

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF AVAILABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF THE WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 OR 811 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- ALL PLAN DIMENSIONS ARE TO FACE OF CURB OR TO THE FACE OF THE BUILDING UNLESS OTHERWISE NOTED.
- THE SUBJECT PROPERTY IS ZONED NT: NEW TOWN PER THE HOWARD COUNTY COMPREHENSIVE ZONING PLAN (10/05/2013).
- AN ENVIRONMENTAL CONCEPT PLAN WAS APPROVED FOR THIS PROJECT DATED (10/15/2018).
- THIS PROJECT IS IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS.
- THE EXISTING TOPOGRAPHY IS A SURVEY OF FIELD RUN TOPO PREPARED BY MORRIS AND RITCHIE ASSOCIATES, INC. DATED 03/17/2018, HOWARD COUNTY GIS TOPO (GIRCA 2011) HAS BEEN SHOWN TO SUPPLEMENT THE PLAN.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY BENCHMARK NO. 42BM2 AND 42BM78 WERE USED FOR THIS PROJECT.
- THIS PROJECT UTILIZES ENVIRONMENTAL SITE DESIGN FOR ALL SWM PRACTICES. ALL SWM DEVICES WILL BE PRIVATELY OWNED AND MAINTAINED.
- THIS PROJECT IS IN COMPLIANCE WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY PAYMENT OF A FEE-IN-LIEU IN THE AMOUNT OF \$5,445 FOR THE 0.1 ACRE OBLIGATION. THE FEE-IN-LIEU WAS PAID WITH THE REDLINE REVISION FOR SDP-74-122.
- NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE REQUIRED WETLANDS, STREAM(S) OR THEIR BUFFERS, FOREST CONSERVATION AREAS AND 100 YEAR FLOODPLAIN.
- EXISTING UTILITIES ARE BASED UPON FIELD RUN SURVEY PERFORMED BY ACCURATE INFRASTRUCTURE DATA, INC. DATED (04/03/2018).
- WATER IS SERVED THROUGH AN EXISTING PUBLIC WATER MAIN (SDP-74-122).
- EXISTING SEWER IS SERVED THROUGH AN EXISTING 4" PUBLIC SEWER MAIN AS SHOWN ON SDP-74-122.
- THERE IS NO FLOODPLAIN ON THIS SITE.
- THERE ARE NO STREAMS OR WETLANDS ON THIS SITE. STEEP SLOPES EXIST ALONG THE BOUNDARY ADJACENT TO THE RAIL LINES.
- THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY THE TRAFFIC GROUP DATED 04/26/2018. THE AFPO STUDY WAS APPROVED ON 05/11/2019.
- A PARKING DEMAND STUDY WAS PREPARED BY THE TRAFFIC GROUP DATED 10/21/2019 AND APPROVED 02/26/2020.
- NO NOISE STUDY REQUIRED FOR THIS PROJECT.
- GEOTECHNICAL REPORT FOR THIS PROJECT WAS PREPARED BY ECS MID-ATLANTIC, LLC DATED NOVEMBER 9, 2018.
- BOUNDARY INFORMATION IS BASED ON A FIELD RUN BOUNDARY SURVEY PERFORMED BY MORRIS AND RITCHIE ASSOCIATES, INC. DATED MARCH 17, 2018.
- ON AUGUST 20, 2020, THE PLANNING BOARD APPROVED THE SITE DEVELOPMENT PLAN MODIFICATION FOR A 2100 SF ADDITION, 300 SF BUILDING ADDITION, DRIVE-THROUGH ACCESS LANE AND SETBACK ADJUSTMENT FOR THE DRIVE-THROUGH CLEARANCE BAR, MENUS SIGNS AND INTERCOM SYSTEM.
- HEALTH DEPARTMENT APPROVAL OF THIS SITE DEVELOPMENT PLAN DOES NOT ENSURE APPROVAL OF BUILDING PERMIT APPLICATIONS ASSOCIATED WITH THIS PLAN. PLANS FOR CERTAIN FACILITIES TO BE CONSTRUCTED WITHIN THE LIMITS DESCRIBED BY THIS PLAN WILL REQUIRE REVIEW AND APPROVAL BY THE HEALTH DEPARTMENT. SUCH FACILITIES MAY INCLUDE, BUT ARE NOT LIMITED TO, THOSE WHICH HAVE SWIMMING POOLS, OR THAT SELL, PREPARED OR PACKAGED FOODS, OR THAT MAY HAVE EQUIPMENT THAT EMITS RADIATION.
- THE CORRECTNESS OR COMPLETENESS OF EXISTING INFORMATION SHOWN ON THE DRAWINGS IS NOT WARRANTED OR GUARANTEED. THE CONTRACTOR SHALL VERIFY THE LOCATION OF UTILITIES AND UNDERGROUND FACILITIES, BY TEST PITS OR OTHER METHODS APPROVED BY THE OWNER'S REPRESENTATIVE, AS REQUIRED TO VERIFY EXACT LOCATIONS AND DEPTHS WITHIN THE LIMIT OF DISTURBANCE. ALL DISCREPANCIES BETWEEN INFORMATION SHOWN ON THE DRAWINGS AND THAT VERIFIED IN THE FIELD SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING WORK.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY IN THE AMOUNT OF \$15,270 FOR 9 SHADE TREES (\$300/TREE), 31 EVERGREEN AND 7 ORNAMENTAL TREES (\$150/TREE), AND 229 SHRUBS (\$30/SHRUB) HAS BEEN POSTED WITH THE DEVELOPER'S AGREEMENT.
- IN ACCORDANCE WITH SECTION 128.08.B OF THE ZONING REGULATIONS, THE EXISTING BUILDINGS IS CONSIDERED A NON-COMPLYING STRUCTURE TO THE 50' BUILDING SETBACK FROM SNOWDEN RIVER PARKWAY SINCE IT PRE-DATES THE RIGHT-OF-WAY DEDICATION FOR THE SNOWDEN RIVER WIDENING CAPITAL PROJECT (J-4222).

ADDRESS CHART

LOT / PARCEL #	STREET ADDRESS	ACREAGE
LOT D-12/0397	7090 DEEPAGE DRIVE	1.79 AC. (77,851 SF)

PERMIT INFORMATION CHART

ADDRESS	TAX ACCOUNT NO.	PLAT NO.				
7090 DEEPAGE DRIVE	108030	26053-26054				
PARCEL	L / F	GRID	ZONING	TAX MAP NO.	ELECT. DIST.	CENSUS TRACT
0397	1 / 1	4	NT	42	6	606705

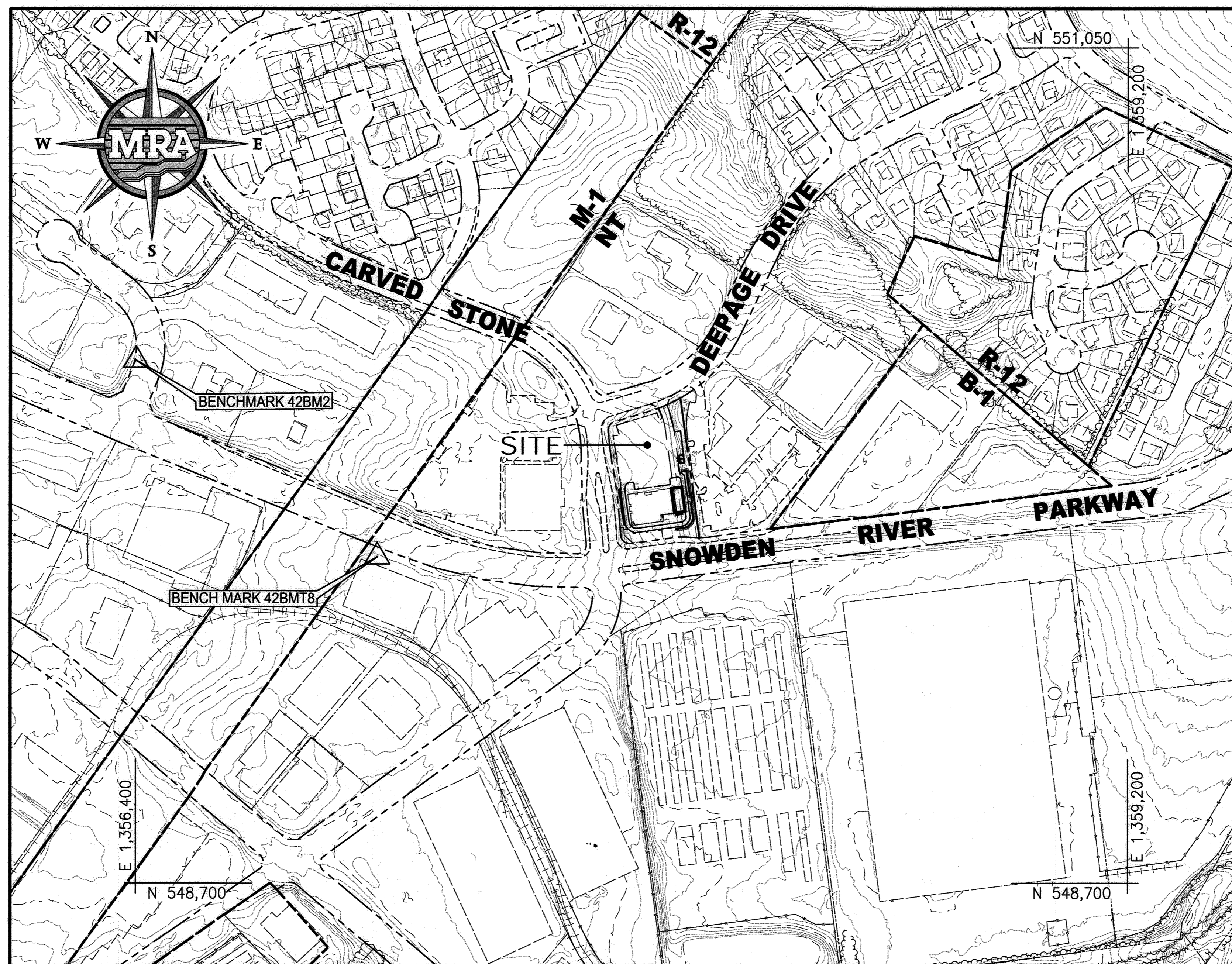
PARKING TABULATIONS

USE	GROSS S.F.	PARKING RATE	PARKING SPACES REQUIRED
EXISTING RESTAURANT - CRAWIN	4,364 SF	14/1,000 SF	61
EXISTING RETAIL - GYM SOURCE	2,807 SF	5/1,000 SF	14
EXISTING RETAIL - CHARM CITY RUN	1,485 SF	5/1,000 SF	8
EXISTING RESTAURANT - WACANT	1,582 SF	14/1,000 SF	22
PR. ADDITION - COFFEE/DONUT SHOP	2,100 SF	14/1,000 SF	30
PR. OUTDOOR SEATING AREA - COFFEE/DONUT SHOP	300 SF	3/1,000 SF	1
TOTAL PARKING REQUIRED			136
TOTAL PARKING PROVIDED (83 + 4 ADA SPACES)			87*

- CURRENT HOWARD COUNTY PARKING REGULATIONS WERE UTILIZED FOR THIS CHART. SINCE THERE WERE NOT SPECIFIC COUNTS LISTED FOR RESTAURANTS ON THE FDP.
- REFER TO NOTE 10 FOR REFERENCE TO THE PARKING DEMAND STUDY. THE PARKING DEMAND STUDY DETERMINED THAT THERE IS SUFFICIENT PARKING SPACES AVAILABLE AT ALL TIMES EXCEPT FOR A 1 HOUR PERIOD ON SATURDAY MORNING FROM 8:30-9:30 AM.
- *REFER TO GENERAL NOTE 10.

SITE DEVELOPMENT PLAN

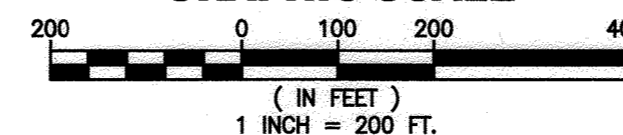
SNOWDEN CROSSING 7090 DEEPAGE DRIVE HOWARD COUNTY, MARYLAND



LOCATION PLAN

SCALE: 1"=200'

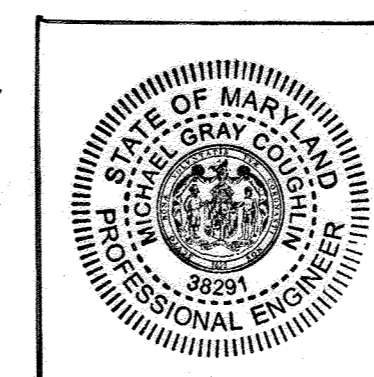
GRAPHIC SCALE



STORMWATER MANAGEMENT INFORMATION						
LOT/PARCEL NUMBER	FACILITY NAME & NUMBER	PRACTICE TYPE (QUANTITY)	PUBLIC	PRIVATE	HOA MAINTAINS	MISC.
D-12 / 0397	MICROBIORETENTION FACILITY 1	M-6 (526 CF)	NO	YES	NO	N/A
D-12 / 0397	FILTERRA FACILITY 1	M-6 (475 CF)	NO	YES	NO	N/A
D-12 / 0397	FILTERRA FACILITY 2	M-6 (475 CF)	NO	YES	NO	N/A

ASBUILT CERTIFICATION

I HEREBY CERTIFY, BY MY SEAL, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE RECORDS SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS ASBUILT PLAN MEET THE APPROVED PLANS AND SPECIFICATIONS 2 AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 38291 EXPIRATION DATE: 1/13/2024



Signature: Michael Cori
DATE: 11-2-2023

DESIGN & DRAWING BASED ON MARYLAND COORDINATE SYSTEM (MCS): HORIZONTAL: NAD 83 (2011) VERTICAL: NAVD 88

DATUM

DESIGN & DRAWING BASED ON MARYLAND COORDINATE SYSTEM (MCS): HORIZONTAL: NAD 83 (2011) VERTICAL: NAVD 88

OWNER / DEVELOPER

SNOWDEN CROSSING LLC
2800 QUARRY LAKE DRIVE, SUITE 340
BALTIMORE, MD 21209
PHONE: 410-306-0700
ATTN: SCOTT CHERRY

LEGEND

- EX. EDGE OF PAVEMENT
- EX. CURB AND GUTTER
- EX. TREE LINE
- EX. ADJACENT PROPERTY LINE
- EX. PROPERTY LINE
- EX. RIGHT OF WAY
- EX. EASEMENT
- EX. BUILDING/STRUCTURE
- EX. 2' CONTOUR
- EX. 10' CONTOUR
- EX. ZONING
- PR. CURB AND GUTTER
- EX. BUILDING/STRUCTURE

SITE ANALYSIS DATA CHART

1. SITE AREA	1.79 ACRES (77,851 SF)
2. AREA OF PLAN SUBMISSION	0.80 ACRES (34,835 SF)
3. LIMIT OF DISTURBANCE	0.80 ACRES (34,835 SF)
4. PRESENT ZONING	NT
5. EXISTING USE	RETAIL/RESTAURANT
6. PROPOSED USE	RETAIL/RESTAURANT WITH ADDITION OF A FAST FOOD RESTAURANT AND DRIVE THRU WINDOW
7. FLOOR SPACE	EXISTING: 10,239 SF PROPOSED: 2,100 SF TOTAL: 12,339 SF
8. PARKING SPACES REQUIRED	136
9. PARKING SPACES PROVIDED	87
10. DPZ FILE REFERENCES	SDP-74-122, PB27-041 (DPZ No. F-74-39C), PB24-086, PB20-196, 118-A-3 PART 2, PLAT NO. 3337 (DPZ No. F-75-87C) PLAT NO. 20563-20564 (F-12-052) PUBLIC PUBLIC 42 / 357
11. SANITARY SEWER / WATER SERVICE	6
12. TAX MAP / PARCEL NO.	0.00 Ac.
13. ELECTION DISTRICT	1.14 Ac.
14. EX. STEEP SLOPES >15%	0.65 Ac.
15. EX. IMPERVIOUS AREA (ON-SITE)	1.26 Ac.
16. EX. OPEN SPACE (ON-SITE)	0.53 Ac.
17. PR. IMPERVIOUS AREA (W/N LOD)	0.27 Ac.
18. EX. IMPERVIOUS AREA (W/N LOD)	0.53 Ac.
19. EX. OPEN SPACE (W/N LOD)	0.39 Ac.
20. PR. OPEN SPACE (W/N LOD)	0.41 Ac.
21. PR. IMPERVIOUS AREA (W/N LOD)	0.00 Ac.
22. EX. OPEN SPACE (W/N LOD)	0.00 Ac.
23. EXISTING FOREST ON-SITE	0.00 Ac.
24. ERODIBLE SOILS ON-SITE (Cub)	0.00 Ac.
25. EXISTING WETLANDS AND BUFFER AREA	0.00 Ac.
26. EXISTING FLOODPLAIN & BUFFER AREA	0.00 Ac.

SHEET INDEX

01 OF 27	COVER SHEET
02 OF 27	SDP SITE PLAN & DETAILS
03 OF 27	SDP SITE PLAN & DETAILS (REVISION)
04 OF 27	SDP DRAINAGE AREA MAP
05 OF 27	SDP DRAINAGE AREA MAP (REVISION)
06 OF 27	SDP ESC
07 OF 27	SDP ESC (REVISION)
08 OF 27	EROSION & SEDIMENT CONTROL EXISTING CONDITIONS & DEMOLITION PLAN (ESC 1 OF 4)
09 OF 27	EROSION & SEDIMENT CONTROL PROPOSED CONDITIONS PLAN (ESC 2 OF 4)
10 OF 27	EROSION & SEDIMENT CONTROL DETAILS (ESC 3 OF 4)
11 OF 27	EROSION & SEDIMENT CONTROL NOTES (ESC 4 OF 4)
12 OF 27	FINAL GRADING PLAN
13 OF 27	UTILITY PLAN, STORM DRAIN PLAN & DRAINAGE AREA MAP
14 OF 27	UTILITY PROFILES
15 OF 27	SITE PLAN
16 OF 27	SITE DETAILS-1
17 OF 27	SITE DETAILS-2
18 OF 27	SITE DETAILS-3
19 OF 27	STORMWATER MANAGEMENT PLAN
20 OF 27	STORMWATER MANAGEMENT PROFILES & DETAILS
21 OF 27	STORMWATER MANAGEMENT NOTES
22 OF 27	GEO-TECHNICAL BORING LOGS & LOCATION PLAN
23 OF 27	LANDSCAPE PLAN
24 OF 27	LANDSCAPE NOTES & DETAILS
25 OF 27	PROPOSED RETAINING WALLS PLAN AND GENERAL NOTES
26 OF 27	PROPOSED RETAINING WALLS PROFILES AND SECTIONS
27 OF 27	PROPOSED RETAINING WALLS TYPICAL DETAILS

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. 38291, EXPIRATION DATE: 1/13/2024.



Know what's below.
Call before you dig.

PROTECT YOURSELF, GIVE THREE WORKING DAYS NOTICE
THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERE TO APPURTENANT.



MORRIS & RITCHIE ASSOCIATES, INC.

ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
1220-B EAST JOPPA ROAD, SUITE 400K
TOWSON, MARYLAND 21286
(410) 821-1690
FAX (410) 821-1748
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REVISED SITE DEVELOPMENT PLAN

VILLAGE OF OWEN BROWN, SECTION 2, AREA 2, LOT D-12, SNOWDEN CROSSING
COVER SHEET

SDP-74-122
TAX MAP 42 ~ GRID 04 ~ PARCEL 0397 ~ ZONING NT ~ DEED REF 17342/229
PLAT NO. 2741 ~ TAX ASSESSMENT DISTRICT 82 ~ 6th ELECTION DISTRICT
7090 DEEPAGE DRIVE, HOWARD COUNTY, MARYLAND, 21045

DATE	REVISIONS	JOB NO.:
11/22/2019	REVISED SDP-74-122 TO INCLUDE 2100 SF ADDITION	19650
11/7/2023	ASBUILT	SCALE: AS SHOWN
		DATE: 04/08/2022
		DRAWN BY: DTP
		DESIGN BY: THIS
		REVIEW BY: THIS
		SHEET: 01 OF 27

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Signature: [Redacted]
DATE: 5/10/22
Signature: [Redacted]
DATE: 6/14/22
Signature: [Redacted]
DATE: 6/14/22

APPROVED
PLANNING BOARD HOWARD COUNTY

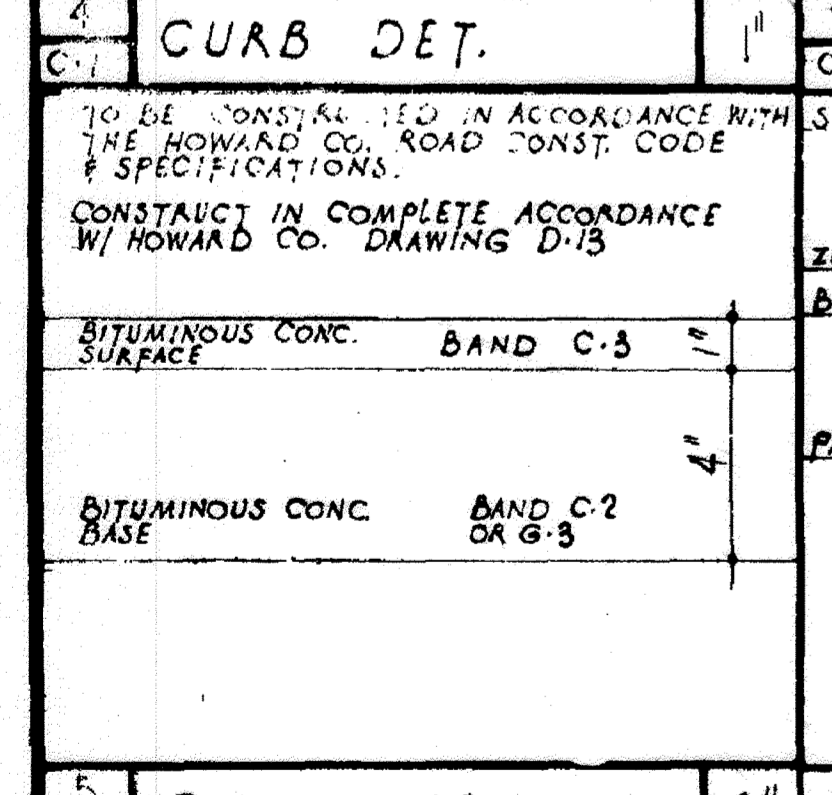
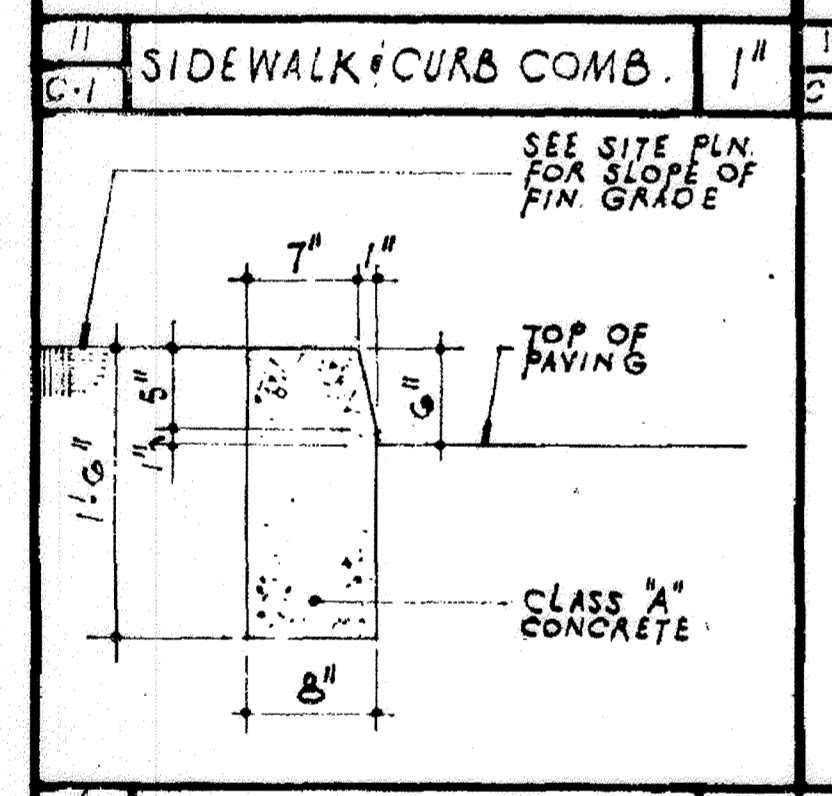
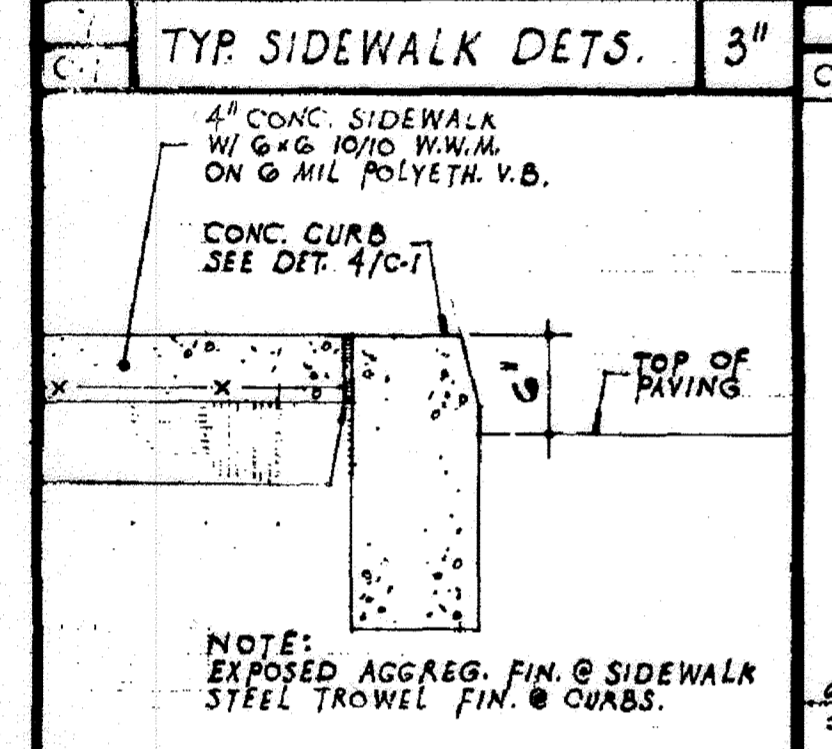
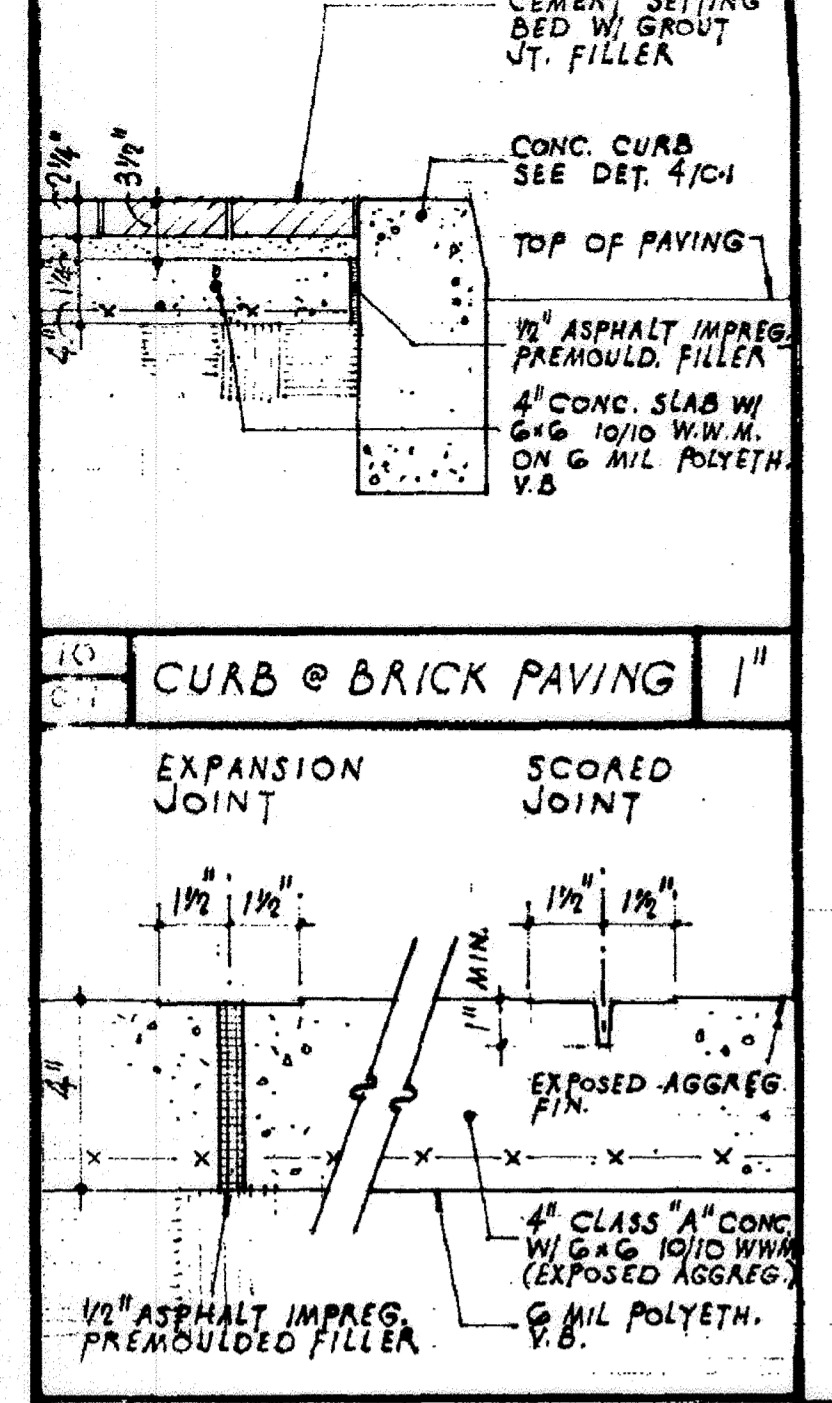
DATE: 08/20/2020

APPROVED FOR PUBLIC WATER AND PUBLIC SEWER

Signature: [Redacted]
DATE: 6/2/22
Signature: [Redacted]
DATE: 6/2/22

PURPOSE STATEMENT

THE PURPOSE OF THE REVISED SITE DEVELOPMENT PLAN IS TO CONSTRUCT A 2,100 SF BUILDING ADDITION WITH DRIVE THROUGH LANE AND ASSOCIATED PARKING UPGRADES, PATIO, AND SWM FACILITIES.

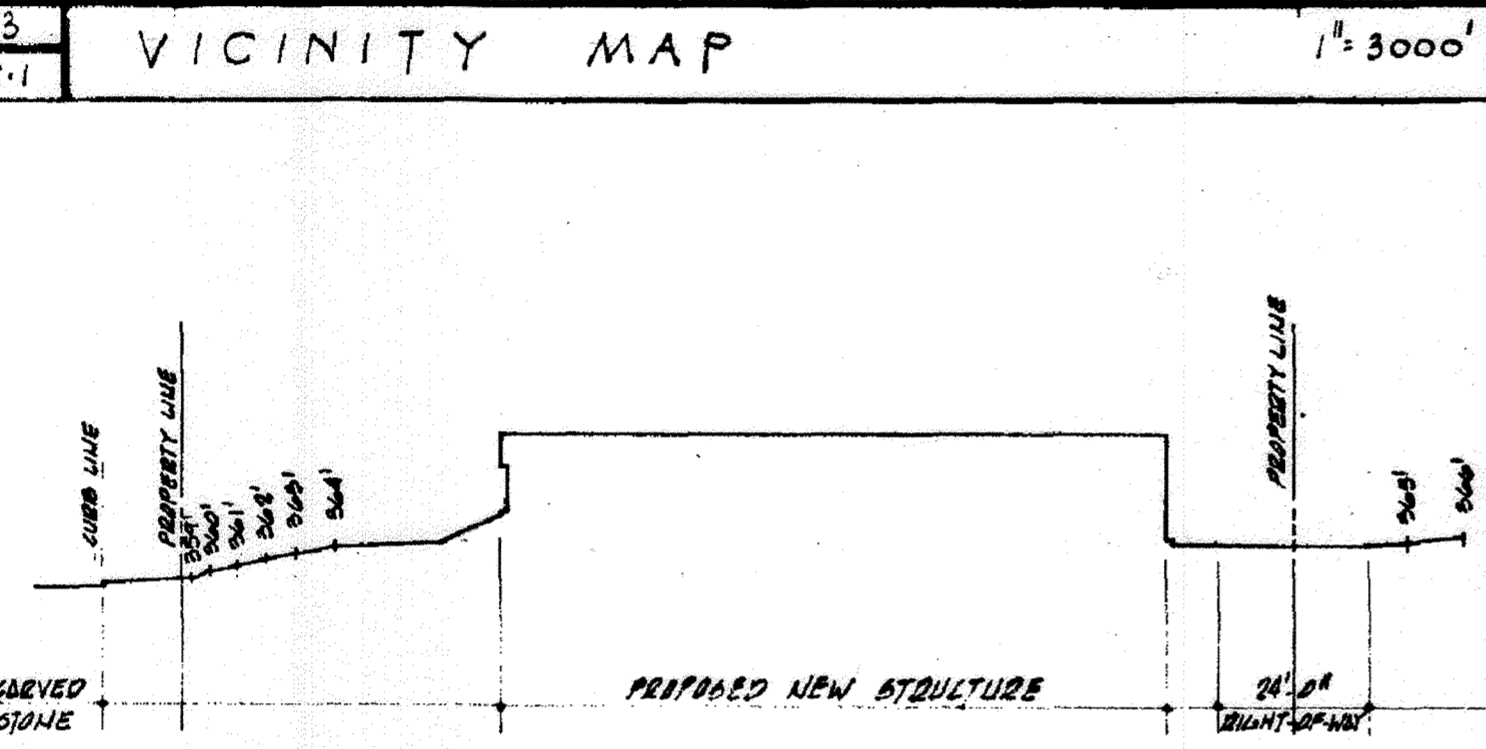
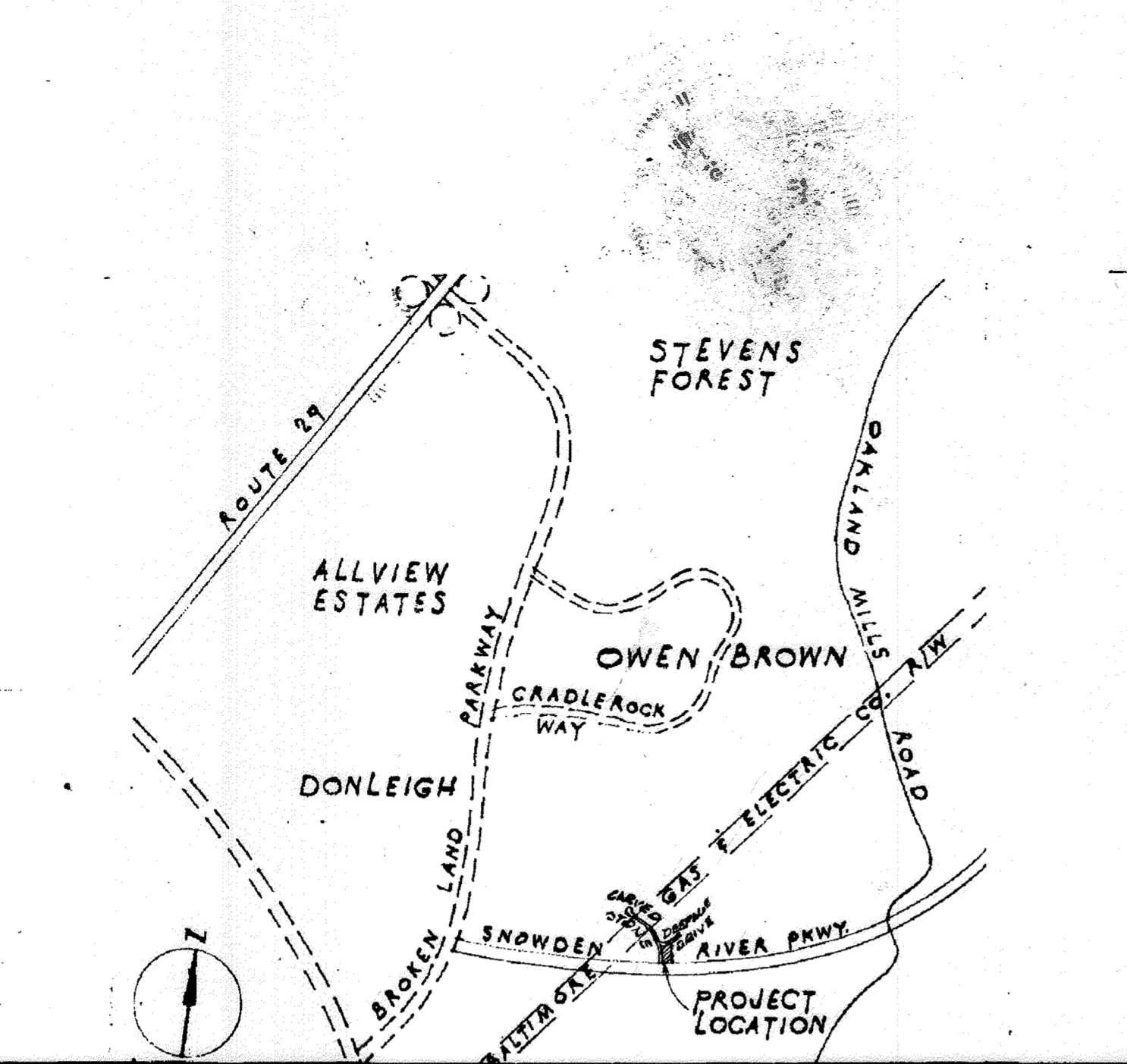


PURPOSE STATEMENT

THE PURPOSE OF THE REVISED SITE DEVELOPMENT PLAN IS TO CONSTRUCT A 2,100 SF BUILDING ADDITION WITH DRIVE THROUGH LANE AND ASSOCIATED PARKING IMPROVEMENTS, PATIO, AND SWM FACILITIES.

APPROVED PLANNING BOARD HOWARD COUNTY

DATE: 08/20/2020



GENERAL NOTES

THE STATE FIRE PROTECTION ENGINEER FOR HOWARD CO., MD., HAS CLASSIFIED THIS STRUCTURE AS CONSTRUCTION TYPE "2-C", USE GROUP "F-3".

THE LOTS OR PARCELS SHOWN ON THIS PLAN ARE SUBJECT TO THE SUPPLEMENTAL SEWER IN-AID-OF-CONSTRUCTION CHARGE CREATED BY SECTION 20.811A OF THE HOWARD COUNTY CODE AND TO EXECUTIVE ORDER NO. 76.7.

EX. 2600 S.F. ADDITION 275 S.F. PATIO 900 S.F. TOTAL: 3775 S.F.

PARKING REQUIRED: 1.40 AC. @ 53 SPACES PER 1000 SF = 53 SPACES (3775 + 1000 = 3.78 x 14 = 52.9)

PROVIDED: TOTAL ON SITE = 87 SPACES = 4 HC SPACES = 83 REG SPACES

PROJECT TABULATIONS

SITE LIGHTING NOTES:

- 18' POLE W/ 1-250 W. COLOR CORRECTED MERCURY VAPOR LAMP.
- 18' POLE W/ 2-250 W. COLOR CORRECTED MERCURY VAPOR LAMPS.
- 8' POLE W/ 1-150 W. COLOR CORRECTED MERCURY VAPOR LAMP.

FIXTURE TYPES A & B TO BE KIM E.K.G. PHASE II, 200 SERIES OR SIMILAR.

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. 38291, EXPIRATION DATE: 1/13/2024.

REDLINE NOTE

THIS SHEET DOES NOT APPLY TO THE CONSTRUCTION OF THE 2,100 SF ADDITION AND THE DRIVE-THRU.

SEE SHEETS 8-27 FOR THE BUILDING EXPANSION AND MODIFICATIONS.

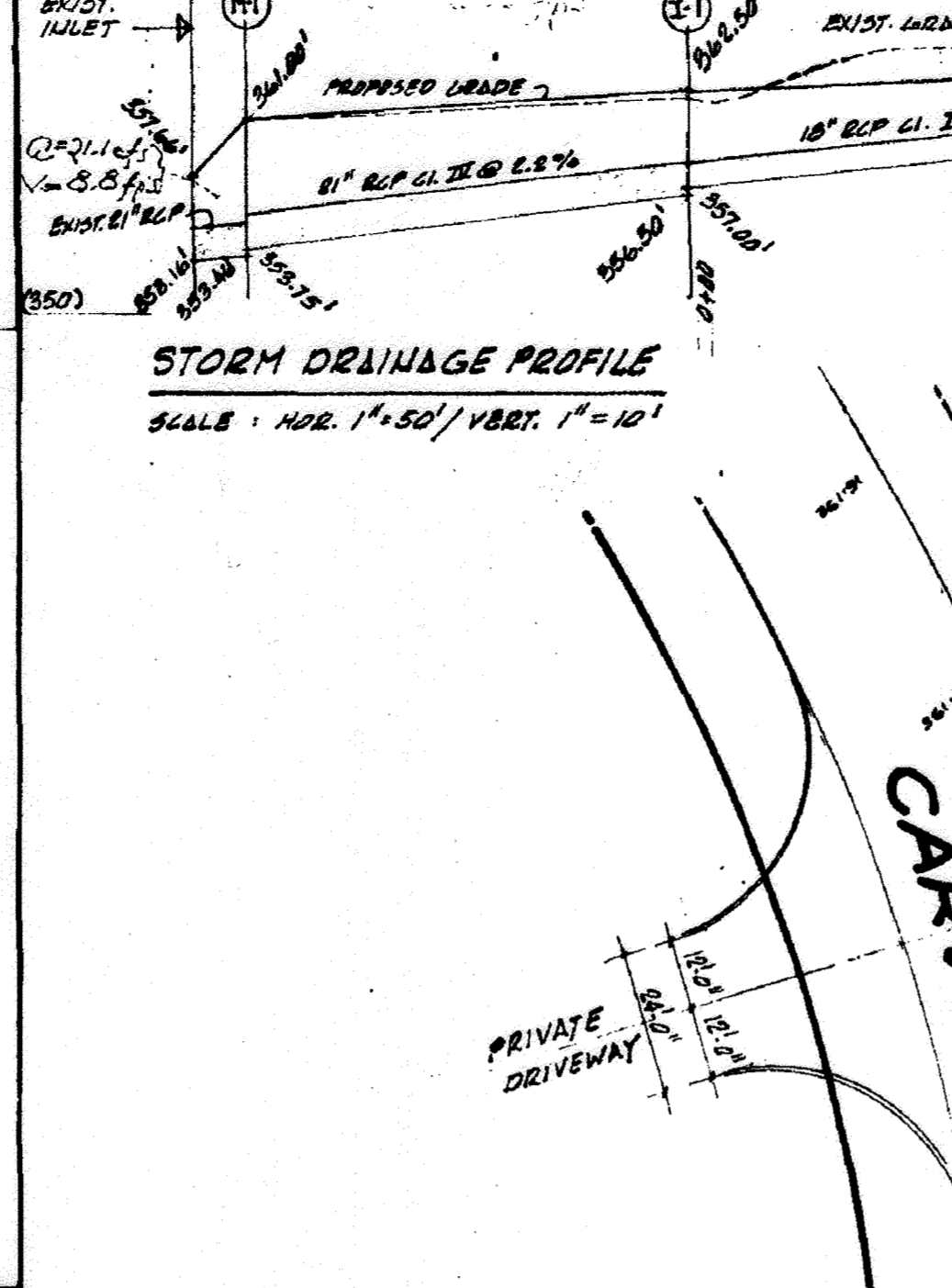
NOTE:

Elevations shown hereon are in accordance with Bench Marks delineated on Sheet 1 of 7, of Road Construction Plans, Village of Owen Brown, Section 2, Area Columbia, Maryland, by Whitman, Reardon & Associates, Engineers, Baltimore, Md. Bench Mark No. L-203 - Roadside Flange Bolt on Fire Hydrant, southeast corner Snowden River Parkway and Barber Road, Elevation 358.17

Underground construction and utilities shown hereon were compiled from available records and should be verified as neither the accuracy nor completeness of these facilities can be assured. (Record Sanitary Sewer M.H. No. 8103 Invert from Contract No. 253A) Property line information taken from Record Plat of Village of Owen Brown, Columbia, and recorded in Plat Book 27 of Folio 41.

OWNER: ROY PASSINI INC. 512 DALE LANE 26826, MD. 20760

ARCHITECT: THOMAS CLARK AIA - ARCHITECT 4702 MONTGOMERY LANE BETHESDA, MD. 20814



STRUCTURE

NO.	TYPE	TOP EL.	REMARKS
M-1	MANHOLE	361.80'	NEW HOWARD CITY STD. D-102
I-1	INLET	362.50'	NEW HOWARD CITY STD. D-102
I-2	"DOUBLE" INLET	363.75'	NEW HOWARD CITY STD. D-102

PIPE

DIA.	TYPE	LENGTH	REMARKS
21"	RCP @ 1%	120'	
18"	RCP @ 1%	150'	
18"	RCP @ 1%	22'	

SCHEDULES

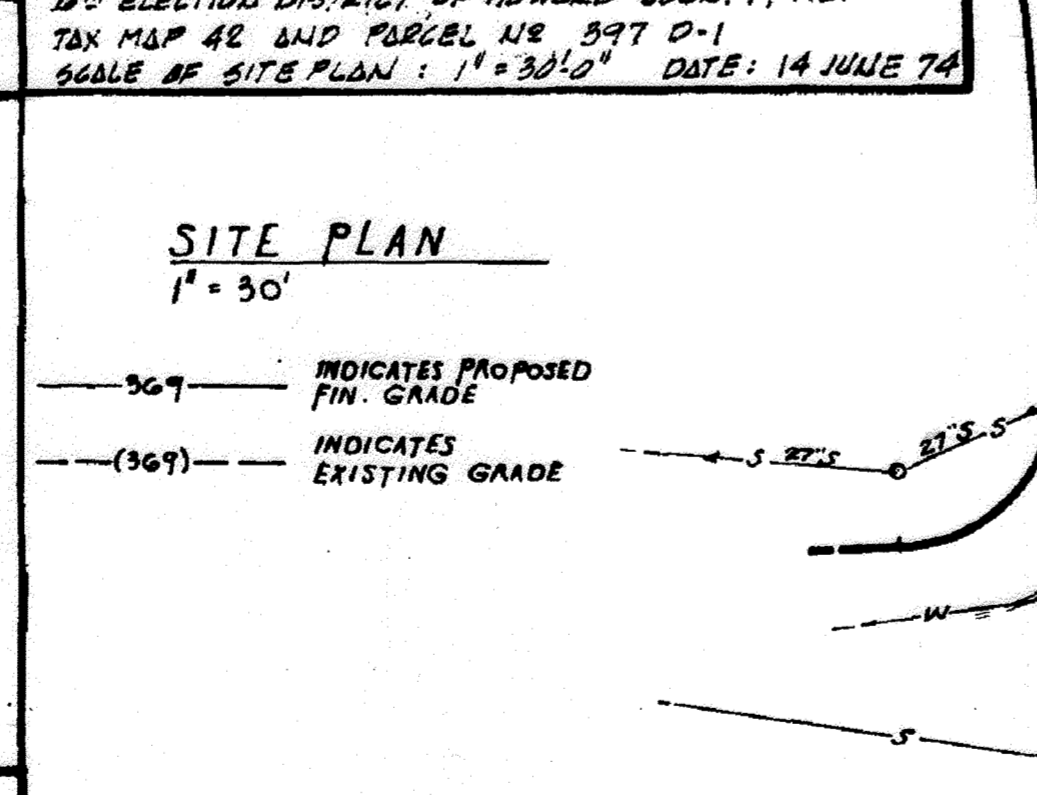
ROY'S PLACE TOO

A RESTAURANT FOR ROY PASSINI, INC. VILLAGE OF OWEN BROWN LOT D-1, SECTION 2, AREA 2 10th ELECTION DISTRICT OF HOWARD COUNTY, MD. TAX MAP 48 AND PARCEL NO. 597 D-1 SCALE OF SITE PLAN: 1" = 30' DATE: 14 JUNE 74

SITE PLAN 1" = 30'

---(367)--- INDICATES PROPOSED FIN. GRADE

---(367)--- INDICATES EXISTING GRADE

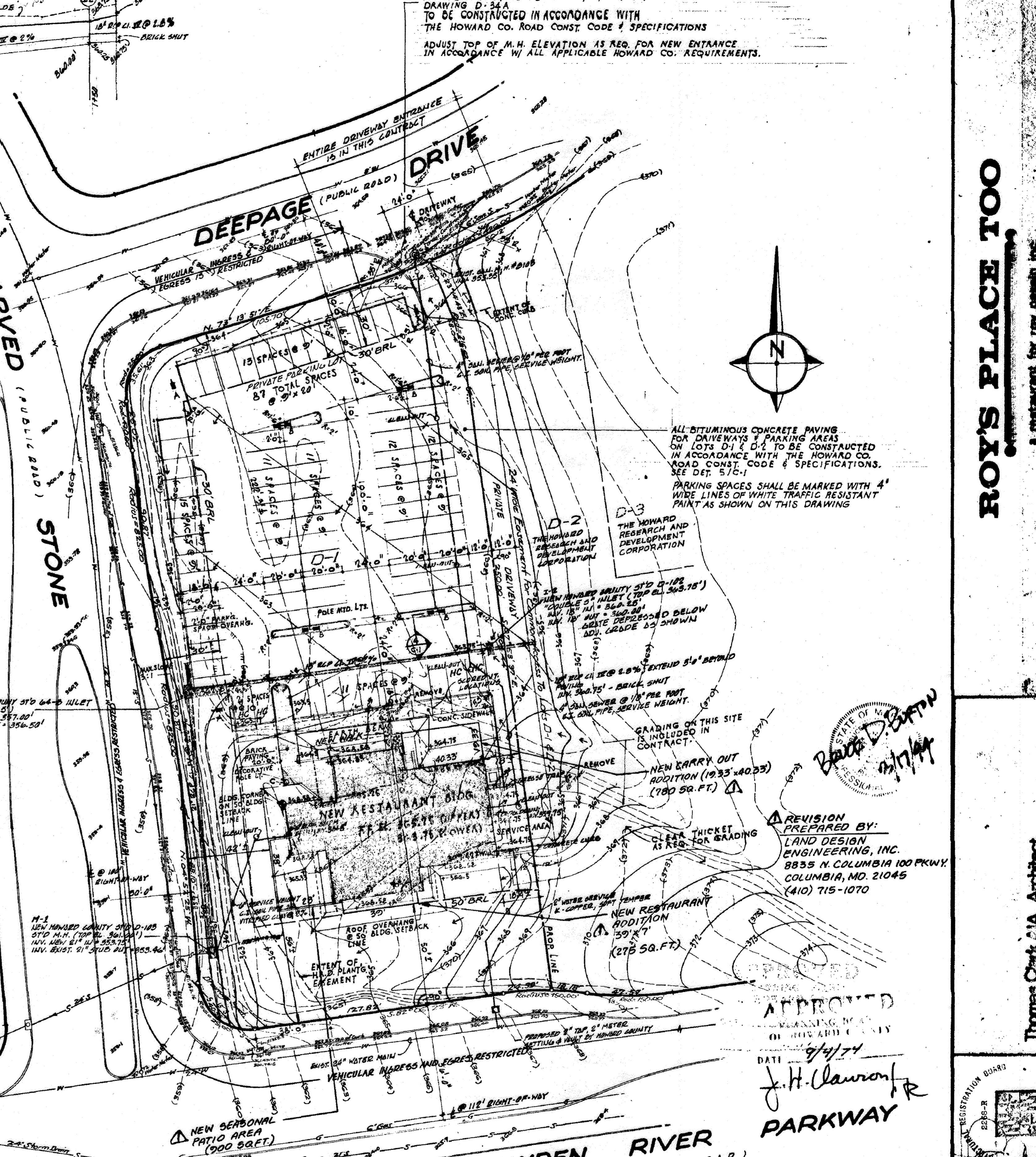


NOTE:

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS AND PUBLIC ROADS - HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS AND PUBLIC ROADS - HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS



REVISIONS

11/22/2019 REVISION SDP-74-122 TO INCLUDE 2100 SF ADDITION

SHEET: 02 OF 27

SITE DEVELOPMENT PLAN

LOT D-12, VILLAGE OF OWEN BROWN COLUMBIA

HOWARD COUNTY, MARYLAND

6th ELECTION DISTRICT

SCALE: 1" = 30'

MAY, 1974

JOHN J. ALLEN ASSOCIATES, CIVIL ENGINEERS - LAND PLANNERS & SURVEYORS

4801 MONTGOMERY LANE BETHESDA, MARYLAND

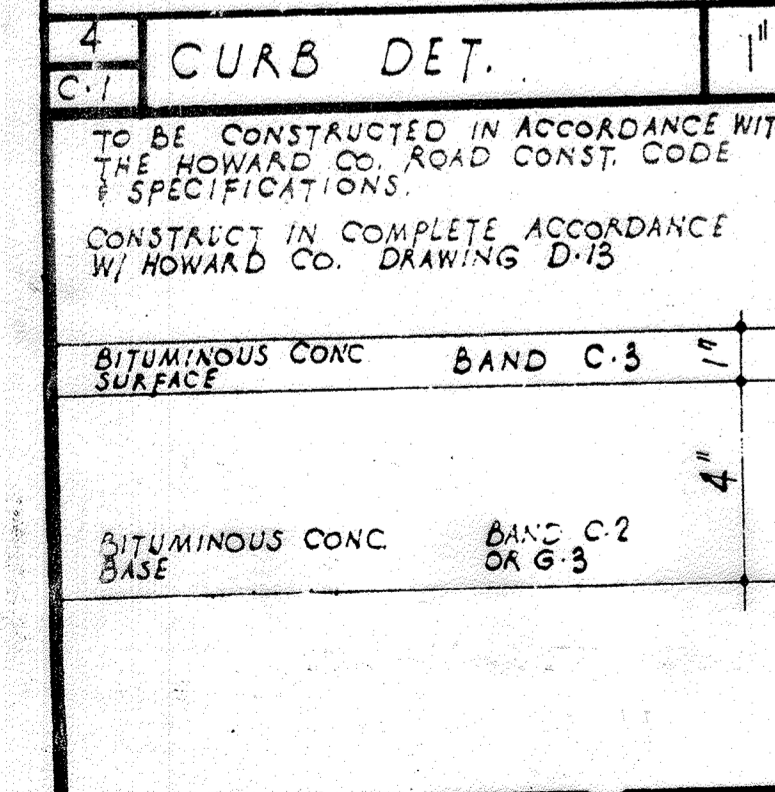
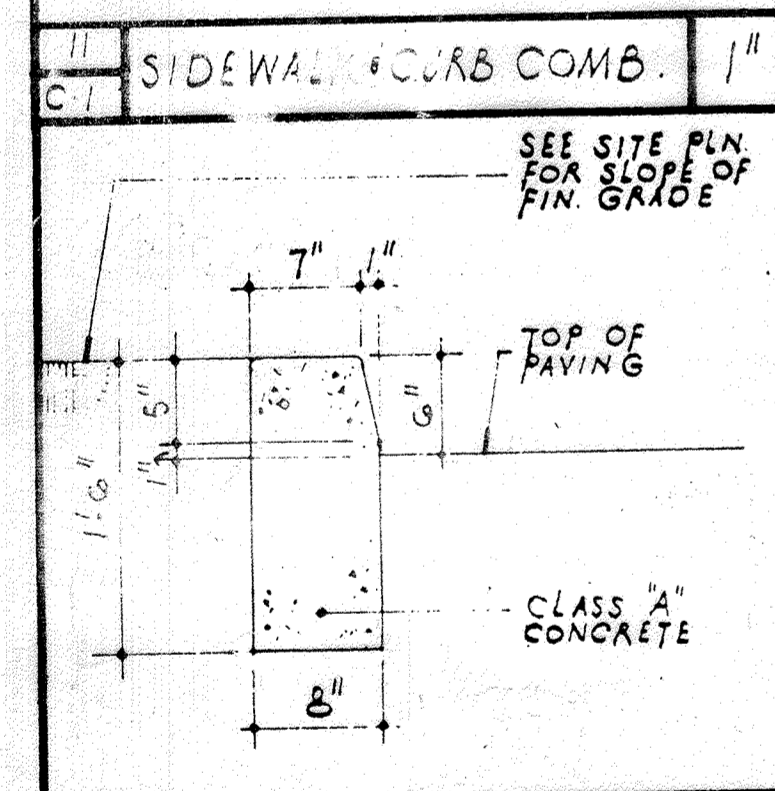
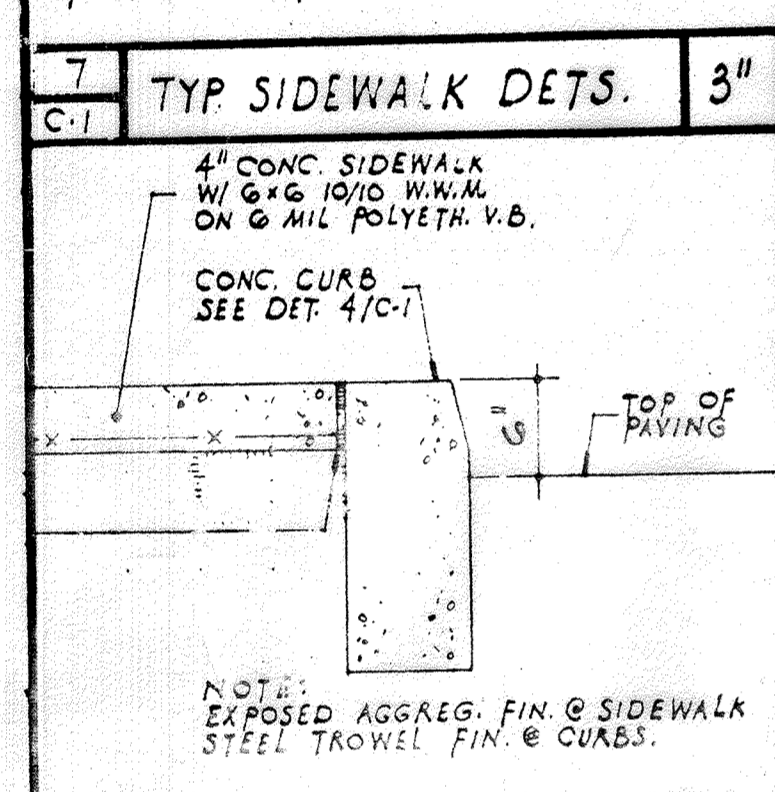
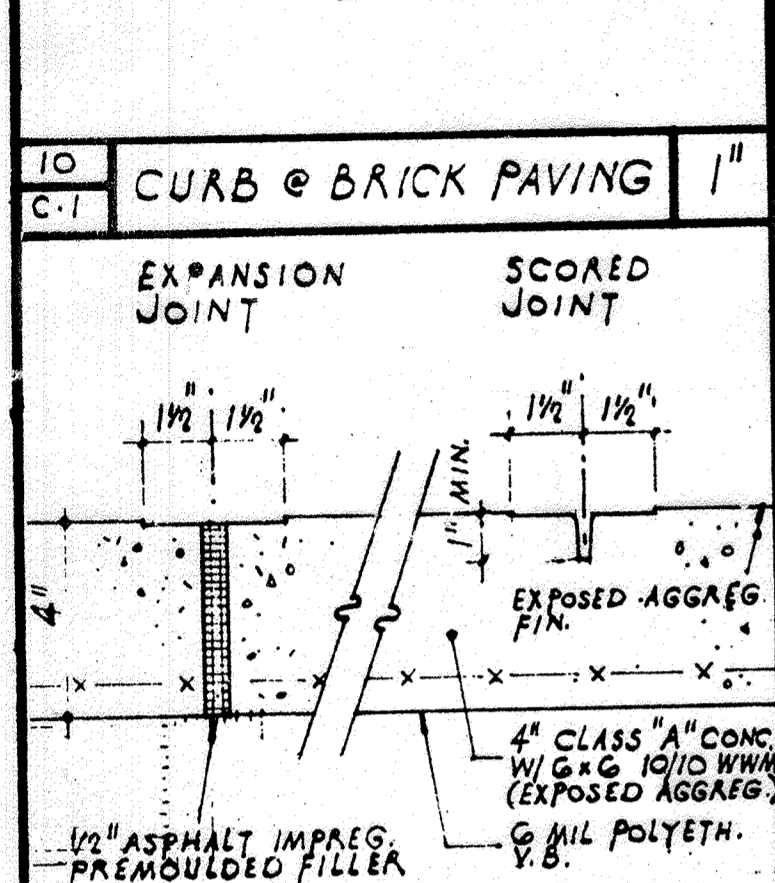
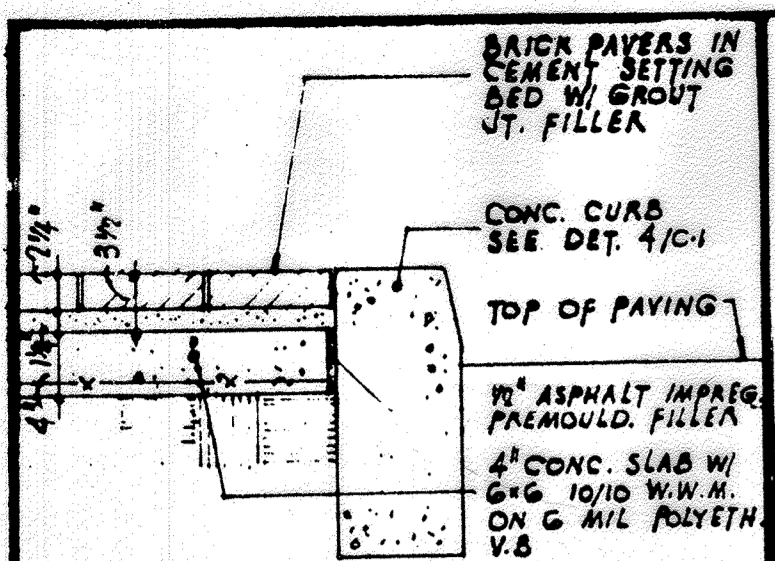
SDP-74-122c

29 JULY 74

ROY'S PLACE TOO

a restaurant for roy passini inc.

Thomas Clark AIA Architect Bethesda, Maryland 682-2520



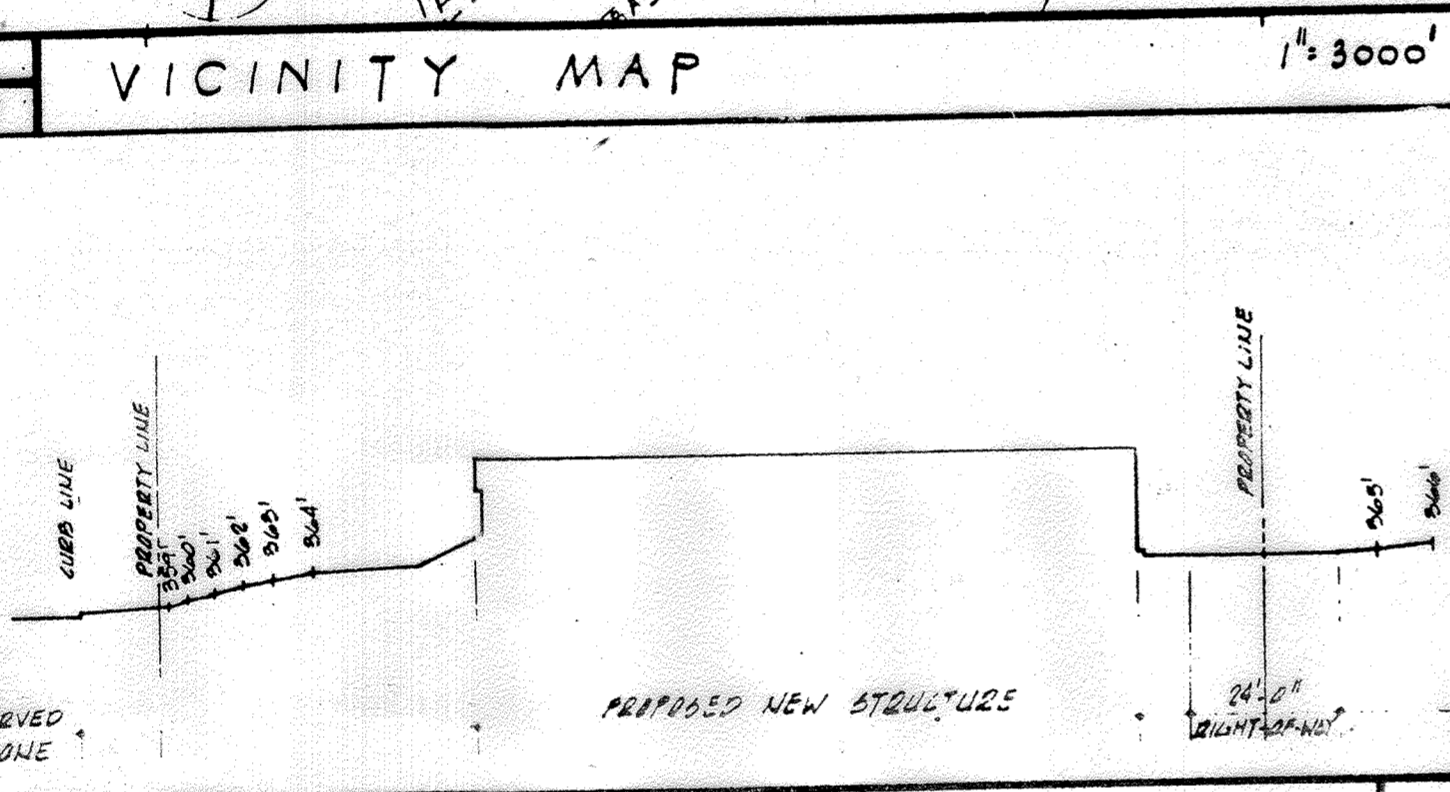
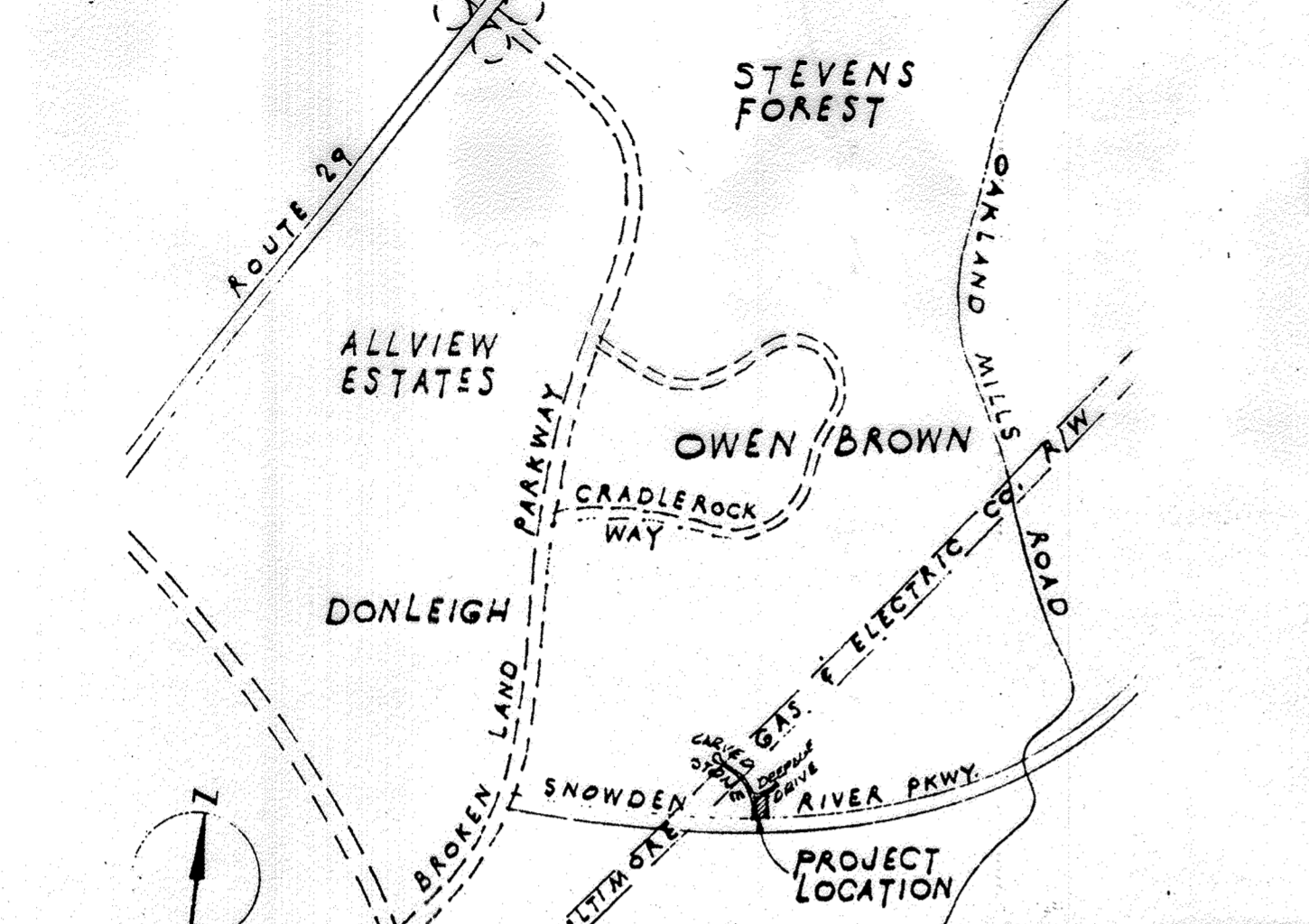
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THE PURPOSE OF THE REVISED SITE DEVELOPMENT PLAN IS TO CONSTRUCT A 2,100 SF BUILDING ADDITION WITH DRIVE THROUGH LANE AND ASSOCIATED PARKING, UPDATES, PATIO AND SWM FACILITIES.

APPROVED
PLANNING BOARD HOWARD COUNTY
DATE 08/20/2010

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. 38291, EXPIRATION DATE: 1/13/2014.

REDLINE NOTE
THIS SHEET DOES NOT APPLY TO THE CONSTRUCTION OF THE 2,100 SF ADDITION AND THE DRIVE-THRU. SEE SHEETS 8-27 FOR THE BUILDING EXPANSION AND MODIFICATIONS.

Michael Conner
PROFESSIONAL ENGINEER



GENERAL NOTES

TO BE CONSTRUCTED IN ACCORDANCE WITH THE HOWARD CO. ROAD CONST. CODE SPECIFICATIONS.

CONSTRUCT IN COMPLETE ACCORDANCE WITH HOWARD CO. DRAWING D-13

SITE: LOT D-1, SECTION 2, AREA 2 VILLAGE OF OWEN BROWN, COLUMBIA, HOWARD CO., MD. LAND AREA: 61,407 SQ. FT. (1.410 AC.)

ZONING: EMPLOYMENT CENTER - COMMERCIAL (EOP110A III Part II)

BUILDING: GROSS BLDG AREA (RESTAURANT) EATING AREA EX. 6,955 S.F. ADDITION 3,000 S.F. PATIO 881 S.F. EXISTING BUILDING COVERAGE 6,955 SF (11.3%) * Excludes Patio Area

PARKING: REQUIRED: 140 SPACES PER 1000 BSF = 53 SPACES (3775 + 1000 = 3.78 X.M = 52.9)

PROVIDED: TOTAL ON SITE = 87 SPACES = 4 HC SPACES = 83 REG SPACES

PROJECT TABULATIONS

SITE LIGHTING NOTES:

A. 18" POLE W/ 1-250W. COLOR CORRECTED MERCURY VAPOR LAMP.

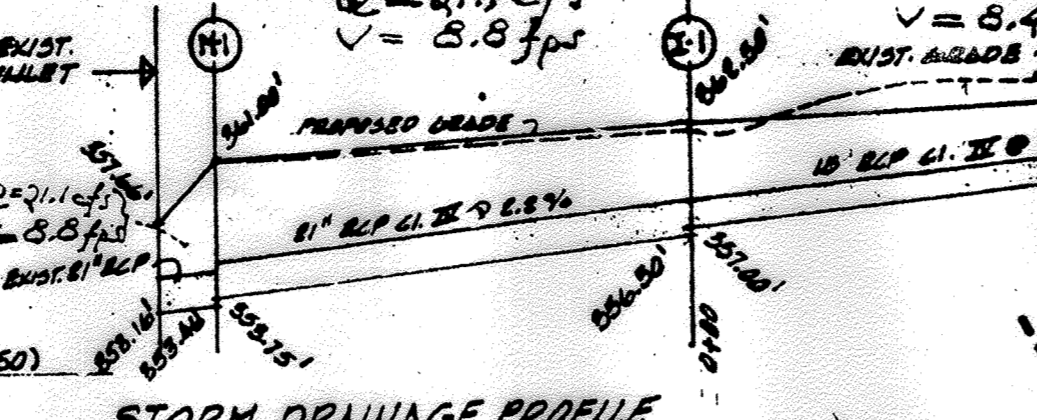
B. 18" POLE W/ 2-250W. COLOR CORRECTED MERCURY VAPOR LAMP.

C. 8" POLE W/ 1-150W. COLOR CORRECTED MERCURY VAPOR LAMP.

FIXTURE TYPES A & B TO BE KIM E.K.G. PHASE II, 200 SERIES OR SIMILAR.

NOTE: Elevations shown hereon are in accordance with Bench Marks delineated on sheet 1 of 7, of Road Construction Plans, Village of Owen Brown, Section 2, Area Columbia, Maryland, by Whitman, Requardt & Associates, Engineers, Baltimore, Md. Bench Marks: No. L-203 - Roadside Flange Bolt on Fire Hydrant, southeast corner Snowden River Parkway and Barger Road. Elevation 358.17

Underground construction and utilities shown hereon were compiled from available records and should be verified as to their accuracy nor completeness of these facilities can be assured. (Record Sanitary Sewer M.H. No. 8103 Invert from Contract No. 2534). Property line information taken from Record Plat of Village of Owen Brown, Columbia, and recorded in Plat Book 27 at Folio 41.



STORM DRAINAGE PROFILE
SCALE: HOR. 1"=50' VERT. 1"=10'

PARKING TABULATION

1. Main Restaurant, Three Brothers Italian Restaurant, sit down restaurant
Useable Seating Area = 3,922 SF (881 SF is outside patio seating)

a) Parking Required: 14 spaces/1000 SF = 55 spaces
b) Parking Provided: 55 spaces

2. Tenant #1 - Carryout Restaurant (Starbucks Coffee)
Gross Area = 1,500 SF

a) Parking Required: 6 spaces/1000 SF of gross area = 9 spaces
b) Parking Provided = 9 spaces

3. Tenant #2 Carryout Restaurant (Ice Cream Store)
Gross Area = 1,500 SF

a) Parking Required: 6 spaces/1000 SF of gross area = 9 spaces
b) Parking Provided = 9 spaces

4. Patio Area for tenants:
Total Area = 1,820 SF

a) Parking Required: 6 spaces/1000 SF of gross area = 11 spaces
b) Parking Provided = 11 spaces

TOTAL PARKING REQUIRED: 84 SPACES
TOTAL PARKING PROVIDED: 84 SPACES

STRUCTURE

NO	TYPE	TOPEL.	REMARKS
M-1	MANHOLE	361.00'	NEW HOWARD CITY STD D-102
I-1	INLET	362.50'	NEW HOWARD CITY STD 84-5
I-2	DOUBLE S' INLET	363.75'	NEW HOWARD CITY STD D-102

PIPE

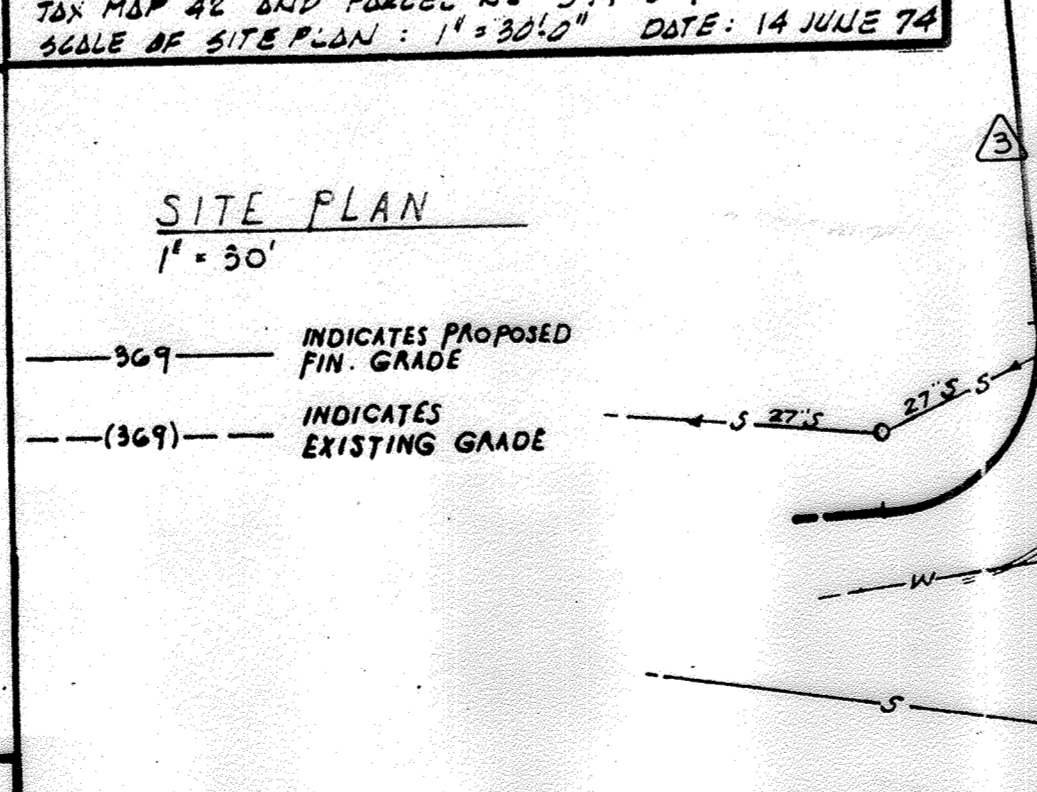
DIA	TYPE	LENGTH	REMARKS
21"	RFP CL. II	126'	
18"	RFP CL. II	150'	
18"	RFP CL. II	22'	

SCHEDULES

1-1 NEW MANHOLE QUANTITY STD 84-5 INLET (TOP ELEV. 362.50') INVERT 18" DIA. 358.50'

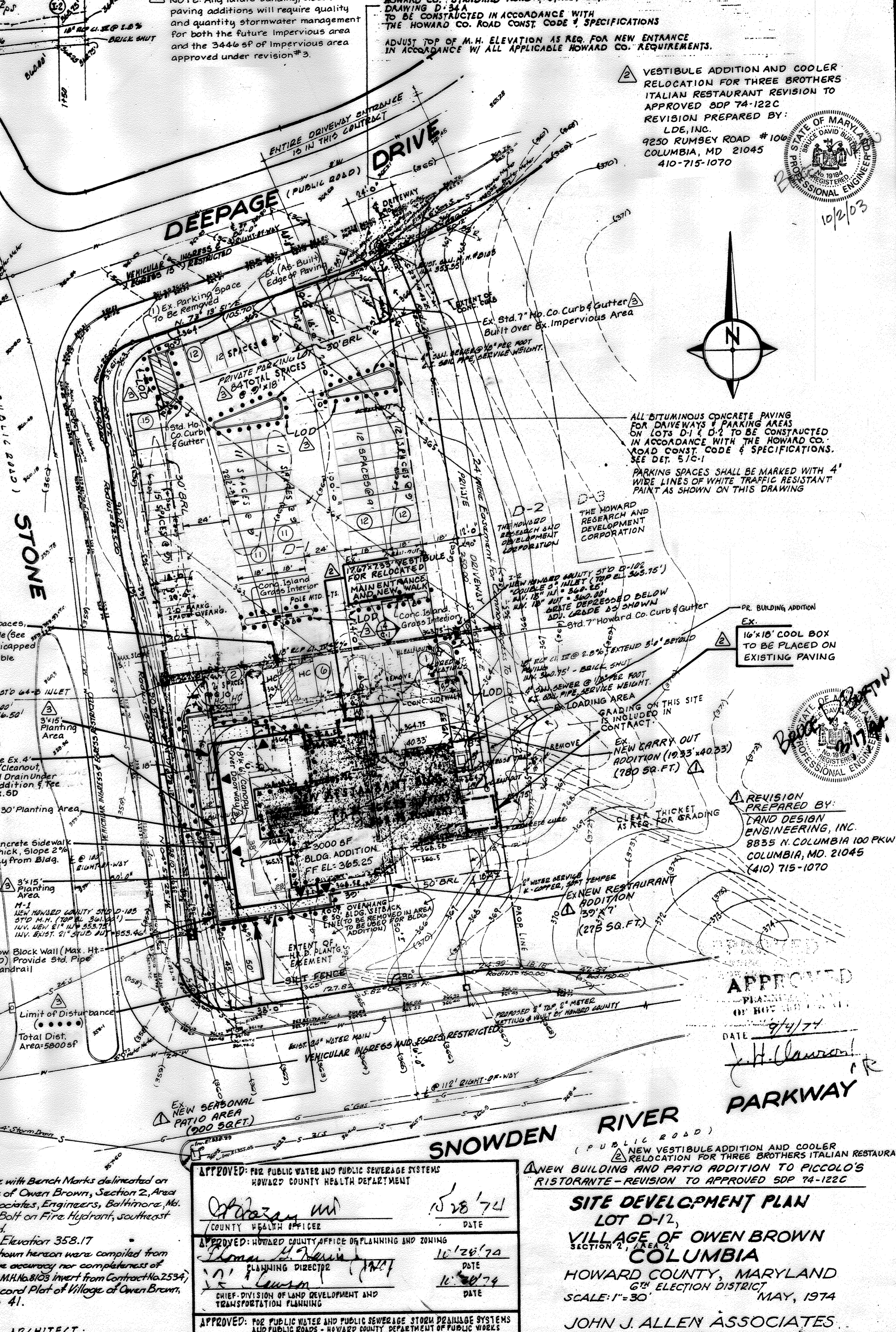
1-2 NEW MANHOLE QUANTITY STD 84-5 INLET (TOP ELEV. 363.75') INVERT 18" DIA. 359.50'

ROY'S PLACE TOO
A RESTAURANT FOR ROY PIZZOLI, INC. VILLAGE OF OWEN BROWN, LOT D-1, SECTION 2, AREA 2 24th ELECTION DISTRICT OF HOWARD COUNTY, MD. TAX MAP 42 W/D PARCEL N8 597 D-1 SCALE OF SITE PLAN: 1"=30' DATE: 14 JULIE 74



NOTE: Elevations shown hereon are in accordance with Bench Marks delineated on sheet 1 of 7, of Road Construction Plans, Village of Owen Brown, Section 2, Area Columbia, Maryland, by Whitman, Requardt & Associates, Engineers, Baltimore, Md. Bench Marks: No. L-203 - Roadside Flange Bolt on Fire Hydrant, southeast corner Snowden River Parkway and Barger Road. Elevation 358.17

Underground construction and utilities shown hereon were compiled from available records and should be verified as to their accuracy nor completeness of these facilities can be assured. (Record Sanitary Sewer M.H. No. 8103 Invert from Contract No. 2534). Property line information taken from Record Plat of Village of Owen Brown, Columbia, and recorded in Plat Book 27 at Folio 41.



NOTE: Any future building, sidewalk or paving additions will require quality and quantity stormwater management for both the future impervious area and the 3446 SF of Impervious area approved under revision #3.

NEW "COMMERCIAL DRIVEWAY ENTRANCE"
DRAWING D-34A TO BE CONSTRUCTED IN ACCORDANCE WITH THE HOWARD CO. ROAD CONST. CODE # SPECIFICATIONS. ADJUST TOP OF M.H. ELEVATION AS REQ. FOR NEW ENTRANCE IN ACCORDANCE WITH ALL APPLICABLE HOWARD CO. REQUIREMENTS.

VESTIBULE ADDITION AND COOLER RELOCATION FOR THREE BROTHERS ITALIAN RESTAURANT REVISION TO APPROVED SDP 74-122C
REVISION PREPARED BY: LDE, INC. 9230 RUMBLEY ROAD #106 COLUMBIA, MD 21045 410-715-1070

ALL BITUMINOUS CONCRETE PAVING FOR DRIVEWAYS & PARKING AREAS ON LOTS D-1 & D-2 TO BE CONSTRUCTED IN ACCORDANCE WITH THE HOWARD CO. ROAD CONST. CODE # SPECIFICATIONS. SEE DET. 5/16-1
PARKING SPACES SHALL BE MARKED WITH 4" WIRE LINES OF WHITE TRAFFIC RESISTANT PAINT AS SHOWN ON THIS DRAWING

REVISION PREPARED BY: LAND DESIGN ENGINEERING, INC. 8835 N. COLUMBIA 100 PKWY COLUMBIA, MD. 21045 (410) 715-1070

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT
DATE 10/28/74

APPROVED: HOWARD COUNTY OFFICE OF PLANNING AND ZONING
DATE 10/28/74

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE STORM DRAINAGE SYSTEMS AND PUBLIC ROADS - HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
DATE 10/28/74

SITE DEVELOPMENT PLAN
LOT D-12, VILLAGE OF OWEN BROWN COLUMBIA
HOWARD COUNTY, MARYLAND
6th ELECTION DISTRICT
SCALE: 1"=30'
MAY, 1974
JOHN J. ALLEN ASSOCIATES

THREE BROTHERS ITALIAN RESTAURANT

a restaurant for roy pizzoli, inc. Village of Owen Brown - Columbia - Howard County - Maryland

Thomas Clark AIA Architect
Baltimore, Maryland 662-2520

11/22/2019 REVISED SDP 74-122 TO INCLUDE 2100 SF ADDITION

SHEET 03 OF 27 SDP-74-122C
SITE PLAN & DETAILS SCALE: 1"=30' AS NOTED



DRAINAGE COMPUTATIONS

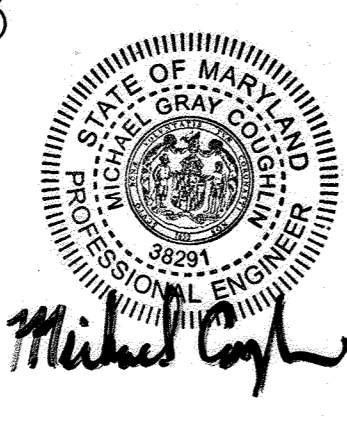
AREA	ACRES	ZONING	C	TOTAL ACRES	I	Q	PIPE DIA.	MIN. SL.	VEL.
3	3.60	50% Com, 50% Res	0.7	3.60	5.9"/hr	149.4'	18"	2.0%	8.4 f/s
2	1.31	Commercial	0.8	4.91	5.9"/hr	211.4'	21"	1.9%	8.8 f/s

REDLINE NOTE
THIS SHEET DOES NOT APPLY TO THE CONSTRUCTION OF THE 2,100 SF ADDITION AND THE DRIVE-THRU.
SEE SHEETS 8-27 FOR THE BUILDING EXPANSION AND MODIFICATIONS.

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. 38291, EXPIRATION DATE: 1/13/2024.

APPROVED
PLANNING BOARD HOWARD COUNTY
DATE 08/20/2020

PURPOSE STATEMENT
THE PURPOSE OF THE REVISED SITE DEVELOPMENT PLAN IS TO CONSTRUCT A 2,100 SF BUILDING ADDITION WITH DRIVE THROUGH LANE AND ASSOCIATED PARKING UPGRADES, PATIO, AND SWM FACILITIES.

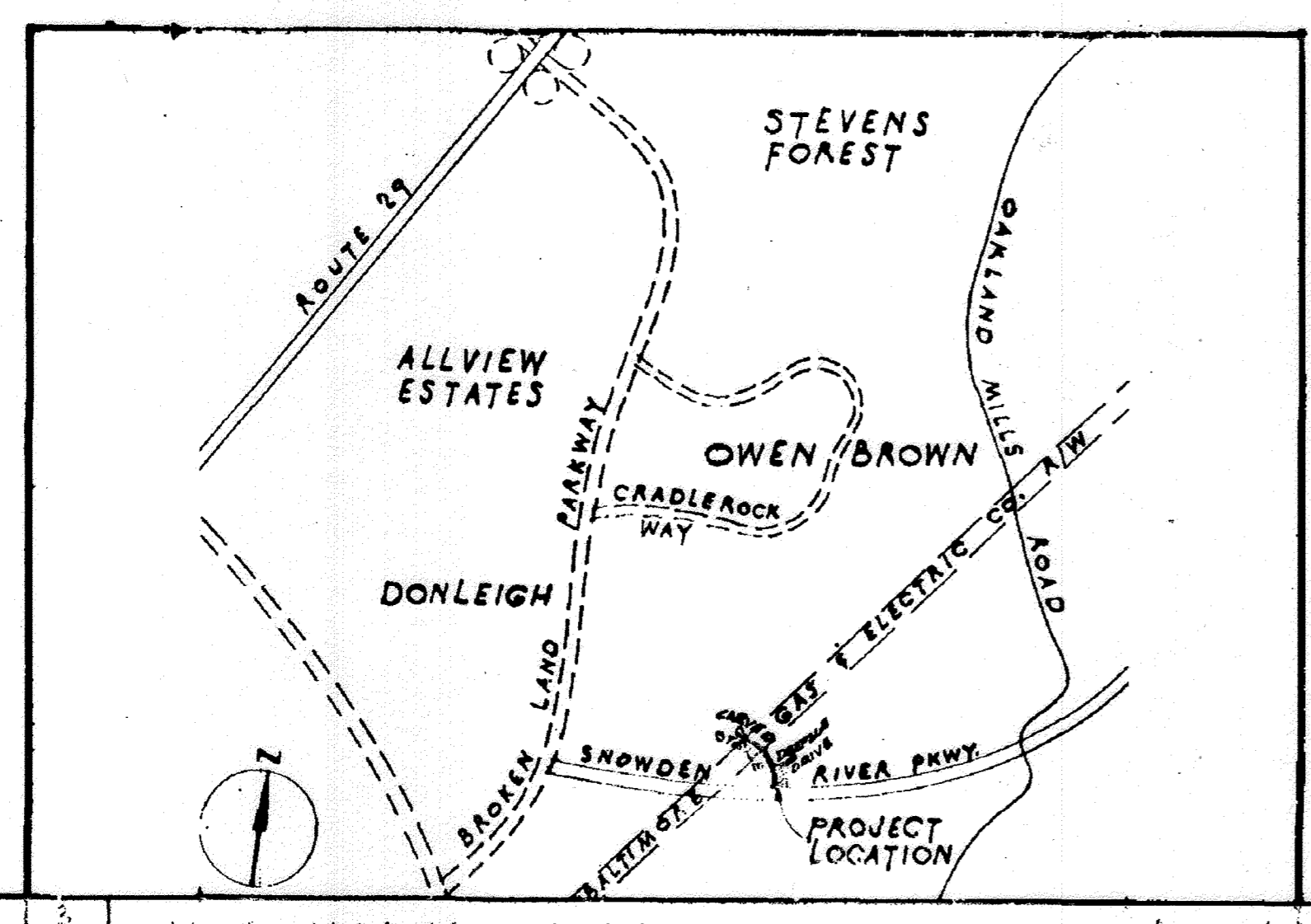


APPROVED: For public water and public sewerage systems, Howard County Health Department
County Health Officer Date 7/17/24

APPROVED: Howard County Office of Planning & Zoning
Chief, Division of Land Development & Transportation Planning Date 10/20/24

APPROVED: For public water, public sewerage and storm drainage systems and roads
Howard County Department of Public Works
Director Date 10/21/24

Checked by: Bureau of Highways Date 10/21/24



NOTE:
Elevations shown hereon are in accordance with Bench Marks delineated on sheet 1 of 7, of Road Construction Plans, Village of Owen Brown, Section 2, Area 1, Columbia, Maryland, by Whitman, Requardt & Associates, Engineers, Baltimore, Md. Bench Mark No. L-203 - Rockside Flange Bolt on Fire Hydrant, southeast corner Snowden River Parkway and Berger Road. Elevation 358.17

Underground construction and utilities shown hereon were compiled from available records and should be verified as neither the accuracy nor completeness of these facilities can be assured. (Record Sanitary Sewer-MH No. 81's Invert from Contract No. 2534)

Property line information taken from Record Plat of Village of Owen Brown, Columbia, and recorded in Plat Book 27 of Folio 41.

OWNER:
ROY PASSIN INC.
13021 BIRDALE LANE
BETHESDA, MD 20760
948-5083

ARCHITECT:
THOMAS CLARK AIA - ARCHITECT
4702 MONTGOMERY LANE
BETHESDA, MD 20016
652-2520

ENGINEER:
JOHN J. ALLEN ASSOCIATES
4801 MONTGOMERY LANE
BETHESDA, MD 20014
656-9550

THE LOTS OR PARCELS SHOWN ON THIS PLAN ARE SUBJECT TO THE SUPPLEMENTAL SEWER IN-ADD-ON CONSTRUCTION CHARGE CREATED BY SECTION 20.314 OF THE HOWARD COUNTY CODE AND TO EXECUTIVE ORDER NO. 72-9.

REVISION PREPARED BY:
LAND DESIGN ENGINEERING, INC.
8835 N. COLUMBIA 100 PKWY.
COLUMBIA, MD 21045
(410) 715-1070

INDICATES PROPOSED FIN. GRADE
INDICATES EXISTING GRADE
NEW BUILDING AND PATIO ADDITION TO PICCOLO'S RISTORANTE - REVISION TO APPROVED SDP 74-122C

DRAINAGE AREA MAP
LOT D-12,
VILLAGE OF OWEN BROWN
SECTION 2, AREA 2
COLUMBIA
HOWARD COUNTY, MARYLAND
6TH ELECTION DISTRICT
DATE: 14 JUNE 1974 (REV. 27 JULY 74)
SCALE: 1" = 30'

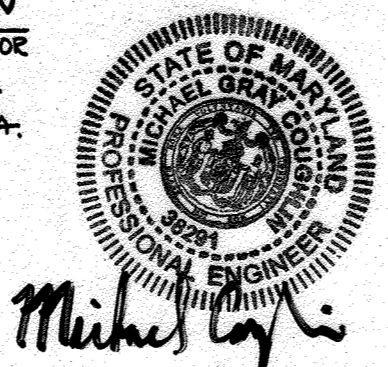


MATCH LINE (THIS SHEET)

Lot D-3 Commercial

Lot D-4 Commercial

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. 38241, EXPIRATION DATE: 1/13/2024.



EMORY ALLEN
1811551
Zoned S.F.M.-D

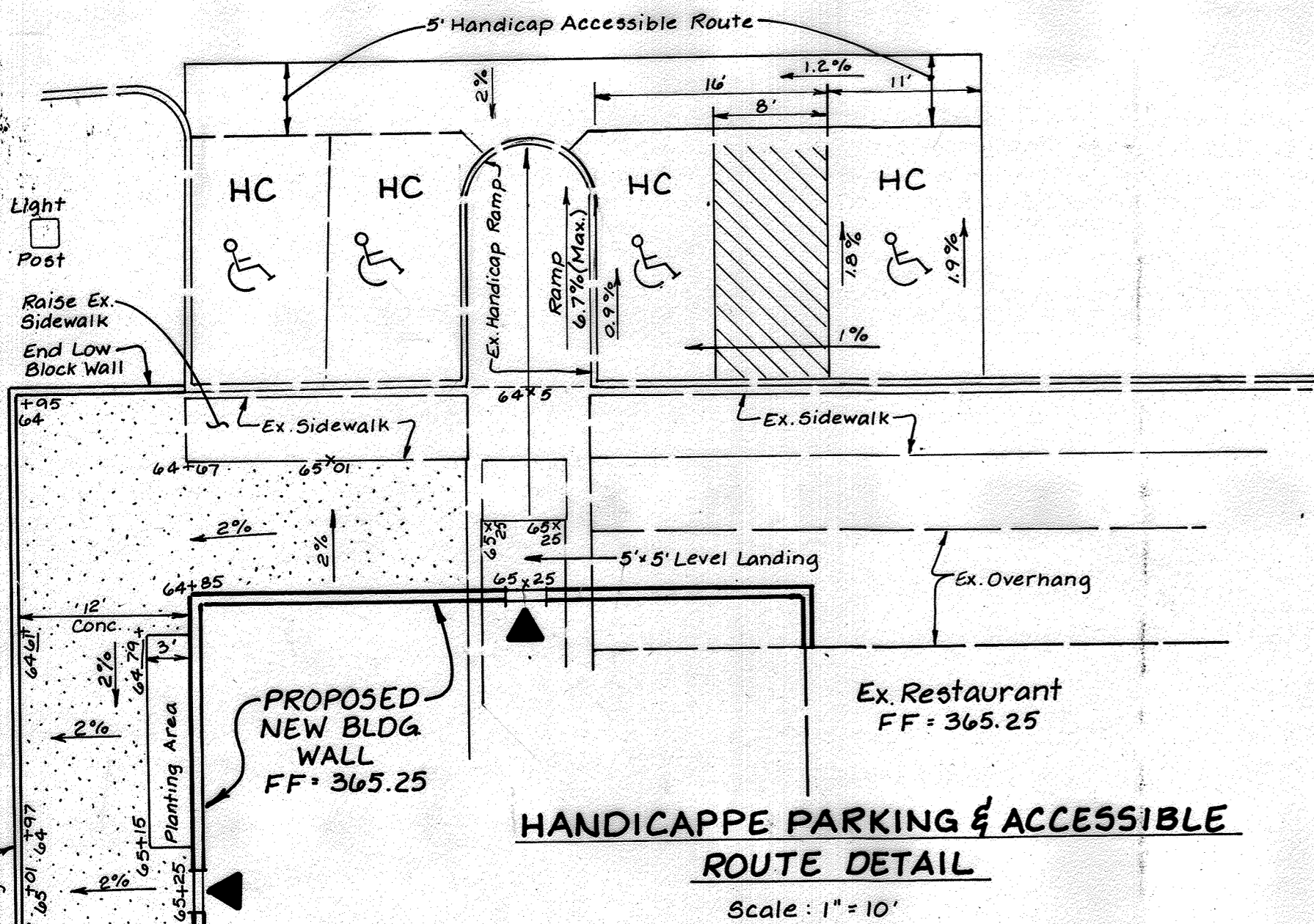
APPROVED
PLANNING BOARD HOWARD COUNTY
DATE 08/20/2020

REDLINE NOTE
THIS SHEET DOES NOT APPLY TO THE CONSTRUCTION OF THE 2,100 SF ADDITION AND THE DRIVE-THRU.
SEE SHEETS B-17 FOR THE BUILDING EXPANSION AND MODIFICATIONS.

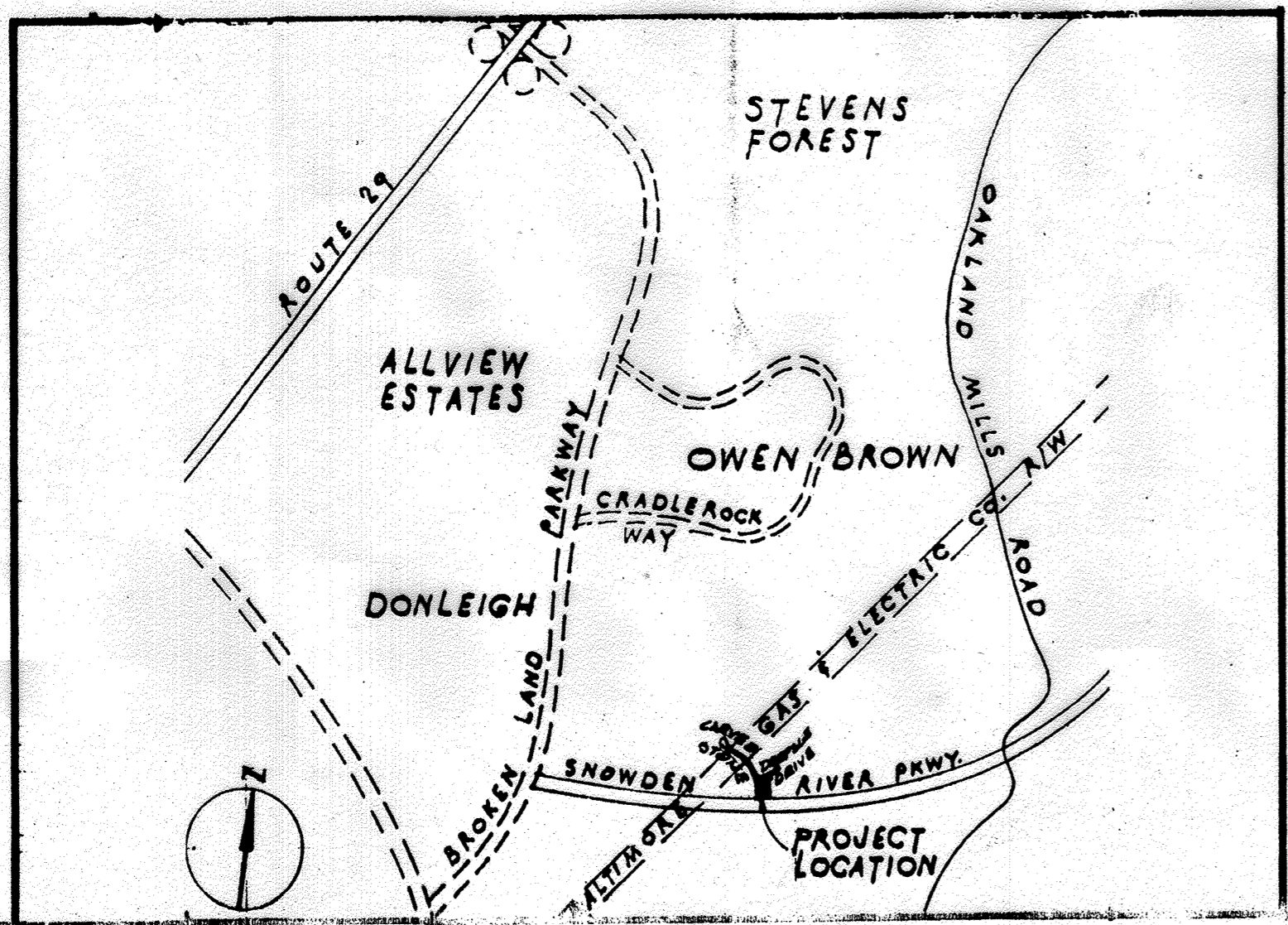
PURPOSE STATEMENT
THE PURPOSE OF THE REVISED SITE DEVELOPMENT PLAN IS TO CONSTRUCT A 2,100 SF BUILDING ADDITION WITH DRIVE THROUGH (LANE AND ASSOCIATED PARKING, UPGRADES, PATIO, AND SWM FACILITIES.

DRAINAGE COMPUTATIONS

AREA	ACRES	ZONING	C	TOTAL ACRES	I	Q	PIPE DIA.	MIN. SL. VEL
3	3.60	50% Com, 50% Res	0.7	3.60	59%/hr	1.79 cfs	18"	2.0% 8.4 f/s
2	1.31	Commercial	0.8	4.91	59%/hr	2.11 cfs	21"	1.9% 8.8 f/s



APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
 APPROVED: HOWARD COUNTY OFFICE OF PLANNING & ZONING
 APPROVED FOR PUBLIC WATER, PUBLIC SEWERAGE AND STORM DRAINAGE SYSTEMS AND ROADS, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS



NOTE: Elevations shown herein are in accordance with Bench Marks delineated on sheet 1 of 7, of Road Construction Plans, Village of Owen Brown, Section 2, Area 1, Columbia, Maryland, by Whitman, Reardon & Associates, Engineers, Baltimore, Md. Bench Marks No. L-203 - Roadside Flange Bolt on Fire Hydrant, southeast corner Snowden River Parkway and Berger Road. Elevation 358.17

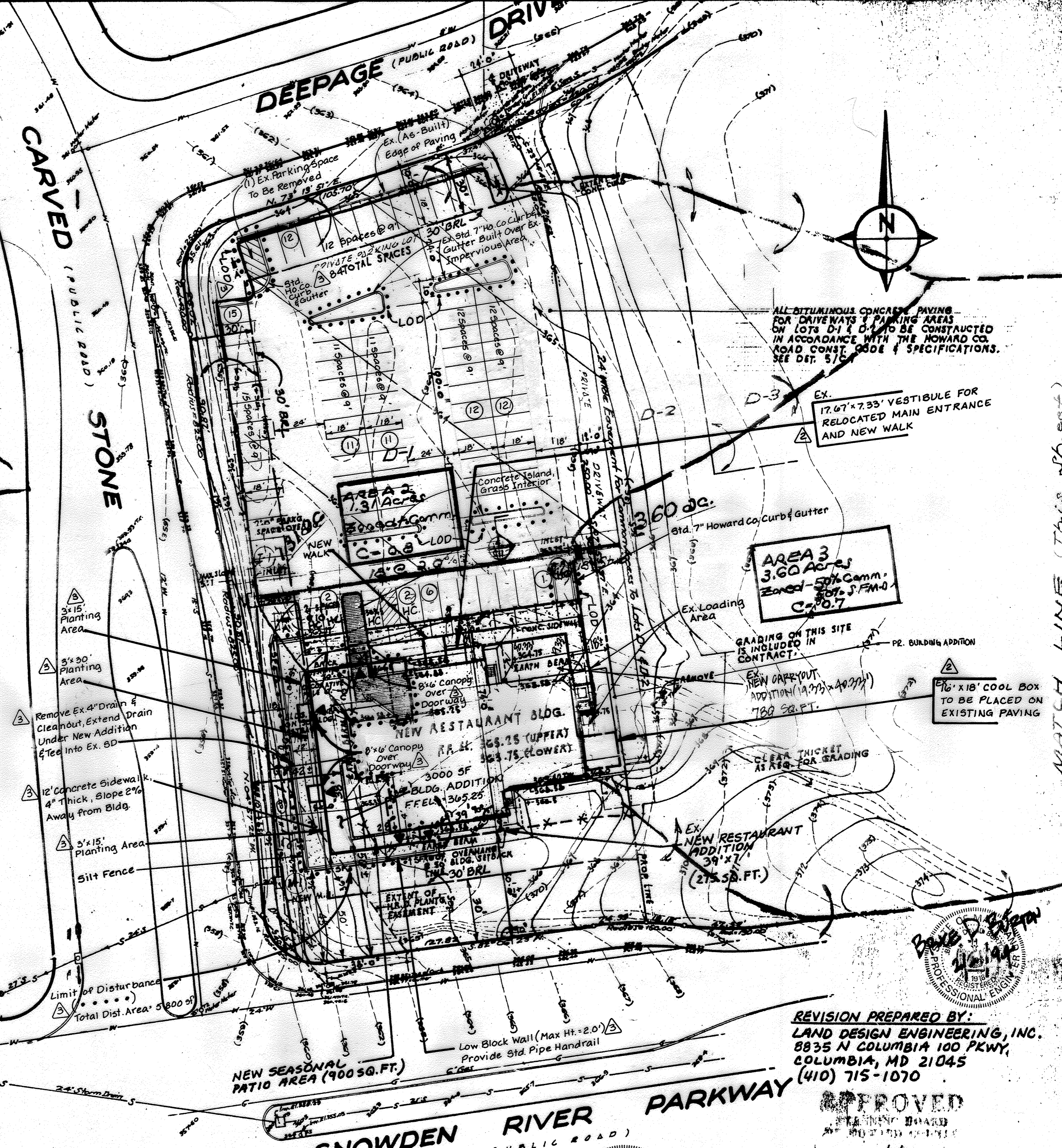
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ROY PASSIN INC.
13021 BIRDALE LANE.
ZANTHERSBURG, MD. 20760
948-5083

ARCHITECT:
THOMAS CLARK AIA - ARCHITECT
4720 MONTGOMERY LANE
BETHESDA, MD. 20014
652-3530

ENGINEER:
JOHN J. ALLEN ASSOCIATES
4801 MONTGOMERY LANE
BETHESDA, MD. 20014
656-9550



ALL BITUMINOUS CONCRETE PAVING FOR DRIVEWAYS & PARKING AREAS ON LOTS D-1 & D-4 TO BE CONSTRUCTED IN ACCORDANCE WITH THE HOWARD CO. ROAD CONST. CODE & SPECIFICATIONS. SEE DET. 5/1

17.07' x 7.33' VESTIBULE FOR RELOCATED MAIN ENTRANCE AND NEW WALK

AREA 3 3.60 ACRES Zoned S.F.M.-D C-2.0

GAZONING ON THIS SITE IS INCLUDED IN CONTRACT.

REVISION PREPARED BY:
LAND DESIGN ENGINEERING, INC.
8835 N COLUMBIA 100 PKWY,
COLUMBIA, MD 21045
(410) 715-1070



APPROVED
 REVISION PREPARED BY:
 LAND DESIGN ENGINEERING, INC.
 8835 N COLUMBIA 100 PKWY,
 COLUMBIA, MD 21045
 (410) 715-1070

INDICATES PROPOSED FIN. GRADE
 INDICATES NEW VESTIBULE ADDITION AND COOLER RELOCATION FOR THREE BROTHERS ITALIAN RESTAURANT
 INDICATES EXISTING GRADE

NEW BUILDING AND PATIO ADDITION TO PICCOLD'S RISTORANTE-REVISION TO APPROVED SDP 74-122C

DRAINAGE AREA MAP
 LOT D-12,
 VILLAGE OF OWEN BROWN
 SECTION 2, AREA 2
 COLUMBIA
 HOWARD COUNTY, MARYLAND
 6TH ELECTION DISTRICT
 DATE: 14 JUNE 1974 (REV. 21 JULY 74)
 SCALE: 1" = 30'

THREE BROTHERS ITALIAN RESTAURANT

Thomas Clark AIA - Architect

11/25/2019
 REVISION SDP-74-122 TO INCLUDE 2,100 SF ADDITION

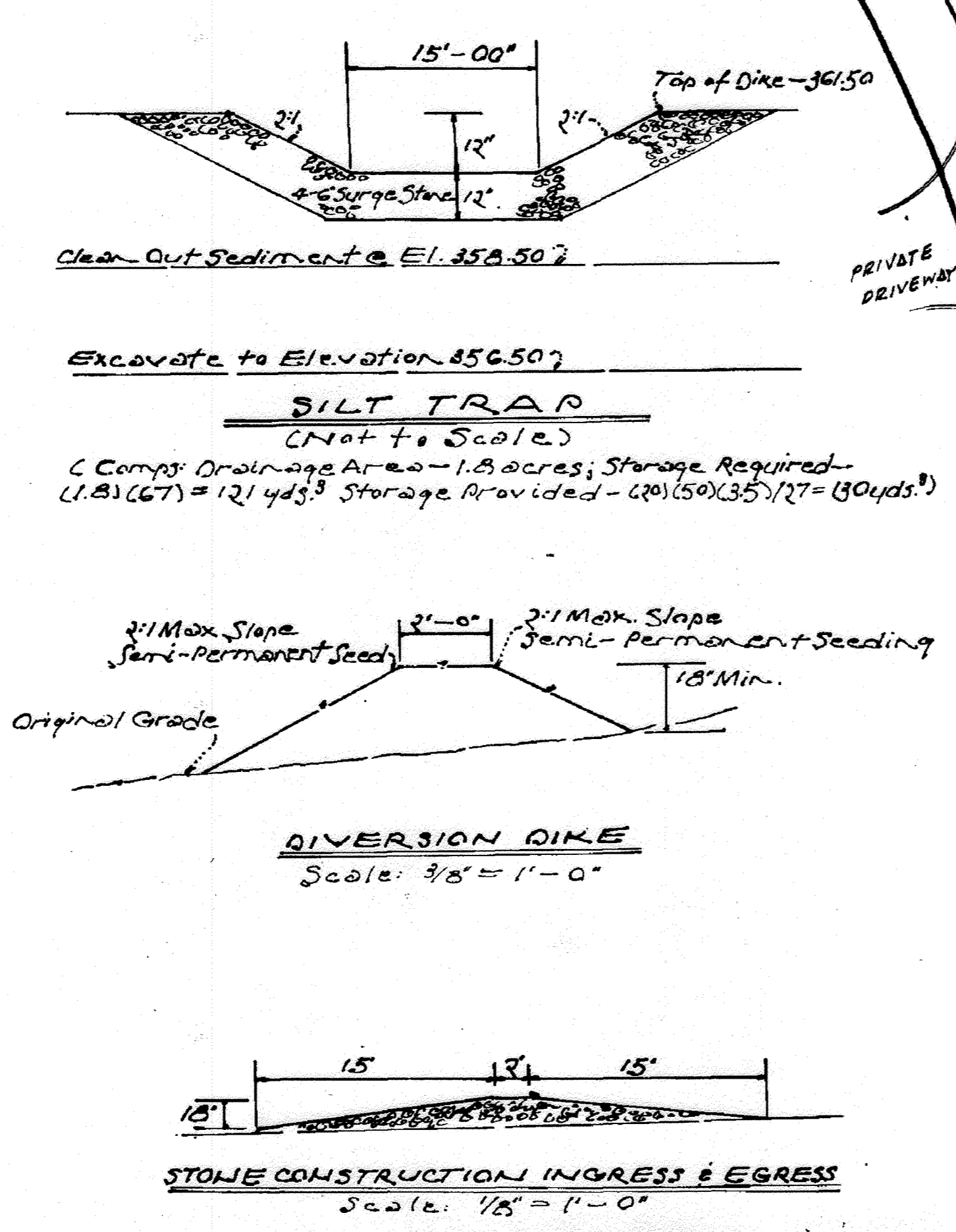
REVISIONS

SHEET 05 OF 27
 DRAINAGE AREA

50P-74-122C
 A-7487

GENERAL NOTES:

1. All erosion and sediment control measures are to be constructed and maintained in accordance with applicable published "Standards and Specifications for Soil Erosion and Sediment Control in Urbanizing Areas."
2. Point of construction ingress and egress will be protected, as shown, to prevent tracking of mud onto public ways.
3. All sediment will be prevented from entering any storm drainage system (i.e. through use of sand bags, gravel, boards, capping, or other satisfactory and acceptable methods).
4. Structural measures, such as berms, dikes, traps, basins, and so forth, will be installed and stabilized according to this plan prior to any other grading, clearing, or disturbance of the existing surface of the site.
5. All structural sediment controls are to remain in place until permission for their removal has been obtained from the Howard Soil Conservation District, phone 465-5000, ext. 328.
6. Notify the Howard Soil Conservation District at least 24 hours before starting any work. Phone 465-3180 or 465-5000, ext. 328.
7. On-site inspection and maintenance of all sediment controls, including cleanout of sediment traps and berms, and proper establishment of all planned vegetative measures, will be the responsibility of the Developer or his representative on the site, on a continuing day-to-day basis.
8. All fill material will be free of decomposable matter.
9. Constructed berms, dikes, etc., will be compacted by several passes with the construction equipment (bulldozer, backhoe, or other heavy equipment) or by use of a suitable roller.
10. Grade entire construction area. Areas not to be built on immediately shall be stabilized with semi-permanent seeding, and sodded side slopes. Sod all three-to-one slopes.
11. Earthwork per site plan:
Cut - 4,117 yds³
Fill - 437 yds³
Note: Excess shall be conveyed to site with approved Sediment Control Plan.
12. Area Breakdown, Lot D-1:
Green - 0.3 acre
Roofed - 0.2 acre
Paved - 0.9 acre
13. Proposed Construction Schedule:
Begin Excavation - 1 September 1974
Complete Storm Drainage System - 1 March 1975
Complete Paving - 1 April 1975
Complete Site Grading & Stabilization - 1 May 1975
14. Stabilization Schedule (Minimum Requirements):
Semi-Permanent Seeding - Harrow or disc seed bed. Apply pulverized dolomitic lime @ 40# per 1,000 ft² and 10-10-10 @ 25# per 1,000 ft². Seed w. Kentucky 31 tall fescue @ 1.37# per 1,000 ft². Mulch w. unweathered small grain straw @ 67-92# per 1,000 ft² or liquid asphalt @ 1.11 gals., or emulsified asphalt @ 4.5 gals., both per 1,000 ft².
Sod - Prepare soil as above w. lime and fertilizer. Use certified Maryland sod. Lay w. staggered joints. Peg or tamp.
Note: For final stabilization, equal amount of Kentucky Bluegrass (1.37# per 1,000 ft²), may be added to above seed mixture.



APPROVED: For public water and public sewerage systems, Howard County Health Department	<i>[Signature]</i>	10/28/74
County Health Officer		Date
APPROVED: Howard County Office of Planning & Zoning	<i>[Signature]</i>	10/28/74
Planning Director		Date
APPROVED: Division of Land Development and Transportation Planning	<i>[Signature]</i>	10/28/74
		Date
APPROVED: For public water, public sewerage and storm drainage systems and roads	<i>[Signature]</i>	10/28/74
Howard County Department of Public Works		Date
Will - L. Utter		10/28/74
<i>[Signature]</i>		10/28/74
Chief Bureau of Highways		Date

Developer's Certificate:
I hereby certify that all development and/or construction will be done according to this plan of development and plan for erosion and sediment control and I also authorize periodic on-site inspections by the Howard Soil Conservation District or their authorized agents, as are deemed necessary. Deviation from this plan will not be made unless authorized by the Howard Soil Conservation District.

[Signature]
18 June 74
Date

Engineer's Certificate:
I hereby certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with requirements of the Howard Soil Conservation District.

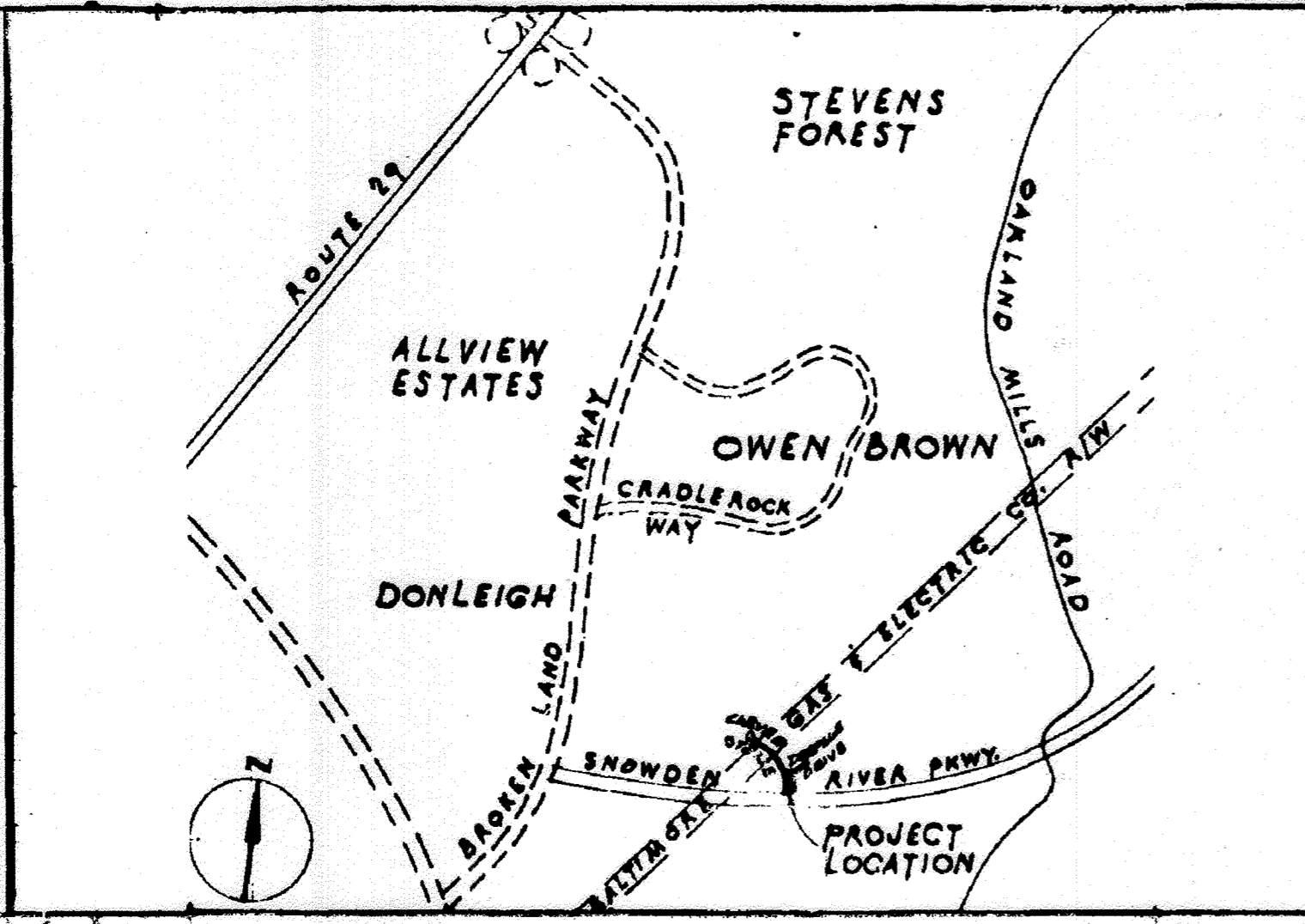
[Signature]
19 June 1974
Date

Reviewed for Howard Soil Conservation District and meets technical requirements.

10-1-74
[Signature]

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

Approved:
10-1-74
[Signature]
Howard Soil Conservation District



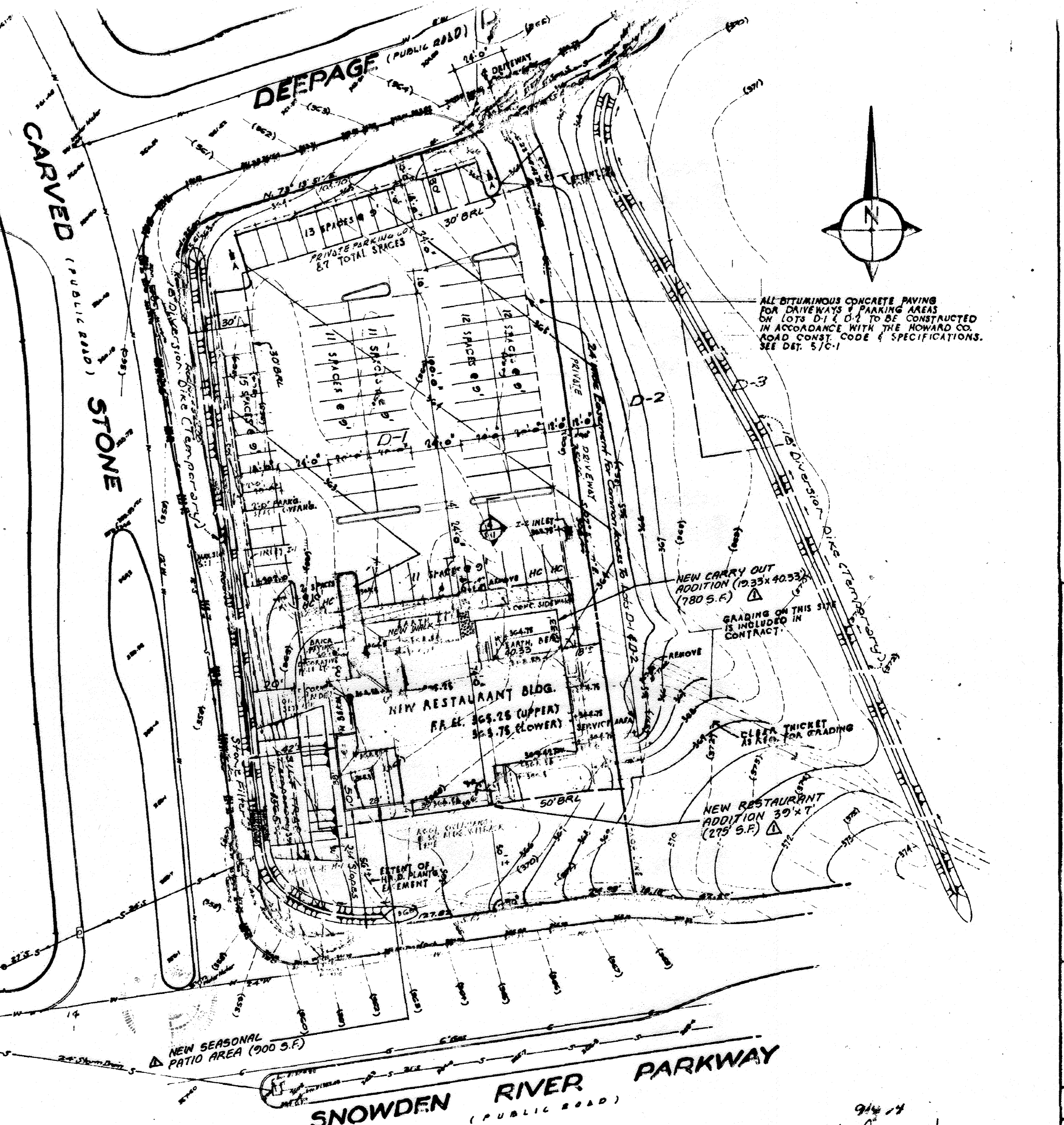
APPROVED
PLANNING BOARD HOWARD COUNTY
DATE 08/20/2020

NOTE:
Elevations shown hereon are in accordance with Bench Marks delineated on sheet 1 of 7, of Road Construction Plans, Village of Owen Brown, Section 2, Area 1, Columbia, Maryland, by Whitman, Reardon & Associates, Engineers, Bethesda, Md. Bench Marks No. L-203 - Roadside Large Bolt on Fire Hydrant, southeast corner Snowden River Parkway and Berger Road. Elevation 358.17

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OWNER:
ROY PASSIN INC.
18021 DIEDALE LAKE
GANTHERCROOK, MD. 20760
948-5083

ARCHITECT:
THOMAS CLARK AIA - ARCHITECT
4701 MONTGOMERY LANE
BETHESDA, MD. 20814
652-2520



REDLINE NOTE
THIS SHEET DOES NOT APPLY TO THE CONSTRUCTION OF THE 2,100 SF ADDITION AND THE DRIVE-THRU.
SEE SHEETS B-27 FOR THE BUILDING EXPANSION AND MODIFICATIONS.

THE LOTS OR PARCELS SHOWN ON THIS PLAN ARE SUBJECT TO THE SUPPLEMENT SEWER IN-AID-OF-CONSTRUCTION CHARGE CREATED BY SECTION 20.311 A OF THE HOWARD COUNTY CODE AND TO EXECUTIVE ORDER NO. 72-9.

PURPOSE STATEMENT
THE PURPOSE OF THE REVISED SITE DEVELOPMENT PLAN IS TO CONSTRUCT A 2,100 SF BUILDING ADDITION WITH DRIVE THROUGH LANE AND ASSOCIATED PARKING UPGRADES, PATIO, AND SWM FACILITIES.

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. 38291, EXPIRATION DATE: 1/13/2024.

ENGINEER:
JOHN J. ALLEN ASSOCIATES
4801 MONTGOMERY LANE
BETHESDA, MD. 20814
652-3550

REVISION PREPARED BY:
LAND DESIGN ENGINEERING, INC.
8835 N. COLUMBIA 100 PKWY, COLUMBIA, MD. 21045 (410) 715-1070

NEW BUILDING AND PATIO ADDITION TO PICCOLO'S RISTORANTE-REVISION TO APPROVED SDP 74-122C

EROSION & SEDIMENT CONTROL PLAN
SCALE: 1" = 30'
Lot D-12,
VILLAGE OF OWEN BROWN
SECTION 2, AREA 2
COLUMBIA
HOWARD COUNTY, MARYLAND
6TH ELECTION DISTRICT
DATE: 14 JUNE 1974 (REV. 27 JULY 74)

[Signature]
11/22/2019
REVISED SDP-74-122 TO INCLUDE 2100 SF ADDITION

11/22/2019
REVISED SDP-74-122 TO INCLUDE 2100 SF ADDITION

11/22/2019
REVISED SDP-74-122 TO INCLUDE 2100 SF ADDITION

ROY'S PLACE TOO
a restaurant for roy passin inc.
village of owen brown - columbia - howard county - maryland

Thomas Clark AIA Architect
Bethesda, Maryland
652-2520

REGISTERED ARCHITECT
STATE OF MARYLAND
REG. NO. 38291

revisions

11/22/2019
REVISED SDP-74-122 TO INCLUDE 2100 SF ADDITION

11/22/2019
REVISED SDP-74-122 TO INCLUDE 2100 SF ADDITION

11/22/2019
REVISED SDP-74-122 TO INCLUDE 2100 SF ADDITION

EROSION & SEDIMENT CONTROL PLAN

SHEET: 06 OF 27

C-6

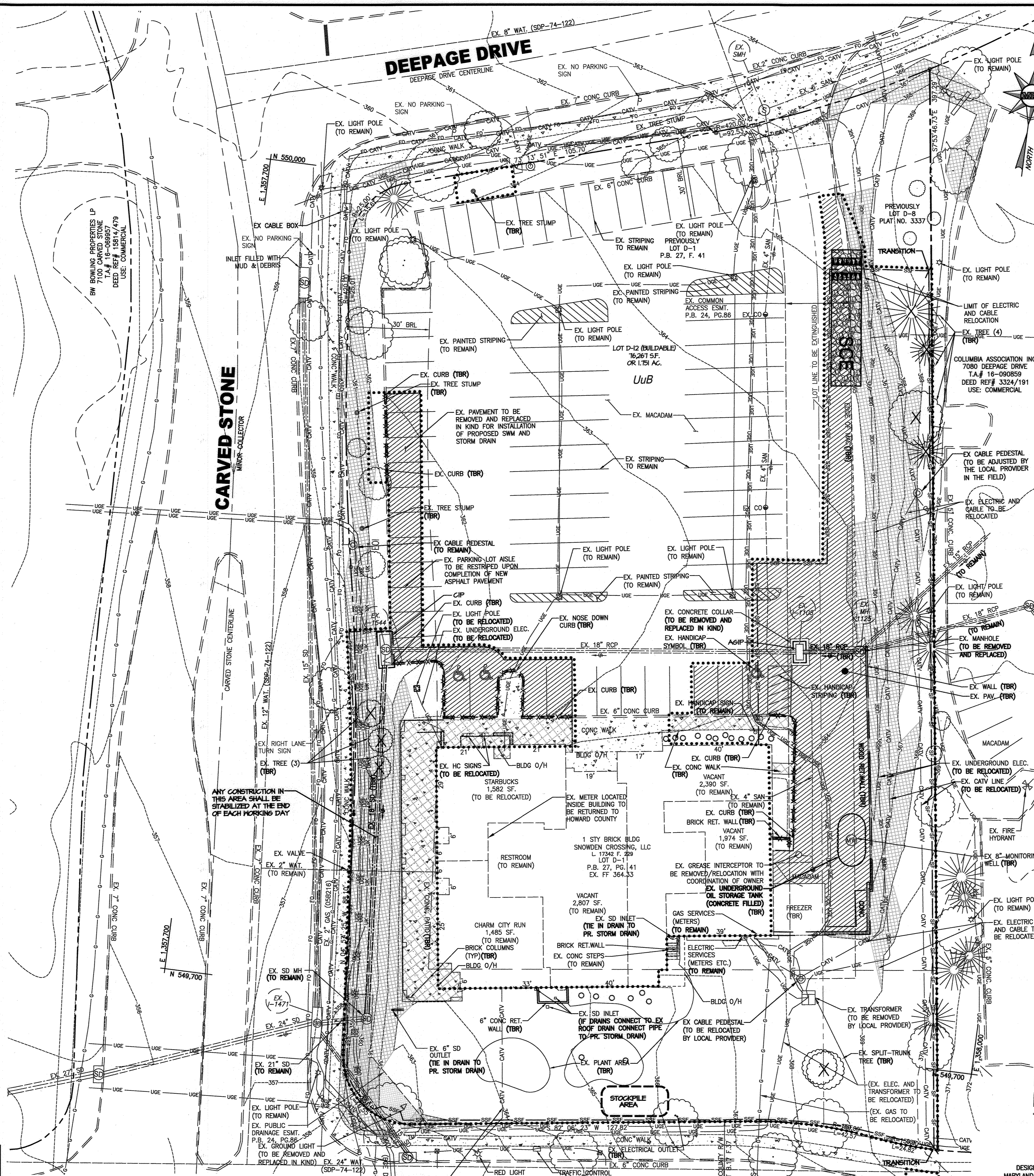
#A74-22

LEGEND

- 1 --- EX. 1 FOOT CONTOURS
- 2 --- EX. 2 FOOT CONTOURS
- 10 --- EX. 10 FOOT CONTOURS
- --- EX. CURB AND GUTTER
- --- EX. CONCRETE
- --- EX. C/L ROAD
- --- EX. ADJACENT PROPERTY LINE
- --- EX. PROPERTY LINE
- --- EX. RIGHT OF WAY
- --- EX. UTILITY EASEMENT
- --- EX. WATER LINE
- --- EX. SANITARY LINE
- --- EX. STORM DRAIN LINE
- --- EX. FIBER OPTIC CABLE
- --- EX. CATV
- --- EX. GAS
- --- EX. UNKNOWN UTILITY
- --- EX. UNDERGROUND ELECTRIC
- --- EX. LIGHT POLE
- --- EX. U/G UTILITY HANDBOX
- --- EX. UTILITY POLE
- --- EX. SIGN
- --- EX. BOLLARD
- --- EX. SLOPE GREATER THAN 15%
- --- EX. TREE
- --- EX. BUILDING/STRUCTURE
- --- EX. BLOCK RETAINING WALL
- --- PROPOSED LIMIT OF DISTURBANCE TO BE REMOVED
- --- EX. CURB TO BE REMOVED
- --- EX. TREE TO BE REMOVED
- --- EX. PAVING TO BE REMOVED *
- --- EX. CONCRETE TO BE REMOVED *
- * REFER TO GEOTECHNICAL REPORT FOR EX. PAVEMENT AND CONCRETE SECTIONS.
- --- PR. SILT FENCE
- --- PR. SUPER SILT FENCE
- --- PR. STABILIZED CONSTRUCTION ENTRANCE W/ TYPE 'B' MOUNTABLE BERM
- --- UuB URBAN LAND-UDORTHERMS COMPLEX SOIL
- --- CIP
- --- ASIP

SITE DEMOLITION NOTES

1. THE CONTRACTOR SHALL SECURE ALL REQUIRED PERMITS FROM ALL APPLICABLE AGENCIES FOR HIS DEMOLITION AND DISPOSAL OF ANY DEMOLITION MATERIAL TO BE REMOVED FROM THE SITE. THE CONTRACTOR SHALL POST BONDS AND PAY PERMIT FEES AS REQUIRED TO ALL INVOLVED AGENCIES.
2. PRIOR TO COMMENCEMENT OF DEMOLITION ACTIVITIES, THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES TO VERIFY THE EXACT LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL CALL "MISS UTILITY" AT 1-800-257-7777 (OR 811), 72 HOURS PRIOR TO CONSTRUCTION.
3. THE CONTRACTOR SHALL STABILIZE THE SITE AND KEEP EROSION CONTROL MEASURES IN PLACE UNTIL THE COMPLETION OF WORK OR DEEMED NECESSARY BY HOWARD COUNTY INSPECTION. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR THE MAINTENANCE OF EXISTING EROSION AND SEDIMENTATION CONTROLS, AND FOR INSTALLATION OF ANY NEW EROSION AND SEDIMENTATION CONTROLS AT THAT TIME (AS PER THE EROSION AND SEDIMENTATION CONTROL PLAN).
4. THE CONTRACTOR SHALL PREPARE ALL MANIFEST DOCUMENTS AS REQUIRED PRIOR TO COMMENCEMENT OF DEMOLITION.
5. THE CONTRACTOR SHALL SECURE ANY PERMITS, PAY ALL FEES AND PERFORM CLEARING AND GRUBBING AND DEBRIS REMOVAL PRIOR TO COMMENCEMENT OF GRADING OPERATIONS.
6. ANY SIDEWALKS, FENCES, STAIRS, WALLS, DEBRIS AND RUBBISH THAT ARE TO BE REMOVED SHALL BE DISPOSED FROM THE SITE AREA IN AN APPROVED LANDFILL. THE CONTRACTOR IS RESPONSIBLE TO SECURE ALL NECESSARY PERMITS FOR DISPOSAL OF CONSTRUCTION MATERIALS.
7. BACKFILL DEPRESSIONS, FOUNDATION HOLES AND REMOVED DRIVEWAY AREAS WITH APPROVED SOIL MATERIAL AND COMPACT, FERTILIZE, SEED AND MULCH DISTURBED AREAS NOT SUBJECT TO FURTHER SITE CONSTRUCTION. EMPLOY WATERING EQUIPMENT FOR DUST CONTROL.
8. IF ASBESTOS OR HAZARDOUS MATERIAL ARE FOUND ON SITE, THEY MUST BE REMOVED BY A LICENSED HAZARDOUS MATERIAL CONTRACTOR.
9. A COPY OF THE "EROSION AND SEDIMENT CONTROL PLAN" SHALL BE ON-SITE THROUGHOUT THE ENTIRE DEMOLITION AND CONSTRUCTION PHASES. THE CONTRACTOR SHALL CONTACT HOWARD CO. 909 BY CALLING (410) 313-8666 ONE (1) WEEK PRIOR TO THE START OF ANY DEMOLITION AND/OR CLEARING AND GRUBBING ACTIVITIES. **CI D 1855**
10. UTILITY LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE, LOCATED FROM FIELD SURVEYS OR UTILITY COMPANY RECORDS. IT WILL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE EXACT LOCATION AND DEPTH OF ALL UTILITY LINES BEFORE THE START OF DEMOLITION.
11. THE CONTRACTOR MUST SUBMIT DISCONNECT NOTIFICATION TO HOWARD CO. PUBLIC WORKS AND ALL ASSOCIATED UTILITY COMPANIES RELATING TO THIS SITE AT LEAST THREE (3) WEEKS PRIOR TO BEGINNING DEMOLITION.
12. EXISTING WATER SERVICES SHALL BE DISCONNECTED AND CAPPED AT THE MAIN IN ACCORDANCE WITH THE REQUIREMENTS OF HOWARD COUNTY. COORDINATE WITH UTILITY DEPT. 48 HOURS PRIOR TO START OF WATER SERVICE CONNECTIONS. ALL SERVICES ARE TO BE DISCONNECTED AT THE MAIN.
13. IF DEEMED NECESSARY, DOMESTIC GAS SERVICES SHALL BE CAPPED AND SERVICE LINES PURGED OF RESIDUAL GAS IN ACCORDANCE WITH BALTIMORE GAS AND ELECTRIC COMPANY. WORK TO BE COORDINATED AND PAID FOR BY THE CONTRACTOR. REMOVE EXISTING SERVICE PIPING ON SITE.
14. THE CONTRACTOR SHALL CUT AND PLUG, OR ARRANGE FOR THE APPROPRIATE UTILITY COMPANY TO CUT AND PLUG ALL SERVICE PIPING AT THE STREET LINE OR MAIN, AS REQUIRED BY LOCAL UTILITY COMPANY AND/OR HOWARD COUNTY. ALL SERVICES MAY NOT BE SHOWN ON THIS PLAN. THE CONTRACTOR SHALL INVESTIGATE THE SITE PRIOR TO BIDDING TO DETERMINE THE EXTENT OF SERVICE PIPING TO BE REMOVED, CUT, OR PLUGGED.
15. THE CONTRACTOR SHALL PROTECT ALL IRON PINS, MONUMENTS, AND PROPERTY CORNERS THAT WILL NOT BE REMOVED AND SHALL BE RESET BY A LICENSED LAND SURVEYOR AT THE EXPENSE OF THE CONTRACTOR.
16. OSHA REGULATIONS MAKE IT UNLAWFUL TO OPERATE CRANES, BOOMS, HOISTS, ETC. WITHIN TEN (10) FEET OF ANY ELECTRIC LINE UNDER (50KV). IF CONTRACTOR MUST OPERATE EQUIPMENT CLOSE TO POWER ELECTRIC LINE(S), CONTACT THE POWER COMPANY TO MAKE ARRANGEMENTS FOR PROPER SAFEGUARDS.
17. THE CONTRACTOR WILL BE RESPONSIBLE FOR SECURING ALL PERMITS FOR DEMOLITION FROM HOWARD COUNTY AND MUST FURNISH THE REQUIRED MATERIAL AND PAY ALL FEES.
18. PRIOR TO DEMOLITION, THE APPLICANT MUST PROVIDE CERTIFICATION, BY A PERSON LICENSED AS A PESTICIDE APPLICATOR BY THE MARYLAND STATE DEPARTMENT OF AGRICULTURE, THAT ALL AREAS OF THE BUILDING, STRUCTURE, AND LOT ARE FREE OF RODENT INFESTATION.
19. DEMOLITION OF EXISTING PAVEMENT, SIDEWALK, SITE FEATURES, AND UTILITIES WITHIN THE PUBLIC RIGHT-OF-WAY CAN ONLY OCCUR ONCE HOWARD COUNTY PERMITS HAVE BEEN ISSUED.
20. ALL EXISTING UTILITIES ALONG DEEPAE DRIVE, CARVED STONE, AND SNOWDEN RIVER PARKWAY INCLUDING GAS, ELECTRIC, CABLE, FIBER OPTIC CABLE, TELEPHONE, AND ALL ASSOCIATED EQUIPMENT AND APPURTENANCES TO REMAIN UNDISTURBED AND OPERATIONAL THROUGHOUT DEMOLITION ACTIVITIES. ANY COSTS ASSOCIATED WITH DAMAGE TO EXISTING UTILITIES SHALL BE BORNE BY THE CONTRACTOR.
21. CONTRACTOR SHALL REFER TO BGE DESIGN DRAWINGS FOR ABANDONMENT, RELOCATION, AND/OR REMOVAL OF EXISTING GAS AND ELECTRIC SERVICES.
22. CONTRACTOR SHALL ONLY REMOVE EXISTING CURB WITHIN PARKING LOT WHEN ACTIVELY CONSTRUCTING PROPOSED ROAD IMPROVEMENTS.
23. THE CORRECTNESS OR COMPLETENESS OF EXISTING INFORMATION SHOWN ON THE DRAWINGS IS NOT WARRANTED OR GUARANTEED. THE CONTRACTOR SHALL VERIFY THE LOCATION OF UTILITIES AND UNDERGROUND FACILITIES BY TEST PITS OR OTHER METHODS APPROVED BY THE OWNER'S REPRESENTATIVE, AS REQUIRED TO VERIFY EXACT LOCATIONS AND DEPTHS WITHIN THE LIMIT OF DISTURBANCE. ALL DISCREPANCIES BETWEEN INFORMATION SHOWN ON THE DRAWINGS AND THAT VERIFIED IN THE FIELD SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING WORK.



HOWARD SCD SIGNATURE BLOCK
 THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
Alexander Beathie
 HOWARD SOIL CONSERVATION DISTRICT
 DATE: 05/05/22

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chad Ables
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 5.10.22
Julia Jansen
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 6/14/22
Shy Conner
 DIRECTOR
 DATE: 6/14/22

APPROVED
 PLANNING BOARD HOWARD COUNTY
 DATE: 08/20/2020

PURPOSE STATEMENT
 THE PURPOSE OF THE REVISED SITE DEVELOPMENT PLAN IS TO CONSTRUCT A 2,100 SF BUILDING ADDITION WITH DRIVE THROUGH LANE AND ASSOCIATED PARKING UPGRADES, PATIO, AND SWM FACILITIES.

SNOWDEN RIVER PARKWAY

SCALE: 1"=20'
 PLAN
 SCALE: 1"=20'

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. 38291, EXPIRATION DATE: 01/13/2024

ESC 1 OF 4
MRA
MORRIS & RITCHIE ASSOCIATES, INC.
 ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
 1220-B EAST JOPPA ROAD, SUITE 400K
 TOWSON, MARYLAND 21286
 (410) 821-1690
 FAX (410) 821-1748
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DATE	REVISIONS	JOB NO.:	19650
11/22/2019	REVISED SDP-74-122 TO INCLUDE 2100 SF ADDITION	SCALE:	1" = 20'
11/7/2023	NO AS BUILT	DATE:	04/08/2022
		DRAWN BY:	DTP
		DESIGN BY:	THS
		REVIEW BY:	THS
		SHEET:	08 OF 27

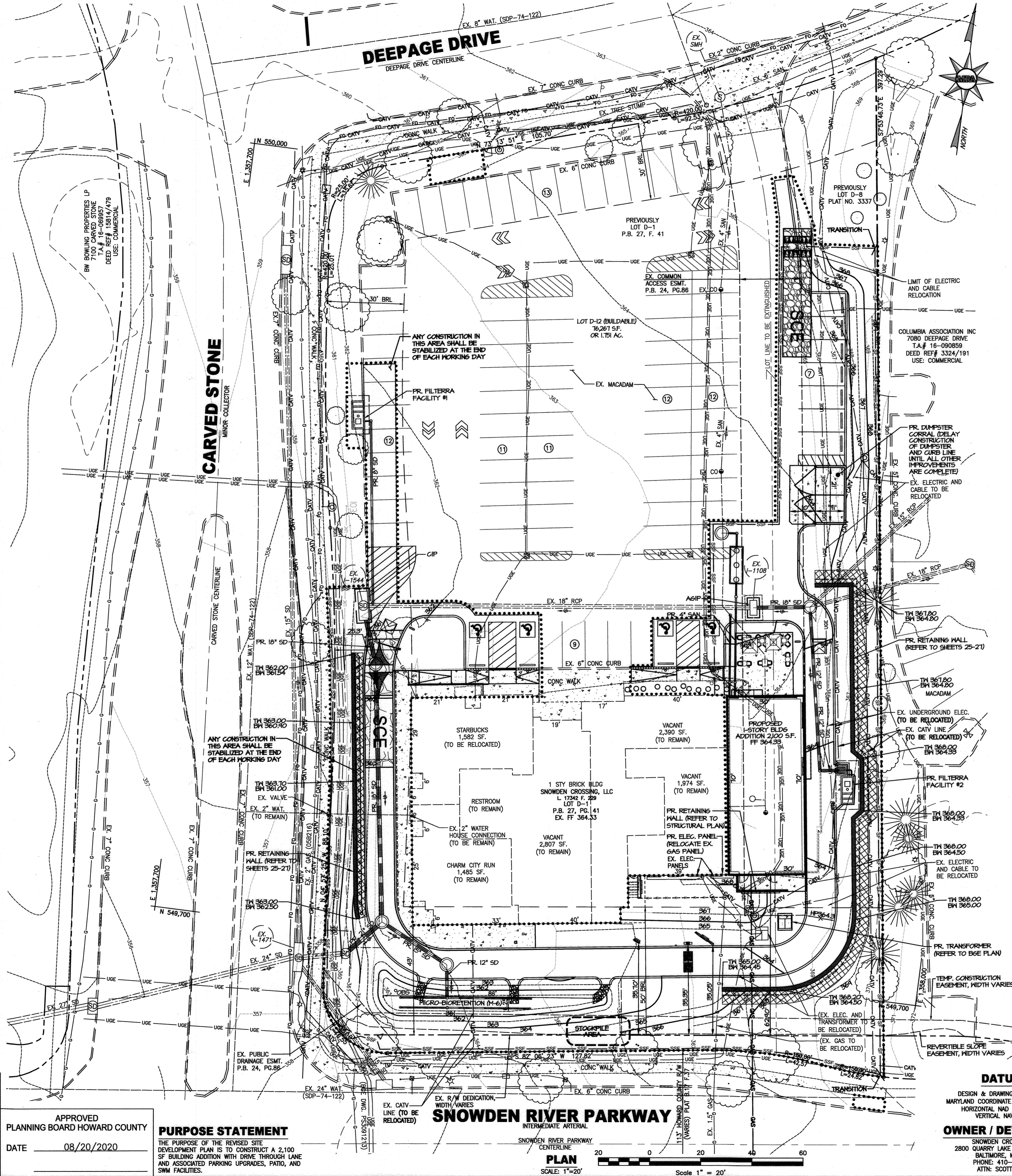
811
 Know what's below.
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PROTECT YOURSELF. GIVE THREE WORKING DAYS NOTICE. THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERE TO APPROPRIATE.

DATUM

DESIGN & DRAWING BASED ON MARYLAND COORDINATE SYSTEM (MCS): HORIZONTAL NAD 83 (2011) VERTICAL NAVD 88
OWNER / DEVELOPER
 SNOWDEN CROSSING LLC
 2800 QUARRY LAKE DRIVE, SUITE 340
 BALTIMORE, MD 21209
 PHONE: 410-308-0700
 ATTN: SCOTT CHERRY

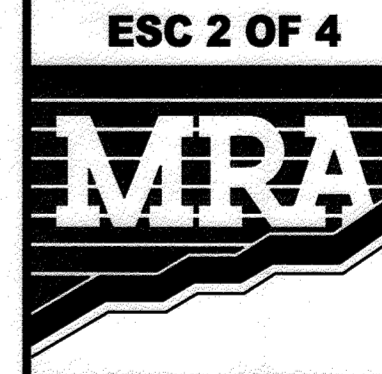
- LEGEND**
- EX. 1 FOOT CONTOURS
 - EX. 2 FOOT CONTOURS
 - EX. 10 FOOT CONTOURS
 - EX. CURB AND GUTTER
 - EX. CONCRETE
 - EX. C/L ROAD
 - EX. ADJACENT PROPERTY LINE
 - EX. PROPERTY LINE
 - EX. RIGHT OF WAY
 - EX. UTILITY EASEMENT
 - EX. WATER LINE
 - EX. SANITARY LINE
 - EX. STORM DRAIN LINE
 - EX. FIBER OPTIC CABLE
 - EX. CATV
 - EX. GAS
 - EX. UNKNOWN UTILITY
 - EX. UNDER GROUND ELECTRIC
 - EX. LIGHT POLE
 - EX. U/G UTILITY HANDBOX
 - EX. UTILITY POLE
 - EX. SIGN
 - EX. BOLLARD
 - EX. TREE
 - EX. BUILDING/STRUCTURE
 - PR. LIMIT OF DISTURBANCE
 - PR. 1 FT. CONTOUR
 - PR. 2 FT. CONTOUR
 - PR. 10 FT. CONTOUR
 - PR. BUILDING
 - PR. CONCRETE WALK
 - PR. CURB & GUTTER
 - PR. SANITARY SEWER
 - PR. STORM DRAIN
 - PR. FILTERRA
 - PR. SILT FENCE
 - PR. SUPER SILT FENCE
 - PR. STABILIZED CONSTRUCTION ENTRANCE W/ TYPE 'B' MOUNTABLE BERM
 - UuB URBAN LAND-UDORTHERTS COMPLEX SOIL
 - GIP
 - AGIP



DATUM
 DESIGN & DRAWING BASED ON MARYLAND COORDINATE SYSTEM (MCS): HORIZONTAL NAD 83 (2011) VERTICAL NAVD 88

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MORRIS & RITCHIE ASSOCIATES, INC.
 ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
 1220-B EAST JOPPA ROAD, SUITE 400K
 TOWSON, MARYLAND 21286
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REVISED SITE DEVELOPMENT PLAN
VILLAGE OF OWEN BROWN, SECTION 2, AREA 2, LOT D-12, SNOWDEN CROSSING
 EROSION AND SEDIMENT CONTROL PROPOSED CONDITIONS PLAN

SDP-74-122
 TAX MAP 42 -- GRID 04 -- PARCEL 0397 -- ZONING NT -- DEED REF 17342/229
 PLAT NO. 2741 -- TAX ASSESSMENT DISTRICT 82 -- 6th ELECTION DISTRICT
 7090 DEEPAE DRIVE, HOWARD COUNTY, MARYLAND, 21045

DATE	REVISIONS	JOB NO.
11/22/2019	REVISED SDP-74-122 TO INCLUDE 2100 SF ADDITION	19650
11/7/2023	NO AS BUILT	

SCALE: 1" = 20'
 DATE: 04/08/2022
 DRAWN BY: DTP
 DESIGN BY: THS
 REVIEW BY: THS
 SHEET: 09 OF 27

HOWARD SCD SIGNATURE BLOCK
 THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
Alvander Butcher
 HOWARD SOIL CONSERVATION DISTRICT
 DATE: 05/05/22

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Ali Chohan
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 5.10.22
Julia Sullivan
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 6/14/22
Stephanna
 DIRECTOR
 DATE: 6/14/22

APPROVED
 PLANNING BOARD HOWARD COUNTY
 DATE: 08/20/2020

PURPOSE STATEMENT
 THE PURPOSE OF THE REVISED SITE DEVELOPMENT PLAN IS TO CONSTRUCT A 2,100 SF BUILDING ADDITION WITH DRIVE THROUGH LANE AND ASSOCIATED PARKING UPGRADES, PATIO, AND SWM FACILITIES.

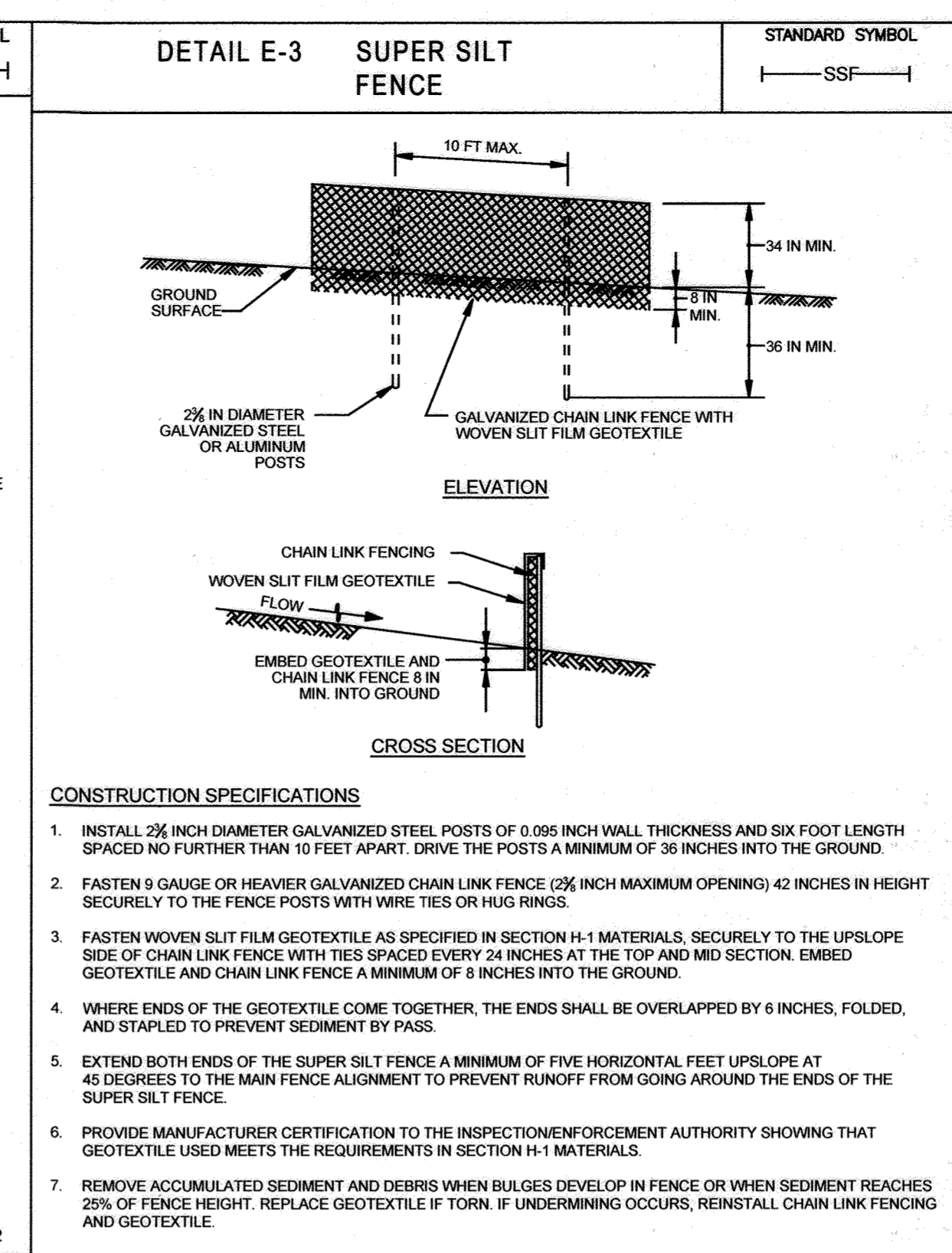
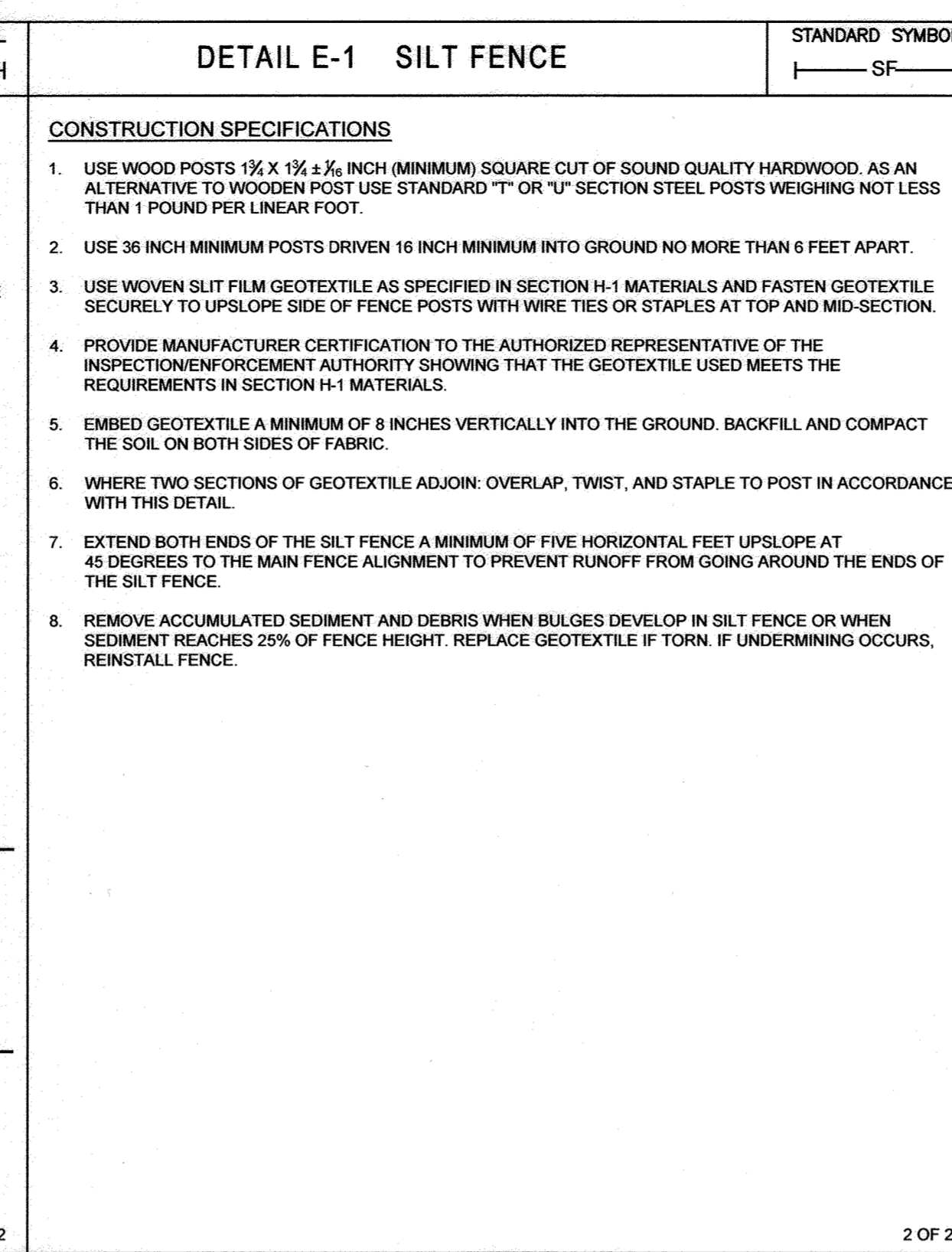
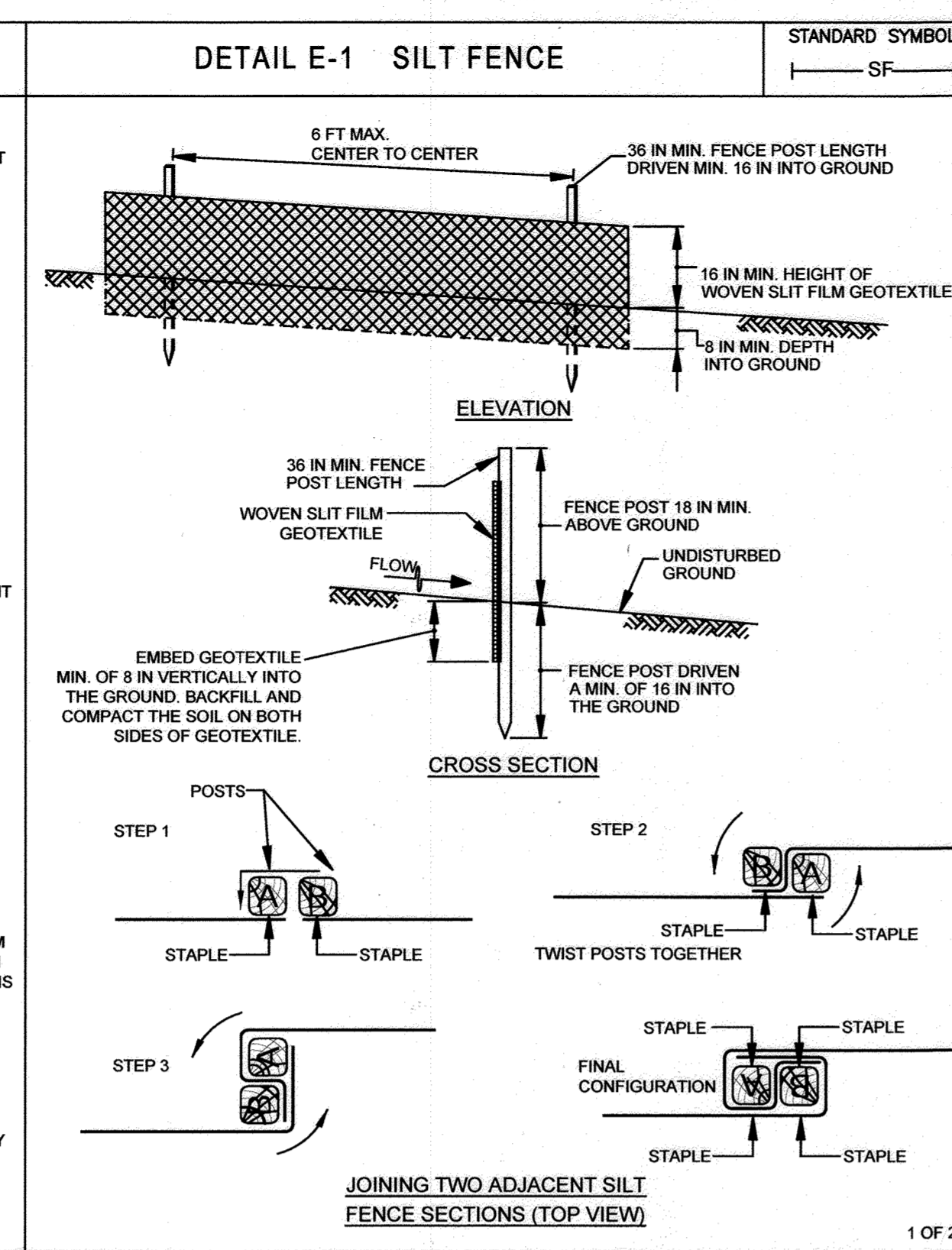
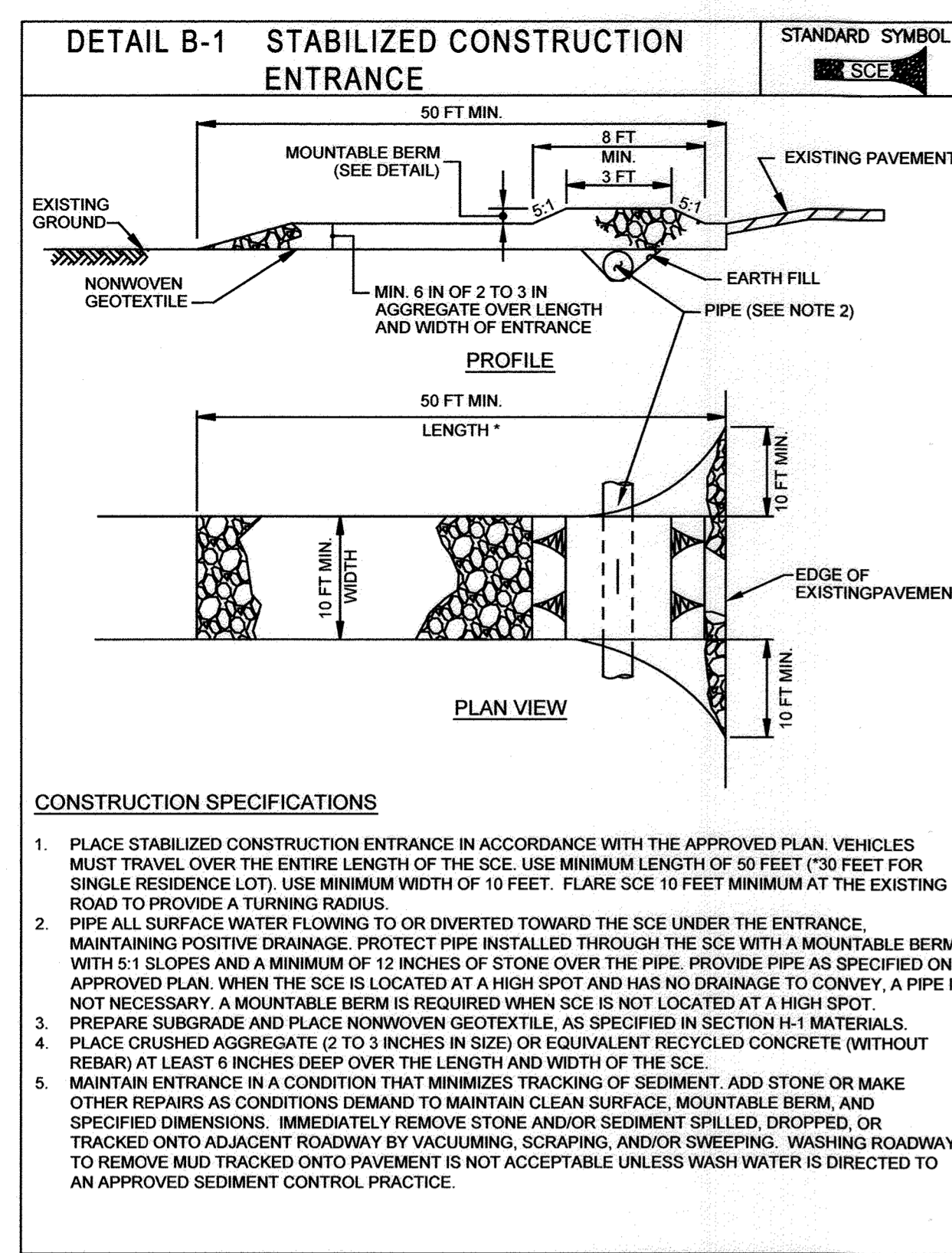
SNOWDEN RIVER PARKWAY
 INTERMEDIATE ARTERIAL
 SNOWDEN RIVER PARKWAY CENTERLINE

PLAN
 SCALE: 1" = 20'



Know what's below.
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PROTECT YOURSELF, GIVE THREE WORKING DAYS NOTICE
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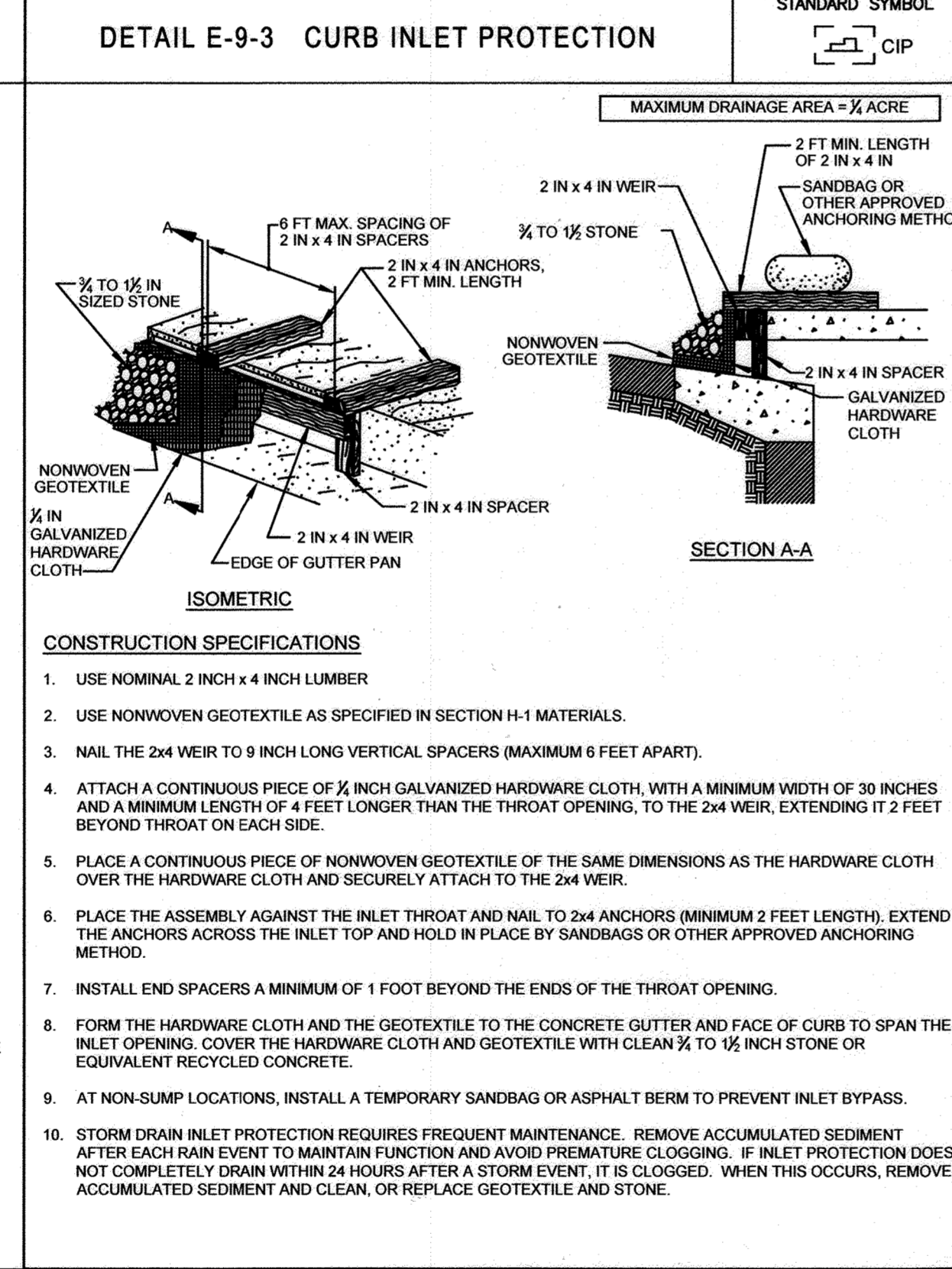
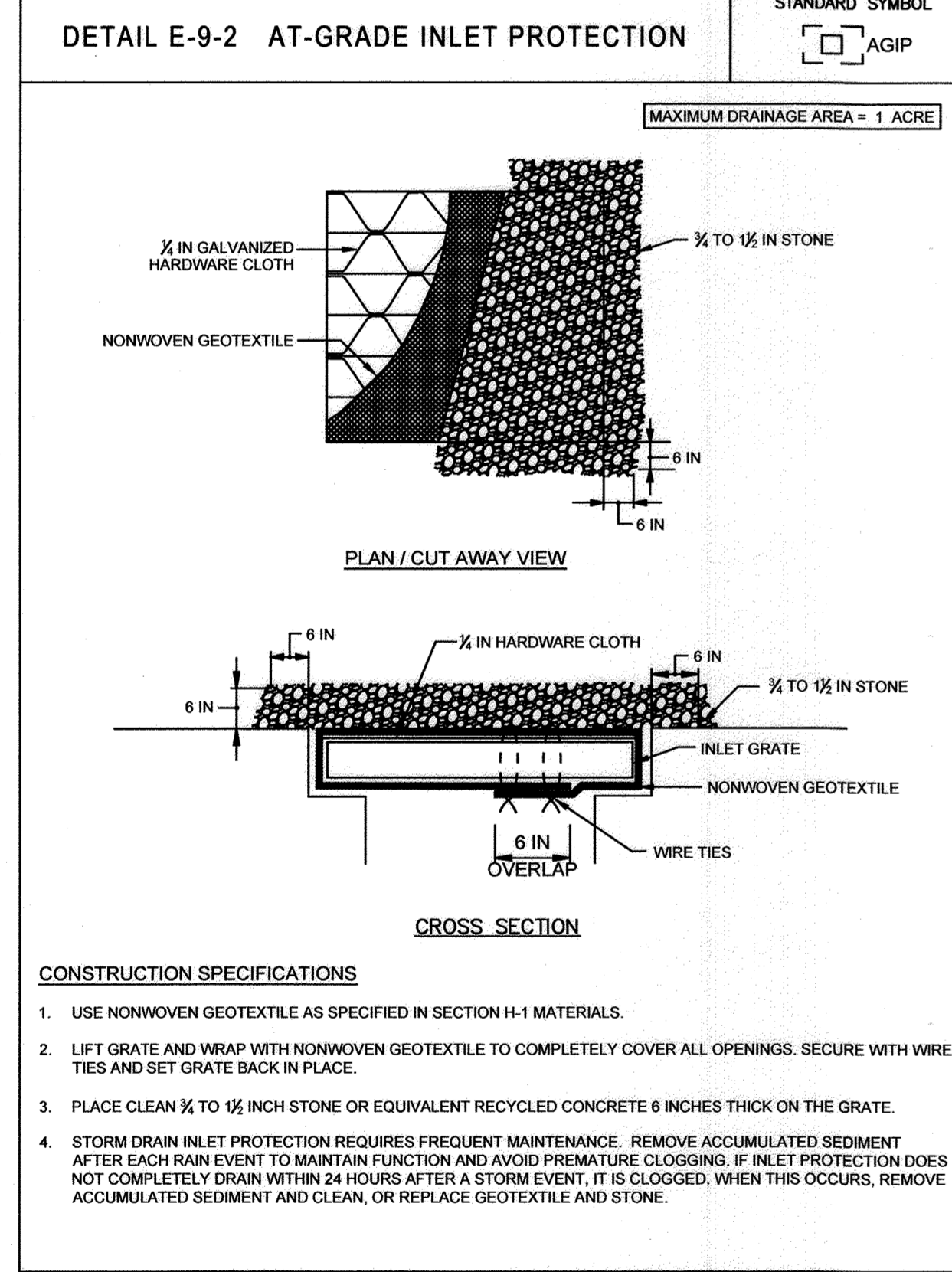


MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL
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 U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

HOWARD SCD SIGNATURE BLOCK
 THIS PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
Alexander Butcher 05/05/22
 HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature] 5.10.22
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
[Signature] 6/14/22
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
[Signature] 6/14/22
 DIRECTOR DATE

APPROVED PLANNING BOARD HOWARD COUNTY
 DATE 08/20/2020

PURPOSE STATEMENT
 THE PURPOSE OF THE REVISED SITE DEVELOPMENT PLAN IS TO CONSTRUCT A 2,100 SF BUILDING ADDITION WITH DRIVE THROUGH LAKE AND ASSOCIATED PARKING UPGRADES, PATIO, AND SWM FACILITIES.

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. 38291, EXPIRATION DATE: 1/13/2024.

ESC 3 OF 4

MRA

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 ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
 1220-B EAST JOPPA ROAD, SUITE 400K
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REVISED SITE DEVELOPMENT PLAN
VILLAGE OF OWEN BROWN, SECTION 2,
AREA 2, LOT D-12, SNOWDEN CROSSING
 EROSION AND SEDIMENT CONTROL
 DETAILS
 SDP-74-122
 TAX MAP 42 -- GRID 04 -- PARCEL 0397 -- ZONING NT -- DEED REF 17342/229
 PLAT NO. 2741 -- TAX ASSESSMENT DISTRICT 82 -- 8th ELECTION DISTRICT
 7090 DEEPAE DRIVE, HOWARD COUNTY, MARYLAND, 21045

DATE	REVISIONS	JOB NO.
11/22/2019	REVISED SDP-74-122 TO INCLUDE 2100 SF ADDITION	19650
11/7/2023	NO AS QUAILT	SCALE: AS SHOWN
		DATE: 04/08/2022
		DRAWN BY: DTP
		DESIGN BY: THS
		REVIEW BY: THS
		SHEET: 10 OF 27

DATUM
 DESIGN & DRAWING BASED ON MARYLAND COORDINATE SYSTEM (MCS): HORIZONTAL NAD 83 (2011) VERTICAL NAVD 88

OWNER / DEVELOPER
 SNOWDEN CROSSING LLC
 2800 QUARRY LAKE DRIVE, SUITE 340
 BALTIMORE, MD 21209
 PHONE: 410-308-0700
 ATTN: SCOTT CHERRY

B-4-S STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION

DEFINITION TO STABILIZED 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 GUIDE, SECTION 342- CRITICAL AREA PLANTING.
c. FOR SITES HAVING DISTURBED AREA 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 1/2 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 INCLUDING 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 KENTUCKY 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 1/2 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 RECOMMENDATION 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 15 (HARDINESS ZONES: 5B, 6A)
CENTRAL MD: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDINESS ZONE: 6B)
EASTERN MD: 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 1/2 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 (1/2 TO 1 INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASON, 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 SOD MUST BE MARYLAND STATE CERTIFIED. SOD LABELS MUST BE MADE AVAILABLE TO THE JOB FOREMAN AND INSPECTOR.
b. SOD MUST BE HARVESTED CUT AT A UNIFORM SOIL THICKNESS OF 1/4 INCH, PLUS OR MINUS 1/8 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 TRANSPORTED 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 TRANSPORTED 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 PLACE 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 AND IN ORDER TO PREVENT JOINTS 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 SOIL 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 ONE 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.

DAILY STABILIZATION

THIS NOTE SHOULD BE USED FOR MINIMAL AREAS WITHIN THE LIMITS OF DISTURBANCE THAT DO NOT DRAIN TO A SEDIMENT CONTROL MEASURE AND/OR WHERE THE INSTALLATION OF CONTROLS IS NOT FEASIBLE. (ROAD WIDENING, SIDEWALK INSTALLATION, ETC.). THE CONTRACTOR SHALL ONLY DISTURB THAT AREA WHICH CAN BE COMPLETED AND STABILIZED BY THE END OF EACH WORKING DAY. STABILIZATION SHALL BE AS FOLLOWS:

- 1. FOR AREAS TO BE PAVED, THE APPLICATION OF STONE BASE.
2. FOR AREAS TO BE VEGETATIVELY STABILIZED:
a.) PERMANENT SEED AND SOIL STABILIZATION MATTING OR SOD FOR ALL STEEP SLOPES, CHANNELS OR SWALES.
b.) PERMANENT SEED AND MULCH FOR ALL OTHER AREAS.

ANY AREAS WHICH CAN NOT BE STABILIZED BY THE END OF EACH WORKING DAY MUST HAVE SILT FENCE INSTALLED ON THE DOWNSLOPE SIDE.

SEQUENCE OF CONSTRUCTION

- 1. OBTAIN ALL NECESSARY PERMITS. CONTACT THE HOWARD COUNTY OFFICE OF INSPECTIONS 48 HOURS PRIOR TO BEGINNING ANY WORK. 1 DAY
2. CLEAR AND GRUB FOR INSTALLATION OF SEDIMENT CONTROLS ONLY. 4 DAYS
3. INSTALL PERIMETER EROSION AND SEDIMENT CONTROL DEVICES, SILT FENCES, INLET PROTECTION, AND STABILIZED CONSTRUCTION ENTRANCE. 2 DAYS
4. BEGIN DEMOLITION AND/OR RELOCATION OF EXISTING STRUCTURES, PAVING, CURB, UTILITY SERVICES, AND SITE FEATURES. 30 DAYS
5. CLEAR AND GRUB AREAS FOR GRADING, BEGIN GRADING FOR BUILDING, DRIVE ASLES, AND PARKING AREAS. PROVIDE TEMPORARY STABILIZATION AS REQUIRED. 30 DAYS
6. BEGIN BUILDING CONSTRUCTION. 180 DAYS
7. INSTALL STORM DRAIN, SANITARY SEWER, WATER, AND DRY UTILITY SERVICES. 30 DAYS
8. INSTALL CURB & GUTTER, AND BASE PAVING. 20 DAYS
9. FINE GRADE SITE AND PROVIDE PERMANENT STABILIZATION. 15 DAYS
10. INSTALL SURFACE PAVING. 2 DAYS
11. INSTALL LANDSCAPING. 4 DAYS
12. WITH THE SEDIMENT CONTROL INSPECTORS APPROVAL, REMOVE ALL REMAINING SEDIMENT CONTROLS AND STABILIZE ANY REMAINING DISTURBED AREAS. 2 DAYS

HOWARD SCD SIGNATURE BLOCK

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

Alexander Bratchuk 05/05/22
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division 5-10-22
Julia Sauer 10/14/22
Chief, Division of Land Development
Director 6/14/22

PURPOSE STATEMENT

THE PURPOSE OF THE REVISED SITE DEVELOPMENT PLAN IS TO CONSTRUCT A 2,100 SF BUILDING ADDITION WITH DRIVE THROUGH LAKE AND ASSOCIATED PARKING UPGRADES, PAVD, AND SWM FACILITIES.

APPROVED PLANNING BOARD HOWARD COUNTY

DATE 08/20/2020

B-4-B 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.

B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION

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 TABLE 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 ALONG AS PRESCRIBED IN SECTION B-4-3A.1.B AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

TABLE B.1: TEMPORARY SEEDING FOR SITE STABILIZATION

Table with columns: PLANT SPECIES, SEEDING RATE 1/ (LB/AC, LB/1,000 FT^2), SEEDING DEPTH 2/ (INCHES), RECOMMENDED SEEDING DATES BY PLANT HARDINESS ZONE 3/ (5B AND 6A, 6B, 7A AND 7B), FERTILIZER RATE (10-20-20). Rows include COOL-SEASON GRASSES (Annual Ryegrass, Barley, Oats, Wheat, Cereal Rye), WARM-SEASON GRASSES (Forktail Millet, Pearl Millet).

NOTES:

- 1. SEEDING RATES FOR WARM-SEASON GRASSES ARE IN POUNDS OF PURE LIVE SEED (PLS). ACTUAL PLANTING RATES SHALL BE ADJUSTED TO REFLECT PERCENT SEED GERMINATION AND PURITY, AS TESTED. ADJUSTMENTS ARE USUALLY NOT NEEDED FOR THE COOL-SEASON GRASSES. SEEDING RATES LISTED ABOVE ARE FOR TEMPORARY SEEDINGS. WHEN PLANTED ALONE, WHEN PLANTED AS A NURSE CROP WITH PERMANENT SEED MIXES, USE 1/3 OF THE SEEDING RATE LISTED ABOVE FOR BARLEY, OATS, AND WHEAT. FOR SMALLER-SEEDED GRASSES (ANNUAL RYEGRASS, PEARL MILLET, FORKTAIL MILLET) DO NOT EXCEED MORE THAN 5X (BY WEIGHT) OF OVERALL PERMANENT SEEDING MIX. CEREAL RYE GENERALLY SHOULD NOT BE USED AS A NURSE CROP, UNLESS PLANTING WILL OCCUR IN VERY LATE FALL BEYOND THE SEEDING DATES FOR OTHER TEMPORARY SEEDINGS. CEREAL RYE HAS ALLELOPATHIC PROPERTIES THAT INHIBIT THE GERMINATION AND GROWTH OF OTHER PLANTS. IF IT MUST BE USED AS A NURSE CROP, SEED AT 1/3 OF THE RATE LISTED ABOVE. OATS ARE THE RECOMMENDED NURSE CROP FOR WARM-SEASON GRASSES.
2. FOR SANDY SOILS, PLANT SEEDS AT TWICE THE DEPTH LISTED ABOVE.
3. THE PLANTING DATES LISTED ABOVE ARE AVERAGES FOR EACH ZONE AND MAY REQUIRE ADJUSTMENT TO REFLECT LOCAL CONDITIONS, ESPECIALLY NEAR THE BOUNDARIES OF THE ZONE.

PERMANENT SEEDING SUMMARY

Table with columns: No., SPECIES, APPLICATION RATE (lb/Ac), SEEDING DATES, SEEDING DEPTHS, N, P2O5, K2O, LIME RATE. Rows include Switch Grass, Creeping Red Fescue, Partridge Pea, Kentucky Bluegrass.

- * ADDITIONAL PLANTING DATES DURING WHICH SUPPLEMENTAL WATERING MAY BE NEEDED TO ENSURE PLANT ESTABLISHMENT.
** WARM-SEASON GRASSES NEED A SOIL TEMPERATURE OF AT LEAST 50 DEGREES F IN ORDER TO GERMINATE. IF SOIL TEMPERATURES ARE COLDER THAN 50 DEGREES, OR MOISTURE IS NOT ADEQUATE, THE SEEDS WILL REMAIN DORMANT UNTIL CONDITIONS ARE FAVORABLE. IN GENERAL, PLANTING DURING THE LATTER PORTION OF THIS PERIOD ALLOWS MORE TIME FOR WEED EMERGENCE AND WEED CONTROL PRIOR TO PLANTING. WHEN SELECTING A PLANTING DATE, CONSIDER THE NEED FOR WEED CONTROL VS. THE LIKELIHOOD OF HAVING SUFFICIENT MOISTURE FOR PLANTINGS, ESPECIALLY ON DROUGHTY SITES.

HOWARD SOIL CONSERVATION DISTRICT (HSCD) 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 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: 1.79 ACRES
AREA DISTURBED: 0.80 ACRES
AREA TO BE ROOFED OR PAVED: 0.39 ACRES
AREA TO BE VEGETATIVELY STABILIZED: 0.41 ACRES
TOTAL CUT: 1270 CU. YDS.
TOTAL FILL: 250 CU. YDS.
OFFSITE WASTE/BORROW AREA LOCATION: (SEE NOTE 12)
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 COMPLETED) 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 BEGINS 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 HSCD, 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 IIP 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.
17. UNSUITABLE MATERIAL SHALL BE REMOVED FROM SITE AND DISPOSED OF AT AN OFFSITE AREA COVERED BY AN ACTIVE GRADING PERMIT, WITH FUNCTIONING EROSION AND SEDIMENT CONTROLS IN PLACE.

SEDIMENT CONTROL

OWNERS/DEVELOPER CERTIFICATION:

"I/WE HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT THE RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF TRAINING AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL ON EROSION AND SEDIMENT TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE."

Scott Cherry 04/08/2022
OWNER'S/DEVELOPER'S SIGNATURE DATE
SCOTT CHERRY, VICE PRESIDENT
PRINTED NAME & TITLE

DESIGN CERTIFICATION:

"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."

Michael Coughlin 04/08/2022
DESIGNER'S SIGNATURE DATE
MICHAEL COUGHLIN
PRINTED NAME
MD REGISTRATION NO. 38291
(P.E.) R.L.S., OR R.L.A. (CIRCLE ONE)

PROFESSIONAL CERTIFICATION

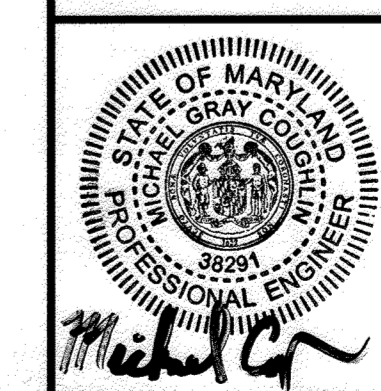
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 38291, EXPIRATION DATE: 11/13/2024.

ESC 4 OF 4



MORRIS & RITCHIE ASSOCIATES, INC.

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REV SITE DEVELOPMENT PLAN

VILLAGE OF OWEN BROWN, SECTION 2, AREA 2, LOT D-12, SNOWDEN CROSSING

EROSION AND SEDIMENT CONTROL NOTES

SDP-74-122
TAX MAP 42 -- GRID 04 -- PARCEL 0397 -- ZONING NT -- DEED REF 17342/229
PLAT NO. 2741 -- TAX ASSESSMENT DISTRICT 82 -- 6th ELECTION DISTRICT
7090 DEEPAE DRIVE, HOWARD COUNTY, MARYLAND, 21045

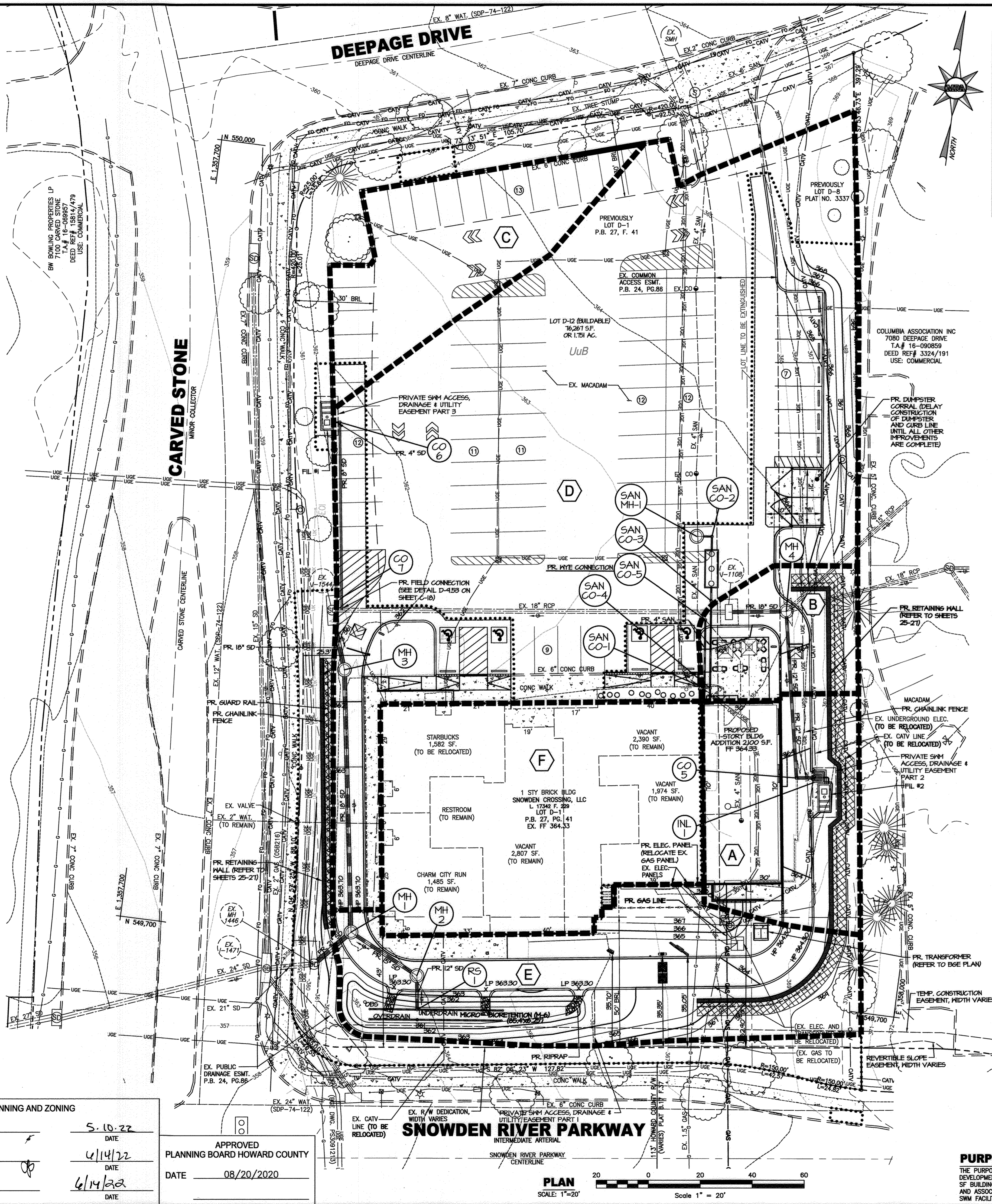
DATUM

DESIGN & DRAWING BASED ON MARYLAND COORDINATE SYSTEM (MCS): HORIZONTAL NAD 83 (2011) VERTICAL NAVD 88

OWNER / DEVELOPER

SNOWDEN CROSSING LLC
2800 QUARRY LAKE DRIVE, SUITE 340
BALTIMORE, MD 21208
PHONE: 410-308-0700
ATTN: SCOTT CHERRY

Table with columns: DATE, REVISIONS, JOB NO., SCALE, DATE, DRAWN BY, DESIGN BY, REVIEW BY, SHEET. Rows show revision history for SDP-74-122.



STORM DRAINAGE FLOW CALCULATIONS

LOCATION	AREA	ACRES	COEFF.	CA	SUMP	TIME CONC.	MIN.	INTEN.	INTEN.	Q=C.I.A.	PIPE #	Partial Flow	Full Flow	REMARKS	
From	To	Sub.	Total	"C"	CA	Inlet	Drain	Total	Adjusted	10 Year	C.F.S.	Vel(7.0 Ips min)	Vel	Lgth.	
FIL-2	CO-5	A	.12	.65	0.0780	0.0000	5.00	9.76	8.50	.66	12	7.0	8	25 YR/10 YR	
FIL-2	CO-5	A	.12	.65	0.0780	0.0000	5.00	9.76	8.50	.66	12	7.0	8	25 YR/10 YR	
CO-5	MH-4	A	.12	.65	0.0780	0.0000	5.00	9.76	8.50	.66	12	7.0	8	25 YR/10 YR	
MH-4	EX-1108	A	.12	.65	0.0780	0.0000	5.00	9.76	8.50	.66	12	7.0	8	25 YR/10 YR	
EX-1108	FIL-1	B	.06	.45	0.0270	0.0000	5.00	9.76	8.50	.33	18	7.0	4	25 YR/10 YR	
FIL-1	FIL-1	C	.12	.86	0.1023	0.0000	5.00	9.76	8.50	.87	18	7.0	5	25 YR/10 YR	
FIL-1	EX-1544	C	.12	.86	0.1023	0.0000	5.00	9.76	8.50	.87	18	7.0	5	25 YR/10 YR	
EX-1544	EX-1544	A-B	.18	.38	0.1050	0.0000	5.00	9.76	8.50	.88	18	7.0	5	25 YR/10 YR	
EX-1544	EX-1544	D	.80	.78	0.6240	0.0000	5.00	9.76	8.50	5.30	18	7.0	39	25 YR/10 YR	
EX-1544	MH-3	A-D	1.10	.83	0.6813	0.0000	5.00	9.76	8.50	6.82	18	7.0	39	25 YR/10 YR	
MH-3	RS-1	E	.21	.43	0.0903	0.0000	5.00	9.76	8.50	.77	12	7.0	10	25 YR/10 YR	
RS-1	MH-2	E	.21	.43	0.0903	0.0000	5.00	9.76	8.50	.77	12	7.0	10	25 YR/10 YR	
MH-2	MH-1	E	.21	.43	0.0903	0.0000	5.00	9.76	8.50	.77	12	7.0	10	25 YR/10 YR	
MH-1	MH-1	A-D	1.10	.76	0.6240	0.0000	5.00	9.76	8.50	6.82	18	7.0	39	25 YR/10 YR	
MH-1	ROOF	F	.24	.86	0.3264	0.0000	5.00	9.76	8.50	1.75	21	7.0	3.8	25 YR/10 YR	
MH-1	EXMH 1446	A-F	1.55	.83	0.6813	0.0000	5.00	9.76	8.50	6.82	21	7.0	38	25 YR/10 YR	
						SUMP	1.1280	5.6	0.2	5.8	0.0	8.10	9.14	21	1.70 % 0.39%

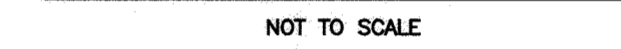
DRAINAGE AREA TABULATION

DRAINAGE AREA	AREA SF	ACRE	IMP AREA SF	% IMP	C-FACTOR
A	5,153	0.12	3,283	63.7%	0.65
B	2,782	0.06	1,755	63.2%	0.45
C	5,200	0.12	5,200	100%	0.86
D	34,842	0.80	30,627	87.9%	0.78
E	9,320	0.21	2,978	32.0%	0.43
F	10,270	0.24	10,270	100%	0.86

ROOF DRAIN NOTES

- CONTRACTOR TO INSTALL ROOF DRAINS TO THE DESIGNATED CLEANOUT DURING SITE CONSTRUCTION. THE REMAINDER OF THE ROOF DRAIN SYSTEM TO BE INSTALLED DURING BUILDING CONSTRUCTION.
- THE ROOF DRAIN SYSTEM FROM THE DESIGNATED CLEANOUT TO SURROUNDING POINTS AROUND THE BUILDING IS A SCHEMATIC ONLY. THE BUILDER SHALL INSTALL THE ROOF DRAINS DURING BUILDING CONSTRUCTION.
- ALL ROOF DRAINS ARE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
- ROOF DRAINS TO HAVE A MINIMUM 2" COVER.
- MINIMUM SLOPE SHALL BE 0.50%.
- ALL ROOF DRAINS SHALL BE NYLOPLAST-ADS HDPE N-12 PIPE OR AN APPROVED EQUAL.
- DRAIN BASINS SHALL BE NYLOPLAST-ADS DRAIN BASIN OR APPROVED EQUAL (AS SHOWN IN STRUCTURE SCHEDULE).
- TOPS OF CLEANOUTS SHALL BE FLUSH WITH GRADE. CONTRACTOR TO USE HEAVY TRAFFIC BEARING FRAME AND COVERS WHEN CLEANOUT IS IN PAVEMENT AND SIDEWALKS.
- ALL UTILITY CROSSINGS SHALL HAVE 1'-0" MINIMUM CLEARANCE.
- SEE ARCHITECTURAL PLANS FOR ELECTRICAL, PLUMBING AND GAS LOCATIONS, SEE CIVIL PLANS FOR STORM DRAIN, SANITARY SEWER AND WATER.

ROOF DRAIN CONNECTION



LEGEND

- EX. 1 FOOT CONTOURS
- EX. 2 FOOT CONTOURS
- EX. 10 FOOT CONTOURS
- EX. CURB AND GUTTER
- EX. CONCRETE
- EX. C/L ROAD
- EX. ADJACENT PROPERTY LINE
- EX. PROPERTY LINE
- EX. RIGHT OF WAY
- EX. UTILITY EASEMENT
- EX. WATER LINE
- EX. SANITARY LINE
- EX. STORM DRAIN LINE
- EX. FIBER OPTIC CABLE
- EX. CATV
- EX. GAS
- EX. UNKNOWN UTILITY
- EX. UNDER GROUND ELECTRIC
- EX. LIGHT POLE
- EX. U/G UTILITY HANDBOX
- EX. UTILITY POLE
- EX. SIGN
- EX. BOLLARD
- EX. TREE
- EX. BUILDING/STRUCTURE
- PR. LIMIT OF DISTURBANCE
- PR. 1 FT. CONTOUR
- PR. 2 FT. CONTOUR
- PR. 10 FT. CONTOUR
- PR. BUILDING
- PR. CONCRETE WALK
- PR. CURB & GUTTER
- PR. SANITARY SEWER
- PR. STORM DRAIN
- PR. FILTERRA
- PR. GEGRID
- DRAINAGE AREA DVIDE

SOILS CHART

MAP SYMBOL AND SOIL NAME	HYDROLOGIC GROUP	SLOPES	ACREAGE ON-SITE
UuB URBAN LAND-URDOTHENTS COMPLEX	D	0-8%	1.41 AC.

ROOF DRAINS

EXISTING ROOF DRAINS FOUND DURING CONSTRUCTION SHALL BE DIVERTED TO THE INTO THE PROPOSED STORM DRAIN SYSTEM. THE FLOWRABS CURRENTLY SHOW THE IMPERVIOUS AREA FROM THE ROOF CAPTURED AND SENT INTO MANHOLE 2.

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. 38291, EXPIRATION DATE: 1/13/2024.



Know what's below. Call before you dig.

MORRIS & RITCHIE ASSOCIATES, INC.
 ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
 1220-B EAST JOPPA ROAD, SUITE 400K
 TOWSON, MARYLAND 21286
 (410) 821-1690
 FAX (410) 821-1748
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REVISED SITE DEVELOPMENT PLAN
VILLAGE OF OWEN BROWN, SECTION 2,
AREA 2, LOT D-12, SNOWDEN CROSSING
 UTILITY PLAN, STORM DRAIN PLAN AND DRAINAGE AREA MAP

SDP-74-122
 TAX MAP 42 -- GRID 04 -- PARCEL 0397 -- ZONING NT -- DEED REF 17342/229
 PLAT NO. 2741 -- TAX ASSESSMENT DISTRICT 82 -- 8th ELECTION DISTRICT
 7090 DEEPAE DRIVE, HOWARD COUNTY, MARYLAND, 21045

DATE	REVISIONS	JOB NO.
11/22/2019	REVISED SDP-74-122 TO INCLUDE 2100 SF ADDITION	19850
11/7/2023	ADD AS BUILT	

SCALE: 1" = 20'
 DATE: 04/08/2022
 DRAWN BY: DTP
 DESIGN BY: THS
 REVIEW BY: THS
 SHEET: 13 OF 27

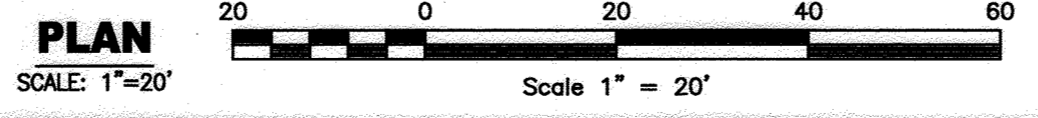
APPROVED: DEPARTMENT OF PLANNING AND ZONING
 [Signature]
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 [Signature]
 CHIEF, DIVISION OF LAND DEVELOPMENT
 [Signature]
 DIRECTOR

DATE: 5.10.22
 DATE: 4/14/22
 DATE: 6/14/22

APPROVED
 PLANNING BOARD HOWARD COUNTY
 DATE: 08/20/2020

SNOWDEN RIVER PARKWAY

INTERMEDIATE ARTERIAL
 SNOWDEN RIVER PARKWAY CENTERLINE

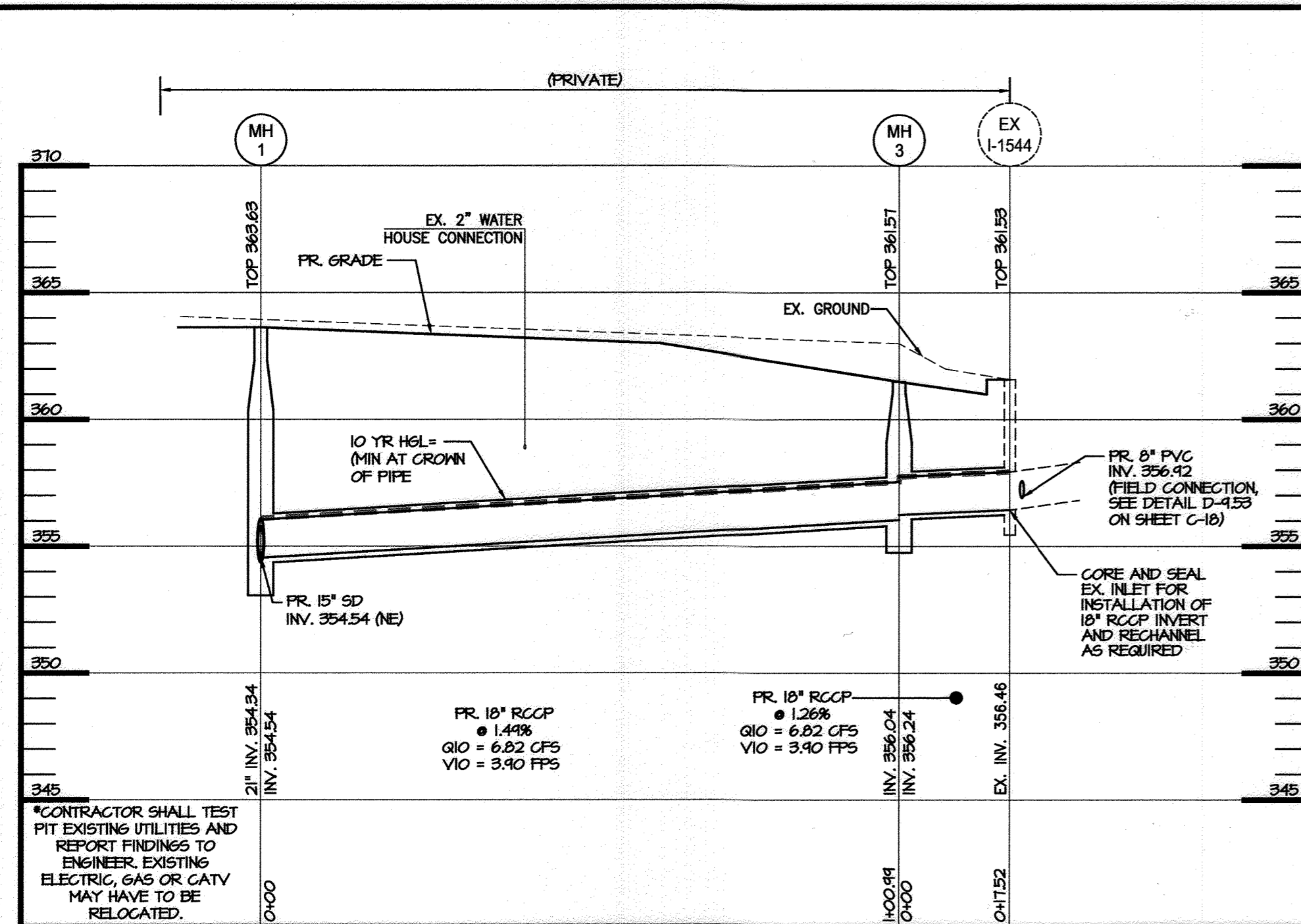


PURPOSE STATEMENT

THE PURPOSE OF THE REVISED SITE DEVELOPMENT PLAN IS TO CONSTRUCT A 2,100 SF BUILDING ADDITION WITH DRIVE THROUGH LANE AND ASSOCIATED PARKING UPGRADES, PATIO, AND SWM FACILITIES.

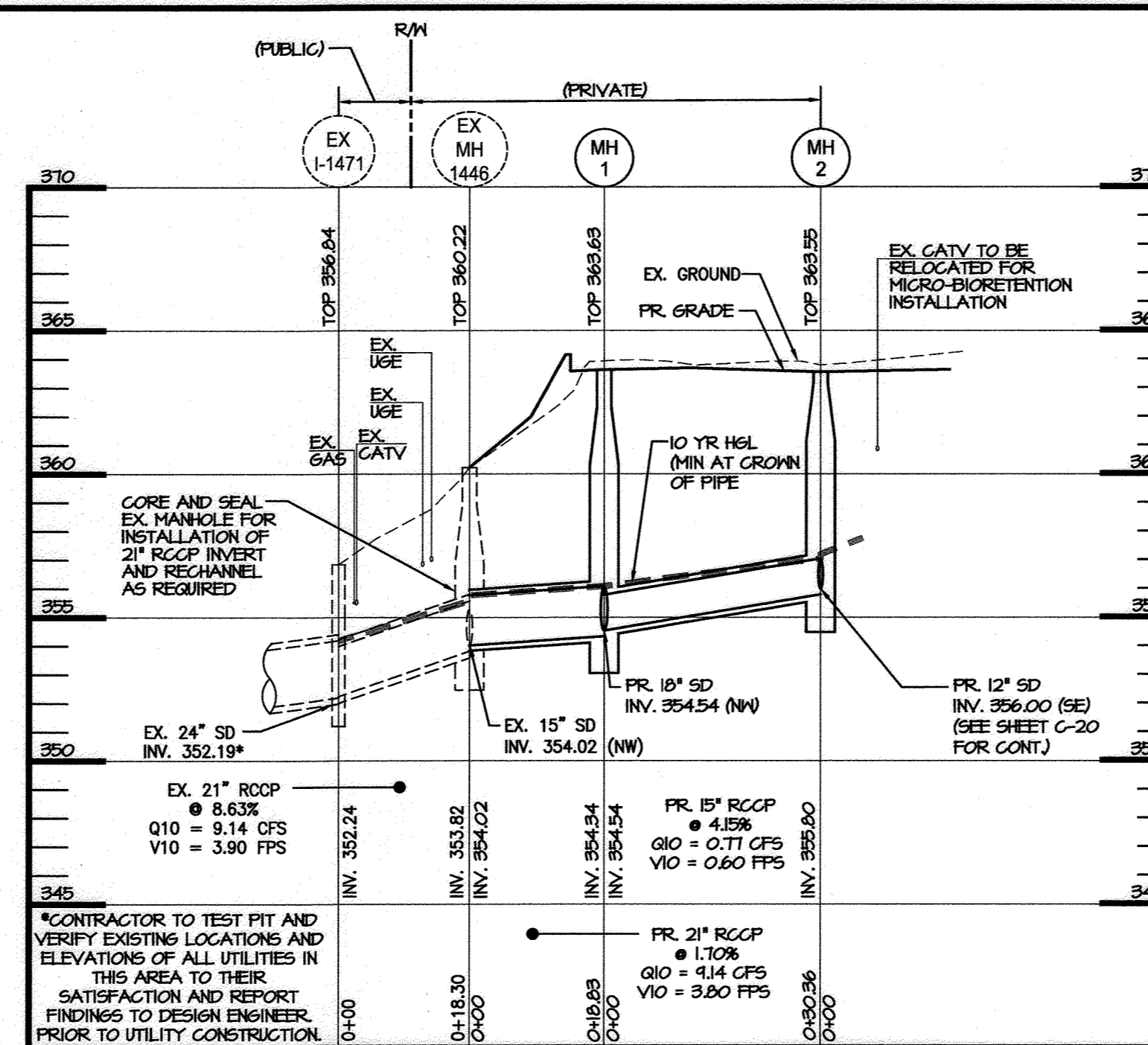
OWNER / DEVELOPER

SNOWDEN CROSSING LLC
 2800 QUARRY LAKE DRIVE, SUITE 340
 BALTIMORE, MD 21208
 PHONE: 410-308-0700
 ATTN: SCOTT CHERRY



STORM DRAIN PROFILE

SCALE: H: 1" = 20'
V: 1" = 5'



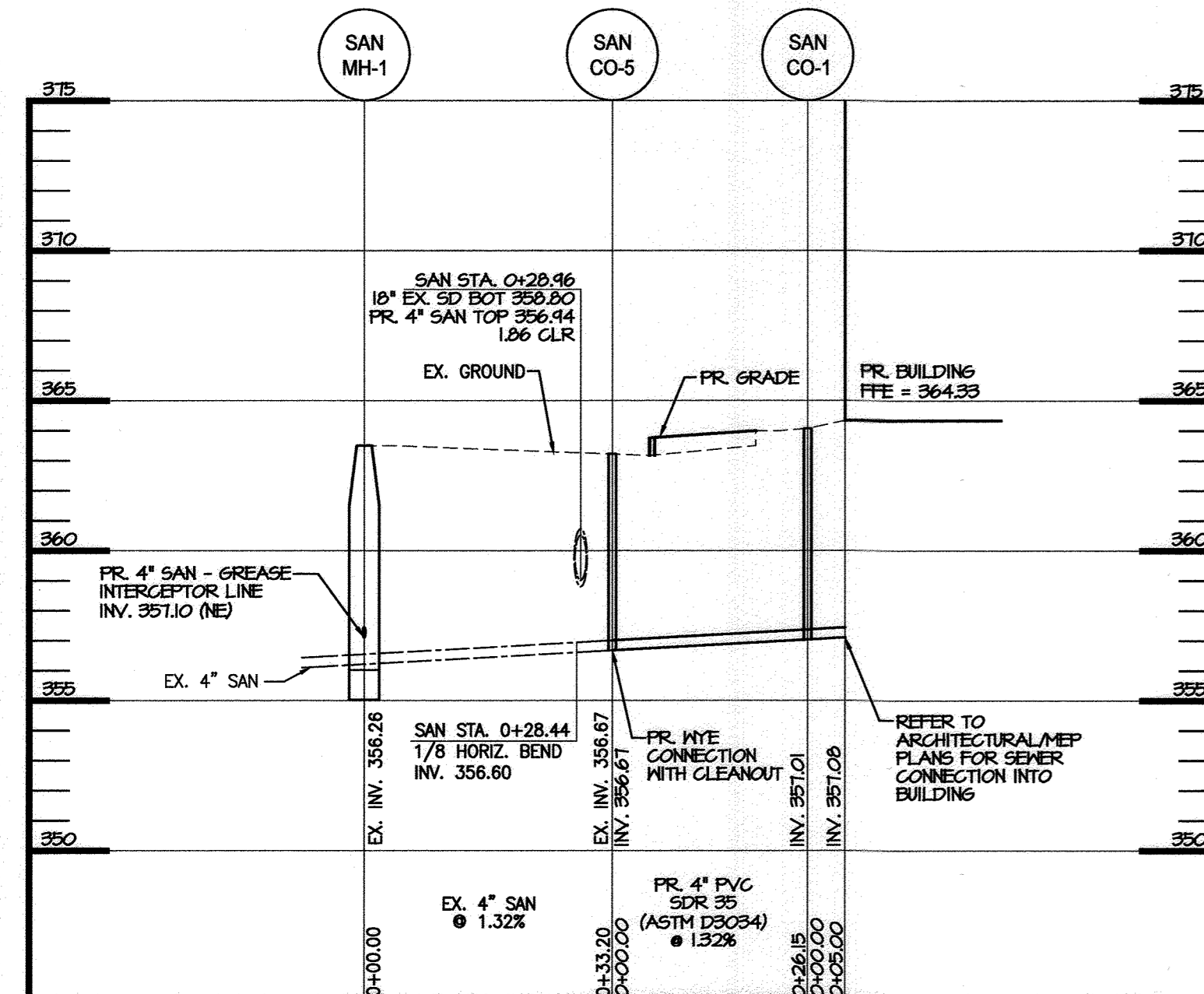
STORM DRAIN PROFILE

SCALE: H: 1" = 20'
V: 1" = 5'

No.	TYPE	SIZE	INV. OUT	TOP EL.	COORDINATE	REMARKS
MH-1	PRECAST MANHOLE	48"	354.34	363.63	N 549,705.42 E 1,357,788.76	HOWARD COUNTY DETAILS G-5.11, G-5.12
MH-2	PRECAST MANHOLE	48"	355.80	363.55	N 549,692.13 E 1,357,816.06	HOWARD COUNTY DETAILS G-5.11, G-5.12
MH-3	PRECAST MANHOLE	48"	356.04	361.57	N 549,804.78 E 1,357,773.25	HOWARD COUNTY DETAILS G-5.11, G-5.12
MH-4	SHALLOW MANHOLE	48"	359.46	363.88	N 549,848.80 E 1,357,938.86	HOWARD COUNTY DETAILS G-5.11, G-5.12
CO-5	CLEAN OUT	12"	359.91	363.87	N 549,786.04 E 1,357,951.04	SCHEDULE 40 PVC
CO-6	CLEAN OUT	8"	358.06	361.70	N 549,898.57 E 1,357,759.17	SCHEDULE 40 PVC
CO-7	CLEAN OUT	8"	357.00	361.00	N 549,832.26 E 1,357,768.57	SCHEDULE 40 PVC
INL-1	TYPE 'S' INLET	3'-1"	359.95	363.33	N 549,787.22 E 1,357,959.42	HOWARD COUNTY DETAIL D-4.24
FIL-1	FILTERRA STRUCTURE	6' X 4'	358.33	362.16	N 549,898.91 E 1,357,753.96	CONTECH FILTERRA
FIL-2	FILTERRA STRUCTURE	6' X 4'	360.33	364.17	N 549,780.22 E 1,357,962.63	CONTECH FILTERRA

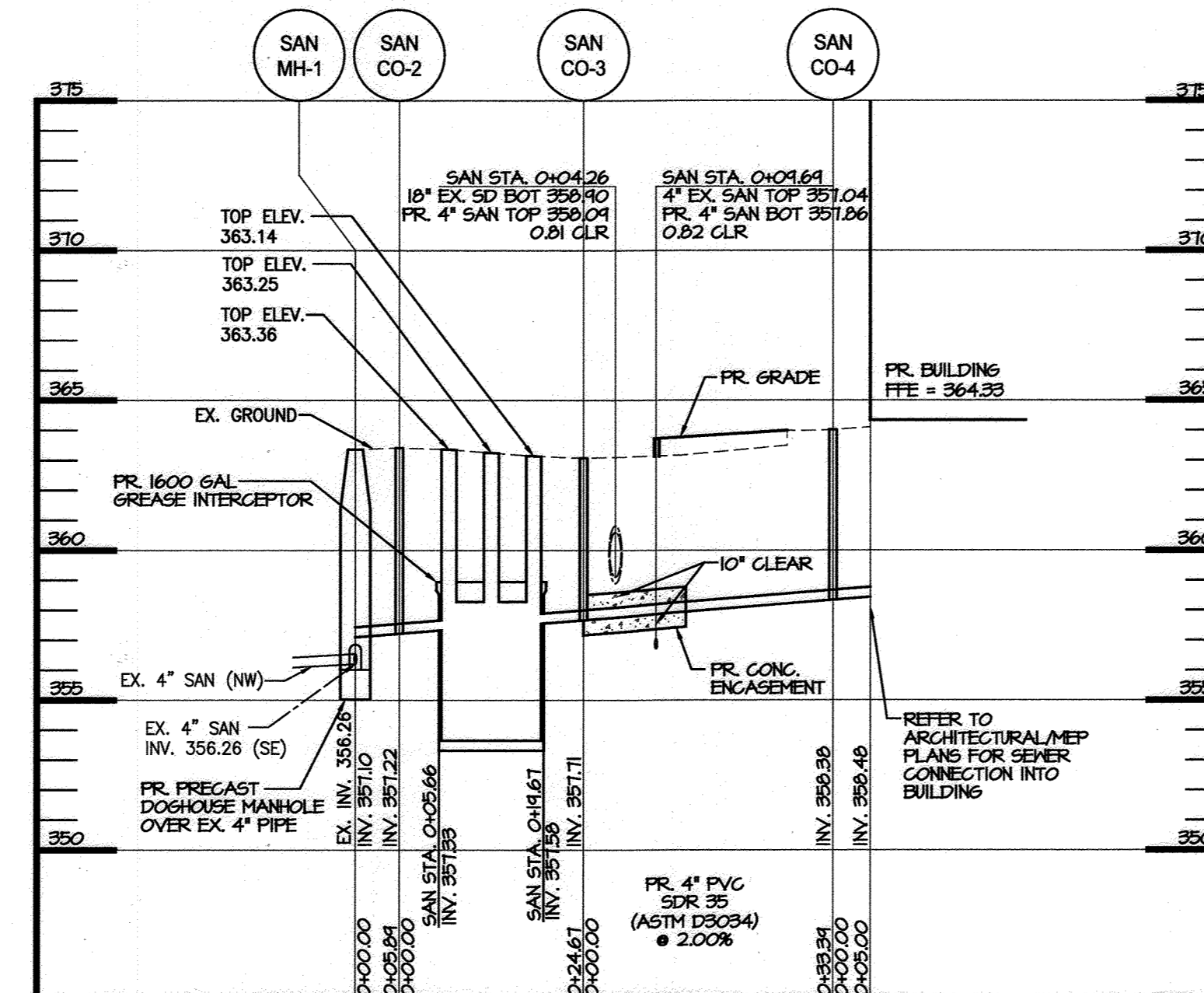
SIZE	TYPE	TOTAL LENGTH
12"	HDPE N-12 WT. IB	86'
15"	CLASS IV RCP	31'
18"	CLASS IV RCP	141'
21"	CLASS IV RCP	19'

*CLEAN OUTS WILL HAVE TERRAZZED BEARING TOTS WHEN LOCATED UNDER PAVEMENT



PRIVATE SANITARY SEWER PROFILE

SCALE: H: 1" = 20'
V: 1" = 5'

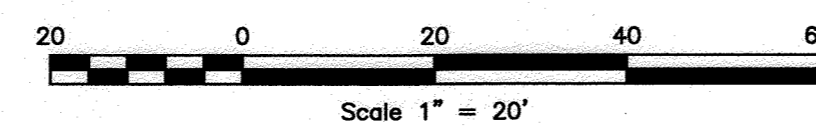


PRIVATE SANITARY SEWER PROFILE

SCALE: H: 1" = 20'
V: 1" = 5'

NO.	COORDINATE	TOP ELEVATION	DETAIL REFERENCE
SMH-1	N 549,872.84 E 1,357,900.93	363.36	HOWARD COUNTY DETAILS G-5.14, G-5.51
SAN CO-1	N 549,815.57 E 1,357,911.51	364.23	HOWARD COUNTY DETAILS S-2.22/2.23
SAN CO-2	N 549,873.54 E 1,357,898.77	363.42	HOWARD COUNTY DETAILS S-2.22/2.23
SAN CO-3	N 549,849.05 E 1,357,909.89	363.08	HOWARD COUNTY DETAILS S-2.22/2.23
SAN CO-4	N 549,815.89 E 1,357,913.63	364.23	HOWARD COUNTY DETAILS S-2.22/2.23
SAN CO-5	N 549,841.54 E 1,357,908.42	363.24	HOWARD COUNTY DETAILS S-2.22/2.23

SANITARY MANHOLE & CLEAN-OUT SCHEDULE



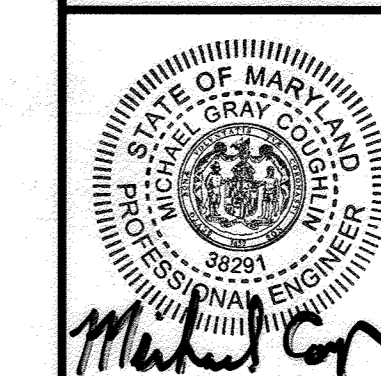
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MORRIS & RITCHIE ASSOCIATES, INC.

ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
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**REVISED SITE DEVELOPMENT PLAN
VILLAGE OF OWEN BROWN, SECTION 2,
AREA 2, LOT D-12, SNOWDEN CROSSING**
UTILITY PROFILES

SDP-74-122
TAX MAP 42 -- GRID 04 -- PARCEL 0397 -- ZONING NT -- DEED REF 17342/229
PLAT NO. 2741 -- TAX ASSESSMENT DISTRICT 82 -- 8th ELECTION DISTRICT
7090 DEEPADE DRIVE, HOWARD COUNTY, MARYLAND, 21045

DATUM

DESIGN & DRAWING BASED ON
MARYLAND COORDINATE SYSTEM (MCS):
HORIZONTAL NAD 83 (2011)
VERTICAL NAVD 88

OWNER / DEVELOPER

SNOWDEN CROSSING LLC
2800 QUARRY LAKE DRIVE, SUITE 340
BALTIMORE, MD 21209
PHONE: 410-308-0700
ATTN: SCOTT CHERRY

DATE	REVISIONS	JOB NO.
11/22/2019	REVISED SDP-74-122 TO INCLUDE 2100 SF ADDITION	19650
11/7/2023	AS BUILT	SCALE: AS SHOWN
		DATE: 04/08/2022
		DRAWN BY: DTP
		DESIGN BY: THS
		REVIEW BY: THS
		SHEET: 14 OF 27

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature]
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 5-10-22
[Signature]
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 6/14/22
[Signature]
DIRECTOR
DATE: 6/14/22

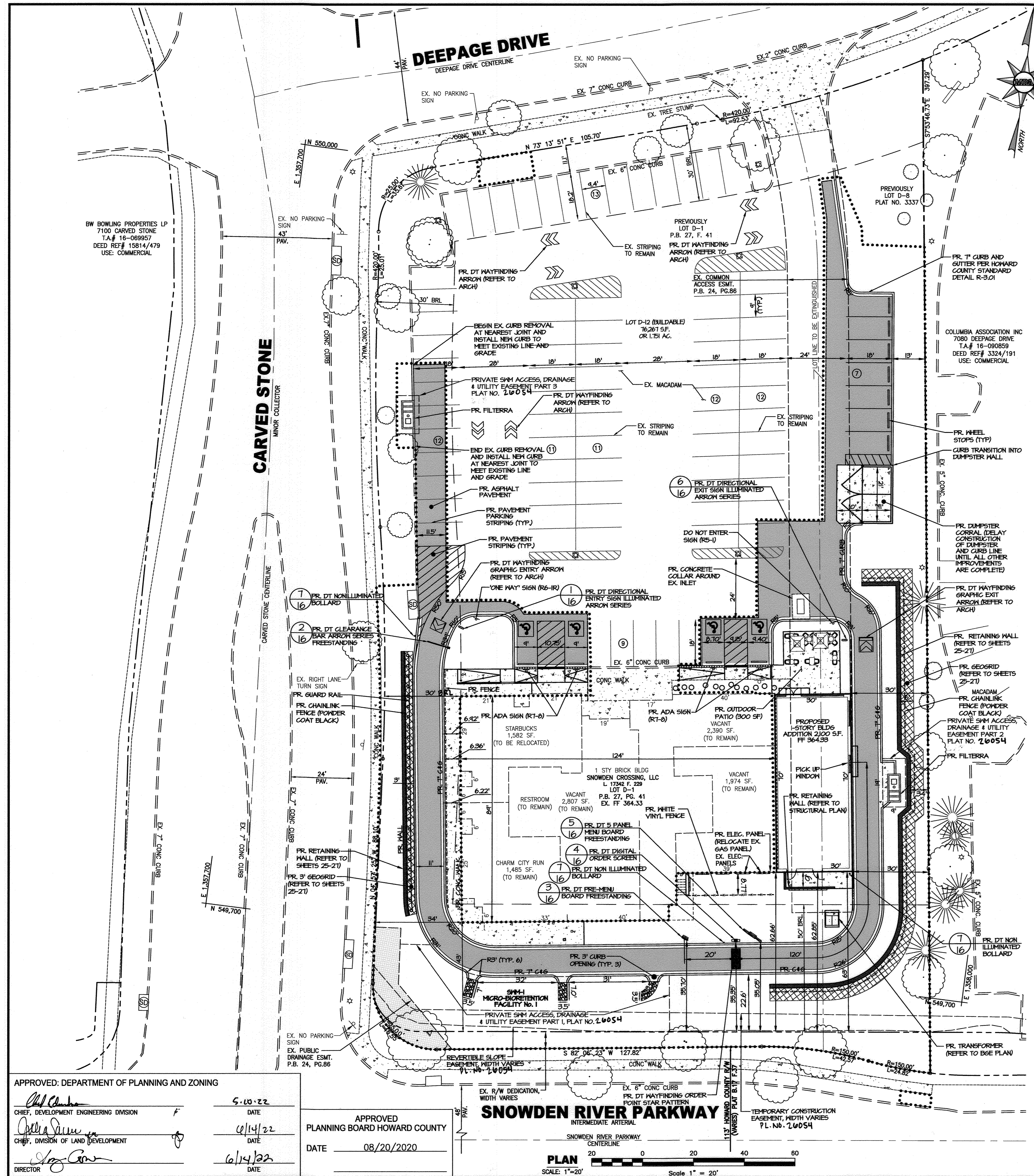
APPROVED
PLANNING BOARD HOWARD COUNTY
DATE: 08/20/2020

APPROVED FOR PUBLIC WATER AND PUBLIC SEWER

COUNTY HEALTH OFFICER
HOWARD COUNTY HEALTH DEPARTMENT

PURPOSE STATEMENT

THE PURPOSE OF THE REVISED SITE DEVELOPMENT PLAN IS TO CONSTRUCT A 2,100 SF BUILDING ADDITION WITH DRIVE THROUGH LAKE AND ASSOCIATED PARKING UPGRADES, PATIO, AND SWM FACILITIES.



GENERAL CONSTRUCTION NOTES

- THE CONTRACTOR IS REQUIRED TO INSPECT THE SITE PRIOR TO BOTH BIDDING AND CONSTRUCTION. SHOULD THE CONTRACTOR DISCOVER DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS, THE OWNER IS TO BE NOTIFIED IMMEDIATELY TO RESOLVE THE SITUATION. SHOULD THE CONTRACTOR PROCEED WITH THE WORK, MAKING FIELD CORRECTIONS OR MAKING ADJUSTMENTS WITHOUT NOTIFYING THE OWNER OF ANY DISCREPANCIES, THEN THE CONTRACTOR ASSUMES ALL RESPONSIBILITIES FOR THOSE RESULTING CHANGES.
- THE OWNER IS NOT RESPONSIBLE FOR THE CONTRACTOR'S UTILIZATION OF WORKERS, MATERIALS, EQUIPMENT OR SAFETY MEASURES IN PERFORMANCE OF ANY WORK FOR THIS CONSTRUCTION. THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR PERFORMING THE WORK CORRECTLY AND IN CONFORMANCE WITH ALL CODE REQUIREMENTS.
- THE OWNER WILL NOTIFY MISS UTILITY AT (800) 257-7777 OR 811 AT LEAST 72 HOURS PRIOR TO STARTING EXCAVATION.
- THE CONTRACTOR SHALL MAINTAIN TRAFFIC AT ALL TIMES.
- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL UTILITIES BEFORE COMMENCING WORK, AND IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
- EXISTING UTILITIES THAT ARE TO REMAIN SHALL BE ADJUSTED TO PROPOSED FINISH GRADE UNLESS NOTED OTHERWISE ON THE DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR ALL COSTS AND WORK REQUIRED TO ADJUST EXISTING AND INSTALL PROPOSED UTILITIES TO FINISH GRADE WITHIN THE LIMIT OF DISTURBANCE, INCLUDING OFF-SITE EASEMENTS AND PUBLIC RIGHTS-OF-WAY, AS APPLICABLE.
- THE CONTRACTOR WILL USE EXTREME CAUTION DURING EXCAVATION AND/OR INSTALLATION OF ALL WORK SHOWN ON THESE PLANS. ALL UTILITIES WILL BE FULLY PROTECTED FROM DAMAGE OR INTERRUPTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING SILT AND DEBRIS OUT OF THE EXISTING STORM DRAIN SYSTEM DURING CONSTRUCTION AND SHALL CLEAN THE SYSTEM THOROUGHLY PRIOR TO FINAL ACCEPTANCE.
- THE CONTRACTOR SHALL STAKE OUT THE LIMIT OF DISTURBANCE, THE LOCATION OF PROPOSED BUILDING AND CORNERS, UTILITIES, ROAD AND DRIVEWAY CENTERLINES, AND PARKING AREAS FOR REVIEW AND APPROVAL BY THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING WORK. DIMENSIONS ARE TO THE FACE OF CURBS, BUILDINGS, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- EXISTING TREES AND PLANT MATERIAL WITHIN THE LIMIT OF DISTURBANCE (LOD) SHALL BE REMOVED UNLESS NOTED OTHERWISE ON THE DRAWINGS. TREES AND PLANT MATERIAL LOCATED OUTSIDE OF THE LOD AND THOSE DESIGNATED TO REMAIN SHALL BE PROTECTED THROUGHOUT THE CONSTRUCTION PERIOD, AS REQUIRED TO MAINTAIN A HEALTHY CONDITION.
- CONSTRUCTION SHALL BE IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE, COUNTY AND LOCAL REGULATIONS, STANDARDS AND SPECIFICATIONS. REFER TO THE DRAWINGS, AND PROJECT MANUAL FOR DESIGNATED MODIFICATIONS AND ADDITIONAL INFORMATION. CONTRACTOR SHALL COMPLY WITH APPLICABLE OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION (OSHA) LAWS AND REGULATIONS FOR WORK ON THIS PROJECT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS AND OR STATE AGENCY APPROVALS, NOT OBTAINED AND FURNISHED TO THE CONTRACTOR BY THE OWNER, AND PAYING RELATED FEES REQUIRED TO COMPLETE THE WORK ON THIS PROJECT. THE CONTRACTOR DOES NOT NEED A BUILDING PERMIT FROM BALTIMORE COUNTY, HOWEVER ALL STREET WORK WITHIN THE PUBLIC RIGHTS-OF-WAY INCLUDING PARKING LANE CLOSURE, CURB CUTS, TRAFFIC INTERRUPTIONS, ETC. SHALL BE COORDINATED WITH THE COUNTY WITH ADVANCE NOTICE AS NEEDED.
- THE CONTRACTOR SHALL REPLACE AT NO ADDITIONAL COST TO THE OWNER, EXISTING CURB AND GUTTER, PAVING, SIDEWALKS, TREES, PLANT MATERIAL AND OTHER ITEMS DESIGNATED TO REMAIN ON THE SITE AND PUBLIC RIGHTS-OF-WAY WHICH ARE DAMAGED DURING CONSTRUCTION. AREAS DISTURBED, BUT NOT DESIGNATED FOR PAVING OR PLANTING AREAS, SHALL BE PERMANENTLY STABILIZED BY SEEDING OR SODDING IN ACCORDANCE WITH THE VEGETATIVE STABILIZATION NOTES ON THE DRAWINGS, AND SPECIFICATIONS IN THE PROJECT MANUAL WHEN APPLICABLE.
- CURB AND GUTTER SHALL BE CONSTRUCTED WITH "REGULAR CROSS SLOPE" OR "REVERSE CROSS SLOPE" AS REQUIRED TO REFLECT THE DIRECTION OF SLOPE ON ADJACENT PAVING. REFER TO THE DRAWINGS FOR CURB AND GUTTER ELEVATIONS. CURB AND GUTTER SHALL BE CONSTRUCTED WITH SMOOTH VERTICAL CURVE TRANSITIONS AT ALL HIGH POINTS, LOW POINTS AND INLET LOCATIONS.
- SANITARY SEWER AND STORM DRAIN PIPE ELEVATIONS ARE TO THE INVERT UNLESS NOTED OTHERWISE ON THE DRAWINGS. UTILITY MANHOLES AND STORM DRAIN STRUCTURE FRAMES, GRATES, AND INLETS SHALL BE ADJUSTED AND INSTALLED AT THE SAME LINE, GRADE AND CROSS SLOPE OF PROPOSED FINISH GRADE IN ADJACENT LAWN AND PAVED AREAS.
- WHERE NEW CURB AND GUTTER MEETS EXISTING CURB AND GUTTER, THE EXISTING SHALL BE REMOVED TO THE NEAREST JOINT, OR SAW CUT TO PROVIDE A CLEAN, UNIFORM JOINT WITH THE NEW CURB AND GUTTER.
- WHERE NEW SIDEWALK MEETS EXISTING SIDEWALK THE EXISTING SHALL BE REMOVED TO THE NEAREST JOINT, OR SAW CUT TO PROVIDE A CLEAN UNIFORM JOINT / TRANSITION WITH THE NEW SIDEWALK.
- HANDICAP RAMPS SHALL BE INSTALLED PER DETAILS AND INCLUDE DETECTABLE WARNING SURFACES AND SHALL MEET THE MOST CURRENT REGULATIONS AT TIME OF INSTALLATION.
- PROPOSED SPOT ELEVATIONS SHOWN IN DRIVEWAYS, SERVICE AND PARKING AREAS ARE TO THE TOP OF PAVED SURFACES AND BOTTOM OF CURBS UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- WHERE NEW CURB IS INSTALLED ADJACENT TO EXISTING PAVING, WHICH MAY BE REQUIRED TO RECEIVE AN OVERLAY, THE OVERLAY THICKNESS MAY VARY AS REQUIRED (MINIMUM OF 2-INCHES) IN ORDER TO MAINTAIN THE SPECIFIED CURB REVEAL AS SHOWN ON THE DETAILS. IT IS ANTICIPATED THAT MINOR FIELD ADJUSTMENT TO THE TOP OF CURB ELEVATIONS NOTED ON THE DRAWINGS MAY BE NECESSARY IN ORDER TO PROVIDE A UNIFORM CURB REVEAL. PROVIDE SMOOTH TRANSITION OF THE FINISHED SURFACE AND MAINTAIN FLOW ALONG THE CURB LINE INTO DRAINAGE STRUCTURES. CONTACT THE OWNERS REPRESENTATIVE FOR APPROVAL OF ADJUSTMENTS PRIOR TO INSTALLING NEW CURB.
- REFER TO CONSTRUCTION DOCUMENTS PREPARED BY ARCHITECT FOR DISPOSITION OF EXISTING AND CONSTRUCTION OF NEW LIGHTING, COMMUNICATION, AND ELECTRICAL SERVICES, UNLESS NOTED OTHERWISE ON THE DRAWINGS.
- CONTRACTOR SHALL TEST PIT FOR LOCATION (HORZ. & VERT.) AND TYPE AND SIZE OF EXISTING STORM DRAIN, SANITARY SEWER, AND WATER STRUCTURES AND UTILITY CROSSINGS PRIOR TO ORDERING MATERIALS OR COMMENCEMENT OF CONSTRUCTION. ANY LOCATION DISCREPANCY SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER AND MORRIS & RITCHE ASSOCIATES, INC. IMMEDIATELY.
- ALL EXISTING INLETS, MANHOLES, AND PIPES AND FLUMES SHOULD BE CLEANED AND FLUSHED BY THE CONTRACTOR AT THE CONCLUSION OF THIS CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR LAYOUT AND STAKEOUT OF ALL PROPOSED IMPROVEMENTS.
- CONTRACTOR IS RESPONSIBLE FOR TRAFFIC MANAGEMENT IN ACCORDANCE WITH THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- CONTRACTOR SHALL SUPPLY AN ADEQUATE NUMBER OF BARRIERS, CONES AND OTHER TRAFFIC CONTROL DEVICES.
- ALL CONCRETE FORMS MUST BE OF FULL DEPTH AS CALLED ON THE CONTRACT DRAWINGS.
- INDICATED SEDIMENT CONTROL DEVICES SHALL MEET THE SPECIFICATIONS AND DETAILS OF THE LATEST MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- RAKE, GRADE, INSTALL 3" TOP SOIL, AND SEED AND MULCH ALL GROUND AREAS WHICH ARE DISTURBED OR ARE WITHIN THE LIMITS OF DISTURBANCE.

LEGEND

- EX. BUILDING/STRUCTURE
- EX. CURB AND GUTTER
- EX. CONCRETE
- EX. C/L ROAD
- EX. ADJACENT PROPERTY LINE
- EX. PROPERTY LINE
- EX. RIGHT OF WAY
- EX. UTILITY EASEMENT
- EX. LIGHT POLE
- EX. U/S UTILITY HANDBOX
- EX. UTILITY POLE
- EX. SIGN
- EX. BOLLARD
- EX. TREE
- PR. LIMIT OF DISTURBANCE
- PR. BUILDING
- PR. CONCRETE WALK
- PR. CURB & GUTTER
- PR. TRANSITION CURB
- PR. FLUSH CURB
- PR. PAVEMENT
- PR. SAW CUT
- PR. FILTERRA
- PR. RETAINING WALL
- PR. GEOGRID

CONCRETE NOTE

THE CONTRACTOR SHALL VERIFY CONCRETE FORM PLACEMENT TO ASSURE COMPLIANCE WITH CURRENT LOCAL AND STATE ADA AS WELL AS BUILDING CODES. ADA INSPECTION SHALL BE REQUIRED PRIOR TO POURING CONCRETE. THE CONTRACTOR ACCEPTS RESPONSIBILITY FOR MEETING ALL APPLICABLE HANDICAP SLOPE AND DISTANCE REQUIREMENTS AS WELL AS OTHER REQUIREMENTS AS STATED IN THE APPLICABLE CODES.

ANY DISCREPANCIES FOUND SHOULD BE BROUGHT TO THE SITE ENGINEER'S ATTENTION BEFORE ANY CONCRETE IS PLACED.

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. 38291, EXPIRATION DATE: 1/13/2024.



MORRIS & RITCHE ASSOCIATES, INC.
 ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
 1220-B EAST JOPPA ROAD, SUITE 400K
 TOWSON, MARYLAND 21286
 (410) 821-1690
 FAX (410) 821-1748
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REVISED SITE DEVELOPMENT PLAN
VILLAGE OF OWEN BROWN, SECTION 2,
AREA 2, LOT D-12, SNOWDEN CROSSING
 SITE PLAN

SDP-74-122
 TAX MAP 42 -- GRID 04 -- PARCEL 0397 -- ZONING NT -- DEED REF 17342/229
 PLAT NO. 2741 -- TAX ASSESSMENT DISTRICT 82 -- 6th ELECTION DISTRICT
 7090 DEEPPAGE DRIVE, HOWARD COUNTY, MARYLAND, 21045

DATE	REVISIONS	JOB NO.:	19650
11/22/2019	REVISED SDP-74-122 TO INCLUDE 2100 SF ADDITION	SCALE:	1" = 20'
11/7/2022	N/C AS BUILT	DATE:	04/08/2022
		DRAWN BY:	DTP
		DESIGN BY:	THS
		REVIEW BY:	THS
		SHEET:	15 OF 27

DATUM

DESIGN & DRAWING BASED ON MARYLAND COORDINATE SYSTEM (MCS): HORIZONTAL NAD 83 (2011) VERTICAL NAVD 88

PURPOSE STATEMENT

THE PURPOSE OF THE REVISED SITE DEVELOPMENT PLAN IS TO CONSTRUCT A 2,100 SF BUILDING ADDITION WITH DRIVE THROUGH LANE AND ASSOCIATED PARKING UPGRADES, PATIO, AND SWM FACILITIES.

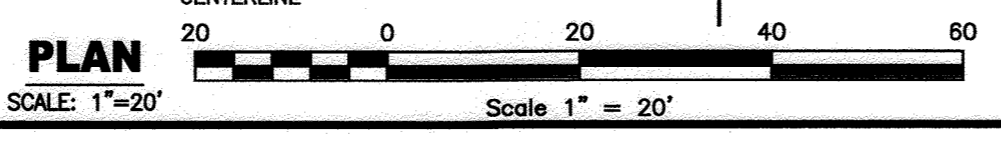
OWNER / DEVELOPER

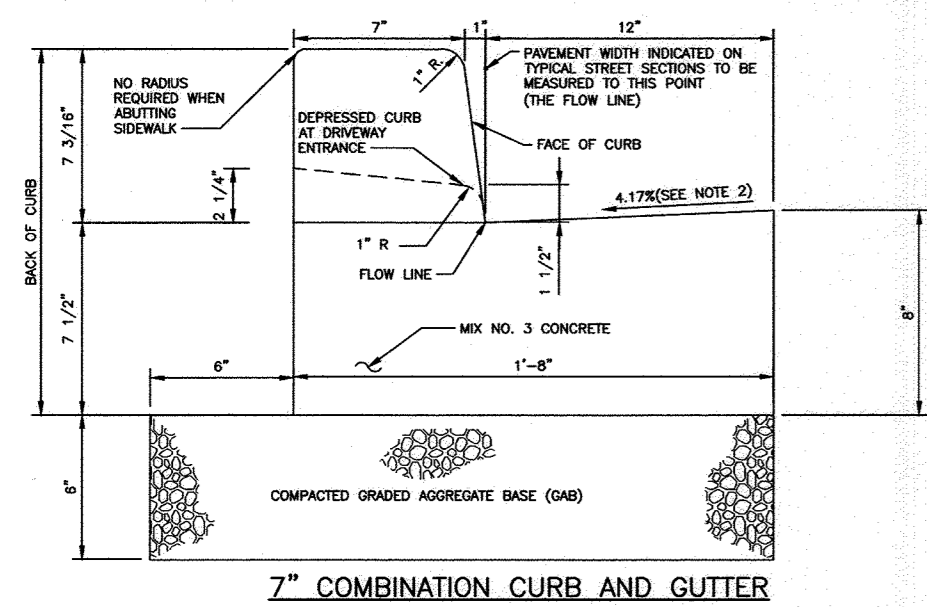
SNOWDEN CROSSING LLC
 2800 QUARRY LAKE DRIVE, SUITE 340
 BALTIMORE, MD 21208
 PHONE: 410-308-0700
 ATTN: SCOTT CHERRY

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 [Signature]
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 [Signature]
 CHIEF, DIVISION OF LAND DEVELOPMENT
 [Signature]
 DIRECTOR

DATE 5.10.22
 DATE 6/14/22
 DATE 6/14/22

APPROVED
 PLANNING BOARD HOWARD COUNTY
 DATE 08/20/2020

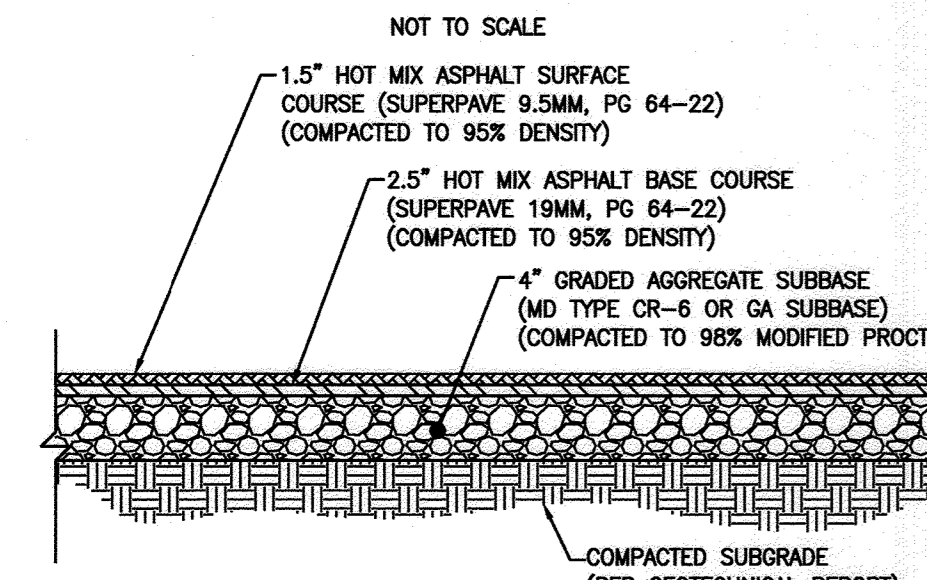




7" COMBINATION CURB AND GUTTER

NOTE:
 1. A REVERSE GUTTER PAN SHALL HAVE A GUTTER SLOPE OF 4.17% AWAY FROM THE FLOW LINE AND SHALL NOT BE USED WHERE THE DRAINAGE CREATES A HAZARDOUS CONDITION.
 2. GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AND IN THE SAME DIRECTION AS THE PAVEMENT. MATCH PAVEMENT CROSS SLOPE WHEN CURB IS LOCATED ON THE LOW SIDE OF SUPERELEVATED SECTION AND THE RATE OF SUPERELEVATION IS GREATER THAN 3% FOR MODIFIED CURB & GUTTER.
 3. A MINIMUM OF TWO (2) FEET OF COMPACTED STABILIZED EXHRT, OR EQUIVALENT, SHALL SUPPORT THE ENTIRE BACK OF CURB.
 4. POSITIVE DRAINAGE SHALL BE PROVIDED BOTH BEHIND THE CURB AND ALONG THE GUTTER AND FLOW LINE.

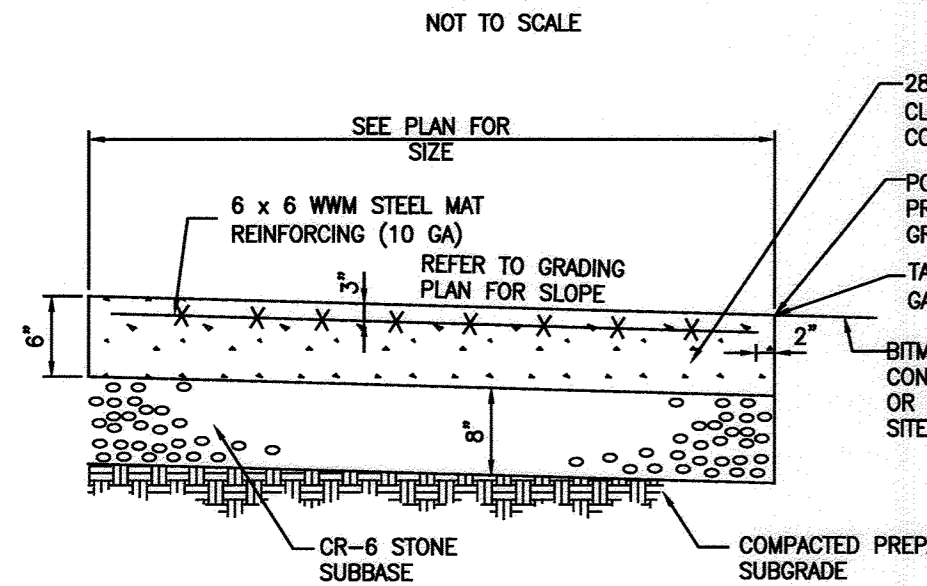
**HO. CO. STD. R-3.01
7" CURB AND GUTTER**



ASPHALT PAVEMENT DETAIL

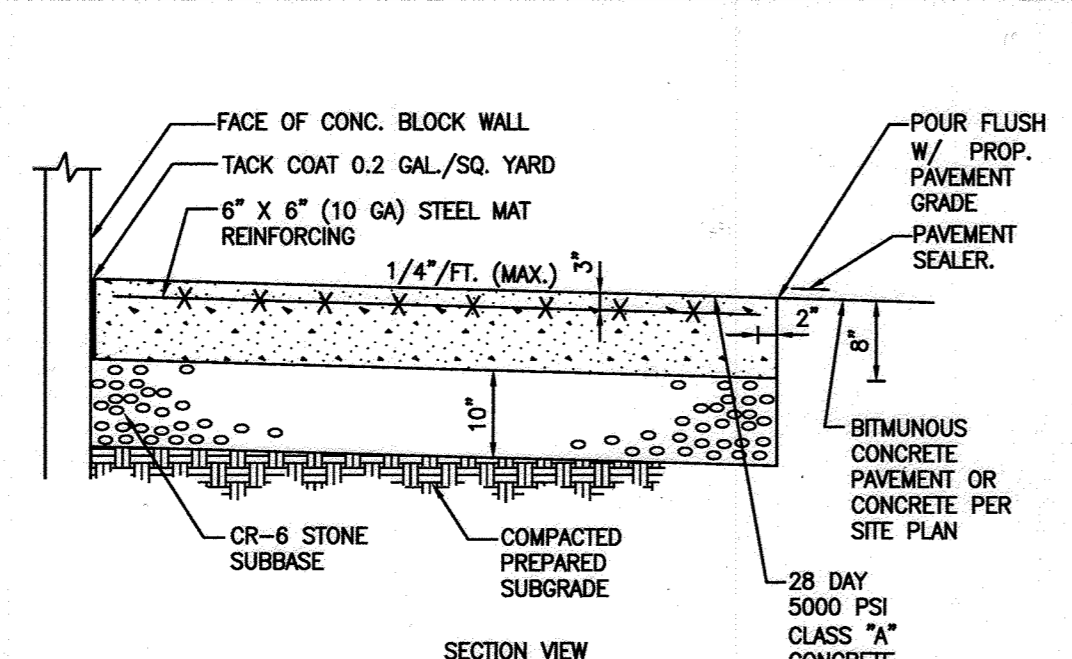
NOTE:
 1. REVISE TO MEET JOB AND LOCAL JURISDICTION REQUIREMENTS AND GEOTECHNICAL REPORT REQUIREMENTS. THE MINIMUM REQUIRED THICKNESS ARE SHOWN IN THE DETAIL USE LOCAL DOT PAVEMENT MIX DESIGN FOR WEARING AND BINDING COURSES.
 2. PROOF ROLL PREPARED SUBBASE SURFACE TO CHECK FOR UNSTABLE AREAS AND AREAS REQUIRING ADDITIONAL COMPACTION. NOTIFY ENGINEER OF UNSATISFACTORY CONDITIONS. DO NOT BEGIN PAVING WORK UNTIL DEFICIENT SUBBASE AREAS HAVE BEEN CORRECTED AND ARE READY TO RECEIVE PAVING.
 3. FOR FINAL PAVEMENT SECTIONS, REFER TO ECS MID-ATLANTIC, LLC PREPARED BY GEO-TECHNOLOGY ASSOCIATES, INC., DATED NOVEMBER 9, 2018 OR MOST CURRENT.

TYPICAL 6" CONCRETE PAVEMENT DETAIL



TYPICAL 6" CONCRETE PAVEMENT DETAIL

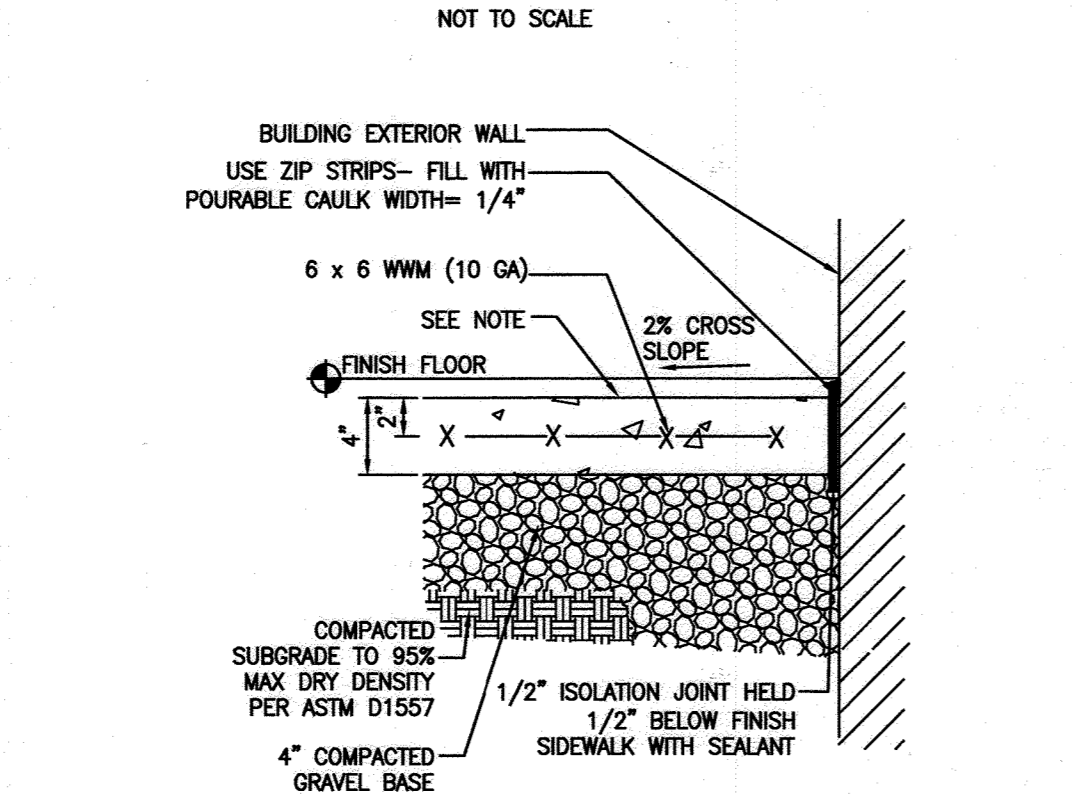
NOTE:
 1. ALL ON-SITE CONCRETE IS TO HAVE A TWO-PART DAYTON SEALER - J19/J35 APPLIED.



DUMPSTER PAD WITH 8" CONCRETE PAVEMENT DETAIL

NOTE:
 1. ALL CONCRETE CURBS AND SIDEWALKS TO BE 4,000 P.S.I. CONCRETE.
 2. ALL ON-SITE CONCRETE IS TO HAVE A TWO-PART DAYTON SEALER - J19/J35 APPLIED.

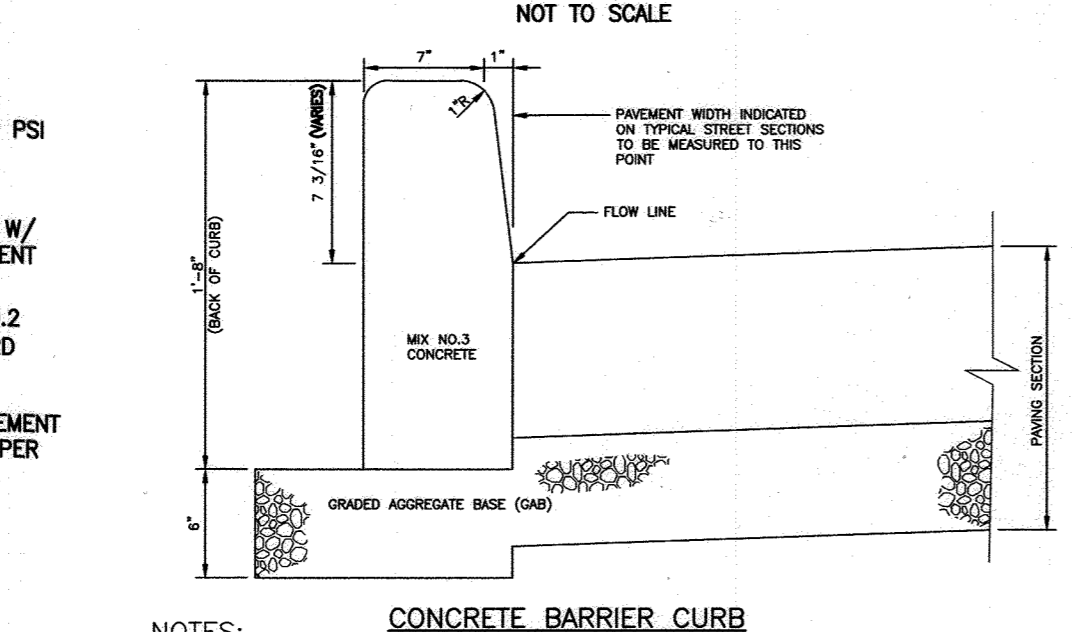
CONCRETE BARRIER CURB



CONCRETE BARRIER CURB

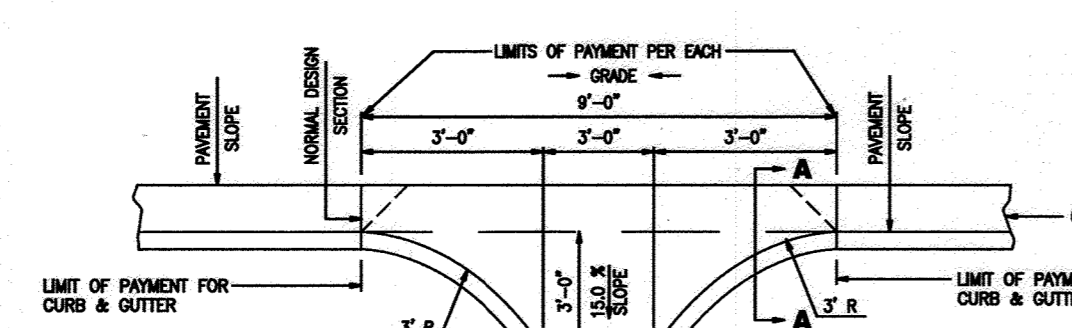
NOTE:
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SIDEWALK AT BUILDING DETAIL



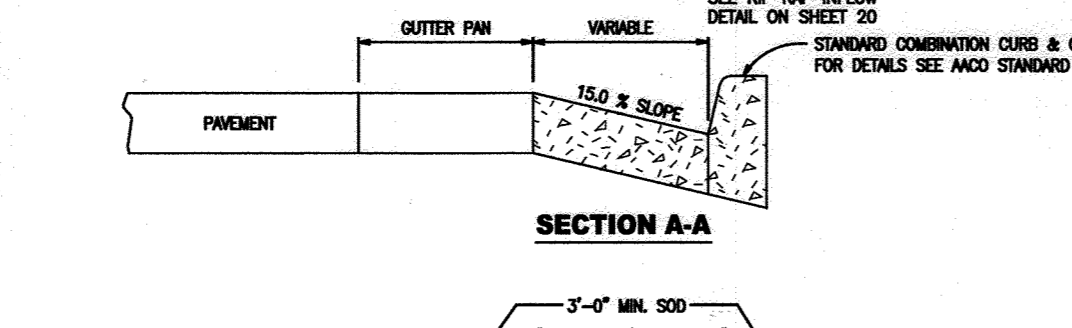
SIDEWALK AT BUILDING DETAIL

NOTE:
 1. ALL CONCRETE CURBS AND SIDEWALKS TO BE 4,000 P.S.I. CONCRETE.
 2. ALL ON-SITE CONCRETE IS TO HAVE A TWO-PART DAYTON SEALER - J19/J35 APPLIED.



CURB OPENING DETAIL

NOTE:
 1. A MINIMUM OF TWO (2) FEET OF COMPACTED STABILIZED EXHRT, OR EQUIVALENT, SHALL SUPPORT THE ENTIRE BACK OF CURB.
 2. POSITIVE DRAINAGE SHALL BE PROVIDED BOTH BEHIND THE CURB AND ALONG THE GUTTER AND FLOW LINE.

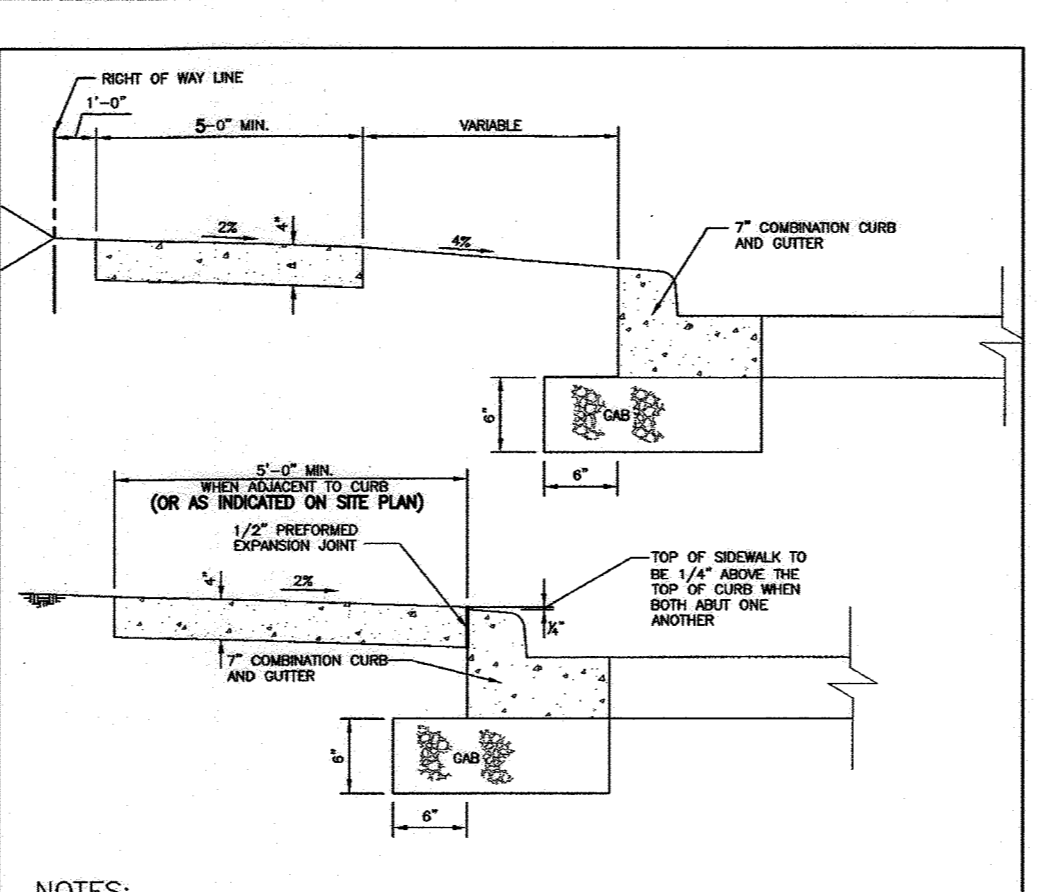


CURB OPENING DETAIL

NOTE:
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 2. POSITIVE DRAINAGE SHALL BE PROVIDED BOTH BEHIND THE CURB AND ALONG THE GUTTER AND FLOW LINE.

PURPOSE STATEMENT

THE PURPOSE OF THE REVISED SITE DEVELOPMENT PLAN IS TO CONSTRUCT A 2,100 SF BUILDING ADDITION WITH DRIVE THROUGH LANE AND ASSOCIATED PARKING UPGRADES, PATIO, AND SWIM FACILITIES.



Concrete Sidewalk

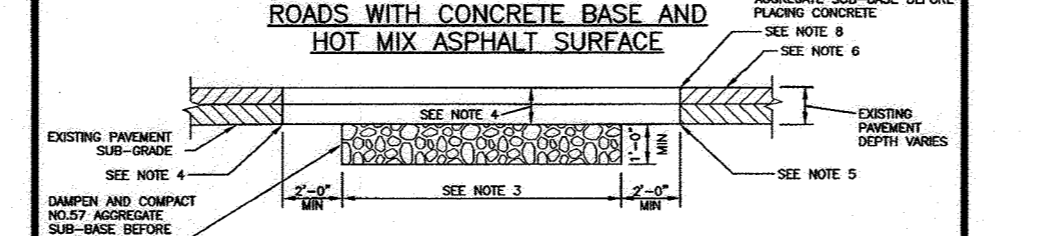
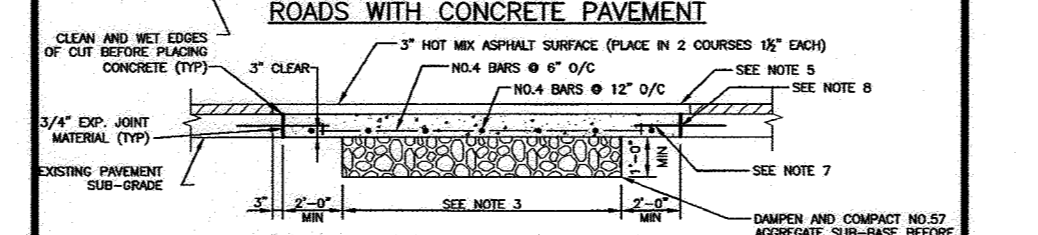
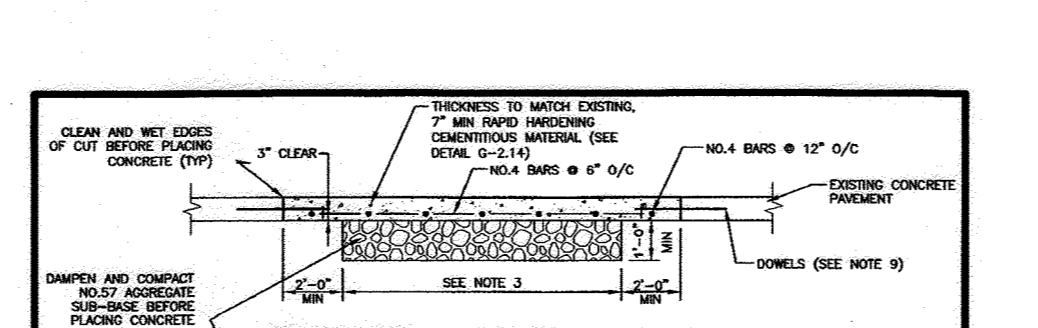
NOTE:
 1. SIDEWALK TO BE SLOPED IN 5'-0" MAXIMUM SQUARES.
 2. EXPANSION JOINS ACROSS THE SIDEWALK NOT TO BE MORE THAN 15' APART.
 3. 1/2" PRE-FORMED EXPANSION JOINTS TO BE KEPT 1/4" BELOW SURFACE OF SIDEWALK.
 4. CONCRETE TO BE MIX NO.3.
 5. WHEN SIDEWALK ADJUTS CURB, SIDEWALK SHALL BE 1/4" ABOVE CURB WITH 1/2" PRE-FORMED EXPANSION JOINT BETWEEN SIDEWALK AND CURB.
 6. ON LONGITUDINAL SIDEWALK GRADIENTS OF 5% OR GREATER, A CONCRETE HEADER 6" THICK AND 4' DEEP BELOW THE NORMAL 6" SIDEWALK THICKNESS SHALL BE CONSTRUCTED OVER THE FULL WIDTH OF THE SIDEWALK AT INTERVALS OF 48 FEET. THE HEADERS SHALL BE PLACED AT THE EXPANSION JOINT LOCATIONS AND SHALL BE REINFORCED WITH THE SIDEWALK.
 7. SIDEWALK WIDTH ADJACENT TO CURB SHALL BE 5'-0" MINIMUM EXCEPT SIDEWALK ADJACENT TO CURB IN COL-DE-SAC AREAS MAY BE 4'-0" WIDE.
 8. SIDEWALK LOCATED 2' OR MORE FROM CURB MAY BE 4'-0" IN WIDTH WITH A 2'-0" PAVED SECTION PLACED 2'-0" AWAY.
 9. 4'-0" SIDEWALK REQUIRES A PASSING AREA (SEE DETAIL R-6.01).

Concrete Sidewalk

NOTE:
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Concrete Sidewalk

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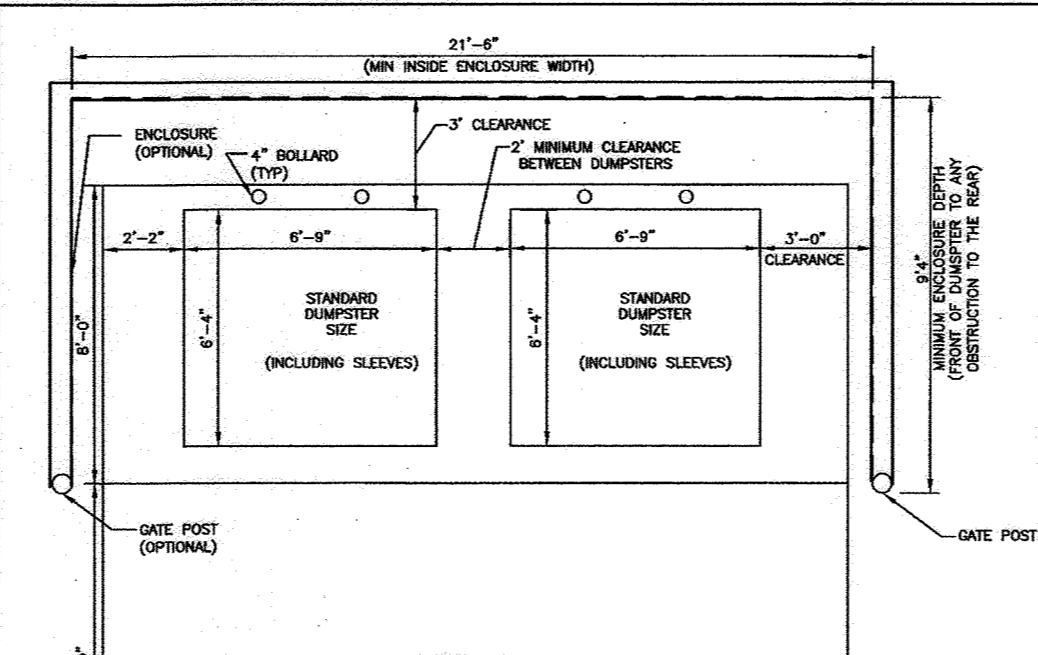


Roads with concrete pavement

NOTE:
 1. CLEAN AND SET EDGES OF CUT AND SUBGRADE BEFORE PLACING CONCRETE.
 2. CLEAN AND SET EDGES OF CUT AND SUBGRADE BEFORE PLACING CONCRETE.
 3. AGGREGATE SUB-BASE WIDTH SHALL BE 8" MINIMUM ON EITHER SIDE WITH OVER 8" GREATER.
 4. HOT MIX ASPHALT PAVEMENT PATCH THICKNESS SHALL BE EQUAL TO THE EXISTING PAVEMENT SECTION OR AS APPROVED BY SOW. THE MINIMUM PAVEMENT PATCH SHALL CONSIST OF 2" THICK SURFACE COURSE OVER 4" THICK BASE COURSE, GRADED AGGREGATE BASE SHALL BE PLACED AND COMPACTED TO 4" MINIMUM UNCOMPACTED THICKNESS LAYER.
 5. CLEAN EXPOSED VERTICAL SURFACE OF ADJACENT PAVEMENT AND PLACE TACK COAT ON ALL VERTICAL SURFACES PRIOR TO PLACING PAVEMENT.
 6. IF THE REMAINING EXISTING PAVEMENT IS LESS THAN 4" WIDE, THE REMAINING PAVEMENT SHALL BE REMOVED IN ITS ENTIRETY AND REPLACED.
 7. CONCRETE REPLACEMENT SHALL BE 10" MINIMUM MAX NO. 4.
 8. SAW CUT FULL DEPTH ALL JOINTS OF EXISTING CONCRETE, BITUMINOUS, AND BASE PAVEMENTS.
 9. REINFORCEMENT OF CONCRETE PAVEMENT SHALL BE ACCORDING TO SOW. ALL BOLLARDS SHALL BE CENTERED IN PAVEMENT THICKNESS AND REINFORCEMENT SHALL BE SET TO DOWELS.
 10. TOTAL REPAIR WIDTH SHALL BE EQUAL TO THE LANE WIDTH IN ACCORDANCE WITH THE SPECIFICATIONS.

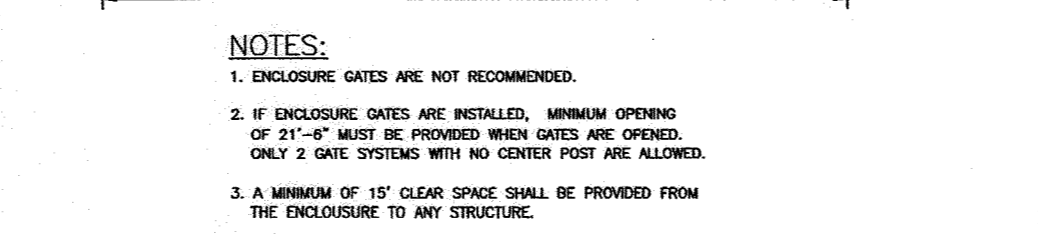
Utility Trench Roadway Repaving

NOTE:
 1. CLEAN AND SET EDGES OF CUT AND SUBGRADE BEFORE PLACING CONCRETE.
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 10. TOTAL REPAIR WIDTH SHALL BE EQUAL TO THE LANE WIDTH IN ACCORDANCE WITH THE SPECIFICATIONS.



STARBUCKS DT FEATURES NOTE

REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR FINAL DETAILS

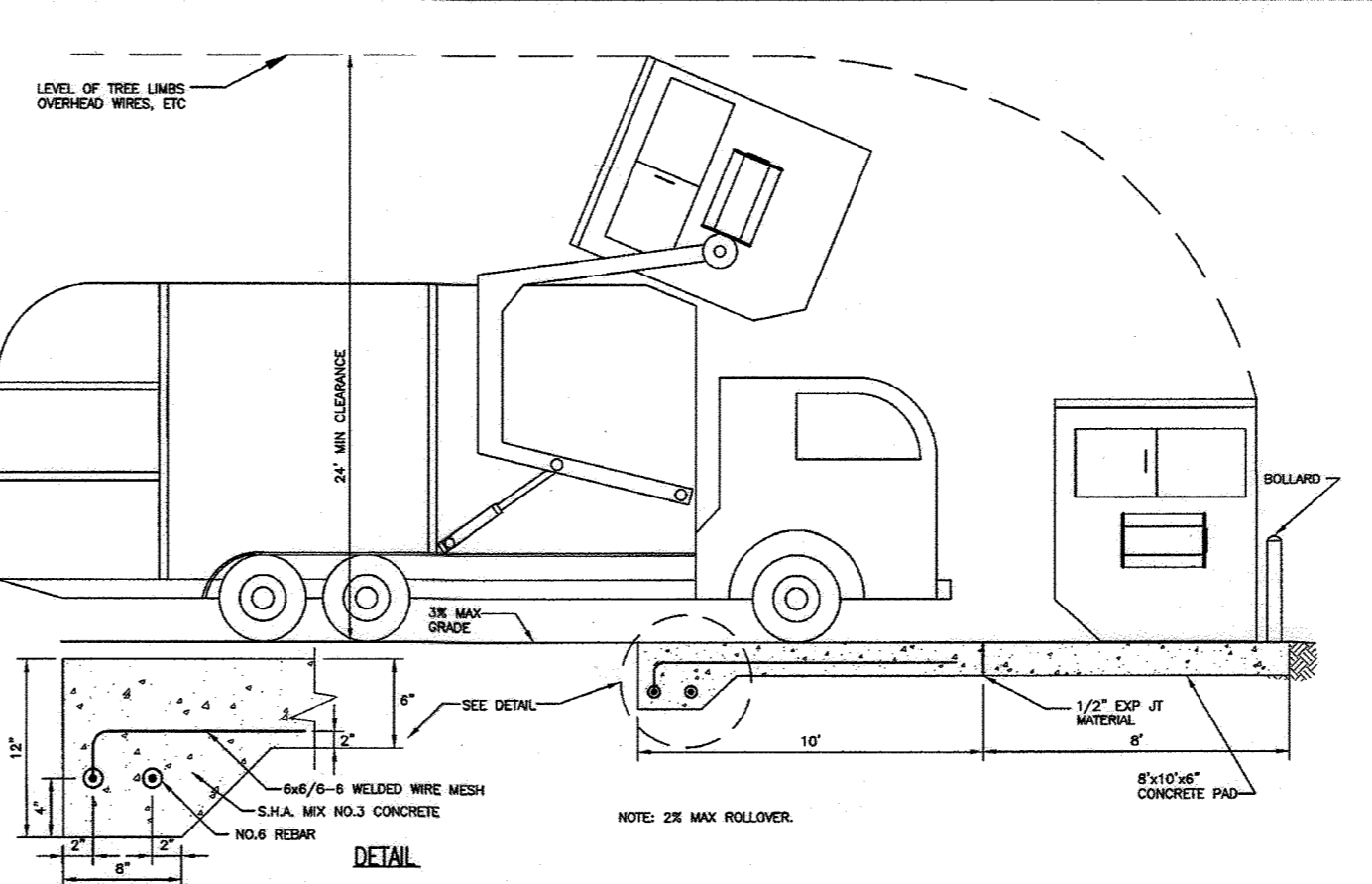


DT DIRECTIONAL EXIT SIGN ILLUMINATED ARROW SERIES

NOTE:
 1. ENCLOSURE GATES ARE NOT RECOMMENDED.
 2. IF ENCLOSURE GATES ARE INSTALLED, MINIMUM OPENING OF 21'-0" MUST BE PROVIDED WHEN GATES ARE OPENED. ONLY 2 GATE SYSTEMS WITH NO COVER POST ARE ALLOWED.
 3. A MINIMUM OF 1' CLEAR SPACE SHALL BE PROVIDED FROM THE ENCLOSURE TO ANY STRUCTURE.

DT NON-ILLUMINATED BOLLARD

NOTE:
 1. ENCLOSURE GATES ARE NOT RECOMMENDED.
 2. IF ENCLOSURE GATES ARE INSTALLED, MINIMUM OPENING OF 21'-0" MUST BE PROVIDED WHEN GATES ARE OPENED. ONLY 2 GATE SYSTEMS WITH NO COVER POST ARE ALLOWED.
 3. A MINIMUM OF 1' CLEAR SPACE SHALL BE PROVIDED FROM THE ENCLOSURE TO ANY STRUCTURE.



SOLID WASTE Service Pad

NOTE:
 1. SIDEWALK TO BE SLOPED IN 5'-0" MAXIMUM SQUARES.
 2. EXPANSION JOINS ACROSS THE SIDEWALK NOT TO BE MORE THAN 15' APART.
 3. 1/2" PRE-FORMED EXPANSION JOINTS TO BE KEPT 1/4" BELOW SURFACE OF SIDEWALK.
 4. CONCRETE TO BE MIX NO.3.
 5. WHEN SIDEWALK ADJUTS CURB, SIDEWALK SHALL BE 1/4" ABOVE CURB WITH 1/2" PRE-FORMED EXPANSION JOINT BETWEEN SIDEWALK AND CURB.
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 9. 4'-0" SIDEWALK REQUIRES A PASSING AREA (SEE DETAIL R-6.01).



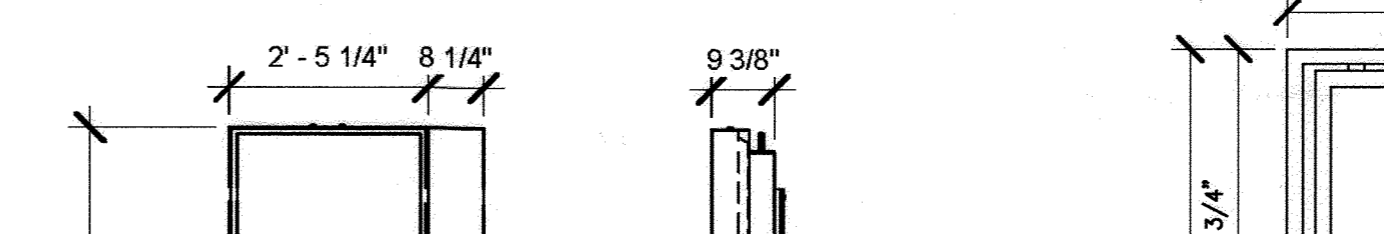
DT DIRECTIONAL ENTRY SIGN ILLUMINATED ARROW SERIES

NOTE:
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 2. IF ENCLOSURE GATES ARE INSTALLED, MINIMUM OPENING OF 21'-0" MUST BE PROVIDED WHEN GATES ARE OPENED. ONLY 2 GATE SYSTEMS WITH NO COVER POST ARE ALLOWED.
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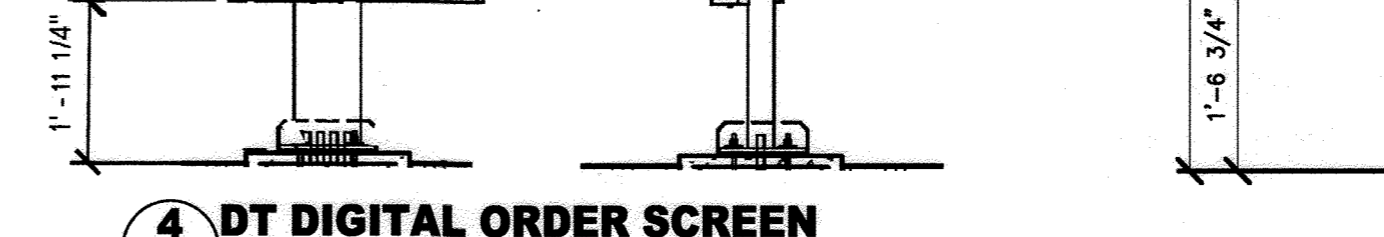
DT CLEARANCE BAR ARROW SERIES FREESTANDING

NOTE:
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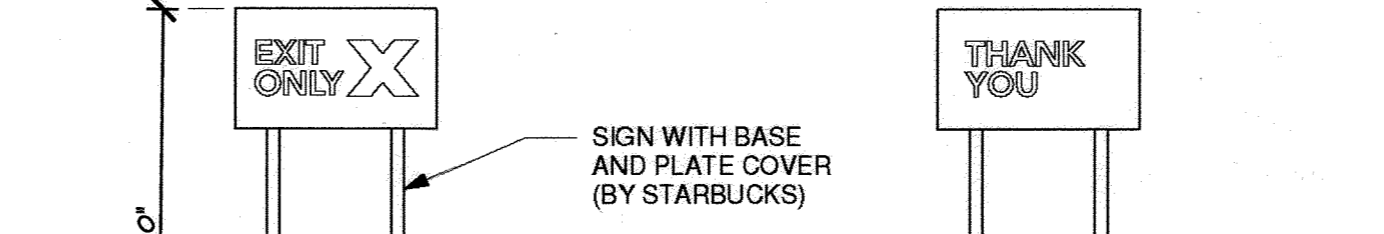
DT DIGITAL ORDER SCREEN

NOTE:
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DT 5 PANEL MENU BOARD FREESTANDING

NOTE:
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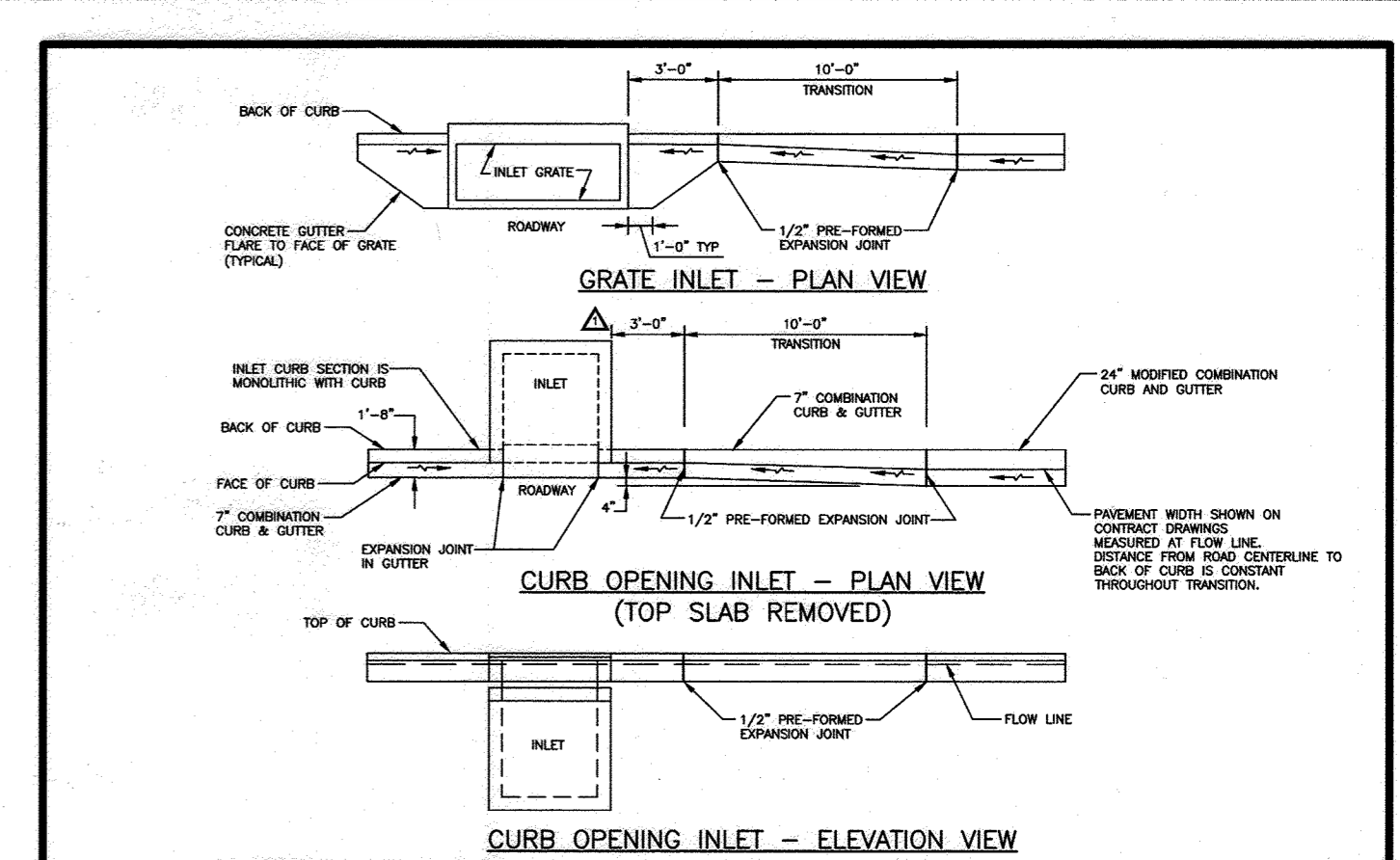
DT DIRECTIONAL EXIT SIGN ILLUMINATED ARROW SERIES

NOTE:
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DT NON-ILLUMINATED BOLLARD

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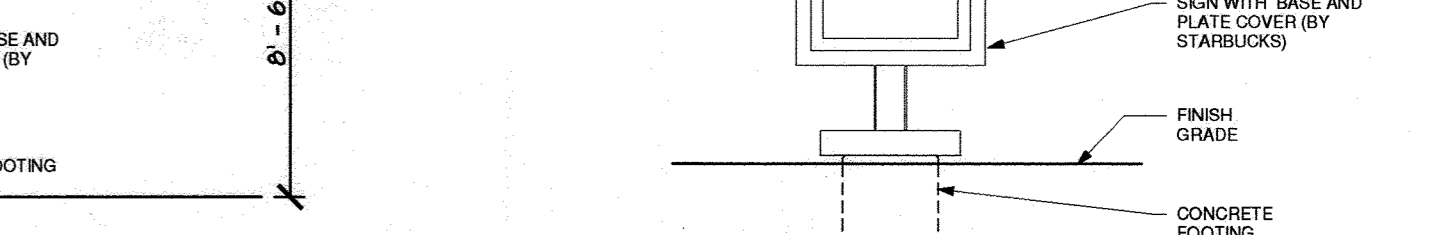
CURB AND GUTTER Modified Combination Transition for Inlets

NOTE:
 1. A REVERSE GUTTER PAN SHALL HAVE A GUTTER SLOPE OF 4.17% AWAY FROM THE FLOW LINE AND SHALL NOT BE USED WHERE THE DRAINAGE CREATES A HAZARDOUS CONDITION.
 2. GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AND IN THE SAME DIRECTION AS THE PAVEMENT. MATCH PAVEMENT CROSS SLOPE WHEN CURB IS LOCATED ON THE LOW SIDE OF SUPERELEVATED SECTION AND THE RATE OF SUPERELEVATION IS GREATER THAN 3% FOR MODIFIED CURB & GUTTER.
 3. A MINIMUM OF TWO (2) FEET OF COMPACTED STABILIZED EXHRT, OR EQUIVALENT, SHALL SUPPORT THE ENTIRE BACK OF CURB.
 4. POSITIVE DRAINAGE SHALL BE PROVIDED BOTH BEHIND THE CURB AND ALONG THE GUTTER AND FLOW LINE.



DT PRE-MENU BOARD FREESTANDING

NOTE:
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 3. A MINIMUM OF 1' CLEAR SPACE SHALL BE PROVIDED FROM THE ENCLOSURE TO ANY STRUCTURE.



DT 5 PANEL MENU BOARD FREESTANDING

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 3. A MINIMUM OF 1' CLEAR SPACE SHALL BE PROVIDED FROM THE ENCLOSURE TO ANY STRUCTURE.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

DATE: 5.10.22

DATE: 6/14/22

DATE: 6/14/22

APPROVED PLANNING BOARD HOWARD COUNTY

DATE: 08/20/2020

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THE PURPOSE OF THE REVISED SITE DEVELOPMENT PLAN IS TO CONSTRUCT A 2,100 SF BUILDING ADDITION WITH DRIVE THROUGH LANE AND ASSOCIATED PARKING UPGRADES, PATIO, AND SWIM FACILITIES.

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. 38291, EXPIRATION DATE: 1/13/2024.

MORRIS & RITCHIE ASSOCIATES, INC.

ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
 1220-B EAST JOPPA ROAD, SUITE 400K
 TOWSON, MARYLAND 21286
 (410) 821-1690
 FAX (410) 821-1748
 Copyright 2022 Morris & Ritchie Associates, Inc.

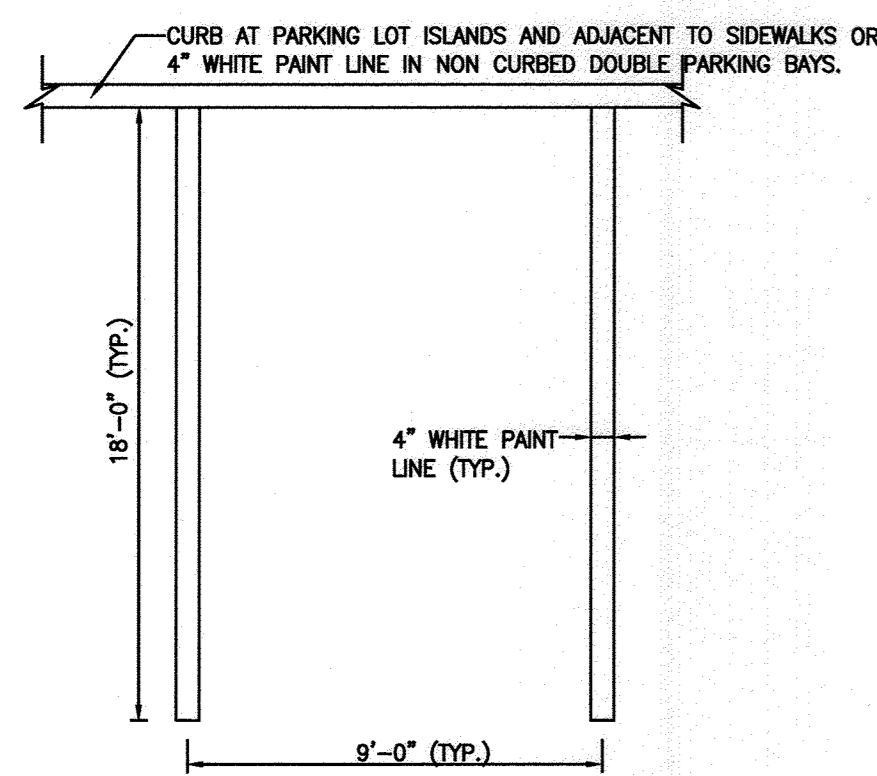
REVISED SITE DEVELOPMENT PLAN

VILLAGE OF OWEN BROWN, SECTION 2, AREA 2, LOT D-12, SNOWDEN CROSSING

SITE DETAILS - 1

DATE: 11/22/2019
 REVISIONS: REVISED SDP-74-122 TO INCLUDE 2100 SF ADDITION
 DATE: 11/7/2023
 ADD AS QUILT

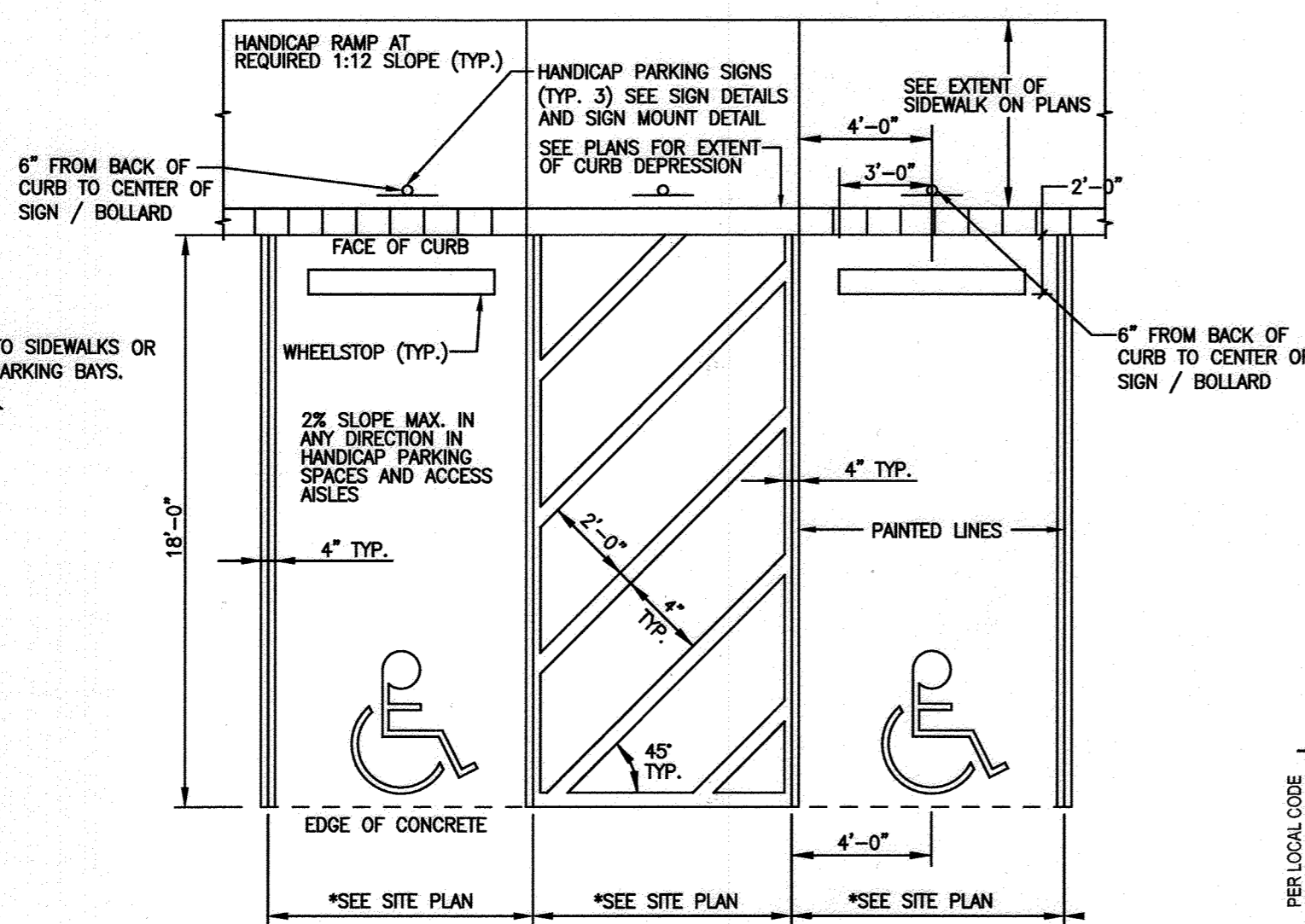
DATE: 04/08/2022
 DRAWN BY: DTP
 DESIGN BY: THS
 REVIEW BY: THS
 SHEET: 16 OF 27



NOTES:
1. PROVIDE 2 COATS OF PAINT ON ALL SITE STRIPING.
2. SEE SITE PLAN FOR ACTUAL SPACE LOCATION AND DIMENSIONS.

TYPICAL PARKING SPACE DETAIL

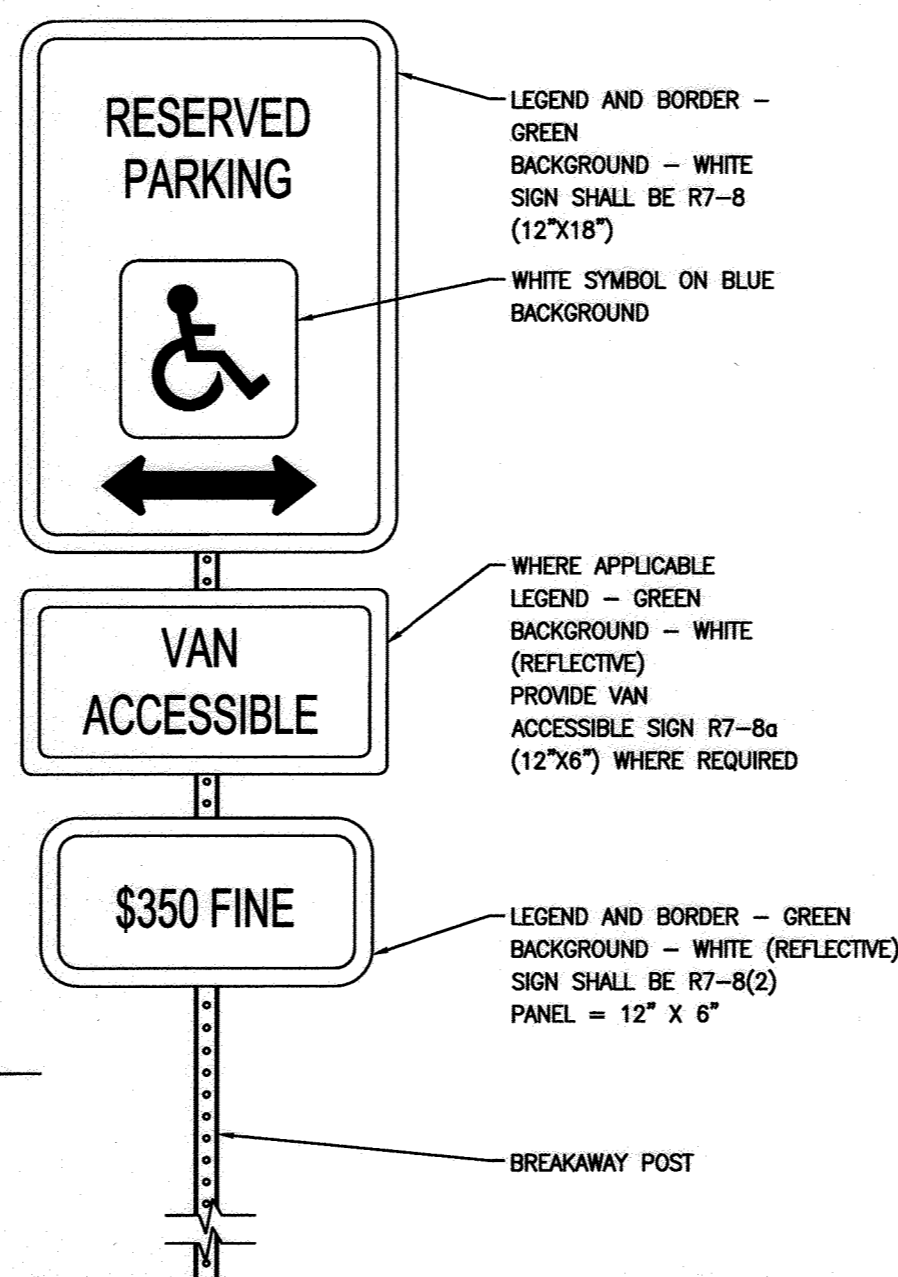
NOT TO SCALE



NOTES:
1. PAINT TO BE WHITE TRAFFIC PAINT APPLIED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. TWO (2) COATS REQUIRED.
2. CONCRETE PARKING SPOT REGION IS TO BE POURED MONOLITHICALLY WITH CONCRETE CURB AND GUTTER.

HANDICAP PARKING & STRIPING DETAIL

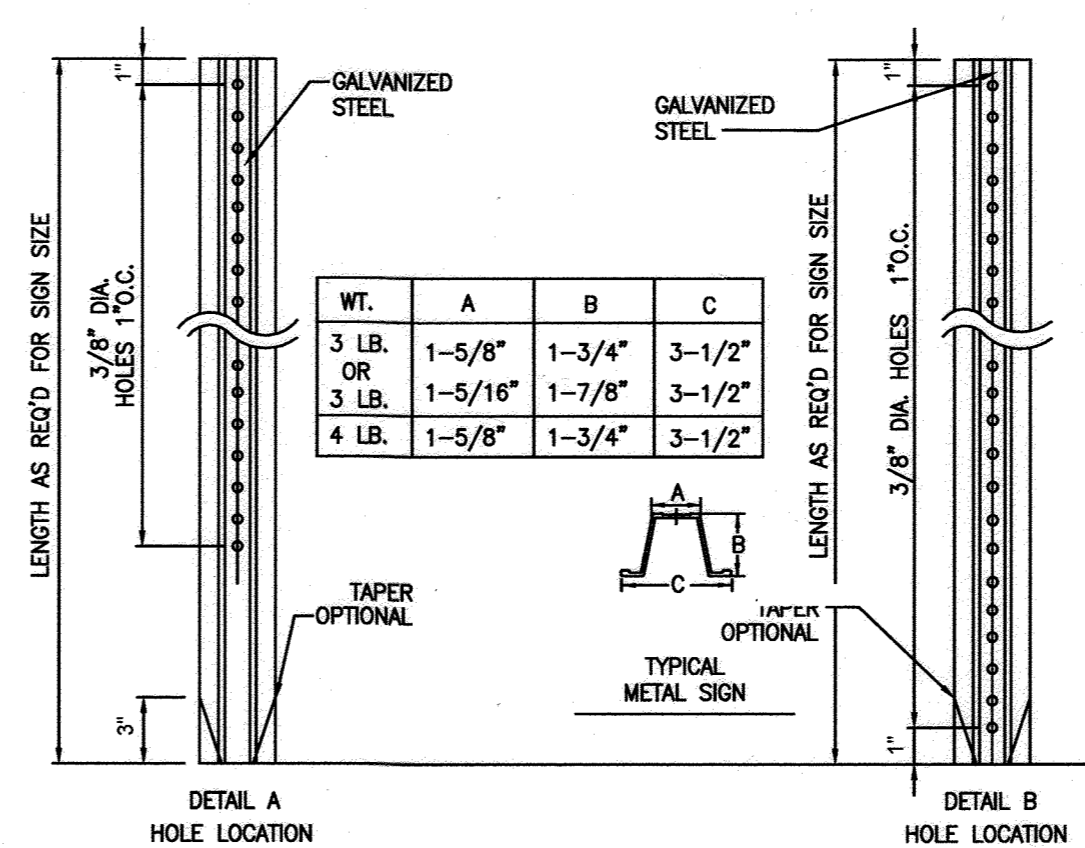
NOT TO SCALE



NOTES:
1. SIGNS SHALL MEET THE REQUIREMENTS OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
2. SIGNS ATTACHED WITH ACORN NUT TYPE FASTENERS.

HANDICAP PARKING SIGN DETAIL

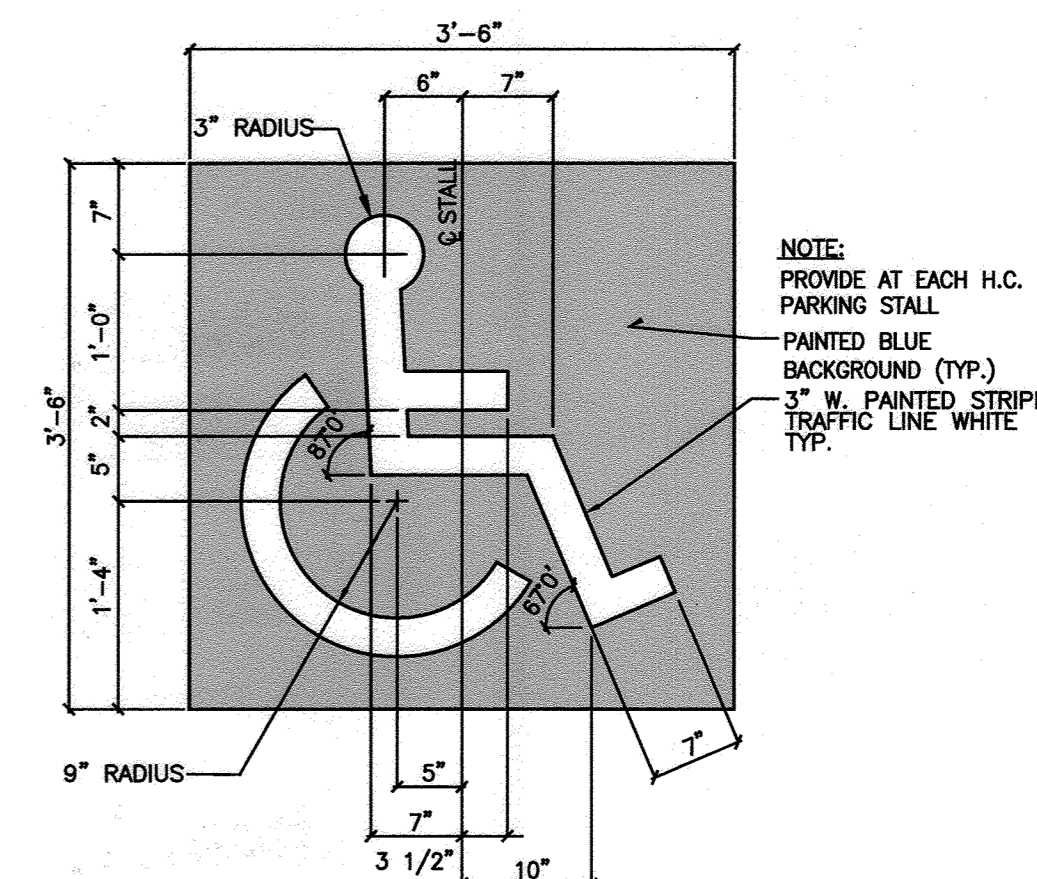
AS SHOWN



NOTES:
1. STEEL FOR POSTS SHALL CONFORM TO THE MECHANICAL REQUIREMENTS OF ASTM A 499-81 GRADE 60 AND TO THE CHEMICAL REQUIREMENTS OF ASTM A1-76 CARBON STEEL TEE RAIL HAVING NOMINAL WEIGHT OF 3 LB. OR GREATER PER LINEAR FOOT.
2. AFTER FABRICATION ALL STEEL POSTS SHALL BE GALVANIZED TO MEET THE REQUIREMENTS OF ASTM A-123.
3. SIGN MOUNTING HEIGHT TO BE PER MUTCD REQUIREMENTS.
4. ALL SIGN POSTS SHALL HAVE "BREAK AWAY" FEATURES THAT MEET ASHOTO REQUIREMENTS CONTAINED IN "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS". THE "BREAK AWAY" FEATURES SHALL BE STRUCTURALLY ADEQUATE TO CARRY THE SIGN SHOWN ON THE PLANS AT 60 MPH WIND LOADINGS. INSTALLATIONS SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

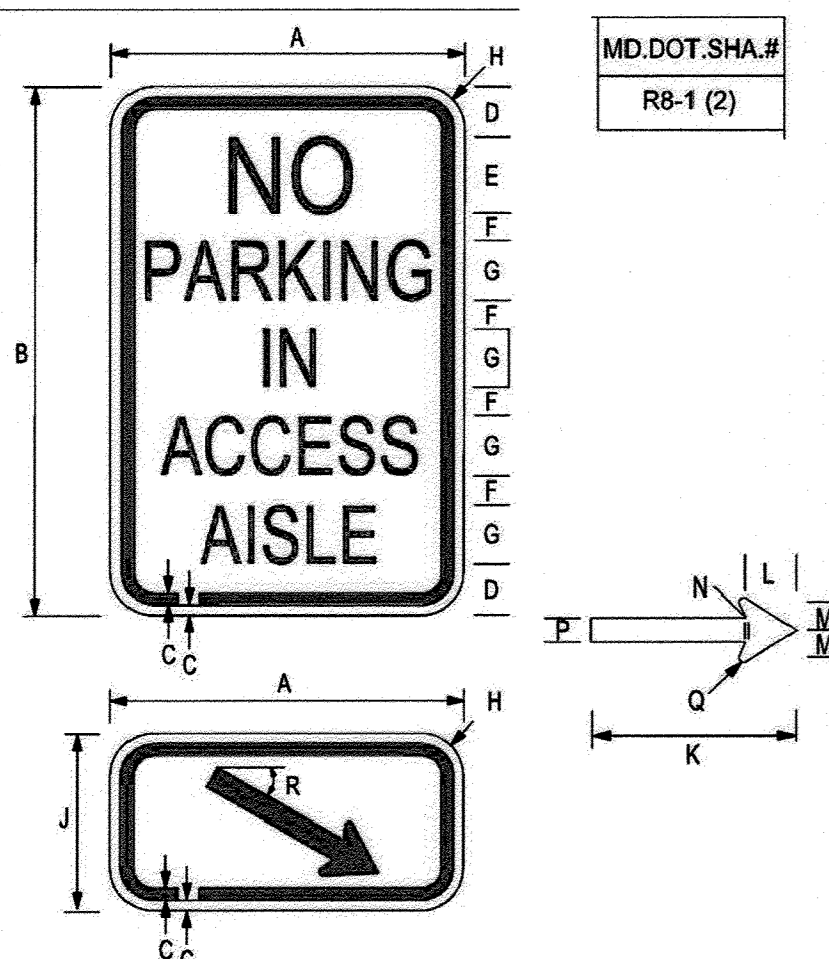
TYPICAL METAL SIGN POST DETAIL

NOT TO SCALE



HANDICAP SYMBOL

NOT TO SCALE

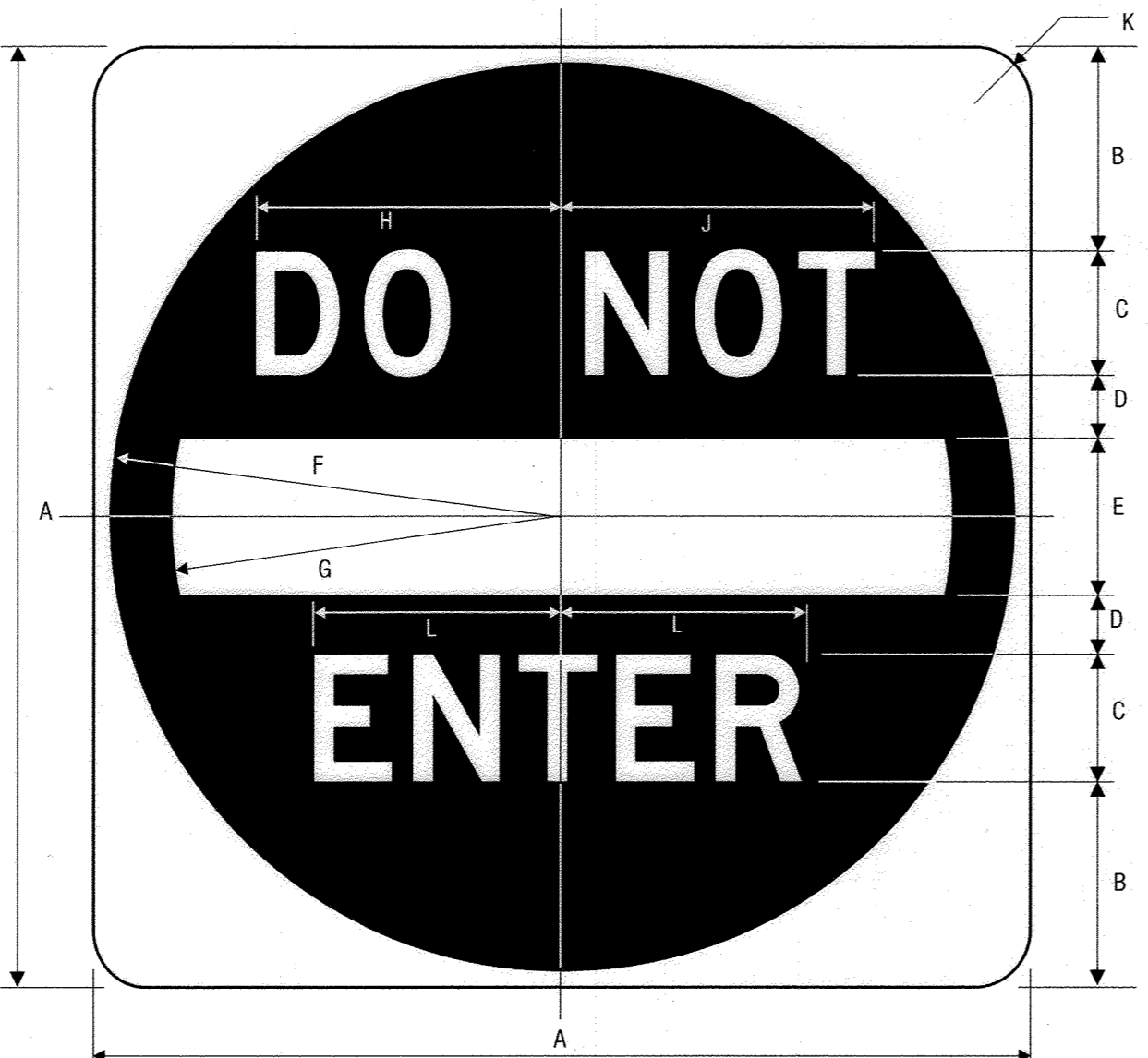


NOTE:
ARROW MAY BE MODIFIED AS NECESSARY TO ACCOMMODATE LOCATION ACCESS RAMP

SIGN SIZE	DIMENSIONS (INCHES)									
	A	B	C	D	E	F	G	H	J	K
STANDARD	12	18	3/8	1-1/2	2-1/4	.625	2C	1-1/2	6	6-1/2

SIGN SIZE	DIMENSIONS (INCHES)									
	L	M	N	P	Q	R	S	T	U	V
STANDARD	1-5/8	7/8	1/8	3/4	9/64	38				

REFERENCES: MUTCD SECTION - 2B.39, 2B.4B.2B, 4.15B.05, 7B.14
COLORS: LEGEND & BORDER - RED, RED SYMBOL ON WHITE BACKGROUND



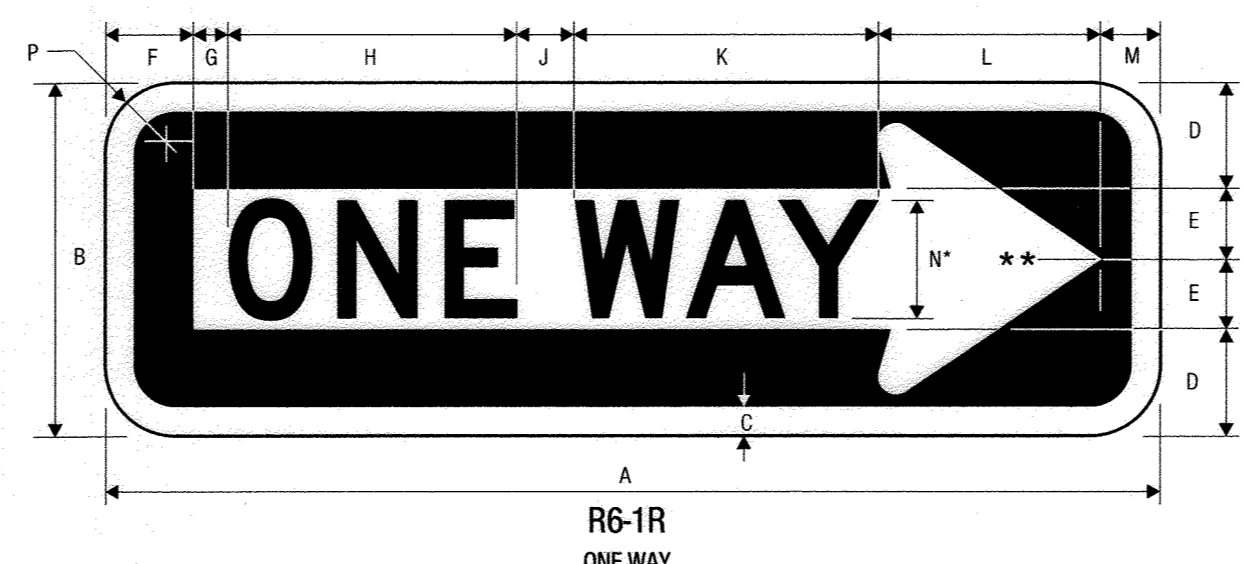
SIGN SIZE	DIMENSIONS (INCHES)									
	A	B	C	D	E	F	G	H	J	K
STANDARD	30	6.5	4D	2	5	14.5	12.5	9.75	10	1.875

SIGN SIZE	DIMENSIONS (INCHES)									
	L	M	N	P	Q	R	S	T	U	V
STANDARD	36	7.5	5D	2.5	6	17.5	15	12	12.375	2.25

REFERENCES: MUTCD SECTION - 2B.39, 2B.4B.2B, 4.15B.05, 7B.14
COLORS: LEGEND & BORDER - RED, RED SYMBOL ON WHITE BACKGROUND

COLORS: SYMBOL - RED (RETROREFLECTIVE), LEGEND & BACKGROUND - WHITE (RETROREFLECTIVE)

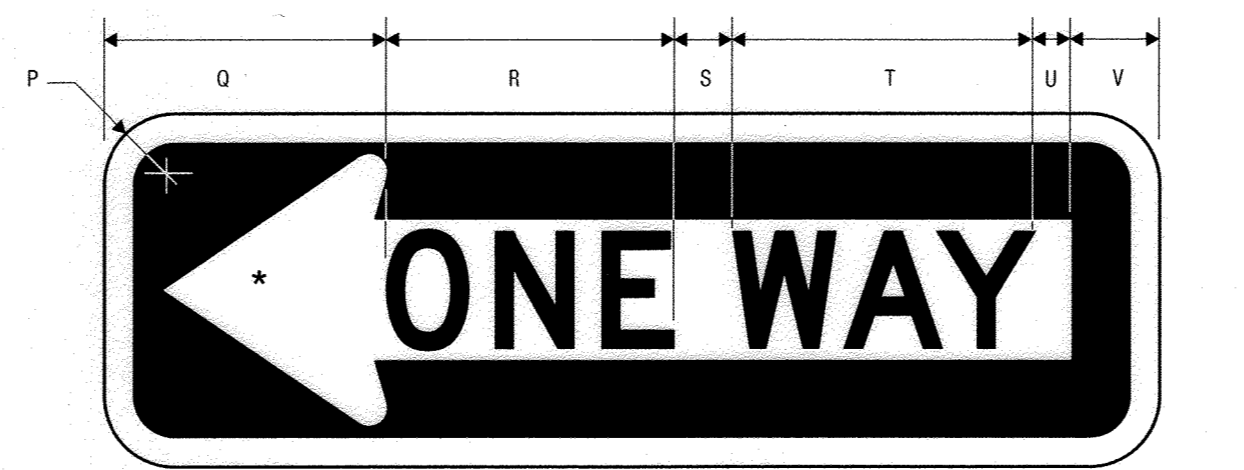
1-73



SIGN SIZE	DIMENSIONS (INCHES)									
	A	B	C	D	E	F	G	H	J	K
STANDARD	36	12	.5	3.375	2.625	3	1.25	9.125	2	9.625

SIGN SIZE	DIMENSIONS (INCHES)									
	L	M	N	P	Q	R	S	T	U	V
STANDARD	54	18	1	5.5	3.5	5	4	12.309	2.929	12.762

*Series 2000 Standard Alphabets. **See page 6-2 for arrow design.



SIGN SIZE	DIMENSIONS (INCHES)									
	A	B	C	D	E	F	G	H	J	K
STANDARD	30	6.5	4D	2	5	14.5	12.5	9.75	10	1.875

SIGN SIZE	DIMENSIONS (INCHES)									
	L	M	N	P	Q	R	S	T	U	V
STANDARD	36	7.5	5D	2.5	6	17.5	15	12	12.375	2.25

REFERENCES: MUTCD SECTION - 2B.39, 2B.4B.2B, 4.15B.05, 7B.14
COLORS: LEGEND & BORDER - RED, RED SYMBOL ON WHITE BACKGROUND

COLORS: SYMBOL - RED (RETROREFLECTIVE), LEGEND & BACKGROUND - WHITE (RETROREFLECTIVE)

1-86



COLORS: LEGEND - GREEN (RETROREFL), BACKGROUND - WHITE (RETROREFL)

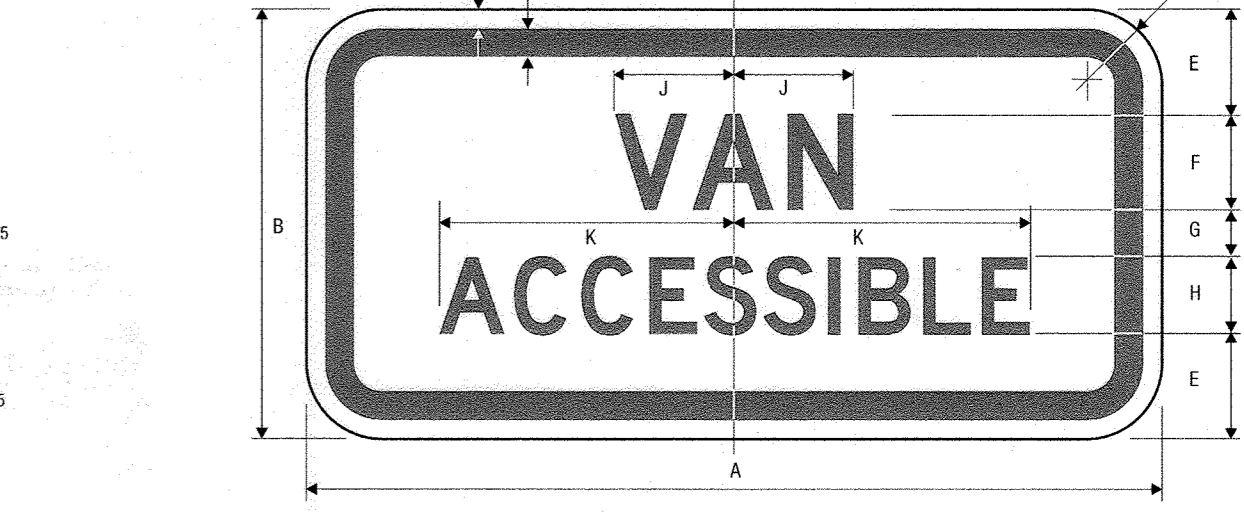


COLORS: LEGEND - RED (RETROREFL), BACKGROUND - WHITE (RETROREFL)

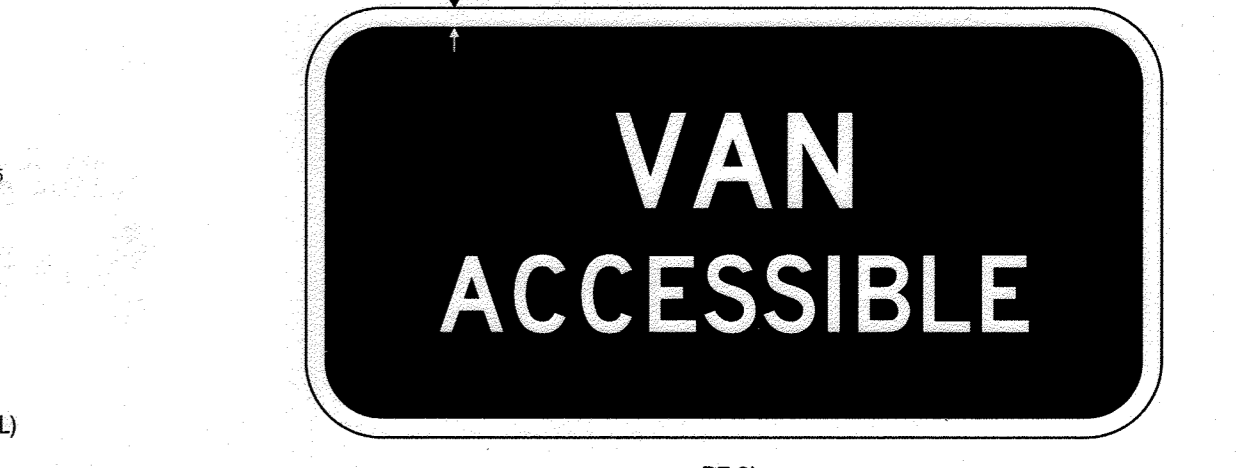
*Reduce spacing 50%. **See page 6-31. ***See page 6-2 for arrow design.

04/14/05

1-92



COLORS: LEGEND - GREEN (RETROREFLECTIVE) OR BLACK (RETROREFLECTIVE), BACKGROUND - WHITE (RETROREFLECTIVE)



COLORS: LEGEND - WHITE (RETROREFLECTIVE), BACKGROUND - BLUE (RETROREFLECTIVE)

SIGN SIZE	DIMENSIONS (INCHES)									
	A	B	C	D	E	F	G	H	J	K
STANDARD	12	6	.375	4.38	1.5	1.5	1.5	1.5	1.0	1.875

REFERENCES: MUTCD SECTION - 2B.39, 2B.4B.2B, 4.15B.05, 7B.14
COLORS: LEGEND - GREEN (RETROREFLECTIVE) OR BLACK (RETROREFLECTIVE), BACKGROUND - WHITE (RETROREFLECTIVE)

COLORS: LEGEND - WHITE (RETROREFLECTIVE), BACKGROUND - BLUE (RETROREFLECTIVE)

1-93

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. 38291, EXPIRATION DATE: 1/13/2024.

MRA
MORRIS & RITCHIE ASSOCIATES, INC.
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
1220-B EAST JOPPA ROAD, SUITE 400K
TOWSON, MARYLAND 21286
(410) 821-1690
FAX (410) 821-1748
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REVISED SITE DEVELOPMENT PLAN
VILLAGE OF OWEN BROWN, SECTION 2, AREA 2, LOT D-12, SNOWDEN CROSSING
SITE DETAILS - 2
SDP-74-122
TAX MAP 42 -- GRID 04 -- PARCEL 0397 -- ZONING NT -- DEED REF 17342/229
PLAT NO. 2741 -- TAX ASSESSMENT DISTRICT 82 -- 6th ELECTION DISTRICT
7090 DEEPADE DRIVE, HOWARD COUNTY, MARYLAND, 21045

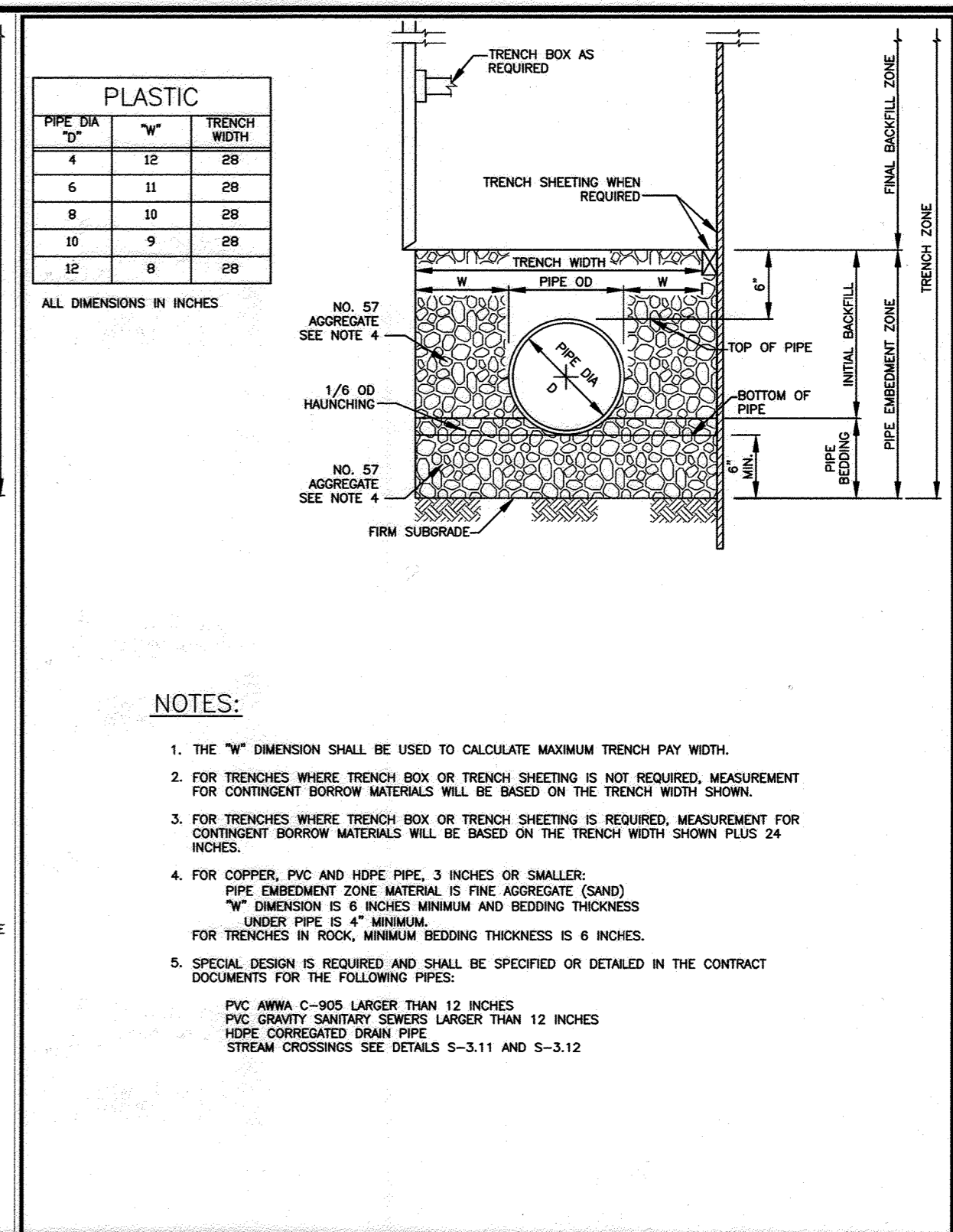
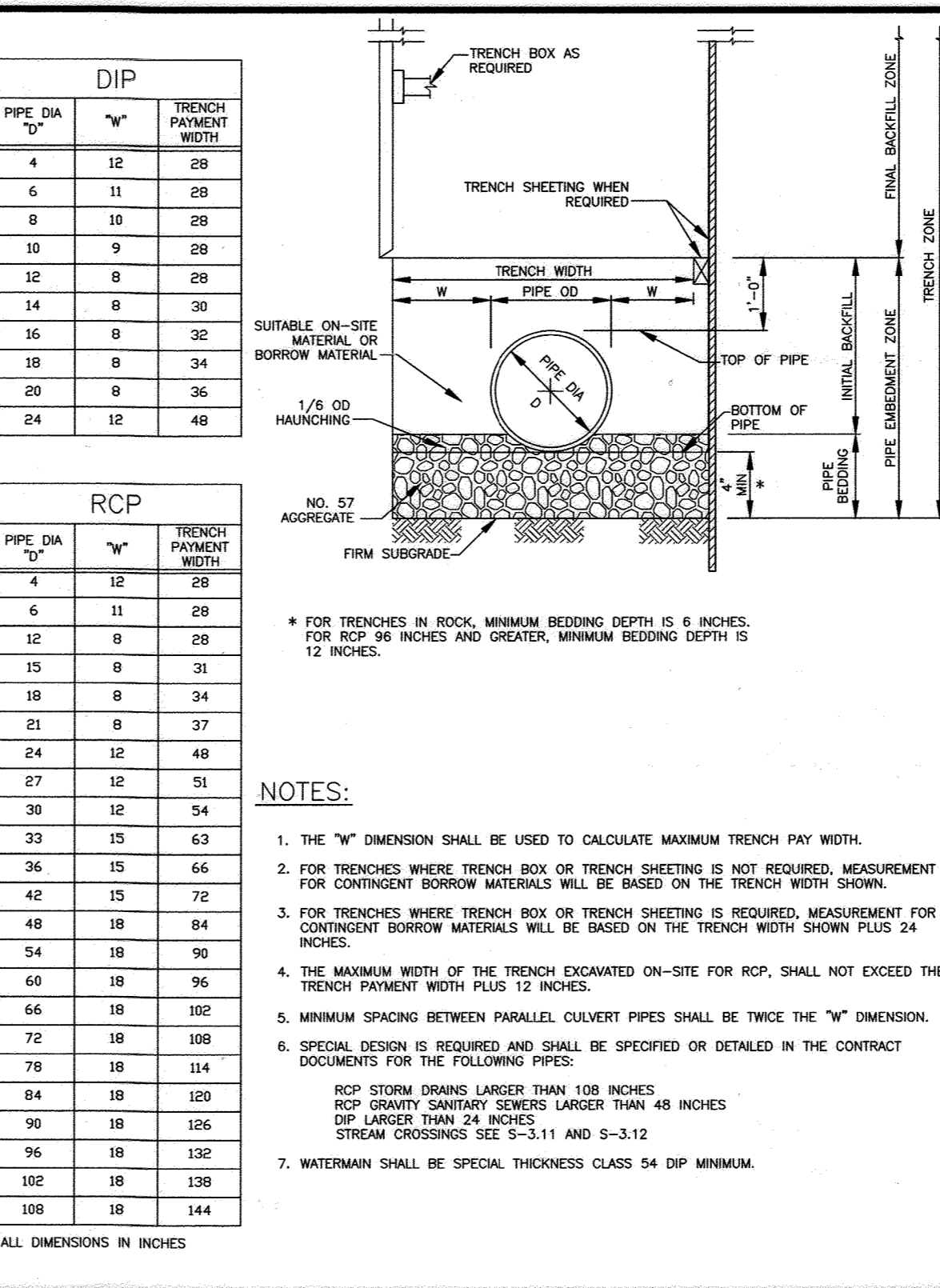
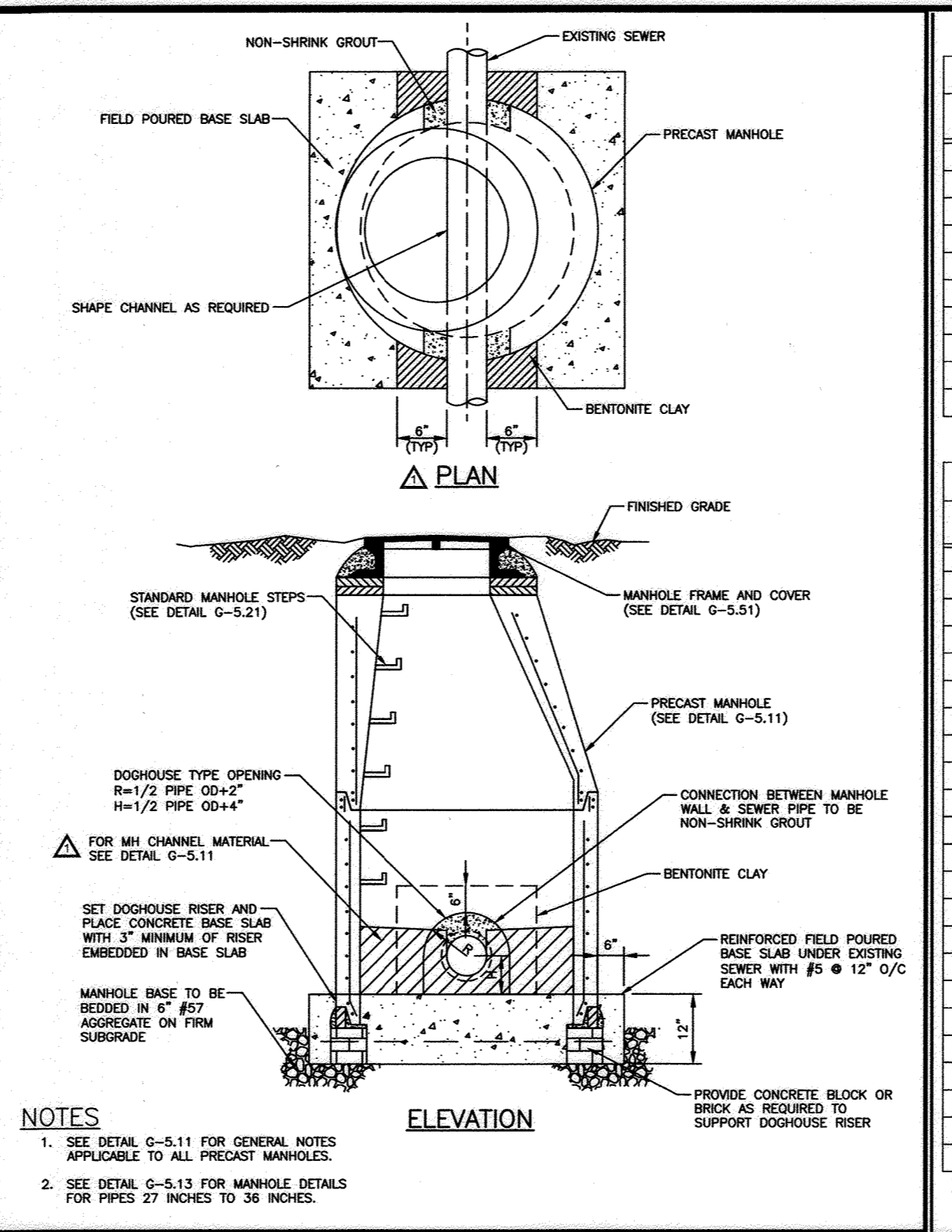
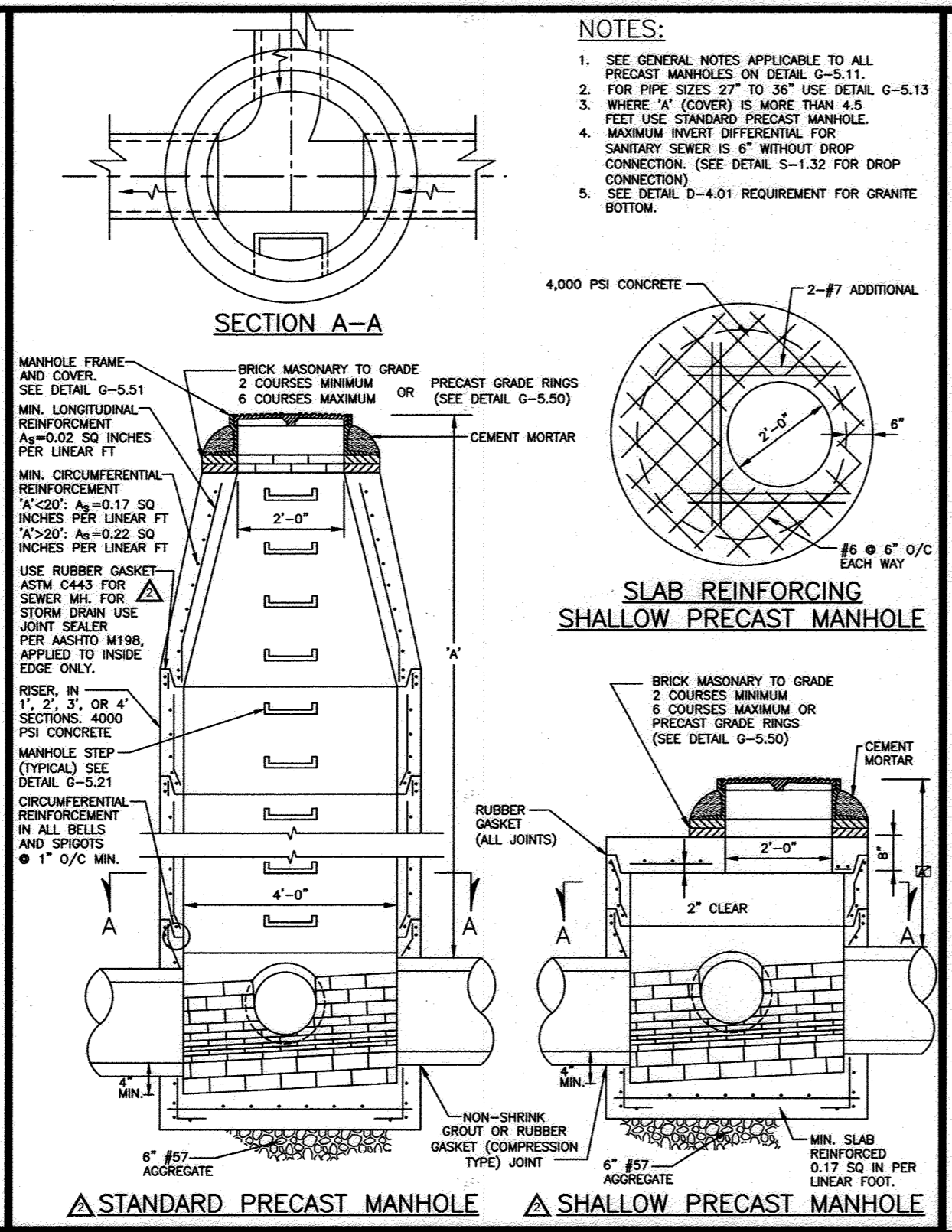
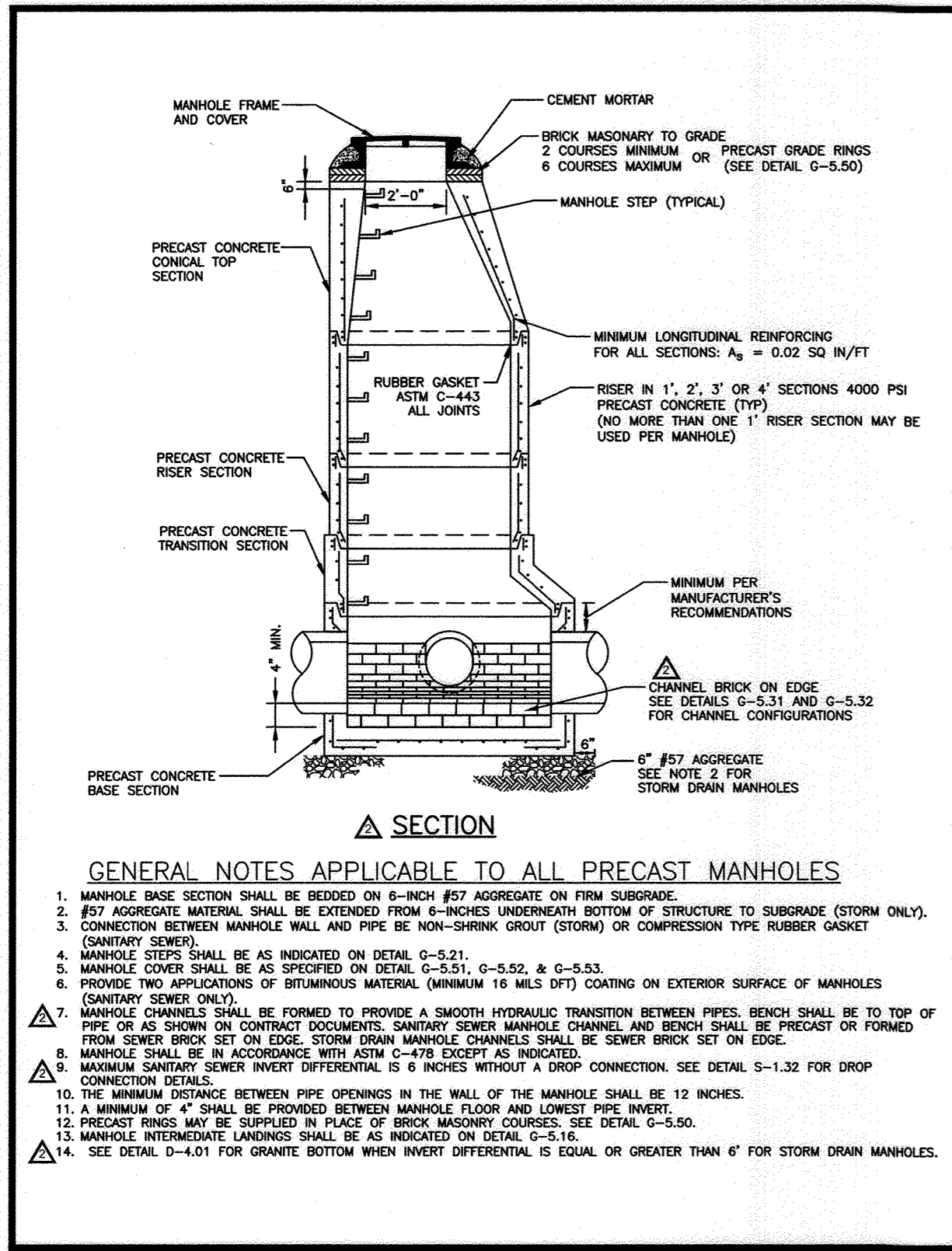
DATE	REVISIONS	JOB NO.
11/22/2019	REVISED SDP-74-122 TO INCLUDE 2100 SF ADDITION	19650
11/7/2023	ADD AS BUILT	SCALE: NO SCALE
		DATE: 04/08/2022
		DRAWN BY: DTP
		DESIGN BY: THS
		REVIEW BY: THS
		SHEET: 17 OF 27

APPROVED: DEPARTMENT OF PLANNING AND ZONING
DATE: 5/10/22
DATE: 10/14/22
DATE: 6/14/22

APPROVED: PLANNING BOARD HOWARD COUNTY
DATE: 08/20/2020

PURPOSE STATEMENT
THE PURPOSE OF THE REVISED SITE DEVELOPMENT PLAN IS TO CONSTRUCT A 2,100 SF BUILDING ADDITION WITH DRIVE THROUGH LANE AND ASSOCIATED PARKING UPGRADES, PATIO, AND SWIM FACILITIES.

DATUM
DESIGN & DRAWING BASED ON MARYLAND COORDINATE SYSTEM (MCS): HORIZONTAL NAD 83 (2011) VERTICAL NAVD 88
OWNER / DEVELOPER
SNOWDEN CROSSING LLC
2800 QUARRY LAKE DRIVE, SUITE 340
BALTIMORE, MD 21209
PHONE: 410-308-0700
ATTN: SCOTT CHERRY



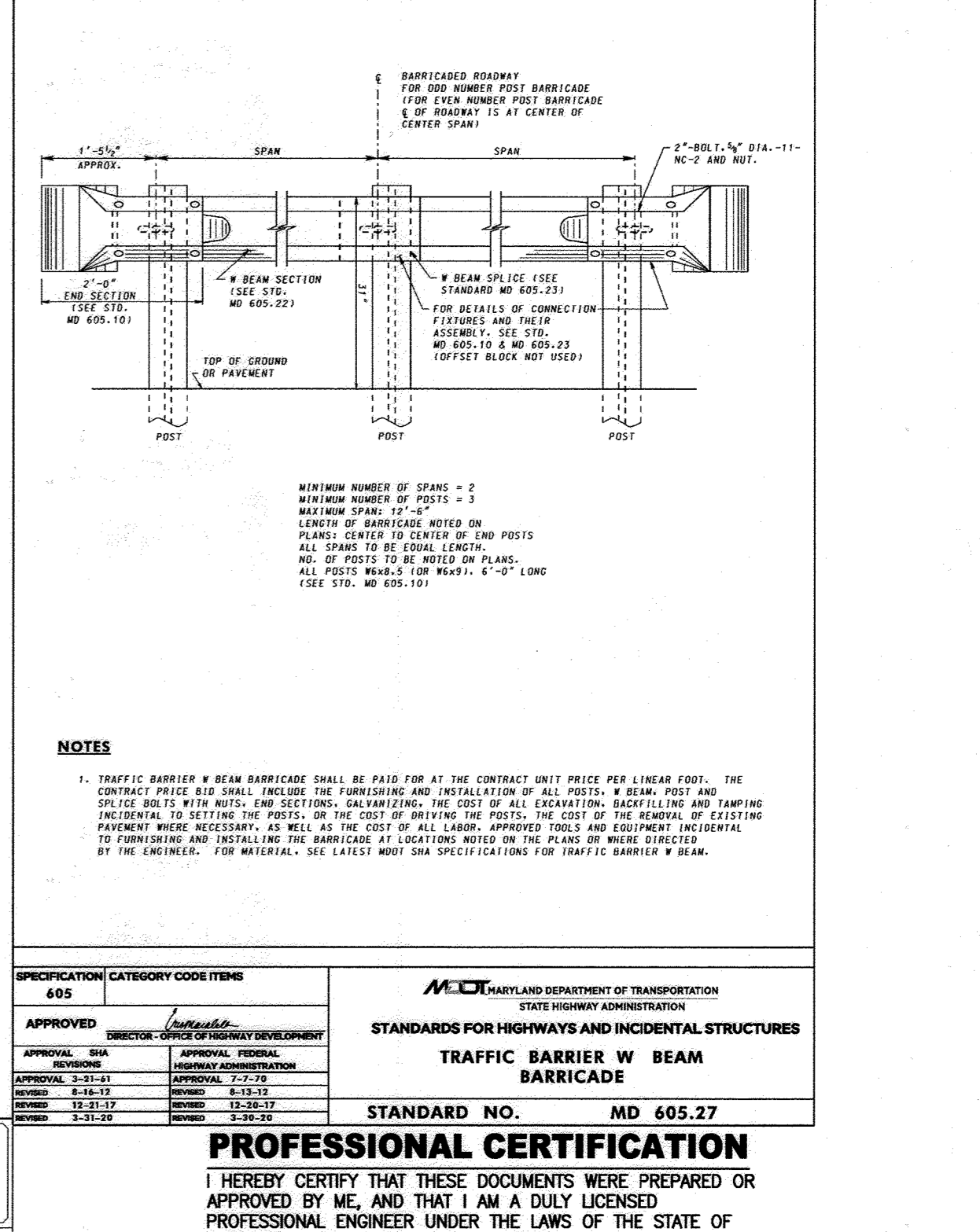
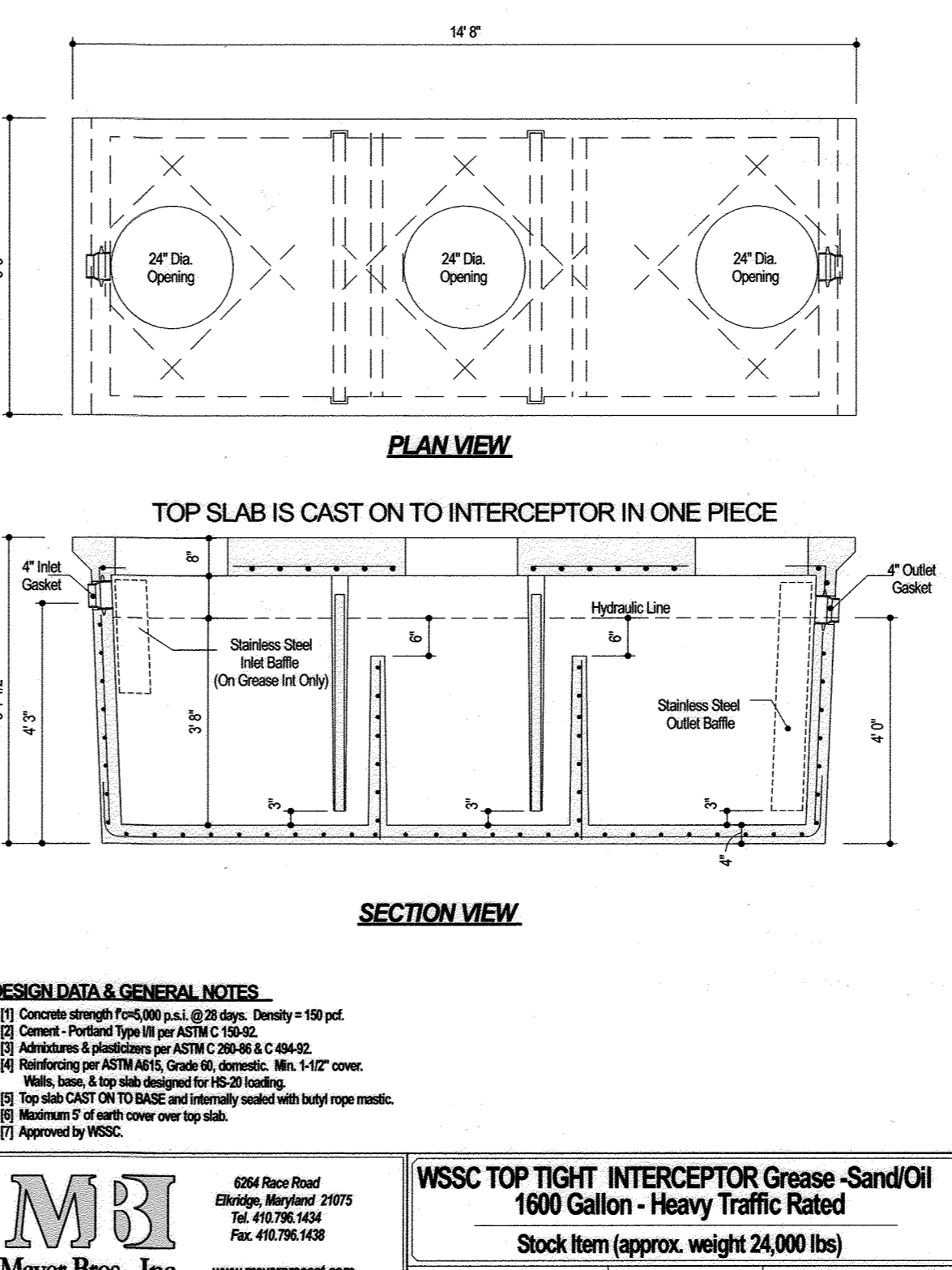
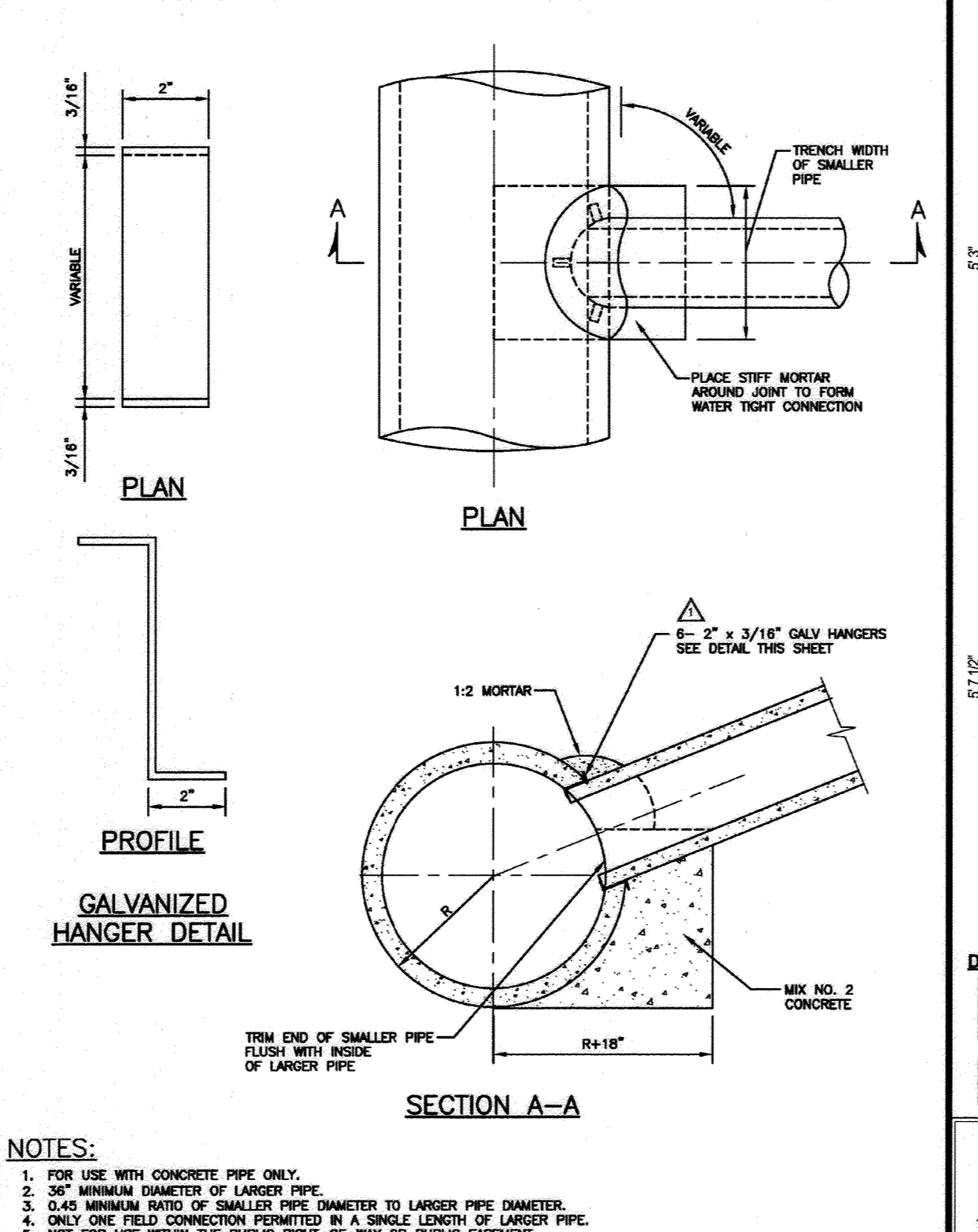
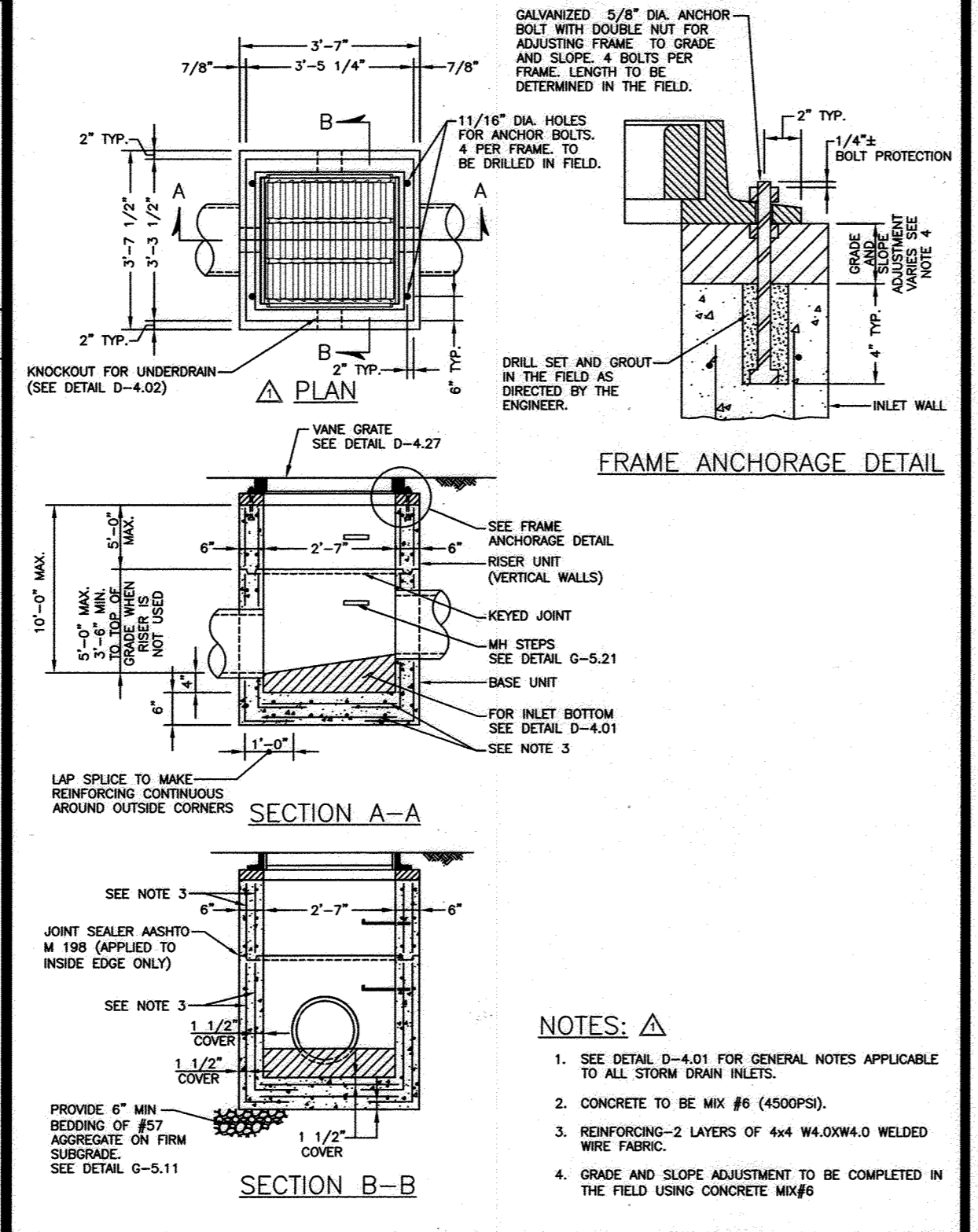
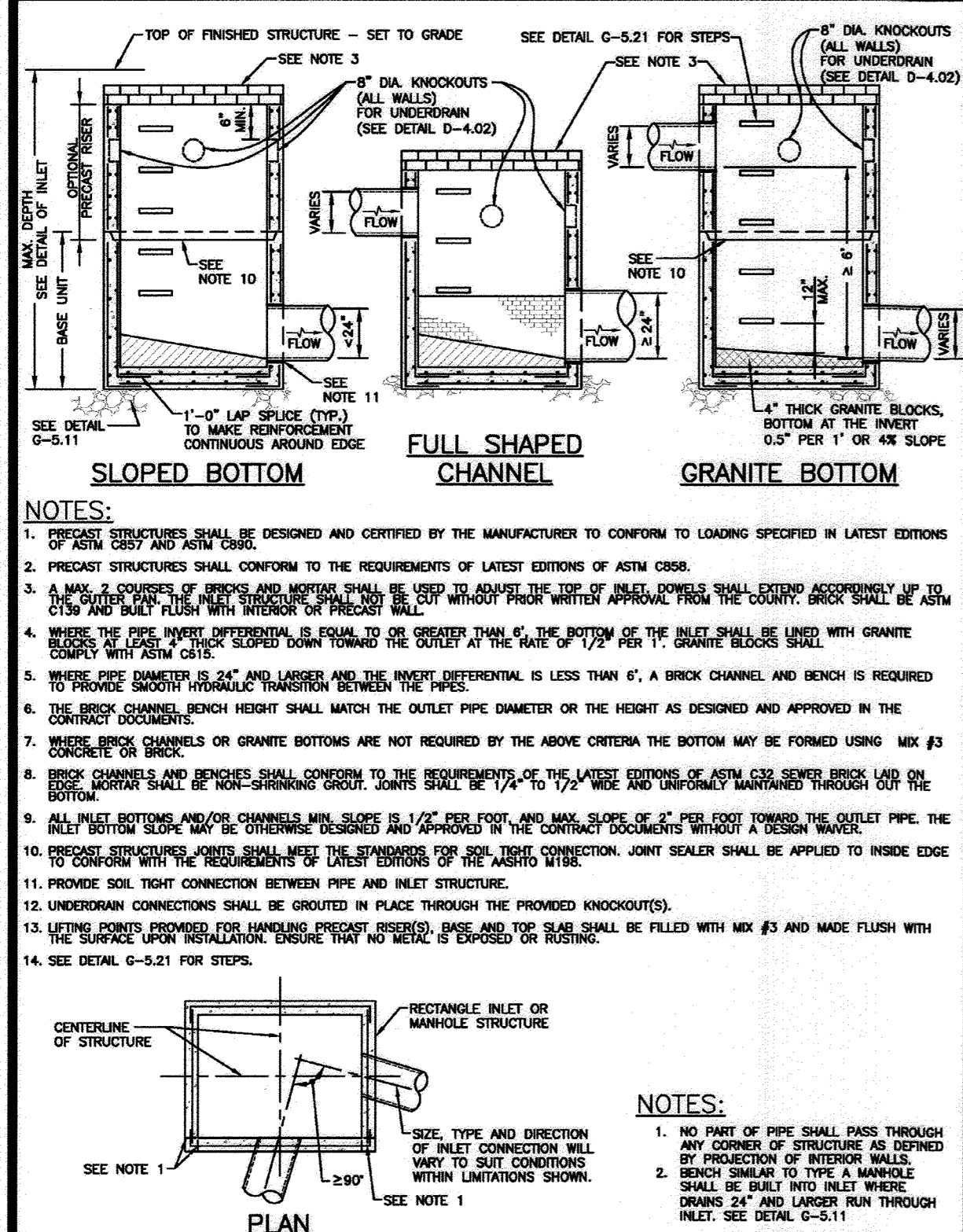
5/1/2014	Howard County, Maryland Department of Public Works	PRECAST MANHOLE Notes	Detail	G-5.11
5/1/2014	Approved: <i>Norman & South</i> Chief, Bureau of Engineering			

5/1/2014	Howard County, Maryland Department of Public Works	PRECAST MANHOLE Standard and Shallow	Detail	G-5.12
5/1/2014	Approved: <i>Norman & South</i> Chief, Bureau of Engineering			

5/1/2014	Howard County, Maryland Department of Public Works	PRECAST MANHOLE Doghouse Over Existing Sewer	Detail	G-5.14
5/1/2014	Approved: <i>Norman & South</i> Chief, Bureau of Engineering			

5/1/2014	Howard County, Maryland Department of Public Works	Pipe Trench DIP & RCP	Detail	G-2.11
5/1/2014	Approved: <i>Norman & South</i> Chief, Bureau of Engineering			

5/1/2014	Howard County, Maryland Department of Public Works	Pipe Trench Plastic & Copper	Detail	G-2.12
5/1/2014	Approved: <i>Norman & South</i> Chief, Bureau of Engineering			



5/1/2014	Howard County, Maryland Department of Public Works	STORM DRAIN INLET General Requirement	Detail	D-4.01
5/1/2014	Approved: <i>Norman & South</i> Chief, Bureau of Engineering			

5/1/2014	Howard County, Maryland Department of Public Works	TYPE 'S' INLET	Detail	D-4.24
5/1/2014	Approved: <i>Norman & South</i> Chief, Bureau of Engineering			

5/1/2014	Howard County, Maryland Department of Public Works	CONCRETE PIPE FIELD CONNECTION	Detail	D-9.53
5/1/2014	Approved: <i>Norman & South</i> Chief, Bureau of Engineering			

5/1/2014	Howard County, Maryland Department of Public Works	WSSC TOP TIGHT INTERCEPTOR Grease-Sand/Oil 1600 Gallon - Heavy Traffic Rated	Detail	D-9.53
5/1/2014	Approved: <i>Norman & South</i> Chief, Bureau of Engineering			

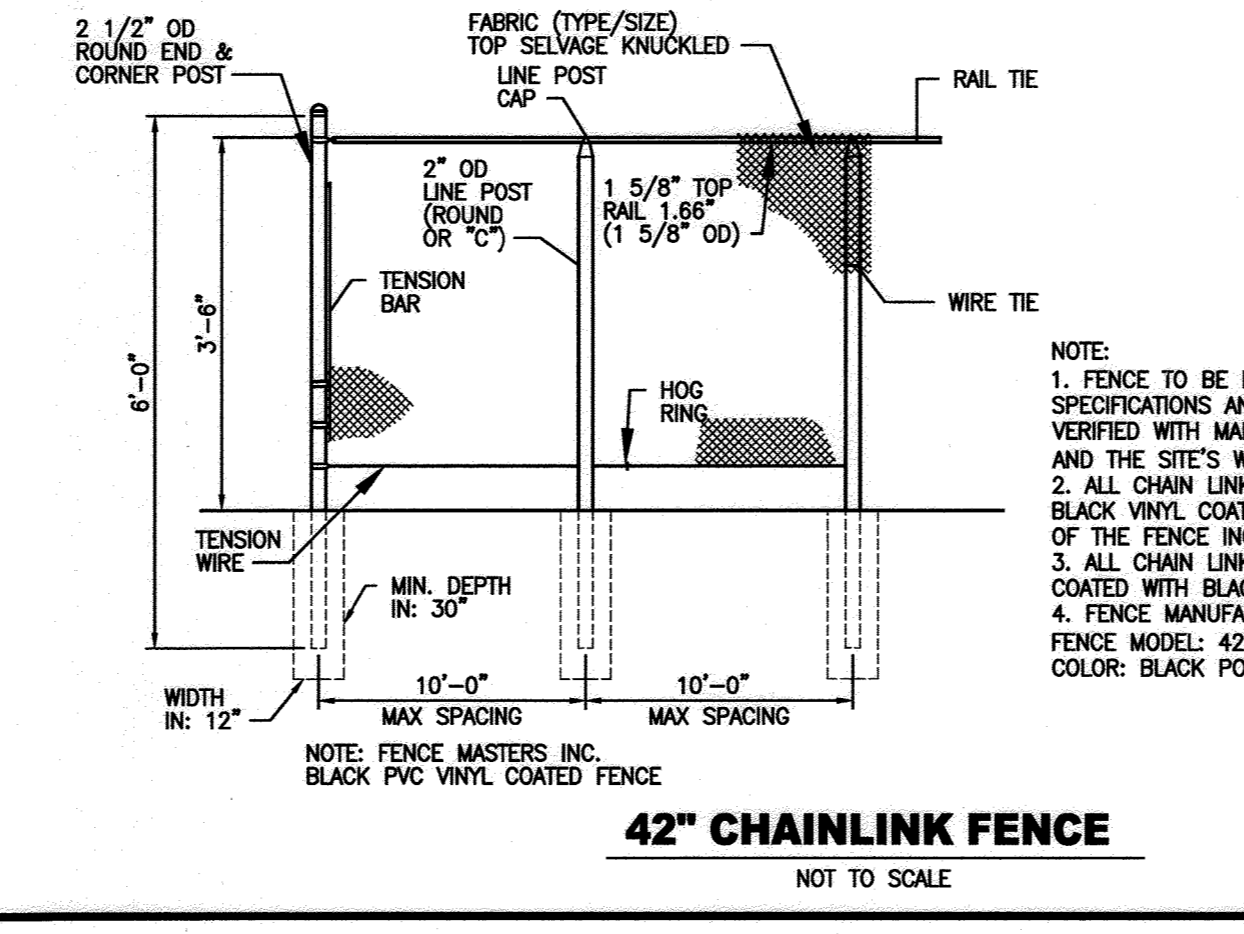
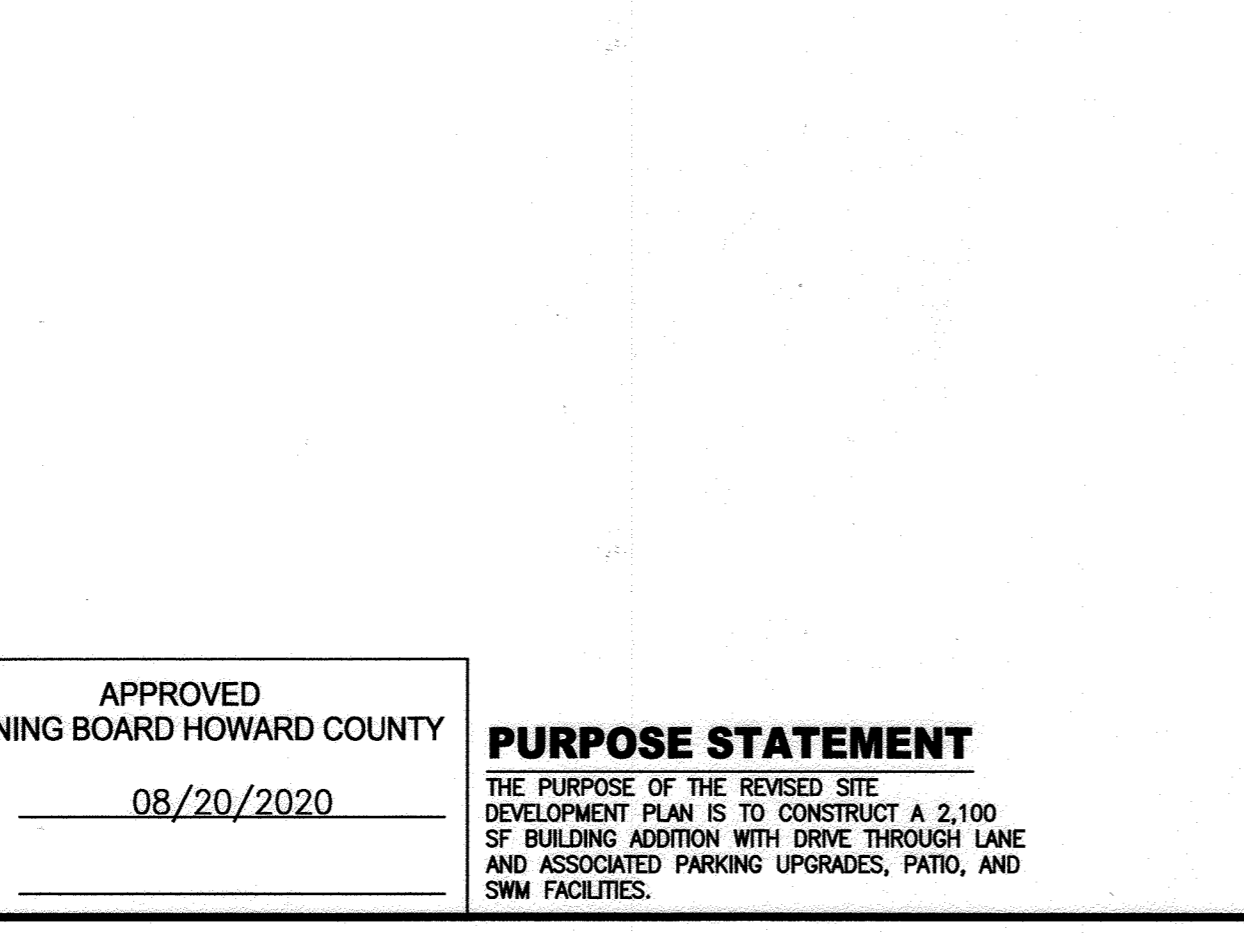
5/1/2014	Howard County, Maryland Department of Public Works	TRAFFIC BARRIER W/ BEAM BARRICADE	Detail	D-9.53
5/1/2014	Approved: <i>Norman & South</i> Chief, Bureau of Engineering			

APPROVED: DEPARTMENT OF PLANNING AND ZONING

5.0.22
 DATE
 01/14/22
 DATE
 01/14/22
 DATE

APPROVED PLANNING BOARD HOWARD COUNTY
 DATE 08/20/2020

PURPOSE STATEMENT
 THE PURPOSE OF THE REVISED SITE DEVELOPMENT PLAN IS TO CONSTRUCT A 2,100 SF BUILDING ADDITION WITH DRIVE THROUGH LAKE AND ASSOCIATED PARKING UPGRADES, PATIO, AND SWIM FACILITIES.



DATUM
 DESIGN & DRAWING BASED ON MARYLAND COORDINATE SYSTEM (MCS): HORIZONTAL, NAD 83 (2011) VERTICAL, NAVD 88

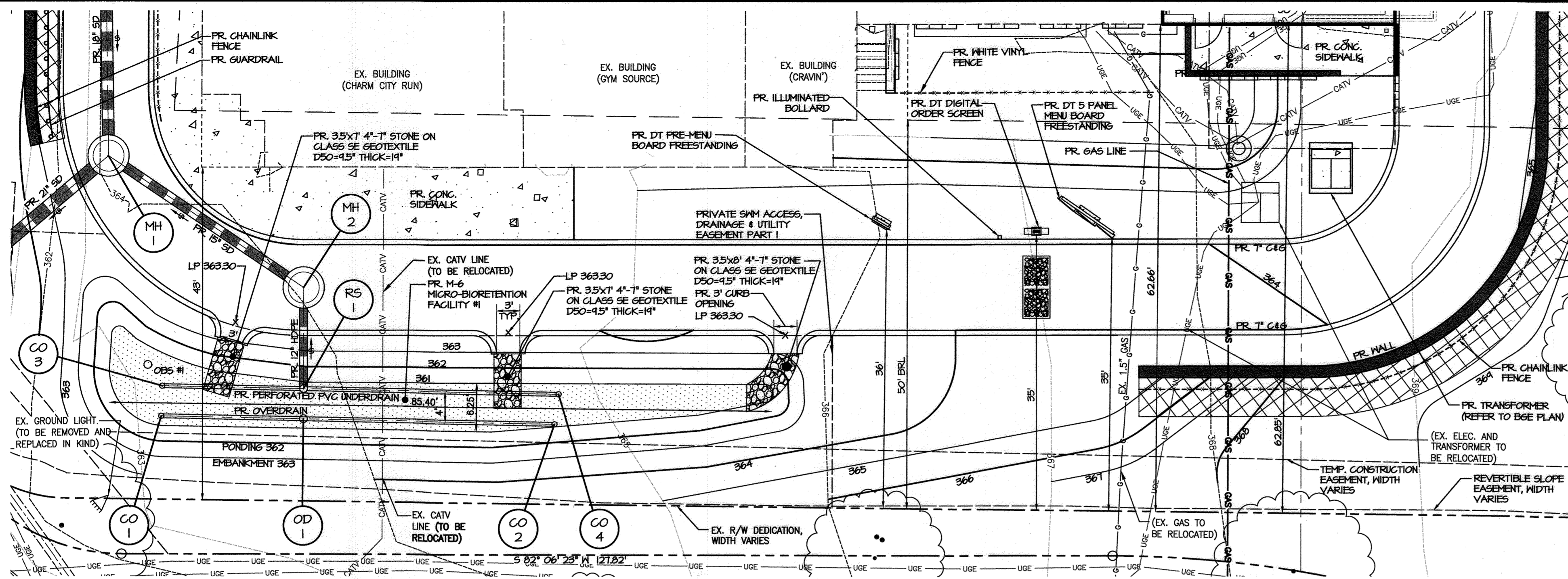
OWNER / DEVELOPER
 SNOWDEN CROSSING LLC
 2800 QUARRY LAKE DRIVE, SUITE 340
 BALTIMORE, MD 21209
 PHONE: 410-308-0700
 ATTN: SCOTT CHERRY

MORRIS & RITCHIE ASSOCIATES, INC.
 ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
 1220-B EAST JOPPA ROAD, SUITE 400K
 TOWSON, MARYLAND 21286
 (410) 821-1690
 FAX (410) 821-1748
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REVISED SITE DEVELOPMENT PLAN
VILLAGE OF OWEN BROWN, SECTION 2, AREA 2, LOT D-12, SNOWDEN CROSSING
 SITE DETAILS - 3

DATE 11/22/2019
 REVISIONS 11/22/2019 REVISED SDP-74-122 TO INCLUDE 2100 SF ADDITION
 11/7/2023 AS QUANT

DATE 04/08/2022
 DRAWN BY: DTP
 DESIGN BY: THS
 REVIEW BY: THS
 SHEET: 18 OF 27



FILTERRA HYDROLOGY/HYDRAULIC SUMMARY

STRUCTURE ID	FILE 1	FILE 2
SIZE	6' x 4'	6' x 4'
INSIDE VAULT DIMENSIONS	6' x 10'	6' x 10'
PLANTED SURFACE AREA REQUIRED (SF)	24	23
PLANTED SURFACE AREA PROVIDED (SF)	24	24
WATER QUALITY VOLUME WQV REQUIRED (CF)	103	85
STORAGE CAPACITY OF UNIT PRIOR TO FILTRATION (CF)	119	119
EQUVALENT WQV TREATMENT PROVIDED	475	475
RAINFALL EVENT PE	1.0 IN	1.0 IN
MEDIA INFILTRATION RATE	140"/HR	140"/HR
OUTLET PIPE	4" SCH 40 PVC	4" SCH 40 PVC

* PIPE TO BE UPSIZED TO 8" PVC AT CLEANOUT 6

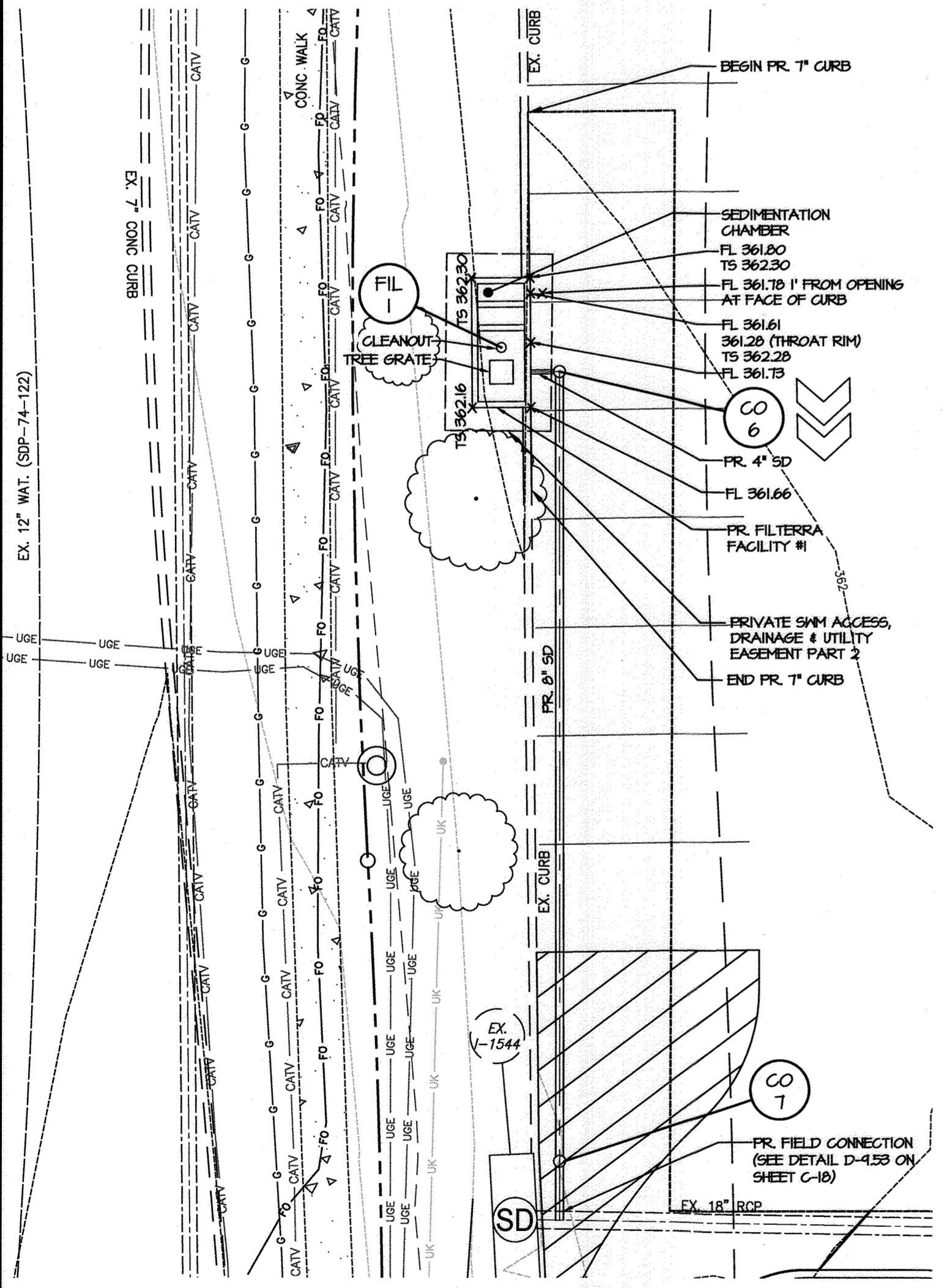
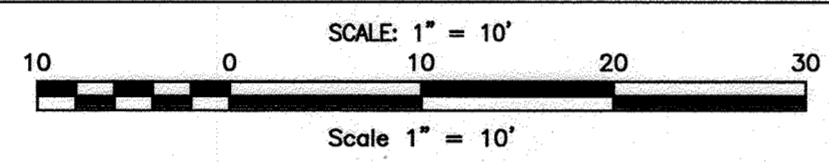
- LEGEND**
- 1 EX. 1 FOOT CONTOURS
 - 2 EX. 2 FOOT CONTOURS
 - 10 EX. 10 FOOT CONTOURS
 - EX. CURB AND GUTTER
 - EX. CONCRETE
 - EX. C/L ROAD
 - EX. ADJACENT PROPERTY LINE
 - EX. PROPERTY LINE
 - EX. RIGHT OF WAY
 - EX. WATER LINE
 - EX. SANITARY LINE
 - EX. STORM DRAIN LINE
 - EX. FIBER OPTIC CABLE
 - EX. CATV
 - EX. GAS
 - EX. UNKNOWN UTILITY
 - EX. UNDER GROUND ELECTRIC
 - EX. LIGHT POLE
 - EX. U/G UTILITY HANDBOX
 - EX. UTILITY POLE
 - EX. SIGN
 - EX. BOLLARD
 - EX. TREE
 - EX. BUILDING/STRUCTURE
 - EX. BLOCK RETAINING WALL
 - EX. LIMIT OF DISTURBANCE
 - PR. 1 FT. CONTOUR
 - PR. 2 FT. CONTOUR
 - PR. 10 FT. CONTOUR
 - PR. BUILDING
 - PR. CONCRETE WALK
 - PR. CURB & GUTTER
 - PR. SANITARY SEWER
 - PR. STORM DRAIN
 - PR. FILTERRA
 - PR. RETAINING WALL
 - PR. GEGRID

HYDROLOGY/HYDRAULIC SUMMARY

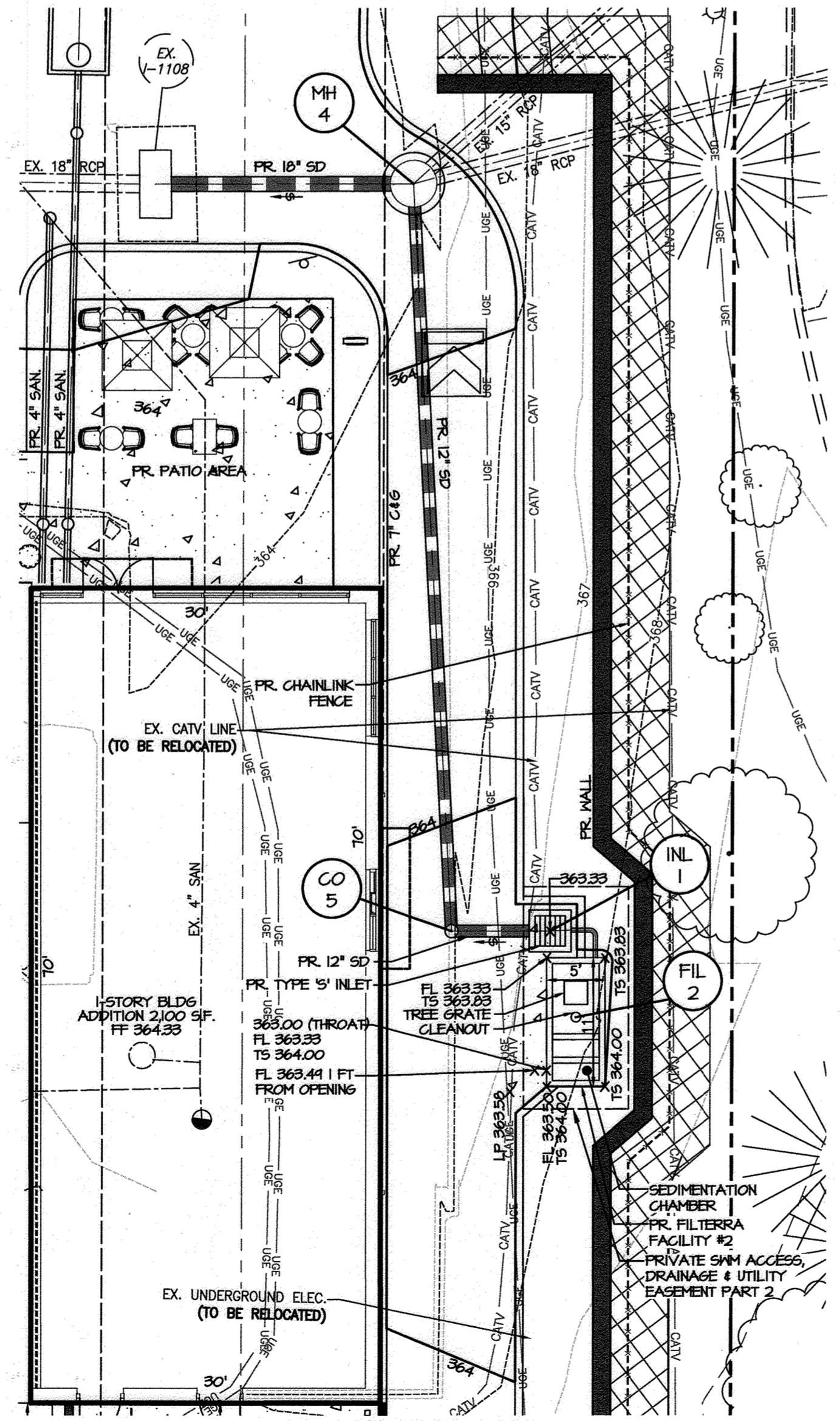
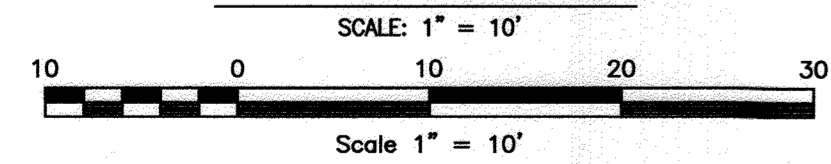
M-6 MICRO-BIORETENTION FACILITY #1	WATER SURFACE ELEVATION	AREA OF FILTER REQUIRED	AREA OF FILTER PROVIDED	TOTAL STORAGE VOLUME REQUIRED	TOTAL STORAGE VOLUME PROVIDED	TOTAL PONDING VOLUME PROVIDED
	ft.	s.f.	s.f.	c.f.	c.f.	c.c.-fl.
ESD VOLUME (ESDV)	361.00	217	508	269	932	0.0214
ESD VOLUME - AS-BUILT	361.00	217	466	269	988	0.0227
RECHARGE VOLUME (REV)	N/A	N/A	N/A	87	102	0.0023
RECHARGE VOLUME - AS-BUILT	N/A	N/A	N/A	87	93	0.0021
10-YEAR STORM	361.93					
10-YEAR STORM (ASBUILT)	362.11					

** WATER QUALITY (WQV) IS SATISFIED WITH FULL STORAGE OF ESD VOLUME.
*** RAINFALL AMOUNT (PE) = 1.00 IN.

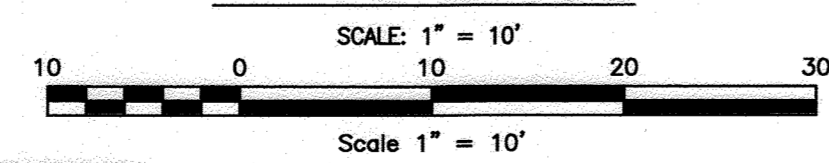
M-6 MICRO-BIORETENTION FACILITY #1 INSET



FILTERRA #1 INSET



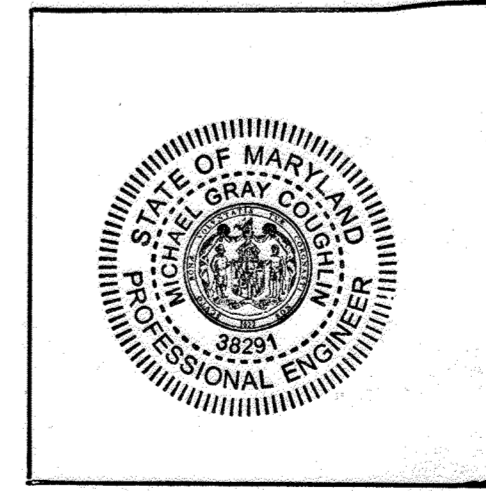
FILTERRA #2 INSET



ASBUILT CERTIFICATION

I HEREBY CERTIFY, BY MY SEAL, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS ASBUILT. I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 38291 EXPIRATION DATE: 1/13/2024

Michael Conley
SIGNATURE DATE 11-2-2023



DESIGN & DRAWING BASED ON MARYLAND COORDINATE SYSTEM (MCS): HORIZONTAL NAD 83 (2011) VERTICAL NAVD 88
DATUM
DESIGN & DRAWING BASED ON MARYLAND COORDINATE SYSTEM (MCS): HORIZONTAL NAD 83 (2011) VERTICAL NAVD 88
OWNER / DEVELOPER
SNOWDEN CROSSING LLC
2800 QUARRY LAKE DRIVE, SUITE 340
BALTIMORE, MD 21209
PHONE: 410-308-0700
ATTN: SCOTT CHERRY

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. 38291, EXPIRATION DATE: 1/13/2024.



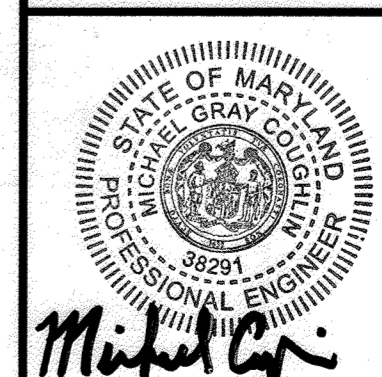
Know what's below.
Call before you dig.

PROTECT YOURSELF, GIVE THREE WORKING DAYS NOTICE
THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERE TO APPROPRIATE.



MORRIS & RITCHIE ASSOCIATES, INC.

ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
1220-B EAST JOPPA ROAD, SUITE 400K
TOWSON, MARYLAND 21286
(410) 821-1690
FAX (410) 821-1748
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**REVISED SITE DEVELOPMENT PLAN
VILLAGE OF OWEN BROWN, SECTION 2,
AREA 2, LOT D-12, SNOWDEN CROSSING
AS-BUILT
STORMWATER MANAGEMENT PLAN**

SDP-74-122
TAX MAP 42 - GRID 04 - PARCEL 0397 - ZONING NT - DEED REF 17342/229
PLAT NO. 2741 - TAX ASSESSMENT DISTRICT 82 - 6th ELECTION DISTRICT
7090 DEEPAE DRIVE, HOWARD COUNTY, MARYLAND, 21045

DATE	REVISIONS	JOB NO.:	19650
11/22/2019	REVISED SDP-74-122 TO INCLUDE 2100 SF ADDITION	SCALE:	AS SHOWN
11/7/2023	AS-BUILT SWM PLAN	DATE:	04/08/2022
		DRAWN BY:	DTP
		DESIGN BY:	THS
		REVIEW BY:	THS
		SHEET:	19 OF 27

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chad Clark
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE 5.10.22
Callia Sauer
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE 4/14/22
Angie Conna
DIRECTOR
DATE 4/14/22

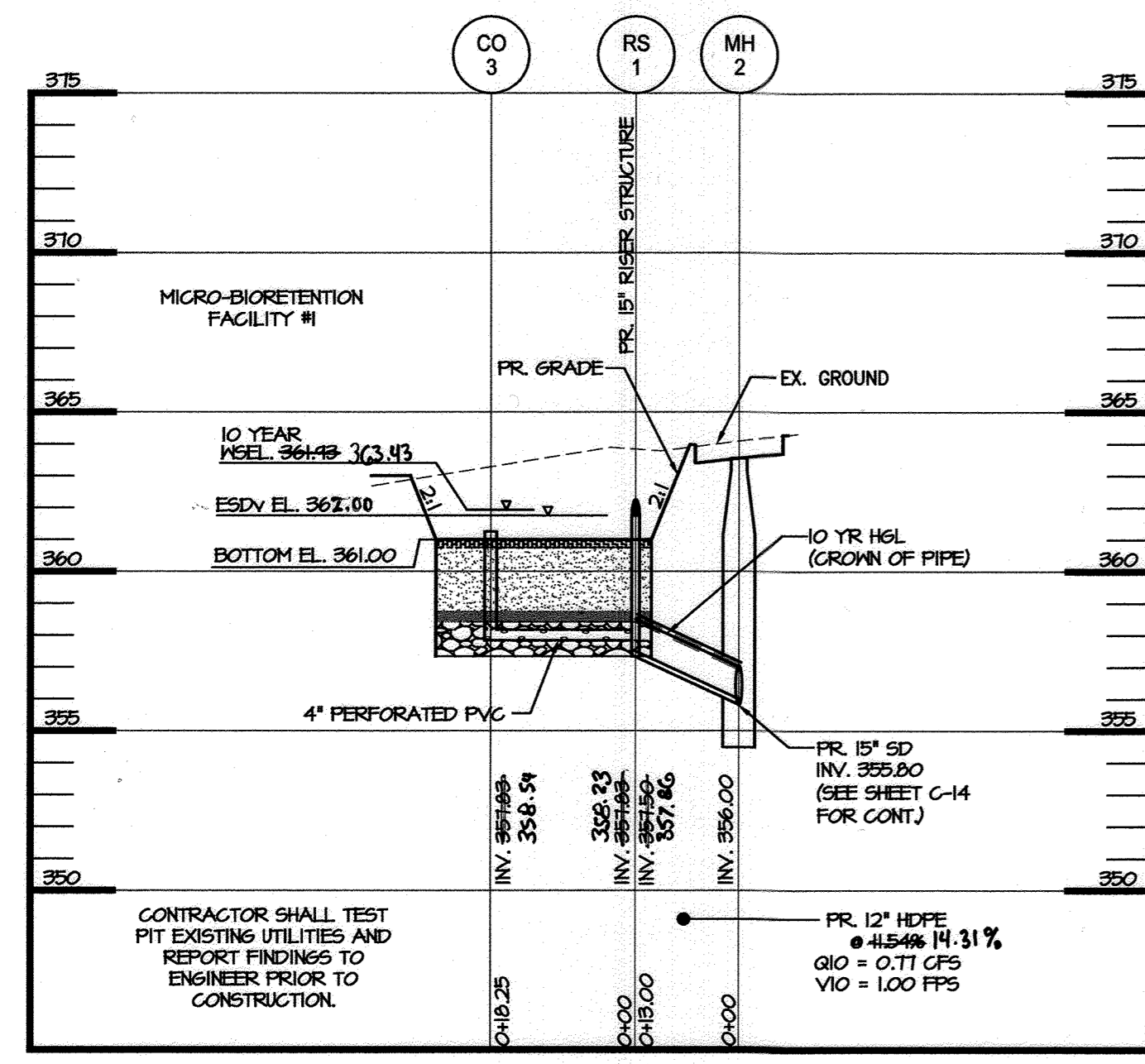
APPROVED
PLANNING BOARD HOWARD COUNTY
DATE 08/20/2020

PURPOSE STATEMENT

THE PURPOSE OF THE REVISED SITE DEVELOPMENT PLAN IS TO CONSTRUCT A 2,100 SF BUILDING ADDITION WITH DRIVE THROUGH LANE AND ASSOCIATED PARKING UPGRADES, PATIO, AND SWM FACILITIES.

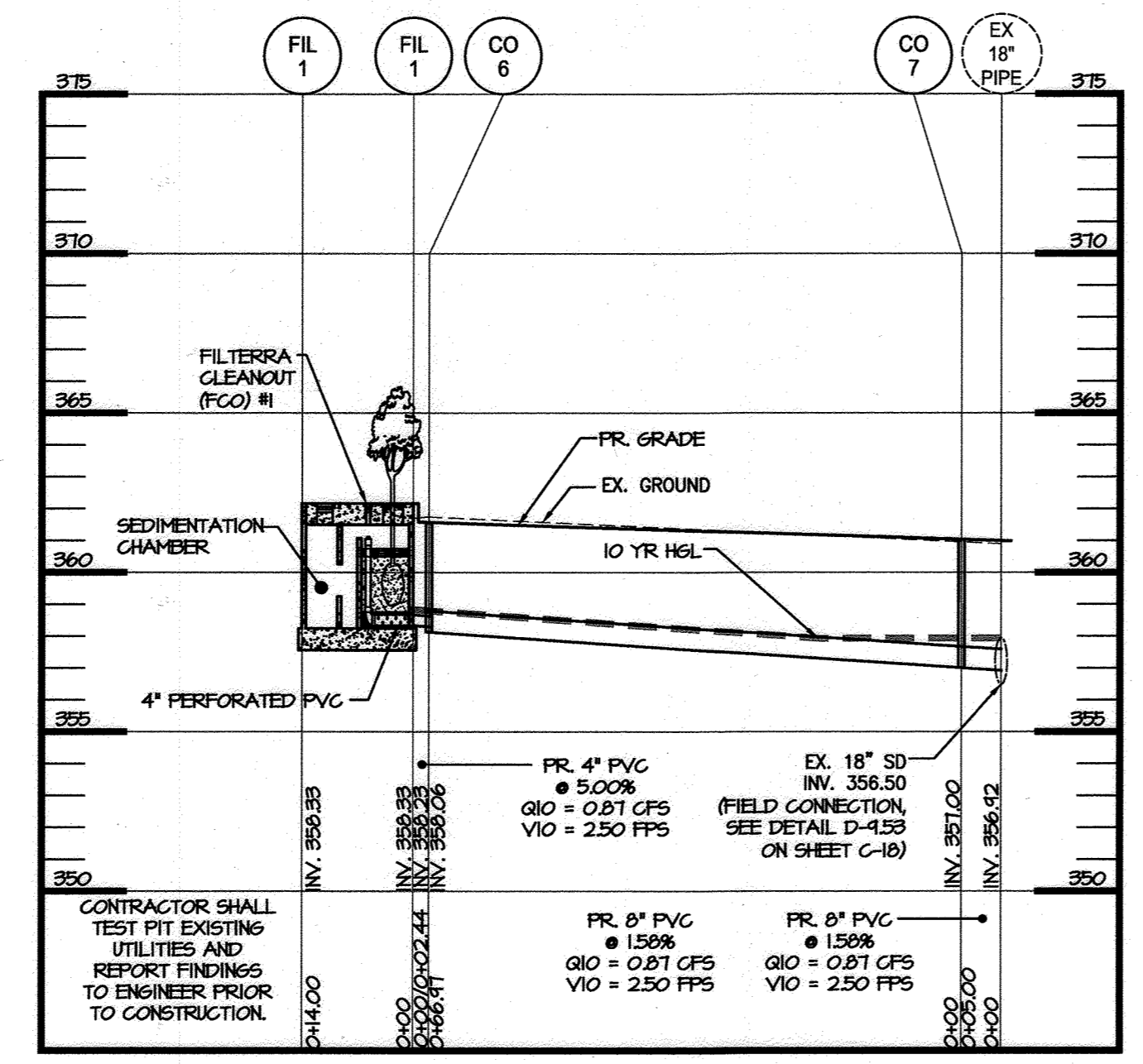
STORMDRAIN CLEANOUT SCHEDULE					
No.	NORTHING	EASTING	TOP WEIR ELEV.	INVERT OUT	SIZE
MICRO-BIORETENTION FACILITY #1					
CO #1	549673.24	1357800.18	361.25	357.83	6"
CO #1 AS-BUILT	549674.02	1357800.12	N/A	358.65	4"
CO #2	549679.27	1357850.53	361.25	357.83	6"
CO #2 AS-BUILT	549680.25	1357850.56	N/A	358.67	4"
CO #3	549677.09	1357799.75	361.25	357.83	6"
CO #3 AS-BUILT	549677.24	1357799.64	N/A	358.59	6"
CO #4	549683.17	1357850.52	361.25	357.83	6"
CO #4 AS-BUILT	549683.69	1357849.99	N/A	358.70	6"
OD #1	549675.42	1357818.38	361.93	357.83	4"
OD #1 AS-BUILT	549676.11	1357819.00	361.71	358.98	4"
OBS #1	549675.79	1357797.54	361.25	357.83	8"
OBS #1 AS-BUILT	N/A	N/A	N/A	N/A	N/A
RS #1	549679.26	1357817.87	362.00	357.50	15"
RS #1 AS-BUILT	549679.83	1357818.21	361.93	357.85	15"
FILTERRA #1					
FCO #1	549899.91	1357753.98	362.24	358.33	6"
FCO #1 AS-BUILT	549899.65	1357757.24	N/A	N/A	N/A
FILTERRA #2					
FCO #2	549781.01	1357962.52	363.91	360.33	4"
FCO #1 AS-BUILT	549773.80	1357961.49	N/A	N/A	4"

(SEE INSERTS ON SHEET C-19 FOR LOCATIONS OF CLEANOUTS)
FCO = FILTERRA CLEANOUT



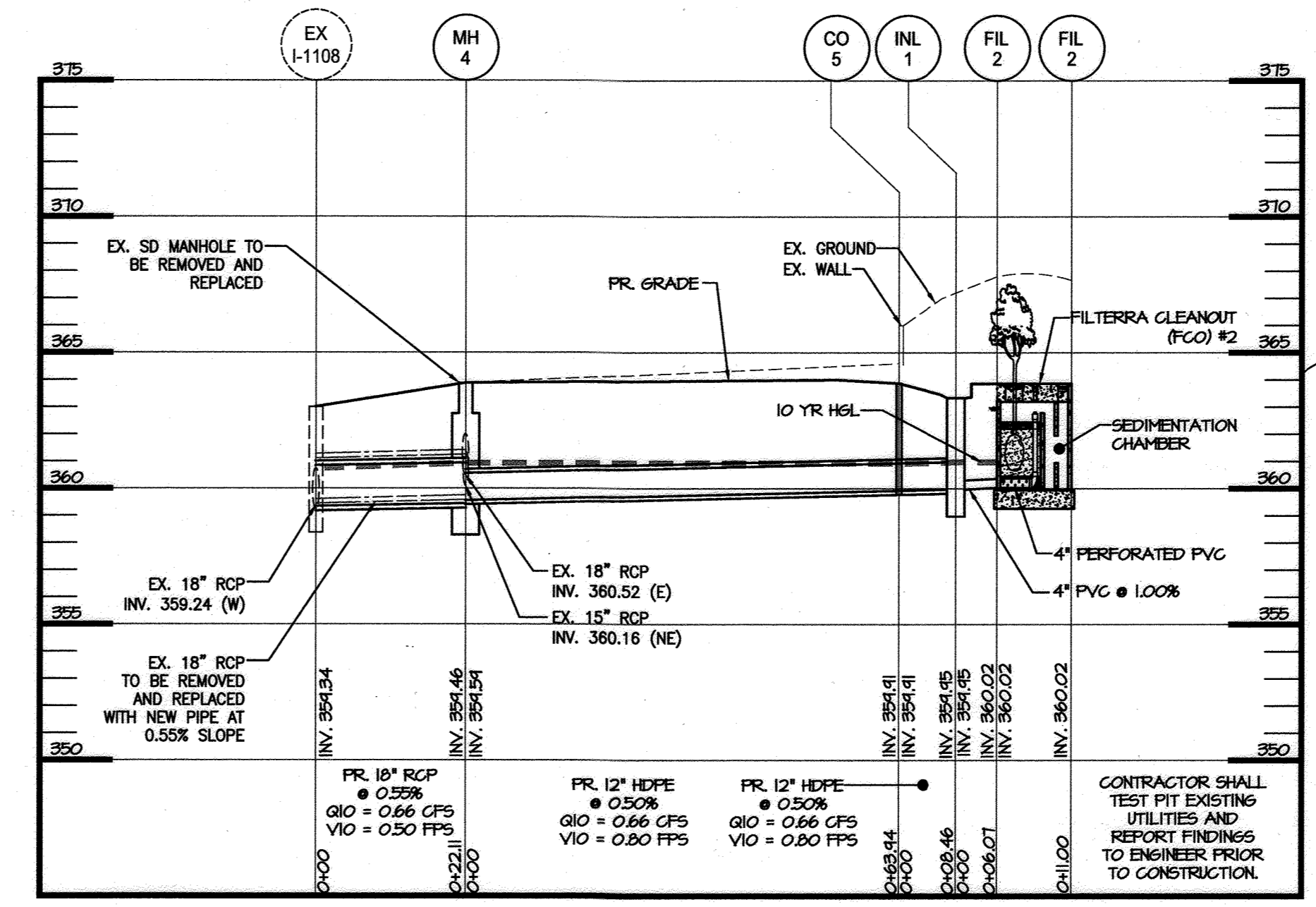
MICRO-BIORETENTION FACILITY No. 1 PROFILE

SCALE: H: 1" = 20"
V: 1" = 5"



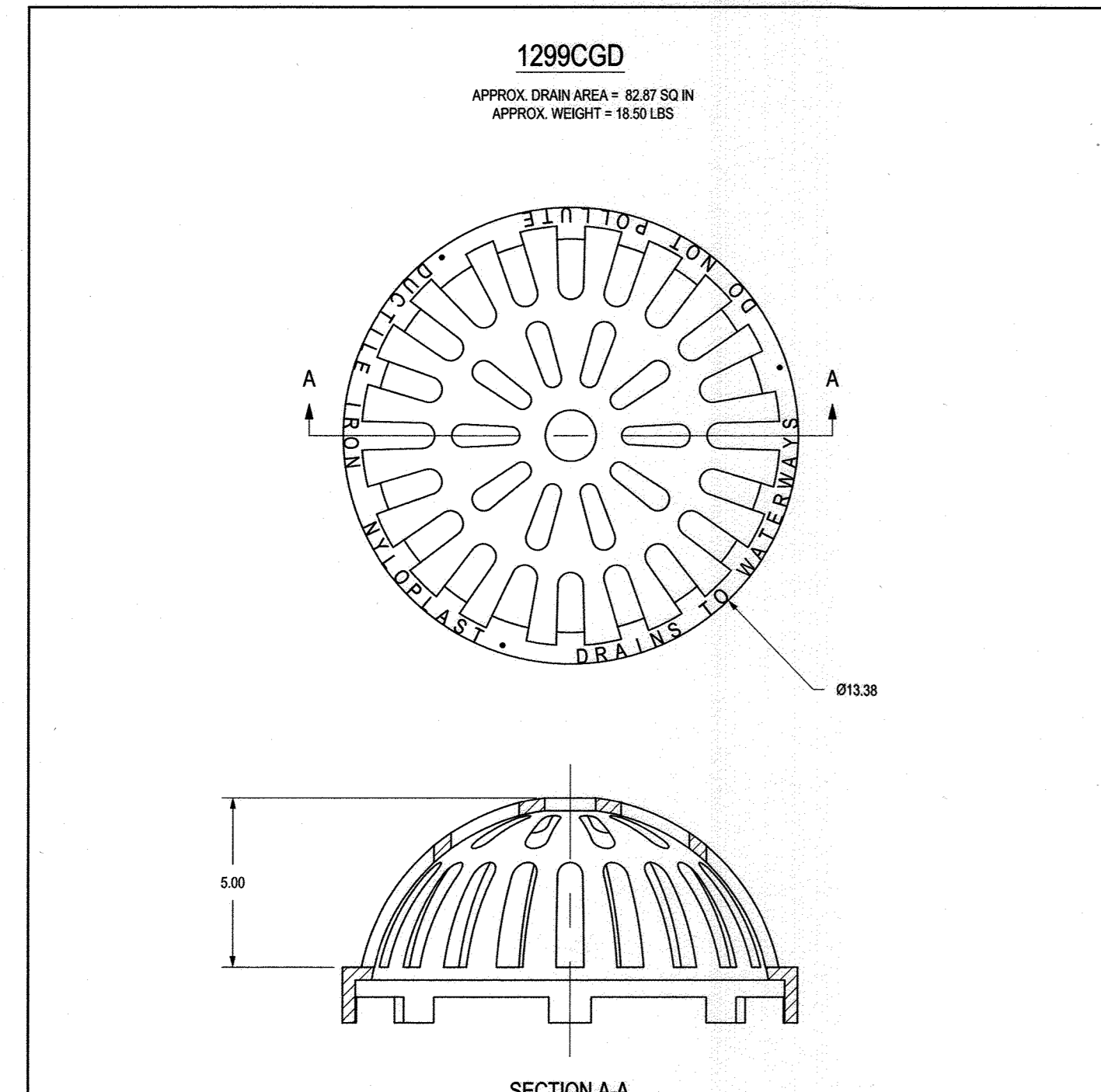
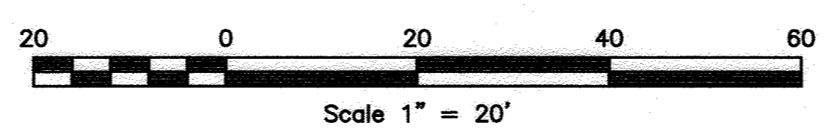
FILTERRA No. 1 PROFILE

SCALE: H: 1" = 20"
V: 1" = 5"



FILTERRA No. 2 PROFILE

SCALE: H: 1" = 20"
V: 1" = 5"



SECTION A-A

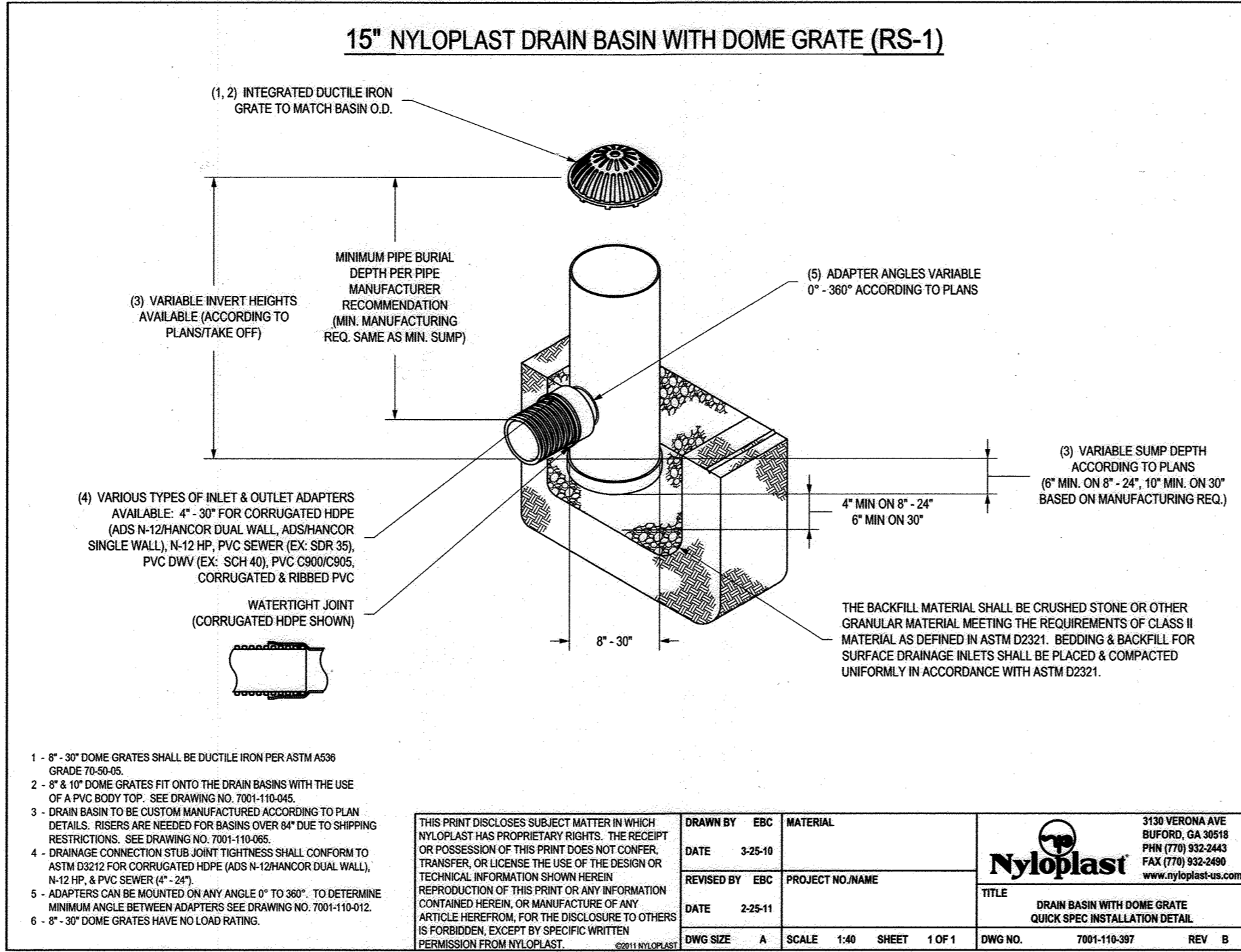
1299CGD
APPROX. DRAIN AREA = 48.27 SQ IN
APPROX. WEIGHT = 18.50 LBS

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DRAWN BY	ESB	MATERIAL	DUCTILE IRON
DATE	3-24-11		
REVISED BY	ESB	PROJECT NO./NAME	
DATE	3-14-11		

NYLOPLAST
3130 VERONA AVE
BURLINGAME, CA 94010
PH (770) 832-2443
FAX (770) 832-2489
www.nyloplast-us.com

TITLE: 15" DOME GRATE (RS 1)
DWG NO. 7091-116-206 REV. D



15" NYLOPLAST DRAIN BASIN WITH DOME GRATE (RS-1)

(1) INTEGRATED DUCTILE IRON GRATE TO MATCH BASIN O.D.

(2) MINIMUM PIPE BURIAL DEPTH PER PIPE MANUFACTURER RECOMMENDATION (MIN. MANUFACTURING REQ. SAME AS MIN. SUMP)

(3) VARIABLE INVERT HEIGHTS AVAILABLE (ACCORDING TO PLAN/STAKE OFF)

(4) VARIOUS TYPES OF INLET & OUTLET ADAPTERS AVAILABLE: 4"-30" FOR CORRUGATED HOPE (ADS N-12 HANCOCK DUAL WALL, ADS HANCOCK SINGLE WALL, N-12 HP, PVC SENDER (EX. SDR 35), PVC DWV (EX. SDR 40), PVC DRAIN/3006 CORRUGATED & RIBBED PVC)

(5) ADAPTERS CAN BE MODIFIED ON ANY ANGLE UP TO 30° TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS (SEE DRAWING NO. 7091-116-112)

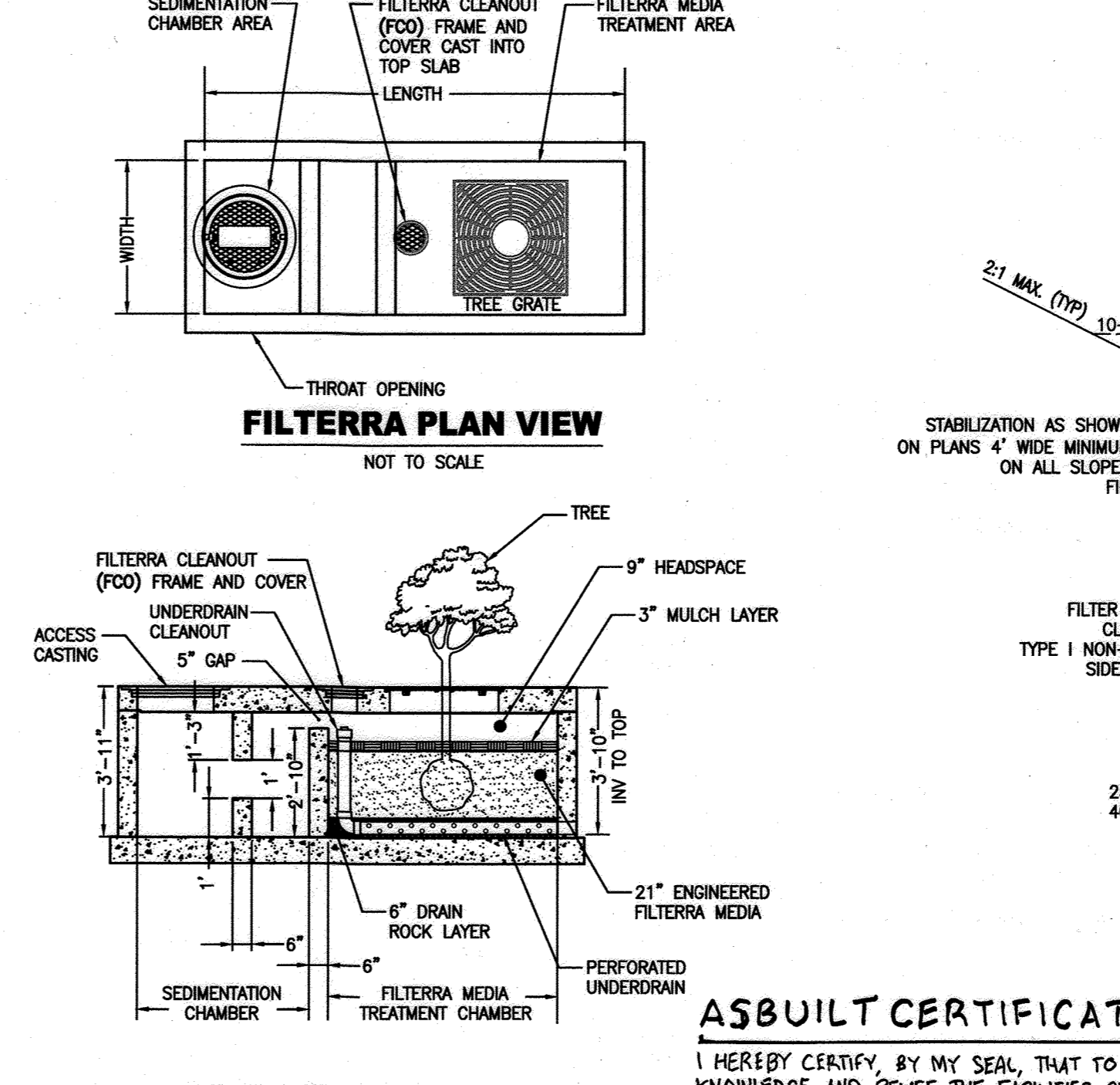
(6) 8" - 30" DOME GRATES HAVE NO LOAD RATING.

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DRAWN BY	ESB	MATERIAL	DUCTILE IRON
DATE	3-25-11		
REVISED BY	ESB	PROJECT NO./NAME	
DATE	2-25-11		

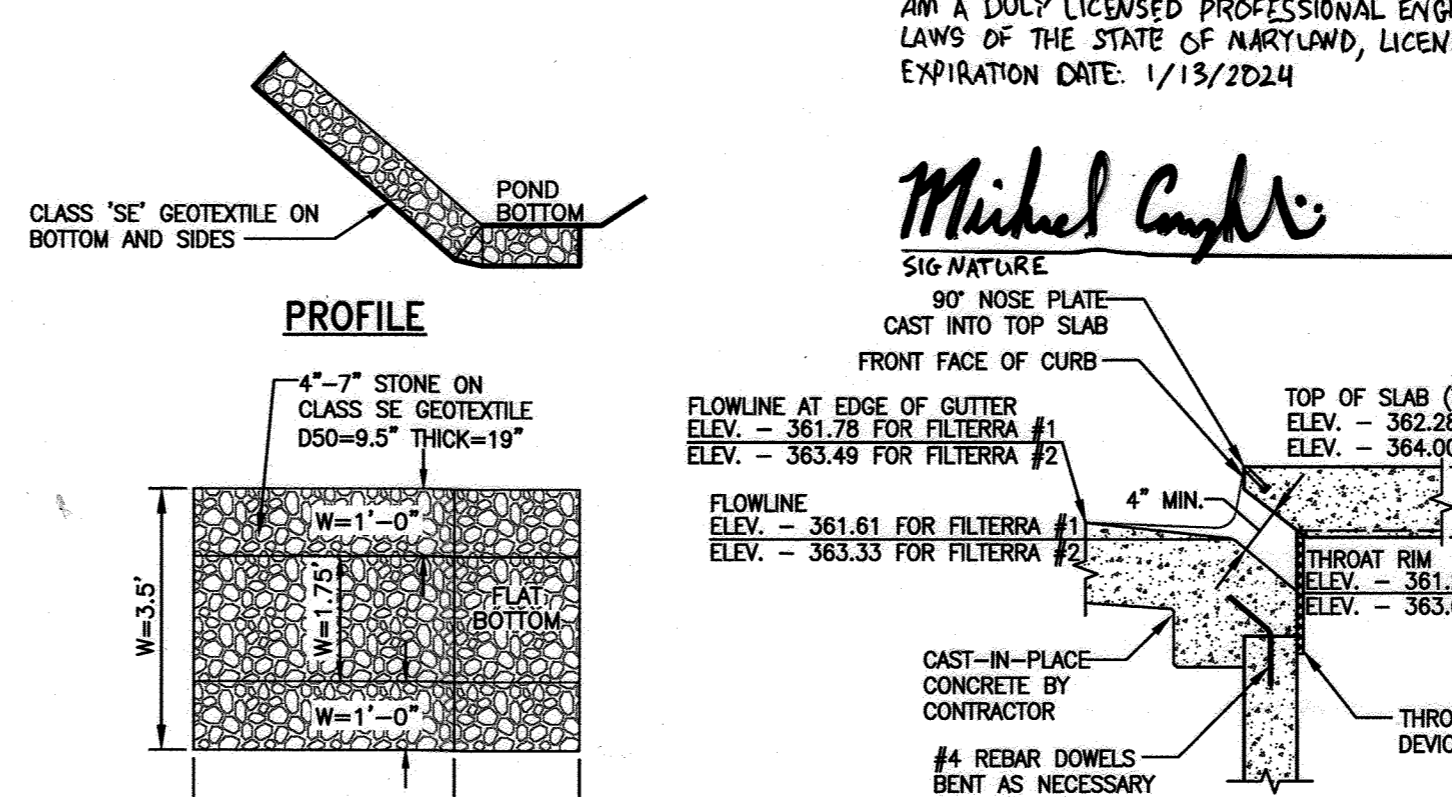
NYLOPLAST
3130 VERONA AVE
BURLINGAME, CA 94010
PH (770) 832-2443
FAX (770) 832-2489
www.nyloplast-us.com

TITLE: DRAIN BASIN WITH DOME GRATE
QUICK SPEC INSTALLATION DETAIL
DWG NO. 7091-116-207 REV. B



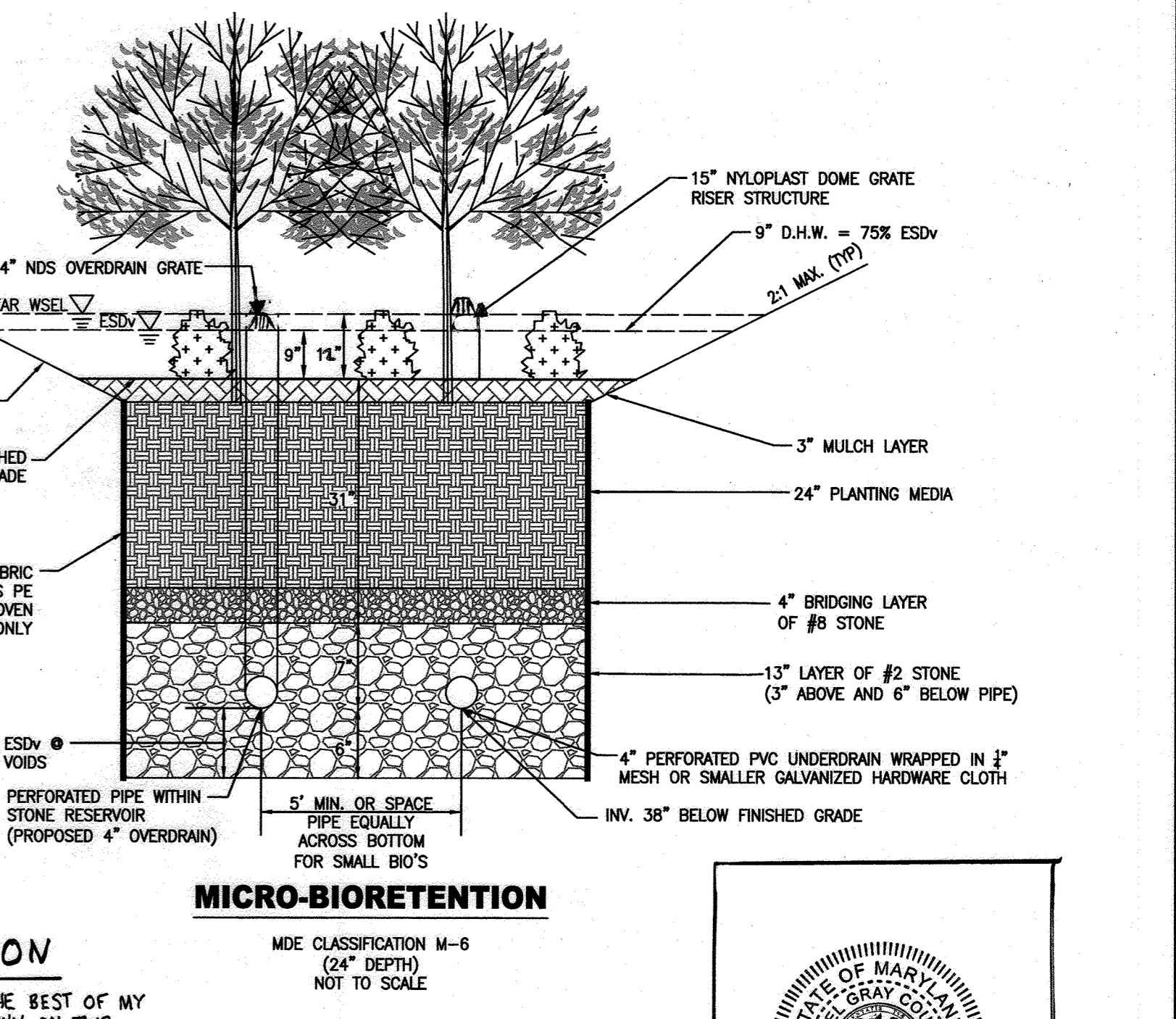
FILTERRA PLAN VIEW

FILTERRA ELEVATION VIEW



OVERDRAIN NDS ATRIUM GRATE

CLEAN-OUT IN UNPAVED AREAS DETAIL



MICRO-BIORETENTION

ASBUILT CERTIFICATION

I HEREBY CERTIFY, BY MY SEAL, THAT TO THE BEST OF MY KNOWLEDGE AND BELIEF THE FACILITIES SHOWN ON THIS PLAN WERE CONSTRUCTED AS SHOWN ON THIS ASBUILT PLAN MEET THE APPROVED PLANS AND SPECIFICATIONS. I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 38291. EXPIRATION DATE: 1/13/2024

Michael Coughlin
11-2-2023

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. 38291, EXPIRATION DATE: 1/13/2024.

DESIGN & DRAWING BASED ON MARYLAND COORDINATE SYSTEM (MCS): HORIZONTAL NAD 83 (2011) VERTICAL NAVD 88

MORRIS & RITCHIE ASSOCIATES, INC.
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
1220-B EAST JOPPA ROAD, SUITE 400K
TOWSON, MARYLAND 21286
(410) 821-1690
FAX (410) 821-1748
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REVISED SITE DEVELOPMENT PLAN
VILLAGE OF OWEN BROWN, SECTION 2, AREA 2, LOT D-12, SNOWDEN CROSSING
AS-BUILT STORMWATER MANAGEMENT PROFILES AND DETAILS

SDP-74-122
TAX MAP 42 -- GRID 04 -- PARCEL 0397 -- ZONING NT -- DEED REF 17342/229
PLAT NO. 2741 -- TAX ASSESSMENT DISTRICT 82 -- 6th ELECTION DISTRICT
7090 DEEPAPE DRIVE, HOWARD COUNTY, MARYLAND, 21045

DATE	REVISIONS	JOB NO.	19850
11/22/2019	REVISED SDP-74-122 TO INCLUDE 2100 SF ADDITION	SCALE:	AS SHOWN
11/7/2023	AS-BUILT SWM PLAN	DATE:	04/08/2022
		DRAWN BY:	DTP
		DESIGN BY:	THS
		REVIEW BY:	THS
		SHEET:	20 OF 27

APPROVED: DEPARTMENT OF PLANNING AND ZONING

DATE: 5.10.22

DATE: 6/14/22

DATE: 4/14/22

APPROVED: PLANNING BOARD HOWARD COUNTY

DATE: 08/20/2020

PURPOSE STATEMENT

THE PURPOSE OF THE REVISED SITE DEVELOPMENT PLAN IS TO CONSTRUCT A 2,100 SF BUILDING ADDITION WITH DRIVE THROUGH LAKE AND ASSOCIATED PARKING UPGRADES, PATIO, AND SWM FACILITIES.

B.4.C SPECIFICATIONS FOR MICRO-BIORETENTION

1. MATERIAL SPECIFICATIONS

THE ALLOWABLE MATERIALS TO BE USED IN THESE PRACTICES ARE DETAILED IN TABLE B.4.1.

2. FILTERING MEDIA OR PLANTING SOIL

THE SOIL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE MICROBIORETENTION PRACTICE THAT MAY BE HARMFUL TO PLANT GROWTH, OR PROVE A HINDERANCE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE OF BERMUDA GRASS, QUACKGRASS, JOHNSON GRASS, OR OTHER NOXIOUS WEEDS AS SPECIFIED UNDER COMAR 15.08.01.05.

THE PLANTING SOIL SHALL BE TESTED AND SHALL MEET THE FOLLOWING CRITERIA:

- SOIL COMPONENT - LOAMY SAND OR SANDY LOAM (USDA SOIL TEXTURAL CLASSIFICATION)
- ORGANIC CONTENT - MINIMUM 10% BY DRY WEIGHT (ASTM D 2974). IN GENERAL, THIS CAN BE MET WITH A MIXTURE OF LOAMY SAND (60%-65%) AND COMPOST (35% TO 40%) OR SANDY LOAM (30%), COARSE SAND (30%), AND COMPOST (40%).
- CLAY CONTENT - MEDIA SHALL HAVE A CLAY CONTENT OF LESS THAN 5%.
- PH RANGE - SHOULD BE BETWEEN 5.5 - 7.0. AMENDMENTS (E.G., LIME, IRON SULFATE PLUS SULFUR) MAY BE MIXED INTO THE SOIL TO INCREASE OR DECREASE PH.

THERE SHALL BE AT LEAST ONE SOIL TEST PER PROJECT. EACH TEST SHALL CONSIST OF BOTH THE STANDARD SOIL TEST FOR PH, AND ADDITIONAL TESTS OF ORGANIC MATTER, AND SOLUBLE SALTS. A TEXTURAL ANALYSIS IS REQUIRED FROM THE SITE STOCKPILED TOPSOIL. IF TOPSOIL IS IMPORTED, THEN A TEXTURE ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE TOPSOIL WAS EXCAVATED.

3. COMPACTION

IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF BIORETENTION PRACTICES AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE EXCAVATION HOES TO REMOVE ORIGINAL SOIL. IF PRACTICES ARE EXCAVATED USING A LOADER, THE CONTRACTOR SHOULD USE WIDE TRACK OR MARSH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH TURF TYPE TIRES. USE OF EQUIPMENT WITH NARROW TRACKS OR NARROW TIRES, RUBBER TIRES WITH LARGE LUGS, OR HIGH-PRESSURE TIRES WILL CAUSE EXCESSIVE COMPACTION RESULTING IN REDUCED INFILTRATION RATES AND IS NOT ACCEPTABLE. COMPACTION WILL SIGNIFICANTLY CONTRIBUTE TO DESIGN FAILURE.

COMPACTION CAN BE ALLEVIATED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS A CHISEL PLOW, RIPPER, OR SUBSOILER. THESE TILLING OPERATIONS ARE TO RESTRUCTURE THE SOIL PROFILE THROUGH THE 12 INCH COMPACTION ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. ROTOTILLERS TYPICALLY DO NOT TILL DEEP ENOUGH TO REDUCE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT.

ROTOTILL 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENTION FACILITY BEFORE BACKFILLING THE OPTIONAL SAND LAYER. PUMP ANY PONDED WATER BEFORE PREPARING (ROTOTILLING) BASE. WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 3 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTOTILL THE SAND/TOPSOIL TO CREATE A GRADATION ZONE. BACKFILL THE REMAINDER OF THE TOPSOIL TO FINAL GRADE.

WHEN BACKFILLING THE BIORETENTION FACILITY, PLACE SOIL IN LIFTS 12" TO 18". DO NOT USE HEAVY EQUIPMENT WITHIN THE BIORETENTION BASIN. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER OF THE BASIN TO SUPPLY SOILS AND SAND. GRADE BIORETENTION MATERIALS WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR A DOZER/LOADER WITH MARSH TRACKS.

4. PLANT MATERIAL

RECOMMENDED PLANT MATERIAL FOR MICRO-BIORETENTION PRACTICES CAN BE FOUND IN APPENDIX A, SECTION A.2.3.

5. PLANT INSTALLATION

COMPOST IS A BETTER ORGANIC MATERIAL SOURCE, IS LESS LIKELY TO FLOAT, AND SHOULD BE PLACED IN THE INVERT AND OTHER LOW AREAS. MULCH SHOULD BE PLACED IN SURROUNDING TO A UNIFORM THICKNESS OF 2" TO 3". SHREDDED OR CHIPPED HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. PINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDDED MULCH MUST BE WELL AGED (6 TO 12 MONTHS) FOR ACCEPTANCE.

ROOTSTOCK OF THE PLANT MATERIAL SHALL BE KEPT MOST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHOULD BE PLANTED SO 1/8th OF THE BALL IS ABOVE FINAL GRADE SURFACE. THE DIAMETER OF THE PLANTING PIT SHALL BE AT LEAST SIX INCHES LARGER THAN THE DIAMETER OF THE PLANTING BALL. SET AND MAINTAIN THE PLANT STRAIGHT DURING THE ENTIRE PLANTING PROCESS. THOROUGHLY WATER GROUND BED COVER AFTER INSTALLATION.

TREES SHALL BE BRACED USING 2" BY 2" STAKES ONLY AS NECESSARY AND FOR THE FIRST GROWING SEASON ONLY. STAKES ARE TO BE EQUALLY SPACED ON THE OUTSIDE OF THE TREE BALL.

GRASSES AND LEGUME SEED SHOULD BE DRILLED INTO THE SOIL TO A DEPTH OF AT LEAST ONE INCH. GRASS AND LEGUME PLUGS SHALL BE PLANTED FOLLOWING THE NON-GRASS GROUND COVER PLANTING SPECIFICATIONS.

THE TOPSOIL SPECIFICATIONS PROVIDE ENOUGH ORGANIC MATERIAL TO ADEQUATELY SUPPLY NUTRIENTS FROM NATURAL CYCLING. THE PRIMARY FUNCTION OF THE BIORETENTION STRUCTURE IS TO IMPROVE WATER QUALITY, ADDING FERTILIZERS DEFATS, OR AT A MINIMUM, IMPEDES THIS GOAL. ONLY ADD FERTILIZER WOOD CHIPS OR MULCH ARE USED TO AMEND THE SOIL. ROTOTILL UREA FERTILIZER AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET.

6. UNDERDRAINS

UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:

- PIPE - SHOULD BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTM F 758, TYPE PS 28, OR AASHTO-M-278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED, 4" RIGID PIPE (E.G., PVC OR HDPE).
- PERFORATIONS - IF PERFORATED PIPE IS USED, PERFORATIONS SHOULD BE 3/8" DIAMETER LOCATED 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH A 1/4" (NO. 4 OR 4 X 4) GALVANIZED HARDWARE CLOTH.
- GRAVEL - THE GRAVEL LAYER (NO. 57 STONE PREFERRED) SHALL BE AT LEAST 3" THICK ABOVE AND BELOW THE UNDERDRAIN.
- THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5% SLOPE.
- A RIGID, NON-PERFORATED OBSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,000 SQUARE FEET) TO PROVIDE A CLEAN-OUT PORT AND MONITOR PERFORMANCE OF THE FILTER.
- A 4" LAYER OF PEA GRAVEL (1/8" TO 3/8" STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES INTO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 24".

THE MAIN COLLECTOR PIPE FOR UNDERDRAIN SYSTEMS SHALL BE CONSTRUCTED AT A MINIMUM SLOPE OF 0.5%. OBSERVATION WELLS AND/OR CLEAN-OUT PIPES MUST BE PROVIDED (ONE MINIMUM PER EVERY 1000 SQUARE FEET OF SURFACE AREA).

7. MISCELLANEOUS

THESE PRACTICES MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.

TABLE B.4.1 MATERIAL SPECIFICATIONS FOR MICRO-BIORETENTION

MATERIAL	SPECIFICATION	SIZE	NOTES
PLANTINGS	SEE APPENDIX A, TABLE A.4	N/A	PLANTINGS ARE SITE-SPECIFIC
PLANTING SOIL [2" TO 4" DEEP]	LOAMY SAND (60 - 65%) & COMPOST (35 - 40%) OR SANDY LOAM (30%), COARSE SAND (30%), AND COMPOST (40%)	N/A	URCCPA SOIL TYPES LOAMY SAND OR SANDY LOAM; CLAY CONTENT < 5%
ORGANIC CONTENT	MIN. 10% BY DRY WEIGHT (ASTM D 2974)		
PEA GRAVEL DIAPHRAGM	PEA GRAVEL: ASTM-D-448	NO. 8 OR NO. 9 (1/8" TO 3/8")	
MULCH	SHREDDED HARDWOOD		AGED 6 MONTHS, MINIMUM; NO PINE OR WOOD CHIPS
GEOTEXTILE		N/A	PE TYPE 1 NONWOVEN
GRAVEL (UNDERDRAINS AND INFILTRATION BERMS)	ASHTO M-43	NO. 57 OR NO. 6 AGGREGATE (3/8" TO 3/4")	
UNDERDRAIN PIPING	F 758, TYPE PS 28 OR AASHTO M-278	4" TO 6" RIGID SCHEDULE 40 PVC OR RCPCP35	SLOTTED OR PERFORATED PIPE; 3/8" PERFORATIONS 6" ON CENTER, 4 HOLES PER ROW. MINIMUM OF 3" OF SCHEDULE 40 PVC OR RCPCP35 UNDERNEATH PIPES; PERFORATED PIPE SHALL BE WRAPPED WITH 1/4-INCH GALVANIZED HARDWARE CLOTH
SAND	ASHTO-M-6 OR ASTM-C-33	0.02" TO 0.04"	SAND SUBSTITUTIONS SUCH AS DIABASE AND GRAYSTONE (ASHTO) #10 ARE NOT ACCEPTABLE. NO CALCIUM CARBONATE OR DOLOMITIC SAND SUBSTITUTIONS ARE ACCEPTABLE. NO "ROCK DUST" CAN BE USED FOR SAND.

MAINTENANCE RESPONSIBILITY

FOR MICRO-BIORETENTION (M-6) FACILITY #1

THE STORMWATER MANAGEMENT FACILITY SHOWN ON THESE PLANS IS PRIVATE AND SHALL BE MAINTAINED BY THE OWNER(S).

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[Signature]
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE 5.10.22
[Signature]
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE 6/14/22
[Signature]
 DIRECTOR
 DATE 6/14/22

APPROVED:
 PLANNING BOARD HOWARD COUNTY
 DATE 08/20/2020

OPERATION AND MAINTENANCE SCHEDULE

FOR MICRO-BIORETENTION (M-6) FACILITY #1

- ALL TRASH AND DEBRIS SHALL BE REMOVED FROM THE AREA SURROUNDING THE FACILITY AS NECESSARY AND IN A TIMELY MANNER. ALL APPOINTMENTS SHALL BE KEPT FREE OF TRASH.
- THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOILS IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL VOLUME II, TABLE B.4.1, AND B.3.2.
- THE OWNER SHALL PERFORM A PLANT IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL, TREAT DISEASED TREES AND SHRUBS, AND REPLACE ALL DEFICIENT STAKES AND WIRES.
- THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED ANNUALLY. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.
- OCCASIONAL PRUNING AND REPLACEMENT OF DEAD VEGETATION IS NECESSARY. IF SPECIFIC PLANTS ARE NOT SURVIVING, MORE APPROPRIATE SPECIES SHOULD BE USED. WATERING MAY BE REQUIRED DURING PROLONGED DRY PERIODS.
- THE TOP FEW INCHES OF FILTER MEDIA SHOULD BE REMOVED AND REPLACED WHEN WATER PONDS FOR MORE THAN 48 HOURS. SILTS AND SEDIMENT SHOULD BE REMOVED FROM THE SURFACE OF THE FILTER BED WHEN ACCUMULATION EXCEEDS ONE INCH.
- SEDIMENT SHOULD BE CLEANED OUT OF THE SEDIMENTATION CHAMBER WHEN IT ACCUMULATES TO A DEPTH OF MORE THAN SIX INCHES.
- THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.
- THE OWNER(S) OF THE FACILITY SHALL BE RESPONSIBLE FOR THE SAFETY OF THE AREAS SURROUNDING THE FACILITIES AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF.
- REFER TO THE 2000 MARYLAND STORMWATER MANAGEMENT DESIGN MANUAL CHAPTER 5 SECTION 5.10.2 MAINTENANCE CRITERIA FOR MICRO-BIORETENTION AND CHAPTER 3 SECTION 3.4.6 FOR BIORETENTION MAINTENANCE CRITERIA.

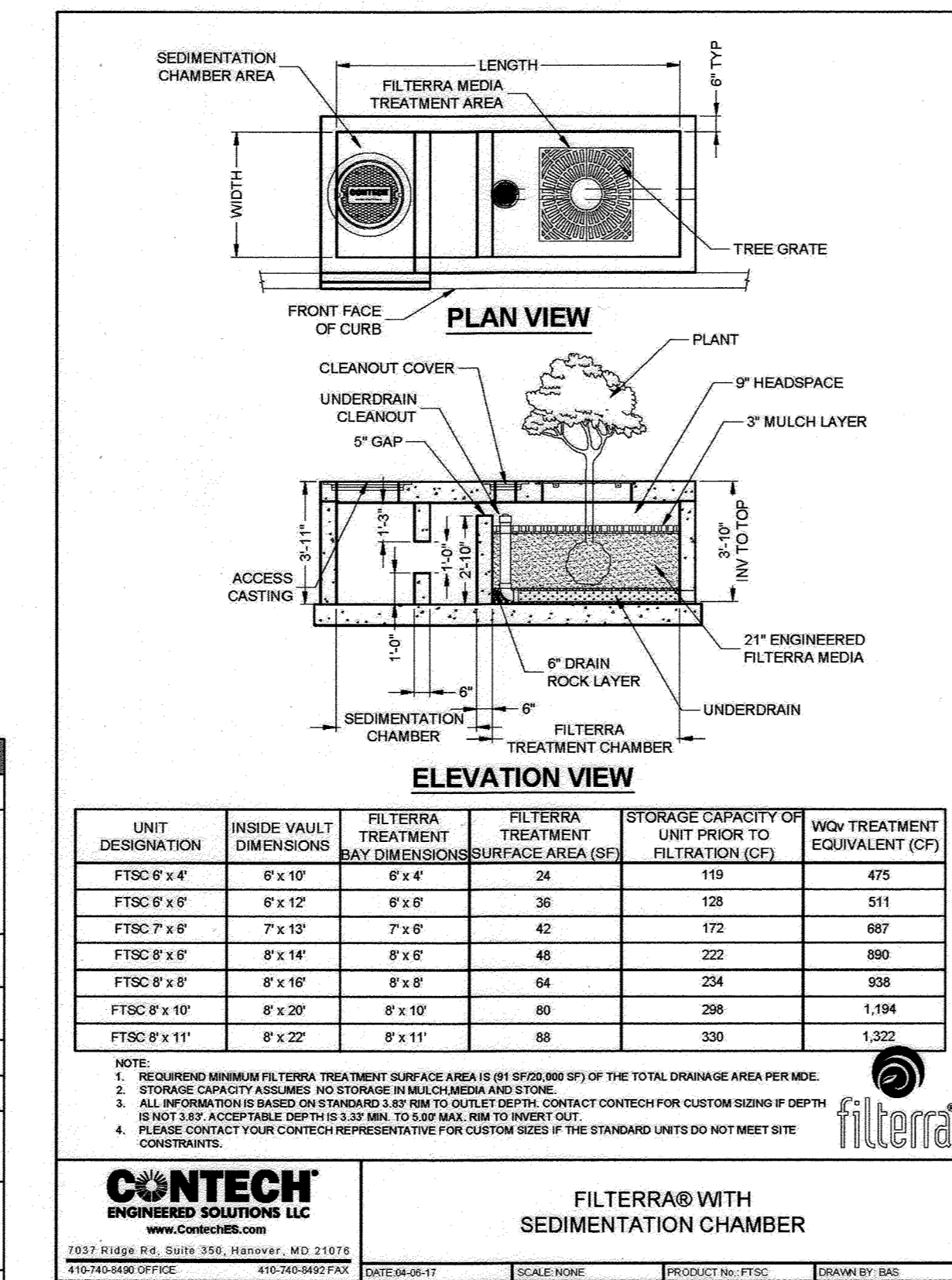
INSPECTION SCHEDULE

FOR MICRO-BIORETENTION (M-6) FACILITY #1

PRIOR NOTIFICATION SHALL BE GIVEN TO THE ENGINEER AND HOWARD COUNTY 48 HOURS BEFORE COMMENCING ANY WORK IN CONJUNCTION WITH THE STORMWATER MANAGEMENT PLAN AND UPON COMPLETION OF A PROJECT WHEN A FINAL INSPECTION WILL BE CONDUCTED.

REGULAR INSPECTIONS SHALL BE DOCUMENTED FOR EACH ESD PLANNING TECHNIQUE AND PRACTICE AT THE STAGES OF CONSTRUCTION SPECIFIED IN THE DESIGN MANUAL BY HOWARD COUNTY, ITS AUTHORIZED REPRESENTATIVE, OR CERTIFIED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MARYLAND. AT A MINIMUM, ALL ESD AND OTHER NONSTRUCTURAL PRACTICES SHALL BE INSPECTED UPON COMPLETION OF FINAL GRADING, THE ESTABLISHMENT OF PERMANENT STABILIZATION AND BEFORE ISSUANCE OF USE AND OCCUPANCY APPROVAL.

- UPON COMPLETION OF EXCAVATION TO SUB-FOUNDATION AND WHERE REQUIRED, INSTALLATION OF STRUCTURAL SUPPORTS OR REINFORCEMENT FOR STRUCTURES, INCLUDING BUT NOT LIMITED TO:
 - CORE TRENCHES FOR STRUCTURAL EMBANKMENTS;
 - INLET-OUTLET STRUCTURES, DRAIN PIPES, AND WATERIGHT CONNECTORS ON PIPES; AND
 - TRENCHES FOR ENCLOSED STORM DRAINAGE FACILITIES.
- DURING PLACEMENT OF STRUCTURAL FILL, CONCRETE, STONE, SAND, SOIL AND INSTALLATION OF PIPING AND CATCH BASINS;
- DURING BACKFILL OF FOUNDATIONS AND TRENCHES;
- DURING EMBANKMENT CONSTRUCTION; AND
- UPON COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF PERMANENT STABILIZATION. NO WORK SHALL PROCEED UNTIL THE ENGINEER INSPECTS AND APPROVES THE WORK PREVIOUSLY COMPLETED.



MAINTENANCE RESPONSIBILITY

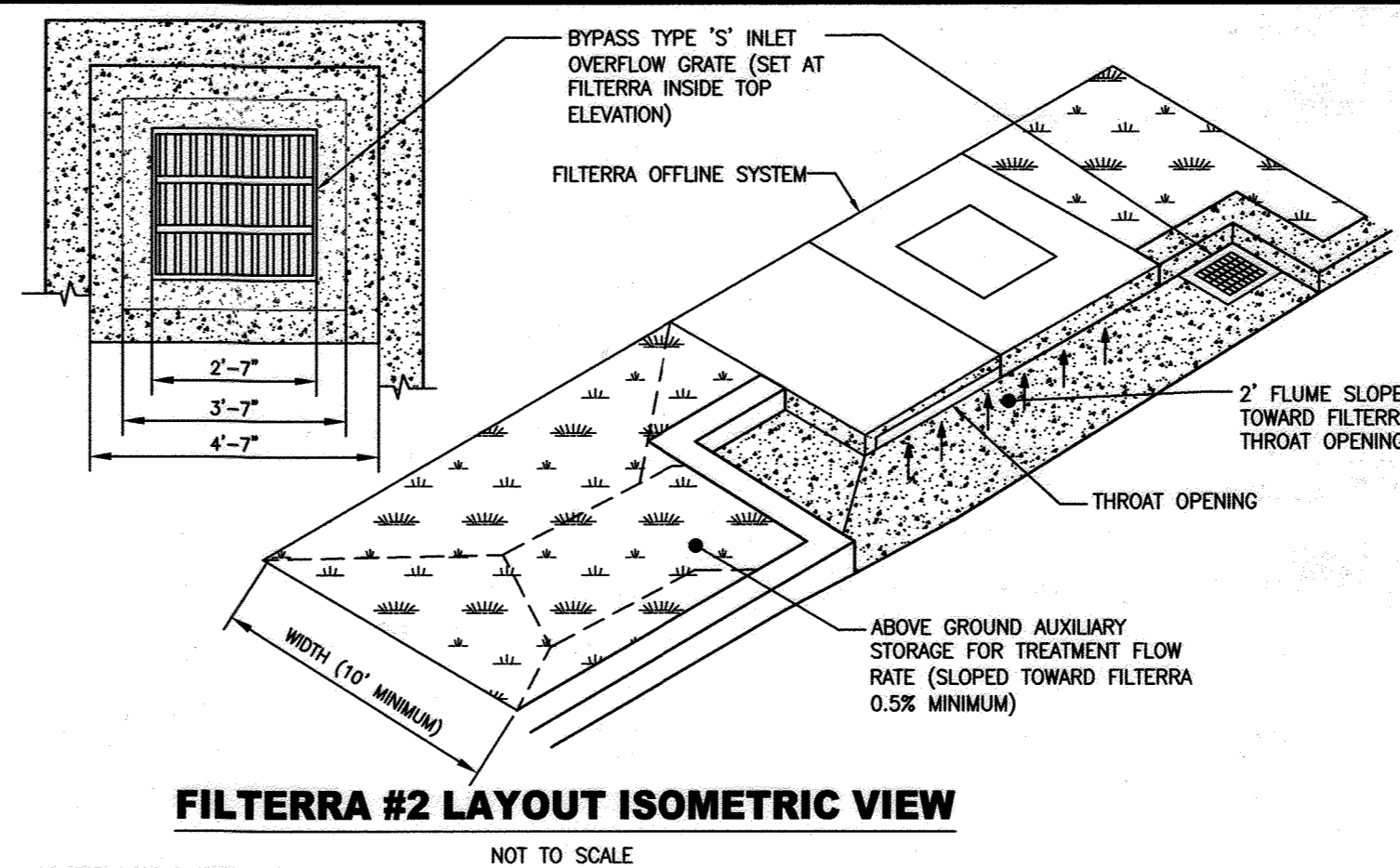
FOR FILTERRA FACILITY #1 AND #2

THE STORMWATER MANAGEMENT FACILITY SHOWN ON THESE PLANS IS PRIVATE AND SHALL BE MAINTAINED BY THE OWNER(S). THE OWNER SHALL PROVIDE ADEQUATE IRRIGATION YEAR ROUND AND CONTACT THE MANUFACTURER FOR SCHEDULED MAINTENANCE EVERY YEAR.

OPERATION & MAINTENANCE SCHEDULE

FOR FILTERRA FACILITY #1 AND #2

- MAINTENANCE IS REQUIRED FOR EACH FILTERRA AT LEAST ONCE PER YEAR. TWO (2) VISITS ARE REQUIRED EACH YEAR IN REGIONS RECEIVING BETWEEN 30-50 INCHES OF RAINFALL PER YEAR. OWNER SHALL IMMEDIATELY NOTIFY THE SUPPLIER OF ANY DAMAGE TO THE PLANT.
- INSPECTION OF THE FACILITY AND THE SURROUNDING AREA SHALL BE DONE, THEN THE TREE GRATE AND EROSION CONTROL STONES ARE TO BE REMOVED.
- ALL TRASH, DEBRIS AND MULCH SHALL BE REMOVED FROM THE AREA SURROUNDING THE FACILITY AS NECESSARY AND IN A TIMELY MANNER. ALL APPOINTMENTS SHALL BE KEPT FREE OF TRASH.
- MULCH SHALL BE REPLACED WITHIN THE UNIT, AND THE AREA SURROUNDING THE TREE GRATE ON THE FILTERRA SURFACE SHALL BE CLEANED.
- AFTER THE MAINTENANCE AND CLEANING, PAPERWORK IS TO BE COMPLETED AND THE PLANT HEIGHT AND WIDTH SHALL BE RECORDED.
- THE OWNER(S) OF THE FACILITY SHALL BE RESPONSIBLE FOR THE SAFETY OF THE AREAS SURROUNDING THE FACILITIES AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF.



FILTERRA #2 LAYOUT ISOMETRIC VIEW

NOT TO SCALE

FILTERRA DESIGN NOTE

THE FILTERRA TREATMENT CAPACITY IS DETERMINED BY THE TREATMENT RATE OF THE FILTERRA MEDIA. A SEPARATE INLET STRUCTURE MUST BE INSTALLED DOWNSTREAM OF THE OFFLINE FILTERRA TO CONVEY FLOWS IN EXCESS OF THE SYSTEM DESIGN CAPACITY. SEE THE FILTERRA DESIGN, OPERATION, AND PERFORMANCE GUIDE FOR MORE INFORMATION.

FILTERRA GENERAL NOTES

- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- PLANT, MULCH, AND DISSIPATION ROCK ARE SUPPLIED AND DELIVERED AT TIME OF SYSTEM ACTIVATION. PLANT SELECTION SHALL BE DONE BY THE ENGINEER OF RECORD IN ACCORDANCE WITH THE PROJECT PLANS AND SPECIFICATIONS.
- DIMENSIONS MARKED WITH () ARE REFERENCE DIMENSIONS. ACTUAL DIMENSIONS MAY VARY.
- FOR SITE SPECIFIC DRAWINGS WITH DETAILED VAULT DIMENSIONS AND WEIGHTS, PLEASE CONTACT YOUR CONTECH REPRESENTATIVE. www.contechES.com
- FILTERRA WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING.
- STRUCTURE DESIGNED FOR PEDESTRIAN LIVE LOAD WITH HS (4,000 LBS.) WHEEL LOAD MOUNTING THE CURB AND ADJACENT HS-2 LIVE LOAD SURCHARGE ON THE WALLS OF THE STRUCTURE.
- FILTERRA STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C-857, ASTM C-918, AND ACSI-318 LOAD FACTOR DESIGN METHOD.

FILTERRA INSTALLATION NOTES

- ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
- CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE FILTERRA VAULT (LIFTING CLUTCHES PROVIDED). SPREADER BAR WITH SUFFICIENT CABLE IS REQUIRED FOR SAFETY AND REDUCTION OF DAMAGE TO CONCRETE STRUCTURE.
- CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL VAULT SECTIONS AND ASSEMBLY WALL.
- CONTRACTOR TO PROVIDE AND INSTALL OUTLET PIPE. PVC COUPLING CAST-IN TO WALL FOR OUTLET PIPE CONNECTION.
- CONTRACTOR TO SUPPLY AND INSTALL INLET PROTECTION BAR IF REQUIRED BY LOCAL JURISDICTION.
- CONTRACTOR TO TAKE APPROPRIATE MEASURES TO PROTECT FILTERRA MEDIA FROM CONSTRUCTION-RELATED EROSION RUNOFF.
- CONTECH IS RESPONSIBLE FOR ACTIVATION OF THE SYSTEM AND PLANTING OF THE PLANT THAT IS SPECIFIED. ACTIVATION ONLY OCCURS WHEN THE SITE IS FULLY STABILIZED, FINAL PAVEMENT INSTALLED AND SWEEP CLEAN BY CONSTRUCTION SEDIMENT.
- ALL FILTERRA UNITS MUST BE WATERED BY IRRIGATION LINES OR SPRINKLER SYSTEMS ON A REGULAR BASIS. EACH FILTERRA UNIT INCLUDES IRRIGATION HOLES FOR NEW OR EXISTING IRRIGATION LINES.

CONSTRUCTION SPECIFICATIONS

- SITE PREPARATION SHALL INCLUDE LOOSENING OF TOP 4 INCHES OF SUBGRADE PRIOR TO PLACEMENT OF PAVING SECTION.
- ALL FILLS IN PAVEMENT AREAS TO BE COMPACTED TO 92% OF THE MODIFIED PROCTOR (AASHTO T-180) MAXIMUM DRY DENSITY IN ACCORDANCE WITH MD SHA SPECIFICATIONS FOR ROAD FILLS.
- OBSERVATION WELL PIPES SHALL BE CONSTRUCTED WITH ASTM F758 PVC FOR PERFORATED SECTIONS.
- ASPHALT SPECIFICATIONS SHALL MEET DESIGN SPECIFICATIONS LISTED IN "ASPHALT CONCRETE SPECIFICATIONS" LISTED ON THIS SHEET.

PLANTING REQUIREMENTS FOR FILTERRA® SYSTEMS

NOTE: CONTRACTOR TO FOLLOW THE MOST CURRENT INSTALLATION AND SPECIFICATIONS PROVIDED BY MANUFACTURER.

PLANT MATERIAL SELECTION

- SELECT PLANT(S) AS SPECIFIED IN THE ENGINEERING PLANS AND SPECIFICATIONS. SELECT PLANT(S) WITH FULL ROOT DEVELOPMENT BUT NOT TO THE POINT WHERE ROOT BOUND. USE LOCAL NURSERY CONTAINER PLANTS ONLY. BALL AND BURLAPPED PLANTS ARE NOT PERMITTED. PLANT(S) SHALL NOT HAVE A MATURE HEIGHT GREATER THAN 25 FEET.
- FOR PRECAST FILTERRA SYSTEMS WITH A TREE GRATE, PLANT(S) MUST NOT HAVE SCAFFOLD LIMBS AT LEAST 14 INCHES FROM THE CROWN DUE TO SPACING BETWEEN THE TOP OF THE MULCH AND THE TREE GRATE. LOWER BRANCHES CAN BE PRUNED AWAY PROVIDED THERE ARE SUFFICIENT SCAFFOLD BRANCHES FOR TREE OR SHRUB DEVELOPMENT.
- FOR PRECAST FILTERRA SYSTEMS WITH A TREE GRATE, AT THE TIME OF INSTALLATION, IT IS REQUIRED THAT PLANT(S) MUST BE AT LEAST 6" ABOVE THE TREE GRATE OPENING AT INSTALLATION FOR ALL FILTERRA CONFIGURATIONS. THIS DOES NOT APPLY TO FULL GRADE COVER DESIGNS.
- FOR STANDARD 21" MEDIA DEPTH, A 7 - 15 GALLON CONTAINER SIZE SHALL BE USED. MEDIA LESS THAN 21" (FILTERRA BOXES ONLY) WILL REQUIRE SMALLER CONTAINER PLANTS.
- FOR PRECAST FILTERRA SYSTEMS, PLANT(S) SHOULD HAVE A SINGLE TRUNK AT INSTALLATION, AND PRUNING MAY BE NECESSARY AT ACTIVATION AND MAINTENANCE FOR SOME OF THE FASTER GROWING SPECIES, OR SPECIES KNOWN TO PRODUCE BASAL SPROUTS.

PLANT INSTALLATION

- DURING TRANSPORT PROTECT THE PLANT LEAVES FROM WIND AND EXCESSIVE JOSTLING. PRIOR TO REMOVING THE PLANT(S) FROM THE CONTAINER, ENSURE THE SOIL MOISTURE IS SUFFICIENT TO MAINTAIN THE INTEGRITY OF THE ROOT BALL. IF NEEDED, PRE-WET THE CONTAINER PLANT. CUT AWAY ANY ROOTS WHICH ARE GROWING OUT OF THE CONTAINER DRAIN HOLES. PLANTS WITH EXCESSIVE ROOT GROWTH FROM THE DRAIN HOLES SHOULD BE REJECTED.
- PLANT(S) SHOULD BE CAREFULLY REMOVED FROM THE POT BY GENTLY POUNDING ON THE SIDES OF THE CONTAINER WITH THE FIST TO LOOSEN ROOT BALL. THEN CAREFULLY SLIDE OUT. DO NOT LIFT PLANT(S) BY TRUNK AS THIS CAN BREAK ROOTS AND CAUSE SOIL TO FALL OFF. EXTRACT THE ROOT BALL IN A HORIZONTAL POSITION AND SUPPORT IT TO PREVENT IT FROM BREAKING APART. ALTERNATIVELY THE POT CAN BE CUT AWAY TO MINIMIZE ROOT BALL DISTURBANCE.
- REMOVE ANY EXCESS SOIL FROM ABOVE THE ROOT FLARE AFTER REMOVING PLANT(S) FROM CONTAINER. EXCAVATE A HOLE WITH A DIAMETER 4" GREATER THAN THE ROOT BALL, GENTLY PLACE THE PLANT(S). IF PLANT(S) HAVE ANY CIRCLING ROOTS FROM BEING POT BOUND, GENTLY TEASE THEM LOOSE WITHOUT BREAKING THEM. IF ROOT BALL HAS A ROOT MAT ON THE BOTTOM, IT SHOULD BE SHAVED OFF WITH A KNIFE JUST ABOVE THE MAT LINE. PLANT THE TREE/SHRUB/GRASS WITH THE TOP OF THE ROOT BALL 1" ABOVE SURROUNDING MEDIA TO ALLOW FOR SETTLING. ALL PLANTS SHOULD HAVE THE MAIN STEM CENTERED IN THE TREE GRATE (WHERE APPLICABLE) UPON COMPLETION OF INSTALLATION. WITH ALL TREES/SHRUBS, REMOVE DEAD, DISEASED, CROSSED/RUBBING, SHARPLY CROUCHED BRANCHES OR BRANCHES GROWING EXCESSIVELY LONG OR IN WRONG DIRECTION COMPARED TO MAJORITY OF BRANCHES.
- TO PREVENT TRANSPLANT SHOCK (ESPECIALLY IF PLANTING TAKES PLACE IN THE HOT SEASON), IT MAY BE NECESSARY TO PRUNE SOME OF THE FOLIAGE TO COMPENSATE FOR REDUCED ROOT UPTAKE CAPACITY. THIS IS ACCOMPLISHED BY PRUNING AWAY SOME OF THE SMALLER SECONDARY BRANCHES OR A MAIN SCAFFOLD BRANCH IF THERE ARE TOO MANY. TOO MUCH FOLIAGE RELATIVE TO THE ROOT BALL CAN DEHYDRATE AND DAMAGE THE PLANT. PLANT STAKING MAY BE REQUIRED.

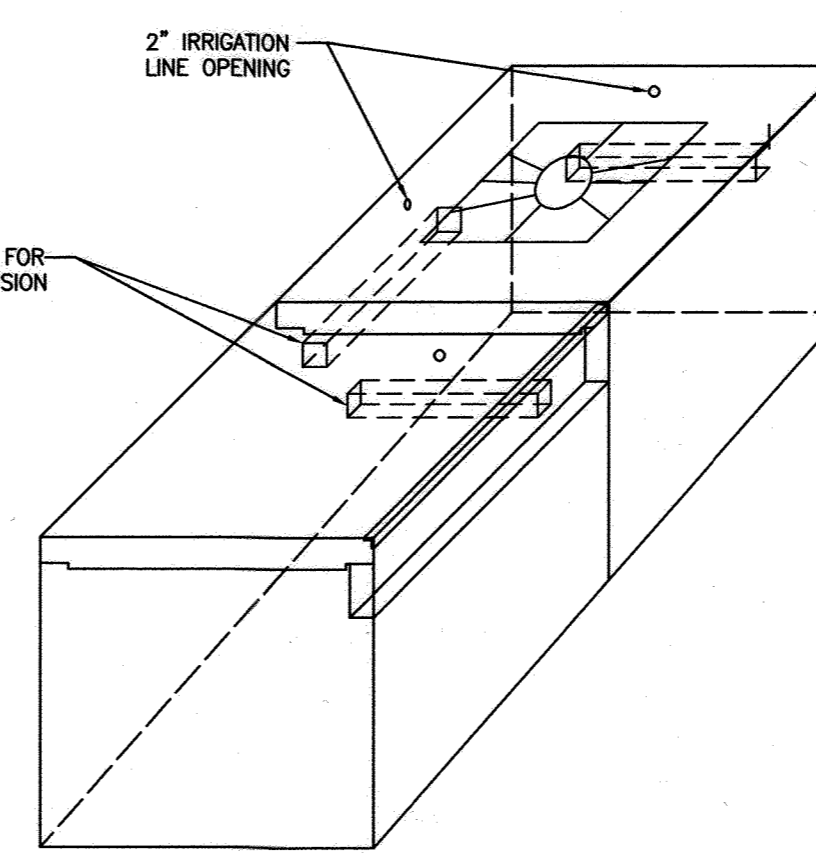
MULCH INSTALLATION

- ONLY MULCH THAT HAS BEEN MEETING CONTECH ENGINEERED SOLUTIONS' MULCH SPECIFICATIONS CAN BE USED IN THE FILTERRA SYSTEM.
- MULCH MUST BE APPLIED TO A DEPTH OF 3" EVENLY OVER THE SURFACE OF THE MEDIA.

IRRIGATION REQUIREMENTS

- AT ACTIVATION: APPLY ABOUT ONE (COOL CLIMATES) TO TWO (WARM CLIMATES) GALLONS OF WATER PER INCH OF TRUNK DIAMETER OVER THE ROOT BALL.
- DURING ESTABLISHMENT: IN COMMON WITH ALL PLANTS, EACH FILTERRA® PLANT WILL REQUIRE MORE FREQUENT WATERING DURING THE ESTABLISHMENT PERIOD. ONE INCH OF APPLIED WATER PER WEEK FOR THE FIRST THREE MONTHS IS RECOMMENDED FOR COOLER CLIMATES (2 TO 3 INCHES FOR WARMER CLIMATES). IF THE SYSTEM IS RECEIVING RAINFALL RUNOFF FROM THE DRAINAGE AREA, THEN IRRIGATION MAY NOT BE NEEDED. INSPECTION OF THE SOIL MOISTURE CONTENT CAN BE EVALUATED BY GENTLY BRUSHING ASIDE THE MULCH LAYER AND FEELING THE SOIL. BE SURE TO REPLACE THE MULCH WHEN THE ASSESSMENT IS COMPLETE. IRRIGATE AS NEEDED.
- FOR A MATURE SYSTEM ASSUME 3.5 INCHES OF AVAILABLE WATER WITHIN THE MEDIA MATRIX. IRRIGATION DEMAND CAN BE ESTIMATED AS 1" OF IRRIGATION DEMAND PER WEEK. THEREFORE IF DRY PERIODS EXCEED 3 WEEKS, IRRIGATION MAY BE REQUIRED. IT IS ALSO IMPORTANT TO RECOGNIZE THAT PLANTS WHICH ARE EXPOSED TO WINDY AREAS AND REFLECTED HEAT FROM PAVED SURFACES MAY NEED MORE FREQUENT IRRIGATION. LONG TERM CARE SHOULD DEVELOP A HISTORY WHICH IS MORE SITE SPECIFIC.

- ** FIVE GALLONS PER SQUARE YARD APPROXIMATES 1 INCH OF WATER THEREFORE FOR A 6' BY 6 FOOT FILTERRA® APPROXIMATELY 20-26 GALLONS OF APPLIED WATER IS NEEDED. TO ENSURE EVEN DISTRIBUTION OF WATER IT NEEDS TO BE EVENLY SPRINKLED OVER THE ENTIRE SURFACE OF THE FILTER BED, WITH SPECIAL ATTENTION TO MAKE SURE THE ROOT BALL IS COMPLETELY WETTED. NOTE: IF NEEDED, MEASURE THE TIME IT TAKES TO FILL A FIVE GALLON BUCKET TO ESTIMATE THE APPLIED WATER FLOW RATE. THEN CALCULATE THE TIME NEEDED TO IRRIGATE THE FILTERRA®, FOR EXAMPLE IS THE FLOW RATE OF THE SPRINKLER IS 5 GALLONS/MINUTE THEN IT WOULD TAKE 12 MINUTES TO IRRIGATE A 6'x6' FILTERRA.
- ** POSSIBLE SCENARIOS FOR ROOT EXPANSION USING KNOCKOUTS:



FILTERRA UNIT ISOMETRIC VIEW

NOT TO SCALE

DATUM

DESIGN & DRAWING BASED ON
 MARYLAND COORDINATE SYSTEM (MCS):
 HORIZONTAL, NAD 83 (2011)
 VERTICAL, NAVD 88

OWNER / DEVELOPER

SNOWDEN CROSSING LLC
 2800 QUARRY LAKE DRIVE, SUITE 340
 BALTIMORE, MD 21209
 PHONE: 410-308-0700
 ATTN: SCOTT CHERRY

NOTIFICATION OF ENGINEER NOTE

CONTRACTOR IS REQUIRED TO CONTACT THE ENGINEER CERTIFYING THE AS-BUILT 5 DAYS PRIOR TO STARTING STORMWATER FACILITIES IN ADDITION TO COORDINATING / SCHEDULING ALL RELATED WORK.

GEOTECHNICAL NOTE

CONTRACTOR SHALL REFER TO THE REPORT OF GEOTECHNICAL INVESTIGATION FOR 7090 DEEPAPE DRIVE, DATED NOVEMBER 9, 2018, PREPARED BY EGS MID-ATLANTIC LLC, FOR BID AND CONSTRUCTION PURPOSES. ALL RECOMMENDATIONS MADE IN THE REPORT SHALL BE CONSIDERED PART OF THE PROJECT'S SCOPE OF WORK.

CONTRACTOR'S AS-BUILT NOTE

AS-BUILT PLANS AND CERTIFICATION ARE REQUIRED FOR THIS STORMWATER MANAGEMENT FACILITY. THESE MUST BE PREPARED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER. HOWARD COUNTY WILL NOT PERFORM THE INSPECTION OR PREPARE THE AS-BUILT PLANS OR CERTIFICATION. THE STORMWATER MANAGEMENT PERMIT SECURITY WILL NOT BE RELEASED UNTIL THE AS-BUILT PLAN AND CERTIFICATION ARE APPROVED BY HOWARD COUNTY.

IN ORDER TO PREPARE THE REQUIRED AS-BUILT PLANS AND CERTIFICATION, THIS STORMWATER MANAGEMENT FACILITY MUST BE INSPECTED BY THE ENGINEER AT SPECIFIC STAGES DURING CONSTRUCTION AS REQUIRED BY THE CURRENT HOWARD COUNTY STORMWATER MANAGEMENT POLICY AND DESIGN MANUAL. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST FIVE (5) WORKING DAYS PRIOR TO STARTING ANY WORK SHOWN ON THESE PLANS.

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.

Michael Conner 38291 11/7/2023
 SIGNATURE MD LICENSE 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 INSPECTION AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN TO IMPLY A GUARANTEE BY THE ENGINEER OR 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.

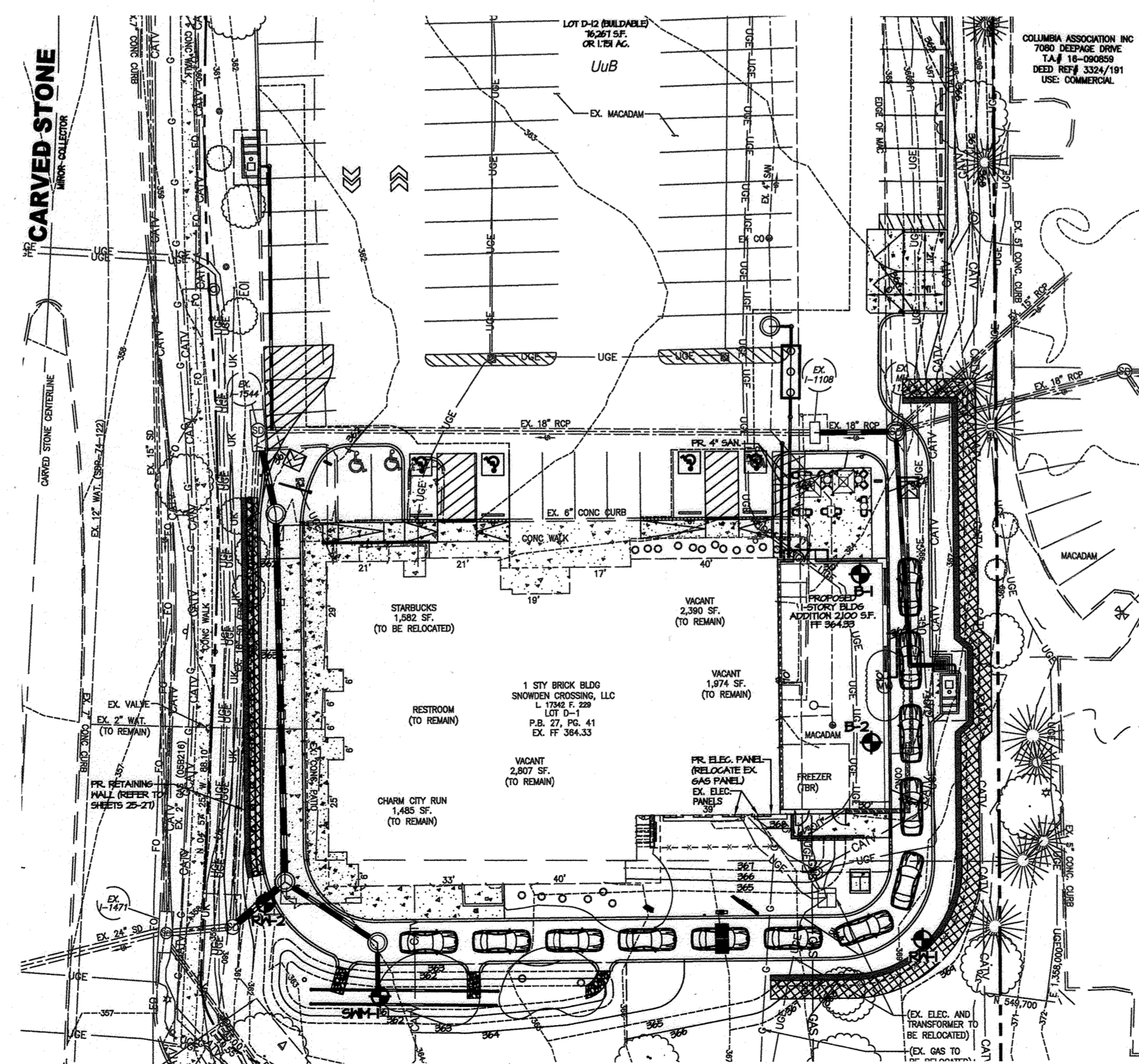
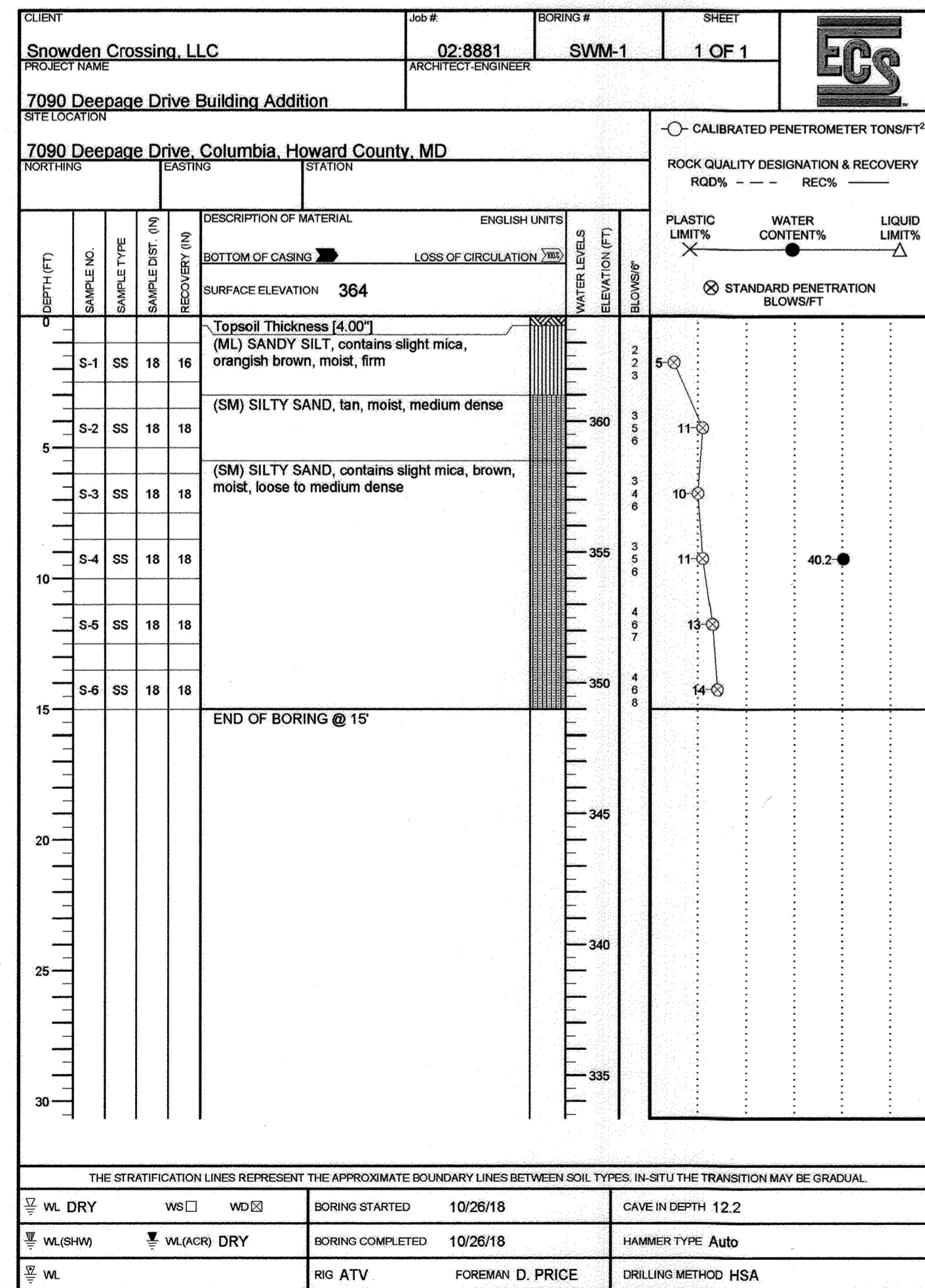
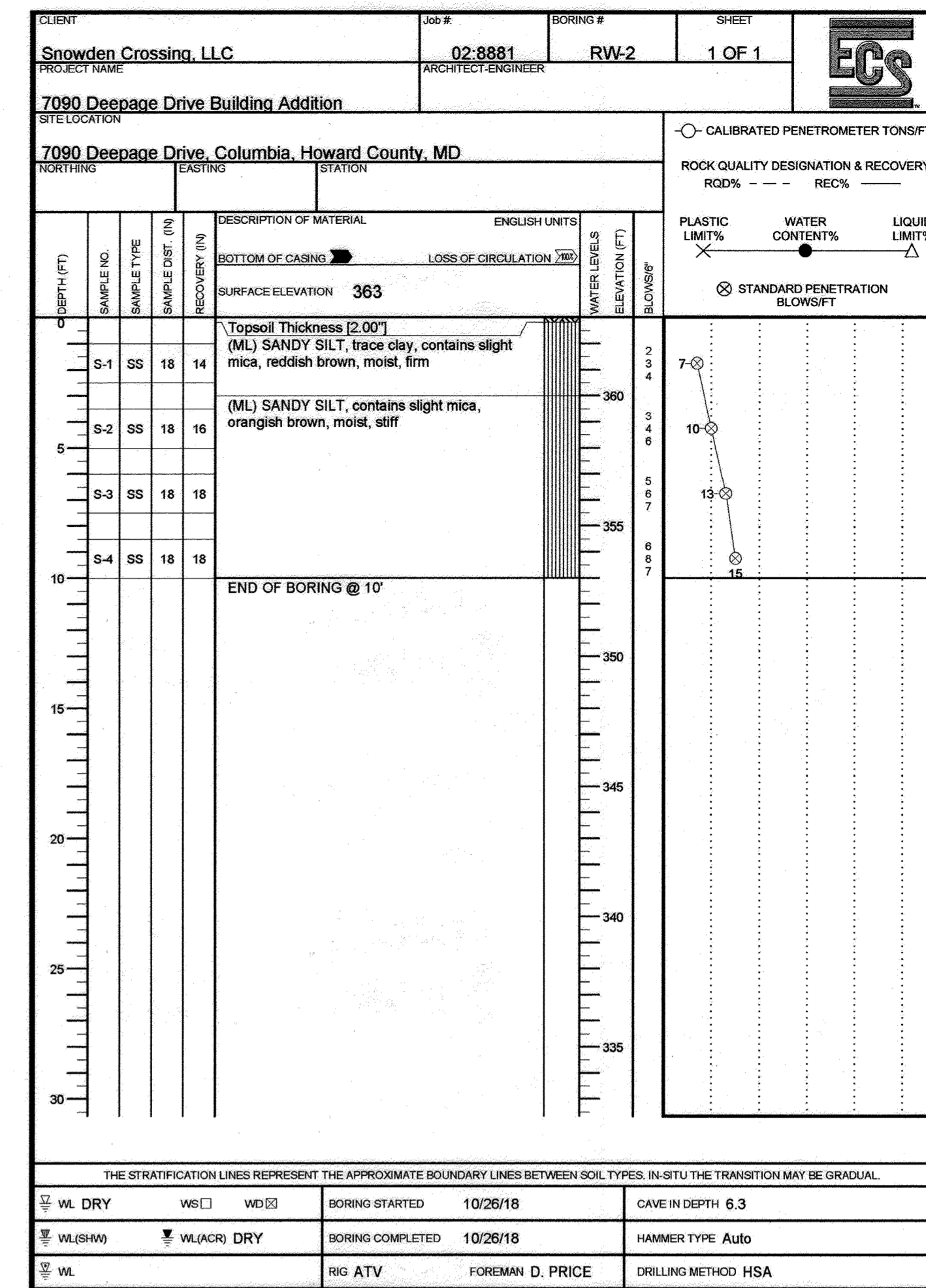
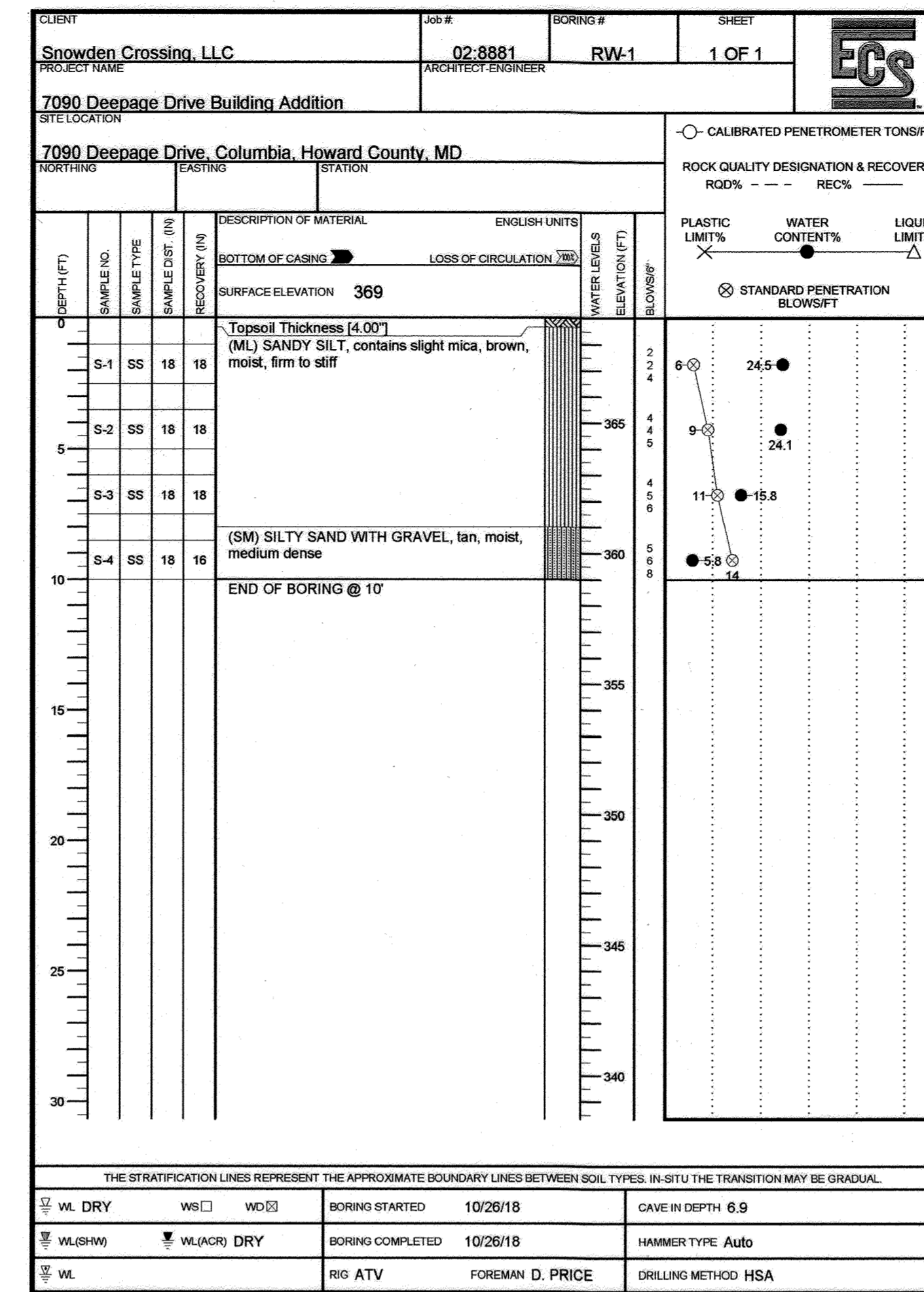
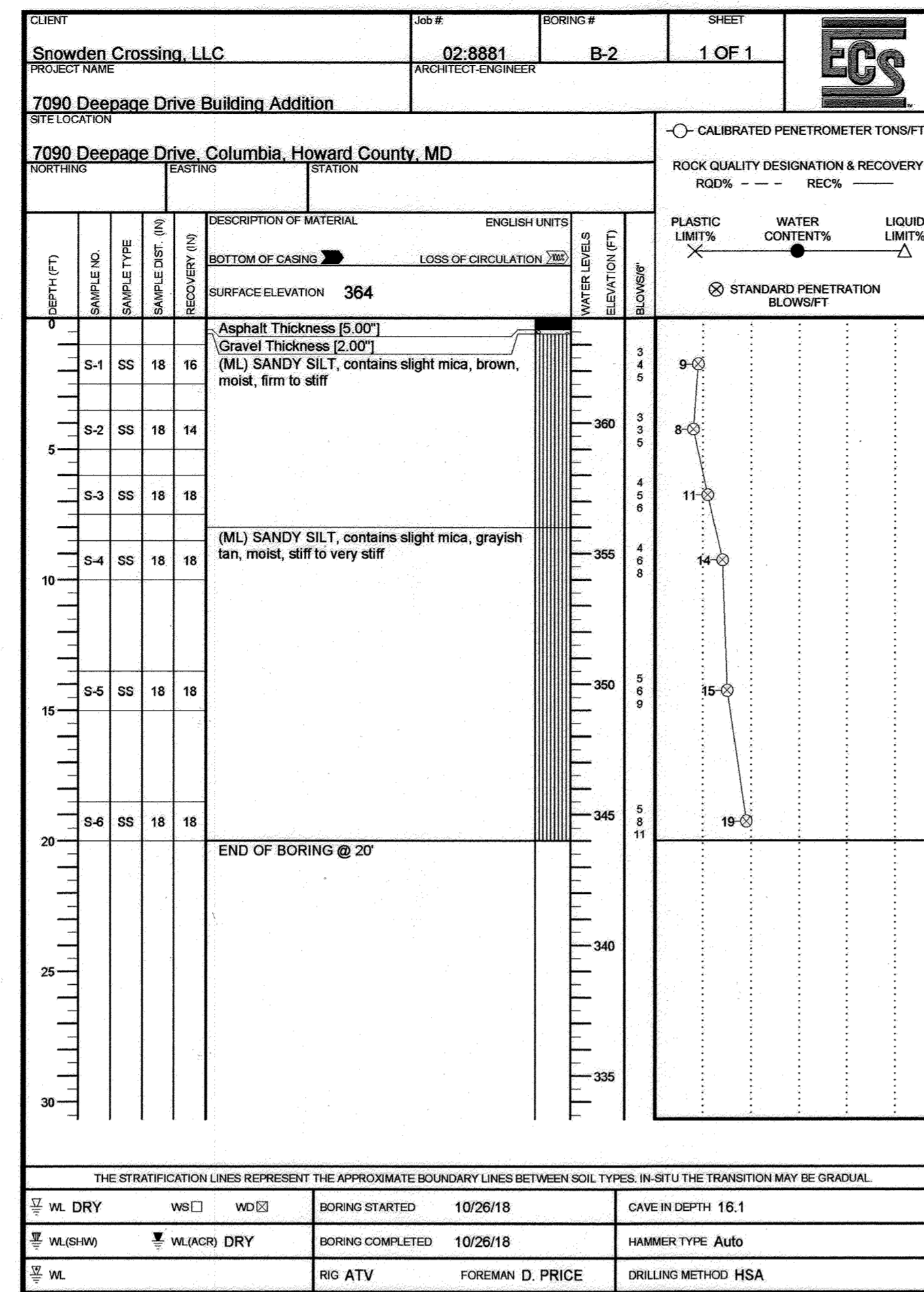
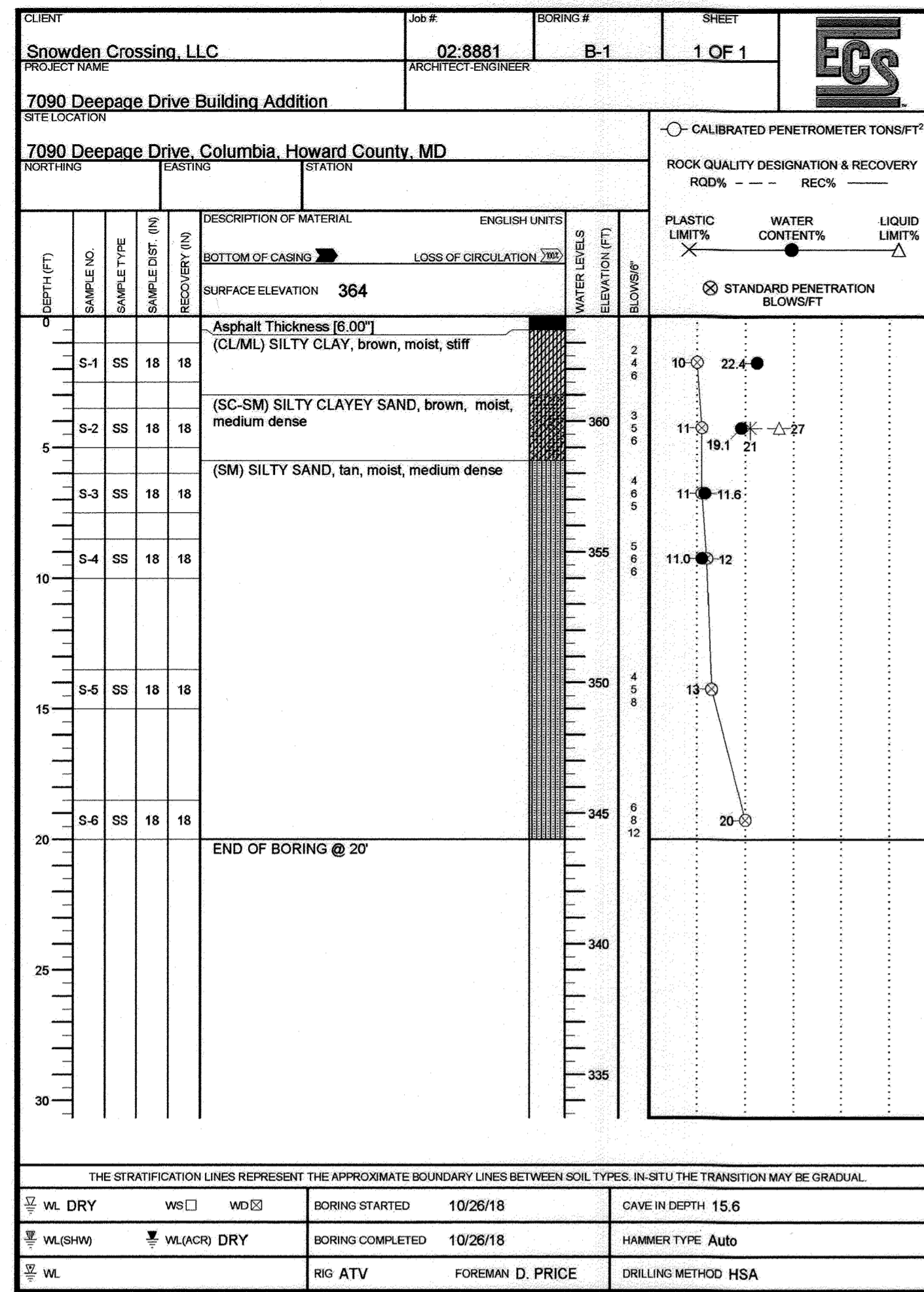
OWNER'S / DEVELOPER'S CERTIFICATION

I/WE CERTIFY THAT ALL WORK SHOWN ON THESE CONSTRUCTION DRAWINGS WILL BE ACCOMPLISHED PURSUANT TO THESE PLANS. I/WE ALSO UNDERSTAND THAT IT IS MY/OUR RESPONSIBILITY TO HAVE THE CONSTRUCTION SUPERVISED AND CERTIFIED, INCLUDING THE SUBMITTAL OF "AS-BUILT" PLANS, BY A REGISTERED PROFESSIONAL ENGINEER WITHIN THIRTY (30) DAYS OF COMPLETION, BY A MARYLAND REGISTERED PROFESSIONAL ENGINEER.

Scott Cherry 04/08/2022
 SIGNATURE DATE

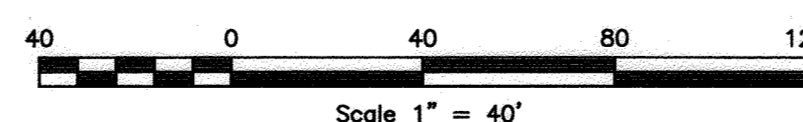
ENGINEER'S CERTIFICATION

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED BY OR UNDER MY SUPERVISION AND MEETS THE MINIMUM STANDARDS OF THE HOW



BORING PLAN

SCALE: 1" = 40'



APPROVED: DEPARTMENT OF PLANNING AND ZONING

5.10.22
6/14/22
6/18/22

APPROVED
PLANNING BOARD HOWARD COUNTY
DATE 08/20/2020

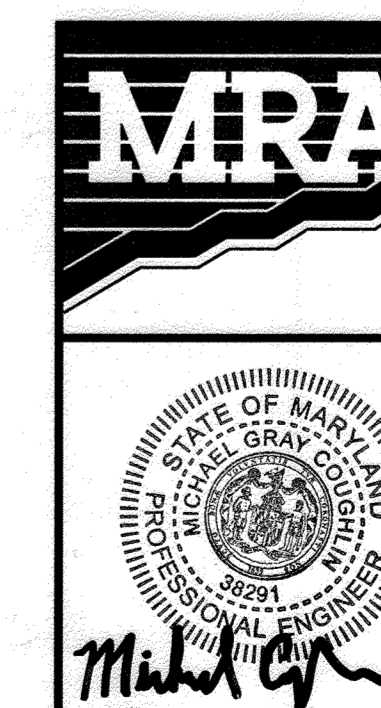
PURPOSE STATEMENT

THE PURPOSE OF THE REVISED SITE DEVELOPMENT PLAN IS TO CONSTRUCT A 2,100 SF BUILDING ADDITION WITH DRIVE THROUGH LANE AND ASSOCIATED PARKING UPGRADES, PATIO, AND SWM FACILITIES.

DATUM
DESIGN & DRAWING BASED ON MARYLAND COORDINATE SYSTEM (MCS): HORIZONTAL NAD 83 (2011) VERTICAL NAVD 88

OWNER / DEVELOPER
SNOWDEN CROSSING LLC
2800 QUARRY LAKE DRIVE, SUITE 340
BALTIMORE, MD 21208
PHONE: 410-308-0700
ATN: SCOTT CHERRY

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. 38291, EXPIRATION DATE: 1/13/2024.



MORRIS & RITCHIE ASSOCIATES, INC.
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
1220-B EAST JOPPA ROAD, SUITE 400K
TOWSON, MARYLAND 21286
(410) 821-1690
FAX (410) 821-1748
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REVISED SITE DEVELOPMENT PLAN
VILLAGE OF OWEN BROWN, SECTION 2, AREA 2, LOT D-12, SNOWDEN CROSSING
GEO-TECHNICAL BORING LOGS & LOCATION PLAN
SDP-74-122

DATE	REVISIONS	JOB NO.
11/22/2019	REVISED SDP-74-122 TO INCLUDE 2100 SF ADDITION	19850
11/7/2023	NO AS BUILT	SCALE: AS SHOWN
		DATE: 04/08/2022
		DRAWN BY: DTP
		DESIGN BY: THS
		REVIEW BY: THS
		SHEET: 22 OF 27



Know what's below.
Call before you dig.

PERIMETER LANDSCAPE EDGE

CATEGORY	P-1 ADJACENT TO ROADWAY: SIDE BUILDING	P-2 ADJACENT TO ROADWAY: REAR BUILDING	P-3 ADJACENT TO COMMERCIAL LOT
LANDSCAPE TYPE: NON-RESIDENTIAL	B	C	A
LINEAR FEET OF PERIMETER	212	202	308
CREDIT FOR EXISTING VEGETATION	0	0	(2) Shade Trees, (2) Evergreen Trees and (1) Ornamental Tree
CREDIT FOR WALL FENCE OR BERM (YES/NO/LF)	N	N	N
NUMBER OF PLANTS REQUIRED:			
SHADE TREES	4	5	5
EVERGREEN/ORNAMENTAL TREES	5	10	0
SHRUBS	0	0	0
NUMBER OF PLANTS PROVIDED:			
SHADE TREES	0	4	3
ORNAMENTAL TREES	0	1	0
EVERGREEN TREES	13	8	0
SHRUBS (10:1 SUBSTITUTION)	(14 Shrubs) (*A)	20	0
Meeting Requirement (Yes/No)	YES	YES	YES

NOTES:
*A- THERE ARE (14) SHRUBS THAT EXCEED THE PLANTING REQUIREMENTS FOR P-1.

Perimeter Landscaping Plant Schedule: (See P-1)

Evergreen Tree	Botanical Name	Common Name	Size	Spacing	Note
TO 13	<i>Thuja occidentalis</i>	Emerald Green Arborvitae	5'-6" Ht.	As Shown	B&B/CG
Shrubs	Ab	<i>Abelia x grandiflora</i>	2.5'-3' Ht.	As Shown	B&B/CG

Perimeter Landscaping Plant Schedule: (See P-2)

Major Deciduous Trees	Botanical Name	Common Name	Size	Spacing	Note	
QP 4	<i>Quercus phellos</i>	Willow Oak	2.5'-3' Ht.	As Shown	B&B	
Minor Flowering Trees <td>SR</td> <td><i>Syringa reticulata</i></td> <td>Tree Lilac</td> <td>1.5'-2' Call</td> <td>As Shown</td> <td>B&B/CG</td>	SR	<i>Syringa reticulata</i>	Tree Lilac	1.5'-2' Call	As Shown	B&B/CG
Evergreen Tree <td>IN</td> <td><i>Ilex Nellie R. Stevens</i></td> <td>Nellie R. Stevens Holly</td> <td>5'-6" Ht.</td> <td>As Shown</td> <td>B&B/CG</td>	IN	<i>Ilex Nellie R. Stevens</i>	Nellie R. Stevens Holly	5'-6" Ht.	As Shown	B&B/CG
Shrubs <td>Ek</td> <td><i>Euonymus kiautschowicus</i></td> <td>Spreading Euonymus</td> <td>2.5'-3' Ht.</td> <td>As Shown</td> <td>B&B/CG</td>	Ek	<i>Euonymus kiautschowicus</i>	Spreading Euonymus	2.5'-3' Ht.	As Shown	B&B/CG
	PI	<i>Prunus laurocerasus</i>	Cherry Laurel	2'-2.5' Ht.	As Shown	B&B/CG

Perimeter Landscaping Plant Schedule: (See P-3)

Major Deciduous Trees	Botanical Name	Common Name	Size	Spacing	Note
TA 3	<i>Tilia americana</i>	American Linden	2.5' Cal.	As Shown	B&B

STORMWATER LANDSCAPING

STORMWATER MANAGEMENT AREA LANDSCAPING (P-5)

CATEGORY	STORMWATER MANAGEMENT AREA LANDSCAPING
LANDSCAPE TYPE: NON-RESIDENTIAL	C
LINEAR FEET OF PERIMETER	191
NUMBER OF TREES REQUIRED:	
SHADE TREES	5
EVERGREEN TREES	2
CREDIT FOR EXISTING VEGETATION (YES/NO/%)	YES (2 SHADE TREES)
CREDIT FOR OTHER LANDSCAPING (YES/NO/%)	N
NUMBER OF TREES PROVIDED:	
SHADE TREES	4
ORNAMENTAL TREES (2:1 SUBSTITUTION)	2*
EVERGREEN TREES	8
SHRUBS (10:1 SUBSTITUTION)	20
Meeting Requirement (Yes/No)	YES

Stormwater Management Area Plant Schedule: (See P-5)

Groundcover and Perennials	Botanical Name	Common Name	Size	Spacing	Note
SW 127	<i>Panicum virginicum</i>	Switch Grass	1 Gal.	1' O.C.	CG

Note: As per page 33 of the Howard County Landscape Manual "Existing vegetation to remain or perimeter planting provided to meet other landscaping requirements may be credited towards fulfilling up to 100% of the requirement for landscaping of stormwater management areas". Please see existing vegetation to remain and P-2 for perimeter planting that is being provided to meet the stormwater management area perimeter planting requirements. 1 ornamental tree has been provided along Carved Stone Road in the proposed Filterra stormwater management system.

STREET TREE LANDSCAPING

STREET TREES (P-6 & P-7)

CATEGORY	P-6 STREET TREES	P-7 STREET TREES
LANDSCAPE TYPE: NON-RESIDENTIAL	C	C
LINEAR FEET OF PERIMETER	202	212
CREDIT FOR EXISTING VEGETATION	(4) Existing Street Trees	N
CREDIT FOR WALL FENCE OR BERM (YES/NO/LF)	N	N
NUMBER OF PLANTS REQUIRED:		
SHADE TREES	5	5
EVERGREEN/ORNAMENTAL TREES	0	0
SHRUBS	0	0
NUMBER OF PLANTS PROVIDED:		
SHADE TREES	1	0
ORNAMENTAL TREES	0	0
EVERGREEN TREES	0	0
SHRUBS (10:1 SUBSTITUTION)	0	0
Meeting Requirement (Yes/No)	YES	NO (*B)

Street Tree Plant Schedule: (See P-6)

Major Deciduous Trees	Botanical Name	Common Name	Size	Spacing	Note
PB 1	<i>Platanus x acerifolia</i>	London Plane Tree	2.5' Cal.	As Shown	B&B

Street Tree Plant Schedule: (See P-7)

Major Deciduous Trees	Botanical Name	Common Name	Size	Spacing	Note
PB 1	<i>Platanus x acerifolia</i>	London Plane Tree	2.5' Cal.	As Shown	B&B

Note: No Planting will be provided for Street Trees for P-7. See note *B in Schedule A- Perimeter Landscape Edge.

NOTES:
*B- REQUESTING TO PROVIDE 0 PLANTING UNITS TOWARDS THE REQUIRED 5 SHADE TREES AS PART OF THE STREET TREE REQUIREMENT DUE TO EXISTING UTILITIES AND CONDITIONS ALONG CARVED STONE ROAD.

PARKING LOT LANDSCAPING

PARKING ADJACENT TO NON-RESIDENTIAL (P-4)

CATEGORY	P-4 PARKING LOT LANDSCAPING
LANDSCAPE TYPE: NON-RESIDENTIAL	B
LINEAR FEET OF PERIMETER	92
CREDIT FOR EXISTING VEGETATION	0
CREDIT FOR WALL FENCE OR BERM (YES/NO/LF)	N
NUMBER OF PLANTS REQUIRED:	
SHADE TREES	2
EVERGREEN/ORNAMENTAL TREES	2
SHRUBS	0
NUMBER OF PLANTS PROVIDED:	
SHADE TREES	0
ORNAMENTAL TREES	0
EVERGREEN TREES	2
SHRUBS (10:1 SUBSTITUTION)	20
Meeting Requirement (Yes/No)	YES

Parking Lot Internal Plant Schedule: (See P-4)

Evergreen Tree	Botanical Name	Common Name	Size	Spacing	Note	
IN 2	<i>Ilex Nellie R. Stevens</i>	Nellie R. Stevens Holly	5'-6" Ht.	As Shown	B&B/CG	
Shrubs	Ca	<i>Clethra alnifolia</i>	Summersweet Clethra	2.5'-3' Ht.	As Shown	B&B/CG
	Ek	<i>Euonymus kiautschowicus</i>	Spreading Euonymus	2.5'-3' Ht.	As Shown	B&B/CG

PARKING LOT INTERIOR LANDSCAPING*

NUMBER OF PARKING SPACES	10
NUMBER OF TREES REQUIRED:	1
NUMBER OF TREES PROVIDED:	0
OTHER TREES (2:1 SUBSTITUTION)	2
* SEEKING ALTERNATIVE LOCATION TO PROVIDE REQUIRED PLANTING UNITS	

Parking Lot Internal Landscaping Plant Schedule: (See Schedule B)

Minor Flowering Trees	Botanical Name	Common Name	Size	Spacing	Note
CF 2	<i>Comus florida</i>	Flowering Dogwood	8'-10" Ht.	As Shown	B&B/CG

* THE REQUIRED PLANTING UNITS ARE LOCATED TO THE NORTH AND SOUTH ADJACENT TO THE PARKING LOT STALLS.

SITE INTERNAL LANDSCAPING

Internal Landscaping Plant Schedule:

Major Deciduous Trees	Botanical Name	Common Name	Size	Spacing	Note
PB 1	<i>Platanus x acerifolia</i>	London Plane Tree	2.5' Cal.	As Shown	B&B
CG 1	<i>Cercis canadensis</i>	Eastern Redbud	1.5'-2' Call	As Shown	B&B/CG
SR 2	<i>Syringa reticulata</i>	Tree Lilac	1.5'-2' Call	As Shown	CG
IN 2	<i>Ilex Nellie R. Stevens</i>	Nellie R. Stevens Holly	5'-6" Ht.	As Shown	B&B/CG
Ab	<i>Abelia x grandiflora</i>	Glossy Abelia	2.5'-3' Ht.	As Shown	B&B/CG
Bk	<i>Buxus koriana</i>	Wintergreen Boxwood	2'-2.5' Ht.	As Shown	B&B/CG
Ca	<i>Clethra alnifolia</i>	Summersweet Clethra	2.5'-3' Ht.	As Shown	B&B/CG
Ek	<i>Euonymus kiautschowicus</i>	Spreading Euonymus	2.5'-3' Ht.	As Shown	B&B/CG
Fr	<i>Fraxinus floridana</i>	Fraxinus Florida	3'-3.5' Ht.	As Shown	B&B/CG
PI	<i>Prunus laurocerasus</i>	Cherry Laurel	2'-2.5' Ht.	As Shown	B&B/CG
ND	<i>Nandina domestica</i>	Harbour Dwarf Nandina	18"-24" Ht.	As Shown	B&B/CG
Groundcover and Perennials	Botanical Name	Common Name	Size	Spacing	Note
ck	<i>Calamagrostis x scutiflora</i>	Feather Reed Grass	1 Gal.	24" O.C.	CG
cv	<i>Cornopogon verticillatus</i>	Moorsbeam	1 Gal.	18" O.C.	CG
hc	<i>Hemerocallis 'Kingy Yellow'</i>	Daylily	1 Gal.	18" O.C.	CG
lm	<i>Liriodie muscari</i>	Big Blue	4" Cont.	12" O.C.	CG
pa	<i>Pennisetum alopecuroides</i>	Honeycutt	1 Gal.	24" O.C.	CG

ADDITIONAL LANDSCAPING

Evergreen Tree	Botanical Name	Common Name	Size	Spacing	Note
IN 6	<i>Ilex Nellie R. Stevens</i>	Nellie R. Stevens Holly	5'-6" Ht.	As Shown	B&B/CG
Minor Flowering Trees	Botanical Name	Common Name	Size	Spacing	Note
CF 1	<i>Comus florida</i>	Flowering Dogwood	8'-10" Ht.	As Shown	B&B/CG
Shrubs	Botanical Name	Common Name	Size	Spacing	Note
Ca	<i>Clethra alnifolia</i>	Summersweet Clethra	2.5'-3' Ht.	As Shown	B&B/CG
Ek	<i>Euonymus kiautschowicus</i>	Spreading Euonymus	2.5'-3' Ht.	As Shown	B&B/CG
Fr	<i>Fraxinus floridana</i>	Fraxinus Florida	3'-3.5' Ht.	As Shown	B&B/CG
PI	<i>Prunus laurocerasus</i>	Cherry Laurel	2'-2.5' Ht.	As Shown	B&B/CG

Additional SWM Landscaping Plant Schedule:	Botanical Name	Common Name	Size	Spacing	Note
CV 29	<i>Cyperus setosus</i>	Redtop	2'-4.5" Ht.	As Shown	B&B/CG
Ca	<i>Clethra alnifolia</i>	Summersweet Clethra	2.5'-3' Ht.	As Shown	B&B/CG

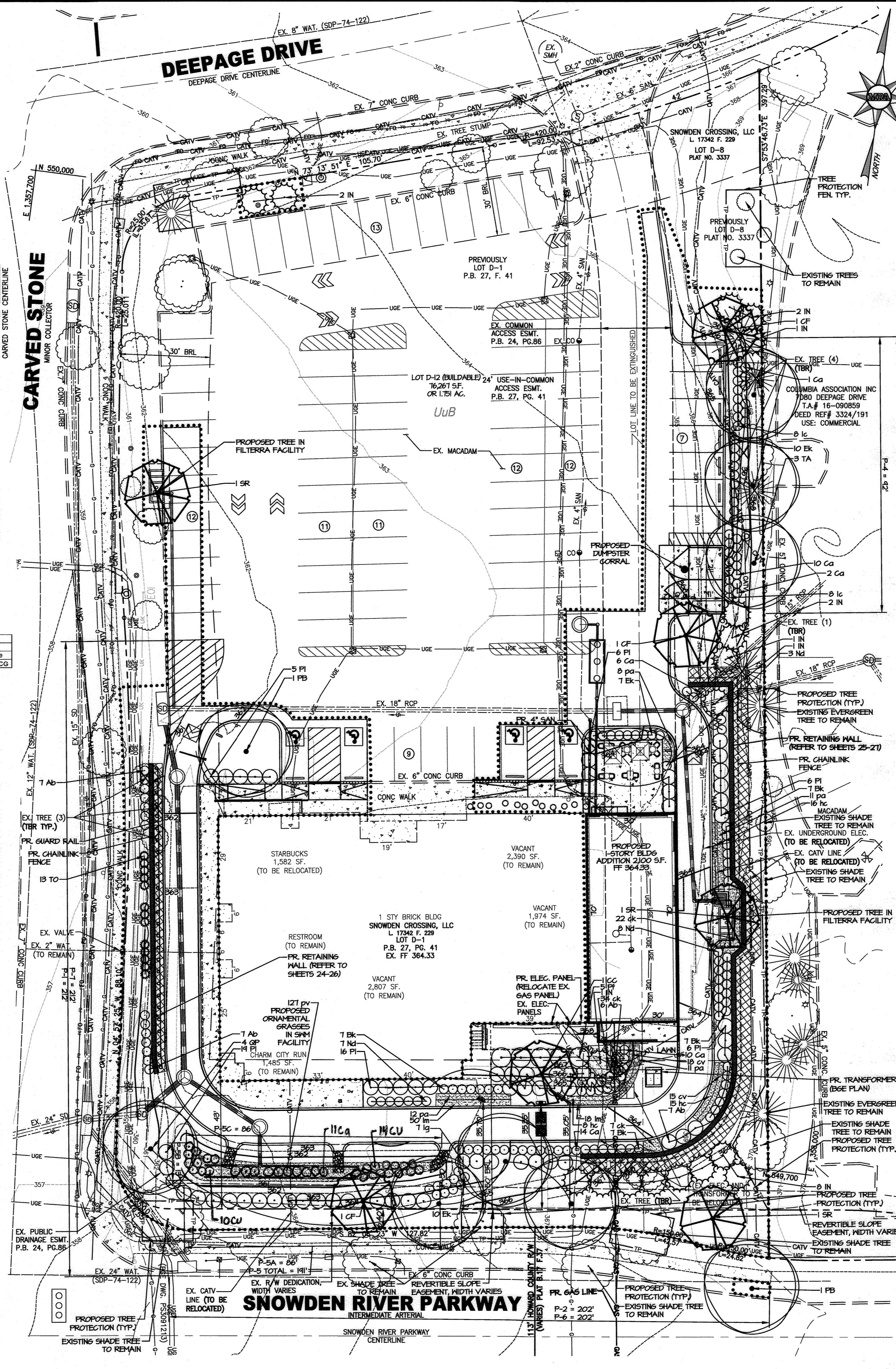
PURPOSE STATEMENT

THE PURPOSE OF THE REVISED SITE DEVELOPMENT PLAN IS TO CONSTRUCT A 2,100 SF BUILDING ADDITION WITH DRIVE THROUGH LAKE AND ASSOCIATED PARKING UPGRADES, PATIO, AND SWM FACILITIES.

APPROVED: DEPARTMENT OF PLANNING AND ZONING
DATE: 08/20/2020

DATUM

DESIGN & DRAWING BASED ON MARYLAND COORDINATE SYSTEM (MCS): HORIZONTAL NAD 83 (2011) VERTICAL NAVD 88
OWNER / DEVELOPER: SNOWDEN CROSSING LLC, 2800 QUARRY LAKE DRIVE, SUITE 340, BALTIMORE, MD 21209, PHONE: 410-308-0700, ATTN: SCOTT CHERRY



LEGEND

1	EX. 1 FOOT CONTOURS	PR. BUILDING
2	EX. 2 FOOT CONTOURS	PR. CONCRETE WALK
10	EX. 10 FOOT CONTOURS	PR. CURB & GUTTER
---	EDGE OF PAVEMENT	PR. SANITARY SEWER
---	EX. CURB AND GUTTER	PR. STORM DRAIN
---	EX. CONCRETE	PR. FILTERRA
---	EX. C/L ROAD	PR. RETAINING WALL
---	EX. ZONING LINE	PR. GEGRID
---	EX. ADJACENT PROPERTY LINE	TREE PROTECTION FENCE TYP.
---	EX. PROPERTY LINE	PROP. MAJOR TREE
---	EX. RIGHT OF WAY	PROP. FLORERING TREE
---	EX. WATER LINE	PROP. EVERGREEN TREE
---	EX. SANITARY LINE	PROP. SHRUB
---	EX. STORM DRAIN LINE	TREE TO BE REMOVED
---	EX. FIBER OPTIC CABLE	PROP. GROUNDCOVER
---	EX. CATV	
---	EX. GAS	
---	EX. UNKNOWN UTILITY	
---	EX. UNDER GROUND ELECTRIC	
---	EX. GROUND LIGHT	
---	EX. U/G UTILITY HANDBOX	
---	EX. UTILITY POLE	
---	EX. SIGN	
---	EX. BOLLARD	
---	EX. SLOPE GREATER THAN 15%	
---	EX. TREE	
---	EX. STUMP	
---	EX. BUILDING/STRUCTURE	
---	EX. BLOCK RETAINING WALL	
---	PR. LIMIT OF DISTURBANCE	
---	PR. 1 FT. CONTOUR	
---	PR. 2 FT. CONTOUR	
---	PR. 10 FT. CONTOUR	

ADDRESS CHART

LOT / PARCEL #	STREET ADDRESS	ACREAGE
LOT D-12/0397	7090 DEEPAE DRIVE	1.79 AC. (77,851 SF)

PERMIT INFORMATION CHART

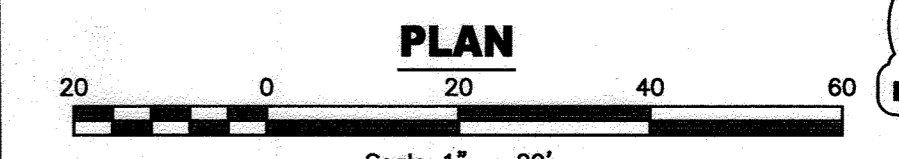
ADDRESS	TAX ACCOUNT NO.	PLAT NO.				
7090 DEEPAE DRIVE	108030					
PARCEL	L / F	GRID	ZONING	TAX MAP NO.	ELECT. DIST.	CENSUS TRACT
0397		4	NT	42	6	606705

SOILS LEGEND

SYMBOL	NAME/DESCRIPTION	SOIL TYPE
UuB	URBAN LAND-UNDEVELOPEDS COMPLEX, 0 - 8 PERCENT SLOPES (ALL SOILS SHOWN ON PLAN ARE UuB)	D

NOTE:

- (2) ORNAMENTAL TREES (SR) ARE LOCATED IN FILTERRA FACILITIES ON THE SITE. THERE ARE (110) ORNAMENTAL GRASSES LOCATED AT THE BOTTOM OF THE STORMWATER MANAGEMENT FACILITY.
- THE CORRECTNESS OR COMPLETENESS OF EXISTING INFORMATION SHOWN ON THE DRAWINGS IS NOT WARRANTED OR GUARANTEED. THE CONTRACTOR SHALL VERIFY THE LOCATION OF UTILITIES AND UNDERGROUND FACILITIES, BY TEST PITS OR OTHER METHODS APPROVED BY THE OWNER'S REPRESENTATIVE, AS REQUIRED TO VERIFY EXACT LOCATIONS AND DEPTHS WITHIN THE LIMIT OF DISTURBANCE. AL DISCREPANCIES BETWEEN INFORMATION SHOWN ON THE DRAWINGS AND THAT VERIFIED IN THE FIELD SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING OF WORK.
- THE LANDSCAPING SHOWN ON THE LANDSCAPE PLANS WILL BE INSTALLED BY THE DEVELOPER.



Know what's below. Call before you dig.

PROFESSIONAL CERTIFICATION

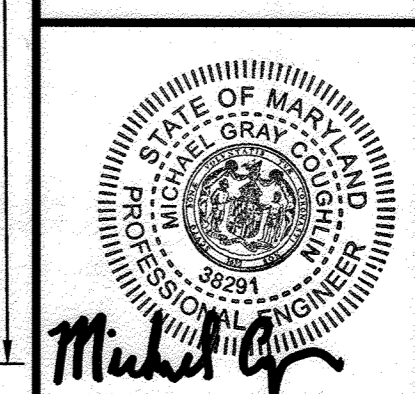
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 38291, EXPIRATION DATE: 1/13/2024.

PROTECT YOURSELF, GIVE THREE WORKING DAYS NOTICE. THIS DRAWING DOES NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY. ALL CONSTRUCTION MUST BE DONE IN COMPLIANCE WITH THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 AND ALL RULES AND REGULATIONS THERE TO APPROPRIATE.



MORRIS & RITCHIE ASSOCIATES, INC.

ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS
1220-B EAST JOPPA ROAD, SUITE 400K
TOWSON, MARYLAND 21286
(410) 821-1690
FAX (410) 821-1748
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REVISED SITE DEVELOPMENT PLAN

VILLAGE OF OWEN BROWN, SECTION 2, AREA 2, LOT D-12, SNOWDEN CROSSING

LANDSCAPE PLAN

SDP-74-122
TAX MAP 42 -- GRID 04 -- PARCEL 0397 -- ZONING NT -- DEED REF 17342/229
PLAT NO. 2741 -- TAX ASSESSMENT DISTRICT 82 -- 8th ELECTION DISTRICT
7090 DEEPAE DRIVE, HOWARD COUNTY, MARYLAND, 21045

DATE	REVISIONS	JOB NO.:	SCALE:
11/22/2019	REVISED SDP-74-122 TO INCLUDE 2100 SF ADDITION	19650	1" = 20'
11/7/2023	NO AS BUILT		DATE: 04/08/2022
			DRAWN BY: DTP
			DESIGN BY: THS
			REVIEW BY: THS
			SHEET: 23 OF 27

PLANTING NOTES

- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE, THE HOWARD COUNTY LANDSCAPE MANUAL, AND THE COLUMBIA OFFICE AND COMMERCIAL DESIGN GUIDELINES.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. FINANCIAL SURETY IN THE AMOUNT OF \$15,270 FOR 9 SHADE TREES (\$300/TREE), 31 EVERGREEN AND 7 ORNAMENTAL TREES (\$150/TREE), AND 229 SHRUBS (\$30/SHRUB) HAS BEEN POSTED WITH THE DEVELOPER'S AGREEMENT.
- CONTRACTOR SHALL CONTACT "MISS UTILITY" 811 AND SHALL VERIFY THE LOCATION OF ALL UNDERGROUND UTILITIES WITHIN THE PROJECT AREA PRIOR TO INSTALLATION OF PLANT MATERIAL.
- PROVIDE ROOT BARRIER ALONG NEAR EDGE OF SIDEWALK / UTILITY INSTALLATION. PROVIDE ROOT BARRIER ALONG NEAR EDGE OF SIDEWALK TO POINT 5' ON EITHER SIDE OF TREE. USE 10 MIL PLASTIC SHEETING TO 12" DEPTH OR AN EQUIVALENT APPROVED BARRIER.
- THE CORRECTNESS OR COMPLETENESS OF EXISTING INFORMATION SHOWN ON THE DRAWINGS IS NOT WARRANTED OR GUARANTEED. THE CONTRACTOR SHALL VERIFY THE LOCATION OF UTILITIES AND UNDERGROUND FACILITIES, BY TEST PITS OR OTHER METHODS APPROVED BY THE OWNER'S REPRESENTATIVE, AS REQUIRED TO VERIFY EXACT LOCATIONS AND DEPTHS WITHIN THE LIMIT OF DISTURBANCE. ALL DISCREPANCIES BETWEEN INFORMATION SHOWN ON THE DRAWINGS AND THAT VERIFIED IN THE FIELD SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING WORK.
- FOR ALL PLANTING AREAS LOCATED IN STORM WATER MANAGEMENT FACILITIES CONTRACTOR SHALL INSTALL PLANTS IN PERMEABLE SOIL AND MULCHED AS SPECIFIED PER THE STORMWATER MANAGEMENT DRAWINGS.
- FOR SEEDING TYPES AND LOCATIONS REFER TO E&S DRAWINGS.
- FOR ALL FENCING DETAILS AND INSTALLATION AROUND STORMWATER MANAGEMENT FACILITIES REFER TO SWM PLANS.
- ALL AREAS, WITH THE EXCEPTION OF STORMWATER MANAGEMENT FACILITIES, NOT SPECIFIED TO BE PLANTED WITH TREES, SHRUBS OR GROUNDCOVER SHALL BE PLANTED WITH SEED AND MULCH.
- THE SOIL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE MICRO-BIORETENTION PRACTICE THAT MAY BE HARMFUL TO PLANT GROWTH OR PROVIDE A HINDERANCE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE OF BERMUDA GRASS, QUACKGRASS, JOHNSON GRASS, OR OTHER NOXIOUS WEEDS. COMPACTION
- THE CONTRACTOR SHALL DISPOSE OF STUMPS AND MAJOR ROOTS OF ALL PLANTS TO BE REMOVED. ANY DEPRESSIONS CAUSED BY REMOVAL OPERATIONS SHALL BE REPAIRED WITH FERTILE, FRAGILE SOIL PLACED AND COMPACTED SO AS TO REESTABLISH PROPER GRADE FOR NEW PLANTING AND/OR LAWN AREAS.

TREE PROTECTION NOTES

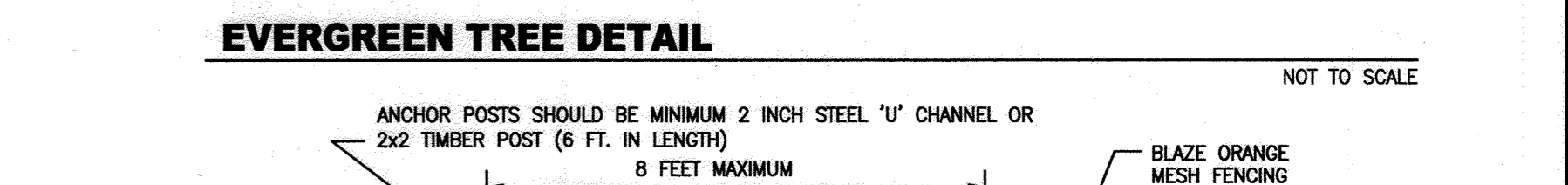
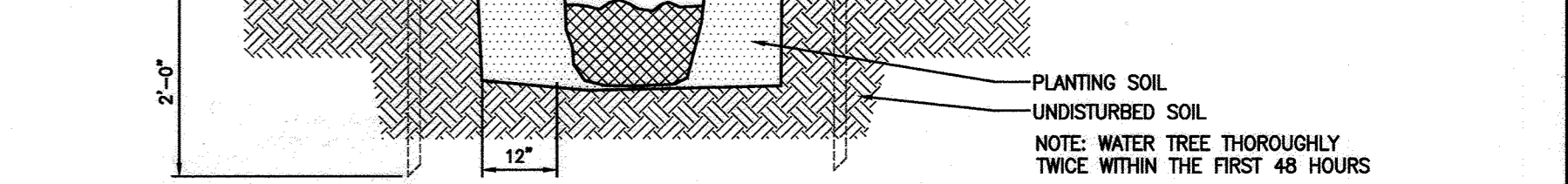
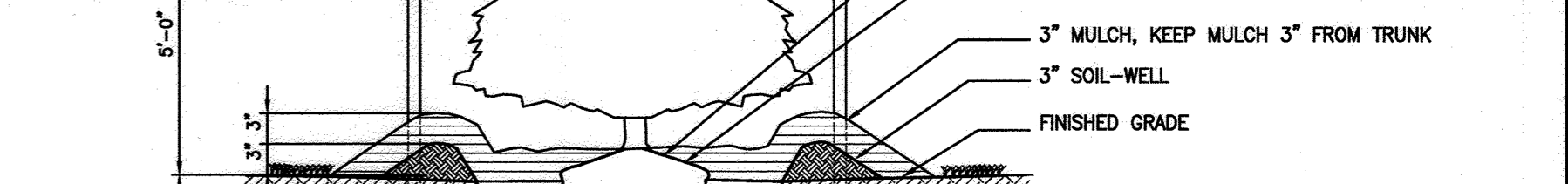
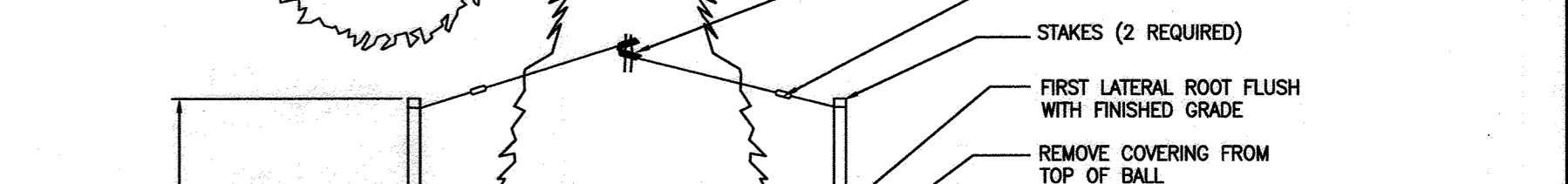
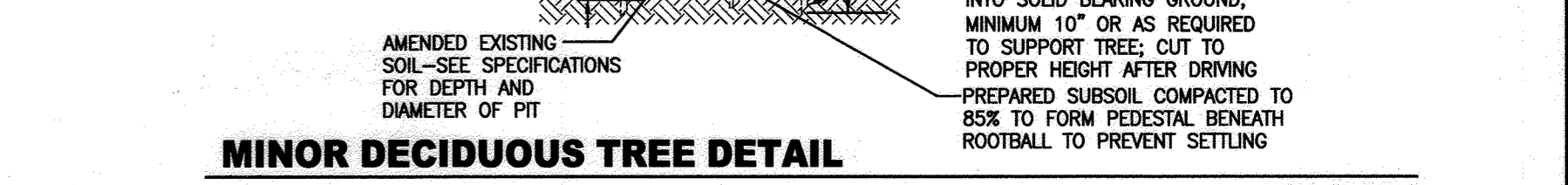
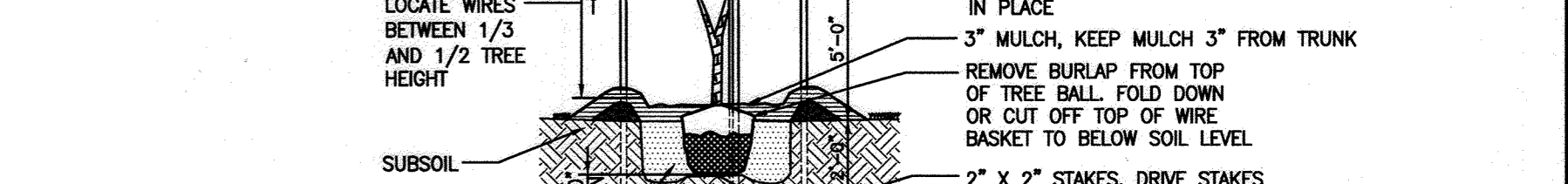
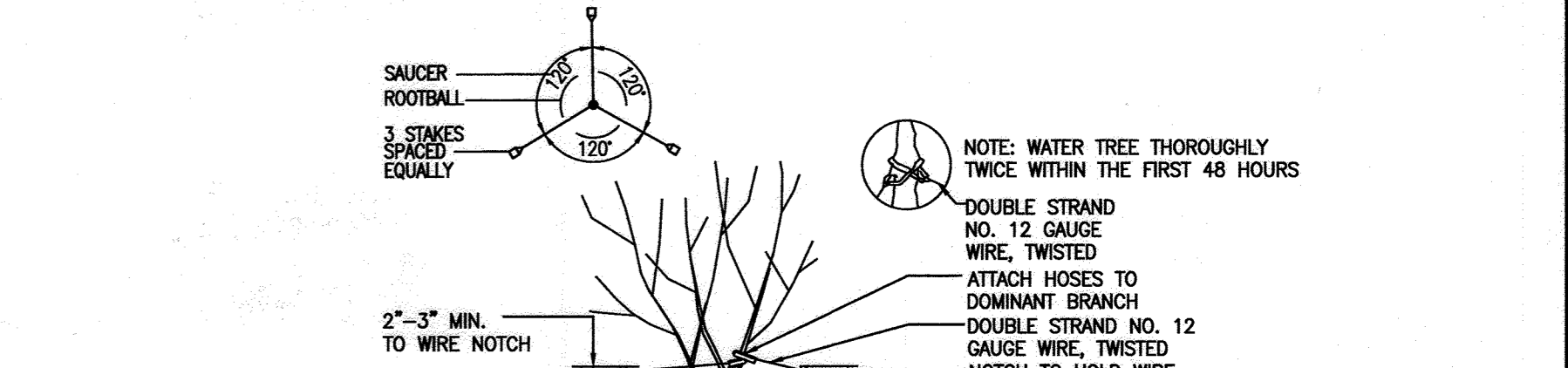
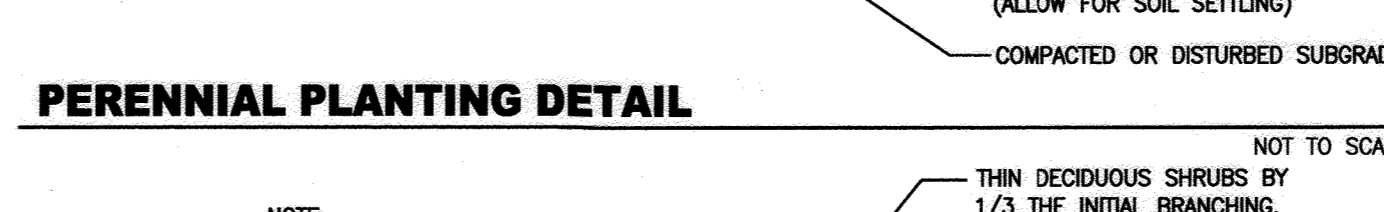
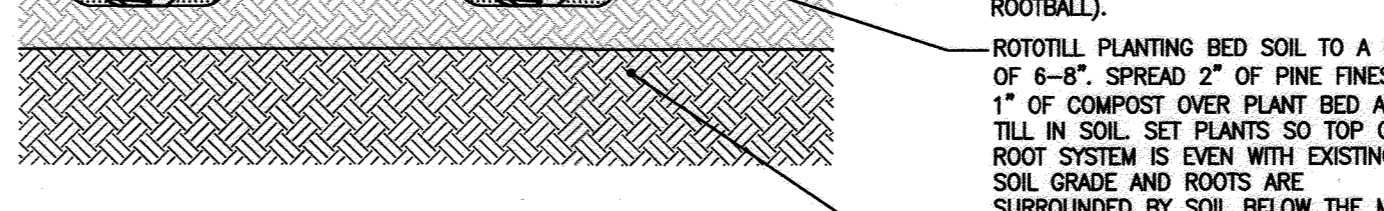
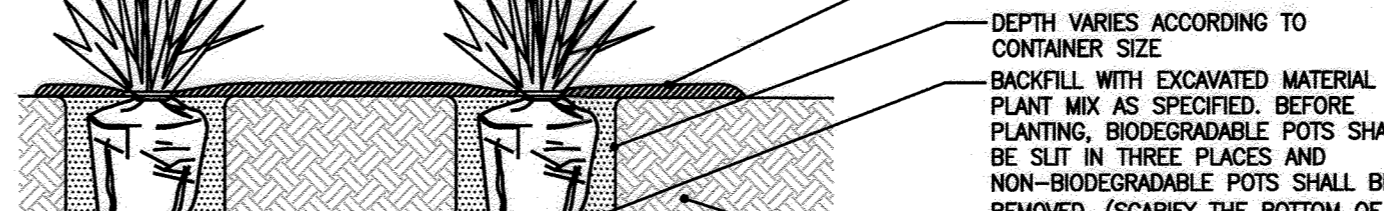
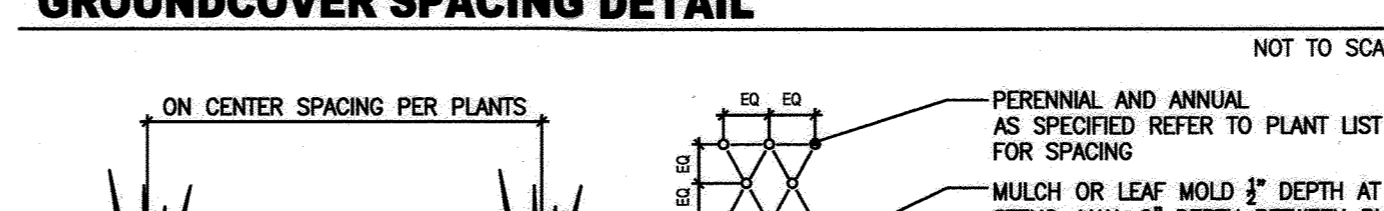
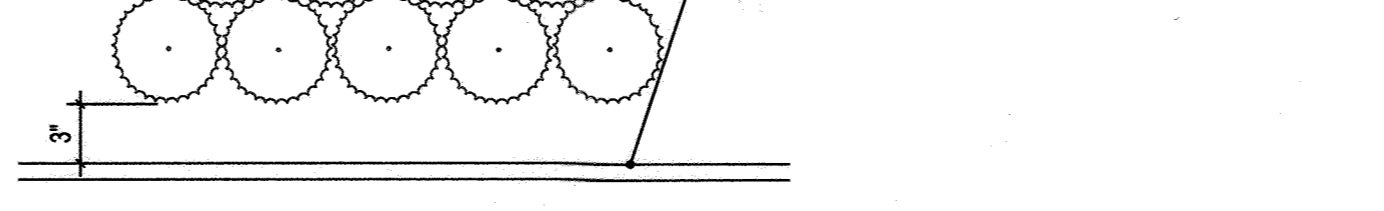
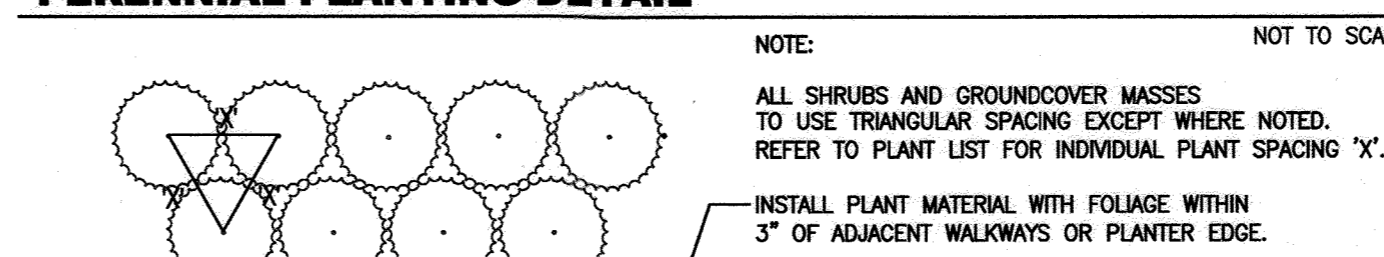
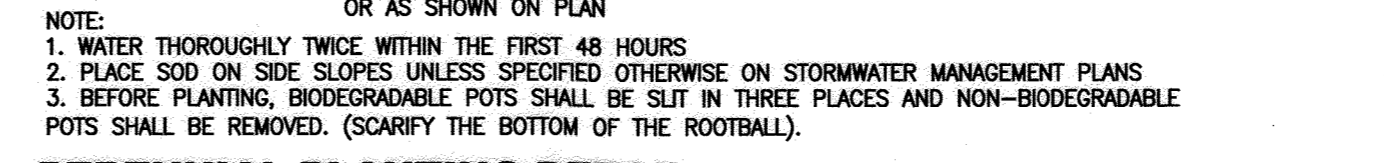
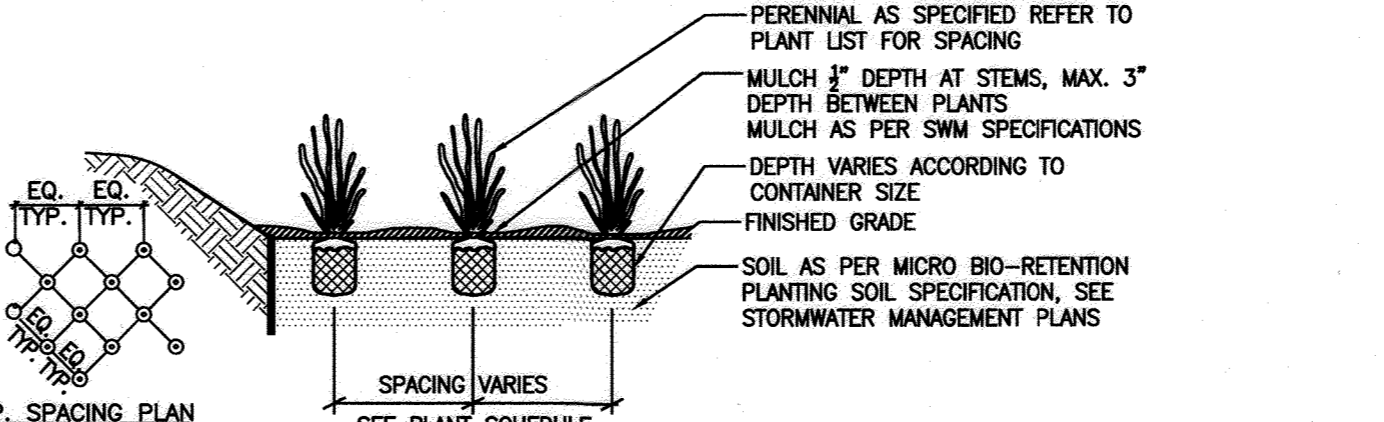
- TREE PROTECTION:**
TREE PROTECTION AREAS AS SHOWN ON THIS PLAN SHALL BE IDENTIFIED ALONG THE LOD BOUNDARIES WITH ORANGE MESH FENCE AS SPECIFIED IN DETAIL SHEETS ON THIS SHEET. TREE PROTECTION INDICATED ON THE PLAN ARE TO INSURE THAT TREES ADJACENT TO THE PROPOSED LOD ARE NOT ADVERSELY IMPACTED BY THE PROPOSED DEVELOPMENT. TEMPORARY PROTECTIVE FENCING WILL BE INSTALLED ALONG THE PROPOSED LIMITS OF DISTURBANCE TO ENSURE THAT THERE IS NO ENCRoACHMENT BEYOND THE PROPERTY LINE TO THE ADJACENT TREES. THE FENCING SHALL BE REMOVED CONCURRENT WITH THE REMOVAL OF THE SEDIMENT AND CONTROL DEVICES. NO TEMPORARY FENCING SHALL BE LEFT ON-SITE ONCE THE SITE IS STABILIZED AND CONSTRUCTION IS COMPLETE.
PRIOR TO GRADING OR OTHER SOIL DISTURBANCE ACTIVITIES, THE PROJECT ENGINEER OR THE CONSTRUCTION MANAGER SHALL ORGANIZE A PRE-CONSTRUCTION MEETING WITH A FORESTER OR ARBORIST TO IDENTIFY TREE PROTECTION MEASURES ALONG AND WITHIN THE LOD. TREE PROTECTION MEASURES MAY INCLUDE ANY OF THE FOLLOWING:
A) TEMPORARY ORANGE CONSTRUCTION FENCE
B) TREE BRANCH PRUNING
C) TREE ROOT PRUNING
D) TREE FERTILIZING
E) OTHER TREE PROTECTION MEASURES LIKE TRUNK PROTECTION AND ROOT BRIDGING
- STANDARD NON-DISTURBANCE NOTES:**
NO EQUIPMENT, VEHICLES, MACHINERY, DUMPING, STORAGE, STOCKPILES, PARKING AREAS, EQUIPMENT CLEANING AREAS, ETC. OR OTHER CONSTRUCTION ACTIVITIES, BURIAL, BURNING, OR OTHER DISPOSAL OF CONSTRUCTION MATERIALS, MUST NOT BE LOCATED INSIDE TREE PROTECTION AREAS OR ADJACENT TO TREES TO REMAIN. ALL PRECAUTIONARY MEASURES SHALL BE TAKEN TO PROTECT THE EXISTING TREE AND ITS CRITICAL ROOT ZONE. ATTACHMENT OF SIGNS, OR ANY OTHER OBJECTS TO TREES IS PROHIBITED.
- SEQUENCE OF CONSTRUCTION:**
A. TREE PROTECTIVE AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED.
B. ALL DISTURBED AREAS SHALL BE STABILIZED.
C. SEDIMENT CONTROL SHALL BE REMOVED ONCE SITE IS STABILIZED.
- TEMPORARY PROTECTION DURING CONSTRUCTION**
• AVOID INJURING ROOTS WHEN INSTALLING ANCHOR POSTS.
• WHEN USING FENCING, IT SHOULD BE AT LEAST 4" HIGH.
• FENCES OR DEVICES SHOULD BE SECURELY ANCHORED, AT LEAST 1/5 OF THE ANCHOR POST SHOULD BE BELOW GROUND LEVEL.
• BLAZE ORANGE PLASTIC MESH FENCING (SEE DETAIL).
- CONSTRUCTION PHASE MONITORING**
• SOIL COMPACTION
• ROOT INJURY
• TRUNK WOUNDS
• LIMB INJURY
• FLOODED CONDITIONS
• DROUGHT CONDITIONS
- POST-CONSTRUCTION PHASE**
• FERTILIZING
• WATERING
• MULCHING
• REPAIR OF TREE DAMAGE
• REPAIR OF DEAD LIMBS
• REMOVAL OF TEMPORARY TREE PROTECTION STRUCTURES
• ON-SITE INSPECTION BY APPROVING AUTHORITY

PLANTING SPECIFICATIONS AND NOTES

- LANDSCAPE DRAWINGS ARE FOR LANDSCAPING INFORMATION ONLY. REFER TO SITE PLAN, UTILITY PLAN, SEDIMENT AND EROSION CONTROL PLANS FOR ALL OTHER INFORMATION. THE CONTRACTOR SHALL REVIEW ARCHITECTURAL/ENGINEERING PLANS TO BECOME THOROUGHLY FAMILIAR WITH GRADING AND SURFACE UTILITIES.
 - COORDINATE PLANT MATERIAL LOCATION WITH SITE UTILITIES. UTILITY LOCATIONS ARE APPROXIMATE. EXERCISE CARE WHEN DIGGING IN THESE AREAS. THE CONTRACTOR IS ADVISED OF THE EXISTENCE OF UNDERGROUND UTILITIES ON THE SITE. THEIR EXACT LOCATION SHALL BE VERIFIED IN THE FIELD WITH THE OWNER OR GENERAL CONTRACTOR PRIOR TO THE COMMENCEMENT OF ANY DIGGING OPERATIONS. IN THE EVENT THEY ARE UNCOVERED, THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL DAMAGE TO UTILITIES AND SUCH DAMAGE SHALL NOT RESULT IN ANY ADDITIONAL EXPENSES TO THE OWNER. IF UTILITY LINES ARE ENCOUNTERED IN EXCAVATION OF TREE PITS, OTHER LOCATIONS FOR TREES SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL COMPENSATION. NO CHANGES OF LOCATION SHALL BE MADE WITHOUT APPROVAL OF THE OWNER OR LANDSCAPE ARCHITECT.
 - ALL EQUIPMENT AND TOOLS SHALL BE PLACED SO AS NOT TO INTERFERE OR HINDER THE PEDESTRIAN AND VEHICULAR TRAFFIC FLOW.
- TREE REQUIREMENTS (COLUMBIA OFFICE AND COMMERCIAL DESIGN GUIDELINES)**
- | | | |
|--------------------------------|---|--|
| NUMBER OF ACRES OF DEVELOPMENT | = | 0.7 |
| TREES REQUIRED PER GROSS ACRE | = | 24 |
| TOTAL REQUIRED | = | 17 |
| TOTAL TREES PROPOSED | = | 9 SHADE TREES
7 FLOWERING TREES (EQUIVALENT 3.5 SHADE TREE)
31 EVERGREEN TREES (EQUIVALENT 15.5 SHADE TREES)
229 SHRUBS (EQUIVALENT 22.9 SHADE TREES)
44.5 SHADE TREES |

PLANTING SPECIFICATIONS AND NOTES CONT.

- LANDSCAPE DRAWINGS ARE FOR LANDSCAPING INFORMATION ONLY. REFER TO SITE PLAN, UTILITY PLAN, SEDIMENT AND EROSION CONTROL PLANS FOR ALL OTHER INFORMATION. THE CONTRACTOR SHALL REVIEW ARCHITECTURAL/ENGINEERING PLANS TO BECOME THOROUGHLY FAMILIAR WITH GRADING AND SURFACE UTILITIES.
- COORDINATE PLANT MATERIAL LOCATION WITH SITE UTILITIES. UTILITY LOCATIONS ARE APPROXIMATE. EXERCISE CARE WHEN DIGGING IN THESE AREAS. THE CONTRACTOR IS ADVISED OF THE EXISTENCE OF UNDERGROUND UTILITIES ON THE SITE. THEIR EXACT LOCATION SHALL BE VERIFIED IN THE FIELD WITH THE OWNER OR GENERAL CONTRACTOR PRIOR TO THE COMMENCEMENT OF ANY DIGGING OPERATIONS. IN THE EVENT THEY ARE UNCOVERED, THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ALL DAMAGE TO UTILITIES AND SUCH DAMAGE SHALL NOT RESULT IN ANY ADDITIONAL EXPENSES TO THE OWNER. IF UTILITY LINES ARE ENCOUNTERED IN EXCAVATION OF TREE PITS, OTHER LOCATIONS FOR TREES SHALL BE MADE BY THE CONTRACTOR WITHOUT ADDITIONAL COMPENSATION. NO CHANGES OF LOCATION SHALL BE MADE WITHOUT APPROVAL OF THE OWNER OR LANDSCAPE ARCHITECT.
- ALL EQUIPMENT AND TOOLS SHALL BE PLACED SO AS NOT TO INTERFERE OR HINDER THE PEDESTRIAN AND VEHICULAR TRAFFIC FLOW.
- THE CONTRACTOR SHALL COORDINATE WITH LIGHTING AND IRRIGATION CONTRACTORS REGARDING TIMING OF INSTALLATION OF PLANT MATERIAL. LANDSCAPE IRRIGATION TO BE DESIGNED AND INSTALLED BY CONTRACTOR IF REQUESTED BY THE OWNER.
- THE CONTRACTOR SHALL INSURE THAT HIS WORK DOES NOT INTERRUPT ESTABLISHED OR PROJECTED DRAINAGE PATTERNS.
- THE CONTRACTOR SHALL INSURE ADEQUATE VERTICAL DRAINAGE IN ALL PLANT BEDS AND PLANTERS. MAINTAIN POSITIVE DRAINAGE OUT OF PLANTING BEDS AT A MINIMUM 2% SLOPE. ALL GRADES, DIMENSIONS, AND EXISTING CONDITIONS SHALL BE VERIFIED BY THE CONTRACTOR ON SITE BEFORE CONSTRUCTION BEGINS. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT OR OWNER.
- EVERY POSSIBLE SAFEGUARD SHALL BE TAKEN TO PROTECT BUILDING SURFACES, EQUIPMENT, AND FURNISHINGS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE OR INJURY TO PERSON OR PROPERTY WHICH MAY OCCUR AS A RESULT OF HIS NEGLIGENCE IN THE EXECUTION OF THE WORK.
- THE GENERAL CONTRACTOR IS REQUIRED TO MAKE SURE THAT ANY SOIL STABILIZATION MATERIALS/CONSTRUCTION DEBRIS ETC. IS REMOVED FROM THE LANDSCAPE AREAS PRIOR TO PLANTING.
- THE CONTRACTOR SHALL STAKE ALL MATERIAL LOCATED ON THE SITE FOR REVIEW AND/OR ADJUSTMENT BY THE LANDSCAPE ARCHITECT PRIOR TO PLANTING. ALL LOCATIONS ARE TO BE APPROVED BY THE LANDSCAPE ARCHITECT BEFORE EXCAVATION.
- PLANTS SHALL CONFORM TO CURRENT "AMERICAN STANDARDS FOR NURSERY STOCK" BY LATEST EDITION OF ANSI Z60.1, PARTICULARLY WITH REGARD TO SIZE, GROWTH, SIZE OF BALL, AND DENSITY OF BRANCH STRUCTURE. ALL PLANTS (B&B OR CONTAINER) SHALL BE PROPERLY IDENTIFIED BY WEATHER-PROOF LABELS SECURELY ATTACHED THERE TO BEFORE DELIVERY TO PROJECT SITE. LABELS SHALL IDENTIFY PLANTS BY NAME, SPECIES, AND SIZE. LABELS SHALL NOT BE REMOVED UNTIL THE FINAL INSPECTION BY THE LANDSCAPE ARCHITECT OR AGENT IN CHARGE. PLANT MATERIAL SHALL BE TAGGED AT THE SOURCE BY THE LANDSCAPE ARCHITECT UNLESS THIS REQUIREMENT IS SPECIFICALLY WAIVED. NO SUBSTITUTIONS SHALL BE MADE WITHOUT WRITTEN CONSENT OF THE OWNER OR LANDSCAPE ARCHITECT. ALL PLANT MATERIAL SHALL BE BALLED AND BURLAPPED (B&B) OR CONTAINER GROWN UNLESS OTHERWISE NOTED. ALL PLANT MATERIALS SHALL BE FULL HEAVY SPECIMENS. PLANTS SHALL BE HIGH QUALITY NURSERY GROWN AND SHALL BE HEALTHY AND VIGOROUS, TYPICAL OF THEIR SPECIES AND VARIETY; AND HAVE WELL-DEVELOPED BRANCHES, DENSELY FOLIATED, AND VIGOROUS ROOT SYSTEMS.
- TREES SHALL BE FRESHLY DUG AND NURSERY GROWN. THEY SHALL HAVE BEEN GROWN UNDER CLIMATIC CONDITIONS SIMILAR TO THOSE IN THE LOCALITY OF THE PROJECT OR PROPERLY ACCLIMATED TO CONDITIONS OF THE LOCALITY OF THE PROJECT.
- TREES SHALL BE FREE FROM DEFECTS AND INJURIES AND CERTIFIED BY APPROPRIATE FEDERAL AND STATE AUTHORITIES TO BE FREE OF DISEASES AND INSECT INFESTATIONS.
- PLANT MATERIAL AVAILABILITY MAY VARY AT THE TIME OF CONSTRUCTION. ANY SUBSTITUTIONS ARE TO BE OF EQUIVALENT OF SPECIES, QUANTITY, SIZE AND LOCATION. SIZE SUBSTITUTIONS MUST BE THE SAME SIZE (OR LARGER), AND MUST BE APPROVED BY LANDSCAPE ARCHITECT BEFORE INSTALLATION.
- QUANTITIES OF TREES, EVERGREENS, SHRUBS AND GROUNDCOVER NOTED ON THE PLANT LIST ARE BASED UPON THE GRAPHIC SYMBOLS SHOWN ON THE DRAWINGS. IF THERE IS A DISCREPANCY BETWEEN GRAPHIC SYMBOLS AND QUANTITIES SHOWN IN THE PLANT LIST, THE GREATER QUANTITY SHALL APPLY. CONTACT OWNER'S REPRESENTATIVE IF A DISCREPANCY IS FOUND BETWEEN THE QUANTITIES NOTED IN THE PLANT LIST AND THE SYMBOL COUNT OF PLANT MATERIALS SHOWN ON THE DRAWINGS.
- THE LANDSCAPE ARCHITECT OR OWNER SHALL HAVE THE RIGHT, AT ANY STAGE OF THE OPERATIONS, TO REJECT ANY AND ALL WORK AND MATERIAL WHICH, IN HIS OPINION, DOES NOT MEET THE REQUIREMENTS OF THESE PLANS AND SPECIFICATIONS. ALL REJECTED MATERIALS SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR STABILITY AND CONDITIONS OF ALL TREES AND SHRUBS AND SHALL BE LEGALLY LIABLE FOR ANY DAMAGE CAUSED BY INSTABILITY OF ANY PLANT MATERIALS. TREE STAKES SHALL BE SET AT LEAST TWO FEET (2') INTO THE GROUND. TREE STAKING AND GUYING SHALL BE DONE PER DETAILS. CONTRACTOR SHALL ENSURE THAT TREES REMAIN PLUMB AND UPRIGHT FOR THE DURATION OF THE GUARANTEE PERIOD.
- ALL PLANT MATERIAL SHALL BE GUARANTEED BY THE PROPERTY OWNER OR INSTALLER FOR 12 MONTHS AFTER FINAL INSPECTION AND ACCEPTANCE OF THE WORK. PLANTS SHALL BE ALIVE AND IN SATISFACTORY GROWING CONDITION AT THE END OF THE GUARANTEE PERIOD. THE PLANT MATERIAL SHALL BE GUARANTEED AGAINST DEFECTS, UNSATISFACTORY GROWTH, DISEASE OR DEATH. UNSATISFACTORY, UNHEALTHY, DYING OR DEAD PLANT MATERIAL (IN THE OPINION OF THE LANDSCAPE ARCHITECT) SHALL BE REPLACED WITH THE SAME SIZE AND SPECIES. IT SHALL BE THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR TO ADEQUATELY AND PROPERLY MAINTAIN THE LANDSCAPED AREAS, WHICH SHALL INCLUDE MOWING OF TURF, WATERING, MULCHING, FERTILIZING, CLEANING OF WEEDS AND DEBRIS, PRUNING AND TRIMMING, REPLACEMENT OF DEAD OR DISEASED PLANTINGS, AND ANY OTHER CARE NECESSARY TO MAINTAIN HEALTHY GROWTH FOR THE WARRANTY PERIOD. THEREAFTER, THE PROPERTY OWNER SHALL BE RESPONSIBLE FOR MAINTAINING ALL PLANT MATERIAL IN A HEALTHY CONDITION AT ALL TIMES. DEAD OR DISEASED PLANTS MAY BE REMOVED BUT SHALL BE REPLACED WITH NEW MATERIAL BY THE OWNER WITHIN ONE GROWING SEASON. THE CONTRACTOR MUST BE ABLE TO PROVIDE CONTINUED MAINTENANCE IF REQUESTED BY THE OWNER.
- UPON COMPLETION OF ALL LANDSCAPING, AN ACCEPTANCE OF THE WORK SHALL BE HELD. THE CONTRACTOR SHALL NOTIFY THE LANDSCAPE ARCHITECT OR OWNER FOR SCHEDULING THE INSPECTION AT LEAST SEVEN (7) DAYS PRIOR TO THE ANTICIPATED INSPECTION DATE.
- UPON FINAL ACCEPTANCE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO REMOVE ALL GUY WIRES AND STAKING.
- THE CONTRACTOR IS RESPONSIBLE FOR TESTING PROJECT SOILS. THE CONTRACTOR IS TO PROVIDE A CERTIFIED SOILS REPORT TO THE OWNER. THE CONTRACTOR SHALL VERIFY THAT THE SOILS ON SITE ARE ACCEPTABLE FOR THE PROPER GROWTH OF THE PROPOSED PLANT MATERIAL. SHOULD THE CONTRACTOR FIND POOR SOIL CONDITIONS, THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE SOIL AMENDMENTS AS NECESSARY. THESE AMENDMENTS SHALL INCLUDE, BUT NOT BE LIMITED TO, FERTILIZERS, LIME, AND TOPSOIL. PROPER PLANTING SOILS MUST BE VERIFIED PRIOR TO PLANTING OF MATERIALS. SOIL PH AND FERTILITY SHALL BE BETWEEN 6.0 AND 7.0.
A. ORGANIC MATTER CONTENT: COMPOST SHALL BE ADDED TO TOPSOIL IN A 70:30 RATIO OF TOPSOIL TO COMPOST.
B. SOIL COMPACTION: OPTIMAL IS <1.65g/CUBIC CM.
- THE CONTRACTOR IS RESPONSIBLE FOR THE REMOVAL AND DISPOSAL OF ALL RUBBISH, TRASH, DEBRIS, AND ORGANIC MATERIAL IN A LAWFUL MANNER. THE CONTRACTOR SHALL DISPOSE OF STUMPS AND MAJOR ROOTS OF ALL PLANTS TO BE REMOVED. ANY DEPRESSIONS CAUSED BY REMOVAL OPERATIONS SHALL BE REPAIRED WITH FERTILE, FRAGILE SOIL PLACED AND COMPACTED SO AS TO REESTABLISH PROPER GRADE FOR NEW PLANTING AND/OR LAWN AREAS.
- ALL PROPOSED TREES TO BE INSTALLED EITHER ENTIRELY IN OR ENTIRELY OUT OF PLANTING BEDS. PLANTING BED LINES ARE NOT TO BE OBTSTRUCTED. ALL SHRUBS AND GROUNDCOVER AREAS SHALL BE PLANTED IN CONTINUOUS PREPARED BED AND TOP DRESSED WITH SHREDDED HARDWOOD MULCH.
- ALL TREE PITS, SHRUB BEDS, AND PREPARED PLANTING BEDS ARE TO BE COMPLETELY EXCAVATED IN ACCORDANCE WITH THE PLANTING DETAILS. CONTRACTOR SHALL DIG PLANTING PITS AND BEDS, AMEND SOIL (AS SPECIFIED), BACKFILL PLANTING AREAS, AND INSTALL PLANTS ONLY WHEN SOIL CONDITIONS ARE NOT WET, AND WHEN MIXING AND BACKFILLING WILL NOT ADVERSELY AFFECT SOIL STRUCTURE.
- CONTRACTOR SHALL SLIGHTLY ADJUST PLANT LOCATIONS IN THE FIELD AS NECESSARY TO BE CLEAR OF DRAINAGE SWALES AND UTILITIES. TREES SHALL BE LOCATED A MINIMUM OF FIVE FEET (5') FROM SEWER/WATER CONNECTIONS. CONTRACTOR SHALL BE LIABLE FOR DAMAGE TO ANY AND ALL PUBLIC AND PRIVATE UTILITIES, WATER AND SEWER LINES.
- TREES AND SHRUBS SHALL BE PLANTED DURING ACCEPTABLE PLANTING SEASONS:
SEASON B&B CONTAINER B&B CONTAINER
SPRING 3/1-5/1 3/1-5/1 3/15-5/1 3/15-5/1
FALL 10/1-12/31 9/1-12/31 9/1-11/15 9/1-11/15
- ALL PLANT BEDS SHALL BE TOP DRESSED WITH A MINIMUM 2" AND A MAXIMUM OF 3" LAYER OF MULCH WITHIN TWO DAYS AFTER PLANTING. THIS SHALL BE SHREDDED HARDWOOD BARK, AND SHALL COVER ENTIRELY THE PLANTING BED. MULCH SHALL HAVE BEEN SHREDDED WITHIN THE LAST SIX MONTHS. ALL TREES PLANTED IN TURF SHALL BE INSTALLED WITH A 3" DIAMETER HARDWOOD MULCH RING, KEEP MULCH 6" FROM TREE TRUNK. PLANTS SHALL BE WATERED TO THE POINT OF OVERFLOW OR SATURATION TWICE WITHIN 48 HOURS OF PLANTING.
- ALL PLANTING BEDS ADJACENT TO LAWN, SOD, OR SEEDDED AREAS SHALL BE SPADE EGGED.
- WHERE THE CONDITION EXISTS THAT BALLED AND BURLAPPED TREES ARE DELIVERED IN WIRE BASKETS, THE WIRE BASKETS SHALL BE CUT DOWN THE SIDE OF EACH MESH AND PEELLED AWAY FROM THE ROOTBALL. NO PORTION OF THE WIRE BASKET SHALL REMAIN INTACT AROUND THE SIDES OF THE ROOTBALL OR EXTEND ABOVE FINISHED GRADE. THE CROWN OF ROOT BALL SHALL BE SET SO THAT THE TOP 1/8 OF THE ROOT BALL SITS ABOVE FINISH GRADE.
- ALL AREAS NOT COVERED BY PAVING, PLANTING BEDS, OR SPECIFIED OTHERWISE ON THE LANDSCAPE PLAN SHALL BE PLANTED WITH SOD OR AS NOTED ON THE EROSION AND SEDIMENT CONTROL PLAN. DISTURBED AREAS SHALL BE SOODED WORKING SIMILAR IN SIZE AND INTENT TO THAT INDICATED FOR THIS PROJECT AND WITH A RECORD OF SUCCESSFUL SOD ESTABLISHMENT. THE CONTRACTOR SHALL MAINTAIN AN EXPERIENCED FULL-TIME SUPERVISOR AT THE PROJECT SITE DURING TIMES WHEN SOODING WORK IS IN PROGRESS. SOODED LAWNS WILL BE ACCEPTABLE PROVIDED THE SOD GROWERS REQUIREMENTS, INCLUDING MAINTENANCE, HAVE BEEN MET, AND A HEALTHY, WELL-ROOTED, EVEN COLORED, UNIFORM STAND OF GRASS IS ESTABLISHED. THE GRASS WILL BE FREE OF WEEDS, OPEN JOINTS, BARE AREAS, AND SURFACE IRREGULARITIES.
- SOD:
HARVEST AND HANDLE SOD ACCORDING TO THE REQUIREMENTS OF THE TURF GRASS PRODUCERS INTERNATIONAL "GUIDELINES AND SPECIFICATIONS TO TURF GRASS SOODING" AND THE ADDITIONAL REQUIREMENTS NOTED HEREIN. THE LANDSCAPE CONTRACTOR SHALL ENGAGE AN EXPERIENCED SOD WORKER WHO HAS COMPLETED SOODING WORK SIMILAR IN SIZE AND INTENT TO THAT INDICATED FOR THIS PROJECT AND WITH A RECORD OF SUCCESSFUL SOD ESTABLISHMENT. THE CONTRACTOR SHALL MAINTAIN AN EXPERIENCED FULL-TIME SUPERVISOR AT THE PROJECT SITE DURING TIMES WHEN SOODING WORK IS IN PROGRESS. SOODED LAWNS WILL BE ACCEPTABLE PROVIDED THE SOD GROWERS REQUIREMENTS, INCLUDING MAINTENANCE, HAVE BEEN MET, AND A HEALTHY, WELL-ROOTED, EVEN COLORED, UNIFORM STAND OF GRASS IS ESTABLISHED. THE GRASS WILL BE FREE OF WEEDS, OPEN JOINTS, BARE AREAS, AND SURFACE IRREGULARITIES.



APPROVED: DEPARTMENT OF PLANNING AND ZONING

DATE: 5/10/22

DATE: 6/14/22

DATE: 6/14/22

APPROVED PLANNING BOARD HOWARD COUNTY

DATE: 08/20/2020

DATE: 6/14/22

SEGMENTAL RETAINING WALL SPECIFICATIONS

PART 1 - GENERAL

1.1 WORK INCLUDES

FURNISHING AND INSTALLING SEGMENTAL RETAINING WALL UNITS, GEGRID REINFORCEMENT, WALL FILL, AND BACKFILL TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS AND AS SPECIFIED HEREIN AT THE PROJECT SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS, INCLUDING BUT NOT LIMITED TO, PERMITS FOR CONSTRUCTION OF SEGMENTAL RETAINING WALLS, ALL EXISTING MATERIALS, EQUIPMENT, AND LABOR REQUIRED FOR CONSTRUCTION OF SEGMENTAL RETAINING WALLS. ALL EXISTING AND PROPOSED CONSTRUCTION AND SITE GRADING INFORMATION WAS BASED ON THE SITE DEVELOPMENT PLAN - SNOWDEN CROSSING FINAL GRADING PLAN, DATED JULY 29, 2020, PREPARED AND PROVIDED BY MORRIS AND RITCHE ASSOCIATES, INC. SUBSURFACE INFORMATION WAS REFERENCED FROM THE REPORT OF SUBSURFACE EXPLORATION, LABORATORY TESTING, AND GEOTECHNICAL ENGINEERING ANALYSIS, DATED NOVEMBER 9, 2018, PREPARED BY ECS MID-ATLANTIC, LLC.

1.2 REFERENCE STANDARDS

- ASTM C90-75 (1981 REV) - HOLLOW LOAD BEARING MASONRY UNITS.
- ASTM C140-75 (1981 REV) - SAMPLING AND TESTING CONCRETE MASONRY UNITS.
- ASTM C145-75 (1981 REV) - SOLID LOAD BEARING CONCRETE MASONRY UNITS.
- GEOSYNTHETIC RESEARCH INSTITUTE (GRI), GRI-664 - DETERMINATION OF LONG TERM DESIGN STRENGTH OF GEOTEXTILES.
- ASTM D 638 - TEST METHOD FOR TENSILE PROPERTIES OF PLASTIC.
- ASTM D 1248 - SPECIFICATION OF POLYETHYLENE PLASTICS MOLDING AND EXTRUSION MATERIALS.
- ASTM D 4218 - TEST METHOD FOR CARBON BLACK CONTENT IN POLYETHYLENE COMPOUNDS BY THE MUFFLE FURNACE TECHNIQUE.
- ASTM D 3034 - SPECIFICATION FOR POLYVINYL CHLORIDE (PVC) PIPE.
- ASTM C 1372 - SPECIFICATIONS FOR SEGMENTAL RETAINING WALL UNITS.

1.3 DELIVERY, STORAGE AND HANDLING

- CONTRACTOR SHOULD CHECK THE MATERIALS UPON DELIVERY TO ASSURE THAT PROPER MATERIAL HAS BEEN RECEIVED.
- CONTRACTOR SHOULD PREVENT EXCESSIVE MUD, WET CEMENT, EPOXY, AND LIKE MATERIALS WHICH MAY AFFIX THEMSELVES, FROM COMING IN CONTACT WITH THE MATERIALS.
- GEOTEXTILES SHOULD BE STORED ABOVE -20° F.
- CONTRACTOR SHOULD PROTECT THE MATERIALS FROM DAMAGE. DAMAGED MATERIAL SHOULD NOT BE INCORPORATED INTO THE REINFORCED RETAINING WALL.

1.4 SUBMITTALS/CERTIFICATION

THE CONTRACTOR SHALL SUBMIT A MANUFACTURER'S CERTIFICATION, PRIOR TO THE START OF THE WORK, THAT THE RETAINING WALL SYSTEM COMPONENTS MEET THE REQUIREMENTS OF ASTM C 1372 AND OTHER REQUIREMENTS SPECIFIED HEREIN. THIS CERTIFICATION SHOULD BE PROVIDED TO THE GEOTECHNICAL ENGINEER FOR REVIEW AND APPROVAL PRIOR TO WALL CONSTRUCTION.

PART 2 - PRODUCTS

2.1 DEFINITIONS

- GEOTRID IS A HIGH DENSITY POLYETHYLENE, POLYESTER, OR POLYPROPYLENE GRID, SPECIFICALLY FABRICATED FOR USE AS A SOIL REINFORCEMENT.
- CONCRETE RETAINING WALL UNITS ARE AS DETAILLED ON THE DRAWINGS AND AS SPECIFIED HEREIN.
- GEOSYNTHETIC DRAINAGE COMPOSITES ARE POLYETHYLENE NET STRUCTURE WITH NON-WOVEN GEOTEXTILES BONDED TO BOTH SIDES.
- REINFORCED BACKFILL IS THE SOIL WHICH IS USED AS FILL FOR THE REINFORCED SOIL MASS.
- FOUNDATION SOIL IS THE IN-SITU SOIL OR CONTROLLED COMPACTED FILL PLACED BELOW THE BOTTOM OF THE RETAINING WALL AND GEOTRID ZONE.

2.2 MATERIALS

THE CONTRACTOR SHOULD SUBMIT MANUFACTURER'S CATALOG AND SAMPLES OF THE PROPOSED MATERIALS FOR APPROVAL BY THE PROJECT GEOTECHNICAL ENGINEER A MINIMUM OF SEVEN DAYS BEFORE THE START OF CONSTRUCTION. MATERIALS SHOULD BE TRANSPORTED TO THE SITE ONLY AFTER APPROVAL OF THE PROPOSED MATERIALS BY THE PROJECT GEOTECHNICAL ENGINEER.

A. CONCRETE UNITS

- MASONRY UNITS FOR THE RETAINING WALL SHOULD BE STRAIGHT OR 3-PLANE FACED KEYSTONE STANDARD III RETAINING UNITS. SUBSTITUTION OF OTHER CONCRETE UNITS OF SIMILAR DEPTH MAY BE ALLOWED WITH THE PRIOR APPROVAL OF THE GEOTECHNICAL ENGINEER.
- CONCRETE WALL UNITS SHOULD HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI, IN ACCORDANCE WITH ASTM C-90. THE CONCRETE SHOULD HAVE ADEQUATE FREEZE/THAW PROTECTION WITH A MAXIMUM MOISTURE ABSORPTION OF 6 PERCENT.
- MODULAR CONCRETE MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C 1372 - STANDARD SPECIFICATIONS FOR SEGMENTAL RETAINING WALL UNITS.
- THE UNITS SHALL PASS 100 FREEZE/THAW CYCLES IN WATER WITH LESS THAN 1% WEIGHT LOSS IN ACCORDANCE WITH ASTM C 1372.
- EXTERIOR DIMENSIONS MAY VARY. UNITS ARE REQUIRED TO HAVE A MINIMUM OF ONE SQUARE FOOT OF FACE AREA EACH.
- UNITS SHOULD HAVE ANGLED SIDES AND BE CAPABLE OF ATTAINING CONCAVE AND CONVEX ALIGNMENT CURVES IN ACCORDANCE WITH THE INTERLOCKING WITH NON-CORROSIVE REINFORCED FIBERGLASS PINS.
- UNITS SHOULD BE INTERLOCKED AS TO PROVIDE A MAXIMUM OF 1 1/8" INCH OF SETBACK PER BLOCK, WHERE REQUIRED.

B. LEVELING PAD

MATERIAL FOR LEVELING PAD/FOOTING SHOULD CONSIST OF COMPACTED FREE-DRAINING COARSE AGGREGATES MEETING THE REQUIREMENTS OF GRADED AGGREGATE BASE PER MARYLAND STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS. A MINIMUM OF 6 INCHES DEEP AND 30 INCHES WIDE COMPACTED LEVELING PAD IS REQUIRED WHERE STANDARD III WALL UNITS ARE USED.

C. FIBERGLASS CONNECTING PINS

- THERMOSET ISOPHTHALIC POLYESTER RESIN PULTRUDED FIBERGLASS REINFORCEMENT RODS, A MINIMUM ONE-HALF INCH IN DIAMETER.
- PINS SHOULD HAVE A MINIMUM FLEXURAL STRENGTH OF 128,000 PSI AND SHORT BEAM SHEAR OF 6400 PSI.
- FOR SUBSTITUTE CONCRETE UNITS, USE OF OTHER COMPATIBLE CONNECTOR SYSTEMS MAY BE ALLOWED WITH THE PRIOR APPROVAL OF THE GEOTECHNICAL ENGINEER.

D. GEOTRID

GEOTRID SHOULD BE MIRAGRID 3XT OR EQUIVALENT AS APPROVED BY THE GEOTECHNICAL ENGINEER. THE GEOTRID SHOULD HAVE AN ALLOWABLE STRENGTH OF 2.104 POUNDS PER FOOT. THE ALLOWABLE STRENGTH IS DEFINED AS THE ULTIMATE STRENGTH DIVIDED BY REDUCTION FACTORS FOR CREEP, DURABILITY, AND INSTALLATION DAMAGE.

E. DRAINAGE FILL

DRAINAGE FILL TO BE PLACED DIRECTLY BEHIND THE CONCRETE WALL UNITS SHOULD CONSIST OF NO. 57 STONE. THE DRAINAGE FILL SHALL BE PLACED IN CONTROLLED LIFTS IN CONJUNCTION WITH THE PLACEMENT AND FILLING OF THE CONCRETE WALL UNITS. THE DRAINAGE FILL SHALL BE WRAPPED IN FILTER FABRIC PRIOR TO THE PLACEMENT OF REINFORCED BACKFILL MATERIALS BEHIND THE WALL.

F. REINFORCED BACKFILL

REINFORCED BACKFILL SOILS SHOULD BE NON-PLASTIC, CONTROLLED FILL MEETING THE REQUIREMENTS OF AASHTO A-2-4, OR MORE GRANULAR. HOWEVER, THE USE OF POORLY-GRADED SANDS SHOULD BE AVOIDED IN THE REINFORCED ZONE. BASED ON THE AVAILABLE SUBSURFACE INFORMATION, OBTAINED FROM NEARBY LOTS, SUITABLE MATERIALS MAY BE AVAILABLE FROM ON-SITE EXCAVATIONS. HOWEVER, SEGREGATION AND STOCKPILING OF SUITABLE MATERIALS WILL BE REQUIRED, IF ADEQUATE QUANTITIES OF THIS MATERIAL ARE NOT AVAILABLE ON-SITE. IMPORTED BACKFILL SHOULD MEET THE ABOVE REQUIREMENTS AND SHOULD BE APPROVED BY THE GEOTECHNICAL ENGINEER.

G. CONTROLLED FILL

CONTROLLED FILL SOILS TO BE PLACED OUTSIDE THE DRAINAGE FILL SHOULD CONSIST OF ON-SITE OR BORROW SOILS MEETING THE REQUIREMENTS OF AASHTO A-4 OR MORE GRANULAR. ALL FILL MATERIALS PROPOSED TO BE PLACED BEHIND THE DRAINAGE FILL SHOULD BE PLACED AS CONTROLLED FILL COMPACTED TO 95 PERCENT OF MAXIMUM DRY DENSITY IN ACCORDANCE WITH THE STANDARD PROCTOR, ASTM D-698.

H. LOW-PERMEABILITY SOIL

LOW-PERMEABILITY SOILS TO BE PLACED AT THE TOP OF THE WALL WHERE SPECIFIED SHOULD CONSIST OF SANDY, SILTY OR CLAYEY SOILS MEETING THE REQUIREMENTS OF ML, CL, SM, OR SC WITH A MINIMUM OF 25% PASSING THE #200 SIEVE.

I. DRAINAGE PIPE

THE DRAINAGE PIPES SHOULD BE PERFORATED OR SLOTTED PVC PIPE MANUFACTURED IN ACCORDANCE WITH ASTM D-3034.

J. FILTER FABRIC

FILTER FABRIC SHOULD BE NON-WOVEN, POLYPROPYLENE GEOTEXTILE, MIRAFI 140 N MANUFACTURED BY TENCATE GEOSYNTHETICS OR APPROVED EQUIVALENT.

PART 3 - EXECUTION

A. EXCAVATION

- THE CONTRACTOR SHOULD EXCAVATE TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS. UNDER NO CIRCUMSTANCES SHOULD THE EXCAVATION LINES AND GRADES BE EXCEEDED, EXCEPT WITH OWNER'S APPROVAL. THE CONTRACTOR SHOULD PROTECT THE EXCAVATION FROM SLOUGHING BY PLACING A MEMBRANE OVER THE FACE OF THE EXCAVATION, OR OTHER APPROPRIATE METHODS AS NECESSARY.
- PRIOR TO RETAINING WALL CONSTRUCTION AND THE PLACEMENT OF FILL, THE EXISTING UTILITIES IN FRONT OF WALL 1 AND BEHIND WALL 2 SHOULD BE RELOCATED TO PREVENT CONTINGENTIAL DAMAGE DURING EXCAVATION.
- EXCAVATIONS SHOULD BE SLOPED OR OTHERWISE SUPPORTED IN ACCORDANCE WITH OCCUPATION SAFETY AND HEALTH ADMINISTRATION (OSHA) AND OTHER LOCAL AND STATE REGULATIONS.

B. FOUNDATION SUBGRADE PREPARATION

- FOUNDATION SOIL SHOULD BE EXCAVATED AS REQUIRED FOR INSTALLATION OF LEVELING PAD, GEOTRID AND OTHER ELEMENTS AND AS SHOWN ON THE CONSTRUCTION DRAWINGS.
- FOUNDATION SOIL SHOULD BE EXAMINED BY THE ENGINEER TO ENSURE THAT THE ACTUAL FOUNDATION SOIL STRENGTH MEETS OR EXCEEDS ASSUMED DESIGN STRENGTH. SOILS NOT MEETING REQUIRED STRENGTH SHOULD BE REMOVED AND REPLACED WITH CONTROLLED, COMPACTED MATERIAL AS AN ALTERNATIVE TO CONTROLLED FILL WITHIN AREAS THAT REQUIRE OVEREXCAVATION. THE EMBEDMENT DEPTH OF THE WALL MAY BE INCREASED SUCH THAT THE WALL FOUNDATION IS BEARING ON A STABLE SUBGRADE.
- OVER-EXCAVATED AREAS SHOULD BE FILLED WITH SELECT AND APPROVED MATERIAL AND COMPACTED TO 95 PERCENT OF MAXIMUM DRY DENSITY IN ACCORDANCE WITH THE STANDARD PROCTOR, ASTM D-698.
- ALLOWABLE BEARING PRESSURE FOR NATURAL AND CONTROLLED, COMPACTED FILL SOILS SHOULD BE AS SPECIFIED IN PART 5.
- ANY FILLS REQUIRED TO ESTABLISH SLOPING SURFACES IN FRONT OF THE WALLS SHOULD CONSIST OF CONTROLLED FILL AND SHOULD BE PLACED, COMPACTED, AND FIELD TESTED IN ACCORDANCE WITH THE REQUIREMENTS SPECIFIED HEREIN.

C. LEVELING PAD

- THE LEVELING PAD SHOULD BE PLACED AS SHOWN ON THE CONSTRUCTION DRAWINGS WITH A MINIMUM THICKNESS OF 6 INCHES.
- LEVELING PAD MATERIALS SHOULD BE INSTALLED UPON UNDISTURBED IN-SITU SOILS OR CONTROLLED, COMPACTED BACKFILL.
- LEVELING PAD SHOULD BE PREPARED TO ENSURE COMPLETE CONTACT OF RETAINING WALL UNIT WITH BASE. GAPS SHOULD NOT BE ALLOWED.

D. UNIT INSTALLATION

- FIRST COURSE OF CONCRETE WALL UNITS SHOULD BE PLACED ON THE LEVELING PAD. THE UNITS SHOULD BE CHECKED FOR LEVEL AND ALIGNMENT. THE FIRST COURSE IS THE MOST IMPORTANT TO PROVIDE ACCURATE AND ACCEPTABLE RESULTS.
- ENSURE THAT UNITS ARE IN FULL CONTACT WITH BASE.
- UNITS ARE PLACED SIDE BY SIDE FOR FULL LENGTH OF WALL ALIGNMENT. ALIGNMENT MAY BE DONE BY MEANS OF A STRING LINE OR OFFSET FROM BASE LINE.
- INSTALL FIBERGLASS CONNECTING PIN.
- LAY UP EACH COURSE ENSURING THAT THE CONNECTING PINS ARE INSERTED THROUGH FRONT SLOT OF THE UNIT, AND INTO THE RECEIVING SLOT IN THE COURSE BENEATH. REPEAT PROCEDURE TO THE EXTENT OF WALL HEIGHT.
- AT THE END OF EACH COURSE WHERE THE WALL CHANGES ELEVATION, UNITS SHOULD BE TURNED INTO THE BACKFILL. UNITS SHOULD BE LAID AS TO CREATE THE MINIMUM RADIUS POSSIBLE, UNLESS OTHERWISE SHOWN ON THE DRAWINGS. A MINIMUM OF ONE UNIT SHOULD BE INSTALLED INTO THE GRADE. ONLY THE FRONT FACE OF THE UNITS SHOULD BE VISIBLE FROM THE SIDE OF THE WALL.
- CONVEX AND CONCAVE CURVES SHOULD BE MADE USING COMPACT UNITS.
- CAP UNITS SHOULD BE INSTALLED AND BONDED WITH CONSTRUCTION ADHESIVE OR EPOXY CEMENT AS REQUIRED BY MANUFACTURER.
- CONTRACTOR SHOULD PROVIDE POSITIVE DRAINAGE FOR THE BACK OF THE RETAINING WALL DURING CONSTRUCTION.

E. GEOTRID INSTALLATION

- THE GEOTRID SOIL REINFORCEMENT SHOULD BE LAID HORIZONTALLY ON COMPACTED BACKFILL, CONNECTED TO THE CONCRETE WALL UNITS. HOOK GRID OVER THE FIBERGLASS CONNECTING PIN, PULL TAUT, AND ANCHOR BEFORE BACKFILL IS PLACED ON THE GEOTRID.
- SLACK IN GEOTRID AT THE WALL UNIT CONNECTIONS SHOULD BE REMOVED IN A MANNER, AND TO SUCH A DEGREE, AS APPROVED BY THE ENGINEER.
- GEOTRID SHOULD BE LAID AT THE PROPER ELEVATION AND ORIENTATION AS SHOWN ON THE CONSTRUCTION DRAWINGS OR AS DIRECTED BY THE ENGINEER.
- CORRECT ORIENTATION (ROLL DIRECTION) OF THE GEOTRID SHOULD BE VERIFIED BY THE CONTRACTOR.
- GEOTRID SHOULD BE SECURED IN-PLACE WITH STAPLES, PINS, SAND BAGS, OR BACKFILL AS REQUIRED BY FILL PROPERTIES. FILL PLACEMENT PROCEDURES, OR WEATHER CONDITIONS, OR AS DIRECTED BY THE ENGINEER.
- OVERLAPS.
 - UNAXIAL GEOTRID DOES NOT NEED TO BE OVERLAPPED IN THE ACROSS THE ROLL DIRECTION, EXCEPT TO CONTAIN THE FILL AT THE SLOPE FACE WHEN WRAP-AROUND FACING IS USED. UNAXIAL GRID SHOULD BE OVERLAPPED 48" IN THE ROLLED DIRECTION.
 - A LAYER OF SOIL A MINIMUM OF 4 INCHES IN THICKNESS SHOULD BE SPREAD BETWEEN UNAXIAL GEOTRID LAYERS IN THE AREA TO BE OVERLAPPED, OR AS DIRECTED.

F. FILL PLACEMENT

- WALL BACKFILL MATERIAL SHOULD BE PLACED IN NO MORE THAN 8-INCH LIFTS AND COMPACTED TO 95 PERCENT OF THE STANDARD PROCTOR (ASTM D-698).
- BACKFILL SHOULD BE PLACED, SPREAD, AND COMPACTED IN SUCH A MANNER THAT MINIMIZES THE DEVELOPMENT OF WRINKLES IN AND/OR MOVEMENT OF THE GEOTRID.
- ONLY HAND-OPERATED COMPACTION EQUIPMENT SHOULD BE ALLOWED WITHIN 4 FEET OF THE WALL FACE.
- BACKFILL SHOULD BE PLACED FROM THE WALL OUTWARD TO ENSURE THAT THE GEOTRID REMAINS TAUT.
- TRACKED CONSTRUCTION EQUIPMENT SHOULD NOT BE OPERATED BEHIND OR ABOVE THE WALL.
- RUBBER-TIRED EQUIPMENT MAY PASS OVER THE GEOTRID REINFORCEMENT AT SLOW SPEEDS, LESS THAN 10 MPH. SUDDEN BRAKING AND SHARP TURNING SHOULD BE AVOIDED.
- PLACE FILTER FABRIC BETWEEN THE UNIT CORE FILL AND THE REINFORCED BACKFILL AS SHOWN ON PLANS. THE FILTER FABRIC SHOULD BE EMBEDDED A MINIMUM OF TWO FEET INTO THE REINFORCED FILL.

G. DRAINAGE

- DRAINAGE FILL SHOULD BE PLACED BEHIND THE WALL TO THE LIMITS SHOWN. THE DRAINAGE FILL SHOULD BE A MINIMUM OF 12-INCHES THICK. THE DRAINAGE FILL SHOULD BE NO. 57 STONE. THE DRAINAGE FILL SHOULD BE WRAPPED IN FILTER FABRIC (MIRAFI 140N OR EQUAL) AS SHOWN ON THE DRAWINGS.
- POSITIVE DRAINAGE SHOULD BE MAINTAINED DURING AND AFTER CONSTRUCTION. SOILS WITHIN THE REINFORCED ZONE THAT BECOME WET DURING CONSTRUCTION SHOULD BE DRIED TO OPTIMUM MOISTURE OR REMOVED.
- INSTALL THE PERFORATED DRAINAGE PIPES AND LATERAL DRAINAGE PIPES INCREMENTALLY ALONG WITH THE INSTALLATION OF CONCRETE UNITS AND PLACEMENT OF FILL.

PART 4 - CONSTRUCTION OBSERVATION AND TESTING

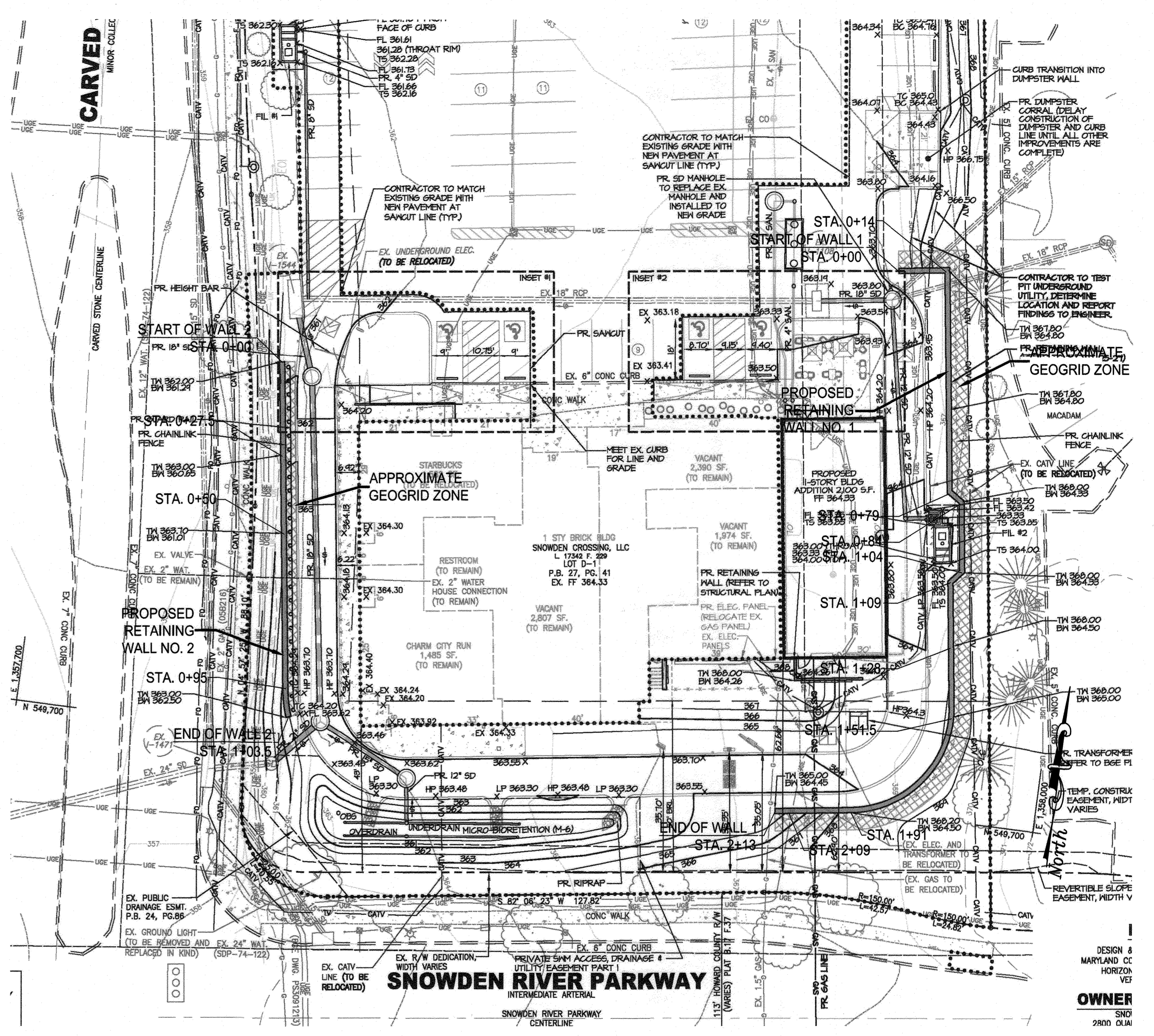
- RETAINING WALLS SHOULD ONLY BE CONSTRUCTED UNDER THE OBSERVATION OF A REGISTERED PROFESSIONAL ENGINEER AND A CERTIFIED (INSET, WACL, OR EQUIVALENT) SOILS TECHNICIAN.
- THE REQUIRED BEARING PRESSURE BENEATH THE FOOTING OF THE WALL SHOULD BE VERIFIED IN THE FIELD BY A CERTIFIED SOILS TECHNICIAN. TESTING DOCUMENTATION MUST BE PROVIDED TO THE GEOTECHNICAL ENGINEER PRIOR TO THE START OF WALL CONSTRUCTION. THE REQUIRED TEST PROCEDURE SHALL BE THE DYNAMIC CONE PENETROMETER (DCP) TEST ASTM STP-399.
- THE SUITABILITY OF FILL MATERIAL SHOULD BE CONFIRMED BY THE ON-SITE SOILS TECHNICIAN.

PART 5 - DESIGN CRITERIA

- IT SHOULD BE NOTED THAT THE GEOTECHNICAL EXPLORATIONS WERE PERFORMED FOR THE PROJECT SITE BY ECS MID-ATLANTIC, LLC, AND THE SOIL PROPERTIES USED FOR DESIGN WERE ESTIMATED BASED ON THESE EXPLORATIONS.
- REQUIRED MINIMUM ALLOWABLE FOUNDATION BEARING PRESSURE IS 2,000 PSF.
- DESIGN INTERNAL FRICTION ANGLE FOR REINFORCED SOIL = 30 DEGREES
- DESIGN INTERNAL FRICTION ANGLE FOR CONTROLLED FILL SOIL = 28 DEGREES.
- DESIGN MOIST UNIT WEIGHT FOR REINFORCED SOIL AND CONTROLLED FILL SOIL = 120 PCF.
- FOUNDATION SOIL INTERNAL FRICTION ANGLE = 28 DEGREES AND COHESION = 0 PSF.
- FOUNDATION SOIL DESIGN MOIST UNIT WEIGHT = 120 PCF.
- RETAINING WALLS ARE NOT DESIGNED TO RESIST HYDROSTATIC PRESSURE.

PURPOSE STATEMENT

THE PURPOSE OF THE REVISED SITE DEVELOPMENT PLAN IS TO CONSTRUCT A 2,100 SF BUILDING AND TO DRIVE THROUGH LAKE AND ASSOCIATED PARKING, UPGRADES, PATIO, AND SWM FACILITIES.



RETAINING WALLS LOCATION PLAN

SCALE: 1" = 20'

THE LOCATION PLAN WAS ADAPTED FROM THE SITE DEVELOPMENT PLAN - SNOWDEN CROSSING FINAL GRADING PLAN, LAST REVISED ON MARCH 1, 2022, PREPARED AND PROVIDED BY MORRIS AND RITCHE ASSOCIATES, INC.

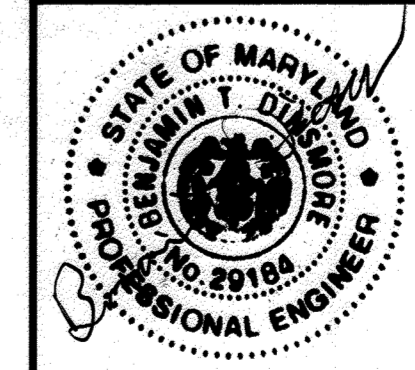
Notes

- THE LOCATION AND DIMENSIONS OF THE EXISTING SITE FEATURES WERE DETERMINED VIA AN INSTRUMENTED SURVEY PERFORMED BY MORRIS AND RITCHE ASSOCIATES, INC.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: *[Signature]* DATE: 5/10/22
 Chief, Division of Land Development: *[Signature]* DATE: 6/14/22
 Director: *[Signature]* DATE: 6/14/22

APPROVED
PLANNING BOARD HOWARD COUNTY
DATE: 8/20/2020



DATUM

DESIGN & DRAWING BASED ON MARYLAND COORDINATE SYSTEM (MCS); HORIZONTAL NAD 83 (1991); VERTICAL NAVD 88

OWNER / DEVELOPER

SNOWDEN CROSSING LLC
2800 QUARRY LAKE DRIVE, SUITE 340
BALTIMORE, MD 21209
PHONE: 410-308-0700
ATTN: SCOTT CHERRY

MD PROFESSIONAL CERTIFICATION:

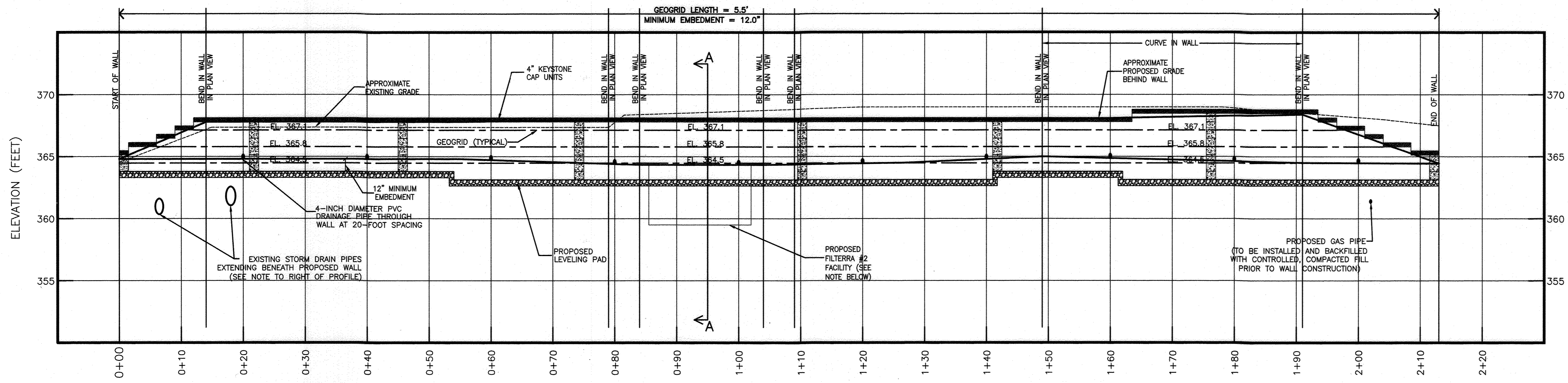
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 29184, EXPIRATION DATE: 06/16/2023.

GEO-TECHNOLOGY ASSOCIATES, INC.
GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS
14280 PARK CENTER DRIVE, SUITE A
LAUREL, MARYLAND 20707
(410) 792-9446 or (301) 470-4470
FAX: (410) 792-7395
WWW.GTAENG.COM

SITE DEVELOPMENT PLAN
VILLAGE OF OWEN BROWN, SECTION 2,
AREA 2, LOT D-1, SNOWDEN CROSSING
PROPOSED RETAINING WALLS
PLAN AND GENERAL NOTES
SDP-74-122

DATE	REVISIONS	JOB NO.:
11/7/2023	AS BUILT	190933
		SCALE: AS SHOWN
		DATE: 04/08/2022
		DRAWN BY: VKP
		DESIGN BY: VKP
		REVIEW BY: BTD
		SHEET: 25 OF 27

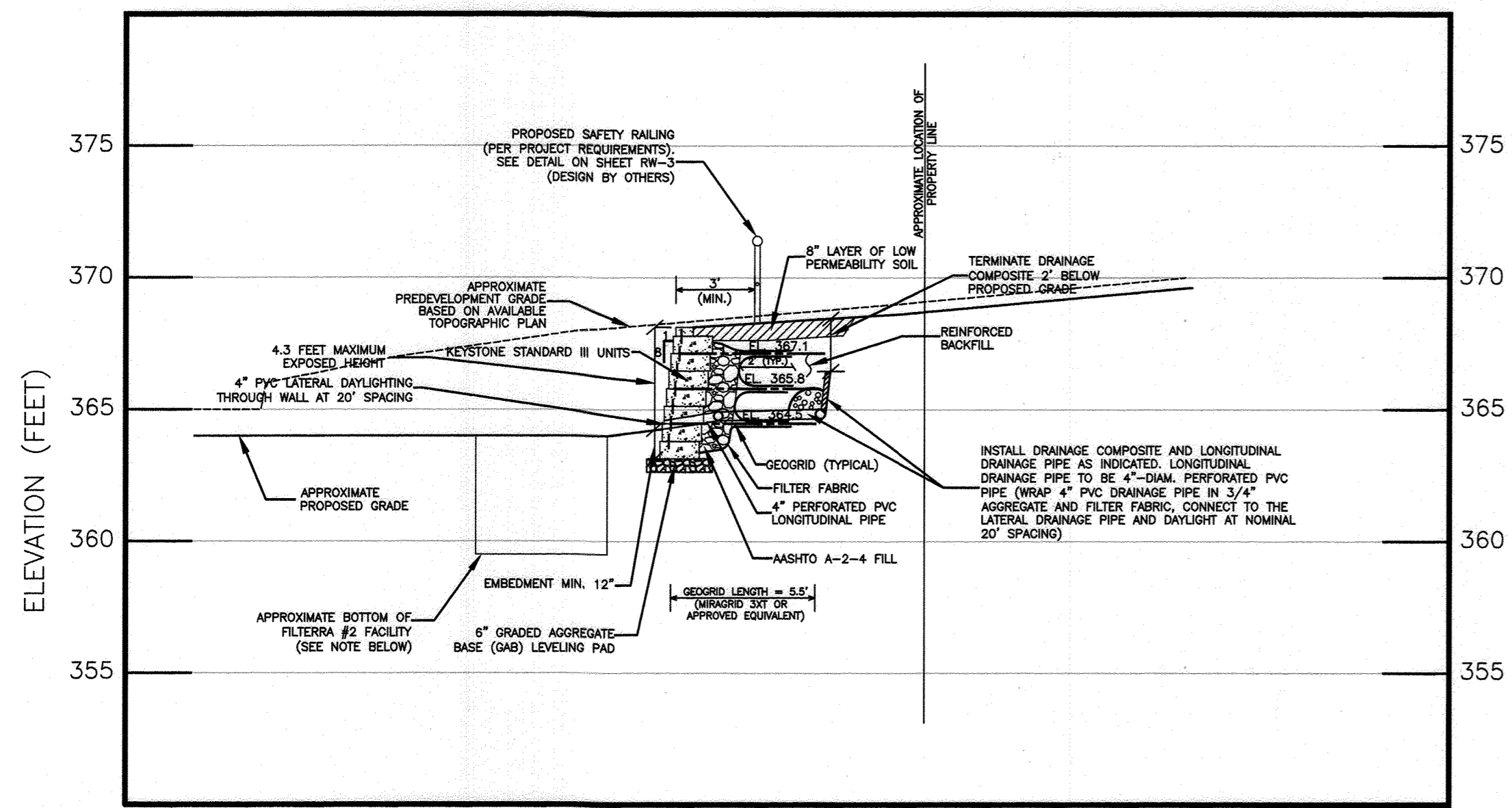
SDP-74-122



RETAINING WALL 1 PROFILE

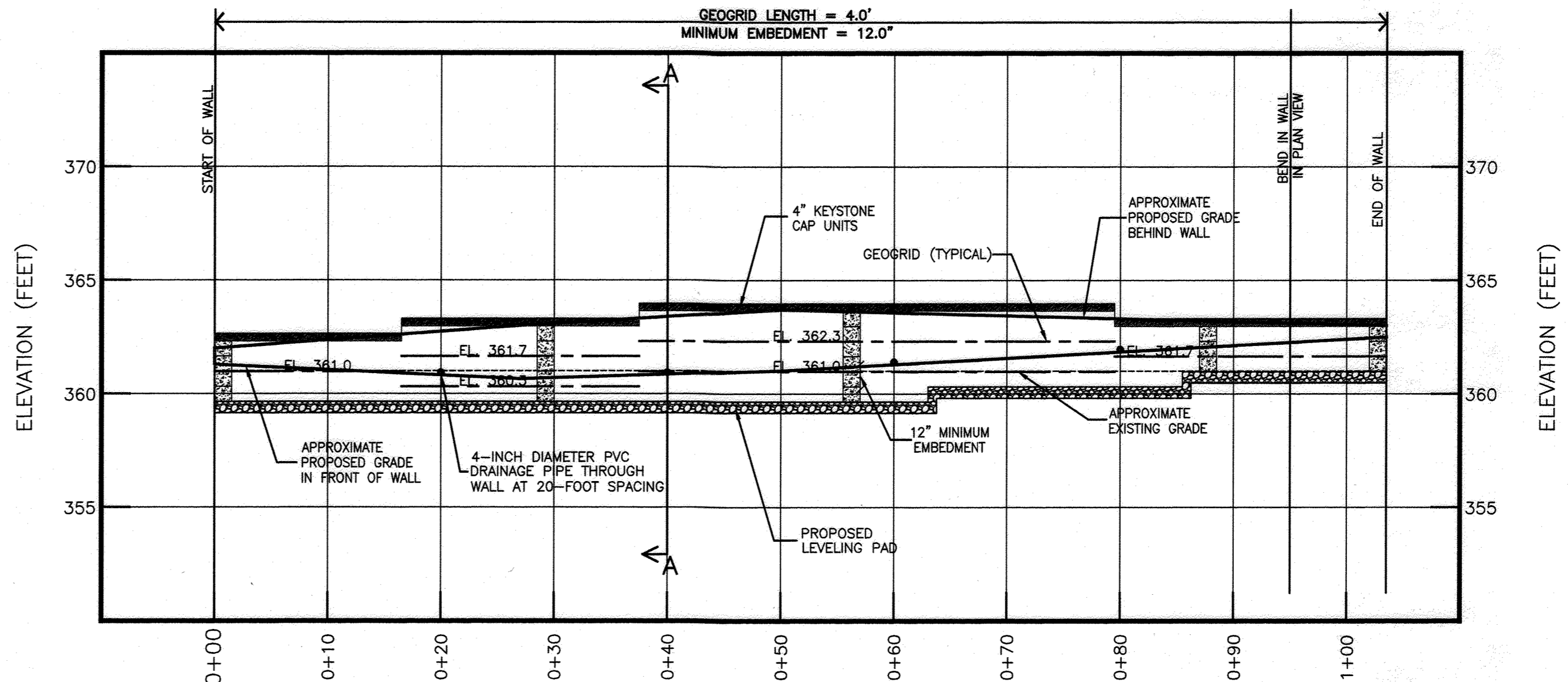
HORIZONTAL SCALE: 1" = 10'
VERTICAL SCALE: 1" = 5'

NOTE:
1. THE BACKFILL SOIL IN THE VICINITY OF THE EXISTING STORM DRAIN PIPES SHOULD BE EVALUATED PRIOR TO THE CONSTRUCTION OF THE LEVELING PAD AND ANY SOFT, LOOSE, OR UNSTABLE EXISTING FILL SHOULD BE REMOVED TO A STABLE SUBGRADE. UNDERCUTS SHOULD BE BACKFILLED WITH #57 STONE OR GRADED AGGREGATE BASE AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER AT THE TIME OF CONSTRUCTION



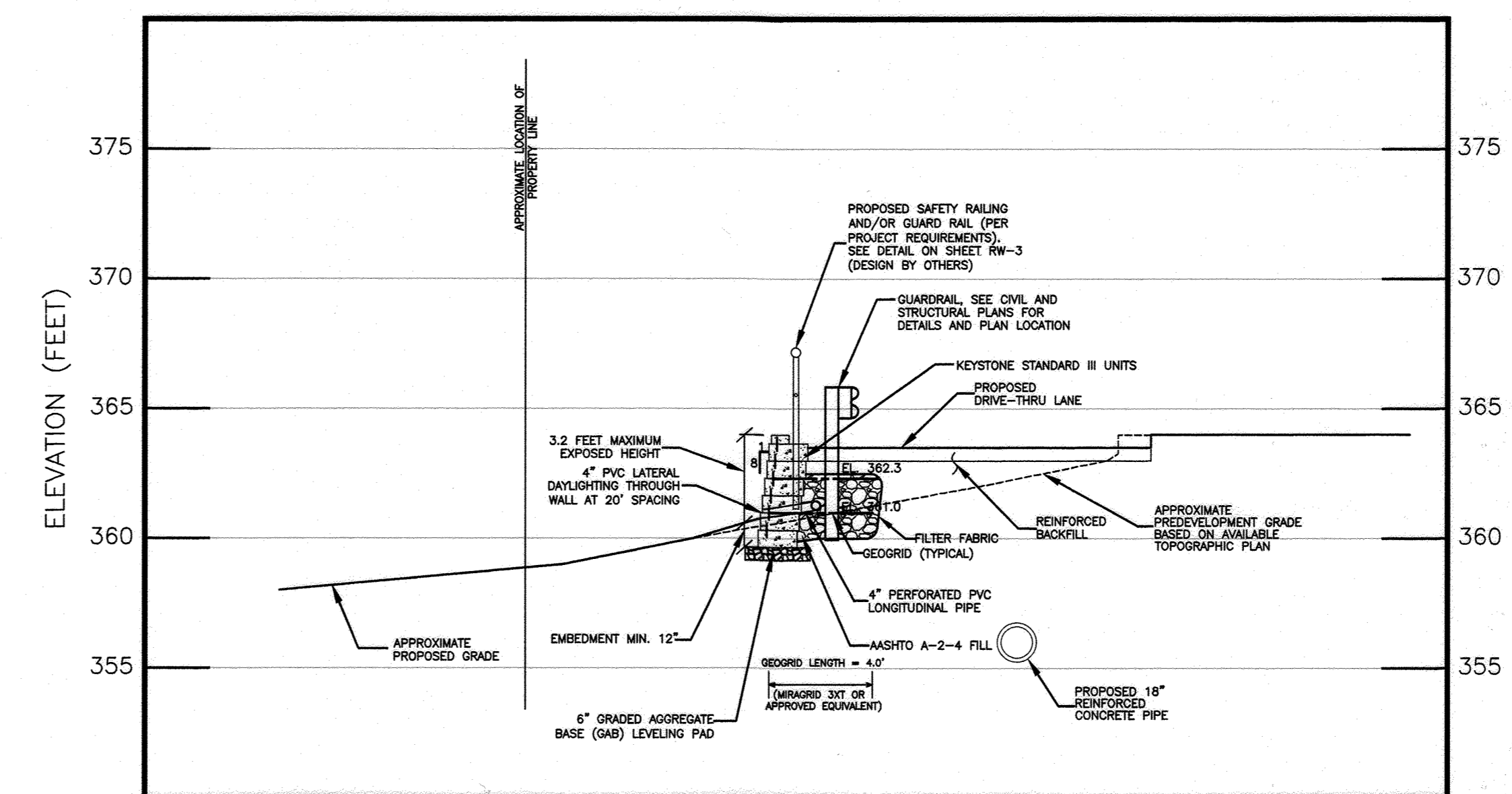
RETAINING WALL 1 - SECTION A-A (APPROXIMATE STATION 0+95)

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



RETAINING WALL 2 PROFILE

HORIZONTAL SCALE: 1" = 10'
VERTICAL SCALE: 1" = 5'



RETAINING WALL 2 - SECTION A-A (APPROXIMATE STATION 0+40)

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

NOTE:
1. THE CONTRACTOR SHOULD IMPLEMENT APPROPRIATE MEASURES TO PREVENT IMPACTING THE ADJACENT PROPERTIES. THE FILTERRA #2 STRUCTURE MUST BE INSTALLED AND BACKFILLED PRIOR TO WALL 1 CONSTRUCTION TO REDUCE THE LIKELIHOOD OF UNDERMINING.
2. THIS PLAN DOES NOT GIVE THE DEVELOPER AUTHORIZATION TO DISTURB THE ADJACENT PROPERTY. IF OFFSITE DISTURBANCE IS REQUIRED, THEN PERMISSION FROM THE ADJACENT PROPERTY OWNER IS REQUIRED BEFORE THE DISTURBANCE IS CREATED.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

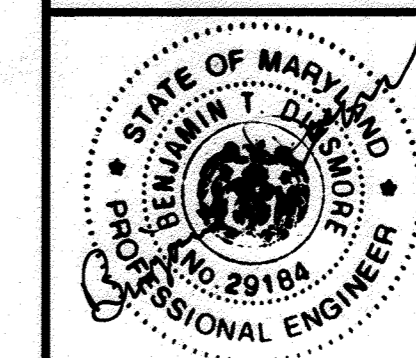
5-10-21
DATE
4/14/22
DATE
6/14/22
DATE

APPROVED
PLANNING BOARD HOWARD COUNTY
DATE 8/20/2020

PURPOSE STATEMENT

THE PURPOSE OF THE REVISED SITE DEVELOPMENT PLAN IS TO CONSTRUCT A 2,100 SP BUILDING ADDITION WITH DRIVE THROUGH LAKE AND ASSOCIATED PARKING UPGRADES, PATIO, AND SWM FACILITIES.

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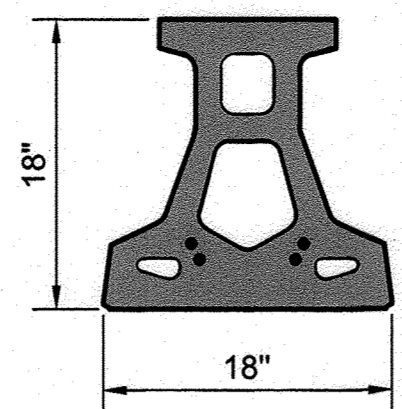
SITE DEVELOPMENT PLAN
VILLAGE OF OWEN BROWN, SECTION 2,
AREA 2, LOT D-1, SNOWDEN CROSSING
PROPOSED RETAINING WALLS
PROFILES AND SECTIONS
SDP-74-122

DATE	REVISIONS	JOB NO.:
11/7/2023	AS BUILT	190933
		SCALE: AS SHOWN
		DATE: 04/08/2022
		DRAWN BY: VKP
		DESIGN BY: VKP
		REVIEW BY: BTD
		SHEET: 26 OF 27

Base Leveling Pad Notes:

- The leveling pad is to be constructed of Graded Aggregate Base (GAB) or No. 57 stone.
- The base foundation is to be approved by the site geotechnical engineer prior to placement of the leveling pad.

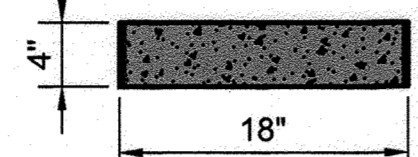
Standard III Unit		Cap Unit	
Width:	18"	Width:	18"
Depth:	18"	Depth:	10 1/2"
Height:	8"	Height:	4"
Weight:	112 lbs	Weight:	50 lbs



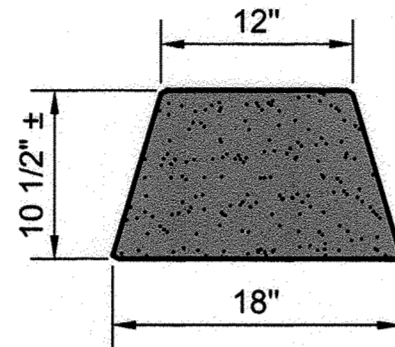
Standard III Plan

Standard III Unit

* Dimensions May Vary by Region



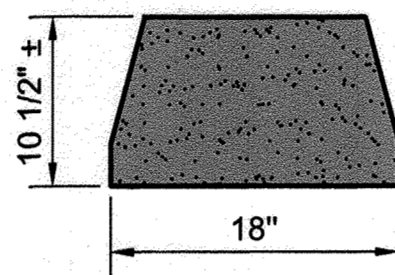
Cap Unit Elevation



Cap Unit Plan

Universal Cap Unit Option

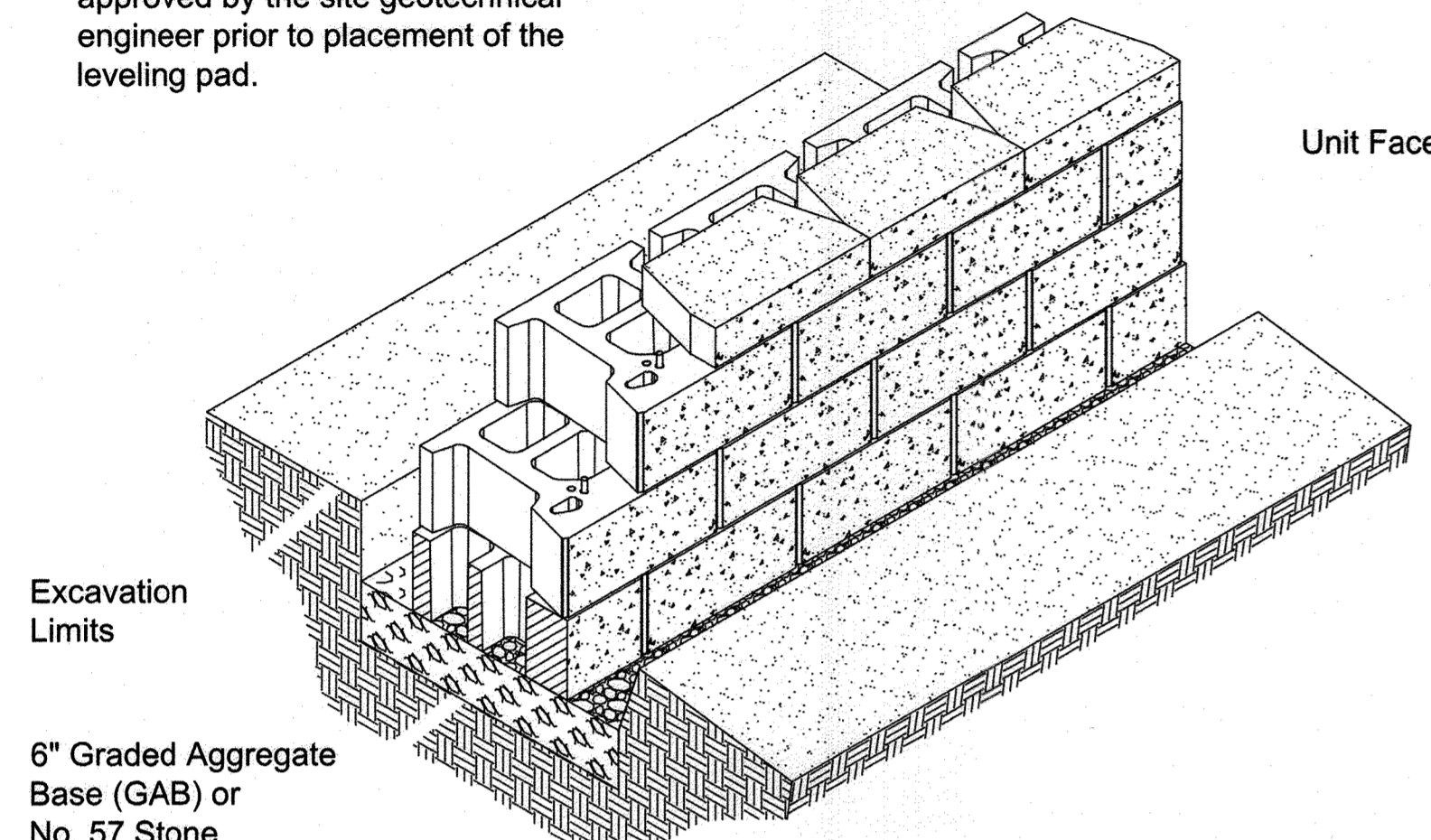
* Dimensions & Availability Will Vary by Region



Cap Unit Plan

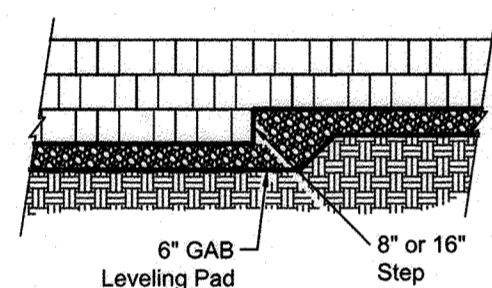
Straight Split Cap Unit Option

* Dimensions & Availability Will Vary by Region

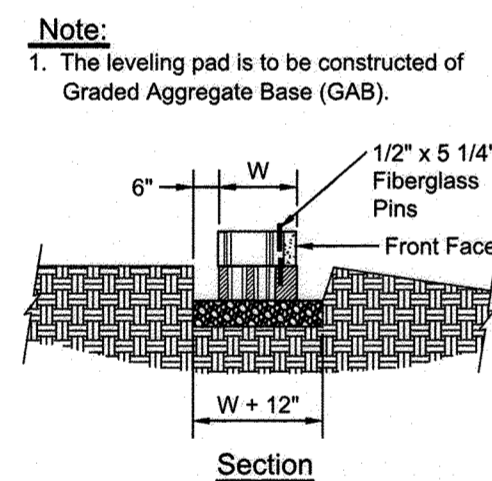


Standard III Unit/Base Pad Isometric Section View

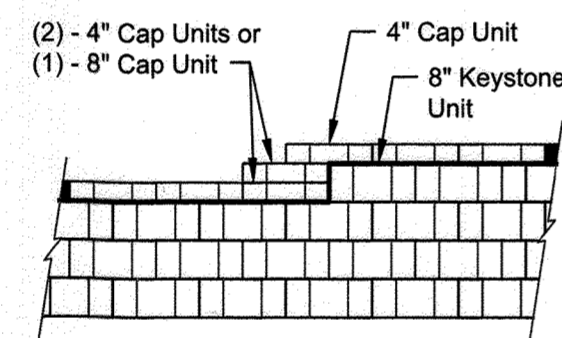
Not To Scale



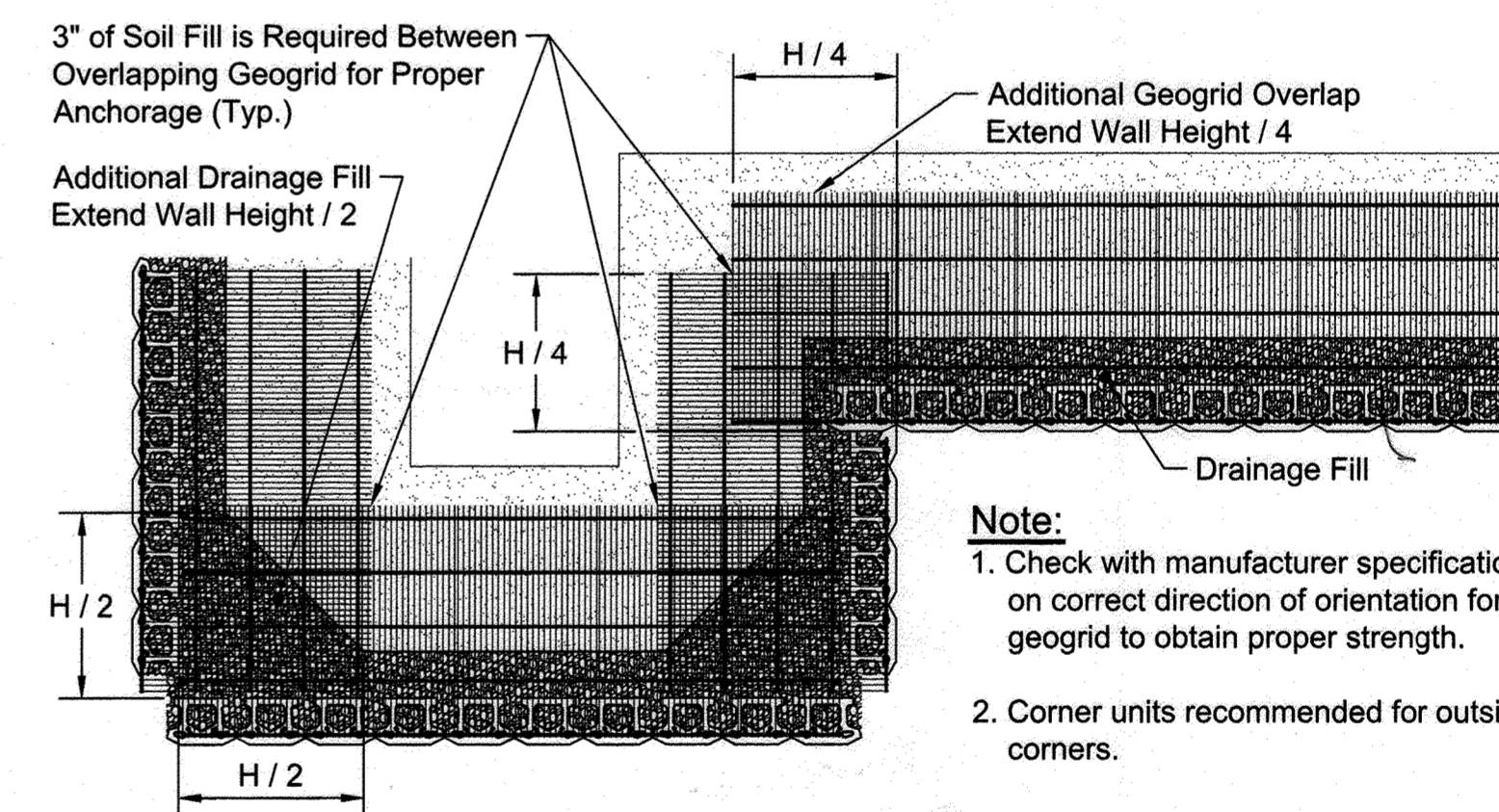
Elevation



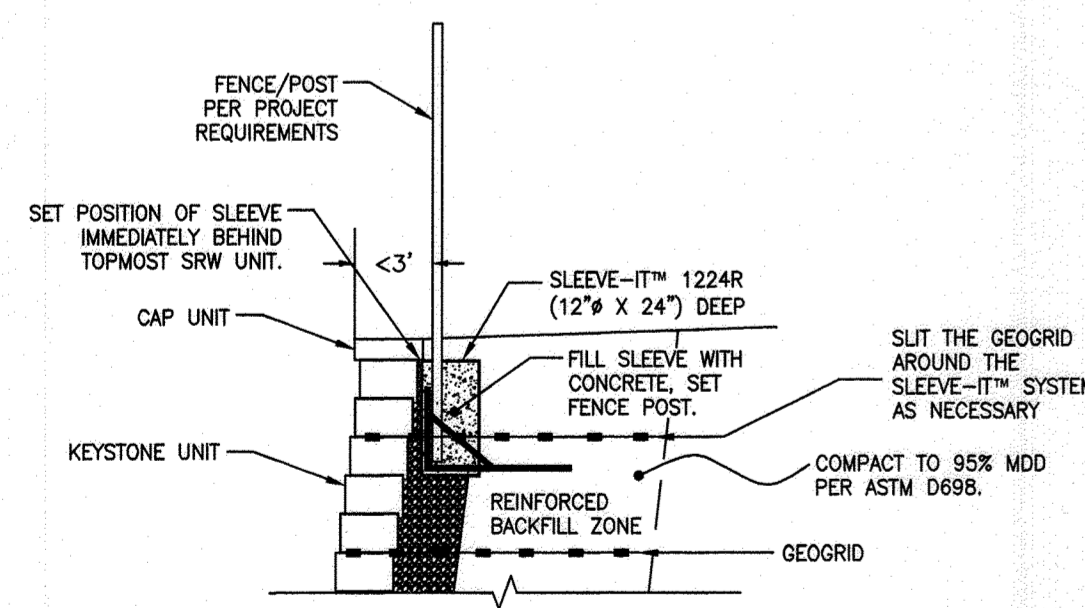
Leveling Pad Detail



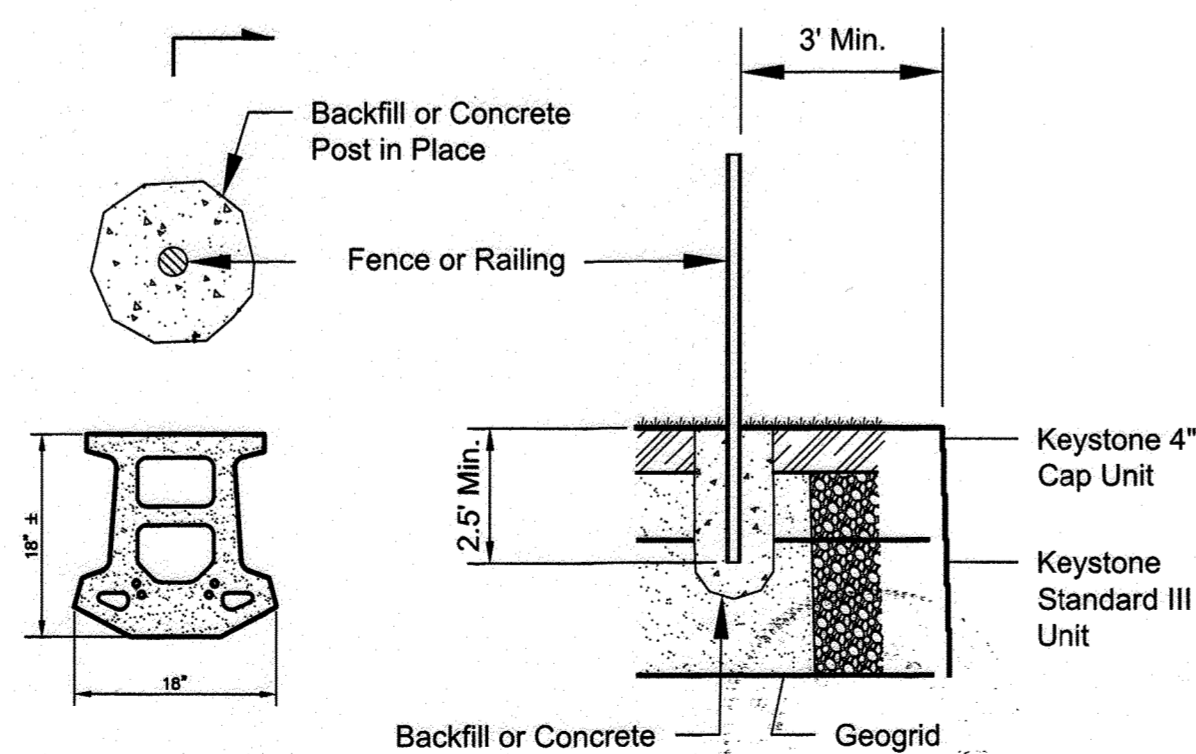
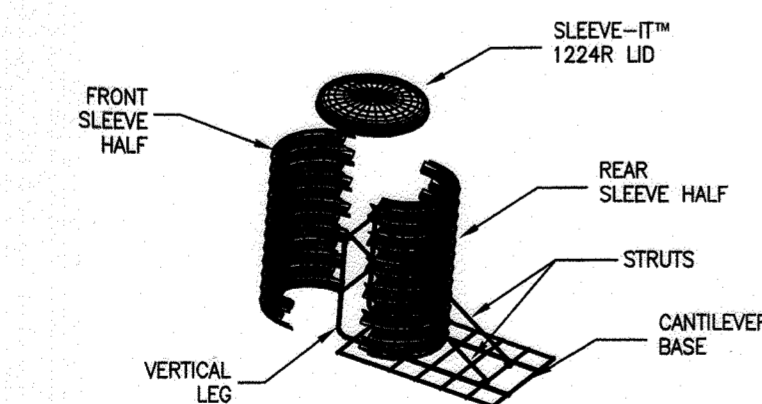
Top of Wall Steps



Geogrid Installation at Corners



DETAIL OF FENCE/NOISE WALL POST INSTALLATION USING SLEEVE-IT™ 1224R N.T.S.



Plan

Section

Typical Detail For Fence Post

PURPOSE STATEMENT

THE PURPOSE OF THE REVISED SITE DEVELOPMENT PLAN IS TO CONSTRUCT A 2,100 SF BUILDING ADDITION WITH DRIVE THROUGH LAKE AND ASSOCIATED PARKING, UPGRADES, PATIO, AND SWM FACILITIES.

APPROVED PLANNING BOARD HOWARD COUNTY

DATE 8/20/2020

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division
 Chief, Division of Land Development
 Director

5/10/22
 6/14/22
 6/14/22

<p>GEO-TECHNOLOGY ASSOCIATES, INC. GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS 14280 PARK CENTER DRIVE, SUITE: A LAUREL, MARYLAND 20707 (410) 792-9446 or (301) 470-4470 FAX: (410) 792-7395 WWW.GTAENG.COM</p>		
<p>SITE DEVELOPMENT PLAN VILLAGE OF OWEN BROWN, SECTION 2, AREA 2, LOT D-1, SNOWDEN CROSSING PROPOSED RETAINING WALLS TYPICAL DETAILS SDP-74-122</p>		
<p>TAX MAP 42 ~ GRID 04 ~ PARCEL 0397 ~ ZONING NT ~ DEED REF 17342/229 PLAT NO. 2741 ~ TAX ASSESSMENT DISTRICT 82 ~ 8th ELECTION DISTRICT 7090 DEEPAGE DRIVE, HOWARD COUNTY, MARYLAND, 21045</p>	<p>DATE: 11/7/2023</p>	<p>REVISIONS: No As BUILT</p>
<p>MD PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 29184, EXPIRATION DATE: 06/16/2023.</p>	<p>JOB NO.: 190933 DATE: 04/08/2022 DRAWN BY: VKP DESIGN BY: VKP REVIEW BY: BTD SHEET: 27 OF 27</p>	<p>SCALE: AS SHOWN</p>