COLUMBIA JUNCTION

SECTION 3 – LOT 'A'–2

6th ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

REVISED SITE DEVELOPMENT PLAN

SHEET INDEX	
NO.	DESCRIPTION
1	COVER SHEET
2	SITE DEVELOPMENT PLAN – GRADING PLAN
3	SEDIMENT & EROSION CONTROL PLAN
4	SEDIMENT & EROSION CONTROL PLAN, NOTES AND DETAILS AND WHC PROFILE AND SHC PROFILE
5	SEDIMENT & EROSION CONTROL NOTES
6	STORM DRAINAGE AREA MAP, SOILS MAP AND BOING LOGS
7	STORM DRAIN PROFILES, NOTES AND DETAILS
8	STORM DRAIN PROFILES, NOTES AND DETAILS
9	WATER QUALITY FACILITY# 1 AND #2 NOTES AND DETAILS
10	WATER QUALITY FACILITY# 3 NOTES AND DETAILS
11	LANDSCAPE PLAN, NOTES AND DETAILS

LEGEND

SOILS CLASSIFICATION — ChB2

SOILS DELINEATION

EXISTING CONTOURS (AERIAL 12/02) — 480 / 478

PROPOSED CONTOURS — 999

EXISTING WOODS LINE

PROPOSED WOODS LINE

PROPOSED STRUCTURE

STABILIZED CONSTRUCTION ENTRANCE — S.C.E.

LIMIT OF DISTURBANCE

SILT FENCE DIVERSION — SFD

SUPER SILT FENCE — SSF

INLET PROTECTION

PROP. PARKING LOT LIGHT

PROP. SOIL BORING

PROPOSED FIRE HYDRANT

PROPOSED FENCE

PROPOSED SIDEWALK

PROP. CROSS WALK

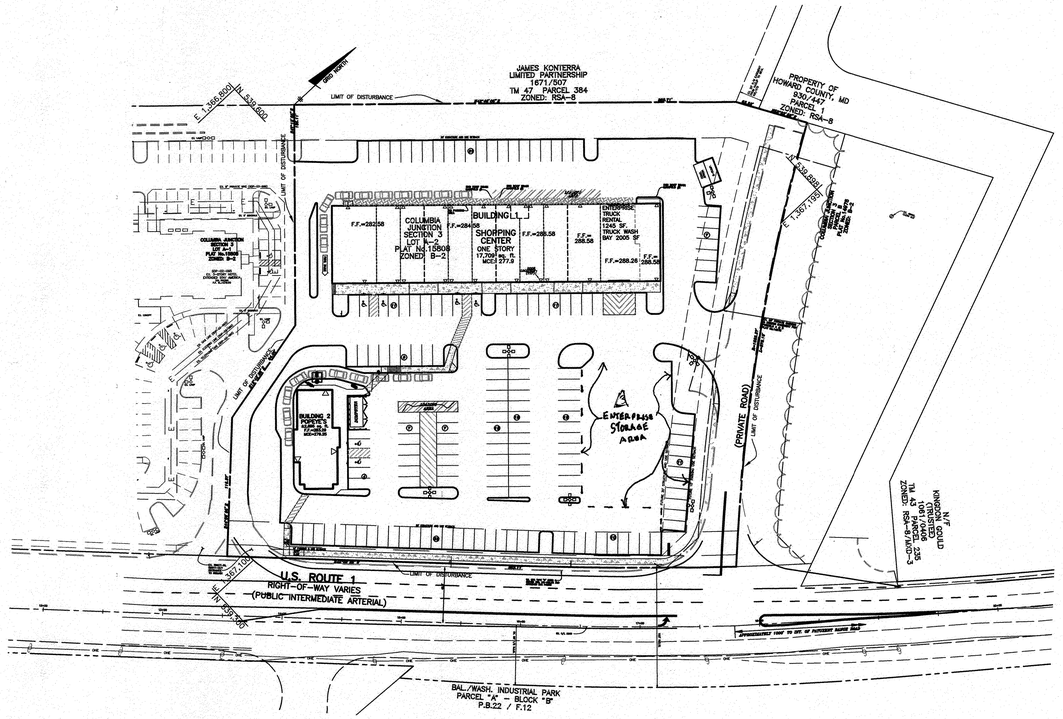
LOADING AREA

NO PARKING AREA

HANDICAP ACCESS

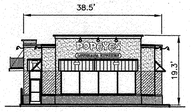
PUBLIC UTILITY EASEMENT

RELOCATABLE PRIVATE ACCESS EASEMENT



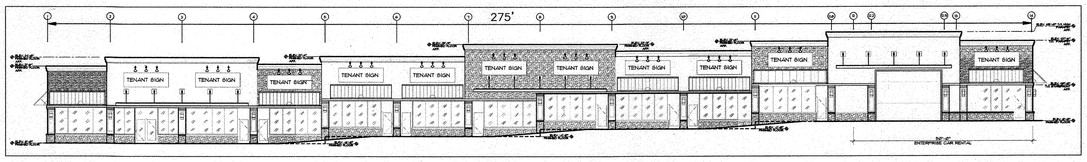
LOCATION PLAN

SCALE: 1" = 60'



ELEVATION – BUILDING 2

SCALE: 1" = 20'



ELEVATION – BUILDING 1

SCALE: 1" = 20'

SITE DATA TABULATION

GENERAL SITE DATA

1.) PRESENT ZONING: B–2

2.) APPLICABLE DPZ FILE REFERENCES: SP–99–011, WP–99–35, F–01–087, SDP–01–103, F–88–160, F–02–169 AND PLATS 15807–15808, PLAT 22372 WP–09–230, WP–11–097, WP–12–078, WP–13–113, WP–15–141

3.) PROPOSED USE OF SITE: RETAIL/COMMERCIAL

4.) PROPOSED WATER _x_ PUBLIC
PROPOSED SEWER _x_ PUBLIC

AREA TABULATION

1.) TOTAL AREA OF SITE	3.68± Ac.
2.) AREA OF 100 YR. FLOODPLAIN	N/A
3.) NET AREA OF SITE	3.68± Ac.
4.) AREA OF THIS PLAN SUBMISSION	3.68± Ac.
5.) APPROXIMATE LIMIT OF DISTURBANCE	3.68± Ac.
6.) BUILDING COVERAGE OF SITE (PERMITTED)	N/A
7.) BUILDING COVERAGE OF SITE (PROPOSED)	20,404 s.f.

OPEN SPACE DATA

1.) OPEN SPACE ON SITE(0.0%)	N/A
2.) AREA OF RECREATION OPEN SPACE REQUIRED BY SUBDIVISION & LAND DEVELOPMENT REGULATIONS	
ACRES REQUIRED	N/A
ACRES PROVIDED	N/A

PARKING SPACE DATA

1.) FLOOR SPACE ON EACH LEVEL PER BUILDING(S) PER USE	20,404 S.F.
2.) MAXIMUM NUMBER OF EMPLOYEES, TENANTS ON–SITE PER USE	N/A
3.) NUMBER OF PARKING SPACES REQUIRED BY ZONING REGULATIONS AND/OR FDP CRITERIA	
SHOPPING CENTER –17,709sf (6/1,000sf)	107
FAST FOOD–2,695sf (14/1000sf)	38
TOTAL PARKING SPACES REQUIRED	145
4.) TOTAL NUMBER OF PARKING SPACES PROVIDED ON–SITE	198
5.) TOTAL NUMBER OF SERVICE PARKING SPACES PROVIDED ON–SITE	N/A
6.) NUMBER OF HANDICAPPED PARKING SPACES PROVIDED ON–SITE	6

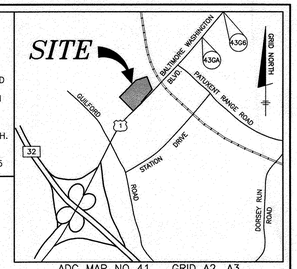
4 ENTERPRISE TRUCK RENTAL - 3250 SF
PARKING ALLOCATED FOR ENTERPRISE IS 19 sp. (6SP/1000 SF)
FENCED IN AREA ACCOUNTS FOR 16 SPACES

PERMIT INFORMATION CHART					
SUBDIVISION NAME		LOT/PARCEL#		ZONE	
COLUMBIA JUNCTION SECTION 3		LOT A–2		B–2	
PLAT Nos.	BLOCK No.	SEC./AREA	TAX MAP	ELEC. DIST.	CENSUS
15808 22372	6	3	48	6th	6069.01
WATER CODE	B–03		SEWER CODE	4250000	

~BENCH MARKS – NAD '83'

HO. CO. NO.43GA EL.=241.665
STAMPED DISC SET ON 3' CYLINDRICAL CONC. BASE 1"–2" BELOW SURFACE, 72.5' SW OF C&P POLE #178, 4.8' FROM EOP NORTHBOUND LANE OF U.S. ROUTE 1.
N–541,797.053 E–1,369,159.481

HO. CO. NO.43G6 EL.=220.142
STAMPED DISC SET ON 3' CYLINDRICAL CONC. BASE 1"–2" BELOW SURFACE, 68.8' SW OF F.H. AT CORNER OF MOTEL, 3.5' SE OF EOP NORTHBOUND LANE OF U.S. ROUTE 1.
N–544,117.540 E–1,370,550.805



ADC MAP NO 41 GRID A2, A3

VICINITY MAP

SCALE: 1" = 2000'

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY, PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION AT 410–313–1880 AT LEAST FIVE(5) WORKING DAYS PRIOR TO THE START OF WORK.
3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1–800–257–7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
4. TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE MOST CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
5. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
6. THE CONTOURS SHOWN HEREON HAVE BEEN TAKEN FROM FIELD RUN TOPOGRAPHIC SURVEYS AT 2' INTERVALS PREPARED BY BENCHMARK ENGINEERING, INC. ON OR ABOUT AUGUST 27, 2007.
7. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UP ON THE MARYLAND STATE PLANE COORDINATES SYSTEM. HOWARD COUNTY MONUMENT Nos. 43GA & 43G6 WERE USED FOR THIS PROJECT.
8. WATER AND SEWER FOR THIS PROJECT IS PUBLIC, CONTRACT No. 24–3901–D. DRAINAGE AREA IS IN THE PATUXENT WATERSHED.
9. SUBJECT PROPERTY ZONED B–2 PER 10–18–1993 COMPREHENSIVE ZONING PLAN AND LIES WITHIN THE METROPOLITAN WATER AND SEWER DISTRICT.
10. STORMWATER MANAGEMENT SHALL BE PROVIDED FOR THIS PROJECT BASED ON GUIDELINES ESTABLISHED BY THE 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUMES I & II. QUALITY CONTROL SHALL BE PROVIDED BY; AN UNDERGROUND SAND FILTERS (F–2) AND AN UNDERGROUND STONE Rev CHAMBER. QUANTITY CONTROL FOR PARCEL 'A' WAS PREVIOUSLY PROVIDED WITHIN THE SWMF CONSTRUCTED AS PART OF F–88–160.
11. THE UNDERGROUND SAND FILTERS (F–2) AND UNDERGROUND STONE Rev CHAMBER SWM FACILITIES SHALL BE PRIVETELY OWNED AND MAINTAINED BY THE H.O.A. THE EXISTING EXTENDED DETENTION POND (P–3) SHALL BE PRIVETELY OWNED AND JOINTLY MAINTAINED BY THE H.O.A.
12. TRAFFIC STUDY WAS PREPARED BY MARS GROUP DATED JANUARY, 2008 AND AS PART OF THIS PLAN.
13. THE FOREST CONSERVATION REQUIREMENT FOR THIS SITE WERE PREVIOUSLY PROVIDED BY A FEE–IN–LIEU PAYMENT FOR 102,366 S.F. OF TOTAL REFORESTATION, PAID ALONG WITH SITE DEVELOPMENT PLAN. SDP–01–103.
14. THERE ARE NO WETLANDS, WETLANDS BUFFERS, STREAMS, STREAM BUFFERS, FLOODPLAIN OR STEEP SLOPES LOCATED ON THIS SITE.
15. EXISTING UTILITIES SHOWN WERE LOCATED BY RECORD DRAWINGS AND FIELD LOCATIONS.
16. UNLESS NOTED AS "PRIVATE", ALL EASEMENTS ARE PUBLIC.
17. CONTRACTOR SHALL ADJUST ALL UTILITIES AND RIM ELEVATIONS AS NEEDED TO MATCH THIS PLAN.
18. ALL PROPOSED EXTERIOR LIGHTING SHALL BE DIRECTED/REFLECTED AWAY FROM ALL ADJACENT PUBLIC ROADS AND RESIDENTIAL ZONING DISTRICTS IN ACCORDANCE WITH SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS.
19. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
20. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING IN THE AMOUNT OF $17,160.00 WAS POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT FOR THIS SITE PLAN.
21. WP–99–35 WAS CONSIDERED AND DENIED ON 12/3/98, WHICH REQUESTED A WAIVER OF SECTION 16.144(a) AND (f) TO REQUIRE SUBMISSION OF A SKETCH PLAN AND PRELIMINARY PLAN FOR THE PROPOSED SUBDIVISION OF PARCELS 90, 91 AND 114.
22. THE ACCESS ROAD FOR THE SITE IS INTENDED TO BECOME A PUBLIC ROAD w/66' RIGHT–OF–WAY IN THE FUTURE. AN AGREEMENT WILL BE RECORDED TO ENSURE THAT BOTH THE OWNERS OF PARCELS 'A' AND 'B' WILL ALLOW FOR THE FUTURE ROAD R/W DEDICATION.
23. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO CEMETERY LOCATIONS ON–SITE.
25. PREVIOUS DEPARTMENT OF PLANNING AND ZONING REFERENCE NUMBERS INCLUDE: SP–99–011, WP–99–35, F–01–087, SDP–01–103, F–88–160, F–02–169 AND PLATS 15807–15808, 22372, 23871.
26. PRIVATE REFUSE STORAGE AND DISPOSAL IS BEING PROVIDED FOR BUILDING #1 AND #2.
27. WP–09–019 WAS DENIED ON 10/10/2008, WHICH REQUESTED A WAIVER OF SECTION 16.124(b)(1)(iii) TO ALLOW THE PLANTING OF PERIMETER LANDSCAPING IN AN EXISTING PUBLIC EASEMENT ADJACENT TO US ROUTE 1.
28. THE STRIPING INDICATED WITHIN US ROUTE 1 IS IN ACCORDANCE WITH A STRIPING PLAN APPROVED SEPTEMBER, 2016. THE STRIPING WORK WILL BE PERFORMED UNDER A DISTRICT PERMIT ISSUED TO SECURITY DEVELOPMENT, INC. SEPTEMBER, 2016.
29. HEALTH DEPARTMENT APPROVAL OF THIS SITE DEVELOPMENT PLAN DOES NOT ENSURE APPROVAL OF ASSOCIATED BUILDING PERMIT APPLICATIONS. PERMIT PLANS FOR CERTAIN FACILITIES SUCH AS FOOD SERVICE OR POOLS WILL REQUIRE REVIEW AND APPROVAL BY THE HEALTH DEPARTMENT.
4 30. A BUILDING PERMIT IS REQUIRED FOR THE FENCE, CONTACT FIRE MARSHAL ABOUT THE NEED FOR A KNOX BOX (410–313–6040).

GENERAL NOTES (CON'T):

30. WP–15–141, A WAIVER TO SECTIONS 16.156(a)(1)(i), 16.156(a)(1)(ii) AND 16.156(a)(2), TO REACTIVATE SDP–08–100. THE APPROVAL WAS SUBJECT TO A REQUIREMENT TO INITIATE CONSTRUCTION ON OR BEFORE JUNE 8, 2016, AND APPLY FOR ALL PERMITS ONE OR BEFORE JUNE 8, 2017. IT WAS NOTED THAT IF THE CONSTRUCTION MUST BE COMPLETED BY MAY 4, 2017 TO MAINTAIN GRANDFATHERING. IT WAS ALSO NOTED THAT MAJOR CHANGES TO THE SDP MAY REQUIRE A NEW SITE DEVELOPMENT PLAN.

ADDRESS CHART	
BLDG. NO.	STREET ADDRESS
1	8530 WASH. BLVD. (U.S. RTE. 1)
2	8520 WASH. BLVD. (U.S. RTE. 1)

"NO AS-BUILT INFORMATION IS" PROVIDED ON THIS SHEET

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. 21443, Expiration Date: 12-21-20

STATE OF MARYLAND · DONALD ALAN MASON · No. 21443 · PROFESSIONAL ENGINEER

4 Specify parking in fenced-in area 7/2/24 BEI
Add general note #30.

NO.	DATE	REVISION
3	1-31-18	REVISED TO SHOW ENTERPRISE STORAGE AREA
2	DEC 16	REVISE BY SHEET SUBSTITUTION TO REVISE ROOF DRAINS, SEWER HOUSE CONNECTION AND PAVE OUTPARCEL.
1	FEB 16	REVISE BY SHEET SUBSTITUTION POPEYE'S BUILDING FOOTPRINT AND ASSOCIATED ITEMS

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS: HOWARD COUNTY HEALTH DEPARTMENT

for Michael J. Nitsos — HOWARD COUNTY HEALTH OFFICER — 2/8/17 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 2.21.17 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 4.17.17 DATE

DIRECTOR — 4.17.17 DATE

BENCHMARK
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS
ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE ▲ SUITE 315 ▲ ELLICOTT CITY, MARYLAND 21043
(P) 410–465–6105 (F) 410–465–6644
WWW.BEI–CIVILENGINEERING.COM

STATE OF MARYLAND · JUNE A. MILLER · No. 28376 · PROFESSIONAL ENGINEER

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. 28376, Expiration Date: 01-01-2019

DEVELOPER:

COLUMBIA JUNCTION DEV. LLC
100 MENLO PARK DRIVE,
SUITE 500
EDISON, NEW JERSEY 08837
201–314–6049

PROJECT: COLUMBIA JUNCTION
SECTION 3 – LOT 'A'–2
(RETAIL CENTER)

LOCATION: TAX MAP 48 – BLOCK 1
PARCEL 548
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: COVER SHEET

DATE: JANUARY, 2017 | PROJECT NO. 1221

Design: DAM/AAM | Draft: HP/AAM | Check: CAM/AAM | SCALE: AS SHOWN | DRAWING 1 OF 11

AS-BUILT

SDP–08–100

NOTE:
A KNOX BOX (FIRE DEPARMENT ACCESS BOX) IS REQUIRED TO BE PLACED ON THE FRONT OF THE BUILDING. IT SHALL BE PLACED TO THE RIGHT OF THE MAIN ENTRANCE AT A RANGE OF 4'-5" IN HEIGHT AND NO MORE THAN 6' LATERALLY FROM THE DOOR. THE KNOX BOX LOCATION SHALL BE SHOWN ON THE PLAN, AS WELL AS, ADDRESSED BY GENERAL NOTE ON THE PLAN. THE BOX SHALL BE ELECTRONICALLY SUPERVISED TO NOTIFY THE OWNER THAT IT IS BEING ACCESSED (INTEGRATED WITH THE FIRE ALARM SYSTEM). NFFPA-118.2.2.1.

NOTE: FOR DETAIL OF THE HANDICAPPED PARKING AT BUILDING #2 SEE SHEET NO. 3 OF 11.

NOTE: SPRINKLER SYSTEM TO BE INSTALLED FOR BUILDING#2 (3)

LEGEND

- SOILS CLASSIFICATION — ChB2
- SOILS DELINEATION
- EXISTING CONTOURS (AERIAL 12/02)
- PROPOSED CONTOURS — 999
- EXISTING WOODS LINE
- PROPOSED WOODS LINE
- PROPOSED STRUCTURE
- STABILIZED CONSTRUCTION ENTRANCE
- LIMIT OF DISTURBANCE
- SILT FENCE DIVERSION — SFD
- SUPER SILT FENCE — SSF
- INLET PROTECTION
- PROP. PARKING LOT LIGHT
- PROP. SOIL BORING
- PROPOSED FIRE HYDRANT
- PROPOSED FENCE
- PROPOSED SIDEWALK
- PROP. CROSS WALK
- LOADING AREA
- NO PARKING AREA
- HANDICAP ACCESS
- PUBLIC UTILITY EASEMENT
- RELOCATABLE PRIVATE ACCESS EASEMENT

PLAN
SCALE: 1" = 20'

NOTE: PROPOSED PRIVATE WATER METER TO HAVE INSIDE LOCATION FOR BUILDING #1 AND #2.

PARKING LOT LIGHT SCHEDULE

SYMBOL	DESCRIPTION	LOCATION
	(3)150 WATT HPS VAPOR WITH 14' BLACK FIBERGLASS POLE.	N 539823.3768 E 1367132.7595
	(5)150 WATT HPS VAPOR WITH 14' BLACK FIBERGLASS POLE.	N 539487.8619 E 1367159.6206 N 539617.0979 E 1367118.1915 N 539725.5468 E 1367230.0171 N 539586.7231 E 1367245.3922 N 539569.3938 E 1367244.1531

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWER SYSTEMS:
HOWARD COUNTY HEALTH DEPARTMENT

HOWARD COUNTY HEALTH OFFICER — DATE 9/8/17

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 7-21-17

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 4-17-17

DIRECTOR — DATE 4-17-17

WALL ELEVATION/GEOMETRY PLAN

SCALE: 1" = 10'

AS-BUILT CERTIFICATION
I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on this "AS-BUILT" Plan meet the Approved Plans and Specifications

Donald Mason, P.E.

Date: 3/29/19

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. 21443 Expiration Date: 12-21-20

NO.	DATE	REVISION
5	5-15-19	REVISE DRAWTH ROUGH BID 1 + UPDATE BOLLARD LOCATIONS TO DOCUMENT AS BUILT CONDITION.
4	1-31-18	REVISED TO ADD ENTERPRISE PARKING/STORAGE AREA AND EXTEND PRIVATE WHC (BID. 1)
3	oct. 23, 2017	Remove FDC Connection/sprinkler notes for Bldg #2
2	DEC 16	SHEET SUBSTITUTION TO REVISE ROOF DRAINS, SEWER HOUSE CONNECTION AND PAVE OUTPARCEL.
1	FEB 16	REVISE BY SHEET SUBSTITUTION POPEYE'S BUILDING FOOTPRINT AND ASSOCIATED ITEMS

BENCHMARK
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS
ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE ▲ SUITE 315 ▲ ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
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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. 28376, Expiration Date: 01-01-19. Jan 17

DEVELOPER:
COLUMBIA JUNCTION DEV. LLC
100 MENLO PARK DRIVE,
SUITE 500
EDISON, NEW JERSEY 08837
201-314-6049

PROJECT: COLUMBIA JUNCTION
SECTION 3 / LOT A-2
(RETAIL CENTER)

LOCATION: TAX MAP 48 - BLOCK 1
PARCEL 548
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: REVISED SITE DEVELOPMENT PLAN
GRADING PLAN

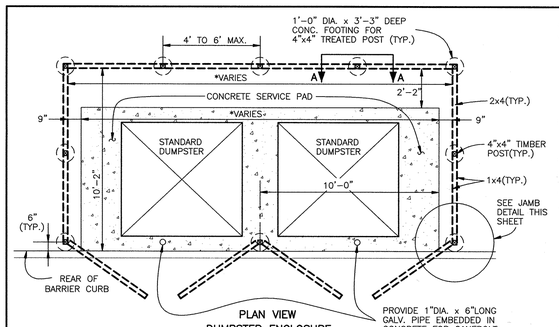
DATE: JANUARY, 2017 PROJECT NO. 1221

Design: DAM/AAM Draft: HP/AAM Check: CAM/AAM SCALE: 1" = 20' DRAWING 2 OF 11

AS-BUILT

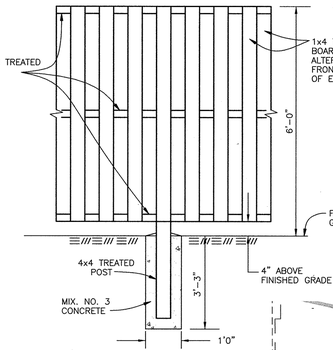
SDP-08-100

BEI 6 Add fence for enterprise vehicle storage 7/7/24



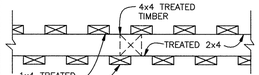
PLAN VIEW
DUMPSTER ENCLOSURE
NOT TO SCALE

* NOTE: THE SIZE OF THE DUMPSTER ENCLOSURE SHALL BE ADJUSTED TO FIT EITHER A SINGLE OR DOUBLE DUMPSTER LOCATION



SECTION A–A
WOOD SCREEN FENCE
FOR DUMPSTER PAD AREA
NOT TO SCALE

NOTE: ALL FASTENING DEVICES SHALL BE GALVANIZED. ALL METAL FRAME ASSEMBLY ITEMS SHALL BE PAINTED WITH BROWN RUST–INHIBITING PAINT.



TOP VIEW OF ENCLOSURE
NOT TO SCALE

THIS SIGN AT ALL ACCESSIBLE PARKING SPACES

PENALTY SIGN WITH WORDING AS REQUIRED BY STATE OR LOCAL LAW

U-CHANNEL POST (3 lbs/ft)

4" PIPE BOLLARD PAINTED TRAFFIC YELLOW AND FILLED w/CONCRETE

SLOPE TOP OF CONCRETE

3500 P.S.I. P.C. CONCRETE

7'-4" MIN

7'-0"

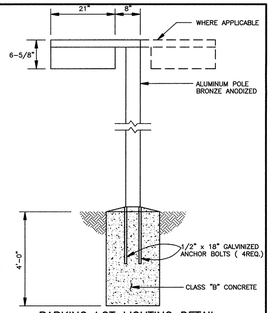
2'-0"

3"

1'-6"

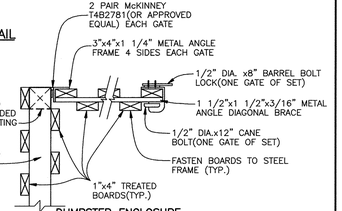
POLE MOUNTED DETAIL

HANDICAP PARKING SIGN DETAIL
NOT TO SCALE



PARKING LOT LIGHTING DETAIL
NOT TO SCALE

NOTES:
1) ALL LIGHT FIXTURES TO BE 150 WATT HIGH PRESSURE SODIUM VAPOR TYPE WITH METAL POLES AND DIRECTED DOWNWARD.
2) LOCATION OF LIGHT FIXTURES ARE ON THE PLAN AND SHOWN AS ■-+-■



DUMPSTER ENCLOSURE
JAMB DETAIL
NOT TO SCALE

"NO AS-BUILT INFORMATION IS" PROVIDED ON THIS SHEET

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. 21443 Expiration Date: 12-21-20

STATE OF MARYLAND · DONALD ALAN MASON · No. 21443 · PROFESSIONAL ENGINEER
3/29/19

ENGINEER'S CERTIFICATE

"I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

ALICE A. MILLER, P.E. (MD. P.E. 28376) — 25 Jan 17

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

COLUMBIA JUNCTION DEV. LLC. — 11/26/17 DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SCD — 2/14/17 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 2-21-17 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 4-17-17 DATE

DIRECTOR — 4-17-17 DATE

NOTE: TEMPORARY SWM IS BEING PROVIDED WITHIN THE SWM FACILITY BUILT UNDER F-88-160 (COLUMBIA JUNCTION SECTION 2 – AREA 1). THIS DESIGN WAS BASED ON A COMMERCIAL AND BUSINESS CURVE NUMBER WHICH HAS A HIGHER VALUE THAN NEWLY GRADED LAND EVEN WITH THE CHANGE IN THE HYDROLOGIC SOILS GROUP.

SEDIMENT CONTROL LOCATION AND IMPLEMENTATION SHOWN ON THIS PLAN IS SUBJECT TO REVISIONS IN THE FIELD AT THE DISCRETION OF THE SEDIMENT CONTROL INSPECTOR

ALL SEDIMENT CONTROL FEATURES SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD DETAILS SHOWN IN THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

SOILS LEGEND

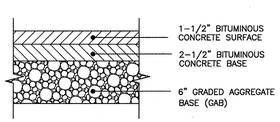
MAP SYMBOL	SOIL GROUP	SOIL TYPE
BeB2	C	BELTSVILLE SILT LOAM, 1 TO 5 PRCENT SLOPES, MODERATELY ERODED
BeC2	C	BELTSVILLE SILT LOAM, 5 TO 10 PRCENT SLOPES, MODERATELY ERODED
IuB	C	IUKA LOAM, LOCAL ALLUVIUM, 1 TO 5 PERCENT SLOPES
SID2	B	SASSAFRAS LOAM, 10 TO 15 PERCENT SLOPES, MODERATELY ERODED
SsE	B	SASSAFRAS SOILS, 15 TO 40 PERCENT SLOPES

* INDICATES HYDRIC SOILS
TAKEN FROM SOILS SURVEY, ISSUED JULY 1968, MAP NO. 25

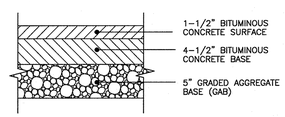
LEGEND

SOILS CLASSIFICATION — ChB2
SOILS DELINEATION
EXISTING CONTOURS (AERIAL 12/02)
PROPOSED CONTOURS — 999
EXISTING WOODS LINE
PROPOSED WOODS LINE
PROPOSED STRUCTURE
STABILIZED CONSTRUCTION ENTRANCE
LIMIT OF DISTURBANCE
SILT FENCE DIVERSION — SFD
SUPER SILT FENCE — SSF
INLET PROTECTION
PROP. PARKING LOT LIGHT
PROP. SOIL BORING

PROPOSED FIRE HYDRANT
PROPOSED FENCE
PROPOSED SIDEWALK
PROP. CROSS WALK
LOADING AREA
NO PARKING AREA
HANDICAP ACCESS
PUBLIC UTILITY EASEMENT
RELOCATABLE PRIVATE ACCESS EASEMENT

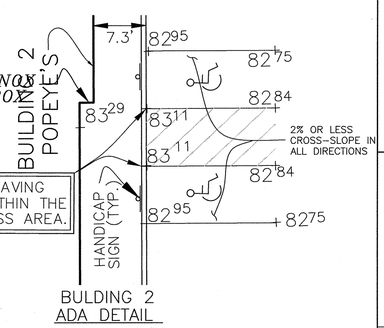


P–2 PAVEMENT DETAIL
NOT TO SCALE



P–3 PAVEMENT DETAIL
NOT TO SCALE

SIDEWALK AND PAVING TO BE FLUSH WITHIN THE HANDICAP ACCESS AREA.



BULDING 2
ADA DETAIL
SCALE: 1" = 10'

NO.	DATE	REVISION
3	1-31-19	REVISED TO ERTEND PRIVATE WHC
2	oct 27,2017	Remove reference from 4" WHC to 1 1/2" WHC
1	FEB 16	REVISE BY SHEET SUBSTITUTION POPEYE'S BUILDING FOOTPRINT AND ASSOCIATED ITEMS

BENCHMARK
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS
ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE ▲ SUITE 315 ▲ ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
WWW.BEI-CIVILENGINEERING.COM

STATE OF MARYLAND · ALICE A. MILLER · No. 28376 · PROFESSIONAL ENGINEER
29 Jan 17

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. 28376, Expiration Date: 01-01-19.

DEVELOPER:
COLUMBIA JUNCTION DEV. LLC
100 MENLO PARK DRIVE,
SUITE 500
EDISON, NEW JERSEY 08837
201-314-6049

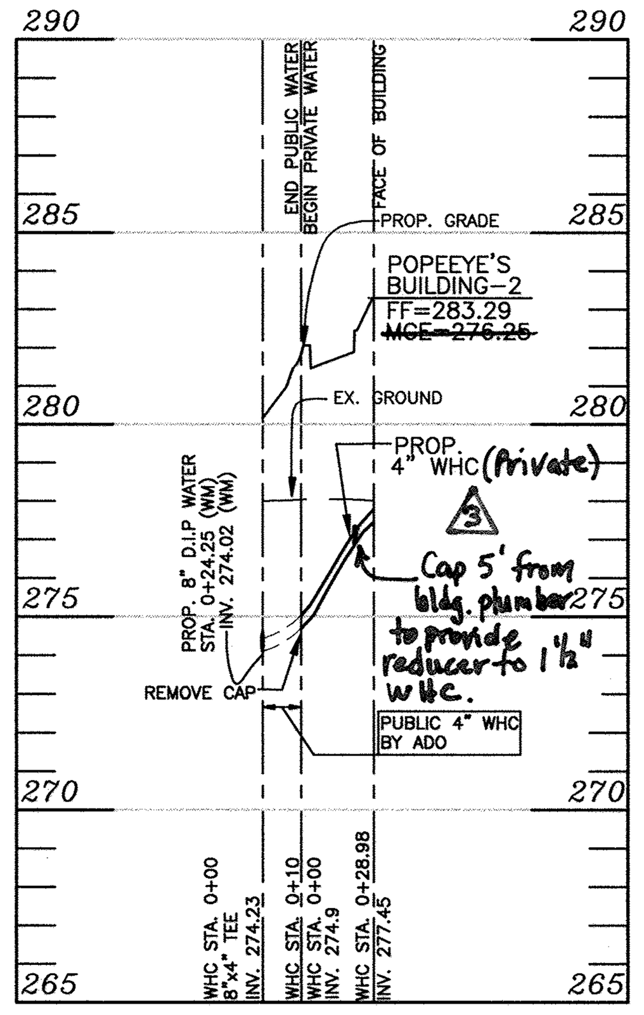
PROJECT: COLUMBIA JUNCTION
SECTION 3 / LOT A-2
(RETAIL CENTER)

LOCATION: TAX MAP 48 – BLOCK 1
PARCEL 548
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: REVISED SITE DEVELOPMENT PLAN
SEDIMENT AND EROSION CONTROL
PLAN, NOTES AND DETAILS

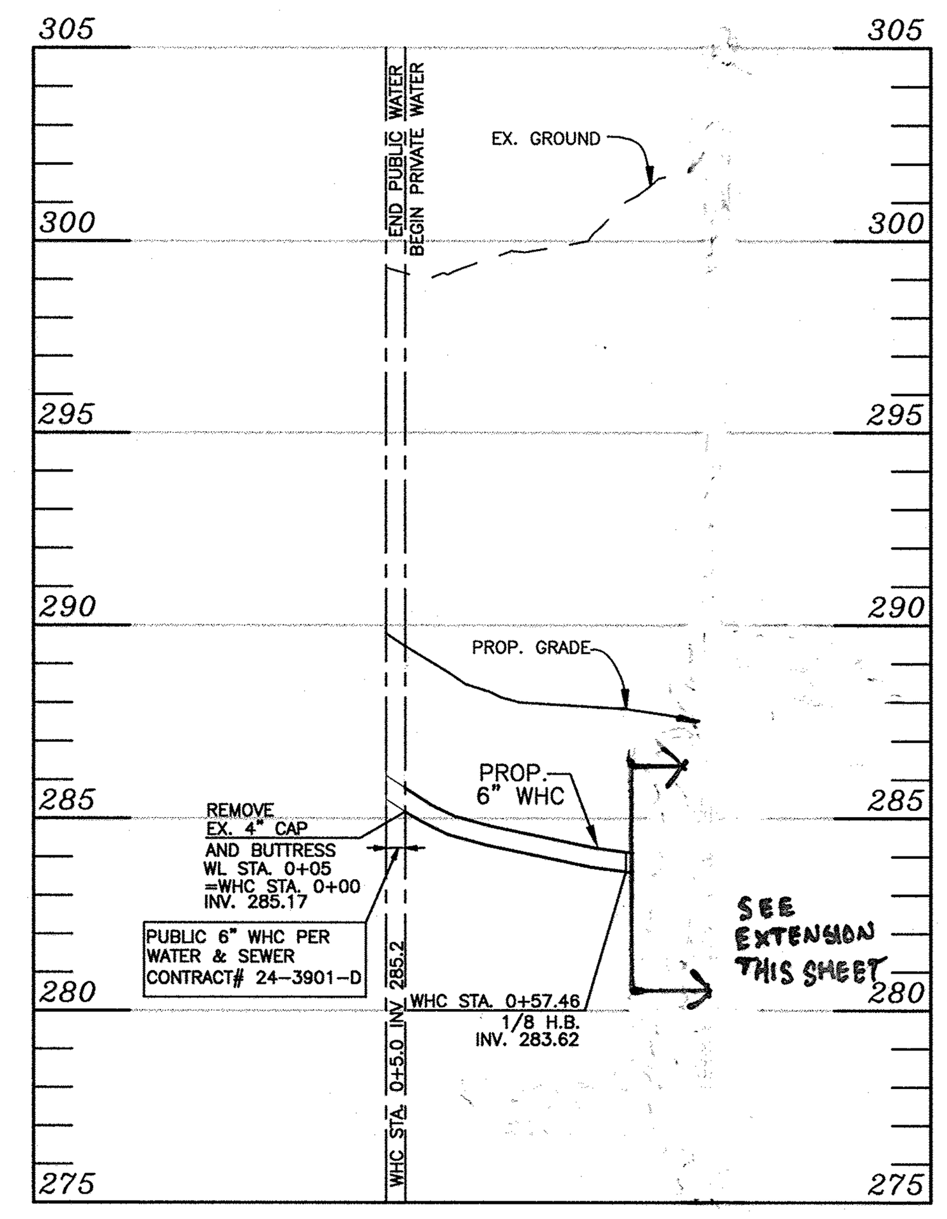
DATE: JANUARY, 2017 PROJECT NO. 1221
SCALE: 1" = 30' DRAWING 3 OF 11
Design: DAM/AAM Draft: HP/AAM Check: CAM/AAM

AS-BUILT SDP-08-100



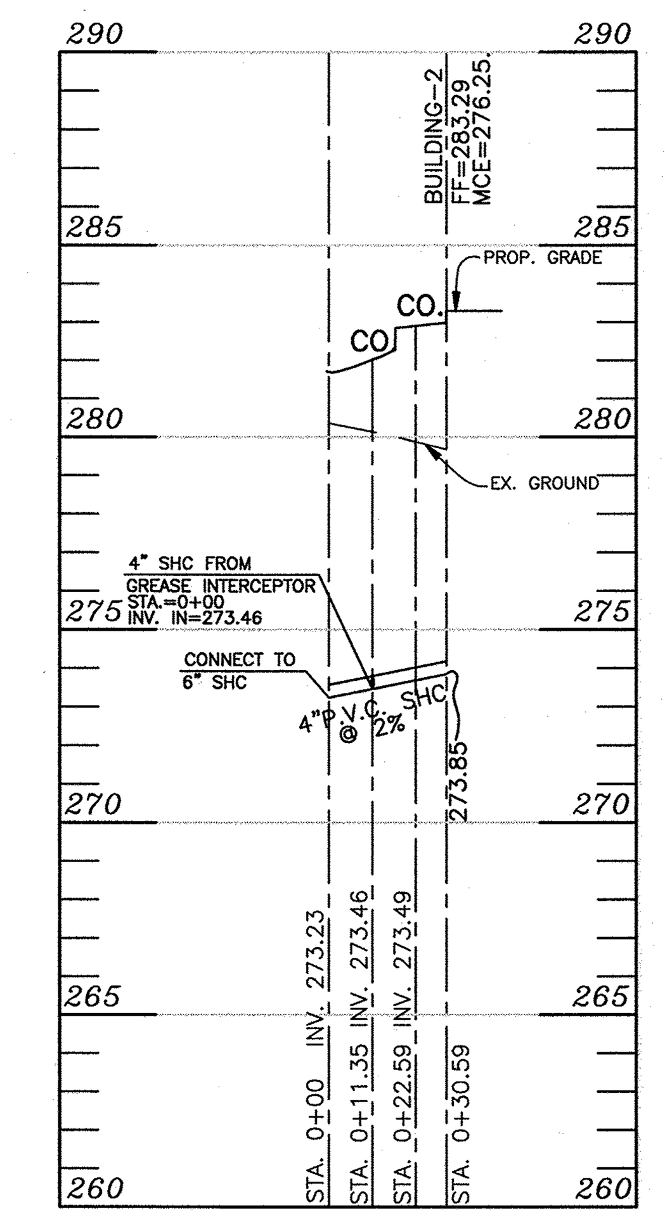
PRIVATE WHC PROFILE-BLDG 2

SCALE: HORIZONTAL: 1" = 50'
VERTICAL: 1" = 5'



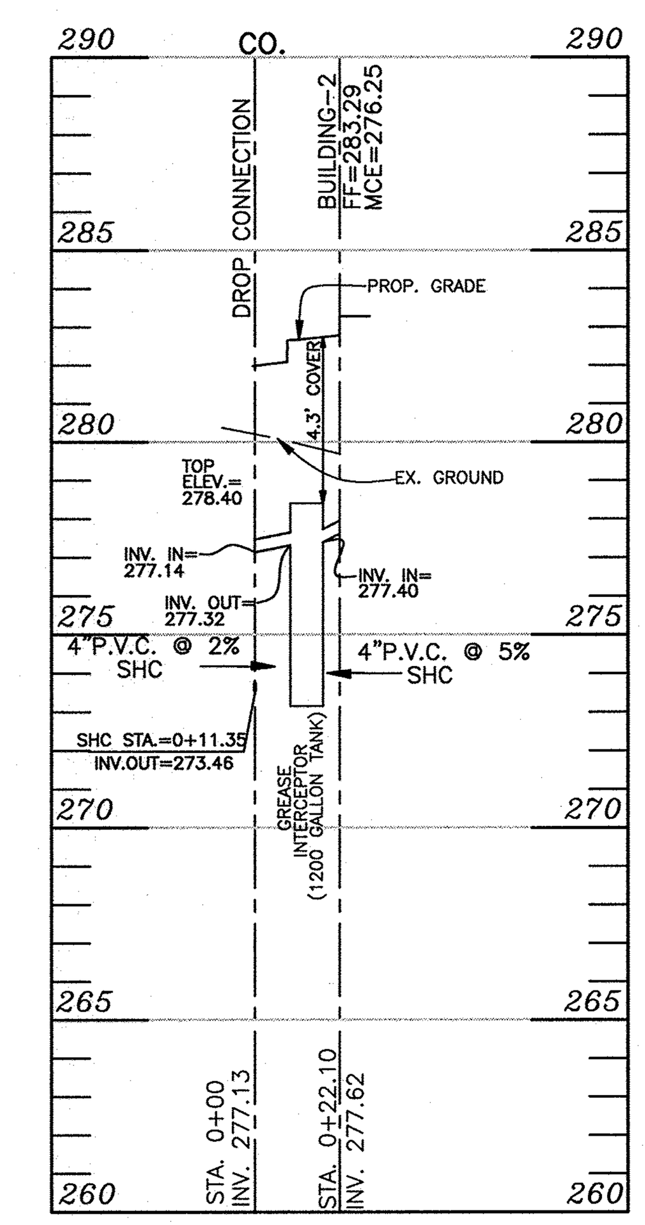
PRIVATE 6" WATER HOUSE CONNECTION

SCALE: HORIZONTAL: 1" = 50'
VERTICAL: 1" = 5'



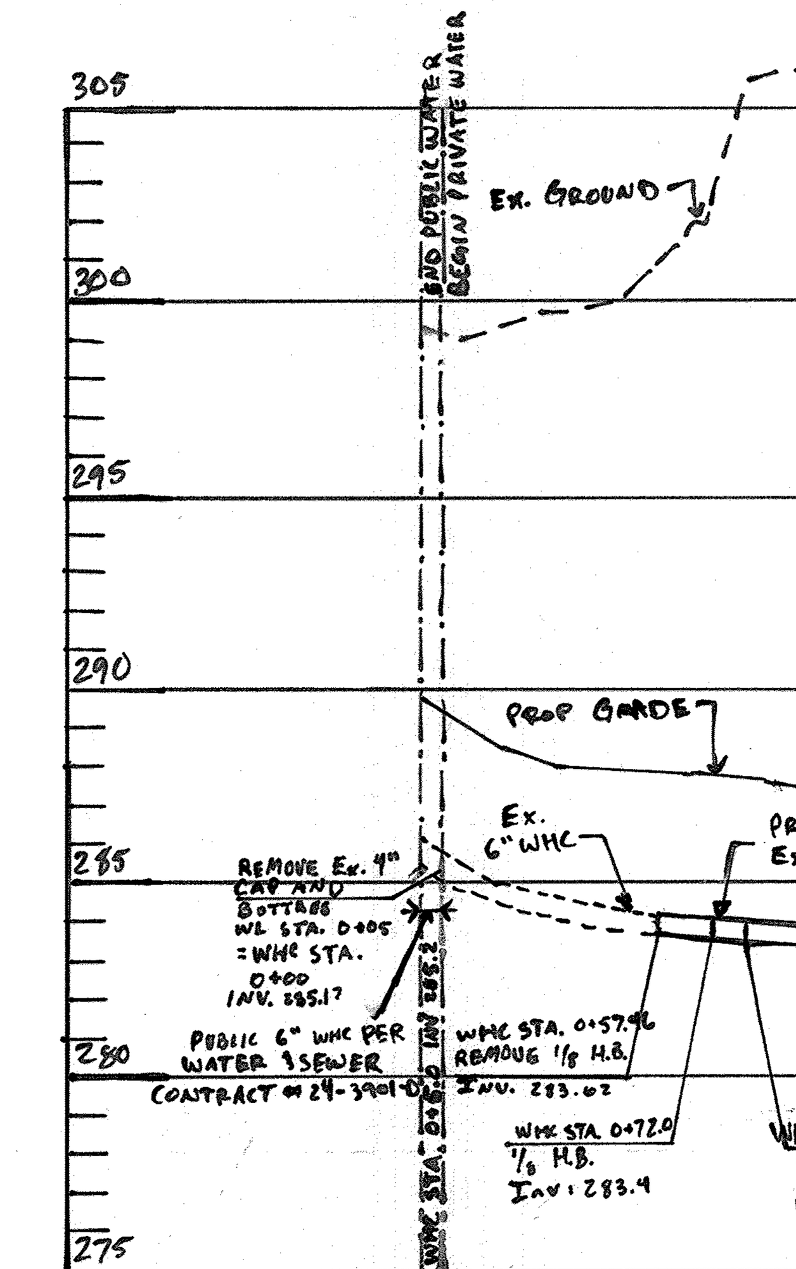
PRIVATE SEWER HOUSE CONNECTION FROM BLDG-2

SCALE: HORIZONTAL: 1" = 50'
VERTICAL: 1" = 5'



PRIVATE SHC- FROM GREASE INTERCEPTOR TO BLDG-2

SCALE: HORIZONTAL: 1" = 50'
VERTICAL: 1" = 5'



PRIVATE 6" WATER HOUSE CONNECTION

SCALE: HORIZONTAL: 1" = 50'
VERTICAL: 1" = 5'

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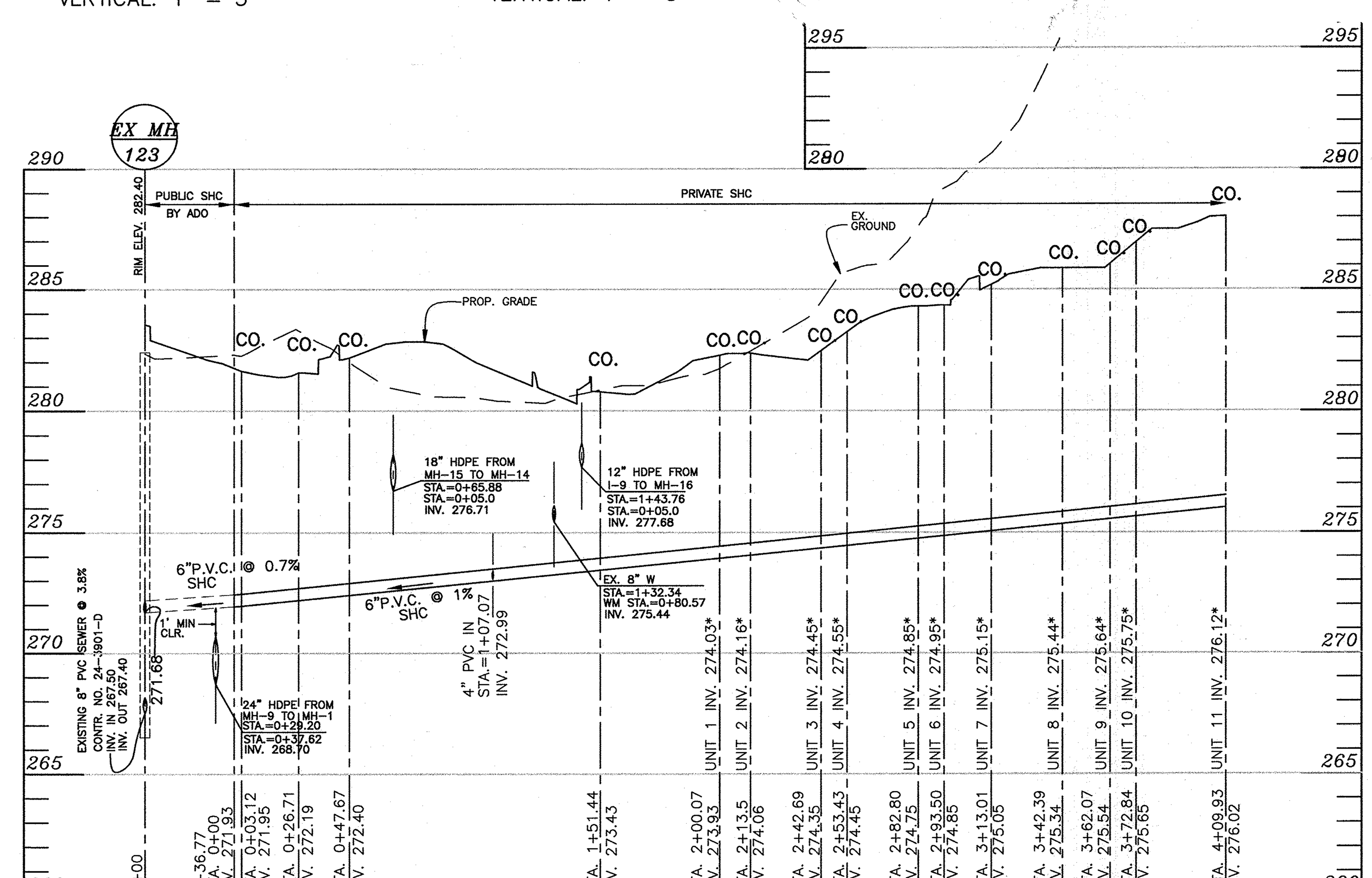
NOTE: FOR GREASE INTERCEPTOR DETAIL SEE SHEET NO. 8 OF 11

NOTE: ALL CLEANOUT FRAMES AND LIDS TO BE CAST IRON

QUANTITIES

ITEMS	QUANTITIES ESTIMATED
4" WHC	19 L.F.
6" WHC	80 L.F.
4" SHC	143 L.F.
6" SHC	409 L.F.
SEWER CLEANOUT	17 EACH



PRIVATE SEWER HOUSE CONNECTION PROFILE BUILDING-1

SCALE: HORIZONTAL: 1" = 50'
VERTICAL: 1" = 5'

*SEWER HOUSE CONNECTION INVERTS ARE 10' OFF MANIFOLD, 5' FROM BUILDING.

"NO AS-BUILT INFORMATION IS" PROVIDED ON THIS SHEET

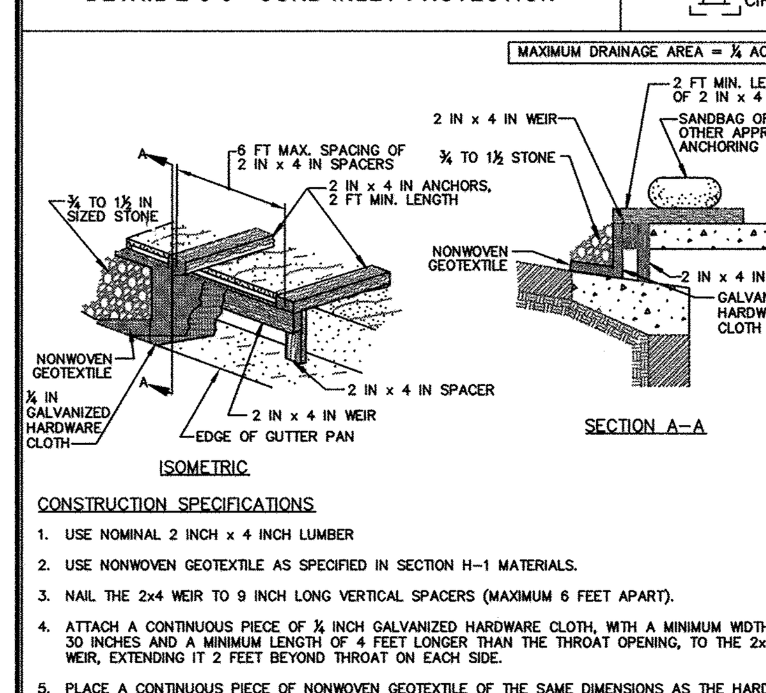
STATE OF MARYLAND DONALD ALAN MASON No. 21443 PROFESSIONAL ENGINEER
AS-BUILT 4/1/19

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. 21443, Expiration Date: 12-21-20

DETAIL E-9-3 CURB INLET PROTECTION

STANDARD SYMBOL: CIP



CONSTRUCTION SPECIFICATIONS

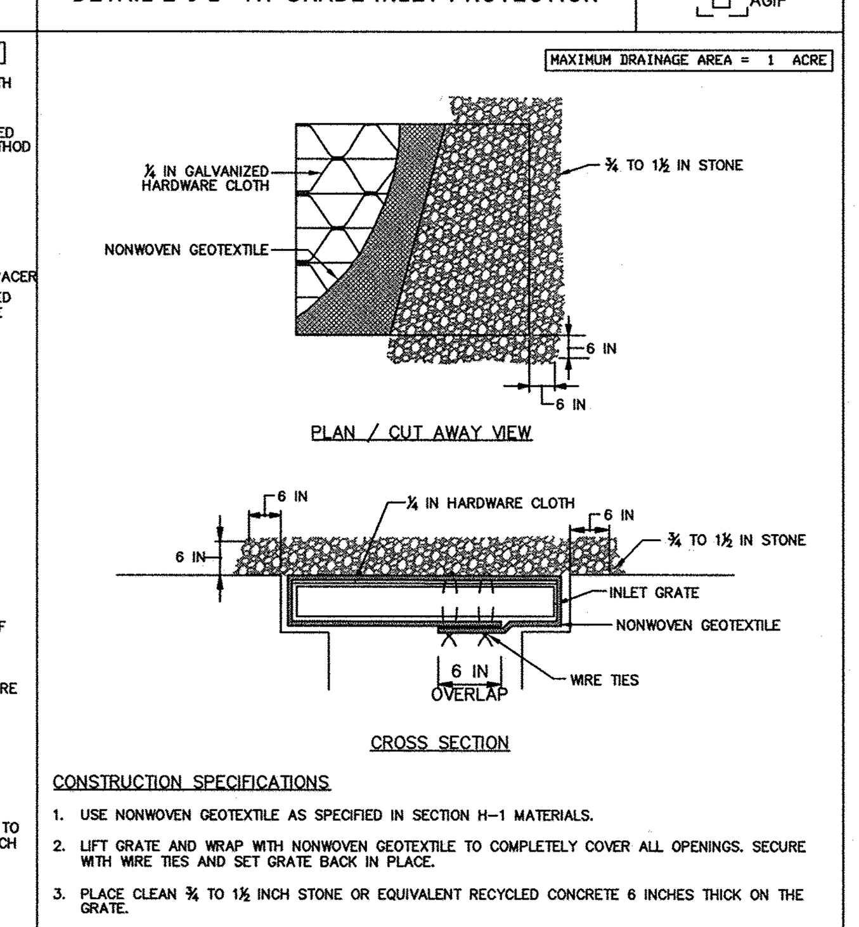
1. USE NOMINAL 2 INCH x 4 INCH LUMBER
2. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
3. NAIL THE 2x4 WEIR TO 9 INCH LONG VERTICAL SPACERS (MAXIMUM 6 FEET APART).
4. ATTACH A CONTINUOUS PIECE OF ¼ INCH GALVANIZED HARDWARE CLOTH, WITH A MINIMUM WIDTH OF 30 INCHES AND A MINIMUM LENGTH OF 4 FEET LONGER THAN THE THROAT OPENING, TO THE 2x4 WEIR, EXTENDING IT 2 FEET BEYOND THROAT ON EACH SIDE.
5. PLACE A CONTINUOUS PIECE OF NONWOVEN GEOTEXTILE OF THE SAME DIMENSIONS AS THE HARDWARE CLOTH OVER THE HARDWARE CLOTH AND SECURELY ATTACH TO THE 2x4 WEIR.
6. PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL TO 2x4 ANCHORS (MINIMUM 2 FEET LENGTH). EXTEND THE ANCHORS ACROSS THE INLET TOP AND HOLD IN PLACE BY SANDBAGS OR OTHER APPROVED ANCHORING METHOD.
7. INSTALL END SPACERS A MINIMUM OF 1 FOOT BEYOND THE ENDS OF THE THROAT OPENING.
8. FORM THE HARDWARE CLOTH AND THE GEOTEXTILE TO THE CONCRETE GUTTER AND FACE OF CURB TO SPAN THE INLET OPENING. COVER THE HARDWARE CLOTH AND GEOTEXTILE WITH CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE.
9. AT NON-SUMP LOCATIONS, INSTALL A TEMPORARY SANDBAG OR ASPHALT BERM TO PREVENT INLET BYPASS.
10. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-9-2 AT-GRADE INLET PROTECTION

STANDARD SYMBOL: AGIP



CONSTRUCTION SPECIFICATIONS

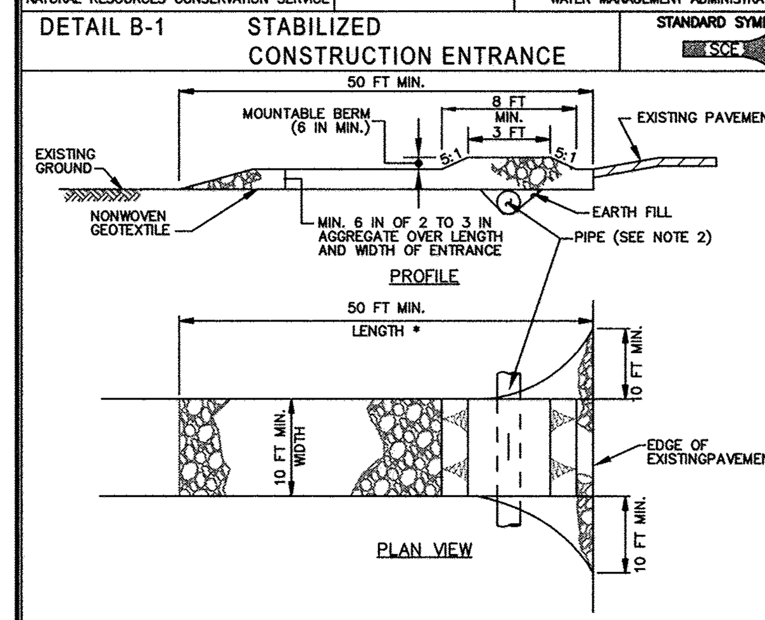
1. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
2. LIFT GRATE AND WRAP WITH NONWOVEN GEOTEXTILE TO COMPLETELY COVER ALL OPENINGS. SECURE WITH WIRE TIES AND SET GRATE BACK IN PLACE.
3. PLACE CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE 6 INCHES THICK ON THE GRATE.
4. STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL: SCE



CONSTRUCTION SPECIFICATIONS

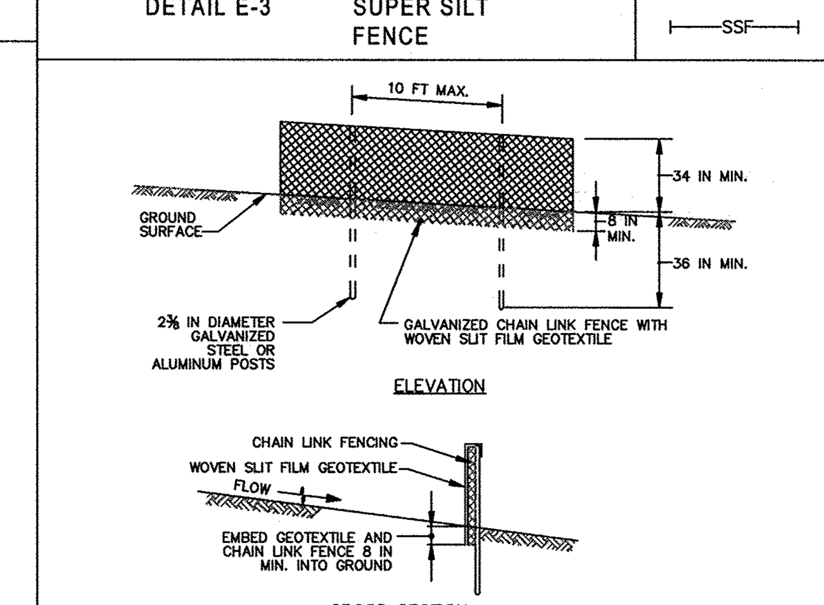
1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-3 SUPER SILT FENCE

STANDARD SYMBOL: SSF



CONSTRUCTION SPECIFICATIONS

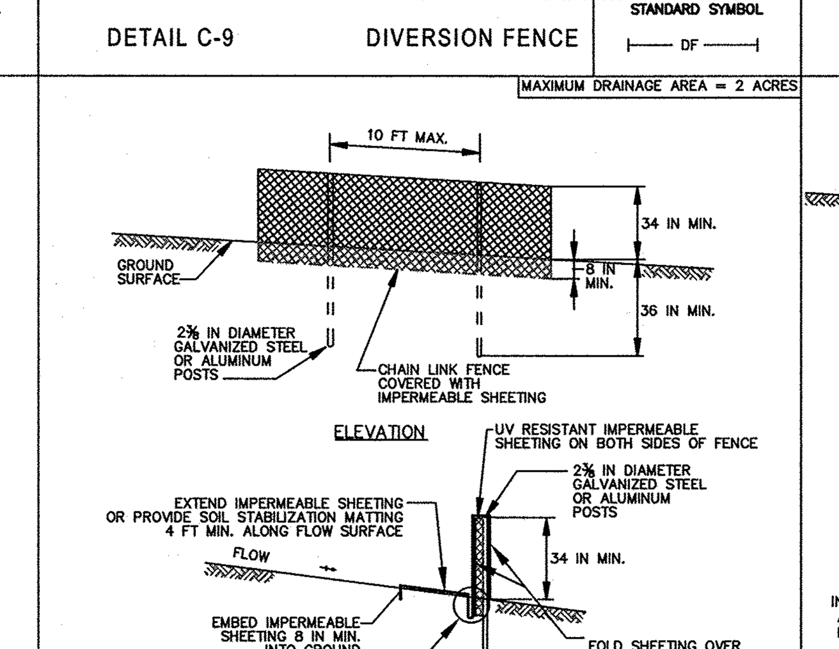
1. INSTALL 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2⅜ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL C-9 DIVERSION FENCE

STANDARD SYMBOL: DF



CONSTRUCTION SPECIFICATIONS

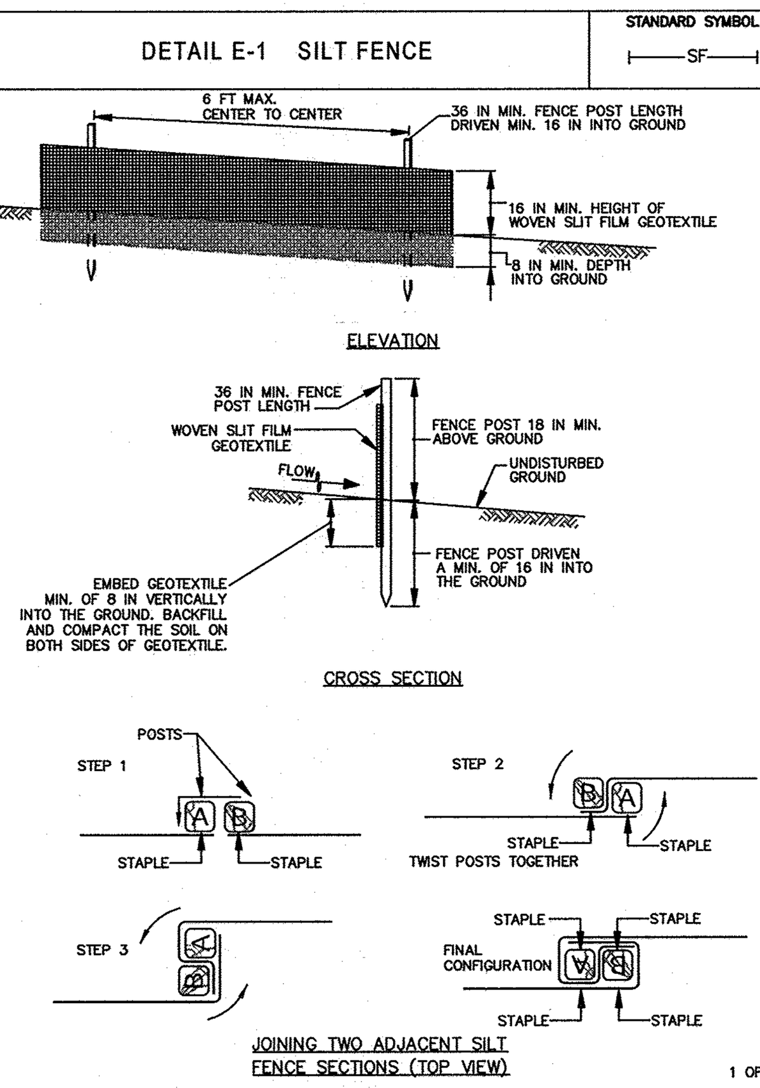
1. USE 42 INCH HIGH, 9 GAUGE OR THICKER CHAIN LINK FENCING (2⅜ INCH MAXIMUM OPENING).
2. USE 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. THE POSTS DO NOT NEED TO BE SET IN CONCRETE.
3. FASTEN CHAIN LINK FENCE SECURELY TO THE FENCE POSTS WITH WIRE TIES.
4. SECURE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING TO CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT TOP, MID SECTION, AND BELOW GROUND SURFACE.
5. EXTEND SHEETING A MINIMUM OF 4 FEET ALONG FLOW SURFACE AND EMBED END A MINIMUM OF 8 INCHES INTO GROUND. SOIL STABILIZATION MATTING MAY BE USED IN LIEU OF IMPERMEABLE SHEETING ALONG FLOW SURFACE.
6. WHEN TWO SECTIONS OF SHEETING ADJOIN EACH OTHER, OVERLAP BY 6 INCHES AND FOLD WITH SEAM FACING DOWNGRADE.
7. KEEP FLOW SURFACE ALONG DIVERSION FENCE AND POINT OF DISCHARGE FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. MAINTAIN POSITIVE DRAINAGE. REPLACE IMPERMEABLE SHEETING IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF



1 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL E-1 SILT FENCE

STANDARD SYMBOL: SF

CONSTRUCTION SPECIFICATIONS

1. USE WOOD POSTS 1¾ X 1¾ ± ⅛ INCH (MINIMUM) SQUARE CUT OF SOUND QUALITY HARDWOOD. AS AN ALTERNATIVE TO WOODEN POST USE STANDARD "T" OR "U" SECTION STEEL POSTS WEIGHING NOT LESS THAN 1 POUND PER LINEAR FOOT.
2. USE 36 INCH MINIMUM POSTS DRIVEN 16 INCH MINIMUM INTO GROUND NO MORE THAN 6 FEET APART.
3. USE WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS AND FASTEN GEOTEXTILE SECURELY TO UPSLOPE SIDE OF FENCE POSTS WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION.
4. PROVIDE MANUFACTURER CERTIFICATION TO THE AUTHORIZED REPRESENTATIVE OF THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT THE GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
5. EMBED GEOTEXTILE A MINIMUM OF 8 INCHES VERTICALLY INTO THE GROUND. BACKFILL AND COMPACT THE SOIL ON BOTH SIDES OF FABRIC.
6. WHERE TWO SECTIONS OF GEOTEXTILE ADJOIN: OVERLAP, TWIST, AND STAPLE TO POST IN ACCORDANCE WITH THIS DETAIL.
7. EXTEND BOTH ENDS OF THE SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SILT FENCE.
8. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN SILT FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL FENCE.

2 OF 2

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE | 2011 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

SEQUENCE OF CONSTRUCTION

NOTIFY SEDIMENT CONTROL DIVISION 48 HOURS PRIOR TO START OF CONSTRUCTION

1. OBTAIN GRADING PERMIT AND REQUEST A PRECONSTRUCTION MEETING WITH THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR (INSPECTOR) 48 HOURS BEFORE ANY CONSTRUCTION ACTIVITIES. (DAY 1)
2. INSTALL ALL STABILIZED CONSTRUCTION ENTRANCE, SUPER SILT FENCE AND DIVERSION FENCE. (DAY 2-5)
3. CLEAR AND GRUB SITE. (DAY 6-8)
4. MASS GRADE SITE AND STABILIZE IN ACCORDANCE WITH TEMPORARY SEEDING NOTES. (DAY 9-15)
5. INSTALL STORM DRAIN FROM EXISTING MH TO EXISTING MH3. REMOVE EXISTING MH1 AND EXISTING MH2. BLOCK UNUSED OPENINGS IN EX. MH AND EX. MH3. (DAY 15-20)
6. INSTALL SEWER AND WATER HOUSE CONNECTIONS. (DAY 21-24)
7. CONSTRUCT UNDERGROUND STORMWATER FACILITIES. (MAY OCCUR SIMULTANEOUSLY WITH UTILITY AND STORM DRAIN CONSTRUCTION) BLOCK ALL INLETS UNTIL SITE IS FULLY STABILIZED. (DAY 21-45)
8. INSTALL STORM DRAINS, BLOCKING OUTLETS TO UNDERGROUND SWM FACILITIES. AS INLET CONSTRUCTION COMMENCES, IMMEDIATELY INSTALL INLET PROTECTION AS SPECIFIED. INLETS I-4, I-8 AND I-9 SHOULD BE WRAPPED IN SUPER SILT FENCE IN ADDITION TO INLET PROTECTION. INSTALLATION OF TRENCH DRAIN INLET I-5 SHALL BE DELAYED UNTIL THE DRAINAGE AREA IS STABILIZED WITH STONE BASE. (DAY 24-45)
9. INSTALL CURB & GUTTER AND PAVING, AND STABILIZE ISLANDS IN ACCORDANCE WITH PERMANENT SEEDING NOTES (DAY 46-97)
10. INSTALL FILTER MEDIA IN SAND FILTERS, AND REMOVE BLOCKING FROM DIVERSION MANHOLES AND INLET PIPES. (DAY 97-102)
11. UPON APPROVAL OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES, AND STABILIZE DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES. (DAY 102-104)

STANDARD SEDIMENT CONTROL NOTES

1. A PRE-CONSTRUCTION MEETING MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, CONSTRUCTION INSPECTION DIVISION (CID), 410-313-1855 AFTER THE FUTURE LOD AND PROTECTED AREAS ARE MARKED CLEARLY IN THE FIELD. A MINIMUM OF 48 HOUR NOTICE TO CID MUST BE GIVEN AT THE FOLLOWING STAGES:
A. PRIOR TO THE START OF EARTH DISTURBANCE,
B. UPON COMPLETION OF THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING,
C. PRIOR TO THE START OF ANOTHER PHASE OF CONSTRUCTION OR OPENING OF ANOTHER GRADING UNIT,
D. PRIOR TO THE REMOVAL OR MODIFICATION OF SEDIMENT CONTROL PRACTICES.
OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE. OTHER RELATED STATE AND FEDERAL PERMITS SHALL BE REFERENCED, TO ENSURE COORDINATION AND TO AVOID CONFLICTS WITH THIS PLAN.
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND REVISIONS THERETO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION IS REQUIRED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED AREAS ON THE PROJECT SITE EXCEPT FOR THOSE AREAS UNDER ACTIVE GRADING.
4. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR TOPSOIL (SEC. B-4-2), PERMANENT SEEDING (SEC. B-4-5), TEMPORARY SEEDING (SEC. B-4-4) AND MULCHING (SEC. B-4-3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES IF THE GROUND IS FROZEN. INCREMENTAL STABILIZATION (SEC. B-4-1) SPECIFICATIONS SHALL BE ENFORCED IN AREAS WITH >15' OF CUT AND/OR FILL. STOCKPILES (SEC. B-4-8) IN EXCESS OF 20 FT. MUST BE BENCHED WITH STABLE OUTLET. ALL CONCENTRATED FLOW, STEEP SLOPE, AND HIGHLY ERODIBLE AREAS SHALL RECEIVE SOIL STABILIZATION MATTING (SEC. B-4-6).
5. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE, AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE CID.
6. SITE ANALYSIS:

TOTAL AREA OF SITE:	3.68	ACRES
AREA DISTURBED:	3.68	ACRES
AREA TO BE ROOFED OR PAVED:	2.46	ACRES
AREA TO BE VEGETATIVELY STABILIZED:	1.21	ACRES
TOTAL CUT:	19,746	CU. YDS.
TOTAL FILL:	2,314	CU. YDS.

OFFSITE WASTE/BORROW AREA LOCATION: TO BE DETERMINED BY CONTRACTOR
7. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
8. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE CID. THE SITE AND ALL CONTROLS SHALL BE INSPECTED BY THE CONTRACTOR WEEKLY; AND THE NEXT DAY AFTER EACH RAIN EVENT. A WRITTEN REPORT BY THE CONTRACTOR, MADE AVAILABLE UPON REQUEST, IS PART OF EVERY INSPECTION AND SHOULD INCLUDE:
- INSPECTION DATE
- INSPECTION TYPE (ROUTINE, PRE-STORM EVENT, DURING RAIN EVENT)
- NAME AND TITLE OF INSPECTOR
- WEATHER INFORMATION (CURRENT CONDITIONS AS WELL AS TIME AND AMOUNT OF LAST RECORDED PRECIPITATION)
- BRIEF DESCRIPTION OF PROJECT'S STATUS (E.G., PERCENT COMPLETE) AND/OR CURRENT ACTIVITIES
- EVIDENCE OF SEDIMENT DISCHARGES
- IDENTIFICATION OF PLAN DEFICIENCIES
- IDENTIFICATION OF SEDIMENT CONTROLS THAT REQUIRE MAINTENANCE
- IDENTIFICATION OF MISSING OR IMPROPERLY INSTALLED SEDIMENT CONTROLS
- COMPLIANCE STATUS REGARDING THE SEQUENCE OF CONSTRUCTION AND STABILIZATION REQUIREMENTS
- PHOTOGRAPHS
- MONITORING/SAMPLING
- MAINTENANCE AND/OR CORRECTIVE ACTION PERFORMED
- OTHER INSPECTION ITEMS AS REQUIRED BY THE GENERAL PERMIT FOR STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITIES (NPDES, MDE).

9. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN AND SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER.
10. ANY MAJOR CHANGES OR REVISIONS TO THE PLAN OR SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE HSCD PRIOR TO PROCEEDING WITH CONSTRUCTION. MINOR REVISIONS MAY ALLOWED BY THE CID PER THE LIST OF HSCD-APPROVED FIELD CHANGES.
11. DISTURBANCE SHALL NOT OCCUR OUTSIDE THE L.O.D. A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE OF 20 AC. PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA IN THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE CID. UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE CID, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.
12. WASH WATER FROM ANY EQUIPMENT, VEHICLES, WHEELS, PAVEMENT, AND OTHER SOURCES MUST BE TREATED IN A SEDIMENT BASIN OR OTHER APPROVED WASHOUT STRUCTURE.
13. TOPSOIL SHALL BE STOCKPILED AND PRESERVED ON-SITE FOR REDISTRIBUTION ONTO FINAL GRADE.
14. ALL SILT FENCE AND SUPER SILT FENCE SHALL BE PLACED ON-THE-CONTOUR, AND BE IMBRICATED AT 25' MINIMUM INTERVALS, WITH LOWER ENDS CURLED UPHILL BY 2' IN ELEVATION.
15. STREAM CHANNELS MUST NOT BE DISTURBED DURING THE FOLLOWING RESTRICTED TIME PERIODS (INCLUSIVE):
- USE I AND IP MARCH 1 - JUNE 15
- USE III AND IIIP OCTOBER 1 - APRIL 30
- USE IV MARCH 1 - MAY 31

16. A COPY OF THIS PLAN, THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, AND ASSOCIATED PERMITS SHALL BE ON-SITE AND AVAILABLE WHEN THE SITE IS ACTIVE.

REV. 8/2015

NO.	DATE	REVISION
4	1-31-18	REVISE WHC BLD. 1
3	oct. 27, 2017	Show private 4" DIP stopping 5' from Bldg. - reduce to 1 1/2" WHC
2	DEC 16	SHEET SUBSTITUTION TO REVISE ROOF DRAINS, SEWER HOUSE CONNECTION AND PAVE OUTPARCEL.
1	FEB 16	REVISE BY SHEET SUBSTITUTION POPEYE'S BUILDING FOOTPRINT AND ASSOCIATED ITEMS

ENGINEER'S CERTIFICATE

"I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

25 Jan 17
ALICE A. MILLER, P.E. (MD. P.E. 28376)

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

COLUMBIA JUNCTION DEV. LLC. 1-26-17 DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SCD 2/14/17 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION 2-21-17 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT 4-17-17 DATE

DIRECTOR 4-17-17 DATE

BENCHMARK
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS
ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE ▲ SUITE 315 ▲ ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
WWW.BEI-CIVILENGINEERING.COM

STATE OF MARYLAND ALICE A. MILLER No. 28376 PROFESSIONAL ENGINEER 25 Jan 17

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. 28376, Expiration Date: 01-01-19.

DEVELOPER:
COLUMBIA JUNCTION DEV. LLC
100 MENLO PARK DRIVE,
SUITE 500
EDISON, NEW JERSEY 08837
201-314-6049

PROJECT: COLUMBIA JUNCTION
SECTION 3 / LOT A-2
(RETAIL CENTER)

LOCATION: TAX MAP 48 - BLOCK 1
PARCEL 548
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: REVISED SITE DEVELOPMENT PLAN
SEDIMENT AND EROSION CONTROL
PLAN, NOTES AND DETAILS
AND WHC PROFILE AND SHC PROFILE

DATE: JANUARY, 2017 | PROJECT NO. 1221

Design: DAM/AAM | Draft: HP/AAM | Check: CAM/AAM | SCALE: AS SHOWN | DRAWING 4 OF 11

AS-BUILT

SDP-08-100

B-4 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

Definition

Using vegetation as cover to protect exposed soil from erosion.

Purpose

To promote the establishment of vegetation on exposed soil.

Conditions Where Practice Applies

On all disturbed areas not stabilized by other methods. This specification is divided into sections on incremental stabilization; soil preparation, soil amendments and topsoiling; seeding and mulching; temporary stabilization; and permanent stabilization.

Effects on Water Quality and Quantity

Stabilization practices are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and runoff to downstream areas.

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration, evaporation, transpiration, percolation, and groundwater recharge. Over time, vegetation will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth.

Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone.

Sediment control practices must remain in place during grading, seedbed preparation, seeding, mulching, and vegetative establishment.

Adequate Vegetative Establishment

Inspect seeded areas for vegetative establishment and make necessary repairs, replacements, and reseedings within the planting season.

1. Adequate vegetative stabilization requires 95 percent groundcover.
2. If an area has less than 40 percent groundcover, restabilize following the original recommendations for lime, fertilizer, seedbed preparation, and seeding.
3. If an area has between 40 and 94 percent groundcover, over-seed and fertilize using half of the rates originally specified.
4. Maintenance fertilizer rates for permanent seeding are shown in Table B.6.

B-4-1 STANDARDS AND SPECIFICATIONS FOR INCREMENTAL STABILIZATION

Definition

Establishment of vegetative cover on cut and fill slopes.

Purpose

To provide timely vegetative cover on cut and fill slopes as work progresses.

Conditions Where Practice Applies

Any cut or fill slope greater than 15 feet in height. This practice also applies to stockpiles.

Criteria

A. Incremental Stabilization - Cut Slopes
   1. Excavate and stabilize cut slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all cut slopes as the work progresses.
   2. Construction sequence example (Refer to Figure B.1):
      a. Construct and stabilize all temporary swales or dikes that will be used to convey runoff around the excavation.
      b. Perform Phase 1 excavation, prepare seedbed, and stabilize.
      c. Perform Phase 2 excavation, prepare seedbed, and stabilize. Overseed Phase 1 areas as necessary.
      d. Perform final phase excavation, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary.

Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

B. Incremental Stabilization - Fill Slopes
   1. Construct and stabilize fill slopes in increments not to exceed 15 feet in height. Prepare seedbed and apply seed and mulch on all slopes as the work progresses.
   2. Stabilize slopes immediately when the vertical height of a lift reaches 15 feet, or when the grading operation ceases as prescribed in the plans.
   3. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
   4. Construction sequence example (Refer to Figure B.2):
      a. Construct and stabilize all temporary swales or dikes that will be used to divert runoff around the fill. Construct silt fence on low side of fill unless other methods shown on the plans address this area.
      b. At the end of each day, install temporary water conveyance practice(s), as necessary, to intercept surface runoff and convey it down the slope in a non-erosive manner.
      c. Place Phase 1 fill, prepare seedbed, and stabilize.
      d. Place Phase 2 fill, prepare seedbed, and stabilize.
      e. Place final phase fill, prepare seedbed, and stabilize. Overseed previously seeded areas as necessary.

Note: Once the placement of fill has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

B-4-2 STANDARDS AND SPECIFICATIONS FOR SOIL PREPARATION, TOPSOILING, AND SOIL AMENDMENTS

Definition

The process of preparing the soils to sustain adequate vegetative stabilization.

Purpose

To provide a suitable soil medium for vegetative growth.

Conditions Where Practice Applies

Where vegetative stabilization is to be established.

Criteria

A. Soil Preparation
   1. Temporary Stabilization
      a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or dragged smooth but left in the roughened condition. Slopes 3:1 or flatter are to be tracked with ridges running parallel to the contour of the slope.
      b. Apply fertilizer and lime as prescribed on the plans.
      c. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.
   2. Permanent Stabilization
      a. A soil test is required for any earth disturbance of 5 acres or more. The minimum soil conditions required for permanent vegetative establishment are:
         i. Soil pH between 6.0 and 7.0.
         ii. Soluble salts less than 500 parts per million (ppm).
         iii. Soil contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if lovegrass will be planted, then a sandy soil (less than 30 percent silt plus clay) would be acceptable.
         iv. Soil contains 1.5 percent minimum organic matter by weight.
         v. Soil contains sufficient pore space to permit adequate root penetration.
      b. Application of amendments or topsoil is required if on-site soils do not meet the above conditions.
      c. Graded areas must be maintained in a true and even grade as specified on the approved plan, then scarified or otherwise loosened to a depth of 3 to 5 inches.
      d. Apply soil amendments as specified on the approved plan or as indicated by the results of a soil test.
      e. Mix soil amendments into the top 3 to 5 inches of soil by disking or other suitable means. Rake lawn areas to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface where site conditions will not permit normal seedbed preparation. Track slopes 3:1 or flatter with tracked equipment leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. Leave the top 1 to 3 inches of soil loose and friable. Seedbed loosening may be unnecessary on newly disturbed areas.

B. Topsoiling
   1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation. The purpose is to provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.
   2. Topsoil salvaged from an existing site may be used provided it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-NRCS.
   3. Topsoiling is limited to areas having 2:1 or flatter slopes where:
      a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
      b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
      c. The original soil to be vegetated contains material toxic to plant growth.
      d. The soil is so acidic that treatment with limestone is not feasible.
   4. Areas having slopes steeper than 2:1 require special consideration and design.
   5. Topsoil Specifications: Soil to be used as topsoil must meet the following criteria:
      a. Topsoil must be a loam, sandy loam, clay loam, silt loam, sandy clay loam, or loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, roots, trash, or other materials larger than 1½ inches in diameter.
      b. Topsoil must be free of noxious plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nut sedge, poison ivy, thistle, or others as specified.
      c. Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
   6. Topsoil Application
      a. Erosion and sediment control practices must be maintained when applying topsoil.
      b. Uniformly distribute topsoil in a 5 to 8 inch layer and lightly compact to a minimum thickness of 4 inches. Spreading is to be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations must be corrected in order to prevent the formation of depressions or water pockets.
      c. Topsoil must not be placed if the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

C. Soil Amendments (Fertilizer and Lime Specifications)
   1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. Soil analysis may be performed by a recognized private or commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
   2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers must all be delivered to the site fully labeled according to the applicable laws and must bear the name, trade name or trademark and warranty of the producer.
   3. Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxides (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 50 percent will pass through a #100 mesh sieve and 98 to 100 percent will pass through a #20 mesh sieve.
   4. Lime and fertilizer are to be evenly distributed and incorporated into the top 3 to 5 inches of soil by disking or other suitable means.
   5. Where the subsoil is either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

B-4-3 STANDARDS AND SPECIFICATIONS FOR SEEDING AND MULCHING

Definition

The application of seed and mulch to establish vegetative cover.

Purpose

To protect disturbed soils from erosion during and at the end of construction.

Conditions Where Practice Applies

To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.

Criteria

A. Seeding
   1. Specifications
      a. All seed must meet the requirements of the Maryland State Seed Law. All seed must be subject to re-testing by a recognized seed laboratory. All seed used must have been tested within the 6 months immediately preceding the date of sowing such material on any project. Refer to Table B.4 regarding the quality of seed. Seed tags must be available upon request to the inspector to verify type of seed and seeding rate.
      b. Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen. The appropriate seeding mixture must be applied when the ground thaws.
      c. Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species. Inoculants must not be used later than the date indicated on the container. Add fresh inoculants as directed on the package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75 to 80 degrees Fahrenheit can weaken bacteria and make the inoculant less effective.
      d. Sod or seed must not be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phyto-toxic materials.
   2. Application
      a. Dry Seeding: This includes use of conventional drop or broadcast spreaders.
         i. Incorporate seed into the subsoil at the rates prescribed on Temporary Seeding Table B.1, Permanent Seeding Table B.3, or site-specific seeding summaries.
         ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction. Roll the seeded area with a weighted roller to provide good seed to soil contact.
      b. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
         i. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.
         ii. Apply seed in two directions, perpendicular to each other. Apply half the seeding rate in each direction.
      c. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer).
         i. If fertilizer is being applied at the time of seeding, the application rates should not exceed the following: nitrogen, 100 pounds per acre total of soluble nitrogen; P2O5 (phosphorous), 200 pounds per acre; K2O (potassium), 200 pounds per acre.
         ii. Lime: Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
         iii. Mix seed and fertilizer on site and seed immediately and without interruption.
         iv. When hydroseeding do not incorporate seed into the soil.

B. Mulching
   1. Mulch Materials (in order of preference)
      a. Straw consisting of thoroughly threshed wheat, rye, oat, or barley and reasonably bright in color. Straw is to be free of noxious weed seeds as specified in the Maryland Seed Law and not musty, moldy, caked, decayed, or excessively dusty. Note: Use only sterile straw mulch in areas where one species of grass is desired.
      b. Wood Cellulose Fiber Mulch (WCFM) consisting of specially prepared wood cellulose processed into a uniform fibrous physical state.
         i. WCFM is to be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
         ii. WCFM, including dye, must contain no germination or growth inhibiting factors.
         iii. WCFM materials are to be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material must form a blotter-like ground cover, on application, having moisture absorption and percolation properties and must cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
         iv. WCFM material must not contain elements or compounds at concentration levels that will be phyto-toxic.
         v. WCFM must conform to the following physical requirements: fiber length of approximately 10 millimeters, diameter approximately 1 millimeter, pH range of 4.0 to 8.5, ash content of 1.6 percent maximum and water holding capacity of 90 percent minimum.
   2. Application
      a. Apply mulch to all seeded areas immediately after seeding.
      b. When straw mulch is used, spread it over all seeded areas at the rate of 2 tons per acre to a uniform loose depth of 1 to 2 inches. Apply mulch to achieve a uniform distribution and depth so that the soil surface is not exposed. When using a mulch anchoring tool, increase the application rate to 2.5 tons per acre.
      c. Wood cellulose fiber used as mulch must be applied at a net dry weight of 1500 pounds per acre. Mix the wood cellulose fiber with water to attain a mixture with a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
   3. Anchoring
      a. Perform mulch anchoring immediately following application of mulch to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon the size of the area and erosion hazard:
         i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of 2 inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should follow the contour.
         ii. Wood cellulose fiber may be used for anchoring straw. Apply the fiber binder at a net dry weight of 750 pounds per acre. Mix the wood cellulose fiber with water at a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
         iii. Synthetic binders such as Acrylic DLR (Agro-Tack), DCA-70, Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used. Follow application rates as specified by the manufacturer. Application of liquid binders needs to be heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. Use of asphalt binders is strictly prohibited.
         iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer recommendations. Netting is usually available in rolls 4 to 15 feet wide and 300 to 3,000 feet long.

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABLIZATION

Definition

To stabilize disturbed soils with vegetation for up to 6 months.

Purpose

To use fast growing vegetation that provides cover on disturbed soils.

Conditions Where Practice Applies

Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.

Criteria

1. Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardiness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this Summary is not put on the plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan.
2. For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding.
3. When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as prescribed in Section B-4-3.A.1.b and maintain until the next seeding season.

B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

Definition

To stabilize disturbed soils with permanent vegetation.

Purpose

To use long-lived perennial grasses and legumes to establish permanent ground cover on disturbed soils.

Conditions Where Practice Applies

Exposed soils where ground cover is needed for 6 months or more.

Criteria

A. Seed Mixtures

1. General Use
   a Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardiness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.
   b Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office Guild, Section 342 - Critical Area Planting.
   c For sites having disturbed areas over 5 acres, use and show the rates recommended by the soil testing agency.
   d For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 ½ pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary.
2. Turfgrass Mixtures
   a. Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance.
   b. Select one or more of the species or mixtures listed below based on the site conditions or purpose. Enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The summary is to be placed on the plan.
   i. Kentucky Bluegrass: Full sun Mixture: For use in areas that receive intensive management. Irrigation required in the areas of central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds per 1000 square feet. Choose a minimum of three Kentucky Bluegrass Cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
   ii. Kentucky Bluegrass/Perennial Rye: Full Sun Mixture: For use in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture per 1000 square feet. Choose a minimum of three Kentucky Bluegrass Cultivars with each ranging from 10 to 35 percent of the total mixture by weight.
   iii. Tall Fescue/Kentucky Bluegrass: Full Sun Mixture: For use in drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes; Certified Tall Fescue Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.
   iv. Kentucky Bluegrass/Fine Fescue: Shade Mixture: For use in areas with shade in Bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes Certified Kentucky Bluegrass Cultivars 30 to 40 percent and Certified Fine Fescue and 60 to 70 percent. Seeding Rate: 1 ½ to 3 pounds per 1000 square feet.
   Notes:Select turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland" Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line.
   c. Ideal Times of Seeding for Turf Grass Mixtures
   Western MD: March 15 to June 1, August 1 to October 1 (Hardiness Zones: 5b, 6a)
   Central MD:March 1 to May 15, August 15 to October 15 (Hardiness Zone: 6b)
   Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardiness Zones: 7a, 7b)
   d. Till areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the areas to prepare a proper seedbed. Remove stones and debris over 1 ½ inches in diameter. The resulting seedbed must be in such condition that future mowing of grasses will pose no difficulty.
   e. If soil moisture is deficient, supply new seedings with adequate water for plant growth (½ to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established. This is not especially true when seedings are made late in the planting season, in abnormally dry or hot seasons, or on adverse sites.

B. Sod: to provide quick cover on disturbed areas (2:1 grade or flatter).

1. General Specifications
   a. Class of turfgrass must be Maryland State Certified. Sod labels must be made available to the job foreman and inspector.
   b. Sod must be machine cut at a uniform soil thickness of ¾ inch, plus or minus ¼ inch, at the time of cutting. Measurement for thickness must exclude top growth and thatch. Broken pads and torn or uneven ends will not be acceptable.
   c. Standard size sections of sod must be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.
   d. Sod must not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect its survival.
   e. Sod must be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period must be approved by an agronomist or soil scientist prior to its installation.
2. Sod Installation
   a. During periods of excessively high temperature or in areas having dry subsoil, lightly irrigate the subsoil immediately prior to laying the sod.
   b. Lay the first row of sod in a straight line with subsequent rows placed parallel to it and tightly wedged against each other. Stagger lateral joints to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.
   c. Wherever possible, lay sod with the long edges parallel to the contour and with staggering joints. Roll and tamp, peg or otherwise secure the sod to prevent slippage on slopes. Ensure solid contact exists between sod roots and the underlying soil surface.
   d. Water the sod immediately following rolling and tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. Complete the operations of laying, tamping and irrigating for any piece of sod within eight hours.
3. Sod Maintenance
   a. In the absence of adequate rainfall, water daily during the first week or as often and sufficiently as necessary to maintain moist soil to a depth of 4 inches. Water sod during the heat of the day to prevent wilting.
   b. After the first week, sod watering is required as necessary to maintain adequate moisture content.
   c. Do not mow until the sod is firmly rooted. No more than 1/3 of the grass leaf must be removed by the initial cutting or subsequent cuttings. Maintain a grass height of at least 3 inches unless otherwise specified.

B-4-8 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA

Definition

A mound or pile of soil protected by appropriately designed erosion and sediment control measures.

Purpose

To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns.

Conditions Where Practice Applies

Stockpile areas are utilized when it is necessary to salvage and store soil for later use.

Criteria

1. The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
2. The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3 Land Grading.
3. Runoff from the stockpile area must drain to a suitable sediment control practice.
4. Access the stockpile area from the upgrade side.
5. Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner.
6. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
7. Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization.
8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable sheeting.

Maintenance

The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section B-3 Land Grading.

H-5 STANDARDS AND SPECIFICATIONS FOR DUST CONTROL

Definition

Controlling the suspension of dust particles from construction activities.

Purpose

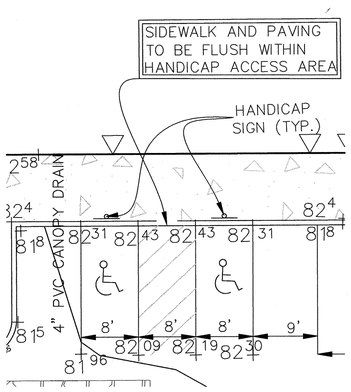
To prevent blowing and movement of dust from exposed soil surfaces to reduce on and off-site damage including health and traffic hazards.

Conditions Where Practice Applies

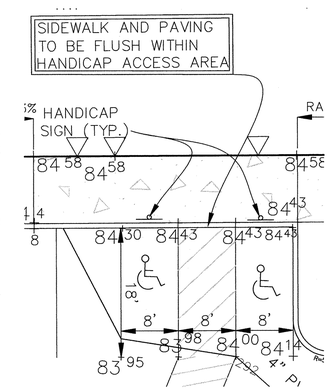
Areas subject to dust blowing and movement where on and off-site damage is likely without treatment.

Specifications

1. Mulches: See Section B-4-2 Soil Preparation, Topsoiling, and Soil Amendments, Section B-4-3 Seeding and Mulching, and Section B-4-4 Temporary Stabilization. Mulch must be anchored to prevent blowing.
2. Vegetative Cover: See Section B-4-4 Temporary Stabilization.
3. Tillage: Till to roughen surface and bring clods to the surface. Begin plowing on windward side of site. Chisel-type plows spaced about 12 inches apart, spring-toothed harrows, and similar plows are examples of equipment that may produce the desired effect.
4. Irrigation: Sprinkle site with water until the surface is moist. Repeat as needed. The site must not be irrigated to the point that runoff occurs.
5. Barriers: Solid board fences, silt fences, snow fences, burlap fences, straw bales, and similar material can be used to control air currents and soil blowing.
6. Chemical Treatment: Use of chemical treatment requires approval by the appropriate plan review authority.



BULDING 1
ADA DETAIL A
SCALE: 1" = 10'



BULDING 1
ADA DETAIL B
SCALE: 1" = 10'

"NO AS-BUILT INFORMATION IS" PROVIDED ON THIS SHEET

STATE OF MARYLAND DONALD ALAN MASON No. 21449 PROFESSIONAL ENGINEER
AS-BUILT 4/1/19

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. 21443 Expiration Date: 12-21-20

SEDIMENT CONTROL LOCATION AND IMPLEMENTATION SHOWN ON THIS PLAN IS SUBJECT TO REVISIONS IN THE FIELD AT THE DISCRETION OF THE SEDIMENT CONTROL INSPECTOR

ALL SEDIMENT CONTROL FEATURES SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD DETAILS SHOWN IN THE ~~1994~~ 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.

ENGINEER'S CERTIFICATE

"I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

ENGINEER – ALICE A. MILLER, P.E. # 28376 — DATE 25 Jan 17

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

COLUMBIA JUNCTION DEV. LLC. — DATE 1-26-17

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SCD — DATE 2/14/17

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 2.21.17

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 4.27.17

DIRECTOR — DATE 4.17.17

NO.	DATE	REVISION
1	DEC 16	SHEET SUBSTITUTION TO REVISE ROOF DRAINS, SEWER HOUSE CONNECTION AND PAVE OUTPARCEL.

BENCHMARK
ENGINEERING, INC.
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS
8480 BALTIMORE NATIONAL PIKE ▲ SUITE 315 ▲ ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
WWW.BEI-CIVILENGINEERING.COM

STATE OF MARYLAND ALICE A. MILLER No. 28376 PROFESSIONAL ENGINEER

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. 28376, Expiration Date: 01-01-2017.

DEVELOPER:
COLUMBIA JUNCTION DEV. LLC
100 MENLO PARK DRIVE,
SUITE 500
EDISON, NEW JERSEY 08837
201-314-6049

PROJECT: COLUMBIA JUNCTION
SECTION 3 / LOT A-2
(RETAIL CENTER)

LOCATION: TAX MAP 48 – BLOCK 1
PARCEL 548
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

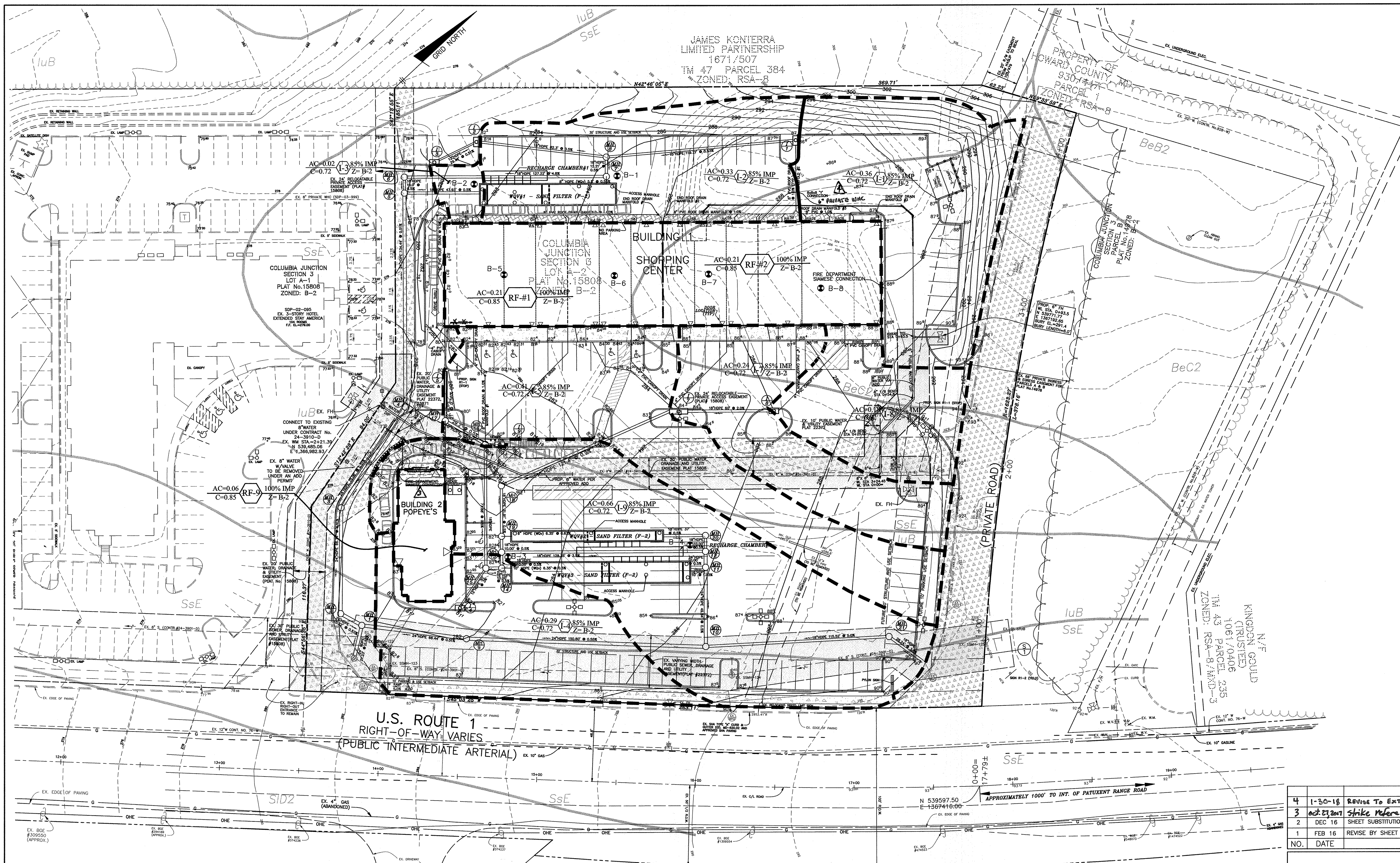
TITLE: REVISED SITE DEVELOPMENT PLAN
SEDIMENT AND EROSION CONTROL
PLAN, NOTES AND DETAILS
AND WHC PROFILE AND SHC PROFILE

DATE: JANUARY, 2017 — PROJECT NO. 1221

Design: DAM/AAM — Draft: HP/AAM — Check: CAM/AAM — SCALE: AS SHOWN — DRAWING 5 OF 11

AS-BUILT

SDP-08-100



STORM DRAIN RUNOFF

INLET	DA (Ac.)	C	%IMP	ZONE
I-1	0.36	0.72	85	B-2
I-2	0.33	0.72	85	B-2
I-3	0.02	0.72	85	B-2
I-4	0.36	0.72	85	B-2
I-5	0.39	0.72	85	B-2
I-7	0.18	0.72	85	B-2
I-8	0.37	0.72	85	B-2
I-9	0.55	0.72	85	B-2
RF-#1	0.21	0.85	100	B-2
RF-#2	0.21	0.85	100	B-2

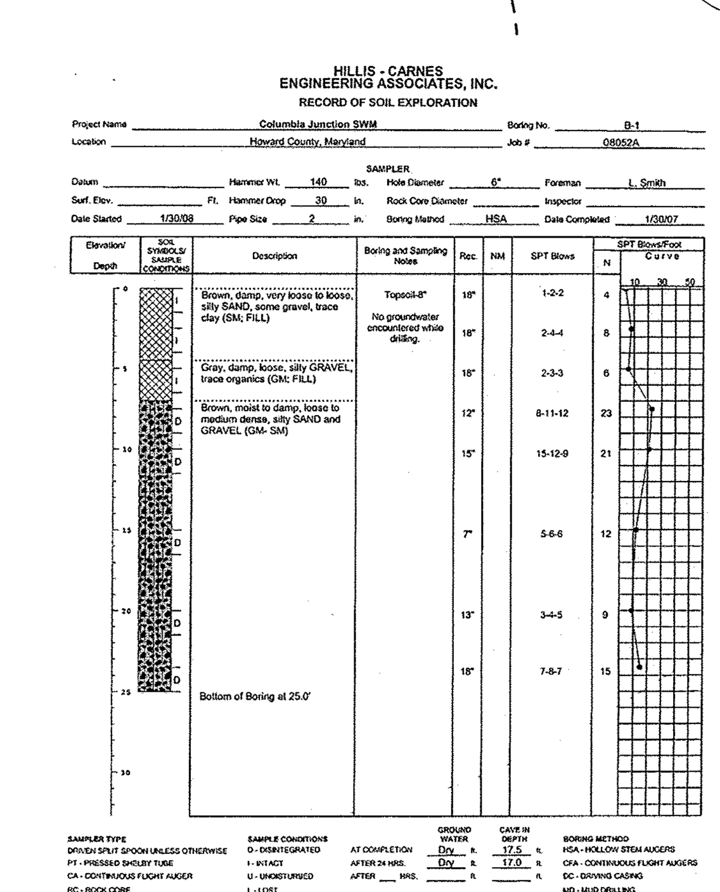
APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 4-17-17

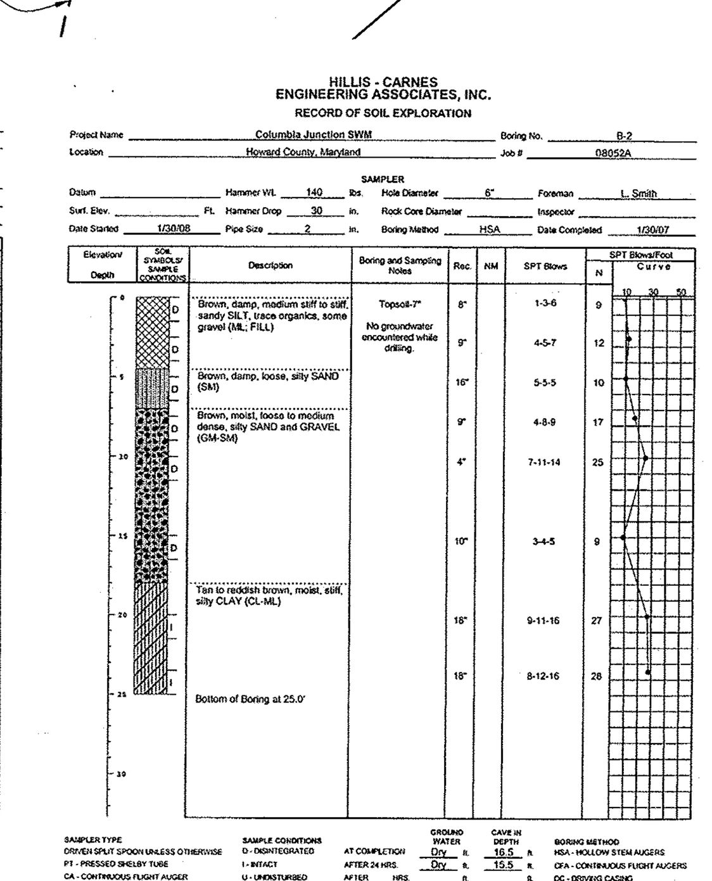
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 2.21.17

DIRECTOR — DATE 4-17-17

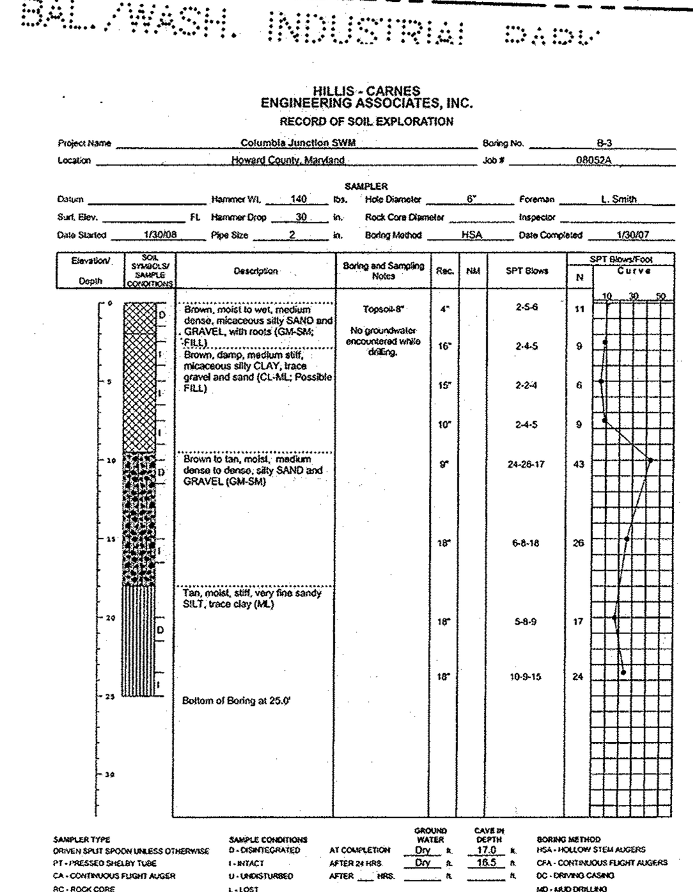
NO.	DATE	REVISION
4	1-30-18	REVISE TO EXTEND PRIVATE WHC (BLDG 1)
3	oct. 27, 2017	strike reference to FDC and WHC size
2	DEC 16	SHEET SUBSTITUTION TO REVISE ROOF DRAINS, SEWER HOUSE CONNECTION AND PAVE OUTPARCEL.
1	FEB 16	REVISE BY SHEET SUBSTITUTION POPEYE'S BUILDING FOOTPRINT AND ASSOCIATED ITEMS



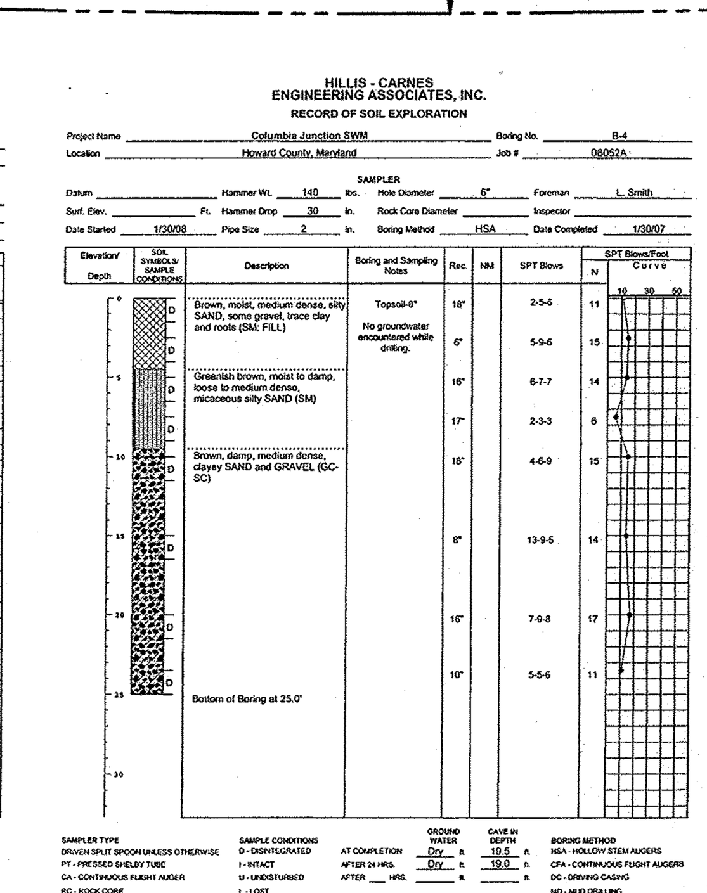
B-1



B-2



B-3



B-4

PLAN
SCALE: 1" = 30'

"NO AS-BUILT INFORMATION IS" PROVIDED ON THIS SHEET

STATE OF MARYLAND DONALD ALAN MASON No. 21443 PROFESSIONAL ENGINEER

AS-BUILT 4/1/19

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. 21443, Expiration Date: 12-21-20

SOILS LEGEND		
MAP SYMBOL	SOIL TYPE	MAPPING UNIT
BeB2	C	BELTSVILLE SILT LOAM – 1 TO 5 PERCENT SLOPES – MODERATELY ERODED
BeC2	C	BELTSVILLE SILT LOAM – 5 TO 10 PERCENT SLOPES – MODERATELY ERODED
IuB	C	IUKA LOAM – LOCAL ALLUVIUM – 1 TO 5 PERCENT SLOPES
SID2	B	SASSAFRAS LOAM – 10 TO 15 PERCENT SLOPES – MODERATELY ERODED
SsE	B	SASSAFRAS SOILS – 15 TO 40 PERCENT SLOPES
SOILS MAP No.		

BENCHMARK ENGINEERING, INC.
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WWW.BEI-CIVILENGINEERING.COM

STATE OF MARYLAND ALICE A. MILLER No. 28376 PROFESSIONAL ENGINEER

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. 28376, Expiration Date: 01-01-19.

DEVELOPER:
COLUMBIA JUNCTION DEV. LLC
100 MENLO PARK DRIVE,
SUITE 500
EDISON, NEW JERSEY 08837
201-314-6049

PROJECT: **COLUMBIA JUNCTION**
SECTION 3 / LOT A-2
(RETAIL CENTER)

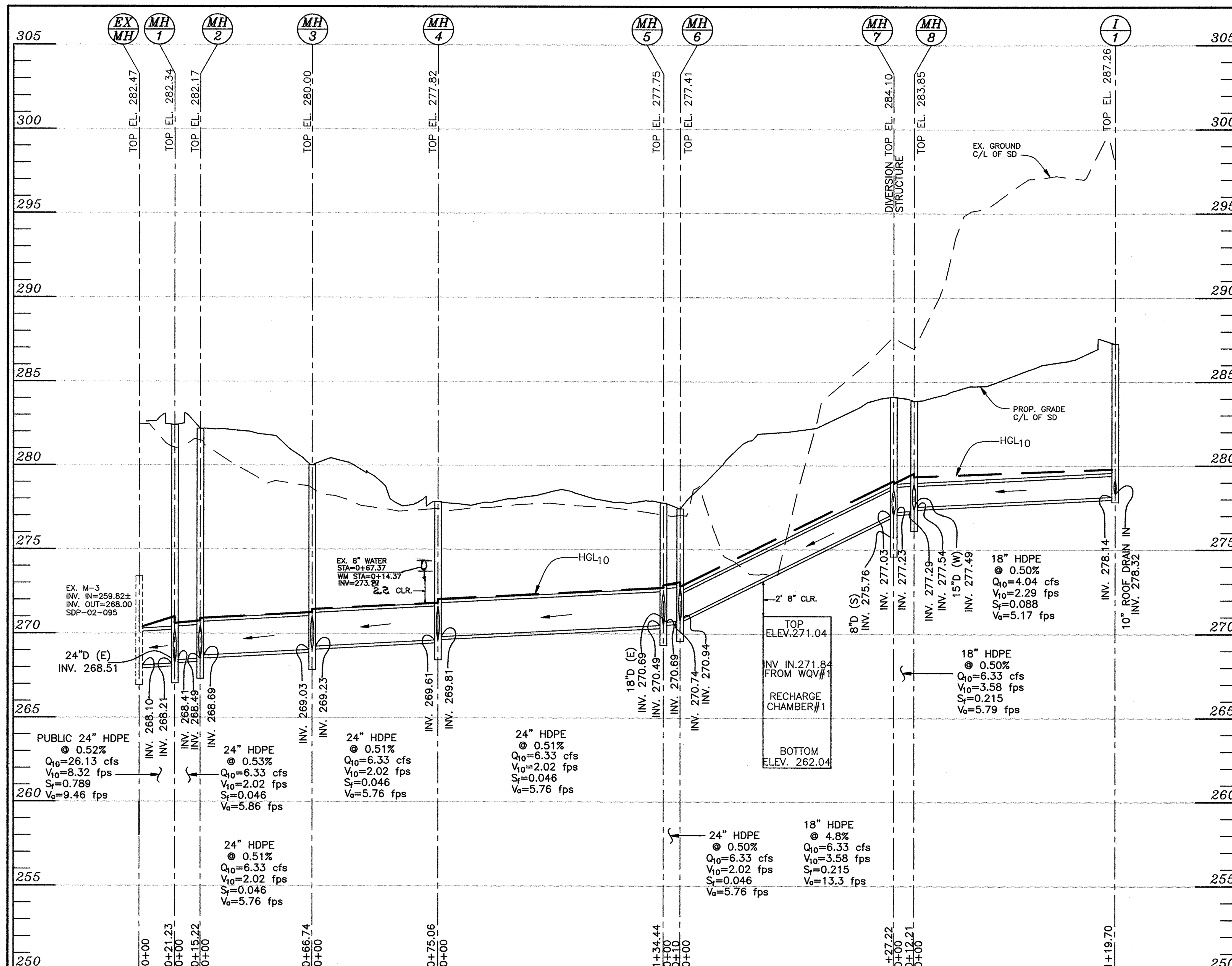
LOCATION: TAX MAP 48 – BLOCK 1
PARCEL 548
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: REVISED SITE DEVELOPMENT PLAN
STORM DRAIN DRAINAGE AREA MAP,
SOILS MAP AND BORING LOGS

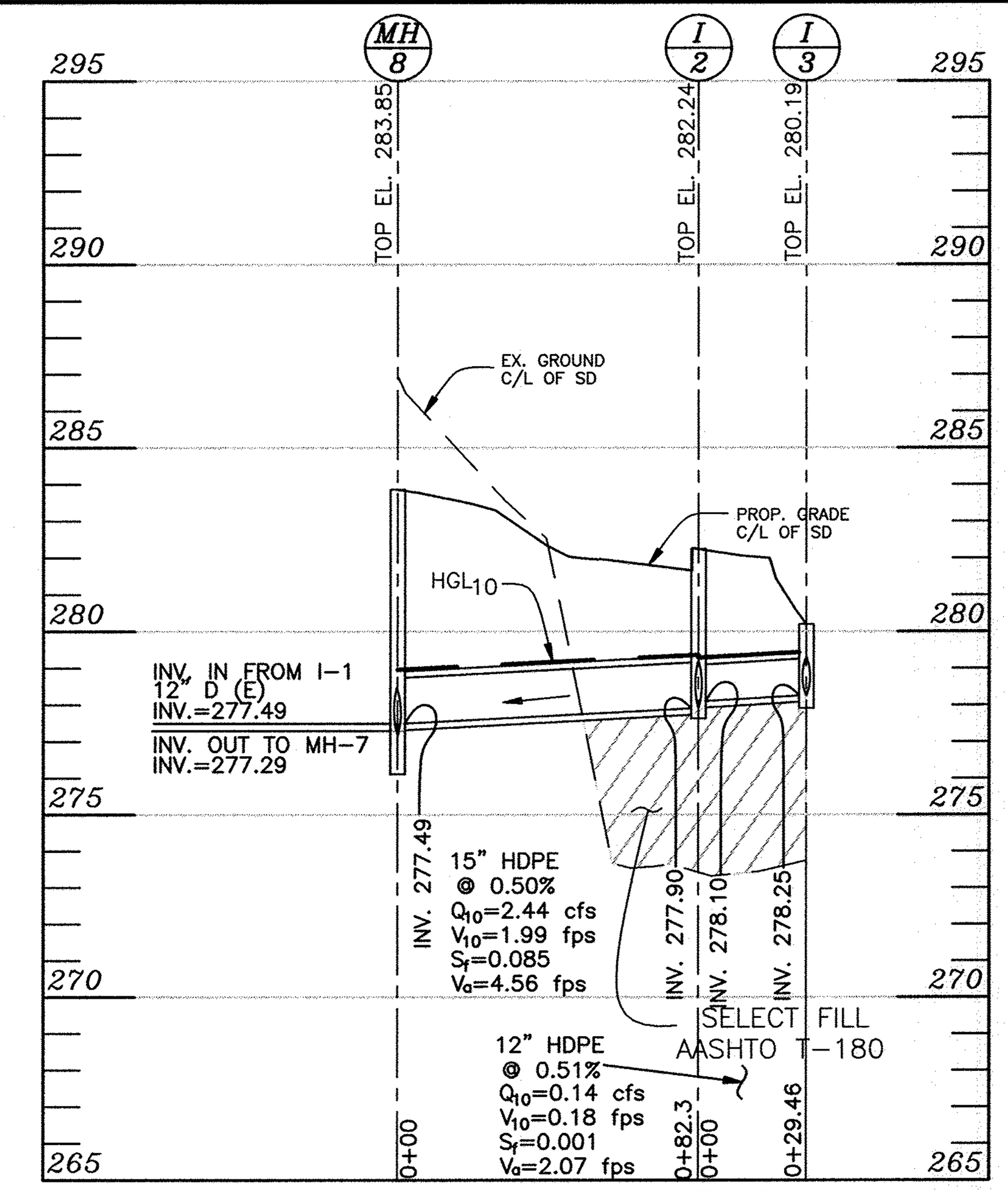
DATE: JANUARY, 2017			PROJECT NO. 1221
Design: DAM/AAM	Draft: HP/AAM	Check: CAM/AAM	
SCALE: 1" = 30'			DRAWING 6 OF 11

AS-BUILT

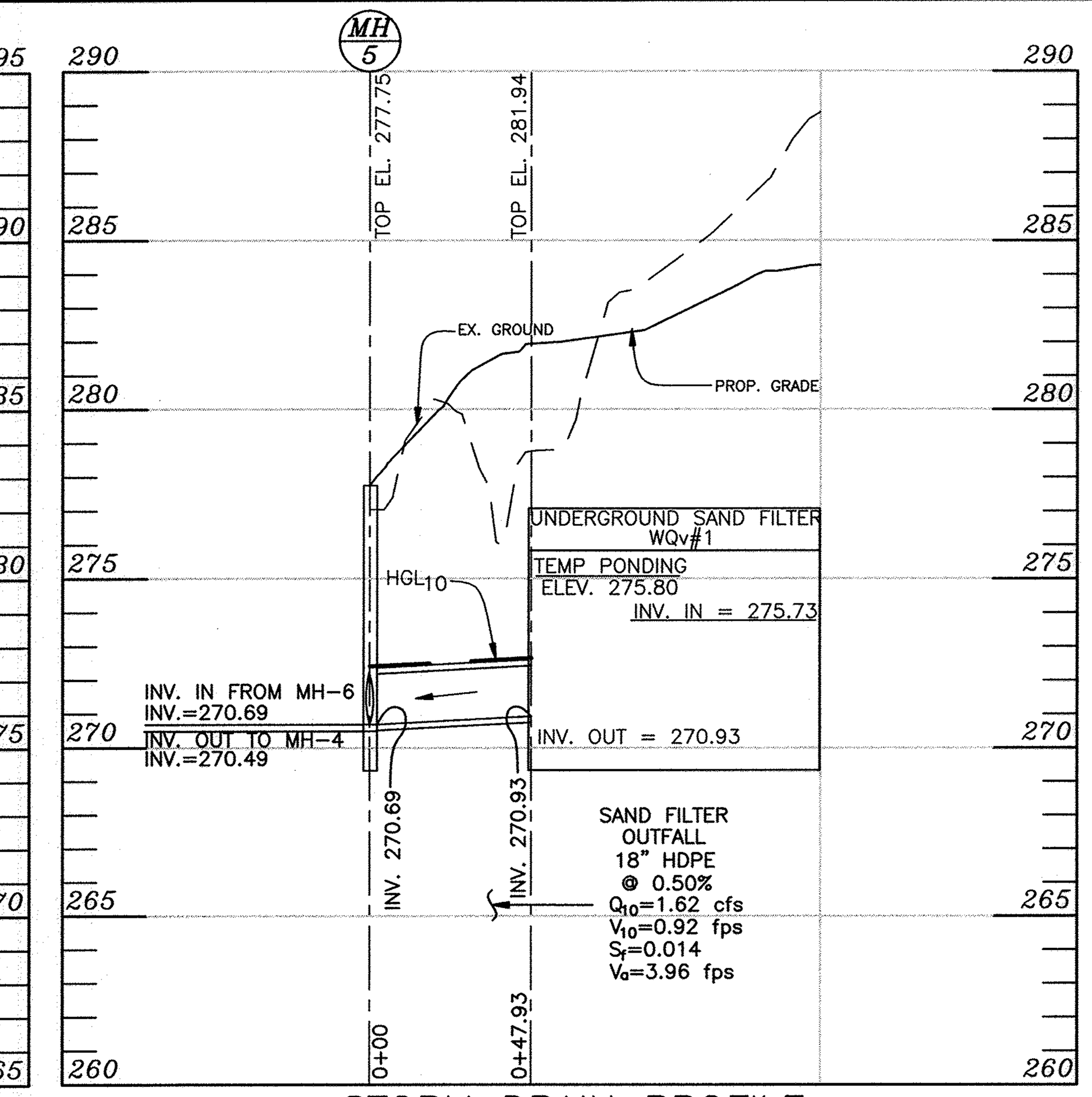
SDP-08-100



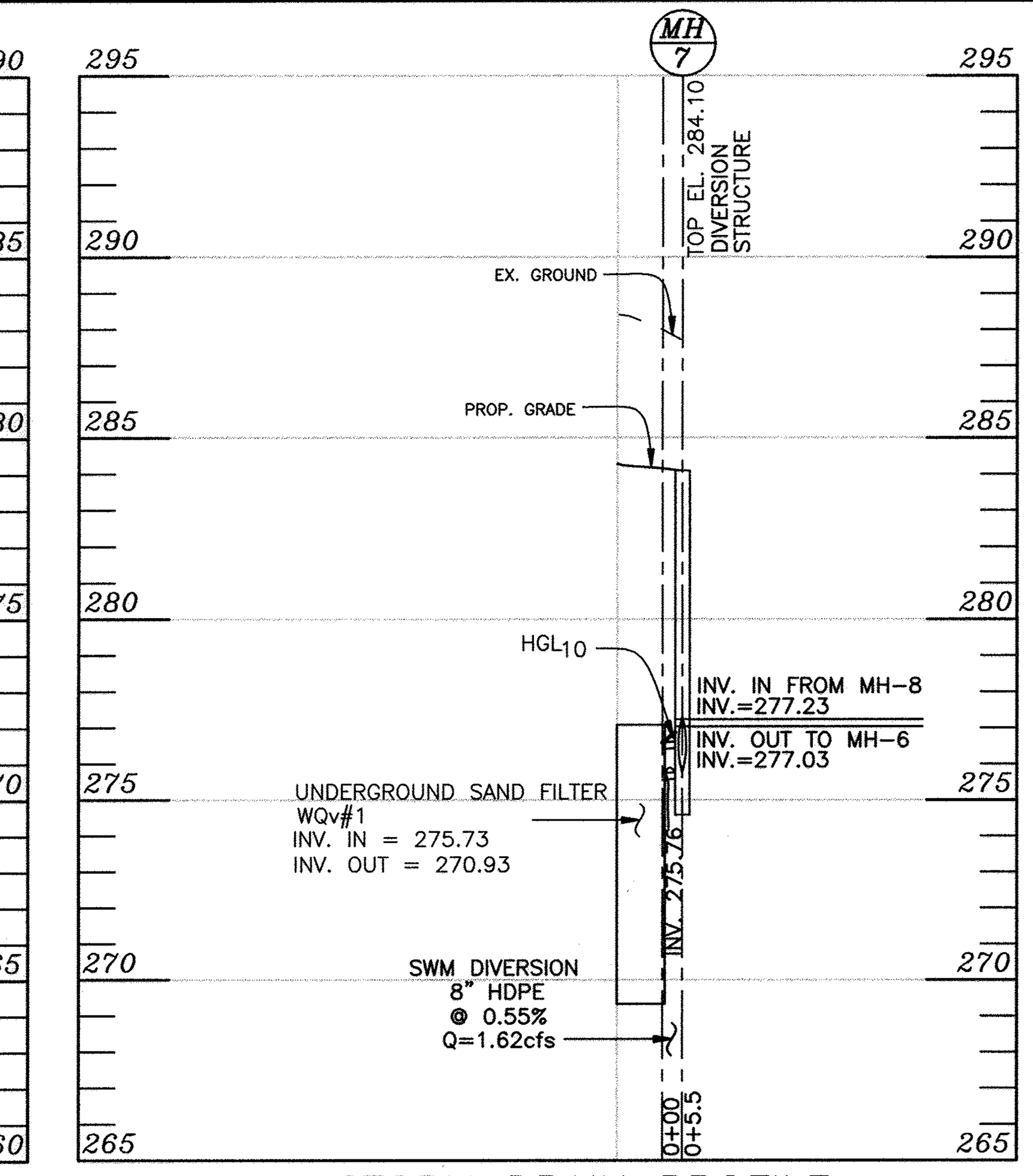
STORM DRAIN PROFILE
FROM EX MH TO I-1



STORM DRAIN PROFILE
FROM MH-8 TO I-3

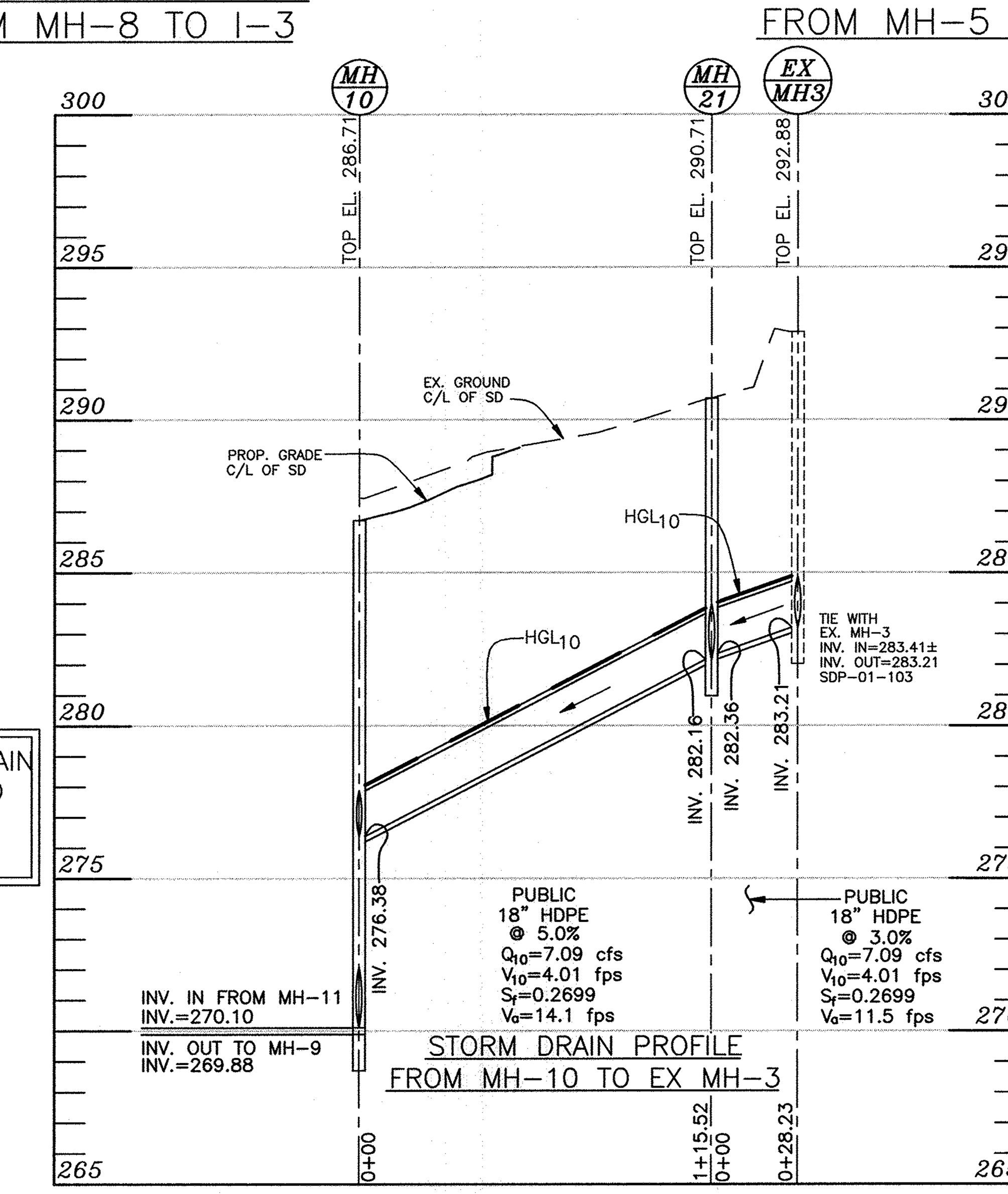


STORM DRAIN PROFILE
FROM MH-5 TO WQV#1

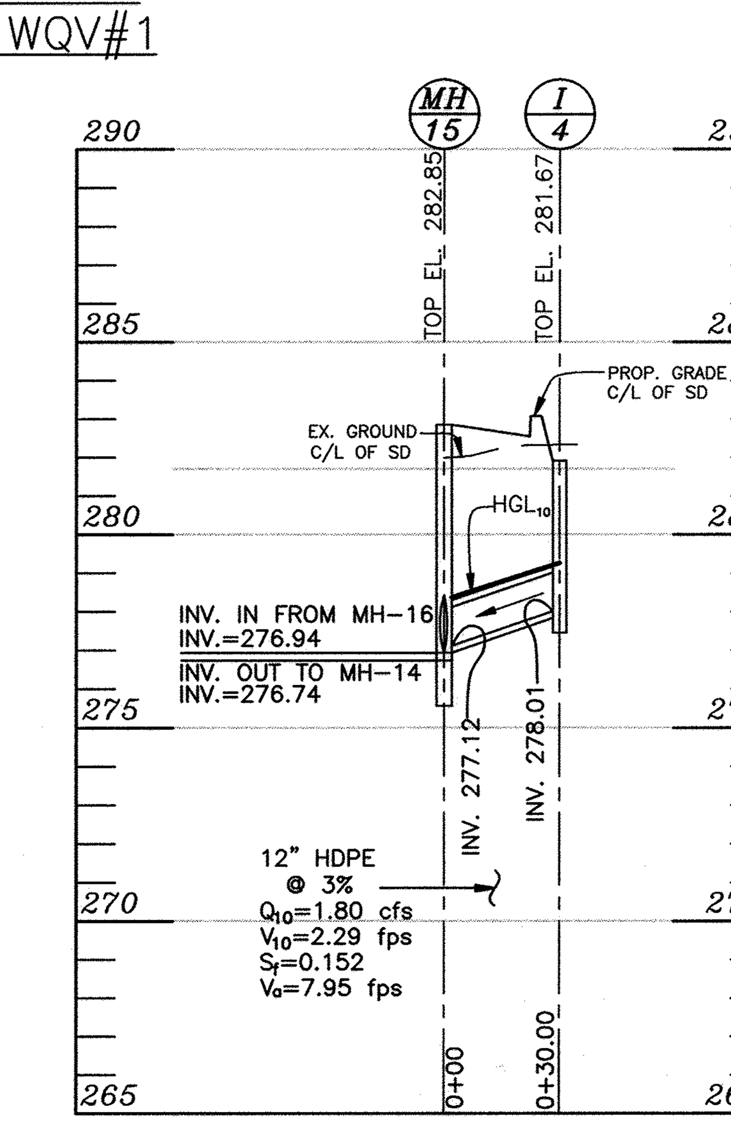


STORM DRAIN PROFILE
FROM WQV#1 TO MH-7

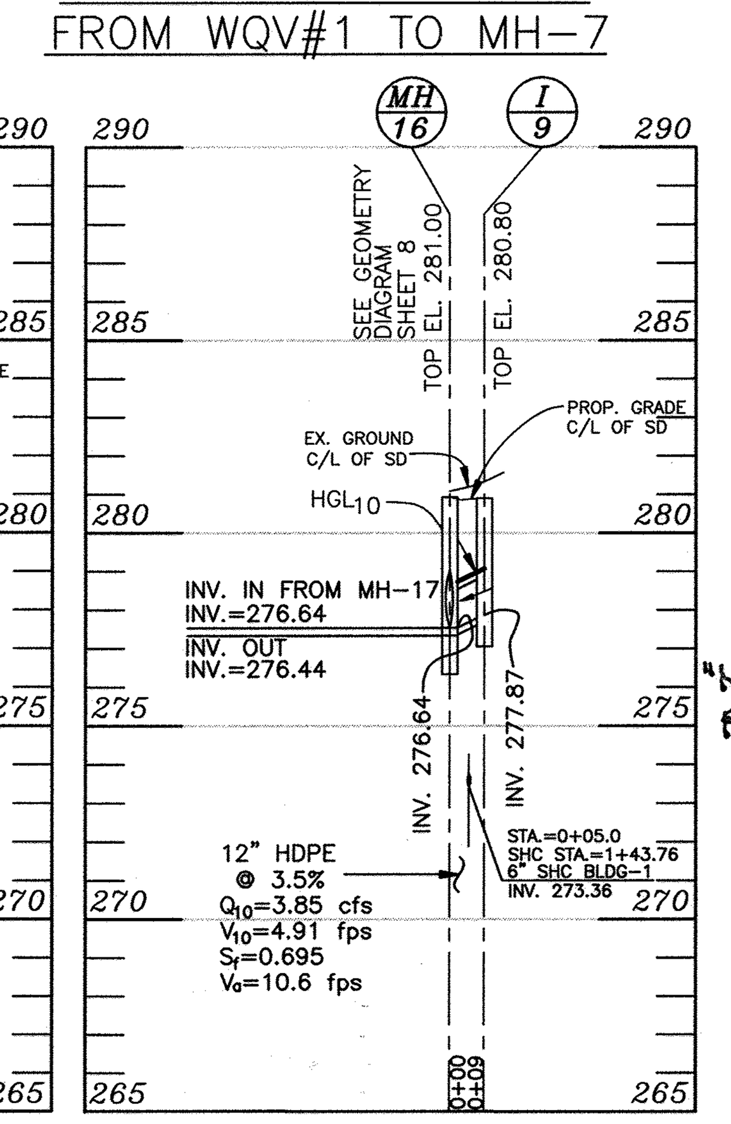
NOTE: ALL STORM DRAIN PRIVATE UNLESS NOTED OTHER WISE ON THE PROFILES.



STORM DRAIN PROFILE
FROM MH-10 TO EX MH-3



STORM DRAIN PROFILE
FROM MH-15 TO I-4



STORM DRAIN PROFILE
FROM MH-16 TO I-9

"NO AS-BUILT INFORMATION IS" PROVIDED ON THIS SHEET

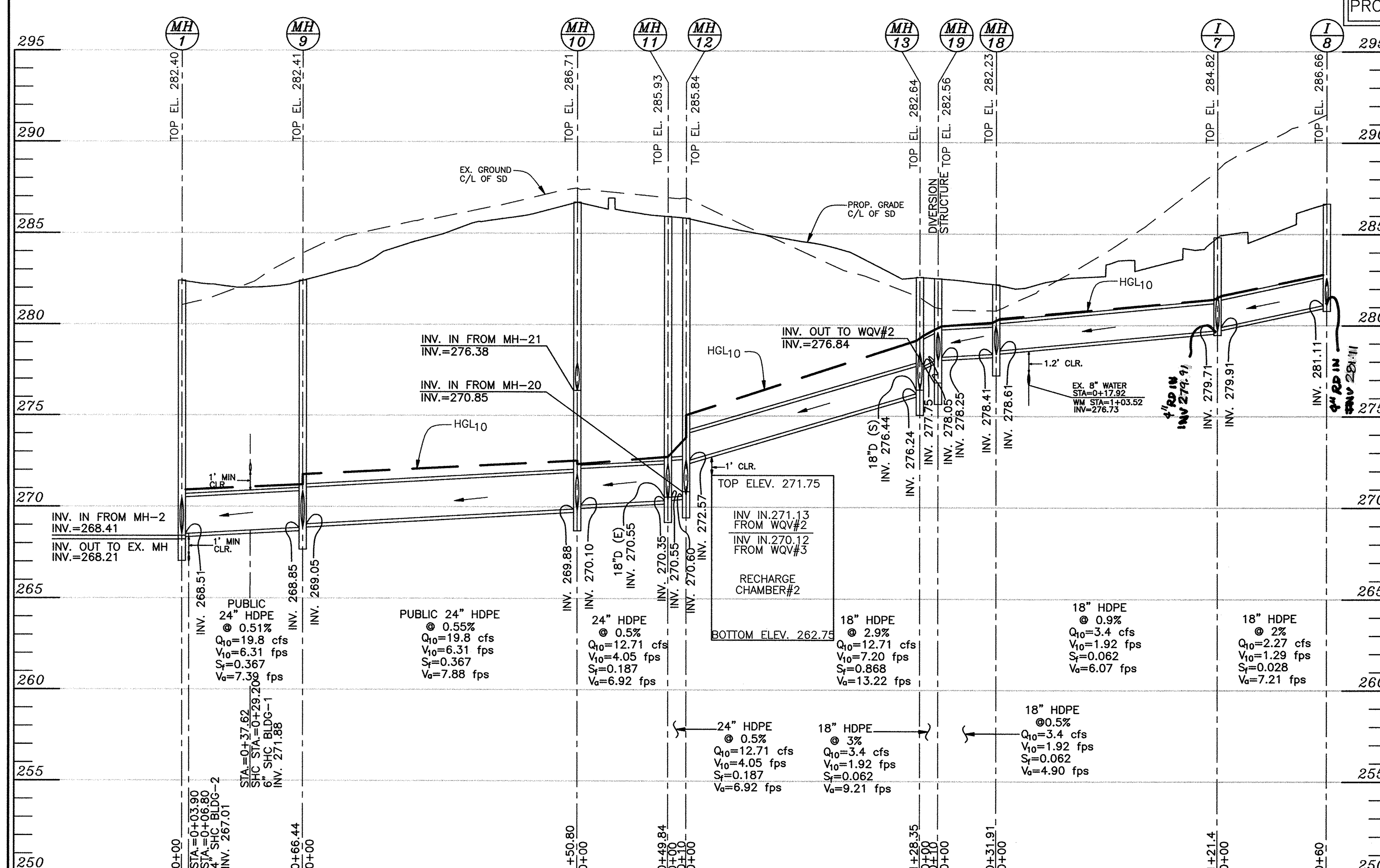
AS-BUILT 2/1/19

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. 21443, Expiration Date: 12.21.20

APPROVED: DEPARTMENT OF PLANNING AND ZONING

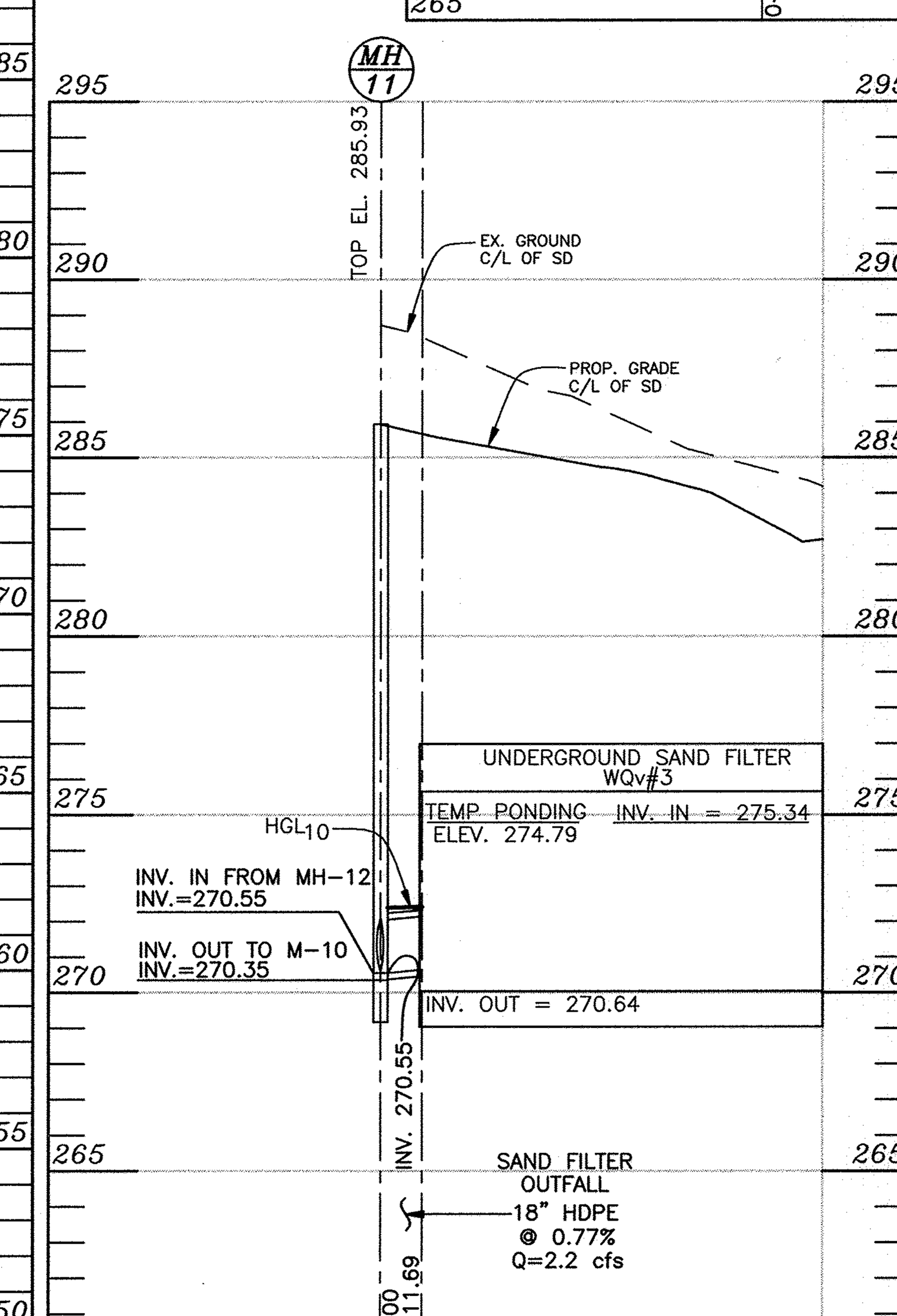
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE 5-26-16
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE 5.19.16
DIRECTOR	DATE 5-26-16



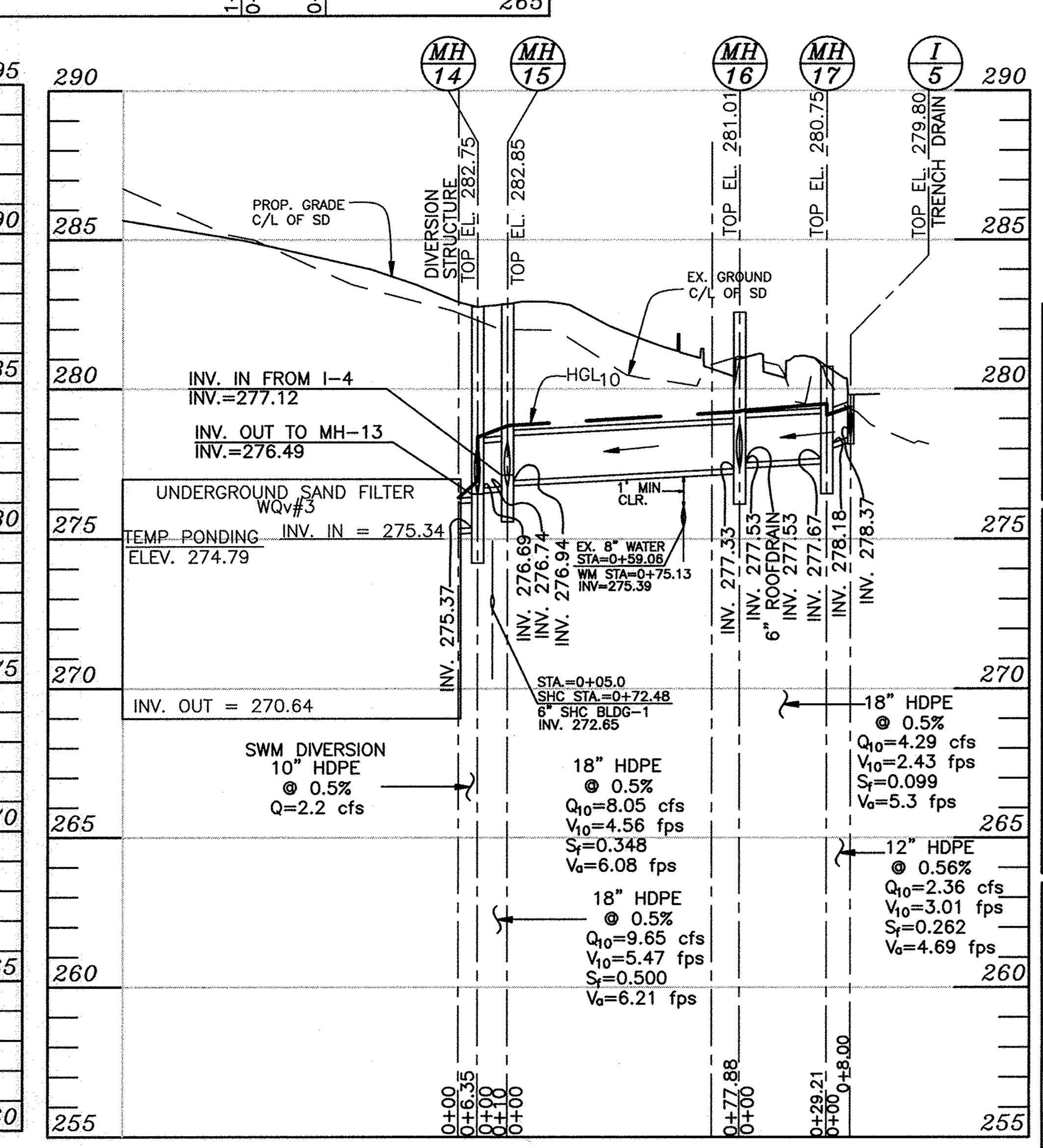
STORM DRAIN PROFILE
FROM MH-1 TO I-8

SCALE: HORIZONTAL: 1" = 50'
VERTICAL: 1" = 5'

NOTE: WATER AND SEWER CONTRACT NO. 24-3901-D.



STORM DRAIN PROFILE
FROM MH-11 TO WQV#3



STORM DRAIN PROFILE
FROM MH-14 TO I-5

NO.	DATE	REVISION
2	24 Jan 17	REVISE OWNER INFO, ADD RD TO I-7, I-8
1	FEB 16	REVISE STORM DRAIN PROFILES FOR I-4, I-5, I-9 AND REMOVE I-6

BENCHMARK ENGINEERING, INC.
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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. 28376, Expiration Date: 01-01-17, 19

DEVELOPER:
COLUMBIA JUNCTION, DEV. LLC
100 MENLO PARK DRIVE, SUITE 500
EDISON, NEW JERSEY 08837
201-314-6049

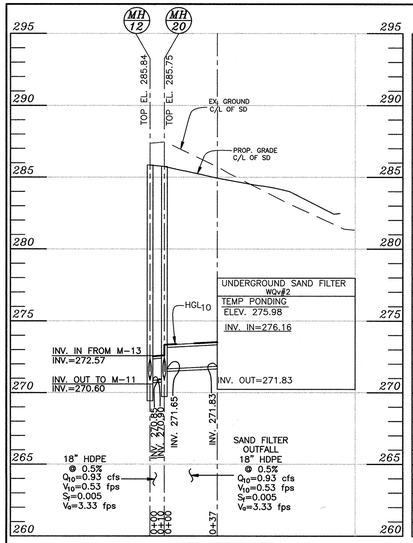
PROJECT: COLUMBIA JUNCTION
SECTION 3 / LOT A-2
(RETAIL CENTER)

LOCATION: TAX MAP 48 – BLOCK 1
PARCEL 548
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

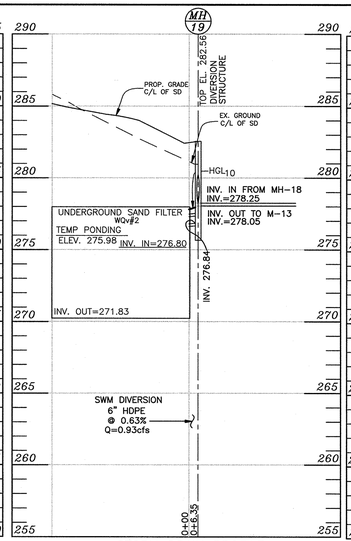
TITLE: STORM DRAIN PROFILES, NOTES AND DETAILS

DATE: APRIL, 2016		PROJECT NO. 1221	
Design: DAM	Draft: HP	Check: DAM/BFC	SCALE: AS SHOWN
DRAWING 7 OF 11			

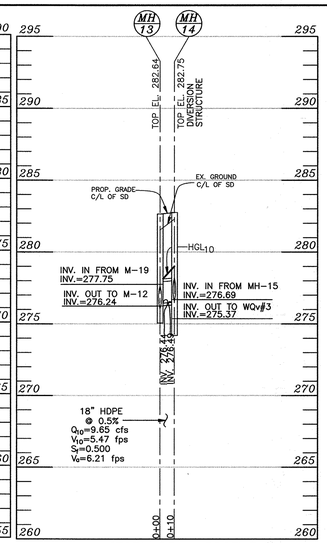
AS-BUILT SDP-08-100



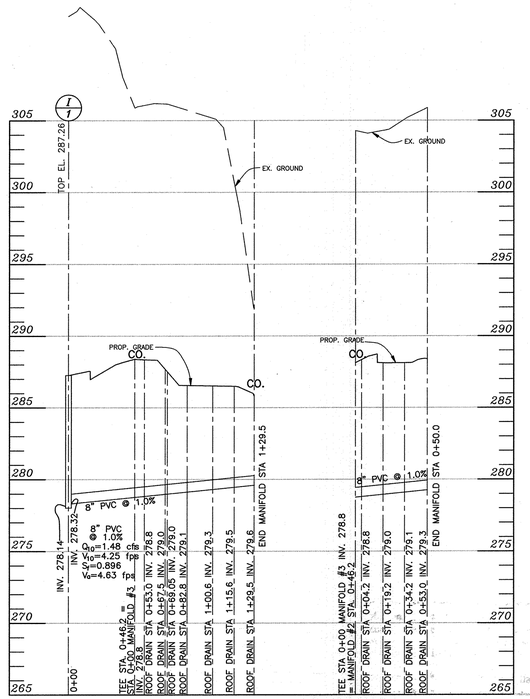
STORM DRAIN PROFILE
FROM MH-12 TO WQV#2



STORM DRAIN PROFILE
FROM WQV#2 TO MH-19

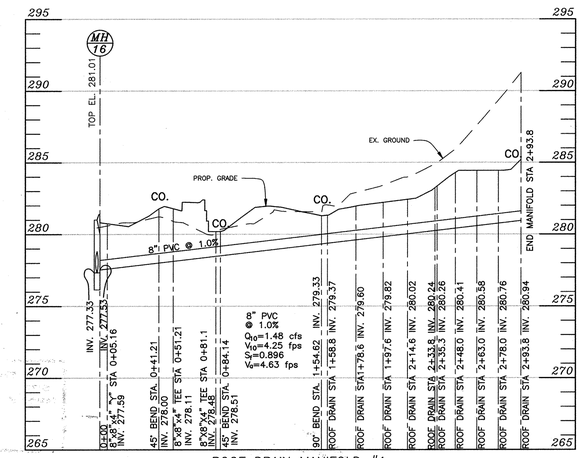


STORM DRAIN PROFILE
FROM MH-13 TO MH-14

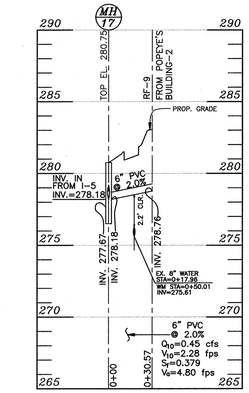


ROOF DRAIN MANIFOLD #2 ROOF DRAIN MANIFOLD #3
FROM I-1 TO BUILDING #1

STORM DRAIN PROFILE
SCALE: HORIZONTAL: 1" = 50'
VERTICAL: 1" = 5'



ROOF DRAIN MANIFOLD #1
FROM M-16 TO BUILDING #1



ROOF DRAIN PROFILE
FROM M-17 TO BUILDING #2

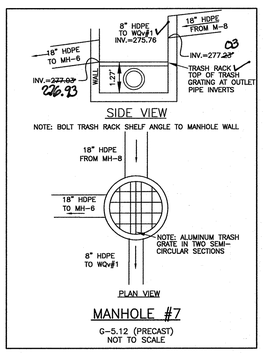
STRUCTURE SCHEDULE									
NO.	TYPE	LOCATION	THROAT INV.	INVERT IN	INVERT OUT	TOP ELEV.	HO. CO. STD.	REMARKS	MAINT.
MH-1	STD. PRE-CAST	N 539,381.98 E 1,367,076.78		268.41	268.21	282.34	Ho.Co.STD. G-5.12	–	PUBLIC
MH-2	STD. PRE-CAST	N 539,377.21 E 1,367,062.32		268.69	268.49	282.17	Ho.Co.STD. G-5.12	–	PRIVATE
MH-3	STD. PRE-CAST	N 539,422.98 E 1,367,013.74		269.23	269.03	280.00	Ho.Co.STD. G-5.12	–	PRIVATE
MH-4	STD. PRE-CAST	N 539,495.66 E 1,366,995.02		269.81	269.61	277.82	Ho.Co.STD. G-5.12	–	PRIVATE
MH-5	STD. PRE-CAST	N 539,586.95 E 1,366,896.33		270.69	270.49	277.75	Ho.Co.STD. G-5.12	–	PRIVATE
MH-6	STD. PRE-CAST	N 539,593.74 E 1,366,888.99		270.94	270.74	277.41	Ho.Co.STD. G-5.12	–	PRIVATE
MH-7	STD. PRE-CAST	N 539,687.13 E 1,366,975.37		277.23	275.76 / 277.03	284.10	Ho.Co.STD. G-5.12	–	PRIVATE
MH-8	STD. PRE-CAST	N 539,695.42 E 1,366,966.41		277.49	277.29	283.85	Ho.Co.STD. G-5.12	–	PRIVATE
MH-9	STD. PRE-CAST	N 539,424.54 E 1,367,127.80		269.05	268.85	282.41	Ho.Co.STD. G-5.12	–	PUBLIC
MH-10	STD. PRE-CAST	N 539,531.39 E 1,367,234.19		270.10 / 276.38	269.88	286.71	Ho.Co.STD. G-5.12	–	PUBLIC
MH-11	STD. PRE-CAST	N 539,565.28 E 1,367,197.64		270.55	270.35	285.93	Ho.Co.STD. G-5.12	–	PRIVATE
MH-12	STD. PRE-CAST	N 539,572.07 E 1,367,190.30		270.85 / 272.57	270.60	285.84	Ho.Co.STD. G-5.12	–	PRIVATE
MH-13	STD. PRE-CAST	N 539,477.85 E 1,367,103.15		277.75 / 276.44	276.24	282.64	Ho.Co.STD. G-5.12	–	PRIVATE
MH-14	STD. PRE-CAST	N 539,471.06 E 1,367,110.49		276.69	275.37 / 276.49	282.75	Ho.Co.STD. G-5.12	–	PRIVATE
MH-15	STD. PRE-CAST	N 539,463.72 E 1,367,103.70		276.94 / 277.12	276.74	282.85	Ho.Co.STD. G-5.12	–	PRIVATE
MH-16	STD. PRE-CAST	N 539,516.60 E 1,367,046.52		277.53 / 277.53	277.33	281.01	Ho.Co.STD. G-5.12	–	PRIVATE
MH-17	STD. PRE-CAST	N 539,508.25 E 1,367,018.53		278.18 / 278.18	277.67	280.75	Ho.Co.STD. G-5.12	–	PRIVATE
MH-18	STD. PRE-CAST	N 539,506.31 E 1,367,072.38		278.61	278.41	282.23	Ho.Co.STD. G-5.12	–	PRIVATE
MH-19	STD. PRE-CAST	N 539,484.64 E 1,367,095.80		278.25	278.05 / 276.84	282.56	Ho.Co.STD. G-5.12	–	PRIVATE
MH-20	STD. PRE-CAST	N 539,578.86 E 1,367,182.96		271.65	270.90	285.75	Ho.Co.STD. G-5.12	–	PRIVATE
MH-21	STD. PRE-CAST	N 539,619.91 E 1,367,308.41		282.36	282.16	290.71	Ho.Co.STD. G-5.12	–	PUBLIC
I-1	"A-5"	N 539,789.79 E 1,367,040.07		–	278.12	287.26	Ho.Co.STD. D-4.01	–	PRIVATE
I-2	"A-5"	N 539,642.09 E 1,366,963.74		278.10	277.90	282.24	Ho.Co.STD. D-4.01	–	PRIVATE
I-3	"A-5"	N 539,613.94 E 1,366,895.07		–	278.25	280.19	Ho.Co.STD. D-4.01	–	PRIVATE
I-4	"A-5"	N 539,433.42 E 1,367,112.16		–	278.01	281.67	Ho.Co.STD. D-4.01	–	PRIVATE
I-5	TRENCH DRAIN	N 539,521.65 E 1,367,004.36		–	278.37	279.50	Ho.Co.STD. D-4.15	–	PRIVATE
I-7	"A-10"	N 539,619.75 E 1,367,114.31		279.91	279.71	284.82	Ho.Co.STD. D-4.03	–	PRIVATE
I-8	"A-5"	N 539,663.79 E 1,367,155.05		–	281.11	286.66	Ho.Co.STD. D-4.01	–	PRIVATE
I-9	"A-5"	N 539,522.22 E 1,367,053.62		–	277.87	280.80	Ho.Co.STD. D-4.01	–	PRIVATE

1) STRUCTURE TOP ELEVATION AND LOCATION FOR MANHOLES IS AT THE TOP AND CENTER OF RIM.
2) STRUCTURE TOP ELEVATION AND LOCATION FOR INLETS IS AT THE TOP AND CENTER OF INLET. AT CURB LINE FOR TYPE 'A' INLET.

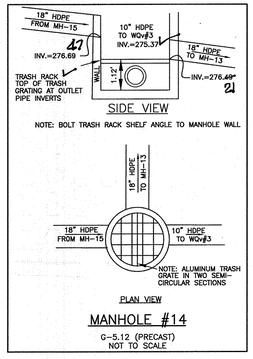
PIPE SCHEDULE			
SIZE	LENGTH	TYPE & CLASS	OWNED & MAINT.
24"	240'	HDPE HI-Q	PUBLIC
18"	144'	HDPE HI-Q	PUBLIC

PIPE SCHEDULE			
SIZE	LENGTH	TYPE & CLASS	OWNED & MAINT.
24"	360'	HDPE HI-Q	PRIVATE
18"	845'	HDPE HI-Q	PRIVATE
15"	82'	HDPE HI-Q	PRIVATE
12"	77'	HDPE HI-Q	PRIVATE
10"	7'	HDPE HI-Q	PRIVATE
8"	6'	HDPE HI-Q	PRIVATE
6"	17'	HDPE HI-Q	PRIVATE
6"	150'	PVC	PRIVATE
8"	473'	PVC	PRIVATE

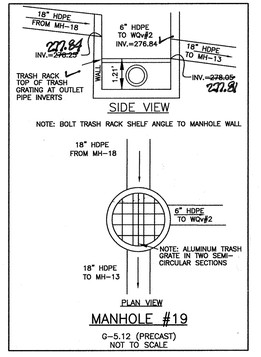
NOTE: WATER AND SEWER CONTRACT NO. 24-4519-D.



MANHOLE #7
G-5.12 (PRECAST)
NOT TO SCALE

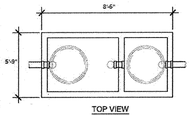


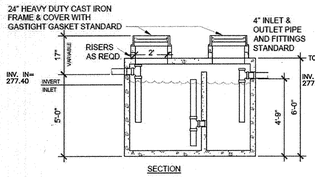
MANHOLE #14
G-5.12 (PRECAST)
NOT TO SCALE



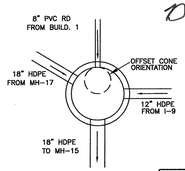
MANHOLE #19
G-5.12 (PRECAST)
NOT TO SCALE

DIVERSION STRUCTURE DETAILS
NOT TO SCALE





EXTERIOR GREASE TRAP
NTS



MANHOLE #16
G-5.12 (PRECAST)
NOT TO SCALE

AS-BUILT CERTIFICATION
I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on this "AS-BUILT" Plan meet the Approved Plans and Specifications

Donald Mason, P.E. Date: 4/1/19

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. 21443 Expiration Date: 12-21-20

STATE OF MARYLAND DONALD ALAN MASON No. 21443 PROFESSIONAL ENGINEER
AS-BUILT 4/1/19

NOTE: ALL STORM DRAIN PRIVATE UNLESS NOTED OTHERWISE ON THE PROFILES.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 4-17-17
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 3.21.17
DIRECTOR — DATE 4-17-17

NO.	DATE	REVISION
2	DEC 16	SHEET SUBSTITUTION TO REVISE ROOF DRAINS, SEWER HOUSE CONNECTION AND PAVE OUTPARCEL.
1	FEB 16	RELOCATE ROOF DRAIN FOR BUILDING #2 AND REVISE STRUCTURE SCHEDULE

BENCHMARK
ENGINEERING, INC.
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS
8480 BALTIMORE NATIONAL PIKE ▲ SUITE 315 ▲ ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
WWW.BEI-CIVILENGINEERING.COM

STATE OF MARYLAND ALICE M. MILLER No. 28376 PROFESSIONAL ENGINEER
Jan 17

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. 28376, Expiration Date: 01-01-19.

DEVELOPER:
COLUMBIA JUNCTION DEV. LLC
100 MENLO PARK DRIVE,
SUITE 500
EDISON, NEW JERSEY 08837
201-314-6049

PROJECT: COLUMBIA JUNCTION
SECTION 3 / LOT A-2
(RETAIL CENTER)

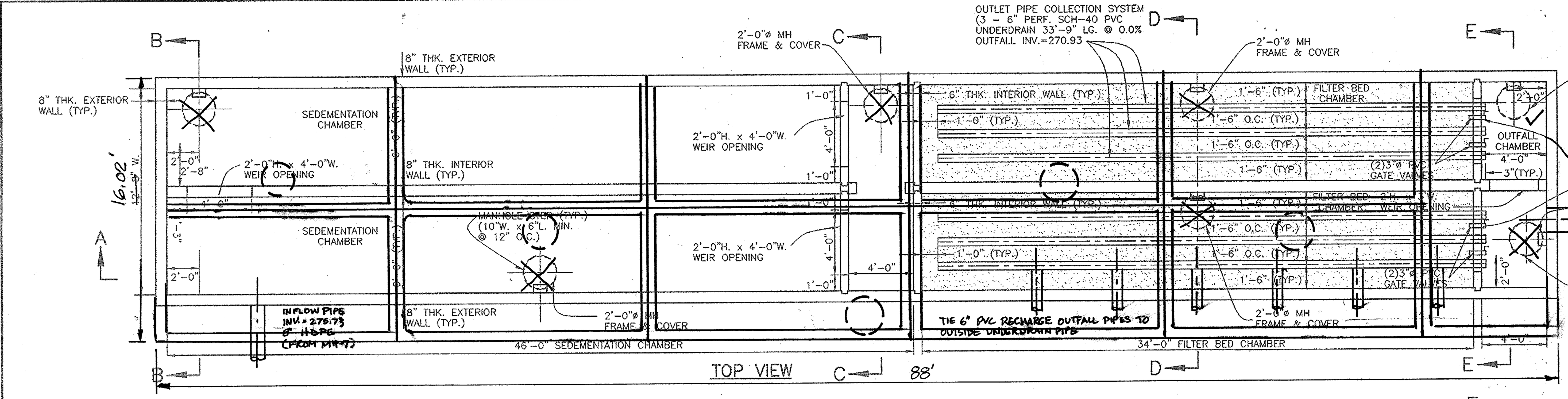
LOCATION: TAX MAP 48 – BLOCK 1
PARCEL 548
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: REVISED SITE DEVELOPMENT PLAN
STORM DRAIN PROFILES, NOTES AND DETAILS

DATE: JANUARY, 2017 PROJECT NO. 1221
Design: DAM/AAM Draft: HP/AAM Check: CAM/AAM SCALE: AS SHOWN DRAWING 8 OF 11

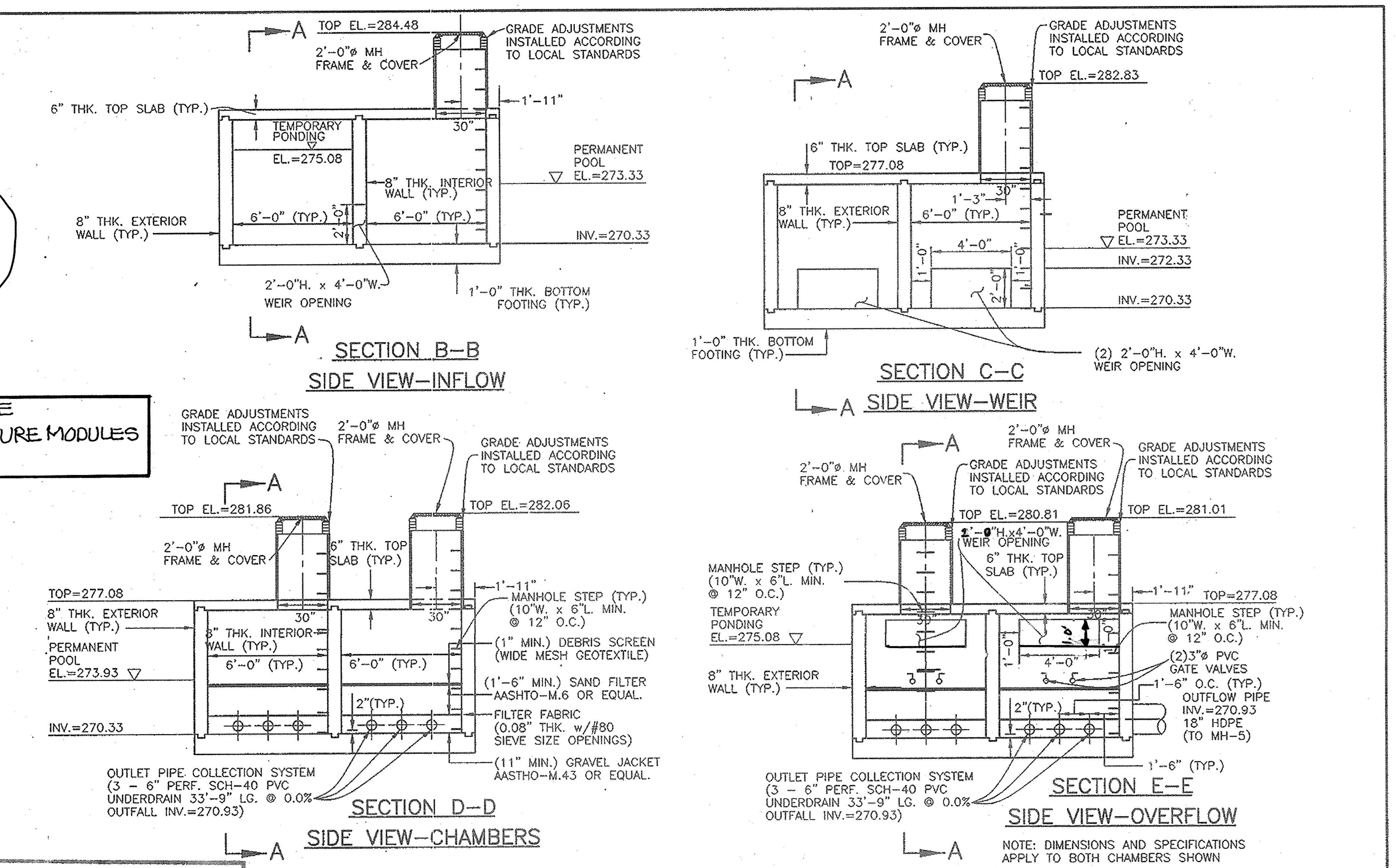
AS-BUILT

SDP-08-100



UNDERGROUND WATER QUALITY FACILITY#1
SCALE: 1"=5'
LOCATION: N 539,651.86 E 1,366,959.33

SECTION A-A
FRONT VIEW



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. 21443 Expiration Date: 12-21-20

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

Donald M... ENGINEER — LICENSE NO. 21443 DATE 4/1/19

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ONSITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ONSITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

BY THE DEVELOPER:

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."

COLUMBIA JUNCTION LLC By: STEVEN K. BREEDEN MEMBER — James R. Moxley, III Member — 4/12/13
DEVELOPER — DATE

BY THE ENGINEER:

"I/WE CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

ENGINEER — BRIAN F. CLEARY, PE # 28559 — 4/12/2013 DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION, AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

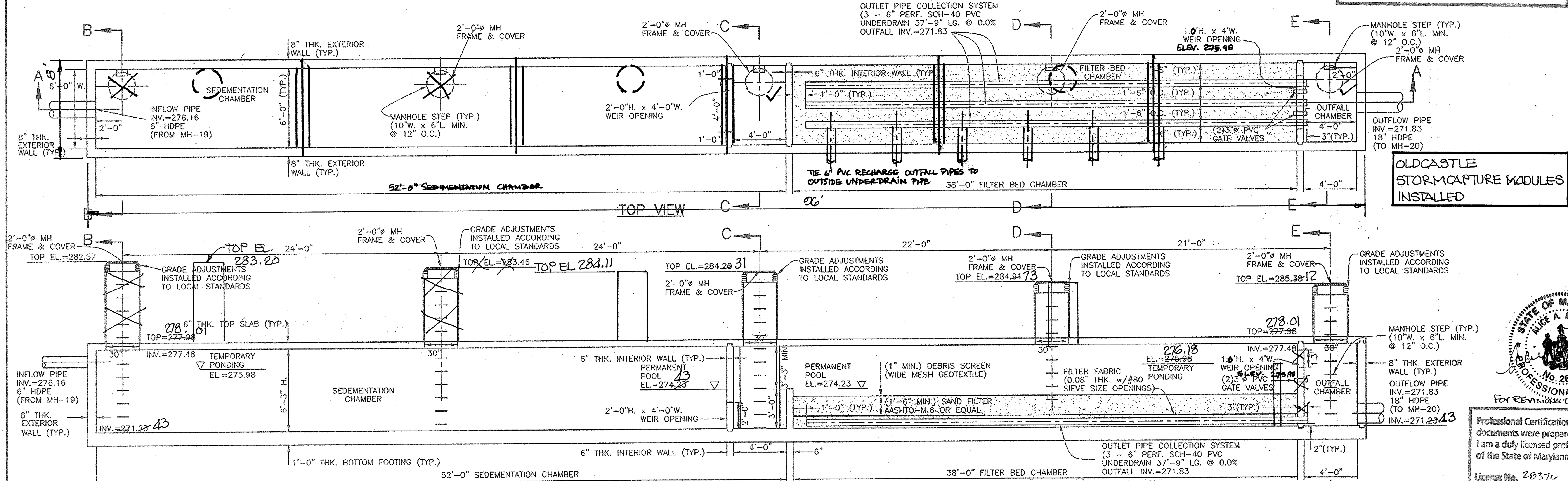
HOWARD SOIL CONSERVATION DISTRICT — DATE

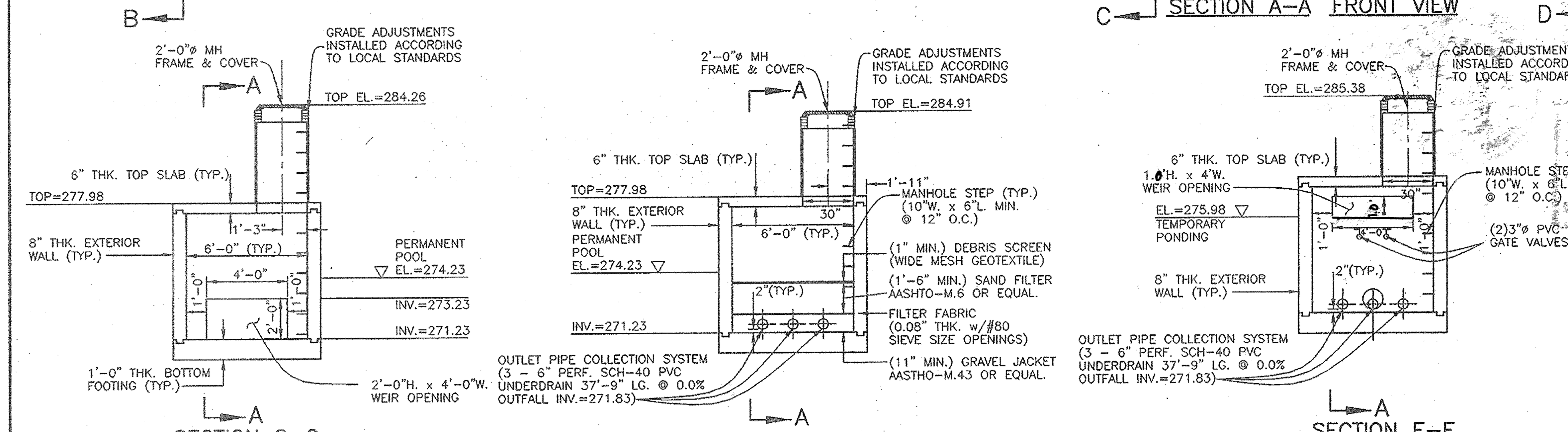
APPROVED: DEPARTMENT OF PUBLIC WORKS

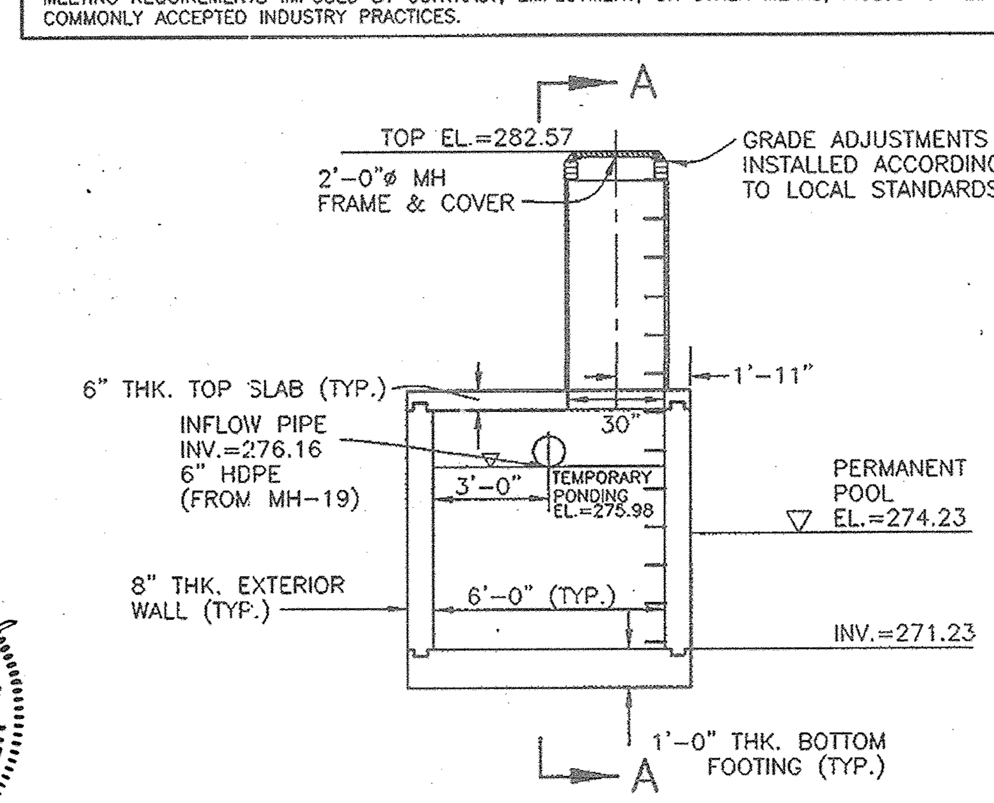
CHIEF, BUREAU OF HIGHWAYS — DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT — 5/03/13
CHIEF, DEVELOPMENT ENGINEERING DIVISION — 4/23/13
DIRECTOR — 5/6/13







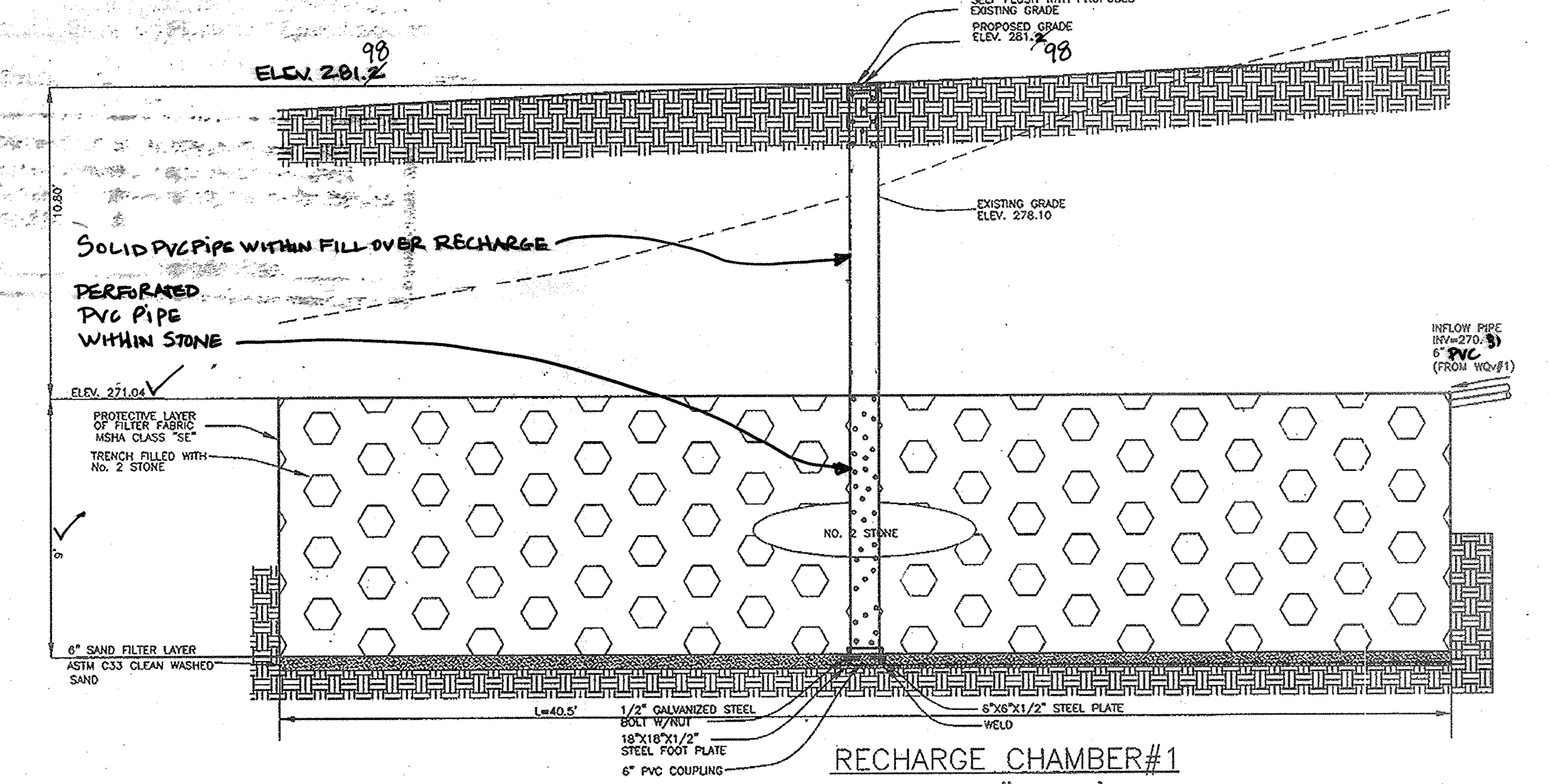
For Revision Only 24 Jan 17

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. 20376 Expiration Date: 1-1-19

NOTE: THE INCOMING PIPE TO THE FACILITIES SHALL BE CAPPED OFF UNTIL THE CONTRIBUTING AREAS HAVE BEEN STABILIZED

NOTE: SAND FILTER SHALL BE DESIGNED BY A LICENSED STRUCTURAL ENGINEER IN THE STATE OF MARYLAND AND DESIGNED FOR HS20 LOADING.

UNDERGROUND WATER QUALITY FACILITY#2
SCALE: 1"=5'
LOCATION: N 539,523.72 E 1,367,132.86



RECHARGE CHAMBER#1
SCALE: 1" = 5'

NO.	DATE	REVISION
1	24 JAN 17	REVISIONS TO CORRECT WEIR ELEVATIONS, RECHARGE OUTFALL AND LOADING SPECS

BENCHMARK ENGINEERING, INC.
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS
8480 BALTIMORE NATIONAL PIKE ▲ SUITE 315 ▲ ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
75 THOMAS JOHNSON DRIVE ▲ SUITE E ▲ FREDERICK, MARYLAND 21702
301-710-5686
WWW.BEI-CIVILENGINEERING.COM

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. 28559, Expiration Date: 07-22-2013.
4/12/2013

DEVELOPER:
COLUMBIA JUNCTION DEV. LLC
100 MENLO PARK DRIVE, SUITE 500
EDISON, NEW JERSEY 08837
201-314-6099

PROJECT: COLUMBIA JUNCTION
SECTION 3 / LOT A-2
(RETAIL CENTER)

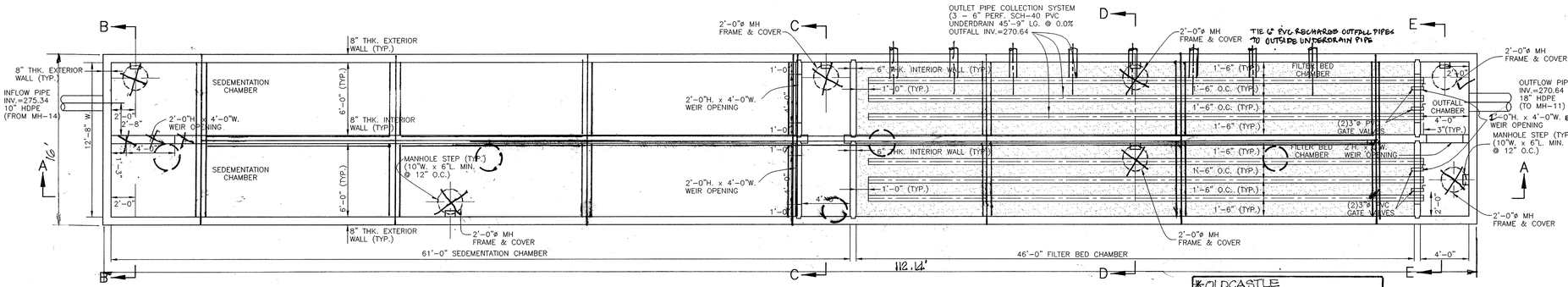
LOCATION: TAX MAP 48 - BLOCK 1
PARCEL 548
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: WATER QUALITY FACILITY#1 AND #2 NOTES AND DETAILS

DATE: MARCH, 2008 / APRIL, 2013 — PROJECT NO. 1221
SCALE: AS SHOWN — DRAWING 9 OF 11
Design: DAM | Draft: HP | Check: DAM/BFC

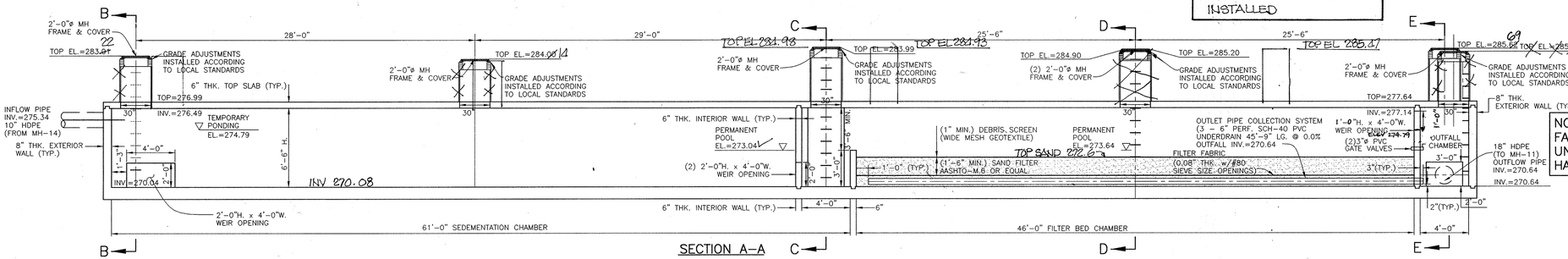
AS-BUILT
SDP-08-100
2nd original

\1221\dwg\8024s9-10v5.dwg, 4/11/2013 1:49:44 PM, Oce TDS600 HDI mylar.pc3



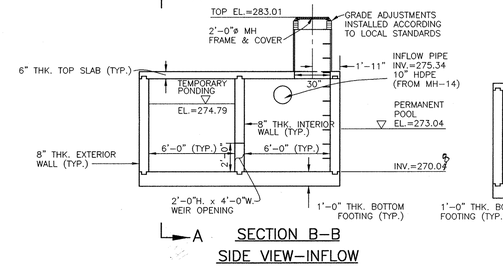
TOP VIEW

*OLDCASTLE STORMCAPTURE MODULES INSTALLED

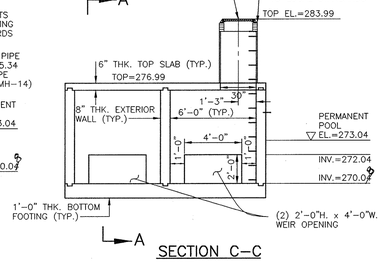


SECTION A-A
FRONT VIEW

NOTE: THE INCOMING PIPE TO THE FACILITIES SHALL BE CAPPED OFF UNTIL THE CONTRIBUTING AREAS HAVE BEEN STABILIZED

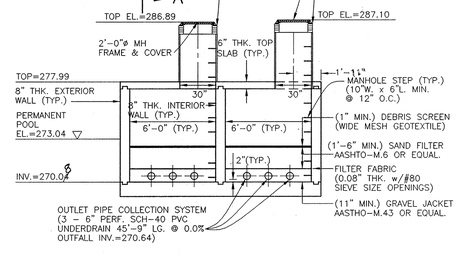


SECTION B-B
SIDE VIEW-INFLOW



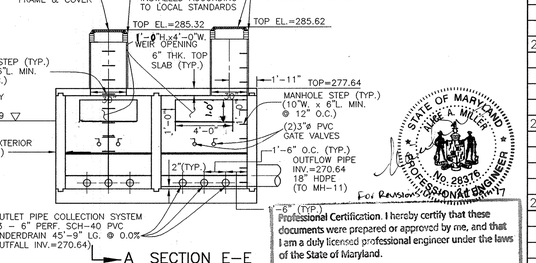
SECTION C-C
SIDE VIEW-WEIR

UNDERGROUND WATER QUALITY FACILITY#3
SCALE: 1"=5'
LOCATION: N 539,514.56 E 1,367,155.28



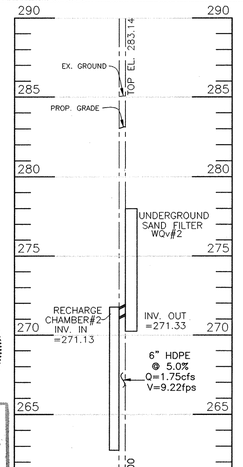
SECTION D-D
SIDE VIEW-CHAMBERS

NOTE: FILTER CHAMBER SPECIFICATIONS APPLY TO BOTH CHAMBERS SHOWN

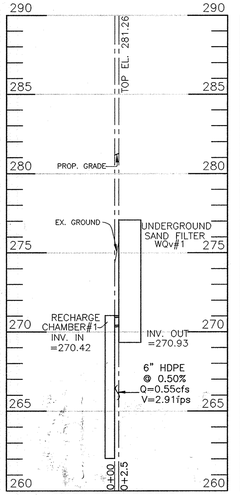


SECTION E-E
SIDE VIEW-OVERFLOW

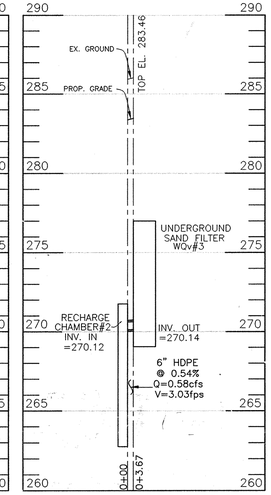
NOTE: DIMENSIONS AND SPECIFICATIONS APPLY TO BOTH CHAMBERS SHOWN



STORM DRAIN PROFILE FROM Rev#2 TO WQv#2
SCALE: HORIZONTAL: 1"=50'
VERTICAL: 1"=5'



STORM DRAIN PROFILE FROM Rev#1 TO WQv#1
SCALE: HORIZONTAL: 1"=50'
VERTICAL: 1"=5'



STORM DRAIN PROFILE FROM Rev#2 TO WQv#3

TABLE B.3.1 MATERIALS AND SPECIFICATIONS FOR SAND FILTERS #1 & #2

MATERIAL	SPECIFICATION	SIZE	NOTES:
NON-REBAR STEEL	ASTM A-36	N/A	STRUCTURAL STEEL TO BE HOT-DIPPED GALVANIZED ASTM A-123
	PEA GRAVEL: ASTM D-448 ORNAMENTAL STONE: WASHED COBBLES	PEA GRAVEL: NO.6 STONE: 2" TO 5"	
GEOTEXTILE	APPARENT OPENING SIZE: (ASTM D-4751) GRAB TENSILE STRENGTH: (ASTM D-4632) PUNCTURE RESISTANCE: (ASTM D-4833)	0.8" THK. EQUIVALENT OPENING SIZE OF #80 SIEVE	MUST MAINTAIN 125 GPM / SQ. FT. FLOW RATE. NOTE: A PEA GRAVEL LAYER MAY BE SUBSTITUTED FOR GEOTEXTILES MEANT TO "SEPERATE" SAND FILTER LAYERS
UNDERDRAIN GRAVEL	AASHTO M-43	0.375" TO 0.750"	
UNDERDRAIN PIPING	F758, TYPE PS28 OR AASHTO M-278	4" TO 6" RIGID SCH-40 PVC OR SDR35	3/8" PERF. @ 6" O/C, 4 HOLES PER ROW; MINIMUM OF 3" OF GRAVEL OVER PIPES, NOT NECESSARY UNDERNEATH PIPES
POURED-IN-PLACE CONC. (IF REQUIRED)	MSHA MIX NO.3, f'c=3500psi @ 28 DAYS, NORMAL WEIGHT, AIR ENTRAINED; REINFORCING TO MEET ASTM 615-60	N/A	ON-SITE TESTING OF POURED-IN-PLACE CONC. REQUIRED; 28 DAY STRENGTH TEST AND SLUMP TEST; ALL CONC. DESIGN (CAST -IN-PLACE or PRE-CAST) NOT USING PREVIOUSLY APPROVED STATE OR LOCAL STANDARDS REQUIRES DESIGN DRAWINGS SEALED AND APPROVED BY A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE OF MARYLAND.
SAND (2.0' DEEP)	AASHTO M-6 OR ASTM C-33	0.02" TO 0.04"	SAND SUBSTITUTIONS SUCH AS DIABASE AND GRAYSTONE#10 ARE NOT ACCEPTABLE. NO CALCIUM CARBONATED OR DOLOMITIC SAND SUBSTITUTIONS ARE ACCEPTABLE. NO "ROCK DUST" CAN BE USED FOR SAND

OPERATION & MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED UNDERGROUND STORMWATER FILTRATION SYSTEMS SAND FILTER (WQv#1, WQv#2, WQv#3)

1. THE SEDIMENT CHAMBER OUTLET DEVICES SHALL BE CLEANED AND/OR REPAIRED WHEN DRAWDOWN TIMES WITHIN THE CHAMBER EXCEEDS 36 HOURS.
2. DEBRIS & LITTER SHALL BE REMOVED AS NECESSARY TO INSURE PROPER OPERATION OF THE SYSTEM.
3. SEDIMENT SHALL BE CLEANED-OUT OF THE SEDIMENTATION CHAMBER WHEN IT ACCUMULATES TO A DEPTH OF 6 INCHES.
4. WHEN WATER PONDS ON THE SURFACE OF THE FILTER BED FOR MORE THAN 72 HOURS, THE TOP FEW INCHES OF DISCOLORED MATERIAL SHALL BE REPLACED WITH FRESH MATERIAL. PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIALS & LIQUIDS MUST BE FOLLOWED BY THE OWNER.
5. A LOGBOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
6. THE MAINTENANCE LOGBOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
7. ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION SYSTEM HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATED THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

ENGINEER – PE NO. _____ DATE _____

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ONSITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ONSITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

BY THE DEVELOPER:

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."

COLUMBIA JUNCTION LLC
BY: _____ 4/12/13
DEVELOPER STEPHEN K. BREEDEN MEMBER James R. Moore, III Member DATE

BY THE ENGINEER:

"I/WE CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

_____ 4/12/2013
ENGINEER – BRIAN F. CLEARY, PE / # 28559 DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION, AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

_____
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS

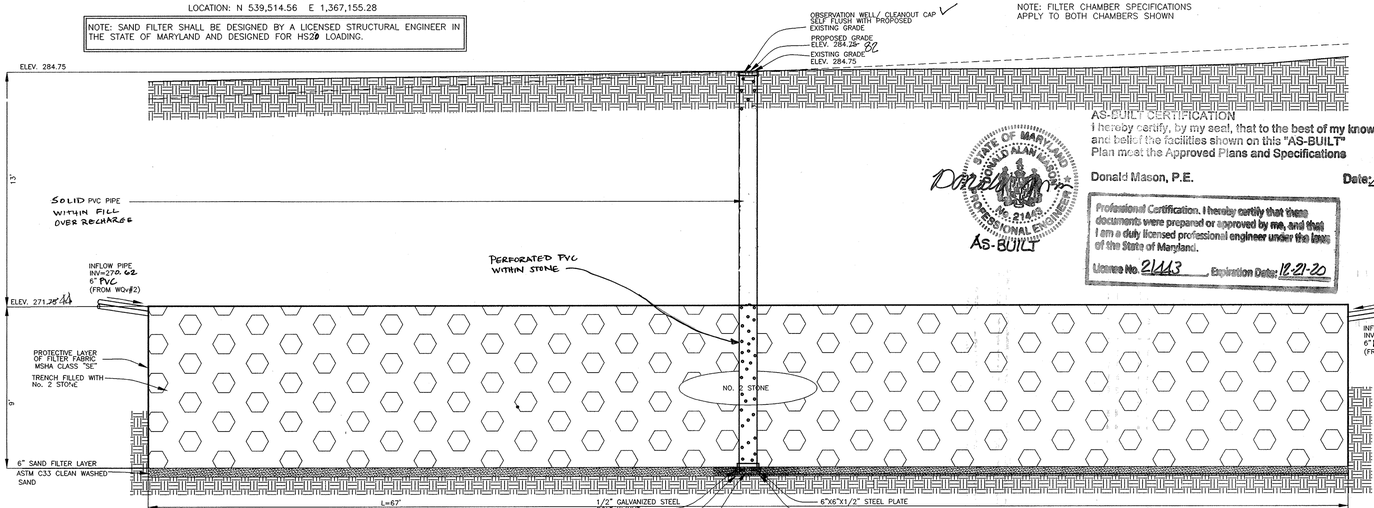
_____
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

_____ 5/03/13
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

_____ 4/9/13
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

_____ 5/8/13
DIRECTOR DATE



RECHARGE CHAMBER#2
SCALE: 1" = 4'

AS-BUILT CERTIFICATION
I hereby certify, by my seal, that to the best of my knowledge and belief the facilities shown on this "AS-BUILT" Plan meet the Approved Plans and Specifications

Donald Mason, P.E. Date: 4/1/19

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. 21443, Expiration Date: 12-21-20

AS-BUILT

NO.	DATE	REVISION
1	24 Jan 17	REVISIONS TO CORRECT WEIR ELEVATIONS, RECHARGE OUTFALL AND LOADING SPECS

BENCHMARK
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS
ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE ▲ SUITE 315 ▲ ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
75 THOMAS JOHNSON DRIVE ▲ SUITE E ▲ FREDERICK, MARYLAND 21702
301-710-5686
WWW.BEI-CIVILENGINEERING.COM

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. 28559, Expiration Date: 07-22-2013. 4/12/2013

DEVELOPER:
COLUMBIA JUNCTION DEV. LLC
100 MENLO PARK DRIVE, SUITE 500
EDISON, NEW JERSEY 08837
201-314-6049

PROJECT: COLUMBIA JUNCTION
SECTION 3 / LOT A-2
(RETAIL CENTER)

LOCATION: TAX MAP 48 – BLOCK 1
PARCEL 548
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: WATER QUALITY FACILTY #3 NOTES AND DETAILS

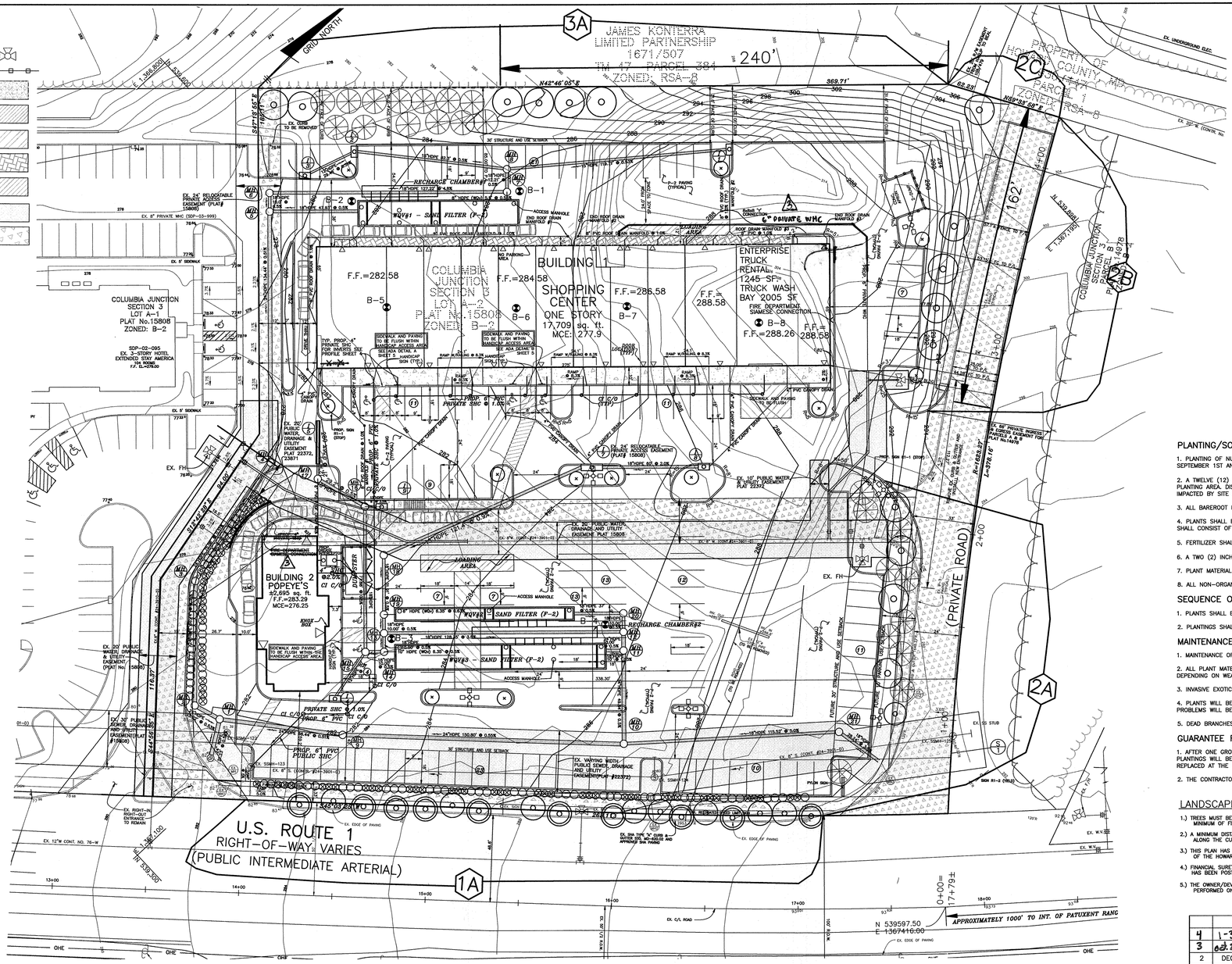
Design: DAM	Draft: MC	Check: DAM/BFC	DATE: MARCH, 2008 / APRIL, 2013	PROJECT NO. 1221
			SCALE: AS SHOWN	DRAWING 10 OF 11

AS-BUILT SDP-08-100

P:\1221\dwg\8024s9-10v5.dwg, 4/11/2013 1:48:45 PM, Oce TDS600 HDI mylar.pc3

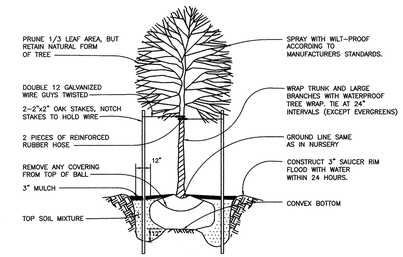
LEGEND

SOILS CLASSIFICATION	ChB2	PROPOSED FIRE HYDRANT	
SOILS DELINEATION		PROPOSED FENCE	
EXISTING CONTOURS (AERIAL 12/02)	480 / 478	PROPOSED SIDEWALK	
PROPOSED CONTOURS	999	PROP. CROSS WALK	
EXISTING WOODS LINE		LOADING AREA	
PROPOSED WOODS LINE		NO PARKING AREA	
PROPOSED STRUCTURE		HANDICAP ACCESS	
STABILIZED CONSTRUCTION ENTRANCE	SCE	PUBLIC UTILITY EASEMENT	
LIMIT OF DISTURBANCE		RELOCATABLE PRIVATE ACCESS EASEMENT	
SILT FENCE DIVERSION	SFD		
SUPER SILT FENCE	SSF		
INLET PROTECTION			
PROP. PARKING LOT LIGHT			
PROP. SOIL BORING	•		



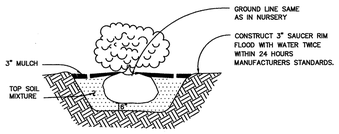
PLAN

SCALE: 1" = 30'



TREE PLANTING DETAIL

NOT TO SCALE



SHRUB PLANTING DETAIL

NOT TO SCALE

PLANTING/SOIL SPECIFICATIONS

1. PLANTING OF NURSERY STOCK SHALL TAKE PLACE BETWEEN MARCH 15TH AND APRIL 30TH. CONTAINER STOCK MAY BE PLANTED BETWEEN SEPTEMBER 1ST AND OCTOBER 30TH.

2. A TWELVE (12) INCH LAYER OF TOPSOIL SHALL BE SPREAD OVER ALL REFORESTATION AREAS IMPACTED BY SITE GRADING TO ASSURE A SUITABLE PLANTING AREA. DISTURBED AREAS SHALL BE SEEDED AND STABILIZED AS PER GENERAL CONSTRUCTION PLAN FOR PROJECT. PLANTING AREAS NOT IMPACTED BY SITE GRADING SHALL HAVE NO ADDITIONAL TOPSOIL INSTALLED.

3. ALL BAREROOT PLANTING STOCK SHALL HAVE THEIR ROOT SYSTEMS DIPPED INTO AN ANTI-DESICCANT GEL PRIOR TO PLANTING.

4. PLANTS SHALL BE INSTALLED SO THAT THE TOP OF ROOT MASS IS LEVEL WITH THE TOP OF EXISTING GRADE. BACKFILL IN THE PLANTING PITS SHALL CONSIST OF 3 PARTS EXISTING SOIL TO 1 PART PINE FINES OR EQUIVALENT.

5. FERTILIZER SHALL CONSIST OF AGRIFORM 22-8-2, OR EQUIVALENT, APPLIED AS PER MANUFACTURER'S SPECIFICATIONS.

6. A TWO (2) INCH LAYER OF HARDWOOD MULCH SHALL BE PLACED OVER THE ROOT AREA OF ALL PLANTINGS.

7. PLANT MATERIAL SHALL BE TRANSPORTED TO THE SITE IN A TARPED OR COVERED TRUCK. PLANTS SHALL BE KEPT MOIST PRIOR TO PLANTING.

8. ALL NON-ORGANIC DEBRIS ASSOCIATED WITH THE PLANTING OPERATION SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR.

SEQUENCE OF CONSTRUCTION

1. PLANTS SHALL BE INSTALLED AS PER PLANT SCHEDULE AND PLANTING/SOIL SPECIFICATIONS FOR THE PROJECT.

2. PLANTINGS SHALL BE MAINTAINED AND GUARANTEED IN ACCORDANCE WITH THE MAINTENANCE AND GUARANTEE REQUIREMENTS FOR PROJECT.

MAINTENANCE OF PLANTINGS

1. MAINTENANCE OF ALL PLANTINGS SHALL LAST FOR A PERIOD OF 24 MONTHS.

2. ALL PLANT MATERIAL SHALL BE WATERED TWICE A MONTH DURING THE 1ST GROWING SEASON. WATERING MAY BE MORE OR LESS FREQUENT DEPENDING ON WEATHER CONDITIONS. DURING SECOND GROWING SEASON, ONCE A MONTH DURING MAY-SEPTEMBER, IF NEEDED.

3. INVASIVE EXOTICS AND NOXIOUS WEEDS WILL BE REMOVED FROM REFORESTATION AREAS. OLD FIELD SUCCESSIONAL SPECIES WILL BE RETAINED.

4. PLANTS WILL BE EXAMINED A MINIMUM OF TWO TIMES DURING THE GROWING SEASON FOR SERIOUS PLANT PESTS AND DISEASES. SERIOUS PROBLEMS WILL BE TREATED WITH THE APPROPRIATE AGENT.

5. DEAD BRANCHES WILL BE PRUNED FROM PLANTINGS.

GUARANTEE REQUIREMENTS

1. AFTER ONE GROWING SEASON, PLANT MATERIAL SHALL BE MAINTAINED AT 90% SURVIVAL THRESHOLD. A 75% SURVIVAL RATE OF FORESTATION PLANTINGS WILL BE REQUIRED AT THE END OF THE 24 MONTH MAINTENANCE PERIOD. ALL PLANT MATERIAL BELOW THE 75% THRESHOLD WILL BE REPLACED AT THE BEGINNING OF THE NEXT GROWING SEASON.

2. THE CONTRACTOR WILL NOT BE LIABLE FOR PLANT LOSS DUE TO THEFT OR VANDALISM.

LANDSCAPING NOTES

1.) TREES MUST BE A MINIMUM OF FOUR(4) FEET FROM THE CURB OR SIDEWALK AND MUST BE A MINIMUM OF FIVE(5) FEET FROM ANY STORM DRAIN.

2.) A MINIMUM DISTANCE OF TWENTY(20) FEET MUST BE MAINTAINED BETWEEN ANY TREES LOCATED ALONG THE CURB LINE AND ANY STREET LIGHTS.

3.) THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL.

4.) FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING IN THE AMOUNT OF $17,160.00 HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT FOR THIS SITE PLAN.

5.) THE OWNER/DEVELOPER IS RESPONSIBLE FOR REPLACING ANY PLANTINGS DISTURBED BY REPAIRS PERFORMED ON THE PUBLIC SEWER.

NO.	DATE	REVISION
4	1-31-18	REVISED TO SHOW EXTENDED WHC.
3	02.27.2017	Strike reference to FDC and WHC size.
2	DEC 16	SHEET SUBSTITUTION TO REVISE ROOF DRAINS, SEWER HOUSE CONNECTION AND PAVE OUTPARCEL.
1	FEB 16	REVISE BY SHEET SUBSTITUTION POPEYE'S BUILDING FOOTPRINT AND ASSOCIATED ITEMS

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE-YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

HAREN PARIKH
COLUMBIA JUNCTION DEV. LLC — 1.26.17

APPROVED: DEPARTMENT OF PLANNING & ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 2.21.17

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 4-17-17

DIRECTOR — DATE 4/17/17

SCHEDULE A – PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAY	YES	YES	YES	NO	NO	TOTAL TREES
	ADJACENT TO PERIMETER PROPERTIES	NO	NO	NO	YES	YES	
PERIMETER NO. / LANDSCAPE TYPE		1A E	2A C	2B E	2C A	3A D	
LINEAR FEET OF ROADWAY (FRONTAGE/PERIMETER)		309'	205'	162'	62'	370'	
CREDIT FOR EXISTING VEGETATION: NO OR YES (w/LINEAR FEET) (DESCRIBE BELOW IF NEEDED)		NO –	NO –	NO –	NO –	NO –	
CREDIT FOR WALL, FENCE OR BERM: NO OR YES (w/LINEAR FEET) (DESCRIBE BELOW IF NEEDED)		NO –	NO –	YES BERM 162'	NO –	YES BERM 240'	
NUMBER OF PLANTS REQUIRED:	SHADE TREES	8	5	4	1	6	
	EVERGREEN TREES	–	10	–	–	13	
	OTHER TREES (2:1 SUBSTITUTE)	–	–	–	–	–	
	SHRUBS	78	–	–	–	–	
NUMBER OF PLANTS PROVIDED:	SHADE TREES	8	5	4	1	6	24
	EVERGREEN TREES	–	10	–	–	13	23
	OTHER TREES (2:1 SUBSTITUTE)	–	–	–	–	–	–
	SHRUBS (10:1 SUBSTITUTE)	78	–	–	–	–	78
	(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	–	–	–	–	–	–

SCHEDULE B – PARKING LOT INTERNAL LANDSCAPING

NUMBER OF PARKING SPACES:	166
NUMBER OF TREES/LS-ISLES REQUIRED:	9
NUMBER OF TREES PROVIDED:	
SHADE TREES	12
OTHER TREES (2:1 SUBSTITUTION)	–
SHRUBS (10:1 SUBSTITUTION)	–

PERIMETER PLANTING LIST

SYMBOL	QUANTITY	NAME	REMARKS
	24	QUERCUS RUBRA "NORTHERN RED OAK"	2 1/2" MIN. CAL. B & B FULL HEAD
	73	TAXUS CUSPIDATA 'NANA' "DWARF JAPANESE YEW"	2'-2 1/2' HT.
	69	SPIRAEA X BUMALDA "GOLDFLAME" "GOLDFLAME SPIREA"	2'-2 1/2' HT.
	23	PINUS STROBUS "EASTERN WHITE PINE"	5'- 6' HT. UNSHEARED

STREET TREE PLANTING LIST

SYMBOL	QUANTITY	NAME	REMARKS
	10	QUERCUS RUBRA "NORTHERN RED OAK"	2 1/2" MIN. CAL. B & B FULL HEAD

PARKING LOT INTERNAL PLANTING LIST

SYMBOL	QUANTITY	NAME	REMARKS
+	12	PRUNUS SARGENTII "SARGENT CHERRY"	2 1/2" MIN. CAL. B & B FULL HEAD

NOTE:

AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWITH LISTED AND APPROVED FOR THIS SITE, SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATIONS.

"NO AS-BUILT INFORMATION IS" PROVIDED ON THIS SHEET

STATE OF MARYLAND — DONALD ALAN MASON — No. 21443 — PROFESSIONAL ENGINEER

AS-BUILT 4/1/19

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. 21443 Expiration Date: 12-21-20

BENCHMARK
ENGINEERING, INC.
ENGINEERS ▲ LAND SURVEYORS ▲ PLANNERS
8480 BALTIMORE NATIONAL PIKE ▲ SUITE 315 ▲ ELLICOTT CITY, MARYLAND 21043
(P) 410-465-6105 (F) 410-465-6644
WWW.BEI-CIVILENGINEERING.COM

STATE OF MARYLAND — ALICE A. MILLER — No. 28376 — PROFESSIONAL ENGINEER — Jan 17

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. 28376, Expiration Date: 01-01-2019.

DEVELOPER:
COLUMBIA JUNCTION DEV. LLC
100 MENLO PARK DRIVE,
SUITE 500
EDISON, NEW JERSEY 08837
201-314-6049

PROJECT: COLUMBIA JUNCTION
SECTION 3 / LOT A-2
(RETAIL CENTER)

LOCATION: TAX MAP 48 – BLOCK 1
PARCEL 548
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: REVISED SITE DEVELOPMENT PLAN
LANDSCAPE PLAN,
NOTES AND DETAILS

DATE: JANUARY, 2017 — PROJECT NO. 1221

Design: DAM/AAM | Draft: HP/AAM | Check: CAM/AAM | SCALE: AS SHOWN | DRAWING 11 OF 11

AS-BUILT

SDP-08-100