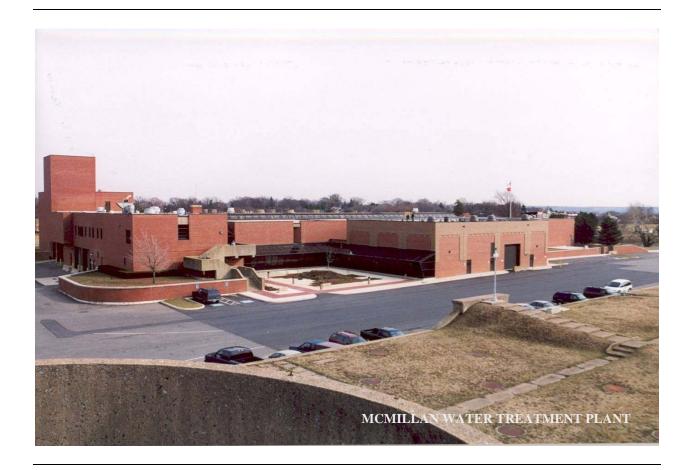
### FINAL ENVIRONMENTAL IMPACT STATEMENT FOR A PROPOSED WATER TREATMENT RESIDUALS MANAGEMENT PROCESS FOR THE WASHINGTON AQUEDUCT, WASHINGTON, D.C.



VOLUME 2B APPENDICES



Prepared by: U.S. Army Corps of Engineers, Baltimore District

Washington Aqueduct 5900 MacArthur Boulevard Washington, D.C. 20016

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and



In Cooperation with:



This Final Environmental Impact Statement (FEIS) describes a proposed project to alter the Washington Aqueduct's current practice of discharging water treatment residuals to the Potomac River to one of instead collecting, treating, then disposing of the residuals at an alternate location. Over 160 alternatives were considered and screened, and four of these, plus the no-action alternative were evaluated in detail to determine the potential for environmental, engineering, and economic impacts. A proposed action, the environmentally preferred alternative, is identified; It involves collection of the residuals at the Dalecarlia Water Treatment Plant and Georgetown Reservoir, treatment of residuals at an East Dalecarlia Processing Site on government property that is located north of Sibley Memorial Hospital in the District of Columbia, and then disposal of residuals by trucking on major streets to licensed land disposal sites likely located in Maryland or Virginia.

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September 2005

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## AQUATIC RESOURCES

• ANACOSTIA RIVER

# **Anacostia River Aquatic Resources**

#### Fish Resources

Because the lower Anacostia is a large tidal riverine system that enters the Potomac, the fish community in the lower Anacostia is not substantively different from what is collected in the Potomac in the vicinity of Ronald Reagan Airport (J. Seimen, personal communication). In 2002, 39 fish species were collected from the Anacostia. Key species include sunfish, catfish, largemouth bass, gizzard shad, and carp.

As stated above, fish tissue samples of certain species show elevated levels of contaminants, including chlordane and PCBs. Biological samples from the site suggest a severely stressed benthic community. Further, U.S. Fish and Wildlife Service studies have documented a prevalence of tumors and skin lesions in bottom feeding and bottom-associated fish species. Therefore, this segment of the Anacostia River does not support the fish consumption use designation and public health advisories are in place. Issued in November 1994, the advisories urge non-consumption of catfish, carp, and eels and limited consumption of other fish species caught in all District of Columbia waters. No commercial harvesting of aquatic species occurs within the District of Columbia or within the project area (John Seimen, personal communication).

#### Submerged Aquatic Vegetation

DC DOH has conducted annual shoreline surveys of SAV since 1993. The calendar year 2003 results were summarized in DOH's Fish and Wildlife Management Division report #F-2-R-18. The data indicate that SAV was nearly non-existent in the Anacostia, with only one species (*Vallisneria americana*) identified in the lower Potomac and very small bed coverage (0.02 acres). The inability of SAV to thrive in the Anacostia was attributed to high turbidity of the waters, and the presence of toxics and excessive nutrients.

#### Chesapeake Bay Program Area of Concern

The Anacostia River is listed as one of three "Areas of Concern" by USEPA's Chesapeake Bay Program. The Chesapeake Bay 2000 Agreement's goals for these priority urban waters include: (1) supporting the restoration of the Anacostia River, Baltimore Harbor, Elizabeth River, and their watersheds as models for urban river restoration in the Bay basin; and (2) by 2010, through mutual efforts of the District of Columbia and its watershed partners, reducing pollution loads to the Anacostia River to eliminate public health concerns and achieve the living resource, water quality, and habitat goals of this and past agreements. There are numerous federal, state and local efforts to help restore the watershed.

#### Navigation

The Anacostia River is a navigable water body and is supported by the Federal Navigation Channel in the Potomac River south of Washington. The lower Anacostia fully supported its navigation use designation in the District's 2002 §305(b) report, and is the site of several marinas. Depths in the Anacostia are maintained by federal dredging upstream to the 12<sup>th</sup> Street Bridge, but the navigation aids are only maintained to just above Potomac Avenue.

### BIOLOGICAL RESOURCES (TERRESTRIAL)

- EA REPORT ON TERRESTRIAL NATURAL RESOURCES AT THE DALECARLIA RESERVOIR
- MARCH 5, 2004, SITE WALK
- JANUARY 14 AND 17, 2005, SITE WALKS



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#### PROJECT CORRESPONDENCE

TO:

Jamie Maughan, CH2MHill

**DATE:** 

14 July 2004

FROM:

Bill Rue and Mary-Alice Koeneke

**SUBJECT:** 

Terrestrial Natural Resources at the Proposed Monofill and Head Cell Sites

Dalecarlia Reservoir

Ref:

Washington Aqueduct

The documents attached are being transmitted in fulfillment of our agreement to provide a description of the existing natural environment on the proposed Dalecarlia Monofill Site.

Michelle Harden and Mary Alice Koeneke conducted a site visit on 6 July 2004. Michael C. Peterson, environmental engineer, Washington Aqueduct, USACE, and Laura Haught of CH2MHill assisted them with site orientation and access. Because of USACE safety concerns, access to the monofill site was restricted to the outer perimeter where field reconnaissance observations could be made at points along the existing reservoir perimeter road.

Attached are: 1) Text describing the natural resources for the affected environment section of the DEIS, including tables of species observed and expected to occur; 2) A figure based on a USGS topographic map of the area describing the features presented in the literature and including the observation station locations from the field survey; and 3) a photographic record of the site.

#### Dalecarlia Water Treatment Facility Alternative 2 - Proposed Monofill

#### **Affected Environment**

#### 1.0 Proposed Monofill Site Description

Alternative 2 proposes the use of a monofill site for storage of residuals from the Dalecarlia Sedimentation Basins and the Georgetown Reservoir. The proposed monofill site as conceived would encompass approximately 30 acres of a 47-acre deciduous hardwood forest located on the eastern side of the Dalecarlia Reservoir (Figure 1). The area slopes westward toward the Dalecarlia Reservoir and Potomac River. The site includes some of the highest elevations on the property ranging from 200 –250 ft above mean sea level and abuts the highest elevation on the property 270 ft. above mean sea level adjacent to the Dalecarlia Parkway on the southwestern boundary (USACE, 1994). The site terrain is intersected by several east-west oriented cuts between small, steep slopes.

The proposed monofill site is bordered to the north by a residential area and on the east by the Dalecarlia Parkway. The southern perimeter slopes steeply southward to a cleared easement adjacent to an eighteen-inch sanitary sewer line that originates on the eastside of Dalecarlia Parkway. The sanitary sewer line easement is a relatively flat, open area approximately 75 feet in width aligned east to west and lying between two steeply sloped banks. According to the proposed alternative the steep embankments on either side of the easement would be bridged for road access to the monofill site. The road over the easement would be elevated. A storm sewer runs parallel to the sanitary sewer line and into East Creek near the current reservoir access road. A segment of East Creek depicted on topographic maps of the area was no longer visible in the easement; it appeared that the creek was no longer flowing above ground and may have been channelized underground into the storm sewer though no definite determination could be made. Erosion from episodes of runoff was evident in the easement and along the steeply sloped bank opposite the proposed monofill site. Exposed soil in open areas and in eroded channels was fine-grained sand.

The western perimeter of the deciduous woods in the vicinity of the monofill site follows the channel of East Creek as it flows northward along the current gravel access road for the reservoir. East Creek flows north until it meets with Mill Creek in the vicinity of the spillway in the northern corner of Dalecarlia Reservoir. The west bank of East Creek immediately adjacent to the reservoir access road has been fortified with large quarried stones; the east bank along the deciduous forest edge is naturally formed. The bank height varies in from approximately 8 to 15 inches on both sides of the creek. Water in the creek was approximately 2-6 inches deep, clear and flowing. The substrate varies from predominantly sand to sand and some stones. Gravel/sand bars are present in several stretches of the creek.

EA Engineering, Science and Technology, Inc., (EA) conducted a site visit to assess and characterize the terrestrial resources of the proposed monofill site on July 06,

2004. Access to the interior of the site was not possible due to United States Army Corps of Engineers (USACE) safety concerns, field observations were completed at a series of small grassy pull-offs adjacent to East Creek from the southern sanitary sewer line area to the spillway of the reservoir. All data collected was recorded based on observations collected around the perimeter of the monofill site. No information was collected for the interior of the 30-acre site. Because information gathered from field observations was limited by lack of access the resource descriptions provided below are supplemented with information found in the Environmental Baseline Report Washington Aqueduct Dalecarlia, Georgetown, and McMillan Reservoirs prepared by the US Army Corps of Engineers (1994).

#### 1.1 Botanical Resources

The 30-acre monofill site is part of a 47-acre plot of deciduous woods on the eastern side of the Dalecarlia Reservoir and entirely within the Dalecarlia Water Treatment Facility property. A general description of the land adjacent to the Dalecarlia Reservoir in the baseline assessment report describes habitats present as oakhickory/mixed hardwood forest and a bottomland forest (USACE 1994). Field observations on July 6, 2004 in the proposed monofill site concurred with the general assessment description and found the forest to be a mixed deciduous hardwood dominated by oaks. A plant species inventory developed during the site visit is presented in Table 1.

The dominant forest canopy species were northern red oak (Quercus rubra), tulip poplar (Liriodendron tulipifera), American beech (Fagus grandifolia), southern red oak (Quercus falcata), cherry (Prunus sp.), and hickory (Carya sp.). The understory was comprised of younger trees of these species and also included sassafras (Sassafras albidum), box elder (Acer negundo), willow oak (Quercus phellos) and pawpaw (Asimina triloba). Shrubs included raspberry (Rubus sp.). Vines found in the understory were poison ivy (Toxicodendron radicans) and wild grape (Vitis sp.). Little herbaceous growth was observed within the proposed site. Species observed included False Nettle (Boehmeria cylindrica) and lady's thumb (Polygonum persicaria). The dominant groundcover species was Japanese stilt grass (Microstegium vimineum) comprising most of the ground layer. Occasional patches of Christmas fern (Polystichum acrostichoides) were also observed.

Botanical species identified from observation points along the gravel access road on the western edge of the proposed site were consistent with the sites in the vicinity of the southern boundary and proposed monofill access road. In open areas around the edge of the proposed site a few other species were noted including black locust (*Robinia pseudoacacia*), princess-tree (*Paulownia tomentosa*), slippery elm (*Ulmus rubra*), common mullein (*Verbascum thapus*), and New York ironweed (*Veronia noveboracensis*).

Of the species identified in the vicinity of the monofill site, several are considered non-native including princess-tree, privet, field bindweed, Lady's thumb, Japanese knotweed, and Japanese stilt-grass.

Table 1 Plant Species Observed in the Monofill Area, Washington Aqueduct 2004

Scientific Name	Common Name	
Dec	iduous	
Acer rubrum	Red Maple	
Acer negundo	Box-Elder	
Asimina triloba	Common Pawpaw	
Carya sp.	Hickory species	
Fagus grandifolia	American Beech	
Liriodendron tulipifera	Tulip-tree	
Paulownia tomentosa	Princess-tree	
Platanus occidentalis	Sycamore	
Prunus sp.	Cherry species	
Quercus phellos	Willow Oak	
Quercus alba	Eastern White Oak	
Quercus falcata	Southern Red Oak	
Quercus rubra	Northern Red Oak	
Robinia pseudoacacia	Black Locust	
Sassafras albidum	Sassafras	
Ulmus rubra	Slippery Elm	
Sh	rubs	
Ligustrum vulgare	Privet	
Rubus sp.	Raspberry species	
V	ines	
Toxicodendron radicans	Poison Ivy	
Vitis sp.	Grape species	
Herb	aceous	
Boehmeria cylindrical	False Nettle	
Convolvulus arvensis	Field Bindweed	
Iris versicolor	Larger Blue Flag	
Lepidium virginicum	Wild Peppergrass	
Melilotus officinalis	Sweet Yellow Clover	
Polygonum cuspidatum	Japanese Knotweed	
Polygonum persicaria	Lady's Thumb	
Trifolium repens	White Clover	
Verbascum thapsus	Common Mullein	
Vernonia noveboracensis	New York Ironweed	
Ground Cover		
Microstegium vimineum	Japanese Stiltgrass	
Polystichum acrostichoides	Christmas Fern	

#### 1.2 Wildlife Resources

The Dalecarlia Reservoir property is located in an urban-suburban section of the District of Columbia and Montgomery County, Maryland (USACE 1994). The earlier baseline ecological assessment conducted in 1994 (USACE 1994) described the existing wildlife resources of the Dalecarlia Reservoir to include species adapted to human disturbance and activity as well as those associated with an aquatic environment.

#### Reptiles and Amphibians

For the USACE baseline assessment in 1994, a list of reptiles and amphibians potentially associated with the Dalecarlia Reservoir was generated by the Center for Urban Ecology, under the National Park Service. EA reviewed the list of reptiles and amphibians for habitat and life history requisites. Species considered to be potentially present in the deciduous hardwood habitat of the proposed monofill site are presented in Table 2. An American toad was the only species on the list that was observed during the field survey in the vicinity of the proposed monofill site.

Table 2. Reptile and Amphibian Species Potentially Present on the Proposed Monofill Site (based on USACE, 1994).

Scientific Name	Common Name		
Amphibians			
Ambystoma maculatum	Spotted Salamander		
Ambystoma opacum	Marbled Salamander		
Plethodon cinereus	Red-backed Salamander		
Bufo americanus	American Toad		
Scaphiopus holbrookii	Eastern Spadefoot Toad		
Rana sylvatica	Wood Frog		
Reptiles			
Carphophia amoenus	Worm Snake		
Coluber constrictor	Northern Black Racer		
Diadophis punctatus	Southern Ringneck Snake		
Elaphe obsolete	Black Rat Snake		
Heterodon platyrhinos	Eastern Hog-nosed Snake		
Lampropeltis gestulus	Eastern Kingsnake		
Thamnophis sirtalis	Eastern Garter Snake		
Agkistrodon contortrix	Copperhead		
Terrapene carolina	Eastern Box Turtle		
Eumeces inexpectatus	Southeastern Five-lined Skink		

#### **Mammals**

Mammals expected to inhabit the vicinity of the proposed monofill site based on the biological assessment (USACE 1994) include opossum (*Dedelphis virginiana*), striped skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*), gray squirrel (*Sciurus carolinensis*), eastern chipmunk (*Tamias striatus*), white-tailed deer (*Odocoileus virginianus*) and eastern cottontail (*Sylvilagus floridanus*) as well as a variety of small rodents such as mice, moles, shrews, and voles. Sightings of mammals during the field survey at the monofill site included tracks and sign as well as brief sightings of red fox (*Vulpes vulpes*) and gray squirrel and are presented on Table 3.

#### **Birds**

The timing of the field assessment survey for July determined that the avian species observed in the vicinity of the proposed monofill site could be categorized as either summer resident species or year-round resident species. By definition, a summer resident species migrates in fall to wintering grounds further south and returns in the spring to nest in its breeding habitat. Examples of summer resident species observed in the vicinity of the monofill site are Acadian flycatcher (*Empidonax virescens*), great crested flycatcher (*Myiarchus crinitus*), red-eyed vireo (*Vireo olivaceous*), yellow-throated vireo (*Vireo olivaceous*), house wren (*Troglodytes aedon*), blue-gray gnatcatcher (*Polioptila caerulea*), and Kentucky warbler (*Oporornis formosus*).

Year-round species are those that remain throughout the year in a given habitat. Examples of resident species are red-bellied woodpecker (*Melanerpes carolinus*), downy woodpecker (*Picoides pubescens*), American crow (*Corvus brachyrhynchos*), tufted titmouse (*Baeolophus bicolor*), Carolina chickadee (*Poecile carolinensis*), white-breasted nuthatch (*Sitta carolinensis*), and Carolina wren (*Thryothorus ludovicianus*).

Near the residential area at northern end of the proposed monofill site species such as mourning dove (Zenaida macroura), house wren, (Troglodytes aedon), American robin (Turdus migratorius), European starling (Sturnus vulgaris) and house sparrow (Passer domesticus) were observed. These species are well-known inhabitants of urban-suburban areas and are tolerant of human activity. Turkey vulture (Cathartes aura), black vulture (Cathartes atratus) and chimney swift (Chaetura pelagica) were observed flying over the site during the field visit.

Fledged young of several species were noted during the site visit and provided evidence of successful nesting for those species. Observed young of red-bellied woodpeckers, Carolina chickadees, Carolina wrens, blue-gray gnatcatchers, and American robins were documented. A complete list of bird species observed during the site visit and their seasonal occurrence is presented in Table 3.

In general, the species observed in the vicinity of the proposed monofill site are relatively common species found in deciduous woodlands and suburban neighborhoods in the Northern Virginia-DC-Maryland area.

#### **Insects**

Insects identified during the site visit are presented in Table 3. Primarily butterflies, they were most often associated with the open areas surrounding the edge of the proposed monofill site.

Table 3. Wildlife Species Observed in the Vicinity of the Proposed Monofill Area, Washington Aqueduct, 2004

Scientific Name	Common Nan	ne	
	Insects		
Papilio glaucus	Eastern Tiger Swallowtail		
Pieris rapae	Cabbage White Butterfly		
Polygonia comma	Eastern Comma		
Ancyloxypha numitor	Least Skipper		
Libellula luctuosa	Widow Skimmer Dragonfly	Widow Skimmer Dragonfly	
Diapheromera femorata	Walking Stick		
	Birds		
		Occurrence <sup>a</sup>	
Cathartes aura	Turkey Vulture	R	
Cathartes atratus	Black Vulture	R	
Accipiter	Accipiter Hawk	R	
Zenaida macroura	Mourning Dove	R	
Chaetura pelagica	Chimney Swift	S	
Melanerpes carolinus	Red-bellied Woodpecker	R	
Picoides pubescens	Downy Woodpecker	R	
Empidonax virescens	Acadian Flycatcher	S	
Myiarchus crinitus	Great Crested Flycatcher	S	
Tyrannus tyrannus	Eastern Kingbird	S	
Vireo olivaceous	Red-eyed Vireo	S	
Vireo flavifrons	Yellow-throated Vireo	S	
Corvus brachyrhynchos	American Crow	R	
Baeolophus bicolor	Tufted Titmouse	R	
Poecile carolinensis	Carolina Chickadee	R	
Sitta carolinensis	White-breasted Nuthatch	R	
Thryothorus ludovicianus	Carolina Wren	R	
Troglodytes aedon	House Wren	S	
Polioptila caerulea	Blue-gray Gnatcatcher	S	
Turdus migratorius	American Robin	R	
Sturnus vulgaris	European Starling	R	

Dumetella carolinensis	Gray Catbird	S	
Oporornis formosus	Kentucky Warbler	S	
Melospiza melodia	Song Sparrow	R	
Cardinalis cardinalis	Northern Cardinal	R	
Quiscalus quiscula	Common Grackle	S	
Caruelis tristis	American Goldfinch	R	
Passer domesticus	House Sparrow	R	
Mammals			
Vulpes vulpes	Red Fox	Red Fox	
Sciurus carolinensis	Gray Squirre	Gray Squirrel	

<sup>&</sup>lt;sup>a</sup> R= year-round resident species; S=summer resident species

## 2.0 Proposed Head Cell Site at the Dalecarlia Water Treatment Facility Forebay Area Site Description

The forebay for the Dalecarlia Reservoir is located on the northwestern end of the reservoir. The grassy area along the northern edge of the forebay is proposed for the construction of a head cell for removal of sediment. Field reconnaissance to assess the habitat and wildlife in the area of the proposed head cell site and the current forebay spoils area was conducted with the survey at the proposed monofill site on July 6, 2004.

The forebay site was comprised of a relatively flat, open terrain bounded by mowed/maintained lawn, the gravel access road and a buffer of deciduous woods on the northwest and southeast. The forebay spoils area was located in a wooded upland site adjacent to Little Falls Branch just to the north of the forebay. Both areas have been disturbed by maintenance and operational activities of the Dalecarlia-Water Treatment Facility.

#### 2.1 Botanical Resources

Most of the area surrounding the forebay has been disturbed by human activities associated with the maintenance and operation of the Dalecarlia Reservoir. The immediate area surrounding the forebay is open and comprised of mowed and maintained lawn with a row of approximately 6-8 eastern red cedars (Juniperus virginiana). The gravel access road separates the moved maintained area from a thin buffer of trees. shrubs and vines along the property boundary with the Capital and Crescent Trail a public recreation trail. The area is also in close proximity to a residential area. Many of the species identified in the deciduous woods of the proposed monofill site were present in the buffer area surrounding the forebay and at the forebay spoils area. A few species of consistent with the more open and disturbed characteristics of the areas were identified and included species such as daisy fleabane (Erigeron annuus), Clayton's bedstraw (Galium tinctorium), and field bindweed (Convolvulus arvensis). Several species of nonnative vegetation were identified in the forbay are and the forebay spoils site. These are princess-tree, honeysuckle, multiflora rose, English ivy, field bindweed and Japanese stiltgrass. Species identified at the forebay area and forebay spoils site are presented in Table 4.

Table 4 Plant Species Observed in the Forebay Area, Washington Aqueduct, 2004

Scientific Name	Common Name		
Coni	ferous		
Juniperus virginiana	Eastern Red Cedar		
Deciduous			
Acer negundo	Box-Elder		
Acer platanoides	Norway Maple		
Asimina triloba	Common Pawpaw		
Fagus grandifolia	American Beech		
Liriodendron tulipifera	Tulip tree		
Paulownia tomentosa	Princess-tree		
Platanus occidentalis	Sycamore		
Prunus sp.	Cherry species		
Quercus phellos	Willow Oak		
Quercus rubra	Northern Red Oak		
Robinia pseudoacacia	Black Locust		
Sassafras albidum	Sassafras		
Ulmus rubra	Slippery Elm		
Shi	rubs		
Lindera benzoin	Spicebush		
<i>Lonicera</i> sp.	Honeysuckle species		
Rosa multiflora	Multiflora rose		
Rubus sp.	Raspberry species		
Rubus odorous	Flowering Raspberry		
Viburnum dentatump.	Southern Arrowwood		
Vi	nes		
Hedera helix	English Ivy		
Parthenocissus quinquefolia	Virginia Creeper		
Toxicodendron radicans	Poison Ivy		
Vitis sp.	Grape species		
Herb	aceous		
Boehmeria cylindrical	False Nettle		
Erigeron annuus	Daisy Fleabane		
Galium tinctorium	Clayton's Bedstraw		
Convolvulus arvensis	Field Bindweed		
Verbascum thapsus	Common Mullein		
Vernonia noveboracensis	New York Ironweed		
Groundcover			
Microstegium vimineum	Japanese Stiltgrass		
Polystichum acrostichoides	Christmas Fern		

#### 2.0 Wildlife Resources

In general, the wildlife resources of the wooded buffer around the forebay and in the forebay spoils area are expected to be similar to those found in the vicinity of the monofill site. Potential reptile and amphibian species inhabiting the area are those listed previously on Table 2. One documented observation of a copperhead snake occurred in the forebay spoils area on a past visit (Michael Peterson, USACE personal communication).

#### **Mammals**

The open, mowed/maintained habitat surrounding the forebay does not provide appropriate habitat for woodland species but is expected to have raccoons, opossum, white-tailed deer, striped skunk, ground hog and other mammals foraging in the area. A large burrow was found along the edge of the access road and may have been the burrow of a red fox or groundhog (*Marmota monax*) but there were no clues to provide certain identity. White-tailed deer tracks were noted and a family of voles (*Microtus* sp.) was observed in the dense leaf litter in the wooded buffer along the southern edge of the forebay.

#### **Birds**

Birds in the vicinity were either using the wooded buffer or found in the open area immediately adjacent to the forebay. Species using the open area were belted kingfisher (Ceryle alcyon), eastern phoebe (Sayornis phoebe), eastern kingbird (Tyrannus tyrannus), barn swallow (Hirnudo rustica), American robin, and brown-headed cowbird (Molothrus ater). Species found in the wooded buffer were similar to those identified in the deciduous hardwood habitat at the proposed monofill site and also included northern flicker (Colaptes auratus), and eastern wood-pewee (Contopus virens). A great blue heron was observed flying over the reservoir at the forebay area. A list of wildlife species observed during the site visit is presented in Table 5.

#### **Insects**

Insects identified during the site visit are presented in Table 5. Primarily butterflies, they were most often associated with the open areas surrounding the edge of the forebay.

Table 5. Wildlife Species Observed in the Forebay Area, Washington Aqueduct, 2004

Scientific Name	Common Name		
Insects			
Pieris rapae	Cabbage White Butterfly		
Celestrina ladon neglecta	Summer Azure Butterfly		
Birds			
Ardea herodias	Great Blue Heron		
Branta Canadensis	Canada Goose		
Aix sponsa	Wood Duck		
Ceryle alcyon	Belted Kingfisher		
Melanerpes carolinus	Red-bellied Woodpecker		
Picoides pubescens	Downy Woodpecker		
Colaptes auratus	Northern Flicker		
Contopus virens	Eastern Wood-Pewee		
Empidonax virescens	Acadian Flycatcher		
Sayornis phoebe	Eastern Phoebe		
Myiarchus crinitus	Great Crested Flycatcher		
Vireo olivaceous	Red-eyed Vireo		
Hirundo rustica	Barn Swallow		
Poecile carolinensis	Carolina Chickadee		
Sitta carolinensis	White-breasted Nuthatch		
Thryothorus ludovicianus	Carolina Wren		
Polioptila caerulea	Blue-gray Gnatcatcher		
Utrdus migratorius	American Robin		
Cardinalis cardinalis	Northern Cardinal		
Molothrus ater	Brown-headed Cowbird		
Mammals			
Microtus sp.	Vole sp.		
Odocoileus virginianus	White-tailed Deer		

#### 3.0 Rare, Threatened and Endangered Species

The Environmental Baseline Report prepared by the USACE (1994) states that except for possible occasional transient individuals, no rare, threatened or endangered (RTE) species are known to occur at the Dalecarlia Reservoir. For purposes of this environmental assessment, lists of RTE and Natural Heritage Program species were obtained for Washington D.C. and Montgomery County, Maryland. Washington D.C. currently has a list of three federally listed species: Hay's Spring Amphipod (Stygobromus hayi) – endangered; bald eagle (Haliaeetus leucocephalus) – threatened and proposed for delisting; and eastern puma (Felis concolor cougar) - endangered. Montgomery County, MD also has three federally listed species: dwarf wedge mussel (Alasmidonta heterodon) - endangered, bald eagle - threatened and proposed for

delisting, and a plant, small whorled pogonia (*Isotria medeoloides*) - threatened. Of these small whorled pogonia is the only species that uses deciduous woods as habitat.

The small whorled pogonia is generally known from open, dry, deciduous woods with acid soil. Where it occurs in habitat with relatively high shrub coverage or high sapling density, flowering appears to be inhibited. Flowering occurs from about mid-May to mid-June, with the flowers apparently lasting only a few days to a week or so. Also, this plant doesn't necessarily flower annually. Individual plants may not flower every year; and extended dormancy, although not scientifically documented, is purported to occur under certain conditions (USFWS Endangered Species website).

#### 4.0 References

Newcomb, Lawrence.1997. Newcomb's Wildflower Guide. Little, Brown and Co. Boston. 490 pages.

Petrides, George A. 1972. Peterson's Field Guides Trees and Shrubs. Houghton Mifflin Company. Boston. 428 pages.

Sibley, David A. 2000. The Sibley Guide to Birds. Alfred A. Knopf. New York 544 pages.

United States Army Corps of Engineers. 1994. Environmental Baseline Report Washington Aqueduct Dalecarlia, Georgetown, and McMillan Reservoirs prepared by the U.S. Army Corps of Engineers, Baltimore District, 09 May 1994.

#### Web-sites:

Maryland Department of Natural Resources – Natural Heritage Program: <a href="http://www.dnr.state.md.us/wildlife/rte/1404/mont.pdf">http://www.dnr.state.md.us/wildlife/rte/1404/mont.pdf</a>. Accessed on 30 June 2004.

United States Fish and Wildlife Service Endangered Species: <a href="http://ecos.fws.gov/tess\_public/TESSWebpageRegionLists?lead\_region=5">http://ecos.fws.gov/tess\_public/TESSWebpageRegionLists?lead\_region=5</a>. Accessed on 30 June 2004

United States Fish and Wildlife Service Endangered Species - Species Account: Small Whorled Pogonia Website: <a href="http://endangered.fws.gov/i/q/saq1q.html">http://endangered.fws.gov/i/q/saq1q.html</a>. Accessed on 13 June 2004.



# **Photographic Record**

Dalecarlia Water Treatment Facility Proposed Monofill Site Vicinity Washington D.C. 06 July 2004



Deciduous woods near the proposed monofill site looking north from the vicinity of the southern boundary.



Deciduous woods near the proposed monofill site looking southeast.



Easement – dry creek bed along sanitary sewer alignment near southern edge of monofill site.



Deciduous woods near the proposed monofill site looking northward from the vicinity of the southern boundary.



Easement in the vicinity of the southern boundary of the proposed monofill.



American toad observed in the vicinity of the southern boundary of the proposed monofill site.



# **Photographic Record**

Dalecarlia Water Treatment Facility Proposed Monofill Site Vicinity Washington D.C.

06 July 2004



Walking stick insect on floor of deciduous woods at proposed monofill site southern boundary.



Proposed monofill site along the western boundary and adjacent creek.



Sewer line access road above northern boundary of the proposed monofill site.



The northwestern boundary of the proposed monofill site near residential boundary.



Dalecarlia forebay. Site of proposed head cell facility.



Current forebay spoils area, Dalecarlia Reservoir

MEMORANDUM CH2MHILL

### March 5, 2004 - Site Walk

T0: Jennifer Armstrong

COPIES: Glenn Palen

FROM: Laura Haught

DATE: February 22, 2005

On March 5, 2004, I visited the Washington Aqueduct property, the Georgetown Reservoir, and the area adjacent to Sibley Memorial Hospital that is currently used to store residuals from the forebay. The purpose of the visit was to determine if any biological resources would be affected by the proposed action and alternatives associated with the Draft Environmental Impact Statement (DEIS) for the proposed residuals treatment management plan at the Dalecarlia Water Treatment Facility.

Other CH2M HILL personnel on site included Glenn Palen, Al Wollman, and Jed Campbell.

Weather the day of the site walk was cool and overcast.

Digital photographs were taken of all the areas visited and have been labeled and provided as part of this Memorandum.

Most of the areas visited have been previously disturbed. Two bald eagles were observed flying over the Georgetown Reservoir during the site visit. Details of the site visit and the resources observed are provided in the existing conditions section of the DEIS.

1

WDC/MEMORANDUM.DOC



View toward Sibley Memorial Hospital from Sedimentation Basins



**View of Bike Trail West of Sedimentation Basins** 



**National Park Service Land West** 



Western Portion of Northwest Dalecarlia Processing Site



Northern Portion of Northwest Dalecarlia Processing Site



Northern Portion of Dalecarlia Processing Site



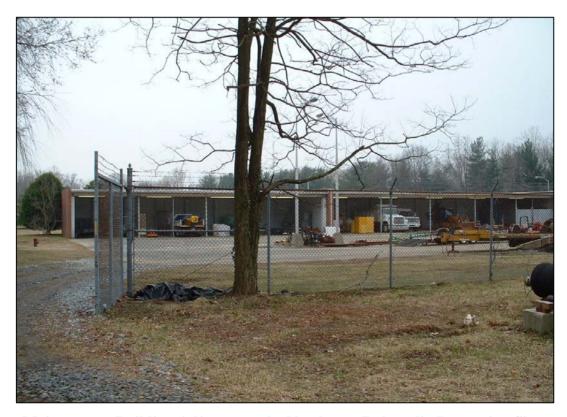
Houses in Background at Northwest Dalecarlia Processing Site



 $Northwest\ Dalecarlia\ Processing\ Site-NGA\ Building$ 



Northwest Dalecarlia Processing Site



Maintenance Building Adjacent to the Northwest Dalecarlia Processing Site



Recycled Oil Storage at Northwest Dalecarlia Processing Site



View toward Maintenance Building from Northwest Dalecarlia Processing Site



Area North of Northwest Dalecarlia Processing Site



Northwest Dalecarlia Processing Site Near Maintenance Building



Forebay Spoils Area



**Sibley Memorial Hospital** 



**Forebay North** 



**Forebay East** 



**Forebay Southeast** 



**Forebay Entrance** 



**Forebay Northwest** 



Pipe Leading from Forebay to Forebay Spoils Area



**View of Woods West of Forebay** 



**Bald Eagle over Georgetown Reservoir** 



**Georgetown Reservoir North** 



Georgetown Reservoir



**Georgetown Reservoir West** 



**Georgetown Reservoir Northeast** 



**Georgetown Reservoir East** 



Georgetown Reservoir view West toward Potomac River

MEMORANDUM CH2MHILL

# **January 14 and 17, 2005 - Site Walk**

T0: Jennifer Armstrong

COPIES: Glenn Palen

FROM: Laura Haught

DATE: February 22, 2005

CH2M HILL biologists Laura Haught and Lindsey Carr conducted a site visit to the area owned by Washington Aqueduct that is adjacent to Sibley Memorial Hospital. In addition the proposed pipeline route was walked. The purpose of the visit was to determine if any biological resources would be affected by the proposed action and alternatives associated with the Draft Environmental Impact Statement (DEIS) for the proposed residuals treatment management plan at the Dalecarlia Water Treatment Facility.

Jennifer Armstrong/CH2M HILL and Mike Peterson of the Washington Aqueduct accompanied the CH2M HILL biologists during the site walk in the Spring Valley area adjacent to Sibley Hospital.

Weather the day of the site walk was very cold with intermittent sleet and snow.

Digital photographs were taken of all the areas visited and have been labeled and provided as part of this Memorandum.

Portions of the pipeline route appear to be located in the floodplain of the Potomac River parallel to Canal Road in Washington, D.C. These areas may be forested wetlands. This area will need to be carefully evaluated if this alternative is selected. The area for the proposed construction of the dewatering and thickening facilities adjacent to Sibley Hospital is mostly disturbed and used for storage and trailers. Portions of this area are used for the storage of residuals from the forebay. Details are described in the Existing Conditions section of the DEIS.

1

WDC/MEMORANDUM.DOC



West Potomac Park along Potomac River – Sports Playing Field - Grass - Scattered Mature Trees



West Potomac Park near Franklin D. Roosevelt Memorial Site – Sports Playing Field – Grass – Scattered Mature Trees



East Potomac Golf Course adjacent to National Capital Regional Park



View of Road South of Chain Bridge Road Bridge



**Tree Cover along Pipeline Route** 



Heavy Underbrush and Mature Trees observed along Pipeline Route



Paved C&O Canal Path – mature Trees Observed on both sides of Path along Pipeline route



Heavy Underbrush and mature Trees viewed along Pipeline route



View along Pipeline Route near intersection of Arizona Avenue and Potomac Avenue



View along Pipeline Route of Walking Trail



**View Below Georgetown Reservoir on C&O Canal Path** 



View along Pipeline Route of Brick Wall, Canal, Bike Path



View along Pipeline Route of C&O Gravel Walking Path



View along Pipeline Route Facing Potomac River



View along Pipeline Route South of the Georgetown Reservoir on C&O Canal Path



**View along Pipeline Route Near Washington Harbor Parking Lot** 



**View along Pipeline Route of Park Near Washington Harbor** 



View along Pipeline Route of E Street Expressway/Urban Area



**View of Urban Area along Pipeline Route** 



View of Gravel Park Area near East Dalecarlia Processing Site



Underbrush and Mature Trees to the East of East Dalecarlia Processing Site



Small Drainage Area with Mature Trees Lining East Dalecarlia Processing Site Entryway



View of AUES FUDS Staging Area to the East of East Dalecarlia Processing Site



Open Grassy Field Located in Northeast Portion of East Dalecarlia Processing Site



Front View of Warehouse 6



View of Concrete Pad and Metal Plates and Piping near East Dalecarlia Processing Site



View along Pipeline Route Below Palisades Park and C&O Canal Path



Small Tributary to South of East Dalecarlia Processing Site



Side View of Small Pond in open Field Northwest of East Dalecarlia Processing Site



View toward Sibley Memorial Hospital from East Dalecarlia
Processing Site



Open Field View of Sibley Memorial Hospital from East Dalecarlia Processing Site



Mature Trees in Area to the North of East Dalecarlia Processing Site



View of AUES FUDS Staging Area from East Dalecarlia Processing Site



View of Concrete Pad Site North of East Dalecarlia Processing Site



View of Vegetation in Pipeline Route Zone B



View of Vegetation in Pipeline Route Zone C



View of Vegetation in Pipeline Route Zone D

# HAZARDOUS, TOXIC, AND RADIOACTIVE WASTE

• EDR Report for Georgetown Reservoir, Inquiry Number 01122495.3r



# The EDR Radius Map with GeoCheck®

Georgetown Reservoir Georgetown Reservoir Washington, DC 20007

Inquiry Number: 01122495.3r

February 02, 2004

# The Source For Environmental Risk Management Data

3530 Post Road Southport, Connecticut 06890

**Nationwide Customer Service** 

Telephone: 1-800-352-0050 Fax: 1-800-231-6802 Internet: www.edrnet.com

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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A search of available environmental records was conducted by Environmental Data Resources, Inc. (EDR). The report meets the government records search requirements of ASTM Standard Practice for Environmental Site Assessments, E 1527-00. Search distances are per ASTM standard or custom distances requested by the user.

#### TARGET PROPERTY INFORMATION

#### **ADDRESS**

**GEORGETOWN RESERVOIR** WASHINGTON, DC 20007

#### **COORDINATES**

Latitude (North):

38.912100 - 38° 54' 43.6"

Longitude (West): Universal Tranverse Mercator: Zone 18

77.093100 - 77° 5' 35.2"

UTM X (Meters):

318517.5 4308897.0

UTM Y (Meters):

Elevation:

144 ft. above sea level

## USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property:

38077-H1 WASHINGTON WEST, DC MD VA

Source:

USGS 7.5 min quad index

#### **TARGET PROPERTY SEARCH RESULTS**

The target property was not listed in any of the databases searched by EDR.

#### **DATABASES WITH NO MAPPED SITES**

No mapped sites were found in EDR's search of available ( "reasonably ascertainable ") government records either on the target property or within the ASTM E 1527-00 search radius around the target property for the following databases:

## FEDERAL ASTM STANDARD

NPL..... National Priority List

Proposed NPL.....Proposed National Priority List Sites

CERCLIS...... Comprehensive Environmental Response, Compensation, and Liability Information

System

CERC-NFRAP...... CERCLIS No Further Remedial Action Planned

CORRACTS...... Corrective Action Report

## STATE ASTM STANDARD

SHWS.......This state does not maintain a SHWS list. See the Federal CERCLIS list and

. Federal NPL list.

#### FEDERAL ASTM SUPPLEMENTAL

CONSENT...... Superfund (CERCLA) Consent Decrees

ROD...... Records Of Decision

Delisted NPL...... National Priority List Deletions

HMIRS..... Hazardous Materials Information Reporting System

MLTS..... Material Licensing Tracking System

RAATS RCRA Administrative Action Tracking System

TRIS\_\_\_\_\_\_ Toxic Chemical Release Inventory System

#### STATE OR LOCAL ASTM SUPPLEMENTAL

AST\_\_\_\_\_List of Aboveground Storage Tanks

#### **BROWNFIELDS DATABASES**

US BROWNFIELDS..... A Listing of Brownfields Sites

#### **EDR PROPRIETARY HISTORICAL DATABASES**

See the EDR Proprietary Historical Database Section for details

#### SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were identified.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in bold italics are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

#### FEDERAL ASTM STANDARD

RCRIS: Resource Conservation and Recovery Information System. RCRIS includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs): generate

less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs): generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs): generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

A review of the RCRIS-LQG list, as provided by EDR, and dated 12/10/2003 has revealed that there is 1 RCRIS-LQG site within approximately 0.75 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
GWU MOUNT VERNON COLLEGE	2100 FOXHALL ROAD NW	1/4 - 1/2NNE	H31	14

RCRIS: Resource Conservation and Recovery Information System. RCRIS includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs): generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs): generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs): generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste.

A review of the RCRIS-SQG list, as provided by EDR, and dated 12/10/2003 has revealed that there are 3 RCRIS-SQG sites within approximately 0.75 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir Map ID	Page
W&J ASSOCIATE EXXON BOULEVARD CITGO	4812 MACARTHURE BOULEVA 4885 MACARTHUR BOULEVAR	1/8 - 1/4 NNW A1 1/4 - 1/2 NNW F26	6 12
Lower Elevation	Address	Dist / Dir Map ID	Page
FOXHALL CLEANERS	4590 MACARTHUR BLVD. N.	1/4 - 1/2 ESE B14	9

**ERNS:** The Emergency Response Notification System records and stores information on reported releases of oil and hazardous substances. The source of this database is the U.S. EPA.

A review of the ERNS list, as provided by EDR, and dated 12/31/2002 has revealed that there are 2 ERNS sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
4560 INDIAN ROCK TERRACE NW	4560 INDIAN ROCK TERRAC	1/4 - 1/2ESE		9
4865 MACARTHUR BLVD	4865 MACARTHUR BLVD	1/4 - 1/2NNW		10

STATE ASTM STANDARD

**LUST:** The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Consumer and Regulatory Affairs' District of Columbia LUST Cases list.

A review of the LUST list, as provided by EDR, and dated 10/03/2003 has revealed that there are 15 LUST sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
EXXON #21717	4812 MACARTHUR BLVD., N	1/8 - 1/4 NNW	A2	6
EXXON	4812 MACARTHUR BLVD, NW	1/8 - 1/4 NNW	A3	7
FORMER CHEVRON USA INC	4885 MACARTHUR BLVD, NW	1/4 - 1/2 NNW	F27	13
MOUNT VERNOS COLLEGE	2100 FOXHALL ROAD, NW	1/4 - 1/2NNE	H29	13
DC PUBLIC LIBRARY	4901 V STREET, NW	1/4 - 1/2 NNW	132	14
FRENCH EMBASSY	4101/3915 RESERVOIR RD,	1/2 - 1 E	43	16
PLYLMAR PLAZA CONDO	4100 W STREET, NW	1/2 - 1 NE	K44	17
BERNSTEIN MANAGEMENT	4101 W STREET, NW	1/2 - 1 NE	K45	17
POLINGER & SHANNON & LUCHS	2315 40TH PLACE, NW	1/2 - 1 NE	47	17
PARK CREST APPARTMENTS	2324 41ST STREET, NW	1/2 - 1 NE	48	18
AMOCO	5101 MACARTHUR BLVD. NW	1/2 - 1 NNW	L49	18
APT BUILDING	5112 MACARTHUR BOULEVAR	1/2 - 1 NNW	L50	18
Lower Elevation	Address	Dist / Dir	Map ID	Page
RIVERSIDE APARTMENTS HANNAH HARRISON SCHOOL	4550 MACARTHUR BLUVARD, 4470 MACARTHUR BLVD., N	1/4 - 1/2ESE 1/2 - 1 ESE	E24 J38	12 15
PSYCHIATRIC INSTITUTE	4460 MACARTHUR BLVD., N	1/2 - 1 ESE	J40	16

**UST:** The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Consumer & Regulatory Affairs' D.C. UST Database List.

A review of the UST list, as provided by EDR, and dated 10/03/2003 has revealed that there are 19 UST sites within approximately 0.75 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
EXXON S/S #2-1717	4812 MACARTHUR BV NW	1/8 - 1/4 NNW	A4	7
DCFD ENGINE CO. #29	4811 MACARTHUR BV NW	1/8 - 1/4 NNW	A5	7
TOWNHOUSE	4836 MACARTHUR BV NW	1/4 - 1/2NNW	A8	8
MACARTHUR BOULEVARD APARTMENTS	S 4858 MACARTHUR BV NW	1/4 - 1/2NNW	A9	8
OUR LADY OF VICTORY CHURCH	4835 MACARTHUR BOULEVAR	1/4 - 1/2NNW	A11	8
BOULEVARD CITGO	4885 MACARTHUR BOULEVAR	1/4 - 1/2 NNW	F26	12
MT. VERNON COLLEGE	2100 FOXHALL RD NW	1/4 - 1/2NNE		13
PALISADES PUBLIC LIBRARY	4901 V ST NW	1/4 - 1/2NNW		14
CAFRITZ MANSION	2301 FOXHALL RD NW	1/2 - 1 NNE	41	16
Lower Elevation	Address	Dist / Dir	Map ID	Page
Lower Elevation  NATIONAL STONE ASSOCIATION	Address 1415 ELLIOT PL NW	Dist / Dir 1/4 - 1/2SE	Map ID 6	Page 7
NATIONAL STONE ASSOCIATION	1415 ELLIOT PL NW	1/4 - 1/2SE	6	7
NATIONAL STONE ASSOCIATION CENTER FOR URBAN ECOLOGY	1415 ELLIOT PL NW 4598 MACARTHUR BV NW	1/4 - 1/2SE 1/4 - 1/2ESE	6 B7 E20	7 8
NATIONAL STONE ASSOCIATION CENTER FOR URBAN ECOLOGY SUN LOY CHAN	1415 ELLIOT PL NW 4598 MACARTHUR BV NW 4577 MACARTHUR BV NW	1/4 - 1/2SE 1/4 - 1/2ESE 1/4 - 1/2ESE	6 B7 E20	7 8 11
NATIONAL STONE ASSOCIATION CENTER FOR URBAN ECOLOGY SUN LOY CHAN 4840 MACARTHUR BV NW	1415 ELLIOT PL NW 4598 MACARTHUR BV NW 4577 MACARTHUR BV NW 4840 MACARTHUR BV NW	1/4 - 1/2SE 1/4 - 1/2ESE 1/4 - 1/2ESE 1/4 - 1/2NNW	6 B7 E20 F22	7 8 11 11 11 12
NATIONAL STONE ASSOCIATION CENTER FOR URBAN ECOLOGY SUN LOY CHAN 4840 MACARTHUR BV NW UNKNOWN SEITH D. SHULMAN THE PALISADES	1415 ELLIOT PL NW 4598 MACARTHUR BV NW 4577 MACARTHUR BV NW 4840 MACARTHUR BV NW 4550 MACARTHUR BV NW 5000 V ST NW 4540 MACARTHUR BV NW	1/4 - 1/2 SE 1/4 - 1/2 ESE 1/4 - 1/2 ESE 1/4 - 1/2 NNW 1/4 - 1/2 ESE 1/4 - 1/2 NW 1/4 - 1/2 ESE	6 B7 E20 F22 E23 25 G28	7 8 11 11 11 12 13
NATIONAL STONE ASSOCIATION CENTER FOR URBAN ECOLOGY SUN LOY CHAN 4840 MACARTHUR BV NW UNKNOWN SEITH D. SHULMAN	1415 ELLIOT PL NW 4598 MACARTHUR BV NW 4577 MACARTHUR BV NW 4840 MACARTHUR BV NW 4550 MACARTHUR BV NW 5000 V ST NW	1/4 - 1/2 SE 1/4 - 1/2 ESE 1/4 - 1/2 ESE 1/4 - 1/2 NNW 1/4 - 1/2 ESE 1/4 - 1/2 NW	6 B7 E20 F22 E23 25	7 8 11 11 11 12

Lower Elevation	Address	Dist / Dir	Map ID	Page
RIVERSIDE HOSPITAL	4460 MACARTHUR BLVD NW	1/2 - 1 ESE	J42	16

#### FEDERAL ASTM SUPPLEMENTAL

FINDS: The Facility Index System contains both facility information and "pointers" to other sources of information that contain more detail. These include: RCRIS; Permit Compliance System (PCS); Aerometric Information Retrieval System (AIRS); FATES (FIFRA [Federal Insecticide Fungicide Rodenticide Act] and TSCA Enforcement System, FTTS [FIFRA/TSCA Tracking System]; CERCLIS; DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes); Federal Underground Injection Control (FURS); Federal Reporting Data System (FRDS); Surface Impoundments (SIA); TSCA Chemicals in Commerce Information System (CICS); PADS; RCRA-J (medical waste transporters/disposers); TRIS; and TSCA. The source of this database is the U.S. EPA/NTIS.

A review of the FINDS list, as provided by EDR, and dated 10/23/2003 has revealed that there are 10 FINDS sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
W&J ASSOCIATE EXXON	4812 MACARTHURE BOULEVA	1/8 - 1/4 NNW	' A1	6
THE LAB SCHOOL OF WASHINGTON	4759 RESEVOIR ROAD NORT	1/4 - 1/2NNW	A10	8
PARKS FABRICARE CENTER	4826 MACARTHUR BLVD. N.	1/4 - 1/2NNW	12	9
ST. PATRICK S EPISCOPAL DAY SC	4700 WHITEHAVEN PARKWAY	1/4 - 1/2NE	D18	10
ST JOHNS CHILD DEVELOP CNTR	4880 MACARTHUR BLVD NW	1/4 - 1/2NNW	C21	11
BOULEVARD CITGO	4885 MACARTHUR BOULEVAR	1/4 - 1/2 NNW	F26	12
GWU MOUNT VERNON COLLEGE	2100 FOXHALL ROAD NW	1/4 - 1/2NNE	H31	14
GEORGETOWN VALET	1613 FOXHALL ROAD	1/4 - 1/2E	36	15
Lower Elevation	Address	Dist / Dir	Map ID	Page
FOXHALL CLEANERS GEORGETOWN DAY SCHOOL	<b>4590 MACARTHUR BLVD. N.</b> 4530 MACARTHUR BOULEVAR	<b>1/4 - 1/2 ESE</b> 1/4 - 1/2 ESE		<b>9</b> 15

FTTS: FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act) over the previous five years. To maintain currency, EDR contacts the Agency on a quarterly basis.

A review of the FTTS INSP list, as provided by EDR, and dated 10/16/2003 has revealed that there are 4 FTTS INSP sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
ST. PATRICKS EPISCOPAL DAY SCH ST PATRICKS EPISCOPAL DAY SCHO ST. PATRICK'S EPISCOPAL DAY SC	4706 WHITEHAVEN PARKWAY 4700 WHITEHAVEN PARKWAY 4700 WHITEHAVEN PARKWAY	1/4 - 1/2NE 1/4 - 1/2NE 1/4 - 1/2NE	D16 D17 D19	10 10 11
Lower Elevation	Address	Dist / Dir	Map ID	Page
GEORGETOWN DAY SCHOOL	4530 MACARTHUR BLVD NW	1/4 - 1/2ESE	G34	14

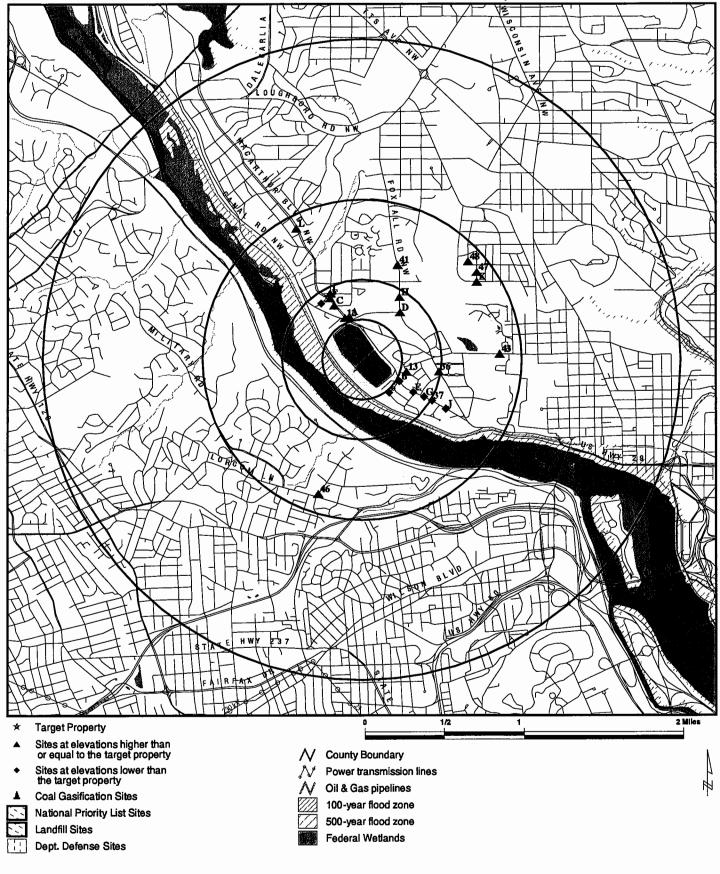
## **EDR PROPRIETARY HISTORICAL DATABASES**

See the EDR Proprietary Historical Database Section for details

Due to poor or inadequate address information, the following sites were not mapped:

Site Name	Database(s)
ARLINGTON COUNTY SCHOOL DISTRICT	FINDS, FTTS INSP
DINWIDDIE STREET MERCURY ASSESSMENT	CERCLIS, FINDS
EPIS. CHURCH HOME-SEVIER HOUSE	LUST
WASHINGTON NAVY YARD	LUST
MARFAIR JOINT VENTURE	LUST
CHEVRON	LUST
WMATA	LUST
WHOLESALE BAKERY	LUST
MATHEW MEMORIAL BAPTIST CHURCH	LUST
FIRE ENGINE COMPANY 25	LUST
AMOCO	LUST
SUNOCO - FORMER	LUST
LECKIE ELEMENTARY SCHOOL	LUST
BROWN JUNIOR HIGH SCHOOL	LUST
GEORGETOWN UNIVERSITY RYAN BUILDING	LUST
UPTOWN PARTNERS, LLC C/O METROPOLIS	LUST
ARLINGTON COUNTY HHW	RCRIS-SQG, FINDS
EXXON CO USA 25361	RCRIS-SQG
CHEVRON USA PRODUCTS C0#122172	RCRIS-SQG, FINDS
SYSTEMS PUBLICATIONS INCORPORATED	RCRIS-SQG, FINDS
WASHINGTON STUDIO SCHOOL	RCRIS-SQG, FINDS

# OVERVIEW MAP - 01122495.3r - CH2M Hill, Inc.



TARGET PROPERTY: ADDRESS: CITY/STATE/ZIP:

LAT/LONG:

Georgetown Reservoir Georgetown Reservoir Washington DC 20007 38.9121 / 77.0931 CUSTOMER: CONTACT: INQUIRY #:

DATE:

CH2M Hill, Inc. Jennifer Wilson 01122495.3r

February 02, 2004 7:20 pm

**DETAIL MAP - 01122495.3r - CH2M Hill, Inc.** FOXHALL ROWN DINGLNAW **♣**A10 LARGE HOOL OF WAS RESERVOIR AD MW KENMORE CHARLESTON TER NW 台至 B14 1/8 1/4 Miles **Target Property** Sites at elevations higher than or equal to the target property County Boundary Sites at elevations lower than Oil & Gas pipelines the target property 100-year flood zone Coal Gasification Sites 500-year flood zone Historical Gas Stations / Historical Dry Cleaners See the EDR Proprietary Historical Map Findings Federal Wetlands Sensitive Receptors National Priority List Sites Landfill Sites Dept. Defense Sites TARGET PROPERTY: **CUSTOMER:** CH2M Hill, Inc. Georgetown Reservoir Georgetown Reservoir ADDRESS: CONTACT: Jennifer Wilson

CITY/STATE/ZIP: LAT/LONG:

Washington DC 20007 38.9121 / 77.0931

INQUIRY#:

01122495.3r

DATE: February 02, 2004 7:22 pm 

# **MAP FINDINGS SUMMARY**

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	>1	Total Plotted
FEDERAL ASTM STANDARD	2							
NPL Proposed NPL CERCLIS CERC-NFRAP CORRACTS RCRIS-TSD RCRIS Lg. Quan. Gen. RCRIS Sm. Quan. Gen. ERNS		1.500 1.500 1.000 0.750 1.500 1.000 0.750 0.750 0.500	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 0 0 0 1 2 2	0 0 0 0 0 0 0 0 NR	0 0 NR NR 0 NR NR NR	0 0 0 0 0 0 1 3 2
STATE ASTM STANDARD								
State Haz. Waste LUST UST		N/A 1.000 0.750	N/A 0 0	N/A 2 2	N/A 4 13	N/A 10 4	N/A NR NR	N/A 16 19
FEDERAL ASTM SUPPLEME	NTAL							
CONSENT ROD Delisted NPL FINDS HMIRS MLTS MINES NPL Liens PADS US BROWNFIELDS DOD RAATS TRIS TSCA SSTS FTTS	IDDI EMENTAL	1.500 1.500 1.500 0.500 0.500 0.500 0.500 0.500 1.000 1.500 0.500 0.500 0.500		0 0 0 1 0 0 0 0 0 0 0	0 0 0 9 0 0 0 0 0 0 0	0 0 0 R RR 0 RR 0 0 RR RR NR 0 NR	0 0 0 NR	0 0 10 0 0 0 0 0 0 0
STATE OR LOCAL ASTM SU	IPPLEMENTAL							
AST EDR PROPRIETARY HISTOR	NOAL DATAS	0.500	0	0	0	NR	NR	0
		_						
Gas Stations/Dry Cleaners Coal Gas		0.250 1.500	0 0	5 0	NR 0	NR 0	NR 0	5 0
BROWNFIELDS DATABASES	<u>s</u>							
US BROWNFIELDS		1.000	0	0	0	0	NR	0

# **MAP FINDINGS SUMMARY**

Search

Target Di Property (M

Distance (Miles)

< 1/8 1/8 - 1/4

1/4 - 1/2

1/2 - 1 > 1

Total Plotted

NOTES:

Database

See the EDR Proprietary Historical Database Section for details

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

N/A = This State does not maintain a SHWS list. See the Federal CERCLIS list.

Map ID Direction Distance Distance (ft.)

Elevation Site

Database(s)

**EDR ID Number EPA ID Number** 

**A1** NNW **W&J ASSOCIATE EXXON** 4812 MACARTHURE BOULEVARD NORTHWEST **RCRIS-SQG** 

1000495670 DCD983969007 **FINDS** 

1/8-1/4

WASHINGTON, DC 20007

1241 ft.

Site 1 of 9 in cluster A

Relative: Higher

RCRIS:

Owner:

PROPERTY OWNER EXXON CORP

Actual: 154 ft.

(281) 296-3579 DCD983969007

EPA ID: Contact:

WILLIAM COOK (202) 337-3144

Classification:

Conditionally Exempt Small Quantity Generator

TSDF Activities: Not reported

**BIENNIAL REPORTS:** 

Last Biennial Reporting Year: 2001

**Waste** 

Quantity (Lbs)

Waste

Quantity (Lbs)

D001

2224.08

D018

2224.08

Violation Status: Violations exist

Regulation Violated:

262.41

Area of Violation:

GENERATOR-RECORDKEEPING REQUIREMENTS 04/04/1994

**Date Violation Determined:** Actual Date Achieved Compliance:

04/18/1994

**Enforcement Action:** 

WRITTEN INFORMAL

**Enforcement Action Date:** 

04/04/1994

Penalty Type:

Not reported

There are 1 violation record(s) reported at this site:

Evaluation

Area of Violation

Date of Compliance

Non-Financial Record Review

GENERATOR-RECORDKEEPING REQUIREMENTS

19940418

FINDS:

Other Pertinent Environmental Activity Identified at Site:

AIRS/AIRS Facility Subystem (AIRS/AFS)

Resource Conservation and Recovery Act Information system (RCRAINFO)

**EXXON #21717 A2** NNW

LUST \$103817094

1/8-1/4 1241 ft. 4812 MACARTHUR BLVD., NW **WASHINGTON DC, DC** 

N/A

Site 2 of 9 in cluster A

Relative: Higher

LUST:

Case Number:

96104

Actual: 154 ft.

Facility Status: Facility Type:

CLOSED Gas Station

Quadrant:

NW

Map ID Direction Distance Distance (ft.) Elevation Site

Database(s)

EDR ID Number **EPA ID Number** 

S100521393

U003294459

N/A

UST U003054834

N/A

U003764117

N/A

N/A

LUST

UST

UST

A3 **EXXON** NNW

4812 MACARTHUR BLVD, NW

1/8-1/4

**WASHINGTON DC, DC** 

1241 ft.

Site 3 of 9 in cluster A

Relative: Higher

LUST:

Case Number:

88014 **CLOSED** 

Actual: 154 ft.

Facility Status: Facility Type:

Gas Station

Quadrant:

NW

Case Number:

93059 CLOSED

Facility Status: Facility Type:

Gas Station

Quadrant:

NW

Α4 NNW 1/8-1/4 EXXON S/S #2-1717 **4812 MACARTHUR BV NW WASHINGTON DC, DC 80228** 

1241 ft.

Site 4 of 9 in cluster A

Relative: Higher

UST:

Facility ID: 3000337

Actual: 154 ft.

**EXXON MOBIL CORPORATION** 

DCFD ENGINE CO. #29 **A5** NNW **4811 MACARTHUR BV NW** WASHINGTON DC, DC 20001

Owner:

1/8-1/4 1245 ft.

Site 5 of 9 in cluster A

Relative:

Higher

UST:

Facility ID: Owner:

3000300

Actual:

DC FIRE DEPARTMENT

155 ft.

NATIONAL STONE ASSOCIATION

SE 1/4-1/2 1415 ELLIOT PL NW

1405 ft.

**WASHINGTON DC, DC 20007** 

Relative:

Actual: 124 ft.

UST:

Facility ID: Lower

Owner:

NATIONAL STONE ASSOCIATION

TC01122495.3r Page 7

MAP FINDINGS Map ID Direction Distance Distance (ft.) **EDR ID Number** Elevation Database(s) **EPA ID Number** В7 UST U002110308 **CENTER FOR URBAN ECOLOGY ESE 4598 MACARTHUR BV NW** N/A 1/4-1/2 **WASHINGTON DC, DC 20008** 1424 ft. Site 1 of 2 in cluster B Relative: UST: Lower Facility ID: 3005513 DOI-NPS - ROCK CREEK PARK Owner: Actual: 139 ft. **TOWNHOUSE** U003294486 **A8** NNW **4836 MACARTHUR BV NW** N/A 1/4-1/2 **WASHINGTON DC, DC 20816** 1435 ft. Site 6 of 9 in cluster A Relative: UST: Higher Facility ID: 3004182 Owner: JOHN E KERN REVOCABLE TRUST Actual: 155 ft. Δ9 **MACARTHUR BOULEVARD APARTMENTS** UST U003763810 **NNW 4858 MACARTHUR BV NW** N/A 1/4-1/2 **WASHINGTON DC, DC 20814** 1446 ft. Site 7 of 9 in cluster A Relative: UST: Higher Facility ID: 3004180 Owner: ALVIN L. AUBINOE, INC. Actual: 155 ft. THE LAB SCHOOL OF WASHINGTON **FINDS** 1006286932 A10 **4759 RESEVOIR ROAD NORTH WEST** 110011774730 NNW 1/4-1/2 **WASHINGTON, DC 20007** 1448 ft. Site 8 of 9 in cluster A Relative: FINDS: Higher Other Pertinent Environmental Activity Identified at Site: Integrated Compliance Information System (ICIS) Actual: 162 ft. National Compliance Database (NCDB)

**OUR LADY OF VICTORY CHURCH** UST U002109682 4835 MACARTHUR BOULEVARD NW N/A

NNW 1/4-1/2

1483 ft.

A11

**WASHINGTON DC, DC 20007** 

Site 9 of 9 in cluster A

Relative: Higher

UST:

Facility ID:

3000015

Actual: 165 ft.

Owner:

**OUR LADY OF VICTORY CHURCH** 

TC01122495.3r Page 8

Map ID MAP FINDINGS

Direction Distance Distance (ft.)

Elevation

Database(s)

**EDR ID Number EPA ID Number** 

12 NNW

**PARKS FABRICARE CENTER** 4826 MACARTHUR BLVD. N.W. WASHINGTON, DC 20007

**FINDS** 

**ERNS** 

RCRIS-SQG

**FINDS** 

1005525537 110002010779

98443631

1000239137

DCD116201476

N/A

1/4-1/2 1489 ft.

FINDS:

Relative: Higher

Other Pertinent Environmental Activity Identified at Site:

AIRS/AIRS Facility Subystem (AIRS/AFS)

Actual:

155 ft.

13 **ESE** 

**4560 INDIAN ROCK TERRACE NW 4560 INDIAN ROCK TERRACE NW** 

1/4-1/2 1525 ft. **WASHINGTON, DC** 

Relative: Higher

The ERNS database may contain additional details for this site.

Please click here or contact your EDR Account Executive for more information.

Actual: 192 ft.

**B14** ESE **FOXHALL CLEANERS** 

4590 MACARTHUR BLVD. N.W. 1/4-1/2 WASHINGTON, DC 20007

1612 ft.

Site 2 of 2 in cluster B

Relative: Lower

RCRIS:

Owner: **BUZZANCA, ANTHONY** (215) 555-1212

Actual: 134 ft.

EPA ID:

DCD116201476

Contact:

ANTHONY BUZZANCA

(202) 333-5556

Classification:

Small Quantity Generator

TSDF Activities: Not reported

Violation Status: No violations found

FINDS:

Other Pertinent Environmental Activity Identified at Site:

AIRS/AIRS Facility Subystem (AIRS/AFS)

Resource Conservation and Recovery Act Information system (RCRAINFO)

MAP FINDINGS Map iD

Direction Distance Distance (ft.)

Elevation Site

Database(s)

**EDR ID Number** EPA ID Number

C15 NNW 4865 MACARTHUR BLVD **4865 MACARTHUR BLVD WASHINGTON DC (County), DC** 

**ERNS** 8863542 N/A

1/4-1/2 1776 ft.

Site 1 of 2 in cluster C

Relative:

Higher

The ERNS database may contain additional details for this site.

Please click here or contact your EDR Account Executive for more information.

Actual: 157 ft.

D16

ST. PATRICKS EPISCOPAL DAY SCHOOL

FTTS INSP 1006967826 N/A

NE 1/4-1/2 **WASHINGTON, DC 20007** 

**4706 WHITEHAVEN PARKWAY NW** 

1932 ft.

Site 1 of 4 in cluster D

Relative: Higher

FTTS Insp:

Region:

03

Actual: 240 ft. Insp Number:

Inspected Date: 3/18/1999 0:00:00 19990318R3005 3

Violation occurred: Inspector:

No **BOYER** 

User

Investigation Type:

AHERA, Enforcement, SEE Conducted

Facility Function: Investig Reason: Legislation Code:

Not reported **TSCA** 

**D17** NE

ST PATRICKS EPISCOPAL DAY SCHOOL 4700 WHITEHAVEN PARKWAY, NW

**FTTS INSP** 1006967645 N/A

1/4-1/2 2000 ft. WASHINGTON, DC 20007

Relative:

Site 2 of 4 in cluster D

Higher

FTTS Insp: Region:

03

Actual: 242 ft.

Inspected Date: Insp Number:

3/29/1999 0:00:00 19990329R3005 2

Violation occurred: Inspector:

Nο **BOYER** 

Investigation Type: Facility Function:

AHERA, Enforcement, SEE Conducted

Investig Reason: Legislation Code: User Not reported **TSCA** 

D18 NE

ST. PATRICK S EPISCOPAL DAY SCHOOL **4700 WHITEHAVEN PARKWAY NORTH WEST**  **FINDS** 1004456137 110011530003

1/4-1/2 2000 ft. **WASHINGTON, DC 20007** 

Site 3 of 4 in cluster D

Relative: Higher

FINDS:

Other Pertinent Environmental Activity Identified at Site:

Actual: 242 ft.

National Compliance Database (NCDB)

Map ID Direction Distance Distance (ft.) Elevation

Database(s)

**FTTS INSP** 

**EDR ID Number EPA ID Number** 

D19 NE

ST. PATRICK'S EPISCOPAL DAY SCHOOL 4700 WHITEHAVEN PARKWAY, NW

1/4-1/2 **WASHINGTON, DC 20007** 

2000 ft.

Site 4 of 4 in cluster D

Relative: Higher

FTTS Insp:

Region:

03 6/7/1993 0:00:00

Actual: 242 ft.

Inspected Date: Insp Number:

19930607R3005 1 No

Violation occurred: Inspector:

**BOYER** 

Investigation Type: Facility Function:

AHERA, Enforcement, SEE Conducted User

Investig Reason: Legislation Code:

Not reported **TSCA** 

E20 **ESE** 

**SUN LOY CHAN** 

**4577 MACARTHUR BV NW WASHINGTON DC, DC 20007** 1/4-1/2

2007 ft.

Site 1 of 3 in cluster E

Relative: Lower

UST:

Facility ID: Owner:

3004196

Actual: 125 ft.

**SUN LOY CHAN** 

C21 NNW

ST JOHNS CHILD DEVELOP CNTR **4880 MACARTHUR BLVD NW** WASHINGTON, DC 20007

1/4-1/2 2011 ft.

Site 2 of 2 in cluster C

Relative:

FINDS: Higher

Other Pertinent Environmental Activity Identified at Site: Integrated Compliance Information System (ICIS) Actual:

148 ft.

National Compliance Database (NCDB)

F22 NNW 1/4-1/2

**4840 MACARTHUR BV NW 4840 MACARTHUR BV NW WASHINGTON DC, DC 20016** 

2086 ft.

Site 1 of 3 in cluster F

Relative: Lower

UST:

Facility ID: Owner:

9000311

Actual: 139 ft.

**ESE** 

TRUST UNDER WILL OF JOHN C PYLES

**E23** 

UNKNOWN

**4550 MACARTHUR BV NW WASHINGTON DC, DC 20816** 

1/4-1/2 2271 ft.

Site 2 of 3 in cluster E

Relative: Lower

UST: Facility ID:

3004200

Actual: 118 ft.

Owner:

**LELAND PHILLIPS ETAL** 

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N/A

1006967825

U003055019

1004456350

110010788852

U003764104

N/A

UST U003055023

N/A

N/A

UST

**FINDS** 

UST

Map ID Direction Distance Distance (ft.)

Elevation Site

Database(s)

LUST

UST

**RCRIS-SQG** 

**FINDS** 

UST

EDR ID Number **EPA ID Number** 

**UNKNOWN** (Continued)

U003055023

S100008069

U002109996

1000495579

DCD983967878

N/A

N/A

E24 **ESE**  RIVERSIDE APARTMENTS 4550 MACARTHUR BLUVARD, NW

1/4-1/2 2271 ft. **WASHINGTON DC, DC** 

Site 3 of 3 in cluster E

Relative: Lower

LUST:

Case Number: Facility Status: Facility Type:

90057 CLOSED Other NW

Actual: 118 ft.

25 NW

**SEITH D. SHULMAN** 5000 V ST NW

Quadrant:

1/4-1/2 **WASHINGTON DC, DC 20007** 

2293 ft.

Relative:

UST:

Lower

Facility ID: 3003830

Owner:

SEITH D. SHULMAN

Actual: 121 ft.

F26

**WNN** 1/4-1/2 4885 MACARTHUR BOULEVARD NORTHWEST WASHINGTON, DC 20007

2294 ft.

Site 2 of 3 in cluster F

**BOULEVARD CITGO** 

Relative: Higher

RCRIS:

Owner:

MACARTHUR LAND CO INC

Small Quantity Generator

Actual: 153 ft.

EPA ID:

(202) 338-3039 DCD983967878

Contact:

Not reported

Classification:

TSDF Activities: Not reported

Violation Status: Violations exist

Regulation Violated:

262.41

Area of Violation:

GENERATOR-RECORDKEEPING REQUIREMENTS

Date Violation Determined:

04/04/1994

Actual Date Achieved Compliance:

04/18/1994

**Enforcement Action:** 

WRITTEN INFORMAL

**Enforcement Action Date:** 

04/04/1994

Penalty Type:

Not reported

There are 1 violation record(s) reported at this site:

Evaluation

Area of Violation

Date of Compliance

Non-Financial Record Review

GENERATOR-RECORDKEEPING REQUIREMENTS

19940418

Map ID Direction Distance Distance (ft.) Elevation Site

Database(s)

**EDR ID Number EPA ID Number** 

**BOULEVARD CITGO (Continued)** 

1000495579

LUST \$104918735

N/A

U003764187

N/A

LUST \$103816940

N/A

FINDS:

Other Pertinent Environmental Activity Identified at Site:

AIRS/AIRS Facility Subystem (AIRS/AFS)

Resource Conservation and Recovery Act Information system (RCRAINFO)

UST:

Facility ID:

3000204

Owner:

WOODROW M ROYCE T/A BLVD CITGO

F27 WNN 1/4-1/2 FORMER CHEVRON USA INC 4885 MACARTHUR BLVD, NW

**WASHINGTON DC, DC** 

2294 ft.

Site 3 of 3 in cluster F

Relative: Higher

Actual:

Case Number:

Facility Status:

99075 **OPEN** Facility Type: Gas Station

153 ft. Quadrant:

NW

**G28 ESE**  THE PALISADES

4540 MACARTHUR BV NW WASHINGTON DC, DC 92692

1/4-1/2 2394 ft.

Site 1 of 3 in cluster G

Relative:

Lower

UST:

Facility ID: 9000400

Actual:

JAMES CARONE TRUST

99066

118 ft.

H29 **MOUNT VERNOS COLLEGE** NNE 2100 FOXHALL ROAD, NW

Owner:

1/4-1/2

WASHINGTON DC, DC

2412 ft.

Site 1 of 3 in cluster H

Relative: Higher

LUST:

Case Number: Facility Status: Actual:

CLOSED Facility Type: University NW

271 ft.

Quadrant:

H30 NNE

2100 FOXHALL RD NW **WASHINGTON DC, DC 20052** 

1/4-1/2 2412 ft.

MT. VERNON COLLEGE

Site 2 of 3 in cluster H

Relative: Higher

UST:

Facility ID:

3001530

Actual: 271 ft.

Owner:

THE GEORGE WASHINGTON UNIVERSITY

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UST

UST U002109811

N/A

Map ID Direction Distance Distance (ft.)

Elevation Site

Database(s)

**RCRIS-LQG** 

**FINDS** 

**EDR ID Number EPA ID Number** 

**H31 NNE** 1/4-1/2 **GWU MOUNT VERNON COLLEGE** 2100 FOXHALL ROAD NW **WASHINGTON, DC 20007** 

1004681863 DCR000002204

2412 ft.

Site 3 of 3 in cluster H

Relative: Higher

RCRIS:

Owner:

GEORGE WASHINGOTN UNIVERSITY

Actual:

(202) 994-3265 DCR000002204

271 ft.

EPA ID:

Contact:

Not reported

Classification:

Large Quantity Generator

TSDF Activities: Not reported

Violation Status: No violations found

FINDS:

Other Pertinent Environmental Activity Identified at Site:

Resource Conservation and Recovery Act Information system (RCRAINFO)

132 NNW 1/4-1/2 2428 ft. DC PUBLIC LIBRARY 4901 V STREET, NW **WASHINGTON DC, DC** 

LUST S105738236

N/A

U003885958

N/A

Site 1 of 2 in cluster I

Relative: Higher

LUST:

Case Number:

2002085

Actual: 164 ft.

Facility Status:

CLOSED DC Govt - other

Facility Type: Quadrant:

NW

**PALISADES PUBLIC LIBRARY** 

NNW

4901 V ST NW

1/4-1/2

**WASHINGTON DC, DC 20001** 

2428 ft.

133

Site 2 of 2 in cluster I

Relative: Higher

UST:

Facility ID: Owner:

9000575

Actual:

164 ft.

D.C. PUBLIC LIBRARY

G34 ESE **GEORGETOWN DAY SCHOOL 4530 MACARTHUR BLVD NW** 

**FTTS INSP** 1006947855 N/A

UST

1/4-1/2 2556 ft. WASH, DC 20007

Relative:

Site 2 of 3 in cluster G

Lower

FTTS Insp:

03

Actual: 116 ft.

Region: Inspected Date:

1/12/1999 0:00:00 19990112R3005 1

Insp Number: Violation occurred:

No

Inspector:

**BOYER** 

Investigation Type:

AHERA, Enforcement, SEE Conducted

Facility Function: Investig Reason:

User Not reported

Legislation Code:

**TSCA** 

Map ID Direction Distance Distance (ft.) Elevation

Site

Database(s)

**EDR ID Number EPA ID Number** 

**GEORGETOWN DAY SCHOOL (Continued)** 

1006947855

**G35 ESE** 

**GEORGETOWN DAY SCHOOL 4530 MACARTHUR BOULEVARD NW**  **FINDS** 1005624807 110011893282

1/4-1/2

WASHINGTON, DC 20007

2556 ft.

Site 3 of 3 in cluster G

Relative: Lower

FINDS:

Other Pertinent Environmental Activity Identified at Site:

Actual: 116 ft.

National Compliance Database (NCDB)

36 East

**GEORGETOWN VALET 1613 FOXHALL ROAD** WASHINGTON, DC 20007

**FINDS** 1005525542 110002007578

1/4-1/2 2582 ft.

FINDS:

Relative: Higher

Other Pertinent Environmental Activity Identified at Site:

AIRS/AIRS Facility Subystem (AIRS/AFS)

Actual: 160 ft.

37 **ESE** 1/2-1 **4520 MACARTHUR BLVD 4520 MACARTHUR BV NW WASHINGTON DC, DC 20007** 

U003055016 UST

N/A

2685 ft.

Relative:

UST:

Lower

Facility ID:

3004191

Owner:

DONALD HARLAND

Actual: 115 ft.

J38 **ESE** 

HANNAH HARRISON SCHOOL 4470 MACARTHUR BLVD., NW **WASHINGTON DC, DC** 

LUST S102834989 N/A

1/2-1 3217 ft.

Site 1 of 4 in cluster J

Relative: Lower

LUST:

Case Number: Facility Status: Facility Type:

Quadrant:

91056 CLOSED University

Actual: 107 ft.

NW

Map ID MAP FINDINGS Direction Distance Distance (ft.) Elevation Site Database(s) J39 HARRISON CTR FOR CAREER EDUCATION UST 4470 MACARTHUR BV NW **ESE** 1/2-1 WASHINGTON DC, DC 20000 3261 ft. Site 2 of 4 in cluster J Relative: UST: Lower Facility ID: HARRISON CTR FOR CAREER EDUCATION Actual: Owner: 107 ft. J40 LUST U002110028 **PSYCHIATRIC INSTITUTE ESE** 4460 MACARTHUR BLVD., NW 1/2-1 **WASHINGTON DC, DC 20007** 3283 ft. Site 3 of 4 in cluster J Relative: LUST: Lower 96004 Case Number: Actual: Facility Status: **CLOSED** 107 ft. Facility Type: Other Quadrant: NW 41 **CAFRITZ MANSION NNE** 2301 FOXHALL RD NW 1/2-1 **WASHINGTON DC, DC 20006** 

UST U003054879 N/A

3341 ft.

Relative:

UST:

Higher

Facility ID: 3001529

Owner:

**MORRIS & GWEN CAFRITZ FOUNDATION** 

Actual: 332 ft.

J42 **RIVERSIDE HOSPITAL** UST U003763811 4460 MACARTHUR BLVD NW **ESE** N/A

1/2-1

**WASHINGTON DC, DC 20016** 

3362 ft.

Site 4 of 4 in cluster J

Relative: Lower

Facility ID:

3004193

Actual: 107 ft.

Owner:

UST:

FIRST MANAGEMENT GROUP INC.

43

**FRENCH EMBASSY** 

East 4101/3915 RESERVOIR RD, NW 1/2-1 **WASHINGTON DC, DC 20007** 

4562 ft.

Relative:

LUST:

Case Number: Higher

92091 Facility Status: CLOSED

Actual:

Facility Type:

Commercial

150 ft.

Quadrant:

NW

U003055093

N/A

LUST

**EDR ID Number EPA ID Number** 

U002109728

N/A

N/A

Map ID Direction Distance Distance (ft.) Elevation

Database(s)

**EDR ID Number EPA ID Number** 

FRENCH EMBASSY (Continued)

U003055093

K44 NE

**PLYLMAR PLAZA CONDO** 4100 W STREET, NW WASHINGTON DC, DC

LUST S103817061 N/A

LUST S103817063

LUST S104407342

N/A

N/A

1/2-1 4589 ft.

Site 1 of 2 in cluster K

Relative: Higher

LUST:

Case Number: Facility Status: 99076 CLOSED Residential

Actual: 296 ft.

Facility Type: Quadrant:

NW

K45 NE

**BERNSTEIN MANAGEMENT** 4101 W STREET, NW **WASHINGTON DC, DC** 

1/2-1 4589 ft.

Site 2 of 2 in cluster K

Relative: Higher

LUST:

Case Number: Facility Status:

95085 CLOSED

Actual: 296 ft.

Facility Type: Quadrant:

Other NW

46 SSW **WOODMONT CENTER** 

2422 NORTH FILLMORE STREET

4650 ft.

1/2-1 ARLINGTON, VA 22207

Relative: Higher

LUST Region NO:

Facility ID: Pollution Complaint #:

3900246 98-3762

Actual: 231 ft.

Priority: Release Date:

Status: Closed Date: Permit Number: Tank Size:

Product: Cas Type: Case Officer: Region:

8/13/98 Not reported

Not reported

05/15/1998

Closed

8,000 heating oil Article 11 Lewis E. Hilder Northern

47

**POLINGER & SHANNON & LUCHS** 

NE 2315 40TH PLACE, NW 1/2-1 **WASHINGTON DC, DC** 

4775 ft.

Relative:

Higher

LUST:

Case Number:

Facility Status: Facility Type:

CLOSED Commercial

99037

Actual: 303 ft.

Quadrant:

NW

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LUST S105890760

N/A

Map ID Direction Distance Distance (ft.) Elevation

Site

Database(s)

**EDR ID Number EPA ID Number** 

POLINGER & SHANNON & LUCHS (Continued)

S105890760

48 NE PARK CREST APPARTMENTS

LUST S103816967 N/A

LUST 1001276810

LUST \$104918752

N/A

N/A

1/2-1

**2324 41ST STREET, NW WASHINGTON DC, DC** 

4782 ft.

Relative:

LUST:

Case Number: Facility Status: 93099

Higher Actual:

Facility Type:

CLOSED Other

267 ft.

Quadrant:

NW

L49 NNW **AMOCO** 

5101 MACARTHUR BLVD. NW WASHINGTON DC, DC 20016

1/2-1 4786 ft.

Site 1 of 2 in cluster L

Relative: Higher

LUST:

Case Number:

91073

Actual: 159 ft.

Facility Status:

**CLOSED** 

Facility Type:

Gas Station

Quadrant:

NW

L50

**APT BUILDING** 

NNW 1/2-1 5112 MACARTHUR BOULEVARD, NW

**WASHINGTON DC, DC** 

4848 ft.

Site 2 of 2 in cluster L

Relative: Higher

LUST:

Case Number: Facility Status: 99067 NFA

Actual: 153 ft.

Facility Type:

Residential NW

Quadrant:



# The EDR Radius Map with GeoCheck®

Dalecarlia Reservoir Dalecarlia Reservoir Washington, DC 20016

Inquiry Number: 01122495.5r

February 03, 2004

# The Source For Environmental Risk Management Data

3530 Post Road Southport, Connecticut 06890

**Nationwide Customer Service** 

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Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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A search of available environmental records was conducted by Environmental Data Resources, Inc. (EDR). The report meets the government records search requirements of ASTM Standard Practice for Environmental Site Assessments, E 1527-00. Search distances are per ASTM standard or custom distances requested by the user.

#### TARGET PROPERTY INFORMATION

## **ADDRESS**

DALECARLIA RESERVOIR WASHINGTON, DC 20016

## **COORDINATES**

Latitude (North):

38.940500 - 38° 56' 25.8"

Longitude (West): 77.11230 Universal Tranverse Mercator: Zone 18

77.112300 - 77° 6' 44.3"

UTM X (Meters): UTM Y (Meters):

316925.7 4312087.5

Elevation:

153 ft. above sea level

#### USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

**Target Property:** 

38077-H1 WASHINGTON WEST, DC MD VA

Source:

USGS 7.5 min quad index

## **TARGET PROPERTY SEARCH RESULTS**

The target property was identified in the following government records. For more information on this property see page 6 of the attached EDR Radius Map report:

Site	Database(s)	EPA ID
DALECARLIA WTP	UST	N/A
5900 MACARTHUR BV NW		
WASHINGTON DC, DC 20016		
DALECARLIA WATER TREATMENT PLANT	LUST	N/A
5900 MACARTHUR BLVD., NW	2001	19/7
WASHINGTON DC. DC		

# **DATABASES WITH NO MAPPED SITES**

No mapped sites were found in EDR's search of available ( "reasonably ascertainable ") government records either on the target property or within the ASTM E 1527-00 search radius around the target property for the following databases:

# FEDERAL ASTM STANDARD

NPL...... National Priority List

Proposed NPL..... Proposed National Priority List Sites

CERCLIS....... Comprehensive Environmental Response, Compensation, and Liability Information

System

CORRACTS...... Corrective Action Report

ERNS..... Emergency Response Notification System

STATE ASTM STANDARD

SHWS.......This state does not maintain a SHWS list. See the Federal CERCLIS list and

Federal NPL list.

FEDERAL ASTM SUPPLEMENTAL

CONSENT...... Superfund (CERCLA) Consent Decrees

ROD...... Records Of Decision

RAATS.......RCRA Administrative Action Tracking System
TRIS.......Toxic Chemical Release Inventory System

TSCA..... Toxic Substances Control Act

SSTS...... Section 7 Tracking Systems

FTTS INSP......FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, &

. Rodenticide Act)/TSCA (Toxic Substances Control Act)

STATE OR LOCAL ASTM SUPPLEMENTAL

AST.....List of Aboveground Storage Tanks

**EDR PROPRIETARY HISTORICAL DATABASES** 

Coal Gas ..... Former Manufactured Gas (Coal Gas) Sites

**BROWNFIELDS DATABASES** 

US BROWNFIELDS..... A Listing of Brownfields Sites

#### **SURROUNDING SITES: SEARCH RESULTS**

Surrounding sites were identified.

Elevations have been determined from the USGS Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified. Sites with an elevation equal to or higher than the target property have been differentiated below from sites with an elevation lower than the target property.

Page numbers and map identification numbers refer to the EDR Radius Map report where detailed data on individual sites can be reviewed.

Sites listed in bold italics are in multiple databases.

Unmappable (orphan) sites are not considered in the foregoing analysis.

#### FEDERAL ASTM STANDARD

CERCLIS-NFRAP: As of February 1995. CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund Action or NPL consideration. EPA has removed approximately 25,000 NFRAP sites to lift the unintended barriers to the redevelopment of these properties and has archived them as historical records so EPA does not needlessly repeat the investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens to promote economic redevelopment of unproductive urban sites.

A review of the CERC-NFRAP list, as provided by EDR, and dated 11/17/2003 has revealed that there is 1 CERC-NFRAP site within approximately 0.75 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
SIBLEY MEMORIAL HOSPITAL	5255 LOUGHBORO RD NW	1/4 - 1/2SSE	<i>B5</i>	8

RCRIS: Resource Conservation and Recovery Information System. RCRIS includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs): generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs): generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs): generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

A review of the RCRIS-SQG list, as provided by EDR, and dated 12/10/2003 has revealed that there are 5 RCRIS-SQG sites within approximately 0.75 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
NATIONAL IMAGERY AND MAPPING A	6000 MACARTHUR BOULEVAR	1/8 - 1/4NW	C9	8
SIBLEY MEMORIAL HOSPITAL	5255 LOUGHBORO RD NW	1/4 - 1/2SSE		8
EXXON RAS 26200	6100 MACARTHUR BLVD	1/4 - 1/2NW		12
NIMA	4600 SANGAMORE ROAD # D	1/2 - 1 NNW	18	15
MOBIL OIL CORP SS# GD8	2084 CHAI BRIDGE RD	1/2 - 1 SW		15

#### STATE ASTM STANDARD

**LUST:** The Leaking Underground Storage Tank Incident Reports contain an inventory of reported leaking underground storage tank incidents. The data come from the Department of Consumer and Regulatory Affairs' District of Columbia LUST Cases list.

A review of the LUST list, as provided by EDR, and dated 10/03/2003 has revealed that there are 5 LUST sites within approximately 1 mile of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
EXXON	5443 MACARTHUR BLVD, NW	1/2 - 1 SSE	21	16

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
EXXONMOBIL CORP #25669	4866 MASSACHUSETTS AVE	1/2 - 1 ENE	F22	17
EXXON CO USA RAS#27834	4861 MASSACHUSETTS AVE	1/2 - 1 ENE	F23	17
CHEVRON	4861 MASSACHUSETTS AVEN	1/2 - 1 ENE	F24	18
RIGGS NATIONAL BANK OF WASH.	4835 MASSACHUSETTS AVE.	1/2 - 1 ENE	F25	18

**UST:** The Underground Storage Tank database contains registered USTs. USTs are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA). The data come from the Department of Consumer & Regulatory Affairs' D.C. UST Database List.

A review of the UST list, as provided by EDR, and dated 10/03/2003 has revealed that there are 5 UST sites within approximately 0.75 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
SIBLEY MEMORIAL HOSPITAL	5255 LOUGHBORO RD NW	1/4 - 1/2SSE	<b>B</b> 5	8
JAMES M. MURPHY, JR.	4902 PALISADE LA NW	1/4 - 1/2SE	12	13
ELIZABETH WILLIAMS	4070 52ND ST NW	1/2 - 1 ENE	14	14
LETIZIA AMADINI & ANTONIO CITT	4208 50TH ST NW	1/2 - 1 ENE	19	16
JOHN F CARR	5070 MILLWOOD LN NW	1/2 - 1 SE	20	16

# FEDERAL ASTM SUPPLEMENTAL

FINDS: The Facility Index System contains both facility information and "pointers" to other sources of information that contain more detail. These include: RCRIS; Permit Compliance System (PCS); Aerometric Information Retrieval System (AIRS); FATES: (FIFRA [Federal Insecticide Fungicide Rodenticide Act] and TSCA Enforcement System, FTTS [FIFRA/TSCA Tracking System]; CERCLIS; DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes); Federal Underground Injection Control (FURS); Federal Reporting Data System (FRDS); Surface Impoundments (SIA); TSCA Chemicals in Commerce Information System (CICS); PADS; RCRA-J (medical waste transporters/disposers); TRIS; and TSCA. The source of this database is the U.S. EPA/NTIS.

A review of the FINDS list, as provided by EDR, and dated 10/23/2003 has revealed that there are 4 FINDS sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
NATIONAL IMAGERY AND MAPPING A	6000 MACARTHUR BOULEVAR	1/8 - 1/4 NW	4	8
SIBLEY MEMORIAL HOSPITAL EXXON RAS 26200	<i>5255 LOUGHBORO RD NW 6100 MACARTHUR BLVD</i>	1/4 - 1/2SSE 1/4 - 1/2NW	B5 C9	8 12
OVERLOOK COMMUNITY POOL	4406 BOX WOOD ROAD	1/4 - 1/2NNE	11	13

**HMIRS:** The Hazardous Materials Incident Report System contains hazardous material spill incidents reported to the Department of Transportation. The source of this database is the U.S. EPA.

A review of the HMIRS list, as provided by EDR, and dated 08/11/2003 has revealed that there is 1 HMIRS site within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
Not reported	4419 CHALFONT PLACE	1/4 - 1/2N	10	13

**MLTS:** The Material Licensing Tracking System is maintained by the Nuclear Regulatory Commission and contains a list fo approximately 8,100 sites which possess or use radioactive materials and are subject to NRC licensing requirements.

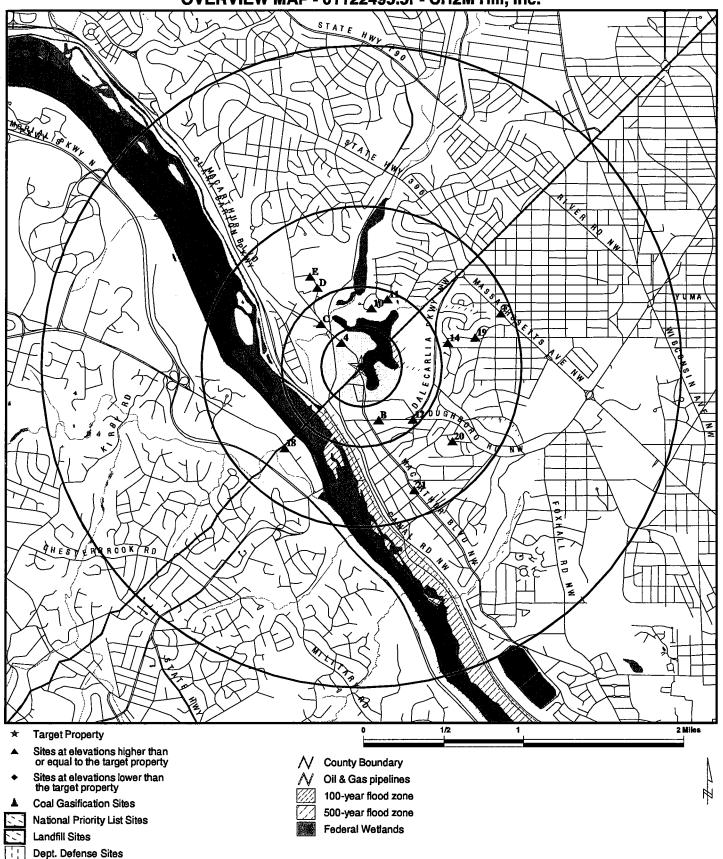
A review of the MLTS list, as provided by EDR, and dated 10/16/2003 has revealed that there are 2 MLTS sites within approximately 0.5 miles of the target property.

Equal/Higher Elevation	Address	Dist / Dir	Map ID	Page
SIBLEY MEMORIAL HOSPITAL	5255 LOUGHBORO ROAD, NW	1/4 - 1/2SSE		10
SIBLEY MEMORIAL HOSPITAL	5255 LOUGHBORO ROAD N.W	1/4 - 1/2SSE		10

Due to poor or inadequate address information, the following sites were not mapped:

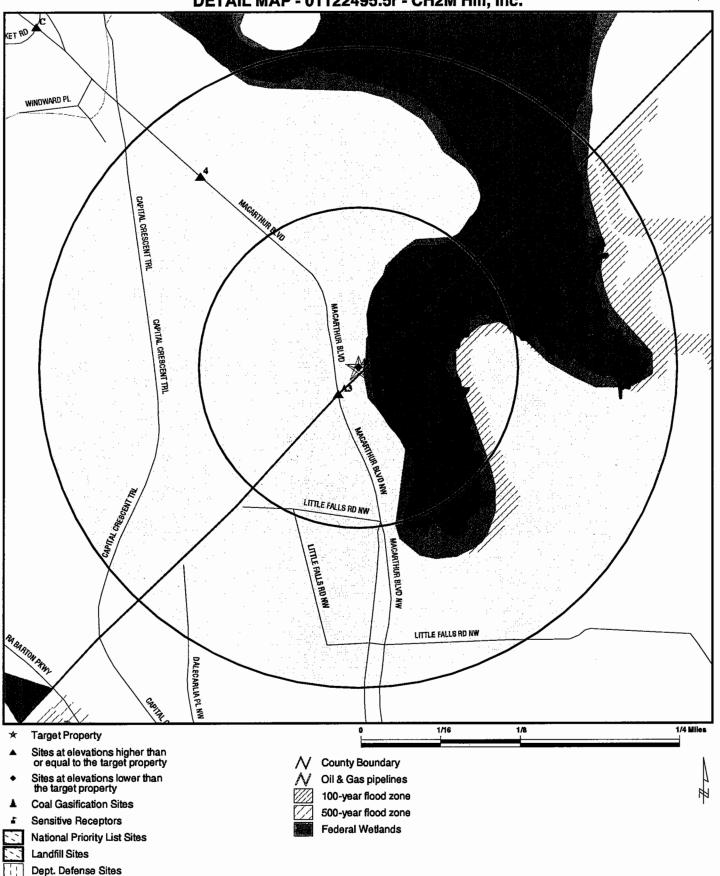
Site Name	Database(s)
ST JOHNS DEVELOPMENT CTR	FTTS INSP
DINWIDDIE STREET MERCURY ASSESSMENT	CERCLIS, FINDS
WASHINGTON NAVY YARD	LUST
J.C. ASSOCIATE	LUST
THE WESTCHESTER	LUST
DEPARTMENT OF THE ARMY	LUST
POST PROPERTIES	LUST
RED BRICK LLC	LUST
BROWN JUNIOR HIGH SCHOOL	LUST
NAVAL RESEARCH LAB #71	LUST
DEAL JR. H.S.	LUST
✓MCLEAN SHOPPING CENTER	UST, LTANKS
✓MCLEAN FIRE STATION CO 1	UST
, MATIONAL MUSEUM OF NATIVE AMERICAN HISTORY	UST
KINDLAND PROPERTIES INC.	UST
EXXON CO USA 25361	RCRIS-SQG
CHEVRON USA PRODUCTS C0#122172	RCRIS-SQG, FINDS
US GEORGE WASHINGTON MEM PARKWAY	RCRIS-SQG, FINDS

OVERVIEW MAP - 01122495.5r - CH2M Hill, Inc.



TARGET PROPERTY: ADDRESS: CITY/STATE/ZIP: LAT/LONG: Dalecarlia Reservoir Dalecarlia Reservoir Washington DC 20016 38.9405 / 77.1123 CUSTOMER: CONTACT: CH2M Hill, Inc. Jennifer Wilson

INQUIRY#: DATE: 01122495.5r February 03, 2004 9:43 am **DETAIL MAP - 01122495.5r - CH2M Hill, Inc.** 



TARGET PROPERTY: ADDRESS: CITY/STATE/ZIP: LAT/LONG: Dalecarlia Reservoir Dalecarlia Reservoir Washington DC 20016 38.9405 / 77.1123 CUSTOMER: CONTACT: INQUIRY #: CH2M Hill, Inc. Jennifer Wilson 01122495.5r February 03, 2004 9:44 am

# MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
FEDERAL ASTM STANDARD								
NPL Proposed NPL CERCLIS CERC-NFRAP CORRACTS RCRIS-TSD RCRIS-TSD RCRIS Lg. Quan. Gen. RCRIS Sm. Quan. Gen. ERNS		1.500 1.500 1.000 0.750 1.500 1.000 0.750 0.750 0.500	0 0 0 0 0 0	0 0 0 0 0 0 0	0 0 0 1 0 0 0 2	0 0 0 0 0 0 0 2 NR	0 NR NR O NR NR	0 0 0 1 0 0 0 5
STATE ASTM STANDARD								
State Haz. Waste LUST UST	X X	N/A 1.000 0.750	N/A 0 1	N/A 0 0	N/A 0 3	N/A 5 5	N/A NR NR	N/A 5 9
FEDERAL ASTM SUPPLEMENTAL								
CONSENT ROD Delisted NPL FINDS HMIRS MLTS MINES NPL Liens PADS US BROWNFIELDS DOD RAATS TRIS TSCA SSTS FTTS		1,500 1,500 0,500 0,500 0,500 0,500 0,500 0,500 1,500 0,500 0,500 0,500 0,500	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 0 0 1 0 0 0 0 0 0 0	0 0 0 3 1 2 0 0 0 0 0 0	O O O R NR NR NR NR NR NR NR NR NR NR NR NR NR	0 0 0 NR	0 0 0 4 1 2 0 0 0 0 0 0
STATE OR LOCAL ASTM SUPPLEMENTAL								
AST	DICAL DATAB	0.500	0	0	0	NR	NR	0
EDR PROPRIETARY HISTORICAL DATABASES								
Coal Gas	e	1.500	0	0	0	0	0	0
BROWNFIELDS DATABASE	<u>.</u>		_	_	_	_		_
US BROWNFIELDS		1.000	0	0	0	0	NR	0

# **MAP FINDINGS SUMMARY**

Search Distance

(Miles)

Target Property

< 1/8 1/8 - 1/4

1/4 - 1/2

1/2 - 1 >

Total Plotted

NOTES:

AQUIFLOW - see EDR Physical Setting Source Addendum

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

N/A = This State does not maintain a SHWS list. See the Federal CERCLIS list.

Map ID Direction Distance Distance (ft.) Elevation Site

Database(s)

**EDR ID Number** EPA ID Number

Coal Gas Site Search: No site was found in a search of Real Property Scan's ENVIROHAZ database.

Α1 **Target** 

**Property** 

**DALECARLIA WTP** 

5900 MACARTHUR BV NW **WASHINGTON DC, DC 20016**  UST U002109674

N/A

Site 1 of 3 in cluster A

Actual: 152 ft.

UST:

Facility ID:

3000007

Owner:

US ARMY DISTRICT, BALTIMORE, WAD

**A2** Target **DALECARLIA WATER TREATMENT PLANT** 

LUST \$105029682

N/A

5900 MACARTHUR BLVD., NW Property **WASHINGTON DC, DC** 

Site 2 of 3 in cluster A

Actual: 152 ft.

LUST:

Case Number:

99080

Facility Status:

**OPEN** 

Facility Type:

Federal

Quadrant:

NW

**A3** SW WASHINGTON AQUEDUCT, DALECARLIA WATER TREATMENT PL

UST U003877014 N/A

5900 MACARTHUR BOULEVARD, N.W.

< 1/8 WASHINGTON, MD 20315

138 ft.

Site 3 of 3 in cluster A

Relative: Higher

UST:

Facility ID:

5386

Facility Phone: Actual: 162 ft.

(202) 764-2639

Capacity: Tank Status:

5000

Product:

**CURRENTLY IN USE GASOLINE** 

Owner Id:

3331

Owner Name:

U.S. Army Corps of Engineers-Baltimore District

Address:

5900 MacArthur Boulevard, N.W. Washington, DC 20315

Contact:

Patricia Gamby

Phone:

(202) 764-2639

First Name: Last Name:

Patricia

Gamby 5386

Facility ID:

Facility Phone: Capacity:

(202) 764-2639 2000

Tank Status:

PERMANENTLY OUT OF USE

Product:

Diesel

Owner Id:

3331

Owner Name:

U.S. Army Corps of Engineers-Baltimore District

Address:

5900 MacArthur Boulevard, N.W.

Contact:

Washington, DC 20315

Patricia Gamby

Phone:

(202) 764-2639

First Name: Last Name:

Patricia Gamby

MAP FINDINGS Map ID

Direction Distance Distance (ft.) Elevation Site

Database(s)

**EDR ID Number EPA ID Number** 

#### WASHINGTON AQUEDUCT, DALECARLIA WATER TREATMENT PL (Continued)

U003877014

Facility ID:

5386

Facility Phone:

(202) 764-2639

Capacity:

5000

Tank Status:

PERMANENTLY OUT OF USE

Product: **GASOLINE** 3331

Owner Id: Owner Name:

U.S. Army Corps of Engineers-Baltimore District

Address:

5900 MacArthur Boulevard, N.W. Washington, DC 20315

Contact:

Patricia Gamby

Phone:

(202) 764-2639

First Name: Last Name: Patricia

Gamby

Facility ID:

5386

Facility Phone:

(202) 764-2639

Capacity:

2500

Tank Status:

**CURRENTLY IN USE** 

Product: Owner Id: Diesel 3331

Owner Name:

U.S. Army Corps of Engineers-Baltimore District

Address:

5900 MacArthur Boulevard, N.W.

Washington, DC 20315

Contact:

Patricia Gamby (202) 764-2639

Phone: First Name:

Patricia

Last Name:

Gamby

Facility ID:

5386

Facility Phone:

(202) 764-2639

Capacity:

550

Tank Status: PERMANENTLY OUT OF USE

Product:

Heating Oil 3331

Owner Id: Owner Name:

U.S. Army Corps of Engineers-Baltimore District

5900 MacArthur Boulevard, N.W.

Address:

Washington, DC 20315

Contact:

Patricia Gamby

Phone:

(202) 764-2639

First Name:

Patricia

Last Name:

Gamby

Facility ID:

5386

Facility Phone:

(202) 764-2639

Capacity:

10000

Tank Status:

PERMANENTLY OUT OF USE Heating Oil

Product: Owner Id:

3331

Owner Name:

U.S. Army Corps of Engineers-Baltimore District

Address:

5900 MacArthur Boulevard, N.W.

Contact:

Washington, DC 20315 Patricia Gamby

Phone:

First Name:

(202) 764-2639

Last Name:

Patricia Gamby

Map ID Direction Distance Distance (ft.)

Elevation Site

Database(s)

**EDR ID Number EPA ID Number** 

#### WASHINGTON AQUEDUCT, DALECARLIA WATER TREATMENT PL (Continued)

U003877014

Facility ID:

5386

Facility Phone:

(202) 764-2639 10000

Capacity: Tank Status:

**CURRENTLY IN USE** 

Product: Heating Oil

Owner id:

3331

Owner Name:

U.S. Army Corps of Engineers-Baltimore District

Address:

5900 MacArthur Boulevard, N.W. Washington, DC 20315

Contact:

Patricia Gamby

Phone:

(202) 764-2639

First Name:

Patricia

Last Name:

Gamby

NW 1/8-1/4 1026 ft. **NATIONAL IMAGERY AND MAPPING AGENCY** 

RCRIS-SQG 1000208460 FINDS MD1210020037

**6000 MACARTHUR BOULEVARD** 

BETHESDA, MD 20816

Relative: Higher

RCRIS:

US ARMY CORPS OF ENGINEERS

(301) 227-5581

Actual: 212 ft.

EPA ID:

Owner:

MD1210020037

JOHNNY R JENNINGS Contact:

(301) 227-5581

Classification:

Small Quantity Generator

TSDF Activities: Not reported

Violation Status: No violations found

FINDS:

Other Pertinent Environmental Activity Identified at Site:

Resource Conservation and Recovery Act Information system (RCRAINFO)

**B**5 SSE 1/4-1/2 1853 ft. SIBLEY MEMORIAL HOSPITAL **5255 LOUGHBORO RD NW** 

**WASHINGTON, DC 20016** 

**RCRIS-SQG** 1000282614 **FINDS** DCD074828344 **CERC-NFRAP** 

Federal Facility: Not a Federal Facility

UST

Relative: Higher

Actual:

187 ft.

CERCLIS-NFRAP Classification Data:

Site Incident CategorNot reported

Non NPL Code:

Site 1 of 3 in cluster B

NFRAP

Ownership Status: Private

**CERCLIS-NFRAP Assessment History:** DISCOVERY Assessment:

Assessment: Assessment:

Assessment:

REMOVAL ASSESSMENT PRELIMINARY ASSESSMENT

**ARCHIVE SITE** 

NPL Status:

Not on the NPL

Completed: Completed: 10/15/1996 10/22/1996 10/14/1999

Completed: Completed:

08/24/2000

Map ID Direction Distance Distance (ft.) Site Elevation

#### MAP FINDINGS

Database(s)

**EDR ID Number EPA ID Number** 

#### SIBLEY MEMORIAL HOSPITAL (Continued)

1000282614

RCRIS:

Owner:

SIBLEY MEMORIAL HOSPITAL

(202) 537-4651

EPA ID:

DCD074828344

Contact:

**BARBARA WILSON** 

(202) 537-4651

Classification:

Conditionally Exempt Small Quantity Generator

TSDF Activities: Not reported

**BIENNIAL REPORTS:** 

Last Biennial Reporting Year: 2001

Waste Quantity (Lbs) Waste Quantity (Lbs) D001 2400.00 D002 15.00 10.00 D008 15.00 D009

F003 2400.00 Violation Status: Violations exist

**Enforcement Action Date:** 

Regulation Violated:

4203.5 Area of Violation: GENERATOR-RECORDKEEPING REQUIREMENTS

Date Violation Determined: 04/01/1998 Actual Date Achieved Compliance: 04/20/1998

Regulation Violated: 262.41

Area of Violation: GENERATOR-RECORDKEEPING REQUIREMENTS

Date Violation Determined: 04/04/1994 Actual Date Achieved Compliance: 05/03/1994

WRITTEN INFORMAL Enforcement Action: **Enforcement Action Date:** 04/04/1994

Penalty Type: Not reported Regulation Violated: 262.41(a)

Area of Violation: GENERATOR-RECORDKEEPING REQUIREMENTS

**Date Violation Determined:** 03/06/1992 Actual Date Achieved Compliance: 03/09/1992

**Enforcement Action:** WRITTEN INFORMAL

Penalty Type: Not reported Regulation Violated: Not reported

Area of Violation: GENERATOR-ALL REQUIREMENTS (OVERSIGHT)

03/06/1992

Date Violation Determined: 03/07/1990 03/22/1990 **Actual Date Achieved Compliance:** 

WRITTEN INFORMAL **Enforcement Action:** 

Enforcement Action Date: 03/16/1990 Penalty Type: Not reported

Regulation Violated: Not reported Area of Violation: GENERATOR-ALL REQUIREMENTS (OVERSIGHT)

Date Violation Determined: 03/07/1990 Actual Date Achieved Compliance: 03/22/1990

**Enforcement Action:** WRITTEN INFORMAL

**Enforcement Action Date:** 03/16/1990 Penalty Type: Not reported

There are 5 violation record(s) reported at this site:

Date of Evaluation Area of Violation Compliance

Map ID Direction Distance Distance (ft.)

Elevation Site

Database(s)

**EDR ID Number EPA ID Number** 

SIBLEY MEMORIAL HOSPITAL (Continued)

1000282614

Non-Financial Record Review Non-Financial Record Review Non-Financial Record Review Compliance Evaluation Inspection GENERATOR-RECORDKEEPING REQUIREMENTS GENERATOR-RECORDKEEPING REQUIREMENTS GENERATOR-RECORDKEEPING REQUIREMENTS GENERATOR-ALL REQUIREMENTS (OVERSIGHT)

GENERATOR-ALL REQUIREMENTS (OVERSIGHT)

19940503 19920309 19900322 19900322

19980420

NY MANIFEST

Additional detail is available in NY MANIFEST. Please contact your EDR Account Executive for more information.

FINDS:

Other Pertinent Environmental Activity Identified at Site:

AIRS/AIRS Facility Subystem (AIRS/AFS)

Resource Conservation and Recovery Act Information system (RCRAINFO)

UST:

Facility ID:

3000660

Owner:

SIBLEY MEMORIAL HOSPITAL

**B6** SSE 1/4-1/2 SIBLEY MEMORIAL HOSPITAL 5255 LOUGHBORO ROAD, NW WASHINGTON, DC 20016

MLTS

N/A

1853 ft.

Site 2 of 3 in cluster B

Relative: Higher

Actual: 187 ft.

MLTS:

License Number: 08-07398-03 07/17/2003 License Date:

License Expires: 08/31/2004

Primary Program: Medical Institution - QMP required

No

No

No

License Use:

Not reported

Department:

Not reported

ROBERT L. SLOAN, CEO Contact Name:

States Allowing Use: Not reported

Store Material:

Redistribution:

Burial: Last Inspection: 04/2001

Inspector Name: N. BHALLA Next Inspection: 01/2004

1001964063

Incineration: No

First License Date: 01/04/1985

Institution Code:

Contact Phone:

**Building:** 

Not reported 202-537-4451

**B7** SSE 1/4-1/2

SIBLEY MEMORIAL HOSPITAL 5255 LOUGHBORO ROAD N.W. **WASHINGTON, DC 20016** 

MLTS 1001964062 N/A

1853 ft.

Site 3 of 3 in cluster B

Relative: Higher

Actual: 187 ft.

MLTS:

License Number: 08-07398-01 License Date: 09/04/1992 License Expires: 02/29/1992

Primary Program: Teletherapy

License Use:

Department:

Not reported

No

Contact Name: ESTELA I. PRIETO, MGR. RAD. DEPT States Allowing Use: Not reported

Store Material: Redistribution: Burial:

No No Last Inspection: 04/1992

Inspector Name: PENNY NESSEN

Source Material Shielding

**Building:** Contact Phone:

Institution Code:

Not reported 202-537-4000

7398

Incineration: No

First License Date: 06/15/1984

Map ID Direction Distance Distance (ft.)

Site Elevation

Database(s)

UST

**EDR ID Number EPA ID Number** 

1001964062

U003735558

N/A

SIBLEY MEMORIAL HOSPITAL (Continued)

Next Inspection: 04/1993

C8 NW **EXXON 26200** 

6100 MACARTHUR BOULEVARD BETHESDA, MD 20816

1/4-1/2

1936 ft.

Site 1 of 2 in cluster C

Relative: Higher

UST: Facility ID:

Actual: 204 ft.

Facility Phone:

3613 (301) 229-3350 1000

Capacity: Tank Status:

PERMANENTLY OUT OF USE

Product:

Used Oil 8195

Owner Id: Owner Name:

Exxon Mobil Corporation

Address:

5959 Las Colinas Boulevard

Irving, TX 75039 Moraima E. Grinnell

Contact: Phone: First Name:

(972) 444-1000 Not reported Not reported

Last Name: Facility ID:

3613

Facility Phone: (301) 229-3350

Capacity:

1000

Tank Status: PERMANENTLY OUT OF USE

Product: Owner Id: Heating Oil

Owner Name:

8195 **Exxon Mobil Corporation** 

Address:

5959 Las Colinas Boulevard

Irving, TX 75039

Contact: Phone:

Moraima E. Grinnell (972) 444-1000

First Name: Last Name:

Not reported Not reported

Facility ID:

3613

Facility Phone: (301) 229-3350

Capacity: Tank Status: 6000

Product:

**CURRENTLY IN USE** GASOLINE

Owner Id:

8195

Owner Name:

**Exxon Mobil Corporation** 5959 Las Colinas Boulevard

Address:

Irving, TX 75039

Contact: Phone:

Moraima E. Grinnell (972) 444-1000

First Name:

Not reported Not reported

Last Name:

Facility ID:

3613 (301) 229-3350

Facility Phone: Capacity:

10000

Tank Status:

**CURRENTLY IN USE** 

Product: Owner Id: **GASOLINE** 8195

Owner Name:

**Exxon Mobil Corporation** 

Address:

5959 Las Colinas Boulevard

Map ID Direction Distance Distance (ft.) Site Elevation

Database(s)

**EDR ID Number EPA ID Number** 

U003735558

## **EXXON 26200 (Continued)**

Irving, TX 75039

Contact:

Moraima E. Grinnell (972) 444-1000

Phone: First Name:

Not reported

Last Name:

Not reported

Facility ID:

3613

Facility Phone:

(301) 229-3350

Capacity: Tank Status: 1000

Product:

PERMANENTLY OUT OF USE Heating Oil

Owner Id:

8195

Owner Name:

**Exxon Mobil Corporation** 

Address:

5959 Las Colinas Boulevard

Irving, TX 75039

Contact:

Moraima E. Grinnell (972) 444-1000

Phone: First Name: Last Name:

Not reported Not reported

Facility ID:

3613

Facility Phone:

(301) 229-3350

Capacity:

8000 **CURRENTLY IN USE** 

Tank Status:

**GASOLINE** 

Product: Owner Id:

8195

Owner Name:

**Exxon Mobil Corporation** 

Address:

5959 Las Colinas Boulevard

Irving, TX 75039

Contact:

Moraima E. Grinnell (972) 444-1000

Phone:

First Name: Not reported

Last Name:

Not reported

C9 NW 1/4-1/2 **EXXON RAS 26200** 6100 MACARTHUR BLVD BETHESDA, MD 20816

Site 2 of 2 in cluster C

1936 ft. Relative: Higher

RCRIS:

WILLIE E PARKER

Actual: 204 ft.

Owner: EPA ID:

(301) 229-3350

MDD985423565

Contact:

**ALLEN SCRUGGS** 

(301) 229-3350

Classification:

Small Quantity Generator

TSDF Activities: Not reported

RCRIS-SQG 1000865187

MDD985423565

**FINDS** 

Map ID MAP FINDINGS

Direction Distance Distance (ft.)

Elevation Site

Database(s)

**HMIRS** 

**EDR ID Number EPA ID Number** 

1000865187

9998070755

N/A

FINDS 1006330125

UST

110012751389

U002109953

N/A

**EXXON RAS 26200 (Continued)** 

Violation Status: No violations found

FINDS:

Other Pertinent Environmental Activity Identified at Site:

AIRS/AIRS Facility Subystem (AIRS/AFS)

Resource Conservation and Recovery Act Information system (RCRAINFO)

10 North

**4419 CHALFONT PLACE** 

1/4-1/2 BETHESDA, MD

1955 ft.

Relative: Higher

The HMIRS database may contain additional details for this site.

Please click here or contact your EDR Account Executive for more information.

Actual: 202 ft.

**OVERLOOK COMMUNITY POOL** 

NNE 4406 BOX WOOD ROAD 1/4-1/2 BETHESDA, MD 20816

2374 ft.

FINDS: Relative:

Higher

Other Pertinent Environmental Activity Identified at Site:

Permit Compliance System (PCS)

Actual: 223 ft.

12 JAMES M. MURPHY, JR. SE 4902 PALISADE LA NW 1/4-1/2 **WASHINGTON DC, DC 20016** 

2427 ft.

Relative:

Higher

UST:

Facility ID:

3002267

Owner:

JAMES M. MURPHY, JR.

Actual: 247 ft.

TC01122495.5r Page 13

Map ID Direction Distance Distance (ft.) Elevation

Database(s)

UST

EDR ID Number **EPA ID Number** 

U003735675

N/A

UST U003294460

N/A

U003735676

N/A

D13 NNW **SUMNER HIGHLANDS APARTMENT** 

**4511 SANGAMORE ROAD** BETHESDA, MD 20816

1/2-1 2932 ft.

Site 1 of 2 in cluster D

Relative: Higher Actual:

198 ft.

UST:

Facility ID:

Facility Phone:

Capacity:

Tank Status:

Product:

Owner Id: Owner Name:

Address:

Miller, W.C. and A.N. 4315 50th Street, NW Washington, DC 20016

PERMANENTLY OUT OF USE

Contact: Phone: First Name: Bill Miller (202) 895-2718 William C.

Heating Oil

Last Name:

Miller

3761

5000

2449

(202) 895-2700

14 **ENE**  **ELIZABETH WILLIAMS** 

4070 52ND ST NW

1/2-1

**WASHINGTON DC, DC 20016** 

2943 ft.

Relative:

Higher

UST: Facility ID:

9000128

Owner:

**ELIZABETH WILLIAMS** 

Actual: 235 ft.

D15 NNW 1/2-1

**SUMNER HIGHLANDS APARTMENT** 

**4521 SANGAMORE ROAD** BETHESDA, MD 20816

2982 ft.

Site 2 of 2 in cluster D

Relative: Higher

UST:

Facility ID: Facility Phone: 3762

Actual: 196 ft. Capacity: (202) 895-2718

Tank Status:

5000

PERMANENTLY OUT OF USE Product: Heating Oil

Owner Id: Owner Name:

2449

Address:

Miller, W.C. and A.N. 4315 50th Street, NW

Washington, DC 20016

Contact: Phone:

Bill Miller (202) 895-2718

First Name:

Last Name:

William C.

Miller

MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation Site

Database(s)

**EDR ID Number EPA ID Number** 

SUMNER HIGHLANDS APARTMENT (Continued)

U003735676

E16 NNW **DEFENSE MAPPING 4600 SANGAMORE ROAD**  **Historical LUST** 

RCRIS-SQG

RCRIS-SQG

**FINDS** 

**FINDS** 

S101184037

1000208461

1000706654

VAD988217451

MD5210090010

1/2-1 3421 ft. POTOMAC, MD

Site 1 of 2 in cluster E

Relative: Higher

**LUST Historical:** 

Case Number:

9-0682MO

Actual: 218 ft.

County: Open/Closed: MONTGOMERY OPEN

Recover Type:

Monitoring - No active remediation. Sampling of monitoring wells only

E17 NNW NIMA

4600 SANGAMORE ROAD # D131

1/2-1 3421 ft.

BETHESDA, MD 20816

Site 2 of 2 in cluster E

Relative: Higher

RCRIS:

Owner:

DEPARTMENT OF DEFENSE (301) 227-5581

Actual: 218 ft.

EPA ID:

MD5210090010

Contact:

JOHNNY R JENNINGS

(301) 227-5581

Classification: Small Quantity Generator

TSDF Activities: Not reported

Violation Status: No violations found

FINDS:

Other Pertinent Environmental Activity Identified at Site:

AIRS/AIRS Facility Subystem (AIRS/AFS)

Resource Conservation and Recovery Act Information system (RCRAINFO)

18 SW 1/2-1 **MOBIL OIL CORP SS# GD8** 2084 CHAI BRIDGE RD FAIRFAX, VA 22180

3690 ft.

Relative: Higher

RCRIS:

Owner:

MOBIL OIL CORP

(703) 849-3566 VAD988217451

Actual: 165 ft.

EPA ID: Contact:

ROBERT BAKER (703) 356-3367

Classification:

Conditionally Exempt Small Quantity Generator

TSDF Activities: Not reported

TC01122495.5r Page 15

N/A

### MAP FINDINGS

Map ID Direction Distance Distance (ft.)

Elevation Site

Database(s)

UST

UST

EDR ID Number **EPA ID Number** 

1000706654

U003055081

U003865193

N/A

N/A

MOBIL OIL CORP SS# GD8 (Continued)

Violation Status: No violations found

FINDS:

Other Pertinent Environmental Activity Identified at Site:

Resource Conservation and Recovery Act Information system (RCRAINFO)

19

**LETIZIA AMADINI & ANTONIO CITTATI** 

**ENE** 4208 50TH ST NW

1/2-1

**WASHINGTON DC, DC 20019** 

3862 ft.

Relative: Higher

UST:

Facility ID:

9000251

Owner:

LETIZIA AMADINI & ANTONIO CITTATI

Actual: 287 ft.

20 SE JOHN F CARR

**5070 MILLWOOD LN NW** 1/2-1 **WASHINGTON DC, DC 20016** 

3872 ft.

Relative: Higher

UST:

Facility ID:

9000526

Owner:

MR JOHN F. CARR

Actual: 248 ft.

21

**EXXON** 

SSE 5443 MACARTHUR BLVD, NW WASHINGTON DC, DC 1/2-1

4414 ft.

Relative:

LUST:

Higher

Case Number:

Facility Status:

CLOSED Gas Station

Actual: 158 ft.

Facility Type: Quadrant:

NW

89040

LUST S103817117

N/A

### MAP FINDINGS

Map ID Direction Distance Distance (ft.) Elevation Site

Database(s)

RCRIS-SQG

**FINDS** 

LUST

RCRIS-SQG 1001481345

DCD983968520

**FINDS** 

LUST

**EDR ID Number EPA ID Number** 

1001404465

DCD982575169

F22 ENE **EXXONMOBIL CORP #25669 4866 MASSACHUSETTS AVE NW** 

1/2-1 4915 ft. WASHINGTON, DC 20016

Site 1 of 4 in cluster F

Relative: Higher

RCRIS:

Owner: **EXXON MOBIL** 

Actual: 236 ft.

EPA ID:

(713) 656-9075 DCD982575169

Contact:

Not reported

Classification:

Small Quantity Generator

TSDF Activities: Not reported

Violation Status: No violations found

FINDS:

Other Pertinent Environmental Activity Identified at Site:

AIRS/AIRS Facility Subystem (AIRS/AFS)

Resource Conservation and Recovery Act Information system (RCRAINFO)

LUST:

Case Number:

89025

Facility Status:

**OPEN** Gas Station

Facility Type: Quadrant:

NW

F23 ENE 1/2-1 **EXXON CO USA RAS#27834 4861 MASSACHUSETTS AVE NW** WASHINGTON, DC 20016

4934 ft.

Site 2 of 4 in cluster F

Relative: Higher

RCRIS:

**EXXON MOBIL** 

Actual:

Owner: EPA ID:

Contact:

(281) 296-3655 DCD983968520

237 ft.

ALDA POOL

(281) 296-3579

Classification: Conditionally Exempt Small Quantity Generator

TSDF Activities: Not reported

Violation Status: No violations found

Other Pertinent Environmental Activity Identified at Site:

AIRS/AIRS Facility Subystem (AIRS/AFS)

Resource Conservation and Recovery Act Information system (RCRAINFO)

LUST:

Case Number: Facility Status: 99022 **CLOSED** 

Facility Type:

**Gas Station** 

Quadrant:

NW

MAP FINDINGS Map ID Direction Distance Distance (ft.) **EDR ID Number** Elevation **EPA ID Number** Site Database(s) F24 S104918734 **CHEVRON** LUST ENE 4861 MASSACHUSETTS AVENUE, NW N/A **WASHINGTON DC, DC** 1/2-1 4934 ft. Site 3 of 4 in cluster F Relative: LUST: Higher Case Number: 93056 Facility Status: **OPEN** Actual: Facility Type: 237 ft. Gas Station Quadrant: NW RIGGS NATIONAL BANK OF WASH. LUST \$104918731

F25 RIGGS NATIONAL BANK OF WASH. L
ENE 4835 MASSACHUSETTS AVE., NW
1/2-1 WASHINGTON DC, DC

5021 ft. Site 4 of 4 in cluster F

٠,,,

Relative:
Higher LUST:

Higher LUST:
Case Number: 91018

Actual: Facility Status: CLOSED

242 ft. Facility Type : Other

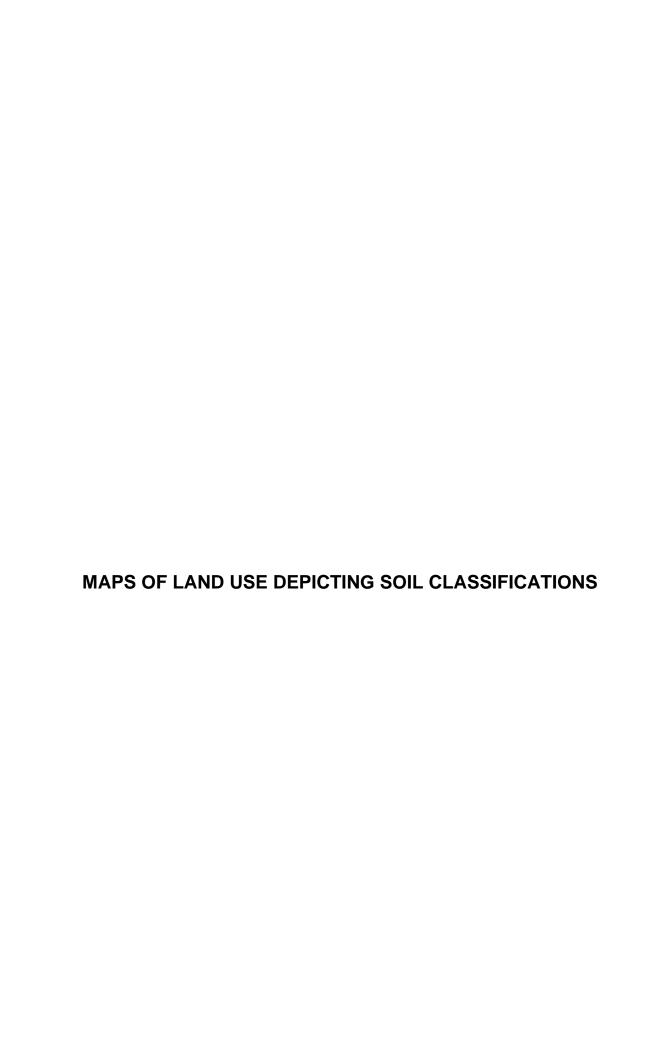
Quadrant: NW

N/A

### Soil Resource

### SOIL, GEOLOGY, AND GROUNDWATER RESOURCES

- MAPS OF LAND USE DEPICTING SOIL CLASSIFICATIONS
- SOIL BORING INFORMATION FOR NORTHWEST DALECARLIA PROCESSING SITE
- SOIL BORING INFORMATION FOR EAST DALECARLIA PROCESSING SITE



### Legend

Potomac Interceptor Route
Proposed Pipe Feed

Drill Rig Site

Pipe Feed Site

Combination Drill Rig and Pipe Feed Site

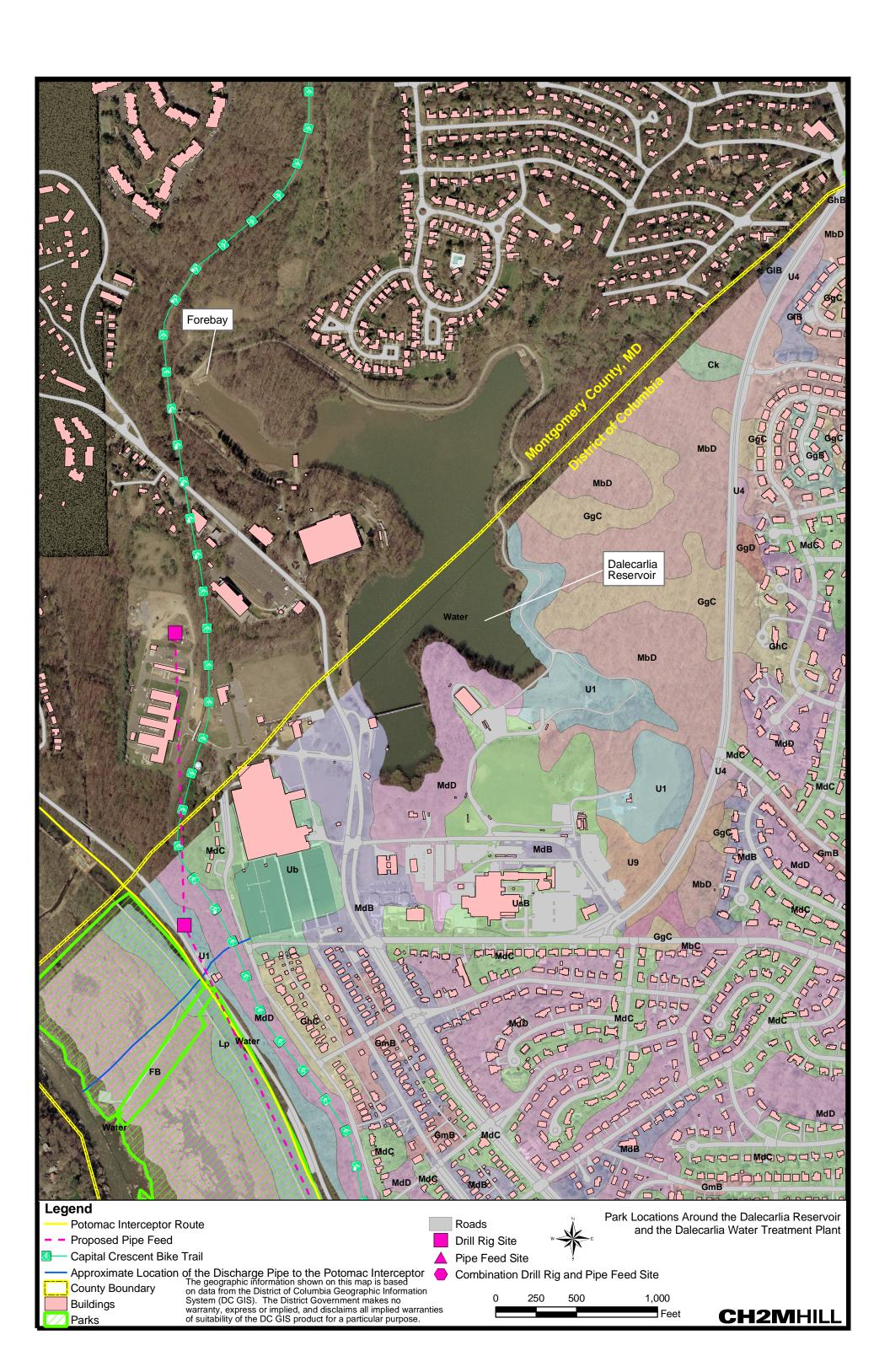
FD

### **Land Use Around the Blue Plains Advanced Wastewater Treatment Plant**

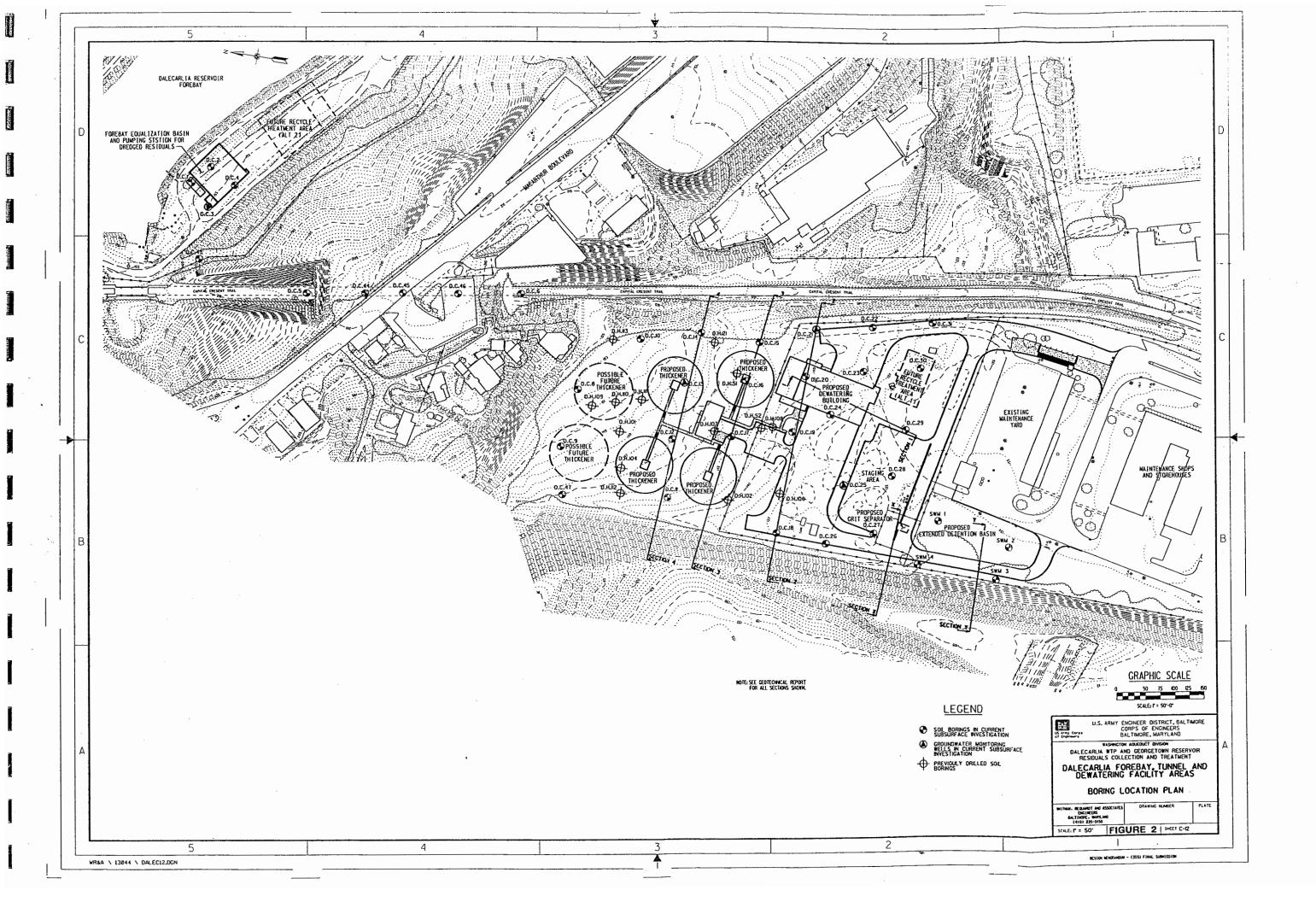
Water

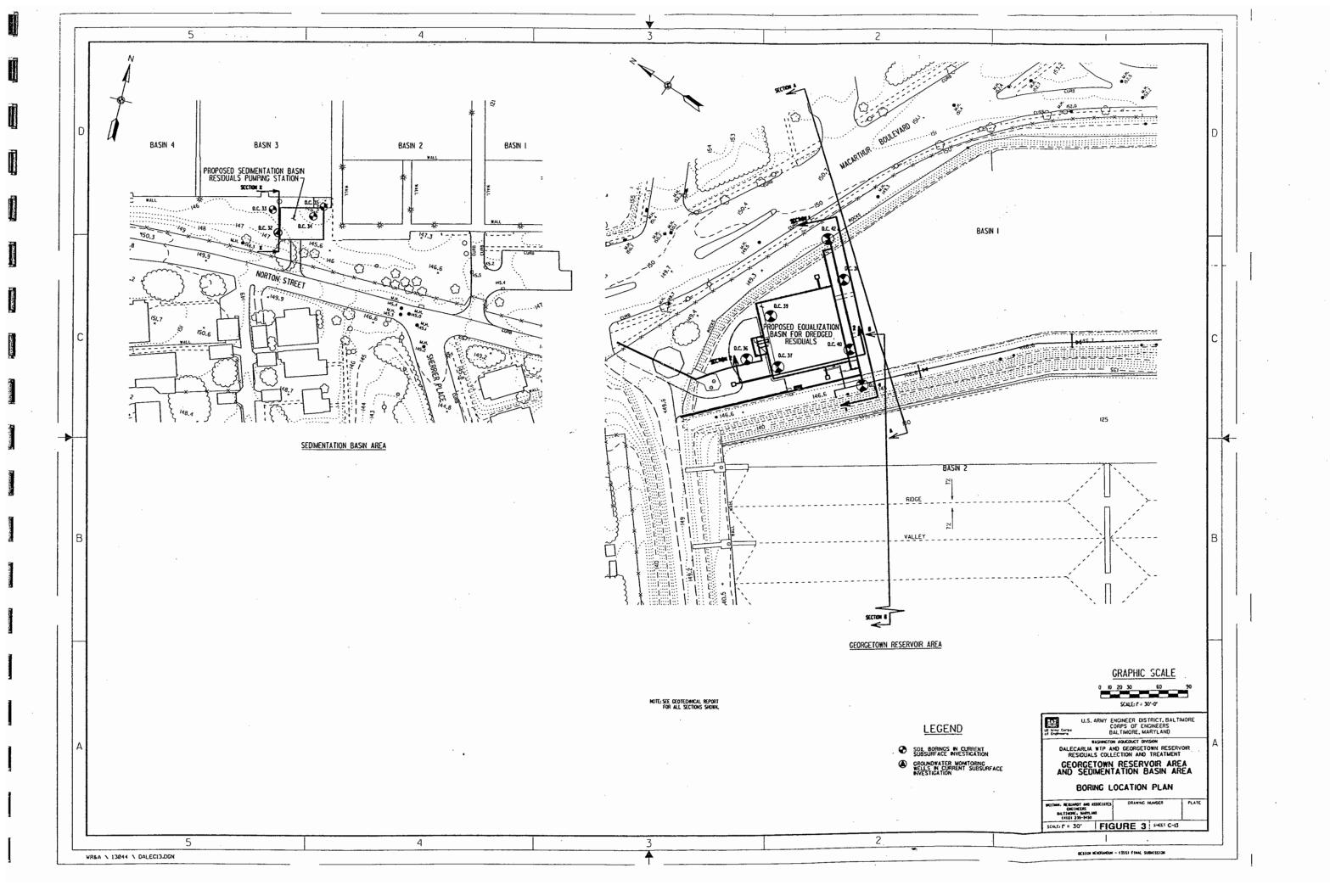
The geographic information shown on this map is based on data from the District of Columbia Geographic Information System (DC GIS). The District Government makes no warranty, express or implied, and disclaims all implied warranties of suitability of the DC GIS product for a particular purpose.





SOIL BORING INFORMATION FOR NORTHWEST DALECARLIA PROCESSING SITE





7050 CHESAPEAKE ROAD, SUITE 205 HYATTSVILLE, MD 20784 PHONE (301) 306-9677 FAX (301) 306-9632

## BORING REPORT

PROJECT:		Dalecarlia Water Treatment Plant	BORING NO.:	: DC-8	<b>∞</b>				
LOCATION:		5900 Mac Arthur Blvd., Brookmount, MD	DATE:	//0	07/11/95				
START:		07/11/95 END: 07/11/95	ELEVATION:		152.2 Ft.				
DRILLER:	·	Jeff Stouffer	DRILL RIG:						
Depth (	Depth (In Ft.)	Soil Description	Se	Sample (In Ft.)	Ft.)	Blow	Blows / 6" Penetration	ion	Rec/
From	To		No.	From	To				!
0	17.0	Tan, dry, very loose to medium dense to loose, silty sand, with trace of roots (fill)		0	1.5	1	2	2	18"
17.0	22.0	Gray, damp, medium stiff organic clay (fill)	2	4.5	6.0	3	4	2	18"
22.0	50.5	Tan, dry, loose to very dense micaceous silty sand, (decomposed rock)	8	9.5	11.0	7	80	6	18"
50.5	60.5	Gray, medium to hard, fractured rock	4	14.5	16.0	3	4	5	18"
			5	19.5	21.0	10	5	5	18"
			9	24.5	26.0	3	4	4	12"
			7	29.5	31.0	35	50/3		12"
			∞	34.5	36.0	31	50/3		12"
			6	39.5	41.0	50/4			*4
			10	44.5	46.0	50/2			2*
		WR&A Note: Strong petroleum-like odors from 5 to	11	49.5	51.0	50/2			2"
		*Auger refusal 50.5 Ft.	12	50.5	55.5	RQD	40%		.09
		*No water encountered while drilling	13	55.5	60.5	RQD	43%		.09
		*Hard augering from 18.5 Ft. to 19.5 Ft.			:				
		*Bottom at 60.5 Ft.	<u> </u>			-			

Water Dry After 24 Hours

Caved 39.0 Ft.

## BORING REPORT

ROJECT:	,	Dalecarlia Water Treatment Plant BOR	BORING NO.:	DC-9	6-:				
OCATION		5900 Mac Arthur Blvd., Brookmount, MD	ü	/20	07/12/95				
TART:		07/12/95 END: 07/12/95 ELE	ELEVATION:	145	149.4 Ft.				
RILLER:		Jeff Stouffer DRII	DRILL RIG:						
Depth (In Ft.)	la Pt.)	Soil Description	Sa	Sample (In Ft.)	Ft.)	Blow	Blows / 6" Penetration		Rec/
rom	To		Š.	From	To				
0	7.0	Tan, dry, very loose to loose, clayey silt (fill)	L-	0	1.5	-	2	2	16*
7.0	22.0	Tan, dry, medium dense to loose, silty sand with trace of gravel (fill)	2	4.5	6.0	2	3	7	18"
22.0	57.0	Tan, dry, medium dense, clayey silt, with trace of brick & rock fragments & layers of silty sand (fill)	3	9.5	11.0	11	6	10	18"
57.0	61.0	Tan, dry, very dense, silty sand (decomposed rock)	4	14.5	16.0	4	5	S	18.
61.0	71.0	Gray, medium to hard, fractured rock	5	19.5	21.0	3	3	9/05	.01
			9	24.5	26.0	11	10	6	18*
			7	29.5	31.0	10	17	17	.9
			∞	34.5	36.0	2	4	12	18"
			6	39.5	41.0	4	9	8	5.
			10	44.5	46.0	5	6	12	3*
			Ξ	49.5	51.0	7	21	6	.9
			12	54.5	56.0	4	5	13	12"
		*Encountered water at 60.0 Ft.	13	59.5	61.0	50/3"			3.
		*Hard augering from 26 Ft. to 28 Ft.	14	61.0	66.0	RQD	20%		.09
			15	0.99	71.0	RQD	10%		.09

Sheet No. 1 of 1

53.0 Ft.

Caved

er Dry

Propose and August

Professional Profession Communication Commun

## BORING REPORT

PROJECT:		Dalecarlia Water Treatment Plant B	BORING NO.:		DC-10				
LOCATION:		5900 Mac Arthur Blvd., Brookmount, MD	DATE:	//0	56/10/10				
START:		07/07/95 END: 07/07/95 E	ELEVATION:		152.4				
DRILLER:		Jeff Stouffer	DRILL RIG:						
Depth (In Ft.)	Ft.)	Soil Description		Sample (In Ft.)	a Ft.)		Blows / 6" Penetration	/6" ation	Rec/
From	To		Š.	From	To				
0	2.0	Tan, dry, loose micaceous silty sand (fill)	-1	0	1.5	1	2	3	17"
2.0	7.0	Brown, damp, medium stiff, clay (fill)	2	4.5	6.0	3	3	4	14.
7.0	12.0	Tan & brown, dry, medium dense silty sand with trace of rock fragment (fill)	3	9.5	11.0	8	9	2	18*
12.0	31.0	Tan to brown, dry, dense to very dense, micaceous silty sand (decomposed rock)	4	14.5	16.0	8	17	24	18"
31.0	34.0	Gray, medium hard, rock	5	19.5	21.0	9	20	34	18"
34.0	36.0	Tan weathered to decomposed rock	9	24.5	26.0	33	.5/05		11.
36.0	41.0	Gray medium hard rock	7	29.5	29.7	50/2"			2,
			∞	31.0	36.0	RQD	7.5%		.55
			6	36.0	41.0	RQD	49%		.09
							•		
		*Auger refusal 31 Ft.							
		*No water encountered							
		*Bottom at 41 Ft.							

Caved 19.5 Ft.

Sheet No. 1 of 1

Water Dry after 24 hours

7050 CHESAPEAKE ROAD, SUITE 205
HYATTSVILLE, MD 20784
PHONE (301) 306-9677 FAX (301) 306-9632

## BORING REPORT

SORING NO.   Datacaria Water Treatment Plant										
Solution   Solution	PROJECT:			RING NO.:		-11				
Color   Soil Description   Color   Soil Description   Color   Color	LOCATION			(TE:	//0	18/95				
To   Tan, dry, loose, silty sand with trace of roots (fill)   2   4.5   5.0	START:		END: 07/18/95	EVATION:	143	.1 Ft.				
To   Soil Description   Soil Description   Soil Description   To   To   Tan, dry, loose, silty sand with trace of roots (fill)   1   0   1.5   2   2.70   Tan, dry, very stiff clay with gravel & rock fragments (fill)   2   4.5   6.0   5   27.0   Tan, dry, very dense, micaceous silty sand (fill)   3   9.5   11.0   3   32.0   Tan, dry, very dense to medium dense to very dense, micaceous silty sand (fill)   4   14.5   16.0   3   32.0   Tan, dry, very dense to medium dense to very dense, micaceous silty sand (fill)   2   29.5   31.0   3   32.0	DRILLER:	,		ULL RIG:						
To.         Tan, dry, loose, silty sand with trace of roots (fill)         1         0         1.5         2           7.0         Tan, dry, very stiff clay with gravel & rock fragments (fill)         2         4.5         6.0         5           27.0         Tan, dry, very stiff clay with gravel & rock fragments (fill)         3         9.5         11.0         3           32.0         Tan, dry, very dense to medium dense to very dense, micaceous silty sand (fill)         4         14.5         16.0         3           60.0         Tan, loose, clayey silt (fill)         6         24.5         26.0         11           70.0         Gray, medium to bard fractured rock         6         24.5         26.0         11           70.0         Gray, medium to bard fractured rock         6         24.5         36.0         50/1           8         34.5         36.0         50/1         3         4         46.0         18           9         *Bottom 70.0 Ft.         *Bottom 70.0 Ft.         11         49.5         51.0         25           10         *After 24 hours water 49 Ft., caved 51 Ft.         15         65.0         70.0         RQD	Depth (	In Ft.)	Soil Description	San	nple (In	Ft.)	Blow	s / 6" Penetral	tion	Rec/ Att
4.0       Tan, dry, loose, silty sand with trace of roots (fill)       1       0       1.5       2         7.0       Tan, dry, very stiff clay with gravel & rock fragments (fill)       2       4.5       6.0       5         27.0       Tan, dry, very stiff clay with gravel & rock fragments decoups silty sand (fill)       4       14.5       16.0       3         32.0       Tan, dry, very dense to medium dense to very dense, micaceous silty sand with some rock fragments (decomposed to weathered rock)       5       19.5       21.0       5         70.0       Gray, medium to hard fractured rock       6       24.5       26.0       11         70.0       Gray, medium to hard fractured rock       7       29.5       31.0       3         8       34.5       36.0       50/1       3         9       39.5       41.0       3         *Bottom 70.0 Ft.       \$*Bottom 70.0 Ft.       12       54.5       56.0       8         *Encountered water at 59.0 Ft.       **After 24 hours water 49 Ft., caved 51 Ft.       15       65.9       70.0       RQD	From	1		No.	From	To				
7.0       Tan, dry, very stiff clay with gravel & rock fragments (fill)       2       4.5       6.0       5         27.0       Tan, dry, medium dense, micaceous silty sand (fill)       4       14.5       16.0       3         32.0       Tan, loose, clayey silt (fill)       4       14.5       16.0       3         60.0       Tan, dry, very dense to medium dense to very dense, micaceous silty sand with some rock fragments (decomposed to weathered rock)       6       24.5       26.0       11         70.0       Gray, medium to hard fractured rock       6       24.5       26.0       11         70.0       Gray, medium to hard fractured rock       8       34.5       36.0       30/1         8       3.4.5       36.0       30.5       11       3         9       39.5       41.0       3       4       46.0       18         10       44.5       56.0       8       8       56.0       8         *Encountered water at 59.0 Ft.       *After 24 hours water 49 Ft., caved 51 Ft.       15       65.0       10       RQD	0	4.0	Tan, dry, loose, silty sand with trace of roots (fill)	1	0	1.5	2	3	4	6
27.0       Tan, dry, medium dense, micaceous silty sand (fill)       4       14.5       11.0       3         32.0       Tan, loose, clayey silt (fill)       4       14.5       16.0       3         60.0       Tan, dry, very dense to medium dense to very dense, micaceous silty sand with some rock fragments (decomposed to weathered rock)       6       24.5       21.0       5         70.0       Gray, medium to hard fractured rock       6       24.5       26.0       11         8       34.5       36.0       30.1       3         9       39.5       41.0       3         10       44.5       46.0       18         10       44.5       56.0       8         *Bottom 70.0 Ft.       11       49.5       51.0       25         *After 24 hours water 49 Ft., caved 51 Ft.       15       65.0       70.0       RQD	4.0	7.0	Tan, dry, very stiff clay with gravel & rock fragments (fill)	2	4.5	6.0	5	12	14	12
32.0       Tan, loose, clayey silt (fill)       4       14.5       16.0       3         60.0       Tan, dry, very dense to medium dense to very dense, micaceous silty sand with some rock fragments (decomposed to weathered rock)       6       24.5       21.0       5         70.0       Gray, medium to hard fractured rock       6       24.5       26.0       11       3         8       34.5       36.0       30.1       3       41.0       3         9       39.5       41.0       3       18         10       44.5       46.0       18       3         10       44.5       56.0       8       8       8         *Bottom 70.0 Ft.       11       49.5       51.0       25         10       *Bottom 70.0 Ft.       13       59.5       61.0       50.1         10       *After 24 hours water 49 Ft., caved 51 Ft.       15       65.0       70.0       RQD	7.0	27.0	Tan, dry, , medium dense, micaceous silty sand (fill)	3	9.5	11.0	3	9	8	12
60.0       Tan, dry, very dense to medium dense to very dense, micaceous silty sand with some rock fragments (decomposed to weathered rock)       5       19.5       21.0       5         70.0       Gray, medium to hard fractured rock       6       24.5       26.0       11         8       34.5       36.0       30.1       3         9       39.5       41.0       3       18         10       44.5       46.0       18       3         10       44.5       56.0       8       8         *Bottom 70.0 Ft.       \$*Bottom 70.0 Ft.       11       49.5       51.0       25         10       *After 24 hours water at 59.0 Ft.       13       59.5       61.0       65.0       RQD         *After 24 hours water 49 Ft., caved 51 Ft.       15       65.0       70.0       RQD       70.0<	27.0	32.0	Tan, loose, clayey silt (fill)	4	14.5	16.0	3	3	9	12
70.0       Gray, medium to hard fractured rock       6       24.5       26.0       11         7       29.5       31.0       3       3         8       34.5       36.0       50/1         9       39.5       41.0       3         10       44.5       46.0       18         8       39.5       41.0       3         10       44.5       46.0       18         11       49.5       51.0       25         12       54.5       56.0       8         13       59.5       61.0       50/1         14       60.0       65.0       RQD         *After 24 hours water 49 Ft., caved 51 Ft.       15       65.0       70.0       RQD	32.0	0.09	Tan, dry, very dense to medium dense to very dense, micaceous silty sand with some rock fragments (decomposed to weathered rock)	<b>S</b> .	19.5	21.0	S	4	7	10
*Bottom 70.0 Ft.       *After 24 hours water 49 Ft., caved 51 Ft.       7       29.5       31.0       3       3       3       3       3       3       4       3       4       3       4       3       4       3       4       3       4       3       4       3       4       3       4       3       4       3       4       3       4       3       4       3       4       3       4       3       4       3       4 <t< td=""><td>0.09</td><td>70.0</td><td>Gray, medium to hard fractured rock</td><td>9</td><td>24.5</td><td>26.0</td><td>11</td><td>13</td><td>14</td><td>18</td></t<>	0.09	70.0	Gray, medium to hard fractured rock	9	24.5	26.0	11	13	14	18
*Bottom 70.0 Ft.       *After 24 hours water 49 Ft., caved 51 Ft.       \$ 34.5       36.0       50/1       3         **Bottom 70.0 Ft.       *Bottom 70.0 Ft.       11       49.5       51.0       25       25         **Encountered water at 59.0 Ft.       *Encountered water 49 Ft., caved 51 Ft.       15       59.5       61.0       50/1       70.0       RQD				7	29.5	31.0	3	2	3	&
*Bottom 70.0 Ft.       *After 24 hours water 49 Ft., caved 51 Ft.       9 39.5 41.0       3         **After 24 hours water 49 Ft., caved 51 Ft.       9 39.5 41.0       3         10 44.5 46.0       18       18         11 49.5 51.0       25         25       8         12 54.5 56.0       8         13 59.5 61.0       50/1         14 60.0       65.0       RQD         *After 24 hours water 49 Ft., caved 51 Ft.       15 65.0       70.0       RQD				∞	34.5	36.0	50/1			1
#Bottom 70.0 Ft.				6	39.5	41.0	3	4	5	80
*Bottom 70.0 Ft.				10	44.5	46.0	18	42	6	12
*Bottom 70.0 Ft.				11	49.5	51.0	25	6	6	18
*Encountered water at 59.0 Ft. 13 59.5 61.0 50/1			*Bottom 70.0 Ft.	12	54.5	56.0	8	6	24	7
*After 24 hours water 49 Ft., caved 51 Ft. 15 65:0 70.0 RQD			*Encountered water at 59.0 Ft.	13	59.5	61.0	50/1		-	1
*After 24 hours water 49 Ft., caved 51 Ft.				14	60.0	65.0	RQD .	40%		51"
			*After 24 hours water 49 Ft., caved 51 Ft.	15	0:59	70.0	RQD			.09

Water 49.0 Ft. at completion

Caved 51.0 Ft.

## BORING REPORT

PROJECT:		Dalecarlia Water Treatment Plant BO	BORING NO.:	DC-12	12				
LOCATION:	ا ن	5900 Mac Arthur Blvd., Brookmount, MD	DATE:	0//0	07/06/95				
START:		07/06/95 END: 07/06/95 ELJ	ELEVATION:		145.9				
DRILLER:		Jeff Stouffer DR	DRILL RIG:						
Depth (In Ft.)	ı Ft.)	Soil Description	S	Sample (In Ft.)	Ft.)		Blows / 6" Penetration	/ 6" ation	Rec/
From	To		No.	From	To				
0	18.0	Brown, dry, very loose to loose, micaceous clayey silt with trace of roots & gravel (fill)	1	0	1.5	1	-	2	12"
18.0	32.0	Gray, damp, medium stiff, clay with trace of roots (fill)	2	4.5	6.0	3	4	9	10"
32.0	60.0	Tan, dry, dense to medium dense to dense, micaceous silty sand with trace of gravel (fill)	<u>س</u>	9.5	11.0	4	5	6.	5".
60.0	68.0	Tan, wet, very dense, micaceous silty sand (decomposed rock)	4	14.5	16.0	3	3	3	4
68.0	78.0	Gray, medium to hard, rock (6" quartz layer 70 Ft. to 70.5 Ft.)	5	19.5	21.0	2	2	5	12"
			9	24.5	26.0	3	4	4	18"
			7	29.5	31.0	3	5	5	18"
		WR&A Note: Gray clay has petroleum-like odor.	∞	34.5	36.0	5	19	20	18"
			6	39.5	41.0	4	5	6	18"
			10	44.5	46.0	4	5	8	8
-			11	49.5	51.0	4	4	7	12"
			12	54.5	56.0	. 6	12	20	18"
		*Auger refusal 68 Ft.	13	59.5	61.0	6	17	17	.9
		*Encountered water at 50 Ft.	14	64.5	0.99	18	35	50/22	18"
		*At completion water at 15 Ft., caved 20 Ft.	15	68.0	73.0	RQD	20%	20%	54"
t t			16	73.0	78.0	RQD	63%	63 %	.09
Water Dry	v after 2	Dry after 24 hours							

## BORING REPORT

PROJECT:	Dale	Dalecarlia Water Treatment Plant	BORING NO.:	DC-13						
LOCATION:		5900 Mac Arthur Blvd., Brookmount, MD	TE:	07/11/95	2					
START:	07/1	07/11/95 END: 07/12/95 ELE	ELEVATION:	147.9						
DRILLER:	Paul	Paul Suit	DRILL RIG:			!		- :		
Dept	Depth (In Ft.)	Soil Description		Samp	Sample (In Ft.)	t.)	Blows /	Blows / 6" Penetration	ration	Rec/ Att
From	To		_4	No.	From	To				
0	19	Brown to gray, dry to wet, soft to very soft, silty clay with trace of brick & concrete fragments & small boulders (fill)	concrete		0	1.5	2	2	2	5"
19	33.0	Brownish gray, wet, very loose micaceous silty sand with trace of rock fragments (possible fill)	ments	2	5.0	6.5	7	10	14	18"
33.0	50.5	Gray, medium very fractured rock.		3	10.0	11.5	9	7	4	18"
50.5	52.5			4	15.0	16.5	8	5	4	12"
52.5	60.5			5	20.0	21.5	∞	9	<b>∞</b>	* *
				9	25.0	26.5	5	7	5	5.
				7	30.0	31.5	10	∞		5.
				8	35.0	35.5	51/5"		27	. <del>1</del>
		*No water encountered		6	40.0	41.5	17	41		12"
		*Void from 58.5 to 59.5 Ft.		10	45.0	45.2	51/3"			3,
		*Installed 2" well to 51.5 Ft.		-11	50.0	50.1	51/2"			2"
		*Boring offset 6 Ft. west		12	50.5	55.5	RQD	15%		.99
		*Bottom 60.5 Ft.		13	55.5	60.5	RQD	%9		48"
		*Strong solvent odor at 10 Ft. WR&A Note: Also noticed odors	ſS.							
		*Hard grinding of augers 8 to 10.0 Ft.		·		- - -	- -			

Caved (Inside Augers)

Sheet No. 1 of 1

Water After 14 Hours Dry

## BORING REPORT

PROJECT:		Dalecarlia Water Treatment Plant BOR	BORING NO.:	DC-14	-14				
LOCATION:		5900 Mac Arthur Blvd., Brookmount, MD	ë	.//0	07/10/95				
START:		07/10/95 END: 07/10/95 ELE	ELEVATION:		148.3				
DRILLER:		Jeff Stouffer DRII	DRILL RIG:						
Depth (In Ft.)	Ft.)	Soil Description	S	Sample (In Ft.)	ı Ft.)		Blows / 6" Penetration		Rec/ Att
From	To		No.	From	To				
0	8.0	Brown, dry, soft, silty clay with trace of gravel		0	1.5	1	4	4	12"
8.0	30.5	Tan to whitish gray, dry, medium dense to very dense, silty sand (decomposed rock)	2	4.5	6.0	3	5	5	12"
30.5	40.5	Gray, medium to hard fractured rock	3	9.5	11.0	5	9	7	.0
			4	14.5	16.0	8	9	21	.0
			5	19.5	21.0	50	51/4		8
			9	24.5	26.0	50/2			2"
			7	29.5	31.0	9/05			0,,
			∞	30.5	35.5	RQD	20%		58"
			6	35.5	40.5	RQD	33%		.09
		*Water at 21 Ft. caved 22 Ft.							
		*Auger refusal 30.5 Ft.					•		
		*No water encountered while drilling							
		*Bottom at 40.5 Ft.							

Caved 22.0 Ft.

Sheet No. 1 of 1

Water 20 Ft. at completion

## BORING REPORT

PROJECT:		Dalecarlia Water Treatment Plant BORU	BORING NO.:	DC-15	.5				
LOCATION:		5900 Mac Arthur Blvd., Brookmount, MD	μ̈́	07/10/95	26/0				
START:		07/10/95 END: 07/10/95 ELEV	ELEVATION:		141.8			,	
DRILLER:		Jeff Stouffer	DRILL RIG:						
Depth (In Ft.)	Ft.)	Soil Description	Sa	Sample (In Ft.)	Ft.)		Blows / 6" Penetration	. 6" ation	Rec/ Att
From	To		No.	From	To				
0	12.0	Tan, dry to loose to medium dense silty sand with trace of gravel (fill)	1	0	1.5	4	4	5	15"
12.0	23.5	Gray to tan, damp, medium stiff to soft clay with trace of gravel & brick fragments (fill)	2	4.5	6.0	2	3	2	17"
23.0	42.0	Reddish brown to tan, dry, medium dense to very dense, micaceous silty sand (decomposed rock)	3	9.5	11.0	జ	11	4	18"
42.0	52.0	Gray, medium to hard, rock	4	14.5	16.0	3	3	3	12"
			5	19.5	21.0	2	2	3	18"
			9	24.5	26.0	3	14	6	18"
			7	29.5	31.0	10	6	9	18"
			8	34.5	36.0	36	9/05		12"
			6	39.5	41.0	45	50/3		.6
			10	42.0	47.0	RQD	61%		.99
		*No water encountered while augering	11	47.0	52.0	RQD	81%		.09
		*Auger refusal 42 Ft.							
		*Bottom at 52 Ft.							:
		*After 24 hours, water at 33 Ft. caved at 34 Ft.			• ,				
						1. 4. 1. 4.			

# BORING REPORT

DATE:   147.6 FL.   PROMISE Arthur Bivd., Brookmount, MD   DATE:   147.6 FL.	PROJECT:		Dalecarlia Water Treatment Plant Bo	BORING NO.:		DC-16				
PRILE BGO.   143.6 Ft.   143	LOCATION			TE:	//0	/03/95				
DRILL BIG.   Soil Description   Sample (Tr. Rt.)   Blows / C Penetration   To   Tan, dry, very loose, silly sand & wood fragments (fill)   1   0   1.5   1   1   1   1   1   1   1   1   1	START:		END: 07/03/95	EVATION:		3.6 Ft.				
To   No.   Fr.)   Soul Description   No.   Fr.   From   To   Fr.	DRILLER:	ſ		ILL RIG:						
To   Tan, dry, very loose, silty sand & wood fragments (fill)   1   0   1.5   1   1   1   1   1   1   1   1   1	Depth (1	In Ft.)	Soil Description	Sa	mple (In	Ft.)	Blow	s / 6" Penetrati	ion	Rec/
4.0       Tan, dry, very loose, silly sand & wood fragments (fill)       1       0       1.5       1       1       1         8.0       Brown, damp, stiff, silly clay with trace of brick fragments (fill)       2       4.5       6.0       5       5         17.0       Brown, damp, stiff, silly clay with trace of brick fragments (fill)       4       14.5       16.0       1       1         22.0       Gray, modium dense to dense, silly, sand, with trace of rock fragments       5       19.5       21.0       3       2         (fill)       53.5       Brown, dry, to wet, dense to very dense, micaceous silt, with trace of rock       6       24.5       26.0       7       7         63.5       Gray, medium to hard, rock       8       34.5       36.0       21       50/5*         63.5       Gray, medium to hard, rock       8       34.5       36.0       21       50/5*         63.5       Gray, medium to hard, rock       10       44.5       44.6       50/2*       12         63.5       Gray, medium to hard, rock       11       49.5       49.6       50/2*       50/5*         63.6       Gray, medium to hard, rock       12       44.5       44.6       50/2*       50/5*         7       Auger re	From	To		No.	From	To				
8.0       Brown, damp, stiff, silty clay with trace of brick fragments (fill)       2       4.5       6.0       5       5         17.0       Brown, dry, loose, silty sand with trace of gravel (fill)       4       14.5       16.0       1       1         22.0       Gray, moist, soft, clay (fill)       5       19.5       21.0       3       2         27.0       Tan, dry, medium dense to dense, silty, sand, with trace of rock fragments       6       24.5       26.0       7       7         53.5       Brown, dry, to wet, dense to very dense, micaceous silt, with trace of rock fragments (decomposed to weathered rock)       7       29.5       31.0       6       12         63.5       Gray, medium to hard, rock       8       34.5       36.0       21       50/5*         63.5       Gray, medium to hard, rock       10       44.5       40.6       50/2*       12         63.6       Fincountered water at 46.0 Ft.       11       49.5       49.6       50/2*       1         *Auger refusal at 53.5 Ft.       *Auger refusal at 53.5 Ft.       13       83.5       83.5       83.0       83.5       83.5       83.5       83.5       83.5       83.5       83.5       83.5       83.5       83.5       83.5       83.5       83.5<	0	4.0	Tan, dry, very loose, silty sand & wood fragments (fill)		0	1.5	1	1	2	12"
17.0       Brown, dry, loose, silty sand with trace of gravel (fill)       3       9.5       11.0       5       3         22.0       Gray, moist, soft, clay (fill)       1       14.5       16.0       1       1         27.0       Tan, dry, medium dense to dense, silty, sand, with trace of rock fragments       5       19.5       21.0       3       2         53.5       Brown, dry, to wet, dense to very dense, micaceous silt, with trace of rock fragments (decomposed to weathered rock)       7       29.5       31.0       6       7       7         63.5       Gray, medium to hard, rock       8       34.5       36.0       21       50/5*         63.5       Gray, medium to hard, rock       9       39.5       40.4       36       50/5*         6.5       Article and an	4.0	8.0	Brown, damp, stiff, silty clay with trace of brick fragments (fill)	2	4.5	6.0	5	5	∞	12"
22.0       Gray, moist, soft, clay (fill)       4       14.5       16.0       1       1         27.0       Tan, dry, medium dense to dense, silty, sand, with trace of rock fragments (fill)       5       19.5       21.0       3       2         53.5       Brown, dry, to wet, dense to very dense, micaceous silt, with trace of rock       6       24.5       26.0       7       7         63.5       Gray, medium to hard, rock       8       34.5       36.0       21       50/5*         1       44.5       40.4       36       50/5*       9       39.5       40.4       36       50/5*         2       *Encountered water at 46.0 Ft.       *Encountered water at 46.0 Ft.       13       58.5       RQD       55.%         4       *Auger refusal at 53.5 Ft.       15       8       8       8       8       8       8       8       8       80.5       8       80.5       8       80.5       8       80.5       8       8       8       8       80.5       8	8.0	17.0	Brown, dry, loose, silty sand with trace of gravel (fill)	3	9.5	11.0	5	3	2	12.
27.0       Tan, dry, medium dense to dense, silty, sand, with trace of rock fragments       5 19.5       21.0       3       2         53.5       Brown, dry, to wet, dense to very dense, micaceous silt, with trace of rock fragments (decomposed to weathered rock)       7       24.5       26.0       7       7         63.5       Gray, medium to hard, rock       8       34.5       36.0       21       50/5*         1       44.5       44.6       36.0       21       50/5*         2       1       44.5       44.6       50/2*       7         3       44.5       44.6       50/2*       7       7         4       44.6       44.6       50/2*       7       7         4       44.6       44.6       50/2*       7       7         4       44.6       44.6       50/2*       7       7         4       44.6       44.6       50/2*       7       7         4       44.6       44.6       50/2*       7       7         5       44.6       44.6       50/2*       7       7         4       44.6       44.6       50/2*       7       7         4       44.6       44.6	17.0	22.0	Gray, moist, soft, clay (fill)	4	14.5	16.0	1		4	10"
53.5       Brown, dry, to wet, dense to very dense, micaceous silt, with trace of rock fragments (decomposed to weathered rock)       7       24.5       26.0       7       7         63.5       Gray, medium to hard, rock       7       29.5       31.0       6       12         1       1       29.5       31.0       6       12       12         2       1       29.5       31.0       6       12       12         3       1       44.5       40.4       36       30/5"       12         4       44.5       44.6       50/2"       12       12       12         4       49.6       50/2"       12	22.0	27.0	Tan, dry, medium dense to dense, silty, sand, with trace of rock fragments (fill)	5	19.5	21.0	3	2	4	12.
63.5       Gray, medium to hard, rock       7       29.5       31.0       6       12         8       34.5       36.0       21       50/5*       50/5*         9       39.5       40.4       36       50/5*       7         10       44.5       44.6       50/2*       7       7         10       44.5       49.5       49.6       50/2*       7         11       49.5       49.5       80.6       55%       8         12       \$4.5       49.5       80.5       8       8       8         *Auger refusal at 53.5 Ft.       13       58.5       RQD       66%       8	27.0	53.5	Brown, dry, to wet, dense to very dense, micaceous silt, with trace of rock fragments (decomposed to weathered rock)	9	24.5	26.0	7	7	10	18.
8       34.5       36.0       21         9       34.5       40.4       36         10       44.5       44.6       50/2"         11       49.5       49.6       50/2"         0 Ft.       13       58.5       63.5       RQD         13       58.5       63.5       RQD         14       13       58.5       63.5       RQD         15       13       58.5       8.0       1	53.5	63.5	Gray, medium to hard, rock	7	29.5	31.0	9	12	19	
9       39.5       40.4       36         10       44.5       44.6       50/2"         11       49.5       49.6       50/2"         12       53.5       58.5       RQD         0 Ft.       13       58.5       63.5       RQD         1       13       58.5       63.5       RQD				8	34.5	36.0	21	.5/05		
0 Ft. 10 44.5 44.6 50/2" 11 49.5 49.6 50/2" 20 Ft. 20 50.5 88.5 80.5 80.5 80.5 80.5 80.5 80.				6	39.5	40.4	36	<b>.</b> \$/0\$		
11 49.5 49.6 50/2" 12 53.5 58.5 RQD 0 Ft. 13 58.5 63.5 RQD				10	44.5	44.6	50/2"			1/2"
0 Ft. 12 53.5 58.5 RQD 13 Ft. RQD 13 S8.5 63.5 RQD 14 Ft. RQD 15 F				111	49.5	49.6	50/2"			2.
0 Ft. 13 58.5 63.5 RQD				12	53.5	58.5	RQD	85%		.09
			*Encountered water at 46.0 Ft.	13	58.5	63.5	RQD	%99		.09
			*Auger refusal at 53.5 Ft.			:				
					`,	-	* * 4 * 4 * 4			

Water 11 Ft. After 24 hours (hard rain over night)

Caved 12.5 F

## BORING REPORT

PROJECT:		Dalecarlia Water Treatment Plant BORI	BORING NO.:	DC-17	17					
LOCATION:		5900 Mac Arthur Blvd., Brookmount, MD DATE:	ë	26/50/10	2/95				ľ	
START:		07/05/95 END: 07/05/95 ELEV	ELEVATION:	142.	142.7 Ft.					
DRILLER:		Jeff Stouffer DRIL	DRILL RIG:							
Depth (In Ft.)	Ft.)	Soil Description	Sau	Sample (In Ft.)	Ft.)		Blo	Blows / 6" Penetration	<b>24 ₹</b>	Rec/
From	To		No.	From	To					
0	57.0	Brown to gray, moist to wet, very soft to hard to soft, clay with layers of silty sand & trace of gravel (fill - trace to a little wood & roots from 47 Ft. to 57 Ft.)	1	0	1.5	1	2	2	<b></b>	
57.0	63.5	Gray, dry, very dense silty sand & rock fragments (weathered rock)	2	4.5	6.0	5	9	8	-	12.
63.5	73.5	Gray, medium to hard, rock	3	9.5	11.0	5	2	2 3		.9
			4	14.5	16.0	1	3	4 4		.9
			5	19.5	21.0	4	3	8		
			9	24.5	26.0		5	8		6.
			7	29.5	31.0		14	14		16"
			∞	34.5	36.0	1		16		
			6	39.5	41.0	9	9			5"
			10	44.5	46.0	2	2	10		12.
			11	49.5	51.0	12	3	3		12.
		*Bottom at 73.5 Ft.	12	54.5	56.0	5		14		.9
		*Encountered water at 18'8"	13	59.5	61.0	50/2				2.
		*Auger refusal at 63.5 Ft.	14	63.5	68.5	RQD .	25%			.09
		*Hard augering 33 Ft. to 34 ft. and 61 Ft. to 63.5 Ft.	15	68.5	73.5	RQD	40%			55"

Water 13 Ft. After 24 hours

Caved 16.0 Ft.

## BORING REPORT

PROJECT:		Dalecarlia Water Treatment Plant	BORING NO.:		DC-18					
LOCATION:		5900 Mac Arthur Blvd., Brookmount, MD	DATE:		07/03/95		>			
START:		07/03/95 END: 07/04/95	ELEVATION:	ä	136.3 Ft.					
DRILLER:		Jeff Stouffer	DRILL RIG:							
Depth (In Ft.)	1 Ft.)	Soil Description	San	Sample (In Ft.)	Ft.)		Blows / 6" Penetration	/ 6" ation		Rec/
From	To		No.	From	To					
0	3.0	Tan, dry, very loose, silty sand (fill)		0	15.0	9/HOM	1	1		12"
3.0	13.0	Gray, damp, medium stiff clay with trace of brick fragments (fill)	2	4.5	0.09	3	4	4		12"
13.0	17.0	Tan & gray, dry, medium dense silty sand (fill)	3	9.5	11.0	3	3	2	3	18.
17.0	32.0	Gray to tan, damp, soft to very soft, silty clay, with trace of brick & rock fragments (fill)	4	14.5	16.0	4	6	7	4	12"
32.0	54.0	Brown, dry, medium dense to loose to very dense, micaceous silty sand with trace of rock fragments (decomposed to weathered rock)	5	19.5	21.0	3	E	4		12"
54.0	64.0	Gray, medium to hard, rock	9	24.5	26.0	12	11	50/2		15"
			7	29.5	31.0	2	2	1		12"
			∞	34.5	36.0	9	9	10		16"
			6	39.5	41.0	3	3	3		3"
			10	44.5	46.0	8	21	50/4		11"
			11	49.5	51.0	4	4	9		2"
		*Bottom at Ft.	12	54.5	54.7	50/2				2"
		*At completion water at 44 Ft. Caved 46 Ft.	13	54.0	59.0	RQD	%8			52"
		*Auger refusal at Ft.	14	59.0	64.0	RQD	, 21%			.09
		*Hard augering (24 to 29 Ft.) (32 to 34 Ft.) (43.5 to 44.5 Ft.)								

Water 44 Ft. After 24 hours

Caved

## BORING REPORT

PROJECT:	Dale	Dalecarlia Water Treatment Plant	BORING NO.:	DC-19						
LOCATION:		5900 Mac Arthur Blvd., Brookmount, MD	DATE:	06/26/95	56					
START:	06/2	06/26/95 END: 06/26/95	ELEVATION:							
DRILLER:	Jeff	Jeff Stouffer	DRILL RIG:	CME 55	55					
Depth	Depth (In Ft.)	Soil Description		Sam	Sample (In Ft.)	(t,	Blows /	Blows / 6" Penetration	ration	Rec/
From	То			No.	From	To				
0	17	Brown, dry, loose to medium dense, silty sand with layers of clay (fill)		-	0	1.5	3	3	4	
17	38	Gray to tan, dry, medium stiff to very stiff, clay with traces of gravel (fill	11	2	4.5	6.0	3	6	7	
38	47	Tan, moist, medium stiff, silty clay (possible fill)		3	9.5	11.0	4	4	4	
47	53	Tan, dry, very dense, silty sand with trace of rock fragment (possible fill)	()	4	14.5	16.0	3	7	6	
53	09	Greenish gray, wet, very dense silty sand and rock fragments (weathered rock)	rock)	5	19.5	21.0	5	3	5	
09	70	Gray, hard rock		9	24.5	26.0	3	4	5	
				7	29.5	31.0	7	6	6	.0
				∞	34.5	36.0	4	7	11	
				6	39.5	41.0	2	2	4	
		WR&A Note: Sample has petroleum product smell.		10	44.5	46.0	3	3	9	
				11	49.5	50.2	31	50/3"		
		*Hard augering from 47 Ft.		12	54.5	54.6	50/2"			2
		*No water encountered		13	59.5	59.6	50/1"			1"
		*Bottom 70 Ft.		14	0.09	65.0	RQ	D	20 0/0	.29
				15	65.0	70.0	RQ	D	25 0/0	.09

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## BORING REPORT

PROJECT:	Dale	Dalecarlia Water Treatment Plant BORING NO.:	.: DC-20	-20					
LOCATION:		5900 Mac Arthur Blvd., Brookmount, MD	./90	06/28/95					
START:	06/2	06/28/95 END: 06/28/95 ELEVATION:		14.5 Ft.					
DRILLER:	Paul	Paul Suit DRILL RIG:							
Dept	Depth (In Ft.)	Soil Description	Sa	Sample (In Ft.)	Ft.)	Blows /	Blows / 6" Penetration	ration	Rec/
From	To		No.	From	To				
0	2.5	Crushed rock (CRG)		٥	1.5	3	8	13	1:
2.5	12.0	Light brown to brown, dry to moist, medium dense to loose, micaceous clayey silt (fill)	2	.8	6.5	3	4	10	14*
12.0	26.0	Brown to reddish brown, dry, medium stiff to very stiff, clay with trace of gravel (fill)	3	10	11.5	4	4	S	12"
26.0	33.0	Brown, dry, dense to very dense, micaceous silty sand with trace of roots (fill)	4	15	16.5	5	4	4	11.
33.0	49.5	Brown, dry to wet, very dense, micaceous silty sand with rock fragments (decomposed to weathered rock)	2	20	21.5	23	11	17	16"
49.5	54.5	Brown to gray, soft to hard rock with layers of decomposed rock	9	25	26.5	49	19	22	14"
54.5	59.5	Gray,hard very fractured rock	7	30	30.3	51/4"			.4
			œ	35	36.5	29	30	36	12"
			6	4	40.1	51/1"			1"
			10	45	45.5	100/6"			6"
			11	49.5	54.5	RQ	D	27%	47*
		*Auger refusal at Ft.	12	54.5	59.5	RQ	Q	%0	.09
		*Encountered water at 37 Ft.		:					
		*Very hard grinding of augers from 37 Ft. to Ft.		-					
		*Bottom 59.5 Ft.							

## BORING REPORT

PROJECT:		Dalecarlia Water Treatment Plant	ON SUITOR	DC-21					
LOCATION:		ount, MD		96/30/92	95				
START:		06/30/95 END: 06/30/95 ELEV	ELEVATION:	Ft.					
DRILLER:		Paul Suit	DRILL RIG:				-		
Depth (In Ft.)	la Ft.)	Soil Description	Sa	Sample (In Ft.)	Ft.)	Blow	Blows / 6" Penetration	tion	Rec/ Att
From	To		No.	From	To				
0	13.0	Brown & red, moist, very soft to very stiff, silty clay with trace of roots & gravel (fill)	1	0	1.5	1	1	3	12*
13.0	42.5	Tan, dry to wet, medium dense to very dense, silty sand, decomposed rock	2	5.0	6.5	5	8	11	14*
42.5	52.5	Gray, medium hard rock	3	10.0	11.5	24	14	10	6"
			4	15.0	16.5	8	. 11	12	16"
			5	20.0	20.5	51/6"			6*
			9	25.0	26.2	9	25	5 2/3"	14"
			7	30.0	30.1	51/1"			.0
			∞	35.0	35.0	51/0"			.0
			6	42.5	47.5	Run #1	RQD %	0/0	.09
			10	47.5	52.5	Run #2	RQD 100%		.09
		*Bottom 52.5 Ft.							
		*Two-inch monitoring well installed to 40 Ft.					·		
		*Encountered water at 33.0 Ft.					•		
			-			, , ,			

Caved Ft.

Sheet No. 1 of 1

Water \_\_\_

7050 CHESAPEAKE ROAD, SUITE 205 HYATTSVILLE, MD 20784 PHONE (301) 306-9677 FAX (301) 306-9632

## BORING REPORT

PROJECT:	I	Dalecarlia Water Treatment Plant BORI	BORING NO.:		DC-22				
LOCATION:		5900 Mac Arthur Blvd., Brookmount, MD	ij		06/29/95				
START:	3	06/29/95 END: 06/29/95 ELEV	ELEVATION:	138	138.2 Ft.				
DRILLER:	H	Paul Suit DRIL	DRILL RIG:						
Depth (In Ft.)	n Ft.)	Soil Description	Sa	Sample (In Ft.)	Ft.)	Blow	Blows / 6" Penetration	по	Rec/
From	To		Š	From	To				nv.
0	9.0	Brown, dry, loose, micaceous silty sand (fill)	1	0	1.5	1	3		7"
9.0	24.0	Brown, damp, hard to very stiff to hard, silty clay, with a little rock fragments (fill)	2	5.0	6.5	4	9	4	# œ
24.0	45.5	Brown, dry to wet, very dense, micaceous silty sand (decomposed to weathered rock)	3	10.0	11.5	30	23	4	*4
45.5	55.5	Gray medium to hard rock	4	15.0	16.5	12	80	14	13*
			5	20.0	21.5	30	24	6	*4
			9	25.0	26.5	24	29	19	11.
			7	30.0	30.0	51/0"		30	ò
			∞	35.0	35.1	1001.			ò
			6	40.0	40.0	.0/15			i.o
			10	45.0	45.1	51/1.5"			1.5"
		*Bottom 55.5 Ft.	11	45.5	50.5	RQD	37%		48"
		*Slight to hard grinding of augers from 28 Ft. to 30 Ft. and 44 Ft. to 45.5 Ft.	12	50.5	55.5	RQD	83%		.09
		*Encountered water at 28.0 Ft.							
		*Auger refusal at 45.5 Ft.			:				
		*At completion water 22 Ft; Caved 44 Ft.							

Water

Caved

## BORING REPORT

PROJECT:	1	Dalecarlia Water Treatment Plant BOR	BORING NO.:	ă	DC-23				
LOCATION:	S	5900 Mac Arthur Blvd., Brookmount, MD	įμ	790	96/56/95				
START:	°	06/26/95 END: 06/28/95 ELE	ELEVATION:	138	138.3 Ft.				
DRILLER:	d.	Paul Suit DRII	DRILL RIG:						
Depth (In Ft.)	1 Ft.)	Soil Description	Sau	Sample (In Ft.)	Ft.)	Blow	Blows / 6" Penetration	ion	Rec/ Att
From	To		No.	From	To				
0	13.0	Brown, dry, medium dense, micaceous, silty sand with clay layers (fill)	1	0	1.5	2	3	8	<b>.</b> 6
13.0	23.0	Brown, dry, stiff, clay with trace of rock fragment & silty sand (fill)	2	5.0	6.5	12	8	9	14"
23.0	45.0	Reddish brown to brown, dry to wet, medium dense to very dense, micaceous silty sand, with rock fragments from 34.5 Ft. to 37 Ft. and 44 Ft. to 45 Ft. (decomposed to weathered rock)	3	10.0	11.5	3	2	5	16"
45.0	55.0	Gray & brown to gray, soft to hard rock	4	15.0	16.5	4	6	4	12"
			5	20.0	21.5	3	9	6	15*
			9	25.0	26.5	2	7	13	18"
			7	30.0	30.0	51/5"			\$*
				35.0	35.1	74/1"			0
			6	40.0	40.0	51/1"			1"
			10	45.0	45.0	51/0"			.0
		*Auger refusal 45 Ft.	11	45.0	50.0	RQD	20%		54"
		*Bottom 55 Ft.	12	50.0	55.0	RQD	88%		41"
		*Encountered water at 43.0 Ft.							
				•	-				

Water 33.4 Ft.

Caved 4

## BORING REPORT

PROJECT:	ı	Dalecarlia Water Treatment Plant BC	BORING NO.:	DC-24	24				
LOCATION:		5900 Mac Arthur Blvd., Brookmount, MD	DATE:	0//0	07/05/95				
START:		07/05/95 END: 07/05/95 EI	ELEVATION:	138.	138.7 Ft.				
DRILLER:		Paul Suit	DRILL RIG:						
Depth (In Ft.)	Ft.)	Soil Description	S	Sample (In Ft.)	Ft.)		Blows / 6" Penetration	/ 6" ation	Rec/ Att
From	To		No.	From	To				
0	33.0	Brown & gray, damp, medium stiff to stiff, clay with trace of silty sand, gravel & brick fragment (fill)	-	0	1.50	2	4	9	18*
33.0	51.0	Tan to gray, medium dense to very dense, micaceous silty sand (decomposed to weathered rock)	72	5.0	6.5	4	9	7	18*
51.0	54.5	Gray, medium to hard rock	3	10.0	11.5	5	9	6	16"
			4	15.0	16.5	2.	2	5	12"
			2	20.0	21.5	9	9	7	12"
			9	25.0	26.5	16	9	5	18.
			7	30.0	31.5	4	\$ .	8	18"
			∞	35.0	36.5	4	5	6	.81
		*Boring offset 7 Ft. north	6	40.0	40.0	51/0"			<b>"</b> 0
		*Slight grinding of augers 39 Ft. to 42 Ft.	10	45.0	45.1	51/1"			1.
		*Auger refusal 51 Ft.	11	50.0	50.1	51/1"			1"
		*Bottom at 54.5 Ft.	12	51.0	54.5	RQD			28.
		*At completion water at 44 Ft. Caved 46 Ft.							
		*Core barrel locked up & broke off at 54.5 Ft.			·				
		*No water encountered				1. 1. A. 1. 1.			

Water 14'5" After 24 hours

14, 8" Caved

## BORING REPORT

PROJECT:		Dalecarlia Water Treatment Plant	BORING NO.:	DC-25	.25				
LOCATION:	ÿ	5900 Mac Arthur Blvd., Brookmount, MD	DATE:	0//0	26/90/10				
START:		07/06/95 END: 07/07/95	ELEVATION:		136.2				
DRILLER:	•	Paul Suit	DRILL RIG:						
Depth (In Ft.)	n Ft.)	Soil Description	SS	Sample (In Ft.)	· Ft.)		Blows / 6" Penetration	/ 6" ation	Rec/ Att
From	То		No.	From	To				
0	2.0	Brownish gray to gray, dry to wet, very loose, silty sand with some rock fragments & small boulders (fill)		0	1.5	3	9	7	12"
2.0	43.0	Gray, wet, loose to very dense, silty sand & rock fragments (decomposed to weathered rock)	2	5.0	6.5	5	7	13	18"
43.0	55.0	Brown, soft partially weathered rock	3	10.0	11.5	4	6	14	18"
55.0	65.0	Gray, medium to hard fractured, rock	4	15.0	16.5	10	8	13	3"
		Gray soft to medium hard fractured rock	5	20.0	21.5	8	7	7	18"
			9	25.0	26.5	7	10	14	18"
			7	30.0	31.5	7	6	14	
			∞	35.0	36.5	14	12	12	18"
			6	40.0	41.5	20	10	13	12"
			10	45.0	46.5	20	30	32	16"
		*Installed 2" monitoring well to 54 Ft.	11	50.0	51.5	29	30	36	18"
		*Bottom at 65.0 Ft.	12	55.0	55.6	51/2"			.0
		*Boring offset 7 Ft. south	13	55.5	60.0	RQD	17%		.09
		*Encountered water at 45.5 Ft.	4	60.0	65.0	RQD	23 %		50"

## BORING REPORT

PROJECT:	I	Dalecarlia Water Treatment Plant BOI	BORING NO.:		DC-26				
LOCATION:		5900 Mac Arthur Blvd., Brookmount, MD	Ë	05/.	05/27/95				
START:	3	05/27/95 END: 06/28/95 ELE	ELEVATION:	135	135.6 Ft.				
DRILLER:	J	Jeff Stouffer DRI	DRILL RIG:						
Depth (In Ft.)	n Ft.)	Soil Description	Sai	Sample (In Ft.)	Ft.)	Blow	Blows / 6" Penetration	ion	Rec/ Att
From	To		Š	From	To				
0	33.0	Brown to gray, damp, soft to very stiff, silty clay with trace of gravel and brick fragments (fill)	-	0	1.5	2	2	3	
33.0	39.0	Grayish tan, dry, medium dense, silty sand with gravel and rock fragments (fill)	2	4.5	6.0	8	=	8	
39.0	48.0	Greenish gray, dry, medium dense silty sand & rock fragments	3	9.5	11.0	2	9	∞	
48.0	53.0	Tan, wet, medium dense, sand & gravel	4	14.5	16.0	4	9	10	
53.0	55.5	Gray, wet, very dense, weathered rock	5	19.5	21.0	3	9	8	
55.5	65.5	Gray, hard, rock	9	24.5	26.0	3	4	7	
			7	29.5	31.0	9	8	7	
			8	34.5	36.0	24	13	L	
			6	39.5	41.0	6	8	10	
			10	44.5	46.0	3	5	6	
			11	49.5	51.0	2	\$.	9	
		*Bottom 65.5 Ft.	12	54.5	56.0	50/2			
		*Encountered water at 50.0 Ft.	13	55.5	60.5	RQD	. %01		53"
		*Hard augering 37 Ft. to 38 Ft.		5'09'	65.5	RQD	81%		.09
-					-				

Water 44.0 Ft.

Caved

## BORING REPORT

PROJECT:	D	Dalecarlia Water Treatment Plant BOR	BORING NO.:		DC-27				
LOCATION:	S	5900 Mac Arthur Blvd., Brookmount, MD	DATE:	/50	05/26/95				
START:	Ö	05/26/95 END: 05/27/95 ELE	ELEVATION:	135	135.1 Ft.				
DRILLER:	J,	Jeff Stouffer DRI	DRILL RIG:						
Depth (In Ft.)	F.E.)	Soil Description	Sa	Sample (In Ft.)	Ft.)	Blown	Blows / 6" Penetration	ion	Rec/ Att
From	To		No.	From	To				
0	7.0	Brown to gray, damp, soft to very stiff, silty clay with trace of gravel and brick fragments (fill)	,I	0	1.5	3	3	4	
7.0	12.0	Grayish tan, dry, medium dense, silty sand with gravel and rock fragments (fill)	2	4.5	0.9	ε	3	٣	
12.0	17.0	Greenish gray, dry, medium dense silty sand & rock fragments	3	9.5	11.0	4	9	13	
17.0	28.0	Tan, wet, medium dense, sand & gravel	4	14.5	16.0	3	9	9	
28.0	43.5	Gray, wet, very dense, weathered rock	5	19.5	21.0	3	5	6	
43.0	54.5	Gray, hard, rock	9	24.5	26.0	3	3	9	
54.5	64.5		7	29.5	31.0	6	6	13	
			•	34.5	36.0	7	5	13	
			6	39.5	41.0	4	6	8	
			10	44.5	46.0	10	31	36	
			111	49.5	51.0	4	8	8	
		*Bottom 64.5 Ft.	12	54.5	59.5	RQD	%05		.09
		*Encountered water at 50.0 Ft.	13	59.5	64.5	RQD	%14		.09
		*Auger refusal 54.5 Ft.							
		*After 24 hours, 38' 10", caved 39 Ft.			-				

Water 37.0 Ft, at completion

Caved 44.0 Ft.

CHESAPEAKE ROAD, SUITE 205
HYATTSVILLE, MD 20784
PHONE (301) 306-9677 FAX (301) 306-9632

## BORING REPORT

PROJECT:	Q	Dalecarlia Water Treatment Plant BORI	BORING NO.:	DC-28	.28				
LOCATION:		5900 Mac Arthur Blvd., Brookmount, MD	ü	05/2	05/29/95				
START:	0	05/28/95 END: 05/29/95 ELEV	ELEVATION:	134	134.8 Ft.				
DRILLER:	J.	Jeff Stouffer	DRILL RIG:						
Depth (In Ft.)	1 Ft.)	Soil Description	San	Sample (In Ft.)	Ft.)	Blow	Blows / 6" Penetration	ioi	Rec/ Att
From	To		No.	From	To				
0	2.0	Crushed stone (CRG)	1	4.5	6.0	3	3	4	
2.0	37.0	Brown to gray to brown, dry, medium stiff to stiff, silty clay, with trace of asphalt & brick fragment (fill)	2	9.5	11.0	4	6	6	
37.0	50.5	Brown, dry to wet, medium dense to very dense, micaceous silty sand with rock fragments from 49 Ft. to 49.6 Ft. (Decomposed to weathered rock)	3	14.5	16.0	4	4	9	
50.5	60.5	Gray hard rock	4	19.5	21.0	2	4	5	
			5	24.5	26.0	4	5	9	
			9	29.5	31.0	3	4	9	
			7	34.5	36.0	5	5	7	
			••	39.5	41.0	5	6	13	
			٥	44.5	46.0	9/05			
			10	49.5	51.0	50/2			
			11	50.5	55.5	RQD	50%		39*
		*Bottom 60.5 Ft.	12	55.5	60.5	RQD	41%		30"
		*Encountered water at 42.0 Ft.							
		*Auger refusal 50,5 Ft.			:,				
		*After 24 hours, 42.5', caved 43 Ft.			-	. 41 1.11	-		

Water 43.0 Ft. at completion

Caved 45.0 Ft

### BORING REPORT

PROJECT:	Dalecarlia Water Treatment Plant BORI	BORING NO.:	DC-29	6				
LOCATION:	5900 Mac Arthur Blvd., Brookmount, MD DATE:	ü	96/30/95	. 66/				
START:	06/30/95 END: 06/30/95 ELEV	ELEVATION:	134.4 Ft.	Ft.				
DRILLER:	Jeff Stouffer DRIL	DRILL RIG:						
Depth (In Ft.)	Soil Description	Sa	Sample (In Ft.)	Ft.)		Blows / 6" Penetration	/6" ation	Rec/ Att
From To		No.	From	To				
0 23.0	Brown & gray, dry to damp, medium stiff to stiff, to medium stiff, clay with layers of silty sand (fill)		0	1.5	3	3	4	12"
23.0 42.0	Tan, dry to wet, dense to very dense, micaceous silty sand (decomposed to weathered rock)	2	4.5	0.9	2	3	5	18"
42.0 52.0	Gray, medium to hard rock	3	9.5	11.0	3	5	8	18"
		4	14.5	16.0	2	2	4	14"
		5	19.5	21.0	4	6	12	18"
		9	21.5	26.0	10	18	20	18"
		7	29.5	31.0	15	50/5		11"
		<b>∞</b>	34.5	36.0	9/05			.9
		6	39.5	41.0	13	50/2		9"
		10	42.0	42.1				
	*Auger refusal 42 Ft.		42.0	47.0	RQD	25%		1"
	*Bottom at Ft.	12	47.0	52.0	RQD	25%		54"
	*At completion water at 20 Ft. Caved 34 Ft.							.09
	*Encountered water at 40 Ft.		-					
				-				

Caved

Water 10.5 Ft. After 24 hours

#### BORING REPORT

PROJECT:		Dalecarlia Water Treatment Plant BOR	BORING NO.:	DC-30	9				
LOCATION:		5900 Mac Arthur Blvd., Brookmount, MD	<u>:</u>	\$6/08/90	3/95				
START:		06/29/95 END: 06/30/95 ELE	ELEVATION:	135.4 Ft.	4 Ft.				
DRILLER:		Jeff Stouffer	DRILL RIG:						
Depth (In Ft.)	Ft.)	Soil Description	Š	Sample (In Ft.)	Ft.)		Blows / 6" Penetration	6" ition	Rec/ Att
From	To		No.	From	To				
0	23.0	Brown, damp medium stiff to stiff, clay with layers of silty sand & rock fragment (fill)	lt 1	0	1.5	2	3	4	5.
23.0	40.5	Gray to tan, very dense, micaceous silty sand with trace of rock fragment (decomposed to weathered rock)	2	4.5	6.0	3	S	5	.9
40.5	50.5	Gray, medium to hard rock	3	9.5	11.0	4	4	7	5*
	_		4	14.5	16.0	5	5	5	8
			5	19.5	21.0	9	12	5	*8
			9	24.5	26.0	9	24	15	12"
			7	29.5	31.0	19	50/2	43	14"
			∞	34.5	36.0	15	50/5		12"
·			6	39.5	40.0	9/05			1"
			10	40.5	45.5	RQD	70%		54"
		*Auger refusal 40.5 Ft.	11	45.5	50.5	RQD	30%		62"
		*Bottom at 50.5 Ft.							
		*At completion water at 28 Ft. Caved 37 Ft.							
					-	1 m			

Water 31 Ft. After 24 hours

Caved 35 Ft.

## BORING REPORT

PROJECT:	Dalecarlia Water Treatment Plant	BORING NO.:	DC-31
LOCATION:	5900 Mac Arthur Blvd., Brookmount, MD	DATE:	06/29/95
START:	06/29/95 END: 06/29/95	ELEVATION:	136.5 Fr
DRILLER:	Jeff Stouffer	DRILL RIG:	

Lepter (in ric.)	Soil Description	3		í	Ē			
		7	Sample (In Ft.)	FC.)	Blow	Blows / 6" Penetration	ion	Rec/
From To		No.	From	To				
0 12.5	Reddish brown to brown, dry to moist, medium stiff to stiff, clayey silt with trace of gravel & rock fragments (fill)	1	o	1.5	2	3	4	.6
		2	5	6.5	1	5	7	10.
		3	10	11.5	6	7	5	10"
	*Bottom 12.5 Ft.							
	*Hard grinding of augers 12 Ft. to 12.5 Ft.							
	*Auger refusal 12.5 Ft.			:				
				-				

Water Dry at completion

Caved 45.0 Ft.

#### BORING REPORT

PROJECT:		Dalecarlia Water Treatment Plant	BORING NO.:	::	DC-31A				
LOCATION:		5900 Mac Arthur Blvd., Brookmount, MD	DATE:		06/29/95				
START:		06/29/95 END: 06/29/95	ELEVATION:	7	퍘.				
DRILLER:	д.	Paul Suit	DRILL RIG:						
Depth (In Ft.)	In Ft.)	Soil Description	S	ample	Sample (In Ft.)	Blo	Blows / 6" Penetration	no	Rec/ Att
From	To		So.	From	пп То				
0	14.2	Reddish brown to brown, dry to moist, clayey silt with trace of gravel & rock fragments (fill)	k 1	14.2	.2 15.2	.2 19	19		*4
14.2	15.2	Rock & concrete			-				
				_					
		*Bottom 15.2 Ft.							
		*Hard grinding of augers 13 Ft. to 14.2 Ft.							
		*Auger refusal 14.2 Ft.							
				Ŀ					

Water Dry at completion

Caved 45.0 Ft.

Sheet No. 1

#### BORING REPORT

PROJECT:		Dalecarlia Water Treatment Plant	BORING NO.:		DC-31B				
LOCATION:		5900 Mac Arthur Blvd., Brookmount, MD	DATE:	0//0	07/03/95				
START:		07/03/95 END: 07/03/95	ELEVATION;						
DRILLER:		Paul Suit	DRILL RIG:						
Depth (In Ft.)	. Ft.)	Soil Description	S	Sample (In Ft.)	ı Ft.)		Blows / 6" Penetration	S#	Rec/ Att
From	То		No.	From	To				
0	8.0	Tan, dry, micaceous silty sand	-	0	5.0	Auger Cut		9	.9
8.0	14.3	Tan, dry, micaceous silty sand with some gravel & small cobbles (fill)	2	5	10.0	Auger Cut		7	.9
14.3	15.8	Tan, dry, very dense silty clay & sand with gravel brick & rock fragments (fill)	ill) 3	14.3	15.8	40:0	33	99	12"
		*Auger refusal 14.3 Ft.							
		*Bottom at 15.8 Ft.							
		*Spoon glancing off below augers sample #3							
		*No water encountered							
					•	•			

Water Dry at completion

Caved 11.0 Ft.

HONE (301) 306-9677 FAX (301) 306-9632 GEOMATRIX, INC. 7050 CHESAPEAKE ROAD, SUITE 205

## BORING REPORT

PROJECT:		Dalecarlia Water Treatment Plant BOI	BORING NO.:	DC-32	32				
LOCATION:		5900 Mac Arthur Blvd., Brookmount, MD	DATE:	07/1	07/17/95				
START:		07/17/95 END: 07/17/95 ELI	ELEVATION:		146.3				
DRILLER:		Paul Suit DR	DRILL RIG:						
Depth (ln Ft.)	i Ft.)	Soil Description	Sa	Sample (In Ft.)	Ft.)		Blows / 6" Penetration	/6" ation	Rec/ Att
From	To		No.	From	To				
0	9.5	Brown, dry, medium dense, silty sand, with trace of wood & brick fragments & boulders (fill)		0	1.5	4	5	60	18"
			2	5.0	6.5	4	9	10	10"
			3	9.0	9.5	15	51/1"		4"
		*No water encountered while drilling							
		*Auger refusal 37 Ft.							
		*Bottom at 42 Ft.			:				
					-	1 1 1 1 1 1 1			

Caved 8 Ft.

Sheet No. 1 of 1

Water Dry After 24 hours

#### BORING REPORT

		INDIAN DAMO	T						
PROJECT:		Dalecarlia Water Treatment Plant	BORING NO.:		DC-32A				
LOCATION:		5900 Mac Arthur Blvd., Brookmount, MD	DATE:	,0	07/17/95				
START:		07/18/95 END: 07/18/95	ELEVATION:		145.3 (	145.3 (Approx.)			
DRILLER:		Paul Suit	DRILL RIG:				·		
Depth (In Ft.)	ı Ft.)	Soil Description	S	ample	Sample (In Ft.)		Blows / 6" Penetration	/ 6" ation	Rec/ Att
From	To		No.	From	п То				
0	18.0	Tan to gray & tan, dry, soft t very stiff, silty clay (fill)	1	10.0	0 11.5	5	3	4	12"
18.0	38.5	Greenish tan to orangish tan, dry, medium dense to very dense, micaceous silty sand (decomposed rock)	ty 2	15.0	0 16.5	7	80	10	.9
38.5	43.5	Gray, soft to medium, rock with soil lenses	3	20.0	0 21.5	8	11	12	10"
			4	25.0	0 26.5	6	12	18	12"
			5	30.0	0 31.5	25	35	50	18*
			9	35.0	0 36.4	10	10	51/5"	17*
			7	38.5	5 38.5	51/0*			.0
			8	38.5	5 43.5	RQD	10%	10%	44"
		*No water encountered while drilling							
		*Auger refusal 38.5 Ft.							
		*Bottom at 43.5 Ft.			:				
		*Installed 2" well to 37.5 Ft.		. '	-	, , , , , ,			

Water Dry After 24 hours

Caved 35 Ft.

#### BORING REPORT

PROJECT:		Dalecarlia Water Treatment Plant BG	BORING NO.:	DC-33	33				
LOCATION:		5900 Mac Arthur Blvd., Brookmount, MD	DATE:	07/1	07/18/95				
START:		07/18/95 END: 07/18/95 EI	ELEVATION:						
DRILLER:		Paul Suit Di	DRILL RIG:						
Depth (In Ft.)	. Ft)	Soil Description	SE	Sample (In Ft.)	Ft.)		Blows / 6" Penetration	/ 6" ation	Rec/ Att
From	To		No.	From	To				
0	23.0	Tan, dry to damp, medium stiff to very soft, silty clay with trace of brick & concrete fragments (fill)	F	0	1.5	5	∞	5	10"
23.0	37.0	Tan to tan & white, dry, very loose to very dense, micaceous silty sand (decomposed rock)	2	5.0	6.5	7	<b>∞</b>	<i>L</i> .	16"
37.0	42.0	Gray, medium to hard rock	3	10.0	11.5	7	6	9	10"
			4	15.0	16.5	3	5	5	4"
			5	20.0	21.5	2	2	2	18"
			9	25.0	26.5	1	1	14	18"
			7	30.0	31.5	3	9	12	18"
			•	35.0	36.5	45	42	46	18"
			6	37.0	42.0	RQD	%01		*09
								-	
		*No water encountered while drilling							
		*Auger refusal 37 Ft.							
		*Bottom at 42 Ft.			• .		•		
					-				

Water Dry After 24 hours

Caved 35 Ft.

## BORING REPORT

PROJECT:	, ,	Dalecarlia Water Treatment Plant	BORING NO.:		DC-34				
LOCATION:		5900 Mac Arthur Blvd., Brookmount, MD	DATE:	0,	07/19/95				
START:		07/19/95 END: 07/19/95	ELEVATION:		145.9 Ft.				
DRILLER:	,	Jeff Stouffer	DRILL RIG:						
Depth (In Ft.)	ln Ft.)	Soil Description		Sample	Sample (In Ft.)		Blows / 6" Penetration	ation	Rec/
From	To		Ź	No. From	лп То				
0	23.0	Brown, dry to damp, medium stiff, silty clay with trace of rock fragments (fill)		1 0	0	1.5 4	4	4	.9
23.0	33.0	Tan, dry, very dense, micaceous silty sand (decomposed to weathered rock)		2 4.5	-	6.0 3	3	2	10.
33.0	38.0	Gray, medium to hard, rock	` '	3 9.5		11.0 3	3	4	18"
				4 14	14.5	16.0 6	\$	4	.6
				5 19	19.5 21	21.0 2	3	5	3*
				6 24	24.5 26	26.0 5	25	30	18"
				7 29	29.5 31	31.0 27	50/3		10"
				9 3	33 33	33.0 51/0"			.0
			1	10 33		38.0 RQD	73%		57"
		*Bottom 38.0 Ft.							
		*Auger refusal at 33.0 Ft.							
		*No water encountered while drilling							
		*After 24 hours, water at 17.5 Ft., caved at 19 Ft.		_		:	,		

Caved

Water 11 Ft. at completion

Caved 16 Ft.

### BORING REPORT

PROJECT:		Dalecarlia Water Treatment Plant	BORING NO.:		DC-47		î e :		
LOCATION:		5900 Mac Arthur Blvd., Brookmount, MD	岜	02/	02/17/95				
START:		07/17/95 END: 07/17/95 ELE	ELEVATION:	41	144.7 Ft.				
DRILLER:	,	Jeff Stouffer DRI	DRILL RIG:						
Depth (In Ft.)	In Ft.)	Soil Description	Sar	Sample (In Ft.)	Ft.)	Blow	Blows / 6" Penetration	tion	Rec/
From	To		No.	From	To				Αtt
0	22.0	Tan, dry, loose to medium dense to loose, silty sand (fill)		0	1.5	,	,		,
22.0	27.0	Tan, dry, stiff, silty clay (possible fill)	2	4.5	0.9	, "	0 1	<b>+</b>   2	٥
27.0	53.0	Tan, dry, medium dense to very dense to medium dense, silty sand with trace of rock fragments	8	9.5	11.0	e .	~ ∞	5	10
53.0	58.0	Gray, soft rock with void from 54 Ft. to 55 Ft.	4	14.5	16.0	9	9	9	9
58.0	63.0	Gray, very soft weathered to decomposed rock	5	19.5	21.0	9	4	7	
			9	24.5	26.0	9	5	14	12
			7	29.5	31.0	8	6	3	8
				34.5	36.0	10	10		7
			6	39.5	41.0	4	4	5	
			10	44.5	46.0	10	6	6	16
			11	49.5	51.0	11	6	6	9
		*Bottom 63.0 Ft.	12	53.0	53.0	51/6"			0
		*Encountered water at 53.0 Ft.	13	53.0	58.0	RQD	25%		32"
			14	58.0	63.0	RQD	%0		.6
		*After 24 hours caved 45 Ft., dry							

Water 49.0 Ft. at completion

51.0 Ft.

Caved

### BORING REPORT

PROJECT:	Dale	Dalecarlia Water Treatment Plant - Phase II BORING NO.:		SWM-1					
LOCATION:		5900 Mac Arthur Blvd., Brookmount, MD	10	10/2/95					
START:	10/2/95	./95 END: 10/2/95 ELEVATION:	ion:						
DRILLER:	Paul	Paul Suit DRILL RIG:	IG:						
Dept	Depth (In Ft.)	Soil Description		Sample (In Ft.)	1 Ft.)	Blows .	Blows / 6" Penetration	ration	Rec/ Att
From	To		N <sub>0</sub> .	From	To				
0	2	Brow, dry medium stiff silty clay with trace of sand (fill)	1	0	1.5	1	3	9	6"
2	14	Tan, dry, medium dense sand with trace of clay and gravel and trace of brick fragments (fill)	2	2.5	4.0	S	9	S	
14	4	Brown to gray to tan, dry, medium dense to dense, clayey sand, (with trace of roots and trace of silt (fill)	ots 3	5.0	6.5	4	∞	9	10"
44	54	Grayish tan to tan, wet to dry, loose to very dense, micaceous silty sand (decomposed rock)	osed 4	10.0	11.4	5	11	51/4"	12"
			5	15.0	16.5	30	9	6	12"
			9	20.0	21.5	6	13	18	16"
			7	25.0	26.5	12	6	14	18"
			8	30.0	31.5	10	10	12	10"
			6	35.0	36.5	7	10	12	18"
	·	WR&A Note: Odors from 15 feet to 20 feet depth.	10	40.0	40.6	30	51/1"		5"
			11	45.0	46.5	4	3	4	18"
		*Strong petroleum odor on Sample No. 5	12	50.0	50.3	51/4"			3#
		*Encountered water at 45 Ft.	13	54.0	54.1	51/1"			1"
		*Bottom 54.0 Ft.							
						-			

## BORING REPORT

PROJECT:	Dal	Dalecarlia Water Treatment Plant - Phase II	BORING NO.:	SWM-2	[-2					
LOCATION:		5900 Mac Arthur Blvd., Brookmount, MD	DATE:	10/2/95	95					
START:	7/01	10/2/95 END: 10/2/95	ELEVATION:							
DRILLER:	Pau	Paul Suit	DRILL RIG:							
Dept	Depth (In Ft.)	Soil Description		San	Sample (In Ft.)	Ft.)	Blows /	Blows / 6" Penetration	ration	Rec/ Att
From	То			No.	From	To				
0	2	Brow, dry soft, silty clay (fill)		1	0	1.5	2	2	3	7"
2	4.5	Tan, dry, medium dense, silty sand (fill)		2	2.5	4.0	5	5	9	16"
4.5	3544	Brown and gray, dry, very stiff to stiff to very stiff clay with a little roots, brick and asphalt fragments and trace of sand (fill)	ots, brick and	3	5.0	6.5	3	9	10	18"
				4	10.0	11.5	5	7	7	18"
				5	15.0	16.5	9	10	14	18"
				9	20.0	21.5	1	5	7	14"
				7	25.0	26.5	14	7	7	18"
				∞	30.0	31.5	10	13	15	18"
				6	35.0	35.2	51/3"		,	1"
		*Hit obstruction at 35.0 Ft.								
		*No water encountered								
		*Bottom 35.0 Ft.								

Water 31.5 Ft. after 48 Hours

Caved Dry

### BORING REPORT

PROJECT:	Dale	Dalecarlia Water Treatment Plant - Phase II	BORING NO.:	SWM-3					
LOCATION:		5900 Mac Arthur Blvd., Brookmount, MD		10/3/95					
START:	10/3	10/3/95 END: 10/3/95 ELE	ELEVATION:						
DRILLER:	Paul	Paul Suit DRI	DRILL RIG:						
Depti	Depth (In Ft.)	Soil Description		Sample (In Ft.)	(In Ft.)	Blows	Blows / 6" Penetration	tration	Rec/ Att
From	To		Z	No. From	т То				
0	7.0	Brown to tan, dry, loose to dense, silty sand with trace of gravel (fill)		1 0	1.5	1	4	9	.8
7.0	38.0	Brown, dry to moist, stiff to very stiff to medium stiff, silty clay with trace of roots and brick fragments (fill)		2 2.5	5 4.0	10	12	13	12"
38.0	43.0	Gray, dry, medium dense, silty sand (possible fill)		3 5.0	6.5	32	24	12	14"
43.0	49.0	Tan, dry, dense, micaceous silty sand with trace of rock fragments		4 10.0	0 11.5	4	4	7	10"
				5 15.0	0 16.5	4	5	7	12"
				6 20.0	0 21.5	4	4	12	12"
			-	7 25.0	0 26.5	4	12	13	12"
				8 30.0	0 31.5	2	2	5	12"
				9 35.0	0 36.4	4	4	51/4"	16"
			1	10 40.0	0 41.5	9	11	12	10"
			1	11 45.0	0 46.5	9	17	19	18"
		*No water encountered	1	12 49.0	0 49.0	51/0"			.0
		*Auger refusal 49.0 Ft.							
		*Bottom 49.0 Ft.							

Caved 41 Ft.

Sheet No. 1 of 1

Water Dry after 24 Hours

## BORING REPORT

PROJECT:		Dalecarlia Water Treatment Plant - Phase II	BORING NO.:	SWM-3A	(-3A					
LOCATION:		5900 Mac Arthur Blvd., Brookmount, MD	DATE:	10/3/95	56					
START:	10/.	10/3/95 END: 10/3/95	ELEVATION:							
DRILLER:		Paul Suit	DRILL RIG:							
Dept	Depth (In Ft.)	Soil Description		San	Sample (In Ft.)	Ft.)	Blows /	Blows / 6" Penetration	ration	Rec/ Att
From	To			No.	From	To				
0	11.0	Tan to brown, dry, stiff clay with trace of sand & gravel (fill)		1	7.5	9.0	7	7	∞	10"
									-	
						-				
						-				
		*No water encountered								
		*Bottom 11 Ft.								

Caved 9.5 Ft.

Sheet No. 1 of 1

Water Dry after 24 Hours

#### BORING REPORT

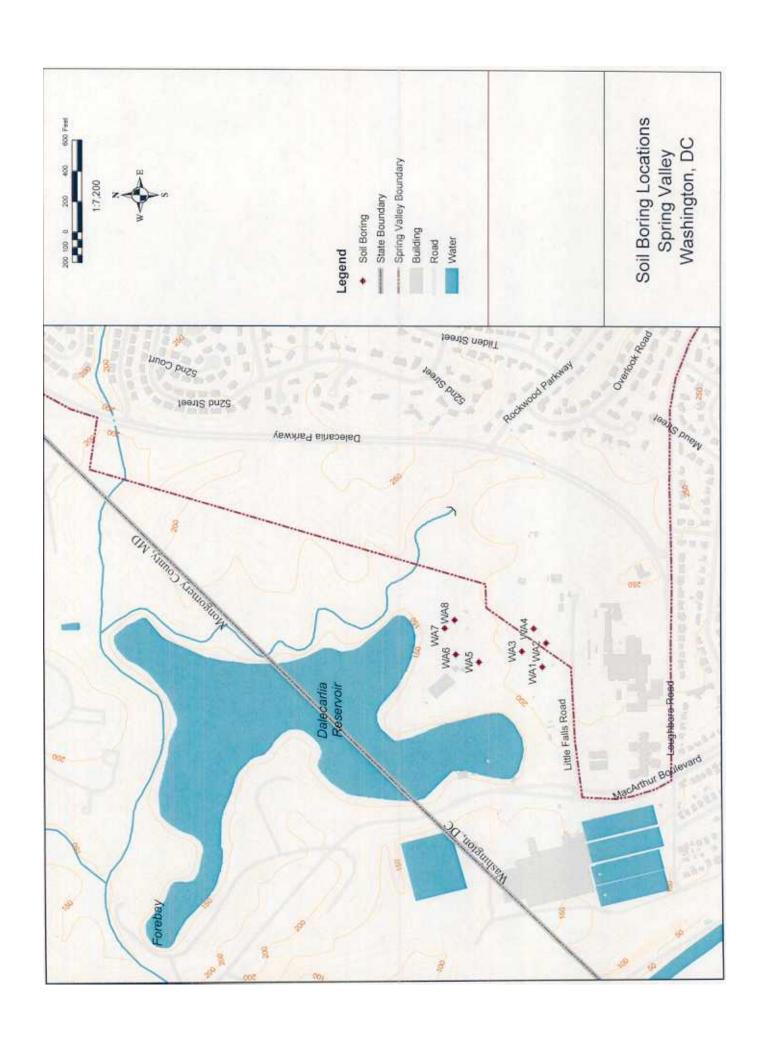
PROJECT:         Delecarlia Water Treatment Plant - Phase II         BORING           LOCATION:         5900 Mac Arthur Bivd., Brookmount, MD         DATE:           START:         10/3/95         END:         10/3/95         ELEVATION:           DRILLER:         Paul Suit         PRILLER:         PRILLER:									
10/3/95 END: 10/3/95  R: Paul Suit  To Soil Description  12.0 Tan, dry, loose to medium dense, clayey sand (fill)  15.0 Tan, dry, medium dense, micaceous silt  18.0 Orangish tan, dry, dense, coarse sand & gravel (fill)  35.5 Gray, dry to damp, very stiff to stiff, silty clay, with trace of roots & concret fragments (fill)  *No water encountered  *Auger refusal 49.0 Ft.  *Bottom 49.0 Ft.	BORING NO.:	SW	SWM-4						
Paul Suit   Soil Description   To   Brown, dry, loose to medium dense, clayey sand (fill)   12.0   Tan, dry, stiff, clayey silt with trace of sand (fill)   15.0   Tan, dry, dense, coarse sand & gravel (fill)   35.5   Gray, dry to damp, very stiff to stiff, silty clay, with trace of roots & concret fragments (fill)   4. No water encountered   *Auger refusal 49.0 Ft.   *Bottom 49.0 Ft.	DATE:	10,	10/3/95						
(In Ft.) Soil Description  To Brown, dry, loose to medium dense, clayey sand (fill)  12.0 Tan, dry, stiff, clayey silt with trace of sand (fill)  15.0 Tan, dry, medium dense, micaceous silt  18.0 Orangish tan, dry, dense, coarse sand & gravel (fill)  35.5 Gray, dry to damp, very stiff to stiff, silty clay, with trace of roots & concret fragments (fill)  *No water encountered  *No water encountered  *Auger refusal 49.0 Ft.  *Bottom 49.0 Ft.	ELEVATION:								
To Brown, dry, loose to medium dense, clayey sand 12.0 Tan, dry, stiff, clayey silt with trace of sand (fill 15.0 Tan, dry, medium dense, micaceous silt 18.0 Orangish tan, dry, dense, coarse sand & gravel (fragments (fill))  *No water encountered *No water encountered *Auger refusal 49.0 Ft.  *Bottom 49.0 Ft.	סאוד אפ:								
To Brown, dry, loose to medium dense, clayey sand 12.0 Tan, dry, stiff, clayey silt with trace of sand (fill 15.0 Tan, dry, medium dense, micaceous silt 18.0 Orangish tan, dry, dense, coarse sand & gravel (fragments (fill)) fragments (fill) *No water encountered *Auger refusal 49.0 Ft.  *Bottom 49.0 Ft.		Samp	Sample (In Ft.)	В	Blows / 6" Penetration	Penetra	ation		Rec/ Att
7.0 Brown, dry, loose to medium dense, clayey sand 12.0 Tan, dry, stiff, clayey silt with trace of sand (fill 15.0 Tan, dry, medium dense, micaceous silt 18.0 Orangish tan, dry, dense, coarse sand & gravel (fragments (fill)) fragments (fill)  *No water encountered  *Auger refusal 49.0 Ft.  *Bottom 49.0 Ft.	N	No. Fi	From To						
12.0 Tan, dry, stiff, clayey silt with trace of sand (fill 15.0 Tan, dry, medium dense, micaceous silt 18.0 Orangish tan, dry, dense, coarse sand & gravel (fragments (fill)) fragments (fill) fragments (fill) *No water encountered *Auger refusal 49.0 Ft.		1	0 1.5	2	3	4	9	-	10"
15.0 Tan, dry, medium dense, micaceous silt 18.0 Orangish tan, dry, dense, coarse sand & gravel ( 35.5 Gray, dry to damp, very stiff to stiff, silty clay, fragments (fill)  *No water encountered  *Auger refusal 49.0 Ft.  *Bottom 49.0 Ft.		2	2.5 4.0	0	6	10	10		14"
18.0 Orangish tan, dry, dense, coarse sand & gravel (35.5 Gray, dry to damp, very stiff to stiff, silty clay, fragments (fill)  *No water encountered  *Auger refusal 49.0 Ft.  *Bottom 49.0 Ft.		3 ,	5.0 6.5	2	9	6	6		10"
fragments (fill)  fragments (fill)  *No water encountered  *Auger refusal 49.0 Ft.  *Bottom 49.0 Ft.		4 1	10.0	5	4	7	80		14"
*No water encountered  *Auger refusal 49.0 Ft.  *Bottom 49.0 Ft.		5 1	12.0 14.00	00	100 * psi	* †	* †	200 psi	24"
*No water encountered  *Auger refusal 49.0 Ft.  *Bottom 49.0 Ft.		6 1	15.0 16.5	.5	8	20	18		10"
*No water encountered  *Auger refusal 49.0 Ft.  *Bottom 49.0 Ft.		7 2	20.0 21.5	5	7	10	13		12"
*No water encountered  *Auger refusal 49.0 Ft.  *Bottom 49.0 Ft.		8	25.0 26.5	ار	1	5	8		10"
*No water encountered  *Auger refusal 49.0 Ft.  *Bottom 49.0 Ft.	3	9 3	30.0 31.5	5	5	5.	9		18"
*No water encountered  *Auger refusal 49.0 Ft.  *Bottom 49.0 Ft.	1	10 3	35.0 35.2		51/3"				3"
*No water encountered  *Auger refusal 49.0 Ft.  *Bottom 49.0 Ft.						-			
*Auger refusal 49.0 Ft. *Bottom 49.0 Ft.									
*Bottom 49.0 Ft.									

Water Dry after 24 Hours

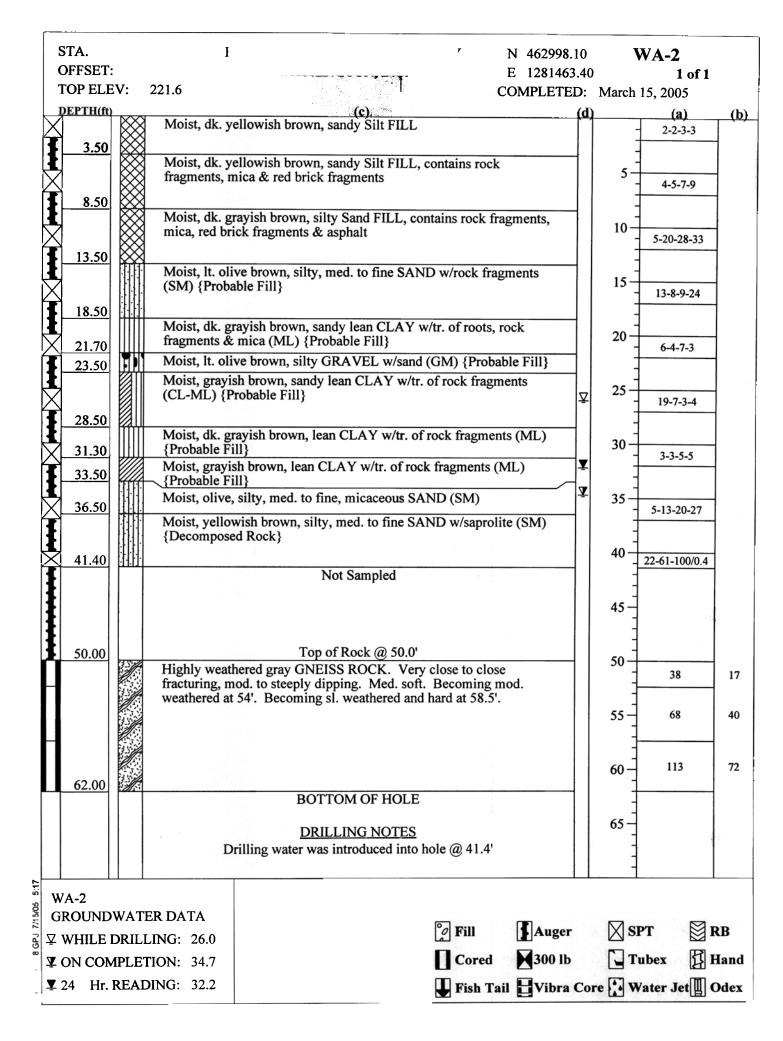
Caved 33 Ft.

\* Plichad Shalby Tuba Eand Dunrous is set

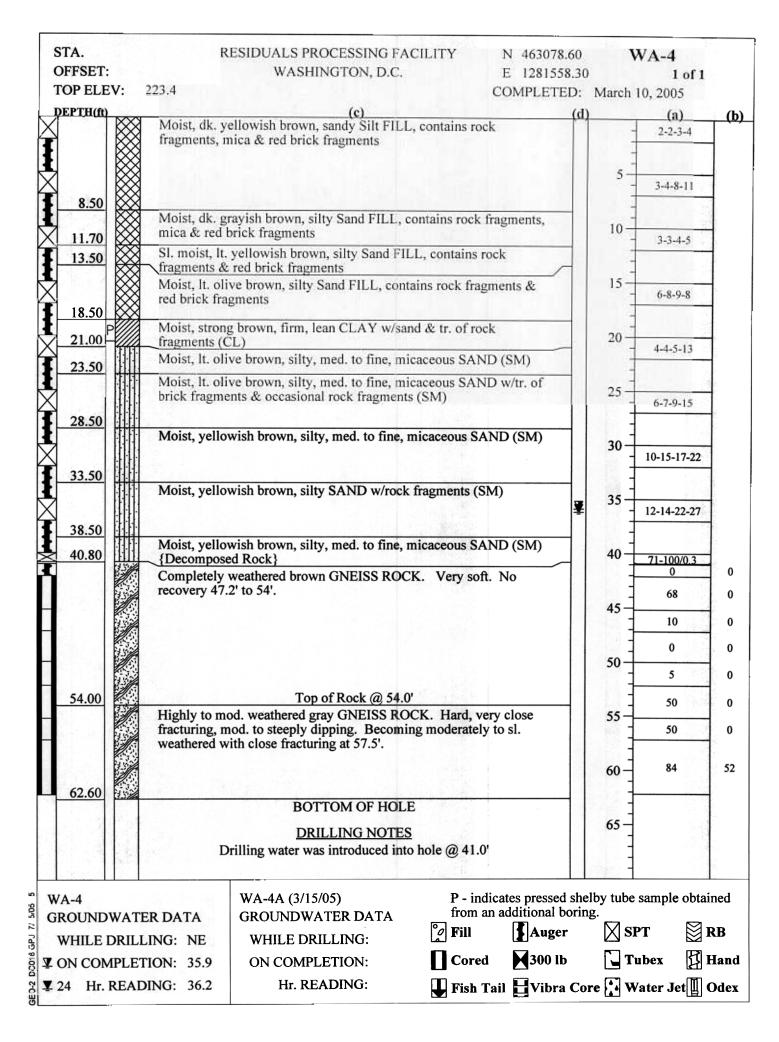
SOIL BORING INFORMATION FOR EAST DALECARLIA PROCESSING SITE



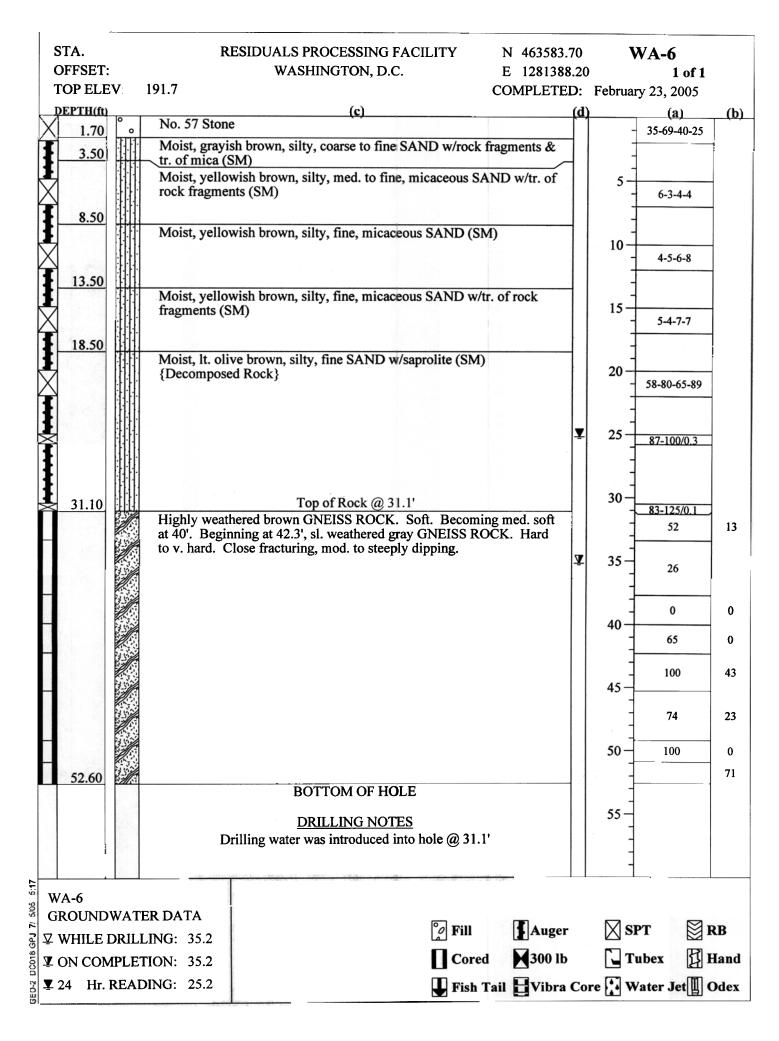
i						
STA.	RESIDUALS PROCESSING FA	CILITY N 4630	23.50	V	VA-1	
OFFSET:	WASHINGTON, D.C.	E 1281			1 of 1	
	216.2	COMPLE	TED:	March 1	1, 2005	
DEPTH(ft)	Moist, grayish brown, silty Sand FILL, cont	ains rock fragments	<u>(d)</u>		(a)	(b)
1.00	Moist, dk. gray, silty Sand FILL, contains ro			+	20-6-7-16	
<b>I</b>	, , , , , , , , , , , , , , , , , , , ,	<i>g</i>		†		
				]		
5.90				5		
X 3.90	Moist, lt. olive brown, silty, med. to fine SA	ND w/tr. of rock	-	+	7-6-9-7	1
3 0.50	fragments & mica (SM)			+		
8.50	Moist, yellowish brown, silty, med. to fine S	SAND w/tr. of rock	-	]		
	fragments & mica (SM)			10		
				+	3-3-3-4	
3				t		
1				]		
				15		
				-	5-8-10-15	
3				+		
18.50	Moist, lt. yellowish brown, silty, med. to fin	e SAND w/tr_of rock	-	]		
	fragments & saprolite (SM) {Decomposed R			20		
				1	2-21-40-100/0.4	
1				+		
23.45	Moist, lt. yellowish brown, silty, med. to fin	e SAND w/saprolite		]		
25.50	(SM) {Decomposed Rock}	c of the wisapronic		25	100/0.5	
	Top of Rock @, 25.5		$A \mid$	1	100/0.5	
	Highly to moderately weathered gray GNE! fracturing, mod. to steeply dipping. Soft. B	SS ROCK. Close ecoming med. soft at 30'	₹	+	67	30
	Sl. weathered and hard below 32'.	ocoming mou. bost at 50 .				
				30	67	54
				+		
				+		
				1	94	72
				35		
35.90	BOTTOM OF HOLI	F	-	+		
	BOTTOM OF HOLE			+		
	DRILLING NOTES			†	1	
	Drilling water was introduced into hole @ 2			40		
	2. 2. ming water was mireduced into note (g. 1	25.5 4.14 54.154 (5) 27.15				
				4		
				1		
				1		
WA-1	0.000.000.000					
WA-1 GROUNDWATE	ER DATA	44400 (Street   1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1 <u>194 - 188 -</u> 11 1981	80 - 50 - 20 - 8 <del>0</del>	
WHILE DRILL		🌠 Fill 🚺 Aug	ger	<b>⊠</b> SP	PT ∭ R	В
NITE BREE	[11] - 11 - 11 - 11 - 12 - 12 - 13 - 13 - 13	Cored 300	lb	Tu	ıbex 🖺 H	land
WHILE DRILL  ▼ ON COMPLET  ▼ 24 Hr. READ						
O + 24 HI. KEAD	11.0. 21.5	Fish Tail UVib	ra Cor	e w	ater Jet 🖺 C	ouex



STA. RESIDUALS PROCESSING FACILITY N 463155.10 WA-3 OFFSET: WASHINGTON, D.C. E 1281408.00 1 of 1 TOP ELEV: 217.2 COMPLETED: March 4, 2005 DEPTH(ft) (b) (a) Moist, dk. yellowish brown, sandy Silt FILL, contains rock 1-1-1-2 fragments, mica & red brick fragments 5 6.60 2-7-14-9 Moist, yellowish brown, silty Sand FILL, contains rock fragments. mica & red brick fragments 10 11.00 10-10-6-14 Moist, reddish brown, silty Gravel Fill, contains sand, asphalt & red brick fragments 13.50 Moist, dk. yellowish brown, silty Sand FILL, contains rock fragments & red brick fragments 15 15.90 10-50-55-13 Moist, lt. olive brown, silty, med. to fine SAND w/rock fragments & saprolite (SM) {Decomposed Rock} 20.20 20 100/0.2 Sl. weathered gray GNEISS ROCK. Hard. No fracturing 21.80 0 information possibly due to poor recovery. No Recovery 0 25 1-2-5-21 26.80 Moist, yellowish brown, clayey, fine SAND w/tr. of rock fragments 3-5-9-10 & mica (SC) 29.40 Moist, brownish yellow, sandy lean CLAY w/tr. of rock fragments 30 31.50 2-3-10-12 V Wet, It. yellowish brown, clayey, coarse to fine SAND w/rock 33.50 fragments (SC) Wet, yellowish brown, silty, med. to fine SAND (SM) 35 38.50 Wet, olive gray, silty, med. to fine SAND (SM) 40 3-5-6-9 42.00 **BOTTOM OF HOLE** 45 DRILLING NOTES Drilling water was introduced into hole @ 20.2'. EZ-Mud introduced @ 20.2'. Water & roller bit used in place of 50 augering for remainder of hole. Between Completion & the 24 Hr. reading, it rained & snowed heavily. 55 Layer of rock encountered @ 20.20'. Cored from 20.20' to 26.80'. Return to HSA sampling from 26.8' to BOH. WA-3 **GROUNDWATER DATA** °o Fill Auger WHILE DRILLING: NE 300 lb Cored **Tubex Y** ON COMPLETION: 31.5 ■ Fish Tail ■ Vibra Core Water Jet Odex **▼** 24 Hr. READING: 16.7



STA. OFFSET:	RESIDUALS PROCESSING FACILITY WASHINGTON, D.C.	N 463435.00 E 1281337.6		WA-5 1 of 1	
TOP ELEV:	195.5	COMPLETED			
DEPTH(ft)	(c)	6	d)	(a)	(b
	Moist, dk. grayish brown, silty, coarse to fine SAND fragments & tr. of mica (SM)	w/rock		13-15-22-11	Ĺ
3.50	Moist, lt. yellowish brown, silty, med. to fine, micace of rock fragments (SM)	ous SAND w/tr.	5-		
X 3				9-11-11-17	
8.50	Moist, lt. yellowish brown, silty, med. to fine, micace (SM)	ous SAND	10-		
11.50	Moist, lt. yellowish brown, silty, med. to fine, SAND {Decomposed Rock}	(SM)		18-21-26-41	
			15-	55-92-100/0.5	60 40 60 60 60 60 60 60 60 60 60 60 60 60 60
				0	0
		7	20 -	100/0.4	0
	Top of Rock @ 23.9'			0	0
	Highly to moderately weathered brown GNEISS ROC Becoming soft at 26'.	CK, Very soft.	25-	53	0
			-	29	0
			30-	69	0
	Sl. to unweathered gray GNEISS ROCK. Hard to v. h mod. close fracturing, mod. to steeply dipping.	ard. Close to	-	62	4
			35-	115	95
			-	94	56
40.90			40 —		
10.50	BOTTOM OF HOLE		-		
26	DRILLING NOTES  Drilling water was introduced into hole @ 16.5' and 1	bailed @ 33.1'			
11 82	2 Fi	100000000000000000000000000000000000000	⊠s		
	☐ Co Ų Fi	ored ∭300 lb sh Tail ∐Vibra C		`ubex 🔀 I Vater Jet🗓 (	



STA. OFFSET:	R	ESIDUALS PROCESSING I WASHINGTON, D.O		N 463654 E 128156		V	VA-7	
TOP ELEV:	189.8	WASHINGTON, D.C		COMPLETE		Februai	1 of 1 ry 24, 2005	
DEPTH(ft)		(c)			(d)		(a)	(b)
	Moist, dk. y & mica	ellowish brown, sandy Silt FI	LL, contains rock	fragments		_	4-5-7-12	
3.50	Moist vello	wish brown, sandy lean Clay	FILL contains m	ica	+1			
	wiolst, yello	wish brown, sandy lean Clay	r iel, contains in	ica		5 —	6-6-8-8	
8.50							0-0-8-8	
1 5.50		wish brown, sandy lean Clay	FILL, contains ro	ck	11	10		
$\bowtie$	fragments &	red brick fragments				10 -	4-5-5-6	
13.50						-		
		wish brown, clayey Sand FIL brick fragments	L, contains rock f	ragments,		15		
<b>À</b>   <b>⊗</b>						1	2-3-2-4	
18.50	Moist, grayi	sh brown, silty, fine, micaceo	us SAND w/tr. of	rock	+	1		
		SM) {Probable Fill}				20	6-9-8-7	
23.50						1		
	Moist, yello	wish brown, clayey, coarse to nents (SC) {Probable Fill}	fine, micaceous S	SAND		25		
	W/TOCK Hagi	nems (Se) (1 locable 1 m)					7-5-18-15	
28.50	Moist olive	to olive gray, silty, med., mic	aceous SAND w	tr of briok	$\parallel \parallel$	_		
		rock fragments (SM)	accous SAND w/	u. of offek		30	2-3-6-10	
						1	2-3-0-10	
						7.		
						35	3-10-20-40	
38.50					≖	1		
		ve brown, silty, med. to fine, ints (SM) {Decomposed Rock		w/tr. of		40		
42.00		BOTTOM OF HO				1	15-38-52-76	
			LE			1		
	WA-7A (3/1	Notes: 1/05) - Location moved 3' No	orth of WA-7. A	2' shelby		45		
	was pushed	starting @ 30' using rig hydra	ulics.			1		
	WA7-B (3/1	6/05) - Location moved 1.5' N	North of WA-7.	A 4'		50		
	shelby was p	bushed starting @ 29' using rig	g hydraulics.			1		
						-		
						55		
						-		
						-		
WA-7		WA-7A / 7B (3/11/05 & 3/	16/05) P - indi	cates pressed	shell	y tube	sample obtai	ned
GROUNDWAT	ER DATA	GROUNDWATER DATA	from an	additional b	oring		_	
WHILE DRILL	LING: NE	WHILE DRILLING:	°o Fill	Auger		⊠ sı	تعدا	
WA-7 GROUNDWAT WHILE DRILL ON COMPLE	TION: NE	ON COMPLETION:	Cored	300 lb	, ,	T	ubex 🖺 l	Hand
	DING: 38.2	Hr. READING:	Fish Ta	ail <b>[</b> ]Vibra	Core	e 🔀 W	ater Jet 🗓 🤇	Odex
·								

STA. OFFSET:	RE	SIDUALS PROCESSING FACILI' WASHINGTON, D.C.	ГҮ	N 463590.80 E 1281615.60		VA-8	
	190.8	WASHINGTON, D.C.	c	COMPLETED:		1 of 1 rv 26, 2005	
DEPTH(ft)		(c)		(d		(a)	(b)
	Moist, grayish & red brick fr	brown, silty Sand FILL, contains r	ock fragm	ents, mica		8-16-8-7	(,,
3.50	Moist, yellow	ish brown, silty Sand FILL, contain ete/red brick fragments	s rock frag	gments,	5-	100/0.1	
12.00					10-		
14.50	mica	brown, clayey Sand FILL, contains		ments &	15-	4-6-8-10	
18.50	fragments, mi	brown, sandy lean Clay FILL, contact & red brick fragments			-	7-6-6-9	
23.50	Moist, lt. olive fragments (SM	e brown, silty, med. to fine, micaced f)	ous SAND	w/rock	20-	100/0.3-19-17-10	
25.30	Moist, lt. olive (SM)	e brown, silty, med. to fine, SAND	w/rock frag	gments	25	35-12-14-10	
33.50					30-	25-15-18-8	
38.50	Moist, grayish rock fragment	brown, silty, med. to fine, micaceo s (SM)	us SAND	w/tr. of	35 -	19-15-8-6	
41.40	Moist, lt. olive		D (SM)		40	18-60-100/0.4	
44.40		Top of Rock @ 41.4' ered brown GNEISS ROCK. Mediu d. to steeply dipping.	m soft. Cl	ose	45 –	17	0
		Not Sampled	3			2-2-2-3	
49.75	fragments (SM				50	76-50/0.1	
	fragments (SM				55	97	19
59.60	soft. Close fra unweathered g	erately weathered brown GNEISS Incturing, mod. to steeply dipping. Buray GNEISS ROCK. Hard to v. has	eginning (	@ 55.8',		100	74
	close fracturin	g. BOTTOM OF HOLE		/	60 –		
	Dri	DRILLING NOTES ling water was introduced into hole	@ 41.4'.		65		
	Began coring HSA @ 47.0'.	@ 41.4'. Material became soft quick Resumed rock coring from 55.8' to	kly. Retur BOH.	ned to	70		
					75		
_	W 75 - 1 - 1						
WA-8							
GROUNDWATE WHILE DRILL		0	Fill	Auger	⊠ sı	PT 📓 R	В
ON COMPLET			Cored	<b>300 lb</b>	T	ubex 🖺 H	land
24 Hr. READ	ING: NT		Fish Tai	il 🖁 Vibra Co	re 🔀 W	ater Jet 🗓 C	dex

#### LABORATORY TEST RESULTS

**DATE:** Jul.2005

**PROJECT:** Residuals Processing Facility

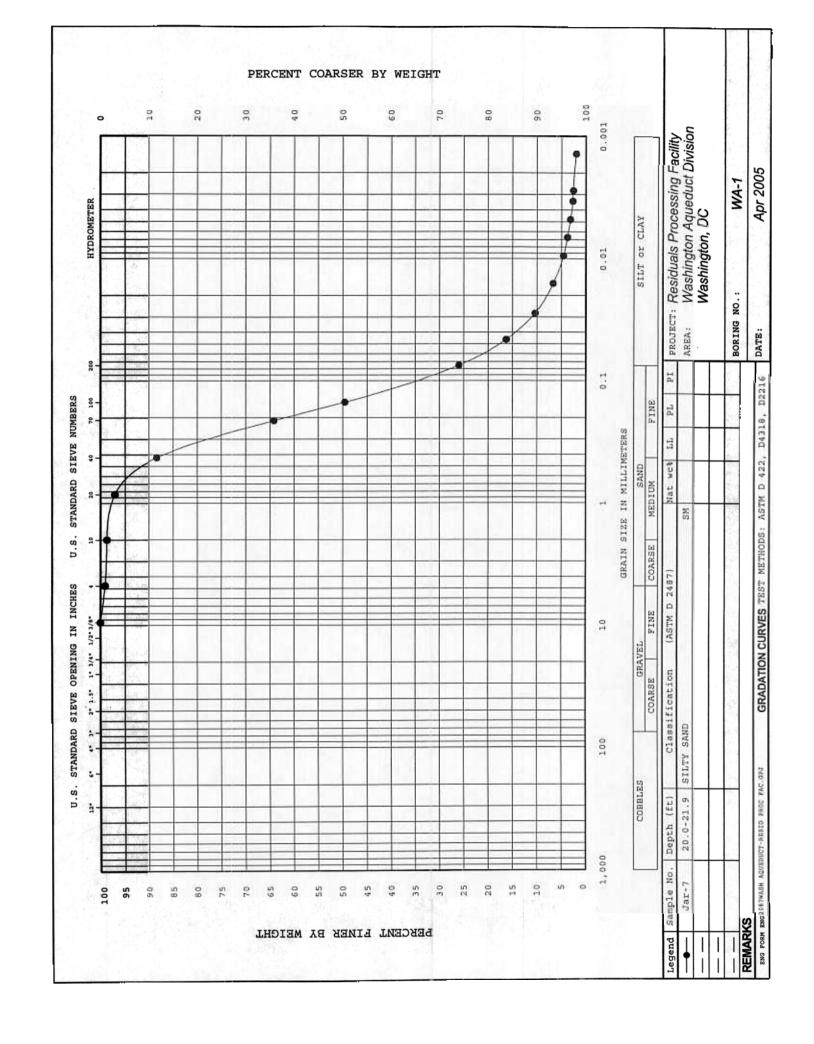
Washington Aqueduct Division

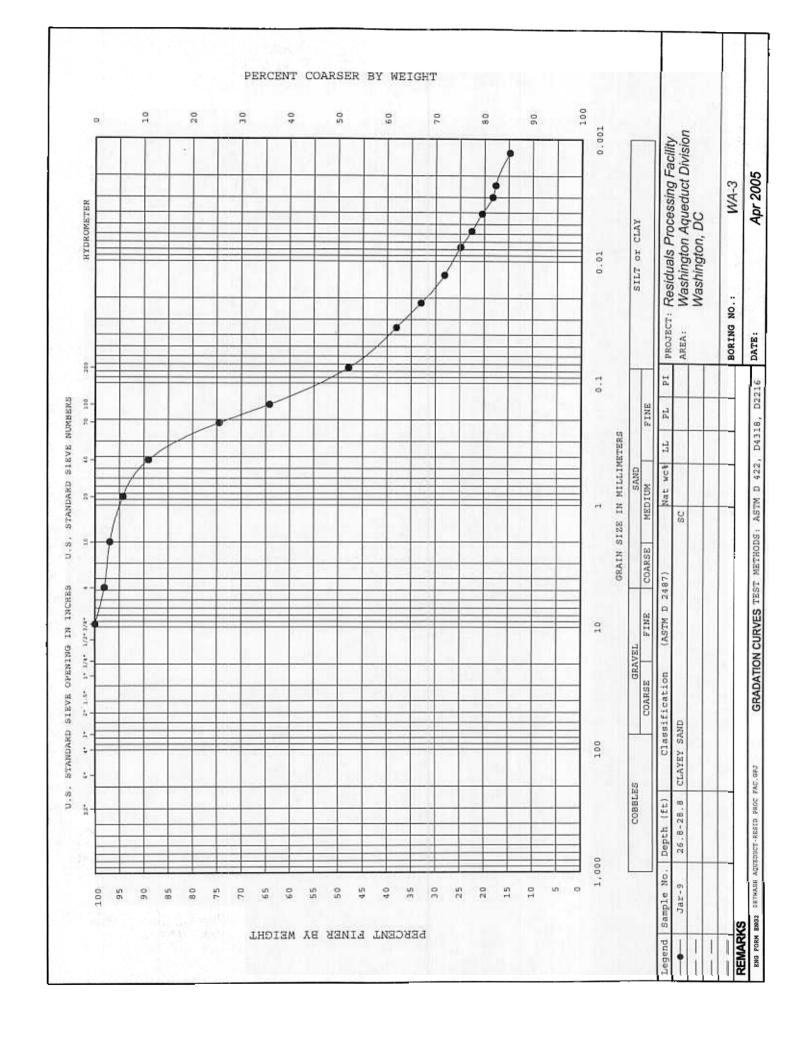
AREA: Washington, DC

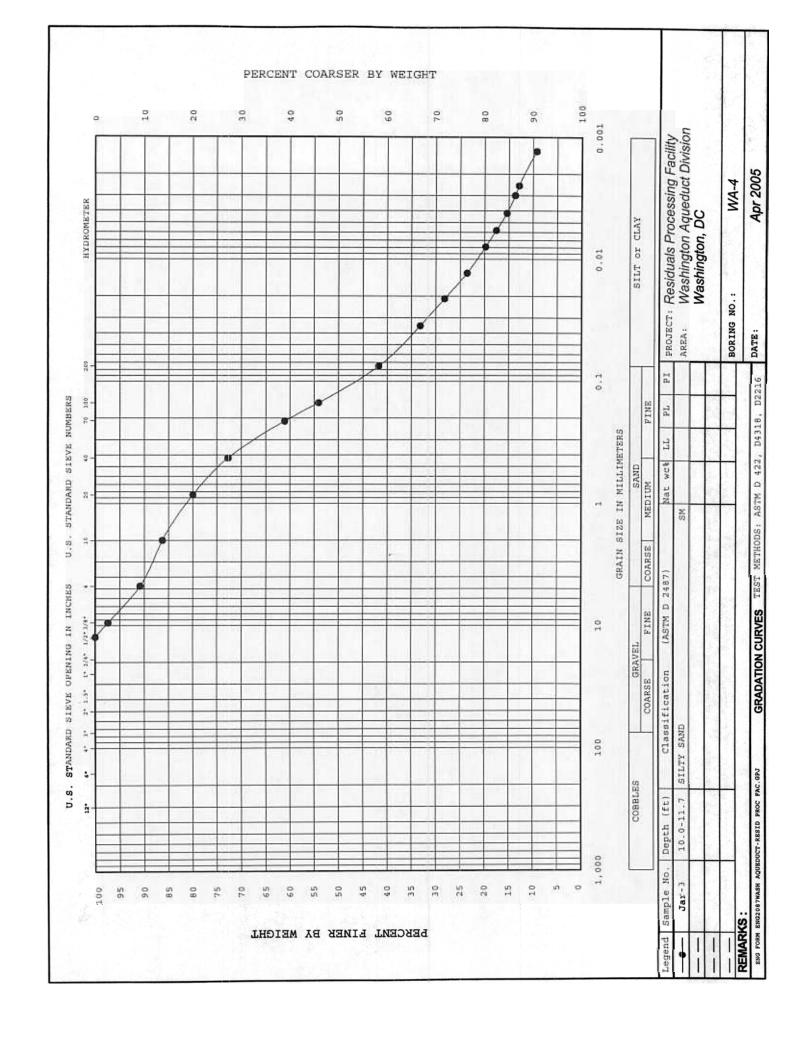
TEST: Natural Moisture Contents (ASTM D 2216) & Atterberg Limits (ASTM D 4318)

		Moisture					
Sample No.	Depth (ft.)	Content, %	<u>LL</u>	PL	PI	Classification	Symbol
Jar-2	5.0-7.0	21.4	35	23	12	Lean Clay	CL
Jar-5	20.0-21.7	26.5	43	28	15	Silt	ML
Jar-7	25.0-27.0	20.7	26	19	7	Silty-Clay	CL-ML
Jar-8	30.0-31.3	25.1	36	25	11	Silt	ML
Jar-2	5.0-6.6	31.4	49	30	19	Silt	ML
Jar-10	30.0-31.5	19.2	33	19	14	Lean Clay	CL
Jar-6	20.0-21.0	27.2	33	22	11	Lean Clay	CL
	100100	40.5		40	•		
Jar-3	10.0-12.0	16.5	28	19	9	Lean Clay	CL
Jar-4	15.0-17.0	18.0	32	21	11	Lean Clay	CL
	Jar-2 Jar-5 Jar-8 Jar-2 Jar-10 Jar-6 Jar-3	Jar-2     5.0-7.0       Jar-5     20.0-21.7       Jar-7     25.0-27.0       Jar-8     30.0-31.3       Jar-2     5.0-6.6       Jar-10     30.0-31.5       Jar-6     20.0-21.0       Jar-3     10.0-12.0	Jar-2       5.0-7.0       21.4         Jar-5       20.0-21.7       26.5         Jar-7       25.0-27.0       20.7         Jar-8       30.0-31.3       25.1         Jar-2       5.0-6.6       31.4         Jar-10       30.0-31.5       19.2         Jar-6       20.0-21.0       27.2         Jar-3       10.0-12.0       16.5	Sample No.         Depth (ft.)         Content, %         LL           Jar-2         5.0-7.0         21.4         35           Jar-5         20.0-21.7         26.5         43           Jar-7         25.0-27.0         20.7         26           Jar-8         30.0-31.3         25.1         36           Jar-2         5.0-6.6         31.4         49           Jar-10         30.0-31.5         19.2         33           Jar-6         20.0-21.0         27.2         33           Jar-3         10.0-12.0         16.5         28	Sample No.         Depth (ft.)         Content, %         LL         PL           Jar-2         5.0-7.0         21.4         35         23           Jar-5         20.0-21.7         26.5         43         28           Jar-7         25.0-27.0         20.7         26         19           Jar-8         30.0-31.3         25.1         36         25           Jar-10         30.0-31.5         19.2         33         19           Jar-6         20.0-21.0         27.2         33         22           Jar-3         10.0-12.0         16.5         28         19	Sample No.         Depth (ft.)         Content, %         LL         PL         PI           Jar-2         5.0-7.0         21.4         35         23         12           Jar-5         20.0-21.7         26.5         43         28         15           Jar-7         25.0-27.0         20.7         26         19         7           Jar-8         30.0-31.3         25.1         36         25         11           Jar-2         5.0-6.6         31.4         49         30         19           Jar-10         30.0-31.5         19.2         33         19         14           Jar-6         20.0-21.0         27.2         33         22         11           Jar-3         10.0-12.0         16.5         28         19         9	Sample No.         Depth (ft.)         Content, %         LL         PL         PI         Classification           Jar-2         5.0-7.0         21.4         35         23         12         Lean Clay           Jar-5         20.0-21.7         26.5         43         28         15         Silt           Jar-7         25.0-27.0         20.7         26         19         7         Silty-Clay           Jar-8         30.0-31.3         25.1         36         25         11         Silt           Jar-10         30.0-31.5         19.2         33         19         14         Lean Clay           Jar-6         20.0-21.0         27.2         33         22         11         Lean Clay           Jar-3         10.0-12.0         16.5         28         19         9         Lean Clay

Note: The Atterberg Limits test is only performed on minus No. 40 material portion of a sample and does not represent the entire sample. Refer to the Visual Classification or the Gradation Analysis for the complete classification.







#### **TUBE CLASSIFICATION ASTM D2487**

**PROJECT:** 

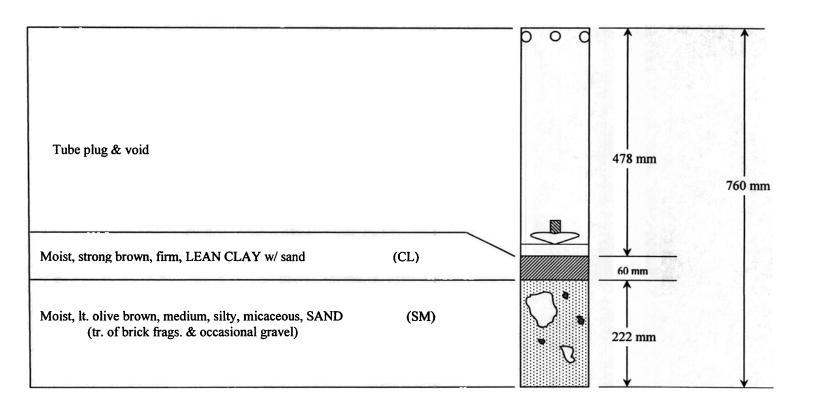
**Residuals Processing Facility** 

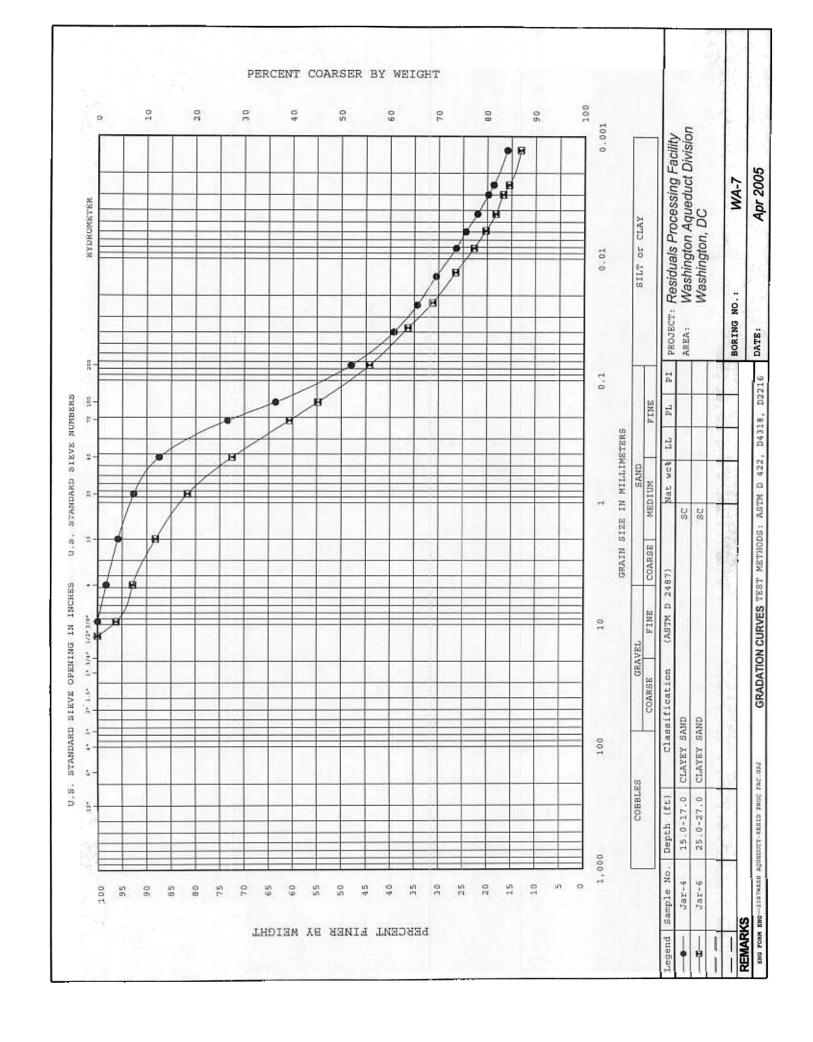
Washington Aqueduct Division Washington, DC

AREA:

**DATE:** Apr 2005

Hole No.	Sample No.	Depth (ft)
WA-4A	Shelby-1	18.5-20.5





#### **TUBE CLASSIFICATION ASTM D2487**

**PROJECT:** 

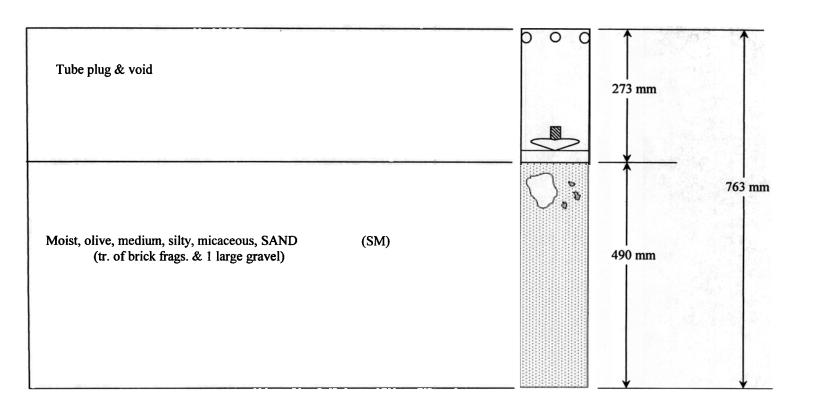
Residuals Processing Facility

Washington Aqueduct Division Washington, DC

AREA:

**DATE:** Apr 2005

Hole No.	Sample No.	Depth (ft)
WA-7A	Shelby-1	30.0-32.0



#### TUBE CLASSIFICATION ASTM D2487

PROJECT

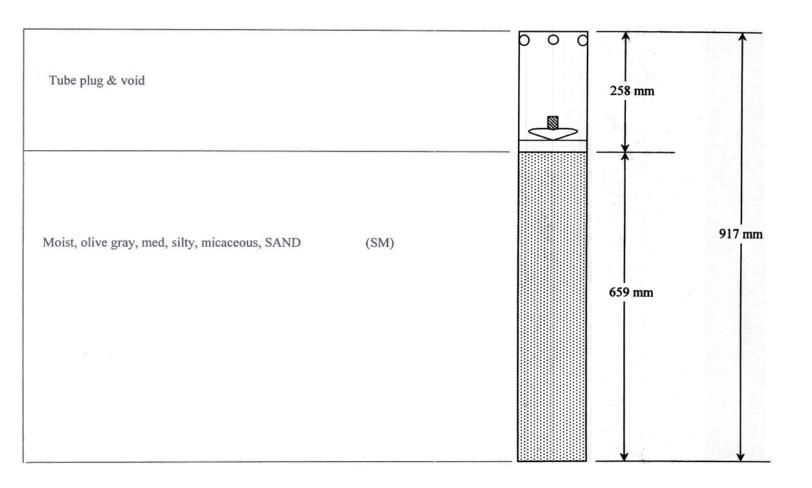
esiduals Processing Facility

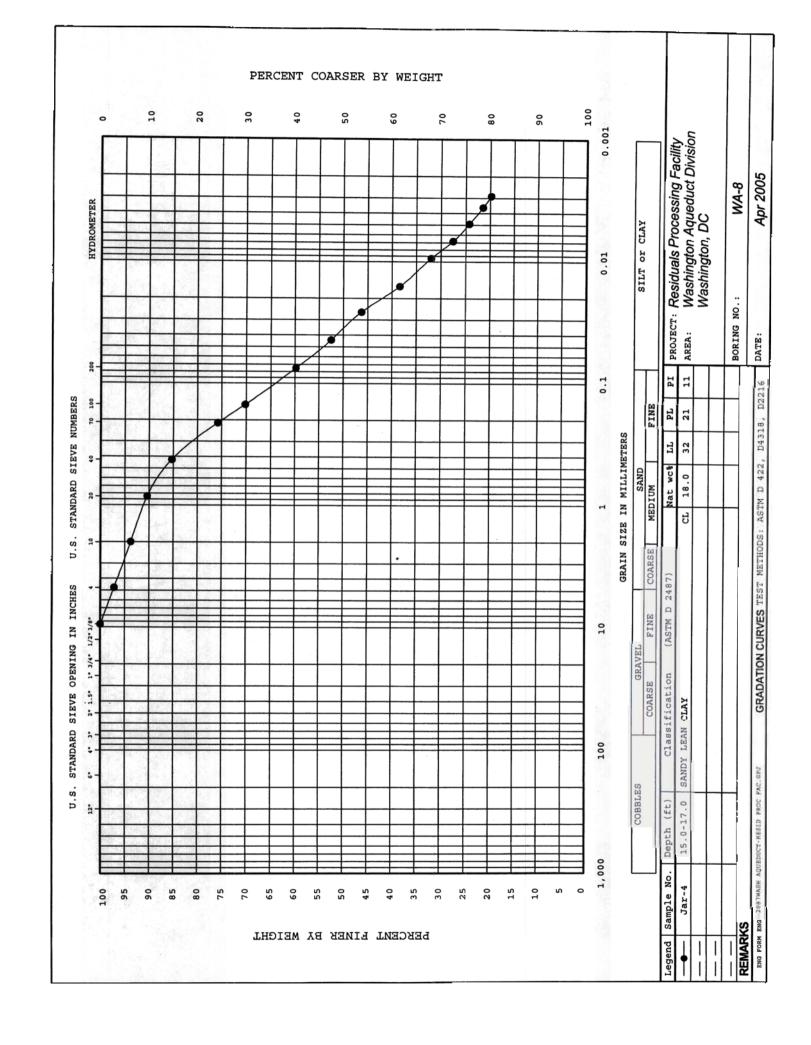
Washington Aqueduct Division Washington, DC

AREA:

ATE: Apr 2005

Hole No.	Sample No.	Depth (ft)
WA-7B	Shelby-1	29.0-32.0





# US ARMY, CORPS OF ENGINEERS - BALTIMORE DISTRICT - MATERIALS & INSTRUMENTATION UNIT TEST REPORT

PROJECT: Washington Aqueduct Division

AREA: Residuals Processing Facility

Washington, DC

DATE: Apr 2005

SPLITTING TENSILE STRENGTH OF INTACT ROCK CORE SPECIMENS & UNIT WEIGHT TEST:

References: ASTM D 3967 Splitting Tensile Strength of Intact Rock Core Specimens

RTH 109-93 Method of Determining Effective (As Received) and Dry Unit Weights of Rock Cores

1.76     0.86     930     166.2       1.75     0.87     927     164.3       1.76     1.06     990     163.3	1.76     0.86     930     166.2       1.75     0.87     927     164.3       1.76     1.06     990     163.3	DEPTH (ft) 45.8-46.4		(in) 1.76	DIAMETER THICKNESS (in) (in) (in) 0.89	SPLITTING TENSILE STRENGTH (psi) 1210	EFFECTIVE UNIT WEIGHT (pcf) 166.1	ROCK TYPE Weathered Micaceous Gneiss
1.75     0.87     927     164.3       1.76     1.06     990     163.3	1.75 0.87 927 164.3 1.76 1.06 990 163.3	45.8-46.4	5.4	1.76	0.86	930	166.2	Weathered Micaceous Gneiss
1.76 1.06 990 163.3	5.4 1.76 1.06 990 163.3	45.8-46.4	6.4	1.75	0.87	927	164.3	Weathered Micaceous Gneiss
		45.8-46.4	6.4	1.76	1.06	066	163.3	Weathered Micaceous Gneiss
	-	16101-201						
		AM Cardistande de 12 4	-	350 117.13				

REMARKS: The moisture condition of this specimens was as-received.

The average splitting tensile strength of all specimens was 1,014 psi w/ std. dev. of 134.

The average time to failure was 4.2 minutes.

The average rate of loading for all specimens was 241 psi/min.

The effective unit weight was determined by the volumetric method.

RD (Rock Disk)

## US ARMY, CORPS OF ENGINEERS - BALTIMORE DISTRICT TEST REPORT MATERIALS & INSTRUMENTATION UNIT

AREA: Washington Aqueduct Division

PROJECT: Residuals Processing Facility

Washington, DC

DATE: Apr 2005

TEST: ASTM D 2938 UNCONFINED COMPRESSIVE STRENGTH of Intact Rock Core Specimens

RTH 109-93 Method of Determining EFFECTIVE (As Received) and DRY UNIT WEIGHTS of Rock Cores

Micaceous Gneiss	172.4	9,039	3.81	1.76	58.4-59.1	RC-1	WA-8
Micaceous Gneiss	171.7	6,639	3.82	1.77	33.9-34.5	RC-1	WA-5
Weathered Micaceous Gneiss	161.8	2,404	3.75	1.85	54.0-54.6	RC-1	WA-2
Weathered Micaceous Gneiss	167.5	4,607	3.78	1.86	33.0-33.7	RC-1	WA-1
ROCK TYPE	EFFECTIVE UNIT WEIGHT (pcf)	UNCONFINED COMPRESSIVE STRENGTH (psi)	LENGTH (in)	DIAMETER (in)	DEPTH (ft)	SPECIMEN NO.	HOLE NO.

REMARKS. The moisture condition of this specimens was as-received.

The average time to failure was 3.0 minutes.

The average rate of loading for all specimens was 1,891 psi/min.

The effective unit weight was determined by the volumetric method.

RC (Rock Core)

- VEHICLE CLASSIFICATIONS (FHWA)
- INTERSECTION TURNING MOVEMENT COUNT REPORTS
- HIGHWAY CAPACITY MANUAL ANALYSIS WORKSHEETS
  - EXISTING TRAFFIC SITUATION IN VICINITY OF PROJECT SITE
  - FUTURE/TOTAL TRAFFIC SITUATION IN VICINITY OF PROJACT SITE
- EVALUATION OF POTENTIAL ACCESS POINTS ALONG DALECARLIA PARKWAY
- PEDESTRIAN AND BIKE COUNTS
- SUMMARY OF VEHICLE AND TRUCK COUNTS COLLECTED ON DALECARLIA PARKWAY AND MACARTHUR BOULEVARD BY O.R. GEORGE AND ASSOCIATES DURING JUNE 2004
- DCDOT TRUCK ROUTE RECOMMENDATIONS

# FHWA SCHEME "F" VEHICLE CLASSIFICATIONS

Motorcycles	Passenger Cars	Other Two-Axle, Four-Tire Single-Unit Vehicles	Buses	Two-Axle, Six-Tire Single-Unit Trucks	Three-Axle, Single-Unit Trucks	Four or More Axle, Single-Unit Trucks	Four or Less Axie, Single-Trailer Trucks	Five-Axle, Single-Trailer Trucks	Six or More Axle, Single-Trailer Trucks	Five or Less Axle, Multi-Trailer Trucks	Six-Axle, Multi-Trailer Trucks	Seven or More Axle, Multi-Trailer Thicks
r L	7.2	F3	<b>ў</b>	۲۰ D	F6	F7	F8	F9	F10	FII	F12	F13

# INTERSECTION TURNING MOVEMENT COUNT REPORTS

O.R. George & Associates, Inc.

File Name : LOU@DEC Site Code : 46231576 Start Date : 06/17/2004 Page No : 1

# Counted By:ORGA-AL Board :D4-1576 City/County:Washington DC Weather :Warm/Clear/Dry

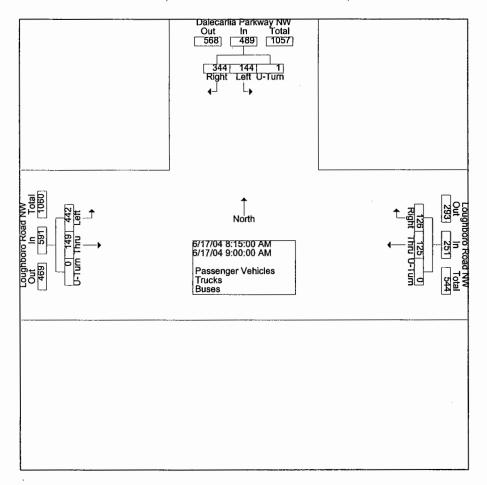
•		•			ucks - Buses	hicles - Tr	senger Ve	Printed- Pass	Groups I				
			oughbord From			Road NW East	oughboro From			arkway NV North	alecarlia P From	Da	
Int. Tota	App. Total	U-Turn	Thru	Left	App. Total	U-Turn	Right	Thru	App. Total	U-Turn	Right	Left	End Time
200	82	0	35	47	41	0	23	18	77	0	58	19	07:15 AM
272	114	0	39	75	58	0	37	21	100	0	73	27	07:30 AM
265	103	0	36	67	48	0	26	22	114	0	82	32	07:45 AM
343	142	0	53	89	64	0	32	32	137	0	95	42	08:00 AM
1080	441	0	163	278	211	0	118	93	428	0	308	120	Total
310	131	0	35	96	64	0	26	38	115	0	77	38	08:15 AM
330	145	0	40	105	72	0	33	39	113	1	86	26	08:30 AM
336	153	0	39	114	53	0	. 31	22	130	0	83	47	08:45 AM
355	162	0	35	127	62	0	36	26	131	0	98	33	09:00 AM
1331	591	0	149	442	251	0	126	125	489	1	344	144	Total
313	111	0	26	85	70	0	35	35	132	1	102	29	04:15 PM
305	93	0	20	73	78	0	36	42	134	0	101	33	04:30 PM
345	100	0	28	72	82	0	45	37	163	1	130	32	04:45 PM
305	108	0	28	80	71	0	46	25	126	0	99	27	05:00 PM
1268	412	0	102	310	301	0	162	139	555	2	432	121	Total
308	87	0	25	62	82	0	37	45	139	0	120	19	05:15 PM
315	75	0	26	49	86	0	49	37	154	0	126	28	05:30 PM
336	86	0	18	68	71	0	38	33	179	0	142	37	05:45 PM
346	93	0	14	79	83	0	51	32	170	0	142	28	06:00 PM
1305	341	0	83	258	322	0	175	147	642	0	530	112	Total
4984	1785	0	497	1288	1085	0	581	504	2114	3	1614	497	Grand Total
	35.8	0.0 0.0	27.8 10.0	72.2 25.8	21.0	0.0 0.0	53.5 11.7	46.5 10.1	42.4	0.1 0.1	76.3 32.4	23.5 10.0	Apprch % Total %
	35.8	U.U	10.0	25.8	21.8	U.U	11.7	10.1	42.4	0.1	32.4	10.0	rotal %

File Name: LOU@DEC Site Code: 46231576 Start Date: 06/17/2004

Page No : 2

## Counted By:ORGA-AL Board :D4-1576 City/County:Washington DC Weather :Warm/Clear/Dry

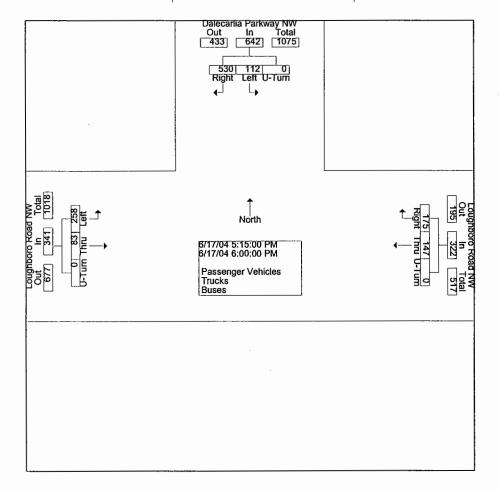
	C	Dalecarlia P	arkway NV	N		Loughboro	Road NW	J		Loughboro	Road NW		]
		From	North			From	East			From	West		
End Time	Left	Right	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	Left	Thru	U-Turn	App. Total	Int. Total
Peak Hour From 07:15 /	AM to 12:45 F	PM - Peak 1	of 1										
Intersection	08:15 AM												
Volume	144	344	1	489	125	126	0	251	442	149	0	591	1331
Percent	29.4	70.3	0.2		49.8	50.2	0.0		74.8	25.2	0.0		
09:00 Volume	33	98	0	131	26	36	0	62	127	35	0	162	355
Peak Factor									ĺ				0.937
High Int.	09:00 AM				08:30 AM				09:00 AM				
Volume	33	98	0	131	39	33	0	72	127	35	0	162	
Peak Factor				0.933				0.872				0.912	



File Name : LOU@DEC Site Code : 46231576 Start Date : 06/17/2004 Page No : 3

Counted By:ORGA-AL Board :D4-1576 City/County:Washington DC Weather :Warm/Clear/Dry

	-[	Dalecarlia F	arkway NV	N		Loughbord	Road NW			oughboro	Road NW		
		From	North			From	East			From	West		
End Time	Left	Right	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	Left	Thru	U-Turn	App. Total	Int. Total
Peak Hour From 01:00 I	PM to 06:00 I	PM - Peak 1	of 1										
Intersection	05:15 PM								Į				
Volume	112	530	0	642	147	175	0	322	258	83	0	341	1305
Percent	17.4	82.6	0.0		45.7	54.3	0.0		75.7	24.3	0.0		
06:00 Volume	28	142	0	170	32	51	0	83	79	14	0	93	346
Peak Factor													0.943
High Int.	05:45 PM				05:30 PM				06:00 PM				
Volume	37	142	0	179	37	49	0	86	79	14	0	93	
Peak Factor				0.897				0.936				0.917	



File Name: LOU@DEC Site Code: 46231576 Start Date: 06/17/2004 Page No : 1

Counted By:ORGA-AL Board :D4-1576 City/County:Washington DC Weather :Warm/Clear/Dry

						Groups Prin	ited- Passe	enger Veh	icles					
	-	D		Parkway N\ North	N		Loughboro From				From	Road NW West		
	End Time	Left	Right	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	Left	Thru	U-Turn	App. Total	Int. Total
	07:15 AM	18	58	0	76	17	22	0	39	43	35	0	78	193
	07:30 AM	27	72	0	99	20	37	0	57	72	39	0	111	267
	07:45 AM	31	77	0	108	21	25	0	46	65	36	0	101	255
	08:00 AM	40	95	0	135	31	30	0	61	85	53	0	138	334
	Total	116	302	0	418	89	114	0	203	265	163	0	428	1049
	08:15 AM	37	74	0	111	37	25	0	62	90	35	0	125	298
	08:30 AM	26	84	1	111	38	33	0	71	103	39	0	142	324
	08:45 AM	46	81	0	127	21	31	0	52	113	37	0	150	329
	09:00 AM	32	96	0	128	24	35	0	59	122	35	0	157	344
	Total	141	335	1	477	120	124	0	244	428	146	0	574	1295
,,										ı				
	04:15 PM	29	101	1	131	35	34	0	69	83	26	0	109	309
	04:30 PM	32	100	0	132	41	34	0	75	70	20	0	90	297
	04:45 PM	32	130	1	163	34	42	0	76	70	28	0	98	337
·	05:00 PM	27	98	0	125	23	46	0	69	77	27	0	104	298
	Total	120	429	2	551	133	156	0	289	300	101	0	401	1241
	.05:15 PM	19	118	0	137	45	35	0	80	61	25	0	86	303
	05:30 PM	28	125	0	153	37	47	0	84	48	26	0	74	311
	05:45 PM	37	142	0	179	31	37	0	68	65	18	0	83	330
	06:00 PM	28	142	0	170	31	51	0	82	75	14	0	89	341
	Total	112	527	0	639	144	170	0	314	249	83	0	332	1285
	Grand Total	489	1593	3	2085	486	564	0	1050	1242	493	0	1735	4870
	Apprch %	23.5	76.4	0.1	46.5	46.3	53.7	0.0	04.0	71.6	28.4	0.0	25.0	
	Total %	10.0	32.7	0.1	42.8	10.0	11.6	0.0	21.6	25.5	10.1	0.0	35.6	

Counted By:ORGA-AL Board :D4-1576 City/County:Washington DC Weather :Warm/Clear/Dry

O.R. George & Associates, Inc. 10210 Greenbelt Road., Suite 310 Lanham, MD 20706-2218 Tel: (301) 794-7700 Fax: (301) 794-4400

File Name: LOU@DEC Site Code: 46231576 Start Date: 06/17/2004 Page No: 1

Groups Printed- Trucks

						ıps Printed							
	D		arkway N	W			Road NW	/ "	, i		Road NW		
			North				East	<u> </u>			West		
End Time	Left	Right	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	Left	Thru	U-Turn	App. Total	Int. Total
07:15 AM	1	0	0	1	0	1	0	1	1	0	0	1	3
07:30 AM	0	1	0	1	0	0	0	0	1	0	0	1	2
07:45 AM	1	4	0	5	0	0	0	0	2	0	0	2	7
MA 00:80	2	0	0	2	1	. 2	0	3	0	0	0	0	5
Total	4	5	0	9	1	3	0	4	4	0	0	4	17
08:15 AM	1	2	0	3	0	1	0	1	l 1	0	0	1	5
08:30 AM	0	2	0	2	. 0	0	0	0	0	1	0	1	3
08:45 AM	1	2	0	3	0	0	0	0	0	0	0	0	3
09:00 AM	1	2	0	3	2	1	0	3	3	0	0	3	9
Total	3	8	0	11	2	2	0	4	4	1	0	5	20
				'					•				
04:15 PM	0	1	0	1	0	1	0	1	1	0	0	1	3
04:30 PM	1	1	0	2	0	2	0	2	1	0	0	1	5
04:45 PM	0	0	0	0	2	1	0	3	2	0	0	2	5
05:00 PM	0	0	0	0	0.	0	0	0	0	1	0	1	1
Total	1	2	0	3	2	4	0	6	4	1	0	5	14
05.45 DM	0	•		0.1		•	0	•	۱ ۵	٥	•	0.1	4
05:15 PM	0	2	0	2	0	2	0	2	0	0	0	0	7
05:30 PM	0	1	0	1	0	2	0	2	0	0	0	0	3
05:45 PM	0	0	0	0	0	1	0	1	1	0	0	1	2
06:00 PM	0	0	0	0	0	0	0	0	2	0	0	2	2
Total	0	3	0	3	0	5	0	5,	3	0	0	3	11
Grand Total	8	18	0	26	5	14	0	19	15	2	0	17	62
Apprch %	30.8	69.2	0.0		26.3	73.7	0.0		88.2	11.8	0.0		
Total %	12.9	29.0	0.0	41.9	8.1	22.6	0.0	30.6	24.2	3.2	0.0	27.4	

Counted By:ORGA-AL Board :D4-1576

10210 Greenbelt Road., Suite 310 Lanham, MD 20706-2218 Tel: (301) 794-7700 Fax: (301) 794-4400

File Name : LOU@DEC Site Code : 46231576 Start Date : 06/17/2004

Page No : 1

City/County:Washington DC Weather ,: Warm/Clear/Dry

**Groups Printed-Buses** Dalecarlia Parkway NW Loughboro Road NW Loughboro Road NW From North From East From West U-Turn App. Total U-Turn App. Total End Time Left Right Thru Right App. Total Left Thru U-Turn Int. Total 07:15 AM 07:30 AM 07:45 AM 08:00 AM Total 08:15 AM 08:30 AM 08:45 AM 09:00 AM Total 

04:15 PM	0	0	. 0	0	0	0	0	0	1	0	0	1	1
04:30 PM	0	0	0	0	1	0	0	1	2	0	0	2	3
04:45 PM	0	0	0	0	1	2	0	3	0	0	0	0	3
05:00 PM	0	1	0	1	2	0	0	2	3	0	0	3	6
Total	0	1	0	1	4	2	0	6	6	0	0	6	13
05:15 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
05:30 PM	0	0	0	0	0	0	0	0	1	0	0	1	1
05:45 PM	0	0	0	0	2	. 0	0	2	2	0	0	2	4
06:00 PM	0	0	0	0	1	0	0	1	2	0	0	2	3
Total	0	0	0	0	3	0	0	3	6	0	0	6	9
Grand Total Apprch % Total %	0.0 0.0	3 100.0 5.8	0 0.0 0.0	3   5.8	13 81.3 25.0	3 18.8 5.8	0 0.0 0.0	16 30.8	93.9 59.6	2 6.1 3.8	0.0 0.0	33 63.5	52

File Name : LOU@SIB Site Code : 45242239 Start Date : 06/17/2004 Page No : 1

Counted By: ORGA-MO Board : D4-2239 City/County: Washington DC Weather : Hot/Clear/Dry

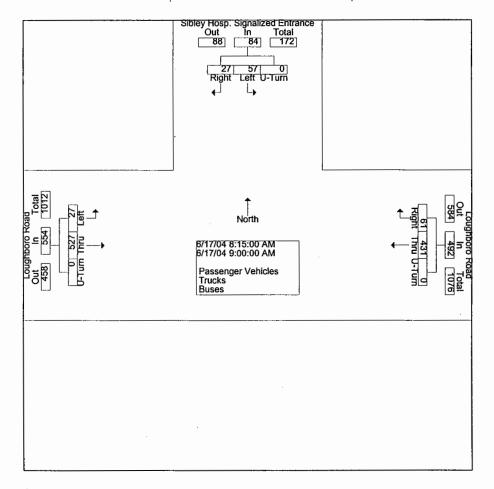
Groups Printed- Passenger Vehicles - Trucks - Buses Sibley Hosp. Signalized Entrance Loughboro Road Loughboro Road													
	Sibley			itrance									
F 1 7:	1 -0		North		<u></u>	From					West		
End Time	Left	Right	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	Left	Thru	U-Turn	App. Total	Int. Total
07:15 AM	14	4	0	18	62	11	0	73	13	71	0	84	175
07:30 AM	13	4	0	17	72	22	0	94	20	97	0	117	228
07:45 AM	20	10	0	30	94	22	0	116	15	96	0	111	257
MA 00:80	21	5	0	26	105	17	0	122	8	115	0	123	271
Total	68	23	, 0	91	333	72	0	405	56	379	0	435	931
08:15 AM	20	4	0	24	110	15	0	125	10	113	0	123	272
08:30 AM	12	10	0	22	109	20	0	129	4	122	0	126	277
08:45 AM	16	9	0	25	89	15	0	104	7	136	0	143	272
09:00 AM	9	4	0	13	123	11	0	134	6	156	0	162	309
Total	57	27	0	84	431	61	0	492	27	527	0	554	1130
04:15 PM	20	8	0	28	130	17	0	147	9	84	0	93	268
04:30 PM	18	8	0	26	128	15	0	143	6	77	0	83	252
04:45 PM	20	11	0	31	156	12	0	168	3	81	0	84	283
05:00 PM	10	13	0	23	119	8	0	127	6	100	0	106	256
Total	68	40	0	108	533	52	0	585	24	342	0	366	1059
05:15 PM	12	6	0	18	135	14	0	149	7	81	0	88	255
05:30 PM	12	10	0	22	153	10	0	163	5	66	0	71	256
05:45 PM	17	2	0	19	166	12	0	178	4	69	0	73	270
06:00 PM	10	6	0	16	163	17	0	180	5	93	0	98	294
Total	51	24	0	75	617	53	0	670	21	309	0	330	1075
Grand Total Apprch %	244 68.2	114 31.8	0.0	358	1914 88.9	238 11.1	0.0	2152	128 7.6	1557 92.4	0.0	1685	4195
Total %	5.8	2.7	0.0	8.5	45.6	5.7	0.0	51.3	3.1	37.1	0.0	40.2	

10210 Greenbelt Road., Suite 310 Lanham, MD 20706-2218 Tel: (301) 794-7700 Fax: (301) 794-4400

File Name: LOU@SIB Site Code : 45242239 Start Date : 06/17/2004 Page No : 2

# Counted By: ORGA-MO Board : D4-2239 City/County: Washington DC Weather : Hot/Clear/Dry

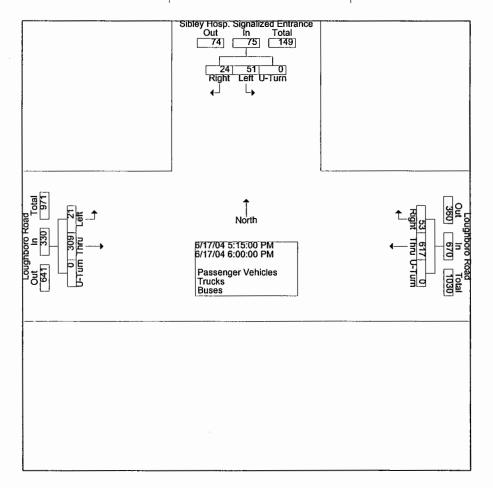
	Sibley	Hosp. Sig	nalized En	trance		Loughbo	oro Road			Loughbo	oro Road		
		From	North			From	East			From	West		
End Time	Left	Right	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	Left	Thru	U-Turn	App. Total	Int. Total
Peak Hour From 07:15	AM to 12:45 P	M - Peak 1	of 1										
Intersection	08:15 AM												
Volume	57	27	0	84	431	61	0	492	27	527	0	554	1130
Percent	67.9	32.1	0.0		87.6	12.4	0.0		4.9	95.1	0.0		
09:00 Volume	9	4	0	13	123	11	0	134	6	156	0	162	309
Peak Factor													0.914
High Int.	08:45 AM				09:00 AM				09:00 AM				
Volume	16	9	0	25	123	11	0	134	6	156	0	162	
Peak Factor				0.840	Ì			0.918				0.855	



File Name: LOU@SIB Site Code: 45242239 Start Date: 06/17/2004 Page No: 3

Counted	y: URGA-MU
Board	: D4-2239
City/Count	y: Washington DC
Weather	: Hot/Clear/Dry

	Sibley	Hosp. Sig	nalized Er	trance		Loughbo	oro Road			Loughbo	oro Road		
		From	North			From	East			From	West		
End Time	Left	Right	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	Left	Thru	U-Turn	App. Total	Int. Total
Peak Hour From 01:00	PM to 06:00 P	M - Peak 1	of 1										
Intersection	05:15 PM								•			ĺ	
Volume	51	24	0	75	617	53	0	670	21	309	0	330	1075
Percent	68.0	32.0	0.0		92.1	7.9	0.0		6.4	93.6	0.0		
06:00 Volume	10	6	0	16	163	17	0	180	5	93	0	98	294
Peak Factor													0.914
High Int.	05:30 PM				06:00 PM				06:00 PM				
Volume	12	10	0	22	163	17	0	180	5	93	0	98	
Peak Factor				0.852				0.931				0.842	



O.R. George & Associates, Inc. 10210 Greenbelt Road., Suite 310 Lanham, MD 20706-2218 Tel: (301) 794-7700 Fax: (301) 794-4400 Counted By: ORGA-MO Board : D4-2239 City/County: Washington DC Weather : Hot/Clear/Dry

File Name : LOU@SIB Site Code : 45242239 Start Date : 06/17/2004 Page No : 1

						Groups Prin			icles					
	-	Sibley		nalized En	trance		Loughbo					oro Road West		
	End Time	Left	From	U-Turn	Ann Total	Thru	From	U-Turn	Ann Total	Left	Thru	U-Turn	Ann Total	Int. Total
L	07:15 AM	14	Right 4	0-14111	App. Total 18	61	Right 11	0-10111	App. Total 72	13	68	. 0	App. Total 81	171
	07:13 AM	13	4	0	17	69	22	0	91	20	94	0	114	222
		20	10		30	87	22		109	20 15	92	0	107	246
	07:45 AM			0				0				-		
	08:00 AM	21	5	0	26	102	17	0	119	- 8	110	0	118	263
	Total	68	23	0	91	319	72	0	391	56	364	0	420	902
					1							_	ابمدا	
	08:15 AM	20	4	0	24	104	15	0	119	10	111	0	121	264
	08:30 AM	12	10	0	22	103	20	0	123	4	119	0	123	268
	08:45 AM	16	9	0	25	85	15	0	100	7	131	0	138	263
	09:00 AM	9	4	0	13	117	11	0	128	6	152	0	158	299
	Total	57	27	0	84	409	61	0	470	27	513	0	540	1094
					,									
	04:15 PM	20	8	0	28	125	17	0	142	9	82	0	91	261
	04:30 PM	18	8	.0	26	126	15	0	141	6	74	0	80	247
	04:45 PM	20	11	0	31	152	11	0	163	3	77	0	80	274
	05:00 PM	10	12	0	22	114	8	0	122	6	98	0	104	248
,	Total	68	39	0	107	517	51	0	568	24	331	0	355	1030
					'				'	•			'	
	05:15 PM	11	5	0	16	134	14	0	148	6	80	0	86	250
	05:30 PM	12	10	0	22	152	9	0	161	5	64	0	69	252
	05:45 PM	17	2	0	19	163	12	0	175	4	66	0	70	264
	06:00 PM	10	6	0	16	159	17	0	176	5	90	0	95	287
	Total	50	23	0	73	608	52	0	660	20	300	0	320	1053
	, ota	00		·		505		·	333		000	·		
	Grand Total	243	112	0	355	1853	236	0	2089	127	1508	0	1635	4079
	Apprch %	68.5	31.5	0.0	550	88.7	11.3	0.0		7.8	92.2	0.0		
	Total %	6.0	2.7	0.0	8.7	45.4	5.8	0.0	51.2	3.1	37.0	0.0	40.1	

# O.R. George & Associates, Inc. 10210 Greenbelt Road., Suite 310

10210 Greenbelt Road., Suite 310 Lanham, MD 20706-2218 Tel: (301) 794-7700 Fax: (301) 794-4400

File Name: LOU@SIB Site Code: 45242239 Start Date: 06/17/2004

Page No : 1

Counted By: ORGA-MO Board : D4-2239 City/County: Washington DC Weather : Hot/Clear/Dry

Groups Printed- Trucks

						Grou	ps Printed							
		Sibley		nalized En	trance		Loughbo					oro Road		
				North			From					West		
L	End Time	Left	Right	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	Left	Thru	U-Tum	App. Total	Int. Total
	07:20 444	•		•	اه	•	•	•	ام			•	41	•
	07:30 AM	0	0	0	0	2	0	0	2	0	1	0	1	3
	07:45 AM	0	0	0	0	3	0	0	3	0	3.	0	3	6
	08:00 AM	0	0	0	0	1_	0	0	1	0	0	0	0	1
	Total	0	0	0	0	6	0	0	6	0	4	0	4	10
	08:15 AM	0	0	0	0 !	2	. 0	0	2	0	0	0	٥١	2
	08:30 AM	0	0	0	o	3	0	0	3	0	1	0	1	4
	08:45 AM	0	0	0	0	2	0	0	2	0	1	0	1	3
	09:00 AM	0	0	0	o	5	0	0	5	0	2	0	2	7
	Total	0	0	0	0	12	0	0	. 12	0	4	0	4	16
					·								,	
	04:15 PM	0	0	0	0	2	0	0	2	0	1	0	1	3
	04:30 PM	0	0	0	0	1	0	0	1	0	1	0	1	2
	04:45 PM	0	0	0	0	0	1	0	1	0	3	0	3	4
	05:00 PM	0	1	0	1	1	0	0	1	0	0	0	0	2
,	Total		1	0	1	4	<del></del> 1	0	5	0	5	0	5	11
	05:15 PM	1	0	0	1	0	0	0	0	1	0	0	1	2
	05:30 PM	0	0	0	0	1	1	0	2	0	1	0	1	3
	05:45 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
	06:00 PM	0	0	0	0	0	0	0	0	0	1	0	1	1
	Total	1	0	0	1	1	1	0	2	1	3	0	4	7
	Grand Total	1	1	0	2	23	2	0	25	1	16	0	17	44
	Approh %	50.0	50.0	0.0	-	92.0	8.0	0.0	20	5.9	94.1	0.0		
	Total %	2.3	2.3	0.0	4.5	52.3	4.5	0.0	56.8	2.3	36.4	0.0	38.6	

File Name: LOU@SIB Site Code: 45242239 Start Date: 06/17/2004

Page No : 1

Counted By: ORGA-MO Board : D4-2239 City/County: Washington DC Weather : Hot/Clear/Dry

Groups Printed- Buses

		O:FI	11			Gro	ups Printed							
		Sibley	Hosp. Sign From		urance		Loughbo From					oro Road West		
End 1	Time -	Left	Right	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	Left	Thru	U-Turn	App. Total	Int. Total
07:15		0	0	0	0	1	0	0	1	0	3	0	3	4
07:30	) AM	0	. 0	0	0	1	0	0	1	0	2	0	2	3
07:45	AM.	0	0	0	0	4	0	0	4	0	1	0	1	5
08:00	AM (	0	0	0	0	2	. 0	0	2	0	5	0	5	7
	Γotal	0	0	0	0	8	0	0	8	0	11	0	11	19
08:15	AM	0	0	0	0	4	0	0	4	0	2	0	2	6
08:30	AM	0	0	0	0	3	0	0	3	0	2	0	2	5
08:45	AM	0	0	0	0	2	. 0	0	2	0	4	0	4	6
09:00	AM	0	0	0	0	1	0	0	1	0	2	0	2	3
ī	Total	0	0	0	0	10	0	0	10	0	10	0	10	20
04:15	PM	0	0	0	0	3	0	0	3	0	1	0	1	4
04:30	PM	0	0	0	0	1	0	0	1	0	2	0	2	3
04:45	PM	0	0	0	0	4	0	0	4	0	1	0	1	5
05:00	PM	0	0	0	0	• 4	0	0	4	0	2	0	2	6
. 1	Fotal	0	0	0	0	12	0	0	12	0	6	0	6	18
05:15	PM	0	1	0	1	1	0	0	1	0	1	0	1	3
05:30	PM	0	0	0	0	0	0	0	0	0	1	0	1	1
05:45	PM	0	0	0	0	3	0	0	3	0	2	0	2	5
06:00	PM	0	0	0	0	4	0	0	4	0	2	0	2	6
1	Total	0	1	0	1	8	0	0	8	0	6	0	6	15
Grand 1		0	1	0	1	38	0	0	38	0	33	0	33	72
Appro Tota	ah % al %	0.0 0.0	100.0 1.4	0.0 0.0	1.4	100.0 52.8	0.0 0.0	0.0 0.0	52.8	0.0 0.0	100.0 45.8	0.0 0.0	45.8	

Counted By: ORGA-KM
Board: D4-1908
City/County: Washington DC
Weather: Hot/Sunny/Dry

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Crave Peterd Research Vehicles - Trucks Ru

File Name : LOU@HOS Site Code : 61291908 Start Date : 06/29/2004

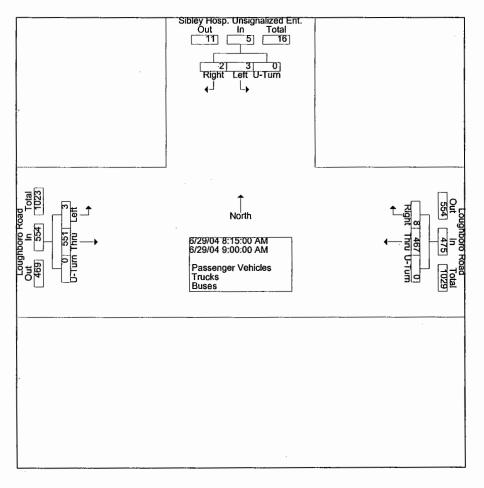
Page No : 1

	,. 2 y			Groups F	Printed- Pas	senger Ve	ehicles - Tr	ucks - Buses				ago no .	•
	Sible	y Hosp. Ui From	nsignalized North				oro Road East				oro Road West		
End Time	Left	Right	U-Tum	App. Total	Thru	Right	U-Turn	App. Total	Left	Thru	U-Turn	App. Total	Int. Total
07:15 AM	1	0	0	1	36	1	0	37	0	61	0	61	99
07:30 AM	0	0	0	0	51	0	0	51	0	64	0	64	115
07:45 AM	0	0	0	0	49	1	0	50	1	61	0	62	112
08:00 AM	1	1	0	2	117	3	0	120	1	139	0	140	262
Total	2	1	0	3	253	5	0	258	2	325	0	327	588
08:15 AM	1	0	0	1	110	0	0	110	0	133	0	133	244
08:30 AM	0	1	0	1	112	0	0	112	0	137	0	137	250
08:45 AM	1	0	0	1	106	5	0	111	2	140	0	142	254
09:00 AM	1	1	0	2	139	3	0	142	1	141	0	142	286
Total	3	2	0	5	467	8	0	475	3	551	0	554	103
04:15 PM	1	2	0	3	127	3	0	130	1	74	0	75	200
04:30 PM	0	3	0	3	137	0	0	137	0	81	0	81	221
04:45 PM	0	1	0	1	133	1	0	134	3	71	0	74	209
05:00 PM	1	3	0	4	153	0	0	153	1	84	0	85	242
Total	2	9	0	11	550	4	0	554	5	310	0	315	88
05:15 PM	1.	1	0	2	142	2	0	144	2	85	0	87	233
05:30 PM	0	3	0	3	152	0	0	152	2	82	0	84	239
05:45 PM	1	2	0	3	148	1	0	149	1	71	0	72	224
06:00 PM	0	1	0	1	169	. 2	0	171	0	121	0	121	293
Total	2	7	0	9	611.	5	0	616	5	359	0	364	98
Grand Total	9	19	0	28	1881	22	0	1903	15	1545	0	1560	349
Apprch %	32.1	67.9	0.0		98.8	1.2	0.0		1.0	99.0	0.0		
Total %	0.3	0.5	0.0	0.8	53.9	0.6	0.0	54.5	0.4	44.3	0.0	44.7	

File Name : LOU@HOS Site Code : 61291908 Start Date : 06/29/2004 Page No : 2

# Counted By: ORGA-KM Board : D4-1908 City/County: Washington DC Weather : Hot/Sunny/Dry

	Sible	ey Hosp. Ui	nsignälized	Ent.		Loughbo	ro Road			Loughbo	oro Road		1
		From	North			From	East			From	West		
End Time	Left	Right	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	Left	Thru	U-Turn	App. Total	Int. Total
Peak Hour From 07:15	AM to 12:45 F	PM - Peak 1	of 1										
Intersection	08:15 AM							ĺ					•
Volume	3	2	0	5	467	8	0	475	3	551	0	554	1034
Percent	60.0	40.0	0.0		98.3	1.7	0.0		0.5	99.5	0.0		
09:00 Volume	1	1	0	2	139	3	0	142	1	141	0	142	286
Peak Factor									1				0.904
High Int.	09:00 AM				09:00 AM				08:45 AM				
Volume	1	1	0	2	139	3	0	142	2	140	0	142	
Peak Factor				0.625				0.836				0.975	

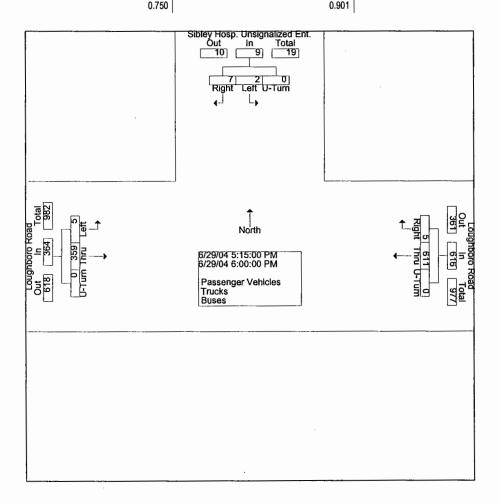


Counted By: ORGA-KM
Board : D4-1908
City/County: Washington DC
Weather : Hot/Sunny/Dry

File Name: LOU@HOS Site Code : 61291908 Start Date : 06/29/2004

Page No	o :	3

	Sibley	Hosp. L	Jnsignalized	Ent.		Loughb	oro Road		<u> </u>	Loughbo	ro Road		
		Fron	n North			From	n East			From	West		
End Time	Left	Right	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	Left	Thru	U-Turn	App. Total	Int. Tota
eak Hour From 01:00	PM to 06:00 PI	M - Peak	1 of 1										
Intersection	05:15 PM											*	
Volume	2	7	0	9	611	5	0	616	5	359	0	364	989
Percent	22.2	77.8	0.0		99.2	0.8	0.0		1.4	98.6	0.0		
06:00 Volume	0	1	0	1	169	2	0	171	0	121	0	121	293
Peak Factor									[				0.844
High Int.	05:30 PM				06:00 PM				06:00 PM				
Volume	0	3	0	3	169	2	0	171	0	121	0	121	
Peak Factor				0.750				0.901				0.752	



File Name: LOU@HOS Site Code: 61291908 Start Date : 06/29/2004

Page No :1

Counted By: ORGA-KM Board : D4-1908 City/County: Washington DC Weather : Hot/Sunny/Dry

Groups Printed- Passenger Vehicles

						Groups Prin			icles					
		Sible	y Hosp. U	nsignalized	Ent.		Loughbo					oro Road		
				North			From					West		
L	End Time	Left	Right	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	Left	Thru	U-Turn	App. Total	Int. Total
	07:15 AM	1	0	0	1	34	0	0	34	0	59	0	59	94
	07:30 AM	0	0	0	0	50	0	0	50	0	62	0	62	112
	07:45 AM	0	0	0	0	48	1	0	49	1	60	0	61	110
	MA 00:80	1	1	0	2	115	3	0	118	1	130	0	131	251
	Total	2	1	0	3	247	4	0	251	2	311	0	313	567
	08:15 AM	1	0	0	1	108	0	0	108	0	129	0	129	238
	08:30 AM	0	1	0	1	110	0	0	110	0	135	0	135	246
	08:45 AM	1	0	0	1	104	5	0	109	2	139	0	141	251
	09:00 AM	1	1	0	2	137	3	0	140	1	138	0	139	281
	Total	3	2	0	5	459	8	0	467	3	541	0	544	1016
					. 1					l			1	
	04:15 PM	1	2	0	3	125	2	0	127	1	72	0	73	203
	04:30 PM	0	3	0	3	135	0	0	135	0	79	0	79	217
	04:45 PM	0	1	0	1	131	1	0	132	3	69	0	72	205
	05:00 PM	1	3	0	4	147	0	0	147	1	82	. 0	83	234
,	Total	2	9	0	11	538	3	0	541	5	302	0	307	859
	TOTAL	2	9	U	11	. 330	3	U	341	J	302	U	301	003
	05:15 PM	1	1	0	2	140	1	0	141	2	84	0	86	229
	05:30 PM	0	3	0	3	151	0	0	151	2	79	0	81	235
	05:45 PM	1	2	0	3	146	1	0	147	1	70	0	71	221
		•		_	- 1		•		170		120		120	291
	06:00 PM	. 0	1	0	1	168	2	0		0		0		
	Total	2	7	0	9	605	4	0	609	5	353	0	358	976
	Grand Total	0	10	0	28	1849	19	0	1868	15	1507	0	1522	3418
	Apprch.%	9 32.1	19 67.9	0 0.0	28	99.0	1.0	0.0	1008	1.0	99.0	0.0	1522	3410
	Total %	0.3	0.6	0.0	0.8	54.1	0.6	0.0	54.7	0.4	44.1	0.0	44.5	

File Name: LOU@HOS Site Code: 61291908 Start Date : 06/29/2004 Page No : 1

2

Counted By: ORGA-KM Board : D4-1908 City/County: Washington DC Weather : Hot/Sunny/Dry

						Grou	ps Printed	- Trucks						
		Sibley	Hosp. Ui From	nsignalized North	Ent.		Loughbo From	oro Road East				oro Road West		
	End Time	Left	Right	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	Left	Thru	U-Tum	App. Total	Int. Total
	07:15 AM	0	0	0	. 0	0	1	0	1	0	0	0	0	1
	07:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
	08:00 AM	0	0	0	0	0	0	0	0	0	5	0	5	5
	Total	0	0	0	0	0	1	0	1	0	6	0	6	7
	08:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	2
	08:45 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
	09:00 AM	0	0	0	0	0	0	0	0	0	1	0	1	1
	Total	0	0		0	0	0	0	0	0	4	0	4	. 4
	04:15 PM	0	0	0	0	0	1	0	1	0	1	0	1	2
	05:00 PM	0	0	0	0	0	0	0	0	0	1	. 0	1	1
,	Total	0	0	0	0	. 0	1	0	1	0	2	0	2	3
	05:15 PM	0	0	. 0	0	0	1	0	1	0	0	0	0	1
	05:30 PM	0	0	0	0	0	0	0	0	0	1	0	1 ]	1
	Total	0	0	0	0	0	1	0	1	0	1	0	1	2
	Grand Total Apprch % Total %	0 0.0 0.0	0 0.0 0.0	0 0.0 0.0	0.0	0 0.0 0.0	3 100.0 18.8	0 0.0 0.0	3   18.8	0 0.0 0.0	13 100.0 81.3	0 0.0 0.0	13 81.3	16

Counted By: ORGA-KM Board : D4-1908 City/County: Washington DC Weather : Hot/Sunny/Dry

O.R. George & Associates, Inc. 10210 Greenbelt Road., Suite 310 Lanham, MD 20706-2218 Tel: (301) 794-7700 Fax: (301) 794-4400

File Name: LOU@HOS Site Code: 61291908 Start Date: 06/29/2004

Page No : 1

					Grou	ps Printed							
	Sible		nsignalized	Ent.			ro Road		7-		ro Road		
			North				East				West		
End Time	Left	Right	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	Left	Thru	U-Turn	App. Total	Int. Total
07:15 AM	0	0	0	0	2	0	0	2	0	2	0	2	4
07:30 AM	0	0	0	0	1	0	0	1	0	1	0	1	2
07:45 AM	0	0	0	0	1	0	0	1	0	1	0	1	2
08:00 AM	0	0	0	0	2	0	0	2	0	4	0	4	6
Total	0	0	0	0	6	0	0	6	0	8	0	8	14
08:15 AM	0	0	0	0	2	0	0	2	0	2	0	2	4
08:30 AM	0	0	0	0	2	0	0	2	0	2	0	2	4
08:45 AM	0	0	0	0	2	0	0	2	0	0	0	0	2
. 09:00 AM	0	0	0	0	2	0	0	2	0	2	0	2	4
Total	0	0	0	0	8	0	0	8	0	6	0	6	14
04:15 PM	0	0	0	0	2	0	0	2	0	1	0	1	3
04:30 PM	0	0	0	0	2	0	0	2	0	2	0	2	4
04:45 PM	0	0	0	0	2	0	0	2	, 0	2	0	2	4
05:00 PM	0	0	0	0	6	0	0	6	0	1	0	1	7
Total	0	0	0	0	12	0	0	12	0	6	0	6	18
05:15 PM	0	0	0	0	2	0	0	2	0	` 1	0	1	3
05:30 PM	0	0	0	0	1	0	0	1	0	2	0	2	. 3
05:45 PM	0	0	0	0	2	0	0	2	0	1	0	1	3
06:00 PM	0	0	0	0	1	0	0	1	0	1	0	1	2
Total	0	0	0	0	6	0	0	6	0	5	0	5	11
Grand Total	0	0	0	0	32	0	0	32	0	25	0	25	57
Apprch % Total %	0.0 0.0	0.0 0.0	0.0 0.0	0.0	100.0 56.1	0.0 0.0	0.0 0.0	56.1	0.0 0.0	100.0 43.9	0.0 0.0	43.9	

File Name: MAC@LOU Site Code: 44042238 Start Date: 06/17/2004 Page No : 1

Counted By:ORGA-LM Board :D4-2238 City/County:Washington DC Weather :Warm/Clear/Dry

	Groups Printed- Passenger Vehicles - Trucks - Buses MacArthur Boulevard   MacArthur Boulevard   Loughboro Road   Norton Street																				
															I						
		F	rom No				F	rom So				-	rom Ea					rom We			
End Time	Left	Thru	Right	U- Turn	App. Total	Left	Thru	Right	U- Tum	App. Total	Left	Thru	Right	U- Tum	App. Total	Left	Thru	Right	U- Tum	App. Total	Int. Total
07:15 AM	46	110	0	0	156	0	63	43	0	106	41	2	13	0	56	0	2	0	0	2	320
07:30 AM	53	121	1	0	175	1	78	53	0	132	50	5	18	0	73	1	3	1	0	5	385
07:45 AM	51	154	0	0	205	0	90	61	0	151	68	2	27	0	97	0	7	6	0	13	466
08:00 AM	36	148	4	0	188	0	84	85	0	169	74	2	36	0	112	0	4	2	0	6	475
Total	186	533	5	0	724	1	315	242	0	558	233	11	94	0	338	1	16	9	0	26	1646
08:15 AM	42	191	1	0	234	1	123	72	0	196	66	4	44	0	114	4	7	1	0	12	556
08:30 AM	43	174	0	0	217	0	110	93	0	203	71	0	25	0	96	6	7	2	0	15	531
08:45 AM	40	156	2	0	198	1	111	107	0	219	69	1	30	0	100	4	7	1	0	12	529
09:00 AM	39	143	0	0	182	1	115	95	0	211	64	5	29	0	98	3	5	1	0	9	500
Total	164	664	3	0	831	3	459	367	0	829	270	10	128	0	408	17	26	5	0	48	2116
04:15 PM 04:30 PM	20 28	128 140	1	0 0	149 169	2	73 58	52 62	0	127 123	105 105	6 2	30 38	0	141 145	9	6 10	1	0	16 11	433 448
94:45 PM	32	148	3	0	183	2	66	51	0	119	110	4	40	0	154	3	6	4	0	13	469
05:00 PM	32	131	0	0	163	0	78	64	0	142	107	2	32	0	141	8	3	0	0	11	457
Total	112	547	5	0	664	7	275	229	0	511	427	14	140	0	581	20	25	6	0	51	1807
05:15 PM	18	132	2	0	152	1	86	36	0	123	94	2	32	0	128	4	0	0	0	4	407
05:30 PM	32	157	0	0	189	0	96	27	0	123	133	3	38	0	174	1	4	1	0	6	492
05:45 PM	17	125	1	0	143	0	106	77	0	183	133	10	30	0	173	3	0	0	0	3	502
06:00 PM	30	141	0	0	171	1	91	61	0	153	131	8	32	0	171	5	4	0	0	9	504
Total	97	555	3	0	655	2	379	201	0	582	491	23	132	0	646	13	8	1	0	22	1905
Grand Total Apprch % Total %	559 19.5 7.5	2299 80.0 30.8	16 0.6 0.2	0.0 0.0	2874 38.5	13 0.5 0.2	1428 57.6 19.1	1039 41.9 13.9	0.0 0.0	2480 33.2	1421 72.0 19.0	58 2.9 0.8	494 25.0 6.6	0.0 0.0	1973 26.4	51 34.7 0.7	75 51.0 1.0	21 14.3 0.3	0.0 0.0	147 2.0	7474

10210 Greenbelt Road., Suite 310 Lanham, MD 20706-2218 Tel: (301) 794-7700 Fax: (301) 794-4400

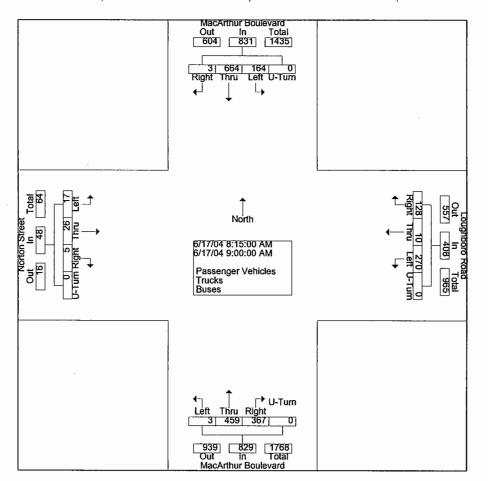
File Name: MAC@LOU Site Code: 44042238 Start Date: 06/17/2004

Page No : 2

### Counted By:ORGA-LM Board :D4-2238 City/County:Washington DC Weather :Warm/Clear/Dry

14.

	<u> </u>	MacAi	thur Bo	ülevard	i		MacAi	rthur Bo	oulevard	-		Lou	ghboro	Road			No	rton St	reet		ì
		F	rom No	rth			F	rom So	uth			F	rom Ea	ast			F	rom W	est		
End Time	Left	Thru	Right	U-	App.	Left	Thru	Right	U-	App.	Left	Thru	Right	U-	App.	Left	Thru	Dight	U-	Арр.	Int.
				Turn	Total	Leit		Right	Turn	Total	Leit	IIIIu	Right	Turn	Total	Leit	Hitu	Right	Turn	Total	Total
Peak Hour Fron	n 07:15	AM to 0	9:00 AM	- Peak	1 of 1						-										
Intersection	08:15	AΜ																			
Volume	164	664	3	0	831	3	459	367	0	829	270	10	128	0	408	17	26	5	0	48	2116
Percent	19.7	79.9	0.4	0.0		0.4	55.4	44.3	0.0		66.2	2.5	31.4	0.0		35.4	54.2	10.4	0.0		
08:15	42	101		•	004		400	70	^	400				•	444		-		•	40	
Volume	42	191	1	0	234	1	123	72	0	196	66	4	44	0	114	4	1	1	0	12	556
Peak Factor																					0.951
High Int.	08:15	AM				08:45 A	M/				08:15 A	M				08:30 A	MΑ				
Volume	42	191	1	0	234	1	111	107	0	219	66	4	44	0	114	6	7	2	0	15	
Peak Factor					0.888					0.946					0.895					0.800	

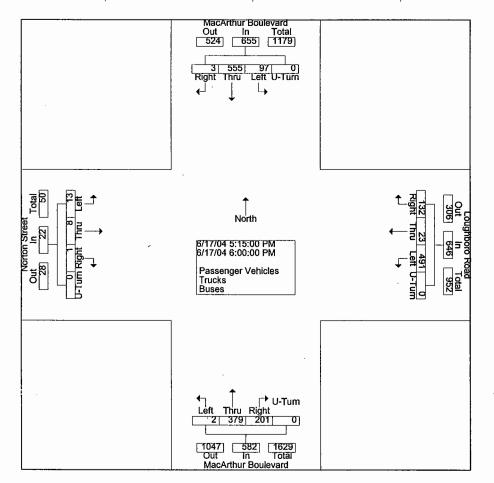


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File Name : MAC@LOU Site Code : 44042238 Start Date : 06/17/2004 Page No : 3

# Counted By:ORGA-LM Board :D4-2238 City/County:Washington DC Weather :Warm/Clear/Dry

		MacA	thur Bo	oulevaro			MacAi	thur Bo	oulevard			Lou	ghboro	Road			No	rton St	reet		
		F	rom No	rth			F	rom So	uth			F	rom Ea	st			F	rom We	est		
End Time	Left	Thru	Right	U-	App.	Left	Thru	Dight	Ú-	Арр.	Left	The	Diabt	Ú-	App.	Left	The	Diaht	U-	App.	int.
Life Thine	reir	HIIIU	Right	Turn	Total	Leit	Hiiu	Right	Turn	Total	Len	Thru	Right	Turn	Total	Leit	Thru	Right	Turn	Total	Total
Peak Hour Fron	n 04:15	PM to 0	6:00 PM	l - Peak	1 of 1																
Intersection	05:15	PM									l										
Volume	97	555	3	0	655	2	379	201	0	582	491	23	132	0	646	13	8	1	0	22	1905
Percent	14.8	84.7	0.5	0.0		0.3	65.1	34.5	0.0		76.0	3.6	20.4	0.0		59.1	36.4	4.5	0.0		
06:00	20	444	^	•	474		04	04		450	404	۰	20	^	474	_		^		^	504
Volume	30	141	0	0	171	1	91	61	0	153	131	8	32	0	171	5	4	0	. 0	9	504
Peak Factor																					0.945
High Int.	05:30 I	PM				05:45 F	M				05:30 F	PM				06:00 F	PM				
Volume	32	157	0	0	189	0	106	77	0	183	133	3	38	0	174	5	4	0	0	9	
Peak Factor					0.866					0.795					0.928					0.611	



Counted By:ORGA-LM Board :D4-2238 City/County:Washington DC Weather :Warm/Clear/Dry

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File Name : MAC@LOU Site Code : 44042238 Start Date : 06/17/2004 Page No : 1

		·.*									ited- Pas	senger										
				thur Bo rom No	ulevard				rthur Bo		1	,		ghboro					orton St			
$\vdash$				TOIN NO	U-	Ann			rom So	uin U-	A		1	rom Ea	ast U-	A		۲	rom We			
L	End Time	Left	Thru	Right	Turn	App. Total	Left	Thru	Right	Turn	App. Total	Left	Thru	Right	Turn	App. Total	Left	Thru	Right	U- Turn	App.   Total	Int. Total
	07:15 AM	45	108	0	0	153	0	63	42	0	105	39	2	13	0	54	0	2	0	0	2	314
	07:30 AM	52	117	1	0	170	1	75	51	0	127	· 46	5	17	0	68	1	3	1	0	5	370
	07:45 AM	50	152	0	0	202	0	90	58	0	148	62	2	26	0	90	0	7	6	0	13	453
_	MA 00:80	35	147	4	0	186	0	84	82	0	166	73	2	35	0	110	0	4	2	0	6	468
	Total	182	524	5	0	711	1	312	233	0	546	220	11	91	0	322	1	16	9	0	26	1605
						1					. 1											
	08:15 AM	41	191	1	0	233	1	121	71	0	193	61	4	43	0	108	4	7	1	0	12	546
	08:30 AM	42	171	0	0	213	0	108	90	0	198	67	0	23	0	90	5	7	. 2	0	14	515
	08:45 AM	39	155	2	0	196	1	109	102	0	212	66	1	30	0	97	4	7	1	0	12	517
	09:00 AM	36	136	0	0	172	1	105	93	0	199	60	2	28	0	90	3	5	1	0	9	470
	Total	158	653	3	0	814	3	443	356	0	802	254	7	124	0	385	16	26	5	0	47	2048
	04.45.004		407			1										1					1	
	04:15 PM	20	127	1	0	148	2	71.	49	0	122	102	6	29	0	137	9	6	1	0	16	423
	04:30 PM	27	139	1	0	167	3	58	61	0	122	103	2	37	0	142	0	10	1	0	11	442
,	04:45 PM	30	147	3	0	180	2	65	48	0	115	104	4	40	0	148	3	6	3	0	12	455
_	05:00 PM	30	130	0	0	160	0	76	63	0	139	104	2	31	0	137	8	3	0	0	11	447
	Total	107	543	5	0	655	7	270	221	0	498	413	14	137	0	564	20	25	5	0	50	1767
	05:15 PM	40	424		^	454		0.5	20	•	400	00		00	•	404		•	•	•	ا ،	404
		18	131	2	0	151	1	85	36	0	122	92	2	30	0	124	4	0	0	0	4	401
	05:30 PM	31	157	0	0	188	0	95	27	0	122	133	3	37	0	173	1	4	1	0	6	489
	05:45 PM	17	125	1	0	143	0	105	74	0	179	130	10	30	0	170	3	0	0	0	3	495
_	06:00 PM	29	141	0	0	170	0	89	58	0	147	128	8	31	. 0	167	5	4	0	0	9	493
	Total	95	554	3	0	652	1	374	195	0	570	483	23	128	0	634	13	8	1	0	22	1878
(	Grand Total	542	2274	16	0	2832	12	1399	1005	0	2416	1370	55	. 480	0	1905	50	75	20	0	145	7298
,	Approh %	19.1	80.3	0.6	0.0	2032	0.5	57.9	41.6	0.0	2410	71.9	2.9	25.2	0.0	1903	34.5	51.7	13.8	0.0	143	1230
	Total %	7.4	31.2	0.2	0.0	38.8	0.2	19.2	13.8	0.0	33.1		0.8	6.6	0.0	26.1	0.7	1.0	0.3	0.0	2.0	

File Name: MAC@LOU Site Code: 44042238 Start Date: 06/17/2004 Page No: 1

Counted By:ORGA-LM Board :D4-2238 City/County:Washington DC Weather :Warm/Clear/Dry

											os Printe	d- Truc								•		
				rthur Bo rom No	ulevard				thur Bo	ülevard				ghboro From Ea					rton St			
$\vdash$					U-	App.				U-	Арр.				U-	App.				U-	App.	Int.
	End Time	Left	Thru	Right	Turn	Total	Left	Thru	Right	Turn	Total	Left	Thru	Right	Turn	Total	Left	Thru	Right	Turn	Total	Total
	07:15 AM	0	1	0	0	1	0	0	1	0	1	1	0	0	0	1	0	0	0	0	0	3
	07:30 AM	0	2	0	0	2	0	3	2	0	5	2	0	0	0	2	0	0	0	0	0	9
	07:45 AM	0	1	0	0	1	0	0	2	0	2	3	0	0	0	3	0	0	0	0	0	6
_	08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1_
	Total	0	4	0	0	4	0	3	5	0	8	6	0	1	0	7	0	0	0	0	0	19
	08:15 AM	0	0	0	0	0	0	2	0	0	2	2	0	0	0	2	0	0	0	0	0	4
	08:30 AM	0	2	0	0	2	0	2	0	0	2	2	0	1	0	3	0	0	0	0	0	7
	08:45 AM	0	1	0	0	1	. 0	2	2	0	4	1	0	0	0	1	0	0	0	0	0	6
	09:00 AM	1	6	0	0	7	0	7	1	0	8	3	3	0	0	6	0	0	0	0	0	21
	Total	1	9	0	0	10	0	13	3	0	16	8	3	1	0	12	0	0	0	0	0	38
		. 65																				
																. 4					. 1	
	04:15 PM	0	0	0	0	0	0	1	2	0	3	2	0	1	0	3	0	0	0	0	.0	6
	04:30 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7	04:45 PM	1	1	. 0	0	2	0	0	2	0	2	1	0	0	0	1	0	0	1	0	1	6
	05:00 PM	1	1	0.	0	2	0	2	0	0	2	1_	0	1	0	2	0	0	. 0	0	0	6_
	Total	2	3	. 0	0	5	0	3	4	0	7	4	0	2	0	6	0	0	1	0	1	19
						. 1					. 1					- 1					- 1	
	05:15 PM	0	1	0 -	0	1	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	3
	05:30 PM	0	0	0	0	0	0	1	0	0	1	0 -	0	0	0	0	0	0	0	0	0	1
	00.00 514					ا م					. 1	_				. 1					اہ	
_	06:00 PM	0	0	0	0	0		2	1	0	4	0	0	0	0	0	0	0	0	0	0	4
	Total	0	1	0	0	1	1	3	1	0	5	1	0	1	0	2	0	0	0	0	0	8
c	rand Total	3	17	0	0	20	1	22	13	0	36	19	3	5	0	27	0	0	1	0	1	84
						20	•			_	30		3			21			100.	_	'	. 04
	Apprch %	15.0	85.0	0.0	0.0		2.8	61.1	36.1	0.0		70.4	11.1	18.5	0.0		0.0	0.0	0	0.0		
	Total %	3.6	20.2	0.0	0.0	23.8	1.2	26.2	15.5	0.0	42.9	22.6	3.6	6.0	0.0	32.1	0.0	0.0	1.2	0.0	1.2	

File Name: MAC@LOU Site Code: 44042238 Start Date : 06/17/2004 Page No : 1

Counted By:ORGA-LM Board :D4-2238
City/County:Washington DC
Weather :Warm/Clear/Dry

											ps Printe	ed- Bus								•		
				rthur Bo rom No	oulevaro	1			thur Bo	oulevard				ghboro					rton Str			
ŀ				rom inc	oran U-	A==			rom So	utn U-	A			rom Ea					rom We	U-		
	End Time	Left	Thru	Right	Turn	App. Total	Left	Thru	Right	Turn	App. Total	Left	Thru	Right	U- Turn	App. Total	Left	Thru	Right	Turn	App. Total	Int. Total
	07:15 AM	1	1	0	0	2	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	3
	07:30 AM	1	2	0	0	3	0	0	0	0	0	2	0	1	0	3	0	0	0	0	0	6
	07:45 AM	1	1	0	0	2	0	0	1	0	1	3	0	1	0	4	0	0	0	0	0	7
	08:00 AM	1	1	0	. 0	2	0	0	3	0	3	1	0	0	0	1	0	0	0	0	0	6
	Total	4	5	0	0	9	0	0	4	0	4	7	0	2	0	9	0	0	0	0	0	22
	08:15 AM	1	0	0	0	1	0	0	1	0	1	3	0	1	0	4	0	0	0	0	0	6
	08:30 AM	- 1	1	0	0	2	0	0	3	0	3	2	0	1	0	3	1	0	0	0	1	9
	08:45 AM	1	0	0	0	1	0	0	3	0	3	2	0	0	0	2	0	0	0	0	0	6
	09:00 AM	2	1	0	0	3	.0	3	1	0	4	1	0	1	0	2	0	0	0	0	0	9
•	Total	5	2	0	0	7	0	3	8	0	11	8	0	3	0	11	1	0	0	0	1	30
	04:15 PM	0	1	0	0	1	0	1	1	0	2	1	0	0	0	1	0	0	0	0	0	4
	04:30 PM	1	0	0	0	1	0	0	1	0	1	2	0	1	0	3	0	0	0	0	0	5
	04:45 PM	1	0	0	0	1	0	1	1	0	2	5	0	0	0	5	0	0	0	0	0	8
	05:00 PM	1	0	0	0	1	0	0	1	0	1	2	0	0	0	2	0	0	0	0	0	4_
	Total	3	1	0	0	4	0	2	4	0	6	10	0	1	. 0	11	0	0	0	0	0	21
	05:15 PM	0	0	0	0	0	0	1	0	0	1	1	0	1	0	2	0	0	0	0	0	3
	05:30 PM	1	0	0	0	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2
	05:45 PM	0	0	0	0	0	0	1	3	0	4	3	0	0	0	3	0	0	0	0	0	7
	06:00 PM	1	0	0	0	1	0	0	2	0	2	3	0	1	0	4	0	0	0	0	0	7
	Total	2	0	0	0	2	0	2	5	0	7	7	0	3	0	10	0	0	0	0	0	19
	Grand Total	14	8	0	0	22	0	7	21	0	28	32	0	9	0	41	1	0	0	0	1	92
	Apprch %	63.6	36.4	0.0	0.0	j	0.0	25.0	75.0	0.0		78.0	0.0	22.0	0.0		100. 0	0.0	0.0	0.0		
	Total %	15.2	8.7	0.0	0.0	23.9	0.0	7.6	22.8	0.0	30.4	34.8	0.0	9.8	0.0	44.6	1.1	0.0	0.0	0.0	1.1	

File Name: MAC@LIT Site Code: 61291908 Start Date : 06/29/2004 Page No : 1

Counted By: ORGA-KM Board : D4-1908 City/County: Washington DC Weather : Warm/Sunny/Dry

Groups Printed- Passenger Vehicles - Trucks - Buses

									ucks - Buses	5				
		. 1		Boulevard			Macarthur From					lls Road East		
	nd Time	Left	Thru	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	Left	Right	U-Turn	App. Total	Int. Total
	7:15 AM	19	140	0-14111	App. 10tar 159	75	Rigit	<u>0-10111</u>	App. rotai 89	5		<u>0-1011  </u> 1	App. 10tal 9	257
	7:30 AM	11	187	0	198	103	8	3	114	. 2	3	0	5	317
	7:45 AM		189			110	4	ა 1	115		1	. 0	3	317
		10 <sub>.</sub> 9		0	199					0	•			
0	3:00 AM		192	0	201	122	5	2	129	2	2	0	4	334
	Total	49	708	0	757	410	25	12	447	9	9	1	19	1223
0.0		_	407	•	1				400				اه	
	3:15 AM	7	197	0	204	119	3	4	126	0	6	0	6	336
	3:30 AM	5	258	0	263	147	8	1	156	0	3	0	3	422
	3:45 AM	4	241	0	245	137	4	0	141	1	2	0	3	389
.09	MA 00;	3	213	0	216	121	3	0	124	0	1	0	1	341
	Total	19	909	0	928	524	18	5	547	1	12	0	13	1488
04	1:15 PM	1	141	1	143	93	1	1	95	9	11	0	20	258
04	1:30 PM	2	179	0	181	100	4	0	104	5	10	0	15	300
04	1:45 PM	0	154	0	154	98	0	0	98	6	9	0	15	267
. 05	5:00 PM	2	170	0	172	94	2	0	96	3	8	0	11	279
,	Total	5	644	1	650	385	7	1	393	23	38	0	61	1104
	1.7				'				'	ı			'	
05	5:15 PM	.3	127	0	130	91	0	2	93	7	11	0	18	241
05	5:30 PM	1	178	0	179	145	1	1	147	9	11	0	20	346
05	5:45 PM	0	134	0	134	132	1	0	133	5	9	0	14	281
06	6:00 PM	1	162	0	163	126	0	0	126	5	7	0	. 12	301
	Total	5	601	0	606	494	2	3	499	26	38	0	64	1169
Com	nd Total	78	2862	4	2941	1813	52	21	1886	59	97	1	157	4984
	oprch %	78 2.7	2862 97.3	1 0.0	2941	96.1	52 2.8	1.1	1000	37.6	61.8	0.6	137	4904
	Total %	1.6	57.4	0.0	59.0	36.4	1.0	0.4	37.8	1.2	1.9	0.0	3.2	
									2.10					

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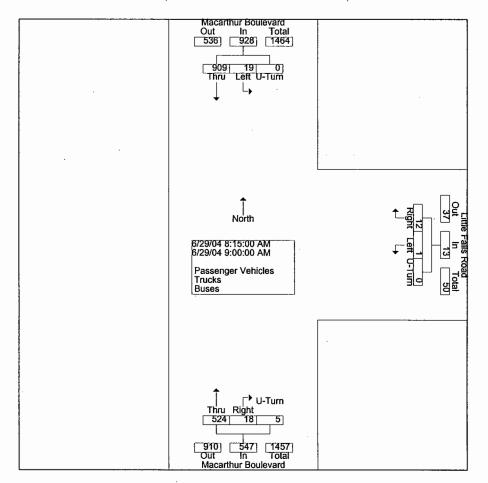
Start Date : 06/29/2004

Page No : 2

File Name: MAC@LIT Site Code : 61291908

Counted By: ORGA-KM Board : D4-1908 City/County: Washington DC Weather : Warm/Sunny/Dry

	1	Macarthui	r Boulevard			Macarthur	Boulevard			Little Fa	lis Road		
		From	North			From	South ·			From	East		
End Time	Left	Thru	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	Left	Right	U-Tum	App. Total	Int. Total
Peak Hour From 07:15	AM to 12:45	PM - Peak 1	of 1										
Intersection	08:15 AM												
Volume	19	909	0	928	524	18	5	547	1	12	0	13	1488
Percent	2.0	98.0	0.0		95.8	3.3	0.9		7.7	92.3	0.0		
08:30 Volume	5	258	0	263	147	8	1	156	0	3	0	3	422
Peak Factor													0.882
High Int.	08:30 AM				08:30 AM				08:15 AM				
Volume	5	258	0	263	147	8	1	156	0	6	0	6	
Peak Factor				0.882				0.877				0.542	



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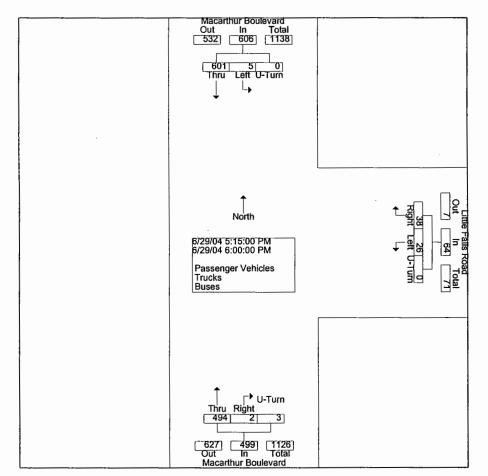
Site Code : 61291908 Start Date : 06/29/2004

Page No : 3

File Name: MAC@LIT

Counted by:	ORGA-KM
Board :	D4-1908
City/County:	Washington DC
Weather:	Warm/Sunny/Dry

		Macarthur	Boulevard			Macarthur	Boulevard	1		Little Fa	lls Road		
		From	North			From	South			From	East		
End Time	Left	Thru	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	Left	Right	U-Turn	App. Total	Int. Total
Peak Hour From 01:00	PM to 06:00 P	M - Peak 1	of 1										
Intersection	05:15 PM												
Volume	5	601	0	606	494	2	3	499	26	38	0	64	1169
Percent	0.8	99.2	0.0		99.0	0.4	0.6		40.6	59.4	0.0		
05:30 Volume	1	178	0	179	145	1	1	147	9	11	0	20	346
Peak Factor													0.845
High Int.	05:30 PM				05:30 PM				05:30 PM				
Volume	1	178	0	179	145	1	1	147	9	11	0	20	
Peak Factor				0.846				0.849				0.800	



File Name: MAC@LIT Site Code: 61291908 Start Date : 06/29/2004 Page No : 1

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Counted By: ORGA-KM Board : D4-1908 City/County: Washington DC Weather : Warm/Sunny/Dry

						Groups Prin	ited- Pass	enger Veh	icles					
			Macarthur		1			Boulevard				lls Road		
			From				From					East		
End		Left	Thru	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	Left	Right	U-Turn	App. Total	Int, Total
07:15	AΜ	19	138	0	157	70	8	6	84	5	. 2	1	8	249
07:30	MA (	11	185	0	196	102	7	3	112	2	3	0	5	313
07:45	AM	10	187	0	197	108	4	1	113	0	1	0	1	311
08:00	MA	9	190	0	199	120	5	2	127	1	2	0	3	329
	Γotal	49	700	0	749	400	24	12	436	8	8	1	17	1202
08:15	AM	7	194	0	201	117	3	4	124	0	5	0	5	330
08:30	) AM	5	255	0	260	144	7	1	152	0	3	0	3	415
08:45	AM.	4	240	0	244	135	4	0	139	1	2	0	3	386
09:00	) AM	. 3	210	0	213	120	3	0	123	0	1	0	1	337
	Total	19	899	0	918	516	17	5	538	1	11	0	12	1468
04:15	PM	1	139	1	141	93	1	1	95	9	10	0	19	255
04:30	PM	2	177	0	179	99	3	0	102	4	10	0	14	295
04:45	PM	0	154	0	154	97	0	0	97	6	9	0	15	266
, 05:00	PM	2	169	0	171	92	2	0	94	3	8	0	11	276
-	Total	5	639	1	645	381	6	1	388	22	37	0	59	1092
05:15	5 PM	3	127	0	130	91	0	2	93	7	10	0	17	240
05:30	PM (	1	176	0	177	144	0	1	145	. 9	11	0	20	342
05:45	5 PM	0	132	0	132	132	1	0	133	5	9	0	14	279
06:00	PM (	1	162	0	163	125	0	0	125	4	7	0	11	299
	Total	5	597	0	602	492	1	3	496	25	37	0	62	1160
Grand 1		78 0.7	2835	1	2914	1789	48	21	1858	56	93	1 0.7	150	4922
Appro Tot	ch % al %	2.7 1.6	97.3 57.6	0.0	59.2	96.3 36.3	2.6 1.0	1.1 0.4	37.7	37.3 1.1	62.0 1.9	0.0	3.0	

File Name: MAC@LIT Site Code: 61291908 Start Date: 06/29/2004 Page No: 1

Groupe	Printed-	Trucks
GIUUDS	Fillitea-	HUCKS

Counted By: ORGA-KM Board : D4-1908 City/County: Washington DC Weather : Warm/Sunny/Dry

	1	Macarthu	r Boulevard	,		ips Printed	I- Trucks Boulevard	,		Title Es	lls Road		
			i North	'			South				East	i	
End Time	e Left		U-Turn	App. Total	Thru	Right	U-Turn	App. Total	Left	Right	U-Turn	App. Total	Int. Total
07:15 AM		<del></del>	0	0	3	0	0	3	0	1	0	1	4
07:30 AN	1 0	0	0	0	0	1	0	1	0	0	0	0	1
08:00 AM	1 0	0	0	0	0	0	0	0	1	0	0	1	1
Tota	I 0	. 0	0	0	3	1	0	4	1	1	0	2	6
08:15 AM	1 0	1	0	1	1	0	0	1	0	1	0	1	3
08:30 AM	1 0	0	0	0	0	1	0	1	0	0	0	0	1
09:00 AM	1 0	1	0	1	0	0	0	0	0	0	0	0	1
Tota	I 0	2	0	2	1	1	0	2	0	1	0	1	5
04:15 PM	1 0	1	0	1	0	0	0	0	0	1	0	1	2
04:30 PM	1 0	0	0	0	0	1	0	1	1	0	0	1	2
Tota	I 0	1	0	1	0	1	0	_ 1	1	1	0	2	4
05:15 PM	. 0	0	0	0	0	0	0	0	0	1	0	1	1
05:30 PM	0	1	0	1	0	1	0	1	0	0	0	0	2
06:00 PM	1 0	0	0	0	0	0	0	0	1	0	0	1	1
Tota	0	1	0	1	. 0	1	0	1	1	1	0	2	4
Grand Tota			0	4	4	4	0	8	3	4	. 0	7	19
Apprch % Total %			0.0 0.0	21.1	50.0 21.1	50.0 21.1	0.0 0.0	42.1	42.9 15.8	57.1 21.1	0.0 0.0	36.8	

File Name: MAC@LIT Site Code: 61291908 Start Date: 06/29/2004 Page No :1

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Counted By: ORGA-KM
Board: D4-1908
City/County: Washington DC
Weather: Warm/Sunny/Dry Groups Printed- Ruses

							ps Printed							
	"		Macarthur					Boulevard			Little Fa		·	
			From				From				From			
L	End Time	Left	Thru	U-Turn	App. Total	Thru	Right	U-Turn	App. Total	Left	Right	U-Turn	App. Total	Int. Total
	07:15 AM	0	2	0	2	2	0	0	2	0	0	0	0	4
	07:30 AM	0	2	0	2	1 ·	0	0	1	0	0	0	0	3
	07:45 AM	0	2	0	2	2	0	0	2	0	0	0	0	4
	MA 00:80	0	2	0	2	2	0	0	2	0	. 0	0	0	4
	Total	0	8	0	8	7	0	0	7	0	0	0	0	15
	08:15 AM	0	2	0	2	1	. 0	0	1	0	0	0	0	3
	08:30 AM	0	3	0	3	3	0	0	3	0	0	0	0	6
	08:45 AM	0	1	0	1	2	0	0	2	0	0	0	0	3
	09:00 AM	0	2	0	2	1	0	0	1	0	0	0	0	3
	Total	0	8	0	8	7	0	0	7	0	0	0	0	15
										`				
	04:15 PM	0	1	. 0	1	0	0	0	0	0	0	0	0	1
	04:30 PM	0	2	0	2	1	0	0	1	0	0	0	0	3
	04:45 PM	0	0	0	0	1	0	0	1	0	0	0	0	1
	05:00 PM	0	1	0	1	2	0	0	2	0	0	0	0	3
	Total	0	4	0	4	4	0	0	4	0	0	0	0	8
					,				,				'	
	05:30 PM	0	1	0	1	1	0	0	1	0	0	0	0	2
	05:45 PM	0	2	0	2	0	0	0	0	0	0	0	0	2
	06:00 PM	0	0	0	0	1	0	0	1	0	0	0	0	1
	Total	0	3	0	3	2	0	0	2	0	0	0	0	5
					- 1				'				ı	
	Grand Total	0.	23	0	23	20	0	0	20	0	0	0	0	43
	Apprch %	0.0	100.0	0.0		100.0	0.0	0.0		0.0	0.0	0.0		
	Total %	0.0	53.5	0.0	53.5	46.5	0.0	0.0	46.5	0.0	0.0	0.0	0.0	

Counted By:ORGA-KM Board :D4-1908 City/County:Washington DC Weather :Warm/Clear/Dry

O.R. George & Associates, Inc. 10210 Greenbelt Road., Suite 310 Lanham, MD 20706-2218 Tel: (301) 794-7700 Fax: (301) 794-4400

File Name: MAC@CAT Site Code: 60291908 Start Date: 06/30/2004

Page No : 1

		Groups Printed- Passe Macarthur Boulevard NW Macarthur Boulevard NW																				
		N		ur Boul rom No		ıw	N		ur Boul rom So		ıw			Iral Ave	nue NV	v			ral Ave	nue NW	' l	
-					run U-	Ann			10111 30	uui U-	Ann			10111 E	J- U-	Арр.	- 1			U-	App.	Int.
	End Time	Left	Thru	Right	Turn	App. Total	Left	Thru	Right	Turn	App. Total	Left	Thru	Right	Turn	Total	Left	Thru	Right	Turn	Total	Total
	07:15 AM	2	143	2	0	147	1	129	2	0	132	2	0	2	0	4	2	0	1	0	3	286
	07:30 AM	1	173	1	0	175	3	174	3	0.	180	3	4	1	0	8	3	0	4	0	7	370
	07:45 AM	2	263	1	0	266	1	184	4	0	189	4	2	3	0	9	0	1	1	. 0	2	466
	08:00 AM	2	255	0	0	257	2	199	3	0	204	5	1	2	0	8	5	0	3	0	8	477
_	Total	7	834	4	0	845	7	686	12	0	705	14	7	8	0	29	10	1	9	0	20	1599
	00.45.44	•		•	•	207	•	400		^	475		•	•		ام	•	•		0	- 1	200
	08:15 AM	0	207	0	0	207	2	169	4	0	175	0	0	3	0	3	2	3	0	0	5	390 453
	08:30 AM	1	239	1	0	241	1	192	7	0	200	4	0	1	0	5	5	0	2	0	7	
	08:45 AM	2	271	0	0	273	2	218	3	0	223	7	0	2	0	9	2		2	0	5	510
_	09:00 AM		242	0	0	243	2	227	3	0	232	10	1	2	0	13	12	2		0	15	503
	Total	4	959	1	0	964	7	806	17	0	830	21	1	8	0	30	21	6	5	0	32	1856
	04:15 PM	4	212	4	0	220	4	107	2	0	113	3	1	4	0	8	6	0	2	0	8	349
	04:30 PM	8	221	1	0	230	5	122	2	0	129	8	2	2	0	12	3	1	2	0	6	377
Λ.	04:45 PM	1	231	1	0	233	6	129	2	0	137	3	0	2	0	5	8	1	4	0	13	388
1	05:00 PM	4	258	1	0	263	4	146	0	0	150	5	0	0	0	5	7	0	2	. 0	9	427
-	Total	17	922	<del>-</del> 7	0	946	19	504	6	0	529	19	3	8	0	30	24	2	10	0	36	1541
						'					'					'					,	
	05:15 PM	5	266	3	0	274	3	118	1	0	122	2	0	5	0	7	6	0	2	0	8	411
	05:30 PM	5	267	0	0	272	3	137	4	0	144	5	1	3	0	9	6	1	1	0	8	433
	05:45 PM	0	267	0	0	267	1	140	9	0	150	1	0	2	0	3	8	3	0	0	11	431
	06:00 PM	4	323	2	0	329	5	153	2	0	160	5	1	4	0	10	10	2	2	0	14	513
	Total	14	1123	5	0	1142	12	548	16	0	576	13	2	14	0	29	30	6	5	0	41	1788
	Grand Total Apprch % Total %	42 1.1 0.6	3838 98.5 56.6	17 0.4 0.3	0 0.0 0.0	3897   57.4	45 1.7 0.7	2544 96.4 37.5	51 1.9 0.8	0 0.0 0.0	2640 38.9	67 56.8 1.0	13 11.0 0.2	38 32.2 0.6	0 0.0 0.0	118 1.7	85 65.9 1.3	15 11.6 0.2	29 22.5 0.4	0 0.0 0.0	129	6784
		0.0		0			,															

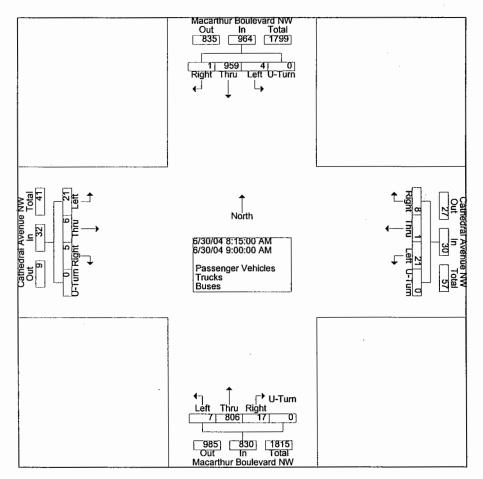
10210 Greenbelt Road., Suite 310 Lanham, MD 20706-2218 Tel: (301) 794-7700 Fax: (301) 794-4400

File Name: MAC@CAT Site Code: 60291908 Start Date: 06/30/2004

Page No : 2

Counted By:ORGA-KM Board :D4-1908 City/County:Washington DC Weather :Warm/Clear/Dry

,	N	acarth	ũr Boul	evard N	W	Macarthur Boulevard NW						Catheo	Iral Ave	nue NW							
		rom No	rth		From South					From East					From West						
End Time	Left	Thru	Right	U- Turn	App. Total	Left	Thru	Right	U- Turn	App. Total	Left	Thru	Right	U- Turn	App. Total	Left	Thru	Right	U- Turn	App. Total	Int. Total
Peak Hour Fron	n 07:15	AM to 0	9:00 AM	- Peak	1 of 1																
Intersection	08:15	AM.																			
Volume	4	959	1	0	964	7	806	17	0	830	21	1	8	0	30	21	6	5	0	32	1856
Percent	0.4	99.5	0.1	0.0		8.0	97.1	2.0	0.0		70.0	3.3	26.7	0.0		65.6	18.8	15.6	0.0		
08:45	2	271	0	. 0	273	2	218	3	0	223	7	0	2	0	9	2	1	2	0	5	510
Volume	2	211	U	. 0	0 2/0	_	210	3	U	223	<b>'</b>	U	2	U	9		1	2	U	3	310
Peak Factor High Int.	08:45	λM				09:00	AM				09:00 A	λM				09:00 /	ΑM				0.910
Volume	2	271	0	0	273	2	227	3	0	232	10	1	2	0	13	12	2	1	0	15	
Peak Factor					0.883					0.894					0.577					0.533	

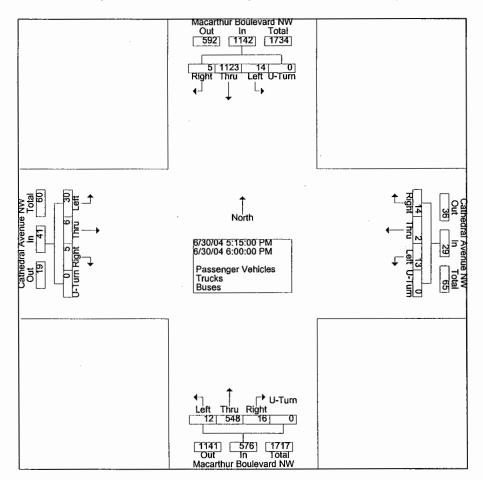


10210 Greenbelt Road., Suite 310 Lanham, MD 20706-2218 Tel: (301) 794-7700 Fax: (301) 794-4400

Counted By:ORGA-KM Board :D4-1908 City/County:Washington DC Weather :Warm/Clear/Dry File Name: MAC@CAT Site Code: 60291908 Start Date: 06/30/2004

Page No	: 3
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	- N	lacarth	ur Boul	evard N	IWW	Macarthur Boulevard NW						rai Ave	nue ÑV	<b>/</b>							
	From North					From South					From East					From West					
End Time	Left	Thru	Right	Ū-	App. Total	Left	Thru	Right	U-	App.	Left	Thru	Right	U- Turn	Арр.	Left	Thru	Diaht	U-	Арр.	Int.
				Turn					Turn	Total	Leit				Total	Leit	Thru	Right	Turn	Total	Total
Peak Hour From 04:15 PM to 06:00 PM - Peak 1 of 1																					
Intersection	05:15 F	PM																		- 1	
Volume	14	1123	5	0	1142	12	548	16	0	576	13	2	14	0	29	30	6	5	0	41	1788
Percent	1.2	98.3	0.4	0.0		2.1	95.1	2.8	0.0		44.8	6.9	48.3	0.0		73.2	14.6	12.2	0.0		
06:00	4	202		0	329	_	450	0	^	400	5	4	4	0	10	10	2	2	0	14	513
Volume	4	323	2	0	329	5	153	2	0	160	)	'	4	U	10	10	2	2	U	14	313
Peak Factor																					0.871
High Int.	06:00 PM					06:00 PM				06:00 PM					06:00 PM				l		
Volume	4	323	2	0	329	5	153	2	0	160	5	1	4	0	10	10	. 2	2	0	14	
Peak Factor					0.868					0.900					0.725					0.732	



O.R. George & Associates, Inc. 10210 Greenbelt Road., Suite 310 Lanham, MD 20706-2218 Tel: (301) 794-7700 Fax: (301) 794-4400

File Name: MAC@CAT Site Code: 60291908 Start Date: 06/30/2004 Page No: 1

Counted By:ORGA-KM Board :D4-1908 City/County:Washington DC Weather :Warm/Clear/Dry

				.,					Grou	ıps Prin	ted- Pas	senger	Vehic	les						-3		
		N		ur Boul rom No	evard N rth	W	N		ur Boul rom So	evard N uth	W			Iral Ave From Ea	enue NV ast	/			rom We	nue NW est		
	End Time	Left	Thru	Right	U- Turn	App. Total	Left	Thru	Right	U- Turn	App. Total	Left	Thru	Right	U- Turn	App. Total	Left	Thru	Right	U- Turn	App. Total	Int. Total
	07:15 AM	2	137	2	0	141	1	127	2	0	130	2	0	2	0	4	2	0	1	0	3	278
	07:30 AM	1	171	1	0	173	3	172	3	0	178	3	4	1	0	8	3	0	4	0	7	366
	07:45 AM	2	261	1	0	264	1	180	4	0	185	4	2	3	0	9	0	1	1	0	2	460
	MA 00:80	2	251	0	0	253	2	198	3	0	203	5	1	2	0	8	4	0	3	0	7	471
	Total	7	820	4	0	831	7	677	12	0	696	14	7	8	0	29	9	1	9	0	19	1575
	08:15 AM	. 0	202	0	0	202	2	167	4	0	173	0	0	3	0	3	2	3	0	0	5	383
	08:30 AM	, 1	235	1	0	237	1	189	7	0	197	4	0	1	0	5	5	0	2	0	7	446
	08:45 AM	2	269	0	0	271	1	215	1	0	217	7	0	2	0	9	2	1	2	0	5	502
_	09:00 AM	1	238	0	0	239	2	222	3	0	227	9	1	2	0	12	11	2	1	0	14	492
	Total	4	944	1	0	949	6	793	15	0	814	20	1	8	0	29	20	6	5	0	31	1823
	04:15 PM	4	208	4	0	216	4	103	2	0	109	3	1	. 4	0	8	6	0	2	0	8	341 374
	04:30 PM	8	219	1	0	228	5	121	2	0	128	8	2	2	0	12	3	1	2	0	6	
	04:45 PM	1	228	1	0	230	6	128	2	0	136	3	0	2	0	5	8 7	1	4	0	13	384 422
-	05:00 PM	4	255		0	260	4	144	0	0	148	5	3	<u>0</u> 8	0	5 30	24	2	10	0	36	1521
	Total	17	910	7	0	934	19	496	.6	0	521	19	3	8	U	30	24	2	10	U	30 ļ	1521
	05:15 PM	5	264	3	0	272	3	118	1	0	122	2	0	5	0	7	6	0	2	0	8	409
	05:30 PM	5	266	0	0	271	3	135	4	0	142	5	1	3	0	9	6	1	1	0	8	430
	05:45 PM	0	264	0	0	264	1	138	9	0	148	1	0	2	0	3	8	3	0	0	11	426
	06:00 PM	4	319	2	0	325	5	152	2	0	159	- 5	1	4	.0	10	10	2	2	0	14	508
	Total	14	1113	5	0	1132	12	543	16	0	571	13	2	14	0	29	30	6	5	0	41	1773
	Grand Total Apprch % Total %	42 1.1 0.6	3787 98.5 56.6	17 0.4 0.3	0 0.0 0.0	3846 57.5	44 1.7 0.7	2509 96.4 37.5	49 1.9 0.7	0 0.0 0.0	2602 38.9	66 56.4 1.0	13 11.1 0.2	38 32.5 0.6	0 0.0 0.0	117 1.7	83 65.4 1.2	15 11.8 0.2	29 22.8 0.4	0 0.0 0.0	127	6692

Counted By:ORGA-KM Board :D4-1908 City/County:Washington DC Weather :Warm/Clear/Dry O.R. George & Associates, Inc. 10210 Greenbelt Road., Suite 310 Lanham, MD 20706-2218 Tel: (301) 794-7700 Fax: (301) 794-4400

File Name: MAC@CAT Site Code: 60291908 Start Date: 06/30/2004

Page No : 1

**Groups Printed- Trucks** 

	N		ur Boule rom No		W	N		ur Boul rom So	evard N uth	iw			ral Ave	enue NW ast				ral Ave	nue NV est		
End Time	Left	Thru	Right	U- Turn	App. Total	Left	Thru	Right	U- Turn	App. Total	Left	Thru	Right	U- Turn	App. Total	Left	Thru	Right	U- Tum	App. Total	Int. Total
07:15 AM	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
07:45 AM	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	3	0	0	3	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	4
08:15 AM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:45 AM	0	0	0	0	0	1	1	2	0	4	0	0	0	0	0	0	0	0	0	0	4
09:00 AM	0	2	0	0	2	0	4	0	0	4	1	0	0	0	1	1	0	0	0	1	8
Total	0	4	0	0	4	1	5	2	0	8	1	0	0	o,	1	1	0	0	0	1	14
04:15 PM	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	4
Total	0	0	0	0	0	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	4
05:45 PM	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	o !	2
06:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Grand Total	0	10	0	0	10	1	10	2	0	13	1	0	0	0	1	1	0	0	0	1	25
Apprch %	0.0	100. 0	0.0	0.0		7.7	76.9	15.4	0.0		100. 0	0.0	0.0	0.0		100. 0	0.0	0.0	0.0		
Total %	0.0	40.0	0.0	0.0	40.0	4.0	40.0	8.0	0.0	52.0	4.0	0.0	0.0	0.0	4.0	4.0	0.0	0.0	0.0	4.0	

O.R. George & Associates, Inc. 10210 Greenbelt Road., Suite 310 Lanham, MD 20706-2218 Tel: (301) 794-7700 Fax: (301) 794-4400

Counted By:ORGA-KM
Board :D4-1908
City/County:Washington DC
Weather :Warm/Clear/Dry

File Name: MAC@CAT Site Code: 60291908 Start Date: 06/30/2004 Page No: 1

				Groups Printed- Buses  Macarthur Boulevard NW   Macarthur Boulevard NW   Cathedral Avenue NW   Cathedral Avenue NW																	
	N				100	N				W					V						
		F	rom No				F	rom So					rom Ea				h	rom We			
End Time	Left	Thru	Right	U- Turn	App. Total	Left	Thru	Right	U- Turn	App. Total	Left	Thru	Right	U- Turn	App. Total	Left	Thru	Right	U- Turn	App. Total	Int. Total
07:15 AM	0	3	0	0	3	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	5
07:30 AM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	4
07:45 AM	0	2	0	0	2	0	3	0	0	3	0	. 0	0	0	0	0	0	0	0	0	5
MA 00:80	0	4	0	0	4	0	1	0	0	1	0	0	0	0	0	1	0	0	0	1	6
Total	0	11	0	0	11	0	8	0	0	8	0	0	0	0	0	1	0	0	0	1	20
08:15 AM	0	3	0	0	3	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	5
08:30 AM	0	4	0	0	4	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	7
08:45 AM	0	2	0	0	2	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	4
09:00 AM	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3
Total	0	11	0	0	11	0	8	0	0	8	0	0	0	0	0	0	0	0	0	0	19
04:15 PM	. 0	4	. 0	0	4	0	0	0	0	0	0	. 0	0	0	0	0	0	0	0	0	4
04:30 PM	0	2	0	0	2	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	3
04:45 PM	0	3	0	0	3	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	4
05:00 PM	0	3	0	0	3	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	5
Total	0	12	0	0	12	0	4	0	0	4	0	0	0	0	0	0	0	0	0	0	16
05:15 PM	0	2	0	0	2	0	0	0	0.	0	0	0	0	0	0	0	0	0	0	0	2
05:30 PM	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	3
05:45 PM	0	1	0	0	1	0	2	0	0	2	0	0	0	0	0	0	0	0	0	0	3
06:00 PM	0	3	0	0	3	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	4
Total	0	7	0	0	7	0	5	0	0	5	0	0	0	0	0	0	0	0	0	0	12
Grand Total	0	41	0	0	41	0	25	0	0	25	0	0	0	0	0	1	0	0	0	1	67
Apprch %	0.0	100. 0	0.0	0.0		0.0	100. 0	0.0	0.0		0.0	0.0	0.0	0.0		100. 0	0.0	0.0	0.0		
Total %	0.0	61.2	0.0	0.0	61.2	0.0	37.3	0.0	0.0	37.3	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	1.5	

## MECHANICAL TRAFFIC VOLUME/ VEHICLE CLASSIFICATION COUNT REPORTS

O.R. George & Associates, Inc.

JAMAR Technologies, Inc. TAS for Windows Copyright 1999

Site Code: 000000012122 Start Date: 06/16/2004 File I.D.: 12122C

								astboun						Page	: 1
Begin .	m - + - 1	Class	Class	Class	Class	Class	Class	Class	Class	Class	Class	Class	Class	Class	
Time 12:00 06/16	Total 3	1	2	3	4 1	5.	6		8	9	10	11	12	13 0	
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08:00	10	0	6	0	3	1	0	0	0	0	0	0	0	0	
09:00	4	0	2	0	2	0	0	0	0	0	0	0	0	0	
10:00	9	0	3	0	5	1	0	0	0	0	0	0	0	0	
11:00	9	0	5	1	3	0	0	0	0	0	0	0	0	0	
12:00 pm	7	0	1	1	3	2	0	0	0	0	0	0	0	^	
01:00 pm	7	0	2	0	3	1	0	0	0	0	0	0	0	0	
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03:00	3	0	2	1	0	0	0	0	0	0	0	0	0	0	
04:00	8	0	5	0	1	1	0	0	1	0	0	0	0	0	
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07:00	1	0	0	0	1	0	0	0	0	0	0	0	0	0	
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
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Totals	143	1	76	8	41	16	0	0	1	0	0	0	0	0	
Percent		.7%	53.1%	5.5%	28.6%	11.1%	.0%	.0%	.7%	.0%	.0%	.0%	.0%	.0%	

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Site Code: 000000012122 Start Date: 06/16/2004 File I.D.: 12122C

							Ε	astboun	d Ln2					Page		: 1
Begin		Class	Class	Class	Class	Class	Class	Class	Class	Class	Class	Class	Class	Class		
Time	Total	1	2	3	4	5_	6	7_	8	9	10	11	12	13		
12:00 06/16	34	1	32	1	0	0	0	0	0	0	0	0	0	0		
01:00 02:00	13 7	0	11	1	1	0	0	0	0	0	0	0	0	0		
03:00	6	0	6 6	1	0	0	0	0	0	0	0	0	. 0	0		
04:00	10	0	5	3	0	1	0	0	0	0 1	0	0	. 0	0		
05:00	46	1	35	8	0	0	1	0	0	1	0	0	0	0		
06:00	198	0	157	31	0	6	0	0	2	2	0	0	0	0		
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12:00 pm	336	1	285	34	1	9	0	0	5	0	1	0	0	0		
01:00	298	0	244	40	0	10	0	0	3	0	0	0	0	1		
02:00	302	0	247	44	2	6	0	1	2	0	0	0	0	0		
03:00	419	0	357	39	5	10	0	0	8	0	0	0	0	0		
04:00	344	0	298	31	4	7	0	0	2	0	0	0	1	1		
05:00	347	2	316	24	0	4	0	0	1	0	0	0	0	0		
06:00	370	0	341	22	2	3	0	0	0	0	2	0	0	0		
07:00	274	0	249	23	0	2	0	0	0	0	0	0	0	0		
08:00 09:00	170 150	1	156 138	11	2	0	0	0	0	0	0	0	0	0		
10:00	112	0	107	6 3	2	1	0	0	0	2	0	, 0	0	0		
11:00	67	0	62	3	2	0	0	0	0	0	0	0	0	0		
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07:00	414	0	358	40	6	6	0	0	1	0	0	0	0	3		
08:00	505	0	433	45	6	7	0	0	8	0	1	0	2	3		
09:00	242	1	208	23	3	3	1	0	1	1	1	0	0	0		
10:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0		
11:00	18	0	14	1	2	1	0	0	0	0	0	0	0	0		
12:00 pm	24	0	20	3	0	1	0	0	0	0	0	0	0	0		
01:00	75	0	64	8	1	2	0	0	0	0	0	0	0	0		
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	hington								ogies, 1	inc.						
County :Was									Windows					Si	te Code :	000000024244
Location:Lou	ignboro	Ka, € OI	Macart	hur Blv	,		Cc	pyrigh	t 1999							06/16/2004
									1 - 2						le I.D. :	
Begin		Class	Class	Class	Class	Class	Class	estbou Class	Class	Class	Class	C1	01.000			1
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08:00	260	1	237	15	1	4	0	0	0	0	1	0	ō	ī		
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10:00	218	0	188	21	2	7	0	0	0	0	0	0	0	0	ı	
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04:00	295	0	271 266	30	0	4	0	. 0	1	0	0	0	0	0		
05:00	372	1	348	24 18	0	3	0	0	2	0	0	0	0	0		
06:00	332	i	309	14	2	0	1	0	1	0	0	0	0	0		
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Day Totals	3989	7	3589	313	8	43	3	<u>1</u>	18	2	j	*	. 1	3		*
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02:00	10	0	8	2	0	0	0	0	0	0	0	0	0	0		
03:00 04:00	10 7	0	6	4	0	0	0	0	0	0	0	0	0	0		
04:00	29	0	5	1	0	1	0	0	0	0	0	0	0	0		
06:00	91	0	24 81	4 8	0	1	0	0	0	0	0	0	0	0		
07:00	207	1	183	15	0	1 5	0 1	0	0	1	0	0	0	0		
08:00	252	ō	220	23	0	7	1	0	0	1	0	0	0	0		
09:00	316	2	258	35	5	5	i	0	6	2	0	0	1	1		
10:00	329	2	274	35	5	6	0	0	2	1	0	0	1	3		
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01:00	309	5	252	34	7	6	1	0	2	ī	ō	ŏ	ŏ	ī		
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05:00	399	3	366	26	1	1	1	0	1	0	0	0	0	0		
06:00	373	0	349	22	1	0	0	0	0	0	1	0	0	0		
07:00	262	0	242	17	0	1	0	0	2	0	0	0	0	0		
08:00	172	1	160	10	1	0	0	0	0	0	0	0	0	0		
09:00	168	1	161	6	0	0	0	0	0	0	0	0	0	0		
10:00	98	0	94	3	0	1	0	0	0	0	0	0	0	0		
11:00	69	0	63	5	0	1	0	. 0	0	0	. 0	0	0	0		
Day Totals Totals	4758	23	4164	420	35	67	8	1	21	7	1	*	3	8	*	*
Percent	8747	30 .3%	7753	733	43	110	11	2	39	9	2	0	4	11		
rercent		. 38	88.6%	8.3%	.4%	1.2%	.1%	.0%	.4%	.1%	.0%	.0%	.0%	.1%		

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Site Code: 000000024244 Start Date: 06/16/2004 File I.D.: 24244C Page: 1

							W	estbour	d Ln4					Page		: 1
Begin	m-+-1	Class	Class	Class	Class	Class	Class	Class	Class	Class	Class	Class	Class	Class		
Time 12:00 06/16	Total 12	1		3 1	- 4	5 0	6_	7	8	9	10	11	12	13		
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01:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0		
02:00	-	0	0	0	0	0	0	0	0	0	0	0	0			
03:00	1	0	0	0	0	0	0	0	0	1	0	0	0	0		
04:00	3	0	2	0	0	0	0	0	0	1	0	0	0	0		
05:00	30	0	21	3	2	3	0	0	0	1	0	0	0	0		
06:00	64	0	54	2	6	2	0	0	0	0	0	0	0	0		
07:00	168	1	141	12	7	5	1	0	0	1	0	0	0	0		
08:00	192	0	165	13	6	7	0	0	1	0	0	0	0	0		
09:00	149	1	120	16	7	4	1	0	0	0	. 0	0	0	0		
10:00	118	0	92	11	5	9	0	0	0	1	0	0	0	0		
11:00	122	0	103	9	5	4	0	0	1	0	0	0	0	0		
12:00 pm	136	1	112	16	4	2	0	0	1	0	0	0	0	0		
01:00	148	0	114	25	5	4	0	0	0	0	0	0	0	0		
02:00	153	0	127	15	6	3	0	0	2	0	0	0	0	0		
03:00	196	0	156	26	7	7	0	0	0	0	0	0	0	0		
04:00	217	0	172	32	8	4	0	0	1	0	0	0	0	0		
05:00	284	2	249	21	6	2	0	0	3	0	1	0	0	0		
06:00	238	3	217	9	5	4	0	0	0	0	0	0	0	0		
07:00	133	0	116	10	4	2	0	0	0	1	0	0	0	0		
08:00	92	1	84	3	4	0	0	0	0	0	0	0	0	0		
09:00	56	0	47	7	2	0	0	0	0	0	0	0	0	0		
10:00	36	0	31	3	2	0	0	0	0	0	0	0	0	0		
11:00	26	0	22	2	2	0	0	0	0	0	0	0	0	0	*	
Day Totals	2575	9	2155	236	95	62	2	*	9	6	1	*	*	*	*	*
12:00 06/17	15	0	11	1	2	0	0	0	0	1	0	0	0	0		
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03:00	2	0	1	0	0	0	0	0	0	1	0	0	0	0		
04:00	6	0	5	1	0	0	0	0	0	0	0	0	0	0		
05:00	23	0	17	4	2	0	0	0	0	0	0	0	0	0		
06:00	74	0	55	7	6	6	0	0	0	0	0	0	0	0		
07:00	154	1	124	15	5	7	1	0	1	0	0	0	0	0		
08:00	207	0	182	13	6	4	0	0	1	1	0	0	0	0		
09:00	266	1	225	17	5	10	1	0	3	0	1	0	0	3		
10:00	308	0	249	32	3	11	0	0	6	1	0	0	1	5		
11:00	333	1	270	39	4	8	1	0	5	1	3	0	0	1		
12:00 pm	365	0	292	47	4	8	1	1	7	1	1	0	0	3		
01:00	326	0	266	31	3	18	1	0	4	0	2	0	1	0		
02:00	143	0	109	23	4	5	1	0	0	1	0	0	0	0		
03:00	194	1	156	22	8	6	0	1	0	0	0	0	0	0		
04:00	233	1	200	18	9	4	0	0	1	0	0	0	0	0		
05:00	264	0	235	16	7	5	0	0	1	0	0	0	0	0		
06:00	278	1	261	10	1	5	0	0	0	0	0	0	0	0		
07:00	157	0	143	7	3	4	0	0	0	0	0	0	0	0		
08:00	111	0	103	5	3	0	0	0	0	0	0	0	0	0		
09:00	65	0	57	5	3	0	0	0	0	0	0	0	0	0		
10:00	40	0	34	2	2	1	0	0	0	1	0	0	0	0		
11:00	22	0	18	2	2	0	0	0	0	0	0	0	0	0		
Day Totals	3590	6	3015	318	82	102	6	2	29	9	7	*	2	12	*	*
Totals	6165	15	5170	554	177	164	8	2	38	15	8	0	2	12		
Percent		. 2%	83.8%	8.9%	2.8%	2.6%	. 1%	. 0%	. 6%	. 2%	.1%	.0%	.0%	.1%		

City :Washington, D.C. County :Washington, D.C. Location:MacArthur Blvd, S of Cathedral

JAMAR Technologies, Inc. TAS for Windows Copyright 1999

		hingtor								gies, 1	nc.						
	County : Was Location: Mac			of Cat	hodra1				S for Works								000000001112 06/23/2004
	Doca cron.mac	AL CHUL	DIVU, E	or car	Heurar			CC	pyright	. 1333						E I.D. :	
_								No.	rthbour						Page		1
	Begin Time	Total	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13		
-	12:00 06/23	18	1	14	2	1	0	- 0	0		0	0		0	0		
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	06:00	145	0	131	13	0	1	ō	Ö	Õ	ō	ō	0	ō	ŏ		
	07:00	221	0	187	27	2	2	1	0	2	0	0	0	0	0		
	08:00 09:00	300 270	1	262 214	31 47	2	3 5	0	0	0 2	0	1	0	0	0		
	10:00	184	0	143	29	1	9	2	0	0	0	0	0	0	0		
	11:00	148	1	123	15	1	6	1	0	1	0	0	0	0	0		
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	02:00	193	1	156	25	1	8	1	0	1	0	0	0	0	0		
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	05:00	233	2	210	17	2	1	0	0	1	0	0	0	0	0		
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	Day Totals	3214	14	2712	390	19	56	10	*	11	*	1	*	1	*	*	*
	12:00 06/24	15	1	12	2	0	0	0	0	0	0	0	0	0	0		
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	08:00	288	0	251	29	1	4	0	0	2	0	1	0	Ö	0		
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	10:00	169	3	129	30	0	5	1	0	1	0	0	0	0	0		
	11:00	171	0	142	25	1	2	0	0	1	0	0	0	0	0		
	12:00 pm	212	2	169	29	2	8	0	0	2	0	0	0	0	0		
	01:00	170	2 1	136 165	25	2	4 2	0	0	1 1	0	0	0	0	0		
	02:00 03:00	212 162	4	138	39 15	1	4	0	0	0	0	0	0	0	0		
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	05:00	179	0	161	17	0	1	0	0	0	0	0	0	0	0		
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	08:00	129	1	114	12	0	2	0	0	0	0	0	0	0	0		
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	10:00	72	0	67	4	0	1	0	0	0	0	0	0	0	0		
	11:00 Day Totals	3286	0 18	2804	374	18	0 55	0 3	0	12	- 0	2	0		<u>0</u>	*	*
	Totals	6500	32	5516	764	37	111	13	0	23	0	3	0	1	0		
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JAMAR Technologies, Inc. TAS for Windows Copyright 1999

City :Washington, D.C. County :Washington, D.C. Location:MacArthur Blvd, S of Cathedral

Site Code : 000000001112 Start Date: 06/23/2004 File I.D. : 1112C

							Mo	rthboun	d 151						1.0.	: 11120
Begin		Class	Class	Class	Class	Class	C1-00			C1	Class	Class	C1	Page		: 1
Time	m-+-1						Class	Class	Class	Class			Class	Class		
	Total	1	2	3	4	5	6	7	8	9	10	11	12	13		
12:00 06/23	29	0	25	3	1	0	0	0	0	0	0	0	0	0		
01:00	14	0	11	2	1	0	0	0	0	0	0	0	0	0		
02:00	11	0	11	0	0	0	0	0	0	0	0	0	0	0		
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06:00	261	1	218	34	5	3	0	0	0	0	0	0	0	0		
07:00	405	1	343	36	9	10	4	0	1	1	0	0	0	0		
08:00	520	1	443	60	3	9	0	0	4	0	0	0	0	0		
09:00	455	4	370	56	10	10	3	0	2	0	0	0	0	0		
10:00	296	0	222	54	6	8	4	1	1	0	0	0	0	0		
11:00	243	2	191	34	4	6	3	1	2	0	0	0	0	0		
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12:00 pm	343	4	248	68	10	9	1	0	2	0	0	0	0	1		
01:00 pm	314	0	257			7	2			0				0		
				42	4			1	1		0	0	0			
02:00	346	1	274	57	4	6	2	0	1	. 0	0	0	1	0		
03:00	385	2	307	59	5	6	2	0	4	0	0	0	0	0		
04:00	315	3	265	37	4	2	0	0	3	0	1	0	0	0		
05:00	372	2	326	35	3	5	0	0	0	0	1	0	0	0		
06:00	399	1	355	34	5	3	0	0	1	0	0	0	0	0		
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10:00	155	0	140	11	3	1	0	0	0	0	0	0	0	0		
11:00	97	0	90	6	0	0	0	0	0	0	1	0	0	0		
Day Totals	5871	24	4905	712	83	95	21	3	22	1	3	*	1	1	*	*
12:00 06/24	44	1	32	8	2	1	0	0	0	0	0	0	0	0		
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06:00	244	1	201	36	1	4	1	0	0	0	0	0	0	0		
07:00	423	1	351	54	6	8	1	0	2	0	0	0	0	0		
08:00	560	2	464	75	8	5	0	0	5	0	1	0	0	0		
09:00	474	1	372	77	8	14	0	0	2	0	0	0	0	0		
10:00	338	1	270	53	5	8	0	0	1	0	0	0	0	0		
11:00	291	1	232	44	7	7	0	0	0	0	0	0	0	0		
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12:00 pm	314	3	251	44	6	7	1	1	1	0	0	0	0	0		
01:00 pm	316	2	252	54	1	4	1	i	1	0	0	0	0	0		
						7				0	0	0	0	0		
02:00	367	1	294	59	1		2	1	2							
03:00	358	0	300	47	3	4	2	0	1	0	0	0	0	1		
04:00	348	1	298	38	3	5	1	0	1	0	1	0	0	0		
05:00	376	0	324	34	7	7	0	0	4	0	0	0	0	0		
06:00	397	3	349	37	5	2	0	0	0	0	0	0	0	1		
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11:00	86	0	77	6	2	1	0	0	0	0	0	0	0			
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Day Totals	6071	19	5073	777	73	90	9	3	23		2			2	*	*
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City :Washington, D.C. County :Washington, D.C. Location:MacArthur Blvd, S of Cathedral

S of Cathedral

JAMAR Technologies, Inc. TAS for Windows Copyright 1999

Site Code: 000000002625 Start Date: 06/23/2004 File I.D.: 2222C

							So	uthboun	d Ln3					Page		: 22220
Begin		Class	Class	Class	Class	Class	Class	Class	Class	Class	Class	Class	Class	Class		<u> </u>
Time	Total	1	2	3	4	5	6	7	8	9	10	11	12	13		
12:00 06/23	9	1	8	0	0	0	0	0	0	0	0	0	0	0		
01:00	6	0	6	0	0	0	0	0	0	0	0	0	0	0		
02:00	2	0	1	0	0	1	0	0	0	0	0	0	0	0		
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07:00	332	0	281	29	2	5	2	0	11	0	1	0	1	0		
08:00	508	0	429	52	3	9	1	0	12	0	1	0	1	0		
09:00	319	0	264	45	1	4	0	0	3	0	1	0	0	1		
10:00	175	1	142	22	1	-	0	0		0	0	0				
11:00	205	1	155	34		6			3				0	0		
11:00	205	1	155	34	4	5	1	0	4	0	0	0	0	1		
12:00 pm	198	0	163	28	1	1	2	0	3	0	0	0	0	0		
01:00	200	1	145	40	2	7	0	1	3	1	0	0	0	0		
02:00	256	0	206	37	0	5	1	0	5	0	2	0	0			
03:00	381	0	300	57	0			0		0				0		
	322	0	293			10	2		10		1	0	1	0		
04:00 05:00	393			20	1	2	0	0	6	0	0	0	0	0		
		0	346	36	0	3	0	0	7	0	1	0	0	0		
06:00	368	0	334	28	2	2	0	0	1	0	1	0	0	0		
07:00	204	1	180	21	0	1	0	0	1	0	0	0	0	0		
08:00	99	1	87	10	0	0	0	0	0	0	1	0	0	0		
09:00	71	0	67	3	1	0	0	0	0	0	0	0	0	0		
10:00	72	0	68	4	0	0	0	0	0	. 0	0	0	0	0		
11:00	41	. 0	33	8	0	0	0	0	0	0	0	0	0	0		
Day Totals	4294	6	3617	491	21	63	10	1	70	1	9	*	3	2	*	*
12:00 06/24	12	0	10	2	0	0	0	0	0	0	0	0	0	0		
01:00	8	0	8	0	0	0	0	0	0	0	0	0	0	0		
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03:00	348	1	301	36	2	2	1	0	2	0	2	1	0	0		
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05:00	411	0	358	44	1	. 2	0	0	4	0	1	0	1	0		
06:00	410	0	363	35	0	1	0	0	8	0	2	0	1	0		
07:00	244	0	212	26	1	0	0	0	5	0	0	0	0	0		
08:00	130	0	115	13	0	0	0	0	0	0	2	0	0			
09:00	85	1	77	5										0		
10:00	66	0		7	1	1	0	0	0	0	0	0	0	0		
			59		0	0	0	0	0	0	0	0	0	0		
11:00 Day Totals	4471		3765	549	0 18	<u>0</u> 58	<u>0</u>	0	52	. 0	13	0 2	<u>0</u> 3	<u>0</u>		
Totals	8765	12	7382	1040	39	121	15	1	122	1	22	2	6	2	~	-
Percent	0,05	.1%	84.2%	11.8%	.4%	1.3%	.1%	.0%	1.3%	.0%	.2%	.0%	.0%	.0%		
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City :Washington, D.C. County :Washington, D.C. Location:MacArthur Blvd, S of Cathedral

JAMAR Technologies, Inc. TAS for Windows Copyright 1999

Site Code: 000000002625 Start Date: 06/23/2004 File I.D.: 222C

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Begin		Class	Class	Class	Class	Class	Class	Class	Class	Class	Class	Class	Class	Class		<u> </u>
Time	Total	1	2	3	4	5_	. 6	7	8	9	10	11	12	13		
12:00 06/23	32	0	29	3	0	0	0	0	0	0	0	0	0	0		
01:00	16	0	14	2	0	0	0	0	0	0	0	0	0	0		
02:00	7	0	7	0	0	0	0	0	0	0	0	0	0	0		
03:00 04:00		0	6	1	0	0	0	0	0	0	0	0	0	0		
05:00	18 42	1	13 32	4 7	0	1	0	0	0	0	0	0	0	0		
06:00	150	0	114	27	1 4	1 5	0	0	0	0	0	0	0	0		
07:00	432	4	359	39	11	7	2	1	0	1	0 1	0	0	0		
08:00	557	4	465	57	12	5	2	1	7	1	1	1	0	3		
09:00	442	3	374	44	9	10	0	0	2	0	0	0	0	2 0		
10:00	286	2	229	43	4	3	0	0	4	0	0	0	0			
11:00	277	3	203	52	5	9	1	0	3	0	0	0	0	1 1		
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03:00	529	1	411	85	11	10	2	ō	5	ő	Õ	Õ	ŏ	4		
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08:00	171	1	146	20	4	0	0	0	0	0	0	0	0	0		
09:00	174	0	163	8	2	1	0	0	0	0	0	0	0	0		
10:00	114	2	101	8	2	1	0	0	0	0	0	0	0	0		
11:00	91	1	86	2	2	0	0	0	0	0	0	0	0	0		
Day Totals	6276	32	5149	766	124	91	21	5	42	5	11	1	1	28	*	*
12:00 06/24	29	0	24	3	2	0	0	0	0	0	0	0	0	0		
01:00	15	0	13	2	0	0	0	0	0	0	0	0	0	0		
02:00	4	0	3	1	0	0	0	0	0	0	0	0	0	0		
03:00	5	ő	2	3	0	0	0	0	0	0	0	0	Ö	0		
04:00	19	Ő	14	5	ő	0	ő	0	0	0	0	0	0	0		
05:00	37	Õ	30	5	ĭ	1	Õ	0	0	0	0	ő	ő	0		
06:00	139	4	108	24	3	ō	ő	Ö	ő	ő	Ö	ő	Ö	0		
07:00	443	1	351	64	12	8	2	ŏ	4	Ö	ĭ	Õ	Õ	Ö		
08:00	558	0	463	58	16	10	2	0	5	Ō	ī	Õ	Õ	3		
09:00	392	0	330	46	4	6	1	. 0	4	Ō	Ō	Ö	ō	ĭ		
10:00	285	1	223	39	7	7	0	Ō	3	2	1	0	Ō	2		
11:00	307	1	228	54	7	11	1	0 .	3	1	1	0	0	0		
12:00 pm	307	0	237	49	5	11	2	0	2	0	0	0	0	1		
01:00	316	3	248	45	7	7	1	0	4	0	0	0	0	1		
02:00	348	1	277	59	6	1	1	0	1	1	0	0	1	0		
03:00	487	3	376	78	9	13	0	0	6	0	0	0	1	1		
04:00 05:00	517	7	408	70	10	12	0	0	7	0	1	1	0	1		
06:00	628 580	3	532 489	55	12	5	3	0	12	0	4	0	1	1		
07:00	349	4 5	489 296	52 39	11 3	5 1	1	0	10	0	2 1	1	1	4		
08:00	169	0	152	10	5	2	0	0	4 0	0	0	0	0	0		
09:00	173	0	144	24	2	1	0	0	2	0	0	0	0	0		
10:00	148	3	130	11	3	0	0	0	0	0	1	0	0	0		
11:00	90	2	80	6	2	0	0	0	0	0	0	0	0	0		
Day Totals	6345	38	5158	802	127	101	14	*	67	4	13	2	4	15	*	*
Totals	12621	70	10307	1568	251	192	35	5	109	9	24	3	5	43		
Percent		.5%	81.6%	12.4%	1.9%	1.5%	.2%	.0%	.8%	.0%	.1%	.0%	.0%	.3%		
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City :Washington, D.C. County :Washington, D.C. Location:Western Ave, N of Chesapeake St

JAMAR Technologies, Inc. TAS for Windows Copyright 1999

Site Code: 000000003132 Start Date: 06/23/2004 File I.D.: 3132C

Locacion.wes	cein Av	e, N 01	. Chesar	reake St			C	phyridut	1999						rt Date: e I.D. :	3132C
							No	orthbour						Pag		1
Begin Time	Tota1	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class	Class	Class	Class	Class		
12:00 06/23	0	0	2			0	0		0	0	10	11	12	13		
01:00	ő	ŏ	ő	ő	ő	ő	ő	0	0	0	0	0	0	0		
02:00	Ö	ŏ	ő	ő	ŏ	ő	ő	ő	Ö	ŏ	ő	ő	Ö	0		
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05:00	0	Ō	Õ	Õ	Õ	Õ	ŏ	ő	Õ	Õ	ő	Õ	ŏ	Õ		
06:00	0	Ō	Ō	0	Õ	Õ	ō	ō	ŏ	ŏ	Õ	ŏ	ő	ő		
07:00	2	0	2	0	0	0	Ŏ	Õ	Ŏ	Õ	ŏ	ŏ	ŏ	Õ		
00:80	1	0	1	0	0	0	0	0	0	Ó	0	Ó	0	Ö		
09:00	0	0	0	0	0	0	0	0	0	0	0	0	0	O		
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
12:00 pm	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
02:00 03:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0		
04:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0		
05:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0		
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11:00 Day Totals	1 15	0	. 1	0	0	0	0	0	0	0	0	0	Ö	<u>ŏ</u>		
-	15		11	*	1	3	*	. *	*	*	*	*	*	*	*	*
12:00 06/24	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
04:00 05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
06:00	2	0	2	0	0	0	0	0	0	0	0	0	0	0		
07:00	4	0	1	0	1 2	0 1	0	0	0	0	0	0	0	0		
08:00	5	0	4	0	1	0	0	0	0	0	0	0	0	0		
09:00	1	0	0	0	Ö	1	0	0	0	0	0	0	0	0		
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05:00	7	0	7	0	0	0	0	0	0	0	0	0	0	0		
06:00	6	0	5	0	1	0	0	0	0	0	0	0	0	0		
07:00	9	0	8	0	1	0	0	0	0	0	0	0	0	0		
08:00	3	0	2	0	1	0	0	0	0	0	0	0	0	0		
09:00	1	0	0	0	1	0	0	0	0	0	0	0	0	0		
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Day Totals Totals	60 75	0	47 58	0	10 11	3	*	*	*	*	* 0	*	*	*	*	*
Percent		.0%	77.3%		14.6%	8.0%	.0%	.0%	.0%	.0%	.0%	.0%	.0%	.0%		

JAMAR Technologies, Inc. TAS for Windows Copyright 1999

City :Washington, D.C. County :Washington, D.C. Location:Western Ave, N of Chesapeake St

Site Code : 000000003132 Start Date: 06/23/2004 File I.D. : 3132C Page : 1 Northbound Ln2

								orthbour						Page	<u>:</u>	_1
Begin		Class	Class	Class	Class	Class	Class	Class		_						
Time	Total	1	2	3	. 4	5	6	7	. 8	9	10	11	12	13		
12:00 06/23	52	0	48	2	0	2	0	0	0	0	0	0	0	0		
01:00	23	0	21	1	1	0	0	0	0	0	0	0	0	0		
02:00	15	Ō	14	0	0	í	ŏ	Õ	Õ	Õ	ŏ	0	Õ	ő		
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04:00	6	0	4	2	0	0	0	0	0	0	0	0	0	0		
05:00	39	0	34	3	0		0	0	0	0						
						2		-	-	-	0	0	0	0		
06:00	134	0	115	13	2	4	0	0	0	0	0	0	0	0		
07:00	379	0	340	26	3	7	2	0	0	1	0	0	0	0		
08:00	536	1	487	34	2	8	0	.0	2	0	0	0	0	2		
09:00	494	1	417	45	3	23	1	0	3	0	1	0	0	0		
10:00	349	0	296	38	5	7	0	0	2	1	0	0	0	0		
11:00	369	Ō	309	40	3.	12	Õ	ő	4	1	Õ	ő	ŏ	ŏ		
		v	505	.0	5	12	U	U	4	1	U	U	U	v		
12:00 pm	425	1	358	46	4	13	1	0	2	0	0	0	0	0		
01:00 pm																
	422	0	357	44	2	14	3	0	2	0	0	0	0	0		
02:00	469	0	398	42	3	21	0	0	4	0	1	0	0	0		
03:00	591	1	526	45	1	12	1	0	5	0	0	0	0	0		
04:00	571	0	525	35	2	5	0	0	4	0	0	0	0	0		
05:00	521	1	471	35	5	8	0	Ö	i	0	0	ō	Ö	Ō		
06:00	518	0	481	24	4	8	ŏ	Õ	ī	Õ	ŏ	ŏ	ŏ	ŏ		
07:00	371	ő	345	19	i	6.	ő	0	ō	0	0	ő	ő	ŏ		
08:00	274	1	254	12	i	4	0	0	1	0	1	0	0	0		
09:00	223	0	208	9	2	4	0	0	0	0	0	0	0			
10:00				8										0		
	163	1	151	_	1	2	0	0	0	0	0	0	0	0		
11:00	149	1	140	6	1	1	0	0	0	0	0	0	0	0		
Day Totals	7106	8	6310	531	46	164	8	*	31	3	3	*	*	2	*	
12:00 06/24	54	0	51	1	0	2	0	0	0	0	0	0	0	0		
01:00	28	0	26			0						0				
				1	1		0	0	0	0	0		0	0		
02:00	19	0	16	2	0	1	0	0	0	0	0	0	0	0		
03:00	11	0	9	2	0	0	0	0	0	0	0	0	0	0		
04:00	15	0	11	3	0	1	0	0	0	0	0	0	0	0		
05:00	43	0	35	5	0	3	0	0	0	0	0	0	0	0		
06:00	142	0	125	10	2	3	i	0	1	0	Ō	Õ	Õ	Õ		
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08:00	515	1	459	34	4	11	4	ő	î	ő	ŏ	ŏ	Õ	ĭ		
09:00	501	1	442	39	3	11	1	0	3	1	0	0	0	0		
10:00	388	2	329	42	4	9	. 0	0		0			0			
									1		1	0		0		
11:00	411	0	351	41	2	13	2	0	1	0	0	1	0	0		
12:00 pm	409	2	333	50	4	15	1	0	4	0	0	0	0	0		
01:00	436	0	379	35	6	14	0	0	1	0	1	0	0	0		
02:00	463	0	390	47	3	13	1	0	9	0	0	0	0	0		
03:00	559	0	481	57	3	16	0	0	1	1	0	0	0	0		
04:00	554	1	490	46	1	10	0	0	5	0	0	0	0	1		
05:00	544	0	496	36	3	7	0	0	2	0	0	0	0	0		
06:00	526	ĩ	476	32	6	8	ĭ	Ŏ	1	ő	ŏ	Õ	ŏ	ĭ		
07:00	401	ō	372	12	7	9	Ô	1	Ô	0	0	0	ő	ō		
08:00	302	1	281	14	1	5	0	0	0	0	0	0	0			
														0		
09:00	212	0	195	11	0	5	0	0	1	0	0	0	0	0		
10:00	181	0	175	2	2	2	0	0	0	0	0	0	0	0		
11:00	146	0	142	2	1	1	. 0	0	0	0	0	0	0	0		
Day Totals	7239	10	6405	553	54	165	11	1	32	2	2	1	*	3	*	
Totals	14345	18	12715	1084	100	329	19	1	63	5	5	1	0	5		
Percent		.1%	88.6%	7.5%	.7%	2.2%	.1%	.0%	.4%	.0%	.0%	.0%	.0%	.0%		

Totals

Percent

2.5%

73.1%

17.4%

4.7%

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JAMAR Technologies, Inc. TAS for Windows Copyright 1999

City :Washington, D.C. County :Washington, D.C. Location:Western Ave, N of Chesapeake St

Site Code : 000000004443 Start Date: 06/23/2004 File I.D. : 4443C Page : 1

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Southbound Ln3 Page Class 6 Begin Time 12:00 06/23 Class Class 2 32 Class 5 Class Class Class 10 Class 12 Class 9 Total 48 01:00 02:00 12 0 9 19 03:00 0 0 0 0 0 04:00 0 0 0 0 296 477 05:00 06:00 209 43 Ō 7 7 07:00 08:00 12 367 95 6 25 12 7 32 09:00 394 253 87 2 0 0 0 11:00 12:00 pm 25 23 22 16 2 0 2 0 1 01:00 3 13 12 8 13 15 6 483 492 73 89 02:00 4 3 ī 2 1 366 03:00 04:00 456 316 245 193 71 57 05:00 06:00 563 0 0 0 0 0 2 0 14 9 15 307 257 3 0 07:00 08:00 ñ 09:00 10:00 11:00 Day Totals 12:00 06/24 01:00 19 02:00 03:00 0 0 2 3 0 0 0 0 0 0 04:00 05:00 96 64 19 ō 06:00 07:00 480 310 31 4 7 12 76 27 08:00 0 0 0 2 1 2 6 2 3 0 0 09:00 398 268 10:00 ō n 11:00 Ō Ö Ö ō 12:00 pm 01:00 б 472 473 22 11 13 18 345 411 471 02:00 03:00 83 21 n 0 0 0 0 2 0 91 77 04:00 05:00 604 17 0 1 0 445 278 12 5 356 14 12 06:00 3 2 2 0 43 39 30 08:00 09:00 10:00 201 11:00 Day Totals 5594 

JAMAR Technologies, Inc. TAS for Windows Copyright 1999

City :Washington, D.C. County :Washington, D.C. Location:Western Ave, N of Chesapeake St

Site Code: 000000004443 Start Date: 06/23/2004 File I.D.: 4443C Page: 1

		0, 01	опосор	oone oe				Plridu	. 1000						I.D. :	
							So	uthbour	nd Ln4					Page		1
Begin		Class	Class	Class	Class	Class	Class	Class	Class	Class	Class	Class	Class	Class		
Time	Total	1	. 2	3	4	5_	6		8	9	10	11	12	13		
12:00 06/23	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
01:00	1	0	0	1	0	0	0	0	0	0	0	0	0	0		
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
05:00	1	0	1	0	0	0	0	0	0	0	0	0	0	0		
06:00	2	0	0	0	2	0	0	0	0	0	0	0	0	Ō		
07:00	9	0	2	1	6	0	0	0	0	0	0	0	0	0		
08:00	15	0	5	3	6	0	1	0	0	0	0	0	0	0		
09:00	10	0	8	0	2	0	0	0	0	0	0	0	0	0		
10:00	11	0	9	0	0	2	0	0	0	0	0	0	0	0		-
11:00	14	U	11	2	0	1	0	0	0	0	0	0	0	0		
12:00 pm	13	0	11	0	1	1	0	0	0	0	0	0	0	0		
01:00	11	ő	11	ŏ	ō	ō	Õ	õ	ő	ŏ	ő	ŏ	0	ő		
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07:00	12	0	12	0	0	0	0	0	0	0	0	0	0	0		
08:00	12	0	12	0	0	0	0	0	0	0	0	0	0	0		
09:00	3	0	3	0	0	0	0	0	0	0	0	0	0	0		
10:00	3	0	3	0	0	0	0	0	0	0	0	0	0	0		
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	<u>0</u>		
Day Totals	202	1	152	17	24	7	1	*	*	*	*	*	*	*	*	*
12:00 06/24	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
05:00	2	0	2	0	0	0	0	0	0	0	0	0	0	0		
06:00	3	0	1	0	2	0	0	0	0	0	0	0	0	0		
07:00	10	0	6	0	4	0	0	0	0	0	0	0	0	0		
08:00	20	1	10	2	6	1	0	0	0	. 0	0	0	0	0		
09:00	11	0	9 7	1	1		0	0	0	0	0	0	0	0		
10:00 11:00	11 12	1	8	2 2	0	1 2	0	0	0	0	0	0	0	0		
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02:00	14	0	10	2	2	0	0	0	0	0	. 0	0	0	0		
03:00	15	1	12	2	0	0	0	0	0	0	0	0	0	0		
04:00	18	1	13	1	1	2	0	0	0	0	0	0	0	0		
05:00	27	0	23	2	0	2	0	0	0	0	0	0	0	0		
06:00	17	0	15	1	0	1	0	0	0	0	0	0	0	0		
07:00	12	0	10	0	2	0	0	0	0	0	0	0	0	0		
08:00	4	0	3	0	1	0	0	0	0	0	0	0	0	0		
09:00	5	0	5	0	0	0	0	0	0	0	0	0	0	0		
10:00	4	0	3	0	1	0	0	0	0	0	0	0	0	0		
11:00	3	0	3	0	0	0	0	0	0	0	0	0	0	<u>0</u>		
Day Totals Totals	211 413	5 6	160 312	15 32	21 45	10 17	1	Ô	ō	Ô	Ô	Ô	o .	ŏ	•	•
Percent	413	1.4%	75.5%	7.7%	10.9%	4.1%	.2%	.0%	.0%	.0%	.0%	.0%	.0%	.0%		
					20.50		0									

Generated by MSC3000 Version 2.01 Copyright 1990-1992 Mitron Systems Corporation

Location ..... Dalecarlia Pkwy, N of Rockwood Pkwy, NB1

Location Code .... 31

County .......... Washington, D.C. Recorder Set ..... 06/16/04 12:01 Recording Start ... 06/16/ 4 00:00 Recording End ..... 06/18/ 4 00:00

Sample Time ..... 60 Minutes Operator Number ... 24

Operator Number ... 24 Machine Number ... 16 Channel ..... 1

Wednesday	7 06/	16/ 4	Ch	nannel	L: 1	Dir	ectio	n: N	Sche	eme:	+F			
	+F1	+F2	+F3_	+F4	+F5	+F6_	+F7	+F8_	+F9	+F10	<u>+F11</u>	+F12	<u>+F13</u>	<u>Totals</u>
01:00	0	9	2	0	1	0	0	0	0	0	0	0	0	12
02:00	0	9	0	1	1 .	0	. 0	0	0	0	0	0	0	11
03:00	0	4	0	0	0	0	0	0	0	0	0	0	0	4
04:00	0	2	2	0	0	0	0	0	0	0	0	0	0	4
05:00	0	3	2	0	0	0	0	0	0	0	0	0	0	5
06:00	0	19	4	0	1 .	0	0	0	0	0	0	0	0	24
07:00	0	68	11	1	0	1	0	0	0	0	0	0	0	81
08:00	0	189	29	3	4	0	0	0	0	0	0	0	0	225
09:00	1	289	26	2	5	1	0	0	0	0	0	0	0	324
10:00	0	253	34	1	7	1	0	0	0	0	0	0	0	296
11:00	1	208	33	2	10	3	0	1	0	0	0	0	0	258
12:00	1	205	26	0	7	2	0	0	0	0	0	0	0	241
13:00	1	254	18	0	11 .	0	0	1	1	0	0	0	0	286
14:00	0	236	28	0	5	1	0	1	0	0	0	0	0	271
15:00	0	233	24	2	5	4	0	1	0	0	0	0	0	269
16:00	0	306	32	0	7	1	0	0	0	0	0	0	0	346
17:00	<u> </u>	325	31	0	5	0	0	1	0	0	0	0	0	362
18:00	0	<u>328</u>	23	0	<u>          6</u>	0	0	0	0	0	0	0	0	<u>357</u>
19:00	0	315	15	0	<u> </u>	0	0	0	0	0	0	0	0	331
20:00	0	243	15	2	1	0	0	0	0	0	0	0	0	261
21:00	0	147	6	0	0	0	0	0	0	0	0	0	0	15 <u>3</u>
22:00	0	114	<u>5</u>	1	1	0	0	0	0	0	0	0	0	121
23:00	0	<u>82</u>	4	0	0	0	0	0	0	0	0	0	0	86
00:00	0	71	1	0	0	0	0	0	0	0	0	0	0	72
Daily Totals	4	3912	371	15	78	14	0	5	1	0	0	0	0	4400
Percentage	0.1%	88.9%	8.4%	0.3%	1.8%	0.3%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	

Axle Clas	ssific	catio	n Rep	ort,	'Dale	carl	<u>ia Pk</u> v	vy, N	of R	ock.	<u></u>		page	2
Thursday	06/:	17/04	Ch	annel	.: 1	Dir	ection	1: N	Sche	me: 4	٠F			
	+F1	+F2	+F3	+F4	+F5	+F6	+F7	+F8	+F9	+F10	+F11	+F12	+F13	Totals
01:00	1	18	1	0	0	0	0	0	0	0	0	0	0	20
02:00	0	8	0	1	0	0	0	0	1	0	0	0	0	10
03:00	0	2	0	0	0 _	0	0	0	0	0	0	0	0	2
04:00	0	4	0	0	0	0	0	0	0	0	0	0	0	4
05:00	0	5	0	0	0	0	0	0	1 _	0	0	0	0	6
06:00	<u> </u>	18	4	0	0	1	0	0	0	0	0	0	0	23
07:00	0	70	<u> </u>	<u>3</u>	5	0	0	0	0	<u> </u>	0	0	0	89
08:00	1	235	19	2	5	0	0	0	0	<u> </u>	0	0	. 0	262
09:00	0	307	30	2	5	0	0	2	0	<u> </u>	0	0	0	346
10:00	1 .	274	28	0	7	2	0	0	2	0	0	0	0	314
11:00	0	207	<u>36</u>	<u> </u>	12	2	0	0	0	0	0	0	0	257
12:00	0	219	<u>41</u>	1	2	4	0	0	0	0	0	0	0	267
13:00	<u> </u>	232	<u>36</u>	1	9	0	0	1	0	0	0	0	0	280
14:00	0	230	<u>31</u>	1	6	1	0	1	0	0	0	0	0	270
15:00	0	254	28	2	14	4	0	0	1 .	0	0	0	0	303
16:00	<u> </u>	305	40	0		2	0	0	0 .	0	0	0	0	<u>355</u>
17:00	1 .	<u>342</u>	35	<u> </u>	7	0	0	0	0	0	0	0	0	385
18:00	1	<u>291</u>	21	0	7	0	0	0	0	0	0	0	0	320
19:00	0	<u>301</u>	25	1	2	0	0	0	0	0	0	0	<u> </u>	329
20:00	1	215	13	1	3	0	0	0	0	0	0	0	0	233
21:00	0	165	3	0	1	0	0	0	0	0	0	0	0	<u>169</u>
22:00	0	127	7	0	1	0	0	0	0	0	0	0	0	<u>135</u>
23:00	0	74	2	0	0	0	0	0	0	0	0	0	0	<u>76</u>
00:00	1	<u>56</u>	0	0	<u> </u>	. 0	0	0	1	0	0	0	0	59
Daily Totals	9	3959	411	15	94	16	0	4	6	0	0	0	0	4514
Percentage	0.2%	87.7%	9.1%	0.3%	2.1%	0.4%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	
714 D 1- 7	-					0.0	0.0	000		c1		`		
AM Peak I						08:					nicles			
PM Peak I	Hour					16:	00 to	17:0	00 (38	5 vei	nicles	3)		
04 110112 1	Marri m	~ To+	-1											
24-Hour N														,,,,,,
01:00- 4408	02:00-		03:00-		04:00-	4405	05:00-	4406	06:00-	4405	07:00-	4413	08:00-	
09:00- 4472	10:00-	4490	11:00-	4489	12:00-	4515	13:00-	4509	14:00-	4508	15:00-	4542	16:00-	
17:00- 4574	18:00-	4537	19:00-	4535	20:00-	4507	21:00-	4523	22:00-	4537	23:00-	4527	24:00-	4514
	+F1	+F2	+F3_	+F4	+F5	+F6	+F7	+F8	<u>+F9</u>	+F10	<u>+F11</u>	+F12	+F13	<u>Totals</u>
Grand Totals	13	7871	782	30	172	30	0	9	7	0	0	0	0	8914

Percentage 0.1% 88.3% 8.8% 0.3% 1.9% 0.3% 0.0% 0.1% 0.1% 0.0% 0.0% 0.0% 0.0%

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Location ..... Dalecarlia Pkwy, N of Rockwood Pkwy, NB2

Location Code .... 311

County .......... Washington, D.C. Recorder Set ..... 06/16/04 11:32 Recording Start ... 06/16/ 4 00:00 Recording End ..... 06/18/ 4 00:00

Sample Time ..... 60 Minutes

Operator Number ... 24 Machine Number ... 8 Channel ..... 1

Wednesday	7 06/	16/ 4	Ch	annel	: 1	Dir	ectio	n: N	Sche	eme:	+F			
	+F1_	+F2	+F3	+F4	+F5	+F6	+F7_	_+F8_	+F9	+F10	+F11	+F12	+F13	<u>Totals</u>
01:00	. 0	18	1	0	<u> </u>	0	0	0	0	0	0	0	0	20
02:00	0	13	1	1	1	0	0	0	0	0	. 0	0	0	16
03:00	0	5	3	0	0	0	0	0	0	0	0	0	0	8
04:00	0	6	1	0	0	0	0	0	0	0	0	0	0	7
05:00	<u>, 0</u> .	8	0	0	0	. 0	0	0	0	0	0	0	0	8
06:00	0	22	2	0	1	1	0	<u> </u>	0	0	0	0	0	26
07:00	. 0	45	5	0	0	0	. 0	0	0	0	0	0	0	50
08:00	0	128	14	1	1	0	0	0	0	0	0	0	0	144
09:00	0	273	25	0	3	0	0	0	0	0	0	0	0	301
10:00	1	174	21	0	2	0	0	0	0	0	0	0	0	198
11:00	1	128	12	0	5	2	0	0	0	0	0	0	0	148
12:00	1	99	21	0	4	1	1	0	0	0	0	0	0	127
13:00	0	133	17	0	2	0	0	0	1	0	0	0	0	<u>153</u>
14:00	0	139	15	0	4	0	0	0	0	0	0	0	0	158
15:00	0	133	23	0	5	1	0	1	. 0	0	0	0	0	<u>163</u>
16:00	0	187	24	0	8	0	0	0	0	0	0	0	0	219
17:00	0	178	13	1 .	4	0	· 0	1	0	0	0	0	0	197
18:00	1	188	15	0	2	0	0	0	0	0	0	0	0	206
19:00	1	211	8	0	3	0	0	1	0	0	0	0	0	224
20:00	0	145	11	1 .	0	0	0	1	0	0	0	0	0	158
21:00	0	98	5	0	1	0	0	0	0	0	0	0	0	104
22:00	0	<u>81</u>	2	0	1	0	0	0	2	0	0	0	0.	<u>86</u>
23:00	0	82	1	0	0	0	0	0	0	0	0	0	0	<u>83</u>
00:00	. 0	65	3	0	0	0	0	0	0	0	0	0	0	68
Daily Totals	5	2559	243	4	48	5	1	4	3	0	0	0	0	2872
Percentage	0.2%	89.1%	8.5%	0.1%	1.7%	0.2%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	

AM	Peak Hour	 08:00	to	09:00	(264	vehicles)
PM	Peak Hour	 15:00	to	16:00	(229	vehicles)

#### 24-Hour Moving Total

01:00-	2874	02:00-	2867	03:00-	2865	04:00-	2864	05:00-	2868	06:00-	2865	07:00-	2868	-00:80	2858
09:00-	2821	10:00-	2849	11:00-	2855	12:00-	2904	13:00-	2933	14:00-	2942	15:00-	2962	16:00-	2972
17:00-	2977	18:00-	2980	19:00-	2985	20:00-	3017	21:00-	3041	22:00-	3048	23:00-	3051	24:00-	3054

	<u>+F1</u>	<u>+F2</u>	<u>+F3</u>	<u>+F4</u>	<u>+F5</u>	+F6_	<u>+F7</u>	<u>+F8</u>	+F9	<u>+F10</u>	<u>+F11</u>	+F12	<u>+F13</u>	<u>Totals</u>
Grand Totals	11	5289	477	9	105	14	2	13	6	0	0	0	0	5926
Percentage	0.2%	89.3%	8.0%	0.2%	1.8%	0.2%	0.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	<b>,</b>

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Location ..... Dalecarlia Pkwy, N of Rockwood Pkwy, SB3 Location ...... Dalecariia Prwy,
Location Code .... 333
County ...... Washington, D.C.
Recorder Set .... 06/16/04 11:04
Recording Start ... 06/16/ 4 00:00
Recording End .... 06/18/ 4 00:00
Sample Time ..... 60 Minutes
Operator Number 24

Operator Number ... 24 Machine Number .... 9 Channel ..... 1

Wednesday	7 06/	16/ 4	Ch	annel	: 1	Dir	ectio	n: S	Sche	eme:	+F			
	<u>+F1</u>	+F2	+F3	+F4	+F5_	<u>+F6</u>	<u>+F7</u>	+F8_	+F9	+F10	+F11	+F12	+F13	<u>Totals</u>
01:00	0	26	1	0	1	0	0	0	0	0	0	0	0	28
02:00	0	9	0	0	0	0	0	0	0	0	0	0	0	9
03:00	0	11	0	0	0	0	0	0	0	0	0	0	0	11
04:00	0	7	1	0	0	0	. 0	0	0	0	0	0	0	8
05:00	0	9	2	0	0	0	0	0	0	0	0	0	0	11
06:00	0	26	4	0	0	0	0	0	1	0	0	0	0	31
07:00	0	60	11	0	<u> 3</u>	0	0	0	0	0	1	0	0	75
08:00	1	166	24	0	4	0	1	1	0	0	0	0	0	197
09:00	1	195	21	0	8	1	0	0	0	0	0	0	0	226
10:00	0	168	18	1	10	0	<u> </u>	0	0	0	0	0	0	197
11:00	0	138	26	0	14	1	0	1	0	0	0	0	0	180
12:00	0	<u>151</u>	28	. 0	9	0	0	1	0	0	0	0	0	189
13:00	0	189	17	0	7	0	0	1	0	0	0	0	0	214
14:00	0	<u>151</u>	17	0	4	0	0	0	0	0	0	0	0	172
15:00	0	152	16	0	8	2	0	0	0	0	0	. 0	<u>0</u>	178
16:00	0	· 218	17	0	4	0	0	0	0	0	0	0	0	239
17:00	0	198	13	0	2	0	0	1	0	0	0	0	0	214
18:00	1	<u>301</u>	16	0	1	0	0	0	0	0	0	0	0	319
19:00	0	<u>304</u>	9	1	1	0	0	0	0	0	0	0	0	315
20:00	0	183	11	0	1	0	0	0	1	0	0	0	0	196
21:00	0	114	7	0	1	0	0	0	1	0	0	0	0	123
22:00	0	120	4	0	0	0	0	0	0	0	0	0	0	124
23:00	0	91	4	0	1	0	0	0	0	0	0	0	0	96
00:00	0	53	1	0	0	0	0	0	0	0	0	0	0	54
Daily Totals	3	3040	268	2	79	4	1	5	3	0	1	0	0	3406
Percentage	0.1%	89.3%	7.9%	0.1%	2.3%	0.1%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	

AM Peak Hour ...... 08:00 to 09:00 (226 vehicles) 

+F6

0.1%

+F7

0.1%

+F8

0.2%

+F9

0.1%

+F10

0.0%

+F5

2.3%

+F11

0.0%

+F12

0.0%

+F13 Totals

0.0%

+F1

. 0.1%

Grand Totals

Percentage

+F2\_

89.2%

+F3

7.8%

+F4

0.1%

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Location ...... Dalecarlia Pkwy, N of Rockwood Pkwy, SB4

Location Code ..... 33

Machine Number .... 11 Channel ..... 1

Wednesday	06/3	16/ 4	Ch	annel	.: 1	Dir	ectio	n: S	Sch	eme:	+F			
_	+F1	+F2	+F3	+F4	+F5_	+F6_	<u>+F7</u>	+F8_	_+F9_	+F10	+F11	+F12	+F13	<u>Totals</u>
01:00	1 .	21	0	0	1 .	0	0	0	1	0	0	0	0	24
02:00	0	6	1	0	0	0	0	0	0	0	0	0	0	7
03:00	1	7	0	0	0	0	0	0	0	0	0	0	0	8
04:00	0	5	1	0	0	0	0	0	0	0	0	0	0	6
05:00	0	12	1	0	. 0	0	0	0	0	0	0	0	0	13
06:00	1	40	2	0	1	0	0	0	0	0	0	0	0	44
07:00	1	174	12	0	0	0	0	1	0	0	0	0	0	188
08:00	2	292	25	0	13	0	0	0	0	0	0	0	0	332
09:00	0	272	22	2	5	1	1	1	0	0	0	0	0	304
10:00	2	213	30	1	7	1	0	1	0	0	0	0	0	255
11:00	2	204	24	0	8	1	1	0	1	0	0	0	0	241
12:00	0	182	25	1	10	0	1	0	1	0	0	0	0	220
13:00	0	212	36	1	3	0	0	1	0	0	0	0	0	253
14:00	1	206	22	0	2	1	2	0	0	0	0	0	0	234
15:00	0	220	21	1	6	0	0	1	0	0	0	0	0	249
16:00	0	263	25	2	7	0	1	0	0	0	0	0	0	298
17:00	0	257	33	3	3	1	0	0	0	0	0	0	0	297
18:00	2	364	21	1	3	0	0	2	0	0	0	0	0	393
19:00	1 .	323	21	0	3	0	0	0	0	0	0	0	0	348
20:00	1	211	16	0	0	0	0	1	0	0	0	0	0	229
21:00	1	116	1	0	3	0	0	0	1	0	0	0	0	122
22:00	0	100	9	0	0	0	0	0	0	0	0	0	0	109
23:00	0	92	6	0	2	0	0	0	0	0	0	0	0	100
00:00	0	56	5	0	0	0	0	0	0	0	0	0	0	61
Daily Totals	16	3848	359	12	77	5	6	8	4	0	0	0	0	4335
Percentage	0.4%	88.8%	8.3%	0.3%	1.8%	0.1%	0.1%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	

AM Peak Hour ...... 07:00 to 08:00 (332 vehicles) PM Peak Hour ...... 17:00 to 18:00 (393 vehicles)

Axle Clas	sific	cation	n Rep	ort,	'Dale	carl	ia Pky	wy, N	of R	ock.	<u> </u>		page	2
Thursday	06/1	L7/04	Ch	annel	.: 1	Dire	ection	n: S	Sche	me: 4	-F			
	+F1	+F2	+F3	+F4_	+F5	+F6	+F7	+F8_	+F9_	+F10	+F11	+F12	+F13	Totals
01:00	0	13	1 .	0	0	0	0	0	0	0	0	0	0	14
02:00	0	9	1	0	0	0	0	0	0	0	0	0	0	10
03:00	0	4	0	0	0	0	0	1	0	0	0	0	0	5
04:00	0	6	2	0	0	0	0	0	1	0	0	0	0	9
05:00	0	11	0	0	0	0	0	0	0	0	0	0	0	11
06:00	1	50	6	1	2	0	0	0	0	0	0	0	0	60
07:00	0	190	<u>15</u>	0	6	0	0	0	0	0	1	0	0	212
08:00	1	<u>271</u>	29	1	11	1 .	1	1	0	0	0	0	0	316
09:00	1	313	30	1	3	1	1	1	1 .	0	0	0	0	352
10:00	1	227	35	0	7	0	2	0	0	0	0	0	0	272
11:00	0	198	29	1	6	3	0	0	0	0	0	0	0	237
12:00	1	188	23	0	4	0	1	0	0	. 0	0	0	0	217
13:00	1	216	29	0	8	2	2	1 .	1	0	0	0	0	260
14:00	0	207	23	0	7	0	1	0	0	0	0	0	0	238
15:00	2	239	25	1	1	1 .	2	1	1	0	0	0	0	273
16:00	1	243	<u>36</u>	2	2	1	1	0	1	0	0	0	0	287
17:00	0	312	23	1	2	0	0	0	0	0	0	0	0	338
18:00	1 .	364	22	0	4	0	0	0	0	0	0	0	0	391
19:00	2	387	29	0	3	0	0	0	0	. 0	0	0	0	421
20:00	0	221	21	0	1 _	0	0	1 .	<u> </u>	0	0	0	0	244
21:00	0	145	9	1 .	2	0	0	0	0	0	0	0	0	<u> 157</u>
22:00	1 .	<u> 137</u>	<u>8</u>	2	0	0	0	0	0	0	0	0	0	<u>148</u>
23:00	0	92	7	0	1 _	0	0	0	1 .	0	0	0	0	101
00:00	0	54	2	0	1 _	<u> </u>	0	0	0	0	0	0	0	57
Daily Totals	13	4097	405	11	71	9	11	6	6	0	1	0	0	4630
Percentage	0.3%	88.5%	8.7%	0.2%	1.5%	0.2%	0.2%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	
AM Peak H	Jour					08.0	00 to	09.0	n (35	2 vet	nicles	z )		
PM Peak H							00 to				nicles	-		
III I Can	iou <sub>1</sub>					10.		13.0	0 (12	1 701	110101	<i>,</i>		
24-Hour M	<u>lovin</u>	Tota	<u>al</u>											
01:00- 4325	02:00-	4328	03:00-	4325	04:00-	4328	05:00-	4326	06:00-	4342	07:00~	4366	08:00-	4350
09:00- 4398	10:00-	4415	11:00-	4411	12:00-	4408	13:00-	4415	14:00-	4419	15:00-	4443	16:00-	4432
17:00- 4473	18:00-	4471	19:00-	4544	20:00-	4559	21:00-	4594	22:00-	4633	23:00-	4634	24:00-	4630
	+F1	+F2	+F3	+F4	+F5	+F6	+F7	+F8	+F9	+F10	+F11	+F12	+F13	Totals
Grand Totals	29	7945	764	23	148	14	17	14	10	<u> </u>	<del></del>	0	0	8965
Percentage	0.3%	88.6%	8.5%	0.3%	1.7%	0.2%	0.2%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0703
rencentage	0.3%	00.0%	0.5%	0.3%	1.1%	0.4%	0.2%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	

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Location ..... Macarthur Blvd, N of Loughboro Rd, NB1

Location Code .... 11
County ..... Washington, D.C.
Recorder Set ..... 06/15/04 14:15 Recording Start ... 06/16/ 4 00:00 Recording End .... 06/18/ 4 00:00 Sample Time ..... 60 Minutes

Operator Number ... 24 Machine Number .... 2 Channel ..... 1

Wednesday	06/	16/ 4	Ch	anne	l: 1	Dir	ectio	n: N	Sch	eme:	+F			
	+F1_	+F2	+F3_	+F4	+F5_	+F6	+F7	_+F8_	_+F9_	+F10	+F11	+F12	+F13	<u>Totals</u>
01:00	0	22	3	0	1 .	0	0	0	0	0	0	0	0	26
02:00	0	7	2	0	0	0	0	0	0	0	0	0	0	9
03:00	0	7	0	0	0	0	0	0	0	0	0	0	0	7
04:00	0	5	0	0	1	0	0	0	0	0	0	0	0	6
05:00	1	<u>16</u>	2	0	0	0	0	0	0	0	0	0	0	19
06:00	0	<u>73</u>	22	1	2	3	0	0	0	0	0	0	0	<u> 101</u>
07:00	0	159	17	1	5	21	1	3	0	1	0	0	0	208
08:00	3	211	11	0	6	30	2	0	0	0	0	0	0	263
09:00	1	232	21	2	4	36	2	5	0	1	0	0	0	304
10:00	0	193	32	0	5	34	0	0	0	0	1	0	0	265
11:00	0	142	23	4	9	15	1	1	0	0	1	0	0	<u>196</u>
12:00	1	126	20	0	5	23	0	1	0	0	1	0	0	<u> 177</u>
13:00	1	146	26	3	6	27	0	3	0	2	1	0	0	215
14:00	0	131	25	0	6	20	1	<u>3</u>	0	0	0	0	0	186
15:00	1	190	29	2	7	25	1	1	0	1	0	0	0	257
16:00	0	188	27	0	7	17	1	0	0	0	0	0	1	241
17:00	0	218	26	2	6	15	0	1	0	0	0	0	0	268
18:00	0	237	12	2	4	44	0	2	0	0	1	0	0	302
19:00	0	191	11	2	5	58	0	0	0	0	0	0	0	267
20:00	1	214	13	1	1	28	0	1	0	0	1	0	0	260
21:00	<u> </u>	126	8	0	0	7	0	0	0	0	0	0	0	142
22:00	0	107	5	0	0	7	0	1	0	0	0	0	0	120
23:00	0	<u>73</u>	4	0	1	5	0	0	0	0	0	0	0	83
00:00	0	52	2	0	0	9	0	0	0	0	0	0	0	63
Daily Totals	10	3066	341	20	81	424	9	22	0	5	6	0	1	3985
Percentage	0.3%	76.9%	8.6%	0.5%	2.0%	10.6%	0.2%	0.6%	0.0%	0.1%	0.2%	0.0%	0.0%	

AM Peak Hour ...... 08:00 to 09:00 (304 vehicles) PM Peak Hour ...... 17:00 to 18:00 (302 vehicles)

09:00- 3719 10:00-11:00- 3754 12:00-13:00-14:00-15:00-16:00-17:00- 3763 18:00- 3779 19:00- 3779 20:00-21:00-22:00-23:00-24:00-

+F4 +F5 +F9 +F1 +F2 +F3 +F6 +F7 +F8 +F10 +F11 +F12 +F13 Totals **Grand Totals** 78.1% Percentage 0.4% 8.6% 0.5% 2.2% 8.8% 0.2% 0.6% 0.1% 0.2% 0.2% 0.0% 0.1%

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Location ..... Macarthur Blvd, N of Loughboro Rd, NB2

Location Code ..... 111

County ..... Washington, D.C. Recorder Set .... 06/15/04 15:14
Recording Start ... 06/16/ 4 00:00
Recording End ... 06/18/ 4 00:00
Sample Time .... 60 Minutes
Operator Number ... 24
Machine Number ... 15
Channel

Channel ..... 1

Wednesday 06/16/ 4 Channel: 1 Direction: N Scheme: +F

	+F1	+F2_	+F3_	+F4	+F5	<u>+F6</u>	+F7_	+F8_	+F9	+F10	+F11	+F12	+F13	Totals
01:00	0	7	1	0	. 0	0	0	0	0	0	0	0	0	8
02:00	0	· 7	0	0	0	0	0	0	0	0	0	0	0	7
03:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1
04:00	1	4	0	0	1	0	0	0	0	0	0	0	0	6
05:00	0	13	2	0	1	0	0	0	0	0	0	0	0	16
06:00	0	59	12	0	3	1	0	0	0	0	0	0	0	75
07:00	0	106	12	0	1	6	0	0	0	0	0	0	0	125
08:00	0	172	11	0	2	5	2	0	0	0	1	0	0	193
09:00	1	208	21	1	0	9	0	3	0	0	0	0	0	243
10:00	1	<u>163</u>	14	0	2	6	1	2	0	1	1	0	0	191
11:00	0	113	19	2	4	6	0	1	0	0	0	0	0	145
12:00	0	112	15	1	3	5	1	0	0	0	0	0	2	139
13:00	0	127	18	0	3	6	0	1	0	0	0	0	<u>0</u>	155
14:00	1	110	16	0	3	10	0	1	0	0	0	0	0	141
15:00	2	105	16	0	4	14	0	1	0	0	0	0	0	142
16:00	2	141	16	0	1	7	0	0	0	0	0	0	0	167
17:00	0	158	22	0	4	15	0	1	0	0	0	0	0	200
18:00	1	<u>151</u>	11	0	0	7	0	1	0	0	0	0	0	171
19:00	1	160	9	0	1	6	0	0	0	0	0	0	0	177
20:00	0	<u>155</u>	11	0	1	5	0	0	0	0	0	0	0	172
21:00	0	72	3	0	1	2	0	0	0	0	0	0	0	78
22:00	0	50	5	0	0	1	0	0	0	0	0	0	0	<u>56</u>
23:00	0	49	2	0	0	0	0	0	0	0	0	0	0	51
00:00	0	25	1	0	0	0	0	0	0	0	0	0	0	26
Daily Totals	10	2268	237	4	35	111	4	11	0	1	2	0	2	2685
Percentage	0.4%	84.5%	8.8%	0.1%	1.3%	4.1%	0.1%	0.4%	0.0%	0.0%	0.1%	0.0%	0.1%	

AM Peak Hour ...... 08:00 to 09:00 (243 vehicles) PM Peak Hour ...... 16:00 to 17:00 (200 vehicles)

01:00- 2682 02:00-03:00- 2686 04:00-05:00-06:00- 2780 07:00- 2857 -00:80 09:00- 2866 10:00- 2918 11:00- 2916 14:00-15:00-16:00- 3004 12:00-13:00-17:00- 2964 18:00-19:00- 3035 23:00-20:00-21:00-22:00-24:00- 3104

+F7 +F8 +F9 +F11 +F13 Totals +F1 +F2 +F3 +F4 +F5 +F6\_ +F10 +F12 Grand Totals 0.1% Percentage 0.2% 84.7% 8.5% 0.2% 1.3% 4.0% 0.2% 0.6% 0.0% 0.1% 0.1% 0.0%

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Location ..... Macarthur Blvd, N of Loughboro Rd, SB3

Location Code .... 133 County ..... Washington, D.C. Recorder Set ..... 06/15/04 16:01 Recording Start ... 06/16/ 4 00:00 Recording End ..... 06/18/ 4 00:00

Sample Time ..... 60 Minutes

Operator Number ... 24 Machine Number .... 34 Channel ..... 1

Wednesday	06/	16/ 4	Ch	annel	L: 1	Dir	ectio	n: S	Sch	eme :	+F			
_	+F1	+F2	+F3_	+F4_	+F5	_+F6_	+F7_	+F8_	+F9_	<u>+F10</u>	+F11	<u>+F12</u>	+F13	<u>Totals</u>
01:00	1	14	0	0	0	0	0	0	0	0	0	0	0	15
02:00	0	6	0	0	0	0	0	0	0	0	0	0	0	6
03:00	0	3	1	0	0	0	0	0	0	0	0	0	0	4
04:00	0	3	0	0	0	0	0	0	0	0	0	0	0	3
05:00	1	3	1	0	1	0	0	0	0	0	0	0	0	6
06:00	1	16	3	0	2	0	0	0	0	0	0	0	<u> </u>	22
07:00	3	72	16	0	7	1	0	0	0	0	0	0	0	99
08:00	3	224	37	0	3	1	0	0	0	0	0	0	0	268
09:00	1	268	<u>38</u>	0	3	0	1	0	0	0	0	0	0	311
10:00	0	174	26	1	5	0	0	0	0	0	0	0	0	206
11:00	1	151	25	1	5	0	1	3	0	0	0	0	0	<u> 187</u>
12:00	1	168	40	0	5	1	0	2	0	0	0	0	0	217
13:00	1	161	24	2	4	0	1	2	0	0	0	0	0	195
14:00	0	149	<u>27</u>	0	6	0	0	2	0	0	0	0	0	184
15:00	0	<u>133</u>	25	1	11	2	0	2	0	0	0	0	0	174
16:00	0	283	46	2	6	0	0	0	0	0	0	0	0	337
17:00	0	228	29	0	4	4	0	1	0	0	0	0	0	266
18:00	0	242	22	0	4	1	0	1	0	0	0	0	0	270
19:00	0	281	18	0	3	0	0	0	0	0	0	0	0	302
20:00	0	176	20	0	2	0	0	2	0	0	0	0	0	200
21:00	1	85	7	0	0	1	0	0	0	0	0	0	0	94
22:00	1	68	4	0	0	1	0	0	1	0	0	0	0	75
23:00	0	34	2	0	0	1	0	0	0	0	0	0	0	37
00:00	1	15	1	0	0	0	0	0	0	0	0	0	0	17
Daily Totals	16	2957	412	7	71	13	3	15	1	0	0	0	0	3495
Percentage	0.5%	84.6%	11.8%	0.2%	2.0%	0.4%	0.1%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	

AM Peak Hour ...... 08:00 to 09:00 (311 vehicles) PM Peak Hour ...... 15:00 to 16:00 (337 vehicles)

0.4%

0.1%

0.3%

0.0%

0.0%

0.0%

0.0%

0.0%

Percentage

0.5%

84.5%

11.8%

0.2%

2.1%

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Location ...... Macarthur Blvd, N of Loughboro Rd, SB4

Location Code .... 13

County .......... Washington, D.C. Recorder Set ..... 06/15/04 15:50 Recording Start ... 06/16/ 4 00:00 Recording End .... 06/18/ 4 00:00 Sample Time ..... 60 Minutes

Operator Number ... 24

Machine Number .... 37 Channel ..... 1

Wednesday	06/	16/ 4	Ch	annel	: 1	Direction:		n: S	Scheme: +F					
	+F1_	+F2	+F3	+F4	_+F5_	+F6	+F7	+F8_	+F9	+F10	+F11	+F12	+F13	<u>Totals</u>
01:00	. 0	12	2	0	0	0	0	0	0	0	0	0	0	14
02:00	0	8	0	0	1	0	0	0	0	0	0	0	0	9
03:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
04:00	0	2	0	0	0	0	0	0	0	0	0	0	0	2
05:00	1	10	1	0	2	0	0	0	0	0	0	0	0	14
06:00	1	24	2	0	0	0	0	0	0	0	0	0	0	27
07:00	1	103	22	3	6	1 .	2	1	0	0	0	0	0	139
08:00	1	412	29	3	9	1	0	4	0	0	0	0	0	459
09:00	4	477	38	4	9	2	2	7	0	0	1	0	0	544
10:00	0	256	26	0	8	1	<u>2</u>	2	0	0	0	0	0	295
11:00	<u> </u>	134	23	2	7	0	1	0	0	0	0	0	0	<u>167</u>
12:00	2	134	16	0	<u>8</u>	<u> </u>	0	0	0	0	0	0	0	160
13:00	2	124	16	2	5	1	0	2	1	0	0	0	0	<u>153</u>
14:00	4	124	19	0	5	1	0	0	0	0	0	0	0	153
15:00	4	183	28	1	3	1	1	0	0	0	1	0	0	222
16:00	1 .	311	<u>53</u>	0	7	0	0	3	0	0	0	0	0	375
17:00	1	290	28	0	4	1	0	1	0	1	0	0	0	<u>326</u>
18:00	<u>2</u>	312	31	0	3	0	0	2	0	0	0	0	0	350
19:00	1	280	19	0	3	0	0	2	0	0	0	0	0	305
20:00	2	111	9	0	1	0	0	0	0	0	0	0	0	123
21:00	2	71	<u>5</u>	0	1	0	0	0	0	0	0	0	0	<u>79</u>
22:00	0	61	3	0	0	0	0	0	0	0	0	0	0	64
23:00	0	35	1	0	0	0	0	0	0	0	0	0	0	<u>36</u>
00:00	1	22	3	0	1	0	0	0	0	0	0	0	0	27
Daily Totals	30	3498	374	15	83	9	8	24	1	1	2	0	0	4045
Percentage	0.7%	86.5%	9.2%	0.4%	2.1%	0.2%	0.2%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	

Axle Clas	ssific	cation	Rep	ort,	'Maca	rthu	r Blv	d, N	of Lo	ugh	<u></u>		page	2
Thursday	06/3	17/04	Ch	annel	.: 1	Dire	ection	n: S	Sche	me: 4	٠F			
-	+F1_		+F3	+F4	+F5	+F6	+F7	+F8	+F9_	+F10	+F11	+F12	+F13	<u>Totals</u>
01:00	0	13	1 .	0	0	0	0	0	0	0	0	0	0	14
02:00	<u> </u>	6	0	0	1	0	0	0	0	0	0	0	0	8
03:00	0	5	0	0	0	0	0	0	0	<u> </u>	0	0	0	5
04:00	. 0	3	1	0	2	0	0	0	0	0	0	0	0	6
05:00	1	8	1 .	0	0	1	0	0	0	0	0	0	0	11
06:00	1 .	18	4	0	1	1	0	0	0	0	0	0	0	25
07:00	1 .	101	13	0	6	3	3	0	1_	0	0	0	0	128
08:00	9	358	<u>31</u>	4	10	0	0	1	0	0	0	0	0	413
09:00	4	456	<u>33</u>	4	8	<u>4</u>	3	3	0	<u> </u>	0	0	0	515
10:00	1 .	244	25	0	10	1 .	4	3	0	0	0	0	0	288
11:00	1 .	168	13	0	6	2	0	1	1	. 0	0	0	0	192
12:00	2	125	18	2	8	0	2	2	0	0	0	0	0	<u>159</u>
13:00	1 .	122	9	1	6	1	0	0	0	0	0	0	0	140
14:00	4	115	25	0	7	4	1 .	0	0	0	0	0	0	<u>156</u>
15:00	4	198		0	8	1	0	0	<u> </u>	1 .	0	0	0	241
16:00	2	293	<u>31</u>	0	8	2	1 .	0	0	<u> </u>	0	0	0	337
17:00	3	306	29	0	4	1	0 .	1	0	0	0	0	0	344
18:00	0	300	21	0	5	<u> </u>	0	3	0	0	0	0	0	329
19:00	1 .	346	35	0	0	<u> </u>	0	<u> </u>	0	0	0	0	0	382
20:00	0	183	23	1	1	<u> </u>	0	1	0	0	0	0	0	209
21:00	3		3	0	2	0	0	0	0	<u> </u>	0	0	0	<u>85</u>
22:00	1 .	84	3	0	0	0	0	0	0	0	0	0	0	88
23:00	0	54	4	0	0	0	0	0	0	0	0	0	0	58
00:00	0		2	0	0	2	0	0	0	0		0	0	43
Daily Totals	40	3622	354	12	93	23	14	15	2	1	0	0	0	4176
Percentage	1.0%	86.7%	8.5%	0.3%	2.2%	0.6%	0.3%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	
AM Peak I	Lour					00.	00 to	00.0	0. (51	E wol	nicles	٠,١		
PM Peak I											nicles			
In reak i	ioui					10.		10.0	0 (50	Z VC1	110102	<i>,</i>		
24-Hour I	Movino	g Tota	1											
01:00- 4045	02:00-	4044	03:00-	4047	04:00-	4051	05:00-	4048	06:00-	4046	07:00-	4035	08:00	3989
09:00- 3960	10:00-	3953	11:00-	3978	12:00-	3977	13:00-	3964	14:00-	3967	15:00-	3986	16:00	3948
17:00- 3966	18:00-	3945	19:00-	4022	20:00-	4108	21:00-	4114	22:00-	4138	23:00-	4160	24:00	4176
	<u>+F1</u>	+F2	+F3	+F4_	+F5_	+F6_	+F7	+F8_	+F9_	+F10	+F11	+F12	+F13	<u>Totals</u>
Grand Totals	70	7120	728	27	176	32	22	39	3	2	2	0	0	8221
Percentage	0.9%	86.6%	8.9%	0.3%	2.1%	0.4%	0.3%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	

# HIGHWAY CAPACITY MANUAL ANALYSIS WORKSHEETS – EXISTING TRAFFIC SITUATION IN VICINITY OF PROJECT SITE

O.R. George & Associates, Inc.

	I VVO-	WAY STOP (	CONTRO	JL 3U	INIMAK	ſ						
General Informatio	n		Site Ir	nform	ation							
Analyst	ORGA-RI	)	Interse	ction		LOUGHBOR	RO/DALE	CARLIA				
Agency/Co.	ORGA		Jurisdi	ction								
Date Performed	7/13/04		Analys	is Year		2004						
Analysis Time Period	AM - EXIS	STING										
Project Description W	ASHINGTON	AQUEDUCT										
East/West Street: LOU	GHBORO RO	AD	North/S	North/South Street: DALECARLIA PARKWAY								
Intersection Orientation:	East-West		Study F	Period (	hrs): 1.0	0						
Vehicle Volumes a	nd Adiustn	nents										
Major Street	T	Eastbound				Westbou	nd					
Movement	1	2	3		4	5		6				
	L	T	R		L	T		Ŕ				
Volume (veh/h)	442	149	0		0	125		126				
Peak-hour factor, PHF	0.91	0.91	1.00		1.00	0.87	(	.87				
Hourly Flow Rate (veh/h)	485	163	0		0	143		144				
Proportion of heavy vehicles, P <sub>HV</sub>	4		_		0							
Median type	Undivided											
RT Channelized?		1	0				T T	0				
Lanes	0	1	0		0	1		0				
Configuration	LT							TR				
Upstream Signal	0 1											
Minor Street		Northbound				Southbou	ınd					
Movement	7	8	9		10	11	1	12				
	L	Т	R		L	Т		R				
Volume (veh/h)	0	0	0		144	0		344				
Peak-hour factor, PHF	1.00	1.00	1.00		0.93	1.00	(	0.93				
Hourly Flow Rate (veh/h)	0	0	0		154	0		369				
Proportion of heavy vehicles, P <sub>HV</sub>	0	0	0		1	0		1				
Percent grade (%)	<del> </del>	0				0						
Flared approach	<del> </del>	N		-		T N		-				
	<del> </del>	0				0	_					
Storage		U	_									
RT Channelized?	ļ		0					0				
Lanes	0	0	0	$\dashv$	1	0		1				
Configuration			ļ		L			R				
Control Delay, Queue			<del></del>									
Approach	EB	WB		lorthbo			outhboun	<u>d</u>				
Movement	1	4	7	8	9	10	11	12				
Lane Configuration	ĹŤ					L		R				
Volume, v (vph)	485		. /			154		369				
Capacity, c <sub>m</sub> (vph)	1257					102	<del>"- "</del>	822				
						1.51		0.45				
v/c ratio	0.39											
Queue length (95%)	1.88					33.00		2.42				
Control Delay (s/veh)	9.7	l l				1053		12.9				

Los	Α		 F		В
Approach delay (s/veh)				319.1	
Approach LOS				F	

 $HCS2000^{\text{TM}}$ 

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Version 4.1d

LOUGHBURU | DALE CARLIA (AM) (EXISTING)

	TWO	-WAY STOP	CONTR	OL SU	JMMAKY							
General Informatio	n		Site I	nform	ation	н	. ,					
Analyst	ORGA-R	D	Interse	ction		LOUGHBOR	RO/DALE	CARLIA				
Agency/Co.	ORGA		Jurisdi	ction								
Date Performed	7/13/04		Analys	is Year	•	2004						
Analysis Time Period	PM - EXI	STING										
		AQUEDUCT										
East/West Street: LOU		DAD		North/South Street: DALECARLIA PARKWAY								
Intersection Orientation:	East-West		Study F	Study Period (hrs): 1.00								
Vehicle Volumes a	nd Adjustn	nents										
Major Street		Eastbound				Westbou	nd					
Movement	1	2	3		4	5		6				
	L	T	R		L	Т		R				
Volume (veh/h)	258	83	0		0	147		175				
Peak-hour factor, PHF	0.91	0.91	1.00		1.00	0.94	(	).94				
Hourly Flow Rate (veh/h)	283	91	0		0	156		186				
Proportion of heavy vehicles, P <sub>HV</sub>	4				0							
Median type		Undivided										
RT Channelized?			0		<u> </u>			0				
Lanes	0	1	0		0	1		0				
Configuration	LT			$\dashv$				TR				
Upstream Signal		0	<b></b>	$\neg$		0	0					
Minor Street	<del>                                     </del>	Northbound		<del>- i</del>		Southbou	ınd					
Movement	7	8	9	-	10	11		12				
	L	T	R		L.	Т		R				
Volume (veh/h)	0	0	0	_	112	0		530				
Peak-hour factor, PHF	1.00	1.00	1.00		0.90	1.00		0.90				
Hourly Flow Rate (veh/h)	0	0	0		124	0	,	588				
Proportion of heavy												
vehicles, P <sub>HV</sub>	0	0	0		1	0		1				
Percent grade (%)	<u> </u>	0				0						
Flared approach	Į	N				N						
Storage	<u></u>	0				0						
RT Channelized?			0					1				
Lanes	0	0	0		1	0		1				
Configuration					L			R				
Control Delay, Queue l	Length, Leve	l of Service										
Approach	EB	WB	١	orthbo	und	S	outhboun	d				
Movement	1	4	7	8	9	10	11	12				
Lane Configuration	LT					L		R				
Volume, v (vph)	283					124		588				
Capacity, c <sub>m</sub> (vph)	1200					234		787				
	0.24				-	0.53		0.75				
v/c ratio												
Queue length (95%)	0.92					3.20		8.19				
Control Delay (s/veh)	8.9					37.4		22.7				

Los	Α		L	E		c
Approach delay (s/veh)					25.3	
Approach LOS					D	

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LOUGHBORO DALECAKLIA (PM)
(EXISTING)

					SHO	ORT I	REP(	)R	т						
General Info	ormation		******		0110				mation	1					
Analyst Agency or C Date Perforr Time Period	co. ned	ORG/ 7/12 M - EX	2/04	3	·	ĺ	nterse Area T Iurisdi Analys	ype	on e on		HO All ot	ORO- SPITA her an		/	
Volume an	d Timing In	out						_							
voidine di	u runnig in	Jut	r -	EB		$\neg$	W	B			NB		T	SB	
			LT	TH	RT	LT	TH		RT	LT	TH	RT	LT	TH	RT
Num. of Lan	ies		0	1 .	0	0	2		0	0	0	0	0	0	0
Lane group				LT			TF	?						LR	
Volume (vph	n)		27	527			43	1	61				57		27
% Heavy ve	eh		0	3			3		0				0		0
PHF			0.85	0.85			0.9	2	0.92				0.84		0.84
Actuated (P	/A)		Р	Р			Р		Р				Р		Р
Startup lost	time			2.0			2.0	_						2.0	
Ext. eff. gree	en			2.0			2.0							2.0	
Arrival type				3	L		3	_			ļ			3	
Unit Extensi				3.0	<u> </u>		3.0							3.0	
	ΓOR Volume			<u> </u>	ļ	10	0		0	0	-		17	0	0
Lane Width				12.0		<b>—</b>	12.	_		<del></del>	<b></b>		٨,	12.0	N
	arking/Grade/Parking			0	Ν	N	- 0		N	Ν		N	N	0	N
Parking/hr			ļ	<del> </del>	┝	+	+-		ļ	ļ			┼	0	
Bus stops/h			<del> </del>	0	<u> </u>		0		ļ	ļ	<del>                                     </del>	_	<del> </del>	<u> </u>	
Unit Extensi		1		3.0		<u> </u>	3.0	_	100	<u> </u>	<u> </u>	<del></del>	<u> </u>	3.0	<u></u>
Phasing	EW Perm G = 52.0	0: G =		03 G =		G =	<del>}</del>		B Only = 16.0		<u>06</u>	G	07	G =	08
Timing	Y = 6	Y =		Y =		Y=		_	= 6	Y:		Y:		Y =	
Duration of	Analysis (hrs			•		<u>:</u>		i i		Сус	de Len	gth C	= 80.0		
Lane Gro	ир Сарас	ity, Co	ontro	l Dela	y, aı	nd LC	S De	ete	rmina	tion					<del></del>
		1	E		Τ		WB				NB			SB	
Adj. flow rat	e	$\top$	652		十	18	534	T						100	Т
Lane group	cap.		1152	2	$\top$	2	246	T						349	
v/c ratio		$\neg$	0.57	,	┪	(	.24	十					1	0.29	
Green ratio		$\top$	0.65	5	十	(	0.65	十						0.20	
Unif. delay	d1	$\top$	7.8		十		5.8	十						27.2	1
Delay factor		+	0.50	,	十	- (	0.50	†					1	0.50	<del>                                     </del>
Increm. dela	ay d2		2.0	$\neg$	十		0.2	十	$\neg$				1	2.1	
PF factor	····	$\top$	1.00	0	十	1	.000	十					<del>                                     </del>	1.000	+
Control dela	ay		9.8	_	$\dashv$		6.0	†					-	29.2	
Lane group	·		A A			$\neg \uparrow$	Α	$\dagger$						С	1
Apprch. del				十	6.	0							29.2		
Approach LOS A			A								<b>1</b>	С			
Intersec. delay 9.7				$\top$			Inte	ersection	n LOS	3		1	Α		
	· · · · · · · · · · · · · · · · · · ·						<u> </u>							ersion 4.1	

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Short Report Page 1 of 1

					SH	OR	TR	FP()	)R	т —						
General Info	ormation				311	<u>UIX</u>	_		_	mation	1					
Analyst Agency or C Date Perforr Time Period	co. ned		GA 2/04				Int Ard Ju	ersedea Tyrisdic	ctic	on e en		HO: All oti	SPITA			-
Volume an	d Timing In	out	··		_				_							
	g			EB		Т		W	В		T	NB		T	SB	
			LT	TH	R		LT	TH		RT	LT	TH	RT	LT	TH	RT
Num. of Lan	es		0	1	0	Т	0	2		0	0	0	0	0	0	0
Lane group				LT		Т		TR							LR	
Volume (vph	1)		21	309		7		617	,	53				51		24
% Heavy ve	eh		0	3				3		0				0		0
PHF			0.84	0.84				0.93	}	0.93				0.85		0.85
Actuated (P			Р	Р		$\bot$		Р		Р				Р		Р
Startup lost				2.0		$\bot$		2.0							2.0	
Ext. eff. gree	en			2.0	L	_		2.0						—	2.0	
Arrival type				3	┡	-		3	_		ļ				3	<u> </u>
Unit Extensi				3.0	_	4		3.0	_			<u> </u>	ļ	10	3.0	<u> </u>
	OR Volume		12.0		+	7	0 12.0	_	0	0			10	0 12.0	0	
	ane Width 12 arking/Grade/Parking N 0					N N		0	_	N	N	<del>                                     </del>	N	l <sub>N</sub>	0	N
Parking/hr	ue/Farking		174	-	<del>  ^``</del>	+	7.4	۲			<del>  '</del>	<del> </del>	-14	+**	<del>                                     </del>	<del>- '`</del>
Bus stops/h	r			0	┢╾	+		0	_			<del>                                     </del>	-	+	0	<del> </del>
Unit Extensi				3.0	╁─	$\dashv$		3.0	,	<del> </del>	<del>                                     </del>			+	3.0	
Phasing	EW Perm	0:	$\frac{1}{2}$	03		г –	04			B Only	<del></del>	06	1	07	1 (	08
	G = 52.0	G =		G =		G = G = 16						G	=	G =		
Timing	Y= 6	Y =		Y =	Y = Y = 6 Y = Y = Cycle Length C =								Y =			
	Analysis (hrs										<del></del>	le Len	gth C	= 80.0	)	
Lane Gro	up Capac	ity, C			y, a	nd			te	rmina	tion					
			E	3	$\perp$		\	NΒ				NB			SB	
Adj. flow rat	е		393		$\perp$		72	0	L					<u> </u>	88	<u> </u>
Lane group	cap.		1128	3			220	60							350	
v/c ratio			0.35				0.3	32							0.25	
Green ratio			0.65				0.6	65	Γ						0.20	
Unif. delay o	d1		6.3		T		6.	2	Т			·			27.0	
Delay factor	· k		0.50	,	$\top$		0.5	50	T					1	0.50	
Increm. dela	ay d2		0.9		7		0.	4	T					1	1.7	
PF factor 1.000			0	$\neg$		1.0	00	T					T	1.000	$\top$	
Control dela	Control delay 7.2			$\top$		6.	6	T						28.7		
Lane group	ip LOS A			十		7	\	T						С	1	
Apprch. delay 7.2						6.6								28.7	•	
Approach LOS A				_		Α								С		
Intersec. de	ntersec. delay 8.4				十			ıl	nte	rsectio	n LOS		-		Α	
	tersec. delay 8.4							D1 : 1		1 D: 1 D						/ersion 4 l

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			P CONTROL SUMMARY										
General Information	1		Site Ir	nform	ation								
Analyst	ORGA-RI	)	Interse	ction		LOUGHE		BLEY					
Agency/Co.	ORGA		Jurisdi			HOSPITA	AL						
Date Performed	7/13/04			is Year		2004							
Analysis Time Period	AM - EXIS	STING	Allalys	is real		2004							
Project Description W	ASHINGTON	AQUEDUCT						-					
ast/West Street: LOUG			North/S	South S	treet: SIBL	EY HOSPI	TAL ENTI	RANCE					
ntersection Orientation:					hrs): 1.00								
/ehicle Volumes ar	nd Adjustm	nents											
Major Street		Eastbound				Westbou	ind						
Movement	1	2	3		4	5		6					
	L	T	R		L	T		R					
/olume (veh/h)	3	551	0		0	467		8					
eak-hour factor, PHF	0.97	0.97	1.00		1.00	0.83		0.83					
lourly Flow Rate veh/h)	3	568	0		0	562		9					
Proportion of heavy	0				0		- 1						
rehicles, P <sub>HV</sub>	<u> </u>					<u> </u>							
Median type				Undivid	ded								
RT Channelized?			0					0					
anes	0	1	0		0	2		0					
Configuration	LT		ļ			T		TR					
Jpstream Signal		0	<u> </u>			0							
Minor Street		Northbound	T			Southboo	ınd						
Movement	7	8	9		10	11		. 12					
	L	Т	R		L	Т		R					
/olume (veh/h)	0	0	0		3	. 0		2					
Peak-hour factor, PHF	1.00	1.00	1.00		0.62	1.00		0.62					
Hourly Flow Rate veh/h)	0	0	0		4	0		3					
Proportion of heavy	0	0	0		1	0	1	1					
vehicles, P <sub>HV</sub>								•					
Percent grade (%)		0				0							
lared approach		N				N							
Storage		0				0							
RT Channelized?			0					1					
anes	0	0	0		1	0		1					
Configuration					L	]		R					
Control Delay, Queue I	ength, Leve	l of Service				- 1							
Approach	EB	WB	١	Vorthbo	und	S	outhbour	d					
Movement	1	4	7	8	9	10	11	12					
_ane Configuration	LT				-	L		R					
Volume, v (vph)	3					4		3					
	1006					194		710					
Capacity, c <sub>m</sub> (vph)						+							
v/c ratio	0.00				<u> </u>	0.02		0.00					
Queue length (95%)	0.01			l		0.06	i	0.01					

Control Delay (s/veh)	8.6	<u> </u>	ll.	23.9		10.1
LOS	Α			С		В
Approach delay (s/veh)					18.0	
Approach LOS					С	

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LOUGHBORD/SIBLEY (AM) UNSIGNALIZED ENTRANCE-EXISTING AM

	TWO-	WAY STOP	CONTROL	SUMMARY			
General Informatio	n		Site Infor	mation			
Analyst	ORGA-RI	)	Intersection	1	LOUGHBO HOSPITAL		LEY
Agency/Co.	ORGA		Jurisdiction	ı			
Date Performed  Analysis Time Period	7/13/04 PM - EXIS	STING	Analysis Y	ear	2004		
			-				
	ASHINGTON		N 11 /0 - 11	Olevert OID!	EVALOODIT	V ENTE	144/OF
East/West Street: LOU Intersection Orientation:		AD		Street: SIBL	EY HUSPITA	AL ENTR	ANCE
		onto	iotady i cho	u (1110). 7.00			
Vehicle Volumes a Major Street	na Aajustii T	Eastbound		T	Westboun	<u>.</u>	
Movement	1	2	3	4	Vesibouii 5	<u> </u>	6
viovement	<u> </u>	T	R	1	T	_	R
Volume (veh/h)	5	359	0	0	611	<del></del>	5
Peak-hour factor, PHF	0.75	0.75	1.00	1.00	0.90	0	).90
Hourly Flow Rate (veh/h)	6	478	0	0	678		5
Proportion of heavy vehicles, P <sub>HV</sub>	0			0			
Median type		.L	Und	ivided			
RT Channelized?		T	0	I		- T	0
anes	0	1	0	0	2		0
Configuration	LT			<u> </u>	T		TR
Upstream Signal		0			0		
Minor Street		Northbound			Southbour	ıd	
Movement	7	8	9	10	11		12
	L	Т	R	L	Т		R
Volume (veh/h)	0	0 .	0	- 2	0		7
Peak-hour factor, PHF	1.00	1.00	1.00	0.75	1.00	(	).75
Hourly Flow Rate (veh/h)	0	0	0	2	0		9
Proportion of heavy	0	0	0	1	0		1
vehicles, P <sub>HV</sub>		Ŭ	<u> </u>	1 '			<u>'</u>
Percent grade (%)		0			0		
Flared approach		N			N		
Storage		0			0		
RT Channelized?			0			· · · · · · · · · · · · · · · · · · ·	1
Lanes	0	0	0	1	0		1
Configuration				L			R
Control Delay, Queue	Length, Level	of Service					
Approach	EB	WB	North	bound	So	uthbound	d
Movement	1	4	7	8 9	10	11	12
Lane Configuration	LT				L		R
Volume, v (vph)	6				2		9
	915				184		653
	910						
Capacity, c <sub>m</sub> (vph)			<b></b>		0.01		0.01
	0.01 0.02				0.01		0.01 0.04

Control Delay (s/veh)	9.0	1	<u></u>	<u> </u>	24.8		10.6
LOS	Α				С		В
Approach delay (s/veh)						13.2	
Approach LOS						В	

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LOUGHBURN/SIBLEY (PM)
UNSIGNALIZED ENT.
EXISTING AM

Short Report

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					SH	OR'	T R	EPO	RT							
General Info	ormation								rmatior	)						
Analyst Agency or C Date Perforr Time Period	ned	OI 7/1	GA-RD RGA 12/04 XISTIN	IG			Are Juri	ersecti a Typ isdiction	e on	1AC		HUR/L II other		IBORC	)	
Volume an	d Timing In	out			•											
			<u></u>	EB	T ma			WB		4		NB	T 6		SB	
Num. of Lan	20		LT 0	TH 1	RT 0		<u>.T</u>	TH 2	RT 0	1 (	<u>.T</u>	TH 2	RT 0	LT 0	TH 2	RT 0
	<u></u>		-	<u> </u>	۲	-		<del>                                     </del>	+ -	+ '			-	"	<del></del>	-
Lane group			17	LTR	5	De		TR	128	3		LTR 459	207	164	LTR	3
Volume (vph % Heavy ve	·		0	26 0	0	27		10	3		<u> </u>	459 2	367 3	3	664	0
PHF	51.1		0.61	0.61	0.61			0.93	0.93	0.8		0.80	0.80	0.86	0.86	0.86
Actuated (P/	(A)		P	P	P	F		P	P	F		P	P	P	P	P
	tartup lost time 2.0									1		2.0			2.0	
Ext. eff. gree	xt. eff. green 2.0 rrival type 3											2.0			2.0	
Arrival type				3	3				3			3	Ī			
Unit Extensi		3.0		3.		3.0		┸		3.0			3.0			
Ped/Bike/RT	0			ļ	0	1		<u> </u>	0	4	ļ	0				
Lane Width						-	2.0	12.0		↓.		12.0			12.0	
Parking/Gra	de/Parking		N O N			^	۷	0	N	^		0	N	N	0	N
Parking/hr					_			<u> </u>		1			ļ		<u> </u>	
Bus stops/hi				0		_ (		0		_		0	<u> </u>		0	
Unit Extensi	on		l	3.0	<u> </u>	3.	.0	3.0				3.0			3.0	
Phasing	EW Perm		02	0:	3		04		NS Per			06		07	_1	08
Timing	G = 24.0 Y = 6	G =		G =		G =			G = 44	.0	زق		G = Y =		G =	
Duration of	γ = ο Analysis (hrs	Y =	00	Y =		Y =	-	ŀ	Y = 6		Y =		gth C =		Y =	
		<u> </u>		L Dol	234 6	سما ا		e De	tormir			JIC LCII	gui o -	- 00.0		
Lane Gro	up Capaci	ity, C	Ontro		ay, a	ına ı	-	NB	ternin	iau	OII	NB		T	SB	
Adj. flow rate	^	+	79		+	90	<u> </u>	49		**	11	037	1	-	966	т —
											-		ļ	<del> </del>	<del> </del>	
Lane group	сар.		491		-	91	+	78				726	<b></b>	<b></b>	1099	
v/c ratio			0.16			.74	+	31			-	0.60		ļ	0.88	-
Green ratio	<del> </del>		0.30			.30		30			_	0.55		-	0.55	-
Unif. delay o		-	20.6		-	5.2	+	1.6			-	12.1		-	15.7	-
Delay factor		_	0.50			.50		50			-	0.50	ļ	<b>_</b>	0.50	
Increm. dela	y d2		0.7			2.9	+	.7			+	1.6			11.3	
PF factor 1.000		-	000	-	000			-	.000	ļ	ļ	1.000	<u>-</u>			
Control delay 21.3			-	8.1		3.3				13.7			27.0	↓		
				D		С				В		<u> </u>	С			
Apprch. delay 21.3				3	33.1				1.	3.7			27.0			
Approach LOS C						С		, . !			В			С		
Intersec. de	lay		22.4					In	tersecti	on L	.OS				С	
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					SH	IORT	R	EPO	RT									
General Info	ormation							Info		ion								
Analyst Agency or C Date Perforr Time Period	ned	OI 7/1	GA-RD RGA 12/04 XISTIN	IG			Are Juri	ersecti a Typ isdiction	e on		CAI	-	HUR/L other	areas		RC	)	
Volume an	d Timing In	out																
			LT	EB TH	RT	-   [	_	WB TH	<b>I</b> R		LT	_	NB TH	RT	+.	_	SB TH	RT
Num. of Lan	es		0	1	0		_	2	0		0	┪	2	0			2	0
Lane group			<del>  </del>	LTR	<u> </u>	De	fl	TR	+-	-	_	┪	LTR	-	┿		LTR	<u> </u>
Volume (vph	1)		13	8	1	49		23	13	2	2	_	379	201	9	7	555	3
% Heavy ve			0	0	Ô	3		0	3		0	+	2	3	3		1	0
PHF			0.61	0.61	0.61	_	_	0.93	0.9	93	0.80	) (	0.80	0.80	0.8		0.87	0.87
Actuated (P/			Ρ	Ρ	Р	P		P	P		Ρ	$\Box$	Р	Р	P		Р	Р
Startup lost				2.0		2.	_	2.0	$\perp$			4	2.0		_		2.0	
Ext. eff. gree	en			2.0	<u> </u>	2.	_	2.0				-	2.0	_	-		2.0	
Arrival type				3.0	-	3.0	_	3	+	_		-+	3.0		╫		3.0	
Unit Extensi	on OR Volume		1	3.0	0	3.0		3.0	+0		1	4	3.0	0	+-		3.0	0
Lane Width	OR Volume		<del>'</del>	12.0	- 0	12		12.0	<del></del>	-		+	12.0	٢	+	_	12.0	
Parking/Gra	N	0	N	1,2.		0	+	,	N	┪	0	N	+	/	0	N		
Parking/hr	<u>y</u>				$\top$		<del> </del>	$\top$			┪			$\top$		<u> </u>		
Bus stops/h	r			0		0		0	十			寸	0		T		0	
Unit Extensi			·	3.0		3.	0	3.0	十			7	3.0		Τ		3.0	
Phasing	EW Perm		02	0:	3	T	04	<u> </u>	NS F	ern	n		06	T	07			)8
Timing	G = 36.0	G =		G =		G =			G =			G =		G			G =	
	Y = 6	Y =	00	Y =	Y =			Y = (	6		Y =		Y:		0.0	Y =		
	Analysis (hrs	·		L Dali			_	<u>.</u>	4	. !			e Len	gin C	- 0	0.0		
Lane Gro	up Capaci	Ty, C	ontro El		ay, a	and L		VB	tern	11111a	auo	11	NB		$\overline{}$		SB	
Adj. flow rate	9		36	<u> </u>	-	528	<u> </u>	67		+		7	27		+		752	1
Lane group		╁	718	-	<del>-   `</del>	509	+	27	-	+		+	278	<del>                                     </del>	┿		926	╫
v/c ratio	oup.	╫	0.05			.87	┺	23	$\vdash$	+		+	57	-	+		0.81	╁
Green ratio		+	0.45		_	.45	4-	45	$\vdash$	+		╄	40		十		0.40	+
Unif. delay of	<u> </u>	1-	12.4			9.8	┿	3.5	一	+		-	8.6	<del>                                     </del>	+		21.3	+
Delay factor			0.50		-	.50	+-	50		$\dagger$		+-	50		十		0.50	
Increm. dela		$\top$	0.1	$-\!\!\!\!\!+\!\!\!\!\!-$	┿	7.9	+	0.7	<b> </b>	+		┿	.9		+		8.2	
PF factor			1.00	0	<del></del>	.000	1.0	000		+		1.	000		$\top$		1.000	1
		12.5	5	3	37.8	14	4.2	<b> </b>	+		20	0.5		$\top$	_	29.5	1	
Lane group LOS B			$\top$	D		В		十		1	С	<del>                                     </del>	$\top$		С			
Apprch. delay 12.5					$\dashv$	3	2.1			$\top$		20.	.5	-	$\top$		29.5	
Approach L	os	1	В		1		С			十		С	;		T		С	
Intersec. de	lay		27.1		十			In	terse	ctio	n LC	s					С	
HCS2000 <sup>TM</sup>		2000	Universi	Florida	All Ri	ahte F	Peserv	ed					v	ersion 4.1				

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	TWO	-WAY STOP	CONTR	OL SU	MMARY			
General Informatio	n		Site I	nform	ation			
Analyst Agency/Co. Date Performed Analysis Time Period	ORGA-RI ORGA 7/12/04 AM - EXI		Interse Jurisdi	ection		MACAR' FALLS 2004	THUR/Li	TTLÉ
Project Description И	/ASHINGTON	AQUEDUCT	<u> </u>					
East/West Street: LIT7			North/	South S	treet: MA	CARTHUR I	BOULEV	'ARD
Intersection Orientation:	North-Sout	h	Study	Period (	hrs): 1.00			
Vehicle Volumes a	nd Adiustn	nents						
Major Street	T	Northbound				Southbo	und	
Movement	1	2	3		4	5		6
	L	Т	R		L	Т		R
Volume	0	524	18		19	909		0
Peak-Hour Factor, PHF		0.87	0.87		0.88	0.88		1.00
Hourly Flow Rate, HFR	0	602	20		21	1032		0
Percent Heavy Vehicles	0				0	~~		
Median Type				Undivid	ded			
RT Channelized			0					0
Lanes	0				0	2		0
Configuration		T	TR		LT	T		
Upstream Signal		0				0		
Minor Street		Westbound				Eastboo	ınd	
Movement	7	8	9		10	11		12
	L	T	R		L	T		- R
Volume	1	0	12		0	0		0
Peak-Hour Factor, PHF	0.54	1.00	0.54		1.00	1.00		1.00
Hourly Flow Rate, HFR	1	0	22		0	0		0
Percent Heavy Vehicles	5	0	4		0	0		0
Percent Grade (%)		0				0		
Flared Approach		N				N		
Storage		O				0		
RT Channelized			0				-	0
Lanes	0	0	0	-+	0	0	-	0
Configuration	<del>                                     </del>	LR	<del>                                     </del>	-+				
Delay, Queue Length,	and Lovel of		<u> </u>			<u> </u>		
	NB	SB	,	Nestbou	ınd	· · ·	Eastbour	nd
Approach								
Movement	1	4	7	8	9	10	11	12
Lane Configuration		<u>LT</u>		LR				
v (vph)		21		23				
C (m) (vph)		967		602				
v/c		0.02		0.04				
95% queue length		0.07		0.12				
Control Delay		8.8		11.2		$\top$		
LOS		A		В		+		
Approach Delay				11.2			l	
		<del></del>						
Approach LOS			<u> </u>	В				

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	1000	-WAY STOP	CONTR	OL SU	<u>MMARY</u>			
General Informatio	n		Site I	nforma	ation			
Analyst Agency/Co. Date Performed Analysis Time Period	ORGA-R ORGA 7/12/04 PM - EXI		Interse Jurisdi Analys			MACAR FALLS 2004	THUR/LI	TTLE
Project Description W	ASHINGTON	AQUEDUCT	<u> </u>		-		_	
East/West Street: LITT			North/	South St	reet: MAC	CARTHUR	BOULEV	ARD
Intersection Orientation:				Period (h				, <u>.</u>
Vehicle Volumes ar					,		****	
Major Street	l / tujuoti.	Northbound				Southbo	und	
Movement	1	2	3	-	4	5		- 6
	L	T	R		L	T	$\neg$	R
√olume	0	494	2		5	601		0
Peak-Hour Factor, PHF	1.00	0.85	0.85		0.84	0.84		1.00
Hourly Flow Rate, HFR	0	581	2		5	715		0
Percent Heavy Vehicles	0				0			
Median Type				Undivid	ed			
RT Channelized			0					0
anes	0 2		0		0	2		0
Configuration	T 0		TR		LT	T		
Jpstream Signal					0			
Minor Street		Westbound				Eastbou	ind	
Movement	7	8	9		10	11		12
	L	T	R		L	T		R
/olume	26	0	38		0	0		0
Peak-Hour Factor, PHF	0.80	1.00	0.80		1.00	1.00		1.00
Hourly Flow Rate, HFR	32	0	47		0	0		0
Percent Heavy Vehicles	. 5	. 0	4		0	0		0
Percent Grade (%)		0				0	_	
Flared Approach		N				N		
Storage		0				0		
RT Channelized			0					0
anes	0	0	0		0	0	$\neg$	0
Configuration		LR						
Delay, Queue Length, a	nd Level of	Service	1	•				
Approach	NB	SB	· · · · · · · · · · · · · · · · · · ·	Vestbour	nd	1	astboun	d
Movement	1	4	7	8	9	10	11	12
ane Configuration	·	LT		LR	<del> </del>	<del>                                     </del>	<del></del>	<del></del>
(vph)		5		79	+	+		+
						+	-	
C (m) (vph)		1000		405		-		
//c		0.00		0.20				
95% queue length		0.02		0.72				
Control Delay		8.6		16.0				
_OS		Α		C				
Approach Delay				16.0				
approach belay								

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					SH	ORT	RI	FΡΩ	RT							
General Info	ormation				011				matio	n				-		
Analyst Agency or C Date Perforr Time Period	o. ned	OF 7/1	GA-RD RGA 13/04 XISTIN	IG		li A	nte Area Iuri:	rsection a Typo sdiction lysis	on e on				r areas	EDRAL		
Volume an	d Timing In	out				<u></u>			·							
				EB				WB		I		NB			SB	
			LT	TH	RT	L		TH	RT	-	LT	TH	RT	LT	TH	RT
Num. of Lan	es		0	1	0	0		1	0		0	2	0	0	2	0
Lane group				LTR				LTR				LTR	<u></u>		LTR	
Volume (vph			21	6	5	21		1	8		7	806	17	4	959	1
% Heavy ve	eh		2	0	0			0	0	_	2.	1	4	0	1	0
PHF Actuated (P/	/A\		0.53 P	0.53 P	0.53 P	0.50 P	8	0.58 P	0.58 P		.89 P	0.89 P	0.89 P	0.88 P	0.88 P	0.88 P
Startup lost		-	-	2.0	<del></del>	+-	$\dashv$	2.0	+-	+	,	2.0	<u> </u>	+	2.0	<del></del>
Ext. eff. gree				2.0		+		2.0	-	十		2.0			2.0	
Arrival type					3				3			3				
Unit Extensi	on				3.0				3.0			3.0				
Ped/Bike/R1	TOR Volume	0	) 14			0		6		0	11		0			
Lane Width	ane Width 12.							12.0				12.0			12.0	
Parking/Gra	de/Parking		Ν	0	Ν	V N		0	N		N	0	N	Ν	0	N
Parking/hr										1.			1			
Bus stops/h	r			0				0				0			0	
Unit Extensi	ion			3.0				3.0				3.0			3.0	
Phasing	EW Perm		02	0:	3	<u>.                                      </u>	04	_	NS Pe			06		07		08
Timing	G = 18.0	G =		G =		G =	G = G = 5 $Y = Y = 6$			0.0	G		G =		G =	
_	Y = 6 Analysis (hrs	Y =	00	Y =		$Y = Y = \theta$					Y :		Y =		Y =	
				l Dal		الممد	~	2 Doi	to rmoi			JE LEI	igin o	- 00.0		
Lane Gro	up Capac	ity, C		B	ay, a	nu L		VB	termi	llai	1011	NB		Τ' '	SB	
		+			-	_	_	·,-		<u> </u>	т.		T	_		т
Adj. flow rat	e	-	60	-	-		52			<u> </u>		933	-		1096	
Lane group	cap.		328	3			32	3		<u> </u>	2	107	ļ		2129	↓
v/c ratio		_	0.1	8			0.1	6			(	).44			0.51	
Green ratio			0.2	2			0.2	22			(	0.63			0.63	
Unif. delay	d1		25.	1			24.	9				7.8			8.3	T
Delay factor	r k		0.5	0			0.5	0			(	0.50			0.50	1
Increm. dela	ay d2		1.2	2	$\top$		1.1	1		Γ	$\top$	0.7			0.9	T
PF factor			1.00	00	$\top$		1.0	00		Γ	1	.000			1.000	
Control delay 26.3		3	$\neg$		26.	.0		Г	寸	8.5	1		9.2	1		
Lane group LOS C			$\top$		С	;		Γ		A	1		Α			
Apprch. delay 26.3				2	6.0	)			8	.5	•		9.2			
Approach LOS C						С			Г	,	4			Α		
Intersec. de	elay		9.8		$\neg$			In	tersec	tion	LOS				Α	
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		SHORT REPORT Site Information																
General Info	ormation				31							_						
Analyst Agency or C Date Perforr Time Period	co. ned	OF 7/1	GA-RD RGA 13/04 XISTIN	IG			Inte Are Juri	ersect a Typ isdicti alysis	ion e on	n A	1AC		THUR/ III othe	r a		EDRAL		
Volume an	d Timing In	out										-			-			
				EB				WB					NB				SB	
			LT	TH	RT	. L	T	TH	$\Box$	RT	LT		TH	1	₹T	LT	TH	RT
Num. of Lan	ies		0	1	0	0		1		0	0		2		0	0	2	0
Lane group				LTR		Т		LTR	Т		l		LTR	Γ			LTR	
Volume (vpl	٦)		30	6	5	13	3	2	7	14	12	?	548	1	6	14	1123	5
% Heavy ve	eh		2	0	0	1		0		0	2		1		4	0	1	0
PHF			0.73	0.73	0.73	0.7	3	0.73		0.73	0.9	0	0.90	0.	90	0.87	0.87	0.87
Actuated (P			Ρ	Ρ	P	P		Р	$\perp$	Ρ	P		Р	_	Р	Р	Р	Р
Startup lost				2.0				2.0	$\perp$				2.0	L			2.0	
Ext. eff. gree	en		ļ	2.0	_			2.0	4		_		2.0	L			2.0	<u> </u>
Arrival type			<del> </del>	3	├—	+		3	4		_		3	┝			3	<b></b>
Unit Extensi	on FOR Volume		8	3.0	0	14	1	3.0	+	0	6		3.0	╀	0	11	3.0	0
Lane Width	IOR Volume		l	12.0	10	17		12.0	+	0	٥		12.0	Н		<del>'''</del>	12.0	۲
	de/Parking		N	0	N	$\perp_{\scriptscriptstyle N}$	,	0	╅	N	N		0		N	N	0	l <sub>N</sub>
Parking/Grade/Parking Parking/hr			<u> </u>	۰	<del>                                     </del>	+-	_	Ť	7		<u> </u>		Ť	Т				
Bus stops/h	r		<del>                                     </del>	0	┼	$\dashv$	_	0	+		Н	_	0	t			0	<u> </u>
Unit Extensi			<del> </del>	3.0	$\vdash$	+		3.0	+		Н		3.0	T		<b></b>	3.0	<del>                                     </del>
Phasing	EW Perm	1	02	0:	3				S Per						07	08		
Timing	G = 18.0	G =		G =				= 50.	0.0 G= G				G=					
	Y = 6	Y =		Y =		Y =			Υ:	= 6	Y = Y = Y = Cycle Length C = 80.0							
	Analysis (hrs			<u> </u>					_	<del></del>			de Len	gth	1 C =	= <i>80.0</i>	)	
Lane Gro	up Capac	ity, C			ay, a	and L			te	<u>rmin</u>	atio	<u>on</u>						
			E	В			V	VΒ	_	_		_	NB	_			SB	
Adj. flow rat	e		56				40	)	L			1	640	L		<u> </u>	1313	
Lane group	сар.		328	5			34	9				2	046	L			2113	
v/c ratio			0.1	7			0.1	11				C	).31				0.62	
Green ratio			0.2	2			0.2	22	Γ			C	0.63	Γ			0.63	
Unif. delay	d1		25.	0			24.	.7	Г				7.0	T			9.2	
Delay factor	rk		0.5	o			0.5	50	┢			0	).50	T			0.50	
Increm. dela	ay d2		1.2	2	$\top$		0.	7	Г			1	0.4	T			1.4	
PF factor 1.000				00	$\dashv$		1.0	00	Г			1	.000	T			1.000	
Control delay 26.1				_		25.	.3	Γ			T	7.4	T			10.6		
Lane group	LOS		C				С	;	Γ		A					В		
Apprch. del	ay		26.1		25.3				7.4					10.6		-		
Approach L	OS		С			·	С					,	4				В	
Intersec. de	Intersec. delay 10.3							Intersection LOS B										
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# HIGHWAY CAPACITY MANUAL ANALYSIS WORKSHEETS – FUTURE/TOTAL TRAFFIC SITUATION IN VICINITY OF PROJECT SITE

O.R. George & Associates, Inc.

	IWC	D-WAY STOP	CONTR	OL SU	MMARY			
General Information	on		Site I	nforma	ation			
Analyst	ORGA-F	RD	Interse	ection		LOUGHBO	RO/DALE	CARLIA
Agency/Co.	ORGA		Jurisdi	iction				
Date Performed	7/13/04		Analys	sis Year		2004		
Analysis Time Period	AM - 7	FOTAL						
Project Description V	VASHINGTO	V AQUEDUCT						
East/West Street: LOI						LECARLIA F	PARKWAY	/
Intersection Orientation	: East-West	!	Study I	Period (I	hrs): 1.00	)		
Vehicle Volumes a	and Adjust	ments						
Major Street	T .	Eastbound				Westbou	ınd	
Movement	1	2	3		4	5		6
	L	T	R		L	Т		R
Volume (veh/h)	475	149	0		0	125		126
Peak-hour factor, PHF	0.91	0.91	1.00		1.00	0.87		0.87
Hourly Flow Rate (veh/h)	521	163	0		0	143		144
Proportion of heavy vehicles, P <sub>HV</sub>	4				0			
Median type				Undivid	led			
RT Channelized?			0					0
Lanes	0	1	0		0	1		0
Configuration	LT							TR
Upstream Signal		0				1		
Minor Street		Northbound				Southbo	und	-
Movement	7	8	9		10	11		12
5)\$	L	Т	R		L	Т	<u> </u>	R
Volume (veh/h)	0	0	0		144	0		377
Peak-hour factor, PHF	1.00	1.00	1.00		0.93	1.00	(	0.93
Hourly Flow Rate (veh/h)	0	0	0		154	0		405
Proportion of heavy	0	0	0		0	0		1
vehicles, P <sub>HV</sub>	<u> </u>							
Percent grade (%)		0				0		
Flared approach		N				N		
Storage		0				0		
RT Channelized?			0					0
Lanes	0	0	0		1	0		1
Configuration					Ĺ			R
Control Delay, Queue	Length, Leve	el of Service						
Approach	EB	WB	N	orthbou	ınd	S	outhboun	d
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT					L		R
Volume, v (vph)	521					154		405
Capacity, c <sub>m</sub> (vph)	1257	<del>                                     </del>				88		822
v/c ratio	0.41	<del></del>			_	1.75		0.49
Queue length (95%)	2.11					38.93		2.87
Control Delay (s/veh)	9.9					1485		13.6

Los	Α	<u> </u>	F B
Approach delay (s/veh)			419.1
Approach LOS			 F ,

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LOUGHBURO/DALECARLIA

AM - TOTAL/FUTURE

General Information	n		Sito In	nforma	tion			
	ORGA-R			_	uon	LOUICUROI	DO/DALE	CADLIA
Analyst Agency/Co.	ORGA-R ORGA	<u> </u>	Interse			LOUGHBOI	KU/DALE	JAKLIA
Date Performed	7/13/04		Analysi			2004		
Analysis Time Period	PM - TO	ΤΔΙ	Allalysi	15 1 641		2004		
	VASHINGTON					<u> </u>		
East/West Street: LOU			North/S	outh Str	reet: DA	LECARLIA F	DADKWAV	, .
ntersection Orientation		DAD			rs): 1.00		AMMAI	
			Olddy I	Criod (ii	1.00			
/ehicle Volumes a	na Aajustr			<del>'</del>		Monthau		
Major Street Movement	1	Eastbound	3		4	Westbou 5	ina	6
novement	<del>                                     </del>	2 T	R		<del>4</del> L	<del>  3</del>		R
Volume (veh/h)	291	83	0	-	0	147		175
Peak-hour factor, PHF	0.91	0.91	1.00	-	1.00	0.94		).94
Hourly Flow Rate								
veh/h)	319	91	0		0	156		186
Proportion of heavy	4				0			
vehicles, P <sub>HV</sub>								
Median type				Undivide	ed		-	
RT Channelized?			0					0
anes	0	1	0		0	1		0 .
Configuration	LT							TR
Jpstream Signal		0				0		
Minor Street		Northbound				Southboo	und	
Movement	7	8	9		10	11		12
	L	Т	R		L	T		R
/olume (veh/h)	0	0	0		112	0		563
Peak-hour factor, PHF	1.00	1.00	1.00		0.90	1.00		0.90
Hourly Flow Rate (veh/h)	0	0	0		124	0		625
Proportion of heavy vehicles, P <sub>HV</sub>	0	О	0		1	О		1
Percent grade (%)		0	· · ·			0		
lared approach		N		$\neg \vdash$		N		·
Storage	-	0				0		
RT Channelized?	<del>                                     </del>	<del>                                     </del>	0	-				1
_anes	0	0	0	-+	1	0		1
Configuration	<del>                                     </del>	<del></del>		_	L	<del></del>		R
Control Delay, Queue	Longth Love	of Sorvice						
Approach	EB	WB	N	orthbou	nd	9	outhboun	d
Movement	1	4	7	8	9	10	11	12
_ane Configuration	LT	T	,		+ $$	L		R
Volume, v (vph)	319			<del></del>		124		625
						204		787
Capacity, c <sub>m</sub> (vph)	1200							<u> </u>
v/c ratio	0.27					0.61		0.79
Queue length (95%)	1.08					4.21		10.27
Control Delay (s/veh)	9.1					49.0		26.5

LOS	Α		ΙE		D
Approach delay (s/veh)	, , <del>-</del> -			30.2	
Approach LOS				D	

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LOUGHBORD/DALECARLIA
PM- TOTAL/FUTURE

					SH	OR	T R	EPC	R	Т								
General Inf	ormation						Sit	te In	for	matio	n				_			
Analyst Agency or C Date Perfor Time Period	med	ORG/ 7/12 Al	A-RD 2/04 M <b>- 7</b>	STAL			Ard Jui	erse ea T risdic alys	ype ctic	e on		LO	HO. All oti	SPIT	re		,	
Volume an	d Timing Inp	out																
				EB				W	Β		L		NB				SB	
	. <u> </u>		LT	TH	R.	_	LT	Th		RT	+-	<u>_T</u>	TH	R1	Γ	LT	TH	RT
Num. of Lar	nes		0	1	0		0	2		0		0	0	0		0	0	0
Lane group				LT				TR	2								LR	
Volume (vpl			27	560				464	4	61	$\perp$					57		27
% Heavy ve	eh		0	3	_	4		3	_	0	╄			_		0		0
PHF	·/^ )		0.85 P	0.85 P		+		0.9 P	2	0.92 P	╀		_	_	_	0.84 P	-	0.84 P
Actuated (P Startup lost				2.0		$\dashv$		2.0	)		+	—		$\vdash$			2.0	<del></del>
Ext. eff. gre				2.0	$\vdash$	+		2.0			t		<b></b>				2.0	
Arrival type				3		$\top$		3									3	
Unit Extens	ion			3.0				3.0	)								3.0	
Ped/Bike/R	TOR Volume						10	0		0		0				17	0	0
Lane Width				12.0				12.	0								12.0	
Parking/Gra	arking/Grade/Parking		Ν	0	N		N	0	)	Ν		N		Ν		N	0	N
Parking/hr																		
Bus stops/h	r			0				0			Τ						0	
Unit Extens	ion			3.0				3.0	)		Γ						3.0	
Phasing	EW Perm	02	2	03		$\Box$	04			B Only			06			07	_	08
Timing	G = 52.0	G =		G =		_	G =		_	= 16.0	)	G=		_	<u>;</u> =		G =	
	Y = 6	Y =		Y =		Y = Y = 6					Y = Y = Y = Y = Cycle Length C = 80.0							
	Analysis (hrs			L D - L -					4 -			_	ie Len	gun C		- 00.0		
Lane Gro	up Capaci	ty, Go			у, а Т	<u>na</u>			ete	rmina	atio	on	NID		_			
			E		4			VB	_			_	NB				SB	
Adj. flow rat	te		691				57	0	╀			4					100	—
Lane group	сар.		115	2	-	· ·	224	<b>19</b>	L								349	
v/c ratio			0.60	)			0.2	25	Ι								0.29	
Green ratio			0.65	5	$\neg$		0.6	35	T			T					0.20	
Unif. delay	d1		8.0		十		5.9	9	T		•	寸					27.2	$\vdash$
Delay factor	r k	_	0.50	,	7		0.5	50	T			寸					0.50	
Increm. dela	ay d2		2.3	一	$ extstyle  ag{7}$		0.	3	T	$\neg \uparrow$		_		-			2.1	
PF factor			1.00	0	1		1.0	00	Ť								1.000	
Control dela	ау		10.4	1	$\top$		6.	1	T								29.2	
Lane group LOS B						Α	\	T								С		
Apprch. delay 10.4					6.1										29.2			
Approach LOS B			A					С										
Intersec. de	ntersec. delay 10.0				Intersection LOS A													
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				_	SH	OR	T R	EPC	R	T								-
General Inf	ormation							_		matio	n							
Analyst Agency or C Date Perfor Time Period	med	ORG/ OR 7/12 PI	GA VOA	10TAL	•		Ar Ju	erse ea Ty risdic nalysi	ype ctio	e on		LO	HO All ot	SP	TAL are		/	
Volume an	d Timing Inp	out																
		,	L <u> </u>	EB	_	_		W	_		L	NB		т.	-		SB	
		-	LT	TH	R	$\rightarrow$	LT	Th	_	RT	+	<u>LT</u>	TH	+-	₹T	LT	TH	RT
Num. of Lan	nes		0	1	0	-	0	2		0	╀	0	0	1	)	0	0	0
Lane group	· ·			LT	<u>L</u>	4		TR			╀			L			LR	24
Volume (vpl		_	21	342	<u> </u>	-		650 3	_	53 0	╀			╄		51 0	<u> </u>	24 0
% Heavy ve	en		0 0.84	3 0.84	⊢	$\dashv$		0.93	~	0.93	╁	_	├	╁	-	0.85	-	0.85
Actuated (P	/A)		0.64 P	P	$\vdash$	+		0.9. P	$\dashv$	0.93 P	十			+		P	1	P
Startup lost				2.0		$\dashv$		2.0			T			T			2.0	
Ext. eff. gree				2.0				2.0			Γ						2.0	
Arrival type				3		_		3			Ļ			╙			3	
Unit Extensi				3.0		_		3.0				_		L			3.0	
	TOR Volume			100	_	4	7	0	_	0		0		$\vdash$		10	0	0
Lane Width				12.0		_		12.0	_	<u> </u>	╀		<u> </u>	<u> </u>		· · ·	12.0	1
	arking/Grade/Parking		N	0	Ν		N	0		N	Ł	N_		<u> </u>	V	N	0	N
Parking/hr			<u> </u>	<u> </u>		_		_			╀			╄			<u> </u>	
Bus stops/h				0	<u> </u>	_		0			╄			╄			0 "	
Unit Extensi			<u> </u>	3.0		<u>_</u>		3.0		<u> </u>	L			Ļ			3.0	
Phasing	EW Perm	02	2	03		04				B Only			06 G =		07		08	
् Timing	G = 52.0 Y = 6	G = Y =		G = Y =		G = Y =				= 16.0 = 6		Y =			G = Y =		G = Y =	
Duration of	Analysis (hrs		2	1 -		' '			1 .					_		80.0		
	up Capaci		=	I Delay	/ 2	nd	100	: De	to	rmin	ati			9	Ť			
Lanc Oio	up Gapaci	T C	E		7	iiia		NB			411	<u> </u>	NB				SB	
Adi flav rat		┿	432		╅		75		Т			Т	NB			┝	88	T
Adj. flow rat			—		+		-		╀	-	_	$\dashv$		⊢			<del></del>	+
Lane group	<u>cap.</u>		113		4		226		╄			$\dashv$		L			350	₩
v/c ratio			0.38	3	_		0.3	33	L			_		_			0.25	ļ
Green ratio			0.68	5			0.6	35									0.20	
Unif. delay	d1		6.5				6.	3									27.0	
Delay factor	r k		0.50	)	T		0.5	50	Τ					Г			0.50	
Increm. dela			1.0		+		0.	4	T	$\neg$		$\dashv$		$\vdash$			1.7:	
PF factor			1.00		$\top$	-	1.0	000	T			$\dashv$		T			1.000	
Control delay 7.5			$\dagger$		6.		T	$\neg \uparrow$		十			_		28.7			
Lane group LOS A			$\dashv$		A		$\dagger$	$\dashv$		_					С			
Apprch. delay 7.5			$\forall$		6.7		_			_		_			28.7	<u></u>		
Approach LOS A				A A										С				
Intersec. delay 8.5				+	_		ļi	nte	rsection	n I	OS		_			A		
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		WAY STOP					_	
<u>General Informatio</u>	<u>n</u>		Site I	nforma	tion			
Analyst	ORGA-RD	)	Interse	ection		LOUGHBO HOSPITAL		LEY
Agency/Co.	ORGA		Jurisdi	ction				
Date Performed	7/13/04 AM - TOTA	ΛΙ	Analys	sis Year		2004		
Analysis Time Period								
Project Description WEast/West Street: LOU	ASHINGTON A		North/C	South Ctr	oot: CIDI	EV HOCDIT	AL ENTE	ANCE
ntersection Orientation:		40			rs): 1.00	EY HOSPIT	AL ENTR	ANGE
			Olddy I	enou (m	3). 1.00			
Vehicle Volumes a	nd Adjustm					14/		
Major Street		Eastbound	1 ^			Westboun	<u>a</u>	_
Movement	1	2 T	3 R		4	5 T		6 R
Volume (veh/h)	3	584	0		0	500		8
Peak-hour factor, PHF	0.97	0.97	1.00	_	1.00	0.83	0	.83
Hourly Flow Rate			-	<del></del>		-	<del>-  `</del>	
(veh/h)	3	602	0			602	_	9
Proportion of heavy	0				0			
vehicles, P <sub>HV</sub>		<u> </u>	<u></u>			-		
Median type				Undivide	d			
RT Channelized?			0			<u> </u>		0
anes	0	1	0		0	2		0
Configuration	LT					T		TR
Jpstream Signal		0		L_		0		
Minor Street		Northbound				Southbour		
Movement	. 7	8	9		10	11		12
	· L	Т	R		L	Т		R
Volume (veh/h)	0	0	0		3	0		2
Peak-hour factor, PHF	1.00	1.00	1.00		0.62	1.00	0	.62
Hourly Flow Rate (veh/h)	0	0	0		4	0		3
Proportion of heavy								,
vehicles, P <sub>HV</sub>	0	0	0		1	0		1
Percent grade (%)		0	_			0		
Flared approach	<u> </u>	N				N		
Storage		0	-			0		
RT Channelized?	1	<u> </u>	0					1
Lanes	0	0	0		1	0		1
Configuration	† <u> </u>				L			R
Control Delay, Queue	Length, Level	of Service						
Approach	EB	WB	N	lorthbour	nd	So	uthbound	1
Movement	, 1	4	7	8	9	10	11	12
Lane Configuration	LT					L		R
Volume, v (vph)	3					4		3
Capacity, c <sub>m</sub> (vph)	973					173		689
v/c ratio	0.00			-		0.02		0.00
Queue length (95%)	0.00					0.02		0.00

Control Delay (s/veh)	8.7				 26.3		10.2
LOS	Α				D		В
Approach delay (s/veh)	<u>-</u>	<u>:-</u>				19.4	
Approach LOS			Ĭ	-		С	

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Version 4.1d

LOUGHBURO/SIBLEY

UNSIGNALIZED ENT. 
AM TOTAL/FUTURE

	1770-	WAY STOP	CONTINUL	30IVIIVIAIN I		
General Informatio	n		Site Infor	mation		
Analyst	ORGA-RI	D	Intersection	1	LOUGHBOF HOSPITAL	RO/SIBLEY
Agency/Co.	ORGA		Jurisdiction			
Date Performed	7/13/04		Analysis Ye		2004	
Analysis Time Period	РМ- ТОТА					
	ASHINGTON		h	0101	= 11100=1=11	
East/West Street: LOU		<u>AD</u>			EY HOSPITAL	ENTRANCE
ntersection Orientation:			Study Perio	d (hrs): 1.00	<del> </del>	
<u>Vehicle Volumes a</u>	nd Adjustm					
Major Street	<u> </u>	Eastbound			Westbound	
Movement	1	2	3	4	5	6
	L	Т	R	L	Т	R
Volume (veh/h)	5	392	0	0	644	5
Peak-hour factor, PHF	0.75	0.75	1.00	1.00	0.90	0.90
lourly Flow Rate veh/h)	6	522	0	0	715	5
Proportion of heavy	0			0		
vehicles, P <sub>HV</sub>		L				
Median type				ivided		
RT Channelized?			0			0
anes	0	1	0	0	2	0
Configuration	LT				T	TR
Jpstream Signal	<u> </u>	0			0	
Minor Street		Northbound			Southbound	
Movement	7	8	9	10	11	12
	L	T	R	L	Т	R
/olume (veh/h)	0	0	0	2	. 0	7
Peak-hour factor, PHF	1.00	1.00	1.00	0.75	1.00	0.75
Hourly Flow Rate (veh/h)	0	0	0	2	0	9
Proportion of heavy						
vehicles, P <sub>HV</sub>	0	. <b>0</b> ' *	0	1	0	::1
Percent grade (%)		0			0	•
lared approach		N		"-	N	
Storage		0			0	
RT Channelizëd?			0			1
anes	0	0	0	1	0	1
Configuration				L		R
Control Delay, Queue I	Length, Level	of Service				
Approach	EB	WB	North	bound	South	nbound
Movement	1	4		3 9	10	11 12
ane Configuration	LT	-	<del></del>		L	R
Volume, v (vph)	6				2	9
Capacity, c <sub>m</sub> (vph)	887			-	163	635
//c ratio						
	0.01		·		0.01	0.01
Queue length (95%)	0.02				0.04	0.04

Control Delay (s/veh)	9.1			27.4		10.8
LOS	Α	 -	-	D		В
Approach delay (s/veh)	1				13.8	
Approach LOS					В	

 $V_{qq}^{\rm log}$ 

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Version 4.1d

LOUGHBORD/SIBLEY

UNSIGNALIZED ENTRANCE

PM TOTAL/FUTURE

					SH	ORT F	<u>(EP</u>	<u>OF</u>	₹T							
General Inf	ormation					Sit	e Inf	orr	nation							
Analyst Agency or C Date Perfor Time Period	med	7/1	GA-RD 12/04 AM - <b>1</b>	OTAL		Are Jur	ersec ea Ty isdic alysi	ype ctior			Δ	l other	areas	HBORC		
Volume an	d Timing In	put														
				EB				/B	T			NB			SB	
Nives of Law			LT	TH	RT	LT	T	_	RT	LT		TH	RT	LT	TH	RT
Num. of Lar	ies		0	1	0	0	1		1	0		2	0	0	2	0
Lane group			1	LTR			L		R	Ļ		LTR		10-	LTR	
Volume (vpl % Heavy vo			17	26 0	5 0	270 3	10	_	161 3	3 0	_	459	367 3	197	664	3
PHF	311		0.80	0.80	0.80	0.89	0.8		0.89	0.9	1	2 0.94	0.94	3 0.89	0.89	0.89
Actuated (P	/A)	_	P	P	P	P	P		P	P	_	P	P	P	P	P
Startup lost				2.0			2.0		2.0	Ť		2.0		T	2.0	
Ext. eff. gre	en			2.0			2.0		2.0			2.0			2.0	
Arrival type				3					3			3			3	
Unit Extensi	on			3.0			3.	0	3.0			3.0			3.0	
	TOR Volume		0		0	4	匚		0	3			0	2		0
Lane Width			N	12.0			12.	.0	12.0			12.0			12.0	<u> </u>
	Parking/Grade/Parking			0	N	N	(	)	N	Ν		0	N	Ν	0	N
Parking/hr							丄			Щ			<u> </u>	<u> </u>	<u> </u>	ļ
Bus stops/h				0			0		0			0			0	<u> </u>
Unit Extensi			<u></u>	3.0		<u> </u>	3.		3.0			3.0			3.0	<u> </u>
Phasing	EW Perm		)2	03	3	04			IS Perr			06		07		08
Timing	G = 24.0 Y = 6	G = Y =		G = Y =		G = Y =		_	= 44.0 = 6		G = Y =		G = Y =		G = Y =	
Duration of	Analysis (hrs		20	Υ =		Υ =		ŢΥ	= 0				gth C =		_	
	up Capaci			L Dola	N 21	2d I O	<u> </u>	ot.	rmin		_	ic Long	guro	- 00.0		
Lane Oro	up Gapaci	iy, c	E	_	iy, ai		<u>ур</u> МВ	CLC	<del></del>	alic	<u>'''</u>	NB		Γ	SB	
Adj. flow rat	e ·	+	59		+	314		18	31	_	Tε	881			970	T
Lane group		1	464	+	1	383		47			┿	727			1152	+
v/c ratio		1	0.13		┪┈	0.8	2	0.3	39		0	.51	1		0.84	<del>                                     </del>
Green ratio			0.30			0.30	0	0.3	30		0	.55			0.55	
Unif. delay o	11		20.4			26.0	0	22	2.2		1	1.3			15.1	
Delay factor	k		0.50			0.5	0	0.5	50		0	.50			0.50	
Increm. dela	y d2		0.6			20.	1	2.	4		1	1.1			8.1	
PF factor 1.000			0		1.00	00	1.0	000		1.	000			1.000		
Control delay 20.9						46.	1	24	.6		1	2.3			23.2	
Lane group LOS C					D		C	;			В			C		
Apprch. dela	Apprch. delay 20.9					38.2				12.3				23.2		
Approach L	os		С		D B					С						
Intersec. de	itersec. delay 22.3					Intersection LOS C										
HCS2000 <sup>TM</sup>			Co	Copyright © 2000 University of Florida, All Rights Reserved									v	ersion 4.1		

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Short Report

					S	HC	ORT F		_									
General Inf	ormation						Sit	e Infe	orn	nation								
Analyst Agency or C Date Perfori Time Period	med	OR( OI 7/1 PM - 1	1	Intersection MACARTHUR/LOUGHBORO Area Type All other areas Jurisdiction Analysis Year 2004														
Volume an	d Timing In	out																
				EB				_ W					NB	_			SB	
			LT	TH	R		LT	TI		RT	Lī	_	H	-	₹T	LT	TH	RT
Num. of Lan	ies		0	1	0		0	2	_	0	0		2	_(	)	0	2	0
Lane group				LTR	L		DefL	TF					LTR	L			LTR	
Volume (vpl			13	8	1		491	23		165	2		379	20		130	555	3
% Heavy ve	en		0.61	0 0.61	0.6		3 0.93	0.9	2	3 0.93	0 0.80	0	2 0.80	0.0	80 80	3 0.87	1 0.87	0 0.87
Actuated (P.	/Δ)		0.6 j P	0.61 P	D.C		0.93 P	0.9 P		10.93 P	0.00 P	_	0.60 P	0.0 F		0.67 P	0.67 P	0.67 P
Startup lost			<del>                                     </del>	2.0	广	_	2.0	2.0		<u> </u>	Ϊ́		2.0	Ħ		<del>                                     </del>	2.0	╁
Ext. eff. gree				2.0			2.0	2.0	_				2.0				2.0	
Arrival type				3			3	3					3				3	
Unit Extensi	ion			3.0			3.0	3.0	)				3.0				3.0	
Ped/Bike/R	TOR Volume		_1		0		4			0	1			(	)	4		0
Lane Width				12.0			12.0	12.	0				12.0	L			12.0	
Parking/Gra	de/Parking		N	0	٨	/	N	C	)	Ν	Ν		0	1	٧	Ν	0	Ν
Parking/hr												-						
Bus stops/h	r			0			0	0					0				0	
Unit Extensi	ion			3.0			3.0	3.0	)				3.0				3.0	
Phasing	EW Perm	. (	02	0:	3.	Т	04	ļ	_	NS Perr	_		06			07		08
Timing	G = 36.0	G =		G =		_	Ğ =		_	i = 32.0		G =			G =		G =	
	Y = 6	Y =	00	Υ =			Y =		Υ	= 6		Y =			Y =	= 80.0	Y =	
	Analysis (hrs			L Dali		_	410	<u> </u>					ie Leii	yuı	<u> </u>	- 00.0		
Lane Gro	up Capaci	ty, C			ay, T	an			916	ermin T	auc	11	NB	_		П	SB	
A -1: - 6:	<u> </u>	+	E	<del>- T</del>	$\dashv$	50		WB	$\overline{}$			٦.	727	_		-	790	_
Adj. flow rat		┿	36	_		528	_	202	+			+		╀		-		+
Lane group	cap.	┿	709	_	4	609	_	724	4			+	278	┞		_	891	₩
v/c ratio			0.05	5		0.8	7 (	0.28	4			0	).57	L			0.89	
Green ratio			0.45	5		0.4	5 (	0.45	Т			0	.40				0.40	
Unif. delay	d1		12.4	1	Ī	19.	8 1	3.8				1	8.6				22.3	
Delay factor	·k		0.50	)	$\Box$	0.5	0 0	0.50	Т			7	).50	Π			0.50	
Increm. dela	ay d2		0.1			17.	9	1.0	十			T	1.9				14.7	
PF factor	1.00	0	$\neg$	1.00	00 1	.000	十			1	.000				1.000			
Control delay 12.5						37.	8 1	14.8	$\dagger$			2	20.5	Γ			37.1	
Lane group LOS B						D		В	十		-	T	С				D	
Apprch. delay 12.5					$\dashv$		31.4	4				20	0.5			37.1		
Approach LOS B							С					(	C D					
Intersec. de	lay		29.6	9.6 Intersection LOS						С								
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					SH	ORT	RE	PO	RT							
General Inf	ormation	_		-		S	ite	Infor	mation							
Analyst ORGA-RD Intersection MACARTHUR/LOUGHBORO Agency or Co. Date Performed 7/12/04 Time Period AM - TOTAL Intersection MACARTHUR/LOUGHBORO Area Type All other areas Jurisdiction ROUTE'S SOUTH ALONG Analysis Year 2004 MACA												,	IR			
Volume an	d Timing Inp	out														
				EB	_			WB	,			NB			SB	
			LT	TH	RT	Lī	$\Box$	<u> TH</u>	RT	L.	<del>-</del>	TH_	RT	LT .	TH	RT
Num. of Lar	ies <sup>-</sup>		0	1	0	0	_	1	1	0		2	0	0	2	0
Lane group				LTR	<u> </u>		_	LT	R	L	_	.TR	ļ		LTR	
Volume (vpl			17	26	5	270	2	10	128	3	<u>_</u>	192	367	164	697	3
% Heavy ve PHF	<u>en</u>		0 0.80	0.80	0.80	0.89	- /	0 0.89	3 0.89	0.9	1 (	2 ).94	3 0.94	0.89	0.89	0 0.89
Actuated (P	/Δ)		P	0.60 P	0.60 P	P. 0.0	9 1	0.09 P	0.69 P	0.9 P	4	P.94	0.94 P	0.69 P	0.69 P	0.69 P
Startup lost			<i>'</i>	2.0	<del>                                     </del>	†	十	2.0	2.0	╁	+	2.0	<del>                                     </del>	+ _	2.0	ť
Ext. eff. gree		-		2.0		+-	_	2.0	2.0		_	2.0			2.0	
Arrival type				3				3	3			3			3	
Unit Extensi	on			3.0	i	T	Т	3.0	3.0			3.0			3.0	
Ped/Bike/R7	TOR Volume		0		0	4			0	3			0	2		0
Lane Width				12.0			1	12.0	12.0		1	2.0			12.0	
Parking/Gra	de/Parking		Ν	0	N	N		0	Ν	N		0	Ν	N	0	N
Parking/hr															1	
Bus stops/h	r			0				0	0		Т	0			0	
Unit Extensi	on			3.0				3.0	3.0			3.0			3.0	
Phasing	EW Perm		)2	03	3	(	)4		NS Per	_		06		07		08
Timing	G = 24.0	G =		G = Y =	G =			3 = 44.	_	G =		G =		G =		
	Y = 6 Analysis (hrs	Y =	20		Y = $Y = 6$ $Y = $ $Y =$									Y =		
				I Dale		- al I (	00	D-4				Len	gui C -	- 00.0		
Lane Gro	up Capaci	ty, C			ay, a	na L	_		ermin 1	atic				т—		
		+-	El	<del></del>	-	-	WI	_			_	NB		_	SB	
Adj. flow rat	e		59		$\bot$		314	—	44		91		<u> </u>	<u> </u>	970	_
Lane group	cap.	$oldsymbol{\perp}$	464			3	883	4	70		17.	33			1168	
v/c ratio			0.13	3		0	.82	0.	.31		0.8	53			0.83	
Green ratio			0.30	)		0	.30	0.	.30		0.8	55			0.55	
Unif. delay o	11		20.4	1		2	6.0	2	1.6		11	.4			14.9	
Delay factor	k		0.50	,		0	.50	0.	.50		0.8	50			0.50	
Increm. dela	ay d2	$\top$	0.6		十	2	0.1	1	.7		1.	2	<u> </u>		7.4	
PF factor		+	1.00	0	$\neg$	1.	000	) 1.	000		1.0	000	†		1.000	<del>                                     </del>
Control dela	ly '	,	+	$\rightarrow$	6.1	-	3.3		12				22.3			
Lane group		+	_	D	-	С		E				С				
Apprch. dela	20.9	<u> </u>	+	38	.9			12.6					22.3			
Approach LOS C						D					В		С			
Intersec. de	lay		21.7	-				Int	ersection	n LO	os				С	
									ersion 4.1							

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*2*		-			SH	ORT	RI	EPC	R	T								
General Inf	ormation					S	ite	Info	rm	ation								
Analyst ORGA-RD Intersection MACARTHUR/LOUGHBORD Agency or Co. ORGA Area Type All other areas Date Performed 7/12/04 Jurisdiction Time Period PM - TOTAL 2 Analysis Year 2004  Volume and Timing Input													0					
Volume an	d Timing In	out																
,				EB				WE					NB			SB		
			LT	TH RT		$\rightarrow$		TH		RT	LT		TH	RT	LT	TH	RT	
Num. of Lar	nes		0	1 0		0 0		2	$\dashv$	0	0		_2	0	0	2	0	
Lane group				LTR		Def	L	TR	$\perp$				LTR		<u>.</u>	LTR		
Volume (vpl			13	8	1	491		23	ightharpoons	135	2		412	201	97	588	3	
% Heavy ve	<u>eh</u>		0	0	0	3	_	0	4	3	0	_	2	3	3	1:	0	
PHF	/A)		0.61 P	0.61 P	0.61 P	0.9. P	3	0.93 P	4	0.93 P	0.8 P	_	0.80 P	0.80	0.87	0.87	0.87 P	
Actuated (P Startup lost				2.0	<del>-</del>	2.0	, -	2.0	+	Р	<del>   </del>		2.0	Р	P	P 2.0	+~	
Ext. eff. gree			-	2.0		2.0	_	2.0	+				2.0		+-	2.0		
Arrival type	1:		<b>-</b>	3		3	$\neg$	3	十		Н		3	-	†	3		
Unit Extensi	ion			3.0		3.0	,	3.0	十				3.0			3.0		
Ped/Bike/R	ΓOR Volume		1		0	4	┪		ヿ	0	1			0	4		0	
Lane Width				12.0		12.0	0	12.0	一				12.0			12.0		
Parking/Gra	de/Parking		Ν	0	Ν	N		0	T	N	Ν		0	Ν	Ν	0	Ν	
Parking/hr							$\neg$		Т									
Bus stops/h	r			0		0		0					0			0		
Unit Extensi	on			3.0		3.0	,	3.0	T				3.0			3.0		
Phasing	EW Perm	(	)2	03	3		)4		NS	S Perr	n		06		07		08	
Timing	G = 36.0	G =		G =		G =				= 32.0		G =		G:		G =		
	Y = 6 Analysis (hrs	Y =	20	Υ =		Y = Y = 6 $Y = Y = $ Cycle Length $C = 80.0$									Υ =			
				l Dala				<u> </u>	4			_	ie Len	gin C	- 80.0	,		
Lane Gro	up Capaci	ty, C			ıy, a	na L			tei	rmini	atic	n	ND		1	0.0		
A II		+	E	<del>- 1 -</del>				VB				Т.	NB		+	SB		
Adj. flow rat		—	36	+	_	28	17		╄			+	768		<b>-</b>	790	<del> </del>	
Lane group	cap.		717		60	9	72	7	L			1	282			908	<del> </del>	
v/c ratio			0.05		0.	87	0.2	23	L			0	.60			0.87		
Green ratio			0.45		0.	45	0.4	5				0	.40			0.40		
Unif. delay o	<del>1</del> 1		12.4		19	9.8	13.	.5	Т			1	8.9			22.1	T	
Delay factor	k	1	0.50	<del>,    </del>	0.	50	0.5	50	T	$\neg$		0	.50		<del>                                     </del>	0.50	$\vdash$	
Increm. dela	ay d2	- <del> </del>	0.1		17	7.9	0.8	8	t	一		1	2.1		1	12.6	${}^{+-}$	
PF factor	<u></u>		1.00	_	-		1.0		T			-	.000		+-	1.000	<del>                                     </del>	
Control delay 12.5					_	7.8	14.		T				1.0			34.7	<del>                                     </del>	
Lane group LOS B					-	)	<i>B</i>		T			十	C		1	C	$\vdash$	
Apprch. delay 12.5					-	32			_	$\neg +$		21	.0		34.7			
Approach L	<u> </u>	+-	B		+	- 02				$\dashv$	C C					C C		
Intersec. de		+	29.0		+						ection LOS					C		
HCS2000 <sup>TM</sup>				nyright @	2000 1	00 University of Florida, All Righ								ь_	Version 4.1e			

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	TWO	-WAY STOP	CONTR	OL S	UMMARY	7					
General Informatio	n		Site I	nforn	nation			-			
Analyst Agency/Co. Date Performed Analysis Time Period	ORGA-R ORGA 7/12/04 AM - TO		Interse Jurisdi	ection		MACARTHUR/LITTLE FALLS 2004					
Project Description W	ASHINGTON	AQUEDUCT									
East/West Street: LITT			North/	South :	Street: MA	CARTHUR	BOULEV	ARD			
Intersection Orientation:			Study				JOULEV	711 (2			
Vehicle Volumes a	nd Adiustr	nents			· · · · · · · · · · · · · · · · · · ·						
Major Street	l Aujusti	Northbound		Т		Southbo	und				
Movement	1	2	3		4	5		6			
	L	Т	Ř		Ĺ	T		R			
Volume	0	557	18		19	942		0			
Peak-Hour Factor, PHF	1.00	0.87	0.87		0.88	0.88		1.00			
Hourly Flow Rate, HFR	0	640	20		21	1070		0			
Percent Heavy Vehicles	0				0						
Median Type				Undiv	ided						
RT Channelized			0					0			
anes	0	2	0		0	2		0			
Configuration		T	TR		LT	T					
Jpstream Signal		0				0					
Minor Street		Westbound				Eastbou	ınd				
Movement	7	8	9		10	11		12			
	L	T	R		L	T		R			
Volume	1	0	12		0	0		0			
Peak-Hour Factor, PHF	0.54	1.00	0.54		1.00	1.00		1.00			
Hourly Flow Rate, HFR	1	0	22		0	0		<u>,</u> 0			
Percent Heavy Vehicles	5	0	4		0	0		0			
Percent Grade (%)		0				0					
Flared Approach		, N	_			N					
Storage		0				0					
RT Channelized			0					0			
anes	0	0	0		0	0		0			
Configuration		LR									
Delay, Queue Length,	and Level of	Service									
Approach	NB	SB	1	Vestbo	ound		Eastboun	id .			
Movement	1	4	7	8	9	10	11	12			
_ane Configuration		LT		LR				+			
v (vph)		21		23				+			
C (m) (vph)		936		580		-					
//c		0.02		0.04			_	+			
						-					
95% queue length		0.07		0.12		ļ					
Control Delay		8.9		11.5							
_OS		A		В							
Approach Delay		<b></b>		11.5							
Approach LOS				В							

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	TWO	-WAY STOP	CONTR	OL S	UM	IMARY				-		
General Information	n		Site I	nforr	nat	ion						
Analyst Agency/Co. Date Performed Analysis Time Period	ORGA-R ORGA 7/12/04 PM - TOT		Interse Jurisdi Analys	ction	ar		MACARTHUR/LITTLE FALLS 2004					
Project Description W	/ASHINGTON	AQUEDUCT										
East/West Street: LITT			North/	South	Stre	et: MAC	ARTHUR I	ROUL	=\/Δ	RD		
Intersection Orientation:			Study				- ARTHOLY I	50021				
Vehicle Volumes a			1-1									
Major Street	T	Northbound					Southbo	und				
Movement	1	2	3			4	5	T		6		
VIO VOITIONE	<del>                                     </del>	<del>                                     </del>	R	$\dashv$		<del>-                                    </del>	T T	$\neg$		R		
Volume	0	527	2			5	634			0		
Peak-Hour Factor, PHF	1.00	0.85	0.85			0.84	0.84	$\neg +$	1	1.00		
Hourly Flow Rate, HFR	0	619	2			5	754			0		
Percent Heavy Vehicles			<del>-</del>			0						
Median Type		<u> </u>		Undiv	/idea				_			
RT Channelized			0							0		
anes	0	2	0			0	2			0		
Configuration		T	TR			LT	Т					
Jpstream Signal	<b>†</b>	0					0					
Minor Street		Westbound					Eastbou	ınd				
Movement	7	8	9			10	11	T		12		
	L	T	R			L	T	t		R		
/olume	26	0	38	$\dashv$		0	0	$\neg$		0		
Peak-Hour Factor, PHF		1.00	0.80			1.00	1.00		1	.00		
Hourly Flow Rate, HFR	32	0	47			0	0			0		
Percent Heavy Vehicles	5	0	4			0	0			0		
Percent Grade (%)		0					0			·		
Flared Approach		T N				_	N	T				
Storage		0	+		-		0	$\dashv$				
RT Channelized	<del>                                     </del>	<u> </u>	0		_		- ŭ	-+		0		
_anes	0	0	0			0	0	-+	_	0		
Configuration	<del>                                     </del>	LR	- 0			U		-+	_	<del></del>		
	<u> </u>		<u> </u>		-		<u> </u>		_			
Delay, Queue Length,												
Approach	NB	SB		Nestbo	ounc			Eastbo	_			
Movement	1	4	7	8		9	10	11		12		
ane Configuration	, , , , , , , , , , , , , , , , , , , ,	LT		LR				<u></u>				
/ (vph)		5		79								
C (m) (vph)		968		378	}							
//c 🏋		0.01		0.21	1							
95% queue length		0.02		0.79								
Control Delay		8.7		17.0	_			<del>                                     </del>				
OS				C	_			-				
		Α										
Approach Delay				17.0								
Approach LOS				C								

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Short Report

		_			SH	OR	ΓR	EPC	RT			_					
General Inf	ormation						Site	e Info	rmat	ion							
Analyst Agency or C Date Perfori Time Period	med	OF 7/1	GA-RD RGA 13/04 TOTAL		* *************************************	Intersection MACARTHUR/CATHEDRAL Area Type All other areas Jurisdiction Analysis Year 2004											
Volume an	d Timing In	out															
The state of the s				EB		<del>_                                    </del>		WB					NB		SB		
Num. of Lan	1		LT 0	1 1			T TH		R	_	L <sup>-</sup>	_	TH 2	RT 0	LT 0	TH 2	RT 0
			-	<u> </u>	<del>                                     </del>	- (	_	1	_		۳		LTR	-	-	₩	U
Lane group Volume (vpl	2)		21	LTR 6	5	2	1	LTR 1	1 8		7		839	17	4	<i>LTR</i> 992	1
% Heavy ve			2	0	0	1		0	0	_	2	_	1	4	0	1	0
PHF	JII		0.53	0.53	0.53	0.8		0.58	_	_	0.8	9	0.89	0.89	0.88	0.88	0.88
Actuated (P.	/A)	-	P	P	P	F		P	F		P	_	P	Р	Р	P	P
Startup lost				2.0				2.0					2.0			2.0	
Ext. eff. gree	en			2.0				2.0	$\bot$				2.0			2.0	
Arrival type				3	<u> </u>	┿		3	+		_		3		_	3	
Unit Extensi				3.0	_	_	_	3.0			L_		3.0			3.0	
	TOR Volume	_	8	40.0	0	1.	4	10.0	0		6		10.0	0	11	40.0	0
Lane Width Parking/Gra	do/Darking		N N	12.0 N		+	_	12.0 0	+,	i	N		12.0 0	l <sub>N</sub>	N	12.0 0	N
Parking/Gra Parking/hr	de/Parking		//	-	'\	+	<u> </u>	<b>⊢</b> °	+	<u> </u>	<u> </u>	_	0	1/	11/	10	//
Bus:stops/h	<u> </u>	_		0		┿		0	╫	_	┝		0	<del>                                     </del>	-	0	
Unit Extensi				3.0	-	┿		3.0	╫		⊢	_	3.0	-	-	3.0	
Phasing	EW Perm	<u> </u>	)2	03	<u> </u>	<del>-  </del> -	04	<u> </u>	NS I	Perr	<u></u>		06	╁	07		08
	G = 18.0	G =		G =		G =		$\neg$	G =			G =		G=		G =	
Timing	Y = 6	Y =		Υ=	_	Y =			Y =		_	Υ=		Y =		Y =	
	Analysis (hrs												le Len	gth C =	80.0		
Lane Gro	up Capaci	ty, C	ontro	ol Dela	ay, a	nd L	<u>.0</u>	S De	tern	<u>iina</u>	atic	n					
		$\bot$	E	В			. V	VB		$\perp$		NB				SB	
Adj. flow rat	e		60				52	2				9	70			1133	
Lane group	cap.		328	3			32	3				2	107			2129	
v/c ratio			0.18	3			0.1	6		Τ		0	.46			0.53	
Green ratio			0.22	2	J. 1. 1. 1.		0.2	22		Т		0	.63			0.63	
Unif. delay o	11		25.1	1			24.	.9		1		7	7.9			8.4	
Delay factor	·k	<b>—</b>	0.50	2	$\neg$		0.5	50		Ť		0	.50			0.50	
Increm. dela	ay d2	十	1.2		十		1.	1		+		(	0.7			1.0	1
PF factor 1.000					十		1.0	00		T		1.	000			1.000	
Control delay 26.3							26.	.0		十		1	3.6			9.4	<b>-</b>
Lane group LOS C							С			+		-	A			A	
Apprch. delay 26.3							26.0	_		8.6					9.4		
Approach LOS C							С			A					A A		
Intersec. de			9.9		$\dashv$	Intersection LOS A											
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					SH	ORT									
General Inf	ormation					s	ite	Infor	mation		·				
Analyst Agency or C Date Perfor Time Period	ARTHUR All othe 20														
Volume an	d Timing In	out													
				EB				WB			NB			SB	
			LT	TH	RT LT		_	TH	RT	Lī		RT	LT	TH	RT
Num. of Lar	nes		0	1	0	0	_	1	0	0	2	0	0	2	0
Lane group				LTR				LTR			LTR			LTR	
Volume (vpl			30	6	5	13	$\Box$	2	14	12	581	16	14	1156	5
% Heavy ve	eh		2	0	0	1	$\perp$	0	0	2	1	4	0	1	0
PHF Actuated (P	/Λ)		0.73 P	0.73 P	0.73 P	0.73 P	3 (	0.73 P	0.73 P	0.9 P	0.90 P	0.90 P	0.87 P	0.87 P	0.87 P
Startup lost				2.0	-	+-	╅	2.0	-	<del>                                     </del>	2.0	+-	<del>                                     </del>	2.0	+
Ext. eff. gre				2.0		+	_	2.0		<del>                                     </del>	2.0	$\vdash$		2.0	<b></b>
Arrival type				3				3			3			3	
Unit Extens	ion			3.0				3.0			3.0			3.0	
Ped/Bike/R	TOR Volume		8		0	14	$\Box$		0	6		Ö	11		0_
Lane Width				12.0				12.0			12.0			12.0	
Parking/Gra	de/Parking		Ν	0	Ν	N		0	Ν	Ν	0	N	Ν	0	Ν
Parking/hr	_												<u> </u>		
Bus stops/h	r			0				0			0			0	
Unit Extens	ion			3.0				3.0			3.0			3.0	
Phasing	EW Perm		)2	03	3		)4		NS Per		06		07		08
Timing	G = 18.0	G =		G =	G = G = 5 Y = Y = 6						G =	G =		G =	
	Y = 6 Analysis (hrs	Y =	20	Y =		Υ =		ΙY	= 6		Y = Cycle Ler	Y =		Y =	
				l Dale		nd I (	26	Dot	ormin			igui C -	- 00.0		
Lane Gro	up Capaci	iy, C	E		ay, a	na L	<u>53</u> W		emm T	alic	NB		T	SB	
A di . fl 1		+			-			<u> </u>				1	<del> </del>		т —
Adj. flow rat		+	56	_	_	-+	40	_			677			1351	₩
Lane group	cap.		325	5			349	<u></u>			2047	<u> </u>	ļ	2113	╄
v/c ratio			0.17	7		(	0.11	1			0.33			0.64	
Green ratio			0.22	2		(	0.22	2			0.63			0.63	
Unif. delay	d1		25.0	) .		2	24.7	7			7.1			9.4	
Delay factor	r k		0.50	2		(	0.50	)			0.50			0.50	
Increm. dela	ay d2		1.2				0.7				0.4			1.5	
PF factor		1.00	00		1	.00	00_			1.000			1.000		
Control dela	ay :	26.	1		2	25.3	3			7.5			10.9		
Lane group	LOS	С				С				Α			В		
Apprch. del	26.1			25	5.3				7.5	10.9					
Approach L	C A							В							
Intersec. de	elay		10.5					Int	ersection	on Lo	os			В	
Intersec. delay  10.5 Intersection LOS  HCS2000 <sup>TM</sup> Copyright © 2000 University of Florida, All Rights Reserved										V	ersion 4.1				

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# TECHNICAL MEMORANDUM

DATE:December 14, 2004

TO: Jed Campbell

Jennifer Armstrong

FROM: Cullen E. Elias

RE: Evaluation of Potential Access Points along Dalecarlia Parkway

### 1.0 INTRODUCTION

Further to our telephone conversation yesterday, we have undertaken an assessment of the two (2) potential access points along Dalecarlia Parkway which are currently under consideration. Specifically, these access points are as follows:

- a) The existing Little Falls Road/Dalecarlia Parkway intersection which primarily provides access to the Sibley Memorial Hospital building and parking facilities and;
- b) A proposed full-access driveway intersection, to be located approximately 870 feet north of Little Falls Road.

The remainder of this memorandum presents the results of our assessment.

## 2.0 ACCESS POINTS EVALUATION

The two (2) potential access points along Dalecarlia Parkway are being considered in the context of the alternative access that would be available off MacArthur Boulevard, and the seven (7) haul routes under consideration. Based on factors which would be outlined below, it is assumed that the subject access points would be the terminals of those haul routes which extend through Montgomery County (Maryland) to the Capital Beltway (I-495). facilitate the decision-making process of the Washington Aqueduct, the advantage and disadvantages of the access points are outlined below:

# Little Falls Road @ Dalecarlia Parkway

- Advantages: a) This intersection exists already.
  - b) The location provides for full access movements, i.e., right and left - turns.
  - c) The intersection currently operates within the City's acceptable Level-of-Service standards. This operational/capacity situation takes into consideration the existing turning movement volumes and the proximity of the intersection to the Dalecarlia relative to the Dalecarlia Parkway/Loughboro Road intersection ((i.e., 100 feet).
  - d) This access situation would circumvent potential adverse traffic and noise impacts on the Sibley Memorial Hospital buildings and residential uses situated along Loughboro Road, as well as the
- Traffic Engineering Studies
   Transportation Planning
   Site Impact Studies
  - Expert Witness Testimony Data Collection: Traffic and Parking Studies

# Jed Campbell-Jennifer Armstrong Technical Memorandum Dalecarlia Parkway **December 14, 2004-Page 2 of 3**

operational and safety issues related to the steep gradiant along Loughboro Road.

- Disadvantages: 1) Vehicular conflicts, involving the residuals-hauling trucks and patrons/employees of the Hospital, would occur at the intersection and along the north-south segment of Little Falls Road.
  - 2) This may present some safety issues, although the truck trips would be few and well distributed.
  - 3) The impacted segment of Little Falls Road may not be constructed to carry heavy truck traffic.
  - 4) Left-turns onto Dalecarlia Parkway by heavy trucks may be difficult and unsafe.

# **Proposed New Driveway Intersection:**

- Advantages: a) The intersection would be constructed in accordance with the DDOT design standards regarding driveway width, turning lane width and radii, etc.
  - b) The intersection would be located approximately 870 feet from the Dalecarlia Parkway/Loughboro Road intersection (to the and the Dalecarlia Parkway/Rockwood Parkway intersection (to the north). These distances more than satisfy the City's separation standards for commercial or industrial driveways.
  - c) The intersection may include a, right-turn deceleration lane for southbound/inbound trips and a left-side acceleration lane for northbound/outbound trips.
  - d) Considering the above, and the projected truck trip generation and hourly distribution, the proposed intersection would operate quite acceptably, from the perspectives of capacity, operational efficiency and safety.
  - e) This access would eliminate potential adverse traffic and noise impacts on the Sibley Memorial Hospital complex and the residential uses along Loughboro Road. The operational/safety issues presented by the steep gradient along Loughboro Road would also be circumvented.

- Disadvantages:1) The proposed intersection would require a new curb-cut and median break, along with other geometric and traffic control improvements.
  - 2) The approval and implementation process for the improvements (noted in item 1) could be lengthy and costly.

# Jed Campbell-Jennifer Armstrong Technical Memorandum Dalecarlia Parkway December 14, 2004-Page 2 of 3

Based on the above, the new access point along Dalecarlia Parkway would have significantly less adverse traffic and noise impacts, and should receive greater "acceptability" by the DDOT and the adjacent residential communities. This conclusion is relative to the other access points currently under consideration.

We trust that you will find the above useful. Should you have any questions or comments, please let us know. Thank you.

ORG/mvd

O.R. George & Associates, Inc. 10210 Greenbelt Road, Suite 310 Lanham, Maryland 20706
Tel: (301) 794-7700 Fax: (301) 794-4400

# Passenger Vehicles

Date: 20-Dec-04
Location: Dalecarlia Parkway @ Little Road

City: Washington, D.C. Weather: Cold/Clear/Dry

From North From	End Dalecarlia Parkway Dalecarlis	Time Left Thru Right U-Turn Left Thru	15 0 67 17 0 12	7:30 0 90 19 0 14 67	7:45 0 114 18 0 15 79	8:00 0 116 16 0 8 91	0 387 70 0 49	8:15 0 115 10 0 6 111	8:30 0 84 14 0 5 115	<b>8:45</b> 0 111 9 0 7 98	9:00 0 105 10 0 96
From South	Dalecarlia Parkway	Thru Right U-Turn	56 0	0 29	0 62	91	293 0	111 0	115 0	0 86	0 96
:		rn Left	0	0	0	0	)  0	0	0	0	0
From East		Thru	0	0	<del>-</del>	0	10 10	0 10	0	0	0
st		Right U-Turn	0	0	0	0	0 0	0	0	0	0 0
		rett	4	၈	4	10]	12	9	<sub>හ</sub>	9	4
From West	Little Road	Thru Right	8	0	6	0	0	0	0	0	0
-		U-Turn	1 0	0	0	3 0	0 2	4 0	3	0	4
	Total		157	195	231	244	827	252	224	232	228

236 257 268 295	1056	286	294	252	238	1070
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0000	0	0	0	0	0	0
16:15 16:30 16:45 17:00	total	17:15	17:30	17:45	18:00	total

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Date: 20-Dec-04 Location: Dalecarlia Parkway @ Little Road

Trucks

City: Washington, D.C. Weather: Cold/Clear/Dry

	11	From N	From North		11110000	From S	rom South			From East	ast			From West	West		
		Dalecarlia Parkway	Parkway		<b>-</b>	Dalecarlia Parkway	Parkway							Little Road	Road		Total
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	0	0		0	0	0	0	0	0	0	0	6	0	0	0	0	0
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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0
	0	0	0	0	1	0	0	0	0	0	0	0	10	0	-	0	7

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Buses

Date: 20-Dec-04

Location: Dalecarlia Parkway @ Little Road

City: Washington, D.C. Weather: Cold/Clear/Dry

From North Fi	Dalecarlia Parkway Dalec	Right U-Turn Left Thr	0 0	0 0	8 0 0	0 0	0 0 0	14 0 14	0 0 0		0 0 0	0 0 0
From South	Dalecarlia Parkway	Thru Right U-Turn	0 0	1 2 0	3 0	0	000	2  0	000	0 0	0 0	
From East		Left Thru I	0 0	00	0	0 0	000	o  o  o	0 0	0 0	000	0 0
st		Right U-Turn	0 0	0 0	0 0	0 0		<b>j</b> o jo	000		000	
From West	Little Road	Left Thru	0 0	00		0 0		]0 ]0	000		0 0 0	
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	Total	10101	- 4	<u>හ 4</u>	12	ကင	1 to 4	12	01 <del></del>	6		- 2 4

O.R. George & Associates, Inc. 10210 Greenbeit Road, Suite 310 Lanham, Maryland 20706 Tel: (301) 794-7700 Fax: (301) 794-4400 orgassoc@aol.com

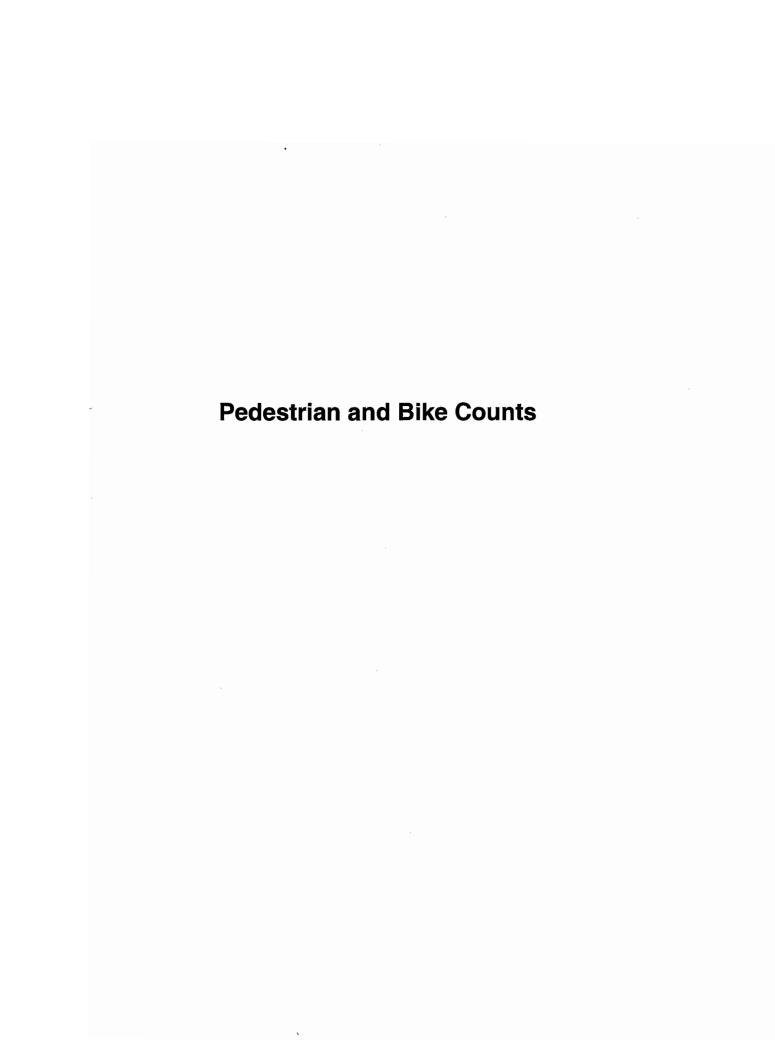
Total Traffic

Date: 20-Dec-04

Location: Dalecarlia Parkway @ Little Road

City: Washington, D.C. Weather: Cold/Clear/Dry

	****	From North	orth	-			From South			From East	шĭ	ast	ast	ast	***************************************	ast From West
E		Dalecarlia Parkway	arkway			Dalecarlia	carlia Parkway								Little F	Little Road
Time	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Tett	Thru		Right	Right U-Turn	Г	U-Turn	U-Turn Left
7:15		29 0	18	0	13	99	0	0	0	0		0	0		0	0 9 0
7:30	3	91		0	17	29	0	0	0	0		0	0		0	4
7:45	J	114	18	0	16	81	0	0	0	0	0		0	0		4
8:00	O	0 117	16	0	Ξ	92	0	0	0	0	0		0	0 10		10
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8:15	0	116	10	0	8	112	0	0	0	0	0	ì	0	9 0	L	9
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16:15	0		.   2	0	. 2	107	0	0	0	0	0		0			22
16:30	0	139	က	0	_	26	0	0	0	0	0		0	0		13
16:45	0		က	0	4	96	0	0	0	0	0		0			21
17:00	0		3	0	8	116	0	0	0	0	0		O	0 18		18
tota/	0	916	11	0	10	416	0	0	0	0	0		0	0 74		74
17:15	0	135	2	0	2	115	0	0	0	0	0		0			23
17:30	0	146	ဇာ	0	-	128	0	0	0	0	0		0			14 0
17:45		145	ထ တ	00	ကဖ	88	0 0	0 0	0 0	00	0 0		00	0 0		2 5
total	0		20	0	15	409	0	0	0	0	0	1	6		59	1 0 69



# O.R GEORGE & ASSOCIATES, INC.

Traffic Engineers - Transportation Planners

Location: Washington D.C.

<u>Date:</u> Tuesday, August 17, 2004

<u>City:</u> Washington D.C. <u>Counted by:</u> ORGA-NL

CAPITOL CRESCENT TRAIL USAGE COUNTS (in vicinity of Datecarila Water Treatment Plant)

# NORTHBOUND

SOUTHBOUND

END	WALKERS/JOGGERS	CYCLISTS
TIME		
6:15	0	0
6:30	1	2
6:45	2	4
7:00	2	9
TOTAL	5	15
7:15	3	9
7:30	1	13
7:45	0	11
8:00	2	11
TOTAL	6	44
8:15	1	5
8:30	2	7
8:45	11	6
9:00	2	5
TOTAL	6	23
0.45		
9:15	1	5
9:30		7
9:45	2	
10:00 TOTAL	3	3
IUIAL	7	16
10:15	6	7
10:30	1	3
10:45	3	4
11:00	1	5
TOTAL	11	19
11:15	1	2
11:30	2	4
11:45	2	6
12:00	3	8
TOTAL	8	20
12:15	1	5
12:30	1	10
12:45	00	4
13:00	0	5
TOTAL	2	24

END	WALKERS/JOGGERS	CYCLISTS
TIME		
6:15	0	3
6:30	0	9
6:45	2	18
7:00	5	22
TOTAL	7	52
7:15	2	31
7:30	2	37
7:45	3	31
8:00	· · · · · · · · · · · · · · · · · · ·	35
TOTAL	8	134
8:15	3	40
8:30	1	37
8:45	0	36
9:00	0	22
TOTAL	4	135
9:15		10
9:30	0 1	19
9:45	2	9
10:00	3	8
TOTAL		
IUIAL	6	40
10:15	3	5
10:30	3	10
10:45	4	3
11:00	0	8
TOTAL	10	26
11:15	0	3
11:30	1	4
11:45	0	5
12:00	2	7
TOTAL	3	19
10.45		
12:15	2	9
12:30	2	11
12:45	0	11
13:00	3	9
TOTAL	7	40

# O.R GEORGE & ASSOCIATES, INC.

Traffic Engineers - Transportation Planners

Location: Washington D.C.

Date: Tuesday, August 17, 2004

<u>City:</u> Washington D.C. <u>Counted by:</u> ORGA-NL

CAPITOL CRESCENT TRAIL USAGE COUNTS (In vicinity of Dalecarlla Water Treatment Plant)

# NORTHBOUND

# SOUTHBOUND

END	WALKERS/JOGGERS	CYCLISTS
TIME		
13:15	0	1
13:30	0	2
13:45	0	11
14:00	2	7
TOTAL	2	21
14:15	2	10
14:30	0	11
14:45	0	7
15:00	3	5
TOTAL	5	33
15:15	0	7
15:30	0	9
15:45	0	11
16:00	0	8
TOTAL	0	35
16:15	0	4
16:30	1	14
16:45	0	11
17:00	0	14
TOTAL	1	43
	<del></del>	
17:15	3	17
17:30	1	17
17:45	11	28
18:00	4	32
TOTAL	9	94
18:15	4	36
18:30	3	39
18:45	1	35
19:00	1	48
TOTAL	9	158

END	WALKERS/JOGGERS	CYCLISTS
TIME		
13:15	1	0
13:30	0	2
13:45	0	5
14:00	1	5
TOTAL	2	12
14:15	0	8
14:30	1	7
14:45	2	4
15:00	2	11
TOTAL	5	30
15:15	0	9
15:30	0	8
15:45	0	10
16:00	0	6
TOTAL	0	33
16:15	0	4
16:30	1	6
16:45	1	7
17:00	2	2
TOTAL	4	19
17:15	1	10
17:30	2	11
17:45	1	.15
18:00	1	7
TOTAL	5	43
18:15	7	12
18:30	0	13
18:45	7	23
19:00	4	27
TOTAL	18	75

# Vehicle and Truck Count Summary for Dalecarlia Parkway and MacArthur Boulevard

The following vehicle count data was collected on June 16, 2004 and June 17, 2004. Detailed traffic count data for the routes listed below and other routes are presented on the following pages.

Route	Date	Total Vehicles per day	Trucks per day (F6 through F13)
Dalecarlia Parkway	6/16/2004	15,013	70
	6/17/2004	15,789	99
MacArthur Boulevard	6/16/2004	14,210	675
Doulevaru	6/17/2004	14,842	577

# 7. TRUCK ROUTE RECOMMENDATIONS

Consider some of the most important concerns about truck traffic in the District: noise and vibration complaints from residents; security concerns around high-risk facilities; congestion; and the need for better information and services for truck operators and their customers. The creation of designated truck routes in the District can address these concerns simultaneously, albeit to varying degrees. This section makes recommendations about how to design a truck route network. A summary of the important traffic issues is presented below, followed by recommendations for a designated truck route system for the District.

# 7.1 SUMMARY OF EXISTING TRUCK TRAFFIC CONDITIONS

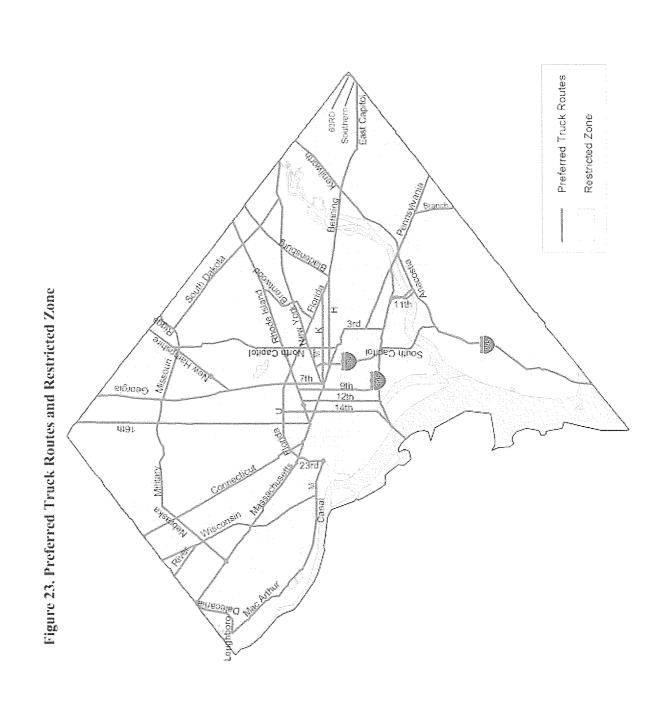
Trucks constitute approximately 5 percent of the traffic in the District; however, truck traffic is not distributed uniformly throughout. For example, on Georgia Avenue about 14 percent of traffic is trucks. Most truck traffic is destined for locations within the District (rather than passing through the District) and consists primarily of 2-axle, 4- and 6-tire vehicles, with a small percentage of larger and combination-type trucks on the major truck corridors.

Based on an analysis of data related to truck traffic and restrictions in the District and on interviews with various stakeholders, several important issues arise:

- The District does not have designated or recommended truck routes.
- There are several roads that have restrictions on one side of the District border with Maryland or Virginia that are not consistent with truck restrictions on the other side of the border.
- Neighborhood residents object to truck traffic cutting through residential streets.
- Double-parked vehicles cause traffic tie-ups on many arterials, especially in Georgetown, Downtown, and the Golden Triangle.
- Trucks pose potential security risks because of their ability to carry large amounts of hazardous materials, both as a necessary part of conducting business in such facilities as the U.S. Mint, and by terrorists.

To better manage truck travel, improve mobility, and enhance the level of safety and security, the District government can implement a series of preferred truck routes; a zone in the heavily congested and security-sensitive downtown area, from which large trucks would be prohibited during the business day; and truck prohibitions on all other roads unless travel on the street is necessary for the truck to reach its destination. There would be a streamlined permitting process through which truck operators could receive permission to travel on otherwise restricted or prohibited roadways. Figure 23 shows the recommended preferred truck routes and restricted zone.

The preferred, restricted, and prohibited routes presented here would encourage trucks to use major arterials for traversing the District, thereby largely eliminating them from side streets and other roadways with inadequate geometry or pavement quality for large trucks. This would be beneficial to both truckers and residents. Truck operators would get reliable



truck routes with roadway geometry and pavement condition adequate to accommodate large trucks. The ease in maneuverability on these larger roads could result in fewer trucks crashes. At the same time, residential neighborhoods would be isolated from large truck traffic. The creation of the restricted zone would permit smoother traffic movement in the major business district by eliminated large trucks from this area during the business day, thus alleviating congestion.

# 7.2 PREFERRED TRUCK ROUTES

The preferred truck routes are the corridors essential to freight movement in the District and currently carry the bulk of truck traffic. Furthermore, they have design characteristics that make them conducive to the movement of large trucks, thus encouraging trucks to use them and avoiding cut-throughs on residential streets.

The following is a list of preferred truck routes, which are mapped in Figure 23.

- Anacostia Freeway (US 295, all)
- Benning Road from East Capitol Street to Florida Avenue
- Bladensburg Road (all)
- Branch Avenue SE from the District border to Pennsylvania Avenue SE
- Brentwood Road (all)
- Canal Road NW from Macarthur Boulevard to M Street NW
- Connecticut Avenue from District border to Massachusetts Avenue
- Dalecarlia Parkway from Loughboro Road to Massachusetts Avenue NW
- East Capitol Street from Benning Road to the District border
- Florida Avenue from Bladensburg Road to U Street
- Florida Avenue NW from Massachusetts Avenue NW to Vernon Street NW
- Georgia Avenue (all)
- H Street NW/NE from Massachusetts Avenue to Benning Road
- Interstate 395 (all)
- Interstate 295 (all)
- K Street NW/NE from Mount Vernon Place to Florida Avenue NE
- Kenilworth Avenue NE (all)
- Loughboro Road from Macarthur Boulevard to Dalecarlia Parkway
- M Street NW from US 29 (Francis Scott Key Bridge) to Pennsylvania Avenue NW
- M Street NW from North Capitol Street east to New York Avenue NW
- Macarthur Boulevard from Loughboro Road to Canal Road NW
- Massachusetts Avenue from District border to 3<sup>rd</sup> Street NE
- Military Road from Nebraska Avenue NW to Missouri Avenue NW
- Missouri Avenue NW from Military Road to Riggs Road NE
- Nebraska Avenue NW from Massachusetts Avenue to Military Road
- New Hampshire Avenue NE/NW from District border to Georgia Avenue
- New York Avenue NE/NW from District border to Massachusetts Avenue NW
- North Capitol Street from New Hampshire Avenue to Massachusetts Avenue
- Pennsylvania Ave SE from District border to 3<sup>rd</sup> Street SE

- Rhode Island Avenue (all)
- Riggs Road NE from Missouri Avenue to District border
- River Road NW from District border to Wisconsin Avenue NW
- South Capitol Street from the Southeast Freeway to Interstate 295
- South Dakota Avenue NE from Riggs Road to Bladensburg Road
- Southern Avenue SE from East Capitol Street to 63<sup>rd</sup> Street NE
- U Street NW from 9<sup>th</sup> Street NW to 18<sup>th</sup> St NW
- Wisconsin Avenue NW from District border to M Street NW
- 3<sup>rd</sup> Street NE/SE from the Southeast Freeway to Massachusetts Avenue
- 7<sup>th</sup> Street from Massachusetts Avenue NW to Rhode Island Avenue NW
- 9<sup>th</sup> Street NW from I-395 to Rhode Island Avenue NW
- 12<sup>th</sup> Street NW from Independence Avenue SW to Massachusetts Avenue NW
- 14<sup>th</sup> Street NW from Maine Avenue SW to U Street NW
- 16<sup>th</sup> Street NW from Massachusetts Avenue to District border
- 23<sup>rd</sup> Street NW from M Street NW to Massachusetts Avenue NW
- 63<sup>rd</sup> Street NE from Southern Avenue to District border

The above roadways offer linkages to the Beltway and provide for good connectivity throughout the District. Further, they constitute a major part of the de facto truck routes used by truck drivers. The recommendation of Military Road as a preferred truck route is sure to be controversial since it is a residential street. Residents voiced concerns about safety (due in large part to trucks exceeding the speed limit), noise, vibrations, and air pollution on this road. However, it is the only east-west arterial in the northern part of the District and is therefore important for truck movement in the city. Some of the residents' concerns can be ameliorated by better enforcement of traffic laws, especially speeding and weight restrictions.

# 7.3 RESTRICTED ZONE

To address concerns about congestion and security, this report recommends the implementation of a restricted zone in the downtown area. This zone, which is shaded in yellow in Figure 23, would have the following regulations:

- It is bounded by:
  - 23<sup>rd</sup> Street NE/NW from Ohio Drive SW to Massachusetts Avenue NW
  - Massachusetts Avenue NW from 23<sup>rd</sup> Street NW to 3<sup>rd</sup> Street NE
  - 3<sup>rd</sup> Street NE/SE from Massachusetts Avenue NW to the Southeast Freeway
  - The Southeast Freeway from 3<sup>rd</sup> Street SE to Interstate 395
  - Interstate 395 from the Southeast Freeway to the Potomac River
- Trucks with 2 axles, 6 tires and smaller would be permitted at all times on the preferred truck routes located within the zone (9<sup>th</sup>, 12<sup>th</sup>, and 14<sup>th</sup> Streets).
- Trucks with more than 2 axles or 6 tires would be prohibited from the zone from 7 AM to 6 PM Monday through Friday.
- Trucks with more than 2 axles and 6 tires would be permitted from 6 PM to 7 AM Monday through Friday and 6 PM Friday to 7 AM Monday.

- All trucks would be required to use the preferred truck routes unless deviation from the routes is necessary to reach the vehicle's final destination.
- Interstate 395 would be exempt from the above restrictions, permitting all trucks at all times (except those otherwise restricted by the height and hazardous cargo restrictions for the 3<sup>rd</sup> Street Tunnel).
- There would be a streamlined permitting process that would allow large trucks to travel within the restricted zone outside of the above rules.
- Existing Federal restrictions around the Capitol would remain in place.

At present most large trucks operating in this area during the daytime hours are food and beverage deliveries, trash haulers, construction trucks, office movers, and gasoline trucks. As part of the implementation of these recommendations, DDOT will have to work with truck operators and their customers to find a solution that is suitable for all stakeholders. It might be possible to shift some of these trips to nighttime hours. Alternatively, it may be possible for operators to make the same deliveries with smaller vehicles, which are allowed in the restricted zone during the workday. If necessary, operators can receive short-term or long-term permits to operate large trucks within the restricted zone during the workday.

# 7.4 OTHER ROADWAYS

Trucks of all sizes would be prohibited from using streets that are not designated preferred truck routes unless travel on the street is necessary for the vehicle to reach its final destination. Emergency vehicles would, of course, be exempt from truck route restrictions. Construction vehicles, which may have to travel off the preferred truck routes over an extended period of time, would be issued a permit exempting them from the truck route regulations and allowing them to travel to and from the construction site using routes approved during the permitting process. Other vehicles and operators may require similar special exemptions, such as trash trucks using the Fort Totten transfer station. These situations will be handled on a case-by-case basis. Trucks owned or operated by the District government will be required to comply with all truck route regulations, and will be able to obtain permits for exemptions when necessary.

# 7.5 OTHER CONSIDERATIONS

# Enforcement

The implementation of truck routes will decrease truck-related problems only if truck operators obey the routes and restrictions. Clear, consistent signing of truck routes and restrictions is one way to encourage trucks to stay on designated routes. However, DDOT must also work closely with the MPD to enforce the new restrictions. Over time, DDOT and MPD must continue to coordinate enforcement activities on streets that are known to have a large number of truck restriction violations.

# Truck Restrictions by Size Rather than Weight

While truck restrictions are usually mandated based on vehicle weight, this truck route scheme restricts based on vehicle size. This is because:

• Restrictions based on vehicle size (which is easily observed) are easier to enforce than restrictions based on vehicle weight, which must be measured.

- Currently, there is not enough weight information available on trucks traveling within the District to make informed choices about how to restrict truck traffic based on vehicle weight.
- The truck-related problems in the District are generally not a function of truck weight. Rather, they are about truck *movement*: where trucks travel and where they stop for loading/unloading.

As more information on weights of trucks operating in the District becomes available and as weigh-in-motion facilities are constructed for the District, a weight restriction may be considered for the truck routes.

# Induced Small Truck Travel

With trucks larger than 2-axle, 6-tire vehicles prohibited from the restricted zone during the business day, truck operators might substitute several trips with smaller vehicles for a single trip now made with a larger vehicle. This could result in an increase in the total number of truck trips within the restricted zone. In the absence of more comprehensive traffic and vehicle classification counts, there is no appropriate way to predict the number of new small-truck-trips that would be generated by the restrictions. This issue may have to be addressed in the future when better data is available.

# SOCIOECONOMIC AND ENVIRONMENTAL JUSTICE

- Census 2000 Data Summary
- SOCIOECONOMIC CALCULATIONS

Demographics (2000)	ROI	DC District of Columbia	MD Frederick County	MD Montgomery County	MD Prince George's County	VA Arlington County	VA City of Alexandria	VA City of Fairfax	VA City of Falls Church	VA City of Manassas	VA City of Manassas Park	VA Fairfax County	VA Loudoun County	VA Prince William County
Total Population 1990	3,923,600	537,218	240,346	989,655	729,268	170,936	111,183	19,622	9,578	27,957	6,797	818,584	86,129	215,686
Total Population 2000	4,450,300	572,059	195,277	873,341	801,515	189,453	128,283	21,498	10,377	35,135	10,290	969,749	169,599	280,813
Percent Change 1990-2000	13.42	6.49	30.00	15.40	9.90	10.80	15.40	9.60	8.30	25.68	51.40	18.50	96.90	30.20
Persons per Square Mile	1,474	9,317	295	1,762	1,651	7,323	8,451	3,407	5,215	3,537	4,129	2,455	326	831
Projected Growth 2015	5,392,900	588,000	260,000	975,000	886,100	207,200	138,700	22,800	10,800	37,600	15,500	1,155,600	371,200	369,200
Percent Change 2000-2015	21.18	2.79	33.14	11.64	10.55	9.37	8.12	6.06	4.08	7.02	50.63	19.16	118.87	31.48
Median Age (years)	34.90	34.60	35.60	36.80	33.30	34.00	34.40	37.00	39.70	31.30	30.30	37.00	33.60	31.90
Average household size	2.59	2.16	2.72	2.66	2.74	2.15	2.04	2.61	2.31	2.88	3.16	2.74	2.82	2.94
Average family size	NA	3.07	3.16	3.19	3.25	2.96	2.87	3.07	3.01	3.39	3.47	3.20	3.24	3.32
Veterans (% of civilians)	12.00	9.80	14.30	9.90	13.40	10.00	11.30	13.10	14.70	14.20	12.60	13.50	13.30	18.50

		DC District of		MD Montgomery	MD Prince George's				VA City of Falls		VA City of Manassas			VA Prince William
Environmental Justice Demographics (2000)	ROI		MD Frederick County	County	County		VA City of Alexandria	VA City of Fairfax	Church	VA City of Manassas	Park		VA Loudoun County	County
White (%)	57.00	30.78	89.33	64.78	27.04	68.94	59.79	72.91	84.97	72.10	72.80	69.91	82.79	68.93
Black or African American (%)	28.20	60.00	6.40	15.10	62.70	9.30	22.50	5.10	3.30	12.90	11.20	8.60	6.90	18.80
American Indian & Alaska Native (%)	0.30	0.30	0.21	0.29	0.35	0.35	0.28	0.34	0.24	0.40	0.40	0.26	0.21	0.39
Asian, Hawaiian and Other Pacific Islander (%)	7.60	2.70	1.70	11.30	3.90	8.60	5.70	12.20	6.50	6.90	4.20	13.00	5.30	3.80
Some other race (%)	4.00	3.84	0.92	5.00	3.38	8.33	7.38	6.17	2.52	7.90	8.10	4.54	2.26	4.35
Two or more races (%)	3.00	2.35	1.47	3.45	2.61	4.34	4.27	3.26	2.43	3.30	3.30	3.65	2.44	3.62
Hispanic Origin (%)	9.70	7.90	2.40	11.50	7.10	18.60	14.70	13.60	8.40	15.10	15.00	11.00	5.90	9.70
Poverty Rate (%)	7.60	16.90	4.80	4.20	5.80	7.10	7.10	6.00	5.20	8.00	5.20	3.50	3.10	3.20

Dalecarlia Reservoir and Treatment Plant, adjoining block groups (1-mile radius)

		Dalecarlia Reservoir and Treatment Plant, adjoining block groups (1-	mile radius)								_
GEO_ID	SUMLEVEL	GEO_NAME	P003002	P003003	P003004	P003005	P003006	P003007	P003008	P003009	
Geography Identifier	Geographic Summary Level	Geography	Total population: Population of one race	Fotal population: Population o one race; White alone	Total population: Population of one race; Black or African American alone	Total population: Population of one race; American Indian and Alaska Native alone	Total population: Population of one race; Asian alone	Total population: Populatior of one race; Native Hawaiial and Other Pacific Islander alone		Total population: Population of two or more races	Total population
10000US110010009017002	100	Block 7002, Block Group 7, Census Tract 9.01, District of Columbia, District of Columbia	147	125	3	0	18	0	1	0	147
10000US110010009017004	100	Block 7004, Block Group 7, Census Tract 9.01, District of Columbia, District of Columbia	65	62	3	0	C	0	0	2	67
10000US110010009017006	100	Block 7006, Block Group 7, Census Tract 9.01, District of Columbia, District of Columbia  Block 7007, Block Group 7, Census Tract 9.01, District of Columbia,	147	132	6	0	8	3 0	1	0	147
10000US110010009017007	100	District of Columbia  Block 7009, Block Group 7, Census Tract 9.01, District of Columbia,	0	0	C	0	C	0	0	0	0
10000US110010009017009	100	District of Columbia	0	0	C	0	C	0	0	0	0
10000US110010009024000	100	Block 4000, Block Group 4, Census Tract 9.02, District of Columbia, District of Columbia  Block 3001, Block Group 3, Census Tract 7057.02, Montgomery County,	0	0	C	0	(	0	0	0	0
10000US240317057023001	100	Maryland	238	230	1	0	6	6 0	1	0	238
10000US240317057023014	100	Block 3014, Block Group 3, Census Tract 7057.02, Montgomery County, Maryland	42	42	C	0	C	C	0	0	42
10000US240317057023015	100	Block 3015, Block Group 3, Census Tract 7057.02, Montgomery County, Maryland	76	67	2	0	5	5 0	2	0	76
10000US240317057023017	100	Block 3017, Block Group 3, Census Tract 7057.02, Montgomery County, Maryland	51	51	C	0	(	0	0	0	51
10000US240317057023018	100	Block 3018, Block Group 3, Census Tract 7057.02, Montgomery County, Maryland  Block 3019, Block Group 3, Census Tract 7057.02, Montgomery County,	73	70	C	0	2	2 0	1	0	73
10000US240317057023019	100	Maryland  Block 3020, Block Group 3, Census Tract 7057.02, Montgomery County,  Maryland	0	0	C	0	C	0	0	0	0
10000US240317057023020	100	Maryland  Block 3021, Block Group 3, Census Tract 7057.02, Montgomery County,  Maryland	0	0	C	0	C	0	0	0	0
10000US240317057023021	100	Maryland	68	67	C	0	1	0	0	0	68
10000US240317058003040	100	Block 3040, Block Group 3, Census Tract 7058, Montgomery County, Maryland	0	0	C	0	(	0	0	0	<u>0</u>
			907	846 93.07%	15 1.65%		40 4.40%	·	6 0.66%	2 0.22%	909 100.00%

GEO_ID	SUMLEVEL	GEO_NAME	P053001	P087001	P087002	
Geography Identifier	Geographic Summary Level	Geography	Households: Median household income in 1999	I statile is determined. I otal	Population for whom poverty status is determined: Income in 1999 below poverty level	% Below Poverty
15000US110010009011	150	Block Group 1, Census Tract 9.01, District of Columbia	100874	653	79	12.10%
15000US110010009012	150	Block Group 2, Census Tract 9.01, District of Columbia	200001	488	6	1.23%
15000US110010009016	150	Block Group 6, Census Tract 9.01, District of Columbia	153177	1336	30	2.25%
15000US110010009017	150	Block Group 7, Census Tract 9.01, District of Columbia	194525	1447	59	4.08%
15000US110010009023	150	Block Group 3, Census Tract 9.02, District of Columbia	149451	701	25	3.57%
15000US110010009024	150	Block Group 4, Census Tract 9.02, District of Columbia	105619	1266	37	2.92%
15000US240317057021	150	Block Group 1, Census Tract 7057.02, Montgomery County, Maryland	136009	1092	22	2.01%
15000US240317057022	150	Block Group 2, Census Tract 7057.02, Montgomery County, Maryland	96632	2033	22	1.08%
15000US240317057023	150	Block Group 3, Census Tract 7057.02, Montgomery County, Maryland	198091	1429	26	1.82%
15000US240317058001	150	Block Group 1, Census Tract 7058, Montgomery County, Marylan	113714	2421	51	2.11%
15000US240317058002	150	Block Group 2, Census Tract 7058, Montgomery County, Marylan	145121	2485	52	2.09%
15000US240317058003	150	Block Group 3, Census Tract 7058, Montgomery County, Marylan	124253	872	6	0.69%
		Weighted Average	117552.0428	16223	415	2.56%

GEO_ID	SUMLEVEL	GEO_NAME	P007001	P007010	
Geography Identifier	Geographic Summary Level	Geography	Total population: Total	Total population: Hispanic or Latino	Percentage
15000US110010009011	150	Block Group 1, Census Tract 9.01, District of Columbia	653	63	9.65%
15000US110010009012	150	Block Group 2, Census Tract 9.01, District of Columbia	3778	190	5.03%
15000US110010009016	150	Block Group 6, Census Tract 9.01, District of Columbia	1336	69	5.16%
15000US110010009017	150	Block Group 7, Census Tract 9.01, District of Columbia	1447	66	4.56%
15000US110010009023	150	Block Group 3, Census Tract 9.02, District of Columbia	701	64	9.13%
15000US110010009024	150	Block Group 4, Census Tract 9.02, District of Columbia	1266	53	4.19%
15000US240317057021	150	Block Group 1, Census Tract 7057.02, Montgomery County, Maryland	1098	63	5.74%
15000US240317057022	150	Block Group 2, Census Tract 7057.02, Montgomery County, Maryland	2033	90	4.43%
15000US240317057023	150	Block Group 3, Census Tract 7057.02, Montgomery County, Maryland	1429	68	4.76%
15000US240317058001	150	Block Group 1, Census Tract 7058, Montgomery County, Marylan	2421	132	5.45%
15000US240317058002	150	Block Group 2, Census Tract 7058, Montgomery County, Marylan	2485	60	2.41%
15000US240317058003	150	Block Group 3, Census Tract 7058, Montgomery County, Marylan	872	5	0.57%
	•	TOTAL	19519	923	4.73%

Georgetown Reservoir, Adjoining Block Groups

Georgetown Reservoir, Adjoining Block Groups													
GEO_NAME	P006001	P006002	P006003	P006004	P006005	P006006	P006007	P006008	P007001	P007010	P053001	P087001	P087002
Geography	Total population: Total	Total population: White alone	Total population: Black or African American alone	Total population: American Indian and Alaska Native alone	Total population: Asian alone	Total population: Native Hawaiian and Other Pacific Islander alone	Total population: Some other race alone	Total population: Two or more races	Total population: Total	Total population: Hispanic or Latino	Households: Median household income in 1999		Population for whom poverty status is determined: Income in 1999 below poverty level
Block Group 4, Census Tract 8.01, District of Columbia, District of Columbia	1458	1128	155	8	152	2	C	15	1458	62	61944	712	60
Block Group 2, Census Tract 8.02, District of Columbia, District of Columbia	1067	970	18	3	64	4 (	C	12	1067	27	111163	1067	148
Block Group 3, Census Tract 8.02, District of Columbia, District of Columbia	1739	1478	54	С	164	1 (	15	28	1739	133	61801	1739	229
	4264	3576	227	11	380	0	15	55	4264	222	234908	3518	437
	100.00%	83.86%	5.32%	0.26%	8.91%	0.00%	0.35%	1.29%	100.00%	5.21%	\$78,302.67		12.42%

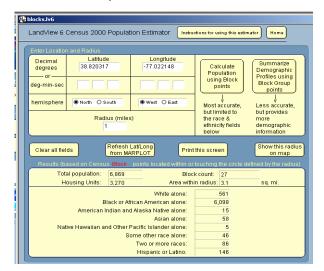
Pipeline route, block groups

GEO_ID	SUMLEVEL	GEO_NAME	P006001	P006002	P006003	P006004	P006005	P006006	P006007	P006008	P007010	P053001	P087001	P087002	
Geography Identifier	Geographic Summary Leve	Geography	Total population: Total	Total population: White alone	Total population: Black or African American alone	Total population: American Indian and Alaska Native alone	Total population: Asian alone	Total population: Native Hawaiian and Other Pacific Islander alone	Total population: Some other race alone	Total population: Two or more races	Total population: Hispanic or Latino	Households: Median household income in 1999	Population for whom poverty status is determined: Total	Population for whom poverty status is determined: Income in 1999 below poverty level	Poverty by block
15000US110010001004	150	Block Group 4, Census Tract 1, District of Columbia, District of Columbia	920	832	50	0	29	0	(	9	49	101502	920	57	6.20%
15000US110010002024	150	Block Group 4, Census Tract 2.02, District of Columbia, District of Columbia	1038	969	15	5 0	32	0		17	81	84342	1038	345	33.24%
				93%	1%	0%	3%	0%	0%	2%	8%				1
15000US110010008014	150	Block Group 4, Census Tract 8.01, District of Columbia, District of Columbia	1458	1128	155	5 8	152	0	C	15	62	61944	712	60	8.43%
15000US110010008023	150	Block Group 3, Census Tract 8.02, District of Columbia, District of Columbia	1739	1478	54	1 0	164	. 0	15	28	133	61801	1739	229	13.17%
15000US110010009017	150	Block Group 7, Census Tract 9.01, District of Columbia, District of Columbia	1447	1314	41	0	60	0		32	2 66	194525	1447	. 59	4.08%
15000US110010009024	150	Block Group 4, Census Tract 9.02, District of Columbia, District of Columbia	1266	1140	48	3 0	29	0	40	9	53	105619	1266	37	2.92%
15000US110010062021	150	Block Group 1, Census Tract 62.02, District of Columbia, District of Columbia	0	0	)	0	(	0	(	(	) (	0	(	0	NA NA
15000US110010073011	150	Block Group 1, Census Tract 73.01, District of Columbia, District of Columbia	5234	3034	1593	3 44	198	17	184	164	461	49122	4631	118	2.55%
15000US110010073081	150	Block Group 1, Census Tract 73.08, District of Columbia, District of Columbia	382	40	315	5 0	(	0	g	18	3 18	0	382	345	90.31%
				10%	82%	0%	0%	0%	2%	5%	5%				1
15000US240317057023	150	Block Group 3, Census Tract 7057.02, Montgomery County, Maryland	1429	1344	. (	7	32	0	40	6	68	198091	1429	26	1.82%
_			14913	11280.03824 75.64%			696.0308285 4.67%	17 0.11%	200.0200112				13564	1276 9.41%	

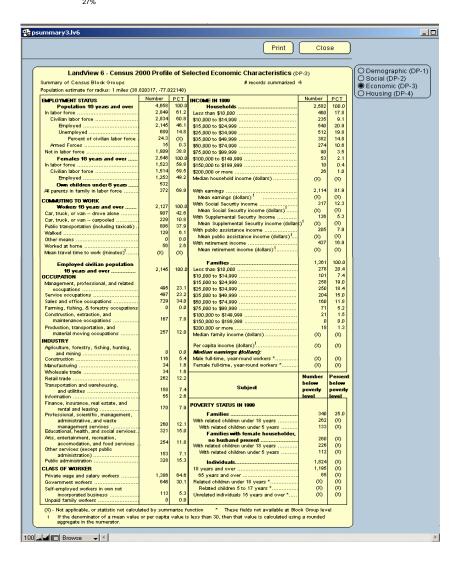
0.8203125 0.014450867

End of Pipeline is at West 77deg 1min 19.72sec North 38deg 49min 13.14sec

Pipeline terminal point (processing building) at Blue Plains, adjoining block groups (1-mile radius). Truck exit onto Anacostia Freeway is about 500 ft N and 1000 ft E of that.



Poverty rate for individuals not calculated. Estimate (based on total population):



Sensitive Receptors	
Dalecarlia Reservoir	
Name	Туре
Wesley Seminary	School
Crescent Trail	Park
Spring Valley Park	Park
Chesapeake and Ohio Canal National Park	Reserve
Friendship Recreation Center	Recreation
Little Falls	River
Chesapeake Canal	River

Georgetown Reservoir	
Name	Туре
Hardy Middle School	School
Georgetown Day School	School
Georgetown University	School
Harrison School	School
Woodmont School	School
Mt. Vernon Junior College & Seminary	School
Conduit Road School	School
Hardy Playground	Park
Reservoir Playground	Park
Chesapeake and Ohio Canal National Park	Reserve
Hardy Recreation Center	Recreation
Riverside Hospital	Hospital
Georgetown University Hospital	Hospital
Engine Company 29	Fire

Pipeline	
Name	Туре
Key Elementary School	School
Prospect Learning Center	School
Hyde Elementary School	School
Saint Stevens School	School
Saint Stephens School	School
Stevens Junior High School	School
Francis Junior High School	School
George Washington University	School
Schools Without Walls Senior High School	School
Jefferson Junior High School	School
Hawthorne High School	School
Leckie Elementary School	School
Patterson Elementary School	School
National Mall	Feature
Reflecting Pool	Feature
East Potomac Park	Park
International Athletic Park	Park
Chesapeake and Ohio Canal National Park	Reserve
Palisades Park and Recreation Center	Recreation
The Potomac Gorge	Park
Georgetown Playground and Recreation Center	Park
Georgetown Waterfront Park	Park
Rock Creek Park	Park
James Monroe Park	Park
Lincoln Memorial	Park
West Potomac Park	Park
Jefferson Memorial	Park
Potomac River	River
Rock Creek	River
Anacostia River	River

Economic Development (2000)	ROI	DC District of Columbia	MD Frederick County	MD Montgomery County	MD Prince George's County	VA Arlington County	VA City of Alexandria	VA City of Fairfax	VA City of Falls Church	VA City of Manassas	VA City of Manassas Park	VA Fairfax County	VA Loudoun County	VA Prince William County
Total labor force	2,360,346	298,225	107,151	,	431,120	120,803		12,361	6,072	19,118		548,812	95,686	157,254
Unemployment (%)	3.7	6.8	2.2	2.2	4.1	2	2.3	1.6	2.1	2.8	1.7	1.9	1.6	2.2
At-place employment (2002)	2,553,077	663,100	81,828	450,197	305,318	151,376	88,065	17,913	14,096	20,095	3,721	523,431	96,739	84,521
Income	\$42,726	\$39,970	\$32,134	\$49,107	\$30,340	\$49,683	\$48,427	\$67,642	\$74,924	\$60,409	\$60,794	\$51,596	\$39,055	\$30,602

At-place Employment by Industrial Group	PMSA Total (2002)
Manufacturing	65,521
Natural Resources & Mining	1,434
Construction	153,589
Trade, Transportation and Utilities	355,634
Information	114,892
Financial Activities	145,168
Professional and Business Services	549,145
Educational & Health Services	261,520
Leisure & Hospitality	212,515
Other Services	139,600
Federal Government	321,382
Local Government	183,963
State Government	75,209
Other/Unclassifiable	1,774
Total	2,581,346

 MWCOG region, 2002
 million

 office space
 \$843
 \$ 843,000,000
 0.0%
 7.5 million square feet

 educational and medical space
 \$334
 \$ 334,000,000
 0.0%
 2.1 million square feet

 other commercial space
 \$468
 \$ 468,000,000
 0.0%
 1.8 million square feet

 \$ 1,645,000,000
 0.0%
 0.0%
 1.8 million square feet

Source: MWCOG Commercial Construction Indicators

 
 Housing MWCOG
 Total 1,684,215
 Occupied 1,607,261
 Vacancy Rate 4.6%

 District of Columbia
 274,845
 248,338
 9.6%

Source: MWCOG "Our Changing Region, Census 2000"

# Socieconomic Calculations:

	Estimated Construction cost (\$2004)	% of 2001-02 regional construction starts**	Estimated Construction Labor (FTEs)*	O&M Cost (Annual)	Estimated O&M Labor (FTEs)
Alternative A-Dalecarlia Monofill	\$56,894,000	1.6%	340	\$877,000	3.333
Alternative B-Dedicated Pipeline to Blue Plains	\$145,197,000	4.0%	867	\$1,998,000	2.333
Alternative C-Onsite Processing with Hauling	\$50,197,000	1.4%	300	\$1,923,000	2.333

based on:

\*Labor-Avg construction income, DC-Mont-Arl-Ffx, 2002: \$55,262 and national average labor/materials breakdown for nonbuilding facilities

\*\* Value of construction starts in region, 2001-2002: \$3,662,187,091

Additional Public Safety Resources Needed (during cor	struction period)						
	Estimated						
	construction workers	Police	Fire fighter	Fire fighting	EMS personnel		Annual EMS
	(FTEs)	(FTEs)	(FTEs)	vehicles	(FTEs)	EMS vehicles	calls
Alternative A-Dalecarlia Monofill	340	0.17	0.14	0.02	0.01	0.003	3.10
Alternative B-Pipeline to Blue Plains	867	0.43	0.36	0.04	0.03	0.01	7.91
Alternative C-Onsite Processing with Hauling	300	0.15	0.12	0.02	0.01	0.003	2.74
•							

Nonresidential Workforce Planning Factor	Resource
0.5 per 1,000 pop	Police
0.4 per 1,000 pop	Fire fighter FTEs
0.1 per 1,000 pop	Fire fighting vehicles
1.0 per 30,000 pop	EMS personnel FTEs
0.3 per 30,000 pop	EMS vehicles
9.1 per 1,000 pop	Annual EMS calls
e: Burchell, Robert W., David Listokin, et al. Development	Impact Assessment Handbook. Washington, DC: the Urban Land Institute, 1994.

Average Construction Labor and Materials Breakdown	Labor	Materials
TOTAL CONSTRUCTION ACTIVITY	34.2%	57.8%
NEW CONSTRUCTION	30.6%	61.3%
Hotels & Motels	29.2%	63.8%
Industrial Buildings	38.0%	56.8%
Office Buildings	33.8%	61.3%
Garages & Service Stations	33.1%	59.0%
Stores & Restaurants	35.9%	61.9%
Amusement & Recreation Buildings	35.0%	60.5%
Local Transit Facilities	29.6%	63.0%
Other nonbuilding facilities	33.0%	60.6%

CA05N Pers	sonal ir	ncome by major source and earnings by industry	(thousands of dollar	rs)		http://www.bea	gov/bea/regio	onal/reis/	downloaded 10/	20/04							
			Washington-Balt					calc: Avg earnings by			calc: Avg earnings by			calc: Avg earnings by	Fairfax, Fairfa	-	calc: Avg
_		re-Northern Virginia, DC-MD-VA-WV (CSA) LineTitle	Virginia, DC-MD	-VA-WV (CSA) 2002	industry	District of 0	2002	industry	Montgo 2001	omery 2002	industry	Arling <b>2001</b>	<sub>jton</sub> 2002	industry	Chu <b>2001</b>	rch 2002	industry
		cine i itie data deleted, not applicable)	2001	2002		2001	2002		2001	2002		2001	2002		2001	2002	•
89548		Nonfarm earnings	\$257,315,870	\$265 018 150		\$52,644,199	\$55,651,184		\$31,014,607	\$32,187,758		\$13,572,015	\$13,810,332		\$43,733,909	\$44,174,859	<b>.</b>
89548		Private earnings	\$192,812,940			\$31,637,300	\$32,822,589		\$24,679,471	\$25,354,799		\$8,555,573	\$8,589,117		\$37,964,084	\$37,847,521	
89548	100	Forestry, fishing, related activities, and other 7/	ψ132,012,340 (D)	(D)		ψ51,037,300 (D)	ψ32,022,303 (D)		\$9,555	\$9,562		\$215	\$221		\$4,953	\$4,905	
89548	101	Forestry and logging	(D)	(D)		\$217	\$224		\$116	\$120		\$106	\$109		\$800	\$815	
89548	102	Fishing, hunting, and trapping	(D)	(D)		\$220	\$226		\$237	\$243		\$58	\$59		(D)	(D)	
89548	103	Agriculture and forestry support activities	(D)	(D)		\$466	\$518		\$9,202	\$9,199		\$51	\$53		(D)	(D)	•
89548	104	Other 7/	(D)	(D)		(D)	(D)		\$0	\$0		\$0	\$0		\$0	\$0	)
89548	200	Mining	(D)	(D)		(D)	(D)		\$13,574	\$15,270		\$1,263	\$1,211		(D)	\$198,398	3
89548	201	Oil and gas extraction	(D)	(D)		\$10,701	\$10,489		\$1,165	\$1,061		\$915	\$827		\$145,563	\$131,380	)
89548	202	Mining (except oil and gas)	(D)	(D)		\$1,603	(D)		(D)	(D)		\$332	\$367		(D)	(D)	)
89548	203	Support activities for mining	(D)	(D)		(D)	(D)		(D)	(D)		(L)	(L)		(D)	(D)	
89548	300	Utilities	(D)	(D)		(D)	(D)		\$1,148,100	\$1,244,490		(D)	(D)		(D)	(D)	)
			C, Montgomery, Arli						•								
89548	400	Construction	(D)	(D)			\$767,305	\$52,541		\$1,955,722		\$391,738	\$335,759		\$2,513,835	\$2,531,417	
89548	401	Construction of buildings	(D)	(D)		\$261,534	\$303,379		\$718,294	\$758,255		\$97,154	\$107,532		(D)	(D)	•
89548 89548	402 403	Heavy and civil engineering construction  Specialty trade contractors	(D) \$8,687,037	(D) \$8,852,216		\$154,923 \$262,322	\$176,385 \$287,541		\$159,211 \$1,011,090	\$158,691 \$1,038,776		\$76,495 \$218,089	\$39,138 \$189,089		(D) \$1,241,050	(D) \$1,251,234	•

(note: remaining industry data deleted, not applicable)

CA25N Total full-time and part-time employment by industry (number of jobs)	http://www.bea.gov/bea/regional/reis/

		Washington-Balti Virginia, DC-MD-		District of Co	olumbia	Montgor	merv	Arlingto	on	Fairfax, Fairfax ( Churc	•
Li	ineCode LineTitle	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002
89548	10 Total employment	5,135,441	5,187,017	764,343	779,008	608,558	616,195	203,285	198,851	760,567	754,590
89548	20 Wage and salary employment	4,383,418	4,391,631	705,206	716,691	494,956	495,742	182,218	176,595	633,929	619,943
89548	40 Proprietors employment	752,023	795,386	59,137	62,317	113,602	120,453	21,067	22,256	126,638	134,647
89548	50 Farm proprietors employment	13,091	12,979	, -	· -	503	495	-	· -	134	134
89548	60 Nonfarm proprietors employment 2/	738,932	782,407	59,137	62,317	113,099	119,958	21,067	22,256	126,504	134,513
89548	70 Farm employment	18,037	18,146	-	-	861	863	-	-	197	204
89548	80 Nonfarm employment	5,117,404	5,168,871	764,343	779,008	607,697	615,332	203,285	198,851	760,370	754,386
89548	90 Private employment	4,154,443	4,186,062	519,622	526,548	519,438	524,267	148,569	145,727	666,667	657,487
89548	100 Forestry, fishing, related activities, and other 3/	(D)	(D)	(D)	(D)	463	471	26	26	264	255
89548	200 Mining	(D)	(D)	(D)	(D)	701	720	166	165	(D)	681
89548	300 Utilities	(D)	(D)	(D)	(D)	1,139	1,389	(D)	(D)	(D)	(D)
89548	400 Construction	(D)	(D)	13,720	14,604	36,688	37,599	5,915	5,317	44,855	43,638
89548	500 Manufacturing	(D)	162511 E	3,884	(D)	20,273	18,812	(D)	(D)	(D)	13,091
89548	600 Wholesale trade	(D)	(D)	4,781	4,658	13,231	13,081	(D)	2,346	20,533	19,503
89548	700 Retail trade	488,323	487,576	20,271	20,240	61,445	59,878	10,488	10,427	71,561	71,480
89548	800 Transportation and warehousing	(D)	(D)	(D)	(D)	8,715	8,800	10,574	9,937	(D)	(D)
89548	900 Information	(D)	156986 E	(D)	28,260	21,803	19,834	10,524	9,493	52,724	41,706
89548	1000 Finance and insurance	197182 E	203512 E	21,840	22,058	31,700	32,534	3,849	3,957	31,299	32,918
89548	1100 Real estate and rental and leasing	175829 E	201256 E	17,097	18,596	29,282	33,054	6,963	7,701	30,712	35,734
89548	1200 Professional and technical services	630234 E	630,818	116,391	117,974	93,398	94,887	38,570	36,700	153,812	151,075
89548	1300 Management of companies and enterprises	35753 E	34395 E	2,582	2,486	1,906	1,888	3,636	3,306	16,597	16,064
89548	1400 Administrative and waste services	314194 E	308853 E	45,622	45,307	41,612	40,239	12,490	11,847	51,654	50,036
89548	1500 Educational services	133837 E	138616 E	42,218	42,471	11,781	12,426	5,035	6,246	12,006	12,157
89548	1600 Health care and social assistance	438249 E	455382 E	56,879	60,738	57,653	59,822	9,600	9,582	52,251	54,647
89548	1700 Arts, entertainment, and recreation	95449 E	99050 E	10,319	10,746	13,794	14,493	2,978	2,975	15,158	15,643
89548	1800 Accommodation and food services	(D)	304304 E	(D)	44,648	33,807	33,317	12,802	13,242	39,435	39,725
89548	1900 Other services, except public administration	313,598	320,801	66,084	67,088	40,047	41,023	11,435	11,414	41,702	42,900
89548	2000 Government and government enterprises	962,961	982,809	244,721	252,460	88,259	91,065	54,716	53,124	93,703	96,899
89548	2001 Federal, civilian	411,724	424,514	182,756	190,821	41,920	42,815	30,091	28,048	33,712	36,442
89548	2002 Military	107,207	103,694	22,991	22,324	6,673	6,128	14,610	14,906	7,064	6,341
89548	2010 State and local	444,030	454,601	38,974	39,315	39,666	42,122	10,015	10,170	52,927	54,116
89548	2011 State government	102154 E	103495 E	-	-	1,110	(D)	511	483	9,724	9,895
89548	2012 Local government	315563 E	(D)	38,974	39,315	38,556	(D)	9,504	9,687	43,203	44,221

- DALECARLIA WTP RESIDUALS SAMPLING AND PROTOCOL
- 2004 ANALYTICAL RESULTS

This document contains the sampling protocol and other pertinent information needed to sample and process water treatment residuals from the Dalecarlia Water Treatment Plant. Please review this document prior to sampling as it includes:

- What tests will be performed
- Address of laboratory performing analysis
- The sampling location
- Instructions on how to sample, pack and ship each sample

# Tests to be performed:

The following tests will be perfored by **A&L Eastern – Agricultural Laboratories**, **Inc.** or by their chosen sub-contractor:

<b>Environmental Analysis</b>	<u>Metals</u>
Total Solids	Cadmium
TKN	Chromium
Phosphorous	Lead
Potassium	Molybdenum
Sulfur	Nickel
Calcium	Arsenic
Magnesium	Mercury

Iron

Sodium

Aluminum Other

Manganese Nitrogen-Ammonia Copper Nitrate (NO<sub>3</sub> + NO<sub>2</sub>)

Zinc Toxic Characteristic Leaching Procedure (to be sub-contracted by

A&L Eastern - Agricultural Laboratories, Inc.)

The following tests will be perfored by Eno River Labs, LLC:

Selenium

**Total Dioxins** 

The following test will be performed by the Washington Suburban Sanitary Commission Consolidated Laboratory:

Fecal Coliform

# **Addresses of Laboratories**

A&L Eastern - Agricultural Laboratories, Inc. 7621 Whitepine Road Richmond, VA 23237

Eno River Labs, LLC 2445 S. Alston, Ave Durham, NC 27713

WSSC Consolidated Laboratory Laboratory Services Group 12245 Tech Rd. Silver Spring, MD 20904-1969

# Sampling Location

In order to mimic real world conditions, the samples will be taken from the drained sedimentation basins at the Dalecarlia Water Treatment Plant. The residuals remaining at the bottom of the tank will most likely be between 15-30% solids. The plant will begin dewatering the sedimenation basins on October 27th, 2004. The samples will be taken the morning of October 28th, 2004 from Sedimentation Basin 1.

# Sampling, Packing and Shipping Instructions

# Environmental Analysis/Metals/Other

The samples will be taken in sterile, quart-sized, wide-mouthed glass sample bottles. Four quarts of residuals will be collected, two quarts will be sent to A & L Eastern – Agricultural Laboratories, Inc. and two quarts are duplicates to be refrigerated or kept on ice till confirmation of reciept of samples is received from the laboratory.

Sample bottle labels will be filled out and placed on the sample bottle in the field. Upon collection, the samples will be wrapped in insulating wrapping and placed in a cooler on ice. The chain of custody will be filled out once the samples have been taken and placed in a ziploc bag in the cooler to be sent to the laboratory. The samples will be shipped overnight via FedEx to A & L Eastern – Agricultural Laboratories, Inc.

# **Total Dioxins**

The samples will be taken in an amber, glass sample bottles with teflon-lined caps provided by Eno River Labs. Approximately 20 oz total of sample will be taken. Duplicate sample will be taken and kept on ice or refrigerated until confirmation of reciept of samples has been received from the laboratory.

Sample bottle labels will be filled out and placed on the sample bottle in the field. Upon collection, the samples will be wrapped in insulating wrapping and placed in a cooler on ice. The chain of custody will be filled out once the samples have been taken and placed in a ziploc bag in the cooler to be sent to the laboratory. The samples will be shipped overnight via FedEx to Eno River Labs.

# **Fecal Coliform**

The samples will be taken in sterile, plastic, 120 mL-sized sample bottles. Approximately 500 mL of sample will be taken. Duplicate sample will be taken and kept on ice or refrigerated until it is no longer needed.

Sample bottle labels will be filled out and placed on the sample bottle in the field. Upon collection, the samples will be wrapped in insulating wrapping and placed in a cooler on ice. The chain of custody will be filled out once the samples have been taken and placed in a ziploc bag in the cooler to be taken to the laboratory. The samples will be driven within 6 hours by the sampler to the WSSC Consolidated Laboratory.

REPORT OF AWAILYSIS

**GRAB COLLECTION** 

COLLECTED BY:

PICK UP BY:

CLIENT: A&L Eastern Agricultural Laboratories SAMPLE RECEIPT

> Dr. Paul Chu DATE: 11/4/2004 TIME: 1530

ADDRESS: 7621 Whitepine Road

Richmond, VA 23237-2296

PHONE: 804-743-9401

ATTN:

CITY:

FAX: 804-271-6446 CH2M

JENNIFER ARMSTRONG

SUITE 600

HERNDON VA 20171

13921 PARK CENTER RD. GOOD CONDITION ☑ Good ☐ Other (See C-O-C)

RE:

NUMBER OF CONTAINERS: 1

DALECAVLIA RESIDUALS

DATE: 10/28/2004 TIME: 0845

CLIENT

REED - CW

SAMPLE ID: 43805 SAMPLE NO 04-21303

SPECIAL NOTES:

	EPA								
	HW	Method	JRA	Regulatory			7.3		
Parameter	No.:	Number	QL	Level	Result		Unit	Anal	yst/Date/Time
Toxic Characteristic Leachi	ng Proce	dure by SW	/-846 Meth	od 1311			Situation V	. · · · .	
Arsenic	D004	6010B	0.002	5	0.003		mg/L	TLG	11/10/2004 1346
Barium	D005	6010B	0.005	100	0.212		mg/L	TLG	11/10/2004 1346
Benzene	D018	8260B	0.005	0.5	< 0.005		mg/L	TAG	11/11/2004 1534
Cadmium	D006	6010B	0.0005	1	0.0010		mg/L	TLG	11/10/2004 1346
Carbon Tetrachloride	D019	8260B	0.005	0.5	< 0.005		mg/L	TAG	11/11/2004 1534
Chlordane	D.020	8270C	0.005	10	< 0.005		mg/L	CLH	11/15/2004 2335
Chlorobenzene	D021	8260B	0.005	100	< 0.005		mg/L	TAG	11/11/2004 1534
Chloroform	D022	8260B	0.005	6	< 0.005		mg/L	TAG	11/11/2004 1534
Chromium	D007	6010B	0.001	5	0.013		mg/L	TLG	11/10/2004 1346
o-Cresol	D023	8270C	0.005	200	< 0.005		mg/L	CLH	11/15/2004 2335
m/p-Cresol	D024	8270C	0.01	200	< 0.01		mg/L	CLH	11/15/2004 2335
Cresol	D026	8270C	0.005	200	< 0.005		mg/L	CLH	11/15/2004 2335
2,4-D	D016	8151A	0.004	10	< 0.004		mg/L	BRD	11/10/2004 1506
1,4-Dichlorobenzene	D027	8260B	0.005	7.5	< 0.005		mg/L	TAG	11/11/2004 1534
1,2-Dichloroethane	D028	8260B	0.005	0.5	< 0.005		mg/L	TAG	11/11/2004 1534
1,1-Dichloroethylene	D029	8260B	0.005	0.7	< 0.005		mg/L	TAG	11/11/2004 1534
2,4-Dinitrotoluene	D030	8270C	0.005	0.13	< 0.005		mg/L	CLH	11/15/2004 2335
Endrin	D012	8270C	0.005	0.008	< 0.005		mg/L	CLH	11/15/2004 2335
Heptachlor (+epoxide)	D031	8270C	0.005	0.02	< 0.005		mg/L	CLH	11/15/2004 2335
Hexachlorobenzene	D032	8270C	0.005	0.13	< 0.005	٠.	mg/L	CLH	11/15/2004 2335
Hexachloro-1,3-butadiene	D033	8270C	0.005	0.5	< 0.005		mg/L	CLH	11/15/2004 2335
,							- 3		

# -REPORT OF ANALYSIS

SAMPLE ID: 43805 SAMPLE NO 04-21303

	EPA							
	HW	Method	JRA	Regulatory				-
Parameter	No.	Number	QL	Level	Result	Unit	Anal	yst/Date/Time
Hexachloroethane	D034	8270C	0.005	3	< 0.005	mg/L	CLH	11/15/2004 2335
Lead	D008	6010B	0.005	5	0.006	mg/L	TLG	11/10/2004 1346
Lindane	D013	8270C	0.005	0.03	< 0.005	mg/L	CLH	11/15/2004 2335
Mercury	D009	7470A	0.0002	0.2	< 0.0002	mg/L	TLG	11/11/2004 1430
Methoxychlor	D014	8270C	0.005	0.4	< 0.005	mg/L	CLH	11/15/2004 2335
Methyl ethyl Ketone	D035	8260B	0.1	200	<.0.1	mg/L	TAG	11/11/2004 1534
Nitrobenzene	D036	8270C	0.005	2	< 0.005	mg/L	CLH	11/15/2004 2335
Pentachlorophenol	D037	8270C	0.1	100	< 0.1	mg/L	CLH	11/15/2004 2335
Pyridine	D038	8270C	0.025	5	< 0.025	mg/L	CLH	11/15/2004 2335
Selenium	D010	6010B	0.005	1	< 0.005	mg/L	TLG	11/10/2004 1346
Silver	D011	6010B	0.001	5	< 0.001	mg/L	TLG	11/10/2004 1346
Tetrachloroethylene	D039	8260B	0.005	0.7	< 0.005	mg/L	TAG	11/11/2004 1534
Toxaphene	D015	8270C	0.1	0.5	< 0.1	mg/L	CLH	11/15/2004 2335
Trichloroethylene	D040	8260B	0.005	0.5	< 0.005	mg/L	TAG	11/11/2004 1534
2,4,5-Trichlorophenol	D041	8270C	0.01	40	< 0.01	mg/L	CLH	11/15/2004 2335
2,4,6-Trichlorophenol	D042	8270C	0.01	2	< 0.01	mg/L	CLH	11/15/2004 2335
2,4,5-TP	D017	8151A	0.004	1	< 0.004	mg/L	BRD	11/10/2004 1506
Vinyl Chloride	D043	8260B	0.01	0.2	< 0.01	mg/L	TAG	11/11/2004 1534

NOTE: \*JRA Quantification Level is the concentration of the lowest calibration standard above zero with a reliable signal.

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RESPECTFULLY SUBMITTED

Elaine Claiborne Laboratory Director

18-Nov-04

Report Number: 2904-R312-042

Lab Number:

43805

# **A&L EASTERN AGRICULTURAL LABORATORIES, INC.**

7621 Whitepine Road • Richmond, Virginia 23237 • (804) 743-9401

Tricia

Account Number:



@

Samples Submitted By:

 $\mathcal{R}$ DALECAVLIA RESIDUALS

CH2M HILL/GLENN PALEN 13921 PARK CENTER RD

Send To:

HERNDON VA 20171

DALECANTIA RESIDUALS

Sample ID:

JENNIFER ARMSTRONG

11/01/2004 10/28/2004

> Date Received: Date Reported:

Date Sampled:

11/03/2004

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	41	4	Detection			ojovio V	
Parameter	( % )	(mg/kg)	(mg/kg)	Analyst	Analysis Date	Alialysis	Method Reference
SOLIDS(AS IS)	6.23	62300	100	JCM M	11/01/2004	16:00	SM 2540 G
NITROGEN(TKN)	0.80	8000	100	KCS	11/02/2004	12:30	EPA 351.3
PHOSPHORUS	0,42	4200	100	JCM	11/02/2004	15:30	SW 846-6010B
POTASSIUM	0.09	006	100	JCM	11/02/2004	15:30	SW 846-6010B
SULFUR	0.42	4200	100	JCM	11/02/2004	15:30	SW 846-6010B
CALCIUM	1.02	10200	100	JCM	11/02/2004	15:30	SW 846-6010B
MAGNESIUM	0.25	2500	100	JCM	11/02/2004	15:30	SW 846-6010B
SODIUM	0.02	200	100	JCM	11/02/2004	15:30	SW 846-6010B
IRON		18400	_	JCM	11/02/2004	15:30	SW 846-6010B
ALUMINUM		151300	10	JCM	11/02/2004	15:30	SW 846-6010B
MANGANESE		1970	_	JCM	11/02/2004	15.30	SW 846-6010B
COPPER		28	_	JCM	11/02/2004	15:30	SW 846-6010B
ZINC		102	_	JCM	11/02/2004	15:30	SW 846-6010B
AMMONIA-NITROGEN	0.00	S	100	KCS	11/02/2004	11:30	EPA 350.2
NO3-NO2 NITROGEN		147	10	KCS	11/02/2004	16:00	SM 4500-NO3 F
CADMIUM		1.5	_	JCM	11/02/2004	15:30	SW 846-6010B
CHROMIUM		9	2	JCM	11/02/2004	15:30	SW 846-6010B
NICKEL		43	5	JCM	11/02/2004	15:30	SW 846-6010B

TCLP TO FOLLOW

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PAUL C. H. CHU

Report Number: 2004-R312-042

# **A&L EASTERN AGRICULTURAL LABORATORIES, INC.**

7621 Whitepine Road • Richmond, Virginia 23237 • (804) 743-9401 Fax No. (804) 271-6446

0

Lab Number: 43805

Account Number:

CH2M HILL/GLENN PALEN Send To:

13921 PARK CENTER RD SUITE 600

DALECA ALIA RESIDUALS

Samples Submitted By:

JENNIFER ARMSTRONG

HERNDON VA 20171

10/28/2004 11/01/2004 11/03/2004 Date Reported: Date Received: Date Sampled:

Sample ID: DALECAVLIA RESIDUALS

		BIG	SOLIDS ANALYSIS REPOR	NALYSI	S REPORT			
			Detection					
Parameter	Result (%)	Result (mg/kg)	Limit (mg/kg)	Analyst	Analysis Date	Analysis Time	Method Reference	
LEAD		206	2	ZGM	11/02/2004	15:30	SW 846-6010B	
ARSENIC		43.93	0.2	KMM	11/03/2004	15:00	SW 846-7061A	
MERCURY		ΩN	0.2	KMM	11/03/2004	15:00	SW 846-7471A	
SELENIUM		1.85	0.1	KMM	11/03/2004	15:00	SW 846-7741A	
ORGANIC NITROGEN	0.80	8000	100	DCH	11/02/2004	•	CALCULATION	
MOLYBDENUM		ΩN	2	CM	11/02/2004	15:30	SW 846-6010B	

TCLP TO FOLLOW

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C. NORMAN JONES

Jak Ch

# Washington Suburban Sanitary Commission Laboratory Services Group 12245 Tech Rd. Silver Spring, MD 20904-1969 Analytical Report 12/10/04

Client:

CH2M Hill WQ BASIN

Project: Description:

Basin Project

Sample: L730	35-01 CH2 M Hill 28-Oct	-04 08:45 a	am .	Collected by:	J.ARMSTRONG	Certif	ication No.		
Product	Parameter		Result	Units	RDL	Analyzed	Analyst	Method	Approval
FCOLI TS PERCENT TVS PERCENT	Fecal Coliforms MPN Percent Total Solids Total Volatile Solids	<	31000 6.4 25.9			10/28/04 10/29/04 10/29/04	J.PENNELLA G.LE G.LE	SM 9221 E SM 2540 B SM 208 E	YES YES YES



# Prepared for: CH2M Hill Reference ID: WATER TREATMENT SLUDGE

# **Project Summary 64154**

# Method 1613B

Concentrations shown in pg/g

	BLANK	DALECARLIA RESIDUAL
Total TEQ	0.9	0.2
TEQ based on EPA 198	39a	
<u>Analytes</u>		
2,3,7,8-TCDD	< 1.00	< 1.00
1,2,3,7,8-PeCDD	< 5.00	< 5.00
1,2,3,4,7,8-HxCDD	< 5.00	< 5.00
1,2,3,6,7,8-HxCDD	< 5.00	< 5.00
1,2,3,7,8,9-HxCDD	< 5.00	< 5.00
1,2,3,4,6,7,8-HpCDD	< 5.00	< 5.00
1,2,3,4,6,7,8,9-OCDD	< 10.0	10.4 B
2,3,7,8-TCDF	< 1.00	< 1.00
1,2,3,7,8-PeCDF	< 5.00	< 5.00
2,3,4,7,8-PeCDF	< 5.00	< 5.00
1,2,3,4,7,8-HxCDF	< 5.00	< 5.00
1,2,3,6,7,8-HxCDF	< 5.00	< 5.00
2,3,4,6,7,8-HxCDF	< 5.00	< 5.00
1,2,3,7,8,9-HxCDF	< 5.00	< 5.00
1,2,3,4,6,7,8-HpCDF	< 5.00	< 5.00
1,2,3,4,7,8,9-HpCDF	< 5.00	< 5.00
1,2,3,4,6,7,8,9-OCDF	< 10.0	< 10.0
Total TCDD	< 1.00	< 1.00
Total PeCDD	< 5.00	< 5.00
Total HxCDD	< 5.00	< 5.00
Total HpCDD	< 5.00	< 5.00
Total TCDF	< 1.00	< 1.00
Total PeCDF	< 5.00	< 5.00
Total HxCDF	< 5.00	< 5.00
Total HpCDF	< 5.00	< 5.00
Extraction Date	11/3/2004	11/3/2004
Analysis Date	11/10/2004	11/10/2004
Primary Filename	T043857	T043858
Confirm Filename	N/A	N/A
Dilution Filename	N/A	N/A

Data Flag Descriptions:

< Not detected -1613 Minimum Levels reported

[..] EMPC Value

Analyte detected in Blank

Value reported from Confirmatory Analysis

Value reported from Dilution Analysis

Ε Estimated Value - Above Calibration Range

Estimated Value-Below Calibration Range

N/A Not Applicable

Quantitative Interference Present

Analyte saturated

Interference from Diphenyl Ethers

summary 1

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