

NORTH LAUREL WASTEWATER PUMPING STATION STORMWATER MANAGEMENT ENVIRONMENTAL CONCEPT PLAN

CONTRACT NO. 20-4680
HOWARD COUNTY, MARYLAND
CAPITAL PROJECT NO. S-6189
DPZ #ECP-11-031

ENVIRONMENTAL DESIGN NARRATIVE

THE SITE WAS EVALUATED FOR STORMWATER MANAGEMENT, AS REQUIRED BY THE STORMWATER MANAGEMENT ACT OF 2007 AND THE HOWARD COUNTY DESIGN MANUAL VOLUME I. THESE REGULATIONS REQUIRE THAT ENVIRONMENTAL SITE DESIGN (ESD) BE IMPLEMENTED TO THE MAXIMUM EXTENT POSSIBLE FOR EVERY NEW PROJECT. ENVIRONMENTAL SITE DESIGN IS A SITE DESIGN STRATEGY TO:

- OPTIMIZE CONSERVATION OF NATURAL FEATURES.
- MINIMIZE IMPERVIOUS SURFACES.
- USING NONSTRUCTURAL PRACTICES AND INNOVATIVE TECHNOLOGIES AS APPROVED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE).

BY IMPLEMENTING ESD, THE ULTIMATE GOAL IS TO MAINTAIN THE RUNOFF CHARACTERISTICS OF THE SITE TO MIMIC PREDEVELOPMENT WOODS IN GOOD CONDITIONS.

IN THIS PROJECT, THE LIMIT OF DISTURBANCE WAS MINIMIZED BY ELIMINATING ONE ACCESS DRIVE AND PLACING ESD PRACTICES NEXT TO THE ROAD. ALTERNATIVE SURFACES WERE CONSIDERED, BUT DUE TO THE HEAVY DUTY TRAFFIC AND SAFETY REQUIREMENTS, PERVIOUS PAVEMENTS ARE NOT FEASIBLE.

THE ALIGNMENT OF THE PROPOSED ACCESS ROAD IS LOCATED TO MINIMIZE DISTURBANCE TO EXISTING NATURAL FEATURES.

THE SITE WILL MAXIMIZE THE USE OF ESD PRACTICES BY INCORPORATING MICRO-BIORETENTION AREAS WHERE ALLOWABLE. EROSION AND SEDIMENT CONTROLS WERE INTEGRATED INTO THE DESIGN WHERE SWALES CARRYING THE RUNOFF WILL DISCHARGE INTO MICRO-BIORETENTION POND.

TO SIZE THE ESD PRACTICES, RCN VALUES ARE DETERMINED BASED ON A SITE AREA'S LAND USE OF WOODS IN GOOD CONDITION. PE TARGETS ARE THEN ESTABLISHED FROM THE VALUES SET IN TABLE 5.3 OF THE ENVIRONMENTAL SITE DESIGN CRITERIA. A TARGET ESD VOLUME IS THEN CALCULATED FOR THE DRAINAGE AREA BASED ON THE PE AND THE PROPOSED SITE IMPERVIOUS AREA. ROOFTOP AND NON-ROOFTOP DISCONNECTION IS UTILIZED WHERE POSSIBLE.

INDIVIDUAL ESD PRACTICES ARE THEN LOCATED WITHIN THE DRAINAGE AREA AND SIZED BASED ON THE DRAINAGE AREA AND IMPERVIOUS AREA FLOWING TO THE PRACTICE. THE TOTAL OF THE ESD VOLUMES CAPTURED BY EACH ESD PRACTICE WITHIN THE DRAINAGE AREA SHOULD MEET THE TARGET ESD VOLUME INITIALLY CALCULATED FOR THE ENTIRE DRAINAGE AREA.

BY MEETING ESD VOLUMES, WATER QUALITY VOLUME (WQV) AND RECHARGE VOLUME (REV) AND CHANNEL PROTECTION VOLUME (CPV) ARE SATISFIED. AREAS WHERE NOT ENOUGH ESD PRACTICES ARE IMPLEMENTED DUE TO SITE CONSTRAINTS WILL HAVE THE REMAINING ESD VOLUME MANAGED IN A STRUCTURAL STORMWATER MANAGEMENT FACILITY.

FOR THIS PROJECT, ONE INDIVIDUAL ESD PRACTICE IS PROPOSED AND ROOFTOP AND NON-ROOFTOP DISCONNECTION.

THERE ARE NO WETLAND AND STREAM DISTURBANCE AND NO DISTURBANCE TO WETLAND OR STREAM BUFFERS. DISTURBANCES TO TREES, FOREST AREAS AND STEEP SLOPES ARE MINIMIZED WHERE POSSIBLE.

GENERAL NOTES

1. APPROVAL OF THIS ENVIRONMENTAL CONCEPT PLAN DOES NOT CONSTITUTE APPROVAL OF ASSOCIATED SUBDIVISION OR SITE DEVELOPMENT PLANS. REVIEW OF THIS PROJECT FOR COMPLIANCE WITH THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE HOWARD COUNTY ZONING REGULATIONS SHALL OCCUR AT THE SUBDIVISION AND SITE PLAN STAGES.
2. OTHER DPZ FILE REFERENCES RELATED TO THIS PROJECT: WP-11-081.

LEGEND

	EXISTING	PROPOSED
SLOPES 15% TO <25%		
SLOPES >25%		
CONTOUR	145	145
SANITARY SEWER		
SANITARY SEWER MANHOLE		
STORM DRAIN		
TREE LINE		
TREE		
SPECIMEN TREE MARKED FOR REMOVAL		
TREES TO BE REMOVED		
STREAM BUFFER	SB	
SILT FENCE	SF	
SUPER SILT FENCE	SSF	
STABILIZED CONSTRUCTION ENTRANCE		
MICRO BIO-RETENTION/PLANTING BED		
IMPERVIOUS AREA		
LIMIT OF DISTURBANCE	LOD	

0 2000' 4000'
SCALE: 1" = 2000'

LIST OF DRAWINGS

SHEET NO.	DESCRIPTION
1	COVER SHEET
2	EXISTING CONDITIONS - PLAN
3	ENVIRONMENTAL SITE DESIGN CONCEPT - PLAN
4	SEDIMENT, EROSION, AND STORMWATER CONTROL - PLAN

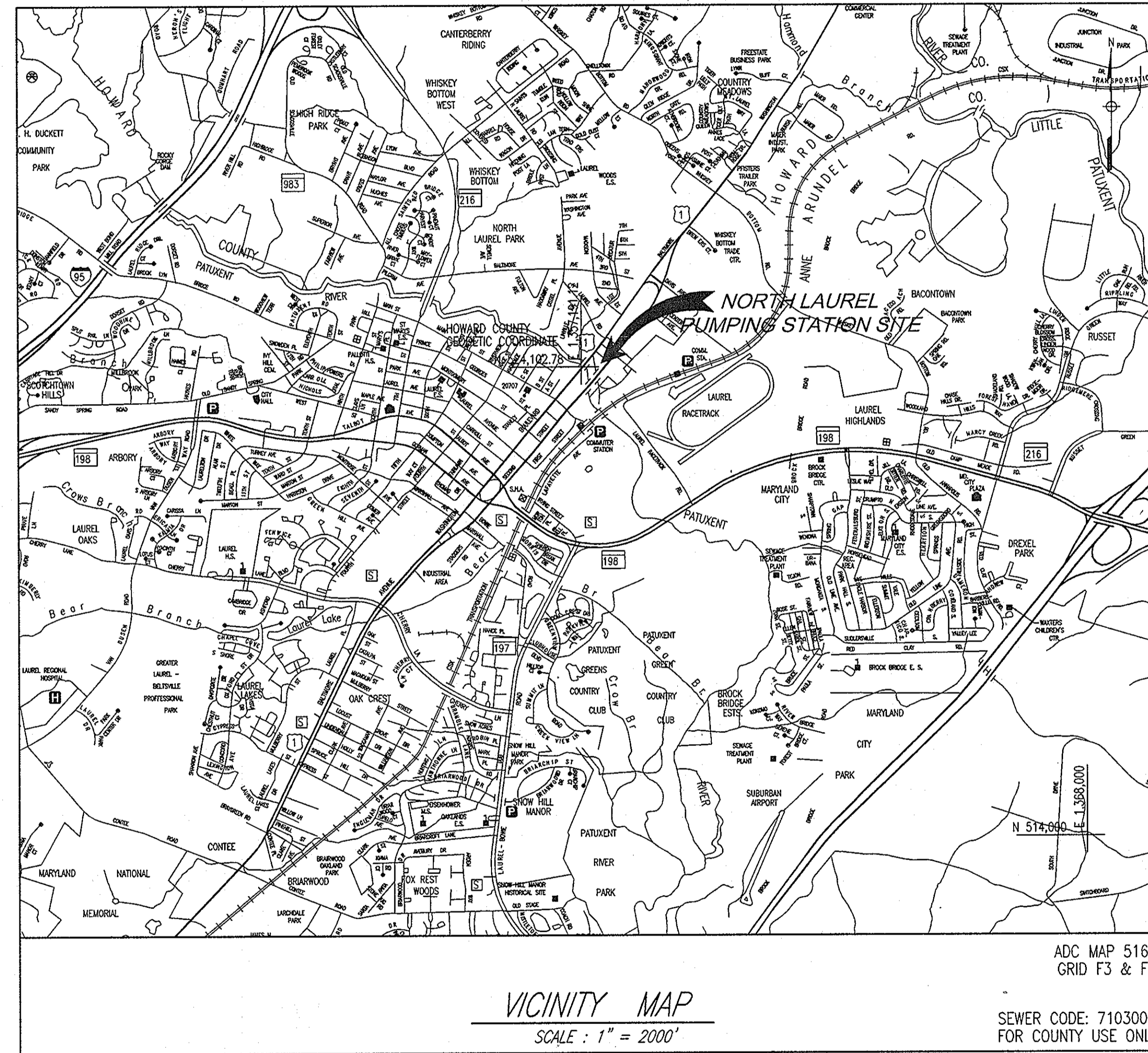
LIST OF WAIVER REQUESTS

WAIVER TO SECTION *	WAIVER DESCRIPTION SUMMARY
16.1205(a)	REMOVAL OF LARGE AND CHAMPION TREES

* FROM HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.

SITE ANALYSIS DATA CHART

SITE AREA.....	0.7 AC.
WETLANDS.....	0 AC.
WETLAND BUFFER.....	0 AC.
FOREST.....	0 AC.
SLOPES 15% TO <25%.....	0.03 AC.
SLOPES 25%.....	0.08 AC.
PROPOSED SITE USE.....	PUMPING STATION
PROPOSED IMPERVIOUS AREA.....	0.2 AC.
FLOOD PLAIN AND BUFFER.....	0.9 AC.
TOTAL PROJECT AREA (LOD).....	0.9 AC.
GREEN AREA.....	0 AC.
ERODIBLE SOILS.....	0 AC.



DIRECTIONS: TAKE ROUTE 32 EAST FROM I-95, AND TRAVEL SOUTH ON ROUTE 1 TO RACE TRACK ROAD

NOTE: HORIZONTAL AND VERTICAL INFORMATION SHOWN HEREON BASED ON HOWARD COUNTY GEODETIC CONTROLS AS ESTABLISHED BY A GPS SURVEY PREFORMED BY WHITMAN, REQUARDT AND ASSOCIATES FROM THE FOLLOWING HOWARD COUNTY GEODETIC CONTROL POINTS (MARYLAND STATE REFERENCE SYSTEM NAD '83 & NAVD '88)

	NORTH	EAST	ELEVATION
HOWARD COUNTY #50EM2	524,102.78	1,357,191.12	141.36
HOWARD COUNTY #0002	544,836.52	1,340,825.33	444.385

DEVELOPMENT ENGINEERING DIVISION
HOWARD COUNTY, MARYLAND

DIVISION OF LAND DEVELOPMENT
HOWARD COUNTY, MARYLAND

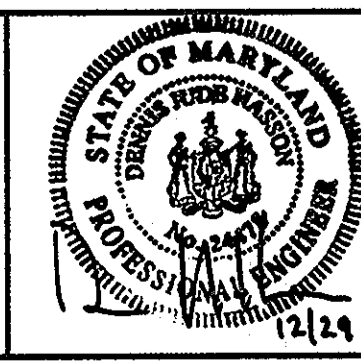
[Signature]
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature]
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 24478, EXPIRATION DATE: 10/28/2013.

OWNER:	PERMIT INFORMATION CHART																												
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS 9250 BENDIX ROAD COLUMBIA, MD 21045 ATTN: MR. BOB DAZZ VOICE 410-313-6153	<table border="1"> <tr> <td>WATER CODE:</td> <td>SEWER CODE:</td> <td>BUILDING</td> <td>STREET ADDRESS</td> </tr> <tr> <td>PUBLIC</td> <td>PUBLIC</td> <td>N/A</td> <td>U.S. ROUTE 1 & COLUMBIA ST.</td> </tr> <tr> <td>PROJECT NAME:</td> <td>TAX MAP/GRID</td> <td>PARCEL NO.</td> <td></td> </tr> <tr> <td>NORTH LAUREL WASTEWATER PUMPING STATION</td> <td>50/10</td> <td>264/406/456</td> <td></td> </tr> <tr> <td>L/F</td> <td>ZONING</td> <td>TAX MAP BLOCK</td> <td>ELEC. DIST.</td> </tr> <tr> <td>420/17</td> <td>CAC-CL1</td> <td>50</td> <td>2</td> </tr> <tr> <td>1309/356</td> <td></td> <td></td> <td>608903</td> </tr> </table>	WATER CODE:	SEWER CODE:	BUILDING	STREET ADDRESS	PUBLIC	PUBLIC	N/A	U.S. ROUTE 1 & COLUMBIA ST.	PROJECT NAME:	TAX MAP/GRID	PARCEL NO.		NORTH LAUREL WASTEWATER PUMPING STATION	50/10	264/406/456		L/F	ZONING	TAX MAP BLOCK	ELEC. DIST.	420/17	CAC-CL1	50	2	1309/356			608903
WATER CODE:	SEWER CODE:	BUILDING	STREET ADDRESS																										
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420/17	CAC-CL1	50	2																										
1309/356			608903																										

WR&A
WHITMAN, REQUARDT AND ASSOCIATES, LLP
801 SOUTH CAROLINE STREET
BALTIMORE, MARYLAND 21231
410 - 235 - 3450



DES: -	DRN: -	CHK: -	BY	NO.	REVISION	DATE

COVER SHEET

600' SCALE MAP NO. 30 BLOCK NO. 10

NORTH LAUREL WASTEWATER PUMPING STATION

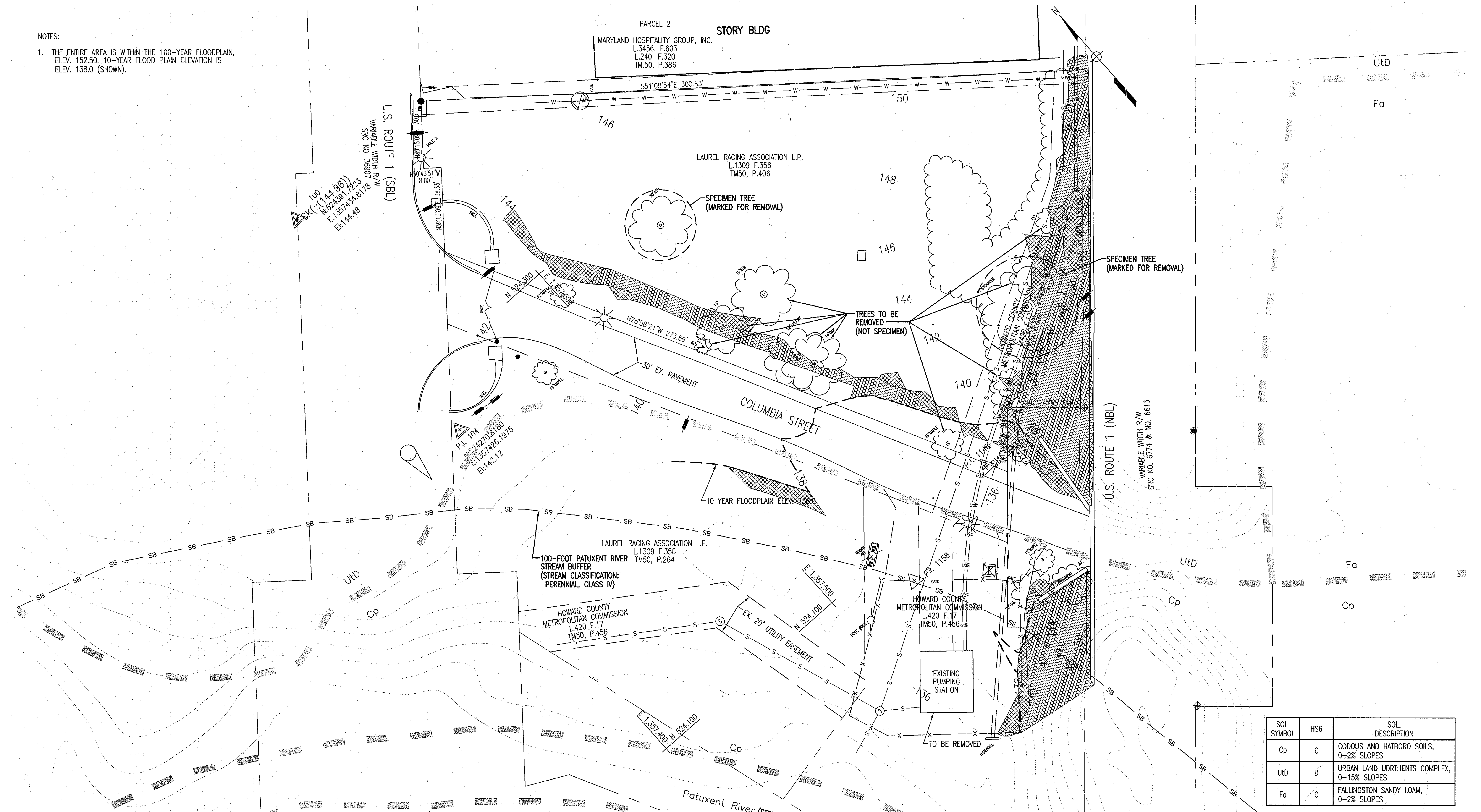
CAPITAL PROJECT NO. S-6189
CONTRACT NO. 20-4680

2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE
AS SHOWN
SHEET
1 OF 4

NOTES:

1. THE ENTIRE AREA IS WITHIN THE 100-YEAR FLOODPLAIN, ELEV. 152.50. 10-YEAR FLOOD PLAIN ELEVATION IS ELEV. 138.0 (SHOWN).

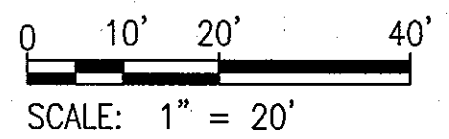


SOIL SYMBOL	HS6	SOIL DESCRIPTION
Cp	C	CODDUS AND HATBORO SOILS, 0-2% SLOPES
Utd	D	URBAN LAND UDRTHENTS COMPLEX, 0-15% SLOPES
Fa	C	FALLINGSTON SANDY LOAM, 0-2% SLOPES

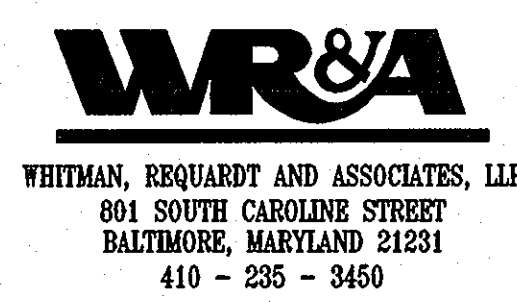
DEVELOPMENT ENGINEERING DIVISION HOWARD COUNTY, MARYLAND	DIVISION OF LAND DEVELOPMENT HOWARD COUNTY, MARYLAND
<i>[Signature]</i> 1/09/12 CHIEF, DEVELOPMENT ENGINEERING DIVISION	<i>[Signature]</i> 1/09/12 CHIEF, DIVISION OF LAND DEVELOPMENT

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PLAN
SCALE: 1" = 20'



OWNER: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS 9250 BENDIX ROAD COLUMBIA, MD 21045 ATTN: MR. BOB DIAZ VOICE 410-313-6153	PERMIT INFORMATION CHART				
WATER CODE: PUBLIC	SEWER CODE: PUBLIC	BUILDING: N/A	STREET ADDRESS: U.S. ROUTE 1 & COLUMBIA ST.	TAX MAP/GRID: 50/10	PARCEL NO.: 264/406/456
PROJECT NAME: NORTH LAUREL WASTEWATER PUMPING STATION	L/F: 420/17	ZONING: CAC-CL1	TAX MAP BLOCK: 50	ELEC. DIST.: 2	CENSUS TRACT: 606903



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CHK: -				
BY	NO.	REVISION	DATE	

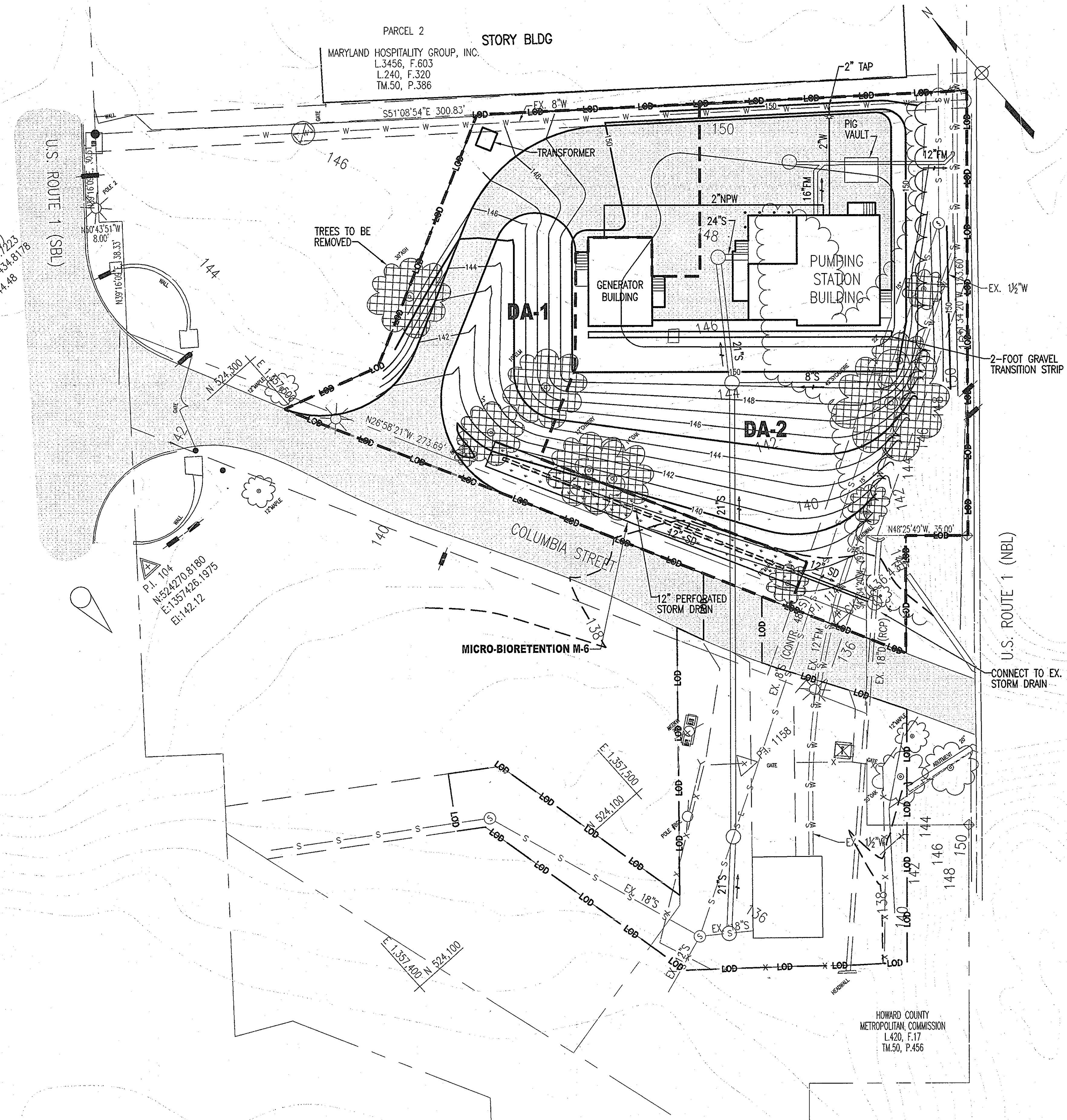
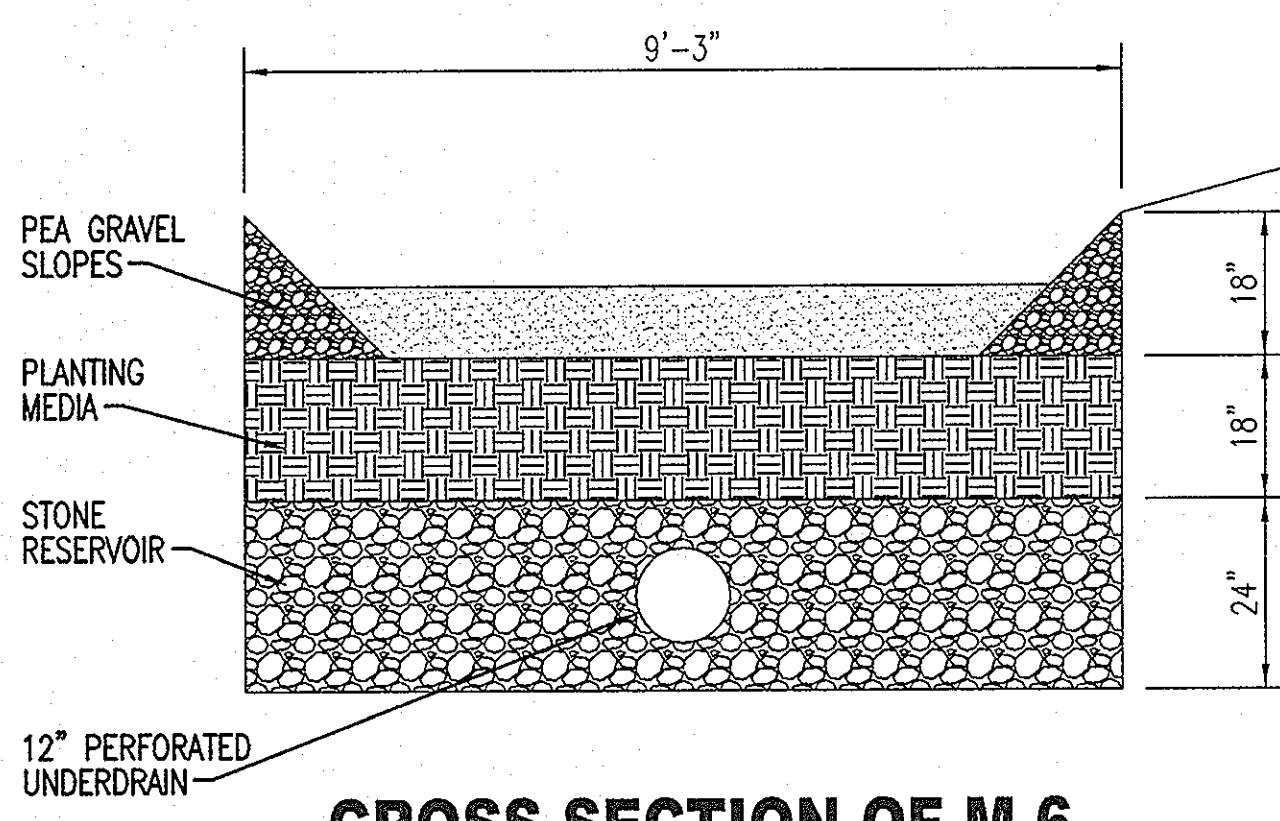
EXISTING CONDITIONS PLAN	
600' SCALE MAP NO. 30	BLOCK NO. 10

NORTH LAUREL WASTEWATER PUMPING STATION
CAPITAL PROJECT NO. S-6189
CONTRACT NO. 20-4680
2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

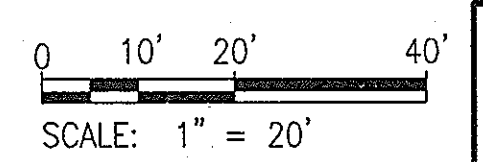
SCALE AS SHOWN
SHEET 2 OF 4

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STORMWATER REQUIREMENTS TABLE			
DRAINAGE AREA	ESD PRACTICE	VOLUME (FT ³)	RCN
DA-1	ROOFTOP DISCONNECTION (PUMPING STATION) N-1	135.4	77
DA-1	ROOFTOP DISCONNECTION (GENERATOR) N-1	49.9	77
DA-1	NON-ROOFTOP DISCONNECTION N-2	320.5	77
DA-2	MICRO-BIORETENTION M-6	470.3	77



PLAN
SCALE: 1" = 20'



DEVELOPMENT ENGINEERING DIVISION
HOWARD COUNTY, MARYLAND

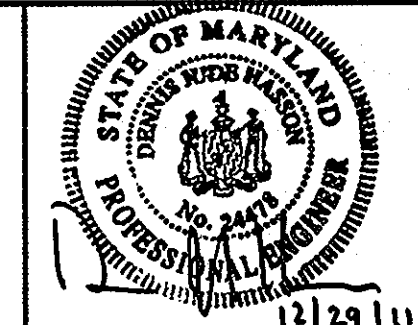
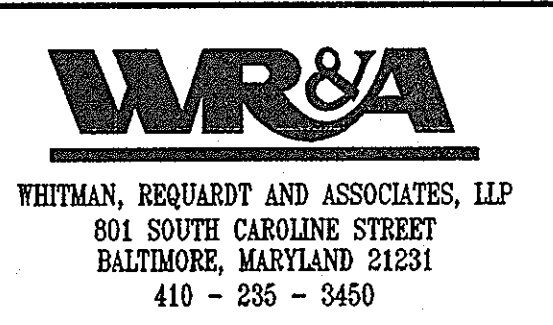
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HOWARD COUNTY, MARYLAND

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	PROJECT NAME:		TAX MAP/GRID:	PARCEL NO.:	
	NORTH LAUREL WASTEWATER PUMPING STATION		50/10	264/406/456	
L/F 420/17 1309/356	ZONING CAC-CL1	TAX MAP BLOCK 50	ELEC. DIST. 2	CENSUS TRACT 606903	



DES:-	BY	NO.	REVISION	DATE
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ENVIRONMENTAL SITE DESIGN
CONCEPT PLAN

600' SCALE MAP NO. 30

BLOCK NO. 10

NORTH LAUREL WASTEWATER PUMPING STATION

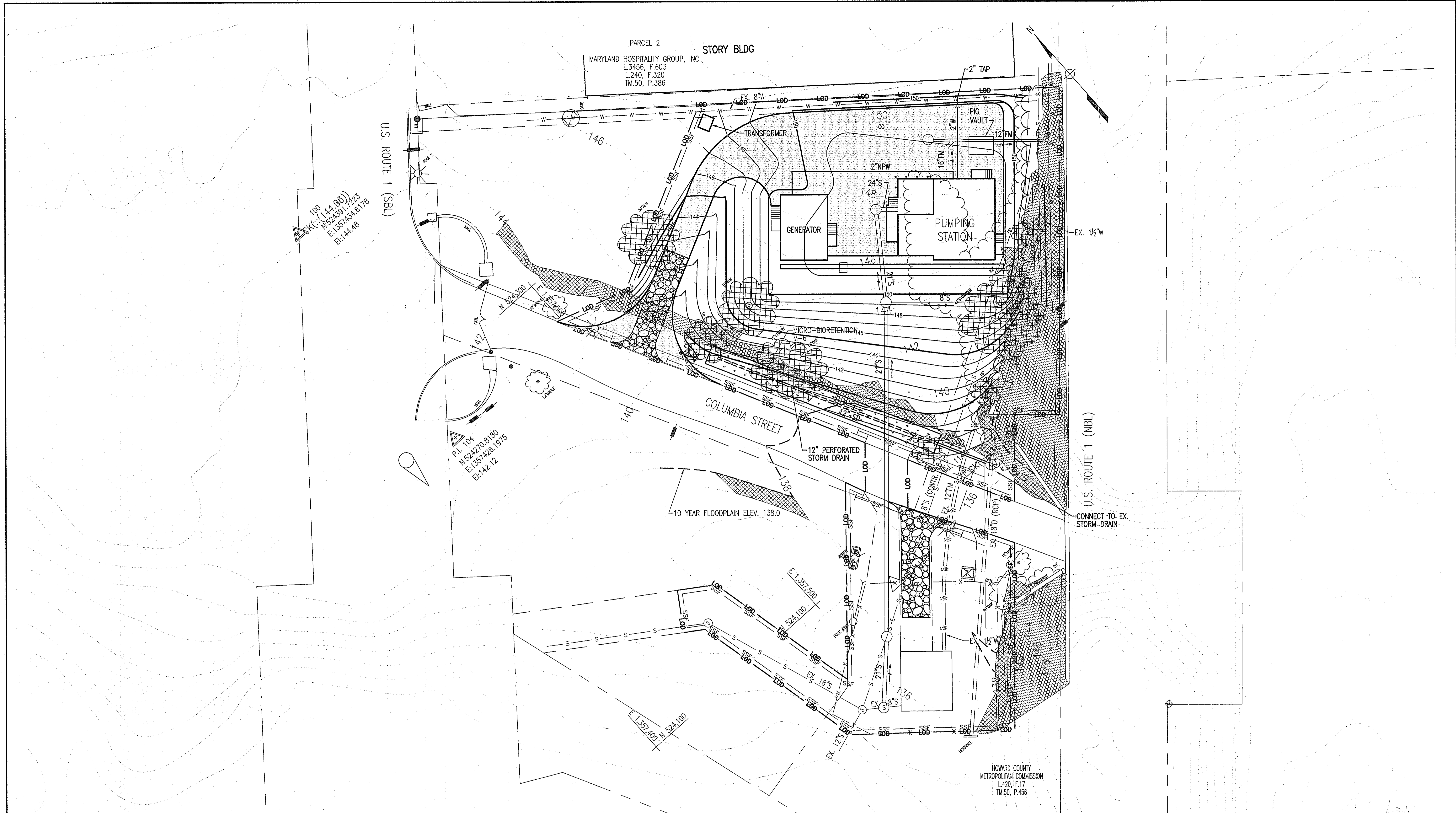
CAPITAL PROJECT NO. S-6189
CONTRACT NO. 20-4680

2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 3 OF 4

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DEVELOPMENT ENGINEERING DIVISION
HOWARD COUNTY, MARYLAND

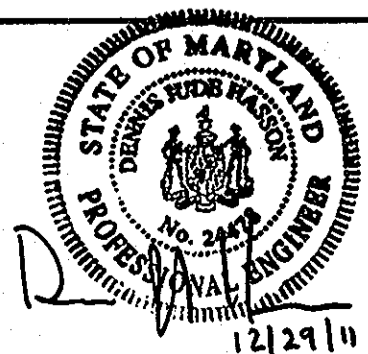
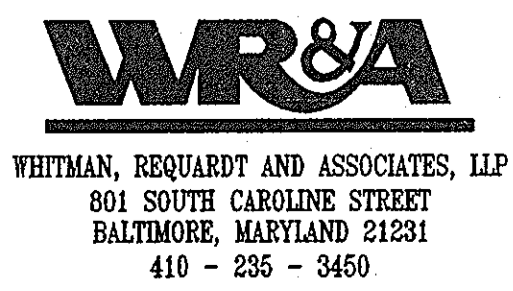
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[Signature] /10/12
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L/F 420/17 1309/356	ZONING CAC-CL1	TAX MAP BLOCK 50	ELEC. DIST. 2	CENSUS TRACT 606903	



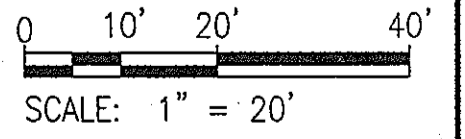
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	BY	NO.	REVISION	DATE

SEDIMENT AND EROSION CONTROL PLAN	
600' SCALE MAP NO. 30	BLOCK NO. 10

NORTH LAUREL WASTEWATER PUMPING STATION
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HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 4 OF 4

PLAN
SCALE: 1" = 20'



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