

STAFF RECOMMENDATION

Eugene Keller

NCPC File No. MP37 / 6572



**DEPARTMENT OF THE ARMY, WASHINGTON AQUEDUCT-
WATER TREATMENT RESIDUALS MANAGEMENT BUILDING AND SITE
IMPROVEMENTS**

5900 MacArthur Boulevard, NW, Washington, DC

Submitted by the Department of the Army

November 30, 2006

Abstract

The U.S. Army Corps of Engineers, Washington Aqueduct, has submitted preliminary site and building plans for a project that involves collection of the residual solid material at the Dalecarlia Water Treatment Plant and from the Georgetown Reservoir. Processing and consolidation of residuals in a new building, with associated small improvements (including structures) are proposed at the east Dalecarlia Reservoir area and Georgetown Reservoir on government property. The largest building of the project would be located north of Sibley Memorial Hospital in the District of Columbia. The disposal of residuals from this structure would be achieved by trucking on major streets to licensed land disposal sites, likely located in Maryland or Virginia.

Commission Action Requested by Applicant

Approval of a master plan modification and preliminary site and building plans pursuant to 40 U.S.C. § 8722 (a), (b)(1) and (d).

Executive Director's Recommendation

The Commission:

Approves the National Environmental Policy Act Environmental Impact Statement Alternative E as presented and analyzed in the adopted Final Environmental Impact Statement, dated September 2005, for the Proposed Water Treatment Residuals Management Process for the Washington Aqueduct;

Approves the master plan modification, and the preliminary site and building plans, for the Department Of The Army, Washington Aqueduct, Water Treatment Residuals Management Building and Site Improvements, as shown on NCPC Map File No. 74.10(38.00)-42145.

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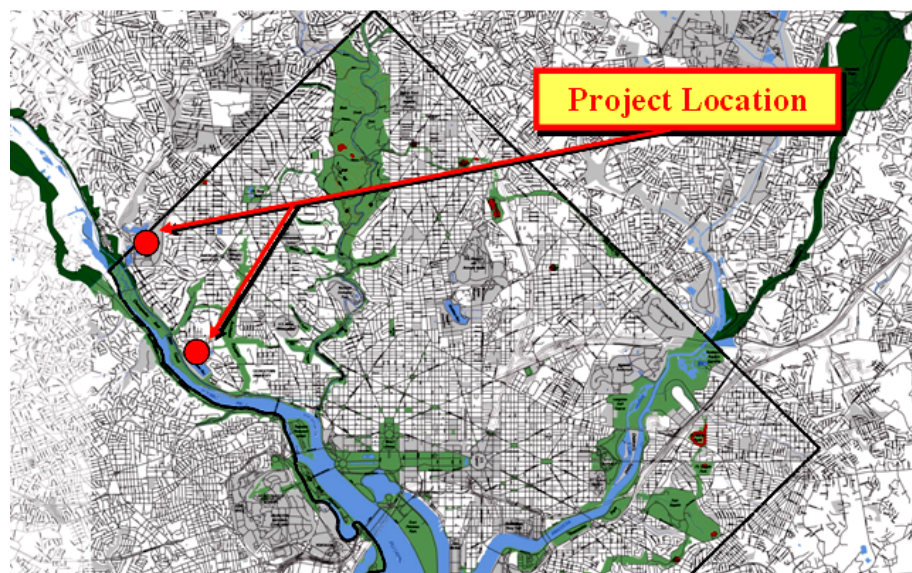
PROJECT DESCRIPTION

Site

The Washington Aqueduct Residuals Treatment project is located at the Dalecarlia Reservoir in Northwest Washington, DC. Project components are generally located near the reservoir, in the District of Columbia and within Montgomery County, Maryland. The main components of the project include the Dalecarlia Reservoir property and new construction for the Dalecarlia Water Treatment Plant (WTP). A small new pumping station is located at the Georgetown Reservoir.

The property at the Dalecarlia Reservoir consists of a Forebay, the open water portion of the Reservoir, approximately 47 acres of mixed hardwood forest, and cleared areas hosting warehousing, parking, and other operational facilities of the Washington Aqueduct. Total area of the Dalecarlia property comprises 276.8 acres. A maintained dirt road follows the eastern perimeter of the reservoir and provides access to the Forebay site by Aqueduct personnel only. Much of the area surrounding the reservoir within the property bounty is characterized as “Permanent Open Space, Buffer, and Reservoir Protection” by the master plan approved by the Commission in December 1980. One small portion of the property contains a temporary, non-Aqueduct use. This area, across Little Falls Road from Sibley Memorial Hospital, currently hosts the administrative office trailers for the Corps American University Experiment Station (AUES) Formerly Used Defense Site (FUDS) investigation and remediation project.

The facilities and buildings comprising the Dalecarlia WTP property are located immediately south and west of the Dalecarlia Reservoir site. This site is bordered by a mix of residential and commercial office uses immediately to the north, by MacArthur Boulevard (and beyond that, the Reservoir property described above) to the east, by residential uses to the south, and by woodland shoreline of the Potomac River to the west. The property is characterized as commercial services and maintained as developed land in a campus-like setting. A portion of the Capital Crescent Trail passes through this property on an approximately north-south axis west of MacArthur Boulevard.



**WATER TREATMENT RESIDUALS MANAGEMENT BUILDING AND SITE
IMPROVEMENTS VICINITY PLAN**

Background

At its December 4, 1980 meeting, the Commission approved the revised master plan for the Dalecarlia Reservoir, District of Columbia and Montgomery County, Maryland, as shown on NCPC Map File No.74.10 (05.12)-28939, and:

- Approved the preliminary site and building plans for the Solids Recovery Facility in Montgomery County, Maryland, with the request that the Army Corps of Engineers in the preparation of final plans:
 - Shift the entire facility south and closer to the existing shop buildings to maximize open space buffering and screening of the facility to the north;
 - Provide additional landscape screening of the western and north boundaries of the site and screen as effectively as possible from adjacent residential property;
 - Provide a buffer strip between the facility and the access road;
 - Select an exterior brick that matches the existing shop building;
 - Select a truck route for the disposal of sludge material that minimizes traffic impacts.
- Continue to coordinate with the Montgomery County Planning Board on the proposed Little Falls Bikeway (Capitol Crescent Trail) through a portion of the Dalecarlia Reservoir and to MacArthur Boulevard.

The facilities and buildings of the Dalecarlia Water Treatment Plant lie on the other side of MacArthur Boulevard from the main reservoir (see page 7). Adjacent land uses also include government-owned facilities, federal and local recreational areas, such as public access pathways and forested lands that surround the facility. Sibley Memorial Hospital is planning a new 8-story office building and is evaluating its potential location to the south of the WTP. This building would not be located on property owned by the Washington Aqueduct, so future Washington Aqueduct plans should not conflict with those of the Hospital.

Proposal

The Washington Aqueduct, a Division of the U.S. Army Corps of Engineers Baltimore District, operates the Dalecarlia and McMillan Water Treatment Plants in the District of Columbia that serves over 1 million persons with potable water in the District of Columbia and northern Virginia area. Water is also stored at the Georgetown Reservoir. The water treatment process removes solid particles (e.g. river silt) from the Potomac River supply water, treats and disinfects the water, and then distributes the finished water to the metropolitan service area. The Washington Aqueduct disposes of water treatment residuals, a combination of river silt and a chemical coagulant, by discharging it back to the Potomac River under a National Pollutant Discharge Elimination System (NPDES) permit. For all practical purposes, the NPDES permit issued in March 2003 placed effluent limitations on total suspended solids, iron, and aluminum. These limitations effectively preclude discharge of water treatment residuals to the river and require other methods of disposing of the coagulant and silt.

The submitted project plans call for the construction of residuals collection and unthickened liquid residuals conveyance facilities in new facilities at the WTP located at the south side of the reservoir. Also new construction to meet the need would include new dredge collection, pumping, and conveyance facilities located at the Georgetown Reservoir, and new residuals

collection equipment, pumping, and unthickened conveyance piping located at the Dalecarlia WTP sedimentation basins.

The Dalecarlia WTP residuals processing building will be sited just north of Sibley Memorial Hospital. Residuals processing, including gravity thickening and dewatering, would occur at the newly constructed building. Following processing, trucks would haul the residuals to an off-site permitted land-disposal area in Maryland or Virginia. The truck hauling will be contracted-out and would not be operated by the Corps. An estimated maximum of normally eight truck loads per day (5 days per week) of dewatered residuals are expected to be transported from the Dalecarlia WTP site on average. Higher numbers of truck loads could occur during high volume water flow years when more sediment may be carried by water and that is processed by the system. The project is to address the management of residual quantities for a period of at least 20 years.

The essential components of the project as submitted are as follows:

1. Modifications to existing sedimentation basins at the Dalecarlia WTP to permit the installation of new continuous residuals collection equipment required to convey residuals to a central processing facility.
2. Construction of three new residuals pumping facilities (the Georgetown Residuals Pump Station, the Dalecarlia Residuals Pump Station, and the Forebay Residuals Pump Station) required to pump the collected residuals to a central processing facility.
3. Expansion of an existing Booster Control Station at the north end of the Dalecarlia Reservoir to provide power for new Forebay residuals dredging and pumping facilities.
4. Installation of several new underground liquid residuals conveyance pipelines.
5. Construction of a new central residuals processing facility.

The development of the residuals processing building will allow residuals to be collected and conveyed from the Forebay portion of the Dalecarlia Reservoir and the sedimentation basins at the both the Georgetown Reservoir and the Dalecarlia WTP to the central location to be thickened and dewatered prior to being loaded onto trucks that will haul the residuals to one or more remote disposal sites. The residuals processing operation is proposed on an existing cleared site immediately north of Little Falls Road; this site is referred to as the East Site for Thickening and Dewatering Residuals, or the East Dalecarlia Processing Site.

A detailed description of each of the essential elements of the project is provided below. The facilities are located in two separate areas: the Georgetown Reservoir site located approximately 2 miles south of the Dalecarlia Water Treatment Plant and the Dalecarlia Reservoir site.

Georgetown Reservoir Site. The proposed buildings and support structures at the Georgetown Reservoir site will allow for collection and conveyance of residuals to the central processing facility at the Dalecarlia location. These include the following:

- The construction of a new unoccupied Georgetown Residuals Pump Station at the northwest corner of the Georgetown Reservoir site. The proposed pump station will be installed below grade to minimize visual impacts. The roof elevation of the proposed pump station will be set lower than the top of the existing Georgetown Reservoir berm to minimize view from MacArthur Boulevard. The pump station is needed to provide force to convey the residuals

dredged from the Georgetown Reservoir (sedimentation basins) to the central processing facility.

- The installation of two new small floating electric powered dredges within Basins 1 and 2 of the existing Georgetown Reservoir. The basins will continue to be used for the same purpose with the installation of these dredges. The dredges allow for residuals to be automatically and continuously collected in place of the current practice of periodically draining the basins and manually washing the residuals to the Potomac River. Although the dredges do not represent a new building or structure to review, the description of the dredges is provided as it provides explanation of the need for a pump station at Georgetown Reservoir location.
- The installation of a new underground residuals transfer pipeline along the north edge of the Georgetown Reservoir. The pipeline will convey material from the pump station at the Georgetown Reservoir sedimentation basins to the central residuals processing facility located at the east Dalecarlia site.

The Georgetown Reservoir site is located along an established heavily traveled corridor – MacArthur Boulevard. An existing underground 9-foot diameter conduit runs beneath the center median of MacArthur Boulevard between the Georgetown Reservoir and the Dalecarlia WTP. The Georgetown Conduit is part of the Washington Aqueduct water supply and treatment system, originally constructed and still used to convey partially treated water from the Dalecarlia Reservoir to the Georgetown Reservoir for sedimentation at Georgetown prior to conveyance across town to the McMillan WTP for further treatment. A new 12-inch diameter pipe will be installed inside of the existing Georgetown Conduit to convey dredged residuals back to the central processing facility at the east Dalecarlia site. The Georgetown Conduit has sufficient capacity to accommodate the new residuals transfer pipe while continuing to transport partially treated water by gravity from the Dalecarlia Reservoir to the Georgetown Reservoir.

West Dalecarlia Site. The proposed modifications at the west Dalecarlia site will allow for collection and conveyance of residuals from the Dalecarlia sedimentation basins to the central residuals processing facility. The west Dalecarlia site includes the Dalecarlia WTP area located to the west of MacArthur Boulevard. The proposed modifications on this site include the following:

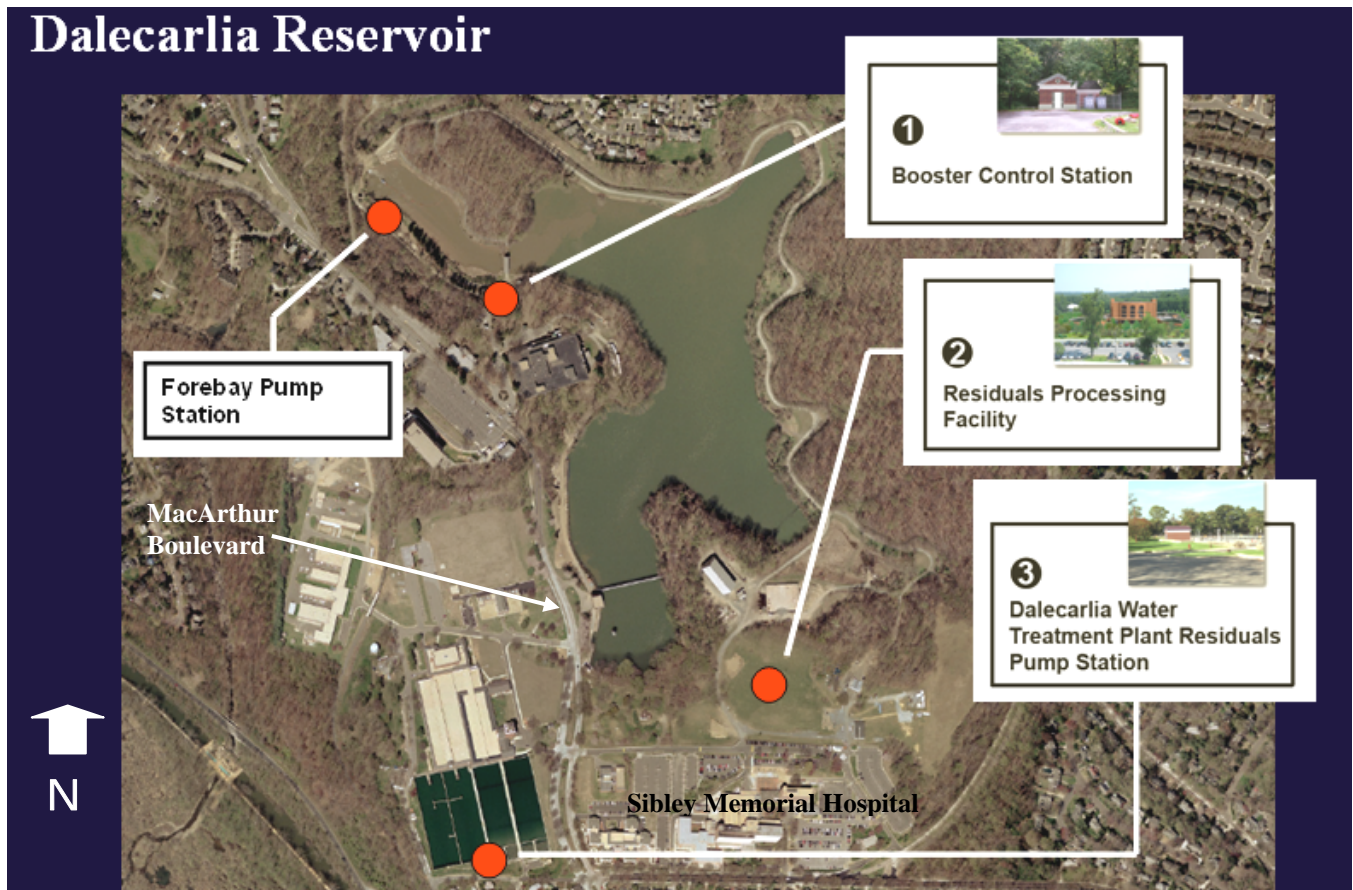
- The installation of a new unoccupied Dalecarlia Residuals Pump Station at the south end of Sedimentation Basin 3, on a cleared portion of Dalecarlia WTP site north of Norton Street. The majority of the new pump station will be below grade to minimize the visual impact of the facility. A small above ground access shaft and electrical building will be constructed above the underground pump station.
- The installation of new residuals collection equipment in the bottom of the four existing sedimentation basins. The existing sedimentation basins are installed below grade on the south side of the Dalecarlia WTP site.
- Several new underground residuals transfer pipelines will be installed at the southern end of the Dalecarlia WTP site. This area of the site currently includes many underground utilities. The new residuals pipelines will be both direct buried and installed within an existing 78” conduit, known as the Penstock Line, which crosses MacArthur Boulevard between the Little

Falls Road intersection and the Dalecarlia WTP entrance. The use of the Penstock Line will allow new residuals pipelines to be installed under MacArthur Boulevard on their way from the sedimentation basin to the central Residuals Processing Facility without requiring disturbance of the existing MacArthur Boulevard road surface, extensive interruption of traffic, or disturbance of the existing mature trees located along the west edge of MacArthur Boulevard.

East Dalecarlia Site. The proposed modifications at the east Dalecarlia site, or area surrounding the Dalecarlia Reservoir and area located east of MacArthur Boulevard and north of Little Falls Road, allow for collection and conveyance as well as processing and disposal of residuals. These include the following:

- A new central Residuals Processing building will be constructed on an existing cleared site owned by Washington Aqueduct and located north of Little Falls Road and across from Sibley Memorial Hospital. A portion of this site was most recently used by the Washington Aqueduct for drying dredged material removed from the Dalecarlia Reservoir Forebay. The new central Residuals Processing Facility will include three floors plus a basement. The upper floor of the building will house the residuals dewatering equipment (centrifuges), operations room, rest rooms, and small operator's lab. As with the second floor, dewatered residuals discharged from the dewatering equipment will discharge into the residuals cake storage bins located on the second floor by gravity. The second floor of the building will house dewatered residuals cake storage bins as well as polymer chemical storage tanks and feed pumps. Discharge from the bins to the trucks below will be by gravity, facilitated by a total of four mechanical bin unloading mechanisms. The ground floor will function as a residuals truck loading area. Roll-up doors will be provided on each of three drive-through bays oriented north/south in the building to allow between an average of 6-8 trucks per day and a maximum peak of 25 trucks per day of dewatered residuals. Loaded material will be hauled away to a permitted offsite disposal site. The lowest level also includes pumps and other mechanical equipment. Total building height is approximately 69 feet with the total building comprising approximately 69,500 square feet of space.
- Four gravity thickener basins will be attached to the corners of the Residuals Processing Facility. The function of these basins will be to provide temporary storage of liquid residuals pumped from the various residuals collection locations (Georgetown Reservoir, Forebay, and Dalecarlia Residuals Pump Stations) and to thicken the residuals prior to dewatering on the third floor of the building.
- To minimize the visual impact and minimize noise related to truck traffic of the proposed Residuals Processing Facility on its neighbors, the site surrounding the proposed building will be graded to allow the first floor of the new structure to be constructed 4 to 9 feet below the elevation of the adjacent Little Falls Road. In addition, extensive landscape plantings will be installed around the proposed facility and a new earthen berm, with a height ranging from 6 to 8 feet, and will be constructed south of the proposed Residuals Processing Facility along Little Falls Road. Soil excavated during the construction of the facility will also be mounded up against the gravity thickeners associated with the Residuals Processing building to lower their visible height.

- An addition will be added to the existing unoccupied Booster Control Station, located adjacent to the Forebay portion of the Dalecarlia Reservoir (to the far north of the reservoir site), to accommodate additional electrical equipment required to collect and transport Forebay residuals.
- A new below grade unoccupied Forebay Residuals Pump Station will be constructed adjacent to the Forebay in the same area as an existing concrete slab on grade. The top elevation of the new Forebay Residuals Pump Station will match the elevation of the existing slab to be removed. A new electric powered automated dredge will also be installed within the Forebay. This new dredge will be small and replace the larger dredge currently used to collect residuals at this location.
- Several new underground and submerged residuals transfer pipelines will be installed across the Dalecarlia Reservoir to transport residuals to the new central residuals processing facility. These pipelines will not be visible from neighboring residences and by public traffic on the Capital Crescent Trail. The construction of these pipelines allows the residuals to be conveyed from the Forebay Residuals Pump Station to the central residuals processing facility and then to a final disposal location without requiring trucks to carry residuals from the Forebay to a final disposal location.



PROJECT ELEMENTS AT DALECARLIA RESERVOIR

PROJECT ANALYSIS

The staff recommends that **the preliminary site and building plans be approved**. Staff believes that the exterior building finish and assemblies have been developed and chosen to enhance the articulation of the building and express its functional massing at the reservoir. The use of the two primary building envelope systems (brick and glass) will express the identity and function of the new structures while breaking down the visual scale of the large residuals processing facility overall. The construction of the residuals transfer pipelines within the existing MacArthur Boulevard conduit and other below ground locations minimizes the visual impacts and traffic impacts during construction. The ancillary project buildings are very small and are not intrusive.

Issues from the public concerns, identified through the project development, have been addressed in the submitted design as follows:

Public Concern	Design Feature That Addresses Concern
Visual impact of Residuals Processing Facility and related facilities	<p>First floor elevation of Residuals Processing Facility will be dropped below Little Falls Rd. elevation to mitigate visual impacts</p> <p>The exterior facade of the residuals processing facility and the thickener tanks will be given an architectural treatment intended to make it architecturally interesting, visually pleasing and compatible with the existing and future planned structures at the Sibley Memorial Hospital Complex</p> <p>Landscaped berm, 6–8 feet high, proposed along the north edge of Little Falls Rd. to screen facility from view</p> <p>Excess excavated soil will be bermed around gravity thickeners to lower their apparent height</p> <p>Existing tree buffer north of Warehouse 6 and the proposed Residuals Processing Facility will be fortified with additional tree plantings to screen view from the north</p> <p>The proposed Georgetown Residuals Pump Station will be constructed primarily below ground with additional tree plantings provided on the north side of the pump station to screen the facility from view by neighbors</p> <p>The proposed West Dalecarlia Residuals Pump Station will be constructed primarily below ground with additional tree plantings provided to screen the facility from view by neighbors</p>
Light impacts from the proposed Residuals Processing Facility	<p>Only site lighting needed to provide for adequate site safety and security will be designed. Site lighting will be directed downward to minimize offsite impacts</p> <p>Extensive landscaping and associated berms will minimize light transmission beyond the Residuals Processing Facility site</p> <p>Full inside lighting will only be on during hours of operation (normal daytime working hours, except for infrequent times of peak processing). During non-processing times only minimal lighting needed for safety and security will be on.</p>
Air quality, dust, and dirt transmission to neighborhood roads	<p>Exposed soils will be moistened with watering trucks as necessary to minimize dusty site conditions during the construction period</p> <p>Air quality issues associated with residuals truck hauling activities will be minimized through the use of low sulfur diesel fuels</p> <p>A construction entrance will be installed at truck exit points to minimize dirt tracked from the site. Trucks will be washed as necessary to minimize tracking dirt from the construction site to the local roadways</p> <p>A permanent truck wash will be provided so that trucks carrying residuals for disposal can be washed as necessary to eliminate tracking residuals from the site to the local roadways</p>
Noise and vibration transmission	<p>Operational noise will be minimized through a combination of site planning that allows topography to serve as a noise control feature, architectural design, and noise control methods applicable during construction</p>

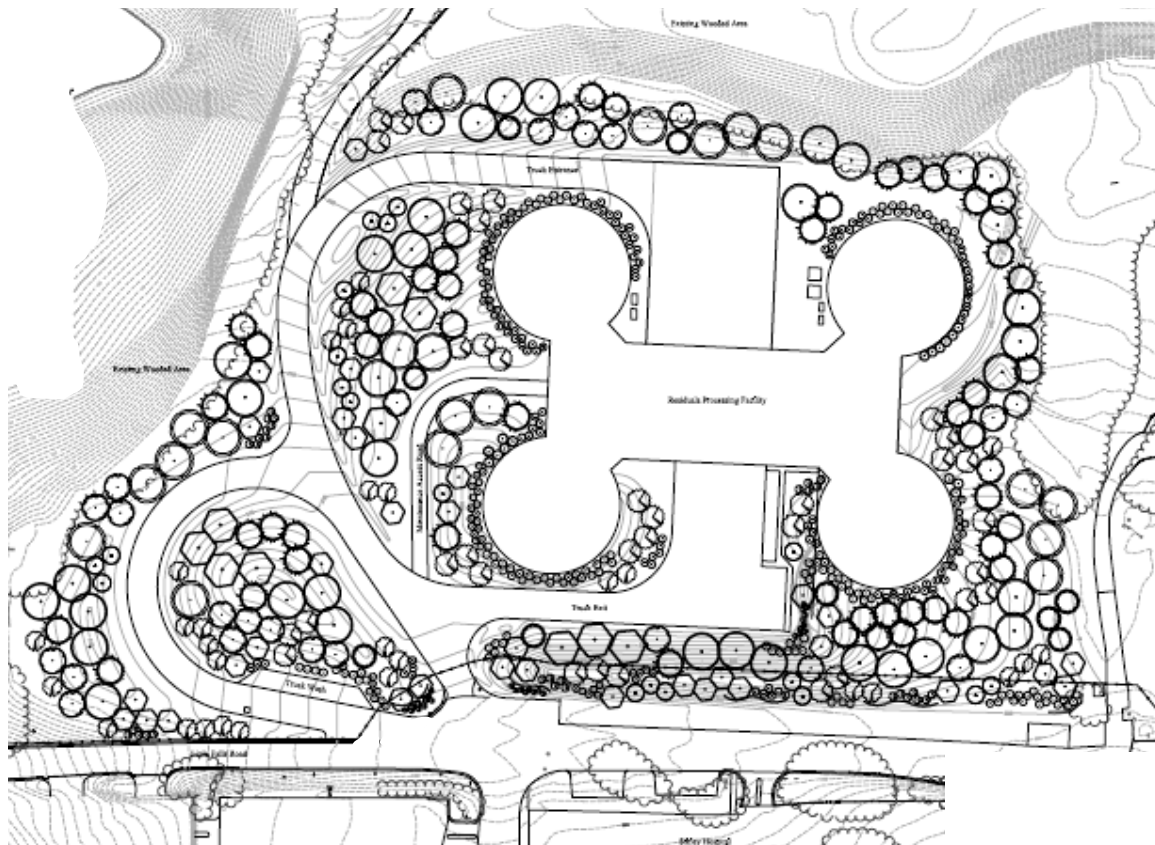
Appropriate building materials will be used, such as sound absorbing CMU. Poured concrete floors will also be incorporated into the building to lessen the transmission of vibrations and noise outside the facility

Closed truck bays will control residuals loading and truck start-up noise. Trucks will be loaded and started with doors closed

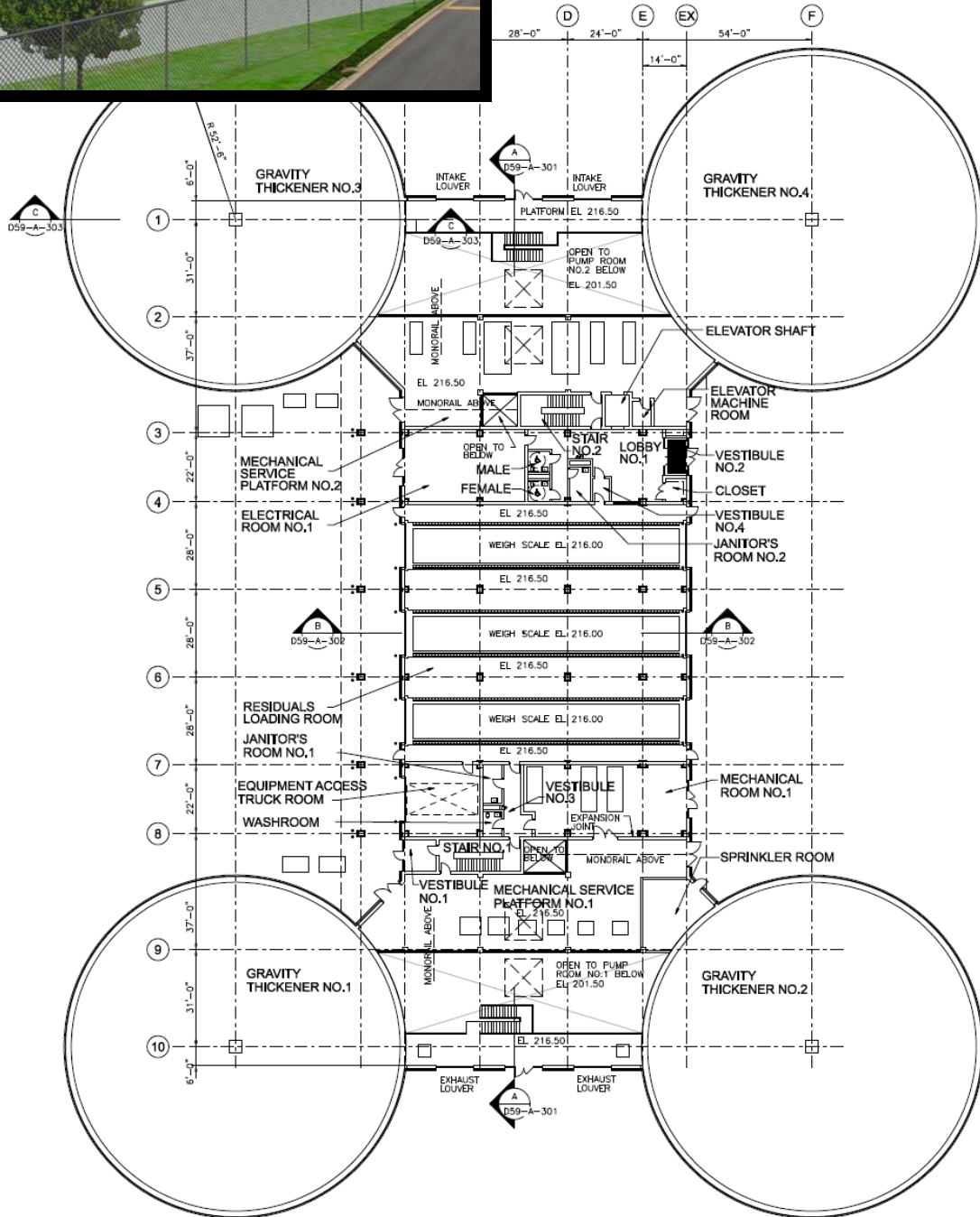
The placement of the dewatered residuals hoppers installed on an intermediate floor of the dewatering facility will also act as sound buffers and minimize the transmission of dewatering equipment noise to the truck loading floor

<p>Truck safety and dewatering site security</p>	<p>Trucks accessing Little Falls Rd. will be provided with adequate stacking space on-site and restricted from parking or standing along the adjacent roadways</p> <p>Barriers and no trespassing signs will be placed around construction sites to deter children from entering these areas</p> <p>Signs warning truck drivers to obey neighborhood speed limits will be posted at the exit from the dewatering site</p> <p>The central dewatering facility will typically be staffed 7:00 a.m. and 7:00 p.m. These are the hours during which trucks will be loaded and residuals hauling will occur, except for hauling route A.</p>
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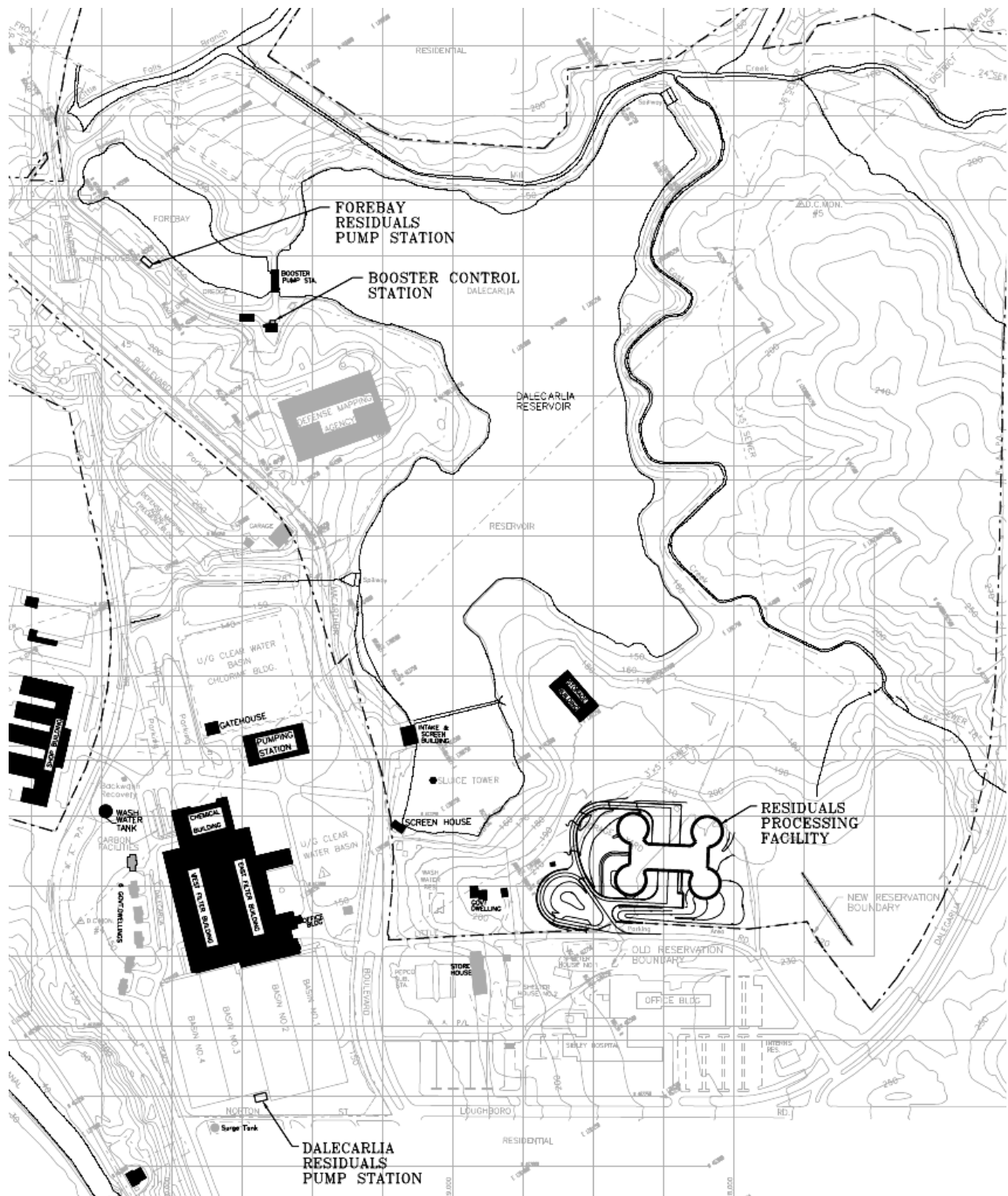
A total of approximately 140 employees are assigned to the Dalecarlia Water Treatment Plant. It is anticipated that the proposed residuals project as submitted will require no more than approximately 10 new positions, including operator and maintenance positions. It is expected that the new positions will be added when the new residuals facilities are completed in 2010. Additional positions are not anticipated to be required in future years.



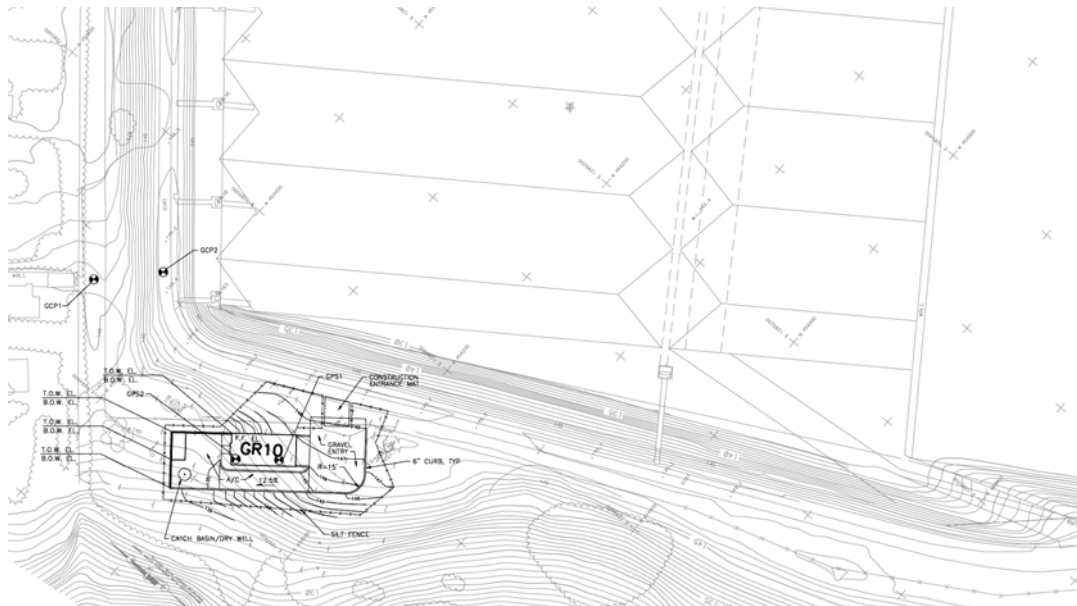
RESIDUALS PROCESSING BUILDING SITE PLAN



RESIDUALS PROCESSING BUILDING GROUND FLOOR PLAN, WITH BUILDING PERSPECTIVE FROM LITTLE FALLS ROAD AT PROPERTY LINE WITH SIBLEY HOSPITAL



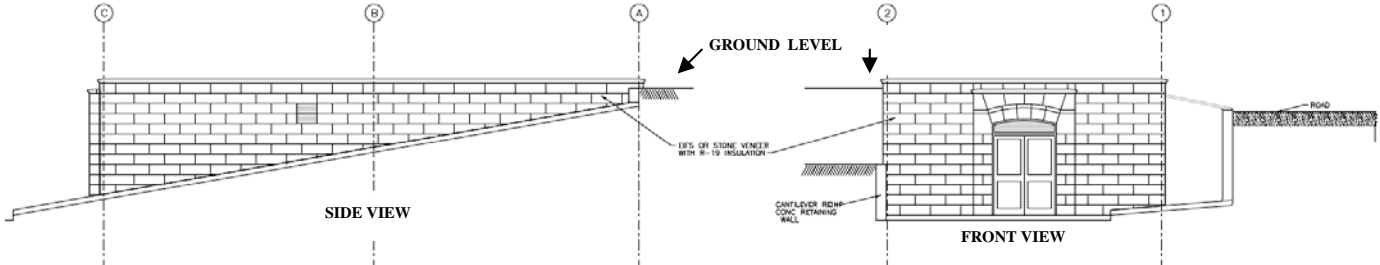
DALECARLIA RESERVOIR MASTER PLAN MODIFICATION, IDENTIFYING ALL RESIDUAL MANAGEMENT PROCESS ELEMENTS



DETAIL SITE PLAN OF GEORGETOWN RESERVOIR RESIDUALS PUMP STATION



PROJECT ELEMENTS AT THE GEORGETOWN RESERVOIR



DETAIL BUILDING ELEVATIONS OF GEORGETOWN RESIDUALS PUMP STATION

CONFORMANCE

Comprehensive Plan for the National Capital: Federal Elements

Staff has determined that the project would not have an effect on other federal facilities and is consistent with the Federal Elements of the Comprehensive Plan.

Master Plan

The proposed project requires the addition of buildings and structures, site work, and landscaping within the area covered by the existing Dalecarlia Reservation Master Plan, as well as at nearby Georgetown Reservoir. A Master Plan modification has been submitted to describe the new construction, site development, and integration of new elements within the existing master area. These changes are:

1. Modifications to proposed land use and landscaping to the north of the shop building, previously identified for use as Proposed Sludge Handling Facilities
2. Location of three new residuals pumping facilities (the Georgetown Residuals Pump Station, the Dalecarlia Residuals Pump Station, and the Forebay Residuals Pump Station)
3. Expansion of an existing electrical building (the Booster Control Station) to provide power for new Forebay residuals facilities
4. Design and construction of a new central Residuals Processing Facility located to the north of Sibley Memorial Hospital.
5. Adjustment of the property boundary to reflect the 2001 transfer of Little Falls Road from the Washington Aqueduct to Sibley Memorial Hospital.

The submitted master plan modifications align the new construction in conformance with the existing master plan and provide an update of the circulation, land use, and master plan landscape concept planning for the Dalecarlia Reservoir site. With the submitted modifications, the staff finds the proposed locations and development of the planned facilities appropriately incorporated into the NCPC master plan of record.

National Environmental Policy Act

Pursuant to the regulations implementing the National Environmental Policy Act (NEPA), the U.S. Army Corps of Engineers, Baltimore District-Washington Aqueduct, has prepared a Final

Environmental Impact Statement (FEIS) and a Record of Decision for the Proposed Water Treatment Residuals Management Process for the Washington Aqueduct, Washington, DC. These documents were prepared in September and late October 2005, respectively.

NCPC Environmental and Historic Preservation Policies and Procedures (69 FR 41299) allow the Executive Director to specify adoption of the Corp's prepared FEIS, as provided in NCPC's authority for review and approval of the submitted action, and in its capacity as a cooperating agency in the preparation of the NEPA environmental impact statement. The general purpose of the U.S. Army Corps of Engineers FEIS, with NCPC identified as a cooperating agency, was to distinguish potential environmental impacts, as defined by Council on Environmental Quality's (CEQ) regulations, resulting from the Proposed Water Treatment Residuals Management Process planning for the Washington Aqueduct. The FEIS examined alternatives to the proposed action and the impacts of those alternatives. The FEIS also addressed mitigation of adverse effects from the alternatives. NCPC staff elected to adopt the existing FEIS pursuant to Section 1506.3 of the CEQ regulations. This adoption is accomplished through staff review and recommendation of approval of the September 2005 FEIS document as described in the Executive Director's report and serves as the NEPA Record of Decision for the Commission's determination of environmental effects. The adopted FEIS was available to the public in September and October 2005 for review.

RECORD OF DECISION AND DETERMINATION OF EFFECTS

The NCPC environmental conclusions are presented below regarding the design and construction plans for the collection of the residuals at the Dalecarlia Water Treatment Plant and Georgetown Reservoir; the 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; minor development at the Georgetown reservoir; and the disposal of residual material at licensed land disposal sites likely located in Maryland or Virginia. This section of the report presents a summary of the environmental considerations, as required by the NEPA Regulations, 40 CFR 1505.2. The adopted FEIS along with this report constitutes NCPC compliance with NEPA.

Alternatives Considered

The NCPC adopted FEIS evaluates in detail five of the 160 studied alternatives that were developed toward the purpose and need of the project or were required by the NEPA review process to be evaluated in detail. The five alternatives, except the No Action alternative, have several common residuals collection and unthickened liquid residuals conveyance facilities. The common facilities found in each alternative included new residuals dredge collection, pumping, and conveyance facilities located at the Georgetown Reservoir, and new residuals collection equipment, pumping, and unthickened conveyance piping located at the Dalecarlia Water Treatment Plant (WTP) sedimentation basins.

The FEIS also describes the impacts on historic resources subject to Section 106 of the National Historic Preservation Act that may result from the construction of the project and identifies environmental mitigation measures. In evaluating the No Action alternative, the adopted FEIS recognizes that until development occurs the existing conditions remain those that include the requirements of compliance established by the U.S. EPA National Pollutant Discharge Elimination System (NPDES) permit (DC0000019).

The NPDES permit was originally issued on March 19, 2003, and amended and reissued on February 27, 2004. It supersedes two previously issued NPDES permits (DC0000019 and DC000329) issued on April 3, 1989 and February 4, 1998 respectively. Because the Clean Water Act does not allow the U.S. Environmental Protection Agency (EPA) to include a compliance schedule delaying attainment within discharge limits, and it is recognized that the Washington Aqueduct could not immediately comply, EPA and the Washington Aqueduct entered into the Federal Facility Compliance Agreement (FFCA) to provide an enforceable compliance schedule for achieving the effluent limitations as expeditiously as possible. EPA and Washington Aqueduct entered into the FFCA pursuant to the Clean Water Act, 33 U.S.C. §§1251-1387 and Executive Order No.12088 (Federal Compliance with Pollution Control Standards). The FFCA provides a legally mandated plan for the Washington Aqueduct to achieve and maintain compliance with the NPDES Permit and thus the Clean Water Act.

In establishing the purpose and need for the project, the following objectives define the goals for the proposed residuals management process scope and were listed in the Notice of Intent to prepare an environmental impact statement that was reviewed by NCPC staff. The notice was published by the Corps of Engineers in the *Federal Register* on January 12, 2004, and cited the purpose of the project was;

- To allow Washington Aqueduct to achieve complete compliance with NPDES Permit DC0000019 and all other federal and local regulations.
- To design a process that will not impact current or future production of safe drinking water reliably for the Washington Aqueduct customers. (Peak design flow of drinking water).
- To reduce, if possible, the quantities of solids generated by the water treatment process through optimized coagulation or other means. (Mass or volume of solids generated).
- To minimize, if possible, impacts on various local and regional stakeholders and minimize impacts on the environment. (Traffic, noise, pollutants, etc.).
- To establish a process that is cost-effective in design, implementation, and operation. (Capital, operations, and maintenance costs).

The alternatives fully considered and reviewed in the FEIS include the following:

- Alternative A: Dewatering at Northwest Dalecarlia Processing Site and Disposal by Monofill

Alternative A does not require continuous off-site trucking for disposal from the Dalecarlia WTP site. With this alternative, residuals would be collected continuously from the Dalecarlia Sedimentation Basins, periodically dredged from the Georgetown Reservoir and pumped to new residuals thickening and dewatering facilities located on the Dalecarlia WTP at a site in the northwestern corner of the property designated the Dalecarlia WTP Northwest site. Once processed, trucks would haul the residuals across MacArthur Boulevard and up Little Falls Road to the monofill disposal site constructed in the Dalecarlia Woods area of the Dalecarlia WTP complex. On average, eight 20-ton truck loads of water treatment residuals would be hauled to the monofill site each day. The residuals disposal monofill would be approximately 50 ft tall on the Dalecarlia Parkway side and 80 ft tall on the Dalecarlia Reservoir side. The foot-print of the monofill is anticipated to occupy approximately 30 acres.

- **Alternative B: Dewatering at Northwest Dalecarlia Processing Site and Disposal by Trucking**

For Alternative B, residuals are collected from the Georgetown Reservoir and the Dalecarlia WTP sedimentation basins and conveyed to the Dalecarlia WTP similar to Alternative A. Residuals processing, including gravity thickening and dewatering would occur at the Dalecarlia WTP Northwest site with this alternative. Following processing, the dewatered residuals would be contract hauled to one or more permitted offsite disposal areas. On average, an estimated eight truck loads per day (5 days per week) of dewatered residuals would be transported from the Dalecarlia WTP site. Higher numbers of truck loads, as defined in Volume 4 of the FEIS (Engineering Feasibility Study Compendium), would be required during infrequent peak residuals production periods.

- **Alternative C: Thickening and Piping to Blue Plains Advanced Wastewater Treatment Plant (AWWTP)**

Alternative C does not rely upon trucks to transport dewatered residuals from the Dalecarlia WTP, but it does require transporting dewatered residuals by truck from the Blue Plains AWWTP. Residual processing at the Dalecarlia WTP site would be limited to gravity thickening with this alternative. Thickened residuals would then be pumped through a dedicated pair of pipelines to the Blue Plains AWWTP for dewatering. The pipeline would be approximately 10 miles long and the pipes 12-inches in diameter each. The proposed route for the dedicated thickened residuals pipeline follows the east bank of the Potomac River to the Blue Plains AWWTP. Residuals collection and conveyance to the Dalecarlia WTP thickening facility would be accomplished by the common facilities described above. Residuals dewatering would be accomplished with dedicated dewatering equipment located at the Blue Plains AWWTP. Following dewatering, the residuals would be contract hauled to a permitted off-site disposal facility.

- **Alternative D: No Action Alternative**

Although not consistent with the purpose and need of the project, Alternative D, the No Action Alternative, was retained and reviewed in the FEIS as a NEPA requirement. This alternative assumes that residuals would continue to be discharged directly from the Dalecarlia WTP sedimentation basins and the Georgetown Reservoir to the Potomac River in the future. This practice would be in violation of the solids concentrations defined in the NPDES permit discharge limits.

- **Alternative E: Dewatering at East Dalecarlia Processing Site and Disposal by Trucking**

Alternative E, the submitted project provided to the Commission, consists of residuals collection, conveyance, processing and disposal facilities that include the following elements:

1. Georgetown Reservoir Residuals Collection, Pumping, and Conveyance Facilities that involves two new electric powered dredges and associated cable positioning systems will be installed in Georgetown Reservoir Basins 1 and 2 to collect the residuals that settle out in these basins. These dredges would typically operate 16 hours per day, five days per week over an anticipated 9-month annual dredging period. Each dredge will be programmed to automatically collect residuals from the basins, following a serpentine collection path that covers the entire floor area of each basin. A combination of a semi-submerged flexible hose attached to the dredge and a buried pipeline will be used to transport residuals to a new below-ground residuals transfer pump station located northwest of Basin 1. This pump station will transfer residuals through a

new pipeline installed inside the Georgetown Conduit, which runs beneath the center median of MacArthur Boulevard, to the Dalecarlia WTP residuals processing site. A new in-ground electrical building will be constructed northwest of Georgetown Reservoir basin 1 (approximately 14 feet wide by 22 feet long by 12 feet high). This building would house the electrical equipment required to power the dredges and the residuals transfer pump station. The new building will be constructed in a low-lying area to minimize the visual impact of the facility.

2. The Dalecarlia Sedimentation Basin Residuals Collection, Pumping, and Conveyance Facilities. New residuals collection mechanisms will be installed inside each of the four existing Dalecarlia WTP sedimentation basins to permit continuous removal of residuals. With the exception of the collection mechanism drive units and associated access walkway, the mechanisms will be installed beneath the water surface in the sedimentation basins. New residuals pumps and conveyance piping would be installed underground if practicable, either in existing below ground galleries or in a new below ground pump station located south of sedimentation basins 3 and 4. A small building, approximately 6 feet wide by 14 feet long by 12 feet high, may be required to access the stairwell into the below ground pump station. The new residuals pumps will discharge directly to the new residuals processing facility through two dedicated water treatment residuals transfer pipelines. A residuals processing building is also established with truck loading capacity and storage of sediment material, which is located at the south side of the reservoir area.

For all alternatives, forebay residuals were assumed to be processed by current methods and periodically hauled by trucks. The environmental impacts associated with alternate forebay residuals processing option is also analyzed in the EIS for each resource area. A more detailed description of the alternatives, along with the reasons why the remaining additional alternatives did not satisfy the screening criteria for the proposed project is provided in Section 3 of Volume 4 of the adopted FEIS.

Environmentally Preferred Alternative

The alternative that best meets the objectives of NEPA is known as the Environmentally Preferred Alternative. This option, according to the Council on Environmental Quality, is the alternative that causes the least damage to the biological and physical environment. It also is the alternative which best protects, preserves, and enhances historic, cultural, and natural resources. Identification of the Environmentally Preferred Alternative is a requirement of NEPA regulations regardless of the intent of the project within an EIS process.

On the basis of all information presented in the NEPA review involving the proposed action; it is the determination of NCPC that the Environmentally Preferred Alternative is Alternative E. Alternative E also best serves the purpose of the project. The project purpose is to develop, design, and construct a permanent residuals management process that will cost-effectively collect, treat, and dispose of the water treatment residuals in conformance with the objectives noted in the earlier paragraphs and cited in the FEIS. Alternative E also meets the objectives for complying with the Federal Facility Compliance Agreement deadlines and that were highlighted by the U.S. EPA in comments to the Corps that...“The FFCA requires the Washington Aqueduct to comply with the discharge limitations in its Clean Water Act permit at one or more of the sedimentation basins within the permit term and no later than March 1, 2008, ...and at all basins no later than December 30, 2009. Although EPA was not required to do so, EPA solicited public

comment on the FFCA due to the significant public interest in the Washington Aqueduct. EPA's notice of availability of a draft FFCA and request for public comment was published in the Washington Post and the Washington Times on March 17, 2003. The comment period was 30 days, and EPA received comments from five persons”.¹

NCPC staff finds Alternative E fully adheres to the permit requirements to achieve environmental goals of discharge limitations analyzed by EPA and required under the Clean Water Act. Furthermore, the preferred alternative also addresses the management of residual quantities for a period of at least 20 years. Additionally, NCPC staff determined Alternative E best conforms towards efforts that do not detract or differ substantially from the goals and objectives of Commission plans and programs of the Comprehensive Plan and is generally consistent with Commission plans and programs. Alternative E is a proposal which has minimal adverse impact to the water and habitat quality of the Potomac River and would greatly improve its water quality for biodiversity purposes. Additionally, Alternatives B and E present equally feasible options, from an engineering perspective, for residuals management that would eliminate residuals discharges to the Potomac River. Each would enable the Aqueduct to meet the conditions of the recent NPDES Permit No. DC0000019 within the schedule put forth in its Federal Facility Compliance Agreement with the U.S. EPA. However, Alternative E offers advantages in following areas:

- Less visual impact to surrounding residential neighbors
- Site topography allows building integration into the site and visual impacts to be minimized
- Less truck noise attributable to loaded residual trucks traveling uphill on Loughboro Road
- Greater distance between surrounding neighborhoods and proposed residuals processing facilities

Therefore, Alternative E—Dewatering at East Dalecarlia Processing Site and Disposal by Trucking is identified by the NCPC staff as the environmentally preferred alternative and supports the design submitted to implement the alternative.

The following were the major factors used in review of the potential environmental effects for the Dalecarlia Water Treatment Plant and Georgetown Reservoir, and the treatment of residuals at an East Dalecarlia Processing Site, located north of Sibley Memorial Hospital in the District of Columbia.

Air Quality

The project site is located within the National Capital Interstate Air Quality Control Region, which has been designated by EPA as a “serious non-attainment area” for ozone National Ambient Air Quality Standards (NAAQS). Ozone is a secondary pollutant that is formed in the atmosphere by the reaction of hydrocarbons and nitrogen oxides in the presence of sunlight.

¹ June 27, 2005, Letter from the United States Environmental Protection Agency Region 3, 1650 Arch Street, Philadelphia, Pennsylvania to Mr. Thomas P. Jacobus, General Manager Washington Aqueduct U.S. Army Corps of Engineers commenting on the Draft EIS.

The majority of expected project-generated emissions of ozone precursors would be generated by mobile sources (vehicular traffic). The analysis of regional mobile source emissions was based on the traffic projections and found localized mobile source emissions associated with vehicle traffic on nearby roadways would not result in exceeding the applicable NAAQS. Short-term effects from construction and operation of facilities and trucks would have a minor impact and the following actions for these effects include:

- Exposed soils will be moistened with watering trucks as necessary to minimize dusty site conditions during the construction period.
- A construction entrance with soil erosion impact measures will be installed at truck exit points to minimize dirt tracked from the site.
- Construction equipment will be in compliance with air quality and emissions requirements.
- Trucks will be washed as necessary to minimize the movement of dirt from the construction site to the local roadways.
- Washington Aqueduct will require that all residuals hauling contractors use low sulfur fuels for the fleet vehicles coming to and departing from all residuals management facilities.
- Washington Aqueduct will investigate the use of diesel retrofits for reduction of PM 2.5 in haul trucks and will include contract specifications for these and other emission reducing technologies as they become available and cost effective in the area's commercial hauling marketplace.

Hazardous Materials

An underground concrete structure, discovered by the Corps of Engineers during the installation of a groundwater monitoring well on Washington Aqueduct Property, has been found to contain an oily material exhibiting lead and is located in the vicinity of the proposed residuals processing building. This material will be removed and disposed of in accordance with applicable District of Columbia and federal regulations. The remaining structure elements at the reviewed location will either be filled with inert material or removed by the Corps of Engineers.

Materials that make-up the residual product essentially include iron, aluminum, and coagulant materials within the clay and other soil sediment concentrated to an earthen cake wet consistency. While trace elements of other chemicals exist in the sediments, concentrations are such that they do not normally qualify the residuals as hazardous or toxic for permitted land disposal. Should water characteristics fluctuate such that toxic elements would exist, the following federal criteria apply: Water systems cannot:

- Land dispose hazardous wastes that have not been treated adequately to reduce the threat posed by the wastes (disposal prohibition in 40 CFR 268.40);
- Dilute wastes as a means of circumventing proper treatment (dilution prohibition in 40 CFR 268.3); or,
- Store untreated hazardous wastes for reasons other than the accumulation of quantities necessary for effective treatment or disposal (storage prohibition in 40 CFR 268.50).

Water systems generating hazardous waste and choosing to land dispose need to treat the wastes according to 40 CFR 268.42 prior to land disposal. This treatment may include:

- Neutralization of hazardous waste with high or low pH; and,
- Removal or treatment of heavy metals.

Terrestrial Biological Effects

In regard to mitigating adverse impacts on existing habitat, the U.S. Army Corps of Engineers will undertake a wetland delineation and determination, which will be conducted prior to any ground disturbing activities if wetlands are suspected to be present. Should wetlands be confirmed, and avoidance is not practicable, mitigation will be provided in order to meet the Corps policy of no net loss of wetlands.

Noise

Construction activities will comply with Chapter 28 of the District of Columbia Municipal Regulations details for construction in residential zones. Operational and design project features will include:

- Noise from construction will not be permitted on Sundays or legal holidays or from 7:00 pm to 7:00 am.
- Operational noise will be minimized through a combination of site planning that allows topography to serve as a noise control feature, architectural design, and noise control methods applicable during construction. Appropriate building materials will be used, such as sound absorbing concrete masonry. Poured concrete floors will also be incorporated into the building to lessen the transmission of vibrations and noise outside the facility. Closed truck bays will be utilized in the project design to control residuals loading and truck start-up noise. Trucks will be loaded and started with doors closed.
- The placement of the dewatered residuals hoppers proposed to be located at an intermediate floor of the dewatering facility will also act as sound buffers and minimize the transmission of dewatering equipment noise to the truck loading floor.
- A display sign will be posted at the facility exit point to remind truck drivers to adhere to traffic noise limits established by the District, as they drive local streets to reach major thoroughfares.

Transportation

An estimated average of eight truckloads of dewatered water treatment residuals are expected daily (5 days per week). In addition, Washington Aqueduct will construct residuals management facilities with sufficient storage capacity to limit the peak truck trips to a daily maximum of 25 outbound trucks under very infrequent extreme operating conditions for future needs, reducing the number of trucks calculated in the original analysis of the draft EIS.

Trucks accessing Little Falls Road or the Dalecarlia Parkway will be provided with adequate stacking space on-site and restricted from parking or standing along the adjacent roadways. Route A within the project proposal of Alternative E will only be used during off-peak hours (9:30 am to 3:00 pm). Residuals hauling on all other viable routes (B, D, E and H) will be restricted to hauling typically from 7:00 am to 7:00 pm.

The Washington Aqueduct operations management is aware of the public concern over traffic and will closely monitor the operation of residuals disposal and will make adjustments as needed, and will sponsor an annual meeting with interested stakeholders to discuss all perceived traffic concerns.

Historic Resource Effects

The U.S. Army Corps of Engineers has owned, maintained, and operated the Washington Aqueduct since construction began in 1853. The system, although expanded over time, has remained in continuous operation since it first delivered water to the District of Columbia in 1864 (Washington Aqueduct Cultural Resource Management Plan, 1998). The Washington Aqueduct, from the intake works at Great Falls on the Potomac River to the Georgetown Reservoir in northwest Washington, DC, was designated a National Historic Landmark (NHL) on November 7, 1973. In the revised 1999 NHL nomination, the Washington Aqueduct was described as a linear historic district composed of a series of aboveground elements physically linked by a below-ground conduit or by underground water mains. The system as a whole retains a high level of integrity to convey its period of significance. Most early American water systems of this type, such as New York's Croton Aqueduct and Boston's Cochituate Aqueduct, are no longer in service. Washington's system remains in use and, despite expansions and equipment upgrades, operates according to the original design (NHL, 1999).

The existing Georgetown Reservoir is a contributing element of the National Historical Landmark. The proposed modifications to the Georgetown Reservoir would have no significant impact on the cultural resources, but would have a visual impact on the facility. However, the historic significance of the facility is associated with its engineering design and function. Neither of these characteristics would be significantly impacted by the proposed modifications. In order to mitigate any impact, consultation with the District of Columbia and Maryland State Historic Preservation Offices (SHPO) will occur, and new facilities such as the electrical building have been designed to be compatible with the Georgetown Reservoir. New exposed structures exhibit features that complement the architectural style of other similar nearby historical structures. The Corps of Engineers has begun consultation with the District of Columbia and Maryland SHPOs.

The project as submitted would be constructed within the boundary of Washington Aqueduct property, in close proximity to Sibley Memorial Hospital, in an area that has been highly disturbed. Due to this disturbance, it has been determined that this area would have a low potential for prehistoric or historic archaeological resources.

The Dalecarlia Reservoir is a contributing element of the Washington Aqueduct National Historic Landmark. The Alternative E site would be visible from the reservoir, but it would not diminish the property significance. Construction of the new processing treatment plant for this alternative would require new temporary workspaces. The new workspaces would not impact existing known cultural resources. The further resolution of any probable impact would be specified through the NHPA Section 106 process, possibly resulting in a Memorandum of Agreement. To date, the Corps has completed a review of reports, surveys, plans, and other assessments that were completed to understand the breadth and significance of the cultural resources located within the boundaries of the Dalecarlia Reservoir area. Meetings have been held with the National Park Service and NCPC and discussions were conducted with the

District's Historic Preservation office (DC SHPO) in 2004 and 2005. The preliminary design drawings were provided to all preservation offices in October 2006.

Monitoring or Enforcement Program

Monitoring provisions by NCPC for minor impact mitigation actions identified in this report will occur through implementation of its authority pursuant to 40 U.S.C. § 8722(a),(b)(1) and (d) in review of the Georgetown Reservoir Residuals Collection, Pumping, and Conveyance Facilities and the East Dalecarlia Processing Site as submitted in the final construction plans. NHPA, Section 106 further compliance will be achieved by the Corps of Engineers prior to submitting the final project design to the Commission.

NCPC staff recognizes that the project construction work will obtain all necessary permits for noise compliance as provided by District of Columbia noise regulations. Additionally, the Corps and community have established an "issues focused" Washington Aqueduct Dalecarlia Stakeholders Leadership Group that will be meeting approximately quarterly to discuss and resolve project related concerns, including potential project noise. However, no unanswered impact issues have been identified in the public EIS review process. Given that all actions of the project as proposed in the preliminary plans occur within the enclosed space of the newly constructed building, NCPC staff finds work noise associated with the project will be contained to an inside environment, which is further buffered by an elevated earth berm with landscaping. NCPC staff concludes no significant effect from the submitted plans.

Unresolved Issues

No major unresolved issues exist. NCPC received no comments during the FEIS public review period. Public interest was expressed to NCPC staff to identify when the proposal would be presented to the Commission. Additionally, during the draft EIS public meeting in May 2005 NCPC staff presented an overview of the Commission's role and purpose regarding review and approval of the project. Furthermore, NCPC staff met at the request of a combined interest group comprised of local residents relating to issues of the draft EIS in the mid-summer of 2005. A representative from the Council on Environmental Quality was also present at the meeting to explain the viability of the NEPA EIS process, particularly in regard to alternatives in the NEPA document and the purpose and need statement of the proposal.

NCPC has carefully reviewed the issue of noise effects involving the proposed alternatives. NCPC staff has found noise impacts are fully evaluated in the FEIS, and that the consequences from truck noise effects are directly within the purview of the local government agencies. Staff notes that the FEIS has identified noise mitigation measures for the residual hauling vehicles, which could be enforced by District of Columbia authorities, since that operational aspect would be controlled by a private contractor operating on public roads. The staff also finds in the submission of the project, the applicants design has implemented mitigation steps to address noise effects as noted on page 8 of this report.

Conclusion

The analyses of the effects of the alternatives and the ability of the alternatives to satisfy the identified purpose and need for the proposal have been carefully considered. All practicable

means to avoid or minimize environmental harm from the recommended proposal, Alternative E, as identified earlier, are implemented in the project submission. It is therefore recommended that the Commission approve the FEIS Alternative E and that the preliminary design plans for the East Dalecarlia Processing Site and the Georgetown Reservoir Residuals Collection, Pumping, and Conveyance Facilities be accepted for Commission review and approval.

National Historic Preservation Act

The Corps of Engineers' analysis has determined that the undertaking does not significantly affect historic resources in the project area.

The Corps of Engineers made an initial determination of no adverse effect to the District of Columbia and Maryland State Historic Preservation Offices in October 2006. The outcome of the Section 106 review will accompany the Corps' submission of the final project design to the Commission.

Development Program

Applicant: Department of the Army

Estimated Cost: Although owned and operated by the Corps, the Washington Aqueduct functions as a public water utility and is not part of the Corps' civil works program that is included in the Civil Works budget request to Congress. All funds for Washington Aqueduct operations and capital improvements, whether self-initiated or in response to regulation and permitting actions, come from the wholesale customers (i.e., District of Columbia Water and Sewer Authority (DC WASA), Arlington County, and the City of Falls Church). Each year, the Washington Aqueduct Wholesale Customer Board, which is comprised of the General Manager of DC WASA, the County Manager of Arlington County, and the City Manager of the City of Falls Church, meets to discuss and approve the upcoming fiscal year operating and capital improvement budgets for Washington Aqueduct. Project design and construction cost is currently authorized for approximately 96 million dollars.

Architect: CH2M HILL, Chantilly, Virginia

Completion Date: The proposed construction bidding process is scheduled to be completed on November 30, 2007 at which time construction notice to proceed will be issued by the Army. The construction of this project is scheduled to be completed by March 31, 2010.

COORDINATION AND CONSULTATION

The Coordinating Committee reviewed the proposed master plan modification and the preliminary site and building plans at its November 15, 2006 meeting and forwarded the proposal to the Commission with the statement that the proposal has been coordinated with all agencies represented.

The Corps of Engineers distributed both the draft and final EIS and description of the proposed project to a wide range of interested individuals, public organizations, local government

jurisdictions, Maryland and District of Columbia agencies, and adjacent Advisory Neighborhood Commissions. Other meetings were earlier established by the Corps in January and May of 2004. Later, in the early fall of 2004 the Corps sponsored an additional public meeting on the project that was announced to consider additional alternatives. A public meeting on the draft EIS occurred in May 2005 in which NCPC staff participated.

The draft EIS meeting was announced to the following list of participants:

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During June of 2005, several parties reviewing the draft EIS requested an extension of the comment period for the document, which was granted by the Corps of Engineers in July 2005. Consequently a total review period of 75 days was provided on the draft EIS.

In May 2005 the Montgomery County Planning Board commented on the project as reviewed by the Maryland National Capital Park and Planning Commission (M-NCPPC) staff and recommended the following:

- Multiple haul routes should be established and selected on a trip-by-trip basis depending upon the destination to minimize total truck travel. Trucks should only use haul routes in Montgomery County for travel to destinations either in Montgomery County or other Maryland jurisdictions north of Montgomery County.
- Haul Route "C" was not recommended as a suitable route because the portion of Little Falls Parkway incorporated in the haul route has a posted restriction prohibiting commercial vehicle use. Either Haul Route "A" or Haul Route "B" was found to be acceptable for trips traveling into Montgomery County.
- Truck trips should be concentrated during off-peak travel times during weekdays between 9:30 a.m. and 4:00 p.m.

The Planning Board staff found that in Montgomery County, Haul Routes A and B consist of those portions of Wisconsin Avenue (MD 355) and River Road (MD Route 1), respectively, that exist between the Capital Beltway and the District of Columbia. M-NCPPC staff found that Haul Routes A and B were very similar in sharing the following characteristics:

- Approximately four miles in length between the Capital Beltway and the Washington, DC boundary
- Classified as multilane, divided, Major Highways in the County's Master Plan of Highways
- No prohibitions on truck traffic and carrying approximately 60,000 vehicles per day in the vicinity of the Capital Beltway

Congestion levels prompted the Planning Board to seek State Highway Administration Development and Evaluation study information based on the July 2004 Annual Development Approval and Congestion Report. The differences between Wisconsin Avenue and River Road are primarily related to adjacent land uses, which have sensitivity to truck traffic for different reasons.

Wisconsin Avenue serves the pedestrian-oriented central business districts of Friendship Heights and Bethesda. Based in part on the pedestrian activity, posted speed limits range from 25 MPH to 35 MPH. River Road serves lower density communities in the Bethesda-Chevy Chase planning area and is generally lined with residential and institutional uses, excepting the Westbard Sector Plan area of the county. Posted speed limits range from 35 MPH to 45 MPH.

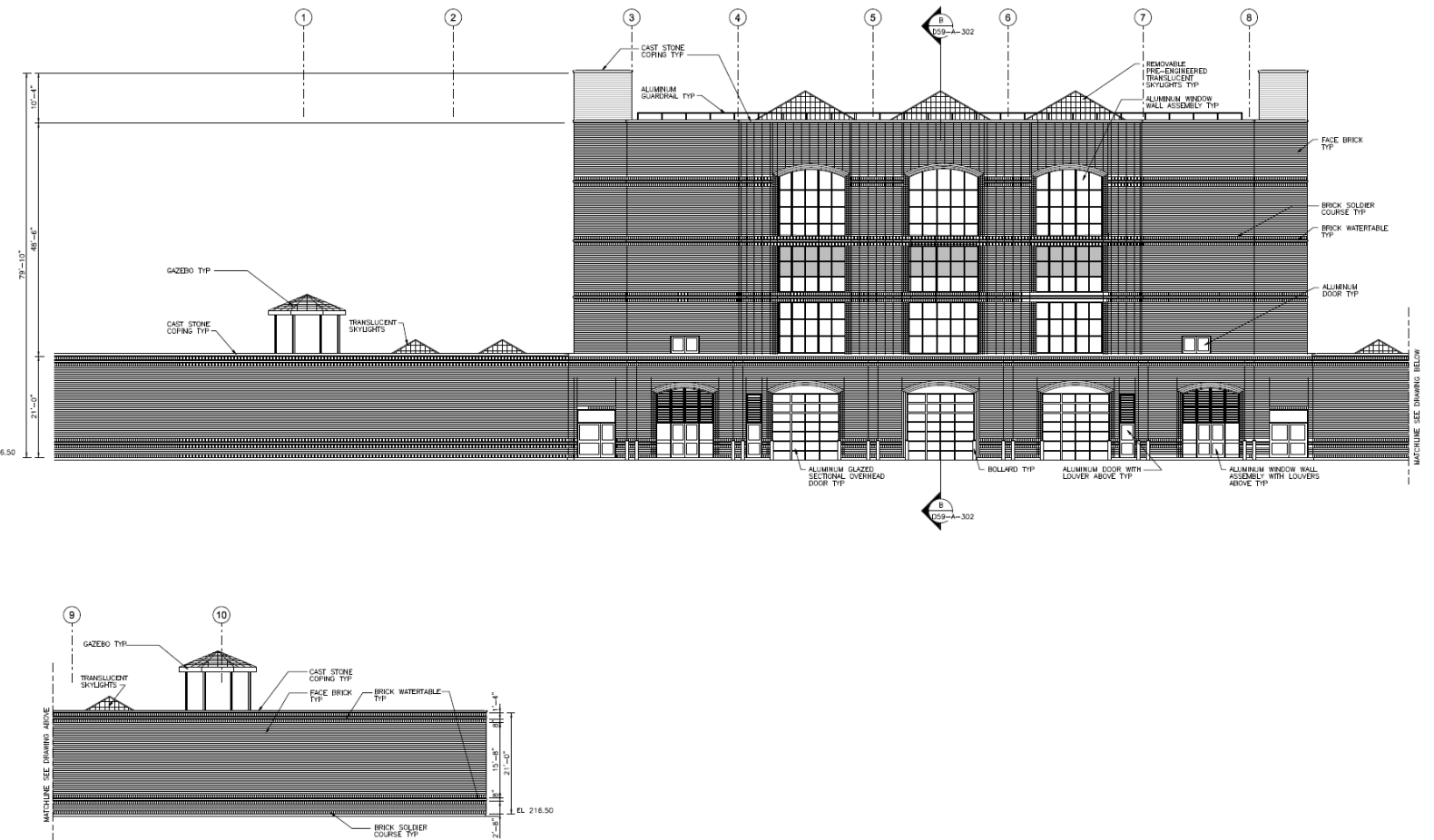
M-NCPPC staff found that neither the pedestrian-oriented developments along Wisconsin Avenue nor the low-density residential communities along River Road to be clearly superior or inferior in determining the appropriateness of a haul route. Both routes carry in excess of 2,000 trucks per day near the Capital Beltway, so the effect of truck traffic anticipated by the proposed project (now a revised maximum of 25 vehicles per day on all haul routes combined) was found to be not significantly noticeable on either route. The staff therefore determined that either Haul Route A (Wisconsin Avenue) or Haul Route B (River Road) would be an appropriate designation for project usage.

M-NCPPC staff did not concur with the DEIS finding that Wisconsin Avenue and River Road operate at acceptable levels of service based on M-NCPPC standards. As described above, substandard congestion levels exist during peak periods along both candidate routes as identified in the July 2004 Annual Development and Congestion Report. The county staff therefore recommended that the truck trips be scheduled to occur after the end of the morning peak period and before the beginning of the evening peak period. Based on the peak period definitions in the Planning Board's Local Area Transportation Review Guidelines, the truck travel should be scheduled to occur between 9:30 a.m. and 4:00 p.m.

In May 2006, the Corps of Engineers initially met with nearby community and neighborhood interest associations to review the project development design and have established an "issues focused" Washington Aqueduct Dalecarlia Stakeholders Leadership Group, which will be meeting approximately quarterly to discuss and resolve project related concerns as the project design progresses, and specific characteristics for the operations of the new residuals treatment facilities as they are finalized.



MASSING MODEL AERIAL VIEW SIMULATION OF THE RESIDUALS PROCESSING BUILDING AND ITS RELATIONSHIP TO SIBLEY HOSPITAL, DALECARLIA PARKWAY AND THE RESERVOIR



ELEVATION OF RESIDUALS PROCESSING BUILDING FEATURING BRICK FAÇADE, ALUMINUM FRAMED WINDOW WALL ASSEMBLIES, AND GLAZED SECTION OVERHEAD ROLL-UP DOORS