding the site.

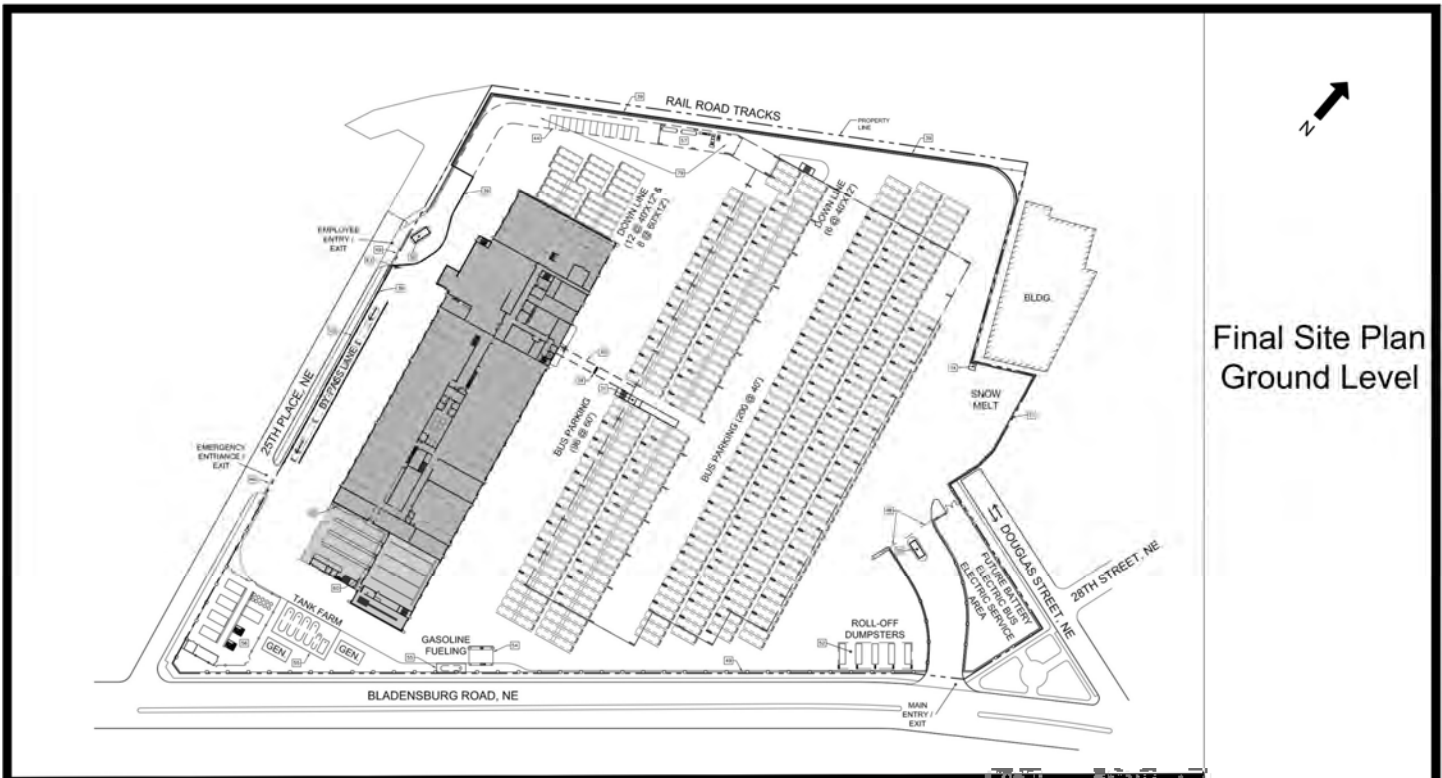
1. Bladensburg Road at 25th Place/V Street (Signalized)
2. Bladensburg Road at 26th Street (Signalized)
3. Bladensburg Road at Channing Street (Unsignalized)



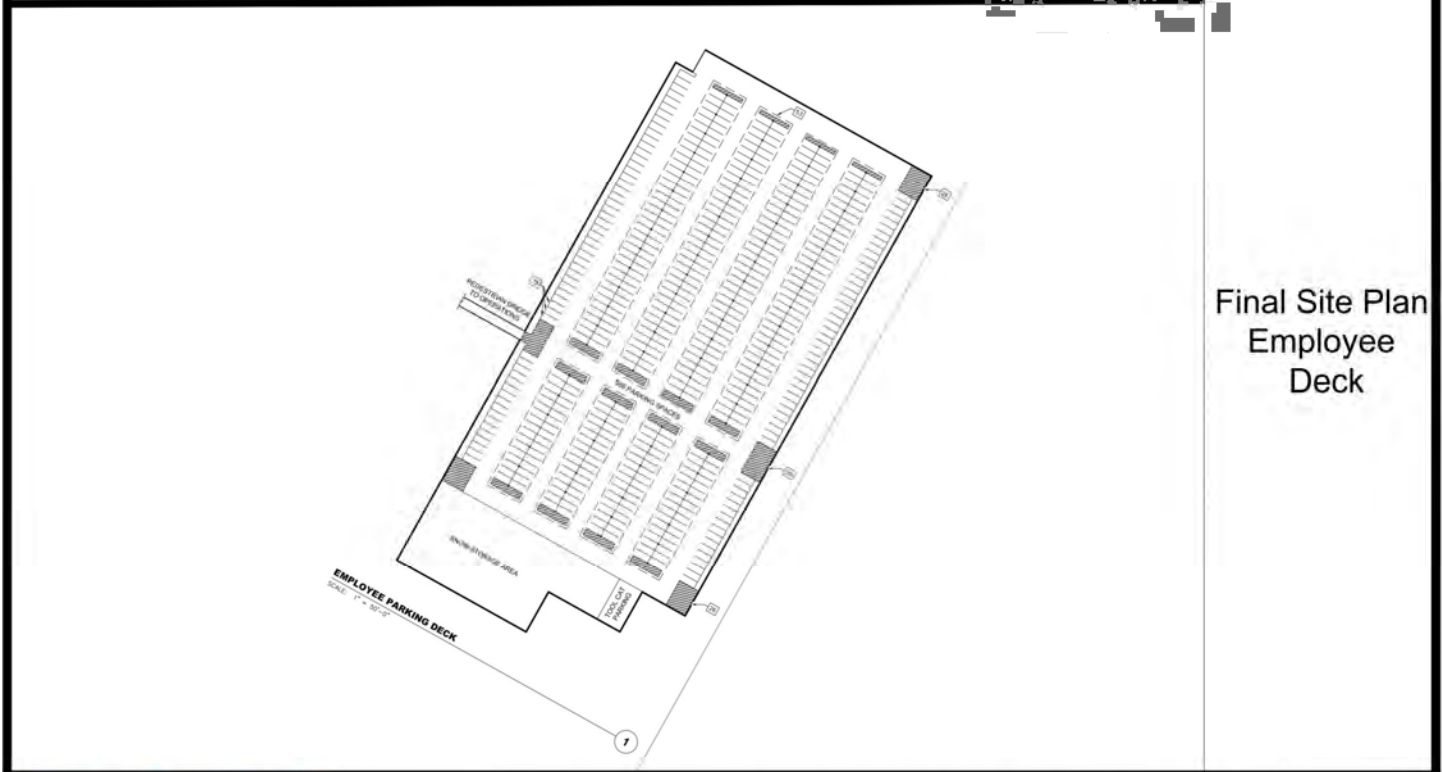
- 4. Bladensburg Road at 28th Street (Unsignalized)
- 5. Bladensburg Road at Douglas Street (Unsignalized)
- 6. Douglas Street at 28th Street (Unsignalized)

This transportation analysis relies on data collected at and around the site in February 2019.





Final Site Plan
Ground Level



Final Site Plan
Employee
Deck



WMATA Bladensburg Bus Garage Facility
Traffic Impact Study
Concept Plan for Bladensburg Site

Figure 2



2. EXISTING CONDITIONS

This section describes the existing roadway network, traffic volumes, traffic operations at the study intersections, parking conditions, and transit, pedestrian, and bicycle facilities in the site vicinity.

2.1 ROADWAY NETWORK

The following describes key roadways that serve the immediate site area.

Bladensburg Road is a north-south roadway, classified as a Minor Arterial per the District of Columbia Department of Transportation (DDOT) Roadway Functional Classification Map, that provides access to US 50, Benning Road / H Street, and South Dakota Avenue in Washington, and communities along the US 1 ALT and US 1 corridors in Prince George's County, MD. It is a six-lane road with parking restrictions during the AM and PM peak periods in the peak direction (three lanes southbound and two lanes northbound during the AM peak; and two lanes southbound and three lanes northbound during the PM peak). On-street parking is permitted in both directions during off-peak periods between 25th Place and Eastern Avenue. Parking along the Bladensburg Road is prohibited from 7:00 AM to 9:30AM in the southbound direction and from 4:00PM to 6:30PM in the northbound direction. The posted speed limit on Bladensburg Road in the study area is 30 mph.

25th Place is a local road with a posted speed limit of 25mph and provides access to an industrial area west of Bladensburg Road.

V Street is classified as a local road on DDOT's Roadway Functional Classification Map with a posted speed limit of 25mph. It provides access to Bladensburg Road to the west and South Dakota Avenue near New York Avenue to the east.

26th Street provides access to the existing WMATA Bladensburg Bus Division.

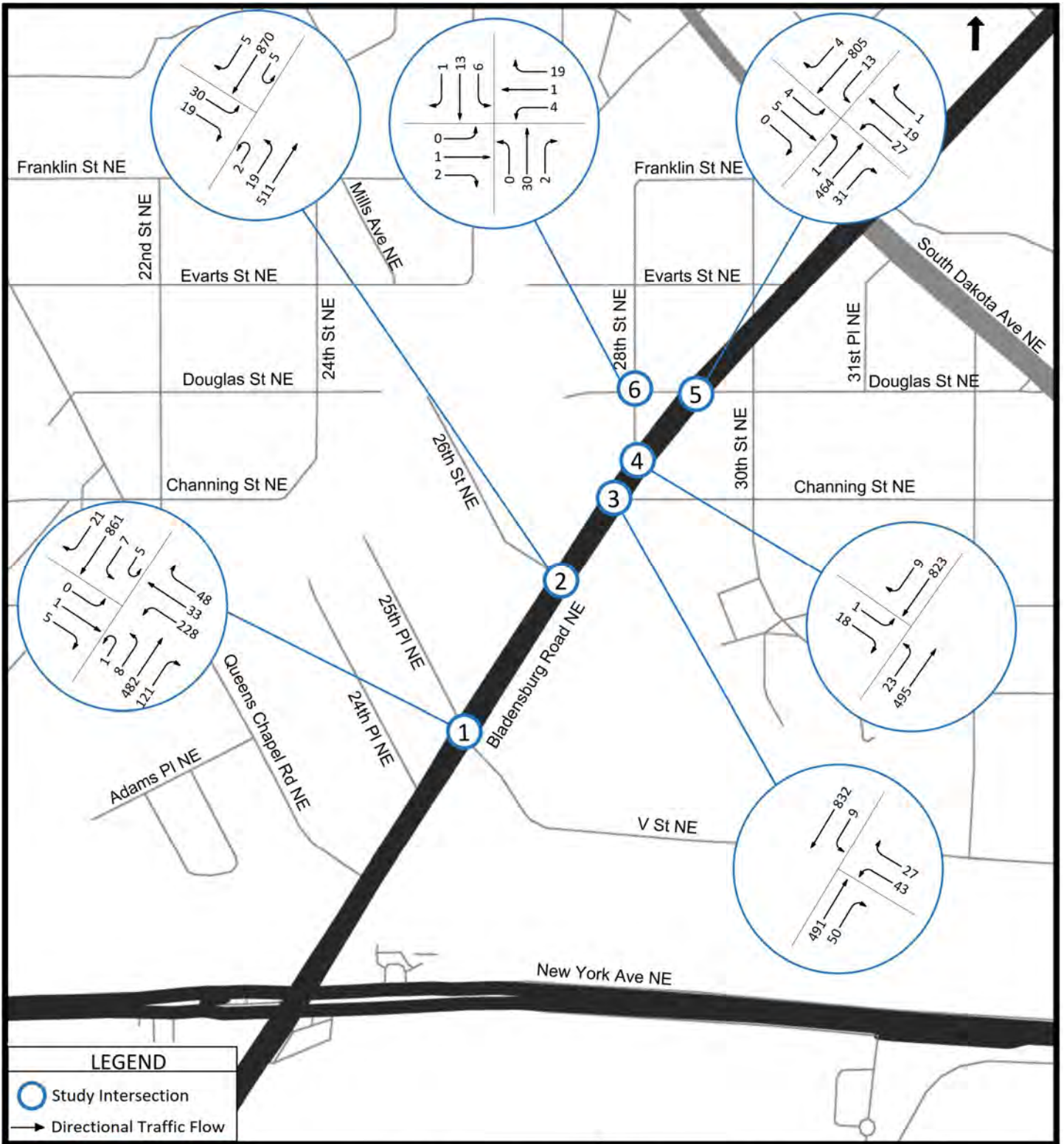
Channing Street is a local road with a posted speed limit of 25mph and provides access to a residential area east of Bladensburg Road.

28th Street is a north-south local road with a posted speed limit of 25mph and provides access to a residential area. It is designated as an east-west road for clarification in this study.

Douglas Street is a local road with a posted speed limit of 25mph and provides east-west access to a residential area.

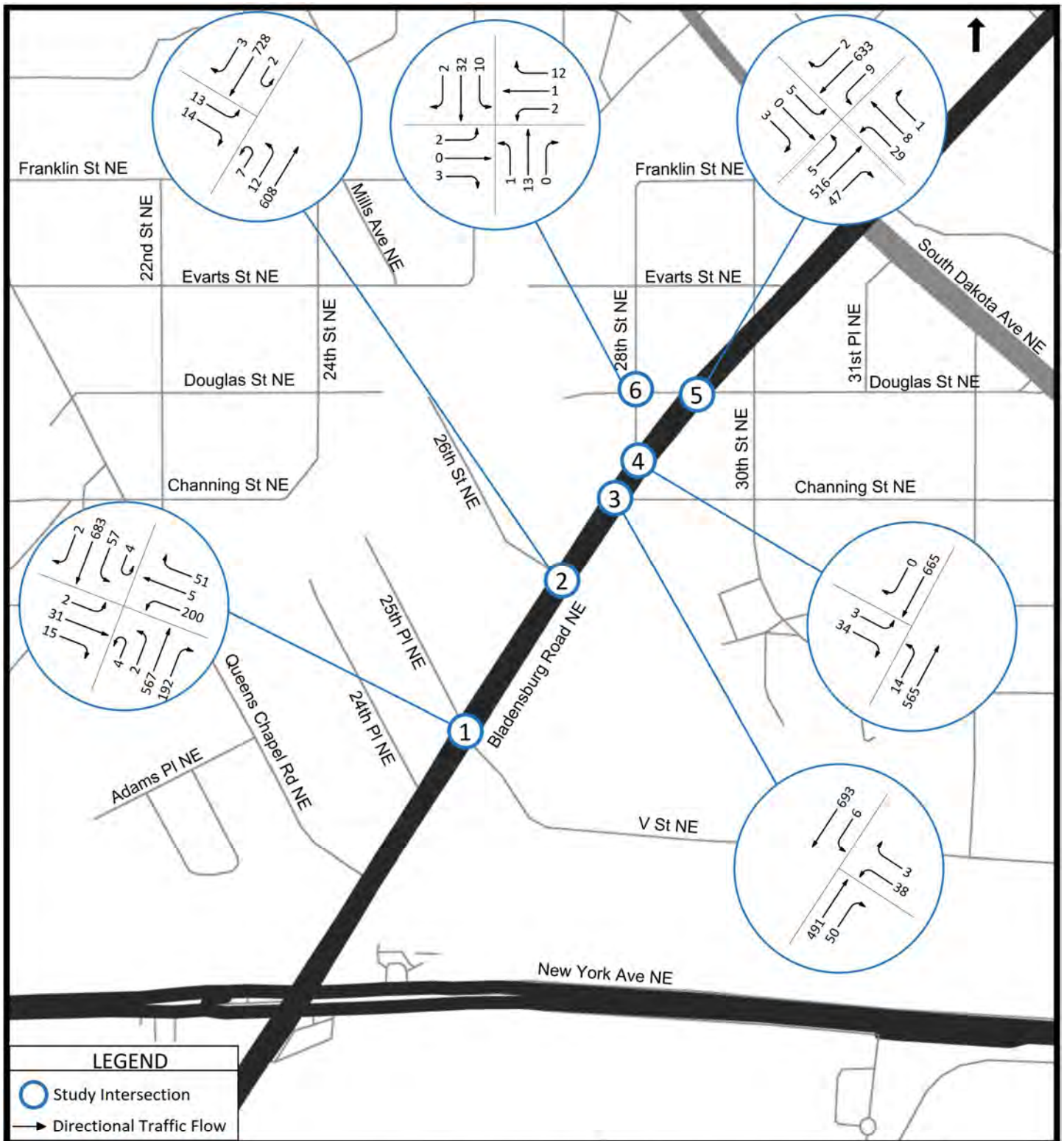
2.2 TRAFFIC VOLUMES

Existing traffic along Bladensburg Road near the site peaks during the morning and afternoon commuter periods. The proposed parking use by buses and employees is expected to occur throughout the day, but the highest demand is expected to be during the weekday AM and PM peak periods. Therefore, the analysis focuses on the weekday commuter AM and PM peak periods when traffic volumes are highest and congestion is typically most severe. Turning movement counts were collected during the AM and PM peak periods (7:00-9:00AM and 4:00-6:30 PM, respectively) at six locations in the vicinity on Wednesday, February 13, 2019, and Thursday, February 14, 2019. The AM and PM peak hours for each of the study intersections were determined individually to provide most conservative peak hour analysis. The balanced volumes for the highest vehicular demand hour within each peak period are shown in **Figures 3** and **4**. The original turning movement counts are provided in **Appendix A**. Existing signal timing data was provided by DDOT and verified in the field and is provided in **Appendix B**.



WMATA Bladensburg Bus Garage Facility
 Traffic Impact Study
 Existing AM Peak Hour Volume

Figure 3



WMATA Bladensburg Bus Garage Facility
 Traffic Impact Study
 Existing PM Peak Hour Volume

Figure 4



2.3 SAFETY ANALYSIS

Crash data was obtained from the DDOT Traffic Accident Reporting and Analysis System for the three-year period from January 01, 2016 to December 31, 2018. **Table 1** highlights a summary of the principal crash types and severities at six intersections near the site vicinity. Sideswipe and parked crashes were the dominant types of crashes adjacent to the site. Of the 90 crashes, there were 20 reported injuries. There were no fatalities reported adjacent to the site. Detailed crash data can be found in **Appendix C**.

Table 1: Crash Data

Intersection	Total Crashes	Injury Crashes	PDO Crashes	3 Highest-Freq. Crash Types	
				Crash Type	Count
Bladensburg Road at 25th Place/V Street	59	10	49	Sideswipe	12
				Parked	10
				Non-Collision	2
Bladensburg Road at 26th Street	4	2	2	Sideswipe	1
Bladensburg Road at Channing Street	1	0	1	Sideswipe	1
Bladensburg Road at 28 th Street	11	4	7	Sideswipe	2
Bladensburg Road at Douglas Street	12	4	8	Sideswipe	4
Douglas Street & 28 th St.	3	0	3	Sideswipe	2
				Parked	1
Total	90	20	70		

2.4 FIELD OBSERVATIONS

Field observations were conducted during the AM and PM peak periods on Thursday, February 14, 2019. A summary of observations at the key intersections is below.

1. System-Wide:

- In the vicinity of the study area, Bladensburg Road is a) closed-section divided facility with a six-foot raised median.
- Several WMATA bus stops are located on Bladensburg Road in the study area. Parking restrictions in the vicinity of these bus stops allow bus operators to pull the buses closer to the curb.
- During both peak hours, traffic volumes along Bladensburg Road were heavier in the southbound direction compared to northbound direction.
- Pedestrians crossing Bladensburg Road at 26th Streets were mainly WMATA employees.

2. Non-Peak Specific:

- Bladensburg Road at 25th Place/V Street
 - Intersection operates with two-phase signal operation. Left-turns are permitted on all approaches with concurrent phasing.
 - Skewed geometry of the intersection results in conflicts between eastbound through and westbound left-turn movements. Westbound left-turn traffic was very heavy.
 - Laddered crosswalks are provided on all legs of the intersection.



- One pedestrian curb ramp is assigned to two crosswalks on all intersection corners. All ramps comply with the Americans with Disabilities Act (ADA).
 - Pedestrian signal heads are not installed for the south leg crossing. Pedestrians crossing on the south leg utilized the vehicular traffic signal indications to cross the south leg. Generally, vehicles were observed yielding to the pedestrians crossing the intersection.
 - Pedestrian phasing operates on recall for all crossings.
 - Parking is permitted on 25th Place and V Street near the intersection throughout the day. On westbound V Street, vehicles were seen to park 60-70 feet from the intersection due to driveway curb-cuts and fire hydrant.
 - A bus stop is located on the near-side in the southbound direction and far-side in the northbound direction at the intersection.
- Bladensburg Road at 26th Street
 - A leading protected-permissive left-turn phasing is provided on the northbound approach.
 - The westbound approach, which serves as a driveway to retail, is not controlled by the signal.
 - Westbound vehicles generally followed eastbound vehicular phasing.
 - Pedestrian signals heads are provided on the west leg without provision of a marked crosswalk nor ADA-compliant ramps.
 - Laddered crosswalks are provided on the north and south legs along with pedestrian signal heads.
 - There is no ADA-compliant ramp on the northeast corner for the north leg crossing.
 - Pedestrian phasing operates on recall for all crossings.
 - A bus stop is located on the near-side in the northbound direction and far-side in the southbound direction at the intersection.
 - Several WMATA employees crossed Bladensburg Road at 26th Street.
- Bladensburg Road at Channing Street
 - Unsignalized T-Intersection with Stop control on Channing Road. Channing Road forms the east leg of the intersection. Northbound and southbound approaches of Bladensburg Road are free flow.
 - Marked crosswalks are present on the south and east legs.
 - A pedestrian crossing (W11-2) warning sign with a supplemental arrow plaque (W16-7p) is posted on the southeast corner for northbound traffic.
 - Pedestrian refuge is provided in the channelizing island for the westbound right-turn movement. A marked crosswalk is provided for crossing of the channelized lane.
 - Bus stops are located on the near-side in northbound and southbound directions at the intersection.
- Bladensburg Road at 28th Street
 - Unsignalized T-Intersection with Stop control on 28th Street. 28th Street forms the west leg of the intersection. Northbound and southbound approaches of Bladensburg Road are free flow.
 - Crosswalk is marked on the west leg with ADA-compliant curb ramps.
 - Generally, traffic is very light on 28th Street.
- Bladensburg Road at Douglas Street
 - Unsignalized 4-leg intersection with two-way Stop control on Douglas Street. Northbound and southbound approaches of Bladensburg Road are free flow.
 - Parking is permitted on both the sides of Douglas Street near the intersection
 - Laddered crosswalks are present on all four legs of the intersection along with curb ramps with detectable warning surfaces. Pedestrian crossing warning signs are not present at the intersection.
 - A bus stop is located on the near-side in southbound direction and far-side in northbound direction at the intersection.



- Douglas Street at 28th Street
 - Unsignalized 4-leg intersection with all-way stop control.
 - ADA-compliant curb ramps are provided, but there are no marked crosswalks.
 - Parking is permitted on all four legs of the intersection.
 - Douglas Street ends in a cul-de-sac just west of the intersection.
 - Low vehicular traffic and pedestrian volumes were also observed throughout the day.

3. AM Peak:

- Bladensburg Road at 25th Place/V Street
 - Queues from New York Avenue frequently extended way past the intersection and often blocked the westbound left-turns from V Street. Cycle failures on the southbound approach were very common.
 - The longest queue of five (5) vehicles was observed on the westbound approach.
 - Queues on the southbound approach extended past the upstream intersection of Bladensburg Road at 26th Street.
 - Conflicts were recorded between northbound right-turn traffic and vehicles exiting a bank on the east leg.
 - No cycle failures were recorded for northbound traffic.
- Bladensburg Road at 26th Street
 - Queues on the southbound approach extended past the upstream intersection which resulted in cycle failures and blockage of the intersection.
 - Northbound left-turn vehicles were blocked by the southbound queued vehicles extending through the intersection.
 - On many occasions, green time provided for the northbound left-turn movement was not sufficient to clear northbound left-turns in one cycle.
 - From 26th Street (WMATA driveway), 22 buses turned left and 8 buses turned right.
 - No cycle failures were recorded for the traffic exiting 26th St.
 - 13 pedestrians crossed Bladensburg Road using the south leg crosswalk, all of whom were WMATA employees.
- Bladensburg Road at Channing Street
 - Southbound queues from the downstream intersection frequently blocked the intersection.
 - Pedestrians had to maneuver between the southbound queued vehicles blocking the crosswalk.
 - Northbound traffic moved freely, providing fewer acceptable gaps for westbound left-turning traffic to enter the southbound lanes.
- Bladensburg Road at 28th Street
 - Traffic turning right from 28th Street could find gaps in the southbound direction, even though southbound queues from the downstream intersection blocked the intersection. However, northbound traffic moved freely, making it difficult for eastbound left-turning traffic to enter the northbound lanes.
- Bladensburg Road at Douglas Street
 - On few occasions, southbound queues from downstream intersection extended beyond the intersection.
 - Traffic on Douglas Street was light.
 - Three pedestrians were observed crossing the intersection.
- Douglas Street at 28th Street
 - Low vehicular and pedestrian volumes were observed at this intersection.

4. PM Peak:

- Bladensburg Road at 25th Place/V Street



- Skewed geometry of the intersection appears to contribute to conflicts between eastbound through and westbound left-turn movements. Westbound left-turn traffic was very heavy. The longest queue of six (6) vehicles were recorded.
- Exiting of vehicles exiting from nearby gas station in the SW corner resulted in conflicts with the southbound through movement.
- Bladensburg Road at 26th Street
 - Queues on the southbound and northbound approaches were minimal.
 - From 26th Street (WMATA driveway), three buses turned left and one (1) bus turned right.
 - On occasion, northbound vehicles turning left onto 26th Street blocked the northbound thru vehicles for more than one cycle.
 - 16 pedestrians crossed Bladensburg Road using the south leg crosswalk, most of whom were WMATA employees.
- Bladensburg Road at Channing Street
 - Traffic moved freely on the northbound and southbound approaches.
 - There were minimal queues on the westbound approach.
- Bladensburg Road at 28th Street
 - A maximum queue of 4 vehicles was recorded for the left-turn movement from 28th Street. Very few acceptable gaps were available in mainline traffic for this movement.
- Bladensburg Road at Douglas Street
 - Delays on northbound and southbound approaches were minimal.
 - Only one left-turn was recorded on both the approaches.
- Douglas Street at 28th Street
 - Low vehicular and pedestrian volumes were observed. at this intersection.

2.5 TRAFFIC OPERATIONS

A level-of-service (LOS) analysis for this study was performed using Synchro® Version 10.1 (build 2, revision 20) at all key intersections in the study area. Synchro® LOS is based on Highway Capacity Manual (HCM) methodology, which is based on vehicular delay. The methodologies for both signalized and unsignalized intersections define six levels of service, from 'A' to 'F'. A level of service 'A' represents optimal traffic conditions, while level of service 'F' represents the worst conditions. Existing AM and PM results are compiled in **Table 2** and **Table 3**.



Table 2: AM LOS and Delay

ID #	Intersection	Existing Conditions AM						Overall Delay (s)	Overall LOS
		Approach	Movement	Movement Delay (s)	Movement LOS	Approach Delay (s)	Approach LOS		
1	Bladensburg Rd at 25 th Pl / V St	EB	LTR	26.1	C	26.1	C	30.4	C
		WB	LT	76.4	E	73.8	E		
			R	60.0	E				
		NB	LT TR	14.8	B	14.8	B		
SB	LT T TR	23.4	C	23.4	C				
2	Bladensburg Rd at 26 th St	EB	LR	40.1	D	40.1	D	12.9	B
		NB	LT T	4.9	A	4.9	A		
		SB	T T TR	16.3	B	16.3	B		
3	Bladensburg Rd at Channing St	WB	LR	17.7	C	17.7	C	1.0	A
		NB	T	0.0	A	0.0	A		
			TR	0.0	A				
		SB	LT	0.6	A	0.1	A		
			T	0.0	A				
T	0.0	A							
4	Bladensburg Rd at 28 th St	EB	LR	11.1	B	11.1	B	0.4	A
		NB	LT	1.6	A	0.6	A		
			T	0.0	A				
		SB	T	0.0	A	0.0	A		
			TR	0.0	A				
T	0.0	A							
5	Bladensburg Rd at Douglas St	EB	LTR	36.5	E	36.5	E	1.1	A
		WB	LTR	25.5	D	25.5	D		
		NB	LT	0.1	A	0.0	A		
			TR	0.0	A				
		SB	LT	0.7	A	0.2	A		
			T	0.0	A				
TR	0.0	A							
6	Douglas St at 28 th St	EB	LTR	6.6	A	6.6	A	7.1	A
		WB	LTR	6.8	A	6.8	A		
		NB	LTR	7.1	A	7.1	A		
		SB	LTR	7.4	A	7.4	A		



Table 3: PM LOS and Delay

ID #	Intersection	Existing Conditions PM						Overall Delay (s)	Overall LOS
		Approach	Movement	Movement Delay (s)	Movement LOS	Approach Delay (s)	Approach LOS		
1	Bladensburg Rd at 25 th Pl/V St	EB	LTR	32.3	C	32.3	C	29.8	D
		WB	LT	82.1	E	72.1	E		
			R	32.1	C				
		NB	LT TR	9.8	A	9.8	A		
SB	LT T TR	33.3	C	33.3	C				
2	Bladensburg Rd at 26 th St	EB	LR	37.7	D	37.7	D	17.4	B
		NB	LT T	14.1	B	14.1	B		
		SB	T T TR	19.3	B	19.3	B		
3	Bladensburg Rd at Channing St	WB	LR	27.8	D	27.8	D	1.0	A
		NB	T	0.0	A	0.0	A		
			T	0.0	A				
			TR	0.0	A				
		SB	LT	0.3	A	0.1	A		
T	0.0		A						
4	Bladensburg Rd at 28 th St	EB	LR	12.2	B	12.1	B	0.5	A
		NB	LT	1.3	A	0.3	A		
			T	0.0	A				
			T	0.0	A				
		SB	T	0.0	A	0.0	A		
TR	0.0		A						
5	Bladensburg Rd at Douglas St	EB	LTR	18.8	C	18.8	C	1.4	A
		WB	LTR	31.9	D	31.9	D		
		NB	LT	0.4	A	0.1	A		
			T	0.0	A				
			TR	0.0	A				
		SB	LT	0.4	A	0.2	A		
TR	0.0		A						
6	Douglas St at 28 th St	EB	LTR	6.8	A	6.8	A	7.1	A
		WB	LTR	6.8	A	6.8	A		
		NB	LTR	7.3	A	7.3	A		
		SB	LTR	7.2	A	7.2	A		

The existing AM and PM queues from Synchro are compiled in **Table 4**. Detailed analysis results can be found in **Appendix D**.



Table 4: Modeled Queue Lengths – Existing Conditions

ID #	Intersection	Approach	Storage (ft)	AM Existing Conditions		PM Existing Conditions	
				50 th % Queue (ft)	95 th % Queue (ft)	50 th % Queue (ft)	95 th % Queue (ft)
1	Bladensburg Rd at 25 th Pl / V St	25 th St. EB-LTR	--	1	9	26	49
		V St. WB-LT	--	261	#329	207	#275
		V St. WB-R	65	0	#32	17	40
		Bladensburg Rd. NB-T	--	140	183	86	104
		Bladensburg Rd. SB-T	--	192	236	368	426
2	Bladensburg Rd at 26 th St	26 th St. EB-LR	--	26	53	11	31
		Bladensburg Rd. NB-T	--	97	92	116	147
		Bladensburg Rd. SB-T	--	142	175	213	259
3	Bladensburg Rd at Channing St	Channing St. WB-LR	--	--	24	--	25
		Bladensburg Rd. NB-T	--	--	0	--	0
		Bladensburg Rd. NB-TR	--	--	0	--	0
		Bladensburg Rd. SB-LT	--	--	1	--	1
		Bladensburg Rd. SB-T	--	--	0	--	0
4	Bladensburg Rd at 28 th St	28 th St. EB-LR	--	--	3	--	6
		Bladensburg Rd. NB-LT	--	--	3	--	2
		Bladensburg Rd. NB-T	--	--	0	--	0
		Bladensburg Rd. SB-T	--	--	0	--	0
		Bladensburg Rd. SB-TR	--	--	0	--	0
5	Bladensburg Rd at Douglas St	Douglas St. EB-LTR	--	--	8	--	3
		Douglas St. WB-LTR	--	--	17	--	27
		Bladensburg Rd. NB-LT	--	--	0	--	1
		Bladensburg Rd. NB-TR	--	--	0	--	0
		Bladensburg Rd. SB-LT	--	--	1	--	0
		Bladensburg Rd. SB-T	--	--	0	--	1
		Bladensburg Rd. SB-TR	--	--	0	--	0
6	Douglas St at 28 th St	Douglas Rd. EB-LTR	--	--	0	--	0
		Douglas Rd. WB-LTR	--	--	0	--	0
		28 th St. NB-LTR	--	--	0	--	0
		28 th St. SB-LTR	--	--	0	--	0

2.6 TRANSIT

Washington Metropolitan Area Transit Authority (WMATA) Metrobus route B2 has stops along Bladensburg Road in the study area. **s** **located** adjacent to the site.

Table 5 highlights the available bus options located adjacent to the site.

Table 5: Nearby Metrobus Service

Route	Route Name	Key Destinations	Weekday Peak Headways
B2	Bladensburg Road - Anacostia	Mount Rainer Mall, Hechinger Mall, Stadium Armory, Anacostia Metro Station	AM - 12 minutes SB and 5 minutes NB; PM - 11 minutes SB and NB



The DC Streetcar is about two miles from the study area which is accessible via Metrobus route B2. The DC Streetcar, operated by DDOT, serves the H Street/Benning Road neighborhood between Union Station and Oklahoma Avenue.

2.7 NON-MOTORIZED TRANSPORTATION

2.7.1 BICYCLE FACILITIES

There are currently no bike lanes on any of the roadways within the site vicinity. The nearest bike trail is 0.5 miles on South Dakota Avenue, east of Bladensburg Road. Per the DDOT Mobility database for bicyclist comfort, 12% of bicyclists feel comfortable sharing the road on Bladensburg Road.

The two closest capital bikeshare docks are located one mile from the site, at New York Avenue & Hecht Avenue, and 24th Street & R Street.

2.7.2 PEDESTRIAN FACILITIES

Pedestrian facilities and sidewalks are provided in and around the site. Sidewalks along Bladensburg Road within the site vicinity are approximately four feet wide, without a minimum clear zone.

WMATA's Bladensburg Bus Division generates most of the pedestrian traffic within the site vicinity. Pedestrians were observed crossing the south leg of the intersection of Bladensburg Road and 26th Street in groups of three (3) to four (4) pedestrians. As a part of the DC Pedestrian Master Plan based on heavy pedestrian traffic and existing walking conditions, Bladensburg Road between Morse Street and Eastern Avenue is identified as a priority corridor in Ward 5.

2.8 PARKING

On-street parking is permitted around the site. On-street parking restrictions included unrestricted parking (not including conditions for street cleaning periods, depending on location), two-hour residential permit parking, peak-hour restricted, and handicapped.

3. PROJECT IMPACT ANALYSES

3.1 BACKGROUND CONDITIONS – ROADWAY NETWORK TRAFFIC GROWTH AND BACKGROUND DEVELOPMENT

The expected completion year of this project is 2025. In order to determine traffic volume growth rates under no-build conditions for the future design year, annual growth rate was obtained from the New City Large Tract Review (LTR) Comprehensive Transportation Study (CTR). The average annual daily traffic (AADT) counts obtained from District Department of Transportation Traffic Volume Maps between 2010 and 2016 were also used to project the growth factor. Volumes were estimated based on the permanent counting stations located throughout the city. An annual growth rate of 0.5% was utilized in the study area.

Approved Background Development

DDOT provided the following information on one development that will impact Background (no-build 2025) Conditions. The New City LTR will be located at 1923 New York Avenue with 670 residential units, 334,889 sq. ft. of retail, 70,000 sq. ft. of grocery, 160 hotel rooms, 4,100 sq. ft. of drive-in bank, and a 2,500-seat movie theatre. It is currently in the development review process and is planned to be complete by 2022.



Projected Trip Generation for Background Developments

An existing Comprehensive Transportation Review (CTR) was available for the 1923 New York Avenue NE property completed in September 2016. **Table 6** shows the trips generated by the background development during peak hours.

Table 6: Background Peak-Hour Site Trips

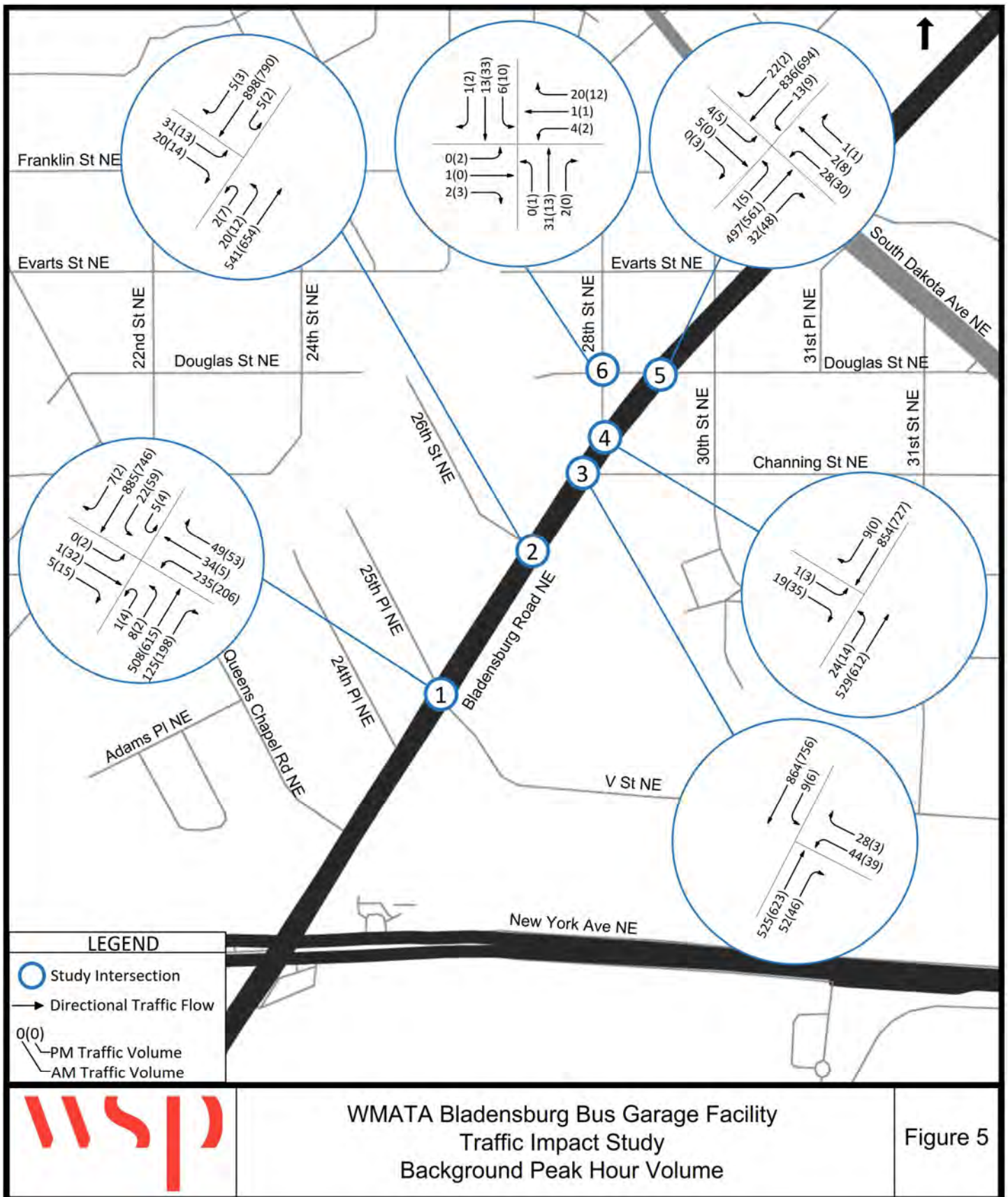
Proposed Development	AM Peak Trips			PM Peak Trips		
	In	Out	Total	In	Out	Total
1923 New York Avenue NE	289	363	652	870	742	1612

The background conditions, including the one nearby proposed development and overall projected growth rates, were analyzed using Synchro®. The AM and PM peak hour traffic for Background Conditions are shown on **Figure 5**. Background AM and PM results are compiled in **Table 7**.

Table 7: Comparison of Existing and Background Delays and LOS

ID #	Intersection	Existing Conditions		Background Condition	
		Delay (s)	LOS	Delay (s)	LOS
		AM (PM)	AM (PM)	AM (PM)	AM (PM)
1	Bladensburg Rd at 25 th Pl/V St	30.4 (29.8)	C (C)	31.7 (31.4)	C (C)
2	Bladensburg Rd at 26 th St	12.9 (17.4)	B (B)	13.0 (18.4)	B (B)
3	Bladensburg Rd at Channing St	1.0 (1.0)	A (A)	1.1 (1.1)	A (A)
4	Bladensburg Rd at 28 th St	0.4 (0.5)	A (A)	0.4 (0.4)	A (A)
5	Bladensburg Rd at Douglas St	1.1 (1.4)	A (A)	1.1 (1.6)	A (A)
6	Douglas St at 28 th St	7.1 (7.1)	A (A)	7.1 (7.1)	A (A)

The capacity analysis results of the background conditions, without the proposed development, indicate that the transportation network experiences delay characteristics similar to the existing conditions. Generally, most of the movements will operate at LOS 'D' or better during both peak hours. However, during the AM Peak hour, the westbound approach of V street at Bladensburg Road, and eastbound approach of Douglas Road at Bladensburg Road will operate at LOS E but remains unchanged when compared to the existing conditions. Similarly, during the PM peak hour, the westbound approach of V Street at Bladensburg Road remains unchanged at LOS 'E' when compared to existing conditions. Whereas eastbound approach of Douglas Street at Bladensburg Road drops from LOS 'D' to LOS 'E' when compared to the existing conditions.



WMATA Bladensburg Bus Garage Facility
Traffic Impact Study
Background Peak Hour Volume

Figure 5



3.2 TRIP GENERATION

Trip generations at the site were obtained from WMATA, and trip assignment methodologies were based on the existing traffic pattern(s) in the site vicinity. The trip generation is projected based on the increased parking capacity for the WMATA buses, and newly proposed employee parking at the site. The generated WMATA bus and employee vehicle volumes during the AM (7:00 AM-8:00 AM) and PM peaks (4:00 PM-5:00 PM) are shown on **Figure 6** and **Table 8**.

Table 8: Proposed Land Uses and Trip Generation

Vehicle Type	AM Peak Trips			PM Peak Trips		
	In	Out	Total	In	Out	Total
WMATA Bus	0	46	46	20	52	72
Employee	40	62	102	52	40	92
Total	40	108	148	72	92	164

Based on **Figure 2**, the driveway to the employee parking will be provided on 25th Place on the northwest side of the site. The main entrance and exit for WMATA buses will be provided along the west side of Bladensburg Road at Channing Street. The existing access point at Bladensburg Road and 26th Street will be permanently closed, and the traffic signal will be removed. The existing emergency access on 25th Street just south of the proposed employee parking access will be retained. The existing west and east drive access points on Bladensburg Road will be permanently closed. With the proposed development, 28th Street will be closed at Bladensburg Road, and the intersection of Douglas Street at 28th Street will therefore be treated as T-intersection in the build conditions.

A traffic signal is being considered for the proposed 4-leg intersection at Bladensburg Road and Channing Street / WMATA bus driveway. A traffic signal warrant analysis was conducted for build conditions using the Peak Hour warrant detailed in the current edition of Manual on Uniform Traffic Devices (MUTCD 2009). The intersection does not meet the warrant. Without traffic signal control, WMATA bus driveway will operate at LOS 'F' and 'D' during the AM and PM peak hour, respectively. Detailed analysis results can be found in **Appendix D**. It will be difficult for buses to find acceptable gaps to turn onto Bladensburg Road given the heavy traffic on Bladensburg Road in the southbound direction and lack of acceptable gaps, especially in the AM peak period. Currently, the intersection of Bladensburg Road and 26th Street (WMATA bus driveway) is signalized. This intersection, Bladensburg Road and 26th Street, does not meet the Peak Hour warrant requirements for the current peak hour volumes. The intersection of Bladensburg Road and Channing Street / WMATA bus driveway will operate under signalized control in pre-timed mode with pedestrian facilities including crosswalks, curb ramps, and pedestrian signal heads on all four legs of the intersection.



3.3 ANALYSIS RESULTS

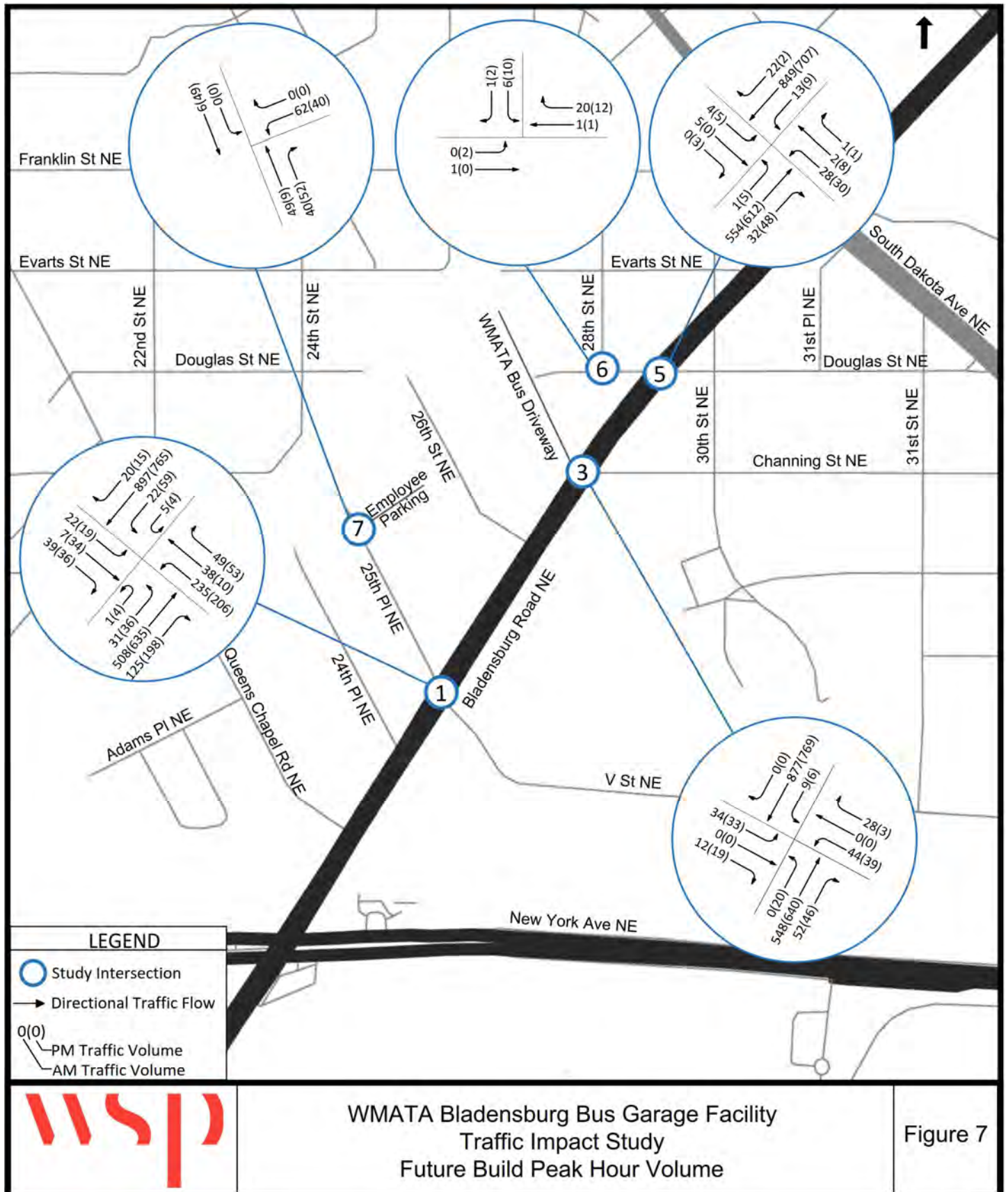
Using the existing vehicular distributions on Bladensburg Road, the additional trips for the proposed increase in the parking spaces are added to a Future Build scenario shown on **Figure 7**. Results are provided in **Table 9** below. Detailed analysis results are provided in **Appendix D**.

Table 9: Existing, Background, and Future Build Condition Delay and LOS Comparison

ID #	Intersection	Existing		Background		Future Build		Future Build with Improvements	
		Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
		AM (PM)	AM (PM)	AM (PM)	AM (PM)	AM (PM)	AM (PM)	AM (PM)	AM (PM)
1	Bladensburg Rd at 25 th Pl/V St	30.4 (29.8)	C (C)	31.7 (31.4)	C (C)	41.6 (34.6)	D (C)	38.3 (31.7)	D (C)
2	Bladensburg Rd at 26 th St	12.9 (17.4)	B (B)	13.0 (18.4)	B (B)	-- --	-- --	-- --	-- --
3	Bladensburg Rd at Channing St	1.0 (1.0)	A (A)	1.1 (1.1)	A (A)	13.2 (17.5)	B (B)	13.2 (17.5)	B (B)
4	Bladensburg Rd at 28 th St	0.4 (0.5)	A (A)	0.4 (0.4)	A (A)	-- --	-- --	-- --	-- --
5	Bladensburg Rd at Douglas St	1.1 (1.4)	A (A)	1.1 (1.6)	A (A)	1.1 (1.7)	A (A)	1.1 (1.7)	A (A)
6	Douglas St at 28 th St	7.1 (7.1)	A (A)	7.1 (7.1)	A (A)	6.7 (6.8)	A (A)	6.7 (6.8)	A (A)
7	25 th Pl at Employee Parking Driveway	-- --	-- --	-- --	-- --	3.7 (2.4)	A (A)	3.7 (2.4)	A (A)

Capacity analyses results of future build conditions indicate that the surrounding transportation network will experience LOS and delay characteristics very similar to the background conditions. Most of the movements will experienced LOS 'D' or better. However, the LOS for the westbound approach of V Street at Bladensburg Road will drops from 'E' to 'F' during both peak hours when compared to the background conditions. The LOS for the eastbound approach of Douglas Street at Bladensburg Road will remain unchanged at 'E' when compared to the background conditions. By comparing the queue lengths between the background and future build conditions, all approaches experienced queueing differential of not more than 150 feet during both peak hours.

During both peak periods, the impacts on the westbound approach at Bladensburg Road and 25th Place/V Street can be mitigated by optimizing the signal timings. The intersection of Bladensburg Road and Channing St / WMATA Bus Driveway will operate at LOS B during both peak hours. The westbound approach of WMATA Bus Driveway will operate at LOS 'D' during the both AM and PM peak periods, respectively.



WMATA Bladensburg Bus Garage Facility
Traffic Impact Study
Future Build Peak Hour Volume

Figure 7



4. CONCLUSIONS

This report outlines the operational impacts resulting from increasing the parking capacity at the WMATA Bladensburg Bus Division. The operational results show that there will be no considerable impacts to the key intersections. **Table 9** shows that, between the Background and Future Build scenarios, the intersection LOS remains the same for both the AM and PM peak hours. No intersection approaches had queue lengths anticipated to increase by more than 150 feet during both AM and PM peak hours between the Background and Future Build Scenario.

Installation of a traffic signal at Bladensburg Road and Channing Road / WMATA bus driveway will provide better overall traffic operations for buses and safer crossing conditions for pedestrians compared to an unsignalized condition. Since the existing signal at Bladensburg Road and 26th Street will be removed, the level-of-need for bus stops at that intersection may change. During the field visits, it was observed that most of the pedestrians crossing at the intersection of Bladensburg Road and 26th Street were WMATA employees. In future, the current access to the WMATA garage facility from 26th Street will be closed, therefore, the level-of-need for marked pedestrian crossings on Bladensburg Road at 26th Street may change.

5. RECOMMENDATIONS

Based on the results provided here, installation of a traffic signal and associated pedestrian facilities is recommended at the intersection of Bladensburg Road and Channing Road / WMATA bus driveway. However, no mitigations are proposed for the rest of the study intersections evaluated expect for optimization of signal timings at the intersection of Bladensburg Road and 25thPlace/V Street. The impacts from the proposed development are not sufficiently substantial to justify changes to roadway conditions when comparing operations under Background and Future Build conditions. After Future Build Conditions are achieved, follow-up studies should be conducted to determine the need for marked pedestrian crossings at Bladensburg Road / 26th Street and to consider the feasibility of consolidating the bus stops at that intersection with adjacent stops.

REFERENCES

- DDOT Traffic Volume Maps - 2010-2015. <<https://ddot.dc.gov/page/traffic-volume-maps>>
- DDOT Functional Classification Map. <<https://ddot.dc.gov/publication/functional-classification-map>>
- District Mobility: Multimodal Transportation in The District <<https://districtmobility.org/>>
- Manual on Uniform Traffic Control Devices for Street and Highways <<https://mutcd.fhwa.dot.gov/index.htm>>



APPENDIX A

TURNING MOVEMENT COUNT

File Name: 25th Street and Bladensburg Road

Start Date: 2/13/2019

AM: 7:00 AM - 9:00 AM

PM: 4:00 PM - 6:30 PM

Passenger Car

Start Time	Bladensburg Road NE						25th Street NE					Bladensburg Road NE						25th Street NE					Int. Total	
	Southbound						Westbound					Northbound						Eastbound						
	Right	Thru	Left	U-turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	U-turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total		
15- Minute Interval																								
07:00 AM	0	184	2	1	0	187	9	8	49	1	66	28	60	1	1	0	90	0	0	0	0	0	0	343
07:15 AM	2	224	8	0	0	234	13	2	56	0	71	24	72	3	1	0	100	1	0	2	0	3	408	
07:30 AM	3	228	11	1	2	243	5	5	50	1	60	21	96	1	0	0	118	3	0	0	1	3	424	
07:45 AM	2	232	5	1	1	240	12	2	44	2	58	41	121	2	1	0	165	0	0	0	0	0	463	
08:00 AM	0	173	3	2	0	178	13	15	69	4	97	21	133	0	0	0	154	0	1	0	0	1	430	
08:15 AM	2	196	1	1	0	200	10	8	56	2	74	27	120	5	0	0	152	2	0	0	0	2	428	
08:30 AM	1	166	10	1	1	178	15	7	37	1	59	25	120	5	1	0	151	1	3	4	1	8	396	
08:45 AM	2	191	4	1	1	198	10	4	65	1	79	31	101	3	2	0	137	2	1	1	2	4	418	
04:00 PM	0	139	7	1	3	147	18	2	69	7	89	61	128	1	1	3	191	7	21	1	2	29	456	
04:15 PM	1	150	13	0	3	164	4	0	36	4	40	60	154	1	1	1	216	1	2	0	1	3	423	
04:30 PM	0	170	17	1	0	188	12	1	45	2	58	28	117	0	1	2	146	6	5	1	0	12	404	
04:45 PM	1	184	15	2	1	202	11	2	46	4	59	37	158	0	1	0	196	1	3	0	0	4	461	
05:00 PM	0	118	18	0	0	136	10	0	37	3	47	54	127	2	2	1	185	1	2	0	1	3	371	
05:15 PM	1	166	13	0	0	180	5	0	39	3	44	40	122	0	2	0	164	2	2	1	0	5	393	
05:30 PM	1	175	12	0	3	188	6	0	41	4	47	41	163	0	2	0	206	2	1	0	1	3	444	
05:45 PM	0	176	15	0	1	191	1	0	37	0	38	37	130	1	2	0	170	0	2	0	1	2	401	
06:00 PM	6	129	23	2	0	160	5	0	34	3	39	32	133	0	2	0	167	1	4	0	0	5	371	
06:15 PM	0	163	7	0	0	170	14	1	35	3	50	38	147	1	0	0	186	0	4	0	1	4	410	
Hourly Total																								
07:00 AM	7	868	26	3	3	904	39	17	199	4	255	114	349	7	3	0	473	4	0	2	1	6	1638	
07:15 AM	7	857	27	4	3	895	43	24	219	7	286	107	422	6	2	0	537	4	1	2	1	7	1725	
07:30 AM	7	829	20	5	3	861	40	30	219	9	289	110	470	8	1	0	589	5	1	0	1	6	1745	
07:45 AM	5	767	19	5	2	796	50	32	206	9	288	114	494	12	2	0	622	3	4	4	1	11	1717	
08:00 AM	5	726	18	5	2	754	48	34	227	8	309	104	474	13	3	0	594	5	5	5	3	15	1672	
04:00 PM	2	643	52	4	7	701	45	5	196	17	246	186	557	2	4	6	749	15	31	2	3	48	1744	
04:15 PM	2	622	63	3	4	690	37	3	164	13	204	179	556	3	5	4	743	9	12	1	2	22	1659	
04:30 PM	2	638	63	3	1	706	38	3	167	12	208	159	524	2	6	3	691	10	12	2	1	24	1629	
04:45 PM	3	643	58	2	4	706	32	2	163	14	197	172	570	2	7	1	751	6	8	1	2	15	1669	
05:00 PM	2	635	58	0	4	695	22	0	154	10	176	172	542	3	8	1	725	5	7	1	3	13	1609	
05:15 PM	8	646	63	2	4	719	17	0	151	10	168	150	548	1	8	0	707	5	9	1	2	15	1609	
05:30 PM	7	643	57	2	4	709	26	1	147	10	174	148	573	2	6	0	729	3	11	0	3	14	1626	

File Name: 25th Street and Bladensburg Road

Start Date: 2/13/2019

AM: 7:00 AM - 9:00 AM

PM: 4:00 PM - 6:30 PM

WMATA Bus

Start Time	Bladensburg Road NE						25th Street NE					Bladensburg Road NE						25th Street NE					Int. Total							
	Southbound						Westbound					Northbound						Eastbound												
	Right	Thru	Left	U-turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	U-turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total								
15- Minute Interval																														
07:00 AM	0	2	0	0	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	2	0	0	0	2	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	3	0	0	0	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	4	0	0	0	4	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	1	0	0	0	1	1	0	0	0	1	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	3	0	0	0	3	1	0	0	0	1	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	6	0	0	0	6	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	3	0	0	0	3	2	0	0	0	2	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	2	0	0	0	2	1	0	0	0	1	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	1	0	0	0	1	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	2	0	0	0	2	1	0	0	0	1	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	3	0	0	0	3	1	0	0	0	1	0	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0
06:00 PM	0	1	0	0	0	1	1	0	0	0	1	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	2	0	0	0	2	1	0	0	0	1	0	8	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total																														
07:00 AM	0	11	0	0	0	11	3	0	0	0	3	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	9	0	0	0	9	2	0	0	0	2	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	7	0	0	0	7	1	0	0	0	1	0	2	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	4	0	0	0	4	0	0	0	0	0	0	3	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	1	0	0	0	1	1	0	0	0	1	0	5	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	14	0	0	0	14	5	0	0	0	5	0	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	11	0	0	0	11	5	0	0	0	5	0	4	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	5	0	0	0	5	4	0	0	0	4	0	5	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	4	0	0	0	4	3	0	0	0	3	0	6	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	5	0	0	0	5	3	0	0	0	3	0	9	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	6	0	0	0	6	3	0	0	0	3	0	9	0	0	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	8	0	0	0	8	4	0	0	0	4	0	16	0	0	0	0	16	0	0	0	0	0	0	0	0	0	0	0	0

File Name: 25th Street and Bladensburg Road

Start Date: 2/13/2019

AM: 7:00 AM - 9:00 AM

PM: 4:00 PM - 6:30 PM

Heavy Vehicle

Start Time	Bladensburg Road NE						25th Street NE					Bladensburg Road NE						25th Street NE					Int. Total	
	Southbound						Westbound					Northbound						Eastbound						
	Right	Thru	Left	U-turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	U-turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total		
15- Minute Interval																								
07:00 AM	0	1	0	0	0	1	1	1	19	0	21	2	2	0	0	0	4	0	0	0	0	0	0	26
07:15 AM	0	3	0	0	0	3	2	0	5	0	7	1	2	0	0	0	3	0	0	0	0	0	0	13
07:30 AM	0	4	1	0	0	5	4	0	2	0	6	0	4	0	0	0	4	0	0	0	0	0	0	15
07:45 AM	0	2	0	0	0	2	2	0	3	0	5	2	4	0	0	0	6	0	0	0	0	0	0	13
08:00 AM	0	1	0	0	0	1	1	3	2	0	6	2	0	0	0	0	2	0	0	0	0	0	0	9
08:15 AM	0	4	0	0	0	4	0	0	2	0	2	7	2	0	0	0	9	0	0	0	0	0	0	15
08:30 AM	0	3	2	0	0	5	2	0	6	0	8	0	1	0	0	0	1	1	0	0	0	0	1	15
08:45 AM	0	1	1	0	0	2	0	3	0	0	3	3	1	0	0	0	4	1	0	0	0	0	1	10
04:00 PM	0	1	0	0	0	1	0	0	0	0	0	1	3	0	0	0	4	0	0	0	0	0	0	5
04:15 PM	0	0	2	0	0	2	0	3	0	0	3	3	2	0	0	0	5	0	0	0	0	0	0	10
04:30 PM	0	1	0	0	0	1	0	0	0	0	0	2	1	0	0	0	3	0	0	0	0	0	0	4
04:45 PM	0	1	1	0	0	2	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	4
05:00 PM	0	1	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
05:15 PM	0	1	0	0	0	1	0	0	0	0	0	1	1	0	0	0	2	0	0	0	0	0	0	3
05:30 PM	0	0	2	0	0	2	0	0	3	0	3	3	1	0	0	0	4	0	0	0	0	0	0	9
05:45 PM	0	1	0	0	0	1	0	0	1	0	1	3	2	0	0	0	5	0	0	0	0	0	0	7
06:00 PM	0	0	0	0	0	0	1	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	2
06:15 PM	0	0	1	0	0	1	0	0	0	0	0	1	0	0	0	0	2	0	0	0	0	0	0	3
Hourly Total																								
07:00 AM	0	10	1	0	0	11	9	1	29	0	39	5	12	0	0	0	17	0	0	0	0	0	0	67
07:15 AM	0	10	1	0	0	11	9	3	12	0	24	5	10	0	0	0	15	0	0	0	0	0	0	50
07:30 AM	0	11	1	0	0	12	7	3	9	0	19	11	10	0	0	0	21	0	0	0	0	0	0	52
07:45 AM	0	10	2	0	0	12	5	3	13	0	21	11	7	0	0	0	18	1	0	0	0	0	1	52
08:00 AM	0	9	3	0	0	12	3	3	13	0	19	12	4	0	0	0	16	2	0	0	0	0	2	49
04:00 PM	0	3	3	0	0	6	1	0	4	0	5	6	6	0	0	0	12	0	0	0	0	0	0	23
04:15 PM	0	3	4	0	0	7	1	0	4	0	5	5	3	0	0	0	8	0	0	0	0	0	0	20
04:30 PM	0	4	2	0	0	6	1	0	1	0	2	3	2	0	0	0	5	0	0	0	0	0	0	13
04:45 PM	0	3	4	0	0	7	1	0	4	0	5	4	2	0	0	0	6	0	0	0	0	0	0	18
05:00 PM	0	3	3	0	0	6	0	0	4	0	4	7	4	0	0	0	11	0	0	0	0	0	0	21
05:15 PM	0	2	2	0	0	4	1	0	4	0	5	7	5	0	0	0	12	0	0	0	0	0	0	21
05:30 PM	0	1	3	0	0	4	1	0	4	0	5	7	5	0	0	0	12	0	0	0	0	0	0	21

File Name: 25th Street and Bladensburg Road

Start Date: 2/13/2019

AM: 7:00 AM - 9:00 AM

PM: 4:00 PM - 6:30 PM

Total Vehicle

Start Time	Bladensburg Road NE						25th Street NE					Bladensburg Road NE						25th Street NE					Int. Total	
	Southbound						Westbound					Northbound						Eastbound						
	Right	Thru	Left	U-turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	U-turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total		
15- Minute Interval																								
07:00 AM	0	187	2	1	0	190	11	9	68	1	88	30	62	1	1	0	94	0	0	0	0	0	0	372
07:15 AM	2	229	8	0	0	239	16	2	61	0	79	25	74	3	1	0	103	1	0	2	0	3	424	
07:30 AM	3	235	12	1	2	251	10	5	52	1	67	21	100	1	0	0	122	3	0	0	1	3	443	
07:45 AM	2	238	5	1	1	246	14	2	47	2	63	43	126	2	1	0	172	0	0	0	0	0	481	
08:00 AM	0	174	3	2	0	179	14	18	71	4	103	23	133	0	0	0	156	0	1	0	0	1	439	
08:15 AM	2	200	1	1	0	204	10	8	58	2	76	34	123	5	0	0	162	2	0	0	0	2	444	
08:30 AM	1	169	12	1	1	183	17	7	43	1	67	25	122	5	1	0	153	2	3	4	1	9	412	
08:45 AM	2	193	5	1	1	201	11	4	68	1	83	34	105	3	2	0	144	3	1	1	2	5	433	
04:00 PM	0	143	7	1	3	151	19	2	69	7	90	62	133	1	1	3	197	7	21	1	2	29	467	
04:15 PM	1	156	15	0	3	172	5	0	39	4	44	63	156	1	1	1	221	1	2	0	1	3	440	
04:30 PM	0	174	17	1	0	192	14	1	45	2	60	30	119	0	1	2	150	6	5	1	0	12	414	
04:45 PM	1	187	16	2	1	206	13	2	47	4	62	37	159	0	1	0	197	1	3	0	0	4	469	
05:00 PM	0	119	19	0	0	138	11	0	37	3	48	54	129	2	2	1	187	1	2	0	1	3	376	
05:15 PM	1	167	13	0	0	181	5	0	39	3	44	41	124	0	2	0	167	2	2	1	0	5	397	
05:30 PM	1	177	14	0	3	192	7	0	44	4	51	44	166	0	2	0	212	2	1	0	1	3	458	
05:45 PM	0	180	15	0	1	195	2	0	38	0	40	40	136	1	2	0	179	0	2	0	1	2	416	
06:00 PM	6	130	23	2	0	161	7	0	34	3	41	32	136	0	2	0	170	1	4	0	0	5	377	
06:15 PM	0	165	8	0	0	173	15	1	35	3	51	39	156	1	0	0	196	0	4	0	1	4	424	
Hourly Total																								
07:00 AM	7	889	27	3	3	926	51	18	228	4	297	119	362	7	3	0	491	4	0	2	1	6	1720	
07:15 AM	7	876	28	4	3	915	54	27	231	7	312	112	433	6	2	0	553	4	1	2	1	7	1787	
07:30 AM	7	847	21	5	3	880	48	33	228	9	309	121	482	8	1	0	612	5	1	0	1	6	1807	
07:45 AM	5	781	21	5	2	812	55	35	219	9	309	125	504	12	2	0	643	4	4	4	1	12	1776	
08:00 AM	5	736	21	5	2	767	52	37	240	8	329	116	483	13	3	0	615	7	5	5	3	17	1728	
04:00 PM	2	660	55	4	7	721	51	5	200	17	256	192	567	2	4	6	765	15	31	2	3	48	1790	
04:15 PM	2	636	67	3	4	708	43	3	168	13	214	184	563	3	5	4	755	9	12	1	2	22	1699	
04:30 PM	2	647	65	3	1	717	43	3	168	12	214	162	531	2	6	3	701	10	12	2	1	24	1656	
04:45 PM	3	650	62	2	4	717	36	2	167	14	205	176	578	2	7	1	763	6	8	1	2	15	1700	
05:00 PM	2	643	61	0	4	706	25	0	158	10	183	179	555	3	8	1	745	5	7	1	3	13	1647	
05:15 PM	8	654	65	2	4	729	21	0	155	10	176	157	562	1	8	0	728	5	9	1	2	15	1648	
05:30 PM	7	652	60	2	4	721	31	1	151	10	183	155	594	2	6	0	757	3	11	0	3	14	1675	
AM Peak Hour (7:30 AM - 8:30 AM)																								
7:30 AM	7	847	21	5	3	880	48	33	228	9	309	121	482	8	1	0	612	5	1	0	1	6	1807	
PHF	0.58	0.89	0.44	0.63	0.38	0.88	0.86	0.46	0.80	0.56	0.75	0.70	0.91	0.40	0.25	0.00	0.89	0.42	0.25	0.00	0.25	0.50	0.94	
H Veh %	0.0%	2.1%	4.8%	0.0%	0.0%	2.2%	16.7%	9.1%	0.0%	0.0%	6.5%	9.1%	2.5%	0.0%	0.0%	0.0%	3.8%	0.0%	0.0%	#DIV/0!	0.0%	0.0%	3.4%	
PM Peak Hour (4:00 PM - 5:00 PM)																								
4:00 PM	2	660	55	4	7	721	51	5	200	17	256	192	567	2	4	6	765	15	31	2	3	48	1790	
PHF	0.50	0.88	0.81	0.50	0.58	0.88	0.67	0.63	0.72	0.61	0.71	0.76	0.89	0.50	1.00	0.50	0.87	0.54	0.37	0.50	0.38	0.41	0.95	
H Veh %	0.0%	2.6%	5.5%	0.0%	0.0%	2.8%	11.8%	0.0%	2.0%	0.0%	3.9%	3.1%	1.8%	0.0%	0.0%	0.0%	2.1%	0.0%	0.0%	0.0%	0.0%	0.0%	2.6%	

File Name: 26th Street and Bladensburg Road

Start Date: 2/13/2019

AM: 7:00 AM - 9:00 AM

PM: 4:00 PM - 6:30 PM

Passenger Car

Start Time	Bladensburg Road NE						26th Street NE					Bladensburg Road NE						26th Street NE					Int. Total
	Southbound						Westbound					Northbound						Eastbound					
	Right	Thru	Left	U-turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	U-turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
15- Minute Interval																							
07:00 AM	1	187	1	1	2	190	0	0	0	1	0	55	2	1	2	58	1	0	9	6	10	258	
07:15 AM	1	225	0	0	2	226	0	0	1	5	1	0	70	3	1	6	74	8	0	5	4	13	314
07:30 AM	1	213	1	2	0	217	0	0	0	0	0	0	80	3	0	1	83	1	0	1	2	2	302
07:45 AM	2	220	0	1	1	223	0	0	0	3	0	0	83	3	1	2	87	3	0	2	3	5	315
08:00 AM	1	206	4	2	0	213	1	0	0	0	1	0	97	1	0	4	98	2	0	0	1	2	314
08:15 AM	2	192	0	3	0	197	4	0	0	3	4	0	85	1	0	1	86	2	0	6	3	8	295
08:30 AM	3	153	0	1	0	157	0	0	0	1	0	0	94	5	1	2	100	0	0	3	1	3	260
08:45 AM	4	141	0	1	0	146	0	0	0	2	0	0	89	11	2	7	102	0	0	6	2	6	254
04:00 PM	0	124	0	1	0	125	0	0	0	4	0	0	153	2	1	3	156	5	0	2	5	7	288
04:15 PM	0	170	1	0	0	171	0	0	0	0	0	0	136	1	1	3	138	4	0	0	3	4	313
04:30 PM	2	169	0	1	0	172	2	0	0	2	2	0	136	2	1	2	139	3	0	1	4	4	317
04:45 PM	0	201	0	2	0	203	0	0	0	4	0	0	143	3	1	4	147	6	0	1	5	7	357
05:00 PM	3	148	0	0	0	151	0	0	1	0	1	0	121	4	2	6	127	2	0	3	5	5	284
05:15 PM	0	177	1	0	0	178	2	0	0	1	2	0	127	2	2	2	131	2	0	1	2	3	314
05:30 PM	0	170	0	0	0	170	2	0	0	0	2	0	154	0	2	4	156	3	0	5	7	8	336
05:45 PM	4	197	1	0	1	202	2	0	0	2	2	0	124	6	2	6	132	3	0	1	5	4	340
06:00 PM	0	147	0	2	0	149	0	0	0	0	0	0	112	2	2	2	116	1	0	2	1	3	268
06:15 PM	4	157	0	0	0	161	0	0	0	3	0	0	148	12	0	2	160	3	0	0	2	3	324
Hourly Total																							
07:00 AM	5	845	2	4	5	856	0	0	1	9	1	0	288	11	3	11	302	13	0	17	15	30	1189
07:15 AM	5	864	5	5	3	879	1	0	1	8	2	0	330	10	2	13	342	14	0	8	10	22	1245
07:30 AM	6	831	5	8	1	850	5	0	0	6	5	0	345	8	1	8	354	8	0	9	9	17	1226
07:45 AM	8	771	4	7	1	790	5	0	0	7	5	0	359	10	2	9	371	7	0	11	8	18	1184
08:00 AM	10	692	4	7	0	713	5	0	0	6	5	0	365	18	3	14	386	4	0	15	7	19	1123
04:00 PM	2	664	1	4	0	671	2	0	0	10	2	0	568	8	4	12	580	18	0	4	17	22	1275
04:15 PM	5	688	1	3	0	697	2	0	1	6	3	0	536	10	5	15	551	15	0	5	17	20	1271
04:30 PM	5	695	1	3	0	704	4	0	1	7	5	0	527	11	6	14	544	13	0	6	16	19	1272
04:45 PM	3	696	1	2	0	702	4	0	1	5	5	0	545	9	7	16	561	13	0	10	19	23	1291
05:00 PM	7	692	2	0	1	701	6	0	1	3	7	0	526	12	8	18	546	10	0	10	19	20	1274
05:15 PM	4	691	2	2	1	699	6	0	0	3	6	0	517	10	8	14	535	9	0	9	15	18	1258
05:30 PM	8	671	1	2	1	682	4	0	0	5	4	0	538	20	6	14	564	10	0	8	15	18	1268

File Name: 26th Street and Bladensburg Road

Start Date: 2/13/2019

AM: 7:00 AM - 9:00 AM

PM: 4:00 PM - 6:30 PM

WMATA Bus

Start Time	Bladensburg Road NE						26th Street NE					Bladensburg Road NE						26th Street NE					Int. Total	
	Southbound						Westbound					Northbound						Eastbound						
	Right	Thru	Left	U-turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	U-turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total		
15- Minute Interval																								
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	5	0	10	0	15	16
07:15 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	2	0	8	0	10	12
07:30 AM	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	2	0	6	0	8	10
07:45 AM	0	2	0	0	0	2	0	0	0	0	0	0	2	1	0	0	0	3	1	0	5	0	6	11
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3	0	0	3	0	3	6
08:15 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:30 AM	2	0	0	0	0	2	0	0	0	0	0	0	1	2	0	0	0	3	1	0	1	0	2	7
08:45 AM	3	1	0	0	0	4	0	0	0	0	0	0	2	3	0	0	0	5	0	0	1	0	1	10
04:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	3	0	5	0	8	10
04:15 PM	0	2	0	0	0	2	0	0	0	0	0	0	1	0	0	0	0	1	2	0	2	0	4	7
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	0	1	0	1	3
04:45 PM	0	2	0	0	0	2	0	0	0	0	0	0	1	0	0	0	0	1	0	0	1	0	1	4
05:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2	0	2	4
05:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	3	1	0	0	0	1	4
05:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	4	0	0	0	4	0	0	1	0	1	6
06:00 PM	3	1	0	0	0	4	0	0	0	0	0	0	2	2	0	0	0	4	0	0	2	0	2	10
06:15 PM	7	1	0	0	0	8	0	0	0	0	0	0	0	2	0	0	0	2	0	0	1	0	1	11
Hourly Total																								
07:00 AM	0	4	0	0	0	4	0	0	0	0	0	0	4	2	0	0	0	6	10	0	29	0	39	49
07:15 AM	0	4	0	0	0	4	0	0	0	0	0	0	5	3	0	0	0	8	5	0	22	0	27	39
07:30 AM	0	5	0	0	0	5	0	0	0	0	0	0	5	2	0	0	0	7	3	0	14	0	17	29
07:45 AM	2	4	0	0	0	6	0	0	0	0	0	0	5	4	0	0	0	9	2	0	9	0	11	26
08:00 AM	5	3	0	0	0	8	0	0	0	0	0	0	5	6	0	0	0	11	1	0	5	0	6	25
04:00 PM	0	5	0	0	0	5	0	0	0	0	0	0	4	1	0	0	0	5	5	0	9	0	14	24
04:15 PM	0	5	0	0	0	5	0	0	0	0	0	0	4	1	0	0	0	5	2	0	6	0	8	18
04:30 PM	0	4	0	0	0	4	0	0	0	0	0	0	4	1	0	0	0	5	0	0	4	0	4	13
04:45 PM	0	4	0	0	0	4	0	0	0	0	0	0	4	2	0	0	0	6	1	0	3	0	4	14
05:00 PM	0	3	0	0	0	3	0	0	0	0	0	0	3	6	0	0	0	9	1	0	3	0	4	16
05:15 PM	3	3	0	0	0	6	0	0	0	0	0	0	5	7	0	0	0	12	1	0	3	0	4	22
05:30 PM	10	3	0	0	0	13	0	0	0	0	0	0	4	9	0	0	0	13	1	0	4	0	5	31

File Name: 26th Street and Bladensburg Road

Start Date: 2/13/2019

AM: 7:00 AM - 9:00 AM

PM: 4:00 PM - 6:30 PM

Heavy Vehicle

Start Time	Bladensburg Road NE						26th Street NE					Bladensburg Road NE						26th Street NE					Int. Total	
	Southbound						Westbound					Northbound						Eastbound						
	Right	Thru	Left	U-turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	U-turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total		
15- Minute Interval																								
07:00 AM	1	6	0	0	0	7	0	0	0	0	0	0	3	1	0	0	4	0	0	0	0	0	0	11
07:15 AM	0	8	0	0	0	8	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	10
07:30 AM	0	10	0	0	0	10	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	13
07:45 AM	0	6	0	0	0	6	0	0	0	0	0	0	6	0	0	0	6	0	0	0	0	0	0	12
08:00 AM	0	3	0	0	0	3	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	4
08:15 AM	0	4	0	0	0	4	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	6
08:30 AM	0	6	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
08:45 AM	0	5	0	0	0	5	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	7
04:00 PM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
04:15 PM	0	4	0	0	0	4	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	5
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1
04:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
05:00 PM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
05:15 PM	0	2	0	0	0	2	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	3
05:30 PM	0	4	0	0	0	4	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	5
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	2
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	2
06:15 PM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Hourly Total																								
07:00 AM	1	30	0	0	0	31	0	0	0	0	0	0	14	1	0	0	15	0	0	0	0	0	0	46
07:15 AM	0	27	0	0	0	27	0	0	0	0	0	0	12	0	0	0	12	0	0	0	0	0	0	39
07:30 AM	0	23	0	0	0	23	0	0	0	0	0	0	12	0	0	0	12	0	0	0	0	0	0	35
07:45 AM	0	19	0	0	0	19	0	0	0	0	0	0	9	0	0	0	9	0	0	0	0	0	0	28
08:00 AM	0	18	0	0	0	18	0	0	0	0	0	0	5	0	0	0	5	0	0	0	0	0	0	23
04:00 PM	0	7	0	0	0	7	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	9
04:15 PM	0	7	0	0	0	7	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	9
04:30 PM	0	5	0	0	0	5	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	7
04:45 PM	0	9	0	0	0	9	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	11
05:00 PM	0	8	0	0	0	8	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	12
05:15 PM	0	6	0	0	0	6	0	0	0	0	0	0	6	0	0	0	6	0	0	0	0	0	0	12
05:30 PM	0	6	0	0	0	6	0	0	0	0	0	0	5	0	0	0	5	0	0	0	0	0	0	11

File Name: 26th Street and Bladensburg Road

Start Date: 2/13/2019

AM: 7:00 AM - 9:00 AM

PM: 4:00 PM - 6:30 PM

Total Vehicle																							
Bladensburg Road NE							26th Street NE					Bladensburg Road NE						26th Street NE					
Southbound							Westbound					Northbound						Eastbound					
Start Time	Right	Thru	Left	U-turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	U-turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
15- Minute Interval																							
07:00 AM	2	193	1	1	2	197	0	0	0	1	0	0	59	3	1	2	63	6	0	19	6	25	285
07:15 AM	1	234	0	0	2	235	0	0	1	5	1	0	72	4	1	6	77	10	0	13	4	23	336
07:30 AM	1	224	1	2	0	228	0	0	0	0	0	0	84	3	0	1	87	3	0	7	2	10	325
07:45 AM	2	228	0	1	1	231	0	0	0	3	0	0	91	4	1	2	96	4	0	7	3	11	338
08:00 AM	1	209	4	2	0	216	1	0	0	0	1	0	100	2	0	4	102	2	0	3	1	5	324
08:15 AM	2	198	0	3	0	203	4	0	0	3	4	0	87	1	0	1	88	2	0	6	3	8	303
08:30 AM	5	159	0	1	0	165	0	0	0	1	0	0	95	7	1	2	103	1	0	4	1	5	273
08:45 AM	7	147	0	1	0	155	0	0	0	2	0	0	93	14	2	7	109	0	0	7	2	7	271
04:00 PM	0	127	0	1	0	128	0	0	0	4	0	0	153	3	1	3	157	8	0	7	5	15	300
04:15 PM	0	176	1	0	0	177	0	0	0	0	0	0	138	1	1	3	140	6	0	2	3	8	325
04:30 PM	2	169	0	1	0	172	2	0	0	2	2	0	139	2	1	2	142	3	0	2	4	5	321
04:45 PM	0	204	0	2	0	206	0	0	0	4	0	0	144	3	1	4	148	6	0	2	5	8	362
05:00 PM	3	151	0	0	0	154	0	0	1	0	1	0	121	5	2	6	128	2	0	5	5	7	290
05:15 PM	0	180	1	0	0	181	2	0	0	1	2	0	129	2	2	2	133	2	0	1	2	3	319
05:30 PM	0	174	0	0	0	174	2	0	0	0	2	0	157	1	2	4	160	4	0	5	7	9	345
05:45 PM	4	198	1	0	1	203	2	0	0	2	2	0	126	10	2	6	138	3	0	2	5	5	348
06:00 PM	3	148	0	2	0	153	0	0	0	0	0	0	116	4	2	2	122	1	0	4	1	5	280
06:15 PM	11	160	0	0	0	171	0	0	0	3	0	0	148	14	0	2	162	3	0	1	2	4	337
Hourly Total																							
07:00 AM	6	879	2	4	5	891	0	0	1	9	1	0	306	14	3	11	323	23	0	46	15	69	1284
07:15 AM	5	895	5	5	3	910	1	0	1	8	2	0	347	13	2	13	362	19	0	30	10	49	1323
07:30 AM	6	859	5	8	1	878	5	0	0	6	5	0	362	10	1	8	373	11	0	23	9	34	1290
07:45 AM	10	794	4	7	1	815	5	0	0	7	5	0	373	14	2	9	389	9	0	20	8	29	1238
08:00 AM	15	713	4	7	0	739	5	0	0	6	5	0	375	24	3	14	402	5	0	20	7	25	1171
04:00 PM	2	676	1	4	0	683	2	0	0	10	2	0	574	9	4	12	587	23	0	13	17	36	1308
04:15 PM	5	700	1	3	0	709	2	0	1	6	3	0	542	11	5	15	558	17	0	11	17	28	1298
04:30 PM	5	704	1	3	0	713	4	0	1	7	5	0	533	12	6	14	551	13	0	10	16	23	1292
04:45 PM	3	709	1	2	0	715	4	0	1	5	5	0	551	11	7	16	569	14	0	13	19	27	1316
05:00 PM	7	703	2	0	1	712	6	0	1	3	7	0	533	18	8	18	559	11	0	13	19	24	1302
05:15 PM	7	700	2	2	1	711	6	0	0	3	6	0	528	17	8	14	553	10	0	12	15	22	1292
05:30 PM	18	680	1	2	1	701	4	0	0	5	4	0	547	29	6	14	582	11	0	12	15	23	1310
AM Peak Hour (7:15 AM - 8:15 AM)																							
07:15 AM	5	895	5	5	3	910	1	0	1	8	2	0	347	13	2	13	362	19	0	30	10	49	1323
PHF	0.63	0.96	0.31	0.63	0.38	0.97	0.25	0.00	0.25	0.40	0.50	0.00	0.87	0.81	0.50	0.54	0.89	0.48	0.00	0.58	0.63	0.53	0.98
H. Veh %	0%	3%	0%	0%	0%	3%	0%	0%	0%	0%	0%	0%	5%	23%	0%	0%	6%	26%	0%	73%	0%	55%	6%
PM Peak Hour (4:45 PM - 5:45 PM)																							
4:45 PM	3	709	1	2	0	715	4	0	1	5	5	0	551	11	7	16	569	14	0	13	19	27	1316
PHF	0.25	0.87	0.25	0.25	0.00	0.87	0.50	0.00	0.25	0.31	0.63	0.00	0.88	0.55	0.88	0.67	0.89	0.58	0.00	0.65	0.68	0.75	0.91
H. Veh %	0%	2%	0%	0%	0%	2%	0%	0%	0%	0%	0%	0%	1%	18%	0%	0%	1%	7%	0%	23%	0%	15%	2%

File Name: Channing Street and Bladensburg Road

Start Date: 2/14/2019

AM: 7:00 AM - 9:00 AM

PM: 4:00 PM - 6:30 PM

Passenger Car

Start Time	Bladensburg Road NE						Channing Street NE					Bladensburg Road NE						Channing Street NE					Int. Total	
	Southbound						Westbound					Northbound						Eastbound						
	Right	Thru	Left	U-turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	U-turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total		
15- Minute Interval																								
07:00 AM	0	176	4	1	0	181	2	0	6	1	8	5	58	0	0	5	68	0	0	0	0	0	0	257
07:15 AM	0	226	4	1	0	231	2	0	10	2	12	2	85	0	0	1	87	0	0	0	0	0	0	330
07:30 AM	0	140	3	0	0	143	0	0	8	0	8	7	63	0	1	2	71	0	0	0	0	0	0	222
07:45 AM	0	166	1	0	0	167	4	0	10	1	14	7	100	0	0	0	107	0	0	0	0	0	0	288
08:00 AM	0	125	1	0	0	126	9	0	20	2	29	3	108	0	0	2	111	0	0	0	0	0	0	266
08:15 AM	0	179	0	0	0	179	4	0	9	1	13	16	83	0	0	2	99	0	0	0	0	0	0	291
08:30 AM	0	158	4	0	0	162	9	0	8	0	17	9	115	0	0	0	124	0	0	0	0	0	0	303
08:45 AM	0	193	1	0	0	194	3	0	6	2	9	15	125	0	0	2	140	0	0	0	0	0	0	343
09:00 AM	0	170	1	2	0	173	0	0	7	0	7	7	121	0	1	1	129	0	0	0	0	0	0	309
09:15 AM	0	149	1	2	0	152	1	0	13	2	14	7	117	0	0	2	126	0	0	0	0	0	0	292
04:00 PM	0	130	1	1	0	132	1	0	4	1	5	12	162	0	1	0	175	0	0	0	0	0	0	312
04:15 PM	0	135	0	2	0	137	3	0	7	5	10	13	146	0	0	0	159	0	0	0	0	0	0	306
04:30 PM	0	163	2	0	0	165	0	0	10	1	10	6	136	0	0	0	142	0	0	0	0	0	0	317
04:45 PM	0	206	1	0	0	207	1	0	13	1	14	26	171	0	0	1	197	0	0	0	0	0	0	418
05:00 PM	0	216	1	0	0	217	1	0	4	0	5	3	152	0	0	1	155	0	0	0	0	0	0	377
05:15 PM	0	233	4	0	0	237	1	0	11	3	12	10	154	0	0	0	164	0	0	0	0	0	0	413
05:30 PM	0	257	2	0	0	259	0	0	10	3	10	14	186	0	0	0	200	0	0	0	0	0	0	469
05:45 PM	0	217	1	2	0	220	1	0	9	0	10	9	140	0	1	0	150	0	0	0	0	0	0	380
06:00 PM	0	203	1	1	0	205	1	0	8	0	9	6	141	0	1	0	148	0	0	0	0	0	0	362
06:15 PM	0	189	1	1	0	191	0	0	7	2	7	4	142	0	2	1	148	0	0	0	0	0	0	346
Hourly Total																								
07:00 AM	0	708	12	2	0	722	8	0	34	4	42	21	306	0	1	8	328	0	0	0	0	0	0	1092
07:15 AM	0	657	9	1	0	667	15	0	48	5	63	19	356	0	1	5	376	0	0	0	0	0	0	1106
07:30 AM	0	610	5	0	0	615	17	0	47	4	64	33	354	0	1	6	388	0	0	0	0	0	0	1067
07:45 AM	0	628	6	0	0	634	26	0	47	4	73	35	406	0	0	4	441	0	0	0	0	0	0	1148
08:00 AM	0	655	6	0	0	661	25	0	43	5	68	43	431	0	0	6	474	0	0	0	0	0	0	1203
04:00 PM	0	634	4	3	0	641	5	0	34	8	39	57	615	0	1	1	673	0	0	0	0	0	0	1353
04:15 PM	0	720	4	2	0	726	5	0	34	7	39	48	605	0	0	2	653	0	0	0	0	0	0	1418
04:30 PM	0	818	8	0	0	826	3	0	38	5	41	45	613	0	0	2	658	0	0	0	0	0	0	1525
04:45 PM	0	912	8	0	0	920	3	0	38	7	41	53	663	0	0	2	716	0	0	0	0	0	0	1677
05:00 PM	0	923	8	2	0	933	3	0	34	6	37	36	632	0	1	1	669	0	0	0	0	0	0	1639
05:15 PM	0	910	8	3	0	921	3	0	38	6	41	39	621	0	2	0	662	0	0	0	0	0	0	1624
05:30 PM	0	866	5	4	0	875	2	0	34	5	36	33	609	0	4	1	646	0	0	0	0	0	0	1557

File Name: Channing Street and Bladensburg Road

Start Date: 2/14/2019

AM: 7:00 AM - 9:00 AM

PM: 4:00 PM - 6:30 PM

WMATA Bus

Start Time	Bladensburg Road NE						Channing Street NE					Bladensburg Road NE						Channing Street NE					Int. Total	
	Southbound						Westbound					Northbound						Eastbound						
	Right	Thru	Left	U-turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	U-turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total		
15- Minute Interval																								
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	7	0	0	0	0	0	0	7
07:15 AM	0	1	0	0	0	1	0	0	0	0	0	0	6	0	0	0	6	0	0	0	0	0	0	7
07:30 AM	0	1	0	0	0	1	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	4
07:45 AM	0	2	0	0	0	2	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	6
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	4
08:15 AM	0	2	0	0	0	2	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	5
08:30 AM	0	2	0	0	0	2	0	0	0	0	0	1	2	0	0	0	3	0	0	0	0	0	0	5
08:45 AM	0	3	0	0	0	3	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	5
09:00 AM	0	3	0	0	0	3	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	5
09:15 AM	0	7	0	0	0	7	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	10
04:00 PM	0	3	0	0	0	3	0	0	0	0	0	0	9	0	0	0	9	0	0	0	0	0	0	12
04:15 PM	0	2	0	0	0	2	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	6
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	3
04:45 PM	0	1	0	0	0	1	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	5
05:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	4
05:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	2
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	9	0	0	0	9	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	11
Hourly Total																								
07:00 AM	0	4	0	0	0	4	0	0	0	0	0	0	20	0	0	0	20	0	0	0	0	0	0	24
07:15 AM	0	4	0	0	0	4	0	0	0	0	0	0	17	0	0	0	17	0	0	0	0	0	0	21
07:30 AM	0	5	0	0	0	5	0	0	0	0	0	0	14	0	0	0	14	0	0	0	0	0	0	19
07:45 AM	0	6	0	0	0	6	0	0	0	0	0	1	13	0	0	0	14	0	0	0	0	0	0	20
08:00 AM	0	7	0	0	0	7	0	0	0	0	0	1	11	0	0	0	12	0	0	0	0	0	0	19
04:00 PM	0	6	0	0	0	6	0	0	0	0	0	0	20	0	0	0	20	0	0	0	0	0	0	26
04:15 PM	0	4	0	0	0	4	0	0	0	0	0	0	14	0	0	0	14	0	0	0	0	0	0	18
04:30 PM	0	3	0	0	0	3	0	0	0	0	0	0	11	0	0	0	11	0	0	0	0	0	0	14
04:45 PM	0	3	0	0	0	3	0	0	0	0	0	0	10	0	0	0	10	0	0	0	0	0	0	13
05:00 PM	0	2	0	0	0	2	0	0	0	0	0	0	7	0	0	0	7	0	0	0	0	0	0	9
05:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	5
05:30 PM	0	9	0	0	0	9	0	0	0	0	0	0	5	0	0	0	5	0	0	0	0	0	0	14

File Name: Channing Street and Bladensburg Road

Start Date: 2/14/2019

AM: 7:00 AM - 9:00 AM

PM: 4:00 PM - 6:30 PM

Heavy Vehicle

Start Time	Bladensburg Road NE						Channing Street NE					Bladensburg Road NE						Channing Street NE					Int. Total	
	Southbound						Westbound					Northbound						Eastbound						
	Right	Thru	Left	U-turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	U-turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total		
15- Minute Interval																								
07:00 AM	0	8	0	0	0	8	0	0	1	0	1	2	5	0	0	0	7	0	0	0	0	0	0	16
07:15 AM	0	7	0	0	0	7	0	0	0	0	0	1	4	0	0	0	5	0	0	0	0	0	0	12
07:30 AM	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2
07:45 AM	0	7	0	0	0	7	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	8
08:00 AM	0	2	0	0	0	2	0	0	0	0	0	1	3	0	0	0	4	0	0	0	0	0	0	6
08:15 AM	0	4	1	0	0	5	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	6
08:30 AM	0	3	0	0	0	3	1	0	0	0	1	1	4	0	0	0	5	0	0	0	0	0	0	9
08:45 AM	0	5	0	0	0	5	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	6
09:00 AM	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
09:15 AM	0	4	0	0	0	4	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	5
04:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:15 PM	0	9	0	0	0	9	1	0	0	0	1	0	2	0	0	0	2	0	0	0	0	0	0	12
04:30 PM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	2	0	0	0	2	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	3
05:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2
05:30 PM	0	2	0	0	0	2	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	3
05:45 PM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	1
Hourly Total																								
07:00 AM	0	23	0	0	0	23	0	0	1	0	1	3	11	0	0	0	14	0	0	0	0	0	0	38
07:15 AM	0	17	0	0	0	17	0	0	0	0	0	2	9	0	0	0	11	0	0	0	0	0	0	28
07:30 AM	0	14	1	0	0	15	1	0	0	0	1	1	5	0	0	0	6	0	0	0	0	0	0	22
07:45 AM	0	16	1	0	0	17	2	0	0	0	2	2	8	0	0	0	10	0	0	0	0	0	0	29
08:00 AM	0	14	1	0	0	15	2	0	0	0	2	2	8	0	0	0	10	0	0	0	0	0	0	27
04:00 PM	0	12	0	0	0	12	1	0	0	0	1	0	2	0	0	0	2	0	0	0	0	0	0	15
04:15 PM	0	13	0	0	0	13	1	0	0	0	1	0	3	0	0	0	3	0	0	0	0	0	0	17
04:30 PM	0	5	0	0	0	5	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	7
04:45 PM	0	5	0	0	0	5	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	8
05:00 PM	0	7	0	0	0	7	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	10
05:15 PM	0	5	0	0	0	5	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	7
05:30 PM	0	4	0	0	0	4	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	6

File Name: Channing Street and Bladensburg Road

Start Date: 2/14/2019

AM: 7:00 AM - 9:00 AM

PM: 4:00 PM - 6:30 PM

Total Vehicle																								
Bladensburg Road NE							Channing Street NE					Bladensburg Road NE						Channing Street NE						
Southbound							Westbound					Northbound						Eastbound						
Start Time	Right	Thru	Left	U-turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	U-turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total	
15- Minute Interval																								
07:00 AM	0	184	4	1	0	189	2	0	7	1	9	7	70	0	0	1	77	0	0	0	0	0	0	275
07:15 AM	0	234	4	1	0	239	2	0	10	2	12	3	95	0	0	2	98	0	0	0	0	0	0	349
07:30 AM	0	142	3	0	0	145	0	0	8	0	8	7	67	0	1	0	75	0	0	0	0	0	0	228
07:45 AM	0	175	1	0	0	176	4	0	10	1	14	7	105	0	0	1	112	0	0	0	0	0	0	302
08:00 AM	0	127	1	0	0	128	9	0	20	2	29	4	115	0	0	2	119	0	0	0	0	0	0	276
08:15 AM	0	185	1	0	0	186	5	0	9	1	14	16	86	0	0	1	102	0	0	0	0	0	0	302
08:30 AM	0	163	4	0	0	167	10	0	8	0	18	11	121	0	0	0	132	0	0	0	0	0	0	317
08:45 AM	0	201	1	0	0	202	3	0	6	2	9	15	128	0	0	2	143	0	0	0	0	0	0	354
04:00 PM	0	134	1	1	0	136	1	0	4	1	5	12	171	0	1	1	184	0	0	0	0	0	0	325
04:15 PM	0	146	0	2	0	148	4	0	7	5	11	13	152	0	0	5	165	0	0	0	0	0	0	324
04:30 PM	0	165	2	0	0	167	0	0	10	1	10	6	139	0	0	1	145	0	0	0	0	0	0	322
04:45 PM	0	207	1	0	0	208	1	0	13	1	14	26	175	0	0	1	201	0	0	0	0	0	0	423
05:00 PM	0	219	1	0	0	220	1	0	4	0	5	3	156	0	0	0	159	0	0	0	0	0	0	384
05:15 PM	0	235	4	0	0	239	1	0	11	3	12	10	156	0	0	3	166	0	0	0	0	0	0	417
05:30 PM	0	259	2	0	0	261	0	0	10	3	10	14	189	0	0	3	203	0	0	0	0	0	0	474
05:45 PM	0	219	1	2	0	222	1	0	9	0	10	9	141	0	1	0	151	0	0	0	0	0	0	383
06:00 PM	0	203	1	1	0	205	1	0	8	0	9	6	141	0	1	0	148	0	0	0	0	0	0	362
06:15 PM	0	198	1	1	0	200	0	0	7	2	7	4	145	0	2	2	151	0	0	0	0	0	0	358
Hourly Total																								
07:00 AM	0	735	12	2	0	749	8	0	35	4	43	24	337	0	1	4	362	0	0	0	0	0	0	1154
07:15 AM	0	678	9	1	0	688	15	0	48	5	63	21	382	0	1	5	404	0	0	0	0	0	0	1155
07:30 AM	0	629	6	0	0	635	18	0	47	4	65	34	373	0	1	4	408	0	0	0	0	0	0	1108
07:45 AM	0	650	7	0	0	657	28	0	47	4	75	38	427	0	0	4	465	0	0	0	0	0	0	1197
08:00 AM	0	676	7	0	0	683	27	0	43	5	70	46	450	0	0	5	496	0	0	0	0	0	0	1249
04:00 PM	0	652	4	3	0	659	6	0	34	8	40	57	637	0	1	8	695	0	0	0	0	0	0	1394
04:15 PM	0	737	4	2	0	743	6	0	34	7	40	48	622	0	0	7	670	0	0	0	0	0	0	1453
04:30 PM	0	826	8	0	0	834	3	0	38	5	41	45	626	0	0	5	671	0	0	0	0	0	0	1546
04:45 PM	0	920	8	0	0	928	3	0	38	7	41	53	676	0	0	7	729	0	0	0	0	0	0	1698
05:00 PM	0	932	8	2	0	942	3	0	34	6	37	36	642	0	1	6	679	0	0	0	0	0	0	1658
05:15 PM	0	916	8	3	0	927	3	0	38	6	41	39	627	0	2	6	668	0	0	0	0	0	0	1636
05:30 PM	0	879	5	4	0	888	2	0	34	5	36	33	616	0	4	5	653	0	0	0	0	0	0	1577
AM Peak Hour (8:00 AM - 9:00 AM)																								
8:00 AM	0	676	7	0	0	683	27	0	43	5	70	46	450	0	0	5	496	0	0	0	0	0	0	1249
PHF	0.00	0.84	0.44	0.00	0.00	0.85	0.68	0.00	0.54	0.63	0.60	0.72	0.88	0.00	0.00	0.63	0.87	0.00	0.00	0.00	0.00	0.00	0.00	0.88
H. Veh %	0%	3%	14%			3%	7%		0%	0%	3%	7%	4%			0%	4%							4%
PM Peak Hour (4:45 PM - 5:45 PM)																								
4:45 PM	0	920	8	0	0	928	3	0	38	7	41	53	676	0	0	7	729	0	0	0	0	0	0	1698
PHF	0.00	0.89	0.50	0.00	0.00	0.89	0.75	0.00	0.73	0.58	0.73	0.51	0.89	0.00	0.00	0.58	0.90	0.00	0.00	0.00	0.00	0.00	0.00	0.90
H. Veh %	0%	1%	0%			1%	0%		0%	0%	0%	0%	2%			0%	2%							1%

File Name: 28th Street and Douglas St

Start Date: 2/14/2019

AM: 7:00 AM - 9:00 AM

PM: 4:00 PM - 6:30 PM

Passenger Car

Start Time	Bladensburg Road NE					28th Street NE					Bladensburg Road NE					28th Street NE					Int. Total
	Southbound					Westbound					Northbound					Eastbound					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
15- Minute Interval																					
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	3	0	1	0	4	8
07:15 AM	1	0	0	0	1	0	0	0	0	0	0	0	1	0	1	3	0	0	0	3	5
07:30 AM	2	0	0	0	2	0	0	0	0	0	0	0	4	0	4	5	0	0	0	5	11
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	7	0	7	3	0	0	0	3	10
08:00 AM	3	0	0	0	3	0	0	0	0	0	0	0	3	0	3	1	0	0	0	1	7
08:15 AM	1	0	0	0	1	0	0	0	0	0	0	0	5	0	5	9	0	1	0	10	16
08:30 AM	3	0	0	0	3	0	0	0	0	0	0	0	5	0	5	2	0	0	0	2	10
08:45 AM	3	0	0	0	3	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	7
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	4	0	1	1	5	11
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	4	0	1	3	5	10
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	6	0	2	2	8	10
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	7	0	0	0	7	10
05:00 PM	1	0	0	0	1	0	0	0	0	0	0	0	4	0	4	2	0	0	1	2	7
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	10	0	0	1	10	12
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	8	0	8	7	0	2	1	9	17
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	7	0	0	0	7	9
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	7	0	1	0	8	11
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2	0	0	1	2	4
Hourly Total																					
07:00 AM	3	0	0	0	3	0	0	0	0	0	0	0	16	0	16	14	0	1	4	15	34
07:15 AM	6	0	0	0	6	0	0	0	0	0	0	0	15	0	15	12	0	0	5	12	33
07:30 AM	6	0	0	0	6	0	0	0	0	0	0	0	19	0	19	18	0	1	3	19	44
07:45 AM	7	0	0	0	7	0	0	0	0	0	0	0	20	0	20	15	0	1	1	16	43
08:00 AM	10	0	0	0	10	0	0	0	0	0	0	0	17	0	17	12	0	1	1	13	40
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	16	0	16	21	0	4	8	25	41
04:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	14	0	14	19	0	3	8	22	37
04:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	11	0	11	25	0	2	6	27	39
04:45 PM	1	0	0	0	1	0	0	0	0	0	0	0	17	0	17	26	0	2	5	28	46
05:00 PM	1	0	0	0	1	0	0	0	0	0	0	0	16	0	16	26	0	2	3	28	45
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	15	0	15	31	0	3	2	34	49
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	15	0	15	23	0	3	2	26	41

File Name: 28th Street and Douglas St

Start Date: 2/14/2019

AM: 7:00 AM - 9:00 AM

PM: 4:00 PM - 6:30 PM

Heavy Vehicle

Start Time	Bladensburg Road NE					28th Street NE					Bladensburg Road NE					28th Street NE					Int. Total	
	Southbound					Westbound					Northbound					Eastbound						
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total		
15- Minute Interval																						
07:00 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:15 AM	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	0	0	0	1	2
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	2	0	0	0	0	2	3
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	1
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total																						
07:00 AM	2	0	0	0	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	3
07:15 AM	1	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2
07:30 AM	3	0	0	0	3	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	4
07:45 AM	3	0	0	0	3	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	4
08:00 AM	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	1
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	1	0	0	0	0	1	3
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	1	0	0	0	0	1	4
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	1	0	0	0	0	1	4
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	3	0	0	0	0	3	6
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	3	0	0	0	0	3	5
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3	0	0	0	0	3	4

File Name: 28th Street and Douglas St

Start Date: 2/14/2019

AM: 7:00 AM - 9:00 AM

PM: 4:00 PM - 6:30 PM

Total Vehicle

Start Time	Bladensburg Road NE					28th Street NE					Bladensburg Road NE					28th Street NE					Int. Total
	Southbound					Westbound					Northbound					Eastbound					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
15- Minute Interval																					
07:00 AM	1	0	0	0	1	0	0	0	0	0	0	0	4	0	4	3	0	1	0	4	9
07:15 AM	2	0	0	0	2	0	0	0	0	0	0	0	1	0	1	3	0	0	0	3	6
07:30 AM	2	0	0	0	2	0	0	0	0	0	0	0	4	0	4	5	0	0	0	5	11
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	8	0	8	3	0	0	0	3	11
08:00 AM	3	0	0	0	3	0	0	0	0	0	0	0	3	0	3	1	0	0	0	1	7
08:15 AM	4	0	0	0	4	0	0	0	0	0	0	0	5	0	5	9	0	1	0	10	19
08:30 AM	3	0	0	0	3	0	0	0	0	0	0	0	5	0	5	2	0	0	0	2	10
08:45 AM	3	0	0	0	3	0	0	0	0	0	0	0	4	0	4	0	0	0	0	0	7
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	4	0	1	1	5	11
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5	4	0	1	3	5	10
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	6	0	2	2	8	10
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	4	0	4	7	0	0	2	7	11
05:00 PM	1	0	0	0	1	0	0	0	0	0	0	0	5	0	5	3	0	0	1	3	9
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	10	0	0	1	10	13
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	8	0	8	7	0	2	1	9	17
05:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	9	0	0	0	9	12
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3	8	0	1	0	9	12
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	2	0	0	1	2	4
Hourly Total																					
07:00 AM	5	0	0	0	5	0	0	0	0	0	0	0	17	0	17	14	0	1	4	15	37
07:15 AM	7	0	0	0	7	0	0	0	0	0	0	0	16	0	16	12	0	0	5	12	35
07:30 AM	9	0	0	0	9	0	0	0	0	0	0	0	20	0	20	18	0	1	3	19	48
07:45 AM	10	0	0	0	10	0	0	0	0	0	0	0	21	0	21	15	0	1	1	16	47
08:00 AM	13	0	0	0	13	0	0	0	0	0	0	0	17	0	17	12	0	1	1	13	43
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	17	0	17	21	0	4	8	25	42
04:15 PM	1	0	0	0	1	0	0	0	0	0	0	0	16	0	16	20	0	3	8	23	40
04:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	14	0	14	26	0	2	6	28	43
04:45 PM	1	0	0	0	1	0	0	0	0	0	0	0	20	0	20	27	0	2	5	29	50
05:00 PM	1	0	0	0	1	0	0	0	0	0	0	0	19	0	19	29	0	2	3	31	51
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	17	0	17	34	0	3	2	37	54
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	16	0	16	26	0	3	2	29	45
AM Peak Hour (7:30 AM - 8:30 AM)																					
7:30 AM	9	0	0	0	9	0	0	0	0	0	0	0	20	0	20	18	0	1	3	19	48
PHF	0.56				0.56								0.63	0.63	0.50		0.25	0.38	0.48	0.63	
H. Veh %	33%				33%								5%	5%	0%		0%	0%	0%	8%	
PM Peak Hour (5:15 PM - 6:15 PM)																					
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	17	0	17	34	0	3	2	37	54
PHF													0.53	0.53	0.85		0.38	0.50	0.93	0.79	
H. Veh %													12%	12%	9%		0%	0%	8%	9%	

File Name: Douglas Street and Bladensburg Road

Start Date: 2/13/2019

AM: 7:00 AM - 9:00 AM

PM: 4:00 PM - 6:30 PM

Passenger Car

Start Time	Bladensburg Road NE						Douglas Street NE					Bladensburg Road NE						Douglas Street NE					Int. Total
	Southbound						Westbound					Northbound						Eastbound					
	Right	Thru	Left	U-turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	U-turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
15- Minute Interval																							
07:00 AM	1	162	1	0	0	164	0	1	8	0	9	3	52	0	0	0	55	0	0	1	0	1	229
07:15 AM	0	196	2	0	1	198	0	1	6	2	7	3	56	0	0	1	59	0	1	1	1	2	266
07:30 AM	0	210	3	0	0	213	0	0	4	0	4	6	62	0	0	0	68	0	0	1	0	1	286
07:45 AM	1	184	7	0	0	192	1	0	8	4	9	4	62	0	0	0	66	0	0	0	1	0	267
08:00 AM	0	172	1	0	0	173	0	1	9	0	10	6	81	0	0	0	87	0	1	0	0	1	271
08:15 AM	2	132	3	0	1	137	1	1	4	0	6	5	75	1	0	0	81	0	1	1	0	2	226
08:30 AM	1	140	5	0	0	146	0	0	3	0	3	3	77	1	0	0	81	0	1	2	0	3	233
08:45 AM	1	118	2	0	1	121	1	0	8	1	9	7	66	0	0	0	73	1	1	0	0	2	205
Hourly Total																							
04:00 PM	4	130	0	0	1	134	1	0	2	3	3	9	133	4	0	0	146	0	0	2	1	2	285
04:15 PM	1	134	2	0	0	137	0	1	6	2	7	9	121	1	0	1	131	1	1	3	0	5	280
04:30 PM	0	151	3	0	1	154	0	0	7	3	7	13	108	0	0	0	121	0	0	1	1	1	283
04:45 PM	0	169	1	0	4	170	0	0	8	1	8	11	114	0	0	0	125	0	0	1	1	1	304
05:00 PM	1	130	3	0	0	134	1	0	5	1	6	7	113	2	0	0	122	1	0	2	0	3	265
05:15 PM	0	150	2	0	0	152	0	0	2	1	2	11	107	2	0	0	120	2	0	0	0	2	276
05:30 PM	0	171	3	0	0	174	0	0	13	1	13	15	126	0	0	0	141	0	0	1	0	1	329
05:45 PM	0	150	6	0	0	156	0	0	7	1	7	10	106	0	0	0	116	0	0	0	0	0	279
06:00 PM	3	142	3	0	0	148	0	0	4	1	4	12	99	1	0	0	112	0	0	1	0	1	265
06:15 PM	1	124	5	0	0	130	0	0	4	1	4	13	126	0	0	0	139	0	0	1	0	1	274
Hourly Total																							
07:00 AM	2	752	13	0	1	767	1	2	26	6	29	16	232	0	0	1	248	0	1	3	2	4	1048
07:15 AM	1	762	13	0	1	776	1	2	27	6	30	19	261	0	0	1	280	0	2	2	2	4	1090
07:30 AM	3	698	14	0	1	715	2	2	25	4	29	21	280	1	0	0	302	0	2	2	1	4	1050
07:45 AM	4	628	16	0	1	648	2	2	24	4	28	18	295	2	0	0	315	0	3	3	1	6	997
08:00 AM	4	562	11	0	2	577	2	2	24	1	28	21	299	2	0	0	322	1	4	3	0	8	935
04:00 PM	5	584	6	0	6	595	1	1	23	9	25	42	476	5	0	1	523	1	1	7	3	9	1152
04:15 PM	2	584	9	0	5	595	1	1	26	7	28	40	456	3	0	1	499	2	1	7	2	10	1132
04:30 PM	1	600	9	0	5	610	1	0	22	6	23	42	442	4	0	0	488	3	0	4	2	7	1128
04:45 PM	1	620	9	0	4	630	1	0	28	4	29	44	460	4	0	0	508	3	0	4	1	7	1174
05:00 PM	1	601	14	0	0	616	1	0	27	4	28	43	452	4	0	0	499	3	0	3	0	6	1149
05:15 PM	3	613	14	0	0	630	0	0	26	4	26	48	438	3	0	0	489	2	0	2	0	4	1149
05:30 PM	4	587	17	0	0	608	0	0	28	4	28	50	457	1	0	0	508	0	0	3	0	3	1147

File Name: Douglas Street and Bladensburg Road

Start Date: 2/13/2019

AM: 7:00 AM - 9:00 AM

PM: 4:00 PM - 6:30 PM

WMATA Bus

Start Time	Bladensburg Road NE						Douglas Street NE					Bladensburg Road NE						Douglas Street NE					Int. Total	
	Southbound						Westbound					Northbound						Eastbound						
	Right	Thru	Left	U-turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	U-turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total		
15- Minute Interval																								
07:00 AM	0	2	0	0	0	2	0	0	0	0	0	0	17	0	0	0	17	0	0	0	0	0	0	19
07:15 AM	0	2	0	0	0	2	0	0	0	0	0	0	10	0	0	0	10	0	0	0	0	0	0	12
07:30 AM	0	1	0	0	0	1	0	0	0	0	0	0	8	0	0	0	8	0	0	0	0	0	0	9
07:45 AM	0	2	0	0	0	2	0	0	0	0	0	0	8	0	0	0	8	0	0	0	0	0	0	10
08:00 AM	0	4	0	0	0	4	0	0	0	0	0	0	6	0	0	0	6	0	0	0	0	0	0	10
08:15 AM	0	1	0	0	0	1	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	4
08:30 AM	0	6	0	0	0	6	0	0	0	0	0	0	6	0	0	0	6	0	0	0	0	0	0	12
08:45 AM	0	4	0	0	0	4	0	0	0	0	0	0	5	0	0	0	5	0	0	0	0	0	0	9
Hourly Total																								
04:00 PM	0	2	0	0	0	2	0	0	0	0	0	0	8	0	0	0	8	0	0	0	0	0	0	10
04:15 PM	0	2	0	0	0	2	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	5
04:30 PM	0	3	0	0	0	3	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	7
04:45 PM	0	2	0	0	0	2	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	6
05:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	5	0	0	0	5	0	0	0	0	0	0	6
05:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	3
05:30 PM	0	2	0	0	0	2	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	5
05:45 PM	0	3	0	0	0	3	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	5
06:00 PM	0	6	0	0	0	6	0	0	0	0	0	0	5	0	0	0	5	0	0	0	0	0	0	11
06:15 PM	0	9	0	0	0	9	0	0	0	0	0	0	2	0	0	0	2	0	0	0	0	0	0	11
Hourly Total																								
07:00 AM	0	7	0	0	0	7	0	0	0	0	0	0	43	0	0	0	43	0	0	0	0	0	0	50
07:15 AM	0	9	0	0	0	9	0	0	0	0	0	0	32	0	0	0	32	0	0	0	0	0	0	41
07:30 AM	0	8	0	0	0	8	0	0	0	0	0	0	25	0	0	0	25	0	0	0	0	0	0	33
07:45 AM	0	13	0	0	0	13	0	0	0	0	0	0	23	0	0	0	23	0	0	0	0	0	0	36
08:00 AM	0	15	0	0	0	15	0	0	0	0	0	0	20	0	0	0	20	0	0	0	0	0	0	35
Hourly Total																								
04:00 PM	0	9	0	0	0	9	0	0	0	0	0	0	19	0	0	0	19	0	0	0	0	0	0	28
04:15 PM	0	8	0	0	0	8	0	0	0	0	0	0	16	0	0	0	16	0	0	0	0	0	0	24
04:30 PM	0	7	0	0	0	7	0	0	0	0	0	0	15	0	0	0	15	0	0	0	0	0	0	22
04:45 PM	0	6	0	0	0	6	0	0	0	0	0	0	14	0	0	0	14	0	0	0	0	0	0	20
05:00 PM	0	7	0	0	0	7	0	0	0	0	0	0	12	0	0	0	12	0	0	0	0	0	0	19
05:15 PM	0	12	0	0	0	12	0	0	0	0	0	0	12	0	0	0	12	0	0	0	0	0	0	24
05:30 PM	0	20	0	0	0	20	0	0	0	0	0	0	12	0	0	0	12	0	0	0	0	0	0	32

File Name: Douglas Street and Bladensburg Road

Start Date: 2/13/2019

AM: 7:00 AM - 9:00 AM

PM: 4:00 PM - 6:30 PM

Heavy Vehicle

Start Time	Bladensburg Road NE						Douglas Street NE					Bladensburg Road NE						Douglas Street NE					Int. Total			
	Southbound						Westbound					Northbound						Eastbound								
	Right	Thru	Left	U-turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	U-turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total				
15- Minute Interval																										
07:00 AM	0	4	0	0	0	4	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0
07:15 AM	0	8	0	0	0	8	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	0	0	0
07:30 AM	0	10	0	0	0	10	0	0	0	0	0	1	11	1	0	0	13	0	0	0	0	0	0	0	0	0
07:45 AM	0	8	0	0	0	8	0	0	0	0	0	1	6	0	0	0	7	0	0	0	0	0	0	0	0	0
08:00 AM	0	8	0	0	0	8	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0
08:15 AM	0	7	0	0	0	7	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0
08:30 AM	0	9	0	0	0	9	0	0	0	0	0	0	2	0	0	0	2	1	0	0	0	0	0	0	1	12
08:45 AM	0	2	0	0	0	2	0	0	0	0	0	0	2	0	0	0	2	1	0	0	0	0	0	0	0	5
04:00 PM	0	1	0	0	0	1	0	0	0	0	0	0	4	0	0	0	4	0	0	0	0	0	0	0	0	5
04:15 PM	0	2	0	0	0	2	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	3
04:30 PM	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	2
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	3
05:00 PM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
05:15 PM	0	2	0	0	0	2	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	3
05:30 PM	0	3	0	0	0	3	0	0	2	0	2	0	3	0	0	0	3	0	0	0	0	0	0	0	0	8
05:45 PM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
06:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	1
06:15 PM	0	1	0	0	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	2
Hourly Total																										
07:00 AM	0	30	0	0	0	30	0	0	0	0	0	2	24	1	0	0	27	0	0	0	0	0	0	0	0	57
07:15 AM	0	34	0	0	0	34	0	0	0	0	0	0	24	1	0	0	27	0	0	0	0	0	0	0	0	61
07:30 AM	0	33	0	0	0	33	0	0	0	0	0	2	21	1	0	0	24	0	0	0	0	0	0	0	0	57
07:45 AM	0	32	0	0	0	32	0	0	0	0	0	1	12	0	0	0	13	1	0	0	0	0	0	1	0	46
08:00 AM	0	26	0	0	0	26	0	0	0	0	0	0	8	0	0	0	8	2	0	0	0	0	0	2	0	36
04:00 PM	0	4	0	0	0	4	0	0	0	0	0	0	9	0	0	0	9	0	0	0	0	0	0	0	0	13
04:15 PM	0	5	0	0	0	5	0	0	0	0	0	0	5	0	0	0	5	0	0	0	0	0	0	0	0	10
04:30 PM	0	5	0	0	0	5	0	0	0	0	0	0	5	0	0	0	5	0	0	0	0	0	0	0	0	10
04:45 PM	0	7	0	0	0	7	0	0	2	0	2	0	7	0	0	0	7	0	0	0	0	0	0	0	0	16
05:00 PM	0	9	0	0	0	9	0	0	2	0	2	0	4	0	0	0	4	0	0	0	0	0	0	0	0	15
05:15 PM	0	7	0	0	0	7	0	0	2	0	2	0	5	0	0	0	5	0	0	0	0	0	0	0	0	14
05:30 PM	0	6	0	0	0	6	0	0	2	0	2	0	5	0	0	0	5	0	0	0	0	0	0	0	0	13

File Name: Douglas Street and Bladensburg Road

Start Date: 2/13/2019

AM: 7:00 AM - 9:00 AM

PM: 4:00 PM - 6:30 PM

Total Vehicle																							
Bladensburg Road NE							Douglas Street NE					Bladensburg Road NE						Douglas Street NE					
Southbound							Westbound					Northbound						Eastbound					
Start Time	Right	Thru	Left	U-turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	U-turn	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
15- Minute Interval																							
07:00 AM	1	168	1	0	0	170	0	1	8	0	9	3	72	0	0	0	75	0	0	1	0	1	255
07:15 AM	0	206	2	0	1	208	0	1	6	2	7	3	70	0	0	1	73	0	1	1	1	1	290
07:30 AM	0	221	3	0	0	224	0	0	4	0	4	7	81	1	0	0	89	0	0	1	0	1	318
07:45 AM	1	194	7	0	0	202	1	0	8	4	9	5	76	0	0	0	81	0	0	0	1	0	292
08:00 AM	0	184	1	0	0	185	0	1	9	0	10	6	90	0	0	0	96	0	1	0	0	1	292
08:15 AM	2	140	3	0	1	145	1	1	4	0	6	5	79	1	0	0	85	0	1	1	0	2	238
08:30 AM	1	155	5	0	0	161	0	0	3	0	3	3	85	1	0	0	89	1	1	2	0	4	257
08:45 AM	1	124	2	0	1	127	1	0	8	1	9	7	73	0	0	0	80	2	1	0	0	3	219
04:00 PM	4	133	0	0	1	137	1	0	2	3	3	9	145	4	0	0	158	0	0	2	1	2	300
04:15 PM	1	138	2	0	0	141	0	1	6	2	7	9	125	1	0	1	135	1	1	3	0	5	288
04:30 PM	0	155	3	0	1	158	0	0	7	3	7	13	113	0	0	0	126	0	0	1	1	1	292
04:45 PM	0	171	1	0	4	172	0	0	8	1	8	11	121	0	0	0	132	0	0	1	1	1	313
05:00 PM	1	133	3	0	0	137	1	0	5	1	6	7	118	2	0	0	127	1	0	2	0	3	273
05:15 PM	0	153	2	0	0	155	0	0	2	1	2	11	110	2	0	0	123	2	0	0	0	2	282
05:30 PM	0	176	3	0	0	179	0	0	15	1	15	15	132	0	0	0	147	0	0	1	0	1	342
05:45 PM	0	155	6	0	0	161	0	0	7	1	7	10	108	0	0	0	118	0	0	0	0	0	286
06:00 PM	3	148	3	0	0	154	0	0	4	1	4	12	105	1	0	0	118	0	0	1	0	1	277
06:15 PM	1	134	5	0	0	140	0	0	4	1	4	13	129	0	0	0	142	0	0	1	0	1	287
Hourly Total																							
07:00 AM	2	789	13	0	1	804	1	2	26	6	29	18	299	1	0	1	318	0	1	3	2	4	1155
07:15 AM	1	805	13	0	1	819	1	2	27	6	30	21	317	1	0	1	339	0	2	2	2	4	1192
07:30 AM	3	739	14	0	1	756	2	2	25	4	29	23	326	2	0	0	351	0	2	2	1	4	1140
07:45 AM	4	673	16	0	1	693	2	2	24	4	28	19	330	2	0	0	351	1	3	3	1	7	1079
08:00 AM	4	603	11	0	2	618	2	2	24	1	28	21	327	2	0	0	350	3	4	3	0	10	1006
04:00 PM	5	597	6	0	6	608	1	1	23	9	25	42	504	5	0	1	551	1	1	7	3	9	1193
04:15 PM	2	597	9	0	5	608	1	1	26	7	28	40	477	3	0	1	520	2	1	7	2	10	1166
04:30 PM	1	612	9	0	5	622	1	0	22	6	23	42	462	4	0	0	508	3	0	4	2	7	1160
04:45 PM	1	633	9	0	4	643	1	0	30	4	31	44	481	4	0	0	529	3	0	4	1	7	1210
05:00 PM	1	617	14	0	0	632	1	0	29	4	30	43	468	4	0	0	515	3	0	3	0	6	1183
05:15 PM	3	632	14	0	0	649	0	0	28	4	28	48	455	3	0	0	506	2	0	2	0	4	1187
05:30 PM	4	613	17	0	0	634	0	0	30	4	30	50	474	1	0	0	525	0	0	3	0	3	1192
AM Peak Hour (7:15 AM - 8:15 AM)																							
7:15 AM	1	805	13	0	1	819	1	2	27	6	30	21	317	1	0	1	339	0	2	2	2	4	1192
PHF	0.25	0.91	0.46			0.91	0.25	0.50	0.75		0.75	0.75	0.88	0.25			0.88		0.50	0.50		0.50	0.94
H Veh %	0.0%	5.3%	0.0%			5.3%	0.0%	0.0%	0.0%		0.0%	9.5%	17.7%	100.0%			17.4%		0.0%	0.0%		0.0%	8.6%
PM Peak Hour (4:45 PM - 5:45 PM)																							
#####	1	633	9	0	4	643	1	0	30	4	31	44	481	4	0	0	529	3	0	4	1	7	1210
PHF	0.25	0.90	0.75			0.90	0.25		0.50		0.52	0.73	0.91	0.50			0.90	0.38		0.50		0.58	0.88
H Veh %	0%	2%	0%			2%	0%		7%		6%	0%	4%	0%			4%	0%		0%		0%	3%

File Name: 28th Street and Douglas St
 Start Date: 2/14/2019
 AM: 7:00 AM - 9:00 AM
 PM: 4:00 PM - 6:30 PM

Passenger Car

Start Time	28th Street NE					Douglas Street NE					28th Street NE					Douglas Street NE					Int. Total
	Southbound					Westbound					Northbound					Eastbound					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
15- Minute Interval																					
07:00 AM	1	2	0	0	3	0	0	1	0	1	4	0	0	0	4	0	3	0	4	3	11
07:15 AM	0	6	0	0	6	0	0	0	1	0	0	1	0	0	1	0	0	0	1	0	7
07:30 AM	0	5	1	0	6	0	0	1	0	1	0	6	0	0	6	0	0	0	2	0	13
07:45 AM	1	2	1	0	4	1	0	2	0	3	1	7	0	0	8	1	0	0	1	1	16
08:00 AM	0	3	1	0	4	10	0	0	0	10	1	7	0	0	8	0	0	0	0	0	22
08:15 AM	0	7	3	0	10	8	1	0	0	9	0	4	0	0	4	1	1	0	0	2	25
08:30 AM	0	1	0	0	1	2	0	1	0	3	0	8	0	0	8	0	0	0	0	0	12
08:45 AM	0	1	1	1	2	7	0	0	0	7	1	5	0	0	6	0	0	0	0	0	15
04:00 PM	0	4	0	2	4	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	10
04:15 PM	0	5	3	0	8	2	2	0	0	4	1	3	1	0	5	0	2	0	0	2	19
04:30 PM	0	6	1	1	7	1	0	1	0	2	1	2	0	0	3	0	2	0	2	2	14
04:45 PM	0	6	3	0	9	1	0	0	0	1	0	4	0	0	4	2	0	0	0	2	16
05:00 PM	1	2	3	1	6	5	1	0	0	6	0	5	0	0	5	0	0	1	0	1	18
05:15 PM	1	5	2	0	8	2	0	0	0	2	0	1	1	0	2	3	0	0	0	3	15
05:30 PM	0	8	2	0	10	4	0	1	0	5	0	7	0	0	7	0	0	0	3	0	22
05:45 PM	0	6	2	2	8	0	0	0	0	0	0	1	0	0	1	0	1	0	0	1	10
06:00 PM	0	3	0	0	3	1	0	1	0	2	0	1	1	0	2	2	0	0	1	2	9
06:15 PM	0	2	0	0	2	1	0	0	0	1	1	1	0	0	2	0	0	0	0	0	5
Hourly Total																					
07:00 AM	2	15	2	0	19	1	0	4	1	5	1	18	0	0	19	1	3	0	8	4	47
07:15 AM	1	16	3	0	20	11	0	3	1	14	2	21	0	0	23	1	0	0	4	1	58
07:30 AM	1	17	6	0	24	19	1	3	0	23	2	24	0	0	26	2	1	0	3	3	76
07:45 AM	1	13	5	0	19	21	1	3	0	25	2	26	0	0	28	2	1	0	1	3	75
08:00 AM	0	12	5	1	17	27	1	1	0	29	2	24	0	0	26	1	1	0	0	2	74
04:00 PM	0	21	7	3	28	4	2	1	0	7	2	15	1	0	18	2	4	0	2	6	59
04:15 PM	1	19	10	2	30	9	3	1	0	13	2	14	1	0	17	2	4	1	2	7	67
04:30 PM	2	19	9	2	30	9	1	1	0	11	1	12	1	0	14	5	2	1	2	8	63
04:45 PM	2	21	10	1	33	12	1	1	0	14	0	17	1	0	18	5	0	1	3	6	71
05:00 PM	2	21	9	3	32	11	1	1	0	13	0	14	1	0	15	3	1	1	3	5	65
05:15 PM	1	22	6	2	29	7	0	2	0	9	0	10	2	0	12	5	1	0	4	6	56
05:30 PM	0	19	4	2	23	6	0	2	0	8	1	10	1	0	12	2	1	0	4	3	46

File Name: 28th Street and Douglas St

Start Date: 2/14/2019

AM: 7:00 AM - 9:00 AM

PM: 4:00 PM - 6:30 PM

Heavy Vehicle

Start Time	28th Street NE Southbound					Douglas Street NE Westbound					28th Street NE Northbound					Douglas Street NE Eastbound					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
15- Minute Interval																					
07:00 AM	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
07:15 AM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:45 PM	0	2	0	0	2	0	0	2	0	2	0	1	0	0	1	0	0	0	0	0	0
06:00 PM	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
06:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total																					
07:00 AM	0	2	0	0	2	0	0	1	0	1	0	1	0	0	1	0	0	0	0	0	0
07:15 AM	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	3	0	0	3	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0
07:45 AM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	1	0	1	0	2	0	0	2	0	0	0	0	0	0
05:00 PM	0	2	0	0	2	0	0	2	1	3	1	1	0	0	2	1	0	0	0	0	0
05:15 PM	0	2	0	0	2	0	0	2	0	2	1	1	0	0	2	0	0	0	0	0	0
05:30 PM	0	2	0	0	2	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	0

File Name: 28th Street and Douglas St

Start Date: 2/14/2019

AM: 7:00 AM - 9:00 AM

PM: 4:00 PM - 6:30 PM

Bicycle Count

Start Time	28th Street NE					Douglas Street NE					28th Street NE					Douglas Street NE					Int. Total	
	Southbound					Westbound					Northbound					Eastbound						
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total		
15- Minute Interval																						
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
07:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hourly Total																						
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
07:15 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
07:30 AM	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1
07:45 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:00 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
04:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

File Name: 28th Street and Douglas St
 Start Date: 2/14/2019
 AM: 7:00 AM - 9:00 AM
 PM: 4:00 PM - 6:30 PM

Total Vehicle

Start Time	28th Street NE					Douglas Street NE					28th Street NE					Douglas Street NE					Int. Total
	Southbound					Westbound					Northbound					Eastbound					
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
15- Minute Interval																					
07:00 AM	1	3	0	0	4	0	0	1	0	1	5	0	0	0	5	0	3	0	4	3	13
07:15 AM	0	7	0	0	7	0	0	0	1	0	0	1	0	0	1	0	0	0	1	0	8
07:30 AM	0	5	1	0	6	0	0	2	0	2	0	6	0	0	6	0	0	0	2	0	14
07:45 AM	1	2	1	0	4	1	0	2	0	3	1	7	0	0	8	1	0	0	1	1	16
08:00 AM	0	3	1	0	4	10	0	0	0	10	1	7	0	0	8	0	0	0	0	0	22
08:15 AM	0	10	3	0	13	8	1	0	0	9	0	4	0	0	4	1	1	0	0	2	28
08:30 AM	0	1	0	0	1	2	0	1	0	3	0	8	0	0	8	0	0	0	0	0	12
08:45 AM	0	1	1	1	2	7	0	0	0	7	1	5	0	0	6	0	0	0	0	0	15
04:00 PM	0	4	0	2	4	0	0	0	0	0	0	6	0	0	6	0	0	0	0	0	10
04:15 PM	0	5	3	0	8	2	2	0	0	4	1	3	1	0	5	0	2	0	0	2	19
04:30 PM	0	6	1	1	7	1	0	1	0	2	1	2	0	0	3	0	2	0	2	2	14
04:45 PM	0	6	3	0	9	1	0	0	0	1	0	5	0	0	5	2	0	0	0	2	17
05:00 PM	1	2	3	1	6	5	1	0	0	6	0	5	0	0	5	0	0	1	0	1	18
05:15 PM	1	5	2	0	8	2	0	1	0	3	0	2	1	0	3	3	0	0	0	3	17
05:30 PM	0	8	2	0	10	4	0	1	0	5	0	7	0	0	7	0	0	0	3	0	22
05:45 PM	0	8	2	2	10	0	0	0	0	0	1	1	0	0	2	0	1	0	0	1	13
06:00 PM	0	3	0	0	3	1	0	2	0	3	0	1	1	0	2	2	0	0	1	2	10
06:15 PM	0	2	0	0	2	1	0	0	0	1	1	1	0	0	2	0	0	0	0	0	5
Hourly Total																					
07:00 AM	2	17	2	0	21	1	0	5	1	6	1	19	0	0	20	1	3	0	8	4	51
07:15 AM	1	17	3	0	21	11	0	4	1	15	2	21	0	0	23	1	0	0	4	1	60
07:30 AM	1	20	6	0	27	19	1	4	0	24	2	24	0	0	26	2	1	0	3	3	80
07:45 AM	1	16	5	0	22	21	1	3	0	25	2	26	0	0	28	2	1	0	1	3	78
08:00 AM	0	15	5	1	20	27	1	1	0	29	2	24	0	0	26	1	1	0	0	2	77
04:00 PM	0	21	7	3	28	4	2	1	0	7	2	16	1	0	19	2	4	0	2	6	60
04:15 PM	1	19	10	2	30	9	3	1	0	13	2	15	1	0	18	2	4	1	2	7	68
04:30 PM	2	19	9	2	30	9	1	2	0	12	1	14	1	0	16	5	2	1	2	8	66
04:45 PM	2	21	10	1	33	12	1	2	0	15	0	19	1	0	20	5	0	1	3	6	74
05:00 PM	2	23	9	3	34	11	1	2	0	14	1	15	1	0	17	3	1	1	3	5	70
05:15 PM	1	24	6	2	31	7	0	4	0	11	1	11	2	0	14	5	1	0	4	6	62
05:30 PM	0	21	4	2	25	6	0	3	0	9	2	10	1	0	13	2	1	0	4	3	50
AM Peak Hour (7:30 AM - 8:30 AM)																					
7:30 AM	1	20	6	0	27	19	1	4	0	24	2	24	0	0	26	2	1	0	3	3	80
PHF	0.25	0.50	0.50		0.52	0.48	0.25	0.50		0.60	0.50	0.86	0.00		0.81	0.50	0.25	0.00		0.38	0.71
Heavy %	0%	15%	0%		11%	0%	0%	25%		0%	4%	0%	0%		0%	0%	0%		0%	0%	5%
PM Peak Hour (4:45 PM - 5:45 PM)																					
4:45 PM	2	21	10	1	33	12	1	2	0	15	0	19	1	0	20	5	0	1	3	6	74
PHF	0.50	0.66	0.83		0.83	0.60	0.00	0.50		0.63	0.00	0.68	0.25		0.71	0.42	0.00	0.25		0.50	0.84
Heavy %	0%	0%	0%		0%	0%	0%	50%		7%		11%	0%		10%	0%	0%	0%		0%	4%



APPENDIX B SIGNAL TIMING DATA

233

Rev - 08/09/2013

BLADENSBURG ROAD, 25TH STREET, AND V STREET, NE

SHEET 2



DEPARTMENT OF TRANSPORTATION
 WASHINGTON, D.C.
 TRAFFIC ENGINEERING & SIGNALS DIVISION

ACISA ID	3138	TS-	277-D OPT-1
ISNUM	609	S-	140-B

C + 0 + F = 1 <F + PHASE + INTVL>	PHASE TIMING BANK								PREEMPT TIMING			
	PHASE								< F/1 + E + row >			
INTERVAL	1	2	3	4	5	6	7	8				
WALK	0	7		7					EVA DELAY	2		
FLASH D/W	1	11		22					EVA CLEAR	3		
MIN. GREEN	2	10		7					EVb DELAY	4		
TYPE 3 LIMIT	3								EVb CLEAR	5		
ADD/ VEH	4								EVC DELAY	6		
VEH EXTENSION	5	1		3					EVC CLEAR	7		
MAX GAP	6	1		3					EVD DELAY	8		
MIN GAP	7	1		3					EVD CLEAR	9		
MAXIMUM	8	120		65					BUS PRIORITY PARAMETERS			
MAXIMUM 2	9								< F/1 + A + row >			
ADVANCE / DELAY WALK	A								BUS HEADWAY	C		
PREEMPT PED. CLEARANCE	B								BUS DELAY	D		
CONDITIONAL SERVICE MINIMUM	C								MAX EARLY GREEN	E		
REDUCE EVERY	D								MAX GREEN EXTN	F		
YELLOW	E	4		4					Min Gm Bef PE Forceoff			
RED CLEAR	F	1.5		2.5					MAX PREEMPT TIME			
COORDINATION FUNCTIONS		PHASE								Min Time Btwn Same PE		
FUNCTION		1	2	3	4	5	6	7	8	NOTES:		
LAG PHASES (Check by phases)			X		X							
SYNC PHASES (Check by phases)			X									
C+0+C=1; C + <PLAN> + <FEATURE>		COORDINATION TIMING PLAN										
FEATURE			1	2	3	4	5	6	7	8	9	
CYCLE TIME		0	80	120	120	120	120	120	150	150		
FORCE OFF 1			1									
FORCE OFF 2			2	0	0	0	0	0	0	0		
FORCE OFF 3			3									
FORCE OFF 4			4	35	39	39	39	45	39	54	51	
FORCE OFF 5			5									
FORCE OFF 6			6									
FORCE OFF 7			7									
FORCE OFF 8			8									
OFFSET A		A	39	61	81	81	4	101	3	105		
END PERMISSIVE 1		D	7	7	7	7	7	7	7	7		
PRETIMED (Phases)			2	2	2	2	2	2	2	2		
MAX RECALL (Phases)												
PERM 1 VEH (Phases)			ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL		
PERM 1 PED (Phases)			ALL	ALL	ALL	ALL	ALL	ALL	ALL	ALL		
EVENT	TIME	PLAN	OFFSET	DAY OF WEEK								NOTES:
EVENT 0	0:00	1	A	1234567								
EVENT 1	5:00	5	A	23456								
EVENT 2	10:00	4	A	23456								
EVENT 3	14:00	6	A	23456								
EVENT 4	20:00	4	A	23456								
EVENT 5	8:00	2	A	1 7								
EVENT 6	16:00	1	A	1								
EVENT 7												
EVENT 8												

C + 0 + E = 28		OVERLAP CONFIG							
FUNCTION		OL A	OL B	OL C	OL D				
SET 1 (Overlapped Phases)									
NEG V									
NEG P									
GREEN EXTENSION									
YELLOW EXTENSION									
RED EXTENSION									
C + 0 + E = 125 E + E + FEATURE		CONFIG DATA PHASE							
FEATURE		1	2	3	4	5	6	7	8
OVERLAP FL YEL		9							
EM VEH A		A							
EM VEH B		B							
EM VEH C		C							
EM VEH D		D							
EXTRA I		E	X	X	X				
IC SELECT		F	X						
C + 0 + E = 125 E + F + FEATURE		CONFIG DATA PHASE							
FEATURE		1	2	3	4	5	6	7	8
PED 2P		5	X						
PED 6P		6							
PED 4P		7		X					
PED 8P		8							
PED #P (C1 REDIRECT)									
FLASH YELLOW		9	X						
LOW PRIORITY A		A							
LOW PRIORITY B		B							
RESTRICT		E							
EXTRA 2 BITS		F		X					
C + 0 + F = 1 F + F + FEATURE		PHASE FUNCTIONS PHASE							
FEATURE		1	2	3	4	5	6	7	8
PERMIT		0	X	X					
RED LOCK		1							
YELLOW LOCK		2							
VEH RECALL		3							
PED RECALL		4	X						
REST IN WALK		6							
RED REST		7							
DOUBLE ENTRY		8							
MAX RECALL		9	X						
SOFT RECALL		A							
MAX 2		B							
COND SERVICE		C							
EXT CONT. CALL		D							
YELLOW START UP		E							
FIRST PHASE GRN		F	X						
C + 0 + F = 2 F + F + FEATURE		PHASE FUNCTIONS PHASE							
FEATURE		1	2	3	4	5	6	7	8
GREEN FLASH									
FLASH WALK									
ADVANCED WALK									
DELAYED WALK									

PREPARED BY: HNTB / SABRA, WANG & ASSOCIATES

WORK/SHOP ORDER NO: S-06-17-06

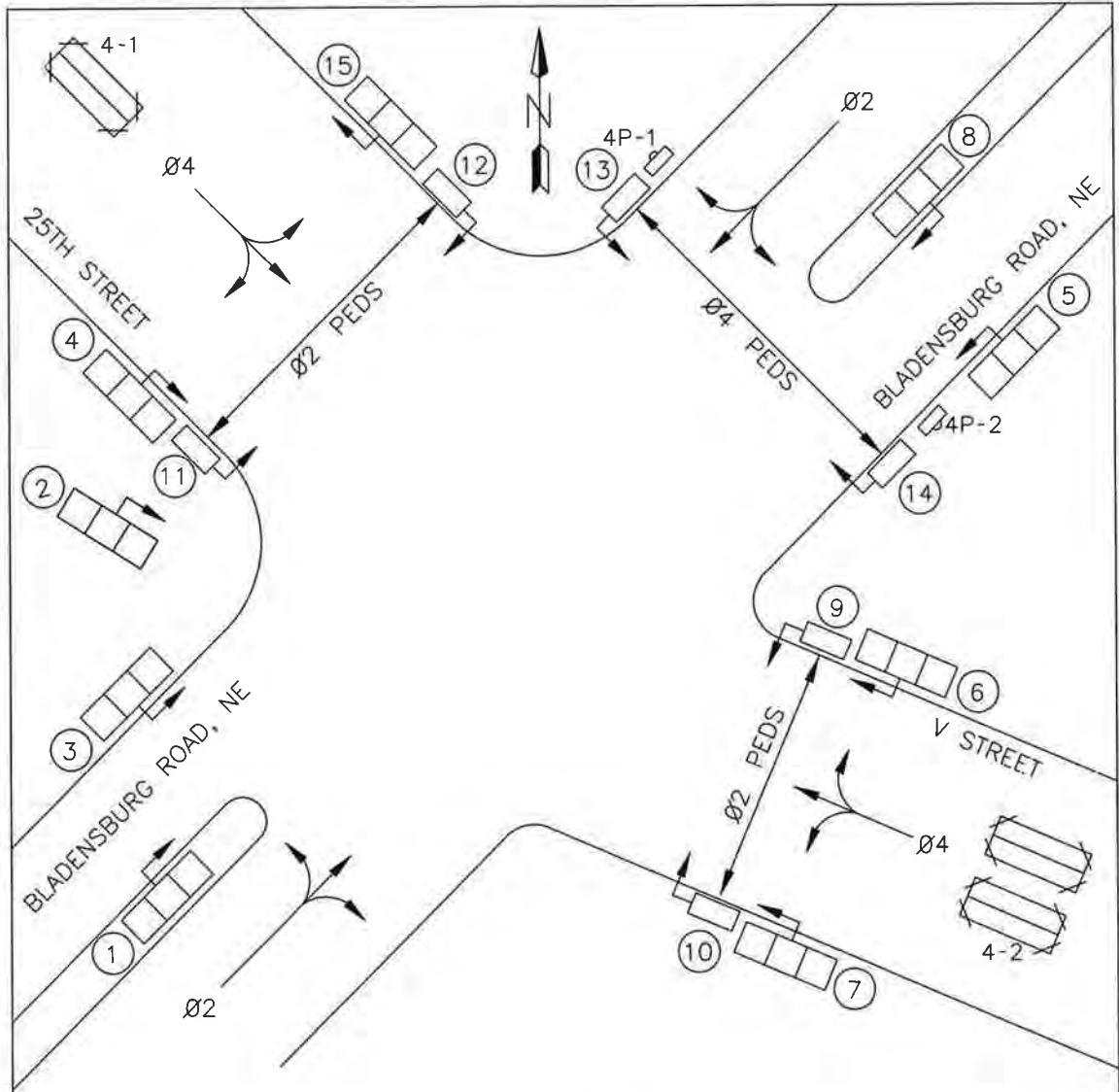
RECOMMENDED BY:

APPROVED BY: *William Boyer*

DATE INSTALLED:

INSTALLED BY:

NOTES:
 *ENABLE "COORDINATION EXTRA BIT 2" IN THE COORDINATION FUNCTIONS WINDOW.
 *SET COUNTDOWN SIGNALS TO BEGIN WITH FDW INTERVALS FOR ALL PHASES.

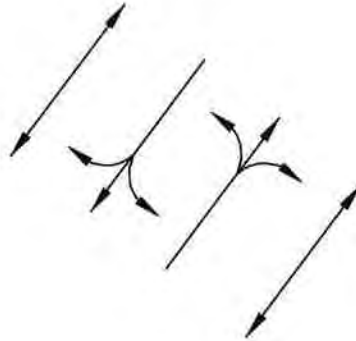
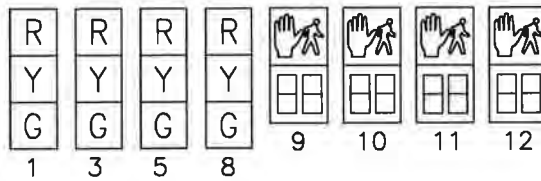


PHASE ASSIGNMENTS

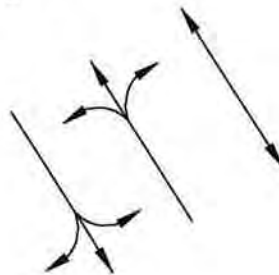
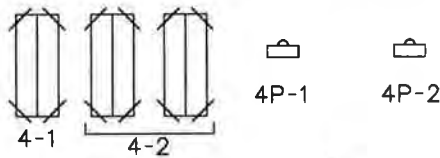
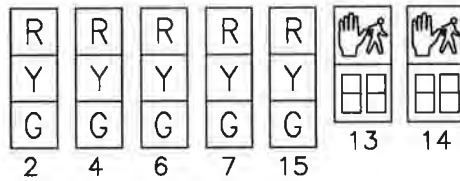
PHASING DIAGRAM

		FUTURE USE	FUTURE USE	FUTURE USE	FUTURE USE	FUTURE USE	FUTURE USE
--	--	------------	------------	------------	------------	------------	------------

<p>TRAFFIC SIGNAL OPERATION 25TH STREET, V STREET AND BLADENSBURG ROAD, NE</p>		<p>ACISA 3138</p>
<p>D.C. DEPARTMENT OF TRANSPORTATION TRANSPORTATION OPERATIONS ADMINISTRATION</p>		<p>T.S. 277-D OPT-1</p>
CHECK BY: K.R.	DATE: 09/25/14	<p>SHEET 1 OF 4</p>
DRAWN BY: R.H./R.F./SWA	DATE: 09/25/14	
IN SERVICE:	SCALE: NONE	
<p>DESIGNED BY: _____</p> <p>SUBMITTED BY: PROJECT ENGINEER</p> <p>APPROVED BY: CHIEF, TRAFFIC SIGNALS & ITS</p>		



Ø2



Ø4

TRAFFIC SIGNAL OPERATION 25TH STREET, V STREET AND BLADENSBURG ROAD, NE		ACISA 3138
D.C. DEPARTMENT OF TRANSPORTATION TRANSPORTATION OPERATIONS ADMINISTRATION		T.S. 277-D OPT-1
CHECK BY: K.R.	DATE: 09/25/14	DESIGNED BY: _____ SUBMITTED BY: PROJECT ENGINEER
DRAWN BY: R.H./R.F./SWA	DATE: 09/25/14	APPROVED BY: _____ CHIEF, TRAFFIC SIGNALS & ITS
IN SERVICE:	SCALE: NONE	SHEET 2 OF 4

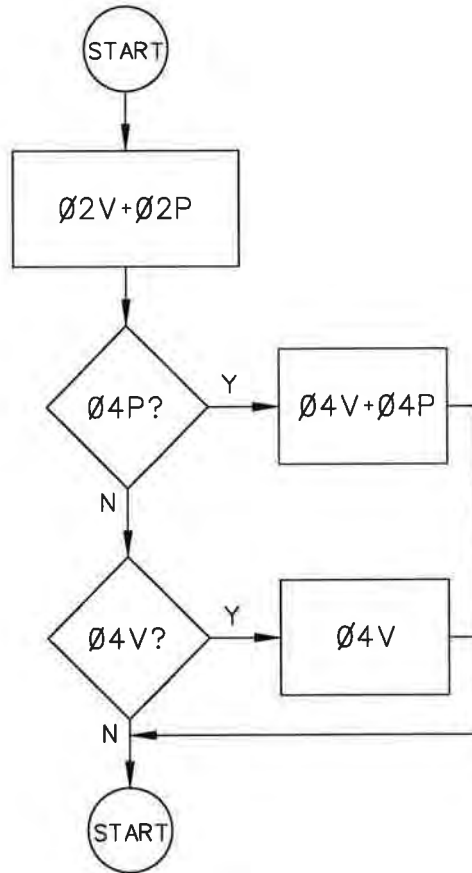
PHASE SEQUENCE

ON RECALL

$\emptyset 2V + \emptyset 2P$

BY DEMAND ONLY

$\emptyset 4V + \emptyset 4P$



TRAFFIC SIGNAL OPERATION
25TH STREET, V STREET AND BLADENSBURG ROAD, NE

ACISA
3138

D.C. DEPARTMENT OF TRANSPORTATION
TRANSPORTATION OPERATIONS
ADMINISTRATION

DESIGNED BY: _____

T.S.
277-D
OPT-1

SUBMITTED BY: PROJECT ENGINEER

CHECK BY: K.R. DATE: 09/25/14

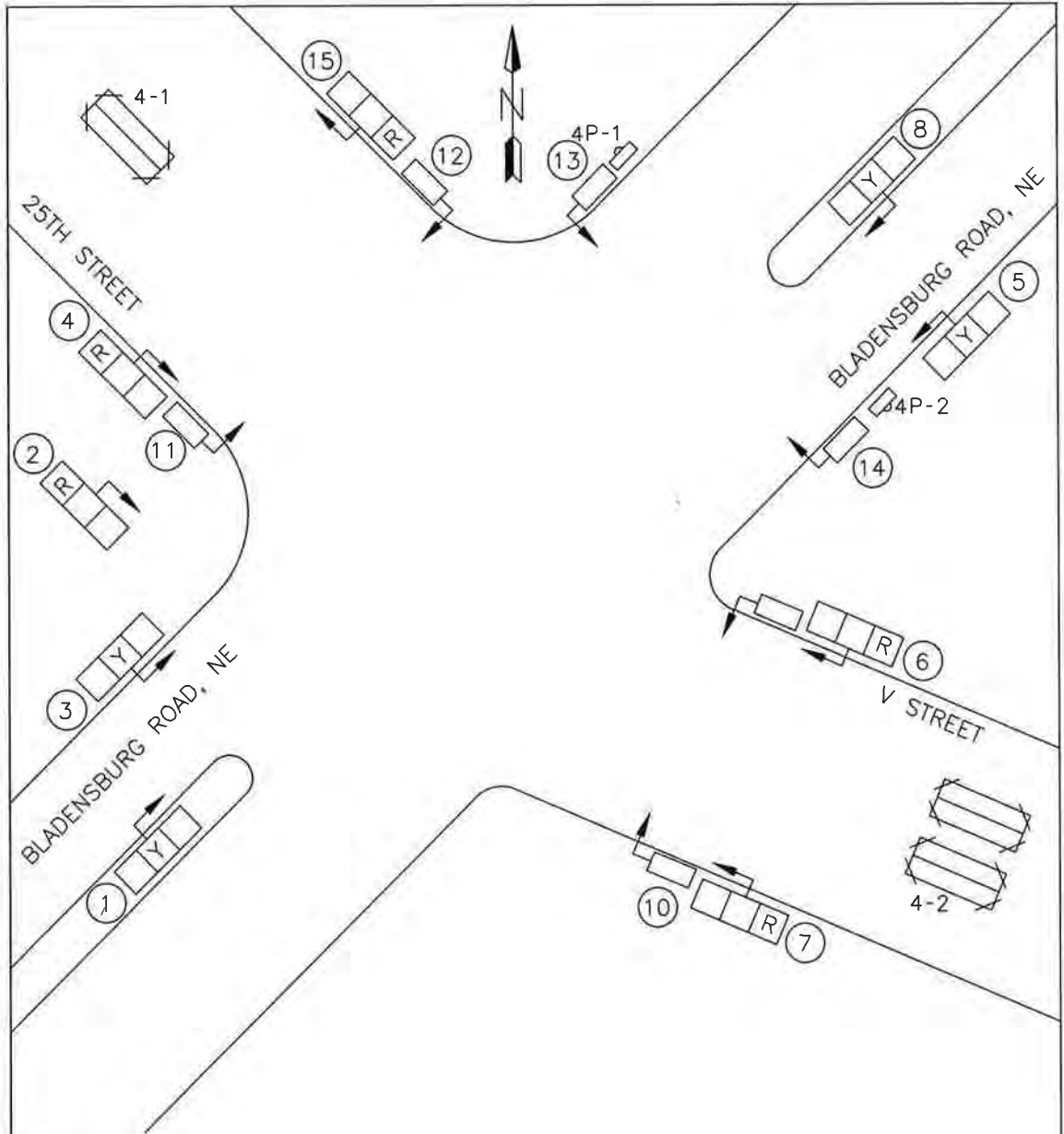
SHEET

DRAWN BY: R.H./R.F./SWA DATE: 09/25/14

APPROVED BY: CHIEF, TRAFFIC SIGNALS & ITS

IN SERVICE: SCALE: NONE

3 OF 4



FLASH
 TRAFFIC SIGNALS OPERATE
 ON COLORS 24 HOURS
 PER DAY, FLASH FOR
 EMERGENCY USE ONLY.

TRAFFIC SIGNAL OPERATION 25TH STREET, V STREET AND BLADENSBURG ROAD, NE		ACISA 3138
D.C. DEPARTMENT OF TRANSPORTATION TRANSPORTATION OPERATIONS ADMINISTRATION		T.S. 277-D OPT-1
CHECK BY: K.R.	DATE: 09/25/14	SHEET
DRAWN BY: R.H./R.F./SWA	DATE: 09/25/14	4 OF 4
IN SERVICE:	SCALE: NONE	
DESIGNED BY: _____ SUBMITTED BY: PROJECT ENGINEER APPROVED BY: CHIEF, TRAFFIC SIGNALS & ITS		

TIMING PLAN SCHEDULE

TS-1462-C

26TH STREET (METROBUS DRIVEWAY) AND BLADENSBURG ROAD NE
LOCATION

S-DRAWING NO: S-1840-A SHEET: 2

SPECIAL TBC

EVENT	TIME	PLAN	OFFSET	DAY OF WEEK
EVENT 0	0:00	1	A	13J45P
EVENT 1	5:00	9	A	2345E
EVENT 2	7:00	5	A	2345E
EVENT 3	10:00	4	A	2345E
EVENT 4	14:00	3	A	2345E
EVENT 5	17:00	6	A	2345E
EVENT 6	20:00	4	A	2345E
EVENT 7	8:00	2	A	1
EVENT 8	19:00	1	A	1

DEPARTMENT OF TRANSPORTATION
WASHINGTON, D.C.
TRAFFIC SERVICES ADMINISTRATION

CONTROLLER
170

ISNUM
1344

ACISA
3219

Site Sketch

DESCRIPTION (INTERSECTION / STREET / DIRECTION)

TIMING PLAN NUMBER

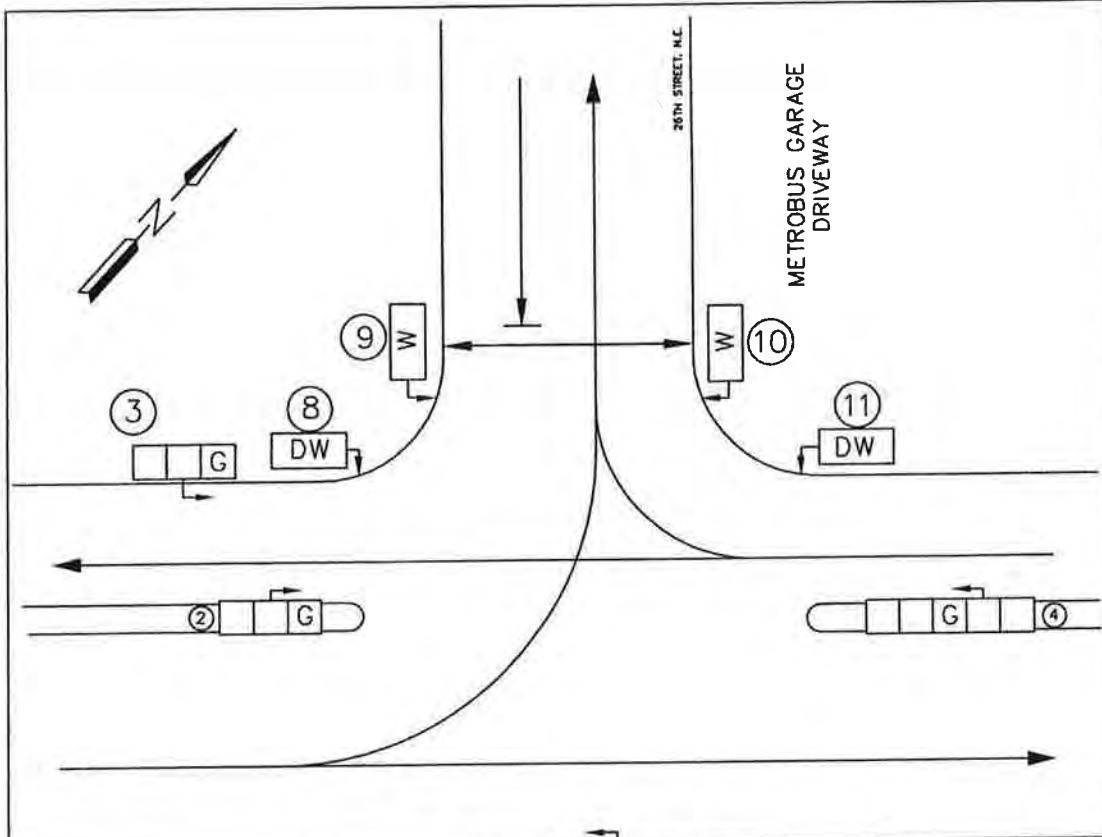
INTERVAL NUMBER	TYPE	TIMING PLAN NUMBER																			
		1	2	3	4	5	6	7	8												
F 1	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
V 2	18	28	49	59	33	43	49	59	48	58	47	57	78	88	77	87	33	43			9
F 3	6	31	6	36	6	49	6	41	6	44	6	49	6	64	6	49					
F 4	4	35	4	40	4	53	4	45	4	48	4	53	4	68	4	53					
F 5	1	39	1	70	1	54	1	70	1	89	1	68	1	99	1	98					
F 6	7	43	7	48	7	61	7	53	7	56	7	61	7	76	7	61					
V 7	1	47	2	79	21	62	2	79	2	78	2	77	2	109	2	107					
F 8	15	58	15	78	15	97	15	77	15	73	15	78	15	93	15	78					
F 9	4	62	4	82	4	101	4	81	4	77	4	82	4	97	4	82					
F 10	2	88	2	100	2	103	2	100	2	99	2	98	2	129	2	128					
F 11	7	71	7	91	7	110	7	90	7	86	7	91	7	106	7	91					
V 12	1	76	9	116	6	119	9	116	10	116	11	116	10	146	11	146					
F 13	4	80	4	120	4	120	4	120	4	120	4	120	4	150	4	150					

PREPARED BY: HNTB/SWA
WORK/SHOP ORDER NO: S-06-17-06
APPROVED BY: *Paulin Paj*

S=Seconds C=Cummulative secs F=Fixed interval V=Variable interval

○ = Force Off (circle the interval)

PREPARED BY:
DATE TO SHOP:
WORK OR SHOP ORDER NO.
APPROVED BY:
DATE INSTALLED BY:
INSTALLED BY:

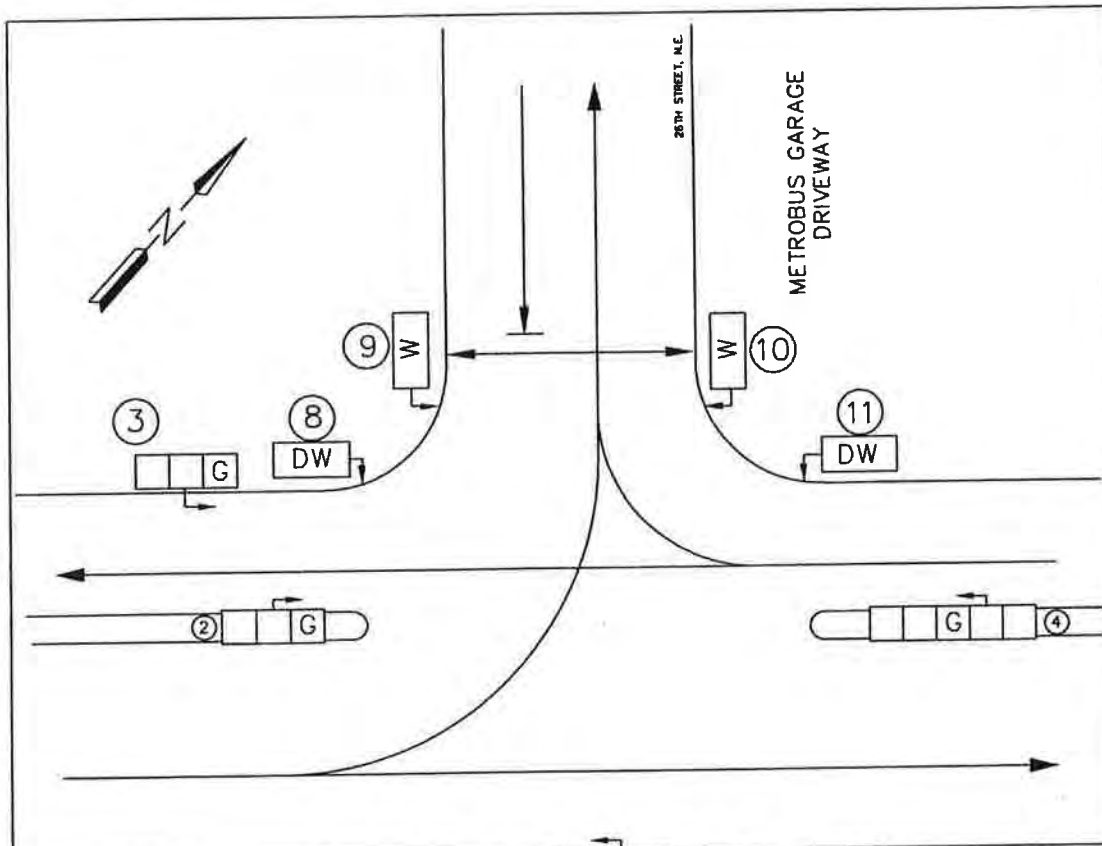


INTERVAL NO. 1

TRAFFIC SIGNAL OPERATION

26TH STREET AND (METRO DRIVEWAY) AND BLADENBURG ROAD NE

D.C. DEPARTMENT OF TRANSPORTATION TRAFFIC OPERATIONS ADMINISTRATION TRAFFIC SIGNAL AND ITS TEAM		DESIGNED BY: <u>William W. McQuirk</u>	T.S. 1462-C
CHECKED BY:	DATE:	SUBMITTED BY:	SHEET 1 of 13
DRAWN BY: <u>E. WALDEN</u>	DATE:	APPROVED BY: <u>William W. McQuirk 5/23/82</u>	
IN SERVICE:	SCALE: <u>NONE</u>	LEAD, SIGNAL/ITS TEAM	

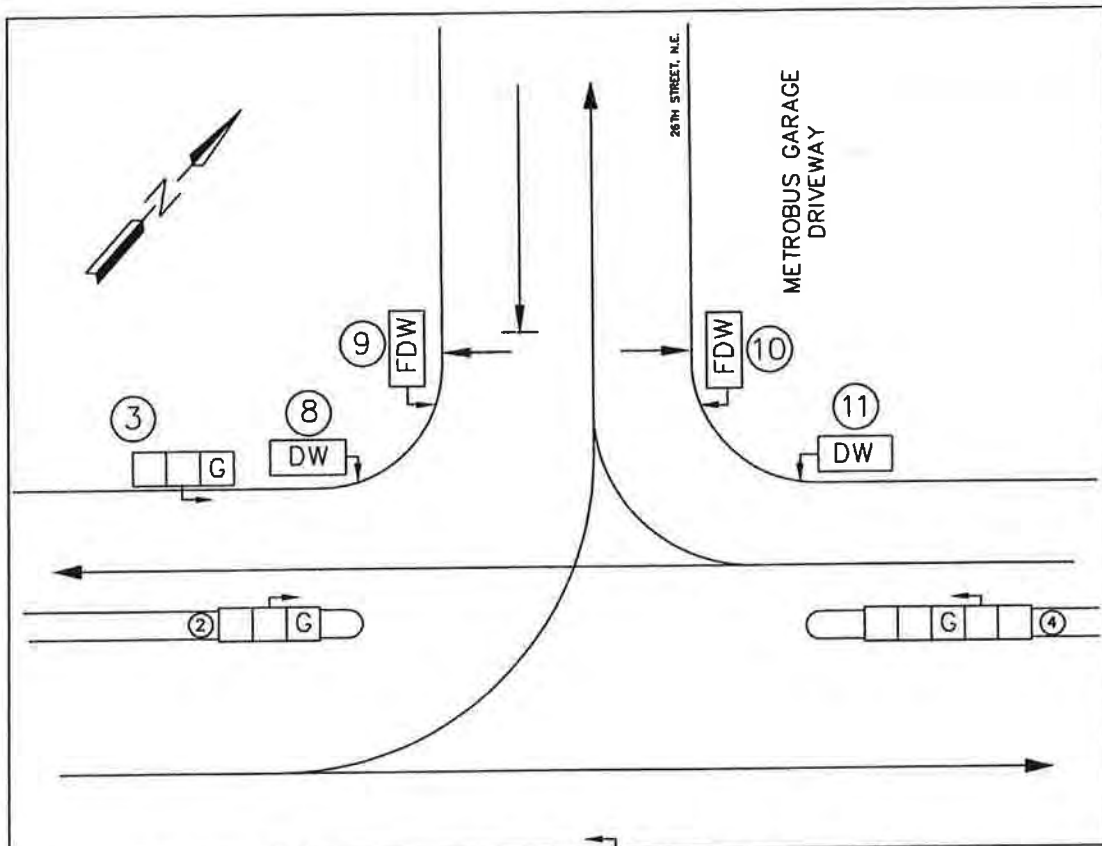


INTERVAL NO. 2

TRAFFIC SIGNAL OPERATION

26TH STREET AND (METRO DRIVEWAY) AND BLADENBURG ROAD NE

D.C. DEPARTMENT OF TRANSPORTATION TRAFFIC OPERATIONS ADMINISTRATION TRAFFIC SIGNAL AND ITS TEAM		DESIGNED BY: _____	T.S.
CHECKED BY: _____ DATE: _____		SUBMITTED BY: _____	1462-C
DRAWN BY: E. WALDEN DATE: _____		APPROVED BY: _____	SHEET
IN SERVICE: _____ SCALE: NONE		TRAFFIC ENGINEER, SIGNAL/ITS TEAM	2 OF 13
		LEAD, SIGNAL/ITS TEAM	

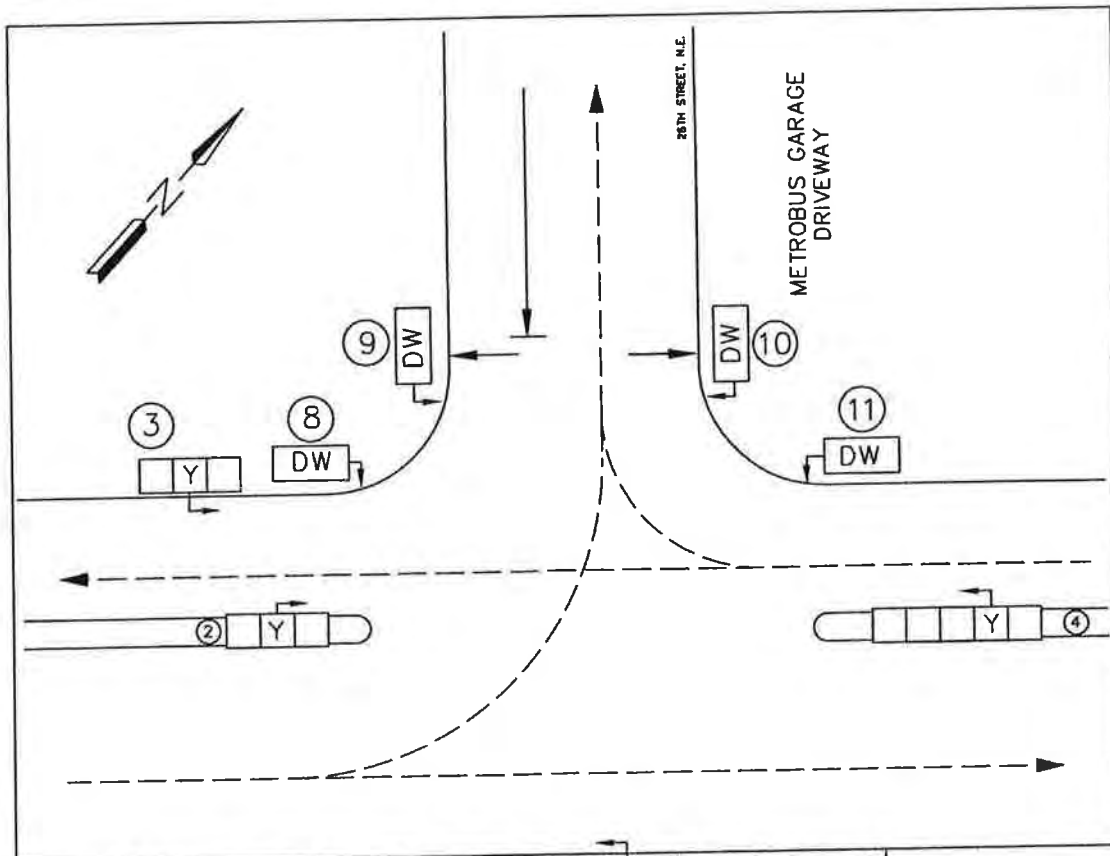


INTERVAL NO. 3

TRAFFIC SIGNAL OPERATION

26TH STREET AND (METRO DRIVEWAY) AND BLADENBURG ROAD NE

D.C. DEPARTMENT OF TRANSPORTATION TRAFFIC OPERATIONS ADMINISTRATION TRAFFIC SIGNAL AND ITS TEAM		DESIGNED BY: _____	T.S.
CHECKED BY: _____ DATE: _____		SUBMITTED BY: _____	1462-C
DRAWN BY: E. WALDEN DATE: _____		APPROVED BY: _____	SHEET
IN SERVICE: _____ SCALE: NONE		LEAD, SIGNAL/ITS TEAM	3 of 13

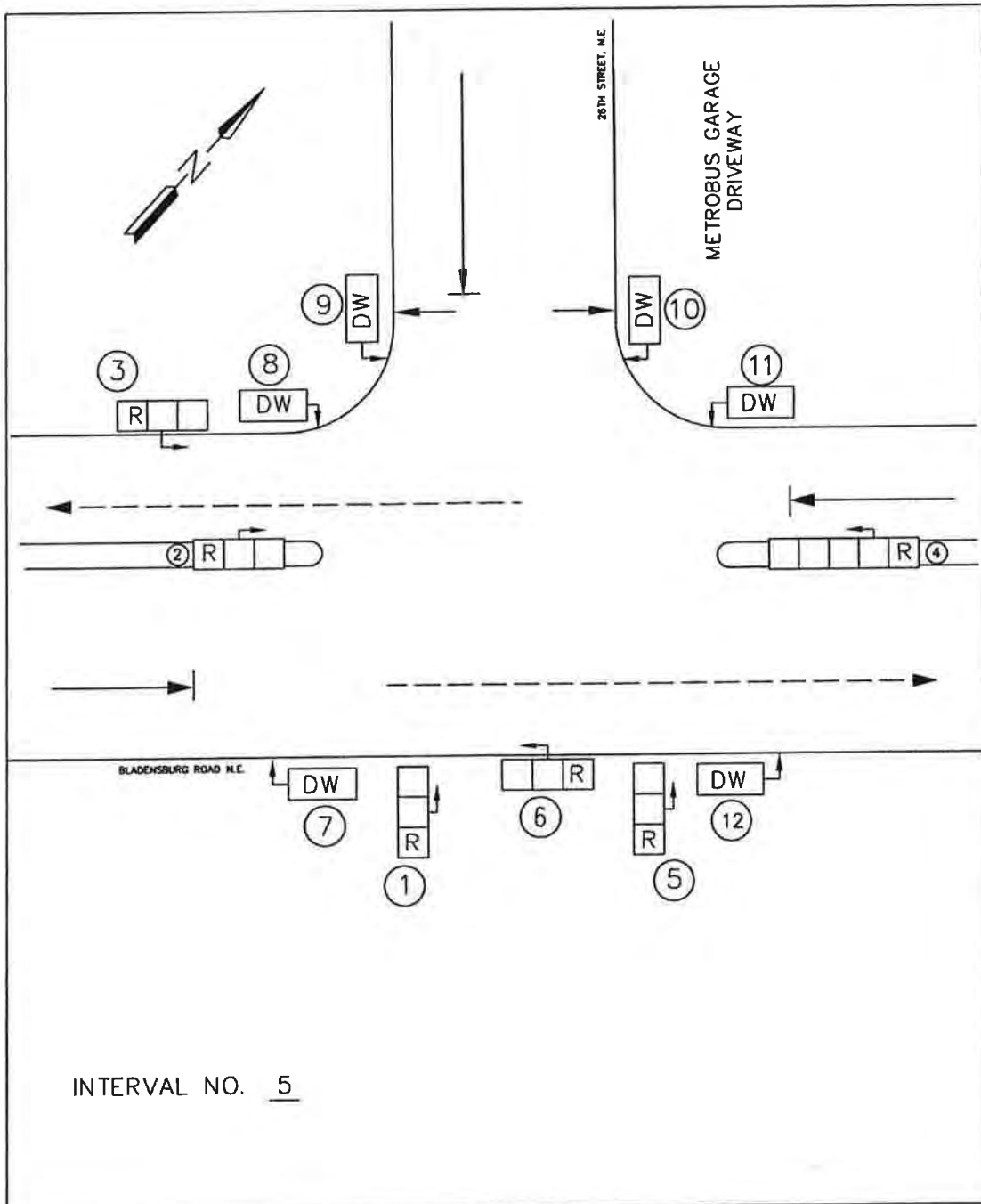


INTERVAL NO. 4

TRAFFIC SIGNAL OPERATION

26TH STREET AND (METRO DRIVEWAY) AND BLADENBURG ROAD NE

D.C. DEPARTMENT OF TRANSPORTATION TRAFFIC OPERATIONS ADMINISTRATION TRAFFIC SIGNAL AND ITS TEAM		DESIGNED BY: _____	T.S. 1462-C
CHECKED BY: _____	DATE: _____	SUBMITTED BY: _____	SHEET
DRAWN BY: E. WALDEN	DATE: _____	APPROVED BY: _____	4 OF 13
IN SERVICE: _____	SCALE: NONE	TRAFFIC ENGINEER, SIGNAL/ITS TEAM LEAD, SIGNAL/ITS TEAM	

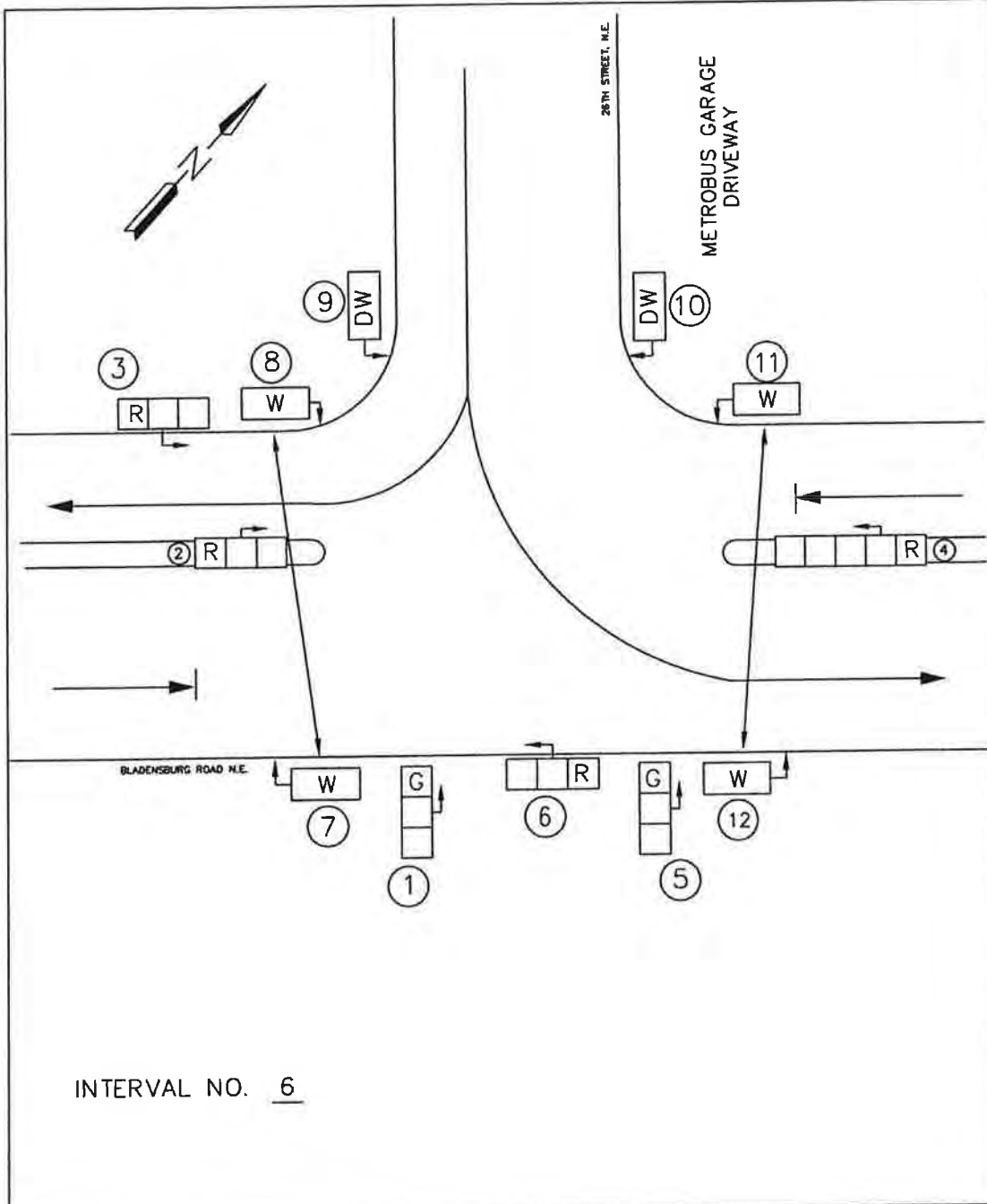


INTERVAL NO. 5

TRAFFIC SIGNAL OPERATION
 26TH STREET AND (METRO DRIVEWAY) AND BLADENSBURG ROAD NE

D.C. DEPARTMENT OF TRANSPORTATION TRAFFIC OPERATIONS ADMINISTRATION TRAFFIC SIGNAL AND ITS TEAM		DESIGNED BY: _____	T.S.
		SUBMITTED BY: _____	1462-C
CHECKED BY: _____	DATE: _____	TRAFFIC ENGINEER, SIGNAL/ITS TEAM	SHEET
DRAWN BY: E. WALDEN	DATE: _____	APPROVED BY: _____	5 of 13
IN SERVICE: _____	SCALE: NONE	LEAD. SIGNAL/ITS TEAM	

THE MICROWAVES , PEDESTRIAN PUSH BUTTONS AND LOOPS ARE DISABLED



INTERVAL NO. 6

TRAFFIC SIGNAL OPERATION

26TH STREET AND (METRO DRIVEWAY) AND BLADENSBURG ROAD NE

D.C. DEPARTMENT OF TRANSPORTATION
 TRAFFIC OPERATIONS ADMINISTRATION
 TRAFFIC SIGNAL AND ITS TEAM

DESIGNED BY: _____

T.S.
 1462-C

SUBMITTED BY: _____

TRAFFIC ENGINEER, SIGNAL/ITS TEAM

SHEET

CHECKED BY: _____ DATE: _____

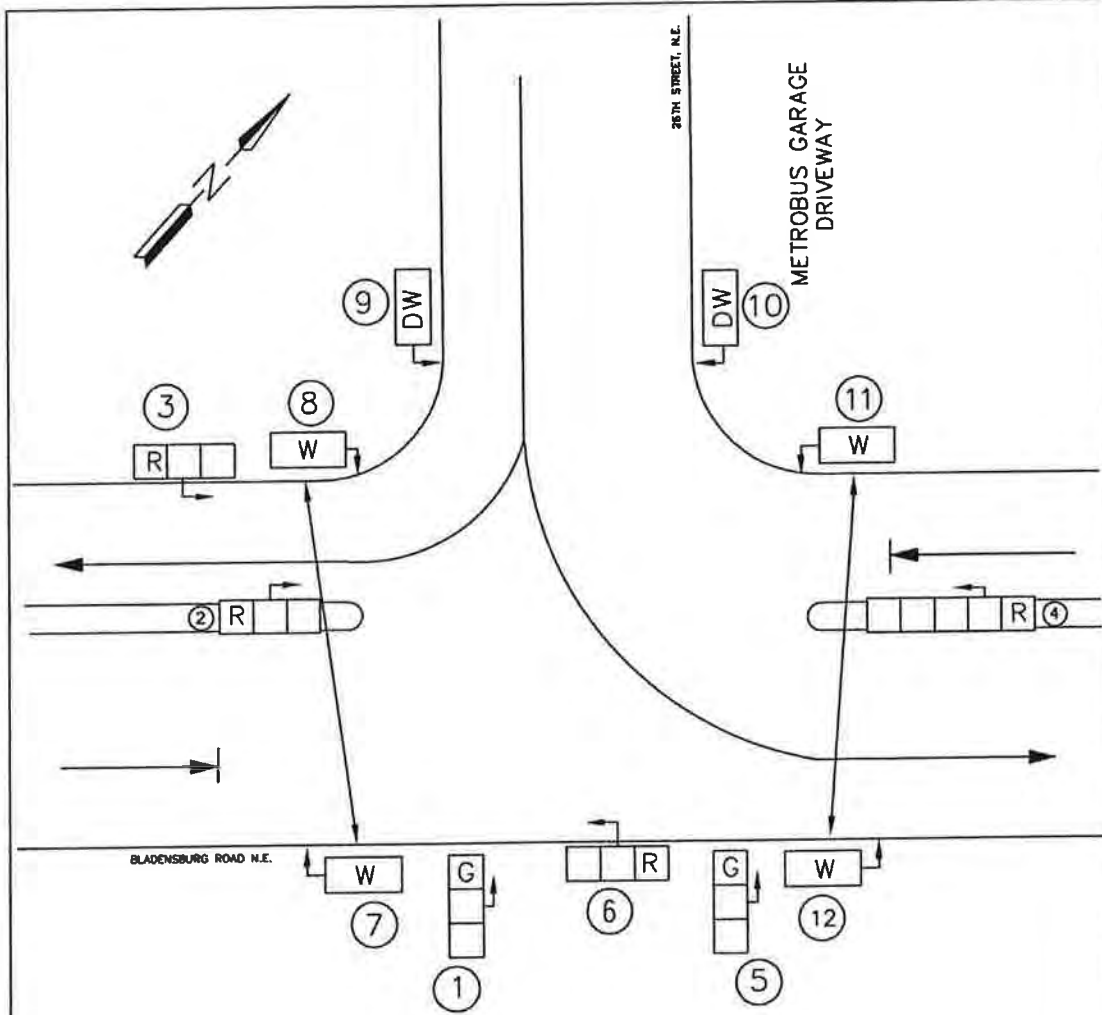
APPROVED BY: _____

LEAD, SIGNAL/ITS TEAM

6 of 13

DRAWN BY: E. WALDEN DATE: _____

IN SERVICE: _____ SCALE: NONE



INTERVAL NO. 7

TRAFFIC SIGNAL OPERATION
 26TH STREET AND (METRO DRIVEWAY) AND BLADENSBURG ROAD NE

D.C. DEPARTMENT OF TRANSPORTATION
 TRAFFIC OPERATIONS ADMINISTRATION
 TRAFFIC SIGNAL AND ITS TEAM

DESIGNED BY: _____

SUBMITTED BY: _____

TRAFFIC ENGINEER, SIGNAL/ITS TEAM

APPROVED BY: _____

LEAD, SIGNAL/ITS TEAM

T.S.

1462-C

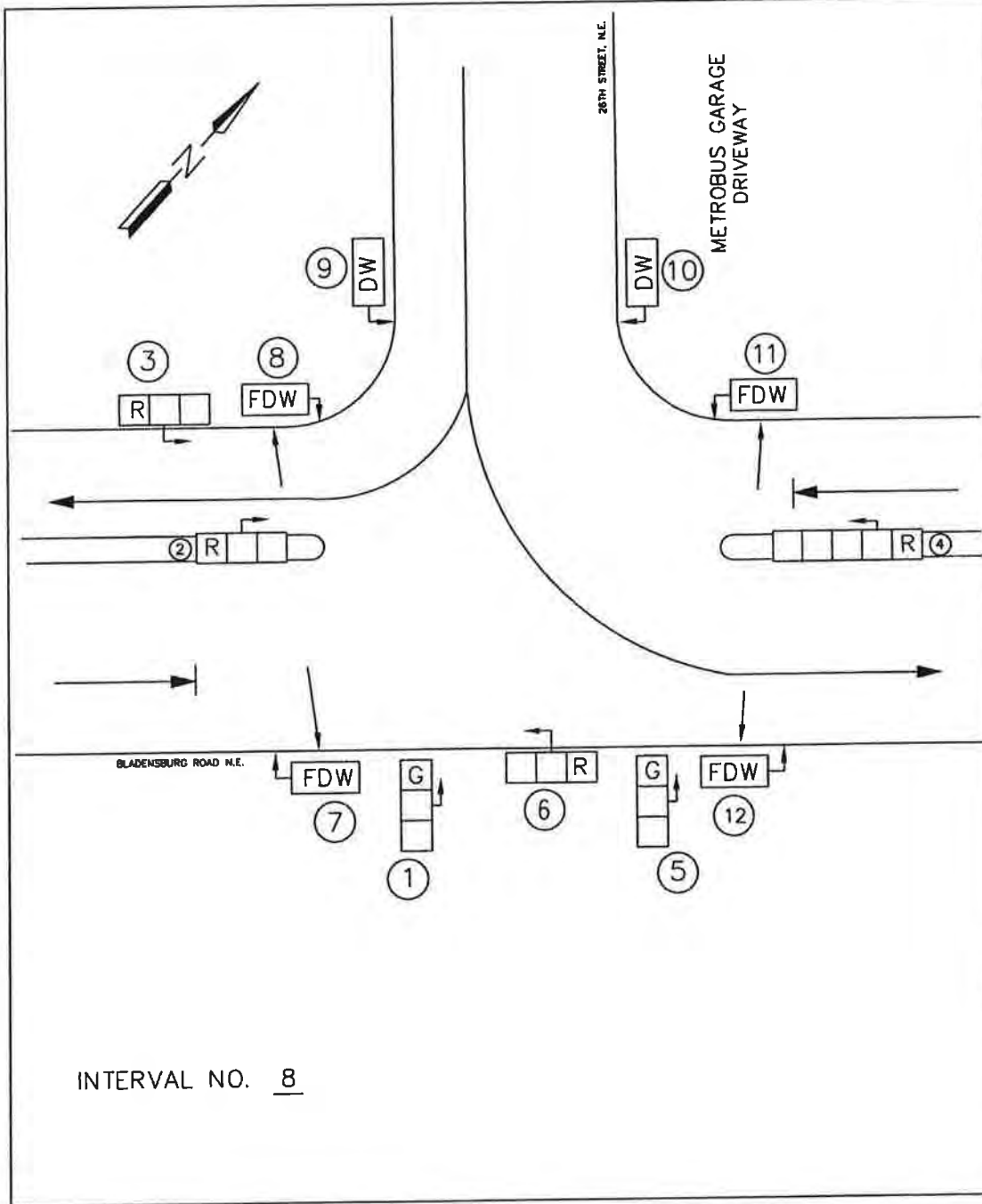
SHEET

7 of 13

CHECKED BY: _____ DATE: _____

DRAWN BY: E. WALDEN DATE: _____

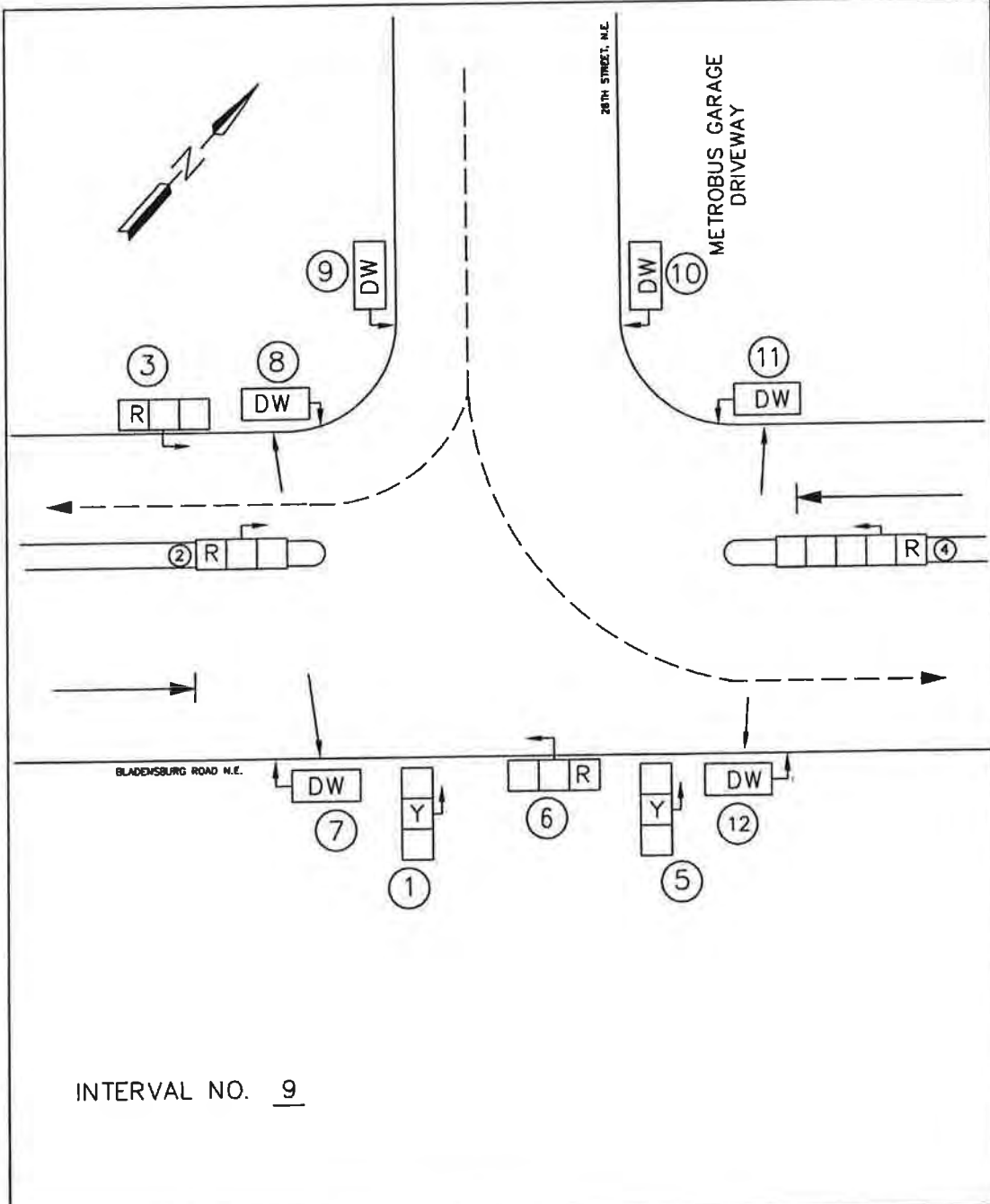
IN SERVICE: _____ SCALE: NONE



INTERVAL NO. 8

TRAFFIC SIGNAL OPERATION
26TH STREET AND (METRO DRIVEWAY) AND BLADENBURG ROAD NE

D.C. DEPARTMENT OF TRANSPORTATION TRAFFIC OPERATIONS ADMINISTRATION TRAFFIC SIGNAL AND ITS TEAM		DESIGNED BY: _____	T.S.
CHECKED BY: _____ DATE: _____		SUBMITTED BY: _____	1462-C
DRAWN BY: E. WALDEN DATE: _____		TRAFFIC ENGINEER, SIGNAL/ITS TEAM	SHEET
IN SERVICE: _____ SCALE: NONE		APPROVED BY: _____	8 of 13
		LEAD, SIGNAL/ITS TEAM	



INTERVAL NO. 9

TRAFFIC SIGNAL OPERATION
 26TH STREET AND (METRO DRIVEWAY) AND BLADENSBURG ROAD NE

D.C. DEPARTMENT OF TRANSPORTATION
 TRAFFIC OPERATIONS ADMINISTRATION
 TRAFFIC SIGNAL AND ITS TEAM

DESIGNED BY: _____

T.S.
 1462-C

SUBMITTED BY: _____
 TRAFFIC ENGINEER, SIGNAL/ITS TEAM

SHEET

CHECKED BY: _____ DATE: _____

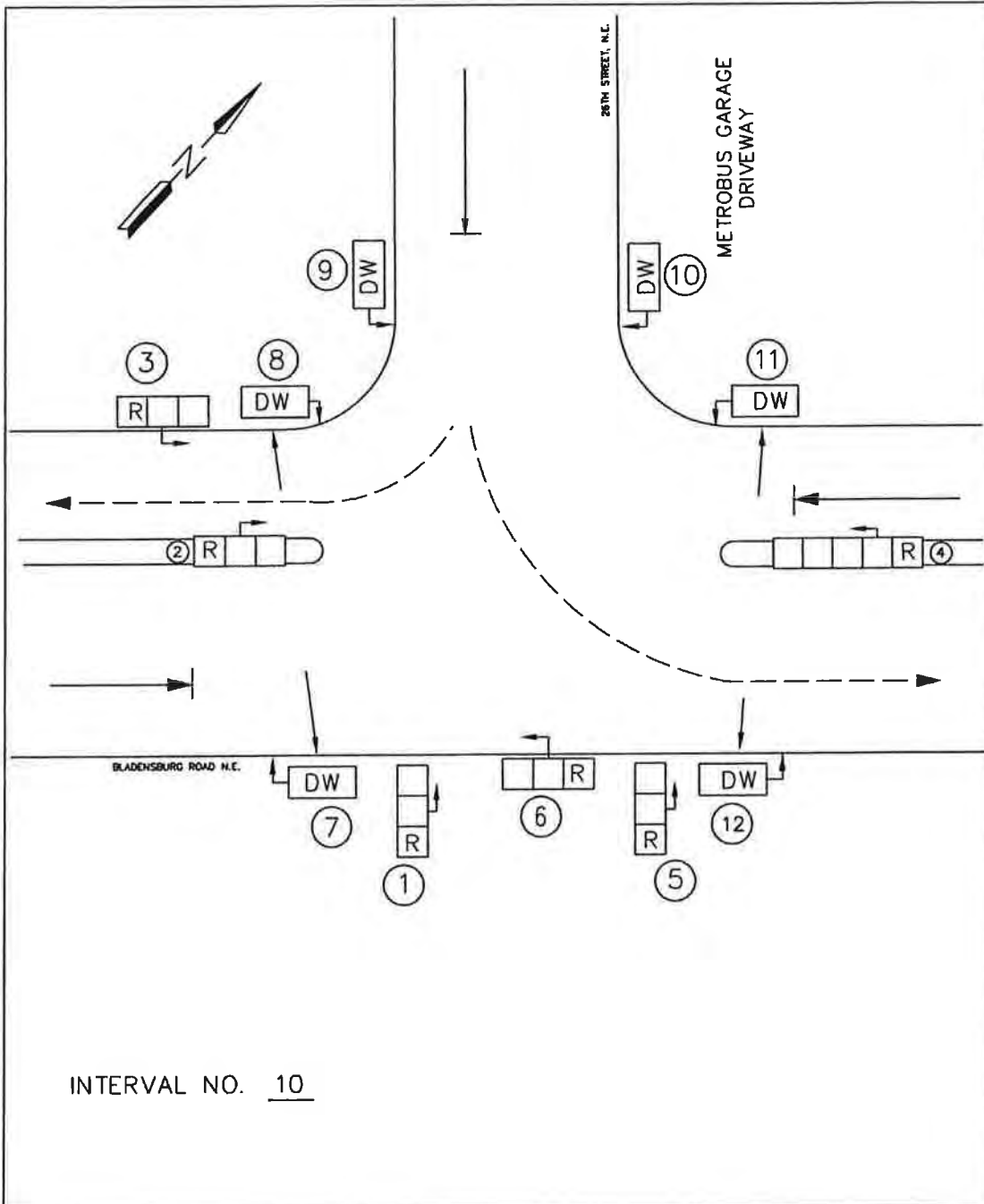
APPROVED BY: _____

DRAWN BY: E. WALDEN DATE: _____

LEAD, SIGNAL/ITS TEAM

IN SERVICE: _____ SCALE: NONE

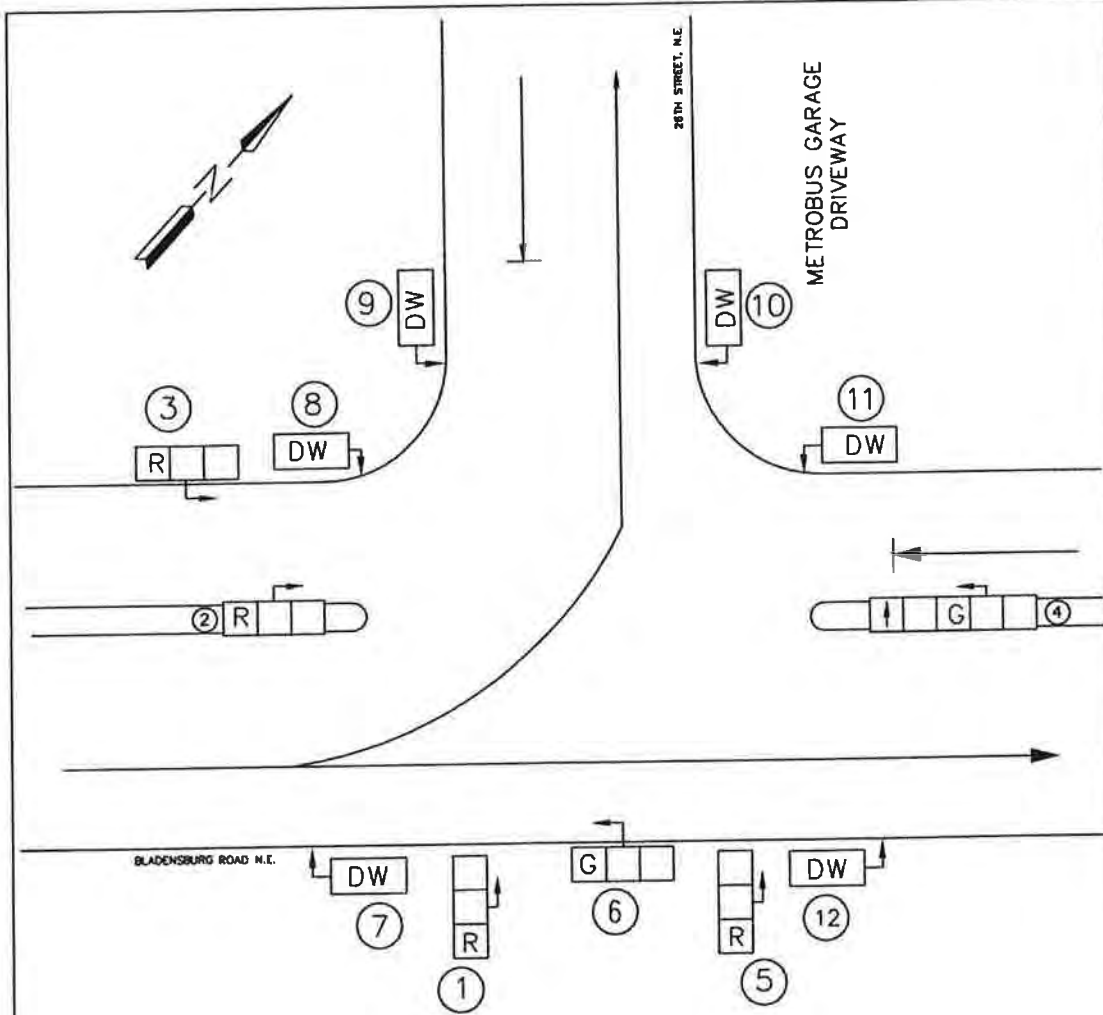
9 of 13



INTERVAL NO. 10

TRAFFIC SIGNAL OPERATION
26TH STREET AND (METRO DRIVEWAY) AND BLADENSBURG ROAD NE

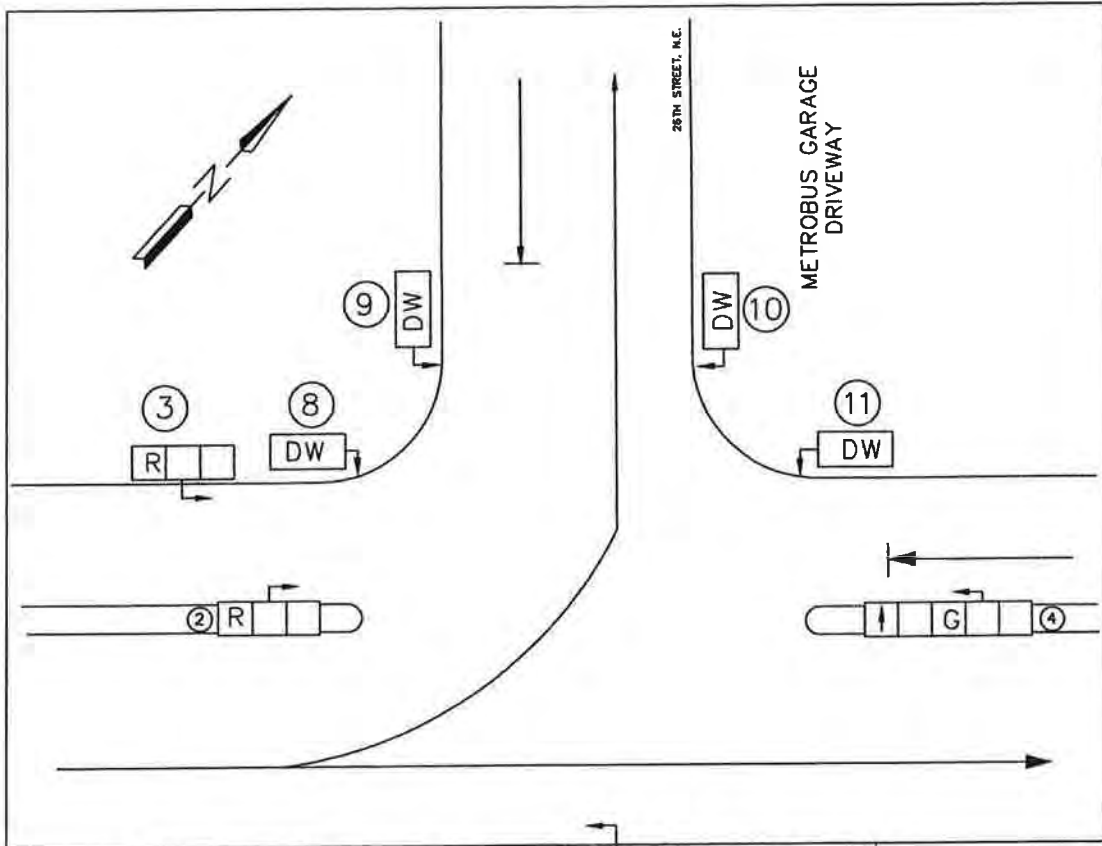
D.C. DEPARTMENT OF TRANSPORTATION TRAFFIC OPERATIONS ADMINISTRATION TRAFFIC SIGNAL AND ITS TEAM		DESIGNED BY: _____	T.S.
		SUBMITTED BY: _____	1462-C
CHECKED BY: _____	DATE: _____	TRAFFIC ENGINEER, SIGNAL/ITS TEAM	SHEET
DRAWN BY: E. WALDEN	DATE: _____	APPROVED BY: _____	10 of 13
IN SERVICE: _____	SCALE: NONE	LEAD, SIGNAL/ITS TEAM	



INTERVAL NO. 11

TRAFFIC SIGNAL OPERATION
 26TH STREET AND (METRO DRIVEWAY) AND BLADENSBURG ROAD NE

D.C. DEPARTMENT OF TRANSPORTATION TRAFFIC OPERATIONS ADMINISTRATION TRAFFIC SIGNAL AND ITS TEAM		DESIGNED BY: _____	T.S. 1462-C
CHECKED BY: _____	DATE: _____	SUBMITTED BY: _____	SHEET
DRAWN BY: E.WALDEN	DATE: _____	APPROVED BY: _____	11 of 13
IN SERVICE: _____	SCALE: NONE	TRAFFIC ENGINEER, SIGNAL/ITS TEAM	
		LEAD, SIGNAL/ITS TEAM	



BLADENSBURG ROAD N.E.

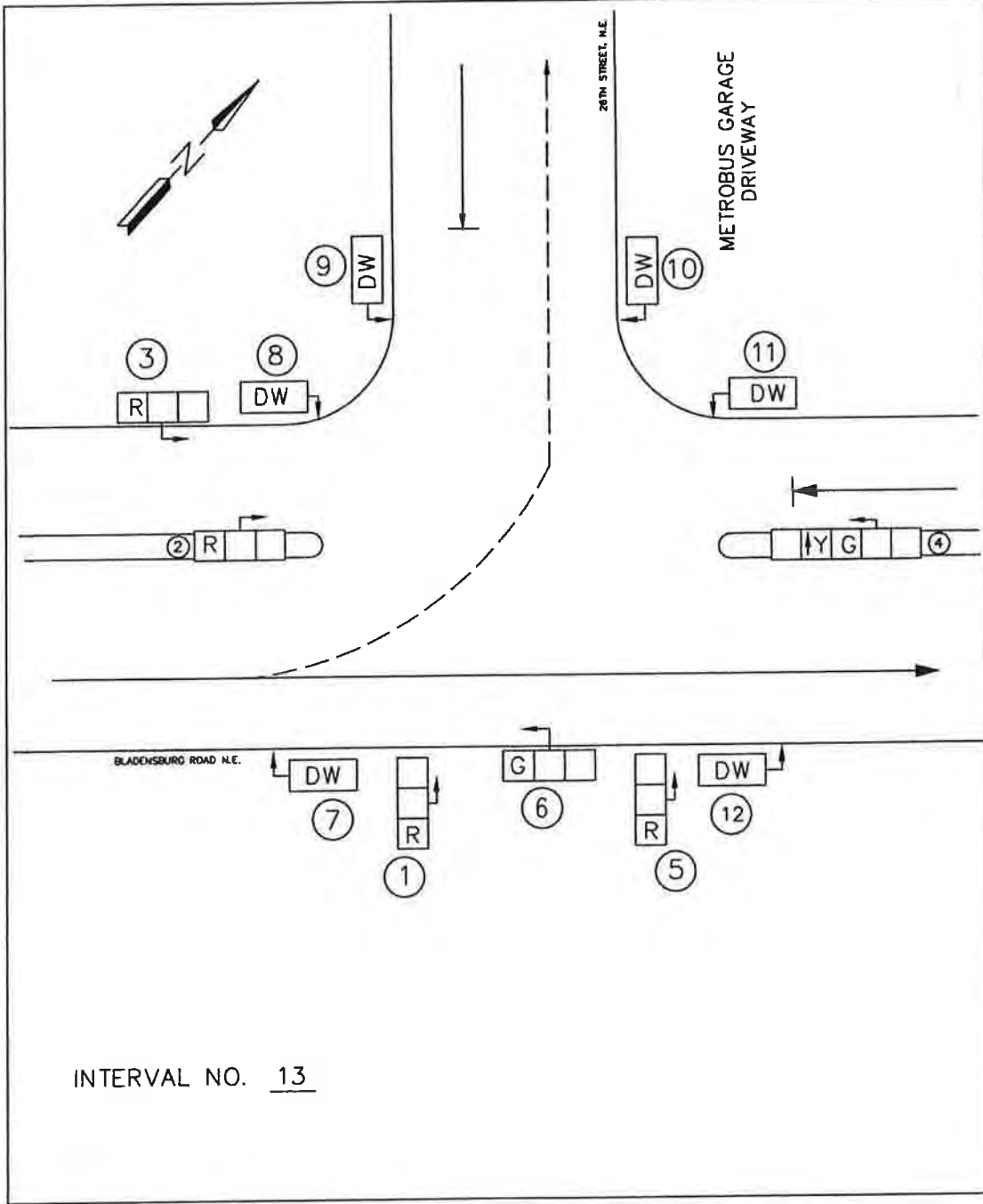
26TH STREET, N.E.

METROBUS GARAGE DRIVEWAY

INTERVAL NO. 12

TRAFFIC SIGNAL OPERATION
26TH STREET AND (METRO DRIVEWAY) AND BLADENSBURG ROAD NE

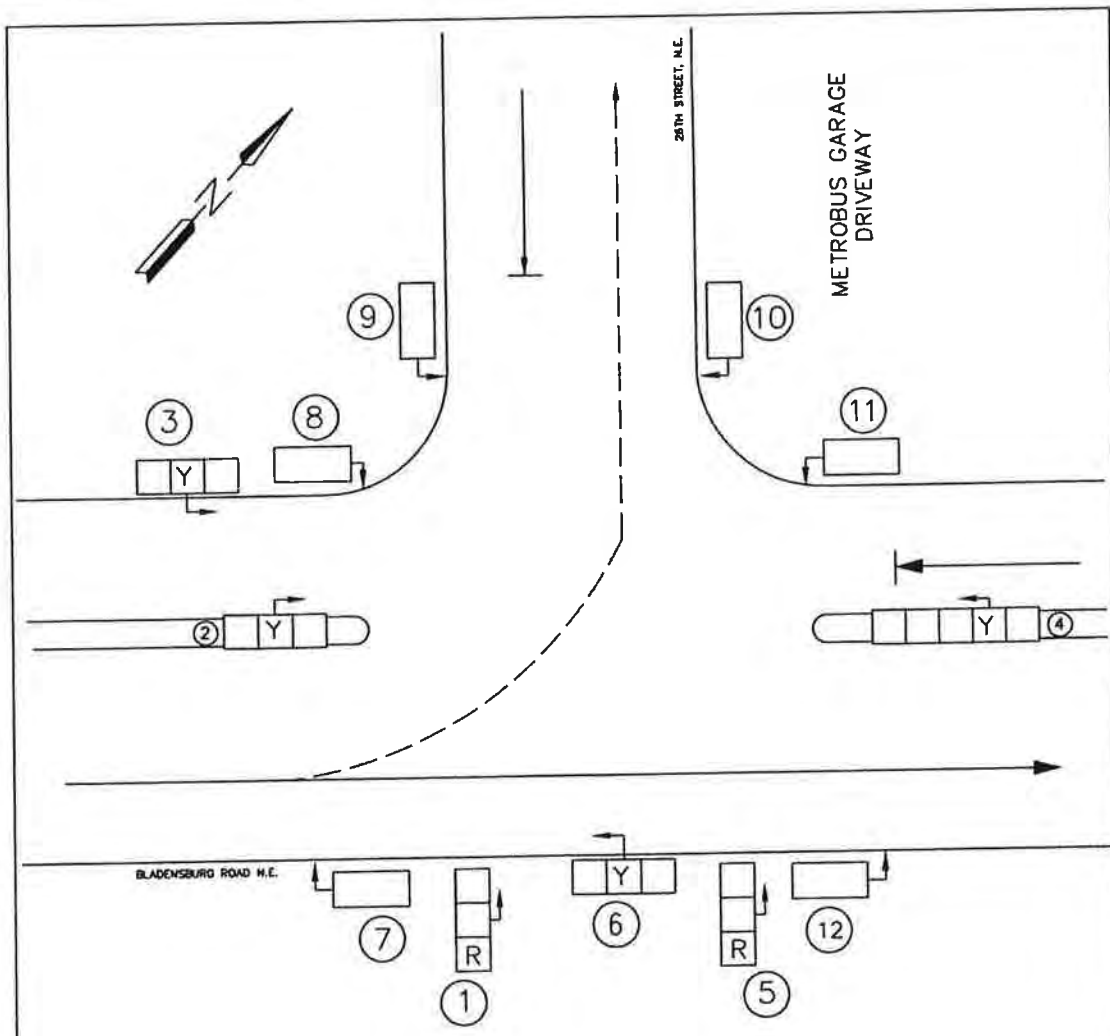
D.C. DEPARTMENT OF TRANSPORTATION TRAFFIC OPERATIONS ADMINISTRATION TRAFFIC SIGNAL AND ITS TEAM	DESIGNED BY: _____	T.S.
	SUBMITTED BY: _____	1462-C
CHECKED BY: _____ DATE: _____	TRAFFIC ENGINEER, SIGNAL/ITS TEAM	SHEET
DRAWN BY: E. WALDEN DATE: _____	APPROVED BY: _____	12 of 13
IN SERVICE: _____ SCALE: NONE	LEAD, SIGNAL/ITS TEAM	



INTERVAL NO. 13

TRAFFIC SIGNAL OPERATION
 26TH STREET AND (METRO DRIVEWAY) AND BLADENSBURG ROAD NE

D.C. DEPARTMENT OF TRANSPORTATION TRAFFIC OPERATIONS ADMINISTRATION TRAFFIC SIGNAL AND ITS TEAM		DESIGNED BY: _____	T.S.
CHECKED BY: _____ DATE: _____		SUBMITTED BY: _____	1462-C
DRAWN BY: E. WALDEN DATE: _____		TRAFFIC ENGINEER, SIGNAL/ITS TEAM	SHEET
IN SERVICE: _____ SCALE: NONE		APPROVED BY: _____	13 of 13
		LEAD, SIGNAL/ITS TEAM	



INTERVAL NO. FLASH
 SIGNAL OPERATES ON COLORS 24 HOURS PER DAY
 FLASH FOR EMERGENCY USE ONLY

TRAFFIC SIGNAL OPERATION
 26TH STREET AND (METRO DRIVEWAY) AND BLADENBURG ROAD NE

D.C. DEPARTMENT OF TRANSPORTATION TRAFFIC OPERATIONS ADMINISTRATION TRAFFIC SIGNAL AND ITS TEAM		DESIGNED BY: _____	T.S.
CHECKED BY: _____ DATE: _____		SUBMITTED BY: _____	1462-C
DRAWN BY: E.WALDEN DATE: _____		TRAFFIC ENGINEER, SIGNAL/ITS TEAM	SHEET
IN SERVICE: _____ SCALE: NONE		APPROVED BY: _____	FLASH
		LEAD, SIGNAL/ITS TEAM	



APPENDIX C CRASH DATA

Accident Summary Report (R-7)**Intersection:** Intersection: 25TH PL and BLADENSBURG RD, NE**Time Period Covered:** From 01/01/2016 To 12/31/2018**Prepared By:** Crash Data**Prepared On:** 3/18/2019

Total Number of Accident:	59	Collision Type	#ACC	%	Collision Type	#ACC	%
Total Number of Fatalities:	0	Right Angle:	0	0.0%	Fixed Object:	0	0.0%
Total Number of Injuries:	18	Left Turn:	0	0.0%	Ran Off Road:	0	0.0%
Total Number of Disabling Injuries:	0	Right Turn:	0	0.0%	Ped. Involved:	0	0.0%
Total Number of NonDisabling Injuries:	4	Rear End:	0	0.0%	Backing:	0	0.0%
Total Number of Pedestrians Involved:	0	Side Swiped:	12	20.3%	Non Collision:	2	3.4%
Total Number of Bicyclists Involved:	0	Head On:	0	0.0%	Under/Over Ride:	0	0.0%
Total Number of Motorcyclists Involved:	0	Parked:	10	16.9%	Unspecified:	35	59.3%

Time of Day	#ACC	%	Day of week	#ACC	%
07:30 ~ 09:30:	6	10.2%	Sunday:	7	11.9%
09:30 ~ 11:30:	5	8.5%	Monday:	3	5.1%
11:30 ~ 13:30:	7	11.9%	Tuesday:	13	22.0%
13:30 ~ 16:00:	9	15.3%	Wednesday:	9	15.3%
16:00 ~ 18:30:	4	6.8%	Thursday:	15	25.4%
18:30 ~ 07:30:	28	47.5%	Friday:	5	8.5%
Unspecified:	0	0.0%	Saturday:	7	11.9%

Weather Condition	#ACC	%	Surface Condition	#ACC	%
Clear:	38	64.4%	Dry:	49	83.1%
Rain:	5	8.5%	Wet:	8	13.6%
Snow:	0	0.0%	Snow/Ice:	0	0.0%
Sleet/Hail:	0	0.0%	Slush:	0	0.0%
Fog/Mist:	0	0.0%	Water/Sand:	0	0.0%
Crosswind/Blowing Sand:	0	0.0%	Repairing:	0	0.0%
Unspecified:	16	27.1%	Unspecified:	2	3.4%

Type of Vehicle	#VEH	%	Accident Severity Type	#ACC	%
Passenger Car:	91	74.6%	Fatal Collision:	0	0.0%
Bus:	3	2.5%	Injury Collision:	10	16.9%
Truck:	10	8.2%	PDO Collision:	49	83.1%
Taxi:	1	0.8%	Light Condition	#ACC	%
Minivan:	0	0.0%	Daylight:	35	59.3%
Police/Emergency Vehicle:	0	0.0%	Dawn/Dusk:	0	0.0%
Motorcycle/Moped:	0	0.0%	Dark(Lighted):	24	40.7%
Bicycle:	0	0.0%	Dark(Not Lighted):	0	0.0%
Fixed Object:	0	0.0%	Dark(Unknown Lighting):	0	0.0%
Unspecified:	17	13.9%	Unspecified:	0	0.0%

Contributing Factor	#VEH	%	Pedestrian Actions	#ACC	%
Driver: Speed:	0	0.0%	In Crosswalk with Signal:	0	0.0%
Driver: Alcohol/Drug:	0	0.0%	In Crosswalk against Signal:	0	0.0%
Driver: Electronic Device:	0	0.0%	In Crosswalk no Signal:	0	0.0%
Driver: Others:	4	3.3%	In Unmarked Crosswalk:	0	0.0%
Vehicle:	0	0.0%	Not in Crosswalk:	0	0.0%
Roadway:	0	0.0%	From Between Parked Cars:	0	0.0%
Unspecified:	118	96.7%	Unspecified:	0	0.0%

Year	Accidents	Fatalities	Injuries	Disabling Injuries	Pedestrians	Bicyclists	Motorcyclists
2016	25	0	8	3	0	0	0
2017	11	0	6	1	0	0	0
2018	23	0	4	0	0	0	0

Accident Summary Report (R-7)**Intersection:** Intersection: 26TH ST and BLADENSBURG RD, NE**Time Period Covered:** From 01/01/2016 To 12/31/2018**Prepared By:** Crash Data**Prepared On:** 3/18/2019

		Collision Type	#ACC	%	Collision Type	#ACC	%
Total Number of Accident:	4	Right Angle:	0	0.0%	Fixed Object:	0	0.0%
Total Number of Fatalities:	0	Left Turn:	0	0.0%	Ran Off Road:	0	0.0%
Total Number of Injuries:	2	Right Turn:	0	0.0%	Ped. Involved:	0	0.0%
Total Number of Disabling Injuries:	0	Rear End:	0	0.0%	Backing:	0	0.0%
Total Number of NonDisabling Injuries:	2	Side Swiped:	1	25.0%	Non Collision:	0	0.0%
Total Number of Pedestrians Involved:	1	Head On:	0	0.0%	Under/Over Ride:	0	0.0%
Total Number of Bicyclists Involved:	0	Parked:	0	0.0%	Unspecified:	3	75.0%
Total Number of Motorcyclists Involved:	0						

Time of Day	#ACC	%	Day of week	#ACC	%
07:30 ~ 09:30:	1	25.0%	Sunday:	1	25.0%
09:30 ~ 11:30:	0	0.0%	Monday:	0	0.0%
11:30 ~ 13:30:	2	50.0%	Tuesday:	0	0.0%
13:30 ~ 16:00:	0	0.0%	Wednesday:	0	0.0%
16:00 ~ 18:30:	0	0.0%	Thursday:	0	0.0%
18:30 ~ 07:30:	1	25.0%	Friday:	2	50.0%
Unspecified:	0	0.0%	Saturday:	1	25.0%

Weather Condition	#ACC	%	Surface Condition	#ACC	%
Clear:	4	100.0%	Dry:	4	100.0%
Rain:	0	0.0%	Wet:	0	0.0%
Snow:	0	0.0%	Snow/Ice:	0	0.0%
Sleet/Hail:	0	0.0%	Slush:	0	0.0%
Fog/Mist:	0	0.0%	Water/Sand:	0	0.0%
Crosswind/Blowing Sand:	0	0.0%	Repairing:	0	0.0%
Unspecified:	0	0.0%	Unspecified:	0	0.0%

Type of Vehicle	#VEH	%	Accident Severity Type	#ACC	%
Passenger Car:	8	100.0%	Fatal Collision:	0	0.0%
Bus:	0	0.0%	Injury Collision:	2	50.0%
Truck:	0	0.0%	PDO Collision:	2	50.0%
Taxi:	0	0.0%			
Minivan:	0	0.0%	Light Condition	#ACC	%
Police/Emergency Vehicle:	0	0.0%	Daylight:	2	50.0%
Motorcycle/Moped:	0	0.0%	Dawn/Dusk:	0	0.0%
Bicycle:	0	0.0%	Dark(Lighted):	1	25.0%
Fixed Object:	0	0.0%	Dark(Not Lighted):	0	0.0%
Unspecified:	0	0.0%	Dark(Unknown Lighting):	0	0.0%
			Unspecified:	1	25.0%

Contributing Factor	#VEH	%	Pedestrian Actions	#ACC	%
Driver: Speed:	0	0.0%	In Crosswalk with Signal:	0	0.0%
Driver: Alcohol/Drug:	0	0.0%	In Crosswalk against Signal:	0	0.0%
Driver: Electronic Device:	0	0.0%	In Crosswalk no Signal:	0	0.0%
Driver: Others:	1	12.5%	In Unmarked Crosswalk:	0	0.0%
Vehicle:	0	0.0%	Not in Crosswalk:	0	0.0%
Roadway:	0	0.0%	From Between Parked Cars:	0	0.0%
Unspecified:	7	87.5%	Unspecified:	1	100.0%

Year	Accidents	Fatalities	Injuries	Disabling Injuries	Pedestrians	Bicyclists	Motorcyclists
2016	2	0	1	1	0	0	0
2017	1	0	0	0	0	0	0
2018	1	0	1	1	1	0	0

Accident Summary Report (R-7)**Intersection:** Intersection: BLADENSBURG RD and CHANNING ST, NE**Time Period Covered:** From 01/01/2016 To 12/31/2018**Prepared By:** Crash Data**Prepared On:** 3/18/2019

		Collision Type	#ACC	%	Collision Type	#ACC	%
Total Number of Accident:	1	Right Angle:	0	0.0%	Fixed Object:	0	0.0%
Total Number of Fatalities:	0	Left Turn:	0	0.0%	Ran Off Road:	0	0.0%
Total Number of Injuries:	0	Right Turn:	0	0.0%	Ped. Involved:	0	0.0%
Total Number of Disabling Injuries:	0	Rear End:	0	0.0%	Backing:	0	0.0%
Total Number of NonDisabling Injuries:	0	Side Swiped:	1	100.0%	Non Collision:	0	0.0%
Total Number of Pedestrians Involved:	0	Head On:	0	0.0%	Under/Over Ride:	0	0.0%
Total Number of Bicyclists Involved:	0	Parked:	0	0.0%	Unspecified:	0	0.0%
Total Number of Motorcyclists Involved:	0						

Time of Day	#ACC	%	Day of week	#ACC	%
07:30 ~ 09:30:	0	0.0%	Sunday:	0	0.0%
09:30 ~ 11:30:	0	0.0%	Monday:	0	0.0%
11:30 ~ 13:30:	0	0.0%	Tuesday:	0	0.0%
13:30 ~ 16:00:	0	0.0%	Wednesday:	0	0.0%
16:00 ~ 18:30:	0	0.0%	Thursday:	0	0.0%
18:30 ~ 07:30:	1	100.0%	Friday:	0	0.0%
Unspecified:	0	0.0%	Saturday:	1	100.0%

Weather Condition	#ACC	%	Surface Condition	#ACC	%
Clear:	1	100.0%	Dry:	1	100.0%
Rain:	0	0.0%	Wet:	0	0.0%
Snow:	0	0.0%	Snow/Ice:	0	0.0%
Sleet/Hail:	0	0.0%	Slush:	0	0.0%
Fog/Mist:	0	0.0%	Water/Sand:	0	0.0%
Crosswind/Blowing Sand:	0	0.0%	Repairing:	0	0.0%
Unspecified:	0	0.0%	Unspecified:	0	0.0%

Type of Vehicle	#VEH	%	Accident Severity Type	#ACC	%
Passenger Car:	3	100.0%	Fatal Collision:	0	0.0%
Bus:	0	0.0%	Injury Collision:	0	0.0%
Truck:	0	0.0%	PDO Collision:	1	100.0%
Taxi:	0	0.0%			
Minivan:	0	0.0%	Light Condition	#ACC	%
Police/Emergency Vehicle:	0	0.0%	Daylight:	0	0.0%
Motorcycle/Moped:	0	0.0%	Dawn/Dusk:	0	0.0%
Bicycle:	0	0.0%	Dark(Lighted):	1	100.0%
Fixed Object:	0	0.0%	Dark(Not Lighted):	0	0.0%
Unspecified:	0	0.0%	Dark(Unknown Lighting):	0	0.0%
			Unspecified:	0	0.0%

Contributing Factor	#VEH	%	Pedestrian Actions	#ACC	%
Driver: Speed:	0	0.0%	In Crosswalk with Signal:	0	0.0%
Driver: Alcohol/Drug:	0	0.0%	In Crosswalk against Signal:	0	0.0%
Driver: Electronic Device:	0	0.0%	In Crosswalk no Signal:	0	0.0%
Driver: Others:	0	0.0%	In Unmarked Crosswalk:	0	0.0%
Vehicle:	0	0.0%	Not in Crosswalk:	0	0.0%
Roadway:	0	0.0%	From Between Parked Cars:	0	0.0%
Unspecified:	3	100.0%	Unspecified:	0	0.0%

Year	Accidents	Fatalities	Injuries	Disabling Injuries	Pedestrians	Bicyclists	Motorcyclists
2017	1	0	0	0	0	0	0

Accident Summary Report (R-7)**Intersection:** Intersection: 28TH ST and BLADENSBURG RD, NE**Time Period Covered:** From 01/01/2016 To 12/31/2018**Prepared By:** Crash Data**Prepared On:** 3/18/2019

		Collision Type	#ACC	%	Collision Type	#ACC	%
Total Number of Accident:	11	Right Angle:	0	0.0%	Fixed Object:	0	0.0%
Total Number of Fatalities:	0	Left Turn:	0	0.0%	Ran Off Road:	0	0.0%
Total Number of Injuries:	6	Right Turn:	0	0.0%	Ped. Involved:	0	0.0%
Total Number of Disabling Injuries:	0	Rear End:	0	0.0%	Backing:	0	0.0%
Total Number of NonDisabling Injuries:	0	Side Swiped:	2	18.2%	Non Collision:	0	0.0%
Total Number of Pedestrians Involved:	0	Head On:	0	0.0%	Under/Over Ride:	0	0.0%
Total Number of Bicyclists Involved:	0	Parked:	0	0.0%	Unspecified:	9	81.8%
Total Number of Motorcyclists Involved:	0						

Time of Day	#ACC	%	Day of week	#ACC	%
07:30 ~ 09:30:	1	9.1%	Sunday:	3	27.3%
09:30 ~ 11:30:	0	0.0%	Monday:	2	18.2%
11:30 ~ 13:30:	0	0.0%	Tuesday:	2	18.2%
13:30 ~ 16:00:	2	18.2%	Wednesday:	1	9.1%
16:00 ~ 18:30:	0	0.0%	Thursday:	1	9.1%
18:30 ~ 07:30:	8	72.7%	Friday:	1	9.1%
Unspecified:	0	0.0%	Saturday:	1	9.1%

Weather Condition	#ACC	%	Surface Condition	#ACC	%
Clear:	5	45.5%	Dry:	7	63.6%
Rain:	1	9.1%	Wet:	2	18.2%
Snow:	0	0.0%	Snow/Ice:	0	0.0%
Sleet/Hail:	0	0.0%	Slush:	0	0.0%
Fog/Mist:	0	0.0%	Water/Sand:	0	0.0%
Crosswind/Blowing Sand:	0	0.0%	Repairing:	0	0.0%
Unspecified:	5	45.5%	Unspecified:	2	18.2%

Type of Vehicle	#VEH	%	Accident Severity Type	#ACC	%
Passenger Car:	21	91.3%	Fatal Collision:	0	0.0%
Bus:	1	4.3%	Injury Collision:	4	36.4%
Truck:	1	4.3%	PDO Collision:	7	63.6%
Taxi:	0	0.0%			
Minivan:	0	0.0%	Light Condition	#ACC	%
Police/Emergency Vehicle:	0	0.0%	Daylight:	3	27.3%
Motorcycle/Moped:	0	0.0%	Dawn/Dusk:	1	9.1%
Bicycle:	0	0.0%	Dark(Lighted):	5	45.5%
Fixed Object:	0	0.0%	Dark(Not Lighted):	1	9.1%
Unspecified:	0	0.0%	Dark(Unknown Lighting):	0	0.0%
			Unspecified:	1	9.1%

Contributing Factor	#VEH	%	Pedestrian Actions	#ACC	%
Driver: Speed:	0	0.0%	In Crosswalk with Signal:	0	0.0%
Driver: Alcohol/Drug:	0	0.0%	In Crosswalk against Signal:	0	0.0%
Driver: Electronic Device:	0	0.0%	In Crosswalk no Signal:	0	0.0%
Driver: Others:	1	4.3%	In Unmarked Crosswalk:	0	0.0%
Vehicle:	0	0.0%	Not in Crosswalk:	0	0.0%
Roadway:	0	0.0%	From Between Parked Cars:	0	0.0%
Unspecified:	22	95.7%	Unspecified:	0	0.0%

Year	Accidents	Fatalities	Injuries	Disabling Injuries	Pedestrians	Bicyclists	Motorcyclists
2016	2	0	2	0	0	0	0
2017	4	0	3	0	0	0	0
2018	5	0	1	0	0	0	0

Accident Summary Report (R-7)

Intersection: Intersection: BLADENSBURG RD and DOUGLAS ST, NE

Time Period Covered: From 01/01/2016 To 12/31/2018

Prepared By: Crash Data

Prepared On: 3/18/2019

		Collision Type	#ACC	%	Collision Type	#ACC	%
Total Number of Accident:	12	Right Angle:	0	0.0%	Fixed Object:	0	0.0%
Total Number of Fatalities:	0	Left Turn:	0	0.0%	Ran Off Road:	0	0.0%
Total Number of Injuries:	5	Right Turn:	0	0.0%	Ped. Involved:	0	0.0%
Total Number of Disabling Injuries:	0	Rear End:	0	0.0%	Backing:	0	0.0%
Total Number of NonDisabling Injuries:	2	Side Swiped:	4	33.3%	Non Collision:	0	0.0%
Total Number of Pedestrians Involved:	0	Head On:	0	0.0%	Under/Over Ride:	0	0.0%
Total Number of Bicyclists Involved:	0	Parked:	0	0.0%	Unspecified:	8	66.7%
Total Number of Motorcyclists Involved:	0						

Time of Day	#ACC	%
07:30 ~ 09:30:	3	25.0%
09:30 ~ 11:30:	1	8.3%
11:30 ~ 13:30:	1	8.3%
13:30 ~ 16:00:	2	16.7%
16:00 ~18:30:	1	8.3%
18:30 ~ 07:30:	4	33.3%
Unspecified:	0	0.0%

Day of week	#ACC	%
Sunday:	0	0.0%
Monday:	1	8.3%
Tuesday:	3	25.0%
Wednesday:	0	0.0%
Thursday:	2	16.7%
Friday:	4	33.3%
Saturday:	2	16.7%

Weather Condition	#ACC	%
Clear:	10	83.3%
Rain:	0	0.0%
Snow:	0	0.0%
Sleet/Hail:	0	0.0%
Fog/Mist:	0	0.0%
Crosswind/Blowing Sand:	0	0.0%
Unspecified:	2	16.7%

Surface Condition	#ACC	%
Dry:	10	83.3%
Wet:	1	8.3%
Snow/Ice:	0	0.0%
Slush:	0	0.0%
Water/Sand:	0	0.0%
Repairing:	0	0.0%
Unspecified:	1	8.3%

Type of Vehicle	#VEH	%
Passenger Car:	16	66.7%
Bus:	3	12.5%
Truck:	1	4.2%
Taxi:	2	8.3%
Minivan:	0	0.0%
Police/Emergency Vehicle:	0	0.0%
Motorcycle/Moped:	0	0.0%
Bicycle:	0	0.0%
Fixed Object:	0	0.0%
Unspecified:	2	8.3%

Accident Severity Type	#ACC	%
Fatal Collision:	0	0.0%
Injury Collision:	4	33.3%
PDO Collision:	8	66.7%

Light Condition	#ACC	%
Daylight:	7	58.3%
Dawn/Dusk:	0	0.0%
Dark(Lighted):	5	41.7%
Dark(Not Lighted):	0	0.0%
Dark(Unknown Lighting):	0	0.0%
Unspecified:	0	0.0%

Contributing Factor	#VEH	%
Driver: Speed:	1	4.2%
Driver: Alcohol/Drug:	0	0.0%
Driver: Electronic Device:	0	0.0%
Driver: Others:	0	0.0%
Vehicle:	0	0.0%
Roadway:	0	0.0%
Unspecified:	23	95.8%

Pedestrian Actions	#ACC	%
In Crosswalk with Signal:	0	0.0%
In Crosswalk against Signal:	0	0.0%
In Crosswalk no Signal:	0	0.0%
In Unmarked Crosswalk:	0	0.0%
Not in Crosswalk:	0	0.0%
From Between Parked Cars:	0	0.0%
Unspecified:	0	0.0%

Year	Accidents	Fatalities	Injuries	Disabling Injuries	Pedestrians	Bicyclists	Motorcyclists
2016	3	0	1	0	0	0	0
2017	4	0	4	2	0	0	0
2018	5	0	0	0	0	0	0

Accident Summary Report (R-7)**Intersection:** Intersection: 28TH ST and DOUGLAS ST, NE**Time Period Covered:** From 01/01/2016 To 12/31/2018**Prepared By:** Crash Data**Prepared On:** 3/18/2019

		Collision Type	#ACC	%	Collision Type	#ACC	%
Total Number of Accident:	3	Right Angle:	0	0.0%	Fixed Object:	0	0.0%
Total Number of Fatalities:	0	Left Turn:	0	0.0%	Ran Off Road:	0	0.0%
Total Number of Injuries:	0	Right Turn:	0	0.0%	Ped. Involved:	0	0.0%
Total Number of Disabling Injuries:	0	Rear End:	0	0.0%	Backing:	0	0.0%
Total Number of NonDisabling Injuries:	0	Side Swiped:	2	66.7%	Non Collision:	0	0.0%
Total Number of Pedestrians Involved:	0	Head On:	0	0.0%	Under/Over Ride:	0	0.0%
Total Number of Bicyclists Involved:	0	Parked:	1	33.3%	Unspecified:	0	0.0%
Total Number of Motorcyclists Involved:	0						

Time of Day	#ACC	%	Day of week	#ACC	%
07:30 ~ 09:30:	0	0.0%	Sunday:	0	0.0%
09:30 ~ 11:30:	0	0.0%	Monday:	1	33.3%
11:30 ~ 13:30:	1	33.3%	Tuesday:	1	33.3%
13:30 ~ 16:00:	1	33.3%	Wednesday:	1	33.3%
16:00 ~ 18:30:	0	0.0%	Thursday:	0	0.0%
18:30 ~ 07:30:	1	33.3%	Friday:	0	0.0%
Unspecified:	0	0.0%	Saturday:	0	0.0%

Weather Condition	#ACC	%	Surface Condition	#ACC	%
Clear:	3	100.0%	Dry:	2	66.7%
Rain:	0	0.0%	Wet:	1	33.3%
Snow:	0	0.0%	Snow/Ice:	0	0.0%
Sleet/Hail:	0	0.0%	Slush:	0	0.0%
Fog/Mist:	0	0.0%	Water/Sand:	0	0.0%
Crosswind/Blowing Sand:	0	0.0%	Repairing:	0	0.0%
Unspecified:	0	0.0%	Unspecified:	0	0.0%

Type of Vehicle	#VEH	%	Accident Severity Type	#ACC	%
Passenger Car:	3	50.0%	Fatal Collision:	0	0.0%
Bus:	0	0.0%	Injury Collision:	0	0.0%
Truck:	1	16.7%	PDO Collision:	3	100.0%
Taxi:	0	0.0%			
Minivan:	0	0.0%	Light Condition	#ACC	%
Police/Emergency Vehicle:	0	0.0%	Daylight:	3	100.0%
Motorcycle/Moped:	0	0.0%	Dawn/Dusk:	0	0.0%
Bicycle:	0	0.0%	Dark(Lighted):	0	0.0%
Fixed Object:	0	0.0%	Dark(Not Lighted):	0	0.0%
Unspecified:	2	33.3%	Dark(Unknown Lighting):	0	0.0%
			Unspecified:	0	0.0%

Contributing Factor	#VEH	%	Pedestrian Actions	#ACC	%
Driver: Speed:	0	0.0%	In Crosswalk with Signal:	0	0.0%
Driver: Alcohol/Drug:	0	0.0%	In Crosswalk against Signal:	0	0.0%
Driver: Electronic Device:	0	0.0%	In Crosswalk no Signal:	0	0.0%
Driver: Others:	0	0.0%	In Unmarked Crosswalk:	0	0.0%
Vehicle:	0	0.0%	Not in Crosswalk:	0	0.0%
Roadway:	0	0.0%	From Between Parked Cars:	0	0.0%
Unspecified:	6	100.0%	Unspecified:	0	0.0%

Year	Accidents	Fatalities	Injuries	Disabling Injuries	Pedestrians	Bicyclists	Motorcyclists
2018	3	0	0	0	0	0	0



APPENDIX D SYNCHRO RESULTS

Queues

Timing Plan: AM Peak

1: Bladensburg Rd & 25th Pl/V St



















Lane Group	EBT	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	8	348	64	688	1007
v/c Ratio	0.02	0.96	0.78	0.46	0.44
Control Delay	15.7	78.3	59.4	14.1	23.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	15.7	78.3	59.4	14.1	23.7
Queue Length 50th (ft)	1	261	0	140	192
Queue Length 95th (ft)	9	#329	#32	183	236
Internal Link Dist (ft)	742	556		558	606
Turn Bay Length (ft)			65		
Base Capacity (vph)	415	366	82	1482	2279
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.02	0.95	0.78	0.46	0.44

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
 1: Bladensburg Rd & 25th PI/V St

Timing Plan: AM Peak

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	
Lane Configurations													
Traffic Volume (vph)	0	1	5	228	33	48	1	8	482	121	5	21	
Future Volume (vph)	0	1	5	228	33	48	1	8	482	121	5	21	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width	9	9	9	12	12	12	12	10	10	10	12	10	
Grade (%)		-1%			-2%				-2%				
Total Lost time (s)		4.5			4.5	2.0			3.5				
Lane Util. Factor		1.00			1.00	1.00			0.95				
Frbp, ped/bikes		1.00			1.00	1.00			0.99				
Flpb, ped/bikes		1.00			1.00	1.00			1.00				
Frt		0.88			1.00	0.85			0.97				
Flt Protected		1.00			0.96	1.00			1.00				
Satd. Flow (prot)		1187			1358	1205			2644				
Flt Permitted		1.00			0.75	1.00			0.94				
Satd. Flow (perm)		1187			1059	1205			2476				
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.90	0.89	0.89	0.89	0.90	0.88	
Adj. Flow (vph)	0	1	7	304	44	64	1	9	542	136	6	24	
RTOR Reduction (vph)	0	5	0	0	0	64	0	0	18	0	0	0	
Lane Group Flow (vph)	0	3	0	0	348	0	0	0	670	0	0	0	
Confl. Peds. (#/hr)	3					3		1		9		9	
Heavy Vehicles (%)	0%	0%	0%	6%	6%	6%	2%	4%	4%	4%	2%	2%	
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0	
Parking (#/hr)	6	6	6	6	6	6			6	6			
Turn Type		NA		Perm	NA	NA		Perm	NA			Perm	
Protected Phases		4			4				2				
Permitted Phases	4			4				2				2	
Actuated Green, G (s)		39.0			39.0	0.0			69.0				
Effective Green, g (s)		41.0			41.0	0.0			71.0				
Actuated g/C Ratio		0.34			0.34	0.00			0.59				
Clearance Time (s)		6.5			6.5				5.5				
Vehicle Extension (s)		3.0			3.0				1.0				
Lane Grp Cap (vph)		405			361	0			1464				
v/s Ratio Prot		0.00											
v/s Ratio Perm					c0.33				c0.27				
v/c Ratio		0.01			0.96	0.00			0.46				
Uniform Delay, d1		26.1			38.8	60.0			13.7				
Progression Factor		1.00			1.00	1.00			1.00				
Incremental Delay, d2		0.0			37.6	0.0			1.0				
Delay (s)		26.1			76.4	60.0			14.8				
Level of Service		C			E	E			B				
Approach Delay (s)		26.1			73.8				14.8				
Approach LOS		C			E				B				
Intersection Summary													
HCM 2000 Control Delay			30.4		HCM 2000 Level of Service				C				
HCM 2000 Volume to Capacity ratio			0.64										
Actuated Cycle Length (s)			120.0		Sum of lost time (s)				8.0				
Intersection Capacity Utilization			69.3%		ICU Level of Service				C				
Analysis Period (min)			15										

HCM Signalized Intersection Capacity Analysis
 1: Bladensburg Rd & 25th Pl/V St

Timing Plan: AM Peak



Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	853	7
Future Volume (vph)	853	7
Ideal Flow (vphpl)	1900	1900
Lane Width	10	10
Grade (%)	-2%	
Total Lost time (s)	3.5	
Lane Util. Factor	0.91	
Frbp, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	1.00	
Flt Protected	1.00	
Satd. Flow (prot)	4272	
Flt Permitted	0.90	
Satd. Flow (perm)	3850	
Peak-hour factor, PHF	0.88	0.88
Adj. Flow (vph)	969	8
RTOR Reduction (vph)	1	0
Lane Group Flow (vph)	1006	0
Confl. Peds. (#/hr)		1
Heavy Vehicles (%)	2%	2%
Bus Blockages (#/hr)	5	5
Parking (#/hr)		
Turn Type	NA	
Protected Phases	2	
Permitted Phases		
Actuated Green, G (s)	69.0	
Effective Green, g (s)	71.0	
Actuated g/C Ratio	0.59	
Clearance Time (s)	5.5	
Vehicle Extension (s)	1.0	
Lane Grp Cap (vph)	2277	
v/s Ratio Prot		
v/s Ratio Perm	0.26	
v/c Ratio	0.44	
Uniform Delay, d1	13.5	
Progression Factor	1.68	
Incremental Delay, d2	0.6	
Delay (s)	23.4	
Level of Service	C	
Approach Delay (s)	23.4	
Approach LOS	C	
Intersection Summary		

c Critical Lane Group

Queues

Timing Plan: AM Peak












2: Bladensburg Rd & 26th St



Lane Group	EBL	NBT	SBT
Lane Group Flow (vph)	65	601	903
v/c Ratio	0.25	0.34	0.41
Control Delay	28.9	4.8	16.4
Queue Delay	0.0	0.0	0.0
Total Delay	28.9	4.8	16.4
Queue Length 50th (ft)	26	97	142
Queue Length 95th (ft)	53	92	175
Internal Link Dist (ft)	365	606	240
Turn Bay Length (ft)			
Base Capacity (vph)	265	1761	2182
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.25	0.34	0.41
Intersection Summary			

HCM Signalized Intersection Capacity Analysis
 2: Bladensburg Rd & 26th St

Timing Plan: AM Peak











								
Movement	EBL	EBR	NBU	NBL	NBT	SBU	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	30	19	2	19	514	5	865	5
Future Volume (vph)	30	19	2	19	514	5	865	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	16	16	12	10	10	12	10	10
Grade (%)	-1%				2%		-2%	
Total Lost time (s)	4.0				3.0		3.0	
Lane Util. Factor	1.00				0.95		0.91	
Frbp, ped/bikes	0.99				1.00		1.00	
Flpb, ped/bikes	1.00				1.00		1.00	
Frt	0.95				1.00		1.00	
Flt Protected	0.97				1.00		1.00	
Satd. Flow (prot)	1138				2611		4238	
Flt Permitted	0.97				0.91		0.94	
Satd. Flow (perm)	1138				2383		3970	
Peak-hour factor, PHF	0.75	0.75	0.90	0.89	0.89	0.90	0.97	0.97
Adj. Flow (vph)	40	25	2	21	578	6	892	5
RTOR Reduction (vph)	19	0	0	0	0	0	0	0
Lane Group Flow (vph)	46	0	0	0	601	0	903	0
Confl. Peds. (#/hr)	3	13		10				10
Confl. Bikes (#/hr)								4
Heavy Vehicles (%)	55%	55%	2%	6%	6%	2%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	6	0	5	5
Parking (#/hr)					6			
Turn Type	Perm		custom	pm+pt	NA	Perm	NA	
Protected Phases				1	6		2	
Permitted Phases	4		1	6		2		
Actuated Green, G (s)	24.0				85.0		64.0	
Effective Green, g (s)	26.0				87.0		66.0	
Actuated g/C Ratio	0.22				0.72		0.55	
Clearance Time (s)	6.0				5.0		5.0	
Lane Grp Cap (vph)	246				1761		2183	
v/s Ratio Prot					c0.05			
v/s Ratio Perm	c0.04				0.20		c0.23	
v/c Ratio	0.19				0.34		0.41	
Uniform Delay, d1	38.4				6.0		15.7	
Progression Factor	1.00				0.73		1.00	
Incremental Delay, d2	1.7				0.5		0.6	
Delay (s)	40.1				4.9		16.3	
Level of Service	D				A		B	
Approach Delay (s)	40.1				4.9		16.3	
Approach LOS	D				A		B	
Intersection Summary								
HCM 2000 Control Delay	12.9			HCM 2000 Level of Service			B	
HCM 2000 Volume to Capacity ratio	0.36							
Actuated Cycle Length (s)	120.0			Sum of lost time (s)			12.0	
Intersection Capacity Utilization	57.9%			ICU Level of Service			B	
Analysis Period (min)	15							

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis

3: Bladensburg Rd & Channing St

Timing Plan: AM Peak

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	43	27	499	50	9	832
Future Volume (Veh/h)	43	27	499	50	9	832
Sign Control	Stop		Free			Free
Grade	-2%		2%			-2%
Peak Hour Factor	0.75	0.75	0.87	0.87	0.85	0.85
Hourly flow rate (vph)	57	36	574	57	11	979
Pedestrians	5		5			
Lane Width (ft)	9.0		10.0			
Walking Speed (ft/s)	4.0		4.0			
Percent Blockage	0		0			
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			320			
pX, platoon unblocked	0.94	0.94			0.94	
vC, conflicting volume	961	320			636	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	839	160			494	
tC, single (s)	6.9	7.0			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	80	96			99	
cM capacity (veh/h)	281	803			996	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	93	383	248	207	392	392
Volume Left	57	0	0	11	0	0
Volume Right	36	0	57	0	0	0
cSH	375	1700	1700	996	1700	1700
Volume to Capacity	0.25	0.23	0.15	0.01	0.23	0.23
Queue Length 95th (ft)	24	0	0	1	0	0
Control Delay (s)	17.7	0.0	0.0	0.6	0.0	0.0
Lane LOS	C			A		
Approach Delay (s)	17.7	0.0		0.1		
Approach LOS	C					
Intersection Summary						
Average Delay			1.0			
Intersection Capacity Utilization			36.0%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
4: Bladensburg Rd & 28th St

















Timing Plan: AM Peak



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	1	18	23	503	823	9
Future Volume (Veh/h)	1	18	23	503	823	9
Sign Control	Stop			Free	Free	
Grade	-1%			2%	-3%	
Peak Hour Factor	0.75	0.75	0.87	0.87	0.91	0.91
Hourly flow rate (vph)	1	24	26	578	904	10
Pedestrians	2					
Lane Width (ft)	9.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)	470					
pX, platoon unblocked	0.97					
vC, conflicting volume	1252	308	916			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1204	308	916			
tC, single (s)	6.8	6.9	4.2			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	97	96			
cM capacity (veh/h)	168	693	721			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	25	219	385	362	362	191
Volume Left	1	26	0	0	0	0
Volume Right	24	0	0	0	0	10
cSH	616	721	1700	1700	1700	1700
Volume to Capacity	0.04	0.04	0.23	0.21	0.21	0.11
Queue Length 95th (ft)	3	3	0	0	0	0
Control Delay (s)	11.1	1.6	0.0	0.0	0.0	0.0
Lane LOS	B	A				
Approach Delay (s)	11.1	0.6		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			44.3%	ICU Level of Service	A	
Analysis Period (min)			15			

















HCM Unsignalized Intersection Capacity Analysis
 5: Bladensburg Rd & Douglas St/Douglas Street

Timing Plan: AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	5	0	27	2	1	1	472	31	13	805	21
Future Volume (Veh/h)	4	5	0	27	2	1	1	472	31	13	805	21
Sign Control		Stop			Stop			Free			Free	
Grade		4%			1%			4%			-2%	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.88	0.88	0.88	0.91	0.91	0.91
Hourly flow rate (vph)	5	7	0	36	3	1	1	536	35	14	885	23
Pedestrians		2			6			1			1	
Lane Width (ft)		9.0			9.0			10.0			10.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								842				
pX, platoon unblocked												
vC, conflicting volume	1200	1506	310	889	1500	292	910			577		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1200	1506	310	889	1500	292	910			577		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.4			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.4			2.2		
p0 queue free %	96	94	100	84	98	100	100			99		
cM capacity (veh/h)	137	119	691	226	121	707	656			968		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3					
Volume Total	12	40	269	303	235	442	244					
Volume Left	5	36	1	0	14	0	0					
Volume Right	0	1	0	35	0	0	23					
cSH	126	215	656	1700	968	1700	1700					
Volume to Capacity	0.10	0.19	0.00	0.18	0.01	0.26	0.14					
Queue Length 95th (ft)	8	17	0	0	1	0	0					
Control Delay (s)	36.5	25.5	0.1	0.0	0.7	0.0	0.0					
Lane LOS	E	D	A		A							
Approach Delay (s)	36.5	25.5	0.0		0.2							
Approach LOS	E	D										
Intersection Summary												
Average Delay			1.1									
Intersection Capacity Utilization			38.4%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
6: 28th St & Douglas St

Timing Plan: AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	1	2	4	1	19	0	30	2	6	13	1
Future Volume (vph)	0	1	2	4	1	19	0	30	2	6	13	1
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.81	0.81	0.81	0.75	0.75	0.75
Hourly flow rate (vph)	0	1	3	5	1	25	0	37	2	8	17	1
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	4	31	39	26								
Volume Left (vph)	0	5	0	8								
Volume Right (vph)	3	25	2	1								
Hadj (s)	-0.45	-0.38	-0.03	0.23								
Departure Headway (s)	3.6	3.7	4.0	4.2								
Degree Utilization, x	0.00	0.03	0.04	0.03								
Capacity (veh/h)	969	961	887	838								
Control Delay (s)	6.6	6.8	7.1	7.4								
Approach Delay (s)	6.6	6.8	7.1	7.4								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			7.1									
Level of Service			A									
Intersection Capacity Utilization			19.7%	ICU Level of Service	A							
Analysis Period (min)			15									

Queues

Timing Plan: PM Peak

1: Bladensburg Rd & 25th Pl/V St




















Lane Group	EBT	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	64	274	68	879	848
v/c Ratio	0.17	0.95	0.18	0.35	0.61
Control Delay	24.9	84.7	18.0	8.2	34.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	24.9	84.7	18.0	8.2	34.5
Queue Length 50th (ft)	26	207	17	86	368
Queue Length 95th (ft)	49	#275	40	104	426
Internal Link Dist (ft)	742	556		558	606
Turn Bay Length (ft)			65		
Base Capacity (vph)	376	292	372	2523	1392
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.17	0.94	0.18	0.35	0.61

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
 1: Bladensburg Rd & 25th PI/V St

Timing Plan: PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	2	31	15	200	5	51	4	2	567	192	4	57
Future Volume (vph)	2	31	15	200	5	51	4	2	567	192	4	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	9	9	9	12	12	12	12	10	10	10	12	10
Grade (%)		-1%			-2%				-2%			
Total Lost time (s)		4.5			4.5	4.5			3.5			
Lane Util. Factor		1.00			1.00	1.00			0.91			
Frbp, ped/bikes		0.99			1.00	0.98			0.98			
Flpb, ped/bikes		1.00			0.99	1.00			1.00			
Frt		0.96			1.00	0.85			0.96			
Flt Protected		1.00			0.95	1.00			1.00			
Satd. Flow (prot)		1278			1369	1203			4071			
Flt Permitted		0.99			0.71	1.00			0.93			
Satd. Flow (perm)		1263			1018	1203			3807			
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.90	0.87	0.87	0.87	0.90	0.88
Adj. Flow (vph)	3	41	20	267	7	68	4	2	652	221	4	65
RTOR Reduction (vph)	0	14	0	0	0	27	0	0	50	0	0	0
Lane Group Flow (vph)	0	50	0	0	274	41	0	0	829	0	0	0
Confl. Peds. (#/hr)	7		6	6		7		3		17		17
Heavy Vehicles (%)	0%	0%	0%	4%	4%	4%	2%	2%	2%	2%	2%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)	6	6	6	6	6	6						
Turn Type	Perm	NA		Perm	NA	Perm	Perm	Perm	NA		Perm	Perm
Protected Phases		4			4				2			
Permitted Phases	4			4		4	2	2			2	2
Actuated Green, G (s)		32.0			32.0	32.0			76.0			
Effective Green, g (s)		34.0			34.0	34.0			78.0			
Actuated g/C Ratio		0.28			0.28	0.28			0.65			
Clearance Time (s)		6.5			6.5	6.5			5.5			
Vehicle Extension (s)		3.0			3.0	3.0			1.0			
Lane Grp Cap (vph)		357			288	340			2474			
v/s Ratio Prot												
v/s Ratio Perm		0.04			0.27	0.03			0.22			
v/c Ratio		0.14			0.95	0.12			0.34			
Uniform Delay, d1		32.1			42.2	31.9			9.4			
Progression Factor		1.00			1.00	1.00			1.00			
Incremental Delay, d2		0.2			39.9	0.2			0.4			
Delay (s)		32.3			82.1	32.1			9.8			
Level of Service		C			F	C			A			
Approach Delay (s)		32.3			72.1				9.8			
Approach LOS		C			E				A			
Intersection Summary												
HCM 2000 Control Delay			29.8				HCM 2000 Level of Service				C	
HCM 2000 Volume to Capacity ratio			0.71									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)				8.0		
Intersection Capacity Utilization			73.5%			ICU Level of Service				D		
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis
 1: Bladensburg Rd & 25th Pl/V St

Timing Plan: PM Peak



Movement	SBT	SBR
Lane Configurations	4T	
Traffic Volume (vph)	684	2
Future Volume (vph)	684	2
Ideal Flow (vphpl)	1900	1900
Lane Width	10	10
Grade (%)	-2%	
Total Lost time (s)	3.5	
Lane Util. Factor	0.95	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	1.00	
Flt Protected	1.00	
Satd. Flow (prot)	2732	
Flt Permitted	0.78	
Satd. Flow (perm)	2142	
Peak-hour factor, PHF	0.88	0.88
Adj. Flow (vph)	777	2
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	848	0
Confl. Peds. (#/hr)	3	
Heavy Vehicles (%)	3%	3%
Bus Blockages (#/hr)	6	6
Parking (#/hr)	6	6
Turn Type	NA	
Protected Phases	2	
Permitted Phases		
Actuated Green, G (s)	76.0	
Effective Green, g (s)	78.0	
Actuated g/C Ratio	0.65	
Clearance Time (s)	5.5	
Vehicle Extension (s)	1.0	
Lane Grp Cap (vph)	1392	
v/s Ratio Prot		
v/s Ratio Perm	c0.40	
v/c Ratio	0.61	
Uniform Delay, d1	12.2	
Progression Factor	2.59	
Incremental Delay, d2	1.7	
Delay (s)	33.3	
Level of Service	C	
Approach Delay (s)	33.3	
Approach LOS	C	
Intersection Summary		

c Critical Lane Group

Queues

Timing Plan: PM Peak

2: Bladensburg Rd & 26th St



Lane Group	EBL	NBT	SBT
Lane Group Flow (vph)	36	701	839
v/c Ratio	0.11	0.25	0.55
Control Delay	23.1	14.0	19.6
Queue Delay	0.0	0.0	0.0
Total Delay	23.1	14.0	19.6
Queue Length 50th (ft)	11	116	213
Queue Length 95th (ft)	31	147	259
Internal Link Dist (ft)	365	606	240
Turn Bay Length (ft)			
Base Capacity (vph)	341	2859	1530
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.11	0.25	0.55
Intersection Summary			

HCM Signalized Intersection Capacity Analysis

2: Bladensburg Rd & 26th St














Timing Plan: PM Peak



Movement	EBL	EBR	NBU	NBL	NBT	SBU	SBT	SBR	
Lane Configurations	↘ ↙		↘ ↙	↘ ↙	↑ ↑ ↑	↘ ↙	↑ ↑		
Traffic Volume (vph)	13	14	7	12	605	2	726	3	
Future Volume (vph)	13	14	7	12	605	2	726	3	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width	16	16	12	10	10	12	10	10	
Grade (%)	-1%				2%		-2%		
Total Lost time (s)	4.0				3.0		3.0		
Lane Util. Factor	1.00				0.91		0.95		
Frbp, ped/bikes	0.98				1.00		1.00		
Flpb, ped/bikes	1.00				1.00		1.00		
Frt	0.93				1.00		1.00		
Flt Protected	0.98				1.00		1.00		
Satd. Flow (prot)	1506				4230		2964		
Flt Permitted	0.98				0.91		0.95		
Satd. Flow (perm)	1506				3865		2828		
Peak-hour factor, PHF	0.75	0.75	0.90	0.89	0.89	0.90	0.87	0.87	
Adj. Flow (vph)	17	19	8	13	680	2	834	3	
RTOR Reduction (vph)	15	0	0	0	0	0	0	0	
Lane Group Flow (vph)	21	0	0	0	701	0	839	0	
Confl. Peds. (#/hr)	16		19				19		
Heavy Vehicles (%)	15%	15%	2%	1%	1%	2%	2%	2%	
Bus Blockages (#/hr)	0	0	0	0	6	0	6	6	
Parking (#/hr)								6	
Turn Type	Perm	custom		pm+pt	NA	Perm	NA		
Protected Phases			1	6	6			2	
Permitted Phases	4	1		6			2		
Actuated Green, G (s)	24.0				85.0		63.0		
Effective Green, g (s)	26.0				87.0		65.0		
Actuated g/C Ratio	0.22				0.72		0.54		
Clearance Time (s)	6.0				5.0		5.0		
Lane Grp Cap (vph)	326				2859		1531		
v/s Ratio Prot					c0.04				
v/s Ratio Perm	c0.01				0.14		c0.30		
v/c Ratio	0.06				0.25		0.55		
Uniform Delay, d1	37.3				5.5		17.9		
Progression Factor	1.00				2.52		1.00		
Incremental Delay, d2	0.4				0.2		1.4		
Delay (s)	37.7				14.1		19.3		
Level of Service	D				B		B		
Approach Delay (s)	37.7				14.1		19.3		
Approach LOS	D				B		B		
Intersection Summary									
HCM 2000 Control Delay	17.4			HCM 2000 Level of Service			B		
HCM 2000 Volume to Capacity ratio	0.39								
Actuated Cycle Length (s)	120.0			Sum of lost time (s)			12.0		
Intersection Capacity Utilization	53.4%			ICU Level of Service			A		
Analysis Period (min)	15								
c Critical Lane Group									

HCM Unsignalized Intersection Capacity Analysis
 3: Bladensburg Rd & Channing St

Timing Plan: PM Peak

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			  			  
Traffic Volume (veh/h)	38	3	575	45	6	693
Future Volume (Veh/h)	38	3	575	45	6	693
Sign Control	Stop		Free			Free
Grade	-2%		2%			-2%
Peak Hour Factor	0.75	0.75	0.75	0.75	0.89	0.89
Hourly flow rate (vph)	51	4	767	60	7	779
Pedestrians	7		7			
Lane Width (ft)	9.0		10.0			
Walking Speed (ft/s)	4.0		4.0			
Percent Blockage	0		0			
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			320			
pX, platoon unblocked	0.97	0.97			0.97	
vC, conflicting volume	1214	293			834	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1096	140			701	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	75	100			99	
cM capacity (veh/h)	200	854			863	
Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	55	307	307	213	267	519
Volume Left	51	0	0	0	7	0
Volume Right	4	0	0	60	0	0
cSH	212	1700	1700	1700	863	1700
Volume to Capacity	0.26	0.18	0.18	0.13	0.01	0.31
Queue Length 95th (ft)	25	0	0	0	1	0
Control Delay (s)	27.8	0.0	0.0	0.0	0.3	0.0
Lane LOS	D				A	
Approach Delay (s)	27.8	0.0			0.1	
Approach LOS	D					
Intersection Summary						
Average Delay			1.0			
Intersection Capacity Utilization			36.0%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
4: Bladensburg Rd & 28th St

















Timing Plan: PM Peak



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	3	34	14	564	665	0
Future Volume (Veh/h)	3	34	14	564	665	0
Sign Control	Stop			Free	Free	
Grade	-1%			2%	-3%	
Peak Hour Factor	0.93	0.93	0.75	0.75	0.90	0.90
Hourly flow rate (vph)	3	37	19	752	739	0
Pedestrians	2					
Lane Width (ft)	9.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)	470					
pX, platoon unblocked	0.98					
vC, conflicting volume	1030	372	741			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	974	372	741			
tC, single (s)	7.0	7.1	4.3			
tC, 2 stage (s)						
tF (s)	3.6	3.4	2.3			
p0 queue free %	99	94	98			
cM capacity (veh/h)	229	608	798			
Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	40	169	301	301	493	246
Volume Left	3	19	0	0	0	0
Volume Right	37	0	0	0	0	0
cSH	541	798	1700	1700	1700	1700
Volume to Capacity	0.07	0.02	0.18	0.18	0.29	0.14
Queue Length 95th (ft)	6	2	0	0	0	0
Control Delay (s)	12.2	1.3	0.0	0.0	0.0	0.0
Lane LOS	B	A				
Approach Delay (s)	12.2	0.3	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay			0.5			
Intersection Capacity Utilization			33.3%	ICU Level of Service	A	
Analysis Period (min)			15			

















HCM Unsignalized Intersection Capacity Analysis
5: Bladensburg Rd & Douglas St/Douglas Street

Timing Plan: PM Peak

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	5	0	3	29	8	1	5	515	47	9	633	2	
Future Volume (Veh/h)	5	0	3	29	8	1	5	515	47	9	633	2	
Sign Control		Stop			Stop			Free			Free		
Grade		4%			1%			4%			-2%		
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.90	0.90	0.90	0.90	0.90	0.90	
Hourly flow rate (vph)	7	0	4	39	11	1	6	572	52	10	703	2	
Pedestrians		2			4						3		
Lane Width (ft)		9.0			9.0						10.0		
Walking Speed (ft/s)		4.0			4.0						4.0		
Percent Blockage		0			0						0		
Right turn flare (veh)													
Median type								None			None		
Median storage veh													
Upstream signal (ft)								842					
pX, platoon unblocked													
vC, conflicting volume	938	1366	354	990	1341	224	707				628		
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	938	1366	354	990	1341	224	707				628		
tC, single (s)	7.5	6.5	6.9	7.6	6.6	7.0	4.2				4.1		
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2				2.2		
p0 queue free %	97	100	99	80	92	100	99				99		
cM capacity (veh/h)	205	145	647	194	147	773	873				948		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2						
Volume Total	11	51	149	286	195	362	354						
Volume Left	7	39	6	0	0	10	0						
Volume Right	4	1	0	0	52	0	2						
cSH	272	184	873	1700	1700	948	1700						
Volume to Capacity	0.04	0.28	0.01	0.17	0.11	0.01	0.21						
Queue Length 95th (ft)	3	27	1	0	0	1	0						
Control Delay (s)	18.8	31.9	0.4	0.0	0.0	0.4	0.0						
Lane LOS	C	D	A			A							
Approach Delay (s)	18.8	31.9	0.1			0.2							
Approach LOS	C	D											
Intersection Summary													
Average Delay			1.4										
Intersection Capacity Utilization			37.5%			ICU Level of Service			A				
Analysis Period (min)			15										

HCM Unsignalized Intersection Capacity Analysis
6: 28th St & Douglas St

Timing Plan: PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	2	0	3	2	1	12	1	13	0	10	32	2
Future Volume (vph)	2	0	3	2	1	12	1	13	0	10	32	2
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.83	0.83	0.83
Hourly flow rate (vph)	3	0	4	3	1	16	1	17	0	12	39	2
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	7	20	18	53								
Volume Left (vph)	3	3	1	12								
Volume Right (vph)	4	16	0	2								
Hadj (s)	-0.26	-0.33	0.18	0.02								
Departure Headway (s)	3.8	3.7	4.2	4.0								
Degree Utilization, x	0.01	0.02	0.02	0.06								
Capacity (veh/h)	920	943	841	890								
Control Delay (s)	6.8	6.8	7.3	7.2								
Approach Delay (s)	6.8	6.8	7.3	7.2								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			7.1									
Level of Service			A									
Intersection Capacity Utilization			16.6%	ICU Level of Service								A
Analysis Period (min)			15									

Queues

Timing Plan: AM Peak

1: Bladensburg Rd & 25th Pl/V St



Lane Group	EBT	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	8	358	65	721	1045
v/c Ratio	0.02	0.98	0.79	0.49	0.46
Control Delay	15.7	81.6	61.9	14.7	25.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	15.7	81.6	61.9	14.7	25.1
Queue Length 50th (ft)	1	272	0	150	204
Queue Length 95th (ft)	9	#343	#35	196	247
Internal Link Dist (ft)	742	556		558	606
Turn Bay Length (ft)			65		
Base Capacity (vph)	415	366	82	1474	2256
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.02	0.98	0.79	0.49	0.46

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

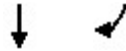
HCM Signalized Intersection Capacity Analysis
 1: Bladensburg Rd & 25th PI/V St

Timing Plan: AM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	
Lane Configurations													
Traffic Volume (vph)	0	1	5	235	34	49	1	8	508	125	5	22	
Future Volume (vph)	0	1	5	235	34	49	1	8	508	125	5	22	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width	9	9	9	12	12	12	12	10	10	10	12	10	
Grade (%)		-1%			-2%				-2%				
Total Lost time (s)		4.5			4.5	2.0			3.5				
Lane Util. Factor		1.00			1.00	1.00			0.95				
Frbp, ped/bikes		1.00			1.00	1.00			0.99				
Flpb, ped/bikes		1.00			1.00	1.00			1.00				
Frt		0.88			1.00	0.85			0.97				
Flt Protected		1.00			0.96	1.00			1.00				
Satd. Flow (prot)		1187			1358	1205			2646				
Flt Permitted		1.00			0.75	1.00			0.94				
Satd. Flow (perm)		1187			1059	1205			2478				
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.90	0.89	0.89	0.89	0.90	0.88	
Adj. Flow (vph)	0	1	7	313	45	65	1	9	571	140	6	25	
RTOR Reduction (vph)	0	5	0	0	0	65	0	0	18	0	0	0	
Lane Group Flow (vph)	0	3	0	0	358	0	0	0	703	0	0	0	
Confl. Peds. (#/hr)	3					3		1		9		9	
Heavy Vehicles (%)	0%	0%	0%	6%	6%	6%	2%	4%	4%	4%	2%	2%	
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0	
Parking (#/hr)	6	6	6	6	6	6			6	6			
Turn Type		NA		Perm	NA	NA		Perm	NA			Perm	
Protected Phases		4			4				2				
Permitted Phases	4			4				2				2	
Actuated Green, G (s)		39.5			39.5	0.0			68.5				
Effective Green, g (s)		41.5			41.5	0.0			70.5				
Actuated g/C Ratio		0.35			0.35	0.00			0.59				
Clearance Time (s)		6.5			6.5				5.5				
Vehicle Extension (s)		3.0			3.0				1.0				
Lane Grp Cap (vph)		410			366	0			1455				
v/s Ratio Prot		0.00											
v/s Ratio Perm					c0.34				c0.28				
v/c Ratio		0.01			0.98	0.00			0.48				
Uniform Delay, d1		25.8			38.8	60.0			14.3				
Progression Factor		1.00			1.00	1.00			1.00				
Incremental Delay, d2		0.0			40.7	0.0			1.2				
Delay (s)		25.8			79.5	60.0			15.4				
Level of Service		C			E	E			B				
Approach Delay (s)		25.8			76.5				15.4				
Approach LOS		C			E				B				
Intersection Summary													
HCM 2000 Control Delay			31.7		HCM 2000 Level of Service				C				
HCM 2000 Volume to Capacity ratio			0.67										
Actuated Cycle Length (s)			120.0		Sum of lost time (s)				8.0				
Intersection Capacity Utilization			71.3%		ICU Level of Service				C				
Analysis Period (min)			15										

HCM Signalized Intersection Capacity Analysis
 1: Bladensburg Rd & 25th Pl/V St

Timing Plan: AM Peak



Movement	SBT	SBR
Lane Configurations	↑↑↑	
Traffic Volume (vph)	885	7
Future Volume (vph)	885	7
Ideal Flow (vphpl)	1900	1900
Lane Width	10	10
Grade (%)	-2%	
Total Lost time (s)	3.5	
Lane Util. Factor	0.91	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	1.00	
Flt Protected	1.00	
Satd. Flow (prot)	4273	
Flt Permitted	0.90	
Satd. Flow (perm)	3839	
Peak-hour factor, PHF	0.88	0.88
Adj. Flow (vph)	1006	8
RTOR Reduction (vph)	1	0
Lane Group Flow (vph)	1044	0
Confl. Peds. (#/hr)		1
Heavy Vehicles (%)	2%	2%
Bus Blockages (#/hr)	5	5
Parking (#/hr)		
Turn Type	NA	
Protected Phases	2	
Permitted Phases		
Actuated Green, G (s)	68.5	
Effective Green, g (s)	70.5	
Actuated g/C Ratio	0.59	
Clearance Time (s)	5.5	
Vehicle Extension (s)	1.0	
Lane Grp Cap (vph)	2255	
v/s Ratio Prot		
v/s Ratio Perm	0.27	
v/c Ratio	0.46	
Uniform Delay, d1	14.0	
Progression Factor	1.73	
Incremental Delay, d2	0.6	
Delay (s)	24.9	
Level of Service	C	
Approach Delay (s)	24.9	
Approach LOS	C	
Intersection Summary		

c Critical Lane Group

Queues

Timing Plan: AM Peak

2: Bladensburg Rd & 26th St



Lane Group	EBL	NBT	SBT
Lane Group Flow (vph)	68	632	937
v/c Ratio	0.26	0.36	0.43
Control Delay	29.0	4.7	16.6
Queue Delay	0.0	0.0	0.0
Total Delay	29.0	4.7	16.6
Queue Length 50th (ft)	27	102	149
Queue Length 95th (ft)	54	95	183
Internal Link Dist (ft)	365	606	240
Turn Bay Length (ft)			
Base Capacity (vph)	265	1757	2182
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.26	0.36	0.43
Intersection Summary			

HCM Signalized Intersection Capacity Analysis

2: Bladensburg Rd & 26th St

Timing Plan: AM Peak













Movement	EBL	EBR	NBU	NBL	NBT	SBU	SBT	SBR
Lane Configurations	↘				↕		↗	
Traffic Volume (vph)	31	20	2	20	541	5	898	5
Future Volume (vph)	31	20	2	20	541	5	898	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	16	16	12	10	10	12	10	10
Grade (%)	-1%				2%		-2%	
Total Lost time (s)	4.0				3.0		3.0	
Lane Util. Factor	1.00				0.95		0.91	
Frbp, ped/bikes	0.99				1.00		1.00	
Flpb, ped/bikes	1.00				1.00		1.00	
Frt	0.95				1.00		1.00	
Flt Protected	0.97				1.00		1.00	
Satd. Flow (prot)	1136				2611		4238	
Flt Permitted	0.97				0.91		0.94	
Satd. Flow (perm)	1136				2374		3970	
Peak-hour factor, PHF	0.75	0.75	0.90	0.89	0.89	0.90	0.97	0.97
Adj. Flow (vph)	41	27	2	22	608	6	926	5
RTOR Reduction (vph)	20	0	0	0	0	0	0	0
Lane Group Flow (vph)	48	0	0	0	632	0	937	0
Confl. Peds. (#/hr)	3	13		10				10
Confl. Bikes (#/hr)								4
Heavy Vehicles (%)	55%	55%	2%	6%	6%	2%	3%	3%
Bus Blockages (#/hr)	0	0	0	0	6	0	5	5
Parking (#/hr)					6			
Turn Type	Perm		custom		pm+pt	NA	Perm	NA
Protected Phases					1	6		2
Permitted Phases	4		1		6		2	
Actuated Green, G (s)	24.0					85.0		64.0
Effective Green, g (s)	26.0					87.0		66.0
Actuated g/C Ratio	0.22					0.72		0.55
Clearance Time (s)	6.0					5.0		5.0
Lane Grp Cap (vph)	246					1756		2183
v/s Ratio Prot						c0.05		
v/s Ratio Perm	c0.04					0.21		c0.24
v/c Ratio	0.20					0.36		0.43
Uniform Delay, d1	38.5					6.1		15.9
Progression Factor	1.00					0.70		1.00
Incremental Delay, d2	1.8					0.5		0.6
Delay (s)	40.2					4.8		16.5
Level of Service	D					A		B
Approach Delay (s)	40.2					4.8		16.5
Approach LOS	D					A		B
Intersection Summary								
HCM 2000 Control Delay			13.0		HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio			0.37					
Actuated Cycle Length (s)			120.0		Sum of lost time (s)		12.0	
Intersection Capacity Utilization			59.5%		ICU Level of Service		B	
Analysis Period (min)			15					

c Critical Lane Group

HCM Unsignalized Intersection Capacity Analysis

3: Bladensburg Rd & Channing St

Timing Plan: AM Peak

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	44	28	525	52	9	864
Future Volume (Veh/h)	44	28	525	52	9	864
Sign Control	Stop		Free		Free	
Grade	-2%		2%		-2%	
Peak Hour Factor	0.75	0.75	0.87	0.87	0.85	0.85
Hourly flow rate (vph)	59	37	603	60	11	1016
Pedestrians	5		5			
Lane Width (ft)	9.0		10.0			
Walking Speed (ft/s)	4.0		4.0			
Percent Blockage	0		0			
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (ft)	320					
pX, platoon unblocked	0.94	0.94			0.94	
vC, conflicting volume	1004	336			668	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	871	159			513	
tC, single (s)	6.9	7.0			4.2	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	78	95			99	
cM capacity (veh/h)	266	799			974	
Direction, Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	96	402	261	214	406	406
Volume Left	59	0	0	11	0	0
Volume Right	37	0	60	0	0	0
cSH	358	1700	1700	974	1700	1700
Volume to Capacity	0.27	0.24	0.15	0.01	0.24	0.24
Queue Length 95th (ft)	27	0	0	1	0	0
Control Delay (s)	18.7	0.0	0.0	0.6	0.0	0.0
Lane LOS	C		A			
Approach Delay (s)	18.7	0.0	0.1			
Approach LOS	C					
Intersection Summary						
Average Delay			1.1			
Intersection Capacity Utilization			36.8%		ICU Level of Service	A
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
4: Bladensburg Rd & 28th St

















Timing Plan: AM Peak



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	1	19	24	529	854	9
Future Volume (Veh/h)	1	19	24	529	854	9
Sign Control	Stop			Free	Free	
Grade	-1%			2%	-3%	
Peak Hour Factor	0.75	0.75	0.87	0.87	0.91	0.91
Hourly flow rate (vph)	1	25	28	608	938	10
Pedestrians	2					
Lane Width (ft)	9.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)	470					
pX, platoon unblocked	0.97					
vC, conflicting volume	1305	320	950			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1246	320	950			
tC, single (s)	6.8	6.9	4.2			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	96	96			
cM capacity (veh/h)	156	681	700			
Direction, Lane #	EB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	26	231	405	375	375	198
Volume Left	1	28	0	0	0	0
Volume Right	25	0	0	0	0	10
cSH	603	700	1700	1700	1700	1700
Volume to Capacity	0.04	0.04	0.24	0.22	0.22	0.12
Queue Length 95th (ft)	3	3	0	0	0	0
Control Delay (s)	11.2	1.7	0.0	0.0	0.0	0.0
Lane LOS	B	A				
Approach Delay (s)	11.2	0.6		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay	0.4					
Intersection Capacity Utilization	45.9%			ICU Level of Service	A	
Analysis Period (min)	15					

















HCM Unsignalized Intersection Capacity Analysis
5: Bladensburg Rd & Douglas St/Douglas Street

Timing Plan: AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	5	0	28	2	1	1	497	32	13	836	22
Future Volume (Veh/h)	4	5	0	28	2	1	1	497	32	13	836	22
Sign Control		Stop			Stop			Free			Free	
Grade		4%			1%			4%			-2%	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.88	0.88	0.88	0.91	0.91	0.91
Hourly flow rate (vph)	5	7	0	37	3	1	1	565	36	14	919	24
Pedestrians		2			6			1			1	
Lane Width (ft)		9.0			9.0			10.0			10.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								842				
pX, platoon unblocked												
vC, conflicting volume	1249	1570	321	930	1564	308	945			607		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1249	1570	321	930	1564	308	945			607		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.4			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.4			2.2		
p0 queue free %	96	94	100	82	97	100	100			99		
cM capacity (veh/h)	126	109	679	210	110	691	635			943		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3					
Volume Total	12	41	284	318	244	460	254					
Volume Left	5	37	1	0	14	0	0					
Volume Right	0	1	0	36	0	0	24					
cSH	116	200	635	1700	943	1700	1700					
Volume to Capacity	0.10	0.21	0.00	0.19	0.01	0.27	0.15					
Queue Length 95th (ft)	8	19	0	0	1	0	0					
Control Delay (s)	39.8	27.6	0.1	0.0	0.7	0.0	0.0					
Lane LOS	E	D	A		A							
Approach Delay (s)	39.8	27.6	0.0		0.2							
Approach LOS	E	D										
Intersection Summary												
Average Delay			1.1									
Intersection Capacity Utilization			39.2%		ICU Level of Service					A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
6: 28th St & Douglas St

Timing Plan: AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	0	1	2	4	1	20	0	31	2	6	13	1
Future Volume (vph)	0	1	2	4	1	20	0	31	2	6	13	1
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.81	0.81	0.81	0.75	0.75	0.75
Hourly flow rate (vph)	0	1	3	5	1	27	0	38	2	8	17	1
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	4	33	40	26								
Volume Left (vph)	0	5	0	8								
Volume Right (vph)	3	27	2	1								
Hadj (s)	-0.45	-0.39	-0.03	0.23								
Departure Headway (s)	3.6	3.7	4.0	4.2								
Degree Utilization, x	0.00	0.03	0.04	0.03								
Capacity (veh/h)	968	963	886	837								
Control Delay (s)	6.6	6.8	7.2	7.4								
Approach Delay (s)	6.6	6.8	7.2	7.4								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			7.1									
Level of Service			A									
Intersection Capacity Utilization			19.8%	ICU Level of Service	A							
Analysis Period (min)			15									

Queues

Timing Plan: PM Peak

1: Bladensburg Rd & 25th Pl/V St




















Lane Group	EBT	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	66	282	71	941	921
v/c Ratio	0.18	0.97	0.19	0.37	0.67
Control Delay	25.5	89.5	18.5	8.8	37.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	25.5	89.5	18.5	8.8	37.0
Queue Length 50th (ft)	28	216	19	96	401
Queue Length 95th (ft)	51	#289	42	115	459
Internal Link Dist (ft)	742	556		558	606
Turn Bay Length (ft)			65		
Base Capacity (vph)	376	290	372	2510	1369
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.18	0.97	0.19	0.37	0.67

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
 1: Bladensburg Rd & 25th PI/V St

Timing Plan: PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	2	32	15	206	5	53	4	2	615	198	4	59
Future Volume (vph)	2	32	15	206	5	53	4	2	615	198	4	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	9	9	9	12	12	12	12	10	10	10	12	10
Grade (%)		-1%			-2%				-2%			
Total Lost time (s)		4.5			4.5	4.5			3.5			
Lane Util. Factor		1.00			1.00	1.00			0.91			
Frbp, ped/bikes		0.99			1.00	0.98			0.98			
Flpb, ped/bikes		1.00			0.99	1.00			1.00			
Frt		0.96			1.00	0.85			0.96			
Flt Protected		1.00			0.95	1.00			1.00			
Satd. Flow (prot)		1280			1369	1203			4080			
Flt Permitted		0.99			0.71	1.00			0.93			
Satd. Flow (perm)		1266			1012	1203			3814			
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.90	0.87	0.87	0.87	0.90	0.88
Adj. Flow (vph)	3	43	20	275	7	71	4	2	707	228	4	67
RTOR Reduction (vph)	0	13	0	0	0	27	0	0	48	0	0	0
Lane Group Flow (vph)	0	53	0	0	282	44	0	0	893	0	0	0
Confl. Peds. (#/hr)	7		6	6		7		3		17		17
Heavy Vehicles (%)	0%	0%	0%	4%	4%	4%	2%	2%	2%	2%	2%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)	6	6	6	6	6	6						
Turn Type	Perm	NA		Perm	NA	Perm	Perm	Perm	NA		Perm	Perm
Protected Phases		4			4				2			
Permitted Phases	4			4		4	2	2			2	2
Actuated Green, G (s)		32.5			32.5	32.5			75.5			
Effective Green, g (s)		34.5			34.5	34.5			77.5			
Actuated g/C Ratio		0.29			0.29	0.29			0.65			
Clearance Time (s)		6.5			6.5	6.5			5.5			
Vehicle Extension (s)		3.0			3.0	3.0			1.0			
Lane Grp Cap (vph)		363			290	345			2463			
v/s Ratio Prot												
v/s Ratio Perm		0.04			0.28	0.04			0.23			
v/c Ratio		0.15			0.97	0.13			0.36			
Uniform Delay, d1		31.8			42.3	31.6			9.8			
Progression Factor		1.00			1.00	1.00			1.00			
Incremental Delay, d2		0.2			45.0	0.2			0.4			
Delay (s)		32.0			87.3	31.8			10.2			
Level of Service		C			F	C			B			
Approach Delay (s)		32.0			76.1				10.2			
Approach LOS		C			E				B			
Intersection Summary												
HCM 2000 Control Delay			31.4				HCM 2000 Level of Service				C	
HCM 2000 Volume to Capacity ratio			0.76									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)				8.0	
Intersection Capacity Utilization			76.6%				ICU Level of Service				D	
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis
 1: Bladensburg Rd & 25th Pl/V St

Timing Plan: PM Peak



Movement	SBT	SBR
Lane Configurations	4T	
Traffic Volume (vph)	746	2
Future Volume (vph)	746	2
Ideal Flow (vphpl)	1900	1900
Lane Width	10	10
Grade (%)	-2%	
Total Lost time (s)	3.5	
Lane Util. Factor	0.95	
Frbp, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	1.00	
Flt Protected	1.00	
Satd. Flow (prot)	2733	
Flt Permitted	0.77	
Satd. Flow (perm)	2120	
Peak-hour factor, PHF	0.88	0.88
Adj. Flow (vph)	848	2
RTOR Reduction (vph)	0	0
Lane Group Flow (vph)	921	0
Confl. Peds. (#/hr)		3
Heavy Vehicles (%)	3%	3%
Bus Blockages (#/hr)	6	6
Parking (#/hr)	6	6
Turn Type	NA	
Protected Phases	2	
Permitted Phases		
Actuated Green, G (s)	75.5	
Effective Green, g (s)	77.5	
Actuated g/C Ratio	0.65	
Clearance Time (s)	5.5	
Vehicle Extension (s)	1.0	
Lane Grp Cap (vph)	1369	
v/s Ratio Prot		
v/s Ratio Perm	c0.43	
v/c Ratio	0.67	
Uniform Delay, d1	13.3	
Progression Factor	2.53	
Incremental Delay, d2	2.2	
Delay (s)	35.9	
Level of Service	D	
Approach Delay (s)	35.9	
Approach LOS	D	
Intersection Summary		

c Critical Lane Group

Queues

Timing Plan: PM Peak

2: Bladensburg Rd & 26th St



Lane Group	EBL	NBT	SBT
Lane Group Flow (vph)	36	756	913
v/c Ratio	0.11	0.26	0.60
Control Delay	23.1	15.0	20.7
Queue Delay	0.0	0.0	0.0
Total Delay	23.1	15.0	20.7
Queue Length 50th (ft)	11	130	241
Queue Length 95th (ft)	31	162	290
Internal Link Dist (ft)	365	606	240
Turn Bay Length (ft)			
Base Capacity (vph)	341	2859	1532
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.11	0.26	0.60
Intersection Summary			

HCM Signalized Intersection Capacity Analysis

2: Bladensburg Rd & 26th St














Timing Plan: PM Peak



Movement	EBL	EBR	NBU	NBL	NBT	SBU	SBT	SBR	
Lane Configurations									
Traffic Volume (vph)	13	14	7	12	654	2	790	3	
Future Volume (vph)	13	14	7	12	654	2	790	3	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width	16	16	12	10	10	12	10	10	
Grade (%)	-1%				2%		-2%		
Total Lost time (s)	4.0				3.0		3.0		
Lane Util. Factor	1.00				0.91		0.95		
Frbp, ped/bikes	0.98				1.00		1.00		
Flpb, ped/bikes	1.00				1.00		1.00		
Frt	0.93				1.00		1.00		
Flt Protected	0.98				1.00		1.00		
Satd. Flow (prot)	1506				4230		2964		
Flt Permitted	0.98				0.91		0.95		
Satd. Flow (perm)	1506				3861		2828		
Peak-hour factor, PHF	0.75	0.75	0.90	0.89	0.89	0.90	0.87	0.87	
Adj. Flow (vph)	17	19	8	13	735	2	908	3	
RTOR Reduction (vph)	15	0	0	0	0	0	0	0	
Lane Group Flow (vph)	21	0	0	0	756	0	913	0	
Confl. Peds. (#/hr)	16		19				19		
Heavy Vehicles (%)	15%	15%	2%	1%	1%	2%	2%	2%	
Bus Blockages (#/hr)	0	0	0	0	6	0	6	6	
Parking (#/hr)								6	
Turn Type	Perm		custom	pm+pt	NA	Perm	NA		
Protected Phases				1	6		2		
Permitted Phases	4		1	6		2			
Actuated Green, G (s)	24.0				85.0		63.0		
Effective Green, g (s)	26.0				87.0		65.0		
Actuated g/C Ratio	0.22				0.72		0.54		
Clearance Time (s)	6.0				5.0		5.0		
Lane Grp Cap (vph)	326				2857		1531		
v/s Ratio Prot					c0.04				
v/s Ratio Perm	c0.01				0.15		c0.32		
v/c Ratio	0.06				0.26		0.60		
Uniform Delay, d1	37.3				5.6		18.6		
Progression Factor	1.00				2.66		1.00		
Incremental Delay, d2	0.4				0.2		1.7		
Delay (s)	37.7				15.2		20.3		
Level of Service	D				B		C		
Approach Delay (s)	37.7				15.2		20.3		
Approach LOS	D				B		C		
Intersection Summary									
HCM 2000 Control Delay			18.4	HCM 2000 Level of Service				B	
HCM 2000 Volume to Capacity ratio			0.42						
Actuated Cycle Length (s)			120.0	Sum of lost time (s)				12.0	
Intersection Capacity Utilization			54.3%	ICU Level of Service				A	
Analysis Period (min)			15						
c Critical Lane Group									

HCM Unsignalized Intersection Capacity Analysis
 3: Bladensburg Rd & Channing St

Timing Plan: PM Peak

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			  			  
Traffic Volume (veh/h)	39	3	623	46	6	756
Future Volume (Veh/h)	39	3	623	46	6	756
Sign Control	Stop		Free		Free	
Grade	-2%		2%		-2%	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.89	0.89
Hourly flow rate (vph)	52	4	831	61	7	849
Pedestrians	7		7			
Lane Width (ft)	9.0		10.0			
Walking Speed (ft/s)	4.0		4.0			
Percent Blockage	0		0			
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (ft)	320					
pX, platoon unblocked	0.96	0.96			0.96	
vC, conflicting volume	1314	314			899	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1178	136			746	
tC, single (s)	6.8	6.9			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	70	100			99	
cM capacity (veh/h)	176	854			826	
Direction, Lane #	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	56	332	332	227	290	566
Volume Left	52	0	0	0	7	0
Volume Right	4	0	0	61	0	0
cSH	187	1700	1700	1700	826	1700
Volume to Capacity	0.30	0.20	0.20	0.13	0.01	0.33
Queue Length 95th (ft)	30	0	0	0	1	0
Control Delay (s)	32.4	0.0	0.0	0.0	0.3	0.0
Lane LOS	D			A		
Approach Delay (s)	32.4	0.0			0.1	
Approach LOS	D					
Intersection Summary						
Average Delay			1.1			
Intersection Capacity Utilization			37.9%		ICU Level of Service	A
Analysis Period (min)	15					

HCM Unsignalized Intersection Capacity Analysis

4: Bladensburg Rd & 28th St

















Timing Plan: PM Peak



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	3	35	14	612	727	0
Future Volume (Veh/h)	3	35	14	612	727	0
Sign Control	Stop			Free	Free	
Grade	-1%			2%	-3%	
Peak Hour Factor	0.93	0.93	0.75	0.75	0.90	0.90
Hourly flow rate (vph)	3	38	19	816	808	0
Pedestrians	2					
Lane Width (ft)	9.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)	470					
pX, platoon unblocked	0.98					
vC, conflicting volume	1120	406	810			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1041	406	810			
tC, single (s)	7.0	7.1	4.3			
tC, 2 stage (s)						
tF (s)	3.6	3.4	2.3			
p0 queue free %	99	93	97			
cM capacity (veh/h)	205	577	749			
Direction, Lane #	EB 1	NB 1	NB 2	NB 3	SB 1	SB 2
Volume Total	41	182	326	326	539	269
Volume Left	3	19	0	0	0	0
Volume Right	38	0	0	0	0	0
cSH	510	749	1700	1700	1700	1700
Volume to Capacity	0.08	0.03	0.19	0.19	0.32	0.16
Queue Length 95th (ft)	7	2	0	0	0	0
Control Delay (s)	12.7	1.3	0.0	0.0	0.0	0.0
Lane LOS	B	A				
Approach Delay (s)	12.7	0.3	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			34.2%	ICU Level of Service	A	
Analysis Period (min)			15			

















HCM Unsignalized Intersection Capacity Analysis
5: Bladensburg Rd & Douglas St/Douglas Street

Timing Plan: PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	0	3	30	8	1	5	561	48	9	694	2
Future Volume (Veh/h)	5	0	3	30	8	1	5	561	48	9	694	2
Sign Control		Stop			Stop			Free			Free	
Grade		4%			1%			4%			-2%	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	7	0	4	40	11	1	6	623	53	10	771	2
Pedestrians		2			4						3	
Lane Width (ft)		9.0			9.0						10.0	
Walking Speed (ft/s)		4.0			4.0						4.0	
Percent Blockage		0			0						0	
Right turn flare (veh)												
Median type								None			None	
Median storage veh												
Upstream signal (ft)								842				
pX, platoon unblocked												
vC, conflicting volume	1023	1486	388	1075	1460	241	775			680		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1023	1486	388	1075	1460	241	775			680		
tC, single (s)	7.5	6.5	6.9	7.6	6.6	7.0	4.2			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	96	100	99	76	91	100	99			99		
cM capacity (veh/h)	175	123	615	168	124	753	823			906		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2					
Volume Total	11	52	162	312	209	396	388					
Volume Left	7	40	6	0	0	10	0					
Volume Right	4	1	0	0	53	0	2					
cSH	237	158	823	1700	1700	906	1700					
Volume to Capacity	0.05	0.33	0.01	0.18	0.12	0.01	0.23					
Queue Length 95th (ft)	4	33	1	0	0	1	0					
Control Delay (s)	20.9	38.4	0.4	0.0	0.0	0.4	0.0					
Lane LOS	C	E	A			A						
Approach Delay (s)	20.9	38.4	0.1			0.2						
Approach LOS	C	E										
Intersection Summary												
Average Delay			1.6									
Intersection Capacity Utilization			39.4%		ICU Level of Service				A			
Analysis Period (min)			15									


















HCM Unsignalized Intersection Capacity Analysis
6: 28th St & Douglas St

Timing Plan: PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Stop			Stop			Stop			Stop	
Traffic Volume (vph)	2	0	3	2	1	12	1	13	0	10	33	2
Future Volume (vph)	2	0	3	2	1	12	1	13	0	10	33	2
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.83	0.83	0.83
Hourly flow rate (vph)	3	0	4	3	1	16	1	17	0	12	40	2
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	7	20	18	54								
Volume Left (vph)	3	3	1	12								
Volume Right (vph)	4	16	0	2								
Hadj (s)	-0.26	-0.33	0.18	0.02								
Departure Headway (s)	3.8	3.7	4.2	4.0								
Degree Utilization, x	0.01	0.02	0.02	0.06								
Capacity (veh/h)	919	942	840	890								
Control Delay (s)	6.8	6.8	7.3	7.2								
Approach Delay (s)	6.8	6.8	7.3	7.2								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			7.1									
Level of Service			A									
Intersection Capacity Utilization			16.7%	ICU Level of Service	A							
Analysis Period (min)			15									

















HCM Unsignalized Intersection Capacity Analysis
3: Bladensburg Rd & Channing St

Timing Plan: AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	34	0	12	44	0	28	0	548	52	9	877	0
Future Volume (Veh/h)	34	0	12	44	0	28	0	548	52	9	877	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			-2%			2%			-2%	
Peak Hour Factor	0.90	0.90	0.90	0.75	0.90	0.75	0.90	0.87	0.87	0.85	0.85	0.90
Hourly flow rate (vph)	38	0	13	59	0	37	0	630	60	11	1032	0
Pedestrians					5			5				
Lane Width (ft)					12.0			10.0				
Walking Speed (ft/s)					4.0			4.0				
Percent Blockage					0			0				
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								1006				
pX, platoon unblocked												
vC, conflicting volume	1406	1749	349	1049	1719	350	1032			695		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1406	1749	349	1049	1719	350	1032			695		
tC, single (s)	7.5	6.5	6.9	7.6	6.5	7.0	4.1			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	59	100	98	66	100	94	100			99		
cM capacity (veh/h)	92	84	645	173	87	641	669			886		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3					
Volume Total	51	96	315	375	269	516	258					
Volume Left	38	59	0	0	11	0	0					
Volume Right	13	37	0	60	0	0	0					
cSH	118	241	669	1700	886	1700	1700					
Volume to Capacity	0.43	0.40	0.00	0.22	0.01	0.30	0.15					
Queue Length 95th (ft)	47	45	0	0	1	0	0					
Control Delay (s)	57.0	29.5	0.0	0.0	0.5	0.0	0.0					
Lane LOS	F	D			A							
Approach Delay (s)	57.0	29.5	0.0		0.1							
Approach LOS	F	D										
Intersection Summary												
Average Delay			3.1									
Intersection Capacity Utilization			37.3%		ICU Level of Service				A			
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
 3: Bladensburg Rd & Channing St

Timing Plan: PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	0	19	39	0	3	20	640	46	6	769	0
Future Volume (Veh/h)	33	0	19	39	0	3	20	640	46	6	769	0
Sign Control		Stop			Stop			Free			Free	
Grade		0%			-2%			2%			-2%	
Peak Hour Factor	0.90	0.90	0.90	0.75	0.90	0.75	0.90	0.75	0.75	0.89	0.89	0.90
Hourly flow rate (vph)	37	0	21	52	0	4	22	853	61	7	864	0
Pedestrians					7			7				
Lane Width (ft)					12.0			10.0				
Walking Speed (ft/s)					4.0			4.0				
Percent Blockage					1			0				
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								1006				
pX, platoon unblocked												
vC, conflicting volume	1210	1843	439	1408	1812	322	864			921		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1210	1843	439	1408	1812	322	864			921		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	72	100	96	44	100	99	97			99		
cM capacity (veh/h)	133	71	563	93	74	676	774			739		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2					
Volume Total	58	56	235	426	274	439	432					
Volume Left	37	52	22	0	0	7	0					
Volume Right	21	4	0	0	61	0	0					
cSH	184	99	774	1700	1700	739	1700					
Volume to Capacity	0.32	0.57	0.03	0.25	0.16	0.01	0.25					
Queue Length 95th (ft)	32	66	2	0	0	1	0					
Control Delay (s)	33.4	81.2	1.2	0.0	0.0	0.3	0.0					
Lane LOS	D	F	A			A						
Approach Delay (s)	33.4	81.2	0.3			0.1						
Approach LOS	D	F										
Intersection Summary												
Average Delay			3.6									
Intersection Capacity Utilization			41.4%		ICU Level of Service				A			
Analysis Period (min)			15									

Queues

Timing Plan: AM Peak

1: Bladensburg Rd & 25th Pl/V St



Lane Group	EBT	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	90	364	65	747	1073
v/c Ratio	0.25	1.06	0.79	0.56	0.48
Control Delay	15.2	104.3	61.9	16.3	37.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	15.2	104.3	61.9	16.3	37.6
Queue Length 50th (ft)	20	~310	0	167	290
Queue Length 95th (ft)	44	#371	#35	220	333
Internal Link Dist (ft)	712	556		558	606
Turn Bay Length (ft)			65		
Base Capacity (vph)	367	343	82	1328	2249
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.25	1.06	0.79	0.56	0.48

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

















Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

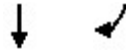
HCM Signalized Intersection Capacity Analysis
 1: Bladensburg Rd & 25th Pl/V St

Timing Plan: AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	22	7	39	235	38	49	1	31	508	125	5	22
Future Volume (vph)	22	7	39	235	38	49	1	31	508	125	5	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	9	9	9	12	12	12	12	10	10	10	12	10
Grade (%)		-1%			-2%				-2%			
Total Lost time (s)		4.5			4.5	2.0			3.5			
Lane Util. Factor		1.00			1.00	1.00			0.95			
Frbp, ped/bikes		1.00			1.00	1.00			0.99			
Flpb, ped/bikes		1.00			1.00	1.00			1.00			
Frt		0.92			1.00	0.85			0.97			
Flt Protected		0.98			0.96	1.00			1.00			
Satd. Flow (prot)		1220			1359	1205			2645			
Flt Permitted		0.78			0.70	1.00			0.84			
Satd. Flow (perm)		963			993	1205			2233			
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.90	0.89	0.89	0.89	0.90	0.88
Adj. Flow (vph)	29	9	52	313	51	65	1	35	571	140	6	25
RTOR Reduction (vph)	0	34	0	0	0	65	0	0	17	0	0	0
Lane Group Flow (vph)	0	56	0	0	364	0	0	0	731	0	0	0
Confl. Peds. (#/hr)	3					3		1		9		9
Heavy Vehicles (%)	0%	0%	0%	6%	6%	6%	2%	4%	4%	4%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)	6	6	6	6	6	6			6	6		
Turn Type	Perm	NA		Perm	NA	NA			Perm	NA		Perm
Protected Phases		4			4				2			
Permitted Phases	4			4				2				2
Actuated Green, G (s)		39.5			39.5	0.0			68.5			
Effective Green, g (s)		41.5			41.5	0.0			70.5			
Actuated g/C Ratio		0.35			0.35	0.00			0.59			
Clearance Time (s)		6.5			6.5				5.5			
Vehicle Extension (s)		3.0			3.0				1.0			
Lane Grp Cap (vph)		333			343	0			1311			
v/s Ratio Prot												
v/s Ratio Perm		0.06			c0.37				c0.33			
v/c Ratio		0.17			1.06	0.00			0.56			
Uniform Delay, d1		27.3			39.2	60.0			15.2			
Progression Factor		1.00			1.00	1.00			1.00			
Incremental Delay, d2		0.2			65.7	0.0			1.7			
Delay (s)		27.5			104.9	60.0			16.9			
Level of Service		C			F	E			B			
Approach Delay (s)		27.5			98.1				16.9			
Approach LOS		C			F				B			
Intersection Summary												
HCM 2000 Control Delay			41.6				HCM 2000 Level of Service				D	
HCM 2000 Volume to Capacity ratio			0.74									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)				8.0	
Intersection Capacity Utilization			75.5%				ICU Level of Service				D	
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis
 1: Bladensburg Rd & 25th Pl/V St

Timing Plan: AM Peak



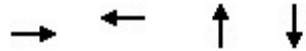
Movement	SBT	SBR
Lane Configurations	↑↑↑	
Traffic Volume (vph)	897	20
Future Volume (vph)	897	20
Ideal Flow (vphpl)	1900	1900
Lane Width	10	10
Grade (%)	-2%	
Total Lost time (s)	3.5	
Lane Util. Factor	0.91	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	1.00	
Flt Protected	1.00	
Satd. Flow (prot)	4263	
Flt Permitted	0.90	
Satd. Flow (perm)	3827	
Peak-hour factor, PHF	0.88	0.88
Adj. Flow (vph)	1019	23
RTOR Reduction (vph)	2	0
Lane Group Flow (vph)	1071	0
Confl. Peds. (#/hr)		1
Heavy Vehicles (%)	2%	2%
Bus Blockages (#/hr)	5	5
Parking (#/hr)		
Turn Type	NA	
Protected Phases	2	
Permitted Phases		
Actuated Green, G (s)	68.5	
Effective Green, g (s)	70.5	
Actuated g/C Ratio	0.59	
Clearance Time (s)	5.5	
Vehicle Extension (s)	1.0	
Lane Grp Cap (vph)	2248	
v/s Ratio Prot		
v/s Ratio Perm	0.28	
v/c Ratio	0.48	
Uniform Delay, d1	14.2	
Progression Factor	2.59	
Incremental Delay, d2	0.7	
Delay (s)	37.4	
Level of Service	D	
Approach Delay (s)	37.4	
Approach LOS	D	
Intersection Summary		

c Critical Lane Group

Queues

Timing Plan: AM Peak

3: Bladensburg Rd & Channing St



















Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	51	96	690	1043
v/c Ratio	0.16	0.30	0.36	0.48
Control Delay	7.7	18.4	1.5	17.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.7	18.4	1.5	17.4
Queue Length 50th (ft)	0	20	13	173
Queue Length 95th (ft)	25	69	15	194
Internal Link Dist (ft)	211	185	240	70
Turn Bay Length (ft)				
Base Capacity (vph)	328	325	1907	2173
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.16	0.30	0.36	0.48
Intersection Summary				

HCM Signalized Intersection Capacity Analysis


















3: Bladensburg Rd & Channing St

Timing Plan: AM Peak

														
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations														
Traffic Volume (vph)	34	0	12	44	0	28	0	548	52	9	877	0		
Future Volume (vph)	34	0	12	44	0	28	0	548	52	9	877	0		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Lane Width	12	12	12	9	12	9	12	10	10	10	10	12		
Grade (%)		0%			-2%			2%			-2%			
Total Lost time (s)		4.0			4.0			3.0			3.0			
Lane Util. Factor		1.00			1.00			0.95			0.91			
Frbp, ped/bikes		1.00			1.00			1.00			1.00			
Flpb, ped/bikes		1.00			1.00			1.00			1.00			
Frt		0.97			0.95			0.99			1.00			
Flt Protected		0.96			0.97			1.00			1.00			
Satd. Flow (prot)		1561			1535			2622			4241			
Flt Permitted		0.79			0.80			1.00			0.93			
Satd. Flow (perm)		1285			1270			2622			3951			
Peak-hour factor, PHF	0.90	0.90	0.90	0.75	0.90	0.75	0.90	0.87	0.87	0.85	0.85	0.90		
Adj. Flow (vph)	38	0	13	59	0	37	0	630	60	11	1032	0		
RTOR Reduction (vph)	0	40	0	0	50	0	0	6	0	0	0	0		
Lane Group Flow (vph)	0	11	0	0	46	0	0	684	0	0	1043	0		
Confl. Peds. (#/hr)				5					5	5				
Heavy Vehicles (%)	2%	2%	2%	3%	2%	3%	2%	4%	4%	3%	3%	2%		
Bus Blockages (#/hr)	0	0	0	0	0	0	0	6	6	0	5	0		
Parking (#/hr)				6		6		6	6					
Turn Type	Perm	NA		Perm	NA			NA		Perm	NA			
Protected Phases		4			8			1	6			2		
Permitted Phases	4			8			6			2				
Actuated Green, G (s)		24.0			24.0			85.0			64.0			
Effective Green, g (s)		26.0			26.0			87.0			66.0			
Actuated g/C Ratio		0.22			0.22			0.72			0.55			
Clearance Time (s)		6.0			6.0			5.0			5.0			
Lane Grp Cap (vph)		278			275			1900			2173			
v/s Ratio Prot								c0.26						
v/s Ratio Perm		0.01			c0.04						c0.26			
v/c Ratio		0.04			0.17			0.36			0.48			
Uniform Delay, d1		37.1			38.2			6.1			16.5			
Progression Factor		1.00			1.00			0.17			1.00			
Incremental Delay, d2		0.3			1.3			0.4			0.8			
Delay (s)		37.4			39.5			1.5			17.3			
Level of Service		D			D			A			B			
Approach Delay (s)		37.4			39.5			1.5			17.3			
Approach LOS		D			D			A			B			
Intersection Summary														
HCM 2000 Control Delay			13.2									HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio			0.39											
Actuated Cycle Length (s)			120.0								10.0			
Intersection Capacity Utilization			38.3%										ICU Level of Service	A
Analysis Period (min)			15											
c Critical Lane Group														

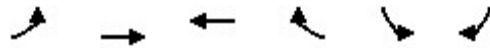
HCM Unsignalized Intersection Capacity Analysis
 5: Bladensburg Rd & Douglas St/Douglas Street

Timing Plan: AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	5	0	28	2	1	1	554	32	13	849	22
Future Volume (Veh/h)	4	5	0	28	2	1	1	554	32	13	849	22
Sign Control		Stop			Stop			Free			Free	
Grade		4%			1%			4%			-2%	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.88	0.88	0.88	0.91	0.91	0.91
Hourly flow rate (vph)	5	7	0	37	3	1	1	630	36	14	933	24
Pedestrians		2			6			1			1	
Lane Width (ft)		9.0			9.0			10.0			10.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								522				
pX, platoon unblocked	0.96	0.96		0.96	0.96	0.96				0.96		
vC, conflicting volume	1296	1649	326	1000	1643	340	959			672		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1228	1595	326	920	1589	235	959			580		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.4			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.4			2.2		
p0 queue free %	96	93	100	82	97	100	100			98		
cM capacity (veh/h)	125	101	674	204	102	741	627			929		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3					
Volume Total	12	41	316	351	247	466	257					
Volume Left	5	37	1	0	14	0	0					
Volume Right	0	1	0	36	0	0	24					
cSH	110	193	627	1700	929	1700	1700					
Volume to Capacity	0.11	0.21	0.00	0.21	0.02	0.27	0.15					
Queue Length 95th (ft)	9	19	0	0	1	0	0					
Control Delay (s)	41.7	28.6	0.1	0.0	0.7	0.0	0.0					
Lane LOS	E	D	A		A							
Approach Delay (s)	41.7	28.6	0.0		0.2							
Approach LOS	E	D										
Intersection Summary												
Average Delay			1.1									
Intersection Capacity Utilization			39.4%		ICU Level of Service					A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
 6: Douglas St & 28th St










Timing Plan: AM Peak



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↘	↙
Sign Control		Stop	Stop		Stop	
Traffic Volume (vph)	0	1	1	20	6	1
Future Volume (vph)	0	1	1	20	6	1
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	0	1	1	27	8	1
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total (vph)	1	28	9			
Volume Left (vph)	0	0	8			
Volume Right (vph)	0	27	1			
Hadj (s)	0.00	-0.51	0.30			
Departure Headway (s)	3.9	3.4	4.3			
Degree Utilization, x	0.00	0.03	0.01			
Capacity (veh/h)	903	1046	829			
Control Delay (s)	6.9	6.5	7.3			
Approach Delay (s)	6.9	6.5	7.3			
Approach LOS	A	A	A			
Intersection Summary						
Delay			6.7			
Level of Service			A			
Intersection Capacity Utilization			14.3%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 7: 25th PI & Employee Parking

Timing Plan: AM Peak

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	62	0	49	40	0	6
Future Volume (Veh/h)	62	0	49	40	0	6
Sign Control	Stop		Free			Free
Grade	0%		0%			-1%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	69	0	54	44	0	7
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			792			
pX, platoon unblocked						
vC, conflicting volume	83	76			98	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	83	76			98	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	100			100	
cM capacity (veh/h)	919	985			1495	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	69	98	7			
Volume Left	69	0	0			
Volume Right	0	44	0			
cSH	919	1700	1495			
Volume to Capacity	0.08	0.06	0.00			
Queue Length 95th (ft)	6	0	0			
Control Delay (s)	9.2	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.2	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			3.7			
Intersection Capacity Utilization			15.1%		ICU Level of Service	A
Analysis Period (min)			15			

Queues

Timing Plan: PM Peak

1: Bladensburg Rd & 25th Pl/V St



Lane Group	EBT	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	118	288	71	1003	957
v/c Ratio	0.35	1.12	0.19	0.44	0.71
Control Delay	28.9	132.7	18.9	9.7	30.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	28.9	132.7	18.9	9.7	30.2
Queue Length 50th (ft)	54	~257	19	112	409
Queue Length 95th (ft)	85	#326	43	134	470
Internal Link Dist (ft)	699	556		558	606
Turn Bay Length (ft)			65		
Base Capacity (vph)	333	257	372	2282	1352
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.35	1.12	0.19	0.44	0.71

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.


















Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
 1: Bladensburg Rd & 25th Pl/V St

Timing Plan: PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	19	34	36	206	10	53	4	36	635	198	4	59
Future Volume (vph)	19	34	36	206	10	53	4	36	635	198	4	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	9	9	9	12	12	12	12	10	10	10	12	10
Grade (%)		-1%			-2%				-2%			
Total Lost time (s)		4.5			4.5	4.5			3.5			
Lane Util. Factor		1.00			1.00	1.00			0.91			
Frbp, ped/bikes		0.99			1.00	0.98			0.98			
Flpb, ped/bikes		1.00			0.99	1.00			1.00			
Frt		0.95			1.00	0.85			0.97			
Flt Protected		0.99			0.95	1.00			1.00			
Satd. Flow (prot)		1247			1371	1203			4086			
Flt Permitted		0.86			0.62	1.00			0.85			
Satd. Flow (perm)		1089			895	1203			3463			
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.90	0.87	0.87	0.87	0.90	0.88
Adj. Flow (vph)	25	45	48	275	13	71	4	41	730	228	4	67
RTOR Reduction (vph)	0	21	0	0	0	26	0	0	44	0	0	0
Lane Group Flow (vph)	0	97	0	0	288	45	0	0	959	0	0	0
Confl. Peds. (#/hr)	7		6	6		7		3		17		17
Heavy Vehicles (%)	0%	0%	0%	4%	4%	4%	2%	2%	2%	2%	2%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)	6	6	6	6	6	6						
Turn Type	Perm	NA		Perm	NA	Perm	Perm	Perm	NA		Perm	Perm
Protected Phases		4			4				2			
Permitted Phases	4			4		4	2	2			2	2
Actuated Green, G (s)		32.5			32.5	32.5			75.5			
Effective Green, g (s)		34.5			34.5	34.5			77.5			
Actuated g/C Ratio		0.29			0.29	0.29			0.65			
Clearance Time (s)		6.5			6.5	6.5			5.5			
Vehicle Extension (s)		3.0			3.0	3.0			1.0			
Lane Grp Cap (vph)		313			257	345			2236			
v/s Ratio Prot												
v/s Ratio Perm		0.09			0.32	0.04			0.28			
v/c Ratio		0.31			1.12	0.13			0.43			
Uniform Delay, d1		33.5			42.8	31.6			10.4			
Progression Factor		1.00			1.00	1.00			1.00			
Incremental Delay, d2		0.6			92.5	0.2			0.6			
Delay (s)		34.0			135.2	31.8			11.0			
Level of Service		C			F	C			B			
Approach Delay (s)		34.0			114.8				11.0			
Approach LOS		C			F				B			
Intersection Summary												
HCM 2000 Control Delay			34.6				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.83									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			78.9%				ICU Level of Service			D		
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis
 1: Bladensburg Rd & 25th Pl/V St

Timing Plan: PM Peak



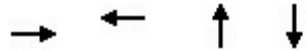
Movement	SBT	SBR
Lane Configurations	4T	
Traffic Volume (vph)	765	15
Future Volume (vph)	765	15
Ideal Flow (vphpl)	1900	1900
Lane Width	10	10
Grade (%)	-2%	
Total Lost time (s)	3.5	
Lane Util. Factor	0.95	
Frpb, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	1.00	
Flt Protected	1.00	
Satd. Flow (prot)	2726	
Flt Permitted	0.77	
Satd. Flow (perm)	2094	
Peak-hour factor, PHF	0.88	0.88
Adj. Flow (vph)	869	17
RTOR Reduction (vph)	1	0
Lane Group Flow (vph)	956	0
Confl. Peds. (#/hr)		3
Heavy Vehicles (%)	3%	3%
Bus Blockages (#/hr)	6	6
Parking (#/hr)	6	6
Turn Type	NA	
Protected Phases	2	
Permitted Phases		
Actuated Green, G (s)	75.5	
Effective Green, g (s)	77.5	
Actuated g/C Ratio	0.65	
Clearance Time (s)	5.5	
Vehicle Extension (s)	1.0	
Lane Grp Cap (vph)	1352	
v/s Ratio Prot		
v/s Ratio Perm	c0.46	
v/c Ratio	0.71	
Uniform Delay, d1	13.9	
Progression Factor	1.93	
Incremental Delay, d2	2.6	
Delay (s)	29.3	
Level of Service	C	
Approach Delay (s)	29.3	
Approach LOS	C	
Intersection Summary		

c Critical Lane Group

Queues

Timing Plan: PM Peak

















3: Bladensburg Rd & Channing St



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	58	56	936	871
v/c Ratio	0.17	0.18	0.33	0.61
Control Delay	9.4	9.2	11.7	21.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	9.4	9.2	11.7	21.0
Queue Length 50th (ft)	0	0	149	232
Queue Length 95th (ft)	32	30	143	293
Internal Link Dist (ft)	197	185	240	70
Turn Bay Length (ft)				
Base Capacity (vph)	332	319	2807	1437
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.17	0.18	0.33	0.61
Intersection Summary				

















HCM Signalized Intersection Capacity Analysis
3: Bladensburg Rd & Channing St

Timing Plan: PM Peak

														
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations														
Traffic Volume (vph)	33	0	19	39	0	3	20	640	46	6	769	0		
Future Volume (vph)	33	0	19	39	0	3	20	640	46	6	769	0		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Lane Width	12	12	12	9	12	9	12	10	10	10	10	12		
Grade (%)		0%			-2%			2%			-2%			
Total Lost time (s)		4.0			4.0			3.0			3.0			
Lane Util. Factor		1.00			1.00			0.91			0.95			
Frbp, ped/bikes		1.00			1.00			1.00			1.00			
Flpb, ped/bikes		1.00			0.99			1.00			1.00			
Frt		0.95			0.99			0.99			1.00			
Flt Protected		0.97			0.96			1.00			1.00			
Satd. Flow (prot)		1545			1619			4135			2800			
Flt Permitted		0.82			0.74			0.92			0.95			
Satd. Flow (perm)		1302			1246			3790			2652			
Peak-hour factor, PHF	0.90	0.90	0.90	0.75	0.90	0.75	0.90	0.75	0.75	0.89	0.89	0.90		
Adj. Flow (vph)	37	0	21	52	0	4	22	853	61	7	864	0		
RTOR Reduction (vph)	0	45	0	0	44	0	0	7	0	0	0	0		
Lane Group Flow (vph)	0	13	0	0	12	0	0	929	0	0	871	0		
Confl. Peds. (#/hr)				7					7	7				
Heavy Vehicles (%)	2%	2%	2%	0%	2%	0%	2%	2%	2%	1%	1%	2%		
Bus Blockages (#/hr)	0	0	0	0	0	0	0	6	6	0	6	0		
Parking (#/hr)				6		6					6			
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA			
Protected Phases		4			8		1	6			2			
Permitted Phases	4			8			6			2				
Actuated Green, G (s)		24.0			24.0			85.0			63.0			
Effective Green, g (s)		26.0			26.0			87.0			65.0			
Actuated g/C Ratio		0.22			0.22			0.72			0.54			
Clearance Time (s)		6.0			6.0			5.0			5.0			
Lane Grp Cap (vph)		282			269			2802			1436			
v/s Ratio Prot								c0.05						
v/s Ratio Perm		0.01			c0.01			0.19			c0.33			
v/c Ratio		0.04			0.05			0.33			0.61			
Uniform Delay, d1		37.2			37.2			6.0			18.8			
Progression Factor		1.00			1.00			1.99			1.00			
Incremental Delay, d2		0.3			0.3			0.3			1.9			
Delay (s)		37.5			37.5			12.2			20.7			
Level of Service		D			D			B			C			
Approach Delay (s)		37.5			37.5			12.2			20.7			
Approach LOS		D			D			B			C			
Intersection Summary														
HCM 2000 Control Delay			17.5									HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio			0.43											
Actuated Cycle Length (s)			120.0								10.0			
Intersection Capacity Utilization			43.7%										ICU Level of Service	A
Analysis Period (min)			15											
c Critical Lane Group														

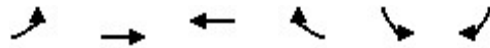
HCM Unsignalized Intersection Capacity Analysis
5: Bladensburg Rd & Douglas St/Douglas Street

Timing Plan: PM Peak

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	5	0	3	30	8	1	5	612	48	9	707	2	
Future Volume (Veh/h)	5	0	3	30	8	1	5	612	48	9	707	2	
Sign Control		Stop			Stop			Free			Free		
Grade		4%			1%			4%			-2%		
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.90	0.90	0.90	0.90	0.90	0.90	
Hourly flow rate (vph)	7	0	4	40	11	1	6	680	53	10	786	2	
Pedestrians		2			4						3		
Lane Width (ft)		9.0			9.0						10.0		
Walking Speed (ft/s)		4.0			4.0						4.0		
Percent Blockage		0			0						0		
Right turn flare (veh)													
Median type								None			None		
Median storage (veh)													
Upstream signal (ft)								522					
pX, platoon unblocked													
vC, conflicting volume	1057	1558	396	1140	1532	260	790				737		
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	1057	1558	396	1140	1532	260	790				737		
tC, single (s)	7.5	6.5	6.9	7.6	6.6	7.0	4.2				4.1		
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2				2.2		
p0 queue free %	96	100	99	73	90	100	99				99		
cM capacity (veh/h)	164	111	608	151	112	732	812				862		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2						
Volume Total	11	52	176	340	223	403	395						
Volume Left	7	40	6	0	0	10	0						
Volume Right	4	1	0	0	53	0	2						
cSH	224	142	812	1700	1700	862	1700						
Volume to Capacity	0.05	0.37	0.01	0.20	0.13	0.01	0.23						
Queue Length 95th (ft)	4	38	1	0	0	1	0						
Control Delay (s)	21.9	44.2	0.4	0.0	0.0	0.4	0.0						
Lane LOS	C	E	A			A							
Approach Delay (s)	21.9	44.2	0.1			0.2							
Approach LOS	C	E											
Intersection Summary													
Average Delay			1.7										
Intersection Capacity Utilization			39.8%			ICU Level of Service			A				
Analysis Period (min)			15										

HCM Unsignalized Intersection Capacity Analysis
 6: Douglas St & 28th St










Timing Plan: PM Peak



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Sign Control		Stop	Stop		Stop	
Traffic Volume (vph)	2	0	1	12	10	2
Future Volume (vph)	2	0	1	12	10	2
Peak Hour Factor	0.75	0.75	0.75	0.75	0.83	0.83
Hourly flow rate (vph)	3	0	1	16	12	2
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total (vph)	3	17	14			
Volume Left (vph)	3	0	12			
Volume Right (vph)	0	16	2			
Hadj (s)	0.20	-0.45	0.09			
Departure Headway (s)	4.1	3.5	4.0			
Degree Utilization, x	0.00	0.02	0.02			
Capacity (veh/h)	859	1022	877			
Control Delay (s)	7.2	6.5	7.1			
Approach Delay (s)	7.2	6.5	7.1			
Approach LOS	A	A	A			
Intersection Summary						
Delay			6.8			
Level of Service			A			
Intersection Capacity Utilization			14.6%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
7: 25th PI & Employee Parking

Timing Plan: PM Peak

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	40	0	9	52	0	49
Future Volume (Veh/h)	40	0	9	52	0	49
Sign Control	Stop		Free		Free	
Grade	0%		0%		-1%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	44	0	10	58	0	54
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)	779					
pX, platoon unblocked						
vC, conflicting volume	93	39			68	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	93	39			68	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	95	100			100	
cM capacity (veh/h)	907	1033			1533	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	44	68	54			
Volume Left	44	0	0			
Volume Right	0	58	0			
cSH	907	1700	1533			
Volume to Capacity	0.05	0.04	0.00			
Queue Length 95th (ft)	4	0	0			
Control Delay (s)	9.2	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.2	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			2.4			
Intersection Capacity Utilization			13.7%	ICU Level of Service	A	
Analysis Period (min)			15			

Queues

Timing Plan: AM Peak

1: Bladensburg Rd & 25th Pl/V St



















Lane Group	EBT	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	90	364	65	747	1073
v/c Ratio	0.22	0.97	0.14	0.59	0.50
Control Delay	13.4	77.1	15.2	19.1	41.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	13.4	77.1	15.2	19.1	41.1
Queue Length 50th (ft)	19	273	17	184	291
Queue Length 95th (ft)	41	#343	37	242	334
Internal Link Dist (ft)	712	556		558	606
Turn Bay Length (ft)			65		
Base Capacity (vph)	420	378	468	1259	2131
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.21	0.96	0.14	0.59	0.50

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
 1: Bladensburg Rd & 25th PI/V St

Timing Plan: AM Peak

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	
Lane Configurations													
Traffic Volume (vph)	22	7	39	235	38	49	1	31	508	125	5	22	
Future Volume (vph)	22	7	39	235	38	49	1	31	508	125	5	22	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Lane Width	9	9	9	12	12	12	12	10	10	10	12	10	
Grade (%)		-1%			-2%				-2%				
Total Lost time (s)		4.5			4.5	4.5			3.5				
Lane Util. Factor		1.00			1.00	1.00			0.95				
Frbp, ped/bikes		1.00			1.00	0.98			0.99				
Flpb, ped/bikes		1.00			1.00	1.00			1.00				
Frt		0.92			1.00	0.85			0.97				
Flt Protected		0.98			0.96	1.00			1.00				
Satd. Flow (prot)		1220			1359	1186			2645				
Flt Permitted		0.83			0.70	1.00			0.84				
Satd. Flow (perm)		1024			997	1186			2232				
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.90	0.89	0.89	0.89	0.90	0.88	
Adj. Flow (vph)	29	9	52	313	51	65	1	35	571	140	6	25	
RTOR Reduction (vph)	0	32	0	0	0	19	0	0	16	0	0	0	
Lane Group Flow (vph)	0	58	0	0	364	46	0	0	731	0	0	0	
Confl. Peds. (#/hr)	3					3		1		9		9	
Heavy Vehicles (%)	0%	0%	0%	6%	6%	6%	2%	4%	4%	4%	2%	2%	
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0	
Parking (#/hr)	6	6	6	6	6	6			6	6			
Turn Type	Perm	NA		Perm	NA	Perm	Perm	Perm	NA		Perm	Perm	
Protected Phases		4			4				2				
Permitted Phases	4			4		4	2	2			2	2	
Actuated Green, G (s)		43.2			43.2	43.2			64.8				
Effective Green, g (s)		45.2			45.2	45.2			66.8				
Actuated g/C Ratio		0.38			0.38	0.38			0.56				
Clearance Time (s)		6.5			6.5	6.5			5.5				
Vehicle Extension (s)		3.0			3.0	3.0			1.0				
Lane Grp Cap (vph)		385			375	446			1242				
v/s Ratio Prot													
v/s Ratio Perm		0.06			0.37	0.04			0.33				
v/c Ratio		0.15			0.97	0.10			0.59				
Uniform Delay, d1		24.7			36.7	24.2			17.5				
Progression Factor		1.00			1.00	1.00			1.00				
Incremental Delay, d2		0.2			38.6	0.1			2.0				
Delay (s)		24.9			75.3	24.3			19.6				
Level of Service		C			E	C			B				
Approach Delay (s)		24.9			67.6				19.6				
Approach LOS		C			E				B				
Intersection Summary													
HCM 2000 Control Delay			38.3		HCM 2000 Level of Service					D			
HCM 2000 Volume to Capacity ratio			0.74										
Actuated Cycle Length (s)			120.0		Sum of lost time (s)					8.0			
Intersection Capacity Utilization			75.5%		ICU Level of Service					D			
Analysis Period (min)			15										

HCM Signalized Intersection Capacity Analysis
 1: Bladensburg Rd & 25th Pl/V St

Timing Plan: AM Peak



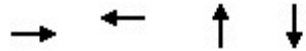
Movement	SBT	SBR
Lane Configurations	↑↑↑	
Traffic Volume (vph)	897	20
Future Volume (vph)	897	20
Ideal Flow (vphpl)	1900	1900
Lane Width	10	10
Grade (%)	-2%	
Total Lost time (s)	3.5	
Lane Util. Factor	0.91	
Frbp, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	1.00	
Flt Protected	1.00	
Satd. Flow (prot)	4263	
Flt Permitted	0.90	
Satd. Flow (perm)	3826	
Peak-hour factor, PHF	0.88	0.88
Adj. Flow (vph)	1019	23
RTOR Reduction (vph)	2	0
Lane Group Flow (vph)	1071	0
Confl. Peds. (#/hr)		1
Heavy Vehicles (%)	2%	2%
Bus Blockages (#/hr)	5	5
Parking (#/hr)		
Turn Type	NA	
Protected Phases	2	
Permitted Phases		
Actuated Green, G (s)	64.8	
Effective Green, g (s)	66.8	
Actuated g/C Ratio	0.56	
Clearance Time (s)	5.5	
Vehicle Extension (s)	1.0	
Lane Grp Cap (vph)	2129	
v/s Ratio Prot		
v/s Ratio Perm	0.28	
v/c Ratio	0.50	
Uniform Delay, d1	16.4	
Progression Factor	2.44	
Incremental Delay, d2	0.8	
Delay (s)	40.7	
Level of Service	D	
Approach Delay (s)	40.7	
Approach LOS	D	
Intersection Summary		

c Critical Lane Group

Queues

Timing Plan: AM Peak

















3: Bladensburg Rd & Channing St



Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	51	96	690	1043
v/c Ratio	0.16	0.30	0.36	0.48
Control Delay	7.7	18.4	1.3	17.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	7.7	18.4	1.3	17.4
Queue Length 50th (ft)	0	20	13	173
Queue Length 95th (ft)	25	69	15	194
Internal Link Dist (ft)	211	185	240	70
Turn Bay Length (ft)				
Base Capacity (vph)	328	325	1907	2173
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.16	0.30	0.36	0.48
Intersection Summary				


















HCM Signalized Intersection Capacity Analysis
3: Bladensburg Rd & Channing St

Timing Plan: AM Peak

														
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations														
Traffic Volume (vph)	34	0	12	44	0	28	0	548	52	9	877	0		
Future Volume (vph)	34	0	12	44	0	28	0	548	52	9	877	0		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Lane Width	12	12	12	9	12	9	12	10	10	10	10	12		
Grade (%)		0%			-2%			2%			-2%			
Total Lost time (s)		4.0			4.0			3.0			3.0			
Lane Util. Factor		1.00			1.00			0.95			0.91			
Frbp, ped/bikes		1.00			1.00			1.00			1.00			
Flpb, ped/bikes		1.00			1.00			1.00			1.00			
Frt		0.97			0.95			0.99			1.00			
Flt Protected		0.96			0.97			1.00			1.00			
Satd. Flow (prot)		1561			1535			2622			4241			
Flt Permitted		0.79			0.80			1.00			0.93			
Satd. Flow (perm)		1285			1270			2622			3951			
Peak-hour factor, PHF	0.90	0.90	0.90	0.75	0.90	0.75	0.90	0.87	0.87	0.85	0.85	0.90		
Adj. Flow (vph)	38	0	13	59	0	37	0	630	60	11	1032	0		
RTOR Reduction (vph)	0	40	0	0	50	0	0	6	0	0	0	0		
Lane Group Flow (vph)	0	11	0	0	46	0	0	684	0	0	1043	0		
Confl. Peds. (#/hr)				5					5	5				
Heavy Vehicles (%)	2%	2%	2%	3%	2%	3%	2%	4%	4%	3%	3%	2%		
Bus Blockages (#/hr)	0	0	0	0	0	0	0	6	6	0	5	0		
Parking (#/hr)				6		6		6	6					
Turn Type	Perm	NA		Perm	NA			NA		Perm	NA			
Protected Phases		4			8			1	6		2			
Permitted Phases	4			8			6			2				
Actuated Green, G (s)		24.0			24.0			85.0			64.0			
Effective Green, g (s)		26.0			26.0			87.0			66.0			
Actuated g/C Ratio		0.22			0.22			0.72			0.55			
Clearance Time (s)		6.0			6.0			5.0			5.0			
Lane Grp Cap (vph)		278			275			1900			2173			
v/s Ratio Prot								c0.26						
v/s Ratio Perm		0.01			c0.04						c0.26			
v/c Ratio		0.04			0.17			0.36			0.48			
Uniform Delay, d1		37.1			38.2			6.1			16.5			
Progression Factor		1.00			1.00			0.14			1.00			
Incremental Delay, d2		0.3			1.3			0.5			0.8			
Delay (s)		37.4			39.5			1.4			17.3			
Level of Service		D			D			A			B			
Approach Delay (s)		37.4			39.5			1.4			17.3			
Approach LOS		D			D			A			B			
Intersection Summary														
HCM 2000 Control Delay			13.1									HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio			0.39											
Actuated Cycle Length (s)			120.0								10.0			
Intersection Capacity Utilization			38.3%										ICU Level of Service	A
Analysis Period (min)			15											
c Critical Lane Group														

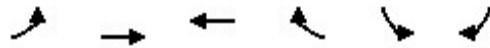
HCM Unsignalized Intersection Capacity Analysis
5: Bladensburg Rd & Douglas St/Douglas Street

Timing Plan: AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	4	5	0	28	2	1	1	554	32	13	849	22
Future Volume (Veh/h)	4	5	0	28	2	1	1	554	32	13	849	22
Sign Control		Stop			Stop			Free			Free	
Grade		4%			1%			4%			-2%	
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.88	0.88	0.88	0.91	0.91	0.91
Hourly flow rate (vph)	5	7	0	37	3	1	1	630	36	14	933	24
Pedestrians		2			6			1			1	
Lane Width (ft)		9.0			9.0			10.0			10.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		0			0			0			0	
Right turn flare (veh)												
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)								522				
pX, platoon unblocked	0.96	0.96		0.96	0.96	0.96				0.96		
vC, conflicting volume	1296	1649	326	1000	1643	340	959			672		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1228	1595	326	920	1589	235	959			580		
tC, single (s)	7.5	6.5	6.9	7.5	6.5	6.9	4.4			4.2		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.4			2.2		
p0 queue free %	96	93	100	82	97	100	100			98		
cM capacity (veh/h)	125	101	674	204	102	741	627			929		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3					
Volume Total	12	41	316	351	247	466	257					
Volume Left	5	37	1	0	14	0	0					
Volume Right	0	1	0	36	0	0	24					
cSH	110	193	627	1700	929	1700	1700					
Volume to Capacity	0.11	0.21	0.00	0.21	0.02	0.27	0.15					
Queue Length 95th (ft)	9	19	0	0	1	0	0					
Control Delay (s)	41.7	28.6	0.1	0.0	0.7	0.0	0.0					
Lane LOS	E	D	A		A							
Approach Delay (s)	41.7	28.6	0.0		0.2							
Approach LOS	E	D										
Intersection Summary												
Average Delay			1.1									
Intersection Capacity Utilization			39.4%		ICU Level of Service					A		
Analysis Period (min)			15									

HCM Unsignalized Intersection Capacity Analysis
 6: Douglas St & 28th St










Timing Plan: AM Peak



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↶	↷		↘	↙
Sign Control		Stop	Stop		Stop	
Traffic Volume (vph)	0	1	1	20	6	1
Future Volume (vph)	0	1	1	20	6	1
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75
Hourly flow rate (vph)	0	1	1	27	8	1
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total (vph)	1	28	9			
Volume Left (vph)	0	0	8			
Volume Right (vph)	0	27	1			
Hadj (s)	0.00	-0.51	0.30			
Departure Headway (s)	3.9	3.4	4.3			
Degree Utilization, x	0.00	0.03	0.01			
Capacity (veh/h)	903	1046	829			
Control Delay (s)	6.9	6.5	7.3			
Approach Delay (s)	6.9	6.5	7.3			
Approach LOS	A	A	A			
Intersection Summary						
Delay			6.7			
Level of Service			A			
Intersection Capacity Utilization			14.3%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
7: 25th PI & Employee Parking

Timing Plan: AM Peak

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	62	0	49	40	0	6
Future Volume (Veh/h)	62	0	49	40	0	6
Sign Control	Stop		Free		Free	
Grade	0%		0%		-1%	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	69	0	54	44	0	7
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None		None	
Median storage (veh)						
Upstream signal (ft)			792			
pX, platoon unblocked						
vC, conflicting volume	83	76			98	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	83	76			98	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	100			100	
cM capacity (veh/h)	919	985			1495	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	69	98	7			
Volume Left	69	0	0			
Volume Right	0	44	0			
cSH	919	1700	1495			
Volume to Capacity	0.08	0.06	0.00			
Queue Length 95th (ft)	6	0	0			
Control Delay (s)	9.2	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.2	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			3.7			
Intersection Capacity Utilization			15.1%	ICU Level of Service		A
Analysis Period (min)			15			

Queues

Timing Plan: PM Peak

1: Bladensburg Rd & 25th Pl/V St




















Lane Group	EBT	WBT	WBR	NBT	SBT
Lane Group Flow (vph)	118	288	71	1003	957
v/c Ratio	0.31	0.99	0.17	0.46	0.75
Control Delay	25.2	91.7	16.4	11.7	34.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	25.2	91.7	16.4	11.7	34.9
Queue Length 50th (ft)	50	221	17	126	411
Queue Length 95th (ft)	79	#298	40	151	471
Internal Link Dist (ft)	699	556		558	606
Turn Bay Length (ft)			65		
Base Capacity (vph)	382	291	412	2164	1282
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.31	0.99	0.17	0.46	0.75

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis
 1: Bladensburg Rd & 25th Pl/V St

Timing Plan: PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	19	34	36	206	10	53	4	36	635	198	4	59
Future Volume (vph)	19	34	36	206	10	53	4	36	635	198	4	59
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	9	9	9	12	12	12	12	10	10	10	12	10
Grade (%)		-1%			-2%				-2%			
Total Lost time (s)		4.5			4.5	4.5			3.5			
Lane Util. Factor		1.00			1.00	1.00			0.91			
Frbp, ped/bikes		0.99			1.00	0.98			0.98			
Flpb, ped/bikes		1.00			0.99	1.00			1.00			
Frt		0.95			1.00	0.85			0.97			
Flt Protected		0.99			0.95	1.00			1.00			
Satd. Flow (prot)		1247			1371	1203			4086			
Flt Permitted		0.90			0.63	1.00			0.85			
Satd. Flow (perm)		1129			909	1203			3462			
Peak-hour factor, PHF	0.75	0.75	0.75	0.75	0.75	0.75	0.90	0.87	0.87	0.87	0.90	0.88
Adj. Flow (vph)	25	45	48	275	13	71	4	41	730	228	4	67
RTOR Reduction (vph)	0	20	0	0	0	26	0	0	44	0	0	0
Lane Group Flow (vph)	0	98	0	0	288	45	0	0	959	0	0	0
Confl. Peds. (#/hr)	7		6	6		7		3		17		17
Heavy Vehicles (%)	0%	0%	0%	4%	4%	4%	2%	2%	2%	2%	2%	3%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)	6	6	6	6	6	6						
Turn Type	Perm	NA		Perm	NA	Perm	Perm	Perm	NA		Perm	Perm
Protected Phases		4			4				2			
Permitted Phases	4			4		4	2	2			2	2
Actuated Green, G (s)		36.5			36.5	36.5			71.5			
Effective Green, g (s)		38.5			38.5	38.5			73.5			
Actuated g/C Ratio		0.32			0.32	0.32			0.61			
Clearance Time (s)		6.5			6.5	6.5			5.5			
Vehicle Extension (s)		3.0			3.0	3.0			1.0			
Lane Grp Cap (vph)		362			291	385			2120			
v/s Ratio Prot												
v/s Ratio Perm		0.09			0.32	0.04			0.28			
v/c Ratio		0.27			0.99	0.12			0.45			
Uniform Delay, d1		30.3			40.6	28.7			12.5			
Progression Factor		1.00			1.00	1.00			1.00			
Incremental Delay, d2		0.4			49.4	0.1			0.7			
Delay (s)		30.7			89.9	28.9			13.2			
Level of Service		C			F	C			B			
Approach Delay (s)		30.7			77.9				13.2			
Approach LOS		C			E				B			
Intersection Summary												
HCM 2000 Control Delay			31.7				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.83									
Actuated Cycle Length (s)			120.0				Sum of lost time (s)			8.0		
Intersection Capacity Utilization			78.9%				ICU Level of Service			D		
Analysis Period (min)			15									

HCM Signalized Intersection Capacity Analysis
 1: Bladensburg Rd & 25th Pl/V St

Timing Plan: PM Peak



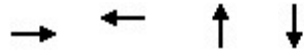
Movement	SBT	SBR
Lane Configurations	4T	
Traffic Volume (vph)	765	15
Future Volume (vph)	765	15
Ideal Flow (vphpl)	1900	1900
Lane Width	10	10
Grade (%)	-2%	
Total Lost time (s)	3.5	
Lane Util. Factor	0.95	
Frbp, ped/bikes	1.00	
Flpb, ped/bikes	1.00	
Frt	1.00	
Flt Protected	1.00	
Satd. Flow (prot)	2726	
Flt Permitted	0.76	
Satd. Flow (perm)	2092	
Peak-hour factor, PHF	0.88	0.88
Adj. Flow (vph)	869	17
RTOR Reduction (vph)	1	0
Lane Group Flow (vph)	956	0
Confl. Peds. (#/hr)		3
Heavy Vehicles (%)	3%	3%
Bus Blockages (#/hr)	6	6
Parking (#/hr)	6	6
Turn Type	NA	
Protected Phases	2	
Permitted Phases		
Actuated Green, G (s)	71.5	
Effective Green, g (s)	73.5	
Actuated g/C Ratio	0.61	
Clearance Time (s)	5.5	
Vehicle Extension (s)	1.0	
Lane Grp Cap (vph)	1281	
v/s Ratio Prot		
v/s Ratio Perm	c0.46	
v/c Ratio	0.75	
Uniform Delay, d1	16.6	
Progression Factor	1.84	
Incremental Delay, d2	3.4	
Delay (s)	33.9	
Level of Service	C	
Approach Delay (s)	33.9	
Approach LOS	C	
Intersection Summary		

c Critical Lane Group

Queues

Timing Plan: PM Peak

3: Bladensburg Rd & Channing St



















Lane Group	EBT	WBT	NBT	SBT
Lane Group Flow (vph)	58	56	936	871
v/c Ratio	0.17	0.18	0.33	0.61
Control Delay	9.4	9.2	10.4	21.0
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	9.4	9.2	10.4	21.0
Queue Length 50th (ft)	0	0	151	232
Queue Length 95th (ft)	32	30	145	293
Internal Link Dist (ft)	197	185	240	70
Turn Bay Length (ft)				
Base Capacity (vph)	332	319	2807	1437
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.17	0.18	0.33	0.61
Intersection Summary				

HCM Signalized Intersection Capacity Analysis

















3: Bladensburg Rd & Channing St

Timing Plan: PM Peak

														
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations														
Traffic Volume (vph)	33	0	19	39	0	3	20	640	46	6	769	0		
Future Volume (vph)	33	0	19	39	0	3	20	640	46	6	769	0		
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900		
Lane Width	12	12	12	9	12	9	12	10	10	10	10	12		
Grade (%)		0%			-2%			2%			-2%			
Total Lost time (s)		4.0			4.0			3.0			3.0			
Lane Util. Factor		1.00			1.00			0.91			0.95			
Frbp, ped/bikes		1.00			1.00			1.00			1.00			
Flpb, ped/bikes		1.00			0.99			1.00			1.00			
Frt		0.95			0.99			0.99			1.00			
Flt Protected		0.97			0.96			1.00			1.00			
Satd. Flow (prot)		1545			1619			4135			2800			
Flt Permitted		0.82			0.74			0.92			0.95			
Satd. Flow (perm)		1302			1246			3790			2652			
Peak-hour factor, PHF	0.90	0.90	0.90	0.75	0.90	0.75	0.90	0.75	0.75	0.89	0.89	0.90		
Adj. Flow (vph)	37	0	21	52	0	4	22	853	61	7	864	0		
RTOR Reduction (vph)	0	45	0	0	44	0	0	7	0	0	0	0		
Lane Group Flow (vph)	0	13	0	0	12	0	0	929	0	0	871	0		
Confl. Peds. (#/hr)				7					7	7				
Heavy Vehicles (%)	2%	2%	2%	0%	2%	0%	2%	2%	2%	1%	1%	2%		
Bus Blockages (#/hr)	0	0	0	0	0	0	0	6	6	0	6	0		
Parking (#/hr)				6		6					6			
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA			
Protected Phases		4			8		1	6			2			
Permitted Phases	4			8			6			2				
Actuated Green, G (s)		24.0			24.0			85.0			63.0			
Effective Green, g (s)		26.0			26.0			87.0			65.0			
Actuated g/C Ratio		0.22			0.22			0.72			0.54			
Clearance Time (s)		6.0			6.0			5.0			5.0			
Lane Grp Cap (vph)		282			269			2802			1436			
v/s Ratio Prot								c0.05						
v/s Ratio Perm		0.01			c0.01			0.19			c0.33			
v/c Ratio		0.04			0.05			0.33			0.61			
Uniform Delay, d1		37.2			37.2			6.0			18.8			
Progression Factor		1.00			1.00			1.77			1.00			
Incremental Delay, d2		0.3			0.3			0.3			1.9			
Delay (s)		37.5			37.5			10.9			20.7			
Level of Service		D			D			B			C			
Approach Delay (s)		37.5			37.5			10.9			20.7			
Approach LOS		D			D			B			C			
Intersection Summary														
HCM 2000 Control Delay			16.9									HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio			0.43											
Actuated Cycle Length (s)			120.0								10.0			
Intersection Capacity Utilization			43.7%										ICU Level of Service	A
Analysis Period (min)			15											
c Critical Lane Group														

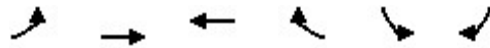
HCM Unsignalized Intersection Capacity Analysis
5: Bladensburg Rd & Douglas St/Douglas Street

Timing Plan: PM Peak

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	5	0	3	30	8	1	5	612	48	9	707	2	
Future Volume (Veh/h)	5	0	3	30	8	1	5	612	48	9	707	2	
Sign Control		Stop			Stop			Free			Free		
Grade		4%			1%			4%			-2%		
Peak Hour Factor	0.75	0.75	0.75	0.75	0.75	0.75	0.90	0.90	0.90	0.90	0.90	0.90	
Hourly flow rate (vph)	7	0	4	40	11	1	6	680	53	10	786	2	
Pedestrians		2			4						3		
Lane Width (ft)		9.0			9.0						10.0		
Walking Speed (ft/s)		4.0			4.0						4.0		
Percent Blockage		0			0						0		
Right turn flare (veh)													
Median type								None			None		
Median storage veh													
Upstream signal (ft)								522					
pX, platoon unblocked													
vC, conflicting volume	1057	1558	396	1140	1532	260	790				737		
vC1, stage 1 conf vol													
vC2, stage 2 conf vol													
vCu, unblocked vol	1057	1558	396	1140	1532	260	790				737		
tC, single (s)	7.5	6.5	6.9	7.6	6.6	7.0	4.2				4.1		
tC, 2 stage (s)													
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2				2.2		
p0 queue free %	96	100	99	73	90	100	99				99		
cM capacity (veh/h)	164	111	608	151	112	732	812				862		
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	NB 3	SB 1	SB 2						
Volume Total	11	52	176	340	223	403	395						
Volume Left	7	40	6	0	0	10	0						
Volume Right	4	1	0	0	53	0	2						
cSH	224	142	812	1700	1700	862	1700						
Volume to Capacity	0.05	0.37	0.01	0.20	0.13	0.01	0.23						
Queue Length 95th (ft)	4	38	1	0	0	1	0						
Control Delay (s)	21.9	44.2	0.4	0.0	0.0	0.4	0.0						
Lane LOS	C	E	A			A							
Approach Delay (s)	21.9	44.2	0.1			0.2							
Approach LOS	C	E											
Intersection Summary													
Average Delay			1.7										
Intersection Capacity Utilization			39.8%			ICU Level of Service				A			
Analysis Period (min)			15										

HCM Unsignalized Intersection Capacity Analysis
6: Douglas St & 28th St










Timing Plan: PM Peak



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	
Sign Control		Stop	Stop		Stop	
Traffic Volume (vph)	2	0	1	12	10	2
Future Volume (vph)	2	0	1	12	10	2
Peak Hour Factor	0.75	0.75	0.75	0.75	0.83	0.83
Hourly flow rate (vph)	3	0	1	16	12	2
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total (vph)	3	17	14			
Volume Left (vph)	3	0	12			
Volume Right (vph)	0	16	2			
Hadj (s)	0.20	-0.45	0.09			
Departure Headway (s)	4.1	3.5	4.0			
Degree Utilization, x	0.00	0.02	0.02			
Capacity (veh/h)	859	1022	877			
Control Delay (s)	7.2	6.5	7.1			
Approach Delay (s)	7.2	6.5	7.1			
Approach LOS	A	A	A			
Intersection Summary						
Delay			6.8			
Level of Service			A			
Intersection Capacity Utilization			14.6%	ICU Level of Service	A	
Analysis Period (min)			15			

HCM Unsignalized Intersection Capacity Analysis
 7: 25th PI & Employee Parking

Timing Plan: PM Peak

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	40	0	9	52	0	49
Future Volume (Veh/h)	40	0	9	52	0	49
Sign Control	Stop		Free			Free
Grade	0%		0%			-1%
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Hourly flow rate (vph)	44	0	10	58	0	54
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)	779					
pX, platoon unblocked						
vC, conflicting volume	93	39			68	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	93	39			68	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	95	100			100	
cM capacity (veh/h)	907	1033			1533	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	44	68	54			
Volume Left	44	0	0			
Volume Right	0	58	0			
cSH	907	1700	1533			
Volume to Capacity	0.05	0.04	0.00			
Queue Length 95th (ft)	4	0	0			
Control Delay (s)	9.2	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	9.2	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			2.4			
Intersection Capacity Utilization			13.7%	ICU Level of Service	A	
Analysis Period (min)			15			

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APPENDIX 4: CULTURAL RESOURCES CORRESPONDENCE



U.S. Department
of Transportation

**Federal Transit
Administration**

REGION III
Delaware, District of
Columbia, Maryland,
Pennsylvania, Virginia,
West Virginia

1760 Market Street
Suite 500
Philadelphia, PA 19103-4124
215-656-7100
215-656-7260 (fax)

May 8, 2019

Mr. Andrew Lewis
Senior Historic Preservation Officer
Historic Preservation Office
District of Columbia, Office of Planning
Washington, D.C. 20024

RE: Section 106 Initiation, WMATA Bladensburg Bus Division Buildings Demolition

Dear Mr. Lewis:

The Washington Area Metropolitan Transit Authority (WMATA), with the Federal Transit Administration (FTA) as the lead federal agency, is proposing to demolish the three buildings and parking lots that comprise the Bladensburg Bus Division, located at 2551 26th Street NE, Washington, D.C. A new building that consolidates bus maintenance and repair functions will replace these existing buildings and more parking will be available for buses and employees. As a federally-funded undertaking, the project is subject to Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, and the associated implementing regulations.

WMATA proposes to demolish three buildings located north and south of 26th Street NE, between Bladensburg Road to the east and the B&O Railroad tracks to the west. Demolition activities will begin in July of 2020 and the project is scheduled for completion in 2024. Prior to the site containing bus facilities, the property was used for manufacturing. One of the existing buildings dates from 1962. In 1988 significant alterations were made to the building and in 1993, an appendage was added to the southeast elevation. In 2004, more alterations were made to the 1962 Building, known as Building 1 - Heavy Overhaul Shop. The other two buildings at the site were constructed in 1978 and 1980. Based on review of records, there are no historic properties within the project area.

Proposed Project Undertaking

The 2018 *Metrobus Facilities Plan* notes that the Bladensburg Division is one of four divisions where articulated buses are stored and maintained and one of two divisions equipped to fuel compressed natural gas (CNG) buses. The facility serves as both an operating base and heavy maintenance facility, and is the largest Metrobus operating and maintenance facility.

Metrobus is planning to increase the use of articulated 60-foot-long buses in place of the standard 40-foot length buses. Expansion of articulated bus service depends on expanding availability of storage and maintenance capacity in the downtown, core service area. The demolition and new construction of the Bladensburg Bus Division will address the need to increase storage and maintenance capacity in the downtown, core service area. Bus storage and maintenance capacity will be redistributed to other garages within the Metrobus system during the construction period.

May 8, 2019
Mr. Andrew Lewis
Page 2

Enclosed you will find the Bladensburg Bus Division demolition and replacement project concept plans (see **Enclosure 1**) and the Section 106 Consultation Report (see **Enclosure 2**) including an Area of Potential Effects (APE), the potential for archaeological resources, and identification and evaluation of the National Register of Historic Places (NRHP) listed or eligible properties in the APE.

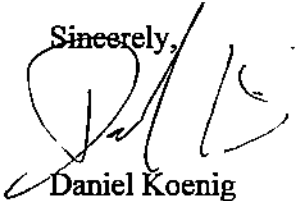
Public Notification

WMATA has held public meetings to inform interested officials of the proposed project, including Ward 5 Councilmember Kenyan R. McDuffie on January 7, 2019, Advisory Neighborhood Commission 5C on February 27, 2019, and the Arboretum Civic Association on March 12, 2019. In addition to this public outreach, Section 106 notification letters were sent to these parties and the DC Preservation League on March 18, 2019, providing them with approximately 4 weeks to comment on the undertaking's effect on historic properties. No comments have been received to-date and should any be received, FTA and WMATA will provide them to your office.

FTA seeks your review and concurrence with the proposed APE, assessment of historic and archaeological resources, and finding of no effect. If you have questions, please contact me at (202) 366-8224.

Thank you for your assistance.

Sincerely,

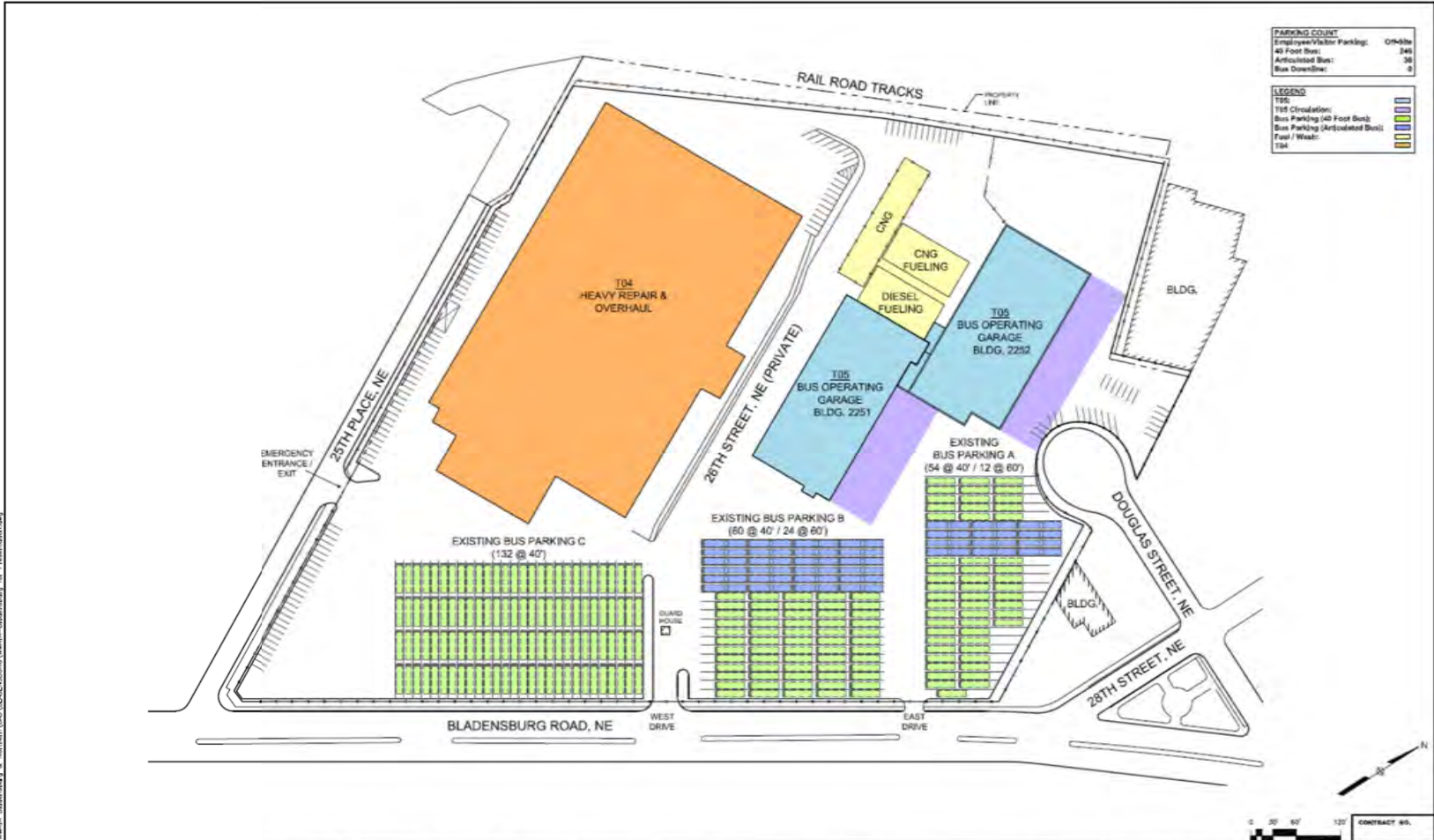


Daniel Koenig
Community Planner

cc: Jeff Winstel, WMATA

Enclosure 1: Bladensburg Bus Garage Project Plans
Enclosure 2: Section 106 Consultation Report

Enclosure 1



PARKING COUNT	
Employee/Visitor Parking:	04-40s
40 Foot Bus:	24s
Articulated Bus:	3s
Bus Downline:	0

LEGEND	
T05 Circulation:	[Blue Line]
Bus Parking (40 Foot Bus):	[Green Box]
Bus Parking (Articulated Bus):	[Blue Box]
Fuel / Wash:	[Yellow Box]
T04	[Orange Box]

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 Project: 19-2016-1156.mxd
 User: J. Bladensburg & Southern\CAD\BLADENBURG\BMDT-Bladensburg_19-2016-1156.mxd

DESIGNED	ASL	DATE	REFERENCE DRAWINGS		REVISIONS		
			NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION
DRAWN	RR	2/20/2019					
CHECKED	ASL	2/20/2019					
APPROVED							

WASHINGTON METROPOLITAN TRANSIT AUTHORITY
 DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES
 OFFICE OF THE CHIEF ENGINEER, INFRASTRUCTURE

SUBMITTED: _____ DATE: _____ APPROVED: _____ DATE: _____
 CHIEF ENGINEER

BLADENBURG BUS DIVISION REPLACEMENT PROJECT
EXISTING CONDITIONS SITE PLAN

SCALE: 1"=50'-0"
 SHEET NO.: _____

P:\18-2018-157\18-2018-157.dwg - WASTE, BISHENBAUGH & NORTON\CACT\BLADENBURG\WASTE-Bladenburg for Presentation.dwg
 11/22/2018 11:22:28 AM



PARKING COUNT	
Employee/Volunteer Parking:	500
40 Front Bus:	200
Articulated Bus:	100
Bus (Overlot):	20

LEGEND	
BUS OPERATING GARAGE:	[Blue Box]
Bus Parking (40 Foot Bus):	[Light Blue Box]
Bus Parking (Articulated Bus):	[Dark Blue Box]
Fuel / Waste:	[Yellow Box]

REVISIONS				
NUMBER	DESCRIPTION	DATE	BY	DESCRIPTION

REFERENCE DRAWINGS	
NUMBER	DESCRIPTION

WASHINGTON METROPOLITAN TRANSIT AUTHORITY
 DEPARTMENT OF TRANSIT INFRASTRUCTURE AND ENGINEERING SERVICES
 OFFICE OF THE CHIEF ENGINEER, INFRASTRUCTURE

SUBMITTER	DATE	APPROVED	DATE

BLADENBURG BUS DIVISION REPLACEMENT PROJECT
FINAL SITE PLAN

SCALE	DRAWING NO.	SHEET NO.
1" = 80'-0"		

Enclosure 2

Bladensburg Bus Division Section 106 Consultation Report

Contents

- Proposed Project Undertaking
- Area of Potential Effect(s)
 - Archaeological Area of Potential Effect(s)
 - Architectural/Historic Area of Potential Effect(s)
- Historic Properties in APEs
 - Potential for Archaeological Resources
 - Architectural/Historic Properties
- Determination of Effect(s)
- Bibliography

Figures

- Figure 1: Bladensburg Bus Division Site Plan. Source: Parsons Brinckerhoff/Tema 1990
- Figure 2: Archaeological Area of Potential Effect. Source: google earth maps
- Figure 3: Architectural/Historic Area of Potential Effect. Source: google earth maps
- Figure 4: Topographical Map of the District of Columbia, Bosche, A. 1861. Source: Library of Congress
- Figure 5: Clark Mills standing in front of his foundry, c. 1862. Source: Malesky
- Figure 6: 2251 26th Street NE, Washington D.C., 1909. Source: Historic Aerials by NETRonline
- Figure 7: Hickey Run Historic Map - 1917. Source: US Fish and Wildlife 2005
- Figure 8: Baist Atlas Maps, 1919 – 1921, Loomis Park, Volume 4, Plate 10. Source: Baist Atlas 1919-1921, DC Volume 4
- Figure 9: 1945 Topographic Map. Source: Historic Aerial by NETRonline
- Figure 10: Hickey Run Historic Map - 1948. Source: US Fish and Wildlife 2005
- Figure 11: Hickey Run Aerial - 1963. Source: US Fish and Wildlife 2005
- Figure 12: 25th Street NE Streetscape, facing South
- Figure 13: 28th Street NE, facing North
- Figure 14: Building 1 South Elevation, facing Northwest
- Figure 15: Building 1 North Entrance Canopy and Portico, facing South
- Figure 16: Building 1 East Elevation Paint Room Addition, facing West

Tables

- Table 1: Historic Maps and Site Chronological Development

Proposed Project Undertaking

The 2018 *Metrobus Facilities Plan* recommends reconstruction of the Bladensburg facility to increase capacity for articulated buses from the current 25-bus capacity to 45 buses by 2025. The new facility will include new Compressed Natural Gas (CNG) fueling capacity and eliminate the tight three point turns required by the path for the bus wash flow, which results in damage to wash lane actuators and damage from buses hitting the walls. Additional needs for the site include improving vehicle flows into and out of the site, additional entrances and exits to surrounding streets, and expanding onsite employee parking. The project area is divided by 26th Street NE, which currently functions as a private drive although historically it was a part of the public street network. The proposed undertaking will eliminate this drive/former street.

WMATA is proposing to demolish three buildings at their Bladensburg Bus Division and replace them with a central maintenance building with facilities to include natural gas and electric battery fueling, and provide more on-site parking. The project includes altering entrance areas, repaving the site and construction of the maintenance facility on the south side of the parcel. The north end of the site will include two additional parking rows for privately owned vehicles and buses. Ancillary corner locations will house tank farms, fueling stations, dumpsters, and snow melt.

Area of Potential Effect(s)

The WMATA Metro Bladensburg Bus Division is located in northeast Washington, D.C. The B&O Railroad tracks and Bladensburg Road, which roughly extends parallel to the railroad tracks, form the east and west borders of the site (Figure 1). Surrounding the site is a tall chain link fence with vertical metal slats and angled in concertina wire.

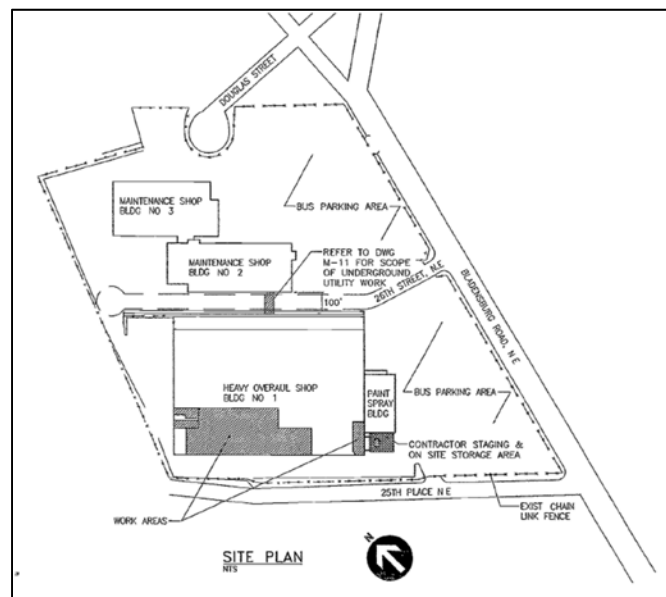


Figure 1: Bladensburg Bus Division Site Plan. Source: Parsons/Brinkerhoff/Tema 1990.

This medium density, urban area consists of several one to two story masonry block or brick warehouses and light industrial buildings. Bladensburg Road contains light industrial buildings fronted by freestanding commercial development or parking lots. Beyond the core industrial buildings and peripheral commercial structures, medium density bungalow and Cape Cod style residences line the suburban streets.

Archaeological Area of Potential Effect(s)

The underground Area of Potential Effect is limited to Square 4350 and is bounded by the B&O Railroad tracks on the west, 25th Street NE on the south, Bladensburg Road on east and the northern boundary line for Square 4350 and a triangular parcel defined by Douglas Street NE and 28th Street NE (Figure 2). Although the three buildings that make up the primary mass of the bus division facility do not have full basements, removal of repair pits, underground tanks, plumbing infrastructure, and existing paving will require sufficient sub terrain disturbance to assess the potential for archaeological resources.

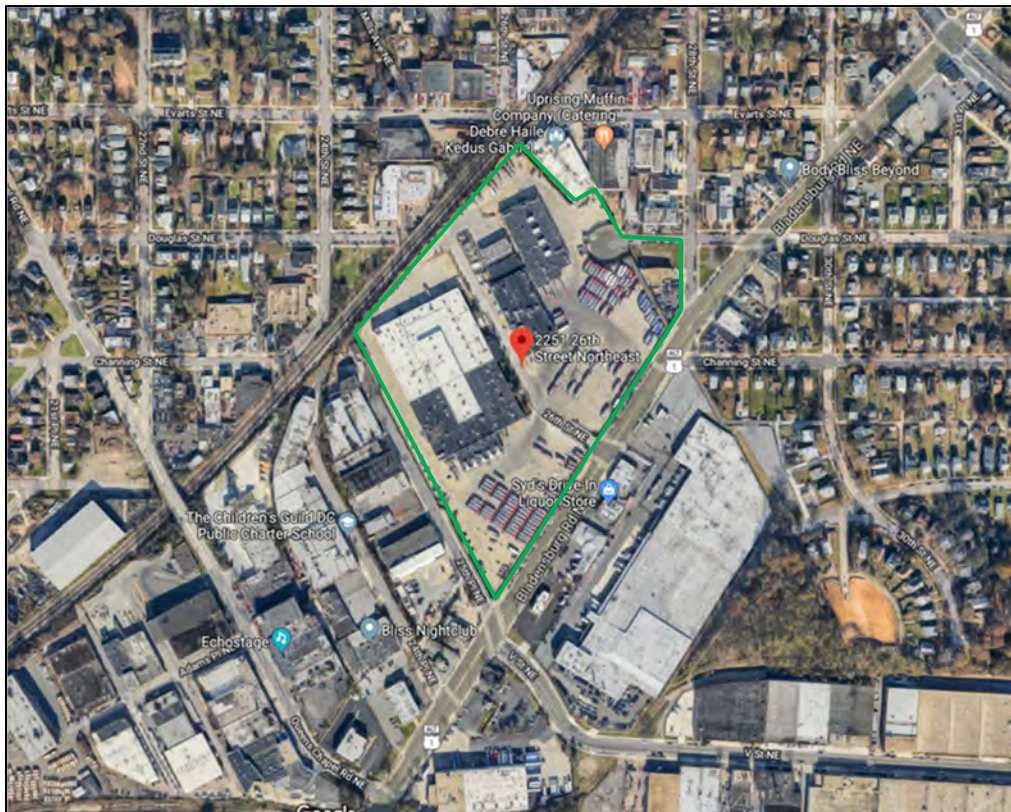


Figure 2: Archaeological Area of Potential Effect ———
Scale 1 in: 200 ft. North ▲ Source: google earth maps

Architectural/Historic Area of Potential Effect(s)

The distance from which the existing facilities that make up the Bladensburg Bus Division are visible, and the distances from which the proposed new facilities are likely to be visible define the aboveground architectural/historic Area of Potential Effect(s). The density of the neighborhood, including the mature tree canopy and horizontality of the industrial buildings and commercial strips limits the architectural/historic Area of Potential Effect(s) to approximately one block beyond the Bladensburg Bus Division, or Square 4350 (Figure 3). The exception to this is the B&O Railroad tracks, which are located on an embankment with trees, providing a visual barrier to site. The railroad tracks and right-of-way serve as the western boundary for the APE.

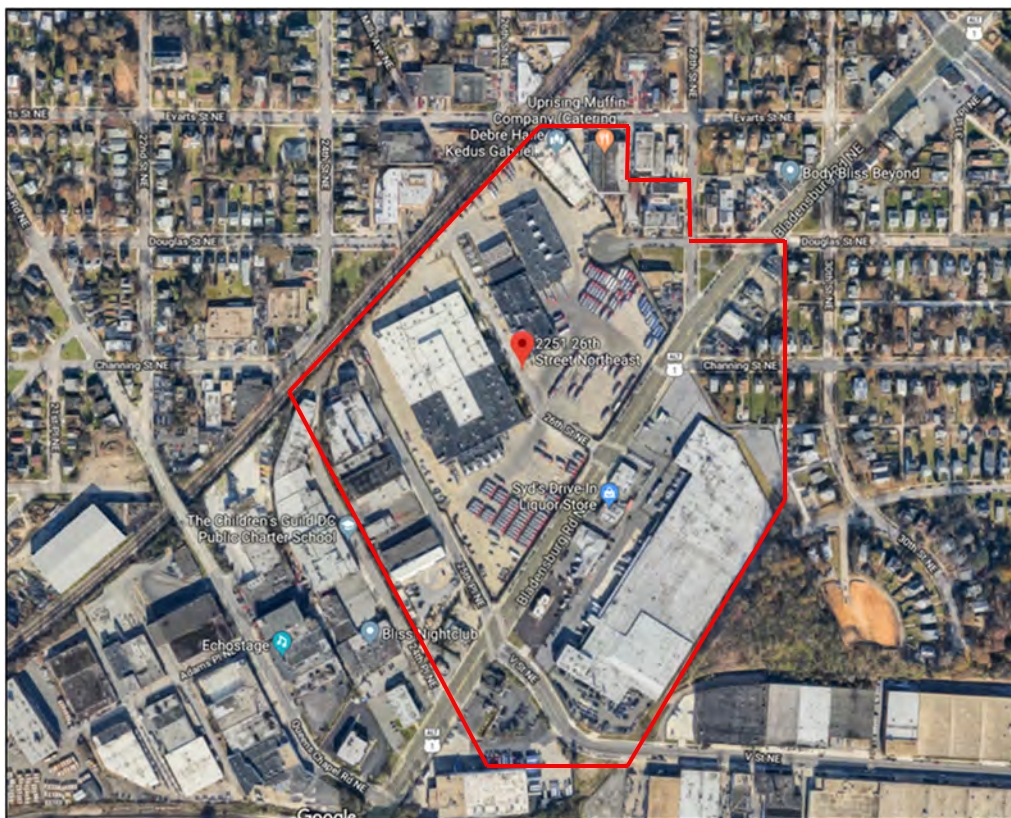


Figure 3: Architectural/Historic Area of Potential Effect ———
Scale 1 in: 200 ft. North ▲ Source: google earth maps

Historic and Archaeological Resources in the APEs

In the early 19th century, the project area was largely “bucolic” and contained numerous brooks and creeks. Many of these are now underground and directed north to a concrete culvert in Mt. Rainer that feeds into the Anacostia River. The Queen family came to Maryland in the 17th century and owned the area surrounding the subject site during the Colonial period (Malesky 2004). Their large tract of land extended from Bladensburg, Maryland, on the east side of the

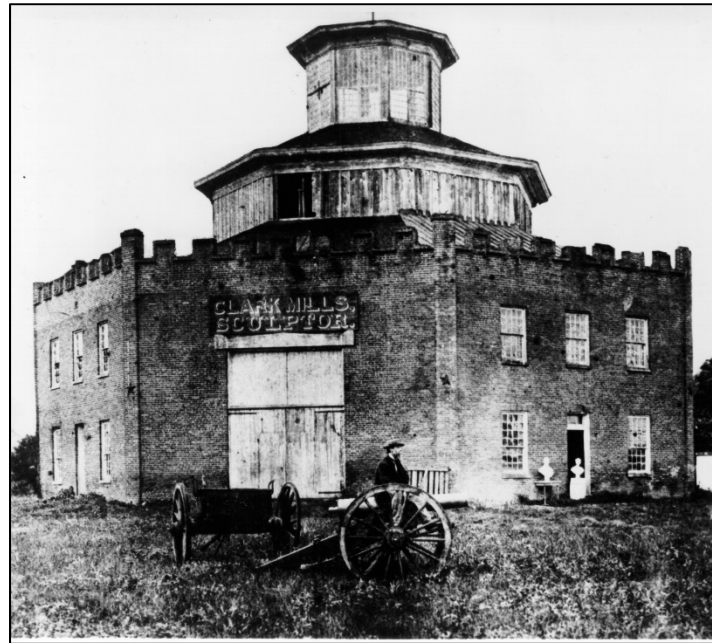


Figure 5: Clark Mills Standing in Front of his Foundry, c. 1862. Source: Malesky

Clark Mills was an established Washington, D.C., sculptor by the 1860s. Mills was born in Syracuse, New York, in 1810. Mills lost his father when he was young and was sent to live with an uncle. He ran away when he was thirteen, wandering from town to town working a variety of unskilled jobs. While cutting timber in a swamp he got frostbite and resolved to never work again as a common laborer. He settled in Charleston, South Carolina, trained as a cabinetmaker, millwright, and ornamental plasterer, and developed a new technique for making life masks. He moved to Washington, D.C., in 1847, to study the classical statuary in the capital city (White House Historical Association).

Mills gained fame when Congress chose him to create an equestrian statue of President Andrew Jackson, winning the commission over noted American Neoclassicist sculpture, Hiram Powers. This piece was the first monumental equestrian statue in the country cast in bronze, and Mills established his own foundry along Bladensburg Turnpike in order to complete the work. Subsequently, he created a huge sculpture of Washington, also on horseback, and cast the colossal Freedom statue, based on Thomas Crawford's design, that now sits at the top of the Capitol dome.

In 1883, Clark Mills died. The foundry building, and property were sold, and the building converted to a factory. A 1906 map indicates that one building is located in the subject area, south of 26th Street NE. A 1909 map matches the 1906 map (Figure 6).



Figure 6: 2251 26th Street NE, Washington D.C., 1909. Source: Historic Aerials by NETRonline

A 1917 map shows the site contained a conglomeration of buildings oriented toward the railroad rather than the road, suggesting a substantial amount of construction occurred on the site between 1909 and 1917 (Figure 7). A local history website states that a factory replaced the foundry and the factory manufactured margarine (Malesky 2004).

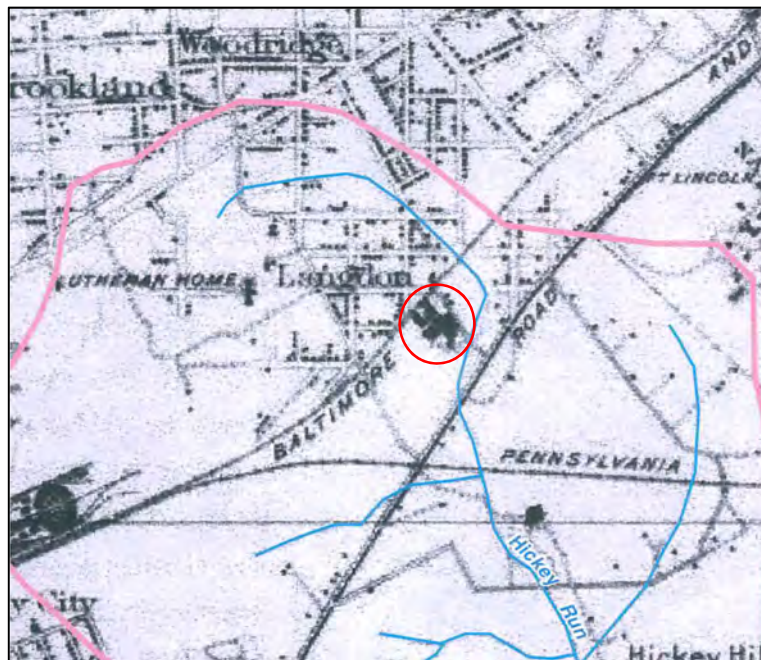


Figure 7: Hickey Run Historic Map - 1917. Source: US Fish and Wildlife 2005

A 1921 G. W. Baist real estate map clearly indicates that the Fleischmann Company Yeast Plant was located at the site, and included a railroad spur line. The conglomeration of buildings

making up the Fleischmann Yeast Plant reflects a different massing and orientation than the buildings depicted on the 1917 map (Figure 8). The majority of the buildings on the 1921 map are brick, two are frame, and the site is paved with brick.

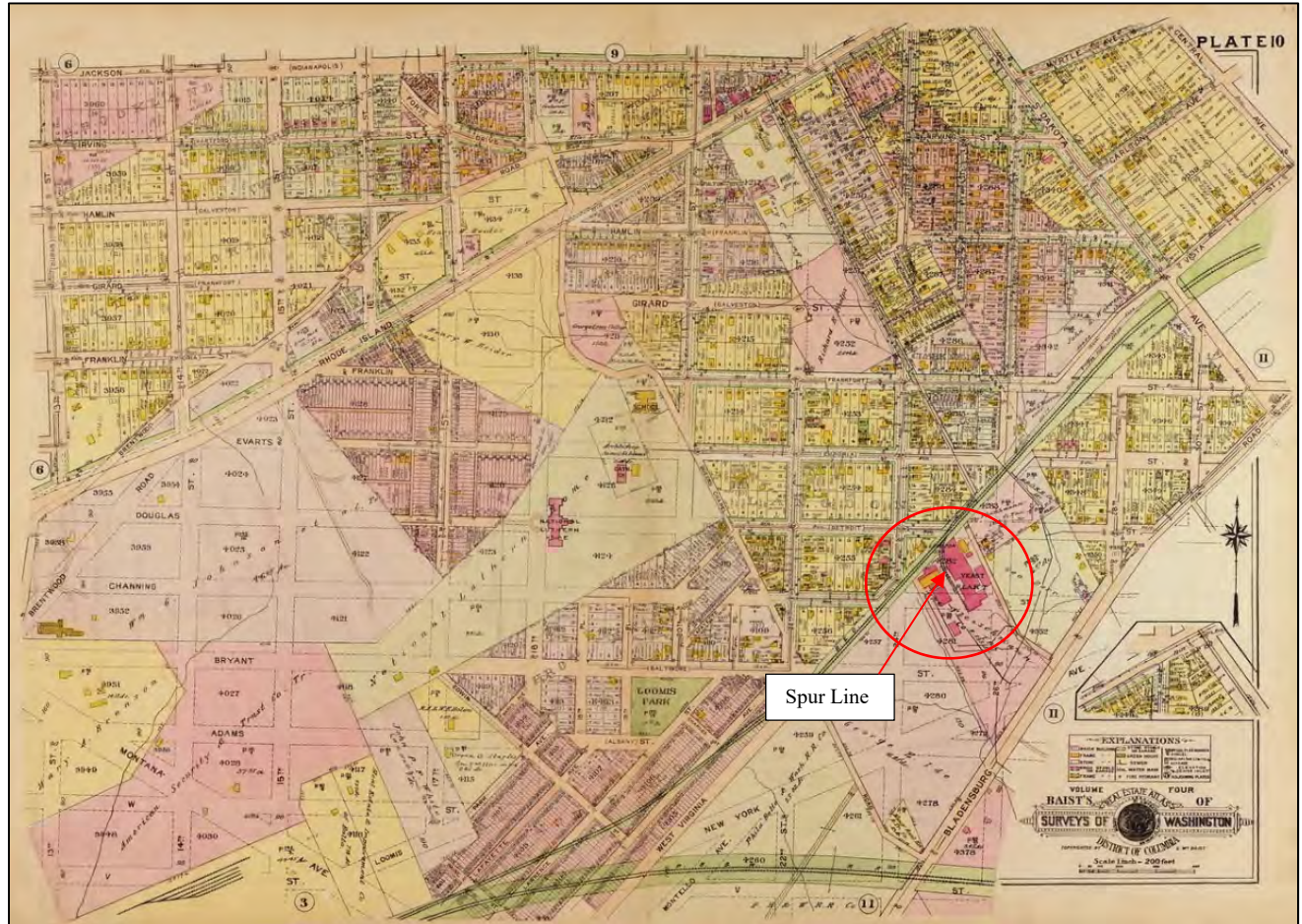


Figure 8: Baist Atlas Maps, 1919 – 1921 Loomis Park, Volume 4, Plate 10. Source: Shop old maps.

A 1945 topographic map indicates there are no buildings north of 26th Street NE, but there is a long rectangular building oriented perpendicularly to the train tracks south of 26th Street NE (Figure 9). South of this building are spur lines, but these are not the spur line depicted on the 1921 map further north. A 1948 aerial map of the site suggests that all the previous buildings were razed. The site appears denuded of vegetation and the land appears disturbed (Figure 10).



Figure 9: 1945 Topographic Map. Source: Historic Aerial by NETRonline

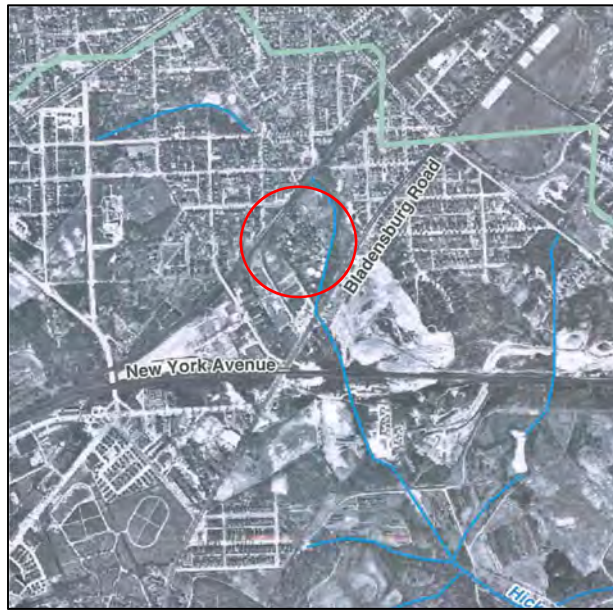


Figure 10: Hickey Run Historic Map - 1948. Source: US Fish and Wildlife 2005



Figure 11: Hickey Run Aerial - 1963. Source: US Fish and Wildlife 2005

A 1963 aerial photograph shows the large rectangular bus maintenance and repair shop that is presently Building 1 of the Bladensburg Bus Division (Figure 11).

Since the mid-19th century, the site of the Bladensburg Bus Division was used for a variety of functions, as summarized in the following table.

Table 1: Historic Maps and Site Chronological Development

Historic Maps				
2251 26th Street NE				
Date	Map	Development	Map Type	Source
1861	Topographical Map of the District of Columbia	Clark Mills Foundary	A. Bosche	Library of Congress
1909	Topo 5659368	Building south of 26th	HstoricAerials.com	NETRonline
1917	1917 Historic Map	Clustered buildings	Topographic Map	Fish and Wildlife, 2005
1919-1921	Loomis Park 1919-1921	Fleishcmann's Yeast Plant	Baist Atlas Map	shop.old-maps.com
1948	1948 Historic Map	Vacant disturbed land	Topographic Map	Fish and Wildlife, 2005
1963	1963 Historic Map	Metrobus Building 1	Topographic Map	Fish and Wildlife, 2005

This review of historic maps and web accessible historic documentation suggest the site has been disturbed several times. Map descriptions above reference previous footprints of differing buildings or developments on the subject site. These footprints do not match one another, suggesting demolition of buildings and structures prior to construction of new buildings and structures. Given this high level of disturbance, the potential for archaeological resources is very low.

Architectural/ Historic Resources in the APE

An approximately 10 ft. high chain link fence with ridged vertical metal strips and angled in concertina wire surrounds the Bladensburg Bus Division property. Beyond the fence, the surrounding buildings are mostly 1-2 story light industrial buildings, warehouse, or small offices. Many of the surrounding buildings have truck bays. The majority of the surrounding buildings are brick and were constructed during the mid- 20th century, ranging from 1946 to 1964 (Figure 11). Exceptions to this date range include three buildings constructed in the 1920s or early 1930s, and two small buildings dating from the 1980 and 1991 (DC Office of Planning). Beyond the warehouse/light industrial area are residential streets that contain mostly early twentieth century bungalows, a few four-squares, and gabled-ell house types. A high degree of alteration is apparent on all the buildings (Figure 12).



Figure 11: 25th Street NE Streetscape, facing South



Figure 12: 28th Street NE, facing North

Of the three Bladensburg Bus Division buildings, only one is more than 50 years of age. Building 1 (Heavy Overhaul Shop) was constructed in 1962. The building is one to two-stories in height and clad with white glazed, common bond brick, has a central monitor and low slope gable roof. Ribbons of transom level lights are mostly filled in with dark metal sheets, although a few sections evidence original windows with horizontal lower lights and rectangular upper lights. Metal muntins separated the windows or metal panels, and I-beams separate the individual bays (Figure 13).



Figure 13: Building 1 South Elevation, facing Northwest

Some of the building's bays have overhead garage doors, some contain windows, and some contain solid dark metal panels similar to the transom level panels. The entrance is on the north side and is marked by a large upward angled canopy, making a modernist architectural statement. Under the canopy, a later off-center addition glass and metal entrance portico appears to be added onto the entrance wall and is now the focus of the entrance, rather than the canopy (Figure 14).



Figure 14: Building 1 North entrance Canopy and Portico, facing South

In 1989, alterations were made to Building 1 that included the installation of a new overhead crane and demolition of part of the first floor and service pits (Parson Brinkerhoff/Tema 1989). Additional work at that time included removing existing reinforced slab, 8 in. thick interior walls, and support framing. Additional areas of the reinforced concrete slab were saw cut for installation of new column footings. Existing partitions and an existing mezzanine were removed. New crane rail girder, crane beam, new structural facing tile was also installed.

The huge heater and ventilation hoods on the roof dominate the 1992 paint room addition on the west side of Building 1. This elevation faces Bladensburg Road and is the closest building to Bladensburg Road (Figure 15).

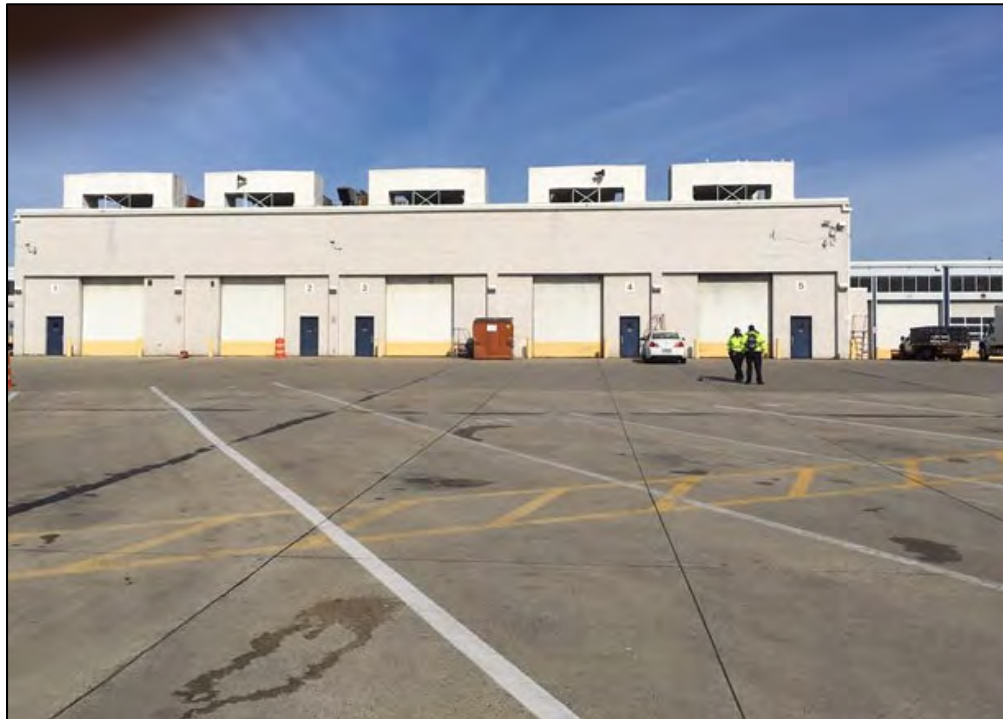


Figure 15: Building 1 East Elevation Paint Room Addition, facing West

Additional alteration work of Building 1 occurred in 2004 to allow for maintenance of compressed natural gas (CMG) buses. Work included sealing all gaps, penetrations, and openings in dismissing walls to prevent migration of gas. Installation of mechanical systems with alarms and automatic ventilation to exhaust any gas detected. Portions of the overhead crane were removed and pass through windows were blocked in with CMU (Wendel Duschscherer Architects & Engineers 2004). Existing doors and hardware were replaced, and existing floor slab was saw cut to install a new emergency generator. Internal partial walls were filled in with CMU up to the ceiling. Glazed openings were changed to metal louvers. Garage bus doors were replaced with overhead coiling doors or overhead doors with a middle band of two stacked lights. Existing roof exhaust ventilators and ducts were replaced as part of new roof ventilation system and ductwork.

Modifications to Building 1 were observed during a site visit conducted in March of 2019. A variety of treatments fill the bay and upper transom fenestration. Some exterior walls are faced with the white glazed common bond brick and other areas are clad with metal sheathing. The building has a variety of door types.

Recommendation of No Effect

The property at 2551 26th Street NE is located between B&O Railroad line and the old Bladensburg Turnpike. This transportation infrastructure supported industrial use of the property starting in the mid-19th century. The 3 story tiered octagonal Clark Mills Foundry was not only an unusual building, it is where Columbia, the bronze statue that caps the Capitol Building dome,

was cast. The foundry was demolished after Clark Mills died in 1883. A 1921 Baist Real Estate map shows a large Fleischmann's Yeast Plant located at the site. By 1944, the site appears cleared as indicated on historic aerial maps. The history of the site and the maps indicate several different buildings and uses occupied the site. By the time the 1962 Bladensburg Bus Division Building 1 was constructed, it is likely that a high level of soil disturbance had already taken place on the site and there remains little potential for the presence of prehistoric or historic archaeological resources that retain stratigraphic context.

The 1962 Building No. 1 is over 50 years of age and its eligibility for listing in the National Register of Historic Places is considered. The building is not referenced in the NRHP *Streetcar and Bus Resources of Washington, D.C., 1862-1962* Multiple Property Document MPD. The building's construction date is the same as the end of the MPD's period of significance. According to the methodology statement in the MPD, the end date for the period of significance was determined by the year streetcars stopped running in Washington, D.C. Other bus garages are identified in this MPD document.

Although clearly associated with local transportation history, and representing a distinct type of building, Bladensburg Bus Division's Building 1 is not considered eligible for listing in the NRHP. Its association with transportation history does not reflect an important change in transportation infrastructure in the Washington, D.C. area. The building is not an important example of a bus maintenance or repair facility, as it is not known to represent an advancement in this building type or reflect the development of new maintenance and repair procedures or construction methods. In addition, several alterations were made in the late 1980s and early 2000s in order to accommodate larger articulated buses and compressed natural gas technology, diminishing its integrity of design, materials, and workmanship. Additional buildings added to the Bladensburg Bus Division site and the addition of the west elevation bus painting bays and roof heater/ventilator sacrifice the building setting. The proposed undertaking will have no effect on historic properties.

Bibliography

Bosche, A. *Topographical Map of the District of Columbia, 1861*. Source: Library of Congress. Available at <https://www.loc.gov/resource/g3850.cw0678500/>. Accessed March 11, 2019

Bernard Johnson Incorporated, *Bladensburg Division Service Lane Renovation Elevations & Section*. Washington, D.C., WMATA, 1982.

DC Office of Planning. *History Quest*. Available at <https://planning.dc.gov/page/historyquest-dc>. Accessed March 8, 2019

Malesky, Robert. *Bygone Brookland, Local Lore: The Sculptor and the Slave*, 2004. Available at <http://www.bygonebrookland.com/local-lore-the-sculptor-and.html>. Accessed March 8, 2019.

Parson Brinkerhoff/ Tema. *Bladensburg Central Shop: Support Vehicle Maintenance Shop Site Plan*. Washington, D.C., WMATA, 1990.

Wendel Duschcherer Architects & Engineers. *CNG Facility Modifications Bladensburg Heavy Overhaul Shop Building No. 1*. Washington, D.C., WMATA, 2004.

White House Historical Association, *Clark Mill's Foundry*. Available at <https://www.whitehousehistory.org/photos/clark-millss-foundry>. Accessed March 8, 2019.

GOVERNMENT OF THE DISTRICT OF COLUMBIA
STATE HISTORIC PRESERVATION OFFICER



June 7, 2019

Mr. Daniel Koenig, Community Planner
U.S. Department of Transportation
Federal Transit Administration, Region III
1760 Market Street, Suite 500
Philadelphia, PA 19103-4124

RE: Initiation of Section 106 Consultation for the WMATA Bladensburg Bus Division Buildings
Demolition; 2251 26th Street, NE

Dear Mr. Koenig:

Thank you for initiating consultation with the District of Columbia State Historic Preservation Officer (SHPO) regarding the above-referenced undertaking. We have reviewed the project submission and are writing to provide our initial comments regarding effects on historic properties in accordance with Section 106 of the National Historic Preservation Act and its implementing regulations, 36 CFR Part 800.

We understand that the Federal Transit Administration (FTA) proposes to provide funding to WMATA so that it can demolish three buildings located at the Bladensburg Bus Garage, specifically Building 1/ Heavy Overhaul Shop which dates from 1962, and two maintenance buildings which were constructed in 1978 and 1980.

We appreciate that FTA has held three public meetings and provided letters to inform interested parties of the proposal and we note that no comments had been received as of the date of FTA's submission to our office. Please copy us on any comments that relate to historic preservation issues.

Although Building 1 has a few interesting Modernist features (e.g. the main entrance canopy and portico), we agree with the findings of the "Section 106 Consultation Report" which recommend that the building is not eligible for listing in the National Register of Historic Places, and that no other listed or eligible buildings are located within the project's Area of Potential Effect.

For future reference, we request that FTA consult with us as early as possible when an undertaking requires the identification and evaluation of potential historic properties so that we will have an opportunity to request Determination of Eligibility (DOE) Forms, when appropriate. We believe it would have been helpful to have such a form developed for Building 1. Nevertheless, we have determined that "no historic properties" will be affected as the undertaking relates to the historic built environment.

However, we will require additional information related to archaeological resources before we can make a final and complete determination of effect. The archaeological section of the report was relatively brief and insufficiently detailed. Therefore, we request maps showing the specific locations of the underground storage tanks and a current topographical map (existing conditions plan).

Mr. Daniel Koenig, Community Planner

Initiation of Section 106 Consultation for the WMATA Bladensburg Bus Division Buildings Demolition; 2251 26th Street, NE

June 7, 2019

Page 2

If you should have any questions or comments regarding the historic built environment, please contact me at andrew.lewis@dc.gov or 202-442-8841. Comments or questions related to archaeology should be directed to Ruth Trocolli at ruth.trocolli@dc.gov or 202-44-8836. We look forward to consulting further to complete the Section 106 review of this project.

Sincerely,

A handwritten signature in blue ink that reads "Andrew Lewis". The signature is written in a cursive style with a large, prominent "A" and "L".

C. Andrew Lewis

Senior Historic Preservation Officer

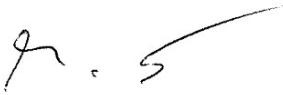
DC State Historic Preservation Office

19-0405


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APPENDIX 5: HAZARDOUS MATERIALS SURVEYS

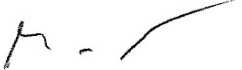
Washington Metropolitan Area Transit Authority Physical Assessment of Asbestos-Containing Materials

Location / Building Name:	Alexandria Rail Yard Track and Structures/Systems Maintenance Building		
Type of ACM / PACM:	<input type="checkbox"/> Surfacing	<input type="checkbox"/> TSI	<input checked="" type="checkbox"/> Miscellaneous
Material Description:	Fire door interiors (assumed) Homogeneous Area TSSM-60		
Friable:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Location of Material:	Throughout building		
Approximate Quantity of Material:	250 doors		
Condition of Material:	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Damaged	<input type="checkbox"/> Significantly Damaged
Approximate Percent Damage:	<input checked="" type="checkbox"/> <1%	<input type="checkbox"/> Localized	<input type="checkbox"/> Distributed
Type of Damage:	<input type="checkbox"/> Deterioration	<input type="checkbox"/> Water	<input type="checkbox"/> Physical <input checked="" type="checkbox"/> Other
Comments:	Not applicable		
Potential for Disturbance:	<input type="checkbox"/> High	<input type="checkbox"/> Moderate	<input checked="" type="checkbox"/> Low
Comments:			
Potential for Damage:	<input type="checkbox"/> Potential for Sig. Damage	<input checked="" type="checkbox"/> Potential for Damage	
Suggested Response Actions and Additional Comments:	Continue periodic surveillance in accordance with WMATA Operations and Maintenance program.		
Signed:	Michaela Mueller-Fokken	Date:	December 2018
			

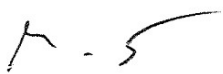
Washington Metropolitan Area Transit Authority Physical Assessment of Asbestos-Containing Materials

Location / Building Name:	Bladensburg Facility Bladensburg HOMT		
Type of ACM / PACM:	<input type="checkbox"/> Surfacing	<input type="checkbox"/> TSI	<input checked="" type="checkbox"/> Miscellaneous
Material Description:	Black, white, green, and pink/coral 9-inch by 9-inch floor tile and associated mastic Homogeneous Area 1		
Friable:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Location of Material:	Second floor locker room and recreation area		
Approximate Quantity of Material:	1,300 square feet		
Condition of Material:	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Damaged	<input type="checkbox"/> Significantly Damaged
Approximate Percent Damage:	<u>0%</u>	<input type="checkbox"/> Localized	<input type="checkbox"/> Distributed
Type of Damage:	<input type="checkbox"/> Deterioration	<input type="checkbox"/> Water	<input type="checkbox"/> Physical <input checked="" type="checkbox"/> Other
Comments:	Not applicable – see comments below.		
Potential for Disturbance:	<input type="checkbox"/> High	<input type="checkbox"/> Moderate	<input checked="" type="checkbox"/> Low
Comments:	Not applicable – see comments below.		
Potential for Damage:	<input type="checkbox"/> Potential for Sig. Damage	<input checked="" type="checkbox"/> Potential for Damage	
Suggested Response Actions and Additional Comments:			
Area reportedly renovated a few years ago. Materials were not observed. Tile and/or mastic may remain present beneath existing finishes.			
Continue periodic surveillance in accordance with WMATA Operations and Maintenance program.			
Signed:	Michaela Mueller-Fokken	Date:	December 2018
			


Washington Metropolitan Area Transit Authority Physical Assessment of Asbestos-Containing Materials

Location / Building Name:	Bladensburg Facility Bladensburg HOMT		
Type of ACM / PACM:	<input type="checkbox"/> Surfacing	<input checked="" type="checkbox"/> TSI	<input type="checkbox"/> Miscellaneous
Material Description:	Mudded fittings/elbows on fiberglass-insulated pipe (assumed) Homogeneous Area 2		
Friable:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Location of Material:	Throughout building		
Approximate Quantity of Material:	400 fittings		
Condition of Material:	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Damaged	<input type="checkbox"/> Significantly Damaged
Approximate Percent Damage:	<u><10%</u>	<input type="checkbox"/> Localized	<input checked="" type="checkbox"/> Distributed
Type of Damage:	<input checked="" type="checkbox"/> Deterioration	<input type="checkbox"/> Water	<input type="checkbox"/> Physical <input type="checkbox"/> Other
Comments:	Material damage was observed on roof drain elbow in Main Shop Bay 12, one elbow in Body Shop Dyno Room, one hot water supply elbow in SVMT Bay 44, and elbow in SVMT Lift #2 bay.		
Potential for Disturbance:	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Moderate	<input type="checkbox"/> Low
Comments:	Based on potential for air flow when vehicle doors are open.		
Potential for Damage:	<input checked="" type="checkbox"/> Potential for Sig. Damage		<input type="checkbox"/> Potential for Damage
Suggested Response Actions and Additional Comments:			
Previous assessment identified approximately 200 mudded fittings observed. Material may be present in other inaccessible areas of the building.			
Remove or repair damaged fittings.			
Continue periodic surveillance in accordance with WMATA Operations and Maintenance program.			
Signed:	Michaela Mueller-Fokken	Date:	December 2018
			

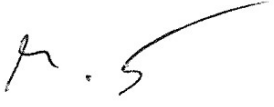
Washington Metropolitan Area Transit Authority Physical Assessment of Asbestos-Containing Materials

Location / Building Name:	Bladensburg Facility Bladensburg HOMT		
Type of ACM / PACM:	<input type="checkbox"/> Surfacing	<input type="checkbox"/> TSI	<input checked="" type="checkbox"/> Miscellaneous
Material Description:	Tan 12-inch by 12-inch wall tile and associated mastic Homogeneous Area 3		
Friable:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Location of Material:	Second floor MTPD area: storage room, telephone closet, and computer room.		
Approximate Quantity of Material:	250 square feet		
Condition of Material:	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Damaged	<input type="checkbox"/> Significantly Damaged
Approximate Percent Damage:	<u><10%</u>	<input type="checkbox"/> Localized	<input checked="" type="checkbox"/> Distributed
Type of Damage:	<input checked="" type="checkbox"/> Deterioration	<input type="checkbox"/> Water	<input type="checkbox"/> Physical <input type="checkbox"/> Other
Comments:	One localized area and some distributed damage in the storage room, distributed minor damage and one tile missing in telephone room, and distributed physical damage in computer room.		
Potential for Disturbance:	<input type="checkbox"/> High	<input checked="" type="checkbox"/> Moderate	<input type="checkbox"/> Low
Comments:	These materials are found in rooms which do not appear to be frequently accessed, but storage of materials in these rooms may cause physical damage to the wall tile. Fans in these areas provide air movement and may distribute dust and fibers if materials are damaged.		
Potential for Damage:	<input type="checkbox"/> Potential for Sig. Damage	<input checked="" type="checkbox"/> Potential for Damage	
Suggested Response Actions and Additional Comments:			
Telephone closet and computer room were not accessible. Observations are based on previous assessment. Material in storage room was in good condition.			
Recommend removal, enclosure, or encapsulation of material.			
Continue periodic surveillance in accordance with WMATA Operations and Maintenance program.			
Signed:	Michaela Mueller-Fokken	Date:	December 2018
			


Washington Metropolitan Area Transit Authority Physical Assessment of Asbestos-Containing Materials

Location / Building Name:	Bladensburg Facility Bladensburg Bus Division Buildings 2 and 3		
Type of ACM / PACM:	<input type="checkbox"/> Surfacing	<input type="checkbox"/> TSI	<input checked="" type="checkbox"/> Miscellaneous
Material Description:	White 9-inch by 9-inch floor tile and associated mastic Homogeneous Area 4		
Friable:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Location of Material:	Stairwells of Building 2 and 3		
Approximate Quantity of Material:	1,200 square feet		
Condition of Material:	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Damaged	<input type="checkbox"/> Significantly Damaged
Approximate Percent Damage:	<input checked="" type="checkbox"/> <1%	<input type="checkbox"/> Localized	<input checked="" type="checkbox"/> Distributed
Type of Damage:	<input type="checkbox"/> Deterioration	<input type="checkbox"/> Water	<input checked="" type="checkbox"/> Physical <input type="checkbox"/> Other
Comments:	Minor damage from normal wear and tear.		
Potential for Disturbance:	<input type="checkbox"/> High	<input type="checkbox"/> Moderate	<input checked="" type="checkbox"/> Low
Comments:			
Potential for Damage:	<input type="checkbox"/> Potential for Sig. Damage	<input checked="" type="checkbox"/> Potential for Damage	
Suggested Response Actions and Additional Comments:			
Materials were not observed in two stairwells on the second floor of the building, but may be present beneath existing finishes. Materials were observed in two stairwell areas where they were not indicated on the figures in the management plan, including the stairwell to the basement and one first floor stairwell area.			
Continue periodic surveillance in accordance with WMATA Operations and Maintenance program.			
Signed:	Michaela Mueller-Fokken	Date:	December 2018
			

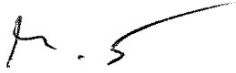
Washington Metropolitan Area Transit Authority Physical Assessment of Asbestos-Containing Materials

Location / Building Name:	Bladensburg Facility Bladensburg Bus Division Building 3		
Type of ACM / PACM:	<input type="checkbox"/> Surfacing	<input type="checkbox"/> TSI	<input checked="" type="checkbox"/> Miscellaneous
Material Description:	Blue, green, and off-white 9-inch by 9-inch and 12-inch by 12-inch (patches) floor tile and associated mastics Homogeneous Area 5		
Friable:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Location of Material:	Basement storage area (outside PLNT office)		
Approximate Quantity of Material:	600 square feet		
Condition of Material:	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Damaged	<input type="checkbox"/> Significantly Damaged
Approximate Percent Damage:	<input checked="" type="checkbox"/> <1%	<input type="checkbox"/> Localized	<input type="checkbox"/> Distributed
Type of Damage:	<input type="checkbox"/> Deterioration	<input type="checkbox"/> Water	<input type="checkbox"/> Physical <input checked="" type="checkbox"/> Other
Comments:	Not applicable		
Potential for Disturbance:	<input type="checkbox"/> High	<input type="checkbox"/> Moderate	<input checked="" type="checkbox"/> Low
Comments:			
Potential for Damage:	<input type="checkbox"/> Potential for Sig. Damage	<input checked="" type="checkbox"/> Potential for Damage	
Suggested Response Actions and Additional Comments:			
Materials were not present. Area appears to have been renovated. Concrete floor visible. Recommend removing from management plan and future condition assessments.			
Continue periodic surveillance in accordance with WMATA Operations and Maintenance program.			
Signed:	Michaela Mueller-Fokken	Date:	December 2018
			

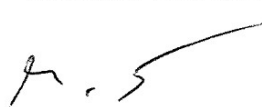
Washington Metropolitan Area Transit Authority Physical Assessment of Asbestos-Containing Materials

Location / Building Name:	Bladensburg Facility Bladensburg Bus Division Building 2		
Type of ACM / PACM:	<input type="checkbox"/> Surfacing	<input type="checkbox"/> TSI	<input checked="" type="checkbox"/> Miscellaneous
Material Description:	Orange, light green, and dark green 9-inch by 9-inch floor tile and associated mastic Homogeneous Area 6		
Friable:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Location of Material:	Second floor areas including offices, drivers' lounge area, training room, depot office, and operator locker room.		
Approximate Quantity of Material:	25,000 square feet		
Condition of Material:	<input type="checkbox"/> Good	<input checked="" type="checkbox"/> Damaged	<input type="checkbox"/> Significantly Damaged
Approximate Percent Damage:	<u><10%</u>	<input type="checkbox"/> Localized	<input checked="" type="checkbox"/> Distributed
Type of Damage:	<input type="checkbox"/> Deterioration	<input type="checkbox"/> Water	<input checked="" type="checkbox"/> Physical <input type="checkbox"/> Other
Comments:	Materials were only observed in limited areas. Previous assessments indicate the materials are 90% enclosed beneath non-ACM floor tile (carpet in a few offices). Surface tile above these materials is in good condition. Damage assessment is based on previous reports. Two broken and loose tiles were observed in the Janitor's Closet.		
Potential for Disturbance:	<input type="checkbox"/> High	<input type="checkbox"/> Moderate	<input checked="" type="checkbox"/> Low
Comments:	Located beneath existing finishes (non ACM floor tile and carpet). Small areas of exposed tile (except for the Janitor's Closet mentioned above) were in good condition.		
Potential for Damage:	<input type="checkbox"/> Potential for Sig. Damage		<input checked="" type="checkbox"/> Potential for Damage
Suggested Response Actions and Additional Comments:	Materials were only observed in limited areas. Previous assessments indicate the materials are 90% enclosed beneath non-ACM floor tile. Surface tile above these materials is in good condition. Damage assessment is based on previous reports. Recommend abatement of loose/broken tiles in Janitor's Closet. Continue periodic surveillance in accordance with WMATA Operations and Maintenance program.		
Signed:	Michaela Mueller-Fokken	Date:	December 2018
			

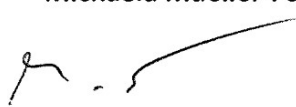
Washington Metropolitan Area Transit Authority Physical Assessment of Asbestos-Containing Materials

Location / Building Name:	Bladensburg Facility Bladensburg Bus Division Buildings 2 and 3		
Type of ACM / PACM:	<input type="checkbox"/> Surfacing	<input checked="" type="checkbox"/> TSI	<input type="checkbox"/> Miscellaneous
Material Description:	Mudded fittings/elbows on fiberglass-insulated pipe Homogeneous Area 7		
Friable:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Location of Material:	Throughout buildings		
Approximate Quantity of Material:	50 fittings		
Condition of Material:	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Damaged	<input type="checkbox"/> Significantly Damaged
Approximate Percent Damage:	<input checked="" type="checkbox"/> <1%	<input type="checkbox"/> Localized	<input checked="" type="checkbox"/> Distributed
Type of Damage:	<input checked="" type="checkbox"/> Deterioration	<input type="checkbox"/> Water	<input type="checkbox"/> Physical <input type="checkbox"/> Other
Comments:	Previous assessment indicates some abatement has been performed. Observed fittings do not exhibit notable physical or water damage.		
Potential for Disturbance:	<input type="checkbox"/> High	<input type="checkbox"/> Moderate	<input checked="" type="checkbox"/> Low
Comments:			
Potential for Damage:	<input type="checkbox"/> Potential for Sig. Damage	<input checked="" type="checkbox"/> Potential for Damage	
Suggested Response Actions and Additional Comments:	Continue periodic surveillance in accordance with WMATA Operations and Maintenance program.		
Signed:	Michaela Mueller-Fokken	Date:	December 2018
			

Washington Metropolitan Area Transit Authority Physical Assessment of Asbestos-Containing Materials

Location / Building Name:	Bladensburg Facility Bladensburg Bus Division Buildings 2 and 3		
Type of ACM / PACM:	<input type="checkbox"/> Surfacing	<input type="checkbox"/> TSI	<input checked="" type="checkbox"/> Miscellaneous
Material Description:	Black mastic beneath non-ACM blue 12-inch by 12-inch floor tile Homogeneous Area 8		
Friable:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Location of Material:	Building offices, hallway, and entry areas on ground floor of Building 3, and hallway and lobby leading between the two buildings, and the base of the stairway in Building 2.		
Approximate Quantity of Material:	1,250 square feet		
Condition of Material:	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Damaged	<input type="checkbox"/> Significantly Damaged
Approximate Percent Damage:	<input checked="" type="checkbox"/> <1%	<input type="checkbox"/> Localized	<input type="checkbox"/> Distributed
Type of Damage:	<input type="checkbox"/> Deterioration	<input type="checkbox"/> Water	<input type="checkbox"/> Physical <input checked="" type="checkbox"/> Other
Comments:	Not applicable		
Potential for Disturbance:	<input type="checkbox"/> High	<input type="checkbox"/> Moderate	<input checked="" type="checkbox"/> Low
Comments:			
Potential for Damage:	<input type="checkbox"/> Potential for Sig. Damage	<input checked="" type="checkbox"/> Potential for Damage	
Suggested Response Actions and Additional Comments:	<p>Materials were not observed in the offices adjacent to the storeroom, but may be present beneath existing finishes. Materials were observed in clerk's office, storeroom office, and hallways.</p> <p>Continue periodic surveillance in accordance with WMATA Operations and Maintenance program.</p>		
Signed:	Michaela Mueller-Fokken	Date:	December 2018
			

Washington Metropolitan Area Transit Authority Physical Assessment of Asbestos-Containing Materials

Location / Building Name:	Bladensburg Facility Bladensburg HOMT and Bladensburg Bus Division Buildings 2 and 3		
Type of ACM / PACM:	<input type="checkbox"/> Surfacing	<input type="checkbox"/> TSI	<input checked="" type="checkbox"/> Miscellaneous
Material Description:	Fire doors (assumed) Homogeneous Area 9		
Friable:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	
Location of Material:	Throughout Bladensburg Facility		
Approximate Quantity of Material:	200 doors		
Condition of Material:	<input checked="" type="checkbox"/> Good	<input type="checkbox"/> Damaged	<input type="checkbox"/> Significantly Damaged
Approximate Percent Damage:	<u><1%</u>	<input type="checkbox"/> Localized	<input type="checkbox"/> Distributed
Type of Damage:	<input type="checkbox"/> Deterioration	<input type="checkbox"/> Water	<input type="checkbox"/> Physical <input checked="" type="checkbox"/> Other
Comments:	Not applicable		
Potential for Disturbance:	<input type="checkbox"/> High	<input type="checkbox"/> Moderate	<input checked="" type="checkbox"/> Low
Comments:			
Potential for Damage:	<input type="checkbox"/> Potential for Sig. Damage	<input checked="" type="checkbox"/> Potential for Damage	
Suggested Response Actions and Additional Comments:	Continue periodic surveillance in accordance with WMATA Operations and Maintenance program.		
Signed:	Michaela Mueller-Fokken	Date:	December 2018
			



CERTIFICATE OF ANALYSIS



Client:	Washington Metropolitan Area Transit Authority	Job Name:	WMATA-Bladensburg Bus Division	Chain Of Custody:	244963
Address:	3101 Eisenhower Avenue Alexandria, Virginia 22314	Job Location:	Lounge 2nd Floor/Vending Machine Area	Date Submitted:	5/20/2015
		Job Number:	Not Provided	Person Submitting:	Michaela Mueller-Fokken
		P.O. Number:	Not Provided	Date Analyzed:	5/22/2015
Attention:	Michaela Mueller-Fokken			Report Date:	5/26/2015

Summary of Atomic Absorption Analysis for Lead

Page 1 of 1

AMA Sample Number	Client Sample Number	Analysis Type	Sample Type	Air Volume (L)	Area Wiped (ft ²)	Reporting Limit	Total ug	Final Result	Comments
15096699	BLTR-08-P	Flame	Paint Chip	****	N/A	0.007 %Pb		0.057 %Pb	

Analysis Method for Flame: Air, Wipes, Paints, and Soil/Solids: EPA 600/R-93/200(M)-7000B; Water: SM-3111B
 Analysis Method For Furnace: Air, Wipes, Paints, and Soil/Solids : EPA 600/R-93/200(M)-7010; Water: SM-3113B
 N/A = Not Applicable mg/Kg = parts per million (ppm) on a dry weight basis mg/L = parts per million (ppm)

%Pb = percent lead on a dry weight basis ug = micrograms ug/L = parts per billion (ppb)

Note: All samples were received in good condition unless otherwise noted.

Note: All results have two significant digits. Any additional digits shown should not be considered when interpreting the result.

Air and Wipe results are not corrected for any blank results
 Final results for air and wipe samples are based on client supplied information nor verified by this laboratory.

All results are to be considered preliminary and subject to change unless signed by the Technical Director or Deputy.

Analyst: Suphin Chinnapad

Technical Manager: G Edward Carney

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these Laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from us. Sample types, locations, and collection protocols are based upon the information provided by the persons submitting them and, unless collected by personnel of these Laboratories, we expressly disclaim any knowledge and liability for the accuracy and completeness of this information. Residual sample material will be discarded in accordance with the appropriate regulatory guidelines, unless otherwise requested by the client. This report must not be used to claim, and does not imply product certification, approval, or endorsement by NY ELAP, AIHA, or any agency of the Federal Government. All rights reserved. AMA Analytical Services, Inc.



Client:	Washington Metropolitan Area Transit Authority	Job Name:	WMATA-Bladensburg Bus Division	Chain Of Custody:	244963
Address:	3101 Eisenhower Avenue Alexandria, Virginia 22314	Job Location:	Lounge 2nd Floor/Vending Machine Area	Date Analyzed:	5/28/2015
Attention:	Michaela Mueller-Fokken	Job Number:	Not Provided	Person Submitting:	Michaela Mueller-Fokken
		P.O. Number:	Not Provided		

Summary of Polarized Light Microscopy

AMA Sample Number	Client Sample #	Total Asbestos	Chrysotile Percent	Amosite Percent	Crocidolite Percent	Other Asbestos Percent	Mineral Wool Percent	Fiberglass Percent	Organic Percent	Synthetic Percent	Other Percent	Particulate Percent	Sample Type	Sample Color	Homogeneity	Analyst ID	Comments
15096700	BLTR-01-FT	NAD	--	--	--	--	--	--	--	--	--	100	FT	Tan	Homogeneous	SC	
15096701	BLTR-01-M	NAD	--	--	--	--	--	--	TR	--	--	100	MS	Black	Homogeneous	SC	
15096702	BLTR-02-FT	2	2	--	--	--	--	--	--	--	--	98	FT	Black	Homogeneous	SC	
15096703	BLTR-02-M	NAD	--	--	--	--	--	--	TR	--	--	100	MS	Black	Homogeneous	SC	
15096704	BLTR-03-FT	4	4	--	--	--	--	--	--	--	--	96	FT	Green	Homogeneous	SC	
15096705	BLTR-03-M	NAD	--	--	--	--	--	--	TR	--	--	100	MS	Black	Homogeneous	SC	
15096706	BLTR-04-FT	3	3	--	--	--	--	--	--	--	--	97	FT	Orange	Homogeneous	SC	
15096707	BLTR-04-M	NAD	--	--	--	--	--	--	TR	--	--	100	MS	Black	Homogeneous	SC	
15096708	BLTR-05-FT	NAD	--	--	--	--	--	--	--	--	--	100	FT	Wht/Beige	Homogeneous	SC	
15096709	BLTR-05-M	NAD	--	--	--	--	--	--	TR	--	--	100	MS	3rwn/Black	Homogeneous	SC	
15096710	BLTR-06-FT	NAD	--	--	--	--	--	--	--	--	--	100	FT	Tan	Homogeneous	SC	
15096711	BLTR-06-M	NAD	--	--	--	--	--	--	TR	--	--	100	MS	3rwn/Black	Homogeneous	SC	
15096712	BLTR-07-MAT	NAD	--	--	--	--	TR	--	5	--	--	95	Matting	Black	Homogeneous	SC	

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these Laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from us. Sample types, locations, and collection protocols are based upon the information provided by the persons submitting them and, unless collected by personnel of these Laboratories, we expressly disclaim any knowledge and liability for the accuracy and completeness of this information. Residual sample material will be discarded in accordance with the appropriate regulatory guidelines, unless otherwise requested by the client. NVLAP accreditation applies only to polarized light microscopy of bulk samples and transmission electron microscopy of AHERA air samples. This report must not be used to claim, and does not imply product certification, approval, or endorsement by NVLAP or any agency of the Federal Government. All rights reserved. AMA Analytical Services, Inc.



Client:	Washington Metropolitan Area Transit Authority	Job Name:	WMATA-Bladensburg Bus Division	Chain Of Custody:	244963
Address:	3101 Eisenhower Avenue Alexandria, Virginia 22314	Job Location:	Lounge 2nd Floor/Vending Machine Area	Date Analyzed:	5/28/2015
		Job Number:	Not Provided	Person Submitting:	Michaela Mueller-Fokken
		P.O. Number:	Not Provided		
Attention:	Michaela Mueller-Fokken				

Summary of Polarized Light Microscopy

AMA Sample Number	Client Sample #	Total Asbestos	Chrysotile Percent	Amosite Percent	Crocidolite Percent	Other Asbestos Percent	Mineral Wool Percent	Fiberglass Percent	Organic Percent	Synthetic Percent	Other Percent	Particulate Percent	Sample Type	Sample Color	Homogeneity	Analyst ID	Comments
-------------------	-----------------	----------------	--------------------	-----------------	---------------------	------------------------	----------------------	--------------------	-----------------	-------------------	---------------	---------------------	-------------	--------------	-------------	------------	----------

The following footnotes only apply to those samples which the total asbestos result is flagged with a note number.

- 1 TEM RECOMMENDATION - Please note, due to resolution limitations with optical microscopy and/or interference from matrix components of this sample, results which are reported via PLM as negative or trace (<1%) for asbestos may contain a significant quantity of asbestos. It is recommended that the additional analytical technique of TEM be used to check for asbestos fibers below the resolution limits of optical microscopy.
- 2 MATRIX REDUCTION RECOMMENDATION - Please note, due to interference from the matrix components of this sample, results which are reported via PLM as negative or trace (<1%) for asbestos may contain a significant quantity of asbestos which is obscured from view. It is recommended that the additional preparation technique of gravimetric reduction be performed on this sample to minimize the obscuring effects of matrix components, followed by reanalysis by PLM and/or TEM.

Analysis Method - EPA/600/R-93/116 dated July 1993

NAD = "No Asbestos Detected" TR = "Trace equals less than 1% of this component"

Uncertainty: For samples containing asbestos in range of 1-10% the CV is 0.43, 11-35% CV=0.55, >35 CV=0.23

All results are to be considered preliminary and subject to change unless signed by the Technical Director or Deputy.

Technical Director

Peerawat Chaiceene

Analyst(s)

Suphin Chinnapad

This report applies only to the sample, or samples, investigated and is not necessarily indicative of the quality or condition of apparently identical or similar products. As a mutual protection to clients, the public, and these Laboratories, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and upon the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from us. Sample types, locations, and collection protocols are based upon the information provided by the persons submitting them and, unless collected by personnel of these Laboratories, we expressly disclaim any knowledge and liability for the accuracy and completeness of this information. Residual sample material will be discarded in accordance with the appropriate regulatory guidelines, unless otherwise requested by the client. NVLAP accreditation applies only to polarized light microscopy of bulk samples and transmission electron microscopy of AHERA air samples. This report must not be used to claim, and does not imply product certification, approval, or endorsement by NVLAP or any agency of the Federal Government. All rights reserved. AMA Analytical Services, Inc.

ASBESTOS

Orange, light green, and dark green 9-inch by 9-inch asbestos-containing floor tiles are present in the second floor Drivers Lounge Vending Storage Area. These materials were identified by the Bladensburg Bus Division and HVMT Asbestos-Containing Materials Survey conducted by Conner Environmental in 1998. The mastics associated with these tiles are also identified by the 1998 survey as containing asbestos. Any material containing greater than one percent asbestos is, by definition, an asbestos-containing material (ACM).

EMIH staff conducted an inspection, including material sampling, of the flooring materials in the Vending Storage Area on 19-May-2015. At present, the 9-inch by 9-inch asbestos containing tiles are overlain by a 12-inch by 12-inch white floor tile. Samples of the overlying 12-inch by 12-inch tile (and mastic) were collected along with confirmatory samples of the underlying 9-inch by 9-inch floor tiles and mastics.

None of the overlying 12-inch by 12-inch floor tile samples were shown to contain asbestos, and asbestos was not detected in the mastics associated with the 12-inch by 12-inch tile. Samples of the underlying 9-inch by 9-inch tiles confirmed asbestos at concentrations ranging from two to four percent. A summary of the relevant samples associated with the Vending Storage Area flooring materials is provided in the attached Asbestos Sample Summary table. A copy of the asbestos laboratory's Certificate of Analysis for the samples collected by EMIH is provided as an attachment.

The underlying 9-inch by 9-inch floor tile and associated mastic are considered to be asbestos-containing materials. As per Section 4.3 of WMATA's Asbestos-Containing Materials Management Plan, the removal, repair, encapsulation, or enclosure of asbestos-containing floor tiles and mastics shall only be performed by an asbestos abatement contractor. Complete copies of the Asbestos-Containing Materials Management Plan and the 1998 Asbestos-Containing Materials Survey are available for review on the EMIH website and can be directly accessed using the following links.

METRO ASBESTOS-CONTAINING MATERIALS MANAGEMENT PLAN

<https://portal.wmata.local/sites/safety/emih/Shared%20Documents/Asbestos/PKL03378%20Metro%20ACM%20Plan.pdf>

BLADENSBURG BUS DIVISION ASBESTOS-CONTAINING MATERIALS SURVEY

<https://portal.wmata.local/sites/safety/emih/Shared%20Documents/Asbestos/Bladensburg%20Asbestos%20Inspection%20Report.pdf>

LEAD-CONTAINING PAINT

A paint chip sample was collected from peeling wall paint in the Vending Storage Area during EMIH's inspection of the area. The sample was found to contain 0.057 percent lead (certificate of analysis is attached).

Repairs to the painted wall will require adherence to OSHA's Lead Standard for the Construction Industry (Title 29 Code of Federal Regulations 1926.62). The standard applies to all construction work where an employee may be exposed to lead. All work related to construction, alteration, or repair,

including painting and decorating is included. A general overview of the standard can be viewed at <https://www.osha.gov/Publications/osh3142.pdf>.

ASBESTOS SAMPLE SUMMARY
Bladensburg Bus Division
2nd Floor Lounge Vending Machine Area

MATERIAL	SAMPLE LOCATION	SAMPLE DATE	SAMPLE IDENTIFICATION NUMBER	ASBESTOS CONTENT	SOURCE
Marble 12-inch by 12-inch floor tile and associated mastic	Vending Machine Area	19-May-2015	BLTR-01-FT	NAD* (tile)	Samples collected by EMIH
			BLTR-01-M	NAD (black mastic)	
			BLTR-06-FT	NAD (tile)	
			BLTR-06-M	NAD (black mastic)	
White/beige 12-inch by 12-inch floor tile and associated mastic	Vending Machine Area	19-May-2015	BLTR-05-FT	NAD (tile)	
			BLTR-05-M	NAD (mastic)	
Black 9-inch by 9-inch floor tile and associated mastic	Vending Machine Area	19-May-2015	BLTR-02-FT	2% Chrysotile (tile)	
			BLTR-02-M	NAD (mastic)	
Green 9-inch by 9-inch floor tile and associated mastic	Vending Machine Area	19-May-2015	BLTR-03-FT	4% Chrysotile (tile)	
			BLTR-03-M	NAD (mastic)	
Orange 9-inch by 9-inch floor tile and associated mastic	Vending Machine Area	19-May-2015	BLTR-04-FT	3% Chrysotile (tile)	
			BLTR-04-M	NAD (mastic)	
Black matting	Vending Machine Area	19-May-2015	BLTR-07-MAT	NAD	
Orange 9-inch by 9-inch floor tile and associated mastic	Depot Storage #2	May 1998	JOC02A	1% Chrysotile (tile)	1998 Asbestos-Containing Materials Survey (Conner Environmental)
			JOC02B	2% Chrysotile (tile) NAD (mastic)	
			JOC02C	2% Chrysotile (tile) 2% Chrysotile (mastic)	
Light green 9-inch by 9-inch floor tile and associated mastic	Depot Storage #2	May 1998	JOC03A	3% Chrysotile (tile) 5% Chrysotile (mastic)	
			JOC03B	3% Chrysotile (tile) 4% Chrysotile (mastic)	
			JOC03C	3% Chrysotile (tile) 1% Chrysotile (mastic)	
Dark green 9-inch by 9-inch floor tile	Depot Storage #2	May 1998	JOC04A	1% Chrysotile (tile)	
			JOC04B	2% Chrysotile (tile)	
			JOC04C	2% Chrysotile (tile)	

NOTES:

Asbestos-containing material is defined as any material containing greater than one percent asbestos.

*NAD = No Asbestos Detected



May 18, 2010

Ms Carla Grano, P.E.
Manager, Environmental Engineering
Office of Environmental Management & Industrial Hygiene
Department of System Safety & Environmental Management
Washington Metropolitan Area Transit Authority
3101 Eisenhower Avenue
Alexandria, VA 22314

Subject: Asbestos Abatement Closeout Report
2251 26th Street
Washington, DC

Dear Ms. Grano,

URS Corporation (URS) is pleased to present the Washington Metropolitan Area Transportation Authority (WMATA) with this closeout report for asbestos abatement oversight at the Bladensburg Bus Garage, located at 2251 26th Street, NE, Washington DC. URS was retained by WMATA to perform abatement oversight and collect air samples. LVI Environmental Services of Gaithersburg, MD was retained by WMATA to perform the abatement which included removal of approximately 735 square feet of non-friable, green 9" x 9" floor tile and mastic from an unoccupied basement area. This report summarizes the abatement and air monitoring activities associated with the project.

Asbestos Abatement

Engineering Controls - LVI Environmental Services (LVI) began setting up engineering controls on March 15, 2010 by establishing a single regulated work area to perform the required abatement. Prior to abatement, the work area was prepared by sealing all openings into the work area, including ductwork and wall penetrations, with 2 layers of 6 mil polyethylene sheeting. prior to abatement. The work area was further isolated from its surroundings by establishing critical barriers consisting of 2 layers of 6 mil polyethylene sheeting. A three stage decontamination chamber was erected to provide access to the work area and to decontaminate workers and equipment. A High Efficiency Particulate Air (HEPA) negative air filtration machine was used to place the work area under a minimum negative pressure of at least -0.02 in/H₂O in order to prevent airborne asbestos fibers from being released to outside. The location of the work area did not allow for the negative air filtration machines to be exhausted outside of the building. Thus, LVI was allowed to direct the exhaust directly into a second negative air machine within the building. The setup of the engineering controls is described in the URS Field Log included in Appendix A.

Removal - Abatement of the floor tile began after the construction of the engineering controls to contain asbestos fibers. The abatement began around 1:00 pm on March 15, 2010 and was completed at approximately 6:00 pm on the same day. LVI personnel wore personal protective equipment (PPE) including Tyvek™ suits, hard hats, work boots, gloves, and ½ half-face air purifying respirators during abatement activities.

LVI removed the non-friable, green 9" x 9" floor tile and mastic using scrapers. A hand held sprayer was used to continuously mist the floor during removal to control the generation or airborne asbestos fibers. Upon completion of the gross removal, the work area was HEPA vacuumed to remove solid pieces of floor tile too small to be removed by hand. LVI then began removal of the asbestos containing floor tile mastic using Bean-e Do™, a soy based mastic remover. After a waiting period, where the mastic remover was allowed to penetrate the mastic, the mastic was removed, using hand towels and rags. LVI's overall compliance with the requirements of OSHA Asbestos in Construction Standard 29 CFR 1926.1101 was documented in oversight checklists and LVI's report (Appendix B).

URS conducted a final, passing, visual inspection of the containment area and observed that the specified asbestos containing materials (ACMs) had been removed. LVI then sprayed a lock down encapsulant over all interior surfaces inside the work area. The floor was then allowed to stand for a short period so it could dry before final air clearance samples were collected. Documentation of the results of the final visual inspection has been included as the Certificate of Final Visual Inspection included as Appendix B.

Asbestos Waste Disposal - Asbestos wastes were double bagged in 6-mil thick asbestos waste disposal bags, with each bag sealed with duct tape. During the abatement, the asbestos waste bags were labeled with the job location, LVI's contact information and LVI's D.C. asbestos contractor license number. Each asbestos waste disposal bag was observed by URS to have proper OSHA labeling. The asbestos waste removed from the job site was temporarily stored by LVI at their Gaithersburg, MD facility until transport to Minerva Enterprises, LLC, a construction and demolition debris landfill, at 8955 Minerva Road S.E. Waynesburg, OH, permitted to dispose of ACMs. A copy of the waste manifest is included in Appendix B.

Air Monitoring

URS performed baseline air sampling, outside work area sampling, and final clearance air sampling during the course of the project. All air samples were collected and analyzed on site via the National Institute for Occupational Safety and Health (NIOSH) 7400 Method. A NIOSH 582 trained microscopist performed the on site analysis using Phase Contrast Microscopy (PCM). The results of analysis for all air samples collected during the project are included in Appendix C.

Baseline Air Sampling - A total of four baseline air samples were collected at the site between 8:00 am and 10:00 am, prior to abatement. The results of the analysis for each of the baseline samples indicated that airborne concentration of asbestos fibers at the site

were less than 0.01 fibers per cubic centimeter (f/cc). The baseline concentrations met the District of Columbia's final clearance level criterion for re-occupancy of less than 0.01 f/cc for fibers greater than five (5) microns in length.

Outside Work Area Sampling - A total of five air samples were collected outside the work area during the abatement which occurred between 10:00 am and 6:00 pm on March 15, 2010. Airborne fiber concentrations ranged between 0.010 f/cc and 0.012 f/cc. These airborne fiber concentrations were not in excess of the OSHA Action Level (1/2 the permissible exposure limit [PEL] or 0.05 f/cc) or the OSHA PEL of 0.1 f/cc. However, they were slightly higher than the District of Columbia's final clearance level criterion for re-occupancy of less than 0.01 f/cc for fibers greater than 5 microns in length. While outside work area sampling was conducted, the engineering controls were constantly monitored with critical barriers observed to be intact and containment under constant negative pressure. The slightly elevated fiber levels in the outside samples were caused by the heavy dust loading of the sampling media outside the work area due to large amounts of foot traffic and material handling during sample collection. Since the PCM air sampling method does not distinguish asbestos fibers from other dust or other fibers, it is almost certain that the slightly elevated fiber counts did not represent elevated concentrations of airborne asbestos fibers.

Final Clearance Air Sampling - URS collected a total of three final clearance samples from inside the work area after completing the final visual inspection. The samples were analyzed on site by PCM. The results of the analyses indicate that the airborne concentration of asbestos fibers inside the work area was less than 0.01 f/cc for each sample analyzed. This meets the District of Columbia's final re-occupancy clearance level of less than 0.01 f/cc for fibers greater than 5 microns in length. URS notified LVI that the PCM results from the work area were satisfactory and LVI proceeded to remove the engineering controls. Final clearance air monitoring results were faxed to the attention of Mr. Joseph Parrish of the DC Dept of Health, Air Quality Division within 24 hours of collection at (202) 535-1371. A copy of the PCM analytical results were also forwarded to Mr. Parrish by email on March 16, 2010. Copies of URS' final air clearance test results are included in Appendix C.

If you have any questions or comments regarding this report, please contact me at (301) 672 0027.

Sincerely,
URS Corporation

Mitchell Johnson for Ron GinSTE

Ronald G. Ginste CIH
Abatement Project Monitor

Ms. Carla Grano
May 18, 2010
Page 4 of 4

Appendices

Appendix A URS Field Log

Appendix B LVI Report Including URS Oversight Checklist, Final Visual Clearance Certificate and Final Manifest

Appendix C Air Sample Test Results

Appendix A
URS Field Log

Appendix A
URS Field Log

DATE: 3-15-10

URS - Field Log

Project 4052-2050 20th St
Madison, Wis Bus Garage

- 0626 Leave Greenfield for WMATA, arrive @ 0705 mileage=7305Z
- 0740 Met Carla Gross at main gate. She directed me on the site inside the building. Approximately 732 sq ft of 6x9 green floor tile must be removed from the basement area.
- 0800 Four presamples running in basement. Temp = 72°F
- 1100 Between 8 and 10 am I ran presamples. Around 10:00 LVI showed up and we toured the site with WMATA.
- 1000-1200 LVI setup the containment in the basement, finishing the area shortly before noon. LVI established critical barriers on all openings into the work area. A single negative air unit is being used to exhaust air from inside containment and is exhausting into the building. Normally this practice is contrary to WMATA policy but WMATA has waived the requirement in this case because the configuration of the work area will not lend itself to exhausting outside the building. LVI is exhausting one unit into another. A four foot high splash guard has been extended up on all walls to protect them from splashing when LVI removes the floor tile mastic. A 3 stage decon has also been setup.
- 1200 Workers enter containment. All workers are double sealing and wearing 1/2 face neg pressure APRs. Area monitoring is being done at 5 locations outside the containment with level pumps.
- 205 Removal in progress. LVI will remove floor tile and mastic also.
- 1:15 Removal still in progress. Floor tile removal nearly complete. Ceiling height is 12 ft. Area of floor inside containment is 23 x 32. Volume of containment is $12 \times 23 \times 32 = 8832 \text{ ft}^3$. If the single negative air unit is removing 2000 CFM then the entire volume of the containment is being evacuated once every 4.4 minutes for a total of 13.33 air changes per hour. Workers are using scraping bars to remove the VAT.
- 1346 Bagout begins. All bags double bagged & labeled.
- 1400 Work continues.
- 17:46 Work ends around this time. There are some remaining small patches that are difficult to remove. LVI will encapsulate the interior of the area.
- 1800 Begin running finals. Collected 3 samples. District requires only 2 per 2500 ft².

Appendix B

LVI Report Including URS Oversight Checklist, Final Visual Clearance Certificate, and Final Manifest

FINAL REPORT
Asbestos Removal of:
WMATA
Bladensburg Bus Division
(430050)

MANIFEST NUMBER

DC 3

LVI ENVIRONMENTAL SERVICES INC.

8005 CESSNA AVE. • GAITHERSBURG, MARYLAND 20879

33164

NON-HAZARDOUS WASTE MANIFEST

DC SITES

GENERATOR

CONTRACTORS NAME: LVI Environmental Services Inc., 8005 Cessna Ave., Gaithersburg, MD 20879
Ph. (301) 840-8898 • FAX (301) 840-0965

WORK SITE: WMATA Bladensburg Bus Division 2251 26th Street NE
Washington DC Ph. Job # 430050

OWNERS NAME: Washington Metro Transit Authority 3101 Eisonhower Ave
Alexandria VA Ph.

WASTE DISPOSAL SITE: Minerva Landfill, 9000 Minerva Road, Waynesburg, OH 44688
Ph. 330-866-3435

DESCRIPTION OF MATERIALS

CONTAINERS

	NO.	TYPE	(yd ³)	Fri.	Non-Fri
FL/IT/mastac	40	DM : DP : BA DM : DP : BA DM : DP : BA	3.0		X

NAME OF RESPONSIBLE AGENCY: DC Department of Environment, Asbestos Program,
51 N Street, NE, 5th Floor, Washington, DC 20002 202-535-2259

Special Handling Instructions: RQ, 9, asbestos, NA 2212, PG III

OPERATOR'S CERTIFICATION

I hereby certify that the above material does not contain free liquid as defined by 40 CFR Part 260.10 or any applicable state law, is not a hazardous waste as defined by 40 CFR Part 261 or any applicable state law, has been properly described, classified and packaged, and is in proper condition for transportation according to applicable regulations.

Name: Christine M Ramirez Title Construction MRGR
Signature: [Signature] Date 3/19/10

TRANSPORTER #1 (Acknowledgment Receipt of Material)

Name/address/tel. STG 58 Pyles Lane, New Castle, DE 19720

Barry Gaudet 877-999-9559

Name/sig./date D Nichols 3/19/10

TRANSPORTER #2 (Acknowledgment Receipt of Material)

Name/address/tel.

Name/sig./date

DISPOSAL SITE

DISCREPANCY INDICATION SPACE:

WASTE DISPOSAL SITE Owner/Operator:

Name/Title Sig.
Date

White: Mail to: LVI Environmental Services, 8005 Cessna Ave., Gaithersburg, MD 20879
Yellow: Transporter Pink: Landfill or Disposal site Gold: Site Copy

2010 MAR 22 A 11: 58

Disposal Facility MS



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

6/30/2009

PRODUCER Phone: 516-914-9634 Fax: 516-414-8931
 Tanenbaum-Harber Co., Inc.
 1055 Franklin Avenue
 Suite 200
 Garden City NY 11530

Issue Date 02/10/10

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURED	INSURERS AFFORDING COVERAGE	NAIC #
LVI Environmental Services Inc. 8005 Cessna Avenue Gaithersburg, MD 20879	INSURER A Commerce and Industry Ins Co.	19410
	INSURER B New Hampshire Ins Co.	
	INSURER C Firemans Fund Ins. Companies	
	INSURER D	
	INSURER E	

COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YYYY)	POLICY EXPIRATION DATE (MM/DD/YYYY)	LIMITS
A GENERAL LIABILITY <input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY CLAIMS MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> Pollution Inc. <input checked="" type="checkbox"/> Lead/Asbest/Mold (ENL AGGREGATE LIMIT APPLIES PER POLICY) <input checked="" type="checkbox"/> PRO <input checked="" type="checkbox"/> RET <input checked="" type="checkbox"/> LOC	PRO07633866	7/1/2009	7/1/2010	EACH OCCURRENCE DAMAGE TO RENTED PREMISES (Per occurrence) \$100,000 MED EXP (Any one person) \$25,000 PERSONAL & ADVISORY \$2,000,000 GENERAL AGGREGATE \$10,000,000 PRODUCTS - COMPROM AOS \$2,000,000
B AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO ALL OWNED AUTOS SCHEDULED AUTOS <input checked="" type="checkbox"/> HIRED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS	CA7633868	7/1/2009	7/1/2010	COMBINED SINGLE LIMIT (Per accident) \$1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per occurrence) \$ AUTO-ONLY - EA ACCIDENT \$ OTHER THAN AUTO-ONLY EA ACC AGG \$
GARAGE LIABILITY <input type="checkbox"/> ANY AUTO				
A EXCESS / UMBRELLA LIABILITY <input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE DEDUCTIBLE <input checked="" type="checkbox"/> RETENTION \$10,000	PROU7633867	7/1/2009	7/1/2010	EACH OCCURRENCE \$25,000,000 AGGREGATE \$25,000,000 \$ \$ \$
B WORKERS COMPENSATION AND EMPLOYERS LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/OWNER EXCLUDED? (Mandatory W/MH) <input type="checkbox"/> Y/N * If yes, describe under SPECIAL PROVISIONS below	W07191687 AOS W07191688 CA	7/1/2009 7/1/2009	7/1/2010 7/1/2010	<input checked="" type="checkbox"/> WC STATUTORY LIMITS EL EACH ACCIDENT \$1,000,000 EL DISEASE - EA EMPLOYEE \$1,000,000 EL DISEASE - POLICY LIMIT \$1,000,000
C OTHER Leased/Rented Equipment Special Form Incl. Theft	MX193008163	7/1/2009	7/1/2010	\$1,000,000 Limit

DESCRIPTION OF OPERATIONS (LOCATIONS / VEHICLES) / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

WMATA - BLADENSBURG BUS D 438058 1
 2251 26TH STREET, NE
 WASHINGTON DC

Start: Completion:
 Contract Amount: 2,909.06
 Certification: 100394

CERTIFICATE HOLDER

Additional Insured: WMATA

WASHINGTON METRO TRANSIT AUTHORITY
 CARLO GRAND
 3103 EISENHOWER AVENUE
 ALEXANDRIA VA 22314

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 10 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT. BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE



LVI Environmental Services Inc.
8005 Cessna Avenue
Gaithersburg, MD 20879

Tel: (301) 840-8898
Fax: (301) 840-0965
www.lviservices.com

May 13, 2010

Washington Metropolitan Transit Authority
3101 Eisenhower Avenue
Alexandria, Virginia 22314
Attn: Carlo Grano

**RE: Final Report for Asbestos Removal; WMATA; Bladensburg Bus Division,
2251 26th Street, NE, Washington, DC (430050)**

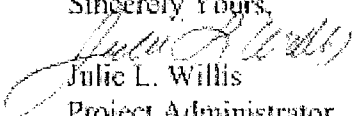
Dear Ms. Grano,

LVI Environmental Services, Inc. performed the removal of asbestos material in the above referenced facility March 5, 2010. All work was carried out according to the OSHA regulation 26CFR 1926.1101. LVI utilized proper engineering controls and personal protective equipment while performing the removal of asbestos materials. Enclosed is the Final Report for work completed during this period. The Final Report contains the following documents:

1. Notification (None Required)
2. Project Log
3. Daily Log Attachments
4. Regulated Area Entry/Exit Log
5. Daily Project Report
6. Lab Analysis
7. Waste Manifest
8. Certification of Insurance

If you should have any questions regarding this report, please contact me at (301) 840-8898.

Sincerely Yours,


Julie L. Willis

Project Administrator

My signing this letter, the above project has been completed, and is considered free of all claims, liens or other charges.

1800 Washington Blvd., Suite 725 • BALTIMORE MD 21230-1720

OFFICE USE ONLY →

Notification ID:

Notification Type: (Check one) → Original Submit Date: _____ <i>[If THIS is a revision]</i> Revision Date: _____ <i>[Date of THIS Revision]</i>	<input checked="" type="checkbox"/> [O] ORIGINAL <small>[First Notice THIS Project]</small>	Resp Agency: S
	<input type="checkbox"/> [R] Revision Revision #	Variance Request Attached? (Y/N)
	<input type="checkbox"/> [P] Postpone → <input type="checkbox"/> [R] Reschedule	Received Date: →
	<input type="checkbox"/> [C] Cancel → <input type="checkbox"/> [R] Reschedule	Postmark Date: →

If this is a Revision, what are you revising? Start Date Complete Date **Initials/Date:**

Other (Specify) _____ Quantity

Type of Project: NESHAP → [N] Renovation [D-N] Demolition [D-N] DEMO ONLY (no asbestos)

[Operation]: Non-NESHAP → [S-N] Renovation [D-N] Demolition [S-N] Encapsulation

I. JOB/SITE DATA Emergency? Yes No Asbestos Present? Yes No

Enter PROJECT [Site/Building] NAME below: ↓

Southgate Elementary School 439050

Street Address: 290 Shetlands Lane Region: **03**

County ID: 02 [From below] City: Glen Burnie State: **MD** Zip: 21061

01 Allegany	04 Calvert	07 Cecil	10 Frederick	13 Howard	16 Prince George	19 Somerset	22 Wicomico
02 Anne Arundel	05 Caroline	08 Charles	11 Garrett	14 Kent	17 Queen Anne	20 Talbot	23 Worcester
03 Baltimore	06 Carroll	09 Dorchester	12 Harford	15 Montgomery	18 St Mary	21 Washington	24 Baltimore City

Project/Site Location Description: (BE SPECIFIC... Bldg, Room, Floor # etc.) **Gym & Kitchen**

Building Size: 30,000 (SQ FT)	No. Floors: 1	Present/Prior Use: B-Shop, C-Commercial, G-Government, H-Hospital, I-Industrial, O-Office, P-Public Building, R-Residence, S-School, U-University/College, V-Vacant, T-Other	Present Use: s
(LN FT)	Age: 40		Prior Use: s

II. ASBESTOS/PROJECT DATA		Nonfriable Not Removed		Nonfriable Removed		Unit
Amount of Asbestos	RACM Removed	CAT I	CAT II	CAT I	CAT II	
Pipes	4					LnFt
Surface Area					100	SqFt
Vol Off Fac Component						CuFt
Removal/Encapsulation/Demolition → Start Date: 3/08/10		Completion Date: 3/12/10		# of Workers: 5		
Project Supervisor: Luis Ramirez		Days Worked: Mon-Fri		Hours Worked: 3p-10p		

III. RESPONSIBLE PARTIES Describe asbestos (e.g. pipe insulation, boiler breeching, floor tile, etc.)
 Fitting insulation, transite, window caulk & glazing

A. Asbestos Contractor: LVI Environmental Services Inc. MD License #: M39-00-0011

Project Contact: David Rymers / Christine Ramirez Telephone: 301-840-8898

B. Other [including Demolition] Contractor:

Address: _____ Contact: _____

City, State, Zipcode: _____ Telephone: _____

C. Owner: Anne Arundel County Public Schools

Address: 9034 Ft. Smallwood Road Contact: Tom Leary

City, State, Zipcode: Pasadena, MD 21122 Telephone: 410-255-2535

III. RESPONSIBLE PARTIES (continued)

D. **Waste Transporter:** Service Transport Group

Address: 58 Pyles Lane

Contact: Barry Gaudet

City, State, Zipcode New Castle, DE 19720

Telephone: 877-999-9559

E. **Landfill:** Minerva Landfill

Address: 9000 Minerva Road

Contact: Jay Clayton

City, State, Zipcode Waynesburg, OH 44688

Telephone: 330-866-3435

IV. WORK PRACTICES

A. Procedure, including analytical method, if appropriate, used to detect the presence of asbestos. *(Use additional sheets, if necessary)*
PLM

B. Description of planned demolition, renovation, or encapsulation work and method(s) to be used: *(Use additional sheets, if necessary)*
Removal of ACM so renovation work can be performed by others.

C. Description of work practices and engineering controls to be used to prevent emissions of asbestos at the demolition, renovation and/or encapsulation site: *(Use additional sheets, if necessary)*
Negative air containment, utilize wet removal procedures, all workers will wear PPE.

D. **EMERGENCY RENOVATIONS:** Date and Hours of Emergency: (MM/DD/YY) Time:
Description of the sudden, unexpected event: *(Use additional sheets, if necessary)*

Explanation of how the event caused unsafe conditions or would cause equipment damage or an unreasonable financial burden: *(Use additional sheets, if necessary)*

E. Description of procedures to be followed in the event that unexpected asbestos is found or previously nonfriable asbestos material becomes crumbled, pulverized, or reduced to powder. *(Use additional sheets, if necessary)*
The area shall be cleaned and the Owner notified.

F. I CERTIFY THAT AN INDIVIDUAL TRAINED IN THE PROVISIONS OF THIS REGULATION (40 CFR PART 61, SUBPART M) WILL BE ON-SITE DURING THE DEMOLITION, RENOVATION OR ENCAPSULATION AND EVIDENCE THAT THE REQUIRED TRAINING HAS BEEN ACCOMPLISHED BY THIS PERSON WILL BE AVAILABLE FOR INSPECTION DURING NORMAL BUSINESS HOURS.

Signature

Date

G. I CERTIFY THAT THE ABOVE INFORMATION IS CORRECT.

Signature

Date

H. IN ADDITION TO THE INFORMATION REQUIRED BY NESHAP REGULATIONS, MARYLAND REQUIRES THAT THE FOLLOWING INFORMATION BE PROVIDED AT THE TIME OF NOTIFICATION: EMPLOYEE INFORMATION. ON A SEPARATE PAGE, PROVIDE THE FOLLOWING INFORMATION FOR EACH EMPLOYEE NOT LISTED ON SCHEDULE I OF "APPLICATION FOR LICENSE TO REMOVE/ENCAPSULATE ASBESTOS" WHO WILL HANDLE ASBESTOS ON THIS PROJECT: 1) **FULL NAME**; 2) **SOCIAL SECURITY NUMBER**; 3) **NAME OF ORGANIZATION THAT PROVIDED APPROVED TRAINING COURSE**; AND 4) **DATE OF MOST RECENT APPROVED TRAINING COURSE ATTENDED**.

NOTIFICATION OF DEMOLITION AND RENOVATION

Operator Project # 430050	Postmark	Date Received	Notification #	
I. TITLE OF NOTIFICATION (O-Original R-Revised C-Cancelled). ORIGINAL				
II. FACILITY INFORMATION (Identify owner, removal contractor, and other operator)				
OWNER NAME: Washington Metropolitan Area Transit Authority - WMATA				
Address: 3101 Eisenhower Avenue				
City: Alexandria	State: VA	Zip: 22314		
Contact: Carla Grant		Tel: 202 962 5077		
REMOVAL CONTRACTOR: LVI Environmental Services Inc				
Address: 8005 Cessna Avenue				
City: Gaithersburg	State: MD	Zip: 20879		
Contact: CHRISTINE M KAMRAN		Tel: 3015408898		
OTHER OPERATOR: N/A				
Address:				
City:	State:	Zip:		
Contact:		Tel:		
III. TYPE OF OPERATION (D-Demo O-Ordered Demo R-Renovation E-Enter. Renovation) Renovation				
IV. IS ASBESTOS PRESENT? (Yes/No) Yes				
V. FACILITY DESCRIPTION (Include building name, number and floor or room number)				
Bldg. Name: WMATA - Bladensburg Bus Division				
Address: 2251 20th Street NE				
City: Washington	State: DC	County: N/A		
Site Location: Basement Storage Room				
Building Size: 100,000 SF	# of Floors: 3	Age in Years: +/- 60		
Present Use: Bus Repair Shop	Prior Use: Bus Repair shop			
VI. PROCEDURE, INCLUDING ANALYTICAL METHOD, IF APPROPRIATE, USED TO DETECT THE PRESENCE OF ASBESTOS MATERIAL: PLM analysis.				
VII. APPROPRIATE AMOUNT OF ASBESTOS, INCLUDING:				
1. Regulated ACM To Be Removed	RACM To Be Removed	Nonfriable Asbestos Material Not To Be Removed		Indicate Unit of Measurement Below
2. Category I ACM Not Removed		CAT I	CAT II	
3. Category II ACM Not Removed				UNIT
Pipes				Ln Ft
Surf/ce Area Fluorite mosaic 500				Sq Ft X
Vol. RACM Off Facility Component				Cu Ft
VIII. SCHEDULED DATES ASBESTOS REMOVAL (MM/DD/YY) Start: 3/15/10 Complete: 3/15/10				
IX. SCHEDULED DATES DEMO/RENOVATION (MM/DD/YY) Start: Complete:				

NOTIFICATION OF DEMOLITION AND RENOVATION (continued)

X. DESCRIPTION OF PLANNED DEMOLITION OR RENOVATION WORK, AND METHOD (S) TO BE USED:

Removal of ACM so area can be renovated by others

XI. DESCRIPTION OF WORK PRACTICES AND ENGINEERING CONTROLS TO BE USED TO PREVENT EMISSIONS OF ASBESTOS AT THE DEMOLITION AND RENOVATION SITE:

Wet removal procedures. Negotiated air containment, all workers will wear PPE. Removal of FFI/mastic utilizing manual methods.

XII. WASTE TRANSPORTER #1

Name: *STG*

Address: *58 Pyles Lane*

City: *New Castle*

State: *DE*

Zip: *19730*

Contact Person: *Dave Nole*

Tel: *8779999559*

WASTE TRANSPORTER #2

Name:

Address:

City:

State:

Zip:

Contact Person:

Tel:

XIII. WASTE DISPOSAL SITE

Name: *Minerva Landfill*

Address: *4000 Minerva Road*

City: *Wilmington*

State: *OH*

Zip: *44188*

Contact: *Jay Clayton*

Tel: *3308003435*

XIV. IF DEMOLITION ORDERED BY A GOVERNMENT AGENCY, PLEASE IDENTIFY THE AGENCY BELOW.

Name:

Title:

Authority:

Date of Order (MM/DD/YY):

Date Ordered to Begin (MM/DD/YY):

XV. FOR EMERGENCY RENOVATIONS

Date and Hour of Emergency (DD/MM/YY):

Description of the Sudden, Unexpected Event:

Explanation of how the event caused unsafe conditions or would cause equipment damage or an unreasonable financial burden:

XVI. DESCRIPTION OF PROCEDURES TO BE FOLLOWED IN THE EVENT THAT UNEXPECTED ASBESTOS IS FOUND OR PREVIOUSLY NONFRIABLE ASBESTOS MATERIAL BECOMES CRUMBLING, PULVERIZED, OR REDUCED TO POWDER.

The area will be cleaned and the owner will be notified

XVII. I CERTIFY THAT AN INDIVIDUAL TRAINED IN THE PROVISIONS OF THIS REGULATION (40 CFR, Part 61, SUBPART M) WILL BE ON-SITE DURING THE DEMOLITION OR RENOVATION AND EVIDENCE THAT THE REQUIRED TRAINING HAS BEEN ACCOMPLISHED BY THIS PERSON WILL BE AVAILABLE FOR INSPECTION DURING NORMAL BUSINESS HOURS (Required 1 year after promulgation)

(Date)

2/18/2010

(Signature of Owner/Operator)

Amundell B...

XVIII. I CERTIFY THAT THE ABOVE INFORMATION IS CORRECT.

(Date)

02/18/2010

(Signature of Owner/Operator)

Amundell B...

LVI ENVIRONMENTAL SERVICES

PROJECT LOG

PROJECT NUMBER: METRO 430050

PROJECT NAME: METRO Bladensburg

BUILDING ADDRESS: 2251 26th. St. NE
Washington, DC 20018

BUILDING OWNER: METRO

OWNER'S ADDRESS: _____

OWNER'S AGENT: _____

AGENT'S ADDRESS: _____

AIR MONITORING FIRM: URS Corp.

FIRM'S ADDRESS: Gaithersburg MD



LVI ENVIRONMENTAL SERVICES INC
DAILY ABATEMENT CHECKLIST

Project Name: METRO

Job Number: 430050

Supervisor: Luis H. Ramirez

Date: 3-15-10

ASBESTOS LEAD MOLD OTHER _____

DID ASBESTOS ACTIVITIES OCCUR THIS DATE? YES NO

I. REGULATED AREA ESTABLISHED	YES	NO	N/A
Barrier Tape Around Area	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Warning Signs Posted at Entrances	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
II. WORK SITE BARRIER (CONTAINMENT)			
Area Heating/Ventilation System Off	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Floor Covered (Where Applicable)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Walls Covered	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All Edges Sealed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Penetrations Sealed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Entry Curtains Erect and Operable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
III. DIFFERENTIAL PRESSURE CONTAINMENT			
Air Filtering Devices in Constant Operation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Differential Pressure Achieved	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recording Manometer in Operation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
IV. ELECTRICAL			
All Wiring Checked for Live Voltage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Workers Protected Against Live Voltage	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ground Fault Circuit Interrupters in Use	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
V. WORK PRACTICES			
Asbestos Material Worked Wet	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Removed Material Promptly Bagged	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bags Properly Labeled and Goose-neck Sealed	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
HEPA Vacuum Used	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Work Area Cleaned At End of Shift	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Workers Decontaminated at Each Departure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No Smoking, Eating or Drinking in Containment	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
VI. PERSONNEL PROTECTION			
Medical Examination and Training Conducted	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Air Sampling Conducted and Posted	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Disposable Clothing Worn Correctly	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Torn Disposable Clothing Replaced Promptly	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Respirators Inspected and Cleaned Daily	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hard Hats and Safety Glasses Worn Correctly	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
VII. DECONTAMINATION			
Showers on-site and Functioning Properly	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adequate Soap and Towels Available	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All Workers Showering Correctly	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water Filtration System in Operation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



LVI ENVIRONMENTAL SERVICES INC.-REGULATED AREA ENTRY/EXIT LOG

WORK AREA: Basement DATE 3-19-10 SHIFT: (1st) 2nd 3rd

SUPERVISOR: Juis H. Ramirez PROJECT MANAGER: Daley Deleo

By my signing this entrance/exit log, I acknowledge that I have been trained in and understand all Federal, State & Local Regulations and Procedures Governing the abatement of asbestos-containing materials.

Print Name	SS#	License #	Resp. Prot.	Time In	Time Out	Time In	Time Out	Task Performed
1 Adonis Gamez	4074	DC 956	H.M.	12:00pm	2:00pm	3:00pm	6:00pm	Floor tiles
2 Edgar Lopez	6561	"	"	"	"	"	"	"
3 Mariana Gutierrez	8385	"	"	"	"	"	"	"
4 Victorino Ortiz	5974	"	"	"	"	"	"	Black Mastic
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

I certify that all individuals entering this work are, were wearing the proper personal Protective equipment. I have checked all critical barriers for leaks at least twice during this shift, and maintained a constant negative pressure within the containment (if applicable)

Supervisor's Signature: Juis H. Ramirez



LVI ENVIRONMENTAL SERVICES INC

DAILY PROCEDURES LOG

Date 3-15-10 S (M) T W R F S

Shift: (1st) 2nd 3rd

Shift Start Time: 10:00 (am) / pm

Shift End Time: _____ am / pm

Project Name: METRO

Job Number: 430050

Number of Workers: 5

Non-ACM Waste Generated: _____ CY ACM Waste Generated: _____ CY

of Drums: _____ # of Bags: _____

Other: _____

Visitors on-site: 1. _____ 2. _____ 3. _____

DAILY WORK PROCEDURES LOG:

TIME NOTES

TIME	NOTES
	Critical Barriers Checked
10:00 Am.	(4) LVI's workers (1) supervisor Plus T.H. From URS corp. meet at job site we checked scope of work: Approx (734) sq. of floor tiles and mastic
10:30am	The crew mobilized equipment and materials At. Basement. They started set up. full containment. critical barrier, seal all opening HVAC, splash guard on all walls, Neg Air machine exhaust on water baffel
12:00pm	The containment is done the I.H. does visual pre abated inspection it's PASS The workers suited with Protective equipment into containment they started wet Removal one worker picked and bagged all Floor tiles debris
	Gross Removal is done the workers doing double bags and bags out I carrying and Load on LVI's truck
1:00pm	The workers set up. the mastic Remover

Continued next page

Supervisor's Signature: [Signature]

Date: 3-15-10



Date 3-15-10

DAILY WORK PROCEDURES LOG-CONTINUED:

TIME	NOTES
2:00pm.	The crew Took Lunch break.
3:00pm.	The crew back to work. They Remove the Black mastic by hand
5:00pm.	The black mastic is Done The workers doing final clean with Hepo vacuum.
5:45pm.	The final clean is Done The I.H. does Visual inspection it's PASS. The workers pack down work area with Encapsulate Clear 500
	- The I.H. Took Air Samples "PCM clearance" The workers mobilized The Equipment. Load on LVI's truck.
6:30pm	I send Two worker a his Home. They completed Shoring work. I stay Late with two work. way for clearance. for will tear down containment.
8:00pm	The I.H. Read The PCM. clearance it's PASS. We tear down. The containment. clean up. work Area we load all waste and Equipment on LVI's truck.
8:45pm.	The crew sign out and left job site
	Critical Barriers Checked

Supervisor's Signature: [Signature]

Date: 3-15-10

LVI ENVIRONMENTAL SERVICES INC.
8005 CESSNA AVENUE
GAITHERSBURG, MD 20879

CERTIFICATE OF FINAL VISUAL INSPECTION

JOB NUMBER 430050
PROJECT NAME METRO
SUPERINTENDENT Jos H. Ramirez
INDUSTRIAL HYGIENIST Ron Grate
COMPANY URS Corp.
ANALYZING LAB on site

TYPE OF FINAL CLEARANCE SAMPLE USED	TEM	PCM	# OF SAMPLES TAKEN
_____	_____	_____	_____

In accordance with the contractual documents the Industrial Hygiene firm representative hereby certifies that they have visually inspected the work area (all surfaces including pipes, beams, ledges, walls, ceiling and floor decontamination unit, sheet plastic, etc. that remains within the work area) and has passed visual inspection in accordance with the contract document as well as approved the application of a penetrating/sealing encapsulant.

INDUSTRIAL HYGIENIST SIGNATURE _____

PRINT NAME AND COMPANY _____

(LVI) WITNESS SIGNATURE Jos H. Ramirez

SCHNEIDER LABORATORIES

INCORPORATED

2512 W. Cary Street • Richmond, Virginia • 23220-5117
804-353-6778 • 800-785-LABS (5227) • (FAX) 804-359-1475

Excellence In Service and Technology

AIHA/ELLAP 100527, NVLAP 101150-0, NYELAP/NELAC 11413, CAELAP 2078, NC 593, SC 93003

LABORATORY ANALYSIS REPORT

Asbestos and Other Fibers Counted based on NIOSH 7400 Method, Issue 2, Aug. 12, 1994
Using SLI A8

ACCOUNT #: 626-10-7325
CLIENT: LVI ENVIRO SERVICES/MD
ADDRESS: 8005 CESSNA AVE
GAITHERSBURG, MD 20879

DATE COLLECTED: 3/15/2010
DATE RECEIVED: 3/24/2010
DATE ANALYZED: 3/31/2010
DATE REPORTED: 3/31/2010
RESPIRATOR: Half Face

PROJECT NAME: Metro
JOB LOCATION:
PROJECT NO.: 430050
PO NO.: 17503

Personal and Excursion Samples Collected For OSHA Compliance.

SLI Sample No.	Client Sample No.	Sample Identification	Sample Date	Flow Rate (L/min)	Sample Time (min)	Sample Volume (L)	Fiber Count (f/field)	Actual Exp. (f/cc)	30 Min TWA (f/cc)	8 HR TWA (f/cc)
30522943	P3	FT/Mastic Wet Removal	3/15/2010	2.00	120	240.0	0.265	0.054		0.014 0.014
30522941	P1	FT/Mastic Wet Removal	3/15/2010	2.00	30	60.0	< 0.055	< 0.045	< 0.045	
30522942	P2	FT/Mastic Wet Removal	3/15/2010	2.00	60	120.0	0.165	0.067		0.008
		<i>Gutierrez, M./ 8385</i>								

Analyst: HALA A. OSMAN

Total Number of Pages in Report: 1

Results relate only to samples as received by the laboratory.

Mohammed B. Hashim

Reviewed By:

Mohammed B. Hashim, Analyst

Visit www.slabin.com for current certifications.

OSHA PELs are 1.0 f/cc for 30 min excursion and 0.1 f/cc for 8 hour TWA. Est. limit of detection: 7 f/mm² or 0.055 f/field. Data precision justifies 2 sig. figures. For f/mm², divide f/field by microscopic field area of 0.00785 mm². Results are not blank-corrected unless noted by analyst. Exposure calculations are based on client-supplied information and assume zero exposure for time not sampled. Est. relative standard deviations: Intra-Laboratory: ± 0.07; Inter-Laboratory: ± 0.81. Unusual sample conditions, if any, are described.

DAILY AIR MONITORING REPORT
ASBESTOS

676-10-714
 LVI Environmental Services, Inc.
 8005 Cessna Avenue
 Gaithersburg, Maryland 20879
 301-840-8898 / 301-840-0965 fax
 Account # 626

CHAIN OF CUSTODY
 Signature of Person Taking Samples
Juis H. Ramirez Date 3-15-10

Signature of Person Delivering Samples to Lab
 Date

DATE: 3-15-10
 SUPERVISOR: Juis H. Ramirez JOB NAME: METRO
 JOB NO.: 430050

ANALYTICAL DATA

Sample ID	Pump No.	Flow Rate (l/min)	Cassette Type	Running Time		Volume (Liters)	Fibers/Field	Results Fibers/cc	Pump Calibration	
				Start	Stop				Before	After
P1	LHR	2.0	25mm	1230pm	100pm	60			2.0	2.0
P2	LHR	2.0	25mm	100pm	200pm	120			2.0	2.0
P3	LHR	2.0	25mm	300pm	500pm	240			2.0	2.0

DESCRIPTIVE INFORMATION

Sample ID	Sample Type	Worker's Name	Social Security No.	Material Type	Activity	Type of Respirator	Results 8 Hr. TWA	Worker's Initials
P1	PRS	Marcena Gutierrez	8385	Floor tiles	REM	HM		MG
P2	PRS	Marcena Gutierrez	8385	+ mastic	REM	HM		MG
								MG

COMMENTS: Floor tiles + mastic wet Removal under veg Pass

KEY TO ABBREVIATIONS

SAMPLE TYPE: PRS = personal; PRM = perimeter; ENV = environmental; BGD = background
 CL = clearance; FC = final clearance; HEX = hepa exhaust; ACTIVITY: REM = removal;
 CLN = clean-up; GLBG = glovebag; BGL0 = bag lead out; PREP = site prep; IC = inside contain;
 OC = outside contain; RESP TYPE: HM = half mask neg; FF = full face neg; PAPR = powered
 air purifying; SAC = supplied air cont.; SAMPD = supplied air press. Demid; SCBA = SCBA

Rotameter #: M-5
 Analyzed by: _____

Appendix C

Air Sample Test Results

 *** TX REPORT ***

TRANSMISSION OK

TX/RX NO 4509
 RECIPIENT ADDRESS 92024813771
 DESTINATION ID
 ST. TIME 03/16 15:44
 TIME USE 00'41
 PAGES SENT 2
 RESULT OK

URS

Facsimile

Date: Tuesday 3-16-10 Page 1 of: 2

To: Mr Joe Parrish From: Ron Ginste

Firm: DC Dept. of Health cc: _____

Facsimile: 202-481-3771

Subject: PCM Final clearance results for WMATA's Bladensburg Bus Garage at 2251 26th St. NE DC.

Message: Dear Mr Parrish

Attached are the PCM clearance results for removal of approx. 735 S.F. of 9"x9" floor tile from 2251 26th Street, Washington DC NE (WMATA - Bladensburg Bus Garage) collected yesterday.

The clearance results were all less than 0.01 f/cc. Please feel free to contact me at 301-258-5832 if you have questions or require additional information.

Ron Ginste

Date: Tuesday 3-16-10 Page 1 of: 2To: Mr Joe Parrish From: Ron GinsteFirm: DC Dept. of Health cc: _____Facsimile: 202-481-3771Subject: PCM Final clearance results for WMATA's Bladensburg
Bus Garage at 2251 26th St. NE DC.Message: Dear Mr Parrish

Attached are the PCM clearance results
for removal of approx. 735 SF. of 9"x9"
floor tile from 2251 26th Street, Washington DC
NE (WMATA - Bladensburg Bus Garage)
collected yesterday.

The clearance results were all less than 0.01 f/ce
Please feel free to contact me at 301-258-5832
if you have questions or require additional
information.

Ron Ginste**CONFIDENTIALITY NOTICE**

The information in this facsimile transmission is intended solely for the stated recipient of this transmission. If you have received this fax in error, please notify the sender immediately by telephone. If you are not the intended recipient, please be advised that dissemination, distribution, or copying of the information contained in this fax is strictly prohibited.



200 Orchard Ridge Dr., Ste 101 -
Gaithersburg, MD 20878 • ph / fax (301) 258-9780

FIELD / ANALYTICAL / CHAIN OF CUSTODY RECORD
Analysis: Phase Contrast Microscopy via NIOSH 7400 Method

SAMPLERS: R. Ginstel PROJECT: 40252 - WMATA VAT removal 1 OF 1 PAGES

SEND RESULTS TO:

CLIENT: WMATA
2250 26th Street
Washington, NE DC

PHONE / FAX:

SITE / LOCATION: WMATA
2251 26th Street
Washington, NE DC

NOTES:

JOB DESCRIPTION:
Removal of approximately 732 square feet of 9" x 9" vinyl floor tile and associated asbestos containing mastic from an unoccupied basement storage area

TURNAROUND TIME:

OF CONTAINER:

CONTAINER TYPE:

PRESERVATIVE:

TYPE OF ANALYSIS:

Limit of Detection (fibers)
Brometric Pressure
Temperature (°F)
Fibers per 100 Fields
Fibers per sq. millimeter
Fibers per cubic centimeter
Fibers Reported
COMMENTS

SAMPLE ID	DATE	TIME ON	TIME OFF	TOTAL TIME (MIN)	FLOW RATE (LPM)	VOLUME (L)	SAMPLE MATRIX	LOCATION	Pump ID	Temperature (°F)	Limit of Detection (fibers)	Brometric Pressure	Fibers per 100 Fields	Fibers per sq. millimeter	Fibers per cubic centimeter	COMMENTS
10074-13	3/15/2010	0:00	0:00	0	0	0	25mm / 8µm MCEF	Field Blank 1	n/a	n/a	7	0.5	1	n/a	n/a	
10074-14	3/15/2010	0:00	0:00	0	0	0	25mm / 8µm MCEF	Field Blank 2	n/a	n/a	7	0	0	n/a	n/a	
10074-01	3/15/2010	8:00	10:10	130	12.4	1612.00	25mm / 8µm MCEF	Basement - Presample	8829	73.0	29.67	7	18.5	23	< 0.01	
10074-02	3/15/2010	8:00	10:10	130	12.6	1638.00	25mm / 8µm MCEF	Basement - Presample	0692	73.0	29.67	7	12.5	15	< 0.01	
10074-03	3/15/2010	8:00	10:10	130	11.3	1469.00	25mm / 8µm MCEF	Basement - Presample	0997	73.0	29.67	7	6.5	8	< 0.01	
10074-04	3/15/2010	8:00	10:10	130	13.6	1768.00	25mm / 8µm MCEF	Basement - Presample	0997	73.0	29.67	7	15.5	8	< 0.01	
10074-05	3/15/2010	11:50	17:45	355	1.9	674.50	25mm / 8µm MCEF	Near exhaust	0498	73.0	29.67	7	17	21	0.012	
10074-06	3/15/2010	11:55	17:45	350	2.37	829.50	25mm / 8µm MCEF	Decon entrance	10631	73.0	29.67	7	20	25	0.012	
10074-07	3/15/2010	11:50	17:45	355	1.9	674.50	25mm / 8µm MCEF	Background Area Sample	10632	73.0	29.67	7	14.5	18	0.010	
10074-08	3/15/2010	11:45	17:45	360	2.25	810.00	25mm / 8µm MCEF	Stairwell	13061	73.0	29.67	7	18	22	0.011	
10074-09	3/15/2010	11:55	17:45	350	2.31	808.50	25mm / 8µm MCEF	Corridor	13063	73.0	29.67	7	8.5	10	< 0.01	
10074-10	3/15/2010	18:00	19:50	110	12.4	1364.00	25mm / 8µm MCEF	IWA - Final clearance sample	22244	73.0	29.67	7	3.5	4	< 0.01	
10074-11	3/15/2010	18:00	19:50	110	12.8	1408.00	25mm / 8µm MCEF	IWA - Final clearance sample	0498	73.0	29.67	7	2	2	< 0.01	
10074-12	3/15/2010	18:00	19:50	110	11.33	1246.30	25mm / 8µm MCEF	IWA - Final clearance sample	0692	73.0	29.67	7	2.5	3	< 0.01	
RELINQUISHED BY:																
RECEIVED BY:																
DATE / TIME																
0:00/0:00																
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RECEIVED BY:																
DATE / TIME																
0:00/0:00																

RECEIVED FOR LABORATORY BY:

AIRBILL:

SHIPPER:

COMMENTS:
R Ginstel, Sr values 20 - 50 fibers/ld = 24

Project Name & Number: 40252-2250 26th St. 176 0-20 2437 70-20 (24) 100+

FIBER COUNTS / FIELD																CALCULATIONS																																																															
Sample ID: <u>R008</u>																<input type="checkbox"/>	10% Blind Recount	<input checked="" type="checkbox"/>	Reference Slide	Sample Volume (V)	<u>1612</u>	FIBERS per mm ² (E)																																																									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20				Avg. fiber count (fib/flds)	<u>21.5</u> <u>100</u>	FIBERS per cc (f/cc)	<u>n/a</u>																																																					
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43					44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96

Sample ID: 10074-01 - Presample

FIBER COUNTS / FIELD																CALCULATIONS																																																															
Sample ID: <u>10074-01 - Presample</u>																<input type="checkbox"/>	10% Blind Recount	<input type="checkbox"/>	Reference Slide	Sample Volume (V)	<u>1612</u>	FIBERS per mm ² (E)																																																									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20				Avg. fiber count (fib/flds)	<u>18.5</u> <u>100</u>	FIBERS per cc (f/cc)	<u>.006</u>																																																					
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43					44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96

Sample ID: 10074-02 Presample

FIBER COUNTS / FIELD																CALCULATIONS																																																															
Sample ID: <u>10074-02 Presample</u>																<input type="checkbox"/>	10% Blind Recount	<input type="checkbox"/>	Reference Slide	Sample Volume (V)	<u>1638</u>	FIBERS per mm ² (E)																																																									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20				Avg. fiber count (fib/flds)	<u>12.5</u> <u>100</u>	FIBERS per cc (f/cc)	<u>0.004</u>																																																					
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43					44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96

Sample ID: 10074-03 Presample

FIBER COUNTS / FIELD																CALCULATIONS																																																															
Sample ID: <u>10074-03 Presample</u>																<input type="checkbox"/>	10% Blind Recount	<input type="checkbox"/>	Reference Slide	Sample Volume (V)	<u>1469</u>	FIBERS per mm ² (E)																																																									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20				Avg. fiber count (fib/flds)	<u>6.5</u> <u>100</u>	FIBERS per cc (f/cc)	<u>.002</u>																																																					
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43					44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96

Sample ID: 10074-04 Presample

FIBER COUNTS / FIELD																CALCULATIONS																																																															
Sample ID: <u>10074-04 Presample</u>																<input type="checkbox"/>	10% Blind Recount	<input type="checkbox"/>	Reference Slide	Sample Volume (V)	<u>1768</u>	FIBERS per mm ² (E)																																																									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20				Avg. fiber count (fib/flds)	<u>15.5</u> <u>100</u>	FIBERS per cc (f/cc)	<u>.004</u>																																																					
21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43					44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96

- 1) Accept pair of 10% Recounts if: $|\sqrt{\text{count 2}} - \sqrt{\text{count 1}}| < [2.77 \times (\sqrt{\text{count 1}} + \sqrt{\text{count 2}}) \times \text{CV}] + 2$
- 2) Reject pair of 10% Recounts if: $|\sqrt{\text{count 2}} - \sqrt{\text{count 1}}| > [2.77 \times (\sqrt{\text{count 1}} + \sqrt{\text{count 2}}) \times \text{CV}] + 2$
- 3) FIBERS/mm² (E) = $[(\text{Avg. Fiber Count} - \text{Avg. Blank count}) \div (\text{Graticle field area} = .00785 \text{ mm}^2)]$
- 4) FIBERS/cc (f/cc) = $[(\text{E f/mm}^2) \times (385 \text{ mm}^3)] \div [\text{Volume (L)} \times (1000 \text{ cc/L})]$
- 5) Avg. fiber count = $\# \text{ of fibers counted} \div \# \text{ of fields counted}$

QA/QC - Analyze min. of two field blanks or 10% of samples daily, whichever is greater. Perform Reference slide count and 10% Blind Recounts daily. Evaluate pairs of blind 10% recounts using formula 1 & 2. Recount entire days samples upon failure of 10% recount:

Project Name & Number: 40252 - WMATA Bladensburg Bus Garage

FIBER COUNTS / FIELD																		CALCULATIONS																																																																																						
Sample ID: <u>10074-05</u>																		<input type="checkbox"/>	10% Blind Recount	<input type="checkbox"/>	Reference Slide	Sample Volume (V)	<u>855.5</u>	FIBERS per mm ² (E)	0.013																																																																															
1	2	3	4	5	6	<u>0.5</u>	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		22	23		24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	<u>0.5</u>	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	<u>0.5</u>	91	<u>1.5</u>	92	93	94	95	96	97	98	<u>0.5</u>
					Avg. fiber count (fib/flds)	<u>17/100</u>	FIBERS per cc (f/cc)																																																																																																	

Sample ID: <u>10074-06</u>																		<input type="checkbox"/>	10% Blind Recount	<input type="checkbox"/>	Reference Slide	Sample Volume (V)	<u>805.80</u>	FIBERS per mm ² (E)	<u>0.012</u>																																																																													
1	2	3	4	5	6	7	8	9	10	11	12	13	14	<u>0.5</u>	15	16	17	18	19	20	21		22	<u>0.5</u>		23	24	25	<u>0.5</u>	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98
					Avg. fiber count (fib/flds)	<u>20/100</u>	FIBERS per cc (f/cc)	<u>0.012</u>																																																																																														

Sample ID: <u>10074-07</u>																		<input type="checkbox"/>	10% Blind Recount	<input type="checkbox"/>	Reference Slide	Sample Volume (V)	<u>655.5</u>	FIBERS per mm ² (E)	<u>0.011</u>																																																																											
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		23	24		25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	<u>0.5</u>	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98
					Avg. fiber count (fib/flds)	<u>14.5/100</u>	FIBERS per cc (f/cc)	<u>0.011</u>																																																																																												

Sample ID: <u>10074-08</u>																		<input type="checkbox"/>	10% Blind Recount	<input type="checkbox"/>	Reference Slide	Sample Volume (V)	<u>810</u>	FIBERS per mm ² (E)	<u>0.011</u>																																																																																	
1	2	3	4	5	<u>0.5</u>	6	7	8	<u>0.5</u>	9	10	11	12	13	14	<u>0.5</u>	15	16	17	18	19		20	21		<u>0.5</u>	22	23	<u>0.5</u>	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	<u>0.5</u>	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	<u>0.5</u>	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98
					Avg. fiber count (fib/flds)	<u>18/100</u>	FIBERS per cc (f/cc)	<u>0.011</u>																																																																																																		

Sample ID: <u>10074-09</u>																		<input type="checkbox"/>	10% Blind Recount	<input type="checkbox"/>	Reference Slide	Sample Volume (V)	<u>808.5</u>	FIBERS per mm ² (E)	<u>0.005</u>																																																																																
1	2	3	4	5	6	<u>0.5</u>	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		22	23		24	25	26	<u>0.5</u>	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	<u>0.5</u>	47	48	49	50	51	2	52	53	54	55	56	57	58	59	60	61	<u>0.5</u>	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	<u>0.5</u>	89	90	91	92	93	94	95	96	97	98
					Avg. fiber count (fib/flds)	<u>8.5/100</u>	FIBERS per cc (f/cc)	<u>0.005</u>																																																																																																	

QA/QC - Analyze min. of two field blanks or 10% of samples daily, whichever is greater. Perform Reference slide count and 10% Blind Recounts daily. Evaluate pairs of blind 10% recounts using formula 1 & 2. Recount entire days samples upon failure of 10% recount:

- 1) Accept pair of 10% Recounts if: $|\sqrt{\text{count 2}} - \sqrt{\text{count 1}}| < [2.77 \times (\sqrt{\text{count 1} + \text{count 2}}) \times CV] \div 2$
- 2) Reject pair of 10% Recounts if: $|\sqrt{\text{count 2}} - \sqrt{\text{count 1}}| > [2.77 \times (\sqrt{\text{count 1} + \text{count 2}}) \times CV] \div 2$
- 3) FIBERS/mm²(E) = $[(\text{Avg. Fiber Count} - \text{Avg. Blank count}) \div (\text{Graticle field area} = .00785 \text{ mm}^2)]$
- 4) FIBERS/cc(f/cc) = $[(\text{E f/mm}^2) \times (385 \text{ mm}^2)] \div [\text{Volume (L)} \times (1000 \text{ cc/L})]$
- 5) Avg. fiber count = $\# \text{ of fibers counted} \div \# \text{ of fields counted}$

6997-105.9 1hr 16min



URS Corporation
 200 Orchard Ridge Drive, Suite 101
 Gaithersburg, MD 20878-1978
 Tel: 301.258.9780
 Fax: 301.869.8728

PROJECT NO. / SITE

DATE

05	(1.7) (385) (7.85) (655.5)	65.45 515.675	= 0.013	01	(6185) (365) (7.85) (1612)	71.225 12654.2	= .0056		
06	(2) (385) (7.85) (805.8)	6725.53	0.012	02	(125) (385) (7.85) (1038)	49.05 12858.3	= 0.0037		
07	(1.8) (385) (7.85) (655.5)	5145.725	= 0.11	03	(405) (385) (7.85) (1461)	25.025 71531.65	= .0022		
08	(7.85) (810) (1005) (385)	6358.5 32.725	0.011	04	(155) (385) (7.85) (1765)	59.675 13878.8	0.0043		
09	(7.85) 808.5	6346.725	0.005						

AMA Analytical Services, Inc.



A Specialized Environmental Laboratory

CERTIFICATE OF ANALYSIS



101143-0

Client:	Washington Metropolitan Area Transit Authority	Job Name:	Bladensburg Bus Division	Chain Of Custody:	185960
Address:	3101 Eisenhower Avenue Alexandria, Virginia 22314	Job Location:	Locker Rooms	Date Analyzed:	1/9/2009
		Job Number:	Not Provided	Person Submitting:	Carla Grano
		P.O. Number:	Not Provided		

Attention: Carla Grano

Page 1 of 2

Summary of Polarized Light Microscopy

AMA Sample Number	Client Sample #	Total Asbestos	Chrysotile Percent	Amosite Percent	Crocidolite Percent	Other Asbestos Percent	Mineral Wool Percent	Fiberglass Percent	Organic Percent	Synthetic Percent	Other Percent	Particulate Percent	Sample Color	Homogeneity	Analyst ID	Comments
0918108	CT-01	NAD	--	--	--	--	30	--	30	--	--	40	Multi	Layered	LBP	
0918109	CT-02	NAD	--	--	--	--	25	--	25	--	--	50	Multi	Layered	LBP	
0918110	CT-03	NAD	--	--	--	--	30	--	30	--	--	40	Multi	Layered	LBP	
0918111	DJ-01/DW	NAD	--	--	--	--	--	--	10	--	--	90	Multi	Layered	LBP	
0918112	DJ-01/JC	2	2	--	--	--	--	--	--	--	--	98	White	Homogeneous	LBP	
0918113	DJ-02/DW	NAD	--	--	--	--	--	--	10	--	--	90	Multi	Layered	LBP	
0918114	DJ-02/JC	2	2	--	--	--	--	--	--	--	--	98	White	Homogeneous	LBP	
0918115	DJ-03/DW	NAD	--	--	--	--	--	--	10	--	--	90	Multi	Layered	LBP	
0918116	DJ-03/JC	2	2	--	--	--	--	--	--	--	--	98	White	Homogeneous	LBP	

CT = 2x4 ceiling tile
 DW = drywall
 JC = joint compound

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CERTIFICATE OF ANALYSIS

Client:	Washington Metropolitan Area Transit Authority	Job Name:	Bladensburg Bus Division	Chain Of Custody:	185960
Address:	3101 Eisenhower Avenue Alexandria, Virginia 22314	Job Location:	Locker Rooms	Date Analyzed:	1/9/2009
		Job Number:	Not Provided	Person Submitting:	Carla Grano
		P.O. Number:	Not Provided		
Attention:	Carla Grano				

Page 2 of 2

Summary of Polarized Light Microscopy

AMA Sample Number	Client Sample #	Total Asbestos	Chrysofile Percent	Amosite Percent	Crocidolite Percent	Other Asbestos Percent	Mineral Wool Percent	Fiberglass Percent	Organic Percent	Synthetic Percent	Other Percent	Particulate Percent	Sample Color	Homogeneity	Analyst ID	Comments
-------------------	-----------------	----------------	--------------------	-----------------	---------------------	------------------------	----------------------	--------------------	-----------------	-------------------	---------------	---------------------	--------------	-------------	------------	----------

The following footnotes only apply to those samples which the total asbestos result is flagged with a note number.

1. TEM RECOMMENDATION - Please note, due to resolution limitations with optical microscopy and/or interference from matrix components of this sample, results which are reported via PLM as negative or trace (<1%) for asbestos may contain a significant quantity of asbestos. It is recommended that the additional analytical technique of TEM be used to check for asbestos fibers below the resolution limits of optical microscopy.
2. MATRIX REDUCTION RECOMMENDATION - Please note, due to interference from the matrix components of this sample, results which are reported via PLM as negative or trace (<1%) for asbestos may contain a significant quantity of asbestos which is obscured from view. It is recommended that the additional preparation technique of gravimetric reduction be performed on this sample to minimize the obscuring effects of matrix components, followed by reanalysis by PLM and/or TEM.

Analysis Method - EPA/600/R-93/116 dated July 1993

NAD = "No Asbestos Detected" TR = "Trace equals less than 1% of this component"

Uncertainty: For samples containing asbestos in range of 1-10% the CV is 0.43, 11-35% CV=0.55, >35 CV=0.23

Lom Butruk

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AMA Analytical Services, Inc.

Focused on Results

AIHA (#100470) NVLAP (#101143-0) NY ELAP (10920)
4475 Forbes Blvd. • Lanham, MD 20706
(301) 459-2640 • (800) 346-0961 • Fax (301) 459-2643
www.amalab.com

CHAIN OF CUSTODY

(Please Refer To This
Number For Inquires)

185960

Mailing/Billing Information:

- Client Name: WMATA
- Address 1: 3101 EISENHOWER AVE
- Address 2: ALEX, VA 22314
- Address 3: _____
- Phone #: 202 962 5077 Fax #: 202 962 5719

Submittal Information:

- Job Name: BLADENSBURG BUS DIVISION
- Job Location: LOCKER ROOMS
- Job #: _____ P.O. #: _____
- Contact Person: CARLA GRANO @ phone # 202 962 5077
- Submitted by: C. GRANO Signature: CA Grano

Reporting Information (Results will be provided as soon as technically feasible):

AFTER HOURS (must be pre-scheduled) <input type="checkbox"/> Immediate Date Due: _____ <input type="checkbox"/> 24 Hours Time Due: _____ Comments: _____		NORMAL BUSINESS HOURS <input type="checkbox"/> Immediate <input checked="" type="checkbox"/> 3 Day <input type="checkbox"/> Next Day <input type="checkbox"/> 5 Day + <input type="checkbox"/> 2 Day Date Due: <u>11/2/09</u>		REPORT TO: <input checked="" type="checkbox"/> Include COC/Field Data Sheets with Report <input checked="" type="checkbox"/> Email: <u>cgrano @ wmata.com</u> <input type="checkbox"/> Fax: _____ <input type="checkbox"/> Verbal: _____	
<input type="checkbox"/> Results Required By Noon (Every Attempt Will Be Made to Accomodate)					

Asbestos Analysis

PCM Air - Please Indicate Filter Type:

- PC MCE Porosity _____ in a 25mm (37mm)
- NIOSH 7400 _____ (QTY)
- Fiberglass _____ (QTY)

TEM Air - Please Indicate Filter Type:

- PC MCE Porosity _____ in a 25mm (37mm)
- AHERA _____ (QTY)
- NIOSH 7402 _____ (QTY)
- Other (specify _____) _____ (QTY)

PLM Bulk

- EPA 600 - Visual Estimate 9 (QTY)
- EPA Point Count _____ (QTY)
- NY State Friable 198.1 _____ (QTY)
- Gray Reduction ELAP 198.6 _____ (QTY)
- Other (specify _____) _____ (QTY)

TEM Bulk

- ELAP 198.4/Chatfield _____ (QTY)
- NY State PLM/TEM _____ (QTY)
- Residual Ash _____ (QTY)

TEM Dust

- Qual. (pres/abs) Vacuum/Dust _____ (QTY)
- Quan. (s/area) Vacuum D5755-95 _____ (QTY)
- Quan. (s/area) Dust D6480-99 _____ (QTY)

TEM Water

- Qual. (pres/abs) _____ (QTY)
- ELAP 198.2/EPA 100.2 _____ (QTY)
- EPA 100.1 _____ (QTY)

All samples received in good condition unless otherwise noted.
(TEM Water samples _____ °C)

Lead Analysis

- Paint Chip _____ (QTY)
- Dust Wipe (wipe type _____) _____ (QTY)
- Air _____ (QTY)
- Soil/Solid _____ (QTY)
- TCLP _____ (QTY)
- Drinking Water _____ (QTY)
- Waste Water _____ (QTY)
- Dust Wipe Furnace (wipe type _____) _____ (QTY)

Mold - Direct Microscopic Analysis

- Collection Apparatus for Spore Traps: _____
- Spore-Trap _____ (QTY)
- Bulk _____ (QTY)
- Surface Swab _____ (QTY)
- Surface Vacuum Dust _____ (QTY)
- Surface Tape _____ (QTY)
- Other (Specify _____) _____ (QTY)

SAMPLE INFORMATION

ANALYSIS

MATRIX

CLIENT CONTACT

CLIENT ID NUMBER	SAMPLE LOCATION/ IDENTIFICATION	DATE	VOLUME (LITERS)	WIPE AREA	ANALYSIS											CLIENT CONTACT (LABORATORY STAFF ONLY)											
					TEM	PCM	PLM	LEAD	MOBILE	MIR	BIOTIK	DUST	WATER	SPORE	MOLD	LEAD	SWAB	DATE/TIME	CONTACT	BY							
CT-01	CLG TILE	1/2/09					X																				
CT-02	↓	↓																									
CT-03	↓	↓																									
DS-01	DRYWALL	↓																									
↓	IT COMP	↓																									
DS-02	DRYWALL	↓																									
↓	IT COMP	↓																									
DS-03	DRYWALL	↓																									
↓	IT COMP	↓																									

LABORATORY
STAFF ONLY:

1. Date/Time RCVD: 1/07/09 @ 6:00 Via: direct By: Chris Nicoletti
 2. Date/Time Analyzed: 1/9/09 to 10:00 By: Lom BUTRUK Sign: Lom Butruk
 3. Results Reported To: Carla Grano Via: Email Date: 1/9/09 Time: _____ Initials: LBP



CERTIFICATE OF ANALYSIS

2251 Locker room renovation
floor tile samples



Client: Washington Metropolitan Area Transit Authority
Address: 3101 Eisenhower Avenue
Alexandria, Virginia 22314
Attention: Carla Grano

Job Name: BLAD 2251
Job Location: Not Provided
Job Number: Not Provided
P.O. Number: Not Provided

Chain Of Custody: 162114
Date Analyzed: 1/8/2007
Person Submitting: Carla Grano

Summary of Polarized Light Microscopy

AMA Sample Number	Client Sample #	Total Asbestos	Chrysotile Percent	Amosite Percent	Crocidolite Percent	Other Asbestos Percent	Mineral Wool Percent	Fiberglass Percent	Organic Percent	Synthetic Percent	Other Percent	Particulate Percent	Sample Color	Homogeneity	Analyst ID	Comments
0722546	BLAD-2251-FTT-01 F1	NAD	--	--	--	--	--	--	--	--	--	100	Off-White	Homogeneous	KY	
0722547	BLAD-2251-FTT-01 M	NAD	--	--	--	--	--	--	TR	--	--	100	Black	Homogeneous	KY	
0722548	BLAD-2251-FTB-01 FT	2	2	--	--	--	--	--	--	--	--	98	Black	Homogeneous	KY	
0722549	BLAD-2251-FTB-01 M	2	2	--	--	--	--	--	--	--	--	98	Black	Homogeneous	KY	
0722550	BLAD-2251-FTB-02 FT	2	2	--	--	--	--	--	--	--	--	98	White	Homogeneous	KY	
0722551	BLAD-2251-FTB-02 M	NAD	--	--	--	--	--	--	TR	--	--	100	Black	Homogeneous	KY	
0722552	BLAD-2251-FTB-03 FT	2	2	--	--	--	--	--	--	--	--	98	Orange	Homogeneous	KY	
0722553	BLAD-2251-FTB-03 M	NAD	--	--	--	--	--	--	TR	--	--	100	Black	Homogeneous	KY	
0722554	BLAD-2251-FTB-04 FT	4	4	--	--	--	--	--	--	--	--	96	Green	Homogeneous	KY	
0722555	BLAD-2251-FTB-04 M	2	2	--	--	--	--	--	TR	--	--	98	Black	Homogeneous	KY	
0722556	BLAD-2251-FTB-05 FT	2	2	--	--	--	--	--	--	--	--	98	Orange	Homogeneous	KY	
0722557	BLAD-2251-FTB-05 M	TR	TR	--	--	--	TR	--	TR	--	--	100	Black	Homogeneous	KY	
0722558	BLAD-2251-FTB-06 FT	4	4	--	--	--	--	--	--	--	--	96	Green	Homogeneous	KY	

FT = floor tile
M = mastic

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CERTIFICATE OF ANALYSIS



Client: Washington Metropolitan Area Transit Authority
Address: 3101 Eisenhower Avenue
 Alexandria, Virginia 22314

Attention: Carla Grano

Job Name: BLAD 2251
Job Location: Not Provided
Job Number: Not Provided
P.O. Number: Not Provided

Chain Of Custody: 162114
Date Analyzed: 1/8/2007
Person Submitting: Carla Grano

Summary of Polarized Light Microscopy

AMA Sample Number	Client Sample #	Total Asbestos	Chrysotile Percent	Amosite Percent	Crocidolite Percent	Other Asbestos Percent	Mineral Wool Percent	Fiberglass Percent	Organic Percent	Synthetic Percent	Other Percent	Particulate Percent	Sample Color	Homogeneity	Analyst ID	Comments
0722559	BLAD-2251-FTB-06 M	NAD	--	--	--	--	--	--	TR	--	--	100	Black	Homogeneous	KY	

The following footnotes only apply to those samples which the total asbestos result is flagged with a note number.

- 1 TEM RECOMMENDATION - Please note, due to resolution limitations with optical microscopy and/or interference from matrix components of this sample, results which are reported via PLM as negative or trace (<1%) for asbestos may contain a significant quantity of asbestos. It is recommended that the additional analytical technique of TEM be used to check for asbestos fibers below the resolution limits of optical microscopy.
- 2 MATRIX REDUCTION RECOMMENDATION - Please note, due to interference from the matrix components of this sample, results which are reported via PLM as negative or trace (<1%) for asbestos may contain a significant quantity of asbestos which is obscured from view. It is recommended that the additional preparation technique of gravimetric reduction be performed on this sample to minimize the obscuring effects of matrix components, followed by reanalysis by PLM and/or TEM.

Analysis Method - EPA/600/R-93/116 dated July 1993

NAD = "No Asbestos Detected" TR = "Trace equals less than 1% of this component"

Katherine Yuen

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CERTIFICATE OF ANALYSIS



Client:	Washington Metropolitan Area Transit Authority	Job Name:	Bladensburg 2250 (HVMT)	Chain Of Custody:	158866
Address:	3101 Eisenhower Avenue Alexandria, Virginia 22314	Job Location:	Mezzanine Locker Room	Date Analyzed:	10/4/2006
Attention:	Carla Grano	Job Number:	Not Provided	Person Submitting:	Carla Grano
		P.O. Number:	Not Provided		

Page 1 of 1

Summary of Polarized Light Microscopy

AMA Sample Number	Client Sample #	Total Asbestos	Chrysotile Percent	Amosite Percent	Crocidolite Percent	Other Asbestos Percent	Mineral Wool Percent	Fiberglass Percent	Organic Percent	Synthetic Percent	Other Percent	Particulate Percent	Sample Color	Homogeneity	Analyst ID	Comments
0700750	BLAD 2250 PCL-01	NAD	--	--	--	--	--	--	--	--	--	100	Gray	Homogeneous	KY	
0700751	BLAD 2250 PCL-02	NAD	--	--	--	--	--	--	--	--	--	100	Gray	Homogeneous	KY	
0700752	BLAD 2250 PCL-03	NAD	--	--	--	--	--	--	--	--	--	100	Gray	Homogeneous	KY	

The following footnotes only apply to those samples which the total asbestos result is flagged with a note number.

- 1 TEM RECOMMENDATION - Please note, due to resolution limitations with optical microscopy and/or interference from matrix components of this sample, results which are reported via PLM as negative or trace (<1%) for asbestos may contain a significant quantity of asbestos. It is recommended that the additional analytical technique of TEM be used to check for asbestos fibers below the resolution limits of optical microscopy.
- 2 MATRIX REDUCTION RECOMMENDATION - Please note, due to interference from the matrix components of this sample, results which are reported via PLM as negative or trace (<1%) for asbestos may contain a significant quantity of asbestos which is obscured from view. It is recommended that the additional preparation technique of gravimetric reduction be performed on this sample to minimize the obscuring effects of matrix components, followed by reanalysis by PLM and/or TEM.

Analysis Method - EPA/600/R-93/116 dated July 1993

NAD = "No Asbestos Detected" TR = "Trace equals less than 1% of this component"

Katherine Yuen
Katherine Yuen

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July 5, 2001

Washington Metropolitan Area Transit Authority
3101 Eisenhower Avenue
Alexandria, Virginia 22314-4547

Attention: Ms. Joan LeLacheur

Reference: Lead Based Paint Survey, Bladensburg Bus Division
Versar Project Number: 104667.3000.00101

Dear Ms. LeLacheur:

I met with Carla Grano at the Bladensburg Bus Division on Monday and Tuesday, July 2nd and 3rd, 2001 to perform a lead based paint (LBP) survey of the areas currently scheduled for asbestos abatement. Attached is a spreadsheet identifying the description of sample locations, colors and substrates of painted surfaces, and survey results.

LBP measurements were performed using an RMD, Inc. LPA-1 x-ray fluorescence (XRF) lead paint analyzer capable of providing real-time measurements of lead concentrations within painted surfaces. Potential LBP locations were measured using standard procedures where like components (i.e., all showing the same type and color of paint) can be grouped together and a representative survey sample collected. Where results were questionable, multiple samples were collected to field-verify readings.

A complete federal Housing and Urban Development (HUD) LBP inspection was not performed, since the building in question is industrial in nature and not a federally-funded residence or family dwelling. HUD LBP inspections are much more extensive and comprehensive in sampling strategies and are designed to specifically identify all sources of lead based paint where children and adults alike can be exposed to harmful levels of lead through contact with deteriorating painted surfaces (primarily through ingestion of lead dust). The HUD action level of 1.0 mg/cm² (where LBP abatement techniques must be used if the paint is to be disturbed or removed) was, however, used for this survey to determine painted components where elevated lead levels were present.

Of the 64 survey locations, ten were determined to be "*Inconclusive*" (an XRF reading of 1.0 mg/cm²). Under HUD protocol, an XRF reading of 1.0 mg/cm² constituting an "*Inconclusive*" reading would require bulk sampling of the painted surfaces and laboratory analysis to specifically determine lead levels. For this general survey, it is Versar's professional judgement that *Inconclusive* readings should not be bulk sampled, since activities at the Bus Division are industrial and not housing-oriented. Accordingly, *Inconclusive* readings have not been counted in the positive results.

Ms. Joan LeLacheur

- 2 -

July 5, 2001

As identified in the spreadsheet (shaded rows), the only locations where lead based paint was above the HUD 1.0 mg/cm² action level were located within the service lanes. Based on the surveyed components, it can be reasonably expected that all structural members, equipment and surfaces painted in a dark grey color (e.g., beams, columns, steel joists, overhead door frames) will test positive for lead levels above the 1.0 mg/cm² action level. Additionally, the three orange-painted cyclone trash cleaners between service lanes 7, 8 and 9 tested positive for lead. The fourth (new) cyclone cleaner between service lanes 6 and 7 is unpainted and therefore not sampled.

If you should have any questions, please call me at 703 642 6763 at your convenience.

Sincerely,



Tim Jensen
Senior Environmental Scientist

TJ/lg

Encl.

WMA01096.wpd

WMA01097.wpd

APPROVED:



James J. Spatarella, CHMM

Director

Environmental Evaluations

R O U T I N G S L I P



TO: ENTS - Fred Farhangi

cc: ENSV - Joan LeLacheur

PLNT - John Grimm

- | | | | |
|-------------------------------------|------------------|--------------------------|------------------|
| <input type="checkbox"/> | Approval | <input type="checkbox"/> | Signature |
| <input checked="" type="checkbox"/> | As Requested | <input type="checkbox"/> | Your Comment |
| <input checked="" type="checkbox"/> | Necessary Action | <input type="checkbox"/> | Your Information |

Remarks:

Attached please find the report of lead-based paint (LBP) testing performed at the Bladensburg Bus Facility. The results must be incorporated into your plans to remove and replace the overhead doors at the facility. Where LBP was identified, ensure that additional testing is performed to determine proper disposal requirements for the removed doors; TCLP analysis will provide the required information.

To summarize the report...

Building 2250 (Building #1 in report): The following bay doors do contain LBP: Bay Nos. 1, 2, 3, 4, 5, 6, 8, 9, 11, 12, 21, 24, 30, 31, 32, 33, 34, 35, 36, 38, and 41. Additionally, the building structure/columns have LBP (this is the steel between the doors referred to as "door frames" in the report). The following bay doors do not contain LBP: Bay Nos. 7, 10, 13, 14, 20, 22, 23, 25, 26, 27, 28, 29, 37, 39, 40, 42, 43, 44, 45, 46, 47, 48. No door rails were found to have LBP.

Building 2251/Service Lane Building (Building #2 in report): The following bay doors do contain LBP: farebox lane, tire shop, and body shop door #2 (2nd door from left looking at the body shop from the building exterior). No door rails were found to have LBP.

Building 2251/Maintenance Building (Building #3 in report): No LBP was identified.

If you have any questions, call me at x5077.

Washington
Metropolitan Area
Transit Authority

From: Carla A. Grano

Date: January 21, 1999

CONNOR

ENVIRONMENTAL
SERVICES AND
ENGINEERING
ASSESSMENTS

January 19, 1999

Washington Metropolitan Area Transit Authority
3101 Eisenhower Avenue
Alexandria, Virginia 22314

Subject: Lead Paint Testing

Reference: Bladensburg Bus Facility
2250/2251 26th Street NE
Washington, DC 20018

ENVIRONMENTAL SITE
ASSESSMENTS

ENGINEERING,
STRUCTURAL AND
MECHANICAL INSPECTIONS

LEAD PAINT SURVEYS

RISK ASSESSMENTS

CAPITAL NEEDS
ASSESSMENTS

ASBESTOS SURVEYS

EXPERT TESTIMONY

LEAD HAZARD
REDUCTION SUPPLIES

TRAINING

CLEANING SERVICES

Dear Ms. Grano:

Pursuant to your verbal request, CONNOR Environmental Services & Engineering Assessments, a division of MIRCON, Inc. ("**Consultant**") performed a lead-containing paint assessment at the above referenced residence on January 8, 1999.

The painted surfaces were tested utilizing a Niton XL Spectrum Analyzer X-ray fluorescence instrument for the detection of lead in paint. As indicated on the attached sheets, the facility does contain lead-containing paint as is defined in the Code of Maryland; Title 26 (Department of the Environment); Subtitle 02 (Occupational Industrial and Residential Hazards); Chapter 07 (Procedures for Abating Lead-Containing Substances from Buildings); 02 (Definitions). A "lead-containing substance" means any paint, plaster or other surface encapsulation material containing more than 0.5 percent lead by weight calculated as lead metal in the dried solid, or more than 0.7 milligrams per square centimeter.

BARE HILLS BUSINESS CENTER
1421 CROFTVIEW ROAD
SUITE
BALTIMORE, MARYLAND 21209-2188
(800) 296-7971
(410) 296-7971
FAX (410) 296-3419
connor1@connorsolutions.com
www.connorsolutions.com

The following data is being provided for general purposes and to provide a baseline of terms and understanding.

Definitions

- "Lead-containing substance" means any paint, plaster or other surface coating material containing more than 0.5 percent lead by weight calculated as lead metal in the dried solid, or more than 0.7 milligrams per square centimeter by the X-ray fluorescence analyzer.

Equipment

- Niton XL Spectrum Analyzer
Serial No. U258NS0361

Validation Testing

- A calibration measurement was performed at the beginning and at the end of the working period. The results are within acceptable standards defined as less than 1000 eV.

Yes

No

Interior and exterior paint samples were obtained and analyzed for lead content utilizing a Spectrum Analyzer X-ray Fluorescence (XRF) unit. One of the garage doors located in Building #2 produced inconclusive readings. Paint samples were taken from both sides of the garage door and submitted for laboratory analysis.

The following paint samples were taken to confirm an inconclusive XRF reading:

SAMPLE	ADDRESS	DESCRIPTION	LEAD RESULTS		
			%	MG/CM ²	YES/NO
SSI01	Building #2	Door #2, interior side	0.478	0.312	No
SSI02	Building #2	Door #2, exterior side	0.815	0.504	Yes

For detailed testing results, please refer to the field sheets in Appendix A. Please see METS paint chip analysis sheets in Appendix B for the detailed laboratory analysis results.

As indicated by the attached field sheets, lead-containing paint was identified on garage doors and exterior garage entrance frames in Buildings #1. The Fairbox garage door, Tire Shop garage door, and one Body Shop garage door (#2) all tested positive for lead-containing paint in Building #2. The garage doors and frames in Building #3 were lead-free. Testing of all three buildings indicated no lead-containing paint on the metal garage door railings/tracks.

CONNOR

ENVIRONMENTAL
SERVICES AND
ENGINEERING
ASSESSMENTS

If you have any further questions, please feel free to contact us at (410) 296-7971.

Sincerely,
CONNOR Environmental Services & Engineering
Assessments, by,



Stephen Sybert, Risk Assessor, Certification #2490

CONNOR

ENVIRONMENTAL
SERVICES AND
ENGINEERING
ASSESSMENTS

PREPARED FOR: **WASHINGTON METROPOLITAN AREA
TRANSIT AUTHORITY
3101 EISENHOWER AVENUE
ALEXANDRIA, VIRGINIA 22314
MS. CARLA GRANO**

**LEAD-CONTAINING PAINT
TESTING
OF
BLADENSBURG BUS FACILITY
2250/2251 26TH STREET NE
WASHINGTON, DC 20018**

ENVIRONMENTAL SITE
ASSESSMENTS

ENGINEERING,
STRUCTURAL AND
MECHANICAL INSPECTIONS

LEAD PAINT SURVEYS

RISK ASSESSMENTS

CAPITAL NEEDS
ASSESSMENTS

ASBESTOS SURVEYS

EXPERT TESTIMONY

LEAD HAZARD
REDUCTION SUPPLIES

TRAINING

CLEANING SERVICES

PREPARED BY: **CONNOR ENVIRONMENTAL SERVICES
AND ENGINEERING ASSESSMENTS
BARE HILLS BUSINESS CENTER
1421 CLARKVIEW ROAD, SUITE 100
BALTIMORE, MARYLAND 21209-2188**

SURVEY DATE: **JANUARY 8, 1999**

BARE HILLS BUSINESS CENTER
1421 CLARKVIEW ROAD
SUITE 100
BALTIMORE, MARYLAND 21209-2188
(800) 296-7971
(410) 296-7971
FAX (410) 296-3419
connor1@connorsolutions.com
www.connorsolutions.com

909400103

ATTACHMENT A
FIELD SHEETS AND WORK SHEETS

CONNOR Environmental Services & Engineering Assessments

Date: January 8, 1999

Validation Niton Number: U258NS0361

User's Name: Stephen Sybert

Location: Bladensburg Bus Facility

Time	Temperature	Conditions	Resolution	Sample Number	NIST Standard	Result mg/cm ²															
0840	70°	Indoors	0638eV	(S) 1	1.0 ± 0.1	1.0 ± 0.1															
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="3">Hourly Validation</th> </tr> <tr> <th>Time</th> <th>NIST Standard</th> <th>Result (mg/cm²)</th> </tr> </thead> <tbody> <tr> <td>1035</td> <td>1.0 ± 0.1</td> <td>1.0 ± 0.1</td> </tr> <tr> <td>1140</td> <td>1.0 ± 0.1</td> <td>1.0 ± 0.1</td> </tr> <tr> <td>1240</td> <td>1.0 ± 0.1</td> <td>1.0 ± 0.1</td> </tr> </tbody> </table>				Hourly Validation			Time	NIST Standard	Result (mg/cm ²)	1035	1.0 ± 0.1	1.0 ± 0.1	1140	1.0 ± 0.1	1.0 ± 0.1	1240	1.0 ± 0.1	1.0 ± 0.1	2	0.0 ± 0.1	0.0 ± 0.1
				Hourly Validation																	
				Time	NIST Standard	Result (mg/cm ²)															
				1035	1.0 ± 0.1	1.0 ± 0.1															
				1140	1.0 ± 0.1	1.0 ± 0.1															
1240	1.0 ± 0.1	1.0 ± 0.1																			
3	0.3 ± 0.1	0.3 ± 0.1																			
4	1.6 ± 0.2	1.5 ± 0.2																			
5	3.5 ± 0.3	3.4 ± 0.3																			
				(B) 1	1.6 ± 0.2	1.4 ± 0.2															
				2	3.5 ± 0.3	3.4 ± 0.3															
				3	1.0 ± 0.1	1.0 ± 0.1															
				4	0.0 ± 0.1	0.0 ± 0.1															
				5	0.3 ± 0.1	0.3 ± 0.1															
								(S) 1	1.0 ± 0.1	1.0 ± 0.1											
								2	0.0 ± 0.1	0.0 ± 0.1											
								3	0.3 ± 0.1	0.3 ± 0.1											
								4	1.6 ± 0.2	1.5 ± 0.2											
								5	3.5 ± 0.3	3.4 ± 0.3											
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3	1.0 ± 0.1	1.0 ± 0.1																			
4	0.0 ± 0.1	0.0 ± 0.1																			
5	0.3 ± 0.1	0.3 ± 0.1																			

CNEM0120

SUBSTRATE CODE SHEET

Substrate	Condition
1 = Metal	Good Paint is intact and does not chalk, flake or peel
2 = Wood	
3 = Plaster	
4 = Drywall	Fair Paint is mainly intact, but there are localized areas of chipping, cracked or worn surfaces
5 = Brick	
6 = Masonry	Poor Paint is actively chipping, flaking and peeling over a distributed area
7 = Stone	
8 = Ceiling Tile	
9 = Vinyl	
10 = Aluminum	
11 = Asbestos	
12 = Concrete	
NA = Not Applicable	
NP = Not Painted	
No Access = Not able to test component	

Lead-Containing Paint Survey Field Sheets

1/21/99

Bladensburg Bus Facility

Page 1 of 4

Client	094	Unit	Bladensburg Bus Facility
Project	001	Inspection Date	1/8/99
Document	03	Inspection #	1685

Building #1

Miscellaneous

Detail ID	Component	Sample#	Substrate	Condition	AAS	Color	Shell	Reading	+/-	Lead
138705	Door #1	1	Wood	F		White	L	2.4	0.6	<input checked="" type="checkbox"/>
138706	Rail #1	2	Metal	P		Black	L	0.0	0.1	<input type="checkbox"/>
138707	Rail #2	3	Metal	P		Black	L	0.1	0.1	<input type="checkbox"/>
138708	Door #2	4	Wood	F		White	L	1.8	0.4	<input checked="" type="checkbox"/>
138709	Door #3	5	Wood	F		White	L	0.0	0.1	<input type="checkbox"/>
138710	Rail #3	6	Metal	P		Black	L	0.0	0.1	<input type="checkbox"/>
138711	Door #4	7	Wood	F		White	L	2.3	0.9	<input checked="" type="checkbox"/>
138712	Door #5	8	Wood	F		White	L	2.3	0.8	<input checked="" type="checkbox"/>
138713	Door #6	9	Wood	F		White	K	3.1	1.3	<input checked="" type="checkbox"/>
138714	Door #7	10	Wood	F		White	L	0.0	0.1	<input type="checkbox"/>
138715	Door #8	11	Wood	F		White	L	1.3	0.4	<input checked="" type="checkbox"/>
138716	Door #9	12	Wood	F		White	L	1.0	0.2	<input checked="" type="checkbox"/>
138717	Door #10	13	Wood	G		White	L	0.0	0.1	<input type="checkbox"/>
138718	Rail #9	14	Metal	P		Black	L	0.0	0.1	<input type="checkbox"/>
138719	Door #11	15	Wood	F		White	L	0.9	0.2	<input checked="" type="checkbox"/>
138720	Door #12	16	Wood	F		White	L	2.4	0.8	<input checked="" type="checkbox"/>
138721	Door Frame - Exterior	17	Metal	F		White	L	>>5.0	---	<input checked="" type="checkbox"/>
138722	Door Frame - Interior	18	Metal	F		White	K	11.7	2.4	<input checked="" type="checkbox"/>
138723	Exterior Door #7	19	Wood	F		Blue	L	0.0	0.1	<input type="checkbox"/>
138724	Exterior Door #3	20	Wood	F		Blue	L	0.0	0.1	<input type="checkbox"/>
138725	Door Frame - Exterior #3	21	Metal	F		White	K	>>5.0	---	<input checked="" type="checkbox"/>
138726	Door #13	22	Wood	F		White	L	0.0	0.1	<input type="checkbox"/>
138727	Door #14	23	Wood	F		White	L	0.0	0.1	<input type="checkbox"/>
138728	Rail #14	24	Metal	P		Black	L	0.1	0.1	<input type="checkbox"/>
138729	Door #20	25	Wood	F		White	L	0.0	0.1	<input type="checkbox"/>
138730	Door #21	26	Wood	F		White	L	1.4	0.4	<input checked="" type="checkbox"/>

138731	Door #20 Exterior	27	Wood	G	Blue	L	0.0	0.1	<input type="checkbox"/>
138732	Door #20 Exterior Frame	28	Metal	F	White	K	7.4	1.9	<input checked="" type="checkbox"/>
138733	Door #22	29	Wood	G	White	L	0.0	0.1	<input type="checkbox"/>
138734	Door #23	30	Wood	G	White	L	0.0	0.1	<input type="checkbox"/>
138735	Rail #23	31	Metal	P	Black	L	0.3	0.2	<input type="checkbox"/>
138736	Door #24	32	Wood	G	White	L	2.2	0.3	<input checked="" type="checkbox"/>
138737	Door #25	33	Wood	F	White	L	0.0	0.1	<input type="checkbox"/>
138738	Door #26	34	Wood	G	White	L	0.0	0.1	<input type="checkbox"/>
138739	Rail #26	35	Metal	P	Black	L	0.0	0.2	<input type="checkbox"/>
138740	Door #27	36	Wood	G	White	L	0.0	0.1	<input type="checkbox"/>
138741	Door #28	37	Wood	G	White	L	0.0	0.1	<input type="checkbox"/>
138742	Door #29	38	Wood	F	White	L	0.0	0.1	<input type="checkbox"/>
138743	Door #30	39	Wood	F	White	K	3.0	1.4	<input checked="" type="checkbox"/>
138744	Door #31	40	Wood	P	White	L	2.4	0.8	<input checked="" type="checkbox"/>
138745	Door #32	41	Wood	F	White	L	1.7	0.6	<input checked="" type="checkbox"/>
138746	Door #33	42	Wood	P	White	L	1.5	0.3	<input checked="" type="checkbox"/>
138747	Door #34	43	Wood	F	White	L	1.6	0.5	<input checked="" type="checkbox"/>
138748	Rail #34	44	Metal	F	White	L	0.0	0.1	<input type="checkbox"/>
138749	Door #35	45	Wood	F	White	K	3.0	1.1	<input checked="" type="checkbox"/>
138750	Door #36	46	Wood	P	White	L	1.8	0.4	<input checked="" type="checkbox"/>
138751	Door #37	47	Wood	F	White	L	0.0	0.1	<input type="checkbox"/>
138752	Door #38	48	Wood	G	White	L	1.3	0.2	<input checked="" type="checkbox"/>
138753	Exterior Door #37	49	Wood	F	Blue	L	0.0	0.1	<input type="checkbox"/>
138754	Exterior Door #29	50	Wood	P	Blue	L	0.0	0.1	<input type="checkbox"/>
138755	Exterior Door #28	51	Wood	G	Blue	L	0.0	0.1	<input type="checkbox"/>
138756	Exterior Door #26	52	Wood	G	Blue	L	0.0	0.1	<input type="checkbox"/>
138757	Exterior Door #25	53	Wood	G	Blue	L	0.0	0.1	<input type="checkbox"/>
138758	Exterior Frame #25	54	Metal	G	White	K	6.3	2.1	<input checked="" type="checkbox"/>
138759	Exterior Door #23	55	Wood	P	Blue	L	0.0	0.1	<input type="checkbox"/>
138760	Exterior Door #22	56	Wood	G	Blue	L	0.0	0.1	<input type="checkbox"/>
138761	Exterior Door #20	57	Wood	G	Blue	L	0.0	0.1	<input type="checkbox"/>
138762	Exterior Frame #20	58	Metal	F	White	K	5.6	1.8	<input checked="" type="checkbox"/>
138763	Door #39	59	Wood	G	White	L	0.0	0.1	<input type="checkbox"/>
138764	Exterior Door #39	60	Wood	G	Blue	L	0.0	0.1	<input type="checkbox"/>
138765	Door #41	61	Wood	P	White	L	2.1	0.6	<input checked="" type="checkbox"/>

138766	Door #40	62	Wood	G		White	L	0.0	0.1	<input type="checkbox"/>
138767	Exterior Door #40	63	Wood	G		Blue	L	0.0	0.1	<input type="checkbox"/>
138768	Door #43	64	Metal	G		Blue	L	0.0	0.1	<input type="checkbox"/>
138769	Door #44	65	Metal	G		Blue	L	0.0	0.1	<input type="checkbox"/>
138770	Door #42	66	Metal	G		Blue	L	0.0	0.1	<input type="checkbox"/>
138771	Door #45	67	Wood	G		White	L	0.0	0.1	<input type="checkbox"/>
138772	Door #46	68	Wood	G		White	L	0.0	0.1	<input type="checkbox"/>
138773	Door #47	69	Metal	G		White	L	0.0	0.1	<input type="checkbox"/>
138774	Door #48	70	Metal	G		White	L	0.0	0.1	<input type="checkbox"/>
138775	Exterior Door #45	71	Wood	G		Blue	L	0.0	0.1	<input type="checkbox"/>
138776	Exterior Door #46	72	Wood	G		Blue	L	0.0	0.1	<input type="checkbox"/>
138777	Exterior Frame #46	73	Metal	F		White	K	8.6	2.4	<input checked="" type="checkbox"/>
138778	Exterior Door #43	74	Metal	G		Blue	L	0.0	0.1	<input type="checkbox"/>
138779	Exterior Door #44	75	Metal	G		Blue	L	0.0	0.1	<input type="checkbox"/>
138780	Exterior Door #47	76	Metal	G		Blue	L	0.0	0.1	<input type="checkbox"/>

Building #2

Fairbox Lane

Detail ID	Component	Sample#	Substrate	Condition	AAS	Color	Shell	Reading	+/-	Lead
138781	Exterior Door	1	Wood	G		Blue	L	1.6	0.5	<input checked="" type="checkbox"/>
138782	Exterior Rail	2	Metal	G		Blue	L	0.1	0.2	<input type="checkbox"/>

Miscellaneous

Detail ID	Component	Sample#	Substrate	Condition	AAS	Color	Shell	Reading	+/-	Lead
138785	Body Shop #1	5	Wood	G		Blue	L	0.0	0.1	<input type="checkbox"/>
138786	Body Shop #2	6	Wood	G	SSI01	Blue	L	0.6	0.2	<input type="checkbox"/>
138787	Body Shop #3	7	Wood	G		Blue	L	0.0	0.2	<input type="checkbox"/>
138788	Body Shop #4	8	Wood	G		Blue	L	0.0	0.1	<input type="checkbox"/>
138789	Body Shop #4, Rail	9	Metal	G		White	L	0.0	0.1	<input type="checkbox"/>
138790	Body Shop #5 (7)	10	Wood	G		Blue	L	0.3	0.2	<input type="checkbox"/>
138791	Body Shop #6 (8)	11	Wood	G		Blue	L	0.0	0.1	<input type="checkbox"/>
138792	Exterior Door #6	12	Wood	G		Blue	L	0.0	0.1	<input type="checkbox"/>
138793	Exterior Door #4	13	Wood	G		Blue	L	0.0	0.1	<input type="checkbox"/>
138794	Exterior Door #2	14	Wood	G	SSI02	Blue	L	0.6	0.2	<input checked="" type="checkbox"/>

Tire Shop

<i>Detail ID</i>	<i>Component</i>	<i>Sample#</i>	<i>Substrate</i>	<i>Condition</i>	<i>AAS</i>	<i>Color</i>	<i>Shell</i>	<i>Reading</i>	<i>+/-</i>	<i>Lead</i>
38783	Door	3	Wood	G		Blue	L	1.2	0.3	<input checked="" type="checkbox"/>
138784	Railing	4	Metal	G		Blue	L	0.0	0.1	<input type="checkbox"/>

Building #3

Miscellaneous

<i>Detail ID</i>	<i>Component</i>	<i>Sample#</i>	<i>Substrate</i>	<i>Condition</i>	<i>AAS</i>	<i>Color</i>	<i>Shell</i>	<i>Reading</i>	<i>+/-</i>	<i>Lead</i>
138795	Bay 1	1	Wood	G		Blue	L	0.0	0.1	<input type="checkbox"/>
138796	Bay 3	2	Wood	G		Blue	L	0.0	0.1	<input type="checkbox"/>
138797	Bay 3, Rail	3	Metal	G		Blue	L	0.0	0.1	<input type="checkbox"/>
138798	Bay 5	4	Wood	G		Blue	L	0.0	0.1	<input type="checkbox"/>
138799	Bay 7	5	Wood	G		Blue	L	0.0	0.1	<input type="checkbox"/>
138800	Bay 9	6	Wood	G		Blue	L	0.0	0.1	<input type="checkbox"/>
138801	Bay 11	7	Wood	G		Blue	L	0.0	0.1	<input type="checkbox"/>
138802	Bay 11, Rail	8	Metal	G		Blue	L	0.0	0.1	<input type="checkbox"/>
138803	Bay 13	9	Wood	G		Blue	L	0.0	0.1	<input type="checkbox"/>
138804	Bay 15	10	Wood	G		Blue	L	0.0	0.1	<input type="checkbox"/>
138805	Bay 17	11	Wood	G		Blue	L	0.0	0.1	<input type="checkbox"/>
138806	Bay 19	12	Wood	G		Blue	L	0.0	0.1	<input type="checkbox"/>
138807	Bay 19 Exterior	13	Wood	G		Blue	L	0.0	0.1	<input type="checkbox"/>
138808	Bay 19 Exterior Frame	14	Metal	G		Blue	L	0.0	0.1	<input type="checkbox"/>
138809	Bay 17 Exterior	15	Wood	G		Blue	L	0.0	0.1	<input type="checkbox"/>
138810	Bay 17 Exterior Frame	16	Metal	G		Blue	L	0.0	0.1	<input type="checkbox"/>

ATTACHMENT B
METS LABORATORY RESULTS

United States Department of Commerce
National Institute of Standards and Technology

NVLAP[®]

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Certificate of Accreditation



METROPOLITAN ENVIRONMENTAL TESTING SERVICES DBA METS LABORATORIES
WALDORF, MD

is recognized under the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC Guide 25 and the relevant requirements of ISO 9002 (ANSI/ASQC Q92-1987) as suppliers of calibration or test results. Accreditation is awarded for specific services, listed on the Scope of Accreditation for:

BULK ASBESTOS FIBER ANALYSIS

June 30, 1999

Effective through

A handwritten signature in black ink, appearing to read "John L. Galt".

For the National Institute of Standards and Technology

NVLAP Lab Code: 200165-0

National Institute
of Standards and Technology



National Voluntary
Laboratory Accreditation Program

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Scope of Accreditation



Page: 1 of 1

BULK ASBESTOS FIBER ANALYSIS

NVLAP LAB CODE 200165-0

METROPOLITAN ENVIRONMENTAL TESTING SERVICES DBA METS LABORATORIES

179 Smallwood Village Center

Waldorf, MD 20602

Ms. Carrie A. Wright

Phone: 301-870-1995 Fax: 301-870-1701

NVLAP Code

Designation

19/A01

U.S. EPA's "Interim Method for the Determination of Asbestos in Bulk Insulation Samples" as found in 40 CFR, Part 763, Subpart F, App. A, or the current U.S. EPA method for the analysis of asbestos in building material.

June 30, 1999

Effective through

For the National Institute of Standards and Technology



THE AMERICAN INDUSTRIAL HYGIENE ASSOCIATION

is proud to acknowledge that

Metropolitan Environmental Testing Services, Inc.
Waldorf, MD
Laboratory ID# 21506

has fulfilled the requirements for the Environmental Lead Laboratory Accreditation Program and has earned distinguished recognition as an

AIHA ELLAP ACCREDITED LABORATORY

06/05/1997 - 06/05/2000

In the following matrices: Paint Soil Dust

This program is recognized by the EPA as meeting the requirements of the National Lead Laboratory Accreditation Program established under Title X of the Residential Lead-Based Paint Hazard Reduction Act of 1992 and includes paint, soil and dust wipe analysis. Air analysis is not included as part of the NLLAP.

Jack Magdorf, Ph.D., CIH, CSP
President, American Industrial Hygiene Association

Lisa A. Constantine, CIH
Chair, Environmental Lead Laboratory Accreditation Committee

Don Hart, Ph.D., CIH
Chair, Analytical Accreditation Board



METS Laboratories

179 Smallwood Village Center, Waldorf Maryland 20692

Metro: 301.870.1995
Toll Free: 800.604.1995
Fax#: 301.870.1701

Lead Paint Chip Analysis Report

NI.LAP / AIIA ELAP #21506, NY ELAP #11603

Lead Analysis Method EPA SW-846, 7420

Account Number: 11-7804	Report Number: <u>990112056</u>	Date Collected: 10799
Client Name: Connor Environmental Services		Date Received: 11299
Address: 1421 Clarkview Rd Suite 100		Date Analyzed: 11299
Baltimore MD 21209		Date Reported: 11299

Project: 9094001 Bladensburg Bus Facility

METS Sample No.	Client Sample ID/ Location	Total Pb ug	% Pb by Wt	Pb mg/ cm2
990112056-001	SSI01 Interior Garage Door	2,817.5	0.478	0.31266
990112056-002	SSI02 Exterior Garage Door	4,542.0	0.815	0.50403

CONNOR

ENVIRONMENTAL
SERVICES AND
ENGINEERING
ASSESSMENTS

PREPARED FOR: **WASHINGTON METROPOLITAN AREA
TRANSIT AUTHORITY
3101 EISENHOWER AVENUE
ALEXANDRIA, VIRGINIA 22314**

ENVIRONMENTAL SITE
ASSESSMENTS

ENGINEERING,
STRUCTURAL AND
MECHANICAL INSPECTIONS

LEAD PAINT SURVEYS
RISK ASSESSMENTS

CAPITAL NEEDS
ASSESSMENTS

ASBESTOS SURVEYS

EXPERT TESTIMONY

LEAD HAZARD
REDUCTION SUPPLIES

TRAINING

CLEANING SERVICES

**ASBESTOS-CONTAINING MATERIALS SURVEY
AT
BLADENSBURG BUS DIVISION AND HVMT
2250 & 2251 26TH STREET, NE
WASHINGTON, D.C. 20018**

PREPARED BY: **CONNOR ENVIRONMENTAL SERVICES
AND ENGINEERING ASSESSMENTS
BARE HILLS BUSINESS CENTER
1421 CLARKVIEW ROAD, SUITE 100
BALTIMORE, MARYLAND 21209-2188**

CONTRACT No.: **C74335 – ACM & LBP INSPECTIONS**
RELEASE No.: **C74335-003**

SURVEY DATE: **MAY 27 – 29, 1998**

BARE HILLS BUSINESS CENTER
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80940304

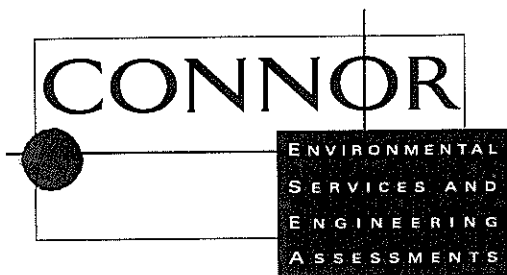


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EXECUTIVE SUMMARY

On May 27 through May 29, 1998, CONNOR Environmental Services & Engineering Assessments conducted an Asbestos-Containing Material (ACM) Survey at the Bladensburg Bus Division and HVMT. The following buildings were included in the survey:

- o Building 1 (HVMT)
- o Building 2 (Division Operations and Service Lane)
- o Building 3 (Division Garage)
- o Dispatch Shack
- o Guard Shack

The following table shows all ACMs, their location and their quantity as well as their condition and method used to determine the presence of asbestos. The locations are presented in the maps in Appendix D.

MATERIAL	LOCATION	QUANTITY	CONDITION	METHOD
Breeching Insulation	Building 1 – Boiler Room	675 SF	Good	Assumed from previous report
Tank Insulation	Building 1 – Boiler Room	400 SF	Good	Assumed from previous report
Fiberglass insulated piping with mudded fittings	Building 1 – Throughout	550 EA	Good	Assumed from previous report
9"x9" vinyl floor tile mastic	Building 1 – Shop Locker Room	1,300 SF	Good	Laboratory Analysis
9"x9" vinyl floor tile mastic	Building 1 – Shop Lunch Room	1,650 SF	Good	Laboratory Analysis
Acoustical ceiling plaster	Building 1 – Shop Lunch Room	1,650 SF	Good	Laboratory Analysis
Tan 12"x12" wall tiles and mastic	Building 1 – TPAS Storage Room	200 SF	Good	Laboratory Analysis
Spray on fireproofing	Building 2 – Throughout	12,000 SF	Fair	Assumed from previous report
Green 9"x9" vinyl floor tiles	Building 2 – Region Storage	560 SF	Good	Assumed from previous

MATERIAL	LOCATION	QUANTITY	CONDITION	METHOD
				report
Orange 9"x9" vinyl floor tiles	Building 2 – Depot Storage Area	100 SF	Good	Laboratory Analysis
Orange 9"x9" vinyl floor tiles and mastic	Building 2 – Depot Office Area Storage Closet	8 SF	Good	Laboratory Analysis
Orange 9"x9" vinyl floor tiles and mastic	Building 2 - Vending Machine Storage Area	70 SF	Good	Laboratory Analysis
Light green 9"x9" vinyl floor tiles and mastic	Building 2 – Depot Storage Area	100 SF	Good	Laboratory Analysis
Light green 9"x9" vinyl floor tiles and mastic	Building 2 – Depot Office Area Storage Closet	8 SF	Good	Laboratory Analysis
Light green 9"x9" vinyl floor tiles and mastic	Building 2 - Vending Machine Storage Area	70 SF	Good	Laboratory Analysis
Light green 9"x9" vinyl floor tiles and mastic	Building 2 – Body Shop Office	30 SF	Fair	Laboratory Analysis
Dark green 9"x9" vinyl floor tiles and mastic	Building 2 – Depot Storage Area	100 SF	Good	Laboratory Analysis
Dark green 9"x9" vinyl floor tiles and mastic	Building 2 – Depot Office Area Storage Closet	8 SF	Good	Laboratory Analysis
Dark green 9"x9" vinyl floor tiles and mastic	Building 2 - Vending Machine Storage Area	70 SF	Good	Laboratory Analysis
White 9"x9" vinyl floor tiles and mastic	Building 2 - Stairwells	300 SF	Good	Laboratory Analysis
Black 12"x12" vinyl floor tiles	Building 2 – Body Shop Office	30 SF	Poor	Laboratory Analysis
Fiberglass insulated piping with mudded fittings	Building 2 - Throughout	116 EA	Good	Laboratory Analysis
Blue 12"x12" vinyl floor tile mastic	Building 3 - Throughout	1,250 SF	Good	Laboratory Analysis
Roofing materials	All Buildings - Roof	250,000 SF	Good	Assumed
Fire doors	All Buildings - Throughout	200 EA	Good	Assumed

INTRODUCTION

CONNOR Environmental Services & Engineering Assessments, a division of MIRCON, Inc., (the "Consultant") contracted with Washington Metropolitan Area Transit Authority (WMATA) (the "Client") to conduct Asbestos-Containing Material Survey of the Bladensburg Bus Division and HVMT (the "Project Site"). The scope-of-services were outlined in the proposal dated November 13, 1997. These services have been incorporated into the Asbestos-Containing Material Survey.

The purpose of this report ("Asbestos-Containing Material Survey") is limited to providing the Client a limited environmental assessment concerning environmental conditions, specified in the report, and evident at the site at the time of the assessment. This Asbestos-Containing Material Survey is designed only for the identification of environmental conditions and shall not be utilized for remediation or abatement. Consultant does not assume responsibility for the discovery and elimination of potential hazards that could cause accidents, injuries, or damage. This assessment includes conditions, operations, and practices as observed during the site walk through. Changes, procedural modifications, or facility renovations made after the site assessment are not included.

Surveyed by: John O'Connor

Written by: John O'Connor

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 Timothy C. Connor, REA
 Vice President



9-1-98
 Date


 John O'Connor

9-1-98
 Date

ASSESSMENT APPROACH

An on-site Asbestos-Containing Material Survey was conducted at the Bladensburg Bus Division and HVMT. (Inspector Training Certificates are included in Appendix A.) The weather condition was sunny with temperatures of 80 (°F). The assessment consisted of sampling suspect asbestos-containing materials pursuant to the requirements of the Code of Federal Regulations, Title 29 (Occupational Safety and Health), Part 1910 (Occupational Safety and Health Standards), Section 1001 (Asbestos), Subsection j (Communication of Hazards to Employees). The assessment was to be sufficient to enable Consultant to issue a professional opinion concerning the Project Site status (based on recorded fact) as related to the following regulated activities:

Determine if the Project Site contains, in the areas surveyed, the following:

- o **Materials containing greater than one percent (1%) asbestos** as determined using the method defined in the Code of Federal Regulations, Title 40 (Protection of Environment); Part 763 (Asbestos); Appendix A to Subpart F (Interim Method of the Determination of Asbestos in Bulk Insulation Samples); Section 1 (Polarized Light Microscopy). This includes materials (Category I Non-Friable, Category II Non-Friable and Friable) defined in the Code of Federal Regulations, Title 40 (Protection of Environment); Part 61 (National Emission Standards of Hazardous Air Pollutants); Subpart M (National Emission Standard for Asbestos); Section 141 (Definitions).

In addition, the assessment was conducted to satisfy the requirements of:

- o The Code of Federal Regulations, Title 29 (Occupational Safety and Health), Part 1910 (Occupational Safety and Health Standards), Section 1001 (Asbestos), Subsection j (Communication of Hazards to Employees).

The laboratory report lists the samples taken from the Project Site and the laboratory analysis results using polarized light microscopy with dispersion staining for asbestos (Interim Method for the Determination of Asbestos in Bulk Insulation Sample - EPA 600/M4-82-020). The Consultant does not assume responsibility for interpretation of test results beyond what is printed in this analytical report.

PROJECT SITE RECONNAISSANCE

Regulated Asbestos-Containing Materials (RACM)

The Consultant was provided with copies of previously conducted assessment reports. Based on these reports, the following materials were assumed to be positive:

- o Building 1
 - Breeching Insulation – Boiler Room
 - Tank Insulation – Boiler Room
 - Fiberglass Insulated Piping With Mudded Fittings – Throughout
- o Building 2
 - Spray-on Fireproofing – Throughout
 - 9" x 9" Green Vinyl Asbestos Tile – Region Storage

During the course of our assessment, suspect asbestos-containing materials (ACM) were observed in the following forms:

- o Suspect Category I Non-Friable material
 - Roofing materials
 - Vinyl floor tiles (VFT) and mastic
- o Suspect Category II Non-Friable material
 - Drywall
 - Joint compound
 - Vibration cloth
 - Plaster
 - Fire doors
- o Suspect Friable materials
 - Spray-on fireproofing
 - Fiberglass insulated piping with mudded fittings
 - Acoustical ceiling plaster
 - Breeching insulation
 - 2' x 4' ceiling tiles
 - 2' x 2' ceiling tiles
 - 12" x 12" wall tiles

Suspect asbestos-containing materials, observed in the form of roofing materials, were not sampled at the time of the assessment because effective roof repairs were not practical and sampling can invalidate existing roof warranties. Sampling of the roof may be done in conjunction with scheduled equipment installation or roof repairs. These materials must be presumed Asbestos-Containing material (PACM) until sampling is conducted to confirm or deny the presence of asbestos.

Sampling Activities

Representative samples of the accessible suspect asbestos-containing materials were obtained.

The following table lists the samples taken, their location/description, and the findings of the laboratory analysis results. Laboratory data sheets are contained in Appendix B. Sample locations are presented on maps in Appendix C.

SAMPLE NUMBER	LOCATION	DESCRIPTION	ASBESTOS-CONTAINING YES/NO	PHOTO NUMBER
JOC01A	Building 2 Sign Room	Gray Spray-On Fireproofing	No	N/A
JOC01B	Building 2 Sign Room	Gray Spray-On Fireproofing	No	N/A
JOC01C	Building 2 Sign Room	Gray Spray-On Fireproofing	No	N/A
JOC01D	Building 2 Sign Room	Gray Spray-On Fireproofing	No	N/A
JOC01E	Building 2 Sign Room	Gray Spray-On Fireproofing	No	N/A
JOC02A	Building 2 Depot Storage #2	Orange 9" x 9" Vinyl Floor Tiles, 1/8"	Yes	05
JOC02B1	Building 2 Depot Storage #2	Orange 9" x 9" Vinyl Floor Tiles, 1/8"	Yes	05
JOC02B2	Building 2 Depot Storage #2	Orange 9" x 9" Vinyl Floor Tiles, Mastic	No	05
JOC02C1	Building 2 Depot Storage #2	Orange 9" x 9" Vinyl Floor Tiles, 1/8"	Yes	05
JOC02C2	Building 2 Depot Storage #2	Orange 9" x 9" Vinyl Floor Tiles, Mastic	Yes	05
JOC03A1	Building 2 Depot Storage #2	Light Green 9" x 9" Vinyl Floor Tiles, 1/8"	Yes	05
JOC03A2	Building 2 Depot Storage #2	Light Green 9" x 9" Vinyl Floor Tiles, 1/8" Mastic	Yes	05

SAMPLE NUMBER	LOCATION	DESCRIPTION	ASBESTOS-CONTAINING YES/NO	PHOTO NUMBER
JOC03B1	Building 2 Depot Storage #2	Light Green 9" x 9" Vinyl Floor Tiles, 1/8"	Yes	05
JOC03B2	Building 2 Depot Storage #2	Light Green 9" x 9" Vinyl Floor Tiles, 1/8" Mastic	Yes	05
JOC03C1	Building 2 Depot Storage #2	Light Green 9" x 9" Vinyl Floor Tiles, 1/8"	Yes	05
JOC03C2	Building 2 Depot Storage #2	Light Green 9" x 9" Vinyl Floor Tiles, Mastic	Yes	05
JOC04A	Building 2 Depot Storage #2	Dark Green 9" x 9" Vinyl Floor Tiles, 1/8"	Yes	05
JOC04B	Building 2 Depot Storage #2	Dark Green 9" x 9" Vinyl Floor Tiles, 1/8"	Yes	05
JOC04C	Building 2 Depot Storage #2	Dark Green 9" x 9" Vinyl Floor Tiles, 1/8"	Yes	05
JOC05A	Building 2 Center Stairwell	2' x 4' Ceiling Tile, White, Gypsum, 3/4"	No	05
JOC05B	Building 2 Driver Lounge	2' x 4' Ceiling Tile, White, Gypsum, 3/4"	No	N/A
JOC05C	Building 2 Ops. Hallway	2' x 4' Ceiling Tile, White, Gypsum, 3/4"	No	N/A
JOC06A	Building 2 NE Stairwell	12" x 12" Dark Marble Vinyl Floor Tiles, 1/8"	No	N/A
JOC06B	Building 2 Driver Lounge	12" x 12" Dark Marble Vinyl Floor Tiles, 1/8"	No	N/A
JOC06C	Building 2 Hallway Behind Depot	12" x 12" Dark Marble Vinyl Floor Tiles, 1/8"	No	N/A
JOC07A	Building 2 Basement Large Storage Area	Drywall - South Wall	No	N/A
JOC07B	Building 2 Ops. Hallway	Drywall - East Wall	No	N/A
JOC07C	Building 2 Driver Locker Room	Drywall - East Wall	No	N/A
JOC08A	Building 2 Basement Large Storage Area	Joint Compound - South Wall	No	N/A

SAMPLE NUMBER	LOCATION	DESCRIPTION	ASBESTOS-CONTAINING YES/NO	PHOTO NUMBER
JOC08B	Building 2 Driver Lounge	Joint Compound – West Wall	No	N/A
JOC08C	Building 2 Ops. Hallway	Joint Compound – East Wall	No	N/A
JOC09	Building 2 Basement Large Storage Area	Drywall/Joint Compound Composite – South Wall	No	N/A
JOC10A1	Building 2 Region Office Hallway	12" x 12" Light Marble Vinyl Floor Tiles, 1/8"	No	N/A
JOC10A2	Building Region Office Hallway	12" x 12" Light Marble Vinyl Floor Tiles, Mastic	No	N/A
JOC10B1	Building 2 Ops. Hallway	12" x 12" Light Marble Vinyl Floor Tiles, 1/8"	No	N/A
JOC10B2	Building 2 Ops. Hallway	12" x 12" Light Marble Vinyl Floor Tiles, Mastic	No	N/A
JOC10C1	Building 2 Street Ops. Supervisor's Office	12" x 12" Light Marble Vinyl Floor Tiles, 1/8"	No	N/A
JOC10C2	Building 2 Street Ops. Supervisor's Office	12" x 12" Light Marble Vinyl Floor Tiles, Mastic	No	N/A
JOC11A	Building 2 Center Stairwell	12" x 12" Tan with White Streaks, Vinyl Floor Tiles, 1/8"	No	N/A
JOC11B1	Building 2 NE Stairwell	12" x 12" Tan with White Streaks, Vinyl Floor Tiles, 1/8"	No	N/A
JOC11B2	Building 2 NE Stairwell	12" x 12" Tan with White Streaks Vinyl Floor Tiles, Mastic	No	N/A
JOC11C1	Building 2 Driver Locker Room Hallway	12" x 12" Tan with White Streaks, Vinyl Floor Tiles, 1/8"	No	N/A
JOC11C2	Building 2 Driver Locker Room Hallway	12" x 12" Tan with White Streaks Vinyl Floor Tiles, Mastic	No	N/A
JOC12A	Building 2 Fare Box Lane	Fiberglass Insulated Piping with Mudded Fittings	Yes	07
JOC12B	Building 2 Fare Box Lane	Fiberglass Insulated Piping with Mudded Fittings	No	07

SAMPLE NUMBER	LOCATION	DESCRIPTION	ASBESTOS-CONTAINING YES/NO	PHOTO NUMBER
JOC12C	Building 2 Service Lane	Fiberglass Insulated Piping with Mudded Fittings	Yes	07
JOC13A	Building 2 Body Shop Office	12" x 12" Black Vinyl Floor Tiles, 1/8"	Yes	04
JOC13B	Building 2 Body Shop Office	12" x 12" Black Vinyl Floor Tiles, 1/8"	Yes	04
JOC13C	Building 2 Body Shop Office	12" x 12" Black Vinyl Floor Tiles, 1/8"	Yes	04
JOC14A	Building 2 Center Stairwell	9" x 9" White Vinyl Floor Tiles, 1/8"	Yes	06
JOC14B1	Building 2 NE Stairwell	9" x 9" White Vinyl Floor Tiles, 1/8"	Yes	06
JOC14B2	Building 2 NE Stairwell	9" x 9" White Vinyl Floor Tiles, Mastic	Yes	06
JOC14C1	Building 2 SE Stairwell	9" x 9" White Vinyl Floor Tiles, 1/8"	Yes	06
JOC14C2	Building 2 SE Stairwell	9" x 9" White Vinyl Floor Tiles, Mastic	Yes	06
JOC15A	Building 2 Classroom	2" x 2" Puffy Ceiling Tile, White, Fiberglass, 1 1/2"	No	N/A
JOC15B	Building 2 Basement Hallway	2" x 2" Puffy Ceiling Tile, White, Fiberglass, 1 1/2"	No	N/A
JOC15C	Building 2 Office #1	2" x 2" Puffy Ceiling Tile, White, Fiberglass, 1 1/2"	No	N/A
JOC16A	Building 2 Basement Hallway	2" x 2" Flat Ceiling Tile, White, Gypsum, 3/4"	No	N/A
JOC16B	Building 2 Office #8	2" x 2" Flat Ceiling Tile, White, Gypsum, 3/4"	No	N/A
JOC16C	Building 2 Basement Hallway	2" x 2" Flat Ceiling Tile, White, Gypsum, 3/4"	No	N/A
JOC17A1	Dispatch Shack	12" x 12" White, Vinyl Floor Tiles, 1/8"	No	N/A
JOC17A2	Dispatch Shack	12" x 12" White, Vinyl Floor Tiles, Mastic	No	N/A

SAMPLE NUMBER	LOCATION	DESCRIPTION	ASBESTOS-CONTAINING YES/NO	PHOTO NUMBER
JOC17B1	Dispatch Shack	12" x 12" White, Vinyl Floor Tiles, 1/8"	No	N/A
JOC17B2	Dispatch Shack	12" x 12" White, Vinyl Floor Tiles, Mastic	No	N/A
JOC17C1	Dispatch Shack	12" x 12" White, Vinyl Floor Tiles, 1/8"	No	N/A
JOC17C2	Dispatch Shack	12" x 12" White, Vinyl Floor Tiles, Mastic	No	N/A
JOC18A1	Building 3 Hallway	12" x 12" Blue, Vinyl Floor Tiles, 1/8"	No	08
JOC18A2	Building 3 Hallway	12" x 12" Blue, Vinyl Floor Tiles, Mastic	Yes	08
JOC18B1	Building 3 Parts Room	12" x 12" Blue, Vinyl Floor Tiles, 1/8"	No	08
JOC18B2	Building 3 Parts Room	12" x 12" Blue, Vinyl Floor Tiles, Mastic	No	08
JOC18C1	Building 3 Office #1	12" x 12" Blue, Vinyl Floor Tiles, 1/8"	No	08
JOC18C2	Building 3 Office #1	12" x 12" Blue, Vinyl Floor Tiles, Mastic	No	08
JOC19A	Building 3 Hallway	2' x 4' Ceiling Tile, White, Gypsum, 3/4"	No	N/A
JOC19B	Building 3 Hallway	2' x 4' Ceiling Tile, White, Gypsum, 3/4"	No	N/A
JOC19C	Building 3 Office #1	2' x 4' Ceiling Tile, White, Gypsum, 3/4"	No	N/A
JOC20A	Building 3 Boiler Room	Spray-on Fireproofing	No	N/A
JOC20B	Building 3 Electrical Room	Spray-on Fireproofing	No	N/A
JOC20C	Building 3 Pump Room	Spray-on Fireproofing	No	N/A
JOC21A	Building 3 General Mechanical Area	Vibration Cloth	No	N/A
JOC21B	Building 3 General Mechanical Area	Vibration Cloth	No	N/A
JOC21C	Building 3 General Mechanical Area	Vibration Cloth	No	N/A
JOC22A	Building 3 Superintendent's Office	Drywall - South Wall	No	N/A

SAMPLE NUMBER	LOCATION	DESCRIPTION	ASBESTOS-CONTAINING YES/NO	PHOTO NUMBER
JOC22B	Building 3 Superintendent's Office	Drywall – West Wall	No	N/A
JOC22C	Building 3 Superintendent's Office	Drywall – West Wall	No	N/A
JOC23A	Building 3 Superintendent's Office	Joint Compound – West Wall	No	N/A
JOC23B	Building 3 Superintendent's Office	Joint Compound – West Wall	No	N/A
JOC23C	Building 3 Superintendent's Office	Joint Compound – North Wall	No	N/A
JOC24	Building 3 Superintendent's Office	Drywall/Joint Compound Composite – West Wall	No	N/A
JOC25A1	Building 1 Medical Offices	12" x 12" Vinyl Floor Tiles, 1/8"	No	N/A
JOC25A2	Building 1 Medical Offices	12" x 12" Vinyl Floor Tiles, Mastic	No	N/A
JOC25B1	Building 1 Medical Offices	12" x 12" White Vinyl Floor Tiles, 1/8"	No	N/A
JOC25B2	Building 1 Medical Offices	12" x 12" White Vinyl Floor Tiles, Mastic	No	N/A
JOC25C	Building 1 Quality Assurance	12" x 12" White Vinyl Floor Tiles, 1/8"	No	N/A
JOC27A	Building 1 Medical Offices	Drywall – North Wall	No	N/A
JOC27B	Building 1 Graphics	Drywall – South Wall	No	N/A
JOC27C	Building 1 Quality Assurance	Drywall – South Wall	No	N/A
JOC28A	Building 1 Shop	Joint Compound – East Wall	No	N/A
JOC28B	Building 1 First Floor Hallway	Joint Compound – East Wall	No	N/A
JOC28C	Building 1 Graphics	Joint Compound – South Wall	No	N/A

SAMPLE NUMBER	LOCATION	DESCRIPTION	ASBESTOS-CONTAINING YES/NO	PHOTO NUMBER
JOC29	Building 1 Medical Offices	Drywall/Joint Compound Composite	No	N/A
JOC30A	Building 1 Shop Locker Room	Plaster Ceiling	No	N/A
JOC30B	Building 1 Storeroom	Plaster Ceiling	No	N/A
JOC30C	Building 1 Spray Booth	Plaster Ceiling	No	N/A
JOC30D	Building 1 Storeroom	Plaster Ceiling	No	N/A
JOC30E	Building 1 Storeroom	Plaster Ceiling	No	N/A
JOC30F	Building 1 Shop Locker Room	Plaster Ceiling	No	N/A
JOC30G	Building 1 Shop Locker Room	Plaster Ceiling	No	N/A
JOC31A1	Building 1 Shop Lunchroom	9" x 9" Black Vinyl Floor Tiles, 1/8"	No	01
JOC31A2	Building 1 Shop Lunchroom	9" x 9" Black Vinyl Floor Tiles, Mastic	No	01
JOC31B1	Building 1 Shop Lunchroom	9" x 9" Black Vinyl Floor Tiles, 1/8"	No	01
JOC31B2	Building 1 Shop Lunchroom	9" x 9" Black Vinyl Floor Tiles, Mastic	No	01
JOC31C1	Building 1 Shop Locker Room	9" x 9" Black Vinyl Floor Tiles, 1/8"	No	01
JOC31C2	Building 1 Shop Locker Room	9" x 9" Black Vinyl Floor Tiles, Mastic	Yes	01
JOC32A	Building 1 Shop Lunch Room	9" x 9" Green Vinyl Floor Tiles, 1/8"	No	01
JOC32B1	Building 1 Shop Lunch Room	9" x 9" Green Vinyl Floor Tiles, 1/8"	No	01
JOC32B2	Building 1 Shop Lunch Room	9" x 9" Green Vinyl Floor Tiles, Mastic	No	01
JOC32C1	Building 1 Shop Locker Room	9" x 9" Green Vinyl Floor Tiles, 1/8"	No	01

SAMPLE NUMBER	LOCATION	DESCRIPTION	ASBESTOS-CONTAINING YES/NO	PHOTO NUMBER
JOC32C2	Building 1 Shop Locker Room	9" x 9" Green Vinyl Floor Tiles, Mastic	No	01
JOC33A1	Building 1 Shop Lunch Room	9" x 9" Coral Vinyl Floor Tiles, 1/8"	No	01
JOC33A2	Building 1 Shop Lunch Room	9" x 9" Coral Vinyl Floor Tiles, Mastic	Yes	01
JOC33B1	Building 1 Shop Lunch Room	9" x 9" Coral Vinyl Floor Tiles, 1/8"	No	01
JOC33B2	Building 1 Shop Lunch Room	9" x 9" Coral Vinyl Floor Tiles, Mastic	No	01
JOC33C	Building 1 Shop Locker Room	9" x 9" Coral Vinyl Floor Tiles 1/8"	No	01
JOC34A1	Building 1 Shop Locker Room	9" x 9" White Vinyl Floor Tiles, 1/8"	No	01
JOC34A2	Building 1 Shop Locker Room	9" x 9" White Vinyl Floor Tiles, Mastic	No	01
JOC34B1	Building 1 Shop Locker Room	9" x 9" White Vinyl Floor Tiles, 1/8"	No	01
JOC34B2	Building 1 Shop Locker Room	9" x 9" White Vinyl Floor Tiles, Mastic	No	01
JOC34C1	Building 1 Shop Locker Room	9" x 9" White Vinyl Floor Tiles, 1/8"	No	01
JOC34C2	Building 1 Shop Locker Room	9" x 9" White Vinyl Floor Tiles, Mastic	Yes	01
JOC35A	Building 1 Shop Lunch Room	Acoustical Ceiling Plaster	Yes	02
JOC35B	Building 1 Shop Lunch Room	Acoustical Ceiling Plaster	Yes	02
JOC35C	Building 1 Shop Lunch Room	Acoustical Ceiling Plaster	Yes	02
JOC35D	Building 1 Shop Lunch Room	Acoustical Ceiling Plaster	Yes	02

SAMPLE NUMBER	LOCATION	DESCRIPTION	ASBESTOS-CONTAINING YES/NO	PHOTO NUMBER
JOC35E	Building 1 Shop Lunch Room	Acoustical Ceiling Plaster	Yes	02
JOC36A1	Building 1 Graphics	12" x 12" Tan with White Streaks Vinyl Floor Tiles, 1/8"	No	N/A
JOC36A2	Building 1 Graphics	12" x 12" Tan with White Streaks, Vinyl Floor Tiles, Mastic	No	N/A
JOC36B1	Building 1 Machine Shop Office	12" x 12" Tan with White Streaks Vinyl Floor Tiles, 1/8"	No	N/A
JOC36B2	Building 1 Machine Shop Office	12" x 12" Tan with White Streaks Vinyl Floor Tiles, Mastic	No	N/A
JOC36C1	Building 1 TPAS Storage	12" x 12" Tan with White Streaks, Vinyl Floor Tiles, 1/8"	No	N/A
JOC36C2	Building 1 TPAS Storage	12" x 12" Tan with White Streaks, Vinyl Floor Tiles, Mastic	No	N/A
JOC37A1	Building 1 SVMS Clerk Office	12" x 12" Beige Vinyl Floor Tiles, 1/8"	No	N/A
JOC37A2	Building 1 SVMS Clerk Office	12" x 12" Beige Vinyl Floor Tiles, Mastic	No	N/A
JOC37B	Building 1 Leadman Office	12" x 12" Beige Vinyl Floor Tiles 1/8"	No	N/A
JOC37C1	Building 1 SVMS Manager	12" x 12" Beige Vinyl Floor Tiles 1/8"	No	N/A
JOC37C2	Building 1 SVMS Manager	12" x 12" Beige Vinyl Floor Tiles, Mastic	No	N/A
JOC38A	Building 3 Janitor Closet	Plaster Ceiling	No	N/A
JOC38B	Building 3 Janitor Closet	Plaster Ceiling	No	N/A
JOC38C	Building 3 Men's Room	Plaster Ceiling	No	N/A
JOC39A	Building 1 Medical Offices	2x4 Ceiling Tile, White, Gypsum, 3/4"	No	N/A
JOC39B	Building 1 TPAS Offices	2x4 Ceiling Tile, White, Gypsum, 3/4"	No	N/A
JOC39C	Building 1 Quality Assurance	2x4 Ceiling Tile, White, Gypsum, 3/4"	No	N/A

SAMPLE NUMBER	LOCATION	DESCRIPTION	ASBESTOS-CONTAINING YES/NO	PHOTO NUMBER
JOC40A	Building 1 Supervisor Locker Room	12" x 12" Ceiling Tiles, Tan, Gypsum, 1"	No	N/A
JOC40B	Building 1 Supervisor Locker Room	12" x 12" Ceiling Tiles, Tan, Gypsum, 1"	No	N/A
JOC40C	Building 1 Supervisor Locker Room	12" x 12" Ceiling Tiles, Tan, Gypsum, 1"	No	N/A
JOC41A	Building 1 TPAS Storage	12" x 12" Wall Tile, Tan, Gypsum, 1"	Yes	03
JOC41B	Building 1 TPAS Storage	12" x 12" Wall Tile, Tan, Gypsum, 1"	Yes	03
JOC41C1	Building 1 TPAS Storage	12" x 12" Wall Tile, Tan, Gypsum, 1"	Yes	03
JOC41C2	Building 1 TPAS Storage	12" x 12" Wall Tile, Mastic	Yes	03
JOC42A1	Building 1 First Floor Hallway	12" x 12" Blue Vinyl Floor Tiles, 1/8"	No	N/A
JOC42A2	Building 1 First Floor Hallway	12" x 12" Blue Vinyl Floor Tiles, Mastic	No	N/A
JOC42B1	Building 1 Stairwell	12" x 12" Blue Vinyl Floor Tiles, 1/8"	No	N/A
JOC42B2	Building 1 Stairwell	12" x 12" Blue Vinyl Floor Tiles, Mastic	No	N/A
JOC42C	Building 1 Stairwell	12" x 12" Blue Vinyl Floor Tiles, 1/8"	No	N/A
JOC43A1	Building 1 Emergency General Room	9" x 9" Off White Vinyl Floor Tiles, 1/8"	No	N/A
JOC43A2	Building 1 Emergency General Room	9" x 9" Off White Vinyl Floor Tiles, Mastic	No	N/A
JOC43B1	Building 1 TPAS Library	9" x 9" Off White Vinyl Floor Tiles, 1/8"	No	N/A
JOC43B2	Building 1 TPAS Library	9" x 9" Off White Vinyl Floor Tiles, Mastic	No	N/A
JOC43C1	Building 1 TPAS Locker Room	9" x 9" Off White Vinyl Floor Tiles, 1/8"	No	N/A

SAMPLE NUMBER	LOCATION	DESCRIPTION	ASBESTOS-CONTAINING YES/NO	PHOTO NUMBER
JOC43C2	Building 1 TPAS Locker Room	9" x 9" Off White Vinyl Floor Tiles, Mastic	No	N/A
JOC44A	Building 3 Boiler Room	Breeching Insulation	No	N/A
JOC44B	Building 3 Boiler Room	Breeching Insulation	No	N/A
JOC44C	Building 3 Boiler Room	Breeching Insulation	No	N/A

Discussion

As indicated by the laboratory analysis results and assumed materials, the use of asbestos-containing materials was identified in the following forms. Locations of ACM are presented on the maps contained in Appendix D.

MATERIAL	LOCATION	QUANTITY	CONDITION	METHOD
Breeching Insulation	Building 1 – Boiler Room	675 SF	Good	Assumed from previous report
Tank Insulation	Building 1 – Boiler Room	400 SF	Good	Assumed from previous report
Fiberglass insulated piping with mudded fittings	Building 1 – Throughout	550 EA	Good	Assumed from previous report
9"x9" vinyl floor tile mastic	Building 1 – Shop Locker Room	1,300 SF	Good	Laboratory Analysis
9"x9" vinyl floor tile mastic	Building 1 – Shop Lunch Room	1,650 SF	Good	Laboratory Analysis
Acoustical ceiling plaster	Building 1 – Shop Lunch Room	1,650 SF	Good	Laboratory Analysis
Tan 12"x12" wall tiles and mastic	Building 1 – TPAS Storage Room	200 SF	Good	Laboratory Analysis
Spray on fireproofing	Building 2 – Throughout	12,000 SF	Fair	Assumed from previous report

MATERIAL	LOCATION	QUANTITY	CONDITION	METHOD
Green 9"x9" vinyl floor tiles	Building 2 – Region Storage	560 SF	Good	Assumed from previous report
Orange 9"x9" vinyl floor tiles	Building 2 – Depot Storage Area	100 SF	Good	Laboratory Analysis
Orange 9"x9" vinyl floor tiles and mastic	Building 2 – Depot Office Area Storage Closet	8 SF	Good	Laboratory Analysis
Orange 9"x9" vinyl floor tiles and mastic	Building 2 - Vending Machine Storage Area	70 SF	Good	Laboratory Analysis
Light green 9"x9" vinyl floor tiles and mastic	Building 2 – Depot Storage Area	100 SF	Good	Laboratory Analysis
Light green 9"x9" vinyl floor tiles and mastic	Building 2 – Depot Office Area Storage Closet	8 SF	Good	Laboratory Analysis
Light green 9"x9" vinyl floor tiles and mastic	Building 2 - Vending Machine Storage Area	70 SF	Good	Laboratory Analysis
Light green 9"x9" vinyl floor tiles and mastic	Building 2 – Body Shop Office	30 SF	Fair	Laboratory Analysis
Dark green 9"x9" vinyl floor tiles and mastic	Building 2 – Depot Storage Area	100 SF	Good	Laboratory Analysis
Dark green 9"x9" vinyl floor tiles and mastic	Building 2 – Depot Office Area Storage Closet	8 SF	Good	Laboratory Analysis
Dark green 9"x9" vinyl floor tiles and mastic	Building 2 - Vending Machine Storage Area	70 SF	Good	Laboratory Analysis
White 9"x9" vinyl floor tiles and mastic	Building 2 - Stairwells	300 SF	Good	Laboratory Analysis
Black 12"x12" vinyl floor tiles	Building 2 – Body Shop Office	30 SF	Poor	Laboratory Analysis
Fiberglass insulated piping with mudded fittings	Building 2 - Throughout	116 EA	Good	Laboratory Analysis
Blue 12"x12" vinyl floor tile mastic	Building 3 - Throughout	1,250 SF	Good	Laboratory Analysis
Roofing materials	All Buildings - Roof	250,000 SF	Good	Assumed
Fire doors	All Buildings - Throughout	200 EA	Good	Assumed

Building 1 Asbestos-Containing Materials (ACM) consist of tan 12" x 12" wall tiles and mastic (Friable Material) which are located in the TPAS Storage Room; 9" x 9" vinyl floor Tiles, Mastic (Category II Non-Friable Material), utilized in the Shop Locker Room and Lunch Room; and acoustical ceiling plaster (Friable Material), which was utilized in the Shop Lunch Room. All of these materials were observed to be in good condition.

Building 2 Asbestos-Containing Materials consist of orange, light green and dark green 9" x 9" vinyl floor tiles and mastic (Category I Non-Friable Material), which are located in the Depot Storage

Room #2, the Depot Office Area Storage Closet and the Vending Machine Storage Area. The light green 9" x 9" vinyl floor tiles and mastic are also located in the Body Shop Office. Other asbestos-containing materials in Building 2 include white 9" x 9" vinyl floor tiles and mastic (Category I Non-Friable Material) which were utilized in the stairwells; 12" x 12" black vinyl floor tiles (Category I Non-Friable Material) which were utilized in the Body Shop Office; and Fiberglass Insulated Piping With Mudded Fittings (Friable Material) which were located throughout the Shop. The 12" x 12" black vinyl floor tiles in the Body Shop Office are in poor condition and should be removed. All other materials in Building 2 are in good condition.

The Building 3 Asbestos-Containing Materials consist only of 12" x 12" blue vinyl floor tile mastic (Category II Non-Friable), which is located in the parts room, all offices and in the hallway. This material is in good condition.

Asbestos-containing materials (ACM) such as these may be maintained in place by the use of an Operation and Maintenance (O&M) Program as defined in the EPA Managing Asbestos In Place: A Building Owner's Guide to Operations and Maintenance Programs for Asbestos-Containing Materials. The O&M program, if carried out with prudence and diligence, should be sufficient to maintain the property in accordance with current applicable regulatory standards and sound business practices. The O&M program should include the elements identified in the Conclusions and Recommendations section of this report. Generally, asbestos-containing materials maintained with an O&M program can remain in place for the life cycle of the individual system, provided the integrity of the material remains intact and undisturbed. Removal can be coordinated with renovations and/or modifications which may effect the ACMs.

CONCLUSIONS AND RECOMMENDATIONS

The black 12" x 12" vinyl floor tiles (Category I Non-Friable Material) in the Building 2 Body Shop are in poor condition and should be removed.

Develop and implement an Operations and Maintenance (O&M) Program that ensures the integrity of the non-friable materials. This program needs only to ensure that the non-friable materials are not sanded, ground or mechanically abraded to produce fibers. Non-friable materials have historically been shown not to be a significant environmental threat.

Develop and implement an Operations and Maintenance (O&M) Program that ensures the integrity of the friable materials. This program needs only to ensure that the condition of the friable materials does not change and if a change in condition is noted, that corrective action be taken. This can be accomplished by implementing a periodic surveillance program for all friable materials.

Building owners shall notify the following persons of the presence, location, and quantity of regulated asbestos-containing materials (ACM) or presumed asbestos-containing materials (PACM), at work sites in their buildings and facilities. Notification either shall be in writing, or shall consist of a personal communication between the owner and the person to whom notification must be given or their authorized representatives.

- o WMATA employees who will work in or adjacent to areas containing such material.
- o Prospective contractors applying or bidding for work whose employees reasonably can be expected to work in or adjacent to areas containing such material.

APPENDIX A

INSPECTOR TRAINING CERTIFICATION

John M. O'Connor

Name

Signature

HAS ATTENDED AND PASSED THE EXAM IN
AN ASBESTOS TRAINING COURSE ENTITLED:

Asst. Bldg. Insp. Ref.
Course Name

FOR ACCREDITATION UNDER TSCA TITLE II.

08/08/97

08/08/98

08/08/97

Course Date(s)

Expiration Date

Exam Date

(STATE SEAL IS BLUE)

NO. 032085 ETI

STATE OF MARYLAND

Tr

Environmental Training
International, Inc.

Ac

1702 Industrial Highway, Suite 7

Cl

Cinnaminson, NJ 08077

Zip

Pt

Roy Bowman

(609)829-3111

31-00-01

Name of Training Director

Signature of Training Director

For additional information, call MDE (410) 631-3801.



INSPECTOR TRAINING CERTIFICATION

CONNOR Environmental Services and Engineering Assessments
A Division of MIRCON, Inc.
Bare Hills Business Center
1421 Clarkview Road
Baltimore, MD 21209-2188

APPENDIX B

LABORATORY CERTIFICATION AND ANALYTICAL RESULTS

National Institute
of Standards and Technology



National Voluntary
Laboratory Accreditation Program

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Scope of Accreditation



Page: 1 of 1

BULK ASBESTOS FIBER ANALYSIS

NVLAP LAB CODE 200165-0

METROPOLITAN ENVIRONMENTAL TESTING SERVICES

179 Smallwood Village Center

Waldorf, MD 20602

Ms. Carrie A. Fike

Phone: 301-870-1995 Fax: 301-870-1701

NVLAP Code

18/A01

Designation

U.S. EPA's "Interim Method for the Determination of Asbestos in Bulk Insulation Samples" as found in 40 CFR, Part 763, Subpart F, App. A, or the current U.S. EPA method for the analysis of asbestos in building material.

June 30, 1998

Effective through

A handwritten signature in black ink, appearing to read "Jan L. G...", is written over a horizontal line.

For the National Institute of Standards and Technology

United States Department of Commerce
National Institute of Standards and Technology

NVLAP[®]



ISO/IEC GUIDE 25:1990
ISO 9002:1987

Certificate of Accreditation

METROPOLITAN ENVIRONMENTAL TESTING SERVICES
WALDORF, MD

is recognized under the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC Guide 25 and the relevant requirements of ISO 9002 (ANSI/ASQC Q92-1987) as suppliers of calibration or test results. Accreditation is awarded for specific services, listed on the Scope of Accreditation for:

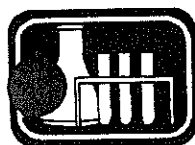
BULK ASBESTOS FIBER ANALYSIS

June 30, 1998

Effective through

For the National Institute of Standards and Technology

NVLAP Lab Code: 200165-0



METS
LABORATORIES

179 Smallwood Village Center, Waldorf, Maryland, 20602

Metro: 301.870.1995
Toll Free: 800.604.1995
Fax#: 301.870.1701

Bulk Asbestos Analysis Report

NY ELAP #11603, NVLAP #200165-0

Method EPA 600/R-93/116

Report Number 980531022

Account Number: 11-7804

Client Name: Connor Environmental Services

Address: 1421 Clarkview Rd Suite 100

Baltimore MD 21209

Date Collected: N/A

Date Received: 53198

Date Analyzed: 60198

Date Reported: 60298

Project: Bladensburg Bus Div+HUMT 2250 (Bldg 1)+(Bldgs 2+3) 26th St 809403 WMATA

METS Sample No.	Client Sample ID	Asbestos Detected (Y/N)	Non Asbestos %	Asbestos / %	Color
980531022-043	JOC15A Bldg 2 Classroom 2x2 Puffy Ceiling Tile	No	Cellulose trace, Fiberglass 95, NANF 4+	NAD	gold/whit
980531022-044	JOC15B Bldg 2 Basement Hallway 2x2 Puffy Ceiling Tile	No	Cellulose trace, Fiberglass 90, NANF 9+	NAD	gold/whit
980531022-045	JOC15C Bldg 2 Office #1 2x2 Puffy Ceiling Tile	No	Cellulose trace, Fiberglass 85, NANF 14+	NAD	gold/whit
980531022-046	JOC16A Bldg 2 Basement Hallway 2x2 Flat Ceiling Tile	No	Cellulose 20, Fiberglass 50, NANF 30	NAD	gray
980531022-047	JOC16B Bldg 2 Office #8 2x2 Flat Ceiling Tile	No	Cellulose 20, Fiberglass 50, NANF 30	NAD	gray
980531022-048	JOC16C Bldg 2 Basement Hallway 2x2 Flat Ceiling Tile	No	Cellulose 25, Fiberglass 55, NANF 20	NAD	gray
980531022-049A	JOC17A Dispatch Shack 12x12 White VFT	No	Cellulose 2, NANF 98	NAD	gray
980531022-049B	JOC17A Dispatch Shack 12x12 White VFT-mastic	No	Cellulose trace, NANF 99+	NAD	black
980531022-050A	JOC17B Dispatch Shack 12x12 White VFT	No	Cellulose 1, NANF 99	NAD	gray

Note: NAD = No Asbestos Detected, NANF = Non-Asbestos Non-Fibrous, * = Presence Noted, Trace = Trace Amounts Noted, < 1%

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Report Number 980531022

Account Number: 11-7804
Client Name: Connor Environmental Services
Address: 1421 Clarkview Rd Suite 100
Baltimore MD 21208
Date Collected: N/A
Date Received: 53198
Date Analyzed: 60198
Date Reported: 60298
Project: Bladensburg Bus Div+HUMT 2250 (Bldg 1)+(Bldgs 2+3) 26th St 809403 WMATA

METS Sample No.	Client Sample ID	Asbestos Detected (Y/N)	Non Asbestos %	Asbestos / %	Color
980531022-036	JOC12C Bldg 2 Service Lane FGIP Fiting	Yes	Fiberglass 40, NANF 58	Amosite 2	beige/gra
980531022-037	JOC13A Bldg 2 Body Shop Office 12x12 Black VFT	Yes	Cellulose trace, NANF 98+	Chrysotile 1	black
980531022-038	JOC13B Bldg 2 Body Shop Office 12x12 Black VFT	Yes	Cellulose 1, NANF 98	Chrysotile 1	black
980531022-039	JOC13C Bldg 2 Body Shop Office 12x12 Black VFT	Yes	Cellulose 1, NANF 98	Chrysotile 1	black
980531022-040	JOC14A Bldg 2 Center Stairwell 9x9 White VFT	Yes	Cellulose trace, NANF 96+	Chrysotile 3	white
980531022-041A	JOC14B Bldg 2 NE Stairwell 9x9 White VFT	Yes	Cellulose trace, NANF 97+	Chrysotile 2	white
980531022-041B	JOC14B Bldg 2 NE Stairwell 9x9 White VFT- mastic	Yes	Cellulose 1, NANF 98	Chrysotile 1	black
980531022-042A	JOC14C Bldg 2 SE Stairwell 9x9 White VFT	Yes	Cellulose trace, NANF 95+	Chrysotile 4	white
980531022-042B	JOC14C Bldg 2 SE Stairwell 9x9 White VFT- mastic	Yes	Cellulose trace, NANF 98+	Chrysotile 1	black

Note: NAD = No Asbestos Detected, NANF = Non-Asbestos Non-Fibrous, + = Presence Noted, Trace = Trace Amounts Noted, < 1%

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NY ELAP #11603, NVLAP #200165-0

Method EPA 600/R-93/116

Report Number 980531022

Account Number: 11-7804

Client Name: Connor Environmental Services

Address: 1421 Clarkview Rd Suite 100

Baltimore MD 21209

Date Collected: N/A

Date Received: 63198

Date Analyzed: 60198

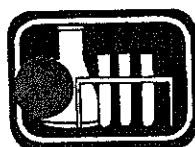
Date Reported: 60298

Project: Bladensburg Bus Div+HUMT 2250 (Bldg 1)+(Bldgs 2+3) 26th St 809403 WMATA

METS Sample No.	Client Sample ID	Asbestos Detected (Y/N)	Non Asbestos %	Asbestos / %	Color
980531022-001	JOC01A Bldg 2 Sign Room Gray Spray-On Fireproofing	No	Cellulose trace, Fiberglass 55, NANF 44+	NAD	gray
980531022-002	JOC01B Bldg 2 Sign Room Gray Spray-On Fireproofing	No	Cellulose trace, Fiberglass 55, NANF 44+	NAD	gray
980531022-003	JOC01C Bldg 2 Sign Room Gray Spray-On Fireproofing	No	Cellulose trace, Fiberglass 55, NANF 44+	NAD	gray
980531022-004	JOC01D Bldg 2 Sign Room Gray Spray-On Fireproofing	No	Cellulose trace, Fiberglass 55, NANF 44+	NAD	gray
980531022-005	JOC01E Bldg 2 Sign Room Gray Spray-On Fireproofing	No	Cellulose trace, Fiberglass 55, NANF 44+	NAD	gray
980531022-006	JOC02A Bldg 2 Depot Storage #2 Orange 9x9 VFT	Yes	Cellulose trace, NANF 98+	Chrysotile 1	orange
980531022-007A	JOC02B Bldg 2 Depot Storage #2 Orange 9x9 VFT	Yes	Cellulose trace, Synthetic trace, NANF 97+	Chrysotile 2	orange
980531022-007B	JOC02B Bldg 2 Depot Storage #2 Orange 9x9 VFT- mastic	No	Cellulose 5, Fiberglass 2, NANF 93	NAD	black
980531022-008A	JOC02C Bldg 2 Depot Storage #2 Orange 9x9 VFT	Yes	Cellulose trace, NANF 97+	Chrysotile 2	orange

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Bulk Asbestos Analysis Report

NY ELAP #11603, NVLAP #200165-0

Method EPA 600/R-93/116

Report Number 980531022

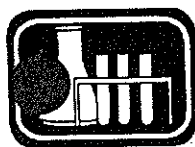
Account Number: 11-7804
Client Name: Connor Environmental Services
Address: 1421 Clarkview Rd Suite 100
Baltimore MD 21209
Date Collected: N/A
Date Received: 53198
Date Analyzed: 60198
Date Reported: 60298
Project: Bladensburg Bus Div+HUMT 2250 (Bldg 1)+(Bldgs 2+3) 26th St 809403 WMATA

METS Sample No.	Client Sample ID	Asbestos Detected (Y/N)	Non Asbestos %	Asbestos / %	Color
980531022-008B	JOC02C Bldg 2 Depot Storage #2 Orange 9x9 VFT- mastic	Yes	Cellulose 1, NANF 97	Chrysotile 2	orange
980531022-009A	JOC03A Bldg 2 Depot Storage #2 Lt Green 9x9 VFT	Yes	Cellulose trace, NANF 98+	Chrysotile 3	green
980531022-009B	JOC03A Bldg 2 Depot Storage #2 Lt Green 9x9 VFT- mastic	Yes	Cellulose trace, NANF 94+	Chrysotile 5	black
980531022-010A	JOC03B Bldg 2 Depot Storage #2 Lt Green 9x9 VFT	Yes	Cellulose trace, NANF 98+	Chrysotile 3	green
980531022-010B	JOC03B Bldg 2 Depot Storage #2 Lt Green 9x9 VFT- mastic	Yes	Cellulose trace, NANF 95+	Chrysotile 4	black
980531022-011A	JOC03C Bldg 2 Depot Storage #2 Lt Green 9x9 VFT	Yes	Cellulose trace, NANF 98+	Chrysotile 3	green
980531022-011B	JOC03C Bldg 2 Depot Storage #2 Lt Green 9x9 VFT- mastic	Yes	Cellulose trace, NANF 98+	Chrysotile 1	black
980531022-012	JOC04A Bldg 2 Depot Storage #2 Dark Green 9x9 VFT	Yes	Cellulose trace, NANF 98+	Chrysotile 1	green
980531022-013	JOC04B Bldg 2 Depot Storage #2 Dark Green 9x9 VFT	Yes	Cellulose trace, NANF 97+	Chrysotile 2	green

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Note: NAD = No Asbestos Detected, NANF = Non-Asbestos Non-Fibrous, * = Presence Noted, Trace = Trace Amounts Noted, < 1%

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Fax#: 301.870.1701

Bulk Asbestos Analysis Report

NY ELAP #11603, NVLAP #200165-0

Method EPA 600/R-93/116

Report Number 980531022

Account Number: 11-7804
Client Name: Connor Environmental Services
Address: 1421 Clarkview Rd Suite 100
Baltimore MD 21209

Date Collected: N/A
Date Received: 53198
Date Analyzed: 60198
Date Reported: 60298

Project: Bladensburg Bus Div+HUMT 2250 (Bldg 1)+(Bldgs 2+3) 26th St 809403 WMATA

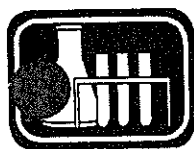
METS Sample No.	Client Sample ID	Asbestos Detected (Y/N)	Non Asbestos %	Asbestos / %	Color
980531022-023	JOC07C Bldg 2 Driver Locker Room Drywall	No	Cellulose 20, NANF 80	NAD	tan/white
980531022-024	JOC08A Bldg 2 Basement Large Storage Area Joint Compound	No	Cellulose trace, NANF 99+	NAD	white
980531022-025	JOC08B Bldg 2 Driver Lounge Joint Compound	No	Cellulose trace, NANF 99+	NAD	gray/whit
980531022-026	JOC08C Bldg 2 Ops Hallway Joint Compound	No	Cellulose trace, NANF 99+	NAD	white
980531022-027	JOC09 Bldg 2 Basement Large Storage Area Drywall/ Joint Compound Composite	No	Cellulose 30, NANF 70	NAD	tan/white
980531022-028A	JOC10A Bldg 2 Region Office Hallway 12x12 Light Marble VFT	No	Cellulose trace, NANF 99+	NAD	white
980531022-028B	JOC10A Bldg 2 Region Office Hallway 12x12 Light Marble VFT-mastic	No	Cellulose trace, NANF 99+	NAD	yellow
980531022-029A	JOC10B Bldg 2 Ops Hallway 12x12 Light Marble VFT	No	Cellulose trace, NANF 99+	NAD	white
980531022-029B	JOC10B Bldg 2 Ops Hallway 12x12 Light Marble VFT-mastic	No	Cellulose trace, NANF 99+	NAD	yellow

SA7

Note: NAD = No Asbestos Detected, NANF = Non-Asbestos Non-Fibrous, * = Presence Noted, Trace = Trace Amounts Noted, < 1%

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Project: Bladensburg Bus Div+HUMT 2250 (Bldg 1)+(Bldgs 2+3) 26th St 809403 WMATA

METS Sample No.	Client Sample ID	Asbestos Detected (Y/N)	Non Asbestos %	Asbestos / %	Color
980531022-014	JOC04C Bldg 2 Depot Storage #2 Dark Green 9x9 VFT	Yes	Cellulose trace, NANF 97+	Chrysotile 2	green
980531022-015	JOC05A Bldg 2 Center Stairwell 2'x4' Ceiling tile	No	Cellulose 30, Fiberglass 40, NANF 30	NAD	gray
980531022-016	JOC05B Bldg 2 Driver Lounge 2'x4' Ceiling tile	No	Cellulose 20, Fiberglass 50, NANF 30	NAD	gray
980531022-017	JOC05C Bldg 2 Ops Hallway 2'x4' Ceiling tile	No	Cellulose 10, Fiberglass 55, NANF 35	NAD	gray
980531022-018	JOC06A Bldg 2 NE Stairwell 12"x12" Dark Marble VFT	No	Cellulose trace, NANF 99+	NAD	white
980531022-019	JOC06B Bldg 2 Driver Lounge 12"x12" Dark Marble VFT	No	Cellulose trace, NANF 99+	NAD	white
980531022-020	JOC06C Bldg 2 Hallway Behind Depot 12"x12" Dark Marble VFT	No	Cellulose trace, NANF 99+	NAD	white
980531022-021	JOC07A Bldg 2 Basement Large Storage Area Drywall	No	Cellulose 40, NANF 60	NAD	tan/white
980531022-022	JOC07B Bldg 2 Ops Hallway Drywall	No	Cellulose 30, NANF 70	NAD	tan/white

SAT

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W. Alex Brennan
QA / QC Officer
LJB



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Account Number: 11-7804

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Date Collected: N/A

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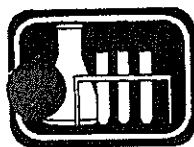
Project: Bladensburg Bus Div+HUMT 2250 (Bldg 1)+(Bldgs 2+3) 26th St 809403 WMATA

METS Sample No.	Client Sample ID	Asbestos Detected (Y/N)	Non Asbestos %	Asbestos / %	Color
980531022-050B	JOC17B Dispatch Shack 12x12 White VFT- mastic	No	Cellulose 2, Synthetic 1, NANF 97	NAD	black
980531022-051A	JOC17C Dispatch Shack 12x12 White VFT	No	Cellulose 2, NANF 98	NAD	gray
980531022-051B	JOC17C Dispatch Shack 12x12 White VFT- mastic	No	Cellulose 1, NANF 99	NAD	black
980531022-052A	JOC18A Bldg 3 Hallway 12x12 Blue VFT	No	Cellulose trace, NANF 99+	NAD	blue
980531022-052B	JOC18A Bldg 3 Hallway 12x12 Blue VFT- mastic	Yes	Cellulose trace, NANF 95+	Chrysotile 4	black
980531022-053A	JOC18B Bldg 3 Parts Room 12x12 Blue VFT	No	Cellulose trace, NANF 99+	NAD	blue
980531022-053B	JOC18B Bldg 3 Parts Room 12x12 Blue VFT- mastic	No	Cellulose trace, NANF 99+	NAD	red
980531022-054A	JOC18C Bldg 3 Office #1 12x12 Blue VFT	No	Cellulose trace, NANF 99+	NAD	blue
980531022-054B	JOC18C Bldg 3 Office #1 12x12 Blue VFT- mastic	No	Cellulose 2, Fiberglass 1, NANF 97	NAD	black

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METS Sample No.	Client Sample ID	Asbestos Detected (Y/N)	Non Asbestos %	Asbestos / %	Color
980531022-030A	JOC10C Bldg 2 Street Ops Supervisor Office 12x12 Light Marble VFT	No	Cellulose trace, Synthetic trace, NANF 99+	NAD	white
980531022-030B	JOC10C Bldg 2 Street Ops Supervisor Office 12x12 Light Marble VFT- mastic	No	Cellulose 1, NANF 99	NAD	yellow
980531022-031	JOC11A Bldg 2 Center Stairwell 12x12 Tan w/white streaks VFT	No	Cellulose trace, NANF 99+	NAD	gray
980531022-032A	JOC11B Bldg 2 NE Stairwell 12x12 Tan w/white streaks VFT	No	Cellulose trace, NANF 99+	NAD	gray
980531022-032B	JOC11B Bldg 2 NE Stairwell 12x12 Tan w/white streaks VFT- mastic	No	Cellulose trace, NANF 99+	NAD	black
980531022-033A	JOC11C Bldg 2 Driver Locker Rm Hallway 12x12 Tan w/wht streaks VFT	No	Cellulose trace, NANF 99+	NAD	gray
980531022-033B	JOC11C Bldg 2 Driver Locker Rm Hallway 12x12 Tan w/wht streaks VFT- mastic	No	Cellulose trace, NANF 99+	NAD	black
980531022-034	JOC12A Bldg 2 Fare Box Lane FGIP Fitting	Yes	Fiberglass 40, NANF 58	Amosite 2	beige
980531022-035	JOC12B Bldg 2 Fare Box Lane FGIP Fitting	No	Fiberglass 55, NANF 45	NAD	gray

Note: NAD = No Asbestos Detected, NANF = Non-Asbestos Non-Fibrous, * = Presence Noted, Trace = Trace Amounts Noted, < 1%

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Bulk Asbestos Analysis Report

NY ELAP #11603, NVLAP #200165-0

Method EPA 600/R-93/116

Report Number 980531022

Account Number: 11-7804

Client Name: Connor Environmental Services

Address: 1421 Clarkview Rd Suite 100
Baltimore MD 21209

Date Collected: N/A

Date Received: 53198

Date Analyzed: 60198

Date Reported: 60298

Project: Bladensburg Bus Div+HUMT 2250 (Bldg 1)+(Bldgs 2+3) 26th St 809403 WMATA

METS Sample No.	Client Sample ID	Asbestos Detected (Y/N)	Non Asbestos %	Asbestos / %	Color
980531022-055	JOC19A Bldg 3 Hallway 2x4 Ceiling Tile	No	Cellulose 30, Fiberglass 50, NANF 20	NAD	white
980531022-056	JOC19B Bldg 3 Hallway 2x4 Ceiling Tile	No	Cellulose 30, Fiberglass 50, NANF 20	NAD	gray
980531022-057	JOC19C Bldg 3 Office #1 2x4 Ceiling Tile	No	Cellulose 30, Fiberglass 50, NANF 20	NAD	gray
980531022-058	JOC20A Bldg 3 Boiler Room Spray-on Fireproofing	No	Cellulose trace, Fiberglass 65, NANF 34+	NAD	gray
980531022-059	JOC20B Bldg 3 Electrical Room Spray-on Fireproofing	No	Cellulose trace, Fiberglass 65, NANF 34+	NAD	gray
980531022-060	JOC20C Bldg 3 Pump Room Spray-on Fireproofing	No	Cellulose trace, Fiberglass 55, NANF 44+	NAD	gray
980531022-061	JOC21A Bldg 3 General Mechanical Area Vibration Cloth	No	Cellulose 3, Fiberglass 10, NANF 87	NAD	black
980531022-062	JOC21B Bldg 3 General Mechanical Area Vibration Cloth	No	Cellulose trace, Fiberglass 70, NANF 29+	NAD	black
980531022-063	JOC21C Bldg 3 General Mechanical Area Vibration Cloth	No	Cellulose trace, Fiberglass 70, NANF 29+	NAD	black

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Note: NAD = No Asbestos Detected, NANF = Non-Asbestos Non-Fibrous, * = Presence Noted, Trace = Trace Amounts Noted, < 1%

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W. Alex
QA/C



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 Baltimore MD 21209 **Date Reported:** 60298
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METS Sample No.	Client Sample ID	Asbestos Detected (Y/N)	Non Asbestos %	Asbestos / %	Color
980531022-084	JOC22A Bldg 3 Superintendent Office Drywall	No	Cellulose 30, NANF 70	NAD	tan
980531022-065	JOC22B Bldg 3 Superintendent Office Drywall	No	Cellulose 60, NANF 40	NAD	tan
980531022-066	JOC22C Bldg 3 Superintendent Office Drywall	No	Cellulose 80, NANF 20	NAD	tan
980531022-067	JOC23A Bldg 3 Superintendent Office Joint Compound	No	Cellulose trace, NANF 99+	NAD	tan
980531022-068	JOC23B Bldg 3 Superintendent Office Joint Compound	No	Cellulose trace, NANF 99+	NAD	tan
980531022-069	JOC23C Bldg 3 Superintendent Office Joint Compound	No	Cellulose trace, NANF 99+	NAD	tan
980531022-070	JOC24 Bldg 3 Superintendent Office Drywall/Joint Compound Composite	No	Cellulose 30, NANF 70	NAD	tan
980531022-071A	JOC25A Bldg 1 Medical Offices 12x12 White VFT	No	Cellulose trace, NANF 99+	NAD	white
980531022-071B	JOC25A Bldg 1 Medical Offices 12x12 White VFT- mastic	No	Cellulose 5, Fiberglass 2, NANF 93	NAD	brown

Note: NAD = No Asbestos Detected, NANF = Non-Asbestos Non-Fibrous, * = Presence Noted, Trace = Trace Amounts Noted, < 1%

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W. Alex D...
QA / CCC

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METS Sample No.	Client Sample ID	Asbestos Detected (Y/N)	Non Asbestos %	Asbestos / %	Color
980531022-072A	JOC25B Bldg 1 Medical Offices 12x12 White VFT	No	Cellulose trace, NANF 99+	NAD	white
980531022-072B	JOC25B Bldg 1 Medical Offices 12x12 White VFT- mastic	No	Cellulose 3, NANF 97	NAD	brown/tan
980531022-073	JOC25C Bldg 1 Quality Assurance 12x12 White VFT	No	Cellulose trace, NANF 99+	NAD	white
980531022-074	JOC27A Bldg 1 Medical Offices Drywall	No	Cellulose 40, Fiberglass 3, NANF 57	NAD	gray/tan
980531022-075	JOC27B Bldg 1 Graphics Drywall	No	Cellulose 30, NANF 70	NAD	gray/tan
980531022-076	JOC27C Bldg 1 Quality Assurance Drywall	No	Cellulose 70, NANF 30	NAD	gray/tan
980531022-077	JOC28A Bldg 1 Shop Joint Compound	No	Cellulose trace, NANF 99+	NAD	tan
980531022-078	JOC28B Bldg 1 1st Floor Hallway Joint Compound	No	Cellulose trace, NANF 99+	NAD	tan
980531022-079	JOC28C Bldg 1 Graphics Joint Compound	No	Cellulose trace, NANF 99+	NAD	tan

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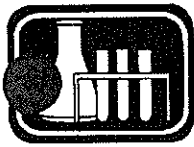
Date Reported: 60298

Project: Bladensburg Bus Div+HUMT 2250 (Bldg 1)+(Bldgs 2+3) 26th St 809403 WMATA

METS Sample No.	Client Sample ID	Asbestos Detected (Y/N)	Non Asbestos %	Asbestos / %	Color
980531022-080	JOC29 Bldg 1 Medical Offices Drywall/Joint Compound Composite	No	Cellulose 30, NANF 70	NAD	gray/tan
980531022-081	JOC30A Bldg 1 Shop Locker Room Plaster	No	Cellulose trace, NANF 99+	NAD	tan
980531022-082	JOC30B Bldg 1 Storeroom Plaster	No	Cellulose trace, NANF 99+	NAD	tan
980531022-083	JOC30C Bldg 1 Spray booth Plaster	No	Cellulose trace, NANF 99+	NAD	tan
980531022-084	JOC30D Bldg 1 Storeroom Plaster	No	Cellulose trace, NANF 99+	NAD	tan
980531022-085	JOC30E Bldg 1 Storeroom Plaster	No	Cellulose trace, NANF 99+	NAD	tan
980531022-086	JOC30F Bldg 1 Shop Locker Room Plaster	No	Cellulose trace, NANF 99+	NAD	tan
980531022-087	JOC30G Bldg 1 Shop Locker Room Plaster	No	Cellulose trace, NANF 99+	NAD	tan
980531022-088A	JOC31A Bldg 1 Shop Lunch Room 9x9 Black VFT	No	Cellulose trace, NANF 99+	NAD	black

Note: NAD = No Asbestos Detected, NANF = Non-Asbestos Non-Fibrous, * = Presence Noted, Trace = Trace Amounts Noted, < 1%

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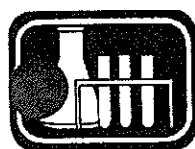
Date Collected: N/A
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Date Analyzed: 60198
Date Reported: 60298

Project: Bladensburg Bus Div+HUMT 2250 (Bldg 1)+(Bldgs 2+3) 26th St 809403 WMATA

METS Sample No.	Client Sample ID	Asbestos Detected (Y/N)	Non Asbestos %	Asbestos / %	Color
980531022-088B	JOC31A Bldg 1 Shop Lunch Room 9x9 Black VFT- mastic	No	Cellulose 5, NANF 95	NAD	brown
980531022-089A	JOC31B Bldg 1 Shop Lunch Room 9x9 Black VFT	No	Cellulose trace, NANF 99+	NAD	black
980531022-089B	JOC31B Bldg 1 Shop Lunch Room 9x9 Black VFT- mastic	No	Cellulose 2, NANF 98	NAD	tan
980531022-090A	JOC31C Bldg 1 Shop Locker Room 9x9 Black VFT	No	Cellulose trace, NANF 99+	NAD	black
980531022-090B	JOC31C Bldg 1 Shop Locker Room 9x9 Black VFT- mastic	Yes	Cellulose 3, NANF 95	Chrysotile 2	tan
980531022-091	JOC32A Bldg 1 Shop Lunch Room 9x9 Green VFT	No	Cellulose trace, NANF 99+	NAD	green
980531022-092A	JOC32B Bldg 1 Shop Lunch Room 9x9 Green VFT	No	Cellulose trace, NANF 99+	NAD	green
980531022-092B	JOC32B Bldg 1 Shop Lunch Room 9x9 Green VFT- mastic	No	Cellulose 3, NANF 96+	Chrysotile trace	black/tan
980531022-093A	JOC32C Bldg 1 Shop Locker Room 9x9 Green VFT	No	Cellulose trace, NANF 99+	NAD	green

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Bulk Asbestos Analysis Report

NY ELAP #11603, NVLAP #200165-0

Method EPA 600/R-93/116

Report Number 980531022

Account Number: 11-7804 **Date Collected:** N/A
Client Name: Connor Environmental Services **Date Received:** 53198
Address: 1421 Clarkview Rd Suite 100 **Date Analyzed:** 60198
 Baltimore MD 21209 **Date Reported:** 60298
Project: Bladensburg Bus Div+HUMT 2250 (Bldg 1)+(Bldgs 2+3) 26th St 809403 WMATA

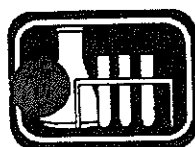
METS Sample No.	Client Sample ID	Asbestos Detected (Y/N)	Non Asbestos %	Asbestos / %	Color
980531022-093B	JOC32C Bldg 1 Shop Locker Room 9x9 Green VFT- mastic	No	Cellulose 3, NANF 97	NAD	tan/black
980531022-094A	JOC33A Bldg 1 Shop Lunch Room 9x9 Coral VFT	No	Cellulose trace, Synthetic trace, NANF 99+	NAD	coral
980531022-094B	JOC33A Bldg 1 Shop Lunch Room 9x9 Coral VFT- mastic	Yes	Cellulose 3, NANF 95	Chrysotile 2	tan
980531022-095A	JOC33B Bldg 1 Shop Lunch Room 9x9 Coral VFT	No	Cellulose trace, NANF 99+	NAD	coral
980531022-095B	JOC33B Bldg 1 Shop Lunch Room 9x9 Coral VFT- mastic	No	Cellulose 5, NANF 95	NAD	tan
980531022-096	JOC33C Bldg 1 Shop Locker Room 9x9 Coral VFT	No	Cellulose 2, NANF 98	NAD	coral
980531022-097A	JOC34A Bldg 1 Shop Locker Room 9x9 White VFT	No	Cellulose trace, NANF 99+	NAD	white
980531022-097B	JOC34A Bldg 1 Shop Locker Room 9x9 White VFT- mastic	No	Cellulose trace, NANF 99+	Chrysotile trace	blk/tan
980531022-098A	JOC34B Bldg 1 Shop Locker Room 9x9 White VFT	No	Cellulose trace, NANF 99+	NAD	white

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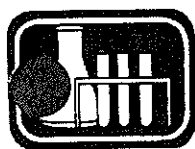
Date Collected: N/A
Date Received: 53198
Date Analyzed: 60198
Date Reported: 60298

METS Sample No.	Client Sample ID	Asbestos Detected (Y/N)	Non Asbestos %	Asbestos / %	Color
980531022-098B	JOC34B Bldg 1 Shop Locker Room 9x9 White VFT- mastic	Yes	Cellulose 5, NANF 93	Chrysotile 2	blk/tan
980531022-099A	JOC34C Bldg 1 Shop Locker Room 9x9 White VFT	No	Cellulose trace, NANF 99+	NAD	white
980531022-099B	JOC34C Bldg 1 Shop Locker Room 9x9 White VFT- mastic	Yes	Cellulose 3, NANF 95	Chrysotile 2	tan/blk
980531022-100	JOC35A Bldg 1 Shop Lunch Room Accoustical Ceiling Plaster	Yes	Cellulose trace, NANF 89+	Chrysotile 10	white
980531022-101	JOC35B Bldg 1 Shop Lunch Room Accoustical Ceiling Plaster	Yes	Cellulose trace, NANF 89+	Chrysotile 10	white
980531022-102	JOC35C Bldg 1 Shop Lunch Room Accoustical Ceiling Plaster	Yes	Cellulose trace, NANF 94+	Chrysotile 5	white
980531022-103	JOC35D Bldg 1 Shop Lunch Room Accoustical Ceiling Plaster	Yes	Cellulose trace, NANF 91+	Chrysotile 8	white
980531022-104	JOC35E Bldg 1 Shop Lunch Room Accoustical Ceiling Plaster	Yes	Cellulose trace, NANF 94+	Chrysotile 5	tan/white
980531022-105A	JOC36A Bldg 1 Graphics 12x12 tan w/white streaks VFT	No	Cellulose trace, NANF 99+	NAD	tan

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Project: Bladensburg Bus Div+HUMT 2250 (Bldg 1)+(Bldgs 2+3) 26th St 809403 WMATA

METS Sample No.	Client Sample ID	Asbestos Detected (Y/N)	Non Asbestos %	Asbestos / %	Color
980531022-105B	JOC36A Bldg 1 Graphics 12x12 tan w/white streaks VFT- mastic	No	Cellulose trace, Synthetic trace, NANF 99+	NAD	tan
980531022-106A	JOC36B Bldg 1 Machine Shop Office 12x12 tan w/white streaks VFT	No	Cellulose trace, NANF 99+	NAD	tan
980531022-106B	JOC36B Bldg 1 Machine Shop Office 12x12 tan w/white streaks VFT- mastic	No	Cellulose trace, Synthetic trace, NANF 99+	NAD	tan
980531022-107A	JOC36C Bldg 1 TPAS Storage 12x12 tan w/white streaks VFT	No	Cellulose trace, NANF 99+	Chrysotile trace	tan
980531022-107B	JOC36C Bldg 1 TPAS Storage 12x12 tan w/white streaks VFT- mastic	No	Cellulose 5, NANF 95	NAD	brwn/blk
980531022-108A	JOC37A Bldg 1 SUMS Clerk Office 12x12 Beige VFT	No	Cellulose trace, NANF 99+	NAD	tan
980531022-108B	JOC37A Bldg 1 SUMS Clerk Office 12x12 Beige VFT- mastic	No	Cellulose 10, NANF 90	NAD	black
980531022-109	JOC37B Bldg 1 Leadman Office 12x12 Beige VFT	No	Cellulose 2, NANF 98	NAD	tan
980531022-110A	JOC37C Bldg 1 SUMS Manager 12x12 Beige VFT	No	Cellulose trace, NANF 99+	NAD	tan

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METS Sample No.	Client Sample ID	Asbestos Detected (Y/N)	Non Asbestos %	Asbestos / %	Color
980531022-110B	JOC37C Bldg 1 SUMS Manager 12x12 Beige VFT- mastic	No	Cellulose 2, NANF 98	NAD	tan
980531022-111	JOC38A Bldg 3 Janitor Closet Plaster	No	Cellulose trace, NANF 99+	NAD	tan/white
980531022-112	JOC38B Bldg 3 Janitor Closet Plaster	No	Cellulose trace, Fiberglass trace, NANF 99+	NAD	tan/white
980531022-113	JOC38C Bldg 3 Men's Room Plaster	No	Cellulose trace, NANF 99+	NAD	white
980531022-114	JOC39A Bldg 1 Medical Offices 2x4 Ceiling tile	No	Cellulose 40, Mineral Wool 40, NANF 20	NAD	tan/wht
980531022-115	JOC39B Bldg 1 TPAS Offices 2x4 Ceiling tile	No	Cellulose 40, Mineral Wool 40, NANF 20	NAD	tan/wht
980531022-116	JOC39C Bldg 1 Quality Assurance 2x4 Ceiling tile	No	Cellulose 40, Mineral Wool 40, NANF 20	NAD	tan
980531022-117	JOC40A Bldg 1 Supervisor Locker Room 12x12 Ceiling tiles	No	Cellulose trace, Mineral Wool 95, NANF 4+	NAD	tan
980531022-118	JOC40B Bldg 1 Supervisor Locker Room 12x12 Ceiling tiles	No	Cellulose trace, Mineral Wool 95, NANF 4+	NAD	gray

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179 Smallwood Village Center, Waldorf, Maryland, 20602

 Metro: 301.870.1995
 Toll Free: 800.604.1995
 Fax#: 301.870.1701

Bulk Asbestos Analysis Report

NY ELAP #11603, NVLAP #200165-0

Method EPA 600/R-93/116

Report Number 980531022

Account Number: 11-7804
Client Name: Connor Environmental Services
Address: 1421 Clarkview Rd Suite 100
 Baltimore MD 21209
Date Collected: N/A
Date Received: 53198
Date Analyzed: 60198
Date Reported: 60298
Project: Bladensburg Bus Div+HUMT 2250 (Bldg 1)+(Bldgs 2+3) 26th St 809403 WMATA

METS Sample No.	Client Sample ID	Asbestos Detected (Y/N)	Non Asbestos %	Asbestos / %	Color
980531022-119	JOC40C Bldg 1 Supervisor Locker Room 12x12 Ceiling tiles	No	Cellulose trace, Mineral Wool 95, NANF 4+	NAD	gray
980531022-120	JOC41A Bldg 1 TPAS Storage 12x12 Wall Tile	Yes	Cellulose trace, Mineral Wool 80, NANF 14+	Amosite 5	tan/gray
980531022-121	JOC41B Bldg 1 TPAS Storage 12x12 Wall Tile	Yes	Cellulose trace, Mineral Wool 80, NANF 11+	Amosite 8	tan/gray
980531022-122A	JOC41C Bldg 1 TPAS Storage 12x12 Wall Tile	Yes	Cellulose trace, Mineral Wool 80, NANF 11+	Amosite 8	tan/gray
980531022-122B	JOC41C Bldg 1 TPAS Storage 12x12 Wall Tile- mastic	Yes	Cellulose trace, NANF 94+	Amosite 5, Chrysotile trace	brown
980531022-123A	JOC42A Bldg 1 1st Floor Hallway 12x12 Blue VFT	No	Cellulose trace, NANF 99+	NAD	blue
980531022-123B	JOC42A Bldg 1 1st Floor Hallway 12x12 Blue VFT- mastic	No	Cellulose 5, Synthetic trace, NANF 94+	Chrysotile trace	brown
980531022-124A	JOC42B Bldg 1 Stairwell 12x12 Blue VFT	No	Cellulose trace, NANF 99+	NAD	blue
980531022-124B	JOC42B Bldg 1 Stairwell 12x12 Blue VFT- mastic	No	Cellulose 5, NANF 95	NAD	black

Note: NAD = No Asbestos Detected, NANF = Non-Asbestos Non-Fibrous, * = Presence Noted, Trace = Trace Amounts Noted, < 1%

The results apply only to the samples analyzed. Collection procedures, protocols, and sample locations are based on sampler and/or submitting party. Therefore, it is the policy of METS Laboratory to disclaim any knowledge of and liability for the accuracy of the information provided. This Report will not be used by the Client to claim product endorsement by NVLAP or any other government agency and shall not be reproduced except in full without the written approval of METS Environmental Testing Services, Inc.



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Project: Bladensburg Bus Div+HUMT 2250 (Bldg 1)-(Bldgs 2+3) 26th St 809403 WMATA

METS Sample No.	Client Sample ID	Asbestos Detected (Y/N)	Non Asbestos %	Asbestos / %	Color
980531022-125	JOC42C Bldg 1 Stairwell 12x12 Blue VFT	No	Cellulose trace, NANF 99+	NAD	blue
980531022-126A	JOC43A Bldg 1 Emergency Gen Room 9x9 Off White VFT	No	Cellulose trace, NANF 99+	NAD	white
980531022-126B	JOC43A Bldg 1 Emergency Gen Room 9x9 Off White VFT- mastic	No	Cellulose trace, NANF 99+	NAD	black
980531022-127A	JOC43B Bldg 1 TPAS Library 9x9 Off White VFT	No	Cellulose trace, NANF 99+	NAD	white
980531022-127B	JOC43B Bldg 1 TPAS Library 9x9 Off White VFT- mastic	No	Cellulose trace, NANF 99+	NAD	black
980531022-128A	JOC43C Bldg 1 TPAS Locker Room 9x9 Off White VFT	No	Cellulose trace, NANF 99+	NAD	tan
980531022-128B	JOC43C Bldg 1 TPAS Locker Room 9x9 Off White VFT- mastic	No	Cellulose trace, NANF 99+	NAD	black
980531022-129	JOC44A Bldg 3 Boiler Room Breaching Insulation	No	Cellulose trace, NANF 99+	NAD	multi
980531022-130	JOC44B Bldg 3 Boiler Room Breaching Insulation	No	Cellulose 10, NANF 90	NAD	tan

Note: NAD = No Asbestos Detected, NANF = Non-Asbestos Non-Fibrous, * = Presence Noted, Trace = Trace Amounts Noted, < 1%

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SAT

Alan Franco

WJG



METS
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Metro: 301.870.1995
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Fax#: 301.870.1701

Bulk Asbestos Analysis Report

NY ELAP #11603, NVLAP #200165-0

Method EPA 600/R-93/116

Report Number 980531022

Account Number: 11-7804

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Address: 1421 Clarkview Rd Suite 100

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Date Collected: N/A

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Date Reported: 60298

Project: Bladensburg Bus Div+HUMT 2250 (Bldg 1)+(Bldgs 2+3) 26th St 809403 WMATA

METS Sample No.	Client Sample ID	Asbestos Detected (Y/N)	Non Asbestos %	Asbestos / %	Color
980531022-131	JOC44C Bldg 3 Boiler Room Breaching Insulation	No	Cellulose 15, NANF 85	NAD	tan

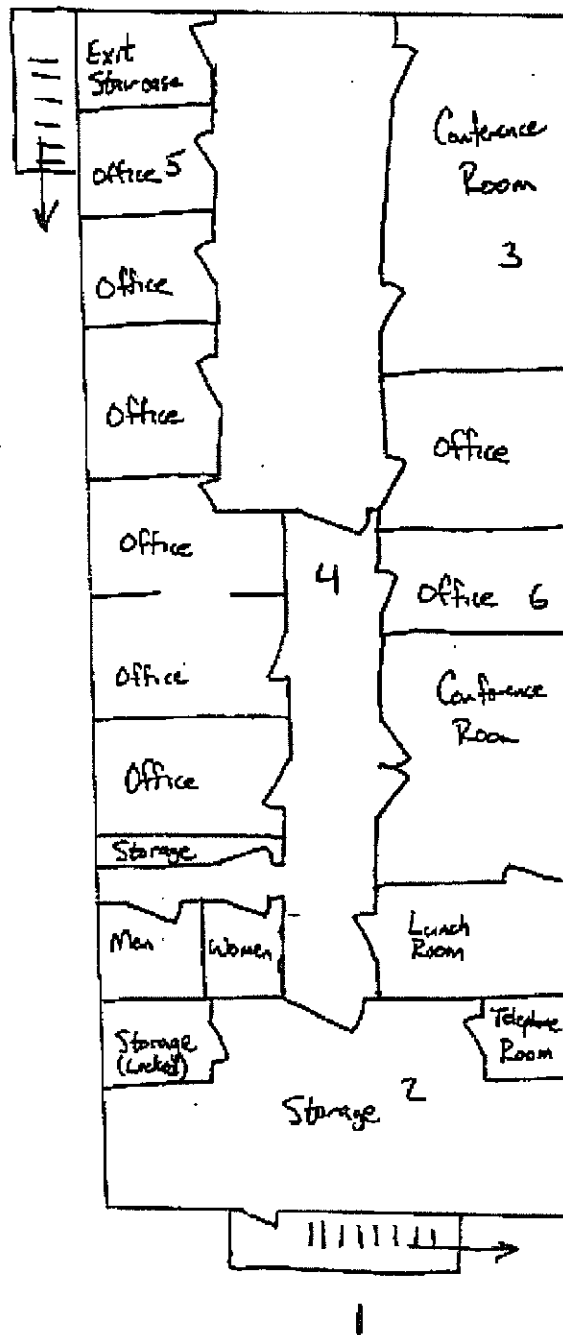
Note: NAD = No Asbestos Detected, NANF = Non-Asbestos Non-Fibrous, * = Presence Noted, Trace = Trace Amounts Noted, < 1%

These results apply only to the samples analyzed. Collection procedures, protocols, and sample locations are based on sampler and/or submitting agency. Therefore, it is the policy of METS Laboratory to disclaim any knowledge of and liability for the accuracy of the information provided. This Report will not be used by the Client to claim product endorsement by NVLAP or any other government agency and shall not be reproduced except in full without the written approval of METS Environmental Testing Services, Inc.

Lab

SA7

APPENDIX C
SAMPLE LOCATION MAPS



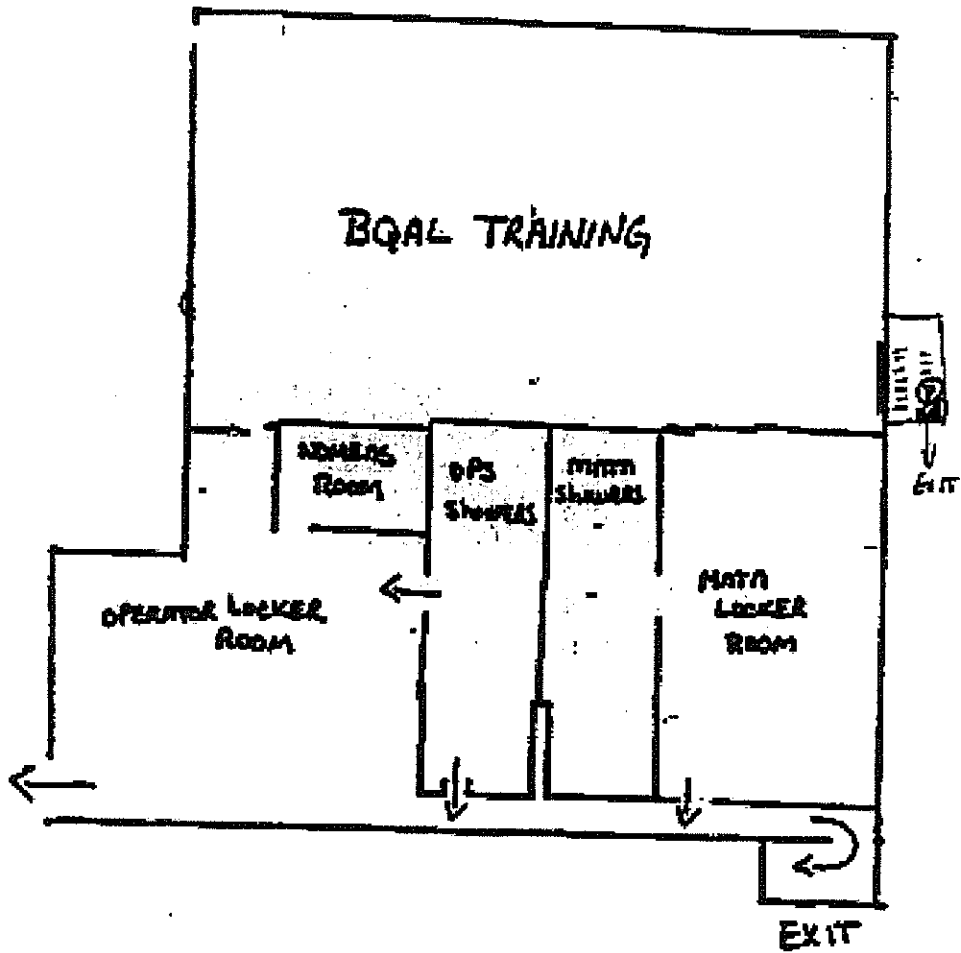
- 1 - JOC01A-E
- 2 - JOC07A
JOC08A
JOC09
- 3 - JOC15A
- 4 - JOC15B
JOC16A
JOC16C
- 5 - JOC15C
- 6 - JOC16B

HVMT BASEMENT LEVEL

Building 2

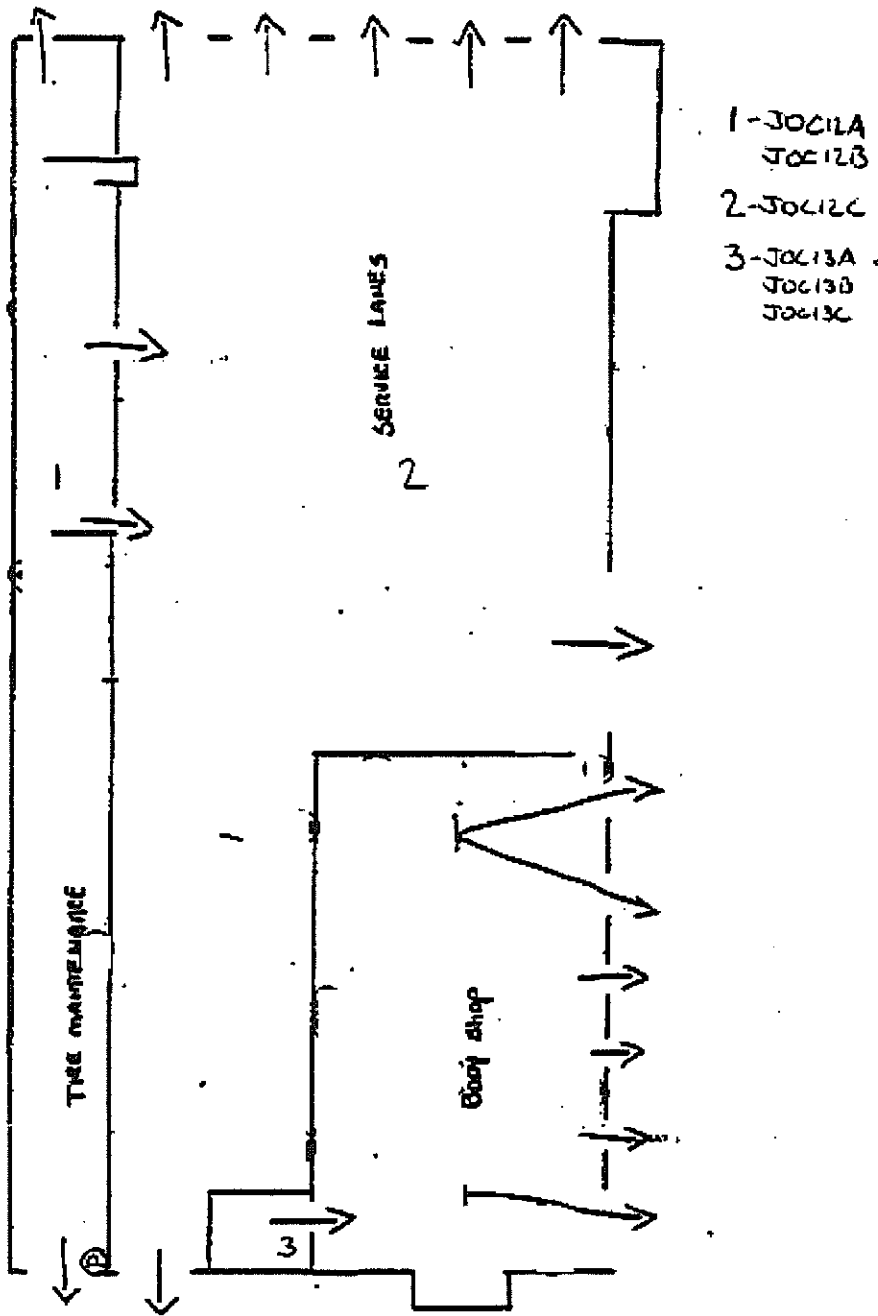
SAMPLE LOCATION MAP

CONNOR Environmental Services and Engineering Assessments
 A Division of MIRCON, Inc.
 Bare Hills Business Center
 1421 Clarkview Road
 Baltimore, MD 21209-2188



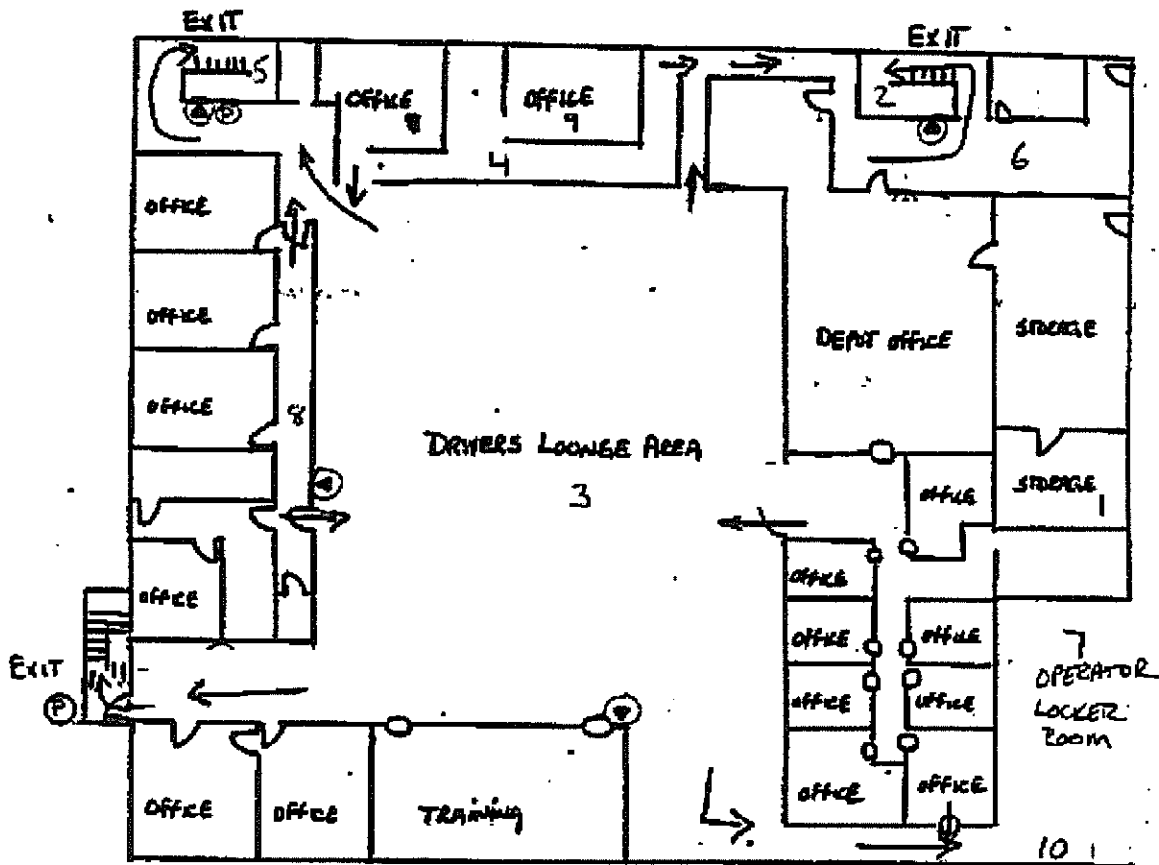
AREA #1 (CONT.) - UPPER LEVEL, BLADENSBURG DIVISION Building 2

SAMPLE LOCATION MAP



AREA #2 - LOWER LEVEL, BLADENSBURG DIVISION Building 2

SAMPLE LOCATION MAP



1-JOC02 Series
JOC03 Series
JOC04 Series

2-JOC05A
JOC11A
JOC14A

3-JOC05B
JOC06B
JOC08B

4-JOC05C
JOC07B
JOC08C
JOC10B
JOC10B2

5-JOC06A
JOC11B1
JOC11B2
JOC14B1
JOC14B2

6-JOC06C

7-JOC07C

8-JOC10A1
JOC10A2

9-JOC10C1
JOC10C2

10 JOC11C1
JOC11C2

11-JOC14C1
JOC14C2

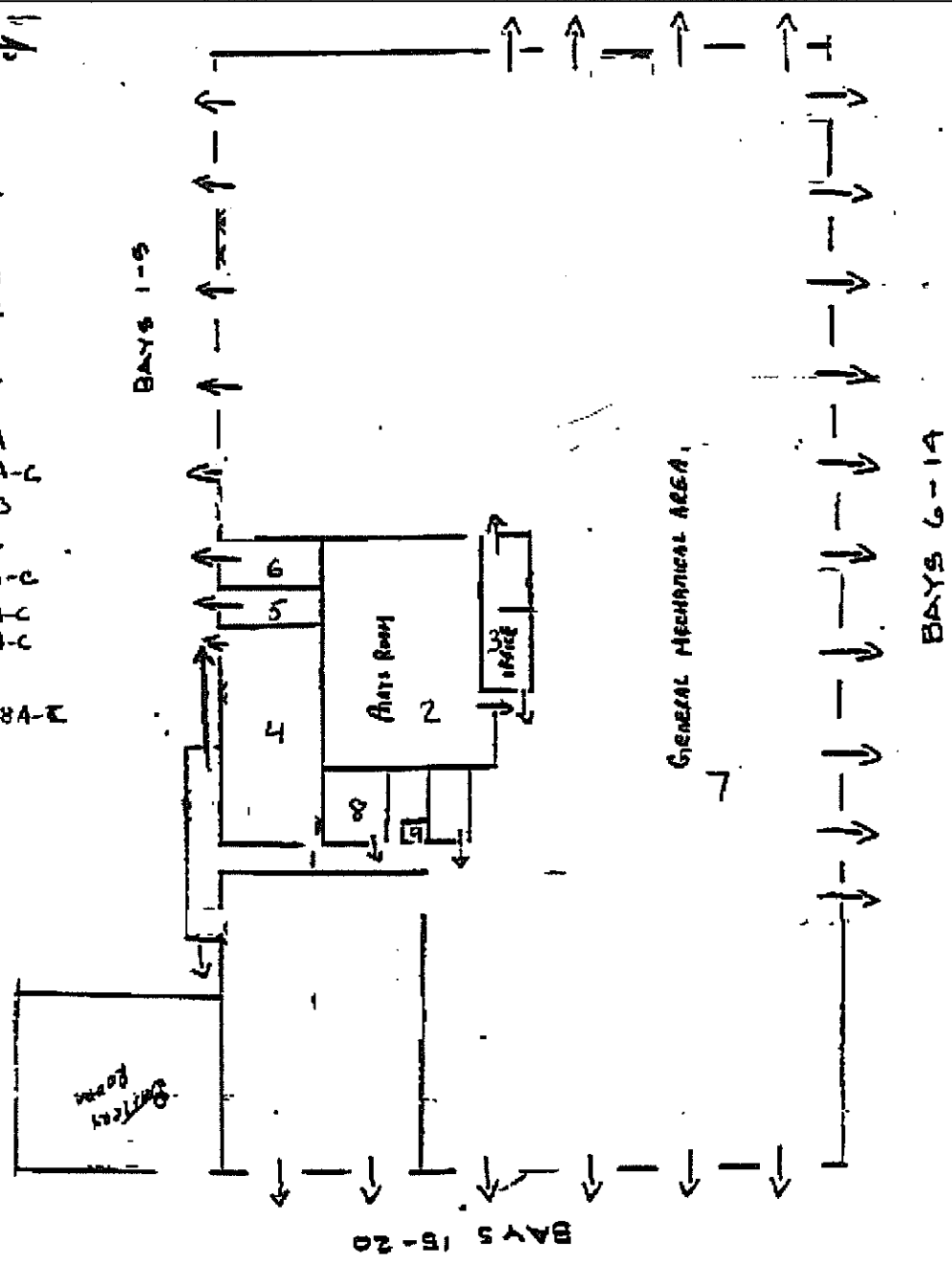
AREA #1 - UPPER LEVEL, BLADENSBURG DIVISION

Building 2

SAMPLE LOCATION MAP

3/11

- 1-JOC18A1
JOC18A2
JOC19A
JOC19B
- 2-JOC18B1
JOC18B2
- 3-JOC18C1
JOC18C2
JOC19C
- 4-JOC20A
JOC44A-C
- 5-JOC20B
- 6-JOC20C
- 7-JOC21A-C
- 8-JOC22A-C
JOC23A-C
JOC24
- 9-JOC38A-E



AREA #3 - LOWER LEVEL, BLADENSBURG DIVISION Building 3

SAMPLE LOCATION MAP

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 A Division of MIRCON, Inc.
 Bare Hills Business Center
 1421 Clarkview Road
 Baltimore, MD 21209-2188

1 - JOC25A1
JOC25A2
JOC25B1
JOC25B2
JOC27A
JOC29
JOC39A

2 - JOC27B
JOC28C
JOC36A1
JOC36A2

3 - JOC28A

4 - JOC28B
JOC42A1
JOC42A2

5 - JOC30A, F, G
JOC31A1
JOC31A2
JOC32A
JOC32C2
JOC33C
JOC34A1
JOC34A2
JOC34B1
JOC34B2
JOC34C1
JOC34C2

6 - JOC30B, D, E

7 - JOC30C

8 - JOC31A, 2 B, 2
JOC32A, B, 2
JOC33A, 2 B, 2
JOC35A-E

9 - JOC36B1, 2

10 - JOC37A1, 2

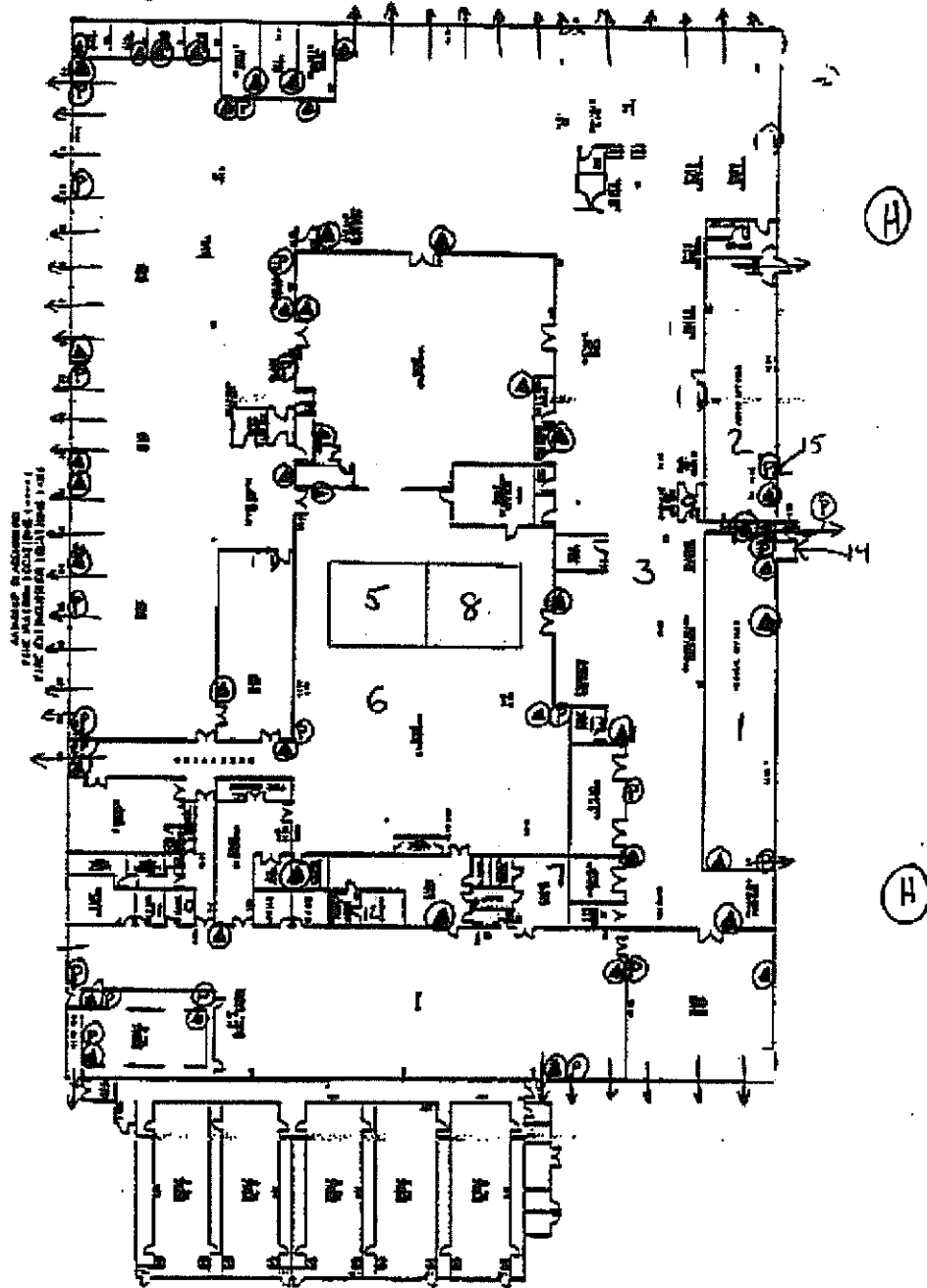
11 - JOC37B

12 - JOC37C1, 2

13 - JOC40A-C

14 - JOC42B1, 2, C, D

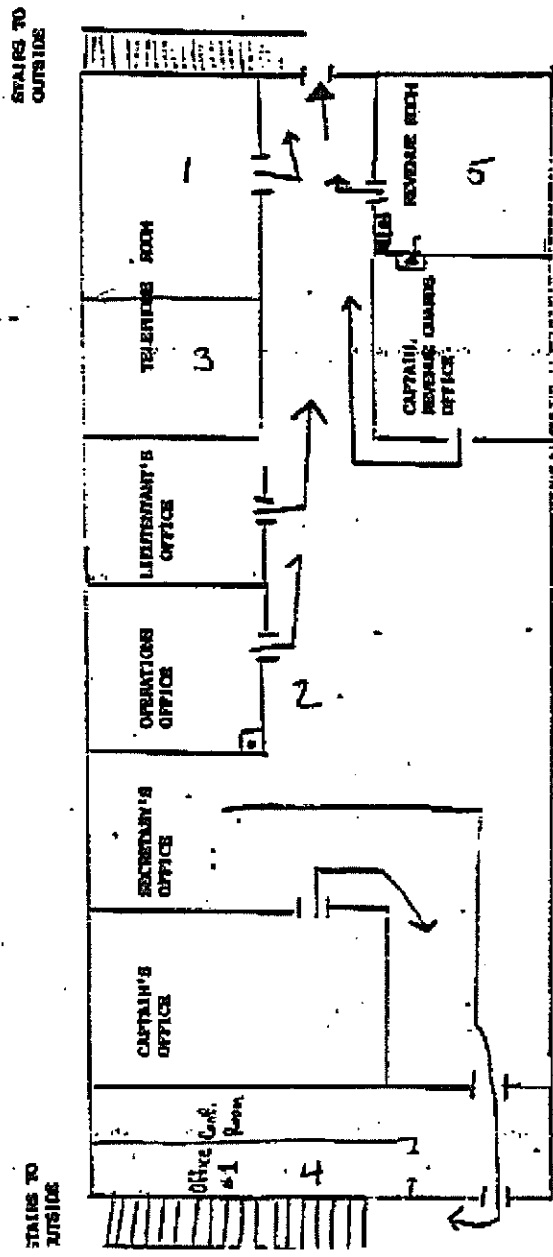
15 - JOC43A1, 2



- MAIN SHOP, BLADENSBURG
Building 1

SAMPLE LOCATION MAP

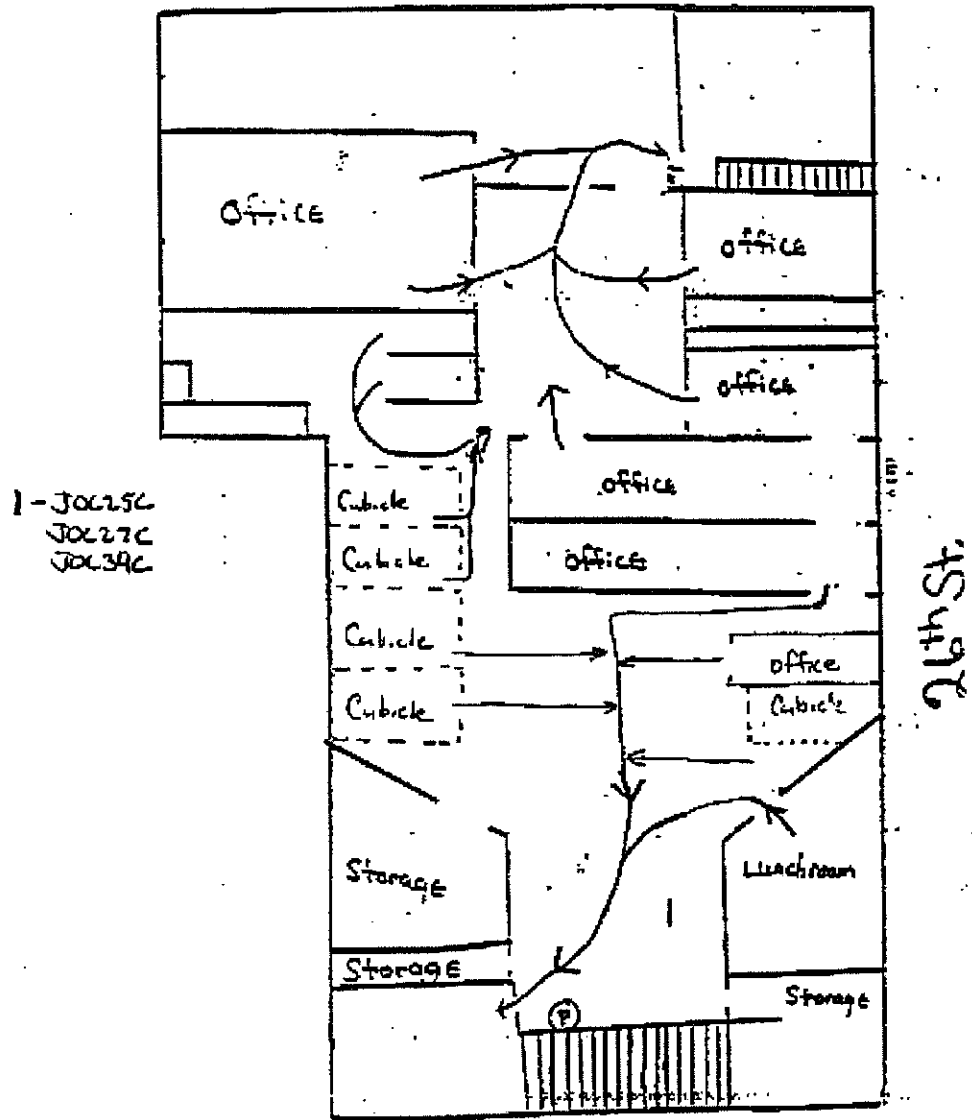
- 1 - JOC36C1
JOC36C2
- 2 - JOC39B
- 3 - JOC41A-C
- 4 - JOC43B1,2
- 5 - JOC43C1,2



TPAS OFFICES

Building 1

SAMPLE LOCATION MAP

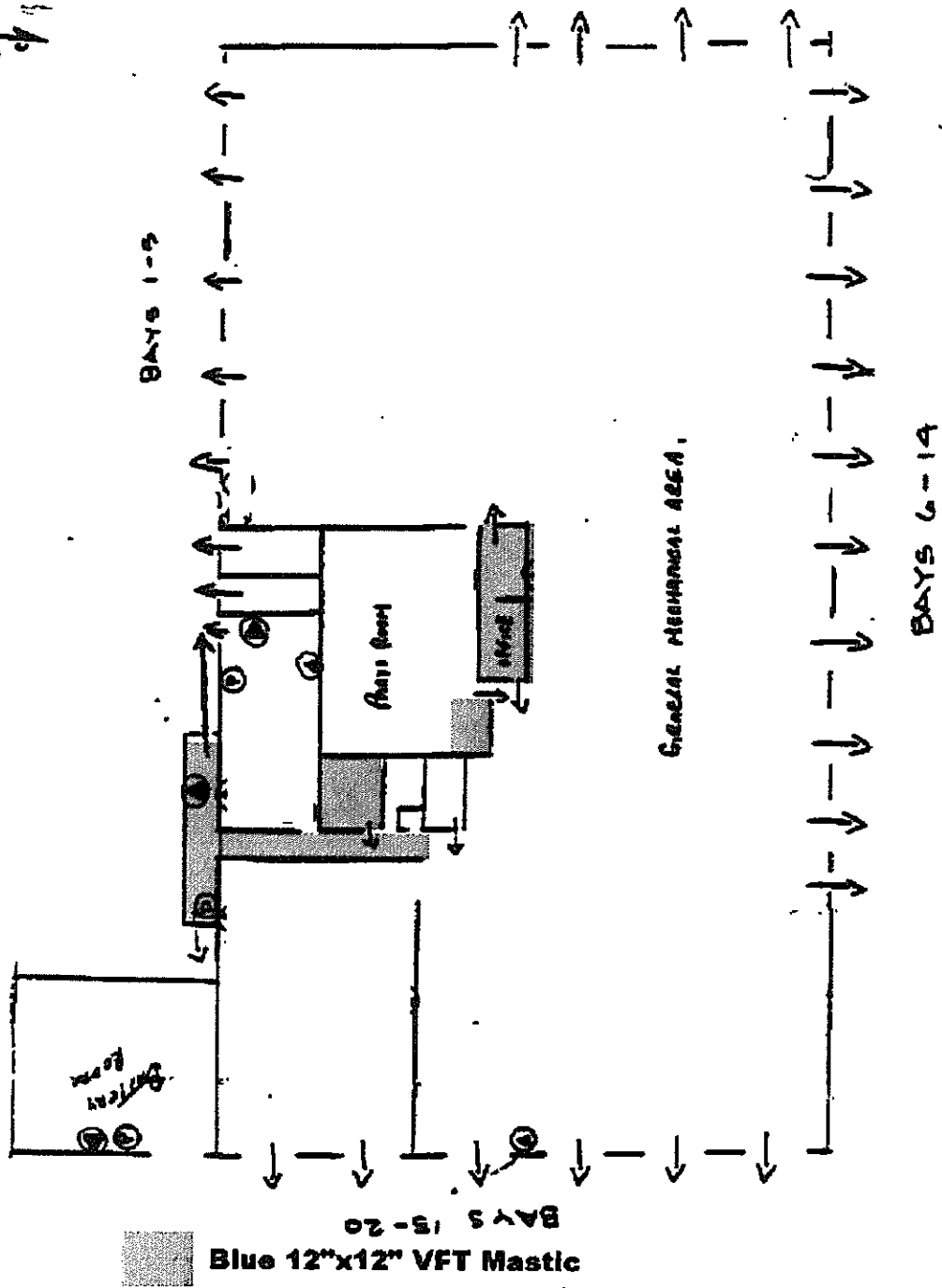


SAMPLE LOCATION MAP

CONNOR Environmental Services and Engineering Assessments
 A Division of MIRCON, Inc.
 Bare Hills Business Center
 1421 Clarkview Road
 Baltimore, MD 21209-2188

APPENDIX D
ACM LOCATION MAPS

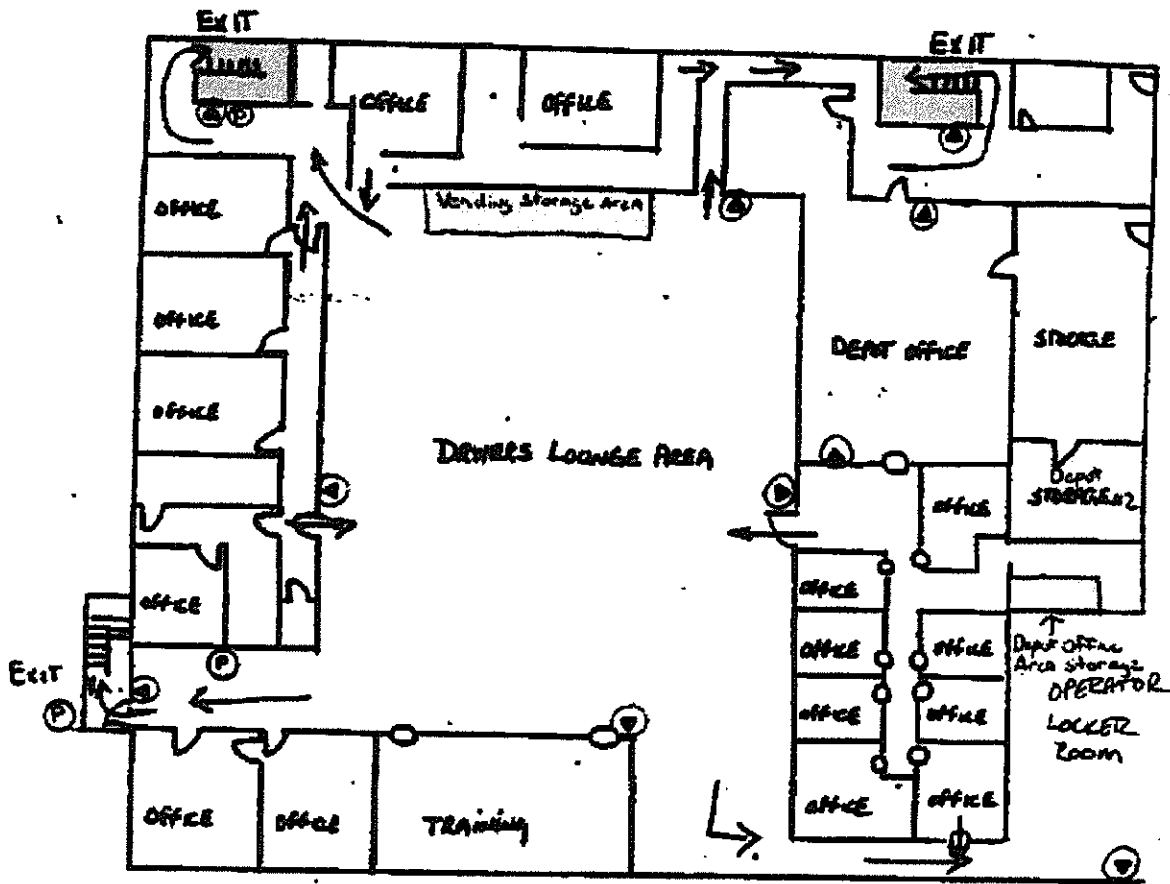
1/30



AREA #3 - LOWER LEVEL, BLADENSBURG DIVISION Building 3

ACM LOCATION MAP

CONNOR Environmental Services and Engineering Assessments
A Division of MIRCON, Inc.
Bare Hills Business Center
1421 Clarkview Road
Baltimore, MD 21209-2188

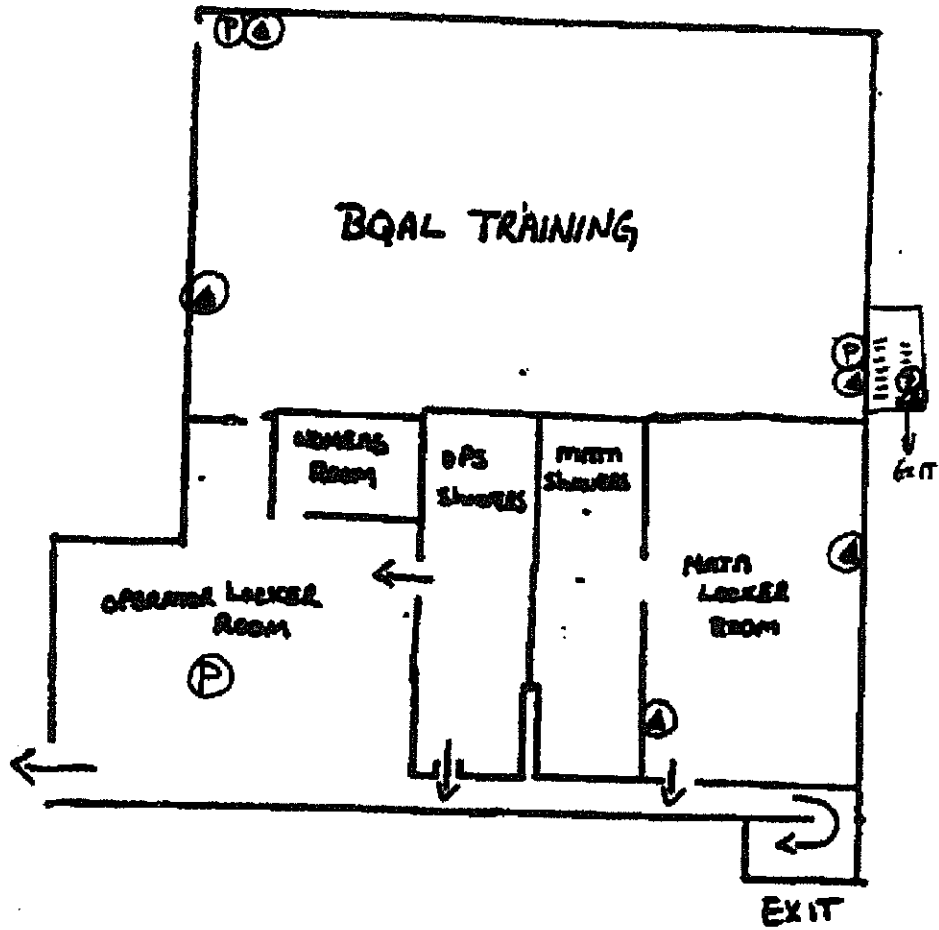


Multi 9"x9" VFT

White 9"x9" VFT

AREA #1 - UPPER LEVEL, BLADENBURG DIVISION Building 2

ACM LOCATION MAP

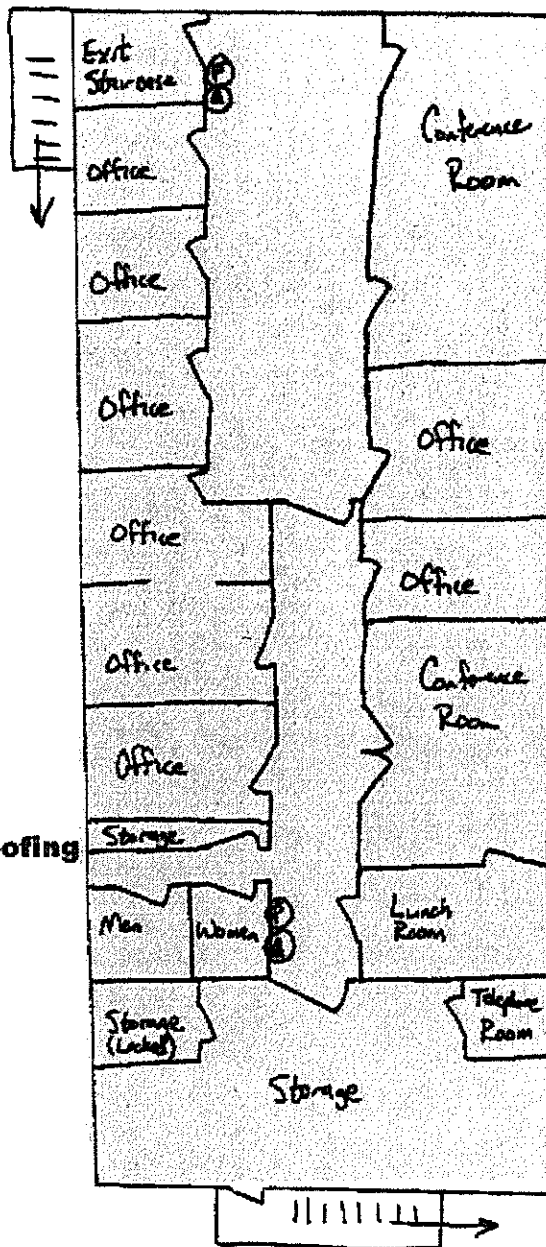


AREA #1 (CONT.) - UPPER LEVEL, BLADENSBURG DIVISION Building 2

ACM LOCATION MAP

CONNOR Environmental Services and Engineering Assessments
 A Division of MIRCON, Inc.
 Bare Hills Business Center
 1421 Clarkview Road
 Baltimore, MD 21209-2188

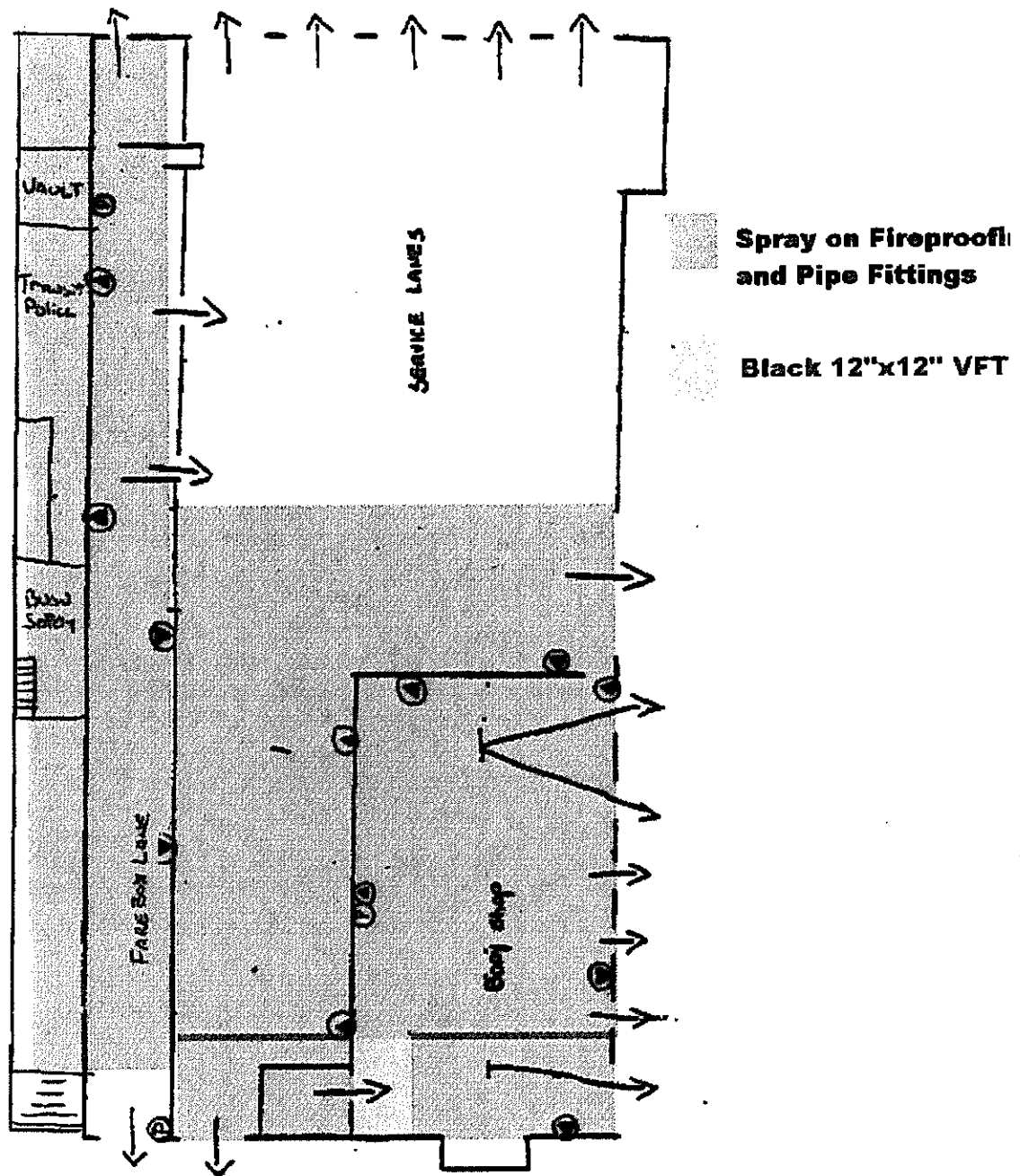
Spray-on Fireproofing



HVMT BASEMENT LEVEL Building 2

ACM LOCATION MAP

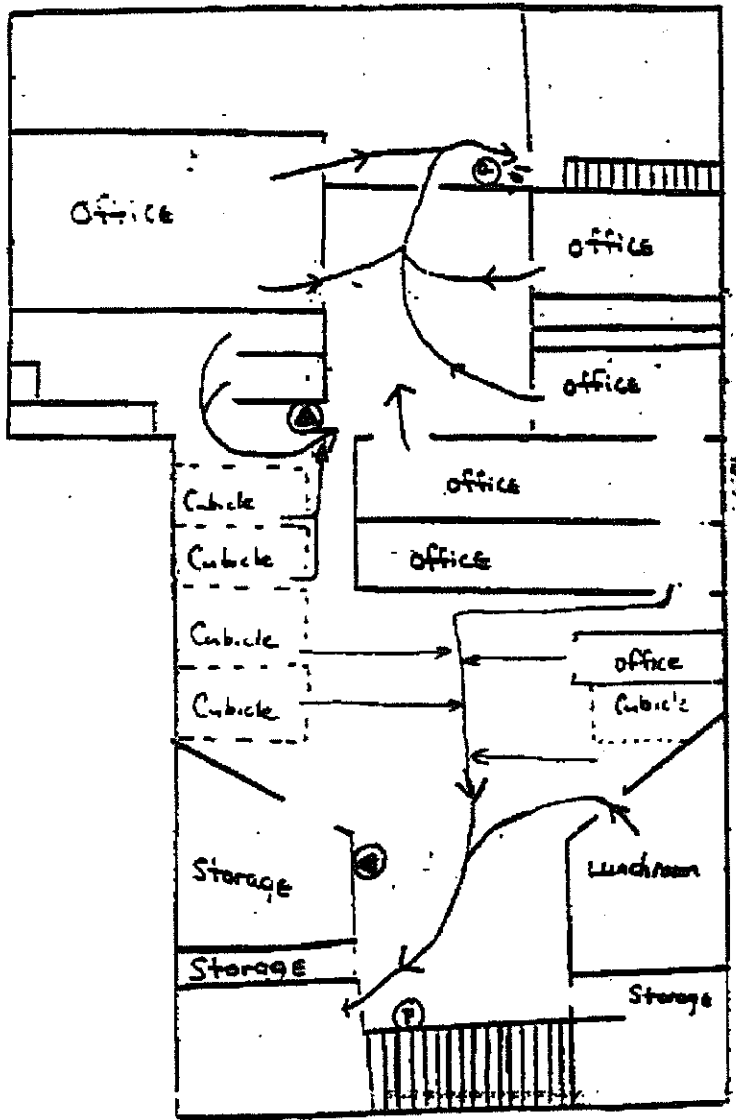
CONNOR Environmental Services and Engineering Assessments
A Division of MIRCON, Inc.
Bare Hills Business Center
1421 Clarkview Road
Baltimore, MD 21209-2188



AREA #2 - LOWER LEVEL, BLADENSBURG DIVISION Building 2

ACM LOCATION MAP

CONNOR Environmental Services and Engineering Assessments
 A Division of MIRCON, Inc.
 Bare Hills Business Center
 1421 Clarkview Road
 Baltimore, MD 21209-2188



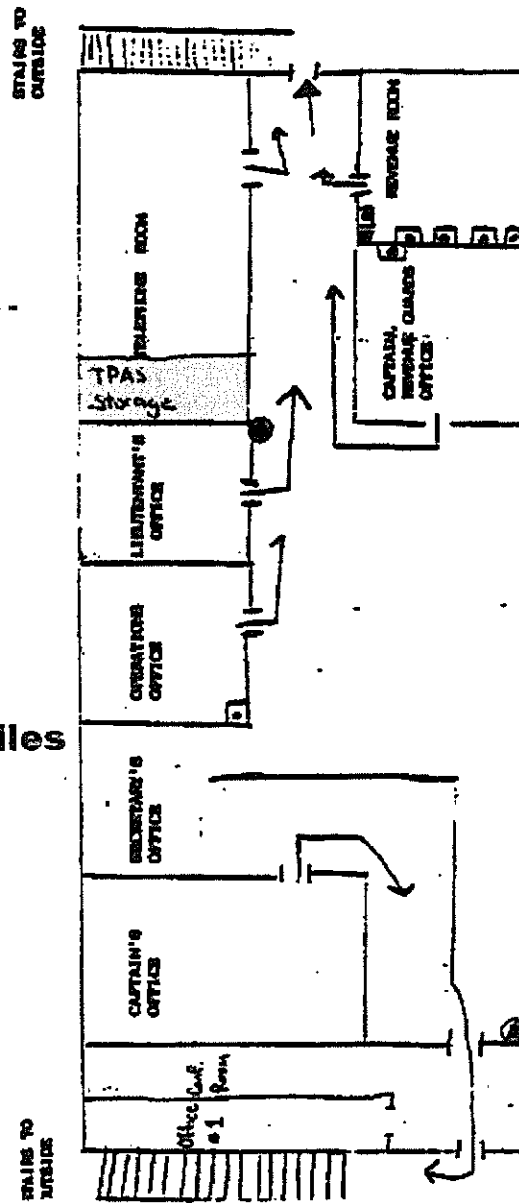
26th St.

BQAL Building 1

ACM LOCATION MAP

CONNOR Environmental Services and Engineering Assessments
 A Division of MIRCON, Inc.
 Bare Hills Business Center
 1421 Clarkview Road
 Baltimore, MD 21209-2188

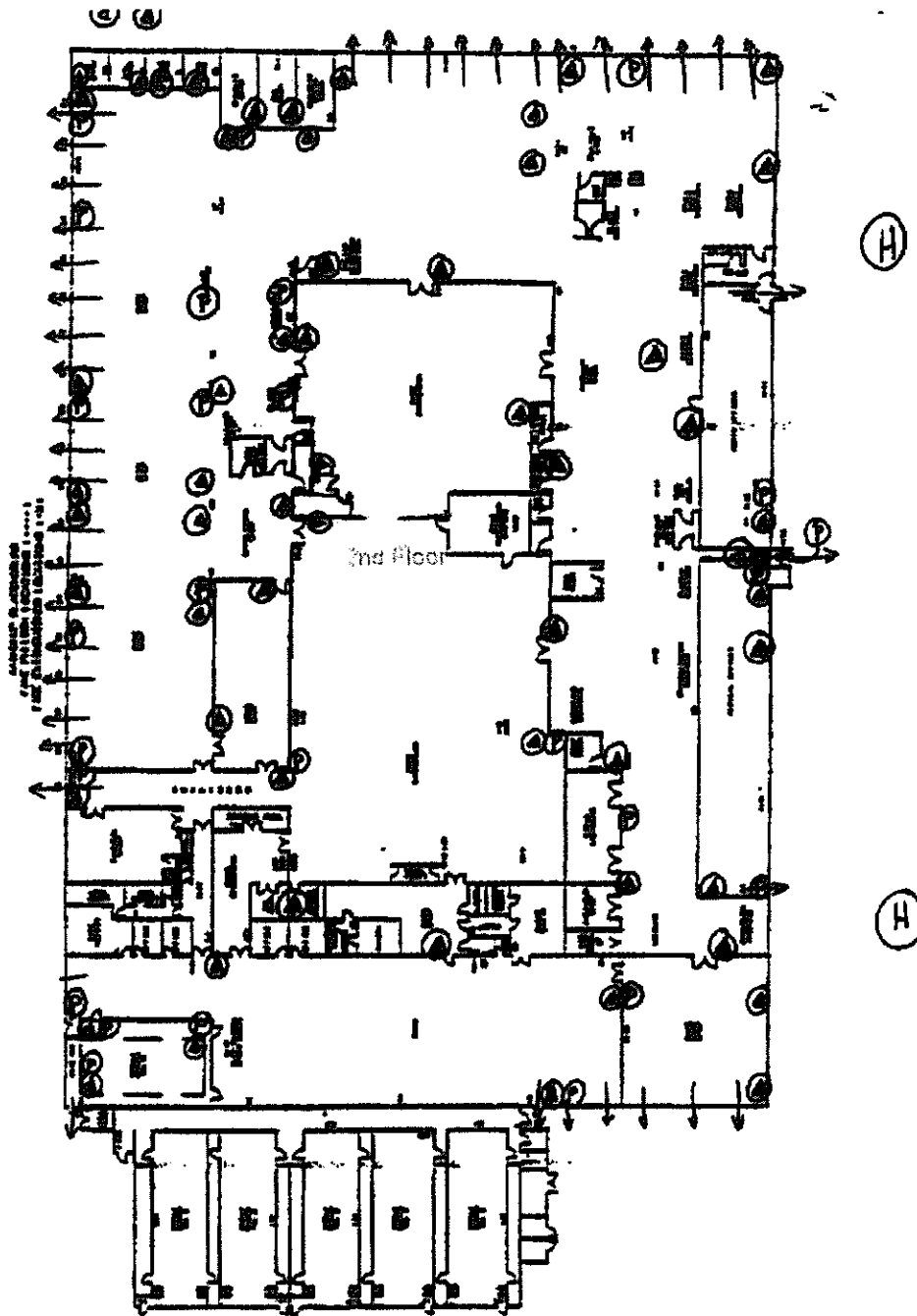
Tan 12"x12" Wall Tiles



TPAS OFFICES Building 1

ACM LOCATION MAP

CONNOR Environmental Services and Engineering Assessments
A Division of MIRCON, Inc.
Bare Hills Business Center
1421 Clarkview Road
Baltimore, MD 21209-2188



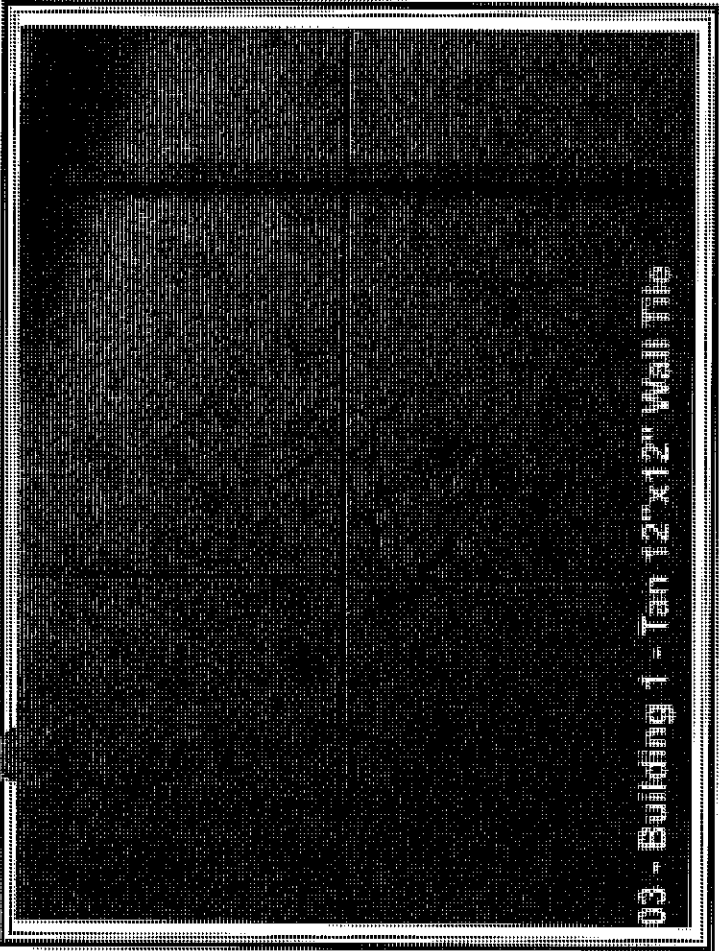
2nd Floor - asbestos containing Plaster and
Multi 9'x9' VFT Mats.

FIGURE 6-1

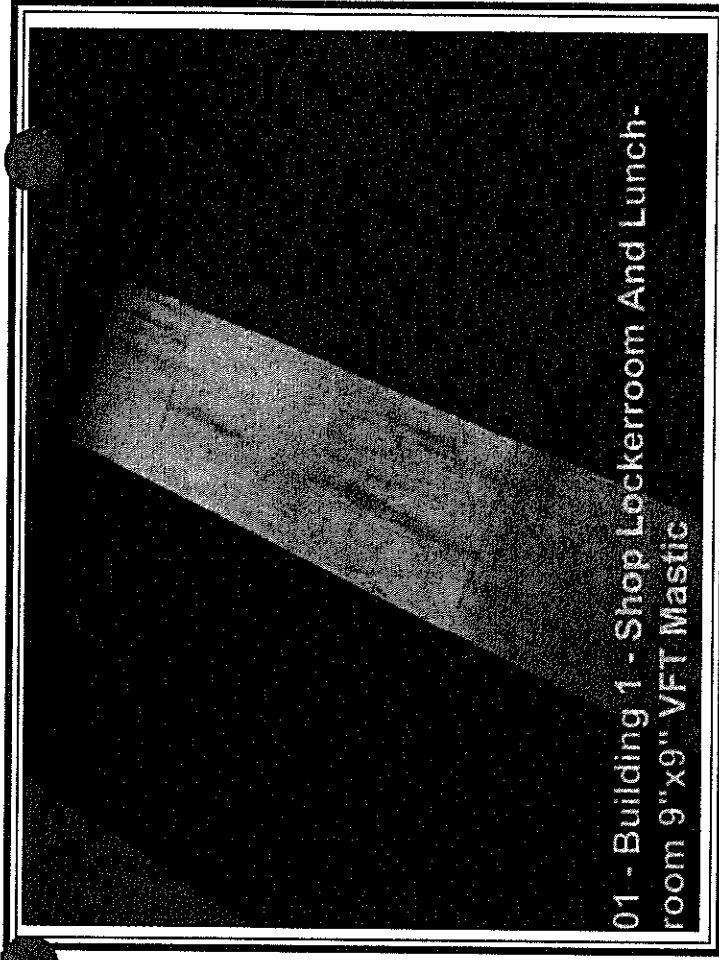
- MAIN SHOP, BLADENSBURG
Building 1

ACM LOCATION MAP

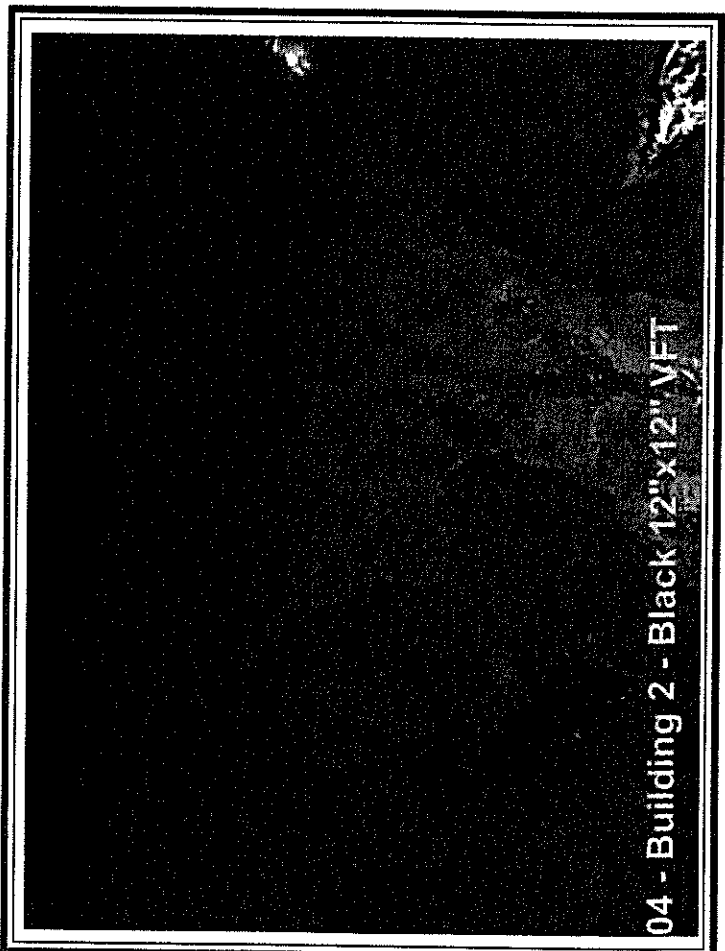
CONNOR Environmental Services and Engineering Assessments
 A Division of MIRCON, Inc.
 Bare Hills Business Center
 1421 Clarkview Road
 Baltimore, MD 21209-2188



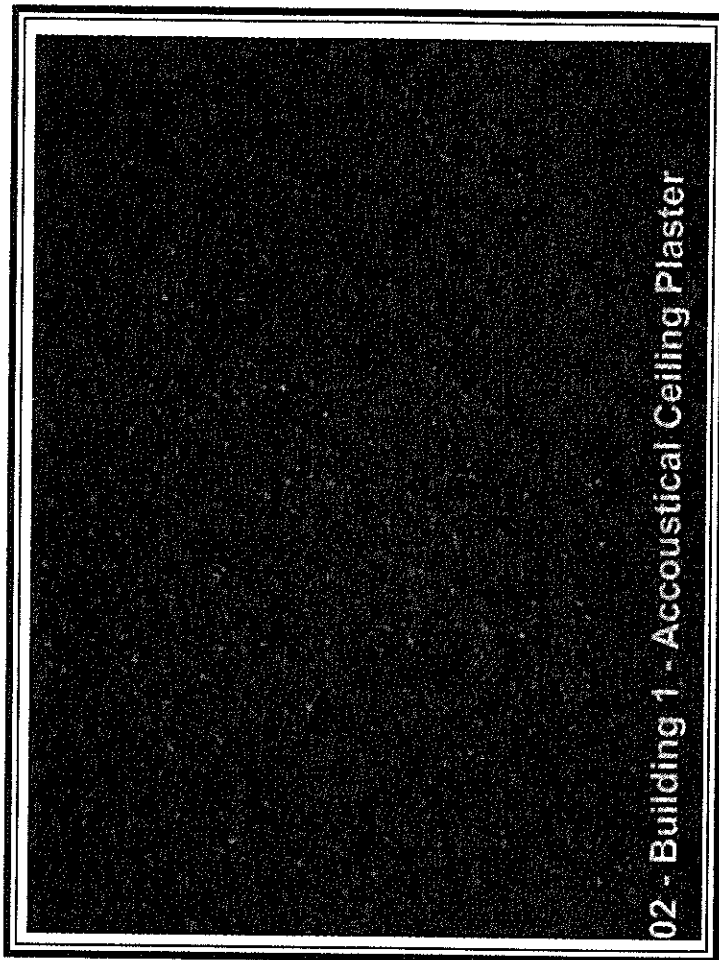
03 - Building 1 - Tan 12"x12" Wall Tile



01 - Building 1 - Shop Lockerroom And Lunchroom 9"x9" VFT Mastic



04 - Building 2 - Black 12"x12" VFT



02 - Building 1 - Accoustical Ceiling Plaster



05 - Building 2 - Orange, Light Green, And Dark Green 9"x9" VFT



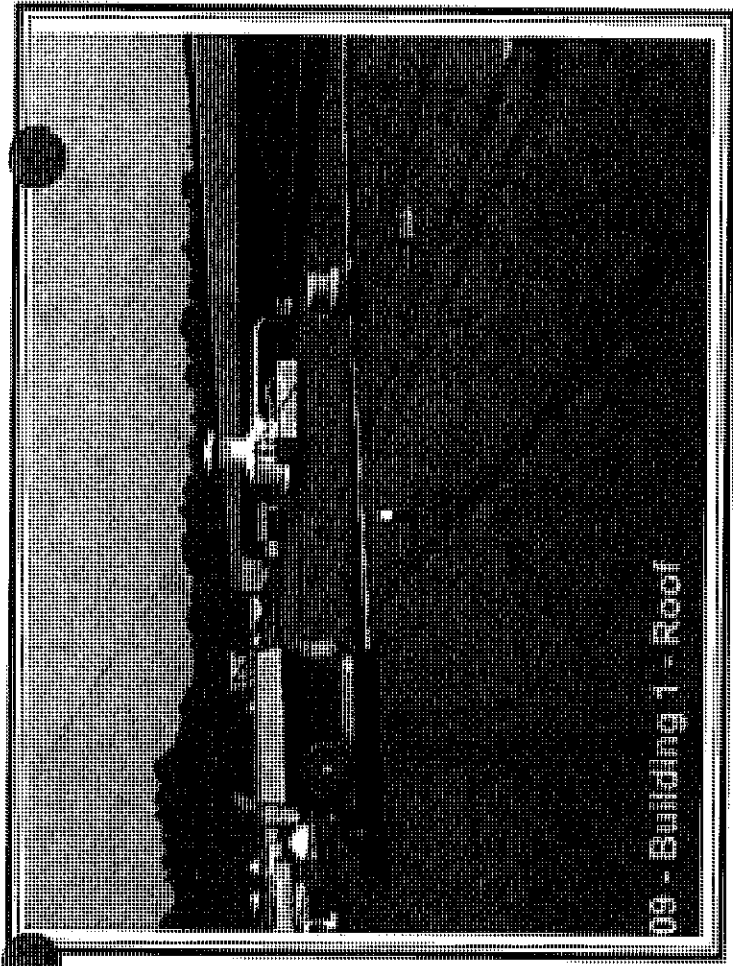
06 - Building 2 - White 9"x9" VFT



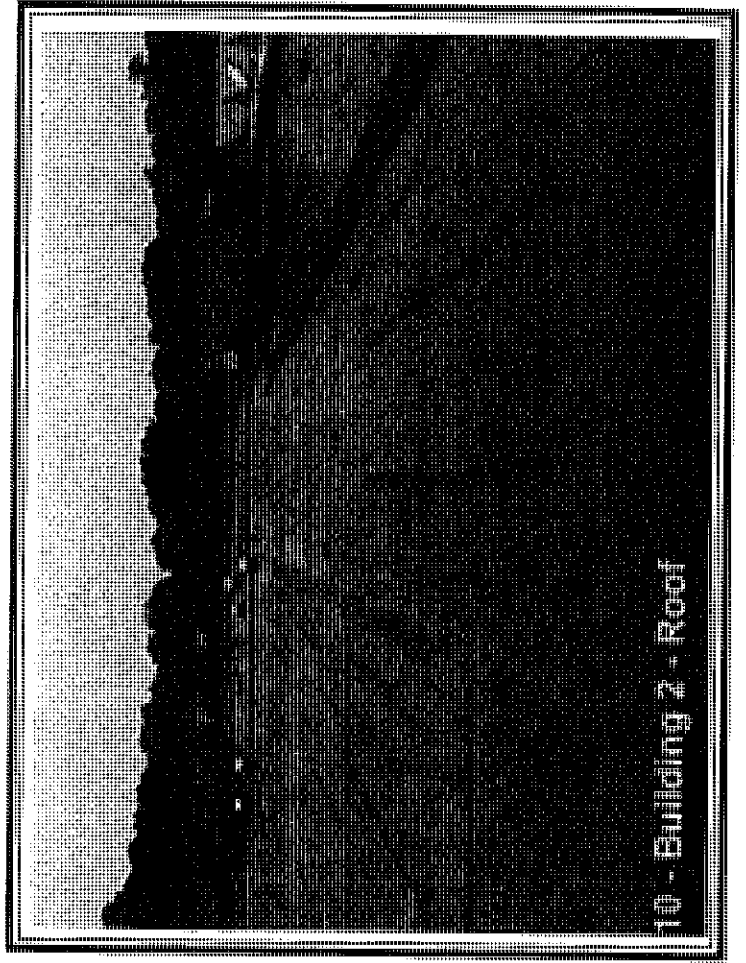
07 - Building 2 - Fiberglass Insulated Piping Fitting



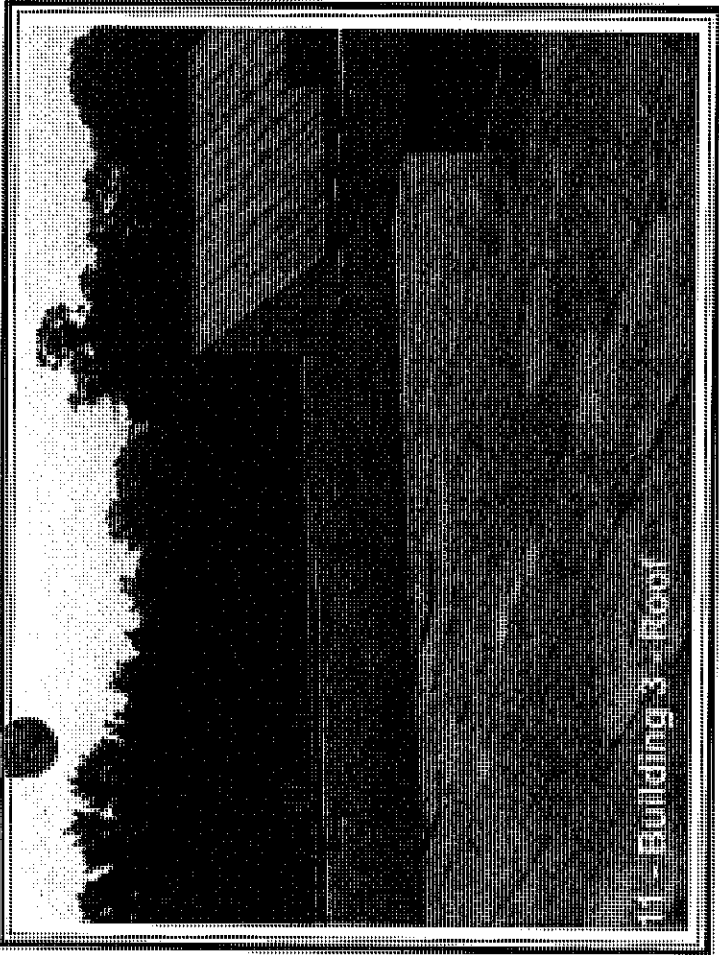
08 - Building 3 - Blue 12"x12" VFT Mastic



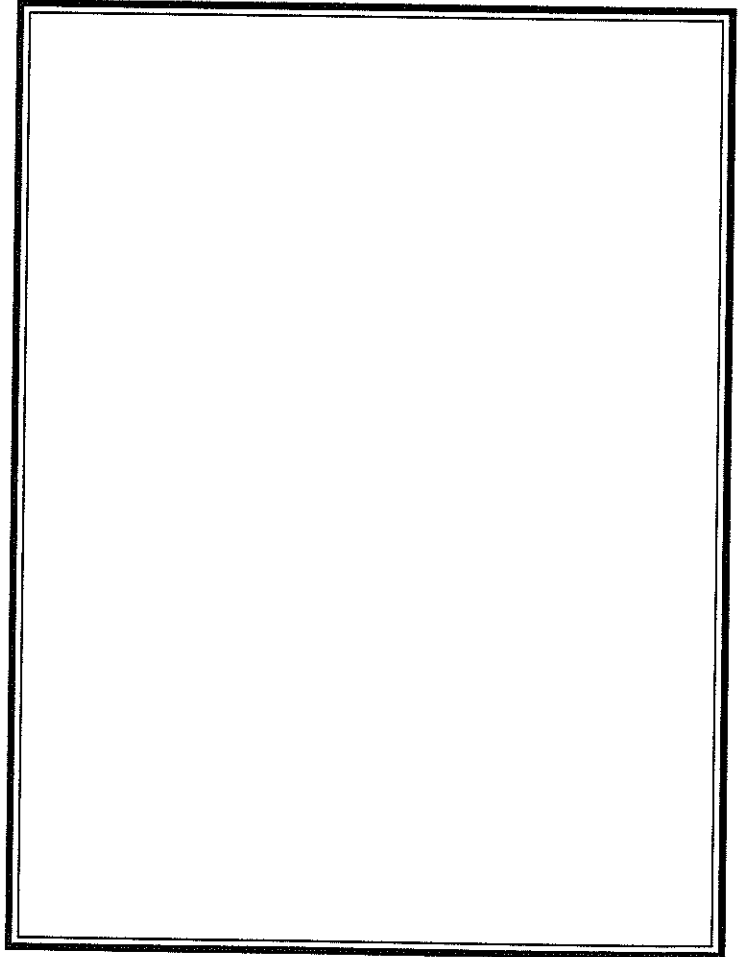
09 - Building 1 - Roof



10 - Building 2 - Roof



11 - Building 3 - Roof



LABORATORY DATA SHEETS

- for Bladensburg Main Shop
Boiler room

- These materials were removed
in 1998 prior to boiler
room renovations

B-1

Versar

5400

CHAIN OF CUSTODY RECORD

PROJECT NO.		PROJECT NAME				PARAMETERS				INDUSTRIAL HYGIENE SAMPLE	
3667.101		WMATA - BLADENSBURG FACILITY								Y N	
SAMPLERS: (Signature)					(Printed)					REMARKS	
Ward E. Nelson					DAVID A. NELSON						
FIELD SAMPLE NUMBER	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS					
BLA-001-B	1/30/98				BOILER ROOM BOILER CLOSEST TO STAIRS	1	✓	ASB-B	ASB98-100	BREECHING INSULATION	
BLA-002-B				①					101	↓	
BLA-003-B									102	↓	
BLA-004-B					BOILER ROOM				103	ELBOW INSULATION ON 8" LINE	
BLA-005-B									104	VALVE INSULATION	
BLA-006-B									105	ELBOW INSULATION ON 8" LINE	
BLA-007-B				②					106	3" O.D. WATER LINE INSULATION	
BLA-008-B									107	↓	
BLA-009-B									108	↓	
BLA-010-B					BOILER ROOM BOILER FARTHEST FROM STAIRS				109	BREECHING INSULATION	
BLA-011-B				③					110	↓	
BLA-012-B									111	↓	
Relinquished by: (Signature)		Date / Time		Received by: (Signature)		Relinquished by: (Signature)		Date / Time		Received by: (Signature)	
Ward E. Nelson		1/30/98 1805		DAVID A. NELSON							
(Printed)				(Printed)		(Printed)				(Printed)	
Ward E. Nelson		1/30/98 1805		DAVID A. NELSON							
(Printed)				(Printed)		(Printed)				(Printed)	
Relinquished by: (Signature)		Date / Time		Received for Laboratory by: (Signature)		Date / Time		Remarks			
Ward E. Nelson		1/30/98 1805		DAVID A. NELSON		9:30am		SEQUENTIAL ANALYSIS			
(Printed)				(Printed)							
Ward E. Nelson		1/30/98 1805		DAVID A. NELSON		9:30am		SEQUENTIAL ANALYSIS			
(Printed)				(Printed)							

③

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG FACILITY
 Project Number : 3667 .001. Batch # : 1
 Client : WMATA

Field Sample #: BLA-001-B Matrix : BULK

DATES: Received: 02/02/98 Collected: 01/30/98 Analyzed: 02/03/98

LOCATION :

BOILER ROOM - BOILER CLOSEST TO STAIRS
 BREECING INSULATION

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : GRAY

ASBESTOS CONTENT

Chrysotile	15-20	%
Amosite		%
Crocidolite		%
Tremolite		%
Actinolite		%
Anthophyllite		%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	1-5	%
[FIBROUS GLASS]	10-15	%
[SYNTH. POLYMER]		%
[]		%
[]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	55-60	%
--------------------	-------	---

TOTAL PERCENT ASBESTOS: 15-20 %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
 40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
- * If sample is not homogeneous, separate components are analyzed separately and single result is reported. If a composited result is "Trace or 1%" asbestos, but a single layer contains greater than 1% asbestos, a description of the layer and the result will be reported in the Comments section of this report.
- * Lab measurements and supporting documentation are available upon request.
- * This report relates only to items tested.
- * This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
- * This report shall not be reproduced except in full, without the written approval of the laboratory.
- * Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.

Marcie Dilks
 MARCIE DILKS
 NVLAP Signatory
 6850 VERSAR CENTER • P.O. BOX 1549 • SPRINGFIELD, VIRGINIA 22151 • TELEPHONE: (703) 750-3000

Asbestos Analyst:
 R. ANSTICE



NVLAP Accreditation # 101122

SAMPLE #:ASB98- 101

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG FACILITY
Project Number : 3667 .001.
Client : WMATA

Batch # : 1

Field Sample #: BLA-002-B

Matrix : BULK

DATES:

Received: 02/02/98

Collected: 01/30/98

Analyzed:

LOCATION :

BOILER ROOM - BOILER CLOSEST TO STAIRS
BREECHING INSULATION

GROSS DESCRIPTION : Friable [] Fibrous [] Homogenous []

COLOR/APPEARANCE :

ASBESTOS CONTENT

Table with 2 columns: Asbestos Type and Percentage (%). Rows include Chrysotile, Amosite, Crocidolite, Tremolite, Actinolite, and Anthophyllite.

NON-ASBESTOS/FIBROUS CONTENT

Table with 2 columns: Non-Asbestos/Fibrous Type and Percentage (%). Rows include Cellulose, Fibrous Glass, Synth. Polymer, and blank entries.

NON-ASBESTOS/NON-FIBROUS CONTENT

Table with 2 columns: Non-Asbestos/Non-Fibrous Type and Percentage (%). Row includes Bind. Material.

TOTAL PERCENT ASBESTOS: %

COMMENTS:

DO NOT ANALYZE PER CLIENT REQUEST

Method: Polarized Light Microscopy/Dispersion Staining (PLM)

40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
* If sample is not homogeneous, separate components are analyzed separately and single result is reported.
* Lab measurements and supporting documentation are available upon request.
* This report relates only to items tested.
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* This report shall not be reproduced except in full, without the written approval of the laboratory.
* Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM.

MARCIE DILKS
NVLAP Signatory

Asbestos Analyst:

6850 VERSAR CENTER • P.O. BOX 1549 • SPRINGFIELD, VIRGINIA 22151 • TELEPHONE: (703) 750-3000

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG FACILITY
 Project Number : 3667 .001. Batch # : 1
 Client : WMATA

Field Sample #: BLA-003-B Matrix : BULK

DATES:
 Received: 02/02/98 Collected: 01/30/98 Analyzed:
 LOCATION :

BOILER ROOM - BOILER CLOSEST TO STAIRS
 BREECHING INSULATION

GROSS DESCRIPTION : Friable [] Fibrous [] Homogenous []

COLOR/APPEARANCE :

ASBESTOS CONTENT	
Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT	
[CELLULOSE]	%
[FIBROUS GLASS]	%
[SYNTH. POLYMER]	%
[]	%
[]	%

NON-ASBESTOS/NON-FIBROUS CONTENT	
[BIND. MATERIAL]	%

TOTAL PERCENT ASBESTOS: %

COMMENTS:
 DO NOT ANALYZE PER CLIENT REQUEST

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
 40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
- * If sample is not homogeneous, separate components are analyzed separately and single result is reported. If a composited result is "Trace or 1%" asbestos, but a single layer contains greater than 1% asbestos, a description of the layer and the result will be reported in the Comments section of this report.
- * Lab measurements and supporting documentation are available upon request.
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- * This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
- * This report shall not be reproduced except in full, without the written approval of the laboratory.
- * Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.

Marcie Dilks
 MARCIE DILKS
 NVLAP Signatory

Asbestos Analyst:

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG FACILITY
 Project Number : 3667 .001. Batch # : 1
 Client : WMATA

Field Sample #: BLA-004-B Matrix : BULK

DATES: Received: 02/02/98 Collected: 01/30/98 Analyzed: 02/03/98
 LOCATION :

BOILER ROOM - BOILER CLOSEST TO STAIRS
 ELBOW INSULATION ON 8" VALVE

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : GRAY

ASBESTOS CONTENT

Chrysotile	5-7	%
Amosite		%
Crocidolite		%
Tremolite		%
Actinolite		%
Anthophyllite		%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	Trace	%
[FIBROUS GLASS]	35-40	%
[SYNTH. POLYMER]		%
[]		%
[]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	50-53	%
--------------------	-------	---

TOTAL PERCENT ASBESTOS: 5-7 %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
 40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
- * If sample is not homogeneous, separate components are analyzed separately and single result is reported. If a composited result is "Trace or 1%" asbestos, but a single layer contains greater than 1% asbestos, a description of the layer and the result will be reported in the Comments section of this report.
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Marcie Dilks
 MARCIE DILKS
 NVLAP Signatory

Asbestos Analyst:
 R. ANSTICE

6850 VERSAR CENTER • P.O. BOX 1549 • SPRINGFIELD, VIRGINIA 22151 • TELEPHONE: (703) 750-3000

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG FACILITY
Project Number : 3667 .001. Batch # : 1
Client : WMATA

Field Sample #: BLA-005-B Matrix : BULK

DATES: Received: 02/02/98 Collected: 01/30/98 Analyzed: 02/03/98

LOCATION :

BOILER ROOM - BOILER CLOSEST TO STAIRS
VALVE INSULATION

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : OFF-WHITE

ASBESTOS CONTENT

Chrysotile	5-10	%
Amosite		%
Crocidolite		%
Tremolite		%
Actinolite		%
Anthophyllite		%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	%
[FIBROUS GLASS] 35-40	%
[SYNTH. POLYMER]	%
[]	%
[]	%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL] 45-50	%
-----------------	---------	---

TOTAL PERCENT ASBESTOS: 5-10 %

COMMENTS: PREVIOUSLY NOT ANALYZED

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
- * If sample is not homogeneous, separate components are analyzed separately and single result is reported. If a composited result is "Trace or 1%" asbestos, but a single layer contains greater than 1% asbestos, a description of the layer and the result will be reported in the Comments section of this report.
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Marcie Dilks
MARCIE DILKS
NVLAP Signatory

Asbestos Analyst:
M. DILKS

6850 VERSAR CENTER • P.O. BOX 1549 • SPRINGFIELD, VIRGINIA 22151 • TELEPHONE: (703) 750-3000

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG FACILITY
 Project Number : 3667 .001. Batch # : 1
 Client : WMATA

Field Sample #: BLA-006-B Matrix : BULK

DATES: Received: 02/02/98 Collected: 01/30/98 Analyzed:
 LOCATION :

BOILER ROOM - BOILER CLOSEST TO STAIRS
 ELBOW INSULATON ON 8" LINE

GROSS DESCRIPTION : Friable [] Fibrous [] Homogenous []

COLOR/APPEARANCE :

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	%
[FIBROUS GLASS]	%
[SYNTH. POLYMER]	%
[]	%
[]	%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	%
--------------------	---

TOTAL PERCENT ASBESTOS: %

COMMENTS:

DO NOT ANALYZE PER CLIENT REQUEST

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
 40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
- * If sample is not homogeneous, separate components are analyzed separately and single result is reported. If a composited result is "Trace or 1%" asbestos, but a single layer contains greater than 1% asbestos, a description of the layer and the result will be reported in the Comments section of this report.
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- * This report relates only to items tested.
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- * Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.

Marcie Dilks
 MARCIE DILKS
 NVLAP Signatory

Asbestos Analyst:

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG FACILITY
Project Number : 3667 .001. Batch # : 1
Client : WMATA

Field Sample #: BLA-007-B Matrix : BULK

DATES:

Received: 02/02/98 Collected: 01/30/98 Analyzed: 02/03/98
LOCATION :

BOILER ROOM - BOILER CLOSEST TO STAIRS
3" O.D. WATER LINE INSULATION

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : OFF-WHITE

ASBESTOS CONTENT

Chrysotile	3-5	%
Amosite		%
Crocidolite		%
Tremolite		%
Actinolite		%
Anthophyllite		%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	3-5	%
[FIBROUS GLASS]	35-40	%
[SYNTH. POLYMER]		%
[BRUCITE]	Trace	%
[]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL] 45-50 %

TOTAL PERCENT ASBESTOS: 3-5 %

COMMENTS:
PREVIOUSLY NOT ANALYZED

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
- * If sample is not homogeneous, separate components are analyzed separately and single result is reported. If a composited result is "Trace or 1%" asbestos, but a single layer contains greater than 1% asbestos, a description of the layer and the result will be reported in the Comments section of this report.
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Marcie Dilks
MARCIE DILKS
NVLAP Signatory

Asbestos Analyst:
M. DILKS

6850 VERSAR CENTER • P.O. BOX 1549 • SPRINGFIELD, VIRGINIA 22151 • TELEPHONE: (703) 750-3000

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG FACILITY
 Project Number : 3667 .001. Batch # : 1
 Client : WMATA

Field Sample #: BIA-008-B Matrix : BULK

DATES: Received: 02/02/98 Collected: 01/30/98 Analyzed:

LOCATION :

BOILER ROOM - BOILER CLOSEST TO STAIRS
 3" O.D. WATER LINE INSULATION

GROSS DESCRIPTION : Friable [] Fibrous [] Homogenous []

COLOR/APPEARANCE :

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	%
[FIBROUS GLASS]	%
[SYNTH. POLYMER]	%
[]	%
[]	%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	%
--------------------	---

TOTAL PERCENT ASBESTOS: %

COMMENTS: DO NOT ANALYZE PER CLIENT REQUEST

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
 40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
- * If sample is not homogeneous, separate components are analyzed separately and single result is reported. If a composited result is "Trace or 1%" asbestos, but a single layer contains greater than 1% asbestos, a description of the layer and the result will be reported in the Comments section of this report.
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- * This report relates only to items tested.
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Marcie Dilks
 MARCIE DILKS
 NVLAP Signatory

Asbestos Analyst:

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG FACILITY
 Project Number : 3667 .001. Batch # : 1
 Client : WMATA

Field Sample #: BLA-009-B Matrix : BULK

DATES: Received: 02/02/98 Collected: 01/30/98 Analyzed:
 LOCATION :

BOILER ROOM - BOILER CLOSEST TO STAIRS
 3" O.D. WATER LINE INSULATION

GROSS DESCRIPTION : Friable [] Fibrous [] Homogenous []

COLOR/APPEARANCE :

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	%
[FIBROUS GLASS]	%
[SYNTH. POLYMER]	%
[]	%
[]	%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	%
--------------------	---

TOTAL PERCENT ASBESTOS: %

COMMENTS: DO NOT ANALYZE PER CLIENT REQUEST

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
 40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
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Margie Dilks
 MARGIE DILKS
 NVLAP Signatory

Asbestos Analyst:

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG FACILITY
Project Number : 3667 .001.
Client : WMATA

Batch # : 1

Field Sample #: BLA-010-B

Matrix : BULK

DATES:

Received: 02/02/98

Collected: 01/30/98

Analyzed: 02/03/98

LOCATION :

BOILER ROOM - BOILER FARTHEST FROM STAIRS
BREECHING INSULATION

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : LT.GRAY

ASBESTOS CONTENT

Chrysotile	5-7	%
Amosite	20-25	%
Crocidolite		%
Tremolite		%
Actinolite		%
Anthophyllite		%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	%
[FIBROUS GLASS]	%
[SYNTH. POLYMER]	%
[]	%
[]	%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	65-68	%
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TOTAL PERCENT ASBESTOS: 25-32 %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
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Marcie Dilks
MARCIE DILKS
NVLAP Signatory

6850 VERSAR CENTER • P.O. BOX 1549 • SPRINGFIELD, VIRGINIA 22151 • TELEPHONE: (703) 750-3000

Asbestos Analyst:
R. ANSTICE

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG FACILITY
 Project Number : 3667 .001. Batch # : 1
 Client : WMATA

Field Sample #: BLA-011-B Matrix : BULK

DATES: Received: 02/02/98 Collected: 01/30/98 Analyzed:

LOCATION :

BOILER ROOM - BOILER FARTHEST FROM STAIRS
 BREECHING INSULATION

GROSS DESCRIPTION : Friable [] Fibrous [] Homogenous []

COLOR/APPEARANCE :

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	%
[FIBROUS GLASS]	%
[SYNTH. POLYMER]	%
[]	%
[]	%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	%
--------------------	---

TOTAL PERCENT ASBESTOS: %

COMMENTS:
 DO NOT ANALYZE PER CLIENT REQUEST

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
 40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
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Margie Dilks
 MARGIE DILKS
 NVLAP Signatory

Asbestos Analyst:



NVLAP Accreditation # 101122

SAMPLE #:ASB98- 111

LABORATORY REPORT - BULK ASBESTOS ANALYS

Site : BLADENSBURG FACILITY
Project Number : 3667 .001.
Client : WMATA

Batch # : 1

Field Sample #: BLA-012-B

Matrix : BULK

DATES:

Received: 02/02/98

Collected: 01/30/98

Analyzed:

LOCATION :

BOILER ROOM - BOILER FARTHEST FROM STAIRS
BREECHING INSULATION

GROSS DESCRIPTION : Friable [] Fibrous [] Homogenous []

COLOR/APPEARANCE :

ASBESTOS CONTENT

Table with 2 columns: Asbestos Type, %

NON-ASBESTOS/FIBROUS CONTENT

Table with 2 columns: Non-Asbestos/Fibrous Type, %

NON-ASBESTOS/NON-FIBROUS CONTENT

Table with 2 columns: Non-Asbestos/Non-Fibrous Type, %

TOTAL PERCENT ASBESTOS: %

COMMENTS:

DO NOT ANALYZE PER CLIENT REQUEST

Method: Polarized Light Microscopy/Dispersion Staining (PLM)

40 CFR Part 763 App. A to Subpart F

- List of notes and conditions regarding the PLM method and report usage.

MARCIE DILKS
NVLAP Signatory

Asbestos Analyst:

6850 VERSAR CENTER • P.O. BOX 1549 • SPRINGFIELD, VIRGINIA 22151 • TELEPHONE: (703) 750-3000



CHAIN OF CUSTODY RECORD

PROJECT NO.		PROJECT NAME				PARAMETERS				INDUSTRIAL HYGIENE SAMPLE	
3667.101		LUMATA - BLADENS BURG FACILITY								Y N	
SAMPLERS: (Signature)				(Printed)				REMARKS			
David Nelson				DAVID A. NELSON							
FIELD SAMPLE NUMBER	DATE	TIME	COMP.	GRAB	STATION LOCATION	NO. OF CONTAINERS					
BLA-013-B	1/30/99				BOILER ROOM - BOILER CLOSEST TO STAIRS	1	ASB-B	ASB98-112	ELBOW INSULATION AT BOTTOM OF BOILER		
BLA-014-B					BOILER ROOM			113	HOT WATER HOLDING STORAGE TANK		
BLA-015-B								114			
BLA-016-B								115			
BLA-017-B					UV-18 IN MAINTENANCE SHOP			116	4" O.D. ELBOW INSULATION		
BLA-018-B								117			
BLA-019-B								118			
BLA-020-B								119	FLEX CONNECTOR		
BLA-021-B								120			
BLA-022-B					UV-2 IN MAINTENANCE SHOP			121	4" O.D. ELBOW INSULATION		
BLA-023-B								122			
BLA-024-B								123			
Relinquished by: (Signature)		Date / Time		Received by: (Signature)		Relinquished by: (Signature)		Date / Time		Received by: (Signature)	
David Nelson		1/30/99 1910		David Nelson							
(Printed)				(Printed)		(Printed)				(Printed)	
DAVID A. NELSON		1/30/99 1910									
Relinquished by: (Signature)		Date / Time		Received for Laboratory by: (Signature)		Date / Time		Remarks			
				[Signature]		9:30 am		SEQUENTIAL ANALYSIS			
(Printed)				(Printed)							
				FEB-2-1999							

PAGE 11/23 ID: 7036426809 FEB-03-99 14:07 FROM: VERSAR ENV. DIV.

(6)



SAMPLE #:ASB98- 112

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG FACILITY
 Project Number : 3667 .001. Batch # : 2
 Client : WMATA

 Field Sample #: BLA-013-B Matrix : BULK

DATES:
 Received: 02/02/98 Collected: 01/30/98 Analyzed: 02/03/98
 LOCATION :

BOILER ROOM - BOILER CLOSEST TO STAIRS
 ELBOW INSULATION AT BOTTOM OF BOILER

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]
 COLOR/APPEARANCE : GRAY

ASBESTOS CONTENT

Chrysotile	1-5	%
Amosite		%
Crocidolite		%
Tremolite		%
Actinolite		%
Anthophyllite		%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]		%
[FIBROUS GLASS]	35-40	%
[SYNTH. POLYMER]		%
[]		%
[]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	50-55	%
-------------------	-------	---

TOTAL PERCENT ASBESTOS: 1-5 %

COMMENTS: _____

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
 40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
- * If sample is not homogeneous, separate components are analyzed separately and single result is reported. If a composited result is "Trace or 1%" asbestos, but a single layer contains greater than 1% asbestos, a description of the layer and the result will be reported in the Comments section of this report.
- * Lab measurements and supporting documentation are available upon request.
- * This report relates only to items tested.
- * This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
- * This report shall not be reproduced except in full, without the written approval of the laboratory.
- * Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.

Marcie Dilks
 MARCIE DILKS
 NVLAP Signatory

Asbestos Analyst:
 R. ANSTICE



SAMPLE #: ASB98- 113

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG FACILITY
 Project Number : 3667 .001. Batch # : 2
 Client : WMATA

 Field Sample #: BLA-014-B Matrix : BULK

DATES: Received: 02/02/98 Collected: 01/30/98 Analyzed: 02/03/98
 LOCATION :

BOILER ROOM
 HOT WATER HOLDING STORAGE TANK

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : LT. TAN

ASBESTOS CONTENT

Chrysotile	5-10	%
Amosite	15-20	%
Crocidolite		%
Tremolite		%
Actinolite		%
Anthophyllite		%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]		%
[FIBROUS GLASS]	10-15	%
[SYNTH. POLYMER]		%
[]		%
[]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	50-55	%
-------------------	-------	---

TOTAL PERCENT ASBESTOS: 20-30 %

COMMENTS: _____

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
 40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
- * If sample is not homogeneous, separate components are analyzed separately and single result is reported. If a composited result is "Trace or 1%" asbestos, but a single layer contains greater than 1% asbestos, a description of the layer and the result will be reported in the Comments section of this report.
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- * This report relates only to items tested.
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- * This report shall not be reproduced except in full, without the written approval of the laboratory.
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Marcy Dilks
 MARCYE DILKS
 NVLAP Signatory

Asbestos Analyst:
 R. ANSTICE



NVLAP Accreditation # 101122

SAMPLE #:ASB98- 114

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG FACILITY
 Project Number : 3667 .001. Batch # : 2
 Client : WMATA

Field Sample #: BLA-015-B Matrix : BULK

DATES: Received: 02/02/98 Collected: 01/30/98 Analyzed:
 LOCATION :

BOILER ROOM
 HOT WATER HOLDING STORAGE TANK

GROSS DESCRIPTION : Friable [] Fibrous [] Homogenous []

COLOR/APPEARANCE :

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	%
[FIBROUS GLASS]	%
[SYNTH. POLYMER]	%
[]	%
[]	%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	%
--------------------	---

TOTAL PERCENT ASBESTOS: %

COMMENTS:
 DO NOT ANALYZE PER CLIENT REQUEST

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
 40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
- * If sample is not homogeneous, separate components are analyzed separately and single result is reported. If a composited result is "Trace or 1%" asbestos, but a single layer contains greater than 1% asbestos, a description of the layer and the result will be reported in the Comments section of this report.
- * Lab measurements and supporting documentation are available upon request.
- * This report relates only to items tested.
- * This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
- * This report shall not be reproduced except in full, without the written approval of the laboratory.
- * Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.

MARCIE DILKS
 NVLAP Signatory

Asbestos Analyst:



NVLAP Accreditation # 101122

SAMPLE #:ASB98- 115

LABORATORY REPORT - BULK ASBESTOS ANALYS

Site : BLADENSBURG FACILITY
Project Number : 3667 .001.
Client : WMATA

Batch # : 2

Field Sample #: BLA-016-B

Matrix : BULK

DATES:

Received: 02/02/98 Collected: 01/30/98 Analyzed:
LOCATION :

BOILER ROOM
HOT WATER HOLDING STORAGE TANK

GROSS DESCRIPTION : Friable [] Fibrous [] Homogenous []

COLOR/APPEARANCE :

ASBESTOS CONTENT

Table with 2 columns: Asbestos Type, %

NON-ASBESTOS/FIBROUS CONTENT

Table with 2 columns: Non-Asbestos/Fibrous Type, %

NON-ASBESTOS/NON-FIBROUS CONTENT

Table with 2 columns: Non-Asbestos/Non-Fibrous Type, %

TOTAL PERCENT ASBESTOS: %

COMMENTS:
DO NOT ANALYZE PER CLIENT REQUEST

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
* If sample is not homogeneous, separate components are analyzed separately and single result is reported.
* Lab measurements and supporting documentation are available upon request.
* This report relates only to items tested.
* This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
* This report shall not be reproduced except in full, without the written approval of the laboratory.
* Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM.

MARCIE DILKS
NVLAP Signatory

Asbestos Analyst:



NVLAP Accreditation # 101122

SAMPLE #:ASB98- 116

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG FACILITY
 Project Number : 3667 .001.
 Client : WMATA

Batch # : 2

 Field Sample #: BLA-017-B

Matrix : BULK

DATES:

Received: 02/02/98

Collected: 01/30/98

Analyzed: 02/03/98

LOCATION :

UV-18 IN MAINTENANCE SHOP
 4" O.D. ELBOW INSULATION

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : TANNISH GRAY

ASBESTOS CONTENT

Chrysotile	10-15	%
Amosite		%
Crocidolite		%
Tremolite		%
Actinolite		%
Anthophyllite		%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]		%
[FIBROUS GLASS]	30-35	%
[SYNTH. POLYMER]		%
[]		%
[]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	45-50	%
-------------------	-------	---

TOTAL PERCENT ASBESTOS: 10-15 %

COMMENTS: _____

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
 40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
- * If sample is not homogeneous, separate components are analyzed separately and single result is reported. If a composited result is "Trace or 1%" asbestos, but a single layer contains greater than 1% asbestos, a description of the layer and the result will be reported in the Comments section of this report.
- * Lab measurements and supporting documentation are available upon request.
- * This report relates only to items tested.
- * This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
- * This report shall not be reproduced except in full, without the written approval of the laboratory.
- * Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.

Marcie Dilks
 MARCIE DILKS
 NVLAP Signatory

Asbestos Analyst:
 R. ANSTICE



SAMPLE #:ASB98- 117

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG FACILITY
 Project Number : 3667 .001. Batch # : 2
 Client : WMATA

 Field Sample #: BLA-018-B Matrix : BULK

DATES:
 Received: 02/02/98 Collected: 01/30/98 Analyzed:
 LOCATION :

UV-18 IN MAINTENANCE SHOP
 4" O.D. ELBOW INSULATION

GROSS DESCRIPTION : Friable [] Fibrous [] Homogenous []

COLOR/APPEARANCE :

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	%
[FIBROUS GLASS]	%
[SYNTH. POLYMER]	%
[]	%
[]	%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	%
--------------------	---

TOTAL PERCENT ASBESTOS: %

COMMENTS:
 DO NOT ANALYZE PER CLIENT REQUEST

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
 40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
- * If sample is not homogeneous, separate components are analyzed separately and single result is reported. If a composited result is "Trace or 1%" asbestos, but a single layer contains greater than 1% asbestos, a description of the layer and the result will be reported in the Comments section of this report.
- * Lab measurements and supporting documentation are available upon request.
- * This report relates only to items tested.
- * This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
- * This report shall not be reproduced except in full, without the written approval of the laboratory.
- * Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.

Marcie Dilks
 MARCIE DILKS
 NVLAP Signatory

Asbestos Analyst:



SAMPLE #:ASB98- 118

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG FACILITY
 Project Number : 3667 .001. Batch # : 2
 Client : WMATA

 Field Sample #: BLA-019-B Matrix : BULK

DATES:
 Received: 02/02/98 Collected: 01/30/98 Analyzed:
 LOCATION :

UV-18 IN MAINTENANCE SHOP
 4" O.D. ELBOW INSULATION

GROSS DESCRIPTION : Friable [] Fibrous [] Homogenous []

COLOR/APPEARANCE :

ASBESTOS CONTENT	
Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT	
[CELLULOSE]	%
[FIBROUS GLASS]	%
[SYNTH. POLYMER]	%
[]	%
[]	%

NON-ASBESTOS/NON-FIBROUS CONTENT	
[BIND. MATERIAL]	%

TOTAL PERCENT ASBESTOS: %

COMMENTS:
 DO NOT ANALYZE PER CLIENT REQUEST

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
 40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
- * If sample is not homogeneous, separate components are analyzed separately and single result is reported. If a composited result is "Trace or 1%" asbestos, but a single layer contains greater than 1% asbestos, a description of the layer and the result will be reported in the Comments section of this report.
- * Lab measurements and supporting documentation are available upon request.
- * This report relates only to items tested.
- * This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
- * This report shall not be reproduced except in full, without the written approval of the laboratory.
- * Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.

Marcie Dilks
 MARCIE DILKS
 NVLAP Signatory

Asbestos Analyst:



SAMPLE #:ASB98- 119

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG FACILITY
 Project Number : 3667 .001.
 Client : WMATA

Batch # : 2

 Field Sample #: BLA-020-B

 Matrix : BULK

DATES:

Received: 02/02/98

Collected: 01/30/98

Analyzed: 02/03/98

LOCATION :

UV-18 IN MAINTENANCE SHOP
 FLEX CONNECTOR

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : BROWN

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	70-75	%
[FIBROUS GLASS]		%
[SYNTH. POLYMER]		%
[]		%
[]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	20-25	%
--------------------	-------	---

TOTAL PERCENT ASBESTOS: N.D. %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
 40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
- * If sample is not homogeneous, separate components are analyzed separately and single result is reported. If a composited result is "Trace or 1%" asbestos, but a single layer contains greater than 1% asbestos, a description of the layer and the result will be reported in the Comments section of this report.
- * Lab measurements and supporting documentation are available upon request.
- * This report relates only to items tested.
- * This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
- * This report shall not be reproduced except in full, without the written approval of the laboratory.
- * Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.

Marcie Dilks
 MARCIE DILKS
 NVLAP Signatory

Asbestos Analyst:
 R. ANSTICE



SAMPLE #:ASB98- 120

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG FACILITY
Project Number : 3667 .001.
Client : WMATA

Batch # : 2

Field Sample #: BLA-021-B

Matrix : BULK

DATES:

Received: 02/02/98

Collected: 01/30/98

Analyzed: 02/03/98

LOCATION :

UV-18 IN MAINTENANCE SHOP
FLEX CONNECTOR

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : BROWN

ASBESTOS CONTENT

Table with 2 columns: Asbestos Type and Percentage (%). Rows include Chrysotile, Amosite, Crocidolite, Tremolite, Actinolite, and Anthophyllite.

NON-ASBESTOS/FIBROUS CONTENT

Table with 3 columns: Component, Range, and Percentage (%). Rows include CELLULOSE (70-75%), FIBROUS GLASS, SYNTH. POLYMER, and empty rows.

NON-ASBESTOS/NON-FIBROUS CONTENT

Table with 2 columns: Component and Percentage (%). Row includes BIND. MATERIAL (20-25%).

TOTAL PERCENT ASBESTOS: N.D. %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
* If sample is not homogeneous, separate components are analyzed separately and single result is reported.
* Lab measurements and supporting documentation are available upon request.
* This report relates only to items tested.
* This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
* This report shall not be reproduced except in full, without the written approval of the laboratory.
* Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM.

MARCIE DILKS
NVLAP Signatory

Asbestos Analyst:
R. ANSTICE



SAMPLE #:ASB98- 121

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG FACILITY
 Project Number : 3667 .001. Batch # : 2
 Client : WMATA

 Field Sample #: BLA-022-B Matrix : BULK

DATES:
 Received: 02/02/98 Collected: 01/30/98 Analyzed: 02/03/98
 LOCATION :

UV-2 IN MAINTENANCE SHOP
 4" O.D. ELBOW INSULATION

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : TANNISH GRAY

ASBESTOS CONTENT

Chrysotile	10-15	%
Amosite		%
Crocidolite		%
Tremolite		%
Actinolite		%
Anthophyllite		%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	1-5	%
[FIBROUS GLASS]	35-40	%
[SYNTH. POLYMER]		%
[]		%
[]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	35-40	%
--------------------	-------	---

TOTAL PERCENT ASBESTOS: 10-15 %

COMMENTS: _____

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
 40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
- * If sample is not homogeneous, separate components are analyzed separately and single result is reported. If a composited result is "Trace or 1%" asbestos, but a single layer contains greater than 1% asbestos, a description of the layer and the result will be reported in the Comments section of this report.
- * Lab measurements and supporting documentation are available upon request.
- * This report relates only to items tested.
- * This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
- * This report shall not be reproduced except in full, without the written approval of the laboratory.
- * Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.

Marcie Dilks
 MARCIE DILKS
 NVLAP Signatory

Asbestos Analyst:
 R. ANSTICE



NVLAP Accreditation # 101122

SAMPLE #:ASB98- 122

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG FACILITY
 Project Number : 3667 .001.
 Client : WMATA

Batch # : 2

Field Sample #: BLA-023-B

Matrix : BULK

DATES:

Received: 02/02/98 Collected: 01/30/98 Analyzed:
 LOCATION :

UV-2 IN MAINTENANCE SHOP
 4" O.D. ELBOW INSULATION

GROSS DESCRIPTION : Friable [] Fibrous [] Homogenous []

COLOR/APPEARANCE :

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	%
[FIBROUS GLASS]	%
[SYNTH. POLYMER]	%
[]	%
[]	%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	%
-------------------	---

TOTAL PERCENT ASBESTOS: %

COMMENTS:
 DO NOT ANALYZE PER CLIENT REQUEST

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
 40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
- * If sample is not homogeneous, separate components are analyzed separately and single result is reported. If a composited result is "Trace or 1%" asbestos, but a single layer contains greater than 1% asbestos, a description of the layer and the result will be reported in the Comments section of this report.
- * Lab measurements and supporting documentation are available upon request.
- * This report relates only to items tested.
- * This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
- * This report shall not be reproduced except in full, without the written approval of the laboratory.
- * Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.

Marcie Dilks
 MARCIE DILKS
 NVLAP Signatory

Asbestos Analyst:



NVLAP Accreditation # 101122

SAMPLE #:ASB98- 123

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG FACILITY
Project Number : 3667 .001.
Client : WMATA

Batch # : 2

Field Sample #: BLA-024-B

Matrix : BULK

DATES:

Received: 02/02/98 Collected: 01/30/98 Analyzed:
LOCATION :

UV-2 IN MAINTENANCE SHOP
4" O.D. ELBOW INSULATION

GROSS DESCRIPTION : Friable [] Fibrous [] Homogenous []

COLOR/APPEARANCE :

ASBESTOS CONTENT

Table with 2 columns: Asbestos Type and Percentage (%). Rows include Chrysotile, Amosite, Crocidolite, Tremolite, Actinolite, and Anthophyllite.

NON-ASBESTOS/FIBROUS CONTENT

Table with 3 columns: Material, Percentage (%), and another Percentage (%). Rows include CELLULOSE, FIBROUS GLASS, SYNTH. POLYMER, and empty rows.

NON-ASBESTOS/NON-FIBROUS CONTENT

Table with 3 columns: Material, Percentage (%), and another Percentage (%). Row includes BIND. MATERIAL.

TOTAL PERCENT ASBESTOS: %

COMMENTS:
DO NOT ANALYZE PER CLIENT REQUEST

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

- List of notes and conditions: N.D. = None Detected (Method Detection Limit is 1%); Trace = Less 1%; If sample is not homogeneous, separate components are analyzed separately and single result is reported. If a composited result is "Trace or 1%" asbestos, but a single layer contains greater than 1% asbestos, a description of the layer and the result will be reported in the Comments section of this report. Lab measurements and supporting documentation are available upon request. This report relates only to items tested. This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without the written approval of the laboratory. Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.

MARCIE DILKS
NVLAP Signatory

Asbestos Analyst:

B-3

5402

Versar

CHAIN OF CUSTODY RECORD

PROJECT NO. 3667.101		PROJECT NAME WYOMATA - BLADENSBURG FACILITY				PARAMETERS				INDUSTRIAL HYGIENE SAMPLE		Y N	
SAMPLERS: (Signature) David A. Nelson			(Printed) DAVID A. NELSON			NO. OF CONTAINERS ASBB						REMARKS	
FIELD SAMPLE NUMBER	DATE	TIME	COMP.	GRAB	STATION LOCATION								
BLA-025-B	1/30/99				UV-2 IN MAINTENANCE SHOP	1	✓	ASB98-124	FLEX COLLECTOR				
BLA-026-B								125	↓				
BLA-027-D					UV-14 IN MAINTENANCE SHOP			126	4" O.D. ELBOW INSULATION				
BLA-028-B								127	↓				
BLA-029-B								128	↓				
BLA-030-B								129	FLEX COLLECTOR				
BLA-031-B								130	↓				
BLA-032-B								131	↓				
Relinquished by: (Signature) David A. Nelson		Date / Time 1/30/99 1815		Received by: (Signature)		Relinquished by: (Signature)		Date / Time		Received by: (Signature)			
(Printed) DAVID A. NELSON		1/30/99 1815		(Printed)		(Printed)				(Printed)			
Relinquished by: (Signature)		Date / Time		Received for Laboratory by: (Signature) Marie P. Ch...		Date / Time 9:20 am		Remarks SEQUENTIAL ANALYSIS					
(Printed)				(Printed) FEB - 2 1998				(6)					



SAMPLE #: ASB98- 124

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG FACILITY
 Project Number : 3667 .001. Batch # : 3
 Client : WMATA

 Field Sample #: BLA-025-B Matrix : BULK

DATES: Received: 02/02/98 Collected: 01/30/98 Analyzed: 02/03/98

LOCATION :

UV-2 IN MAINTENANCE SHOP
 FLEX CONNECTOR

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous []

COLOR/APPEARANCE : OFF-WHITE/TAN

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	75-80	%
[FIBROUS GLASS]		%
[SYNTH. POLYMER]		%
[]		%
[]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	15-20	%
--------------------	-------	---

TOTAL PERCENT ASBESTOS: N.D. %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
 40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
- * If sample is not homogeneous, separate components are analyzed separately and single result is reported. If a composited result is "Trace or 1%" asbestos, but a single layer contains greater than 1% asbestos, a description of the layer and the result will be reported in the Comments section of this report.
- * Lab measurements and supporting documentation are available upon request.
- * This report relates only to items tested.
- * This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
- * This report shall not be reproduced except in full, without the written approval of the laboratory.
- * Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.

Marcie Dilks
 MARCIE DILKS
 NVLAP Signatory

Asbestos Analyst:
 M. DILKS



SAMPLE #:ASB98- 125

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG FACILITY
 Project Number : 3667 .001.
 Client : WMATA

Batch # : 3

Field Sample #: BLA-026-B

Matrix : BULK

DATES:

Received: 02/02/98

Collected: 01/30/98

Analyzed: 02/03/98

LOCATION :

UV-2 IN MAINTENANCE SHOP
 FLEX CONNECTOR

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous []

COLOR/APPEARANCE : OFF-WHITE/TAN

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	75-80	%
[FIBROUS GLASS]		%
[SYNTH. POLYMER]		%
[]		%
[]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	15-20	%
--------------------	-------	---

TOTAL PERCENT ASBESTOS: N.D. %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
 40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
- * If sample is not homogeneous, separate components are analyzed separately and single result is reported. If a composited result is "Trace or 1%" asbestos, but a single layer contains greater than 1% asbestos, a description of the layer and the result will be reported in the Comments section of this report.
- * Lab measurements and supporting documentation are available upon request.
- * This report relates only to items tested.
- * This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
- * This report shall not be reproduced except in full, without the written approval of the laboratory.
- * Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.

Marcie Dilks
 MARCIE DILKS
 NVLAP Signatory

Asbestos Analyst:
 M. DILKS



SAMPLE #:ASB98- 126

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG FACILITY
 Project Number : 3667 .001. Batch # : 3
 Client : WMATA

 Field Sample #: BLA-027-B Matrix : BULK

DATES:
 Received: 02/02/98 Collected: 01/30/98 Analyzed: 02/03/98

LOCATION :

UV-14 IN MAINTENANCE SHOP
 4" O.D. ELBOW INSULATION

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : OFF-WHITE

ASBESTOS CONTENT

Chrysotile	3-5	%
Amosite		%
Crocidolite		%
Tremolite		%
Actinolite		%
Anthophyllite		%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE] Trace	%
[FIBROUS GLASS] 35-40	%
[SYNTH. POLYMER]	%
[]	%
[]	%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL] 50-55	%
-----------------	---------	---

TOTAL PERCENT ASBESTOS: 3-5 %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
 40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
- * If sample is not homogeneous, separate components are analyzed separately and single result is reported. If a composited result is "Trace or 1%" asbestos, but a single layer contains greater than 1% asbestos, a description of the layer and the result will be reported in the Comments section of this report.
- * Lab measurements and supporting documentation are available upon request.
- * This report relates only to items tested.
- * This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
- * This report shall not be reproduced except in full, without the written approval of the laboratory.
- * Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.

Marcie Dilks
 MARCIE DILKS
 NVLAP Signatory

Asbestos Analyst:
 M. DILKS



SAMPLE #:ASB98- 127

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG FACILITY
 Project Number : 3667 .001. Batch # : 3
 Client : WMATA

 Field Sample #: BLA-028-B Matrix : BULK

DATES: Received: 02/02/98 Collected: 01/30/98 Analyzed:

LOCATION :

UV-14 IN MAINTENANCE SHOP
 4" O.D. ELBOW INSULATION

GROSS DESCRIPTION : Friable [] Fibrous [] Homogenous []

COLOR/APPEARANCE :

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	%
[FIBROUS GLASS]	%
[SYNTH. POLYMER]	%
[]	%
[]	%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	%
--------------------	---

TOTAL PERCENT ASBESTOS: %

COMMENTS:
 DO NOT ANALYZE PER CLIENT REQUEST

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
 40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
- * If sample is not homogeneous, separate components are analyzed separately and single result is reported. If a composited result is "Trace or 1%" asbestos, but a single layer contains greater than 1% asbestos, a description of the layer and the result will be reported in the Comments section of this report.
- * Lab measurements and supporting documentation are available upon request.
- * This report relates only to items tested.
- * This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
- * This report shall not be reproduced except in full, without the written approval of the laboratory.
- * Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.

Marcie Dilks
 MARCIE DILKS
 NVLAP Signatory

Asbestos Analyst:



SAMPLE #:ASB98- 128

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG FACILITY
 Project Number : 3667 .001. Batch # : 3
 Client : WMATA

Field Sample #: BLA-029-B Matrix : BULK

DATES: Received: 02/02/98 Collected: 01/30/98 Analyzed:
 LOCATION :

UV-14 IN MAINTENANCE SHOP
 4" O.D. ELBOW INSULATION

GROSS DESCRIPTION : Friable [] Fibrous [] Homogenous []

COLOR/APPEARANCE :

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	%
[FIBROUS GLASS]	%
[SYNTH. POLYMER]	%
[]	%
[]	%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	%
--------------------	---

TOTAL PERCENT ASBESTOS: %

COMMENTS: DO NOT ANALYZE PER CLIENT REQUEST

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
 40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
- * If sample is not homogeneous, separate components are analyzed separately and single result is reported. If a composited result is "Trace or 1%" asbestos, but a single layer contains greater than 1% asbestos, a description of the layer and the result will be reported in the Comments section of this report.
- * Lab measurements and supporting documentation are available upon request.
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- * This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
- * This report shall not be reproduced except in full, without the written approval of the laboratory.
- * Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.

MARCIE DILKS
 NVLAP Signatory

Asbestos Analyst:



NVLAP Accreditation # 101122

SAMPLE #:ASB98- 129

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG FACILITY
 Project Number : 3667 .001. Batch # : 3
 Client : WMATA

Field Sample #: BLA-030-B Matrix : BULK

DATES: Received: 02/02/98 Collected: 01/30/98 Analyzed: 02/03/98

LOCATION :

UV-14 IN MAINTENANCE SHOP
 FLEX CONNECTOR

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : OFF-WHITE/TAN

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	75-80	%
[FIBROUS GLASS]		%
[SYNTH. POLYMER]		%
[]		%
[]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	15-20	%
-------------------	-------	---

TOTAL PERCENT ASBESTOS: N.D. %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
 40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
- * If sample is not homogeneous, separate components are analyzed separately and single result is reported. If a composited result is "Trace or 1%" asbestos, but a single layer contains greater than 1% asbestos, a description of the layer and the result will be reported in the Comments section of this report.
- * Lab measurements and supporting documentation are available upon request.
- * This report relates only to items tested.
- * This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
- * This report shall not be reproduced except in full, without the written approval of the laboratory.
- * Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.

Marcie Dilks
 MARCIE DILKS
 NVLAP Signatory

Asbestos Analyst:
 M. DILKS



NVLAP Accreditation # 101122

SAMPLE #:ASB98- 130

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG FACILITY
 Project Number : 3667 .001.
 Client : WMATA

Batch # : 3

Field Sample #: BLA-031-B

Matrix : BULK

DATES:

Received: 02/02/98

Collected: 01/30/98

Analyzed: 02/03/98

LOCATION :

UV-14 IN MAINTENANCE SHOP
 FLEX CONNECTOR

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous []

COLOR/APPEARANCE : OFF-WHITE/TAN

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	75-80	%
[FIBROUS GLASS]		%
[SYNTH. POLYMER]		%
[]		%
[]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	15-20	%
--------------------	-------	---

TOTAL PERCENT ASBESTOS: N.D. %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
 40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
- * If sample is not homogeneous, separate components are analyzed separately and single result is reported. If a composited result is "Trace or 1%" asbestos, but a single layer contains greater than 1% asbestos, a description of the layer and the result will be reported in the Comments section of this report.
- * Lab measurements and supporting documentation are available upon request.
- * This report relates only to items tested.
- * This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
- * This report shall not be reproduced except in full, without the written approval of the laboratory.
- * Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.

Marcie Dilks
 MARCIE DILKS
 NVLAP Signatory

Asbestos Analyst:
 M. DILKS



NVLAP Accreditation # 101122

SAMPLE #:ASB98- 131

LABORATORY REPORT - BULK ASBESTOS ANALYSIS:

Site : BLADENSBURG FACILITY
 Project Number : 3667 .001.
 Client : WMATA

Batch # : 3

Field Sample #: BLA-032-B

Matrix : BULK

DATES:

Received: 02/02/98

Collected: 01/30/98

Analyzed: 02/03/98

LOCATION :

UV-14 IN MAINTENANCE SHOP
 FLEX CONNECTOR

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous []

COLOR/APPEARANCE : OFF-WHITE/TAN

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	75-80	%
[FIBROUS GLASS]	Trace	%
[SYNTH. POLYMER]		%
[]		%
[]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	15-20	%
--------------------	-------	---

TOTAL PERCENT ASBESTOS: N.D. %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
 40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
- * If sample is not homogeneous, separate components are analyzed separately and single result is reported. If a composited result is "Trace or 1%" asbestos, but a single layer contains greater than 1% asbestos, a description of the layer and the result will be reported in the Comments section of this report.
- * Lab measurements and supporting documentation are available upon request.
- * This report relates only to items tested.
- * This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
- * This report shall not be reproduced except in full, without the written approval of the laboratory.
- * Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.

M. Dilks
 MARGIE DILKS
 NVLAP Signatory

Asbestos Analyst:
 M. DILKS

Versar INC



**ASBESTOS INSPECTION AT THE
BLADENSBURG BUS DIVISION**

*limited survey of
Basement area
- these materials were
removed prior to
construction to install
remediation systems*

Submitted to:

**Washington Metropolitan Area Transit Authority
3101 Eisenhower Avenue
Alexandria, Virginia 22314-4547**

Submitted by:

**Versar, Inc.
6850 Versar Center
Springfield, Virginia 22151**

June 11, 1996

TABLE OF CONTENTS

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2.0 INSPECTION	1
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Table 2.	Quantities of Each Type of ACM	5

ATTACHMENT

Attachment 1.	Accreditations and Certificates
Attachment 2.	Sample Location Drawing
Attachment 3.	Chain of Custody Records and Laboratory Reports



**Asbestos Inspection at the
Bladensburg Bus Division
2251 26th Street, N.E.
Washington D.C.**

1.0 INTRODUCTION

On April 11, 1996, Versar's Bradley Norton inspected the basement area of the WMATA Bladensburg Bus Division, Building No. 2, located at 2251 Bladensburg Road. Mr. Norton is accredited as an EPA AHERA asbestos inspector, management planner and supervisor; a copy of his current accreditation certificates are contained in Attachment 1. One section of the basement, between the storage area adjacent to the compressor room and stairwell number 1, was not accessible at the time of this inspection. This area was locked and Versar's point of contact, Mr. Flynn, did not have the key. All other areas of this basement were visually inspected and suspect materials were sampled and subsequently analyzed by Polarized Light Microscopy to determine the percentage and types of asbestos present in these materials.

The purpose of this inspection was to identify materials that contain asbestos and determine the locations and quantities of these materials. More specifically, the inspection was performed to identify asbestos-containing materials (ACM) that could be affected by future renovations or the pending remedial action to construct sump pits within the basement at this site. The materials of greatest concern were those materials located in the compressor room and the storage room adjacent to the compressor room, because remedial actions are planned for this area. The inspection of the other portions of the basement were performed to obtain additional information that may be needed in the future.

2.0 INSPECTION

Upon arriving at the site, Mr. Norton toured the areas to be inspected with Mr. Ken Flynn of WMATA. In each area inspected a description of the area was recorded in the inspector's field log and marked on a drawing of the basement. The locations and quantities of suspect materials were also recorded. Attachment 2 contains a drawing of the areas inspected, indicates the sample locations, and shows the area to be abated for the proposed renovations. Once all suspect materials in an area had been identified, representative samples were then collected. The areas where materials were to be sampled were first wetted with amended water, then a section of each material was removed with a clean sampling tool.



Each sample collected was then placed directly into a durable container which was then sealed and marked with a unique sample number. The areas sampled were sprayed with a light encapsulant to prevent fiber release.

All collected samples were transported to the Versar NVLAP-accredited laboratory for analysis. Strict chain-of-custody procedures were followed to maintain sample integrity. Following the analysis the inspector reviewed the results to ensure that no variations between the observations noted at the site and laboratory observations would affect the interpretation of the sample data.

3.0 FINDINGS

The laboratory analysis of the samples collected has determined that the following materials are asbestos-containing per the EPA and OSHA definition (i.e., the EPA and OSHA consider all materials containing greater than one percent asbestos to be asbestos-containing materials (ACM)).

- All pipe elbow insulation

- The insulation on the twin tanks in the compressor room

- The black mastic applied to some of the duct insulation

- The 9" X 9" green floor tile

- All sprayed-on fireproofing on the beams throughout the basement

- The linoleum at the large office in the storage area near stairway No. 1

The drywall systems used on the interior walls in the storage area adjacent to the compressor room, in the small mechanical room, and in the hallway between this storage room and the small mechanical room were found not to be asbestos-containing by definition, but do contain asbestos at or below one percent. The drywall system in the former Credit Union (currently occupied by QTRN) was found not to contain asbestos. The floor tile in the restrooms of the storage room adjacent to the compressor room was also found not to be ACM, but one percent chrysotile asbestos was detected.

No sprayed-on fireproofing was present in the compressor room, but this material was observed on the beams in all other areas of the basement. Minor over spray was noted on the concrete and other components adjacent to the beams with this sprayed-on fireproofing. Pieces of the spray-on fireproofing were noted on the floor in the two storage areas, and on

the tops of the ceiling tile in the hallway by the small mechanical room and in the former Credit Union.

The results of the sample analysis are provided in Table 1 of this report. This table also presents the locations and types of materials sampled. Copies of the laboratory data sheets are presented in Attachment 3.

Table 1			
Sample No.	Material Location	Material Description	Sample Results
BB-01	Compressor Room	Pipe Elbow Ins., 2" Domestic Water	1-2% Amosite
BB-02	Compressor Room	Pipe Elbow Ins., 4" Piping for Tank	1-2% Amosite
BB-03	Compressor Room	Pipe Elbow Ins., 4" Piping at Tank	1% Chry. 1% Amosite
BB-04	Compressor Room	Tank Insulation, Tank Side over Fiberglass	40-45% Chry., Trace Amosite
BB-05	Compressor Room	Tank End Insulation	40-43% Chry., 1-2% Amosite
BB-06	Compressor Room	Pipe Elbow, 2" at Water Heater	1-2% Amosite
BB-07	Storage Room By Comp. Room	2' X 4' Ceiling Tile in Men's Room	ND
BB-08-A	Storage Room Restrooms	12" X 12" Brown Floor Tile	1% Chry.
BB-08-B	Storage Room Restrooms	Mastic From BB-08-A	ND
BB-09	Storage Room Restroom	Drywall System	Trace Chry.*
BB-10	Storage Room By Comp. Room	Pipe Elbow Ins., 6"	15-20% Chry. 1-2% Amosite
BB-11	Storage Room By Comp. Room	Black Duct Mastic	5-10% Chry.

Table 1 (continued)

Sample No.	Material Location	Material Description	Sample Results
BB-12-A	Hallway By Storage Room	9" X 9" Green Floor Tile	5-10% Chry.
BB-12-B	Hallway By Storage Room	Mastic From BB-12-A	ND
BB-13	Storage Room By Comp. Room	Sprayed-on Fireproofing	30-35% Chry.
BB-14	Small Mechanical Room	Pipe Elbow Ins., 10" Fire Protection	1-2% Amosite
BB-15	Small Mechanical Room	Drywall System	Trace Chry.*
BB-16	Hallway by Small Mechanical Room	2' X 4' Ceiling Tile	ND
BB-17	Storage Area By Stairway No. 1	Drywall System at Interior Office	ND
BB-18	Storage Area By Stairway No. 1	Linoleum at Interior Office	5-7% Chry.
BB-19	Storage Area By Stairway No. 1	Sprayed-on Fireproofing	25-30% Chry.
BB-20	Former Credit Union, Hallway	Drywall System	ND
BB-21	Former Credit Union, Hallway	2' X 2' Ceiling Tile	ND
BB-22	Former Credit Union, Hallway	Sprayed-on Fireproofing	25-30% Chry.
BB-23	Former Credit Union, Occupied Area	12" X 12" Brown Floor Tile	ND
BB-24	Former Credit Union, Main Room	Sprayed-on Fireproofing	20-25% Chry.

NOTES: ND indicates no asbestos was detected
 Chry indicates chrysotile asbestos
 * Chrysotile (1-2%) detected in Wall Taping Compound
 Trace equals less than one percent

4.0 QUANTITIES OF ACM

The following table provides the quantities of each type of ACM in each room inspected. No quantities for pipe elbows are provided for the former Credit Union area because access to the areas above the ceiling tile was limited. It is likely that a limited number of ACM pipe fittings are present in this area.

Table 2		
Location	Material	Quantity
Compressor Room	Pipe Elbows Ins., 2"	17
	Pipe Elbows Ins., 4"	40
Compressor Room	Tank Insulation	102 Sq. Ft. each 204 Sq. Ft. Total
Storage room Adjacent to Comp. Room	Pipe Elbows Ins., 4"	10
Storage room Adjacent to Comp. Room	Black Duct Sealer	54 Sq. Ft. on 120 linear feet of 3' by 1' duct
Storage room Adjacent to Comp. Room	Sprayed-on Fireproofing	1800 Sq. Ft., includes restrooms and hallway
Hallway by Storage Room and Small Mech. Room	9" X 9" Green Floor Tile	160 Sq. Ft., Mastic not ACM
Hallway by Storage Room and Small Mech. Room	Black Duct Sealer	10 Sq. Ft. on 15 linear feet of 3' by 1' duct
Small Mechanical Room	Sprayed-on Fireproofing	140 Sq. Ft.
Small Mechanical Room	Black Duct Sealer	4 Sq. Ft. on 8 linear feet of 3' by 1' duct
Small Mechanical Room	Pipe Elbows Ins., 10"	4
Storage Room by Stairway No.1	Pipe Elbows Ins., 6"	6
Storage Room by Stairway No.1	Sprayed-on Fireproofing	900 Sq. Ft.
Storage Room by Stairway No.1	Linoleum	150 Sq. Ft.
Union Office	Sprayed-on Fireproofing	2700 Sq. Ft.

5.0 CONCLUSIONS

In the areas where remedial actions are planned, the fireproofing could be disturbed (storage room adjacent to compressor room) by the vibration and movement of equipment. The insulation on the twin tanks in the compressor room could be disturbed if any contact with these tanks occurs during the remedial action. The pipe elbows are of less concern, but if abatement is performed, the pipe elbows should be included in the abatement plans to prevent additional abatement at a later time. The estimated cost to remove the ACM potentially disturbed by the proposed remedial activity is approximately \$50,500. This included third party project oversight.

The 9" X 9" green floor tile is basically in good condition except for localized damage near the hinges of the door to the storage room. Removal of this tile should be included if any abatement is selected for the storage room or the small mechanical room. Because the mastic associated with this tile was found not to be ACM, the removal of floor tile would be less expensive, and would not greatly affect the cost if abatement of the sprayed-on fireproofing was planned.

The sprayed-on fireproofing poses the greatest asbestos hazard. In the two storage rooms, the small mechanical room and probably in the area that was inaccessible, there is no ceiling to prevent dislodged fibers from becoming air entrained, and therefore these fibers can be breathed by personnel working in these areas. It is estimated that an additional 1,300 square feet of this sprayed-on material is present in the area that was inaccessible at the time of the inspection. Vibration from the movement of buses traveling through the building on the ground floor, employee activities, as well as air erosion and impact damage can cause fibers to be released. During the inspection, pieces of the sprayed-on fireproofing were noted on the concrete floor. Foot traffic in these areas can cause this material to become air entrained. Abatement of the sprayed-on fireproofing in the areas where no ceiling is present should be planned as soon as feasible.

The sprayed-on fireproofing in areas such as the former Credit Union is a concern. The ceilings in these areas are suspended ceiling tiles and do not provide an air tight barrier between the occupants and the ACM fireproofing. Because this area has been recently renovated, Versar assumes that abatement of the fireproofing material in the former Credit Union will not be performed. If this material is to remain in place of the fiber levels that occupants are exposed to should be determined through the use of air sampling. A

combination of Phase Contrast and Transmission Electron Microscopy could be used to reduce the cost of this assessment.

ATTACHMENT 1

ACCREDITATIONS AND CERTIFICATES

National Institute
of Standards and Technology



National Voluntary
Laboratory Accreditation Program

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Scope of Accreditation



Page: 1 of 1

BULK ASBESTOS FIBER ANALYSIS

NVLAP LAB CODE 101122-0

VERSAR, INC.

6850 Versar Center
Springfield, VA 22151

Ms. Marcie Dilks

Phone: 703-642-6889 Fax: 703-642-6809

NVLAP Code

Designation

18/A01

U.S. EPA's "Interim Method for the Determination of Asbestos in Bulk Insulation Samples" as found in 40 CFR, Part 763, Subpart F, App. A, or the current U.S. EPA method for the analysis of asbestos in building material.

March 31, 1997

Effective through

A handwritten signature in black ink, appearing to read 'John L. G...'. The signature is written over a horizontal line.

For the National Institute of Standards and Technology

United States Department of Commerce
National Institute of Standards and Technology

NVLAP[®]

ISO/IEC GUIDE 25:1990
ISO 9002:1987

Certificate of Accreditation



VERSAR, INC.
SPRINGFIELD, VA

is recognized under the National Voluntary Laboratory Accreditation Program for satisfactory compliance with criteria established in Title 15, Part 285 Code of Federal Regulations. These criteria encompass the requirements of ISO/IEC Guide 25 and the relevant requirements of ISO 9002 (ANSI/ASQC Q92-1987) as suppliers of calibration or test results. Accreditation is awarded for specific services, listed on the Scope of Accreditation for:

BULK ASBESTOS FIBER ANALYSIS

March 31, 1997

Effective through

For the National Institute of Standards and Technology
NVLAP Lab Code: 101122-0



This is to certify that

BRADLEY J. NORTON

has successfully completed an EPA approved course and examination for

AHERA Building Inspector and Management Planner Refresher—8 Hours

and has completed training for accreditation under TSCA Title II

January 29, 1996

Location of Training: Beltsville, MD

Certificate Number: 96-01-29-06

Certificate Expires: January 29, 1997

Exam Date: January 29, 1996

Kenn M. Marfany

 Instructor

Rachel Riley

 Course Director: Rachel M. Riley, CET

This Course Meets the Maryland State Training Requirements (Biospherics Approval #21-17-10).

♻️ Printed on recycled paper



BIOSPHERICS® INCORPORATED

12051 Indian Creek Court
Beltsville, MD 20705
(301) 419-3900

This is to certify that

BRADLEY J. NORTON

has successfully completed an EPA approved course and examination for

AHERA Supervisor Refresher—8 Hours

and has completed training for accreditation under TSCA Title II

July 31, 1995

Location of Training: Beltsville, MD

Certificate Number: 95-07-31-13

Certificate Expires: July 31, 1996

Exam Date: July 31, 1995

Kevin M. Maloney

Instructor

Rachel Riley

Course Director: Rachel M. Riley, CET

This Course Meets the Maryland State Training Requirements (Biospherics Approval #21-17-10).

 Printed on recycled paper

Not Approved for Work in Maryland Schools

EXAM DATE: January 17, 1995



This is to certify that
Bradley Norton

has successfully completed
an EPA approved course for
Building Inspectors (Refresher)

entitled
Asbestos Hazards, Abatement and Protection
given
January 17, 1995

95-01-17-29

Certification Number

January 17, 1996

Certification Expires

4196
inspection
(see back)

Kevin M. Maloney

Instructor

Rachel Riley

Course Director
Rachel M. Riley

THIS COURSE MEETS THE MARYLAND STATE TRAINING REQUIREMENTS (BIOSPHERICS APPROVAL #21-17-10).
THIS TRAINEE HAS SUCCESSFULLY PASSED OUR EXAMINATION AND IS ACCREDITED UNDER TSCA TITLE II.

Not Approved for Work in Maryland Schools

EXAM DATE: January 17, 1995



This is to certify that
Bradley Norton

has successfully completed
an EPA approved course for
Management Planners (Refresher)

entitled
Asbestos Hazards, Abatement and Protection
given
January 17, 1995

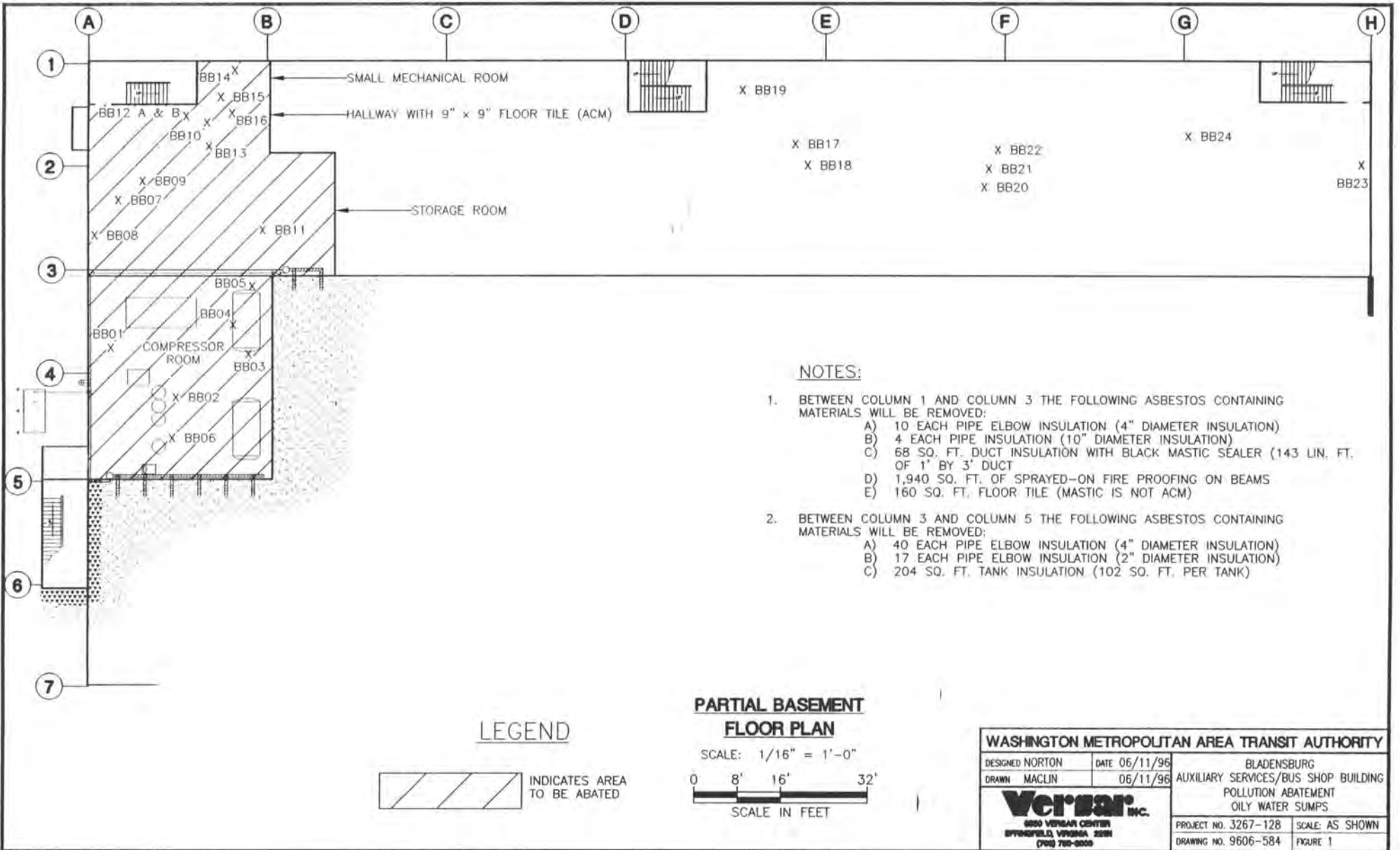
95-01-17-30
Certification Number
January 17, 1996
Certification Expires

Kenneth M. Marjany
Instructor
Rachel Riley
Course Director
Rachel M. Riley

496
inspection
(see back)
copy

THIS COURSE MEETS THE MARYLAND STATE TRAINING REQUIREMENTS (BIOSPHERICS APPROVAL #21-17-10).
THIS TRAINEE HAS SUCCESSFULLY PASSED OUR EXAMINATION AND IS ACCREDITED UNDER TSCA TITLE II.

ATTACHMENT 2
SAMPLE LOCATION DRAWING



NOTES:

1. BETWEEN COLUMN 1 AND COLUMN 3 THE FOLLOWING ASBESTOS CONTAINING MATERIALS WILL BE REMOVED:
 - A) 10 EACH PIPE ELBOW INSULATION (4" DIAMETER INSULATION)
 - B) 4 EACH PIPE INSULATION (10" DIAMETER INSULATION)
 - C) 68 SQ. FT. DUCT INSULATION WITH BLACK MASTIC SEALER (143 LIN. FT. OF 1' BY 3' DUCT)
 - D) 1,940 SQ. FT. OF SPRAYED-ON FIRE PROOFING ON BEAMS
 - E) 160 SQ. FT. FLOOR TILE (MASTIC IS NOT ACM)
2. BETWEEN COLUMN 3 AND COLUMN 5 THE FOLLOWING ASBESTOS CONTAINING MATERIALS WILL BE REMOVED:
 - A) 40 EACH PIPE ELBOW INSULATION (4" DIAMETER INSULATION)
 - B) 17 EACH PIPE ELBOW INSULATION (2" DIAMETER INSULATION)
 - C) 204 SQ. FT. TANK INSULATION (102 SQ. FT. PER TANK)

LEGEND

INDICATES AREA TO BE ABATED

PARTIAL BASEMENT FLOOR PLAN

SCALE: 1/16" = 1'-0"

 SCALE IN FEET

WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY			
DESIGNED NORTON	DATE 06/11/96	BLADENSBURG	
DRAWN MACLIN	06/11/96	AUXILIARY SERVICES/BUS SHOP BUILDING	
Versar Inc.		POLLUTION ABATEMENT	
<small>6000 VERSAR CENTER SPYGLASS, VIRGINIA 22081 (703) 760-0000</small>		PROJECT NO. 3267-128	SCALE: AS SHOWN
		DRAWING NO. 9606-584	FIGURE 1

ATTACHMENT 3

**CHAIN OF CUSTODY RECORDS AND
LABORATORY REPORTS**

B-3



CHAIN OF CUSTODY RECORD

PROJECT NO. 3267.128		PROJECT NAME BUDENSBURG WMATA BLDG. 2251					PARAMETERS								INDUSTRIAL, HYGIENE SAMPLE		Y N			
SAMPLERS: (Signature) <i>Bradley J. Norton</i>					(Printed) BRADLEY J. NORTON					NO. OF CONTAINERS ASB BULK								REMARKS		
FIELD SAMPLE NUMBER	DATE	TIME	COMP.	GRAB	STATION LOCATION															
BB	23	4/1/96			12x12" BROWN FLOOR TILE OCCUPIED AREA					1	✓									ASB96-1649
BB	24	↓			FINE PAPERING OCCUPIED AREA					1	✓									1650
Relinquished by: (Signature) <i>Bradley J. Norton</i>		Date / Time 4/1/96		Received by: (Signature)				Relinquished by: (Signature)				Date / Time		Received by: (Signature)						
(Printed) BRADLEY J. NORTON				(Printed)				(Printed)						(Printed)						
Relinquished by: (Signature)		Date / Time		Received for Laboratory by: (Signature) <i>Marcie Dillas</i>				Date / Time APR 1 1996		Remarks										
(Printed)				(Printed) MARCIE DILLAS																

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG, BUILDING 2251
Project Number : 3267 .128. Batch # : 1
Client : WMATA

Field Sample #: BB 01 Matrix : BULK

DATES:
Received: 04/11/96 Collected: 04/11/96 Reported: 04/16/96

LOCATION :

COMP. ROOM
DOMESTIC WATER PIPE ELBOW

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : TAN

ASBESTOS CONTENT

Chrysotile		%
Amosite	1-2	%
Crocidolite		%
Tremolite		%
Actinolite		%
Anthophyllite		%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]		%
[FIBROUS GLASS]	45-48	%
[SYNTH. POLYMER]		%
[]		%
[]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	45-50	%
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TOTAL PERCENT ASBESTOS: 1-2 %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
- * If sample is not homogeneous, separate components are analyzed separately and a single result is reported.
- * Lab measurements and supporting documentation are available upon request.
- * This report relates only to items tested.
- * This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
- * Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.


MARCIE DILKS
NVLAP Signatory

Asbestos Analyst:
R. ANSTICE

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG, BUILDING 2251
Project Number : 3267 .128. Batch # : 1
Client : WMATA

Field Sample #: BB 02 Matrix : BULK

DATES:
Received: 04/11/96 Collected: 04/11/96 Reported: 04/16/96

LOCATION :

COMP. ROOM
PIPE ELBOW TO TANK

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : TAN

ASBESTOS CONTENT

Chrysotile		%
Amosite	1-2	%
Crocidolite		%
Tremolite		%
Actinolite		%
Anthophyllite		%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]		%
[FIBROUS GLASS]	45-48	%
[SYNTH. POLYMER]		%
[]		%
[]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	45-50	%
--------------------	-------	---

TOTAL PERCENT ASBESTOS: 1-2 %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

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Marcie Dilks
MARCIE DILKS
NVLAP Signatory

Asbestos Analyst:
R. ANSTICE

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG, BUILDING 2251
Project Number : 3267 .128. Batch # : 1
Client : WMATA

Field Sample #: BB 03 Matrix : BULK

DATES:
Received: 04/11/96 Collected: 04/11/96 Reported: 04/16/96

LOCATION :

COMP. ROOM
PIPE ELBOW AT TANK

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : GRAY

ASBESTOS CONTENT

Chrysotile	1	%
Amosite	1	%
Crocidolite		%
Tremolite		%
Actinolite		%
Anthophyllite		%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]		%
[FIBROUS GLASS]	45-48	%
[SYNTH. POLYMER]		%
[]		%
[]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	45-50	%
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TOTAL PERCENT ASBESTOS: 2 %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
- * If sample is not homogeneous, separate components are analyzed separately and a single result is reported.
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- * This report relates only to items tested.
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MARCIE DILKS
NVLAP Signatory

Asbestos Analyst:
R. ANSTICE

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG, BUILDING 2251
Project Number : 3267 .128. Batch # : 1
Client : WMATA

Field Sample #: BB 04 Matrix : BULK

DATES:
Received: 04/11/96 Collected: 04/11/96 Reported: 04/16/96

LOCATION :

COMP. ROOM
TANK INSULATION

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : TAN

ASBESTOS CONTENT

Chrysotile	40-45	%
Amosite	Trace	%
Crocidolite		%
Tremolite		%
Actinolite		%
Anthophyllite		%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]		%
[FIBROUS GLASS]	20-25	%
[SYNTH. POLYMER]		%
[]		%
[]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	25-30	%
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TOTAL PERCENT ASBESTOS: 40-45 %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

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MARCIE DILKS
NVLAP Signatory

Asbestos Analyst:
R. ANSTICE

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG, BUILDING 2251
Project Number : 3267 .128. Batch # : 1
Client : WMATA

Field Sample #: BB 05 Matrix : BULK

DATES:
Received: 04/11/96 Collected: 04/11/96 Reported: 04/16/96

LOCATION :

COMP. ROOM
TANK END INSULATION

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : TAN

ASBESTOS CONTENT

Chrysotile	40-43	%
Amosite	1-2	%
Crocidolite		%
Tremolite		%
Actinolite		%
Anthophyllite		%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]		%
[FIBROUS GLASS]	15-20	%
[SYNTH. POLYMER]		%
[]		%
[]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	30-35	%
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TOTAL PERCENT ASBESTOS: 41-45 %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

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MARCIE DILKS
NVLAP Signatory

Asbestos Analyst:
R. ANSTICE

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG, BUILDING 2251
Project Number : 3267 .128.
Client : WMATA

Batch # : 1

Field Sample #: BB 06

Matrix : BULK

DATES:

Received: 04/11/96 Collected: 04/11/96 Reported: 04/16/96

LOCATION :

COMP. ROOM
PIPE ELBOW AT WATER HEATER

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : TAN

ASBESTOS CONTENT

Chrysotile		%
Amosite	1-2	%
Crocidolite		%
Tremolite		%
Actinolite		%
Anthophyllite		%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]		%
[FIBROUS GLASS]	45-48	%
[SYNTH. POLYMER]		%
[]		%
[]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	45-50	%
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TOTAL PERCENT ASBESTOS: 1-2 %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

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MARCIE DILKS
NVLAP Signatory

Asbestos Analyst:
R. ANSTICE

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG, BUILDING 2251
Project Number : 3267 .128. Batch # : 1
Client : WMATA

Field Sample #: BB 07 Matrix : BULK

DATES:
Received: 04/11/96 Collected: 04/11/96 Reported: 04/16/96

LOCATION :

STORAGE AREA BY COMP.
2'x4' CEILING TILE

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : TAN

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	25-30	%
[FIBROUS GLASS]	45-50	%
[SYNTH. POLYMER]		%
[]		%
[]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	15-20	%
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TOTAL PERCENT ASBESTOS: N.D. %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

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MARCIE DILKS
NVLAP Signatory

Asbestos Analyst:
R. ANSTICE

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG, BUILDING 2251
Project Number : 3267 .128. Batch # : 1
Client : WMATA

Field Sample #: BB 08B Matrix : BULK

DATES:
Received: 04/11/96 Collected: 04/11/96 Reported: 04/16/96

LOCATION :

STORAGE AREA BY COMP.
MASTIC FROM BB-08A

GROSS DESCRIPTION : Friable [] Fibrous [] Homogenous [X]

COLOR/APPEARANCE : BLACK

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	1-5	%
[FIBROUS GLASS]		%
[SYNTH. POLYMER]		%
[]		%
[]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

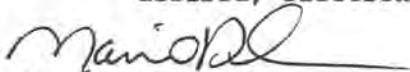
[BIND. MATERIAL]	90-95	%
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TOTAL PERCENT ASBESTOS: N.D. %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

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MARCIE DILKS
NVLAP Signatory

Asbestos Analyst:
R. ANSTICE



NVLAP Accreditation # 101122

SAMPLE #: ASB96- 1634

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG, BUILDING 2251
Project Number : 3267 .128.
Client : WMATA

Batch # : 1

Field Sample #: BB 09 Matrix : BULK

DATES: Received: 04/11/96 Collected: 04/11/96 Reported: 04/16/96

LOCATION :

STORAGE AREA BY COMP.
DRYWALL SYSTEM

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous []

COLOR/APPEARANCE : OFF-WHITE/GRAY

ASBESTOS CONTENT

Table with 2 columns: Asbestos Type, Percentage. Rows include Chrysotile (Trace), Amosite, Crocidolite, Tremolite, Actinolite, Anthophyllite.

NON-ASBESTOS/FIBROUS CONTENT

Table with 2 columns: Component, Percentage. Rows include CELLULOSE (1-5%), FIBROUS GLASS (5-10%), SYNTH. POLYMER, and empty rows.

NON-ASBESTOS/NON-FIBROUS CONTENT

Table with 2 columns: Component, Percentage. Row includes BIND. MATERIAL (80-85%).

TOTAL PERCENT ASBESTOS: Trace %

COMMENTS: CHRYBOTILE (1-2%) DETECTED IN WTC PORTION OF SAMPLE - (15% OF TOTAL SAMPLE)

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

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* Lab measurements and supporting documentation are available upon request.
* This report relates only to items tested.
* This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
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Marcie Dilks signature
MARCIE DILKS
NVLAP Signatory

Asbestos Analyst:
R. ANSTICE

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG, BUILDING 2251
Project Number : 3267 .128.
Client : WMATA

Batch # : 1

Field Sample #: BB 10

Matrix : BULK

DATES:

Received: 04/11/96

Collected: 04/11/96

Reported: 04/16/96

LOCATION :

STORAGE AREA BY COMP.
PIPE ELBOW

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : TAN

ASBESTOS CONTENT

Chrysotile	15-20	%
Amosite	1-2	%
Crocidolite		%
Tremolite		%
Actinolite		%
Anthophyllite		%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]		%
[FIBROUS GLASS]	35-38	%
[SYNTH. POLYMER]		%
[]		%
[]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	35-40	%
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TOTAL PERCENT ASBESTOS: 16-22 %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

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MARCIE DILKS
NVLAP Signatory

Asbestos Analyst:
R. ANSTICE

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG, BUILDING 2251
Project Number : 3267 .128. Batch # : 1
Client : WMATA

Field Sample #: BB 11 Matrix : BULK

DATES:
Received: 04/11/96 Collected: 04/11/96 Reported: 04/16/96

LOCATION :

STORAGE AREA BY COMP.
BLACK DUCT MASTIC

GROSS DESCRIPTION : Friable [] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : BLACK

ASBESTOS CONTENT

Chrysotile	5-10	%
Amosite		%
Crocidolite		%
Tremolite		%
Actinolite		%
Anthophyllite		%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE] 1-5	%
[FIBROUS GLASS] 1-5	%
[SYNTH. POLYMER] 1-5	%
[]	%
[]	%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL] 80-85	%
-----------------	---------	---

TOTAL PERCENT ASBESTOS: 5-10 %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

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Marcie Dilks
MARCIE DILKS
NVLAP Signatory

Asbestos Analyst:
R. ANSTICE

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG, BUILDING 2251
Project Number : 3267 .128. Batch # : 2
Client : WMATA

Field Sample #: BB 12A Matrix : BULK

DATES:
Received: 04/11/96 Collected: 04/11/96 Reported: 04/17/96

LOCATION :

STORAGE AREA BY COMP.
9"x9" GREEN FLOOR TILE

GROSS DESCRIPTION : Friable [] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : GREEN

ASBESTOS CONTENT

Chrysotile	5-10	%
Amosite		%
Crocidolite		%
Tremolite		%
Actinolite		%
Anthophyllite		%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	%
[FIBROUS GLASS]	%
[SYNTH. POLYMER]	%
[]	%
[]	%

NON-ASBESTOS/NON-FIBROUS CONTENT

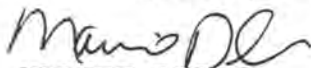
[BIND. MATERIAL]	85-90	%
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TOTAL PERCENT ASBESTOS: 5-10 %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

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- * If sample is not homogeneous, separate components are analyzed separately and a single result is reported.
- * Lab measurements and supporting documentation are available upon request.
- * This report relates only to items tested.
- * This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
- * Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.


MARCIE DILKS
NVLAP Signatory

Asbestos Analyst:
M. DILKS

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG, BUILDING 2251
Project Number : 3267 .128. Batch # : 2
Client : WMATA

Field Sample #: BB 12B Matrix : BULK

DATES:
Received: 04/11/96 Collected: 04/11/96 Reported: 04/17/96

LOCATION :

STORAGE AREA BY COMP.
MASTIC FROM BB-12A

GROSS DESCRIPTION : Friable [] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : BLACK

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	Trace	%
[FIBROUS GLASS]		%
[SYNTH. POLYMER]		%
[]		%
[]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL] 95-100 %

TOTAL PERCENT ASBESTOS: N.D. %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

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- * If sample is not homogeneous, separate components are analyzed separately and a single result is reported.
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- * This report relates only to items tested.
- * This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
- * Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.


MARCIE DILKS
NVLAP Signatory

Asbestos Analyst:
M. DILKS



NVLAP Accreditation # 101122

SAMPLE #: ASB96- 1639

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG, BUILDING 2251
Project Number : 3267 .128.
Client : WMATA

Batch # : 2

Field Sample #: BB 13 Matrix : BULK

DATES:
Received: 04/11/96 Collected: 04/11/96 Reported: 04/17/96

LOCATION :

STORAGE AREA BY COMP.
FIRE PROOFING

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : OFF-WHITE

ASBESTOS CONTENT

Chrysotile	30-35	%
Amosite		%
Crocidolite		%
Tremolite		%
Actinolite		%
Anthophyllite		%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]		%
[FIBROUS GLASS]	45-50	%
[SYNTH. POLYMER]		%
[]		%
[]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	10-15	%
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TOTAL PERCENT ASBESTOS: 30-35 %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
- * If sample is not homogeneous, separate components are analyzed separately and a single result is reported.
- * Lab measurements and supporting documentation are available upon request.
- * This report relates only to items tested.
- * This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
- * Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.

Marcie Dilks
MARCIE DILKS
NVLAP Signatory

Asbestos Analyst:
M. DILKS

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG, BUILDING 2251
Project Number : 3267 .128. Batch # : 2
Client : WMATA

Field Sample #: BB 14 Matrix : BULK

DATES: Received: 04/11/96 Collected: 04/11/96 Reported: 04/17/96

LOCATION :

SMALL MECH ROOM
PIPE ELBOW

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : OFF-WHITE

ASBESTOS CONTENT

Chrysotile		%
Amosite	1-2	%
Crocidolite		%
Tremolite		%
Actinolite		%
Anthophyllite		%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]		%
[FIBROUS GLASS]	35-40	%
[SYNTH. POLYMER]		%
[]		%
[]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	55-58	%
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TOTAL PERCENT ASBESTOS: 1-2 %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

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Marcie Dilks
MARCIE DILKS
NVLAP Signatory

Asbestos Analyst:
M. DILKS

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG, BUILDING 2251
Project Number : 3267 .128.
Client : WMATA

Batch # : 2

Field Sample #: BB 15

Matrix : BULK

DATES:

Received: 04/11/96

Collected: 04/11/96

Reported: 04/17/96

LOCATION :

SMALL MECH ROOM
DRYWALL SYSTEM

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous []

COLOR/APPEARANCE : *

ASBESTOS CONTENT

Chrysotile	Trace	%
Amosite		%
Crocidolite		%
Tremolite		%
Actinolite		%
Anthophyllite		%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE] 25-30	%
[FIBROUS GLASS] 1-2	%
[SYNTH. POLYMER]	%
[]	%
[]	%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL] 65-68	%
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TOTAL PERCENT ASBESTOS:	Trace	%
-------------------------	-------	---

COMMENTS:

* COLOR = OFF-WHITE/TAN/LT. TAN
CHRYBOTILE (1-2%) DETECTED IN JOINT COMPOUND PORTION - 20% OF TOTAL.

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

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- * If sample is not homogeneous, separate components are analyzed separately and a single result is reported.
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MARCIE DILKS
NVLAP Signatory

Asbestos Analyst:
M. DILKS

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG, BUILDING 2251
Project Number : 3267 .128. Batch # : 2
Client : WMATA

Field Sample #: BB 16 Matrix : BULK

DATES:
Received: 04/11/96 Collected: 04/11/96 Reported: 04/17/96

LOCATION :

HALL BY SMALL MECH ROOM
2'x4' CEILING TILE

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : LT. TAN

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	25-30	%
[FIBROUS GLASS]	40-45	%
[SYNTH. POLYMER]		%
[]		%
[]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	20-25	%
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TOTAL PERCENT ASBESTOS: N.D. %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
- * If sample is not homogeneous, separate components are analyzed separately and a single result is reported.
- * Lab measurements and supporting documentation are available upon request.
- * This report relates only to items tested.
- * This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
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Marcie Dilks
MARCIE DILKS
NVLAP Signatory

Asbestos Analyst:
M. DILKS



NVLAP Accreditation # 101122

SAMPLE #:ASB96- 1643

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG, BUILDING 2251
Project Number : 3267 .128.
Client : WMATA

Batch # : 2

Field Sample #: BB 17

Matrix : BULK

DATES:

Received: 04/11/96

Collected: 04/11/96

Reported: 04/17/96

LOCATION :

STORAGE AREA BY STAIRS
DRYWALL SYSTEM

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous []

COLOR/APPEARANCE : OFF-WHITE/TAN

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	55-60	%
[FIBROUS GLASS]	1-2	%
[SYNTH. POLYMER]		%
[]		%
[]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	35-38	%
--------------------	-------	---

TOTAL PERCENT ASBESTOS: N.D. %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
- * If sample is not homogeneous, separate components are analyzed separately and a single result is reported.
- * Lab measurements and supporting documentation are available upon request.
- * This report relates only to items tested.
- * This report must not be used to claim product endorsement by NVLAP or any agency of the U.S. Government.
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MARCIE DILKS
NVLAP Signatory

Asbestos Analyst:
M. DILKS

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG, BUILDING 2251
Project Number : 3267 .128. Batch # : 2
Client : WMATA

Field Sample #: BB 18 Matrix : BULK

DATES:
Received: 04/11/96 Collected: 04/11/96 Reported: 04/17/96

LOCATION :

STORAGE AREA BY STAIRS
LINOLEUM

GROSS DESCRIPTION : Friable [] Fibrous [X] Homogenous []

COLOR/APPEARANCE : TAN/GRAY

ASBESTOS CONTENT

Chrysotile	5-7	%
Amosite		%
Crocidolite		%
Tremolite		%
Actinolite		%
Anthophyllite		%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	%
[FIBROUS GLASS]	%
[SYNTH. POLYMER]	%
[]	%
[]	%

NON-ASBESTOS/NON-FIBROUS CONTENT

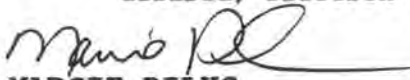
[BIND. MATERIAL] 90-93 %

TOTAL PERCENT ASBESTOS: 5-7 %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

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MARCIE DILKS
NVLAP Signatory

Asbestos Analyst:
M. DILKS

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG, BUILDING 2251
Project Number : 3267 .128. Batch # : 2
Client : WMATA

Field Sample #: BB 19 Matrix : BULK

DATES:
Received: 04/11/96 Collected: 04/11/96 Reported: 04/17/96

LOCATION :

STORAGE AREA BY STAIRS
FIRE PROOFING

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : OFF-WHITE

ASBESTOS CONTENT

Chrysotile	25-30	%
Amosite		%
Crocidolite		%
Tremolite		%
Actinolite		%
Anthophyllite		%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]		%
[FIBROUS GLASS]	50-55	%
[SYNTH. POLYMER]		%
[]		%
[]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	10-15	%
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TOTAL PERCENT ASBESTOS: 25-30 %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

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- * This report relates only to items tested.
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Marcie Dilks
MARCIE DILKS
NVLAP Signatory

Asbestos Analyst:
M. DILKS



NVLAP Accreditation # 101122

SAMPLE #:ASB96- 1646

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG, BUILDING 2251
Project Number : 3267 .128.
Client : WMATA

Batch # : 2

Field Sample #: BB 20

Matrix : BULK

DATES:

Received: 04/11/96

Collected: 04/11/96

Reported: 04/17/96

LOCATION :

OCCUPIED AREA
DRYWALL SYSTEM

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous []

COLOR/APPEARANCE : *

ASBESTOS CONTENT

Table with 2 columns: Asbestos Type and Percentage (%). Rows include Chrysotile, Amosite, Crocidolite, Tremolite, Actinolite, and Anthophyllite.

NON-ASBESTOS/FIBROUS CONTENT

Table with 3 columns: Material, Range, and Percentage (%). Rows include CELLULOSE (25-30%), FIBROUS GLASS (1-2%), SYNTH. POLYMER, and two empty rows.

NON-ASBESTOS/NON-FIBROUS CONTENT

Table with 3 columns: Material, Range, and Percentage (%). Row includes BIND. MATERIAL (65-68%).

TOTAL PERCENT ASBESTOS: N.D. %

COMMENTS:

* COLOR = OFF-WHITE/TAN/WHITE

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

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* This report relates only to items tested.
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* Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.

Marcie Dilks signature
MARCIE DILKS
NVLAP Signatory

Asbestos Analyst:
M. DILKS

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG, BUILDING 2251
Project Number : 3267 .128. Batch # : 2
Client : WMATA

Field Sample #: BB 21 Matrix : BULK

DATES:
Received: 04/11/96 Collected: 04/11/96 Reported: 04/17/96

LOCATION :

OCCUPIED AREA
2'x2' CEILING TILE

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : LT. TAN

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	25-30	%
[FIBROUS GLASS]	40-45	%
[SYNTH. POLYMER]		%
[]		%
[]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

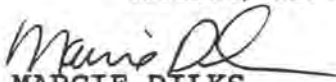
[BIND. MATERIAL]	20-25	%
--------------------	-------	---

TOTAL PERCENT ASBESTOS: N.D. %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

- * N.D. = None Detected (Method Detection Limit is 1%): Trace = Less 1%
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- * This report relates only to items tested.
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MARCIE DILKS
NVLAP Signatory

Asbestos Analyst:
M. DILKS

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG, BUILDING 2251
Project Number : 3267 .128. Batch # : 2
Client : WMATA

Field Sample #: BB 22 Matrix : BULK

DATES:
Received: 04/11/96 Collected: 04/11/96 Reported: 04/17/96

LOCATION :

OCCUPIED AREA
FIRE PROOFING

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : OFF-WHITE

ASBESTOS CONTENT

Chrysotile	25-30	%
Amosite		%
Crocidolite		%
Tremolite		%
Actinolite		%
Anthophyllite		%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]		%
[FIBROUS GLASS]	50-55	%
[SYNTH. POLYMER]		%
[]		%
[]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	10-15	%
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TOTAL PERCENT ASBESTOS: 25-30 %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

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MARCIE DILKS
NVLAP Signatory

Asbestos Analyst:
M. DILKS

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG, BUILDING 2251
Project Number : 3267 .128.
Client : WMATA

Batch # : 3

Field Sample #: BB 23

Matrix : BULK

DATES:

Received: 04/11/96

Collected: 04/11/96

Reported: 04/16/96

LOCATION :

OCCUPIED AREA
12"x12" BROWN FLOOR TILE

GROSS DESCRIPTION : Friable [] Fibrous [] Homogenous [X]

COLOR/APPEARANCE : TAN

ASBESTOS CONTENT

Chrysotile	%
Amosite	%
Crocidolite	%
Tremolite	%
Actinolite	%
Anthophyllite	%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]	%
[FIBROUS GLASS]	%
[SYNTH. POLYMER]	%
[]	%
[]	%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL] 95-100 %

TOTAL PERCENT ASBESTOS: N.D. %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

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MARCIE DILKS
NVLAP Signatory

Asbestos Analyst:
R. ANSTICE

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG, BUILDING 2251
Project Number : 3267 .128.
Client : WMATA

Batch # : 3

Field Sample #: BB 24 Matrix : BULK

DATES:
Received: 04/11/96 Collected: 04/11/96 Reported: 04/16/96

LOCATION :

OCCUPIED AREA
FIRE PROOFING

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : TAN

ASBESTOS CONTENT

Chrysotile	20-25	%
Amosite		%
Crocidolite		%
Tremolite		%
Actinolite		%
Anthophyllite		%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]		%
[FIBROUS GLASS]	45-50	%
[SYNTH. POLYMER]		%
[]		%
[]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	20-25	%
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TOTAL PERCENT ASBESTOS: 20-25 %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

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- * If sample is not homogeneous, separate components are analyzed separately and a single result is reported.
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- * This report relates only to items tested.
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- * Dust, tile, and vinyl may contain asbestos fibers that cannot be detected with PLM. If greater certainty concerning asbestos content is desired, electron microscopy or XRD is recommended.

Marcie Dilks
MARCIE DILKS
NVLAP Signatory

Asbestos Analyst:
R. ANSTICE



CENTRAL VIRGINIA
LABORATORIES & CONSULTANTS, INC.

*pipe fittings ins.
(unit + heaters
in store room)*

September 18, 1996

Carla A. Grano
WMATA (ENSV)
3101 Eisenhower Ave.
Alexandria, Virginia 22314

Dear Ms. Grano:

Enclosed are analytical results for the asbestos sample collected at the Bladensburg HVMT Storeroom on September 6, 1996.

If you should have any questions or require additional information, please do not hesitate to contact me.

Sincerely,

A handwritten signature in cursive script, appearing to read 'Ted M. Schumacher'.

Ted M. Schumacher
Laboratory Director

TMS/sts
enclosures

ANALYTICAL RESULTS
FOR
WMATA, BLADENSBURG - HVMT STOREROOM

September 18, 1996

Prepared By:

Central Virginia Laboratories & Consultants, Inc.
3109 Odd Fellows Road
Lynchburg, Virginia 24501
(804) 847-2852

<u>CVLC #</u>	<u>Client ID</u>	<u>% Asbestos Fibers</u>	<u>% Other Fibers</u>	<u>% Non-Fibrous Material</u>
96-08493	PFI	Chrysotile 10 Amosite ND Crocidolite ND <u>Total 10</u>	Fibrous Glass, 30	60

ND = Not Detected, <1%

If the above samples are building materials regulated by EPA's NESHAP regulations (renovation/demolition), the results may be biased on the high side. You may opt to have samples with less than 10 percent asbestos re-analyzed by the reportedly more accurate point count procedure in the EPA Interim Method for the identification of Asbestos in Bulk Materials.

Collection Information

<u>CVLC #</u>	<u>Client ID</u>	<u>Location</u>	<u>Sample Date</u>	<u>Sample Time</u>
96-08493	PFI	Bladensburg HVMT Storeroom	09/06/96	1200

B-1

PROJECT NO.		PROJECT NAME		PARAMETERS										INDUSTRIAL HYGIENE SAMPLE		Y	N
3267.101		Wamata Bladensburg Building #2		NO. OF CONTAINERS ACM													
SAMPLERS: (Signature)		(Printed)														REMARKS	
<i>Karl Liebenberg</i>		Karl Liebenberg															
FIELD SAMPLE NUMBER	DATE	TIME	COMP.	GRAB	STATION LOCATION												
84288	12/15	4:00		X	Room Adjacent to Mechanical Rm In Basement	1 X					AS95-11002		Spray-ON Fireproofing				
Relinquished by: (Signature)			Date / Time		Received by: (Signature)			Relinquished by: (Signature)			Date / Time		Received by: (Signature)				
<i>Karl Liebenberg</i>			12/18/95														
(Printed)					(Printed)			(Printed)					(Printed)				
<i>Karl Liebenberg</i>					Received for Laboratory by: (Signature)			Date / Time		Remarks							
<i>Karl Liebenberg</i>					<i>MD</i>			12-18-95		Call Ext. 6733 with Results							
(Printed)					(Printed)												
					Marcie Dilks												

P. 02

DEC-20-95 WED 18:19

Versar INC.
NVLAP Accreditation # 101122

SAMPLE #: ASB95- 11002

LABORATORY REPORT - BULK ASBESTOS ANALYSIS

Site : BLADENSBURG BUILDING #2
Project Number : 3267 .101.
Client : WMATA

Batch # : 1

Field Sample #: 84288

Matrix : BULK

DATES:

Received: 12/18/85

Collected: 12/15/95

Reported: 12/19/95

LOCATION :

ROOM ADJACENT TO MECHANICAL ROOM IN BASEMENT
SPRAY-ON FIREPROOFING

GROSS DESCRIPTION : Friable [X] Fibrous [X] Homogenous [X]

COLOR/APPEARANCE : OFF-WHITE

ASBESTOS CONTENT

Chrysotile	35-40	%
Amosite		%
Crocidolite		%
Tremolite		%
Actinolite		%
Anthophyllite		%

NON-ASBESTOS/FIBROUS CONTENT

[CELLULOSE]		%
[FIBROUS GLASS]	35-40	%
[SYNTH. POLYMER]		%
[]		%
[]		%

NON-ASBESTOS/NON-FIBROUS CONTENT

[BIND. MATERIAL]	15-20	%
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TOTAL PERCENT ASBESTOS: 35-40 %

COMMENTS:

Method: Polarized Light Microscopy/Dispersion Staining (PLM)
40 CFR Part 763 App. A to Subpart F

- * N.D. - None Detected (Method Detection Limit is 1%); Trace - Less than 1%
- * If sample is not homogeneous, separate components are analyzed separately and a single result is reported.
- * Lab measurements and supporting documentation are available upon request.
- * This report relates only to items tested.
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Marcie Dilks
MARCIE DILKS
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