

**District of Columbia Water and Sewer Authority
East Side Pumping Station Rehabilitation
DCFA #359A-WSA**



**Draft
Environmental Assessment Report**

January 8, 2003

National Park Service
National Capital Parks – East
National Capital Region
Department of the Interior

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I. Introduction

This National Environmental Policy Act (NEPA) Environmental Assessment (EA) was prepared for submission to the National Park Service (NPS) as a requirement for obtaining a Special Use Permit for the replacement of the existing East Side Pumping Station. The District of Columbia Water and Sewer Authority (DC WASA) owns and operates the existing East Side Pumping Station which is located in Anacostia Park, on lands leased from the NPS. The rehabilitation project entails construction of a replacement station, demolition of the existing station, restoration of the existing station site, and the return of the existing station site to the NPS. The project does not significantly change the functions of the station already in place, it serves mainly to upgrade the facilities at the same capacity and to make the facility safer to operate and maintain. The general location of the station and the proposed work is shown on Figure 1: Project Study Area. This EA has been prepared by Whitman, Requardt and Associates for DC WASA under contract DCFA No. 359A-WSA.

II. Purpose And Need For Requested Action

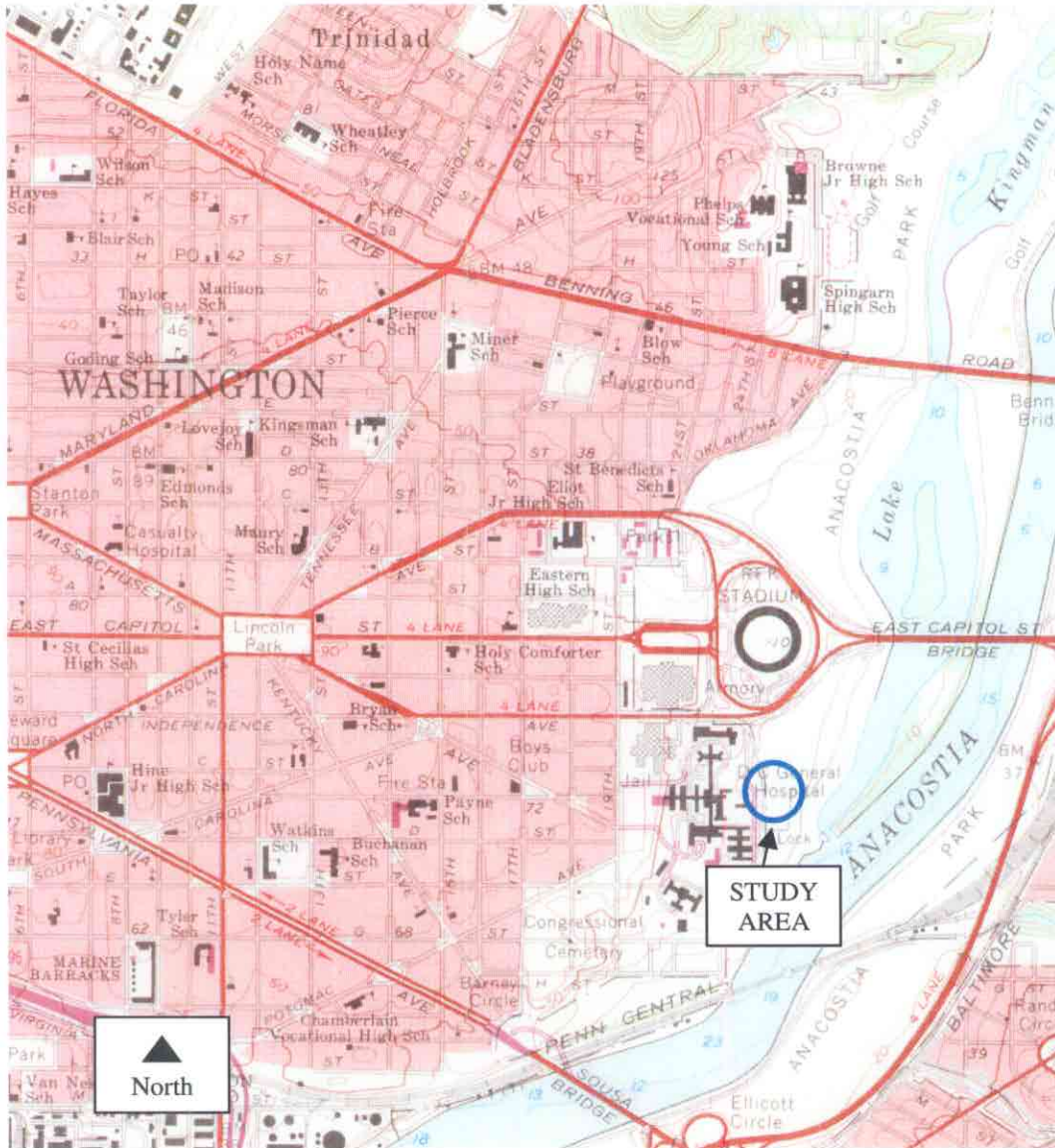
The existing East Side Pumping Station conveys District of Columbia sanitary flows to the Blue Plains Wastewater Treatment Plant for treatment prior to discharge into the local waterways. The station has been in continuous service since the mid 1960's when it was built. The East Side Pumping Station is also a vital element of the DC WASA Combined Sewer System Long Term Control Plan, which requires this station to remain in service at the same capacity in the future. Since the station is a key element in the District of Columbia wastewater collection system, it is imperative that it remain in reliable service. Previous studies performed by WASA have indicated that the existing pumping station requires numerous improvements to maintain safe, reliable long-term operations. Additionally, present day design standards dictate the need to provide improvements beyond those identified in the previous studies. This combined set of necessary improvements makes rehabilitation of the existing pumping station impractical. Therefore, a replacement pumping station is recommended. The station is proposed on the same site as the existing District of Columbia Water and Sewer Authority (DC WASA) Combined Sewer Overflow (CSO) Swirl Facility. This will help minimize the construction period and overall impact to the adjacent properties.

III. Alternatives Considered

The construction of the replacement pumping station was evaluated for three alternatives that can feasibly satisfy the project purpose and needs. A no build alternative was also considered. Figure 2: Study Area Aerial Photograph, depicts the locations of the project study area and the locations of the three considered alternatives. A site plan for Alternatives 1, 2, and 3 is depicted on Figures 3, 4, and 5, respectively.

Washington Water and Sewer Authority East Side Pumping Station Rehabilitation

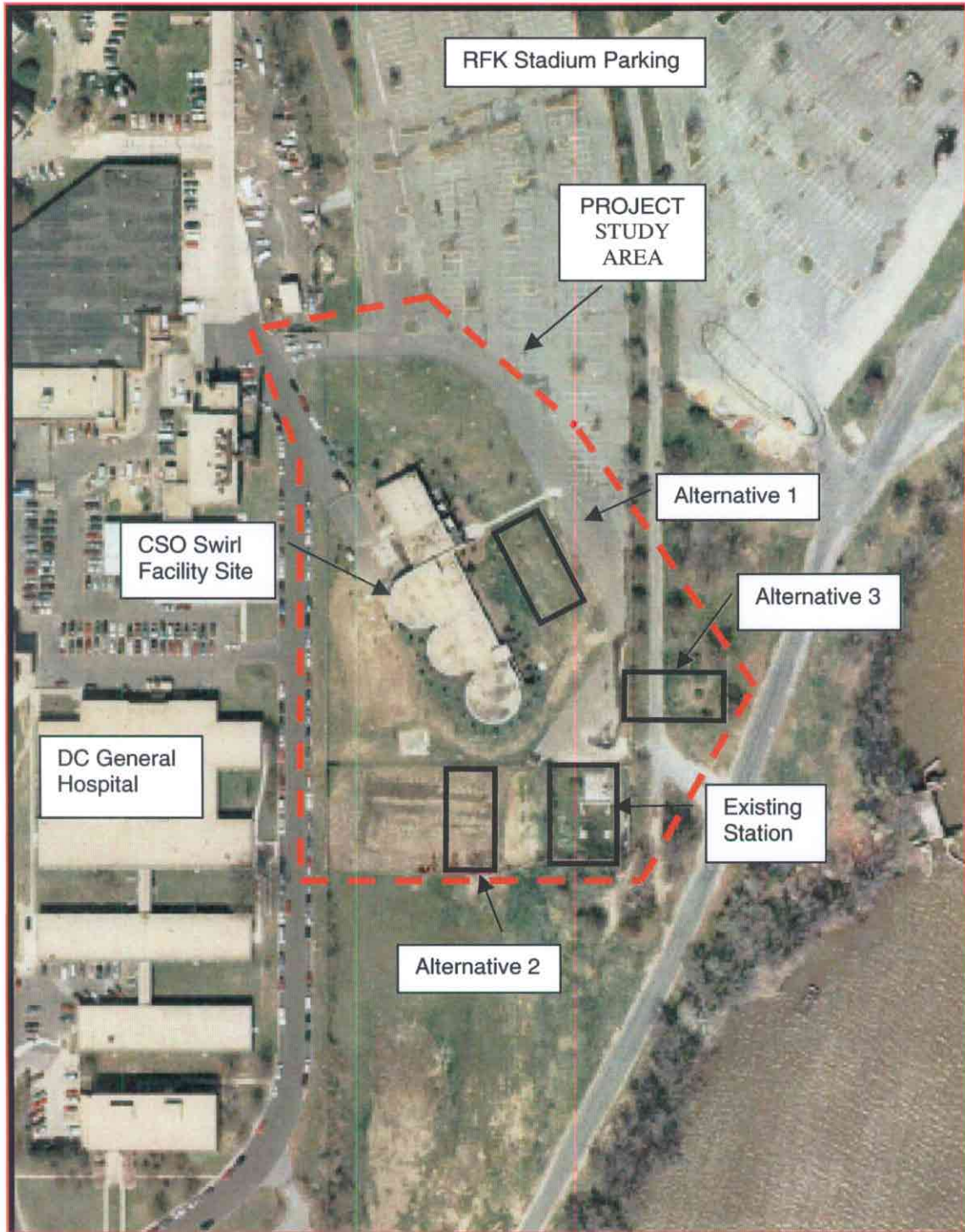
Figure 1: Project Study Area Map



Source: USGS Topographic Quadrangle Map, Washington East, MD- DC, 1971
Scale: approximately 1:24000

DC WATER AND SEWER AUTHORITY East Side Pumping Station Rehabilitation

Figure 2: Study Area Aerial Photograph



Alternative 1

Alternative 1 proposes construction of a replacement pumping station immediately to the east of the existing Swirl Facility and within the area disturbed by the original Swirl Facility construction. The existing station would be maintained during construction and then demolished. The existing station lands would then be returned to park like conditions. This alternative has been proposed by WASA in the "East Side Pumping Station Rehabilitation, Concept Design Report, dated February 2002. The Alternative 1 layout and its estimated construction cost forms the basis of comparison between all of the alternatives.

The advantages of Alternative 1 include:

- The permanent disturbance is within the existing swirl facility curb line, area that was previously disturbed for the construction of the swirl facility, thereby minimizing disturbance to park lands.
- There would be no reduction in existing parking area.
- The nearness of the structure to the existing swirl facility provides visual harmony when viewed from the Anacostia River
- The structure and associated facilities would avoid planned pathways as shown in the Anacostia Waterfront Initiative plan.
- The layout allows the sharing of access ways with the existing Swirl Facility
- The site is located within the existing security fencing
- This site's average elevation is at or nearly at the FEMA 100-yr flood plain elevation or Base Flood Elevation (BFE), therefore, only nominal fill is required at this site in order to set the operating floor one foot above the BFE and grade access accordingly.

The disadvantages of Alternative 1 include:

- Construction at this location would require a longer force main (48" diameter pipe) than the two other alternatives
- Construction at this site would require installation of temporary 13.2 kV electrical service feeders, telephone service and water main in order to maintain service at the existing pumping station.

Alternative 2

Alternative 2 proposes construction of a replacement pumping station immediately to the south of the existing Swirl Facility and to the west of the existing pumping station. Alternative 2 is located mostly within a fenced area formally used by the Stadium Authority. The existing station would be maintained during construction and then demolished. The existing station lands would then be returned to park like conditions.

The advantages of Alternative 2 include:

- The site is above the 100-year floodplain elevation of 12 feet above mean sea level (AMSL)
- Relocation of the electric and telephone ductbanks would not be required
- The force main would be shorter in length than Alternative 1
- The permanent disturbance is on a grassy field and would not reduce the parking area

The disadvantages of Alternative 2 include:

- The first floor would be about 2.5 feet higher, requiring additional concrete substructure to minimize site regrading and installation of tall retaining walls

SUB-PROJECT SHEET	
CONSTRUCTION	PRE-BID REVISION
DESIGN	PRE-BID REVISION
DESIGN MGR.	PRE-BID REVISION
JOB NO.	PRE-BID REVISION
NO.	DESCRIPTION
BY	DATE

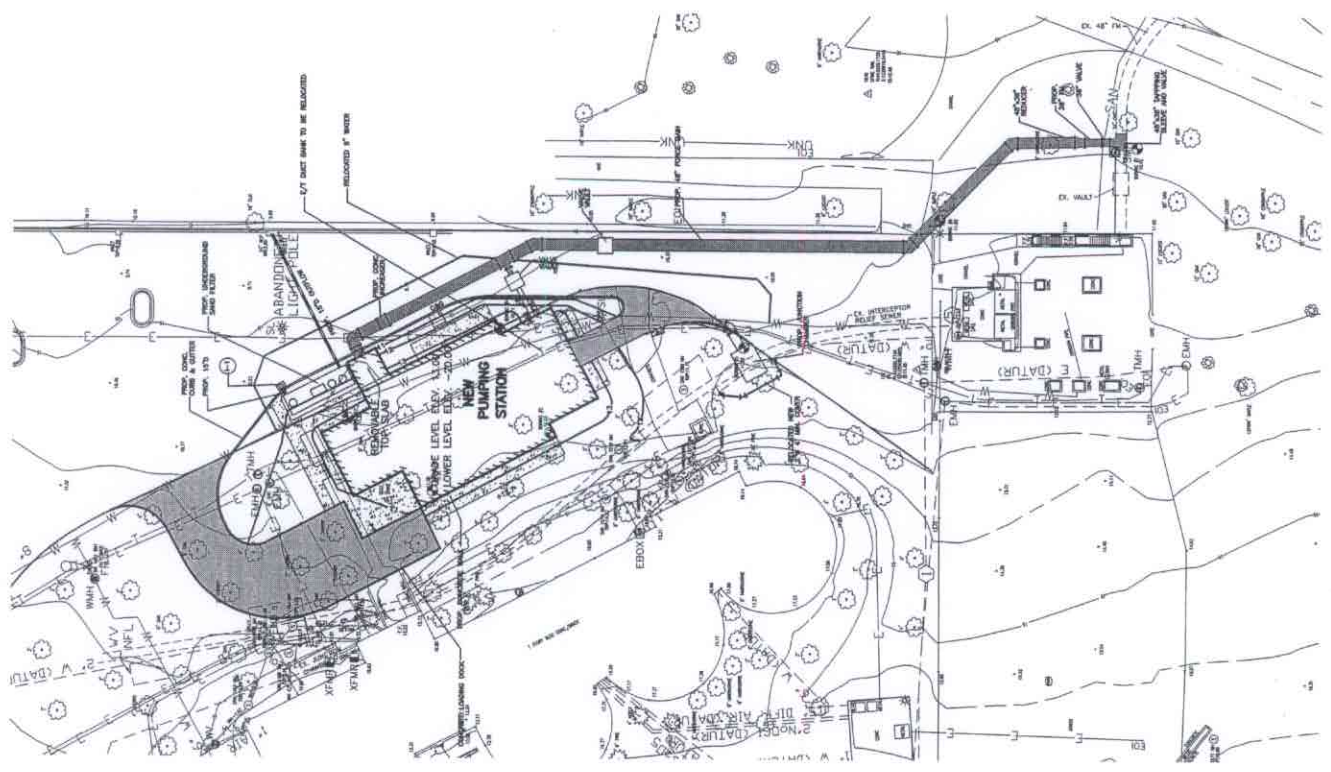
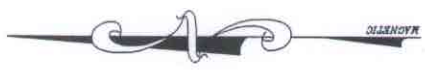
LEGEND

—	EXISTING ELECTRIC
—	EXISTING WATER
—	EXISTING TELEPHONE
—	EXISTING CONTOUR
—	EXISTING SPOT SHOT
—	UTILITY MARKER
○	TREE

PROPOSED WORK

[Pattern]	ASPHALT PAVEMENT
[Pattern]	CONCRETE PAVEMENT
[Pattern]	STORMDRAIN
[Pattern]	SANITARY SEWER
[Pattern]	CURB AND GUTTER
[Pattern]	PROPOSED BUILDING

DESCRIPTION	
PRE-BID REVISION	DATE
DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY	
SEWAGE COLLECTION SYSTEM EAST SIDE SEWAGE PUMPING STATION REVISION FIGURE 1 SITE PLAN - ALTERNATIVE 1	
SCALE	AS SHOWN
DRAWN	M.B.P.
CHECKED	Z.O.K.
DESIGNED	M.F. / M. WILLIAMS
DATE	8/72
RECOMMENDED	
LOAD FILE	



REDUCED
SCALE

10 FEET

SUB-PROJECT SHEET	
CONSTRUCTION	W-HOUSE
DESIGN	CONTRACT NO. 0
DESIGN MGR.	DCFA #
JOB NO.	POST-BID REVISION
NO.	DESCRIPTION
BY	DATE

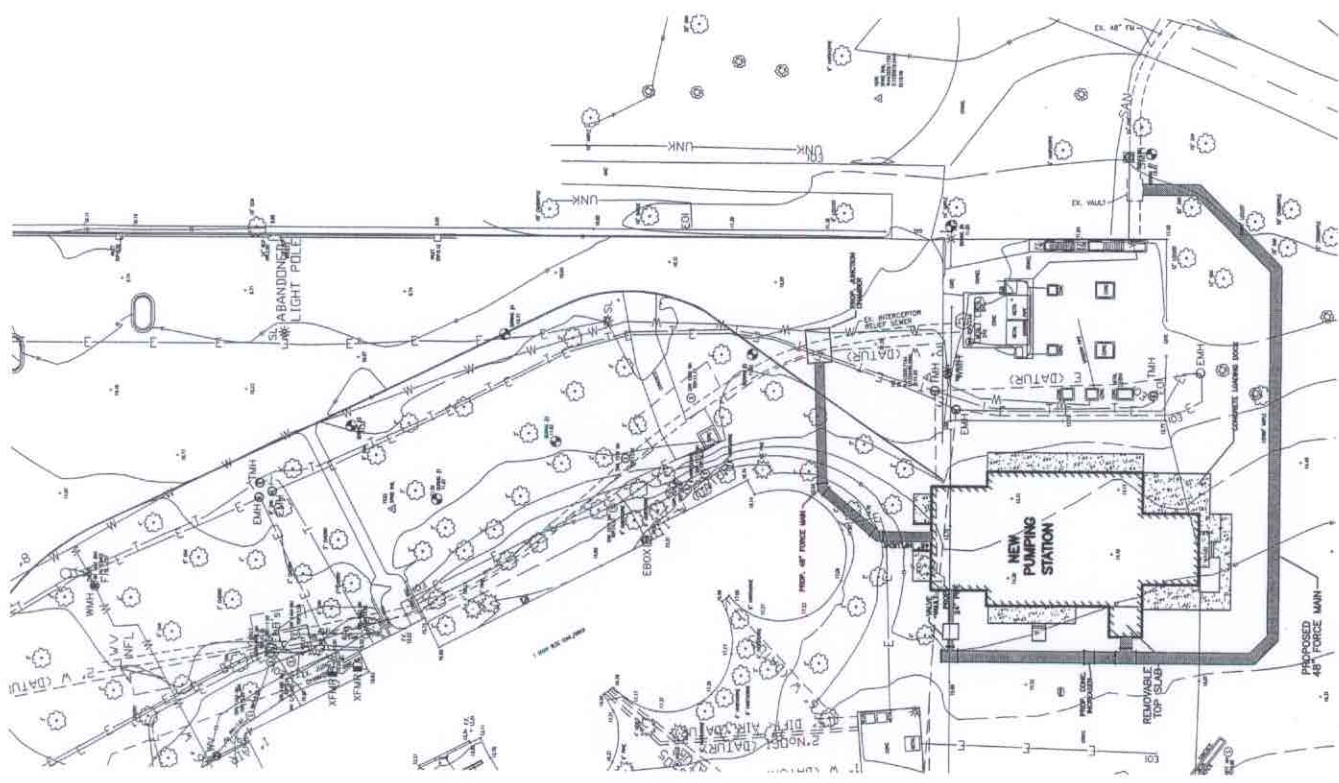
LEGEND

EXISTING ELECTRIC
 EXISTING WATER
 EXISTING TELEPHONE
 EXISTING CONTOUR
 EXISTING SPOT SHOT
 UTILITY MANHOLE
 TREE

PROPOSED WORK

ASPHALT PAVEMENT
 CONCRETE PAVEMENT
 STORMDRAIN
 SANITARY SEWER
 CURB AND GUTTER
 PROPOSED BUILDING

NO.	DESCRIPTION	BY	DATE
	PRE-BID REVISION		
	DISTRICT OF COLUMBIA WATER AND SEWER AUTHORITY		
	SEWAGE COLLECTION SYSTEM EAST SIDE PUMPING STATION REVISION		
	FIGURE		
	SITE PLAN - ALTERNATIVE 2		



GRAPHIC SCALE
 (IN FEET)
 1 inch = 50 ft

10 FEET

REDUCED FROM ORIGINAL SCALE

- Additional security fencing and paving would be required
- A separate ductbank would be required to provide a second electrical service feeder to the existing Swirl Facility
- Large caliber, mature hardwood trees would be removed for installation of the force main
- The recycle line would be longer in length than the other two alternatives
- When viewed from the Anacostia Waterfront, the Alternative 2 would increase the magnitude of the WASA facilities
- Alternative 2 is located on the pedestrian pathway and roadway shown in the Anacostia Waterfront Initiative Draft Framework Plan
- There would be an additional construction cost of about \$150,000 over Alternative 1

Alternative 3

Alternative 3 proposes construction of a replacement pumping station immediately to the northeast of the existing pumping station. Alternative 3 is located mostly outside of the WASA fenced area in the riverfront park area. The existing station would be maintained during construction and then demolished. The existing station lands would then be returned to park like conditions.

The advantages of Alternative 3 include:

- Relocation of the electric and telephone ductbanks would not be required
- The force main and interceptor would be shorter in length than the other two alternatives
- There would be a net construction cost savings of about \$80,000 less than Alternative 1

The disadvantages of Alternative 3 include:

- Additional security fencing and paving would be required
- A separate ductbank would be required to provide a second electrical service feeder to the existing Swirl Facility
- The recycle line would be longer in length
- When viewed from the Anacostia Waterfront, this alternate site would appear more massive than Alternative 1
- Alternative 3 is located on the pedestrian pathway and roadway shown in the Anacostia Waterfront Initiative Draft Framework Plan
- The switchgear room is located further from the existing ductbanks requiring additional ductbanks and conductors

No Build Alternative

NEPA requires that a “No Build” alternative be considered for each federal action. The “No Build” alternative defines whether the project purpose and need can be satisfied through other methods (such as non-constructed, reduced construction, or other techniques). In this instance, the need for the project, as defined in Section II above, is linked to the remediation of existing deficiencies in existing infrastructure. The “No Build” alternative cannot satisfy the purpose and need of the project and, therefore, was not retained for detailed consideration.

SUB-PROJECT SHEET	
CONSTRUCTION	IN-HOUSE
DESIGN	DESIGN
DESIGN MGR.	DESIGN
JOB NO.	DESIGN
CONTRACT NO. <input type="checkbox"/>	
DCFA # <input type="checkbox"/>	
DESIGN NO. <input type="checkbox"/>	
FORWARDING NO. <input type="checkbox"/>	
FORWARDING NO. <input type="checkbox"/>	
POST-BID REVISION	
NO.	DESCRIPTION
BY	DATE

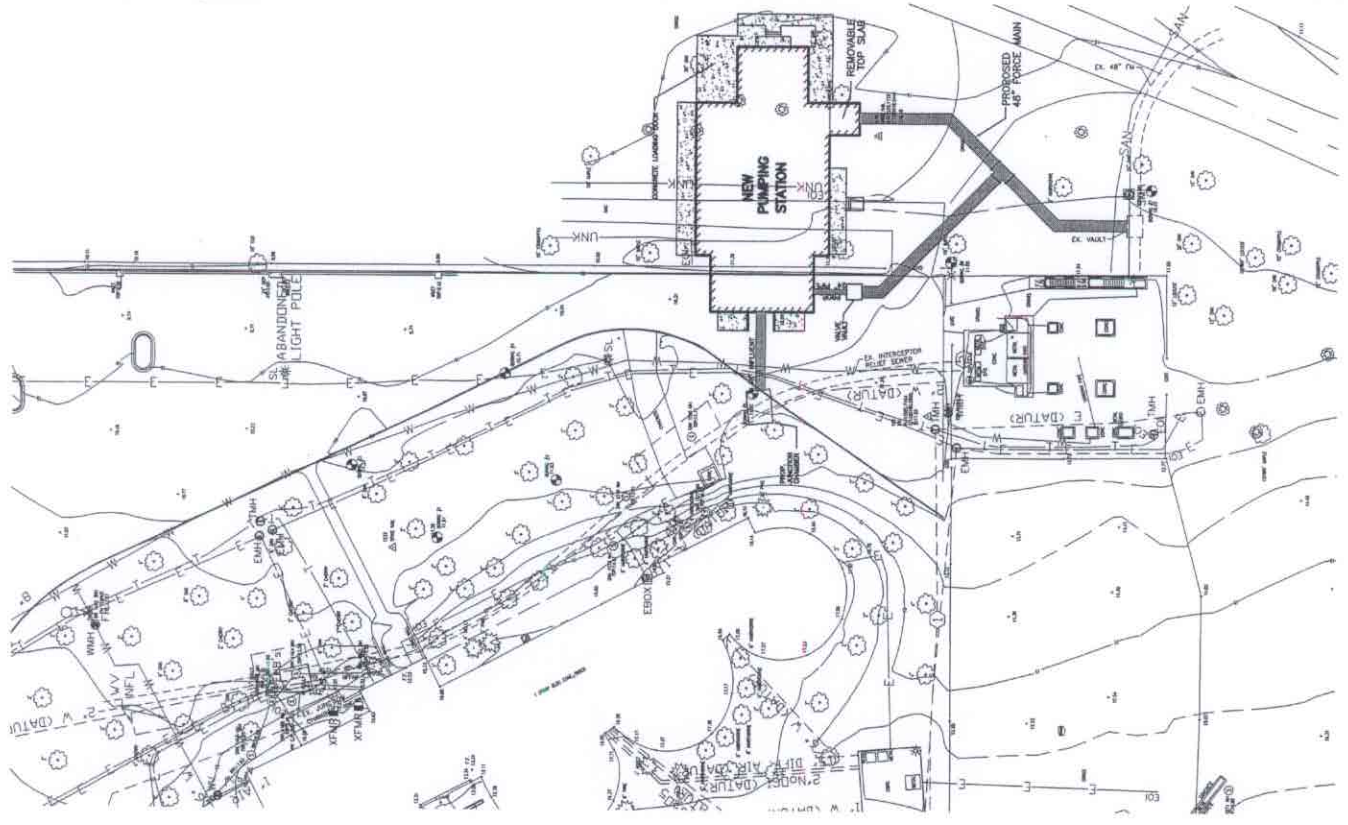
LEGEND

—	EXISTING ELECTRIC
—	EXISTING WATER
—	EXISTING TELEPHONE
—	EXISTING CONTOUR
—	EXISTING SPOT SHOT
—	UTILITY MANHOLE
—	TREE

PROPOSED WORK

[Pattern]	ASPHALT PAVEMENT
[Pattern]	CONCRETE PAVEMENT
[Pattern]	STORMDRAIN
[Pattern]	SANITARY SEWER
[Pattern]	CURB AND GUTTER
[Pattern]	PROPOSED BUILDING

NO.	DESCRIPTION	BY	DATE
PRE-BID REVISION			
DISTRICT OF COLUMBIA			
WATER AND SEWER AUTHORITY			
SEWAGE COLLECTION SYSTEM			
EAST SIDE SEWAGE PUMPING STATION			
IMPROVEMENT			
FIGURE 5			
SITE PLAN - ALTERNATIVE 3			
SCALE	AS SHOWN	M.B.F.	
DRAWN	BY	DATE	
CHECKED	BY	DATE	
DESIGNED	BY	DATE	
APPROVED	BY	DATE	
RECOMMENDED	BY	DATE	



REDUCED SCALE
10 INCHES



IV. Affected Environment

The project area occurs within the District of Columbia on property owned by the NPS, within the National Capital Region, National Capital Parks East. The project area is near the developed site of the existing Robert F. Kennedy Stadium, adjacent to the District of Columbia General Hospital, and is contiguous with the existing DC WASA combined storm/sewer “Swirl Facility”. The purpose of the project requires that the project occur in close proximity to the existing East Side Pumping Station and Swirl Facility.

The existing Swirl Facility is located on NPS property within a DC WASA dedicated “long-term” easement. National parkland abuts the Swirl Facility to the north, east, and south. The DC General Hospital abuts the Swirl Facility to the west. North of the Swirl Facility, land use is almost entirely paved parking. East of the Swirl Facility, land use is a mix of impervious parking and maintained landscape. Immediately to the south of the Swirl Facility, land use is impervious and with a mix of active recreational use and unutilized area. Passive recreational land use increases to the south. Figure 2: Study Area Aerial Photograph, depicts the existing conditions and land use coverage within the project study area.

The topography of the study area is generally level, with a mild gradient sloping down to the Anacostia River. The entire study area was previously cleared of vegetation and has been disturbed by modern construction activities. Approximately 30% of the study area is an impervious paved area used for parking and roads. The remainder of the study area is sparsely vegetated. Most vegetated areas within the study area are actively maintained as landscaped area. The existing National Parkland within the project study area, contiguous with the Swirl Facility, is gated and is not open to the public.

The project study area occurs within the National Capital Planning Commission regional park planning area of the Anacostia Park – West Bank Waterfront planning area. According to the Washington’s Waterfronts, An Analysis of Issues and Opportunities Along the Potomac and Anacostia Rivers, National Capital Planning Commission, December 1999 report, the Anacostia Park –West Bank extends generally from the Sousa Bridge to the Prince Georges County Maryland boundary, in the vicinity of New York Avenue. This area contains RFK stadium, the D.C. Armory Complexes, the Langston Golf Course, Congressional Cemetery, the D.C. Jail and General Hospital complexes, Kingman Lake, Heritage Island, and portions of the National Arboretum and Fort Lincoln New Town. The primary uses of most of the Anacostia Park – West Bank are associated with seasonal recreation activities of RFK stadium. The report states that because this area “lacks activities that would make it a year-round draw, the park has remained vastly underutilized. Furthermore, the grounds are poorly maintained”.

The East Side Pumping Station operations involve screening the effluent flow to separate solids. Separated solids must be hauled away by trucks. All alternatives include adding screening compaction function to the pumping station. The new facility will compact screening material approximately 50%. Therefore, the required traffic to haul screened materials will be reduced by approximately 50%. The project does not have associated adverse traffic impacts.

On October 16, 2002 the study area was inspected by Whitman, Reardon & Associates, on behalf of DC WASA. The following are the findings of the on-site environmental features:

The following natural, social, and cultural resources are known to occur within the project study area:

- National Park Land, National Capital Region – East

- Institutional, passive recreational, and unused land uses
- District of Columbia airshed
- Anacostia River watershed
- Regional Park Planning Area – Anacostia Park, West Bank
- FEMA 100-Year Floodplain

The following natural, social and cultural resources do not occur within the project study area:

- Residential, Commercial, Industrial, Agricultural and Transportation land uses
- Minority racial and ethnic populations
- Waters of the United States, including wetlands
- Forests
- Tribal lands
- Wooded wildlife and fisheries habitats
- Prime Farmlands
- Wilderness Areas
- Scenic Rivers
- Historic Structures and structures that are Eligible for the National Register of Historic Places
- Coastal Zone Management Areas

At the time of this report, responses to our inquiry letter to the U.S. Fish and Wildlife Service (USFWS) had not been received. Therefore, categorical definition of affects of this construction on the environment in regard to the following codes/regulations are not yet completed:

- Section 106 National Historic Preservation Act compliance. The NPS has indicated it will take the lead role in resolution of cultural, historic and archeological compliance.
- Section 7 Threatened and Endangered Species Protection Act compliance. DC WASA has directed correspondence to the USFWS and is awaiting their response.

V. Environmental Consequences

The attached Appendix 1 contains the National Park Service Environmental Screening Form (ESF). The ESF documents the effects of the project upon resources within National Park Service lands. To develop this evaluation, correspondence was submitted to several state and federal agencies; the content of that correspondence is addressed in the following discussions. Not all agencies provided response to the information requests at the time this Draft report was written. Copies of the agency correspondence are contained in Appendix 2. The following addresses the environmental consequences of the alternatives considered.

Consistency with Local Plans

Correspondence has been directed to the DC Office of Planning (DCOP), DC Department of Health (DDOH) and the District Department of Transportation (DDOT) to address the projects consistency with local plans. Copies of those letters are contained in Appendix 2, Agency Correspondence. The following local planning documents were also consulted in the development of this report:

- Extending the Legacy, Planning America's Capital for the 21st Century, National Capital Planning Commission, Anacostia Waterfront.
- Washington's Waterfronts, An Analysis of Issues and Opportunities Along the Potomac and Anacostia Rivers, National Capital Planning Commission, December 1999. Anacostia River – West Bank.

- The Anacostia Waterfront Initiative Draft Framework Plan, District of Columbia Office of Planning, June 2002. Draft.

As of the date of this report, a written response regarding plan consistency has not been obtained from DCOP, DDOH or DDOT. On November 12, 2002, DCOP telephoned with questions/comments on the proposal and stated that written comments will be developed. A copy of this telephone conversation memorandum is also in Appendix 2. All considered alternatives occur in the immediate vicinity of the existing DC WASA combined sewer Swirl Facility.

The DCOP Draft Anacostia Waterfront Initiative Plan specifically addresses proposed waterfront park plans for the Reservation 13 - Robert F. Kennedy Stadium area. Public Reservation 13 refers to the DC General Hospital complex. Though not yet adopted, the draft plan identifies the Reservation 13 area as an excellent candidate for a “grand public waterfront park” that connects the surrounding neighborhoods (Hill East) to the National Capital Park East park and the Anacostia River, via a network of public streets and green parks. The Draft Plan includes DC WASA proposed “modifications to the sewer-storm drain system that will reduce combined sewer overflows” and “mandates rehabilitating pumping stations”. All plans for this region include the existing DC WASA Swirl facility and pumping station. A detail of the specific concept for the Reservation 13 / RFK waterfront park includes the proposed East Side Pumping Station in a new location. The Anacostia Waterfront Initiative Plan is a draft plan report dated June 2002. The plan includes conceptual roads and pathways in the vicinity of the DC WASA Swirl facility. All proposed roads/trails are conceptual and none have advanced to engineering design. The proposed relocated East Side Pumping Station will have a compact footprint (less than 9,000 square feet). If the Draft Anacostia Plan were adopted and reached implementation, proposed roads would be designed around the DC WASA Swirl Facility and East Side Pumping Station. East Side Pumping Station Alternative 3 is located near an area of intersecting thoroughfares, and therefore may present a greater constraint to future plan design than Alternatives 1 and 2. All reviewed local plans incorporate the existing conditions of the project study area, including the East Side Pumping Station. The project is consistent with local plans.

Section 106 NHPA Historic and Archeological Resources

An assessment of this project’s effect on cultural resources is currently being conducted by the National Park Service. The project area contains no sites that are listed on the National Register of Historic Places. The project area is near the National Register Listed Gallinger Municipal Hospital Psychopathic Ward, Reservation 13, 19th Street and Massachusetts Avenue, SE, Washington, DC (1989-02-27). The proposed project Area of Potential Effect (APE) does not include the Gallinger National Register Site. In addition, the D.C. General Hospital is listed as a D.C. Landmark.

Correspondence was directed to the DC Historic Preservation Office (HPO) requesting data on National Register Properties, historic structures or archeological resources that may be in the area. On October 30, 2002, the DC HPO provided written comments, a copy of the DC HPO response is in Appendix 2, Agency Correspondence. The following is a summary of the DC HPO comments:

- No potentially historic standing structures will be affected by the project,
- There is a potential for prehistoric archeological resources in the general area,
- Archeological testing in this area, conducted in 1984 for the CSO Swirl Facility, was directed towards finding evidence of the 19th Century Potter’s Field Cemetery.

- DC HPO states that the “entire area may be archeologically sensitive” and suggests that when the preferred alternative is selected DC HPO be contacted to determine “what level of archeological work that may be needed, if at all.”

The only structures within the project study area are the DC WASA Swirl Facility and the existing East Side Pumping Station. The Swirl Facility was constructed post-1980. The East Side Pumping Station was constructed in the mid-1960’s. The project study area has been significantly disturbed by past construction activities. The project is not anticipated to adversely impact historic or archeological resources.

A previously proposed Barney Circle Extension transportation project conducted an archeological study of the East Side Pumping Station Rehabilitation project study area. The NPS has that documentation on record.

Aesthetic/Visual impacts

The project study area is visually dominated by paved parking area, the existing wastewater Swirl Facility, and unutilized parkland and is mostly inaccessible to the public. Alternatives 1 and 2 are in areas that are not open to the public and are contiguous with the existing combined sewer institutional use. Alternative 3 is partially outside of the fenced Swirl Facility boundaries within the National Capital Park East area. All pumping station alternatives share a designed architectural finish that compliments the surrounding context. The rehabilitation of the East Side Pumping Station will not change the visual character of the project study area. The project will have no foreseeable adverse impact upon visual resources and the aesthetics of the study area.

Water Quality (surface & groundwater)

The project will have no releases to groundwater. The project will result in a small increase in impervious surface area. Drinking water aquifers will not be affected by the project. Groundwater resources will not be adversely impacted by the project.

All alternatives will effect improvements to the existing combined wastewater and storm sewer infrastructure. A benefit of the project is the improvement of regional water quality management by improving the management of sewer overflows during rain events. The project will not adversely impact surface waters within the project study area.

Benefit. The project will improve the functioning of the East Side Pumping Station as it relates to the Swirl Facility. A net effect of the project will be a reduction in the pollutant load of effluent during storm events that are released directly into the Anacostia River. A benefit of the project will be a net improvement in Anacostia River water quality.

Air Quality

This project occurs within the District of Columbia Metropolitan Statistical Area (MSA) airshed. The District of Columbia MSA is a designated non-attainment area for NO_x and ozone. The project will neither directly nor indirectly contribute to increased emissions of NO_x or ozone into the air. The project will have no adverse impact upon regional air quality.

Section 7 Threatened and Endangered Species

Correspondence has been direct to the U.S. Fish and Wildlife Service to request data on populations of federally protected threatened and endangered species that may occur within the project study area. As of the date of this report, a response has not been received from the U.S. Fish and Wildlife Service. The study area is dominated by habitat typical of urban environments.

The project is not anticipated to result in adverse impacts upon protected species or wildlife populations.

Waters of the U.S. and Riparian Zones

Correspondence has been directed to the U.S. Army Corps of Engineers to request data on the presence of Waters of the U.S., including wetlands within the project study area. As of the date of this report, a response has not been obtained from the U.S. Army Corps of Engineers. Inspection of the project study area revealed an absence of Waters of the U.S., including wetlands. The Washington DC East National Wetland Inventory Map also does not indicate the presence of Waters of the U.S., including wetlands, within the project study area. The project area is not forested. The project will have no foreseeable adverse impact upon Waters of the U.S., including wetlands, and riparian zones. Therefore, Section 404 Clean Waters Act and Section 10 Rivers and Harbors Act authorizations are not required for this project.

Floodplains

The elevation of the Federal Emergency Management Agency (FEMA) 100-Year Floodplain or Base Flood Elevation (BFE) within the project study area is 12-feet. A map of the FEMA floodplain is contained in Figure 6. The project area is located outside of the floodplain as depicted on the FEMA maps; however, the site topographic survey provides ground elevation data, which is more detailed than that used in the FEMA report. Therefore, the extent of the 100-year flood plain should be determined from the actual site elevations. The following table addresses the relationship between the considered alternatives and the 100-Year floodplain.

Alternative	100-YR FP EL.	Ground El. At Alternative
1	12.0'	11.3'
2	12.0'	13.7'
3	12.0'	10.1'

A portion of Alternative 1 will be below the FEMA 100-Year floodplain elevation of 12-feet. The entire Alternative 2 area is above the FEMA 100-Year Floodplain elevation. Alternative 3 occurs entirely within the FEMA 100-Year Floodplain as it is lower than the BFE. Alternative 3 will result in a maximal displacement potential area of approximately 8,500 square feet. Based on the relative size of the floodplain in this location and the minimal footprint of the considered alternatives, none of the considered alternatives will adversely impact floodplains in the region.

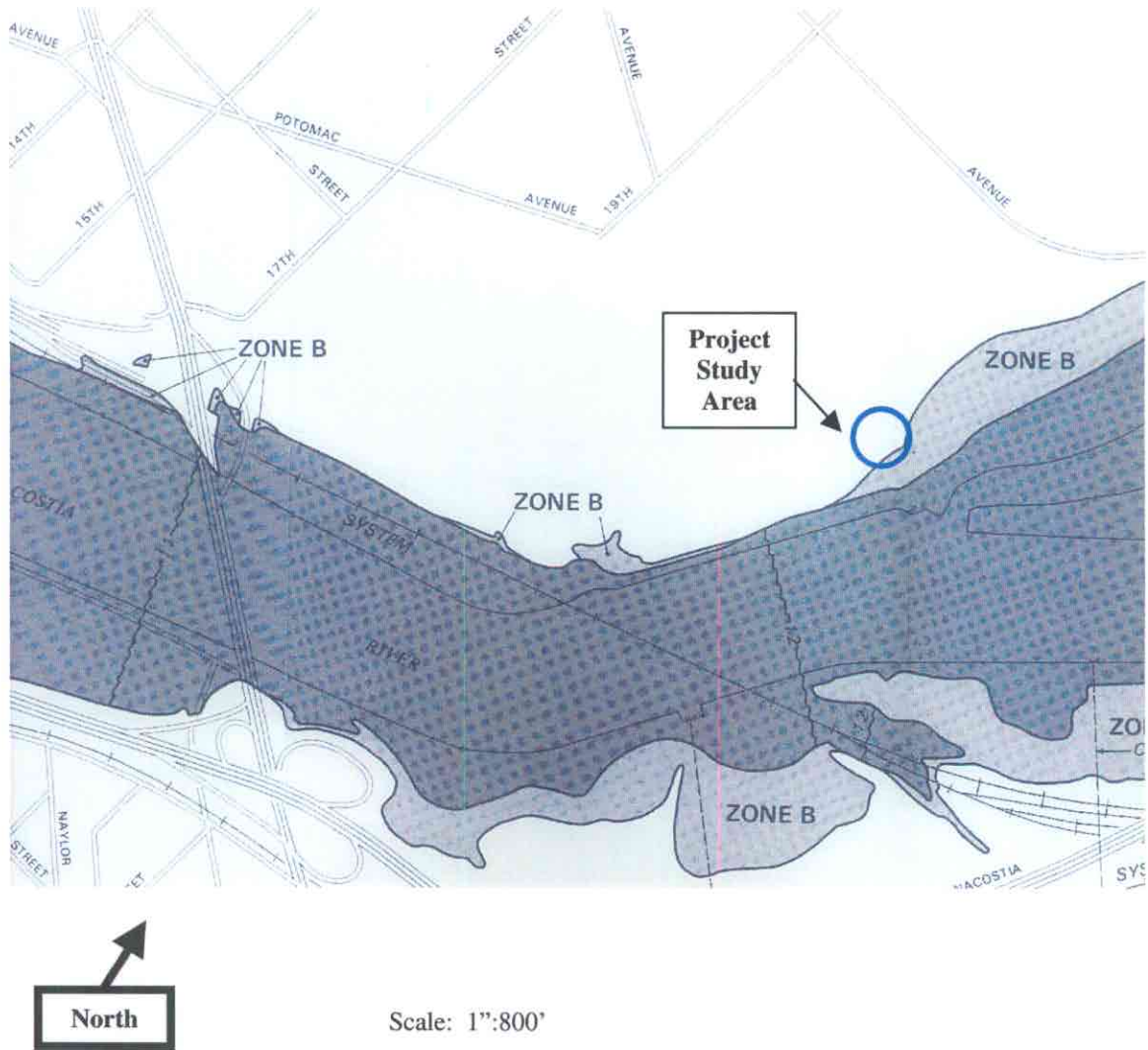
Wildlife & Terrestrial/Aquatic Habitat

All alternatives are either contained within or contiguous with fenced areas. The project will have no impact upon wildlife migration. The study area is dominated by habitat typical of urban environments. The project will not change land use. Aquatic habitat will not be affected by the project. The project will have no adverse effects upon wildlife or terrestrial and aquatic habitat.

Benefit. The project will improve the functioning of the East Side Pumping Station as it relates to the Swirl Facility. A net effect of the project will be a reduction in the pollutant load of effluent during storm events that are released directly into the Anacostia River. A benefit of the project will be a net improvement in aquatic habitat quality.

DC WATER AND SEWER AUTHORITY East Side Pumping Station Rehabilitation

Figure 6: FEMA, Flood Insurance Rate Map



Source: Federal Emergency Management Agency, Flood Insurance Rate Map, District of Columbia Washington, D.C., panel 30 of 30.

Noise

The DC General Hospital is a sensitive noise receptor located adjacent to the project study area. The project does not involve changes to the ambient noise environment. The construction period is approximately 1-year. Temporary short-term ambient daytime noise levels may be affected by project construction. The project will have no permanent adverse impact upon noise levels or patterns within the project study area.

Socio-economics and Environmental Justice

The project study area does not occur within residential areas and will not affect residential populations. The project has no impact upon local businesses or local transportation. The project will have no adverse impact upon environmental justice or socio-economics of the area.

Coastal Zone Management Areas

The project does occur within the coastal zone. Coastal Zone Management Areas will not be adversely impacted by the proposed project.

Cumulative and Secondary Effects

This project is a DC WASA rehabilitation/relocation of an existing pumping station. There are no foreseeable cumulative or secondary impacts of this action.

State, Local & Federal Permits

The project is within the District of Columbia on federally-owned NPS Parkland. The project will require local approval of a stormwater management plan and sediment and erosion control plan. Local building and construction permits will be required DCRA. The only federal permit the project will require is a Special Use permit from the National Park Service. The ability of the NPS to grant the Special Use permit will be partly influenced by the agency comments requested to develop this report. Local and Federal permits are not anticipated to adversely affect the project.

National Park Service Lands

The project study area occurs within the National Capital Parks – East, National Park Service lands within the National Capital Region. All alternatives have some potential to affect National Park Service land. Alternatives 1 and 2 are located within areas that are not accessible to the public. Alternative 3 is partially within an area that is accessible to the public. Alternatives 1 and 2 do not have a potential to affect NPS recreational resources, visitor experience or aesthetic resources. None of the alternatives will affect visitation supply, demand or activities. The following addresses the potential impacts that are common to all alternatives:

- All alternatives require an approximately 8,500 square foot wastewater pumping station and associated 48-inch force main tie-in be constructed on NPS land within a dedicated DC WASA long-term right-of-way
- Temporary construction easements for staging and construction access will likely be required. Design of the project is not sufficiently advanced to define the locations of new temporary easement bounds. All staging and access easements within unencumbered Parkland will require review and approval by NPS staff. Design efforts will focus upon maximizing utilization of existing dedicated long-term easements and minimizing parkland disturbance outside of easements and right-of ways
- All alternatives will require some temporary construction impacts to parkland outside of existing dedicated long-term right-of-way
- No adverse effect on public health or safety
- No adverse effect upon national landmarks or natural landmarks

- No adverse effect upon wetlands or ecologically significant or critical areas
- No highly controversial environmental effects
- No precedents for future action or decisions about future actions with potentially significant direct or cumulative environmental effects
- All alternatives are compliant with existing federal regulations for the protection/management of waters, wetlands, and aquatic resources
- No change in land use
- No significant impact upon park users or park operations
- No potential to violate the NPS Organic Act by impairing park resources or values
- Negligible impacts to parkland associated with stormwater management. The stormwater management requirements are minimal and will likely be addressed with underground sand filters within the footprints of the pumping station construction area

The existing East Side Pumping Station and the existing DC WASA Swirl Facility are located within a dedicated “Long-term Construction Right-of-Way”. All alternatives utilize the existing DC WASA long-term right-of-way to the maximal extent possible. The following is a discussion of the potential impacts to National Parkland associated with each alternative:

Alternative 1 locates the replacement pumping station entirely within the existing DC WASA long-term construction right-of-way. Construction of the new 48-inch force main from the pumping station would require approximately 0.165-acre (7,200 square feet) of new temporary construction easement on NPS parkland.

Alternative 2 also locates the replacement pumping station entirely within the existing DC WASA long-term construction right-of-way. Construction of the new 48-inch force main from the pumping station would require approximately 0.207-acre (9,000 square feet) of new temporary construction easement on NPS parkland.

Alternative 3 locates the replacement pumping station partially within the existing DC WASA long-term construction right-of-way. Construction of the new pumping station and associated 48-inch force main from the pumping station would require approximately 0.744-acre (32,400 square feet) of new long-term construction right-of-way on NPS parkland.

This project also requires the removal of the existing underground pumping station and restoration of the site. Alternatives 1, 2 and 3 would not require the area of the existing pumping station remain within dedicated right-of-way. Under these scenarios, the existing long-term construction right-of-way associated with the existing East Side Pumping Station could be reverted back to the NPS, if desired to mitigate for any impacts that may be associated with the proposed project.

VI. LIST OF PREPARERS

Whitman, Requardt & Associates
Aaron M. Keel, AICP
William Wagner, P.E.
801 South Caroline Street
Baltimore, Maryland 21231
(410) 235-3450

DC WASA
Barry Lucas
5000 Overlook Avenue, SW
Washington DC 20032
(201) 787-2396

VII. LIST OF AGENCIES, ORGANIZATIONS, PERSONS CONSULTED

National Park Service, Scott Ahrnsbak, 1480 Ohio Drive, SW, Room 206, Land, Washington, DC 20024

DC Historic Preservation Office, Nancy Kassner, 801 N. Capitol Street, NE, Suite 3000, Washington, DC 20002

US Fish & Wildlife Service, Charissa Morris/Maricella Constantino, Chesapeake Bay Field Office, 177 Admiral Cochrane Drive, Annapolis, Maryland 21401

District of Columbia Office of Planning, Art Rogers/Uwe Brandes, 801 North Capitol Street, NE, Suite 400, Washington, DC 2002

US Army Corps of Engineers, George Harrison, Baltimore District, 10 S. Howard Street, 8th Floor Baltimore, Maryland 21201-2326.

District of Columbia Department of Health, Ted Gordon, 825 N. Capitol Street, NE, 4th Floor, Washington DC 20002

District Department of Transportation, Dan Tangerlini, 2000 14th Street NW, 6th Floor, Washington DC 20009.

APPENDIX 1
ENVIRONMENTAL SCREENING FORM

Appendix 1

Environmental Screening Form

Project Description/Location: *Replacement of the existing DC WASA East Side pumping Station. The project location is at the DC WASA Switch Facility located on National Park Service, National Capital Region - East Lands, near RFK stadium.*

	Yes	No	Data Needed to Determine
Mandatory Criteria (A-M). Would the proposal, if implemented:			
A. Have material adverse effects on public health or safety?		X	
B. Have adverse effects on such unique characteristics as historic or cultural resources; park, recreation, or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands; floodplains; or ecologically significant or critical areas, including those listed on the National Register of Natural Landmarks?		X	
C. Have highly controversial environmental effects?		X	
D. Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks?		X	
E. Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects?		X	
F. Be directly related to other actions with individually insignificant, but cumulatively significant, environmental effects?		X	
G. Have adverse effects on properties listed or eligible for listing on the National Register of Historic Places?			X
H. Have adverse effects on species listed or proposed to be listed on the List of Endangered or Threatened Species, or have adverse effects on designated Critical Habitat for these species?			X

	Yes	No	Data Needed to Determine
I. Require compliance with Executive Order 11988 (Floodplain Management), Executive Order 11990 (Protection of Wetlands), or the Fish and Wildlife Coordination Act?		X	
J. Threaten to violate a federal, state, local, or tribal law or requirement imposed for the protection of the environment?		X	
K. Involve unresolved conflicts concerning alternative uses of available resources (NEPA sec. 102(2)(E))?		X	
L. Have a disproportionate, significant adverse effect on low-income or minority populations (EO 12898)?		X	
M. Restrict access to and ceremonial use of Indian sacred sites by Indian religious practitioners or adversely affect the physical integrity of such sacred sites (EO 130007)?		X	
N. Contribute to the introduction, continued existence, or spread of federally listed noxious weeds (Federal Noxious Weed Control Act)?		X	
O. Contribute to the introduction, continued existence, or spread of non-native invasive species or actions that may promote the introduction, growth or expansion of the range of non-native invasive species (EO 13112)?		X	
P. Require a permit from a federal, state, or local agency to proceed, unless the agency from which the permit is required agrees that a CE is appropriate?		X	
Q. Have the potential for significant impact as indicated by a federal, state, or local agency or Indian tribe?			X
R. Have the potential to be controversial because of disagreement over possible environmental effects?		X	
S. Have the potential to violate the NPS Organic Act by impairing park resources or values?		X	
Tailor the following to meet individual park unit/project needs. Are any measurable impacts possible in the following categories relating to physical, natural, or cultural resources?			
A. Geological resources—soils, bedrock, streambeds, etc.		X	
B. From geohazards?		X	
C. Air quality, traffic, or from noise		X	
D. Water quality or quantity		X	
E. Streamflow characteristics		X	
F. Marine or estuarine resources		X	

	Yes	No	Data Needed to Determine
G. Floodplains or wetlands		X	
H. Land use, including occupancy, income, values, ownership, type of use		X	
I. Rare or unusual vegetation—old growth timber, riparian, alpine, etc.		X	
J. Species of special concern (plant or animal; state or federal listed or proposed for listing) or their habitat			X
K. Unique ecosystems, biosphere reserves, World Heritage sites		X	
L. Unique or important wildlife or wildlife habitat		X	
M. Unique or important fish or fish habitat		X	
N. Introduce or promote non-native species (plant or animal)		X	
O. Recreation resources, including supply, demand, visitation, activities, etc.		X	
P. Visitor experience, aesthetic resources		X	
Q. Cultural resources, cultural landscape, sacred sites, etc.			X
R. Socioeconomics, including employment, occupation, income changes, tax base, infrastructure, etc.		X	
S. Minority and low-income populations, ethnography, size, migration patterns, etc.		X	
T. Energy resources		X	
U. Other agency or tribal land use plans or policies		X	
V. Resource, including energy, conservation potential		X	
W. Urban quality, gateway communities, etc.		X	
X. Long-term management of resources or land/resource productivity		X	
Y. Other important environmental resources?		X	

APPENDIX 2

AGENCY CORRESPONDENCE

Aaron Keel - anacostia pumping station

From: <Scot_Ahmsbrak@nps.gov>
To: <akeel@wrallp.com>
Date: 12/13/2002 11:52 AM
Subject: anacostia pumping station
CC: <Stephen_Syphax@nps.gov>, <James_Rosenstock@nps.gov>

Mr. Keel

I have contacted Anacostia Park, National Capital Parks-East and other staff in the Regional Office about comments relating to the proposed pumping station near the existing "swirl concentrator" in Anacostia Park.

Comments are listed below

1. Anacostia Park is currently producing a "General Management Plan" (GMP) for the park. This process will probably take over a year to finalize and includes public comment on proposed uses within the Park. This process may affect the placement of your project.

2. NCP-East has requested details concerning access and staging areas for the project, duration of construction period, proposed landscape screening, and information on any utility work or upgrades needed for the new facility. They also suggest that you consult with Fish and Wildlife, the affected ANC's and the Anacostia Watershed Society. Archeological analysis of the area would be needed also.

3. Comments from Regional Staff include a request for submission to NPS of a complete set of existing as-built plans of the current facilities. Our drawings of the current facility are incomplete. The staff also commented that the Barney Circle Freeway project that we are a partner to, may affect your proposed development if funded and implemented at a later time. NPS would require verification that the Barney Circle Freeway project is in accordance with your project or that the project has been canceled and is no longer a factor to be considered in the future.

I will forward any additional comments to you if I receive them.

Sincerely,
Scot Ahmsbrak
Right-Of-Way Coordinator, NCR
202-619-7035

Partners:

C. Richard Lortz
John S. Maynes
James A. Avirett, Jr.
Joseph S. Makar
David B. McCormick

Senior Associates:

James O. Armacost, III
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December 5, 2002

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J. Mark Parker
Douglas A. Kelso
Amitava Podder

Mr. Dan Tangerlini
District of Columbia
Department of Transportation
2000 14th Street, NW
6th Floor
Washington, D.C. 20009

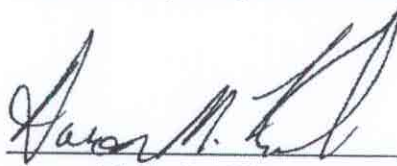
Re: Washington Water and Sewer Authority
East Side Pumping Station Rehabilitation
Near RFK Stadium in Washington, D.C.
WR&A WO #70567

Dear Mr. Tangerlini:

The District of Columbia Water and Sewer Authority (WASA) is conducting a NEPA environmental assessment study on the behalf of the National Park Service for the East Side Pumping Station Rehabilitation project. This study requires an evaluation of the potential environmental impacts of the construction a new wastewater pumping station and the demolition of the existing pumping station, located near RFK Stadium and adjacent to the existing WASA "Swirl Facility" within the District of Columbia. The project is located near the Reservation 13, DC General Hospital. This project is not federally funded, but requires a Special Use permit from the National Park Service.

Whitman, Requardt and Associates is gathering information on the potential environmental impacts of the proposed East Side Wastewater Pumping Station rehabilitation project. Enclosed is a copy of a USGS Quad location map (Washington East, MD - D.C.), and an aerial photograph composite image showing the existing station and alternate locations. Please forward any information that you may have regarding the consistency of this project with local transportation plans and Department of Transportation operations. If you have any questions regarding the project, please contact me at (410) 235-3450, extension 1622.

Sincerely,
WHITMAN, REQUARDT AND ASSOCIATES, LLP



Aaron M. Keel, AICP, Project Planner

Enclosure

cc: Brian McDermott, DMSS-III
William Wagner, WR&A

Partners:

C. Richard Lortz
John S. Maynes
James A. Avirett, Jr.
Joseph S. Makar
David B. McCormick

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Mr. Ted Gordon
District of Columbia
Department of Health
825 N. Capitol Street, NE
4th Floor
Washington, D.C. 20002

Re: Washington Water and Sewer Authority
East Side Pumping Station Rehabilitation
Near RFK Stadium in Washington, D.C.
WR&A WO #70567

Dear Mr. Gordon:

The District of Columbia Water and Sewer Authority (WASA) is conducting a NEPA environmental assessment study on the behalf of the National Park Service for the East Side Pumping Station Rehabilitation project. This study requires an evaluation of the potential environmental impacts of the construction a new wastewater pumping station and the demolition of the existing pumping station, located near RFK Stadium and adjacent to the existing WASA "Swirl Facility" within the District of Columbia. The project is located near the Reservation 13, DC General Hospital. This project is not federally funded, but requires a Special Use permit from the National Park Service.

Whitman, Requardt and Associates is gathering information on the potential environmental impacts of the proposed East Side Wastewater Pumping Station rehabilitation project. Enclosed is a copy of a USGS Quad location map (Washington East, MD – D.C.), and an aerial photograph composite image showing the existing station and alternate locations. Please forward any information that you may have regarding the consistency of this project with local plans and Department of Health operations. If you have any questions regarding the project, please contact me at (410) 235-3450, extension 1622.

Sincerely,
WHITMAN, REQUARDT AND ASSOCIATES, LLP



Aaron M. Keel, AICP, Project Planner

Enclosure

cc: Brian McDermott, DMSS-III

William Wagner, WR&A

Baltimore, MD • Richmond, VA • Fairfax, VA • York, PA • Altoona, PA • Pittsburgh, PA • Wilmington, DE • Newport News, VA



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MEMORANDUM OF PHONE CONVERSATION

Date: November 12, 2002

Time: 1:10 PM

Participants: Uwe Brandes,
Aaron Keel

Project: D.C. WASA East Side Pumping Station Rehabilitation
WR&A W.O.: 70567

Subject: D.C. Office of Planning Comments on the East Side Pumping Station Relocation

Uwe Brandes, Project Manager for Anacostia Waterfront Initiative, D.C. Office of Planning, Phone: 202-442-7619. Referred to on the D.C. OP website link to the Reservation 13 Master Plan, located adjacent to the East-Side P.S. Mr. Brandes will provide written comments, the following are his initial concerns:

- Alternative 1 may conflict with local plans.
- Alternative 2 may be feasible.
- Alternative 3 appears to be the most incompatible with local plans.

The D.C. Office of Planning is considering new roads within the vicinity of the D.C. WASA Swirl facility that may conflict with Alternative 1. The D.C. Office of Planning plans for a waterfront park makes location of the new pumping station a very sensitive matter. D.C. Office of Planning has concerns about ancillary issues associated with the pumping station facility such as fencing and truck access.

Mr. Brandes also recommended coordination with the following agencies:

- D.C. Sports and Entertainment Commission (Bobby Goldwater)
- D.C. Department of Health (Ted Gordon)
- D.C. Department of Corrections (Odie Washington)
- D.C. Department of Transportation (Dan Tangerlini)

Mr. Brandes will be developing written comments this week in response to our request.

Aaron M. Keel, AICP, Project Planner

cc: Bill Wagner

GOVERNMENT OF THE DISTRICT OF COLUMBIA
HISTORIC PRESERVATION OFFICE
OFFICE OF PLANNING



October 30, 2002



Mr. Aaron M. Keel, Project Planner
Whitman, Requardt and Associates, LLP
801 South Caroline Street
Baltimore, MD 21231

Dear Mr. Keel:

I have received your letter of October 21st, in which you ask us to advise you if the East Side Pumping Station Replacement project will have any potential impacts to National Register properties, and potential archaeological resources within the project area.

To my knowledge there are no standing structures that will be affected by the project, however, there is the potential for archaeological resources in the location of the various sites. Archaeological excavations were conducted at D.C. General Hospital in the 1990's and a prehistoric site was identified. This site is listed as a D.C. Landmark.

Archaeological testing was also conducted prior to construction of the CSO Swirl Facility in 1984. However, these excavations were directed towards finding the presence of a 19th century cemetery known as Potter's Field. (The Potter's Field was identified during the archaeological excavations at D.C. General Hospital, however the size of it is unknown). While two femurs were uncovered in that area, no other skeletal remains were found.

Since that entire area may be archaeologically sensitive, I would suggest that when you decide which site is actually selected for construction of the new facility, you contact this office and we can discuss what level of archaeological work may be needed, if at all.

Thank you for advising me of this project, and I will look forward to hearing from you in the future. If you wish to contact me I can be reached at (202) 442-8843, or nancy.kassner@dc.gov.

Sincerely,

A handwritten signature in cursive script that reads "Nancy J. Kassner".

Nancy J. Kassner
Staff Archaeologist

Partners:

C. Richard Lortz
John S. Maynes
James A. Avirett, Jr.
Joseph S. Makar
David B. McCormick

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October 15, 2002

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Douglas A. Kelso
Amitava Podder

Mr. Scott Ahrnsbak
National Park Service, ROW, NCR
1480 Ohio Drive, SW
Room 206, Land
Washington, DC 20024

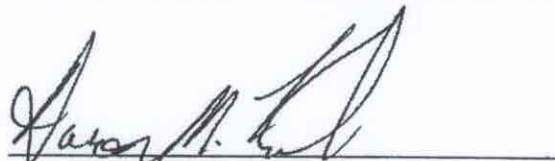
Re: Washington Water and Sewer Authority
East Side Pumping Station Rehabilitation
Near RFK Stadium in Washington, D.C.
WR&A WO # 70567

Dear Mr. Ahrnsbak:

The District of Columbia Water and Sewer Authority (WASA) is conducting a NEPA environmental assessment study on the behalf of the National Park Service for the East Side Pumping Station Rehabilitation project. This study requires an evaluation of the potential environmental impacts of the construction a new wastewater pumping station and the demolition of the existing pumping station, located near RFK Stadium and adjacent to the existing WASA "Swirl Facility" within the District of Columbia. This project is not federally funded, but requires a Special Use permit from the National Park Service.

Whitman, Requardt and Associates is gathering information on the potential environmental impacts of the proposed East Side Wastewater Pumping Station rehabilitation project. Enclosed is a copy of a USGS Quad location map (Washington East, MD - D.C.), and an aerial photograph composite image showing the existing station and alternate locations. NPS EA guidelines require that potential impacts to national park resources also be assessed. Please forward any information that you may have regarding potential impacts of this project to park visitor services or activities (parking, trails, recreation, handicap access, etc...). At this initial stage we do not anticipate that significant impacts to National Park Service resources will occur as a result of the proposed project. If you have any questions regarding the project, please contact me at (410) 235-3450, extension 1622.

Sincerely,
WHITMAN, REQUARDT AND ASSOCIATES, LLP



Aaron M. Keel, AICP, Project Planner

Enclosure

cc: Brian McDermott, DMSS-III
William Wagner, WR&A

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Ms. Nancy Kassner
District of Columbia
Historic Preservation Office
801 N. Capitol Street, NE
Suite 3000
Washington D.C. 20002

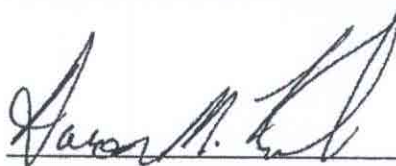
Re: Washington Water and Sewer Authority
East Side Pumping Station Rehabilitation
near RFK Stadium in Washington, D.C.
WR&A WO # 70567

Dear Ms. Morris:

The District of Columbia Water and Sewer Authority (WASA) is conducting a NEPA environmental assessment study on the behalf of the National Park Service for the East Side Pumping Station Rehabilitation project. This study requires an evaluation of the potential environmental impacts of the construction a new wastewater pumping station and the demolition of the existing pumping station, located near RFK Stadium and adjacent to the existing WASA "Swirl Facility" within the District of Columbia. This project is not federally funded, but requires a Special Use permit from the National Park Service.

Whitman, Requardt and Associates is gathering information on the potential environmental impacts of the proposed East Side Wastewater Pumping Station rehabilitation project. Enclosed is a copy of a USGS Quad location map (Washington East, MD – D.C.), and an aerial photograph composite image showing the existing station and alternate locations. Please forward any information that you may have regarding potential impacts to Section 106 National Historic Preservation Act resources, specifically any historic structures, properties that are Eligible for or Listed on the National Register of Historic Places, and potential archeological resources within the project area. If you have any questions regarding the project, please contact me at 410-235-3450, extension 1622.

Sincerely,
WHITMAN, REQUARDT AND ASSOCIATES, LLP



Aaron M. Keel, AICP, Project Planner

Enclosure

cc: Brian McDermott, DMSS-III
William Wagner, WR&A

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Amitava Podder

Ms. Charissa Morris
Chesapeake Bay Field Office
U.S. Fish and Wildlife Service
177 Admiral Cochrane Drive
Annapolis, MD 21401

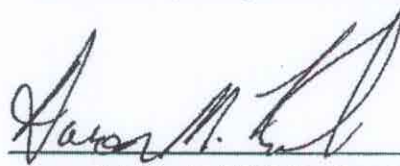
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Whitman, Requardt and Associates is gathering information on the potential environmental impacts of the proposed East Side Wastewater Pumping Station rehabilitation project. Enclosed is a copy of a USGS Quad location map (Washington East, MD - D.C.), and an aerial photograph composite image showing the existing station and alternate locations. Please forward any information that you may have regarding potential impacts to rare, threatened or endangered species within the project area. If you have any questions regarding the project, please contact me at 410-235-3450, extension 1622.

Sincerely,
WHITMAN, REQUARDT AND ASSOCIATES, LLP



Aaron M. Keel, AICP, Project Planner

Enclosure

cc: Brian McDermott, DMSS-III
William Wagner, WR&A

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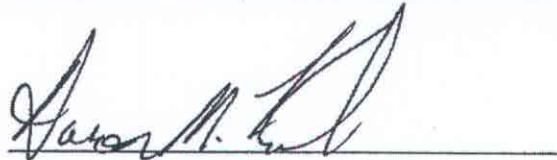
Re: Washington Water and Sewer Authority
East Side Pumping Station Rehabilitation
Near RFK Stadium in Washington, D.C.
WR&A WO #70567

Dear Mr. Rogers:

The District of Columbia Water and Sewer Authority (WASA) is conducting a NEPA environmental assessment study on the behalf of the National Park Service for the East Side Pumping Station Rehabilitation project. This study requires an evaluation of the potential environmental impacts of the construction a new wastewater pumping station and the demolition of the existing pumping station, located near RFK Stadium and adjacent to the existing WASA "Swirl Facility" within the District of Columbia. This project is not federally funded, but requires a Special Use permit from the National Park Service.

Whitman, Requardt and Associates is gathering information on the potential environmental impacts of the proposed East Side Wastewater Pumping Station rehabilitation project. Enclosed is a copy of a USGS Quad location map (Washington East, MD - D.C.), and an aerial photograph composite image showing the existing station and alternate locations. Please forward any information that you may have regarding the consistency of this project with local plans and planning efforts. If you have any questions regarding the project, please contact me at (410) 235-3450, extension 1622.

Sincerely,
WHITMAN, REQUARDT AND ASSOCIATES, LLP



Aaron M. Keel, AICP, Project Planner

Enclosure

cc: Brian McDermott, DMSS-III
William Wagner, WR&A

Partners:

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John S. Maynes
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David B. McCormick

Senior Associates:

James O. Armacost, III
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October 15, 2002

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Dennis J. Hasson
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J. Mark Parker
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Amitava Podder

Mr. George Harrison
U.S. Army Corps of Engineers
Baltimore District
10 S. Howard Street
8th Floor, City Crescent Building
Baltimore, MD 21201-2326

Re: Washington Water and Sewer Authority
East Side Pumping Station Rehabilitation
Near RFK Stadium in Washington, D.C.
WR&A WO # 70567


Dear Mr. Harrison:

The District of Columbia Water and Sewer Authority (WASA) is conducting a NEPA environmental assessment study on the behalf of the National Park Service for the East Side Pumping Station Rehabilitation project. This study requires an evaluation of the potential environmental impacts of the construction a new wastewater pumping station and the demolition of the existing pumping station, located near RFK Stadium and adjacent to the existing WASA "Swirl Facility" within the District of Columbia. This project is not federally funded, but requires a Special Use permit from the National Park Service.

Whitman, Requardt and Associates is gathering information on the potential environmental impacts of the proposed East Side Wastewater Pumping Station rehabilitation project. Enclosed is a copy of a USGS Quad location map (Washington East, MD - D.C.), and an aerial photograph composite image showing the existing station and alternate locations. Please forward any information that you may have regarding potential impacts of this project upon Waters of the United States, including wetlands, and areas subject to Section 404 CWA regulation. If you have any questions regarding the project, please contact me at (410) 235-3450, extension 1622.

Sincerely,

WHITMAN, REQUARDT AND ASSOCIATES, LLP



Aaron M. Keel, AICP, Project Planner

Enclosure

cc: Brian McDermott, DMSS-III
William Wagner, WR&A

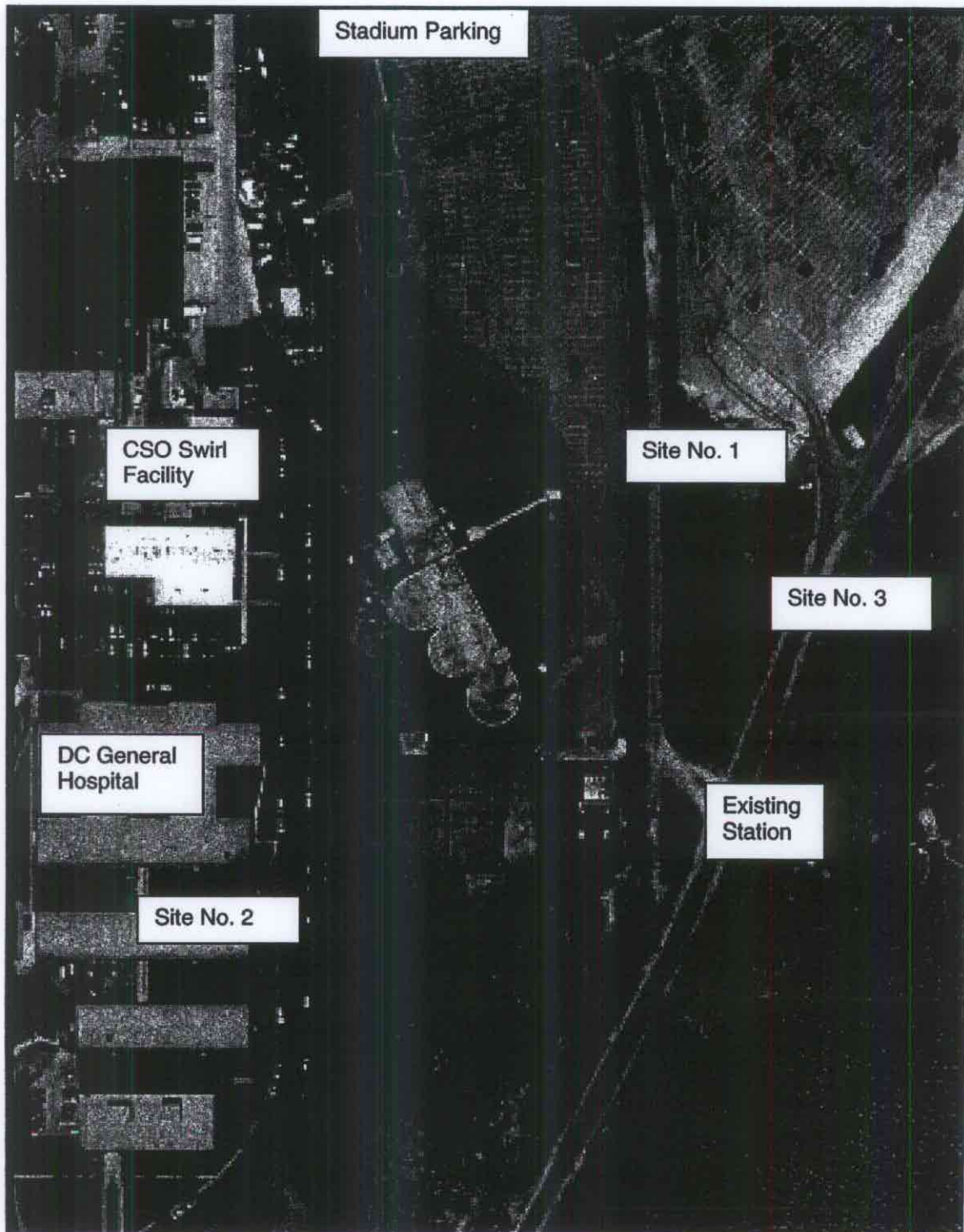
DC WATER AND SEWER AUTHORITY

DESIGN MEMORANDUM NO. 2

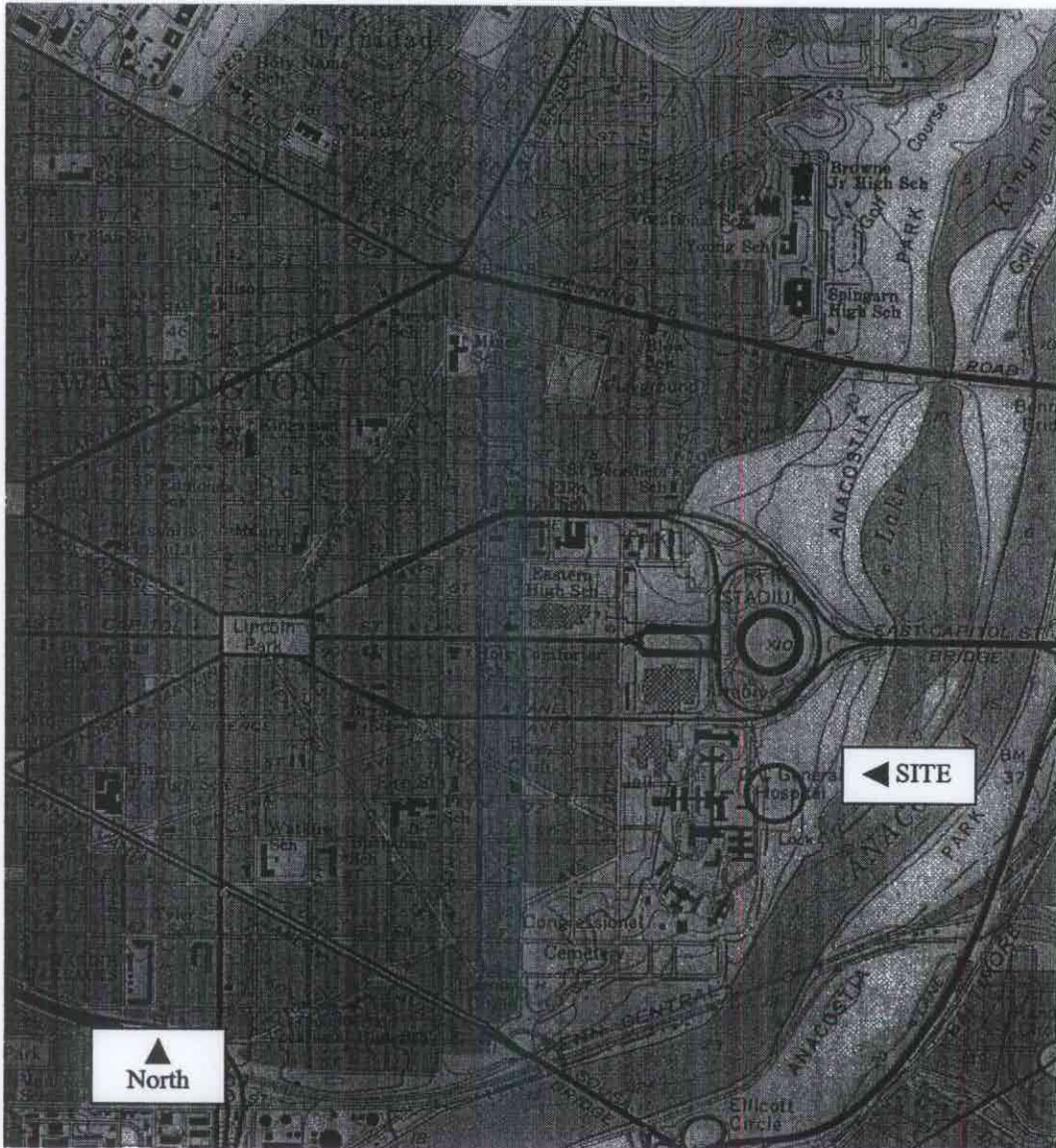
East Side Pumping Station Replacement Project

DCFA #359A-WSA

AERIAL COMPOSITE IMAGE



**Washington Water and Sewer Authority
East Side Pumping Station Rehabilitation
Project Location Map**



Source: USGS Topographic Quadrangle Map, Washington East, MD- DC, 1971
Scale: approximately 1:24000

APPENDIX 3
PHOTOGRAPH LOG

**District of Columbia Water and Sewer Authority
East Side Pumping Station Rehabilitation
APPENDIX 3 -PHOTO LOG**



**Photo 1: Existing
below-grade East
Side Pumping
Station.
View is South.**



**Photo 2:
Alternative 1 Site.
Existing
conditions.
View is West.**

**District of Columbia Water and Sewer Authority
East Side Pumping Station
PHOTO LOG - continued**



**Photo 3:
Alternative 2 Site.
Existing conditions
within fencelines.
View is South.**



**Photo 4:
Alternative 3 Site.
Existing
conditions.
View is East.**

APPENDIX 4

**DESIGN MEMORANDUM NO 2,
ALTERNATIVES SITES,
COST BENEFIT ANALYSIS**

EAST SIDE PUMPING STATION REHABILITATION
DCWASA: DCFA#359A-WSA

DESIGN MEMORANDUM NO. 2
ALTERNATIVE SITES
BENEFIT/COST ANALYSIS
OCTOBER 31, 2002

Section I: Design Criteria, Parameters, and Basic Assumptions for Sizing

Design Criteria

Compare impacts and benefits for the pumping station at the three potential sites:

1. The site identified in the Concept Design Report (Site No. 1)
2. The alternate site located due west of the existing pumping station (Site No. 2)
3. The alternate site identified in the 1998 Facility Plan (Site No. 3)

Design Parameters

1. Grade level elevation of 13.0 for Site No. 1
2. Grade level elevation of 15.5 for Site No. 2
3. Grade level elevation of 13.0 for Site No. 3

Basic Assumptions for Sizing

1. All features shown in the Concept Design Report apply to two alternate sites
2. New security fencing required for the two alternate sites

Section II: National Codes and Specifications

1. Apply equally to all three sites
2. Additional access stairs required at Site No. 2 accommodate the higher grade level. May result in reconfiguring inside of pumping station.

Section III: Supporting Calculations

See the attached sheets for the following calculations:

1. Site No. 2 difference in quantities
2. Site No. 3 difference in quantities

Section IV: Process Flow Diagram and Control Strategy

1. Identical for all three sites

Section V: Preliminary Layout

See the attached figures for proposed layout of all three sites. The interior process equipment layout would be identical for all three sites. A composite aerial image of the three sites is also attached.

Section VI: Manufacturer's Literature, Quoted Cost and Delivery

1. Identical for all three sites

Section VII: Equipment Specifications and Requirements

1. Identical for all three sites

Section XIII: Required Coordination with Other Disciplines, Basis of Design for Each Discipline

1. Identical for all three sites

Section IX: Outline Specifications

1. Identical for all three sites, except security fencing required at the two alternate sites

Appendix

1. Figures for the three sites
2. Aerial composite of the three sites
3. Difference in quantities for the two alternate sites
4. Draft Environmental Assessment

Additional Discussions**Site No. 1.**

Site No. 1 is presented in the Concept Design Report and is the base used for the Alternative Sites Cost/Benefit Analysis. The advantages for this site include:

- Permanent disturbance is within existing curb line
- No reduction in parking area
- Provides visual harmony with the existing Swirl Facility when viewed from the Anacostia River
- Avoids planned pathways as shown in the Anacostia Waterfront Initiative plan
- Allows the sharing of access ways with the existing Swirl Facility
- Site is located within in existing security fencing

The disadvantages of Site No. 1 include:

- Installation of a longer force main

- Possible relocation of the 13.2 kV PEPCO feeders, telephone service and water main to the existing pumping station

The recent utility location effort discovered electric and telephone ductbanks plus a water service main not shown on the "as-built" record drawings from the Swirl Facility construction contract in the late 1980s. In addition, the electric ductbanks shown to the west and south of the Swirl Facility could not be field located. Efforts are ongoing to confirm the location of the utilities with their respective provider and to determine the required details for temporary relocation of said utilities. The cost for relocating the 13.2 kV feeders assumes that the existing feeders can support transformers twice as large as the transformers in the existing pumping station. If the PEPCO ductbanks require reconductoring, the two alternative sites would have additional construction costs that would partially offset the cost of relocating the 13.2 kV feeders.

Site No. 2

Site No. 2 is the alternate site located due west of the existing pumping station and due south of the existing Swirl Facility. The advantages for this site include:

- The site is above the 100 year flood plain elevation of 12.
- Relocation of the electric and telephone ductbanks would not be required
- The force main would be shorter in length
- The permanent disturbance is on a grassy field and will not reduce the parking area

The disadvantages of Site No. 2 include:

- The first floor would be about 2.5 feet higher requiring additional concrete substructure
- Additional security fencing and paving would be required
- A separate ductbank would be required to provide a second electrical service feeder to the existing Swirl Facility
- Large caliber, mature hardwood trees would be removed for installation of the force main
- The recycle line would be longer in length
- When viewed from the Anacostia Waterfront, the alternate site would increase the magnitude of the WASA facilities
- The alternate site is located on the pedestrian pathway and roadway shown in the Anacostia Waterfront Initiative Draft Framework Plan
- There would be an additional construction cost of about \$150,000

Site No. 3

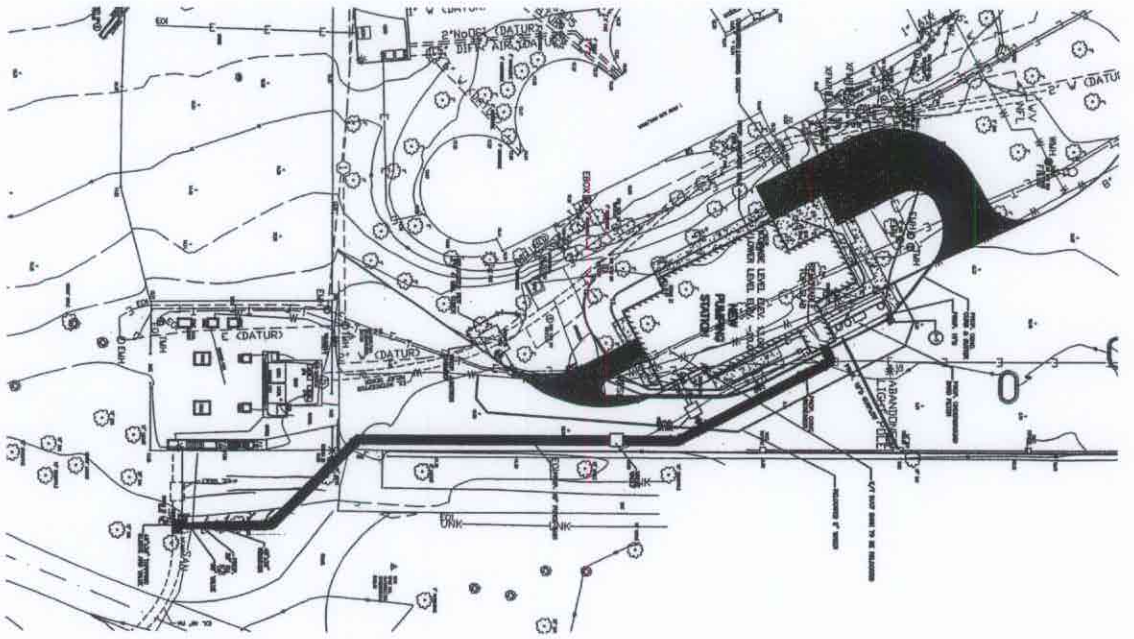
Site No. 3 is the alternate site located due east of the existing Swirl Facility where shown in the 1998 Master Plan. The advantages for this site include:

- Relocation of the electric and telephone ductbanks would not be required
- The force main and interceptor would be shorter in length

- There would be a net construction cost savings of about \$80,000

The disadvantages of Site No. 3 include:

- Additional security fencing and paving would be required
- A separate ductbank would be required to provide a second electrical service feeder to the existing Swirl Facility
- The recycle line would be longer in length
- When viewed from the Anacostia Waterfront, the alternate site would appear more massive.
- The alternate site is located on the pedestrian pathway and roadway shown in the Anacostia Waterfront Initiative draft Framework Plan
- The switchgear room is located further from the existing ductbanks requiring additional ductbanks and conductors



- LEGEND**
- EXISTING ELECTRICAL
 - EXISTING WATER
 - EXISTING TELEPHONE
 - EXISTING GAS
 - EXISTING SEWER
 - EXISTING SHOT BOLT
 - UTILITY MARKING
 - TREE

- PROPOSED WORK**
- ASPHALT PAVEMENT
 - CONCRETE PAVEMENT
 - STONE/DRAIN
 - SAWTOOTH KERB
 - CURB AND GUTTER
 - PROPOSED BUILDING

SUB-PROJECT	01-0050
CONSTRUCTION	01-0050
DESIGN	01-0050
DESIGN NO.	01-0050
DESIGN WORK	01-0050
JOB NO.	01-0050
POST-CONSTRUCTION	01-0050
REVISION	01-0050
NO.	01-0050
DATE	01-0050

SITE PLAN - ALTERNATIVE 1	
NO.	01-0050
DATE	01-0050
DESIGNER	01-0050
CHECKER	01-0050
DATE	01-0050
NO.	01-0050
DATE	01-0050
NO.	01-0050
DATE	01-0050

POST-CONSTRUCTION
 REVISION
 NO. DATE
 01-0050

DESIGNER
 CHECKER
 DATE

NO. DATE
 01-0050

NO. DATE
 01-0050

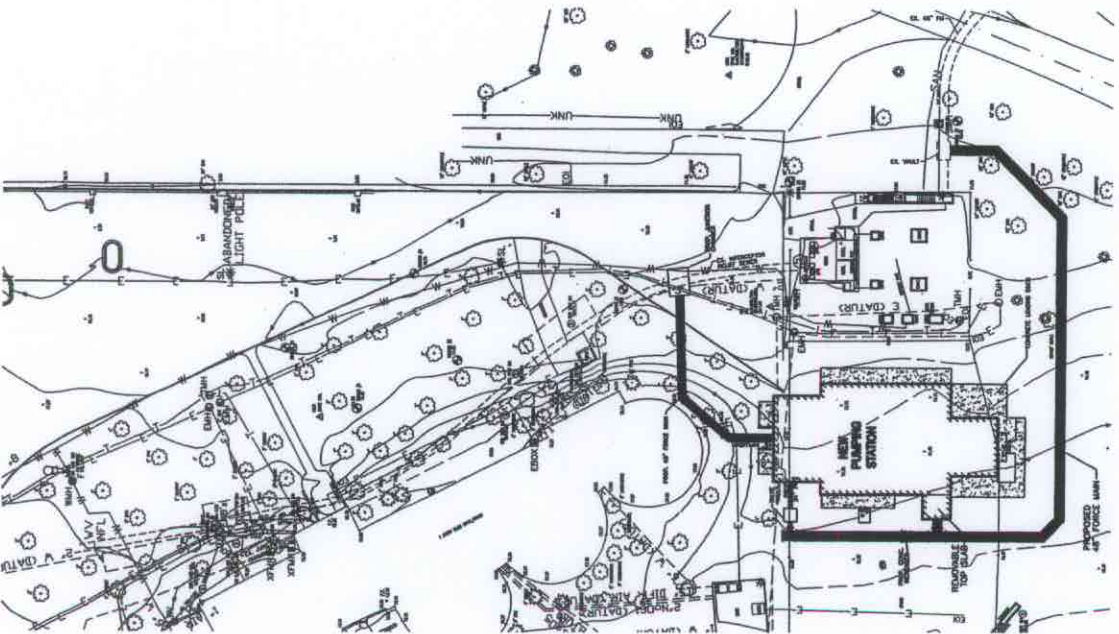
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DESIGN	DCFA #339-WSA	BY	
DESIGN MGR.	EMPC II	DATE	
JOB NO.		POST-BID REVISION	
		DESCRIPTION	
		BY	
		DATE	

LEGEND

- EXISTING ELECTRIC
- EXISTING WATER
- EXISTING GAS
- EXISTING CONDUIT
- EXISTING CONDUIT
- EXISTING SPOT SHOT
- UTILITY MANHOLE
- TREE

PROPOSED WORK

- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- STORMSEWER
- SANITARY SEWER
- CLUB AND GUTTER
- PROPOSED BUILDING



NO.	DESCRIPTION	BY	DATE
	PRE-BID REVISION		
	DISTRICT OF COLUMBIA		
	WATER AND SEWER AUTHORITY		
	SEWER COLLECTION SYSTEM		
	DISTRICT SIDE SEWER PUMPING STATION		
	REPLACEMENT		
	SITE PLAN - ALTERNATIVE 2		

WR&A
WATER RESOURCES & ANALYTICS

AMT
ARCHITECTURAL MODELING TECHNOLOGIES

DESIGNED BY: [Name]
CHECKED BY: [Name]
DATE: [Date]

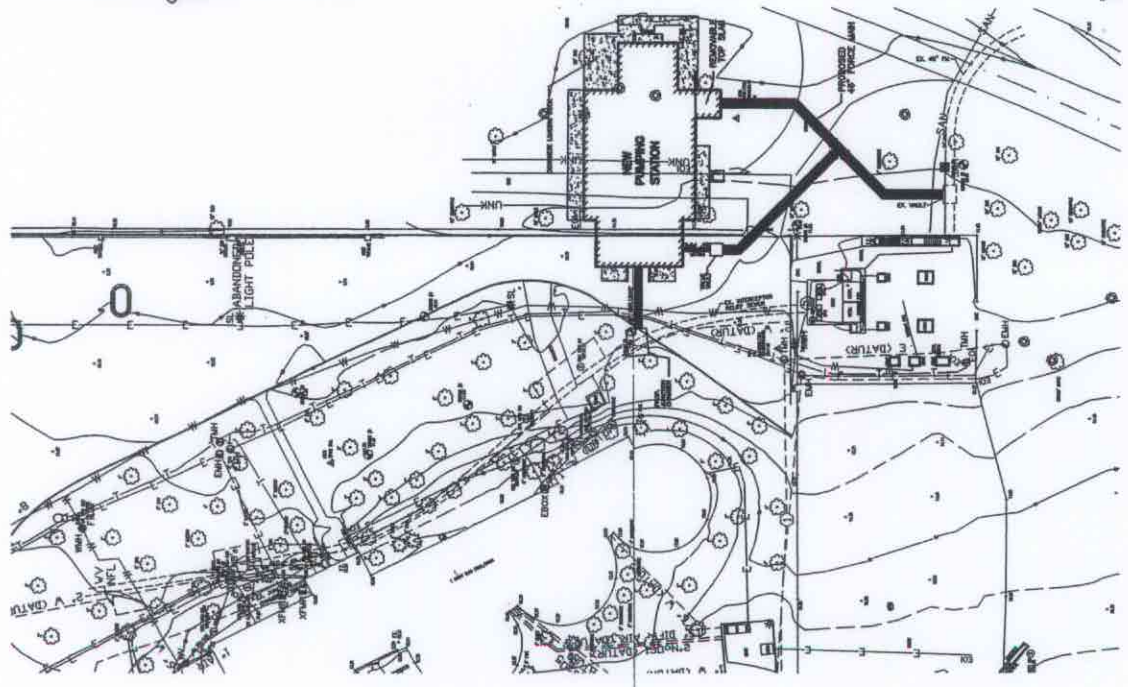
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NO. 01-0050	DCFA #330-WSA	DESIGN	EMPC II
DESIGN MGR.	EMPC II	JOB NO.	
POST-BID REVISION		BY	DATE

LEGEND

- EXISTING ELECTRIC
- EXISTING WATER
- EXISTING SANITARY
- EXISTING CONDUIT
- EXISTING SPOT SIGHT
- UTILITY MARKER
- TREE

PROPOSED WORK

- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- STORMSEWER
- SANITARY SEWER
- CURB AND GUTTER
- PROPOSED BUILDING



GRAPHIC SCALE
1" = 50' ±

NO.	DATE	BY	DATE
PRE-BID REVISION			
CITY OF COLUMBIA			
WATER AND SEWER AUTHORITY			
SEWER COLLECTION SYSTEM			
EAST SIDE RENOVATION			
STATION			
SITE PLAN - ALTERNATIVE 3			
DESIGNED BY	DATE	BY	DATE
CHECKED BY	DATE	BY	DATE
APPROVED BY	DATE	BY	DATE
DATE FILED	FILE NO.	REVISIONS	

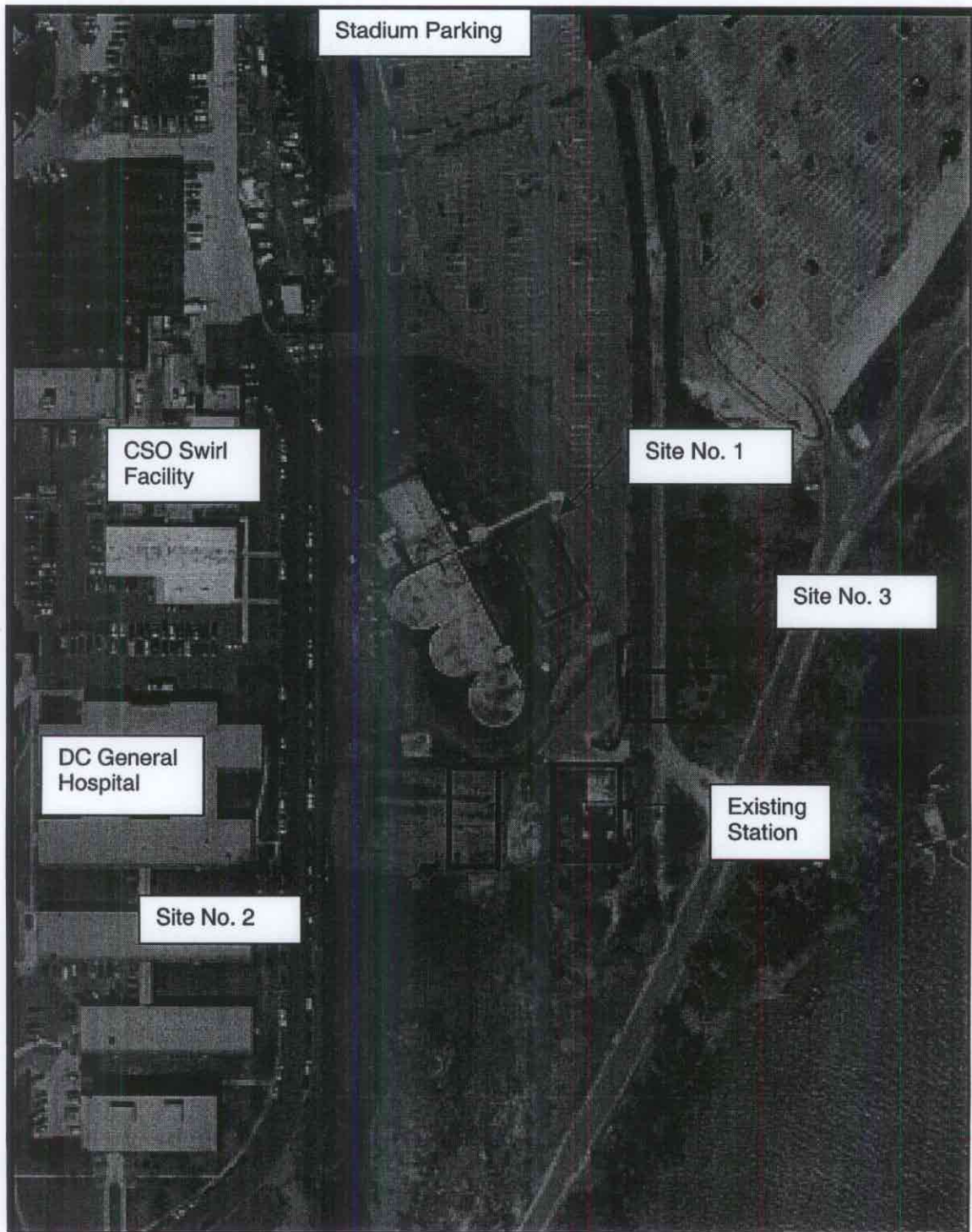


DC WATER AND SEWER AUTHORITY

DESIGN MEMORANDUM NO. 2

East Side Pumping Station Replacement Project
DCFA #359A-WSA

AERIAL COMPOSITE IMAGE



BY: WPW SUBJECT East Side PS
 DATE: 8-22-02 Design Memo No-2

Alternative Sites Cost/Benefit Analysis
 Difference in Quantities

- Use site No. 1 as base

Site No. 2

Additional Substructure Concrete Wall

Avg wall thickness = 2'
 false wall by 2.5'
 Wall length ≈ 450'

$Vol. = 2' \times 2.5' \times 450' = 2250 CF \div 27 = 83 CY$

Additional 24" Recycle Line: L = 80'

1-48" 45° bend

4 piles / 20' length = 4 x 4 = 16 piles / 8 pile caps

Additional Fencing (security) L = 300'

Additional Paving:

$1670 SY - 1080 SY = 590 SY$

Additional earthwork hauling and offsite disposal

$1.5' \times 120' \times 60' = 10,800$

$2.5' \times 180' \times 20' = 9,000$

$19,800 CF = 733 CY$

BY: WPW
DATE: 8-22-02

SUBJECT East Side PS
Design Memo No. 2

Additional Electric Ductbank for Dual
freder to Swirl

L=30'

Deduct for less 48" Interceptor and Force Main

L = 380' - 340' = 40' of F.M.

20 extra' of Interceptor

Net savings is 20'

4 piles per 20' length = 4 piles / 2 pile caps

BY: WPW SUBJECT: East Side PS
DATE: 8-22-02 Design Memo 2

Site No. 3

Additional 24" Recycle line $L=90'$
and 45° bend
4 piles / 20' length = $4 \times 5 = 20$ piles / 10 pile caps

Additional Electric Ductbank to P.S.
 $L=220'$

Additional Electric Ductbank to SWIRL
 $L=30'$

Additional Security Fencing $L=400'$

Deduct for Less 48" Interceptor and F.M.
 $L=380' - 140' = 240'$ of F.M.

1- 45° bend

4 piles / 20' length = $4 \times 12 = 48$ piles / 24 pile caps

$L=70'$ of Interceptor
2- 45° bends

4 piles / 20' length = $4 \times 4 = 16$ piles / 8 pile caps

WRA COST ESTIMATE

DISCIPLINE/FRM: Shta No. 2 Quantities and Cost Differences		W.O. NO. 70587					
PROJECT TITLE: East Side Pumping Station		ESTIMATED BY:W/PW					
STATUS OF DESIGN: Draft Design Memo 2							
ITEM DESCRIPTION	UNIT	QUANTITY	MATERIAL COST		LABOR COST		TOTAL COST
			UNIT COST	TOTAL	UNIT COST	TOTAL	
COST SUMMARY							
<i>Additions</i>							
Structural concrete walls	CY	83	\$176.00	\$14,608.00	\$219.00	\$18,177.00	
24" recycle line	LF	80	\$55.00	\$4,400.00	\$19.25	\$1,540.00	
Pile cap supports	EA	8	\$1,000.00	\$8,000.00	\$500.00	\$4,000.00	
48" 45 degree bend	EA	1	\$2,400.00	\$2,400.00	\$840.00	\$840.00	
Security Fencing	LF	300	\$24.00	\$7,200.00	\$5.00	\$1,500.00	
Paving	SY	600	\$7.00	\$4,200.00	\$1.00	\$600.00	
Earthwork	CY	733	\$0.00	\$0.00	\$20.00	\$14,660.00	
Electric Ductbank to Swirl	LF	30	\$40.00	\$1,200.00	\$30.00	\$900.00	
<i>Additions Subtotal</i>				\$42,008.00		\$42,217.00	
<i>Deductions</i>							
48" force main	LF	20	\$125.00	\$2,500.00	\$43.75	\$875.00	
Pile cap supports	EA	2	\$1,000.00	\$2,000.00	\$500.00	\$1,000.00	
<i>Deductions Subtotal</i>				\$4,500.00		\$1,875.00	
<i>Net difference</i>						\$40,342.00	
Total Bare Cost:						\$40,342.00	
<i>Mark-up:</i>							
20% Fringes						\$8,068.40	
25% Overhead and Profit						\$10,085.50	
<i>Subtotal Cost:</i>						\$58,495.90	\$105,380.90
30% Uncertainties						\$17,548.77	\$31,614.27
ADJUSTED ENR COST INDEX						\$76,044.67	\$136,995.17
(August 2002(6592) to August 2005 (7097))						\$5,825.63	\$10,494.93
<i>Total Adjusted Cost:</i>						\$81,870.30	\$147,490.10
<i>Say:</i>							\$150,000.00

