

GENERAL NOTES

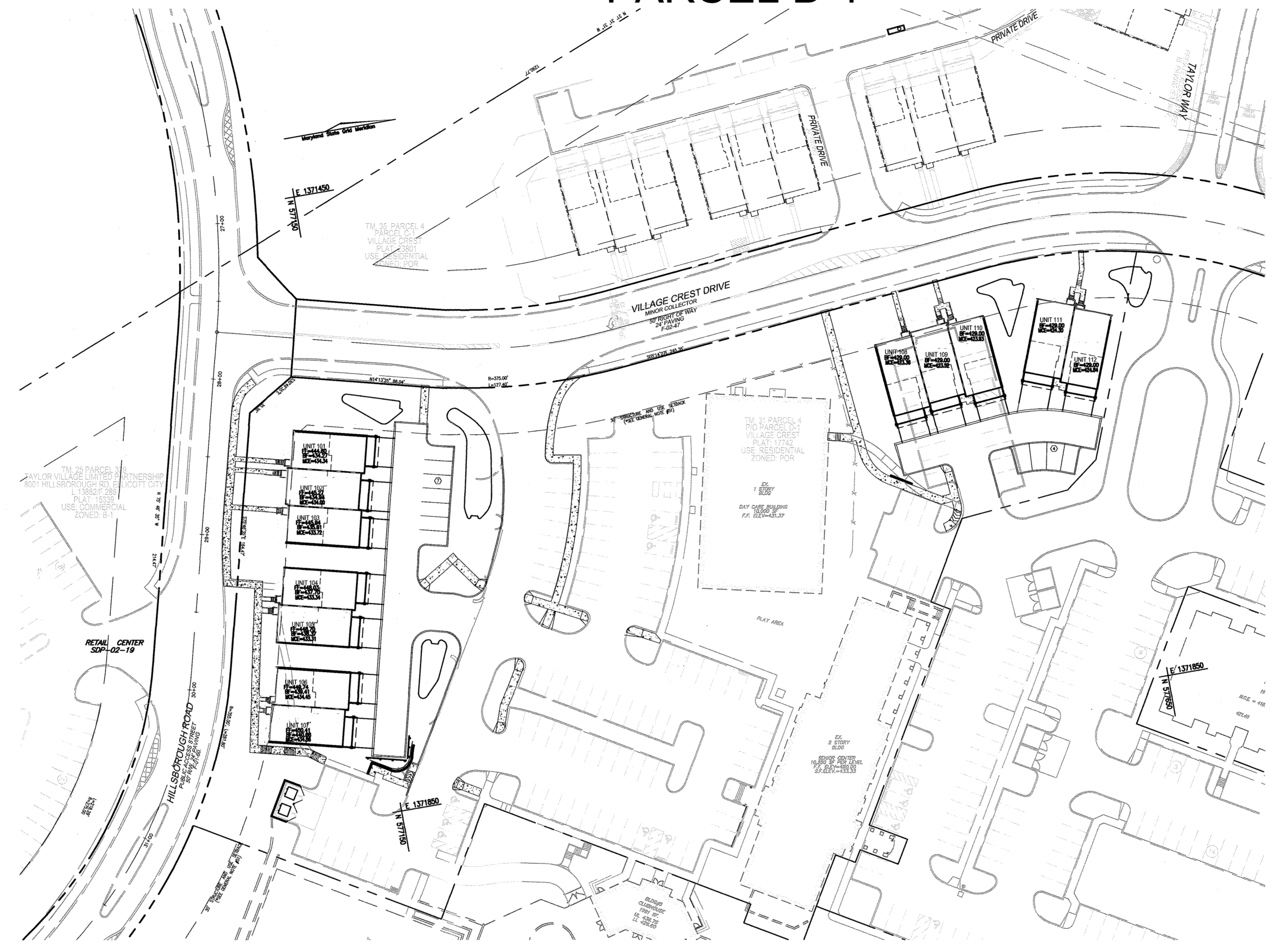
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY STANDARDS AND SPECIFICATIONS AND MARYLAND STATE HIGHWAY ADMINISTRATION STANDARDS AND SPECIFICATIONS AS APPLICABLE. ALL WORK AND MATERIALS SHALL COMPLY WITH O.S.H.A. STANDARDS.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- THE CONTRACTOR IS TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE DAYS BEFORE STARTING WORK ON THESE DRAWINGS:
MISS UTILITY: 1-800-257-7777
VERIZON: 1-800-743-0033
BUREAU OF UTILITIES: 410-313-6900
AT&T: 1-800-252-1133
C.O.G.E. (CONSTRUCTION SERVICES): 410-637-8713
B.G.&E. (EMERGENCY): 410-685-0123
STATE HIGHWAY ADMINISTRATION: 410-531-5533
COLONIAL PIPELINE CO.: 410-726-1300
- SITE ANALYSIS:**
TOTAL DEVELOPMENT AREA (PARCEL "D-1"): 38.94 AC.
GROSS PROJECT AREA (AREA 1 AND 2): 1.72 AC.
AREA 1: 0.69 AC.
AREA 2: 1.03 AC.
PRESENT ZONING: POR
USE OF STRUCTURE: AGE RESTRICTED TOWNHOUSES
TOTAL BUILDING COVERAGE (FOOTPRINT AREA): 19,934 SF (0.32 AC. OR 18.6% OF GROSS AREA)
PAVED PARKING LOT/AREA ON SITE: 15,264 SF (0.35 AC. OR 20.48% OF GROSS AREA)
AREA OF LANDSCAPE ISLAND: 1,114 SF (0.03 AC. OR 1.43% OF GROSS AREA)
AREA OF STEEP SLOPES: 0.07 AC.
AREA OF FLOODPLAIN: 0.00 AC.
LIMIT OF DISTURBED AREA: 1.72 AC.
CUT: 1,500 CY FILL: 1,500 CY (SUBJECT TO CONTRACTOR CONFIRMATION)
- PROJECT BACKGROUND:**
LOCATION: ELLICOTT CITY, MD.; TAX MAP 31, BLOCK 03, PARCEL 4, PARCEL D-1
ZONING: POR
SUBDIVISION: VILLAGE CREST
SECTION/AREA: N/A
SITE AREA: 1.72 AC.
DPZ REFERENCES: P-00-07, S-99-18, S-00-05, F-01-60, P-01-20, F-02-47, F-02-112, F-04-077, S0P-04-26, F-05-189, ECP-16-031, AA-16-006, PLAT 2157
- 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 START OF WORK.
- ANY DAMAGE TO PUBLIC RIGHT-OF-WAY, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MESA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
- EXISTING UTILITIES LOCATED FROM ROAD CONSTRUCTION PLANS, FIELD SURVEYS, PUBLIC WATER AND AND SEWER EXTENSION PLANS AND ADJACENT DRAWINGS. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN FOR THE CONTRACTOR'S INFORMATION. CONTRACTOR SHALL LOCATE EXISTING UTILITIES WELL IN ADVANCE OF CONSTRUCTION ACTIVITIES AND TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- ESTIMATES OF EARTHWORK QUANTITIES ARE PROVIDED SOLELY FOR THE PURPOSE OF CALCULATING FEES. SOIL COMPACTION SPECIFICATIONS, REQUIREMENTS, METHODS AND MATERIALS ARE TO BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER. GEOTECHNICAL ENGINEER TO CONFIRM ACCEPTABILITY OF PROPOSED PAVING SECTION, BASED ON SOIL TEST PRIOR TO CONSTRUCTION.
- COORDINATES AND ELEVATIONS ARE BASED ON MARYLAND COORDINATE SYSTEM - NAD83(1991) AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS #304400R AND #304400R4.
- THE PROPERTY LINES SHOWN HEREON IS BASED ON PLAT #17742.
- EXISTING TOPOGRAPHY SHOWN HEREON IS TAKEN FROM A FIELD RUN TOPOGRAPHIC SURVEY WITH TWO FOOT CONTOUR INTERVALS BY ROBERT H. VOGEL ENGINEERING, INC., DATED JUNE 2010. OFFSITE TOPOGRAPHY IS FROM HOWARD COUNTY GIS.
- GEOTECHNICAL TEST PIT REPORT PREPARED BY HILLIS-CARNEE ENGINEERING ASSOCIATES, INC., DATED AUGUST 31, 2018.
- THE GEOTECHNICAL ENGINEER IS TO CONFIRM PAVING SECTION PRIOR TO CONSTRUCTION (SEE DETAILS, SHEET 3).
- CURB AND GUTTER TO BE HOWARD COUNTY STANDARD DETAIL 3D.
- WHERE DRAINAGE FLOWS AWAY FROM CURB, CONTRACTOR TO REVERSE THE GUTTER PAN.
- ALL ELEVATIONS ARE TO FLOWLINE/BOTTOM OF CURB UNLESS OTHERWISE NOTED.
- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- CONTRACTOR RESPONSIBLE FOR CONSTRUCTING ALL HANDICAP RAMPS AND HANDICAP ACCESS IN ACCORDANCE WITH CURRENT ADA REQUIREMENTS.
- ALL REINFORCED CONCRETE FOR STORM DRAIN STRUCTURES SHALL HAVE A MINIMUM OF 28 DAYS STRENGTH OF 3500 P.S.I.
- ALL STORMDRAIN PIPE BEDDING IS TO BE CLASS "C", AS REQUIRED BY ASHTO-180.
- THE PROPOSED BUILDINGS TO HAVE ROOF LEADERS WHICH EMPTY INTO THE STORMWATER MANAGEMENT FACILITIES, WHICH ULTIMATELY DISCHARGE TO STORM DRAIN SYSTEM.
- PUBLIC SEWER AVAILABLE THROUGH CONT. 14-4034-D AND WATER AVAILABLE THROUGH CONT. 14-3855 AND 44-4091-D.
- THE SUBJECT PROPERTY IS ZONED POR IN ACCORDANCE WITH THE 10/06/13 COMPREHENSIVE ZONING PLAN. THIS PROJECT IS SUBJECT TO COMPLIANCE WITH THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, DEVELOPMENT OR CONSTRUCTION ON THIS PROPERTY MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, MANAGER PETITION APPLICATION OR BUILDING/GRADING PERMIT APPLICATIONS.
- THE EXISTING HILLSBOROUGH IS CLASSIFIED AS A PUBLIC ACCESS ROAD AND VILLAGE CREST DRIVE IS CLASSIFIED AS MINOR COLLECTOR.
- THE ENVIRONMENTAL LETTER WAS PREPARED BY ROBERT H. VOGEL ENGINEERING, INC. DATED NOVEMBER 8, 2015.
- THERE ARE STEEP SLOPES LOCATED ON THE SITE.
- THERE ARE WETLANDS, STREAMS, THEIR BUFFERS, OR 100-YEAR FLOODPLAIN LOCATED ON-SITE.
- 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 FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE SUBMISSION OF THE AGREEMENT FOR THIS SITE DEVELOPMENT PLAN IN THE AMOUNT OF \$8,100 FOR THE REQUIRED 20 SHADE TREES, 10 EVERGREEN TREES, AND 20 SHRUBS. ALL LANDSCAPING AND AMENITY FEATURES MUST BE IN PLACE BEFORE BOND IS RELEASED FOR SDP-16-021.
- THE FOREST CONSERVATION OBLIGATION FOR THIS PROJECT HAVE BEEN PREVIOUSLY ADDRESSED BY THE VILLAGE CREST ROAD PLAN (F-02-047).
- THERE ARE NO BURIAL GROUNDS OR CEMETERIES LOCATED ON THIS PROPERTY.
- THERE ARE NO HISTORIC STRUCTURES LOCATED ON THIS PROPERTY.
- THIS SITE IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
- THE PROPOSED BUILDINGS WILL HAVE OUTSIDE METER SETTINGS. THE BUILDINGS WILL ALSO HAVE AN AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM.
- SIGNAGE SHALL BE PROVIDED ON EACH BUILDING IDENTIFYING THE BUILDING ADDRESS.
- STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOLUME III (2006), SECTION 5.5.A. A MINIMUM OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- ALL EXTERIOR LIGHTING TO COMPLY WITH THE REQUIREMENTS FOUND IN ZONING SECTION 13.4.0 OF THE HOWARD COUNTY ZONING REGULATIONS. LIGHT TRESPASS ONTO PROPERTY IN THE POR ZONING DISTRICT SHALL BE LIMITED TO 0.50 FOOT CANDLES.
- TRASH COLLECTION AND RECYCLING TO BE PRIVATE AND WILL OCCUR INDIVIDUALLY WITH EACH UNIT.
- STORMWATER MANAGEMENT FOR THE PROJECT IS PROVIDED BY THE USE OF MICRO-SCALE PRACTICES IN ACCORDANCE WITH ENVIRONMENTAL SITE DESIGN CRITERIA. MICRO-SCALE PRACTICES INCLUDE MICRO-BIOTENTIONS AND PERVIOUS CONCRETE. THESE FACILITIES SHALL BE PRIVATELY OWNED AND MAINTAINED. STORMWATER MANAGEMENT CON. 04v and 04w WAS PREVIOUSLY PROVIDED IN CONJUNCTION WITH F-02-47. THIS SITE DOES NOT FALL WITHIN THE TIBER BRANCH OR HUDSON BRANCH WATERSHED.
- THE COMMUNITY MEETING FOR THIS PROJECT WAS CONDUCTED ON OCTOBER 28, 2015 AT THE HOWARD COUNTY PUBLIC LIBRARY, ELLICOTT CITY.
- THE TOTAL ACREAGE OF THIS PROJECT IS 1.49 AC, WHICH INCLUDES AREA 1 (0.61 AC) AND AREA 2 (0.88 AC).
- AS REQUIRED BY SECTION 115.02.11 OF THE ZONING REGULATIONS, UNIVERSAL DESIGN FEATURES HAVE BEEN INCORPORATED TO MAKE INDIVIDUAL DWELLINGS ADAPTABLE TO PERSONS WITH MOBILITY OR FUNCTIONAL LIMITATIONS AND TO PROVIDE ACCESSIBLE ROUTES BETWEEN PARKING AREAS, SIDEWALKS, DWELLING UNITS AND COMMON AREAS. DWELLING FEATURES INCLUDE ELEVATORS AND ZERO-THRESHOLD GARAGES IN EACH UNIT. SITE ACCESSIBILITY IS ENSURED BY PLACEMENT OF ACCESSIBLE PARKING DISTRIBUTED THROUGHOUT THE SITE ALONG ACCESSIBLE ROUTES IN CLOSE PROXIMITY TO COMMON USE AREAS.
- HEALTH DEPARTMENT APPROVAL OF THIS SITE DEVELOPMENT PLAN (SDP) DOES NOT ENSURE APPROVAL OF BUILDING PERMIT APPLICATIONS ASSOCIATED WITH THIS PLAN. PERMIT PLANS FOR CERTAIN FACILITIES TO BE CONSTRUCTED WITHIN THE LIMITS DESCRIBED BY THIS SDP 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.
- REFERENCE ADMINISTRATIVE ADJUSTMENT CASE NO. AA-16-006, APPROVED MAY 25, 2016, TO REDUCE THE SETBACK FROM A PUBLIC ROAD RIGHT-OF-WAY FROM 30 FEET TO A MAXIMUM OF 24 FEET TO CONSTRUCT AGE-RESTRICTED SINGLE FAMILY ATTACHED DWELLINGS SUBJECT TO THE FOLLOWING CONDITIONS:
1. THE PETITIONER SHALL COMPLY WITH ALL APPLICABLE FEDERAL, STATE AND COUNTY LAWS AND REGULATIONS.
2. THE GRANTED ADMINISTRATIVE ADJUSTMENT SHALL APPLY SOLELY TO THE AGE-RESTRICTED SINGLE-FAMILY ATTACHED DWELLINGS AS DEPICTED ON THE ADMINISTRATIVE ADJUSTMENT PLAN SUBMITTED BY THE PETITIONER AND NOT TO ANY OTHER STRUCTURE OR USE.
- REFERENCE LETTER FROM DPZ OLD CHIEF, DATED 06/09/15, STATING THAT ALL VILLAGE CREST AND TAYLOR HIGHLANDS AGE RESTRICTED UNITS WITHIN POR ZONE ARE EXEMPT SINCE THE OVERALL COMPREHENSIVE PROJECT PREDATES THE MNU REQUIREMENT.

SITE DEVELOPMENT PLAN

VILLAGE CREST SENIOR TOWNS

AGE RESTRICTED ADULT HOUSING UNITS

PARCEL D-1



BENCHMARKS

BENCHMARK NO. 1, COUNTY CONTROL: #304400SR
3/4" REBAR 0.6' BELOW SURFACE
N. 578233.92, E. 1473142.33
ELEV. = 374.389

BENCHMARK NO. 2, COUNTY CONTROL: #304400AR
3/4" REBAR 0.6' BELOW SURFACE
N. 578128.03, E. 1473460.71
ELEV. = 362.575

LEGEND

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- PROPOSED SIDEWALK

VICINITY MAP

SCALE: 1"=2000'
ADC MAP COORDINATE: PAGE 4816 D10

PARKING TABULATION

REQUIRED	PROVIDED
12 AGE-RESTRICTED TOWNHOUSE DWELLING UNITS	24 SPACES
2 SPACES PER DWELLING UNIT	48 SPACES
TOWNHOUSE VISITOR PARKING	4 SPACES
0.3 SPACES PER DWELLING UNIT	36 SPACES
TOTAL PARKING SPACES REQUIRED:	28 SPACES
TOTAL PARKING SPACES PROVIDED:	59 SPACES*

* INCLUDES 48 GARAGE DRIVEWAY SPACES (4 PER UNIT) AND 11 VISITOR SPACES

SHEET INDEX

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- UNIVERSAL DESIGN REQUIREMENTS FOR AGE-RESTRICTED ADULT HOUSING IN HOWARD COUNTY**
- FOR MULTI-FAMILY APARTMENT OR CONDO DEVELOPMENTS, AN ACCESSIBLE PATH BETWEEN PARKING, DWELLING UNITS, AND COMMON AREAS THAT MEETS ADA STANDARDS.
 - FOR SINGLE FAMILY DETACHED AND ATTACHED DEVELOPMENTS, A "NO-STEP" ACCESS TO THE FRONT ENTRANCE TO THE COMMON BUILDING AND ALL DWELLINGS (A NO-STEP ENTRANCE IS DESIRABLE, BUT NOT REQUIRED TO OTHER ENTRANCES). THIS PLAN PROVIDES RESIDENTIAL UNITS WITH A "NO-STEP" ACCESS THROUGH THE GARAGE.
 - 3/4" WIDE FRONT DOOR WITH EXTERIOR LIGHTING OF ENTRANCE (EXTERIOR DOORS SHALL BE PROVIDED WITH AN ARTIFICIAL LIGHT SOURCE LOCATED IN THE IMMEDIATE VICINITY OF THE EXTERIOR DOOR. THE ILLUMINATION OF THE EXTERIOR LIGHT SHALL BE PROVIDED FROM THE DWELLING UNIT. EXCEPTION: LIGHTS THAT ARE CONTINUOUSLY ILLUMINATED OR AUTOMATICALLY CONTROLLED).
 - ALL INTERIOR DOORWAYS AT LEAST 32" CLEAR WIDTH IN THE OPEN POSITION (27/10 DOORS ARE OR A 36" IS PREFERRED).
 - HALLWAYS AT LEAST 36" WIDE (40-42" IS PREFERRED). THE MAXIMUM VERTICAL FLOOR LEVEL CHANGE IS 1/4" INCH EXCEPT WHEN A TAPERED THRESHOLD IS USED. THE MAXIMUM HEIGHT IS 1/2" INCH.
 - COMPLETE LIVING AREA INCLUDING MASTER BEDROOM AND BATH ON FIRST FLOOR (OR ELEVATOR ACCESS IF MULTI-STORY RENTAL/CONDO APARTMENTS).
 - LEVER HANDLES ON INTERIOR AND EXTERIOR DOORS.
 - REINFORCED WALLS TO ALLOW FOR THE LATER INSTALLATION OF GRAB BARS AROUND THE TOILET, TUB, AND SHOWER SHALL.
 - CLEAR FLOOR SPACE OF 30"x48" CENTERED ON THE APPLIANCE OR FIXTURE SHALL BE PROVIDED AT EACH FIXTURE IN THE KITCHEN. FLOOR SPACES CAN OVERLAP. (FAIR HOUSING ACT).
 - MANEUVERING SPACE WITHIN THE BATHROOM TO PERMIT A PERSON USING A MOBILITY AID TO ENTER THE BATH ROOM AND REOPEN THE DOOR. WITH A CLEAR FLOOR SPACE OF 30"x48" OUTSIDE OF THE DOOR SWING. IN ADDITION, A CLEAR FLOOR SPACE OF 30"x48" SHOULD BE PROVIDED AT EACH FIXTURE AND CENTERED ON EACH FIXTURE. THE 30"x48" FLOOR SPACE CAN OVERLAP WITH OTHER. (NOTE: THIS IS A REQUIREMENT IN THE FAIR HOUSING ACT GUIDELINES).
 - WALL MOUNTED LIGHT SWITCHES, ELECTRICAL OUTLETS, OR ENVIRONMENTAL CONTROLS SHALL BE MOUNTED FOR A REACHING RANGE OF MINIMUM 15" OFF THE FLOOR AND MAXIMUM 48" ABOVE THE FLOOR.

ADDRESS CHART

UNIT NO.	STREET ADDRESS
UNIT 101	8012 HILLSBOROUGH ROAD
UNIT 102	8010 HILLSBOROUGH ROAD
UNIT 103	8008 HILLSBOROUGH ROAD
UNIT 104	8006 HILLSBOROUGH ROAD
UNIT 105	8002 HILLSBOROUGH ROAD
UNIT 106	7998 HILLSBOROUGH ROAD
UNIT 107	7996 HILLSBOROUGH ROAD
UNIT 108	8130 VILLAGE CREST DRIVE
UNIT 109	8132 VILLAGE CREST DRIVE
UNIT 110	8134 VILLAGE CREST DRIVE
UNIT 111	8138 VILLAGE CREST DRIVE
UNIT 112	8140 VILLAGE CREST DRIVE

PERMIT INFORMATION CHART

SUBDIVISION NAME	SECTION/AREA	LOT/PARCEL NUMBER
VILLAGE CREST	N/A	PARCEL D-1

PLAT OR L/F: PLATS 17742 & 21157
L12580/F001
L12580/F011

GRID NO.: 03
ZONING: POR
TAX MAP NO.: 31
ELECT. DIST.: 2ND
CENSUS TR.: 605103

WATER CODE: G-01
SEWER CODE: 1253100

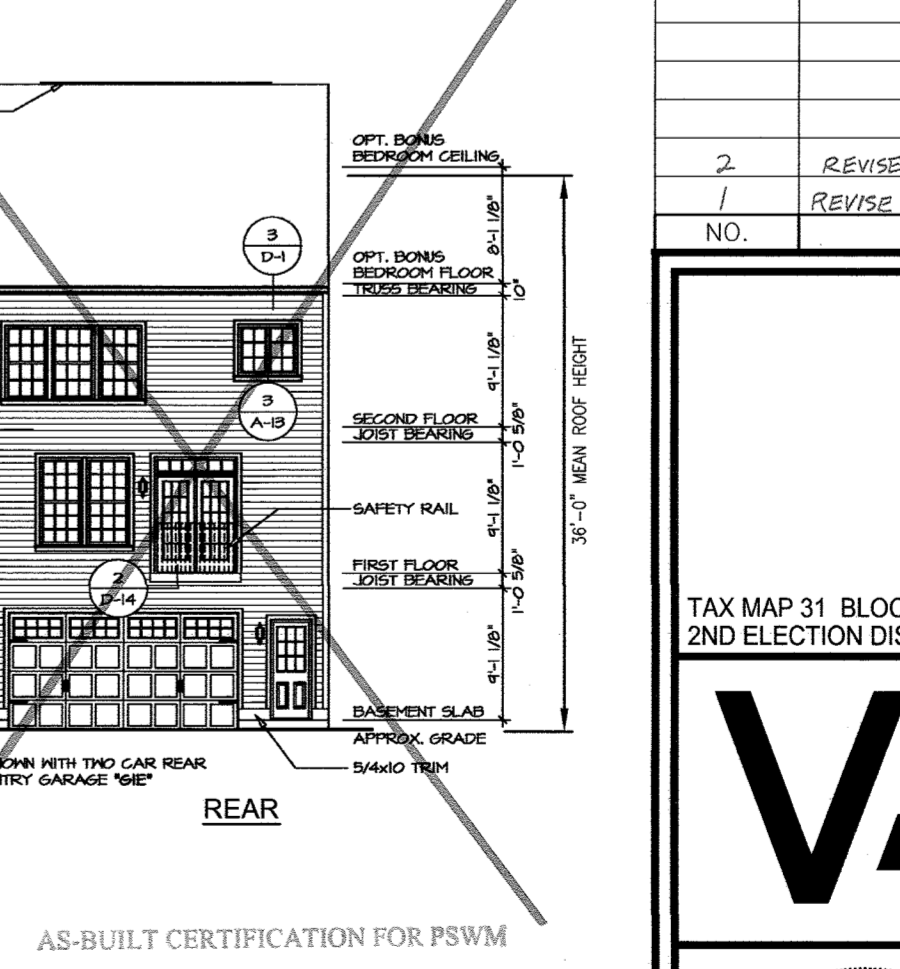
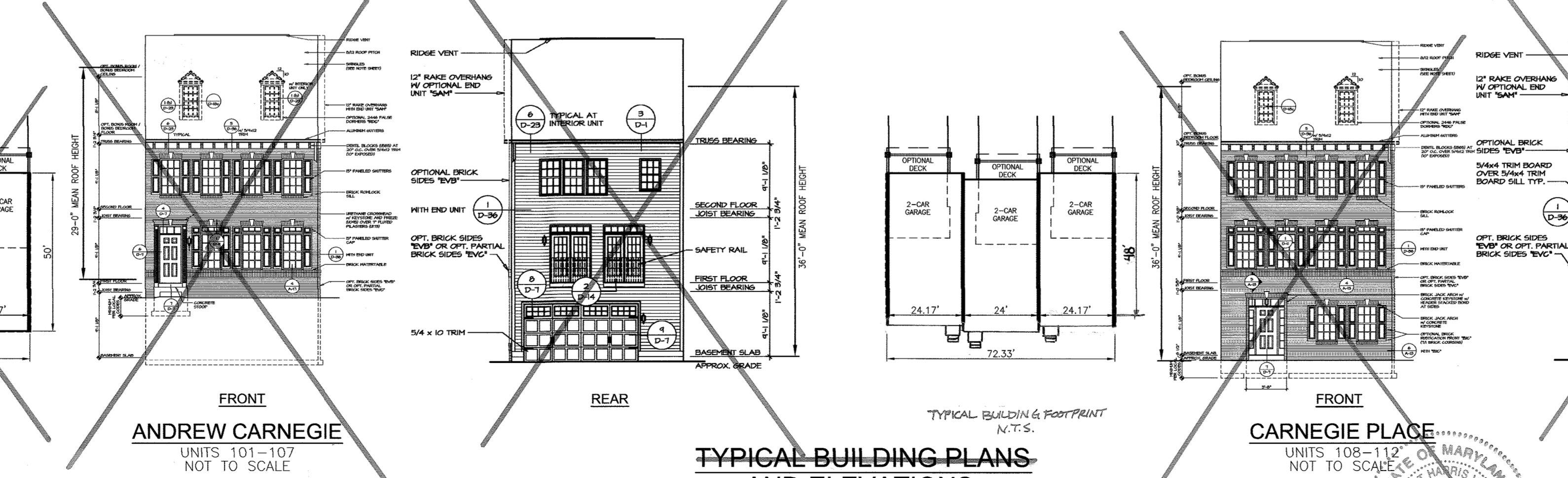
EX. COMMUNITY CENTER CHART

SECTION	115.02.4
SENIOR CENTER SPACE (SDP-04-025)	13,088 SF
NUMBER OF UNITS EXISTING SENIOR CENTER CAN SUPPORT	99 UNITS @ 20 SF/UNIT 1,980 SF @ 30 SF/UNIT 2,970 SF
TOTAL AGE RESTRICTED UNITS: 459 UNITS	268 UNITS SDP-02-094 3,670 SF 51 UNITS SDP-03-035 510 SF 83 UNITS SDP-05-044 830 SF 45 UNITS SDP-10-052 450 SF 12 UNITS SDP-17-007 120 SF
TOTAL SENIOR BUILDING AREA REQUIRED:	5,380 SF

OWNERS
TAYLOR VILLAGE BUSINESS CENTER, LLC
AND TAYLOR OFFICE, LLC
C/O TAYLOR VILLAGE FAMILY LIMITED PARTNERSHIP
MANAGING MEMBER: PHIL CUSIJOITI
4110 COLLEGE AVENUE
ELLICOTT CITY, MD 21043
PHONE: 410-465-3500

DEVELOPER
AUTUMN DEVELOPMENT CORPORATION
RONALD L. SPAN, PRESIDENT
ROSS TAYLOR, VICE PRESIDENT
5401 TWIN KNOLLS ROAD, SUITE 7
COLUMBIA, MD 21046
PHONE: 410-465-3500

PLAN VIEW
SCALE: 1"=50'



AS-BUILT CERTIFICATION FOR PSWM

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

DATE: 7-3-20
P.E. # 16193

REVISIONS

NO.	REVISION	DATE
2	REVISE ADDRESS CHART TO CORRECT ADDRESS FOR LOT 4	5-7-19
1	REVISE PLANS TO REVISE HOUSE TYPES	2-19-19

SITE DEVELOPMENT PLAN
COVER SHEET

VILLAGE CREST SENIOR TOWNS
AGE RESTRICTED ADULT HOUSING UNITS
ZONED: POR

TAX MAP 31 BLOCK 03
2ND ELECTION DISTRICT

PARCEL 4, PID PARCEL D-1
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS

8407 MAIN STREET
ELLICOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961

PROFESSIONAL CERTIFICATE

DESIGN BY: RHV
DRAWN BY: RHV/MR
CHECKED BY: RHV
DATE: AUG. 2017
SCALE: AS SHOWN
W.O. NO.: 15-33

1 SHEET OF 10

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DATE: 8-21-17
DATE: 10-2-17
DATE: 10-2-17

CHIEF, DEVELOPMENT ENGINEERING DIVISION
CHIEF, DIVISION OF LAND DEVELOPMENT
DIRECTOR

OVERALL VILLAGE CREST PARCEL D-1 PARKING ANALYSIS

	REQUIRED:	PROVIDED:
1. SENIOR CENTER:	65 SPACES	65 SPACES
2. DAY CARE:	30 SPACES	30 SPACES (AT BUILDING)
3. 12 SENIOR TOWNS:	28 SPACES	28 SPACES (4+11 SURPLUS SPACES)
4. POOL & CLUBHOUSE:	82 SPACES	75* SPACES (64+11 SURPLUS SPACES)
5. SENIOR APARTMENTS:	268 SPACES	385 SPACES

* 7 SPACE SHORTFALL PROVIDED BY APARTMENT SURPLUS

*FOR BUILDING ELEVATIONS, SEE SHEET 8

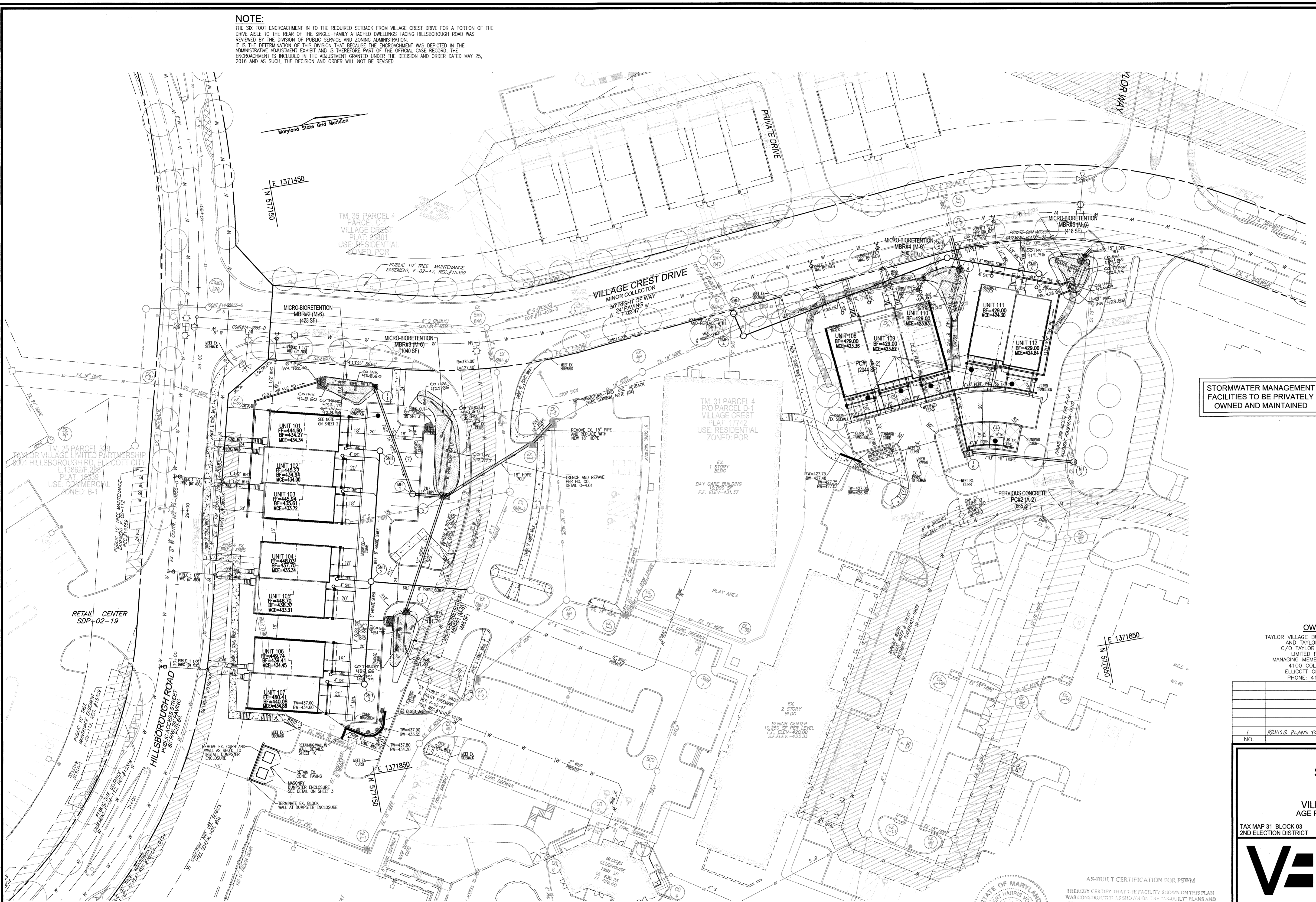


NO AS-BUILT INFORMATION ON THIS SHEET

AS-BUILT JUNE 2020

NOTE:
 THE SIX FOOT ENCROACHMENT IN TO THE REQUIRED SETBACK FROM VILLAGE CREST DRIVE FOR A PORTION OF THE DRIVE ASIDE TO THE REAR OF THE SINGLE-FAMILY ATTACHED DWELLINGS FACING HILLSBOROUGH ROAD WAS REVIEWED BY THE DIVISION OF PUBLIC SERVICE AND ZONING ADMINISTRATION. IT IS THE DETERMINATION OF THIS DIVISION THAT BECAUSE THE ENCROACHMENT WAS DEPICTED IN THE ADMINISTRATIVE ADJUSTMENT EXHIBIT AND IS THEREFORE PART OF THE OFFICIAL CASE RECORD, THE ENCROACHMENT IS INCLUDED IN THE ADJUSTMENT GRANTED UNDER THE DECISION AND ORDER DATED MAY 25, 2016 AND AS SUCH, THE DECISION AND ORDER WILL NOT BE REVISED.

LEGEND	
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	ADJACENT PROPERTY LINE
	EXISTING CURB AND GUTTER
	EXISTING 10' CONTOUR
	EXISTING 2' CONTOUR
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING SIGN
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING WATER LINE
	EXISTING STORM DRAIN
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING FENCE
	EXISTING STREET LIGHTS
	EXISTING PRIVATE LIGHTS
	EXISTING TREES
	EXISTING TREE LINE
	PROPOSED TREE LINE
	PROPOSED SANITARY LINE
	PROPOSED WATER LINE
	PROPOSED STORM DRAIN
	PROPOSED STORM DRAIN INLET
	PROPOSED CURB AND GUTTER
	PROPOSED SIDEWALK
	PROPOSED PRIVATE LIGHTS
	MICRO-BIORETENTION
	EX. STEEP SLOPES (25% OR GREATER)
	EX. MODERATE SLOPES (15%-24.99% OR GREATER)
	PERVIOUS PAVING
	EXISTING UTILITY EASEMENT (SEE PLAN FOR SIZE AND TYPE)
	EXISTING ACCESS EASEMENT (SEE PLAN FOR SIZE AND TYPE)



STORMWATER MANAGEMENT FACILITIES TO BE PRIVATELY OWNED AND MAINTAINED

OWNERS
 TAYLOR VILLAGE BUSINESS CENTER, LLC
 AND TAYLOR OFFICE, LLC
 C/O TAYLOR VILLAGE FAMILY
 LIMITED PARTNERSHIP
 MANAGING MEMBER PHIL GUGLIOTTI
 4100 COLLEGE AVENUE
 ELLICOTT CITY, MD 21043
 PHONE: 410-465-3500

DEVELOPER
 AUTUMN DEVELOPMENT CORPORATION
 RONALD L. SPAHN, PRESIDENT
 ROSS TAYLOR, VICE PRESIDENT
 5401 TWIN KNOLLS ROAD, SUITE 7
 COLUMBIA, MD 21045
 PHONE: 410-465-3500

NO.	REVISION	DATE
1	REVISE PLANS TO REVISE HOUSE TYPES	2-19-19

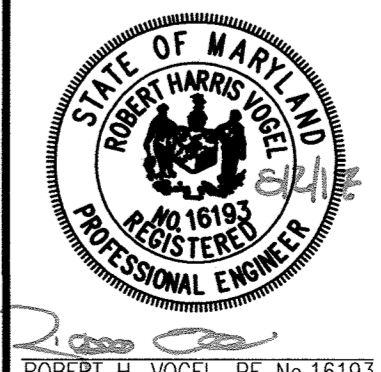
**SITE DEVELOPMENT PLAN
 SITE LAYOUT PLAN**

**VILLAGE CREST SENIOR TOWNS
 AGE RESTRICTED ADULT HOUSING UNITS
 ZONED: POR**

TAX MAP 31 BLOCK 03 PARCEL 4, P/O PARCEL D-1
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET TEL: 410.461.7666
 ELLICOTT CITY, MD 21043 FAX: 410.461.8961

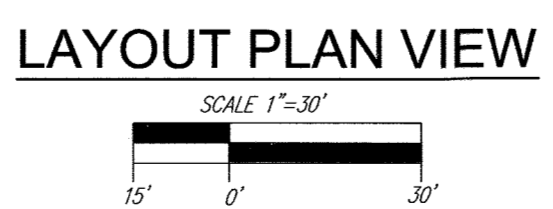
AS-BUILT CERTIFICATION FOR PSWM
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN BY THE AS-BUILT PLANS AND COMPLIES WITH THE APPLICABLE CODES AND SPECIFICATIONS. I HAVE VERIFIED THAT THE DRAINAGE AREA IS SUFFICIENTLY DETAILLED TO PREVENT CLOGGING OF THE DRAINAGE AREA FACILITY.
 R.H.V. 16193 7-13-20
 PROFESSIONAL ENGINEER

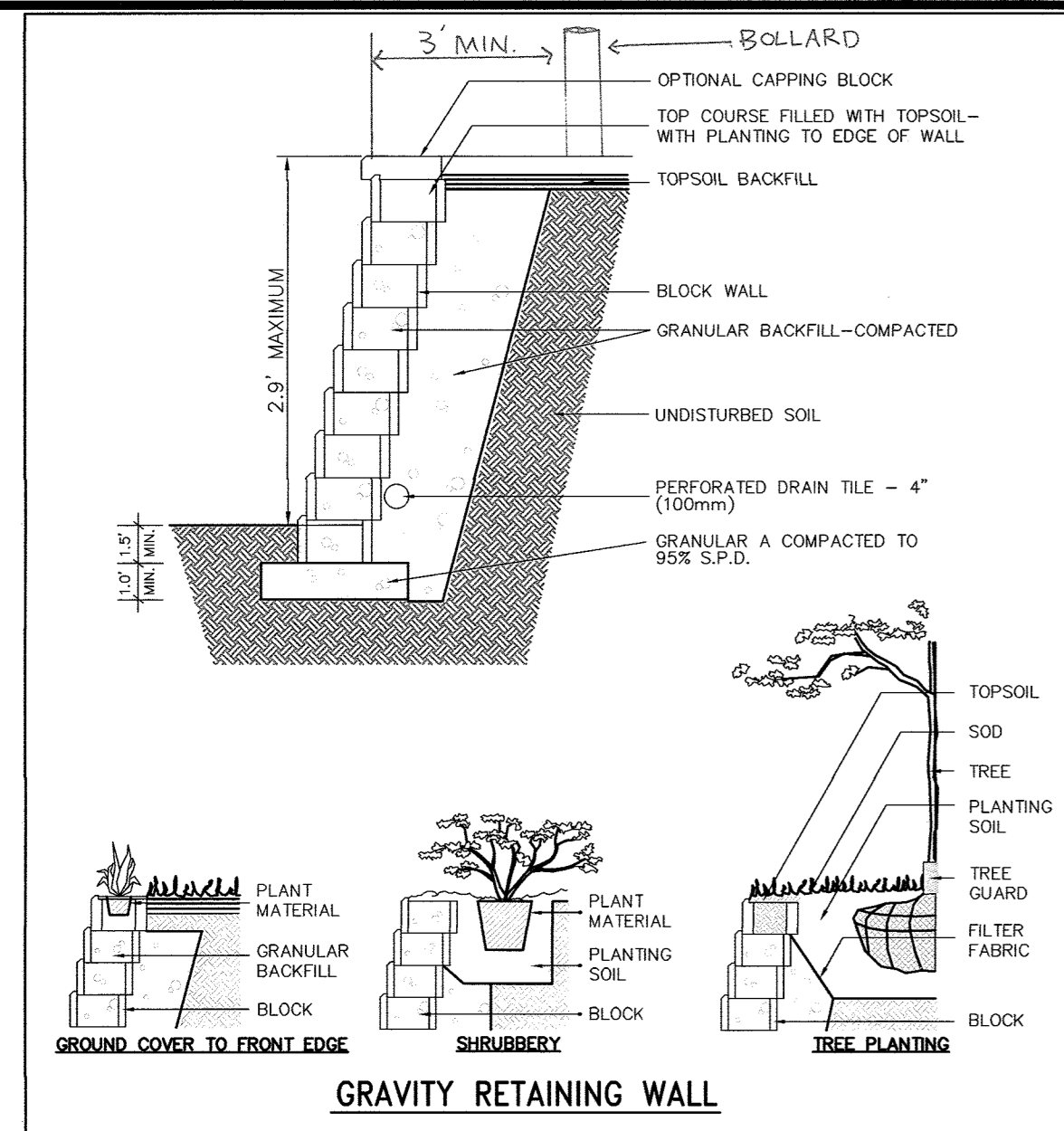


PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2018.
 DESIGN BY: RHV
 DRAWN BY: RHV/MR
 CHECKED BY: RHV
 DATE: AUG. 2017
 SCALE: AS SHOWN
 W.O. NO.: 15-33
 2 SHEET OF 10

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 8-21-17
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 [Signature] 10/2/17
 CHIEF, DIVISION OF LAND DEVELOPMENT
 [Signature] 10-2-17
 DIRECTOR

CURB AND GUTTER NOTE
 'STANDARD CURB' TO BE HOWARD COUNTY STANDARD 7" COMBINATION CURB AND GUTTER AND 'MODIFIED CURB' TO BE HOWARD COUNTY MODIFIED COMBINATION CURB AND GUTTER. SEE DETAIL R-3.01 ON SHEET 3. MEET EXISTING CURB FOR LINE AND GRADE WHERE NOTED ON THE PLANS.

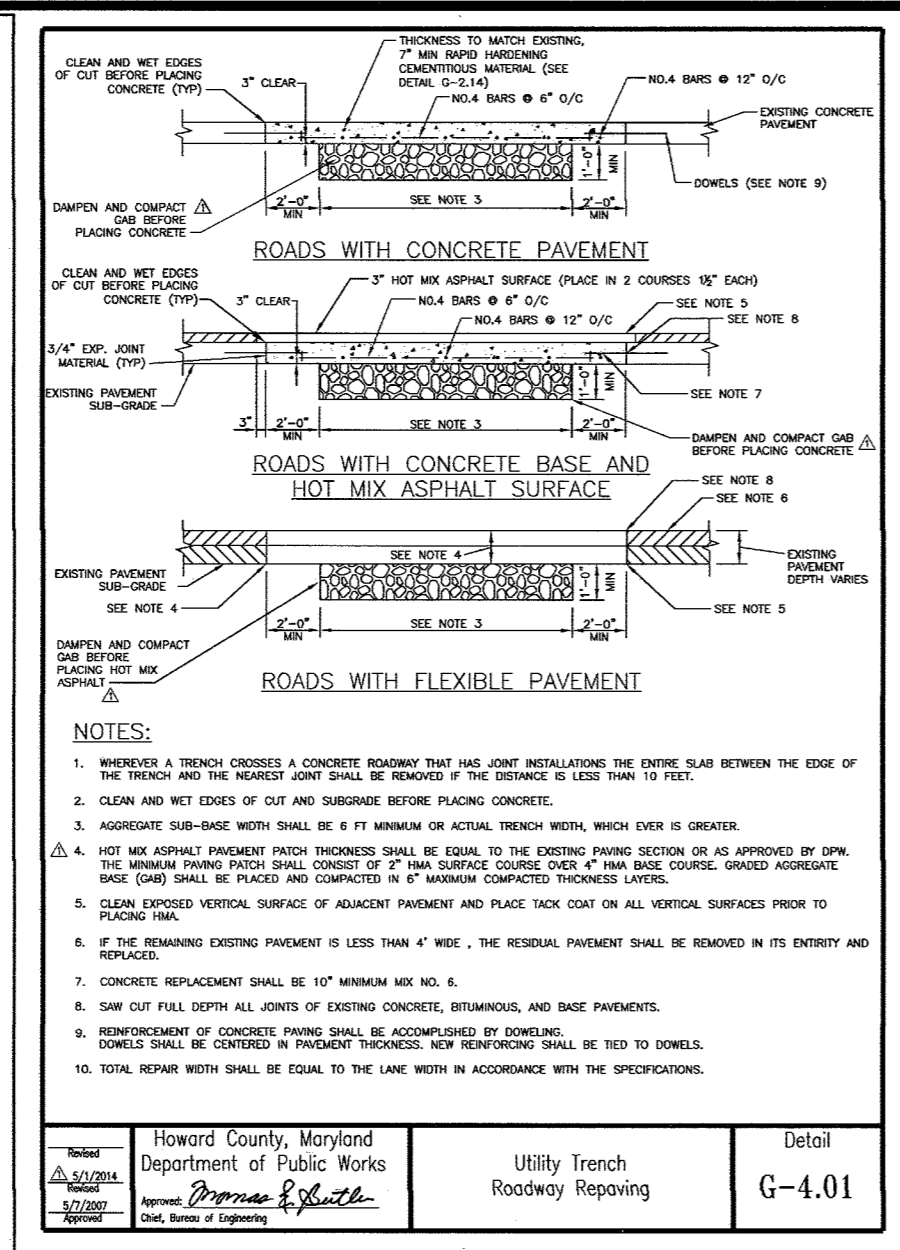
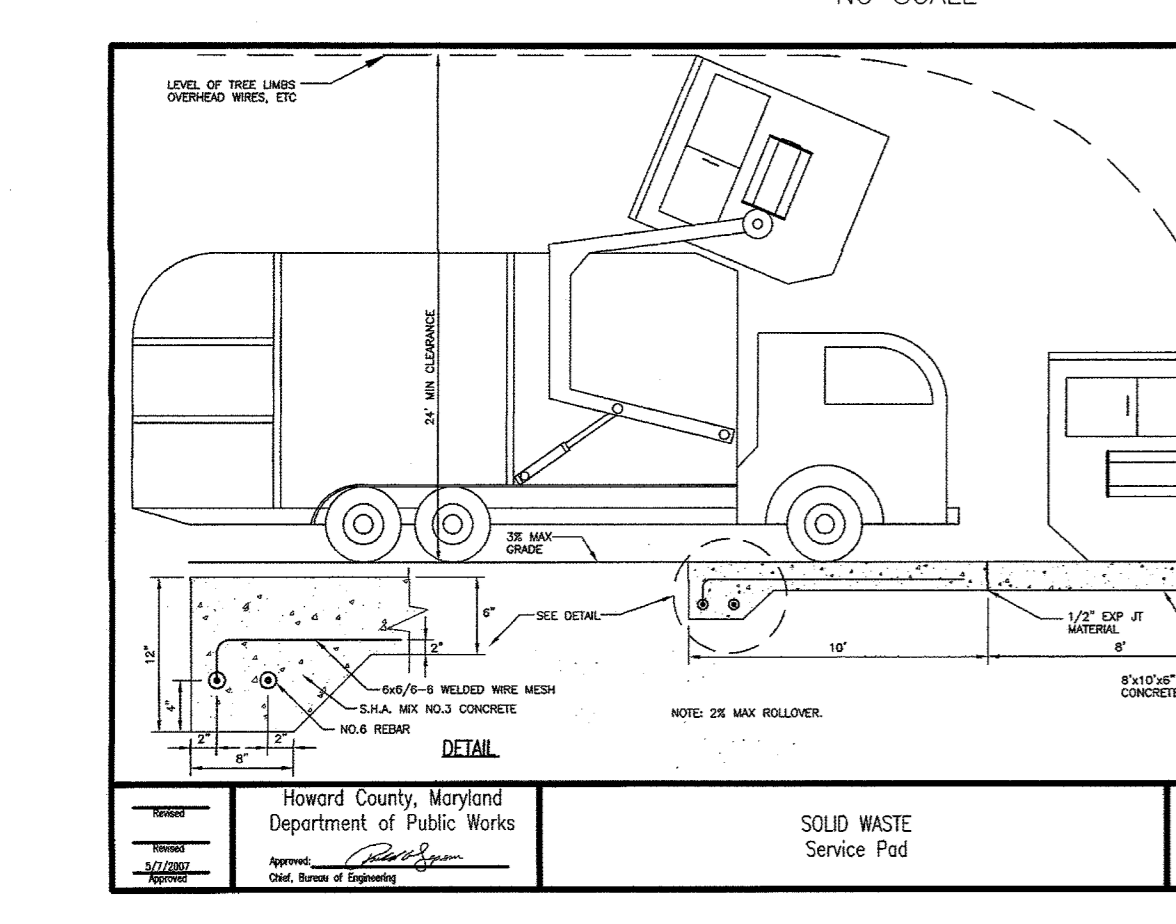
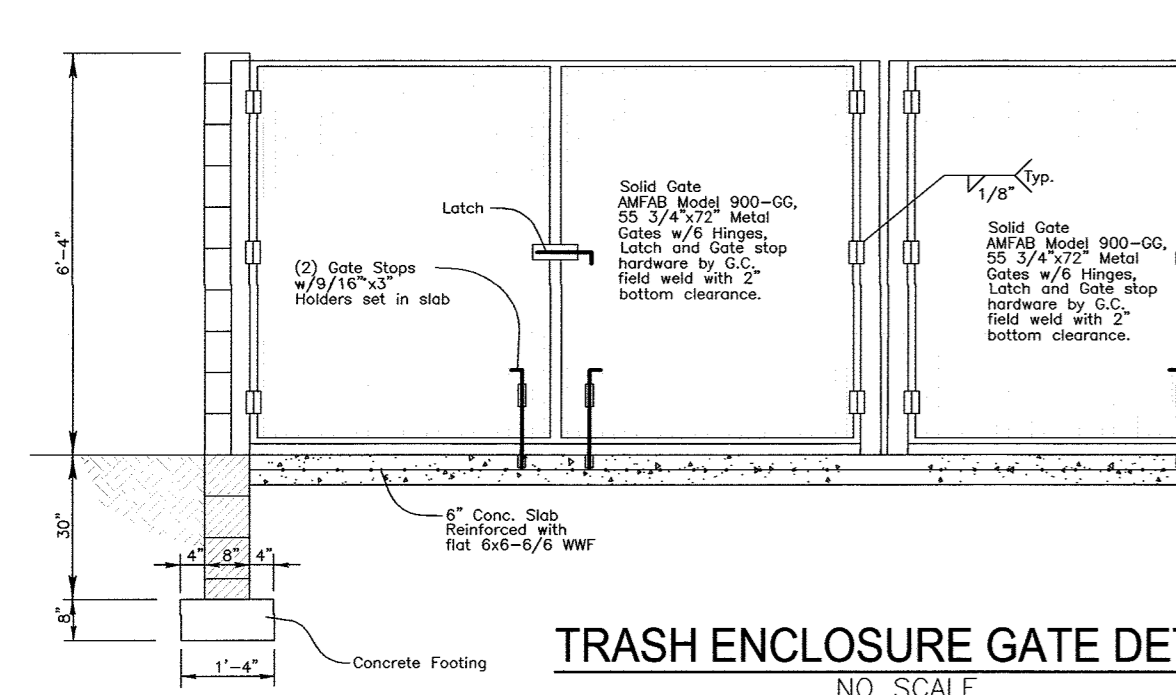
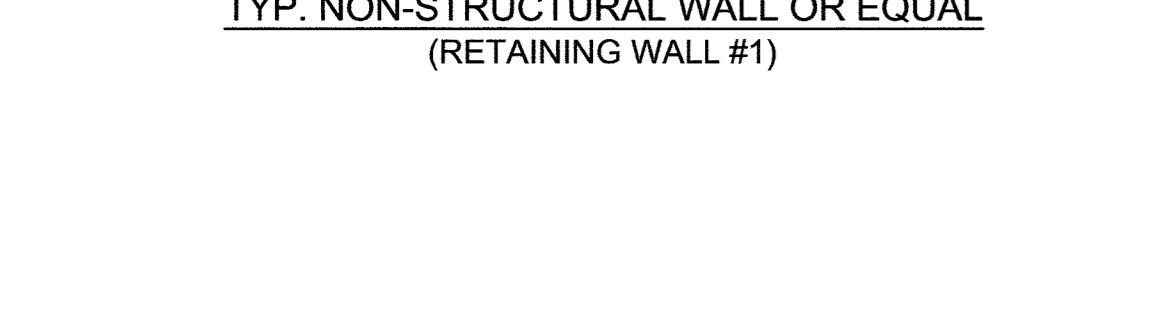




GRAVITY RETAINING WALL

SPECIFICATIONS:

1. EXCAVATE AREA TO LINE AND GRADES AS SHOWN ON CONSTRUCTION DRAWINGS.
2. SUBGRADE TO BE FIRM AND UNDISTURBED AND COMPACTED TO 95% S.P.D.
3. BASE MATERIAL SHALL BE GRANULAR A COMPACTED TO 95% S.P.D. AND GRADED TO PROVIDE LEVEL HARD SURFACE ON WHICH TO PLACE THE FIRST COURSE OF UNITS. MIN. THICKNESS - 4" (100mm).
4. PLACE FIRST COURSE A MINIMUM OF 4" (100mm) BELOW FINISHED GRADE, WITH THE RAISED LIP FACING OUT AND THE FRONT EDGES TIGHT TOGETHER. FILL GANTRY WITH SAND OR CLEAR CRUSHED STONE AND COMPACT. SWEEP CLEAN AND CHECK THE UNITS FOR LEVEL AND ALIGNMENT, BACKFILL FRONT AND BACK OF ENTIRE BASE ROW TO FIRMLY LOCK IN PLACE.
5. INSTALL SUBSEQUENT COURSES IN SIMILAR FASHION PROVIDING A MIN. 3" (76mm) OVERLAP OF SEAMS AND A MIN. OF 12" (305mm) GRANULAR BACKFILL. 6. WALLS HIGHER THAN 6' REQUIRE OVERLAY OF SEAMS AND MASONRY CONSTRUCTION; CONSULT MANUFACTURER AND STRUCTURAL ENGINEER. 7. CONSULT WALL/BLOCK MANUFACTURER FOR MORE SPECIFIC INSTALLATION INSTRUCTIONS.

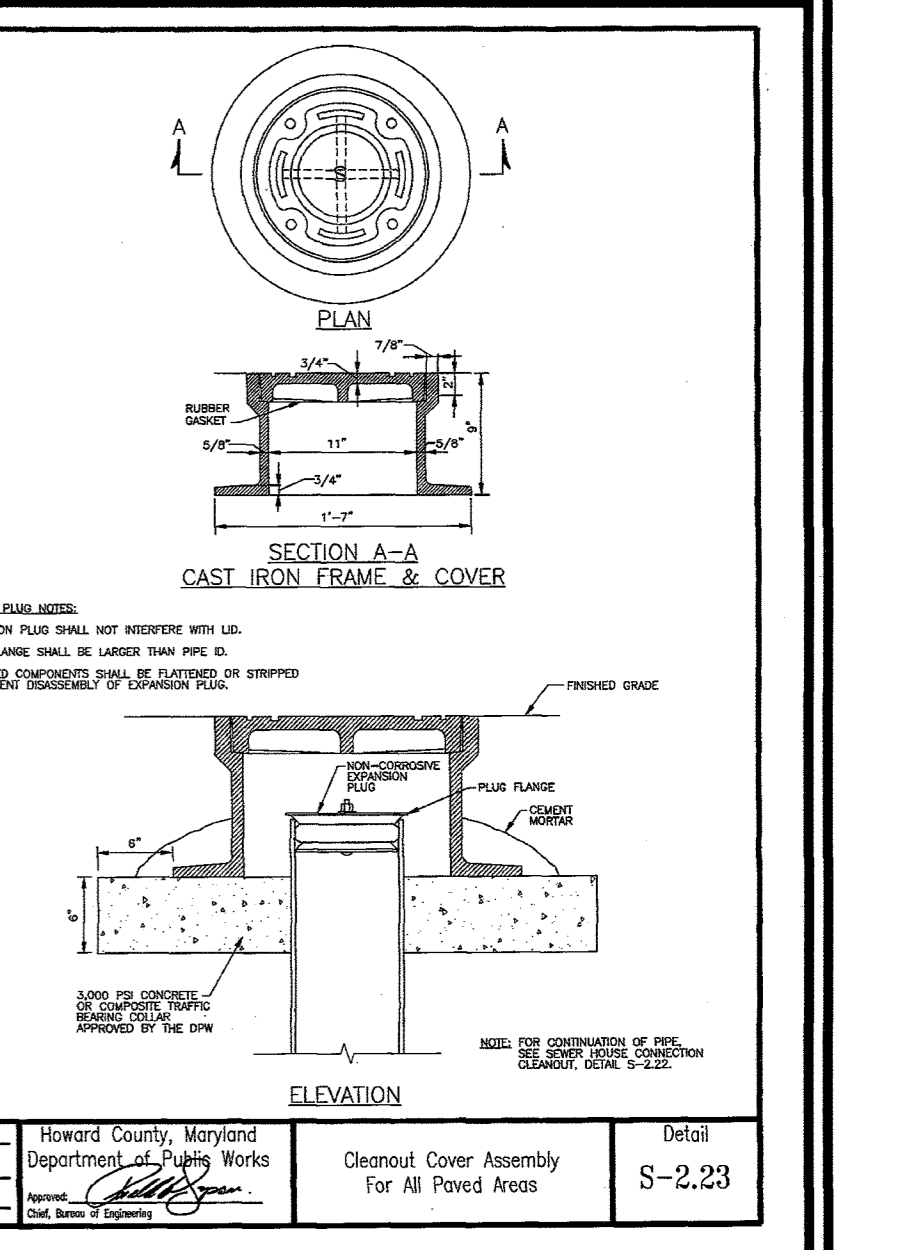
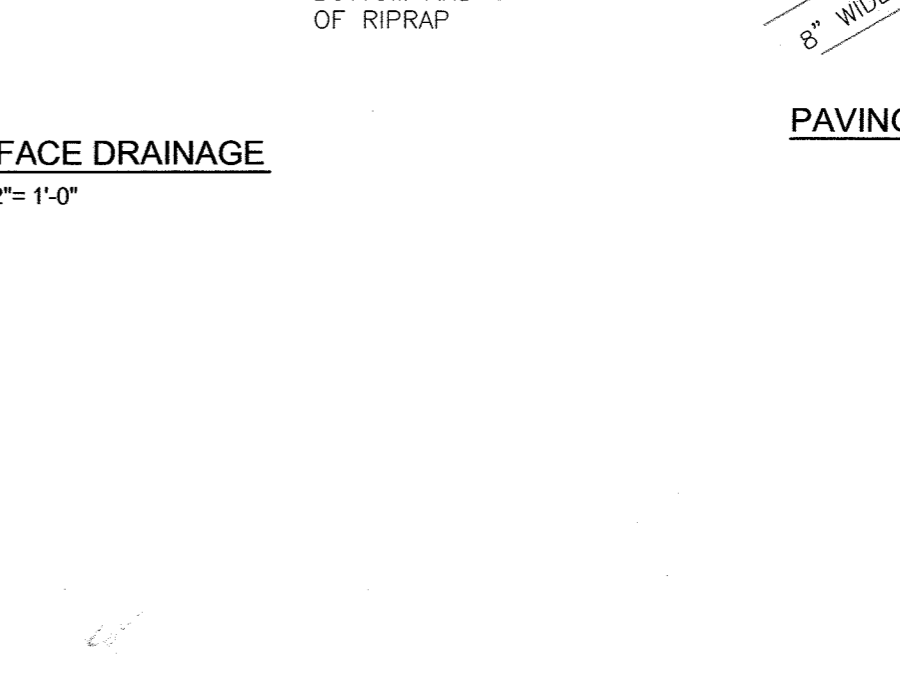
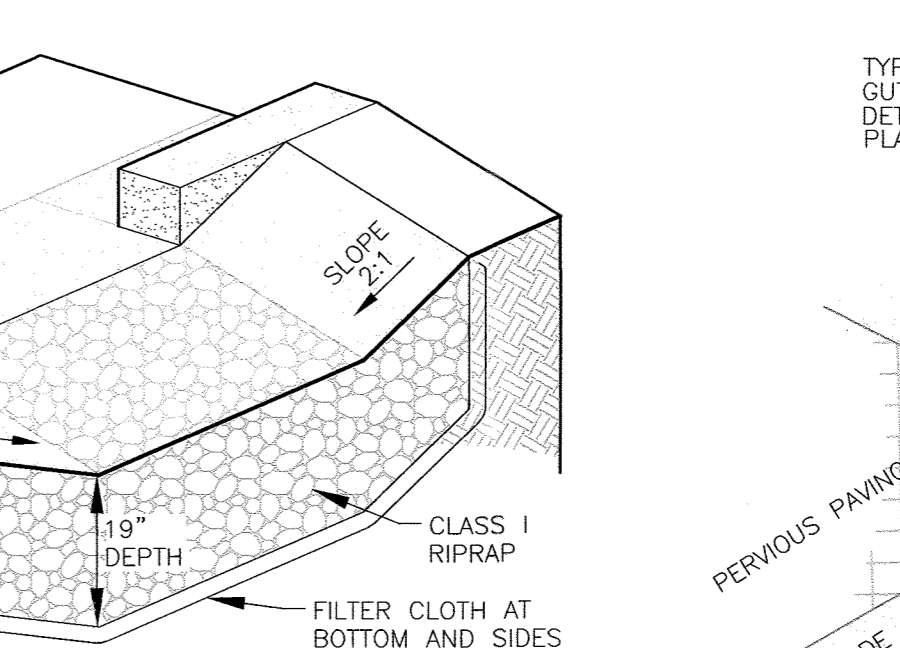
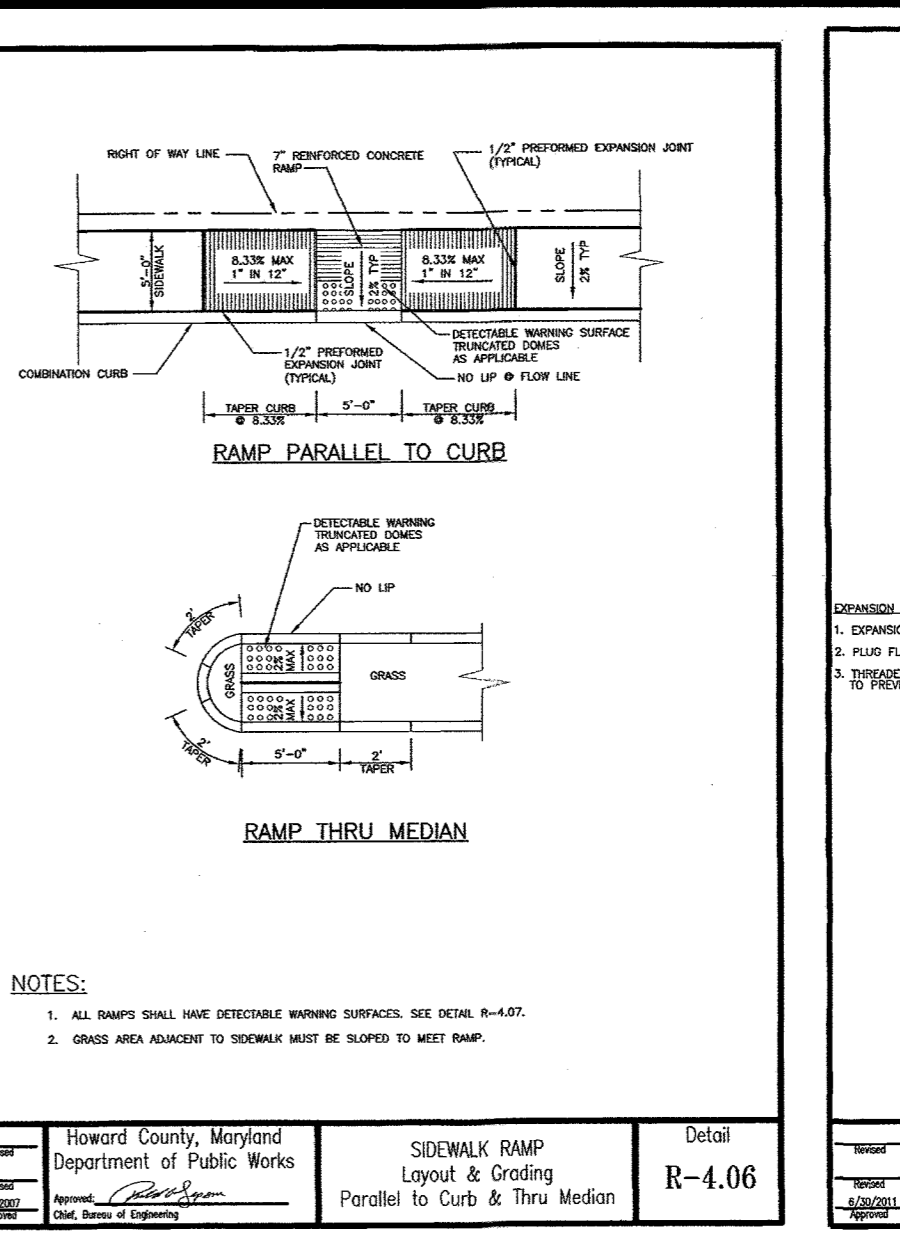
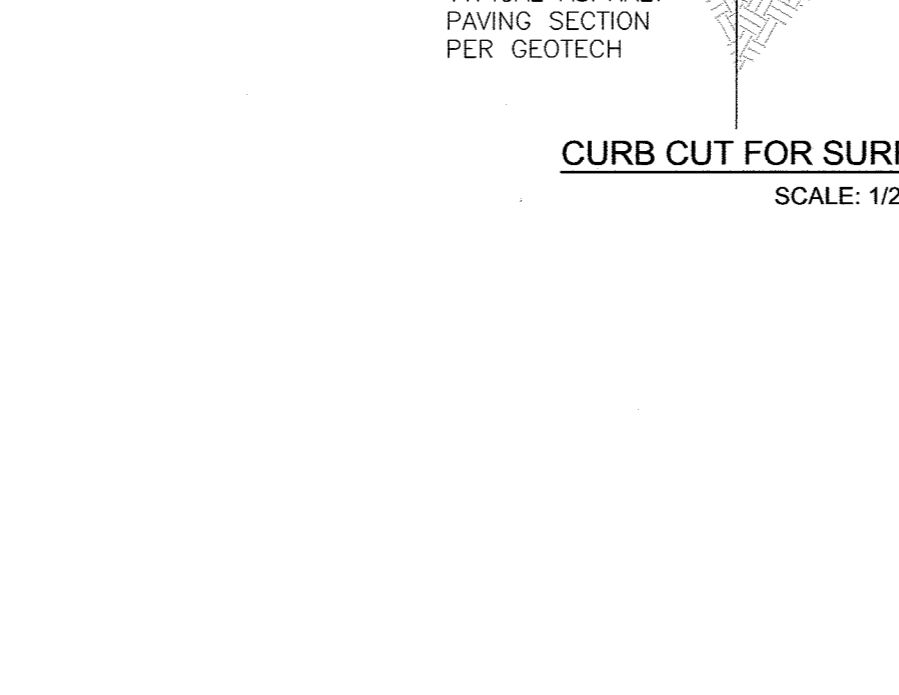
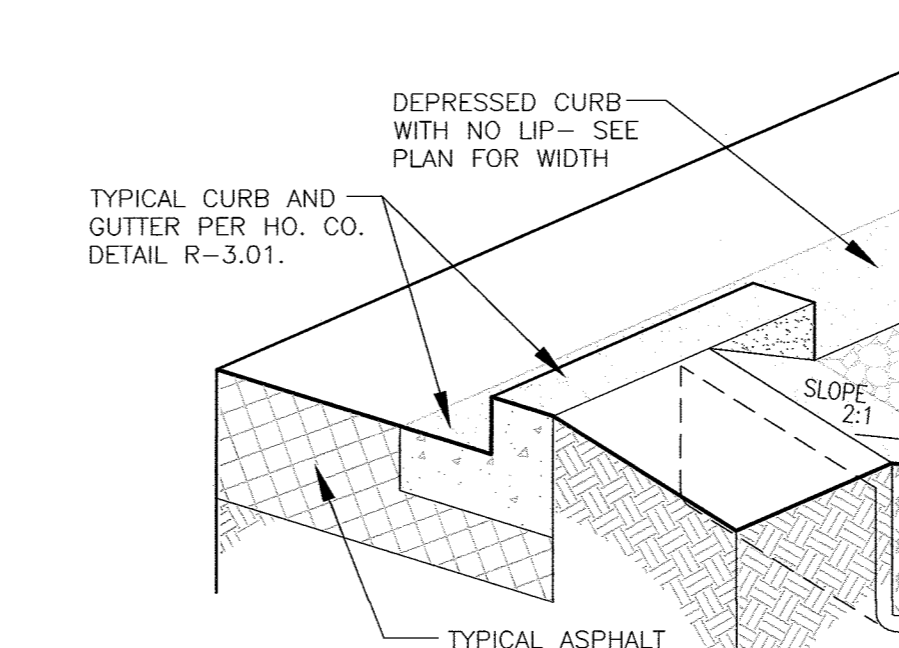
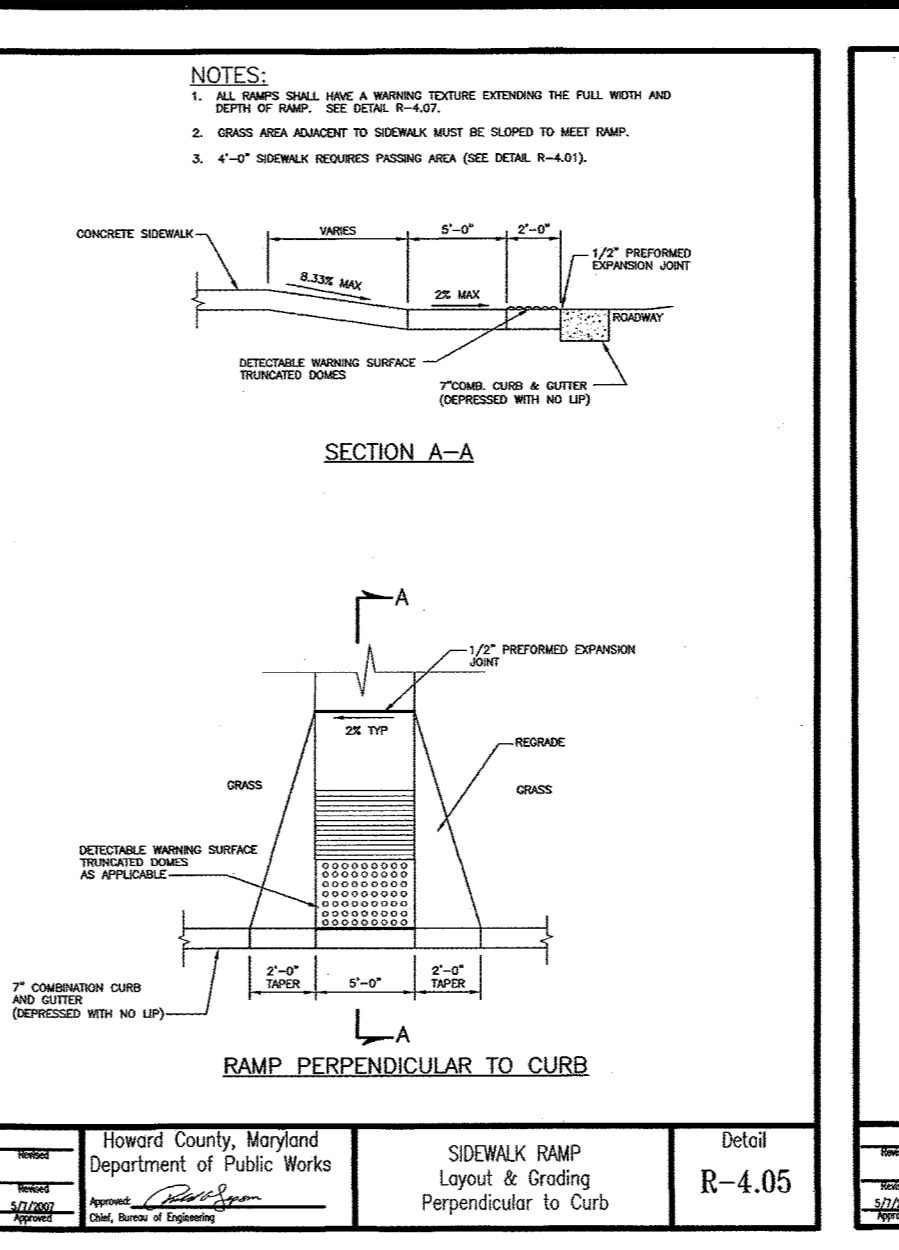
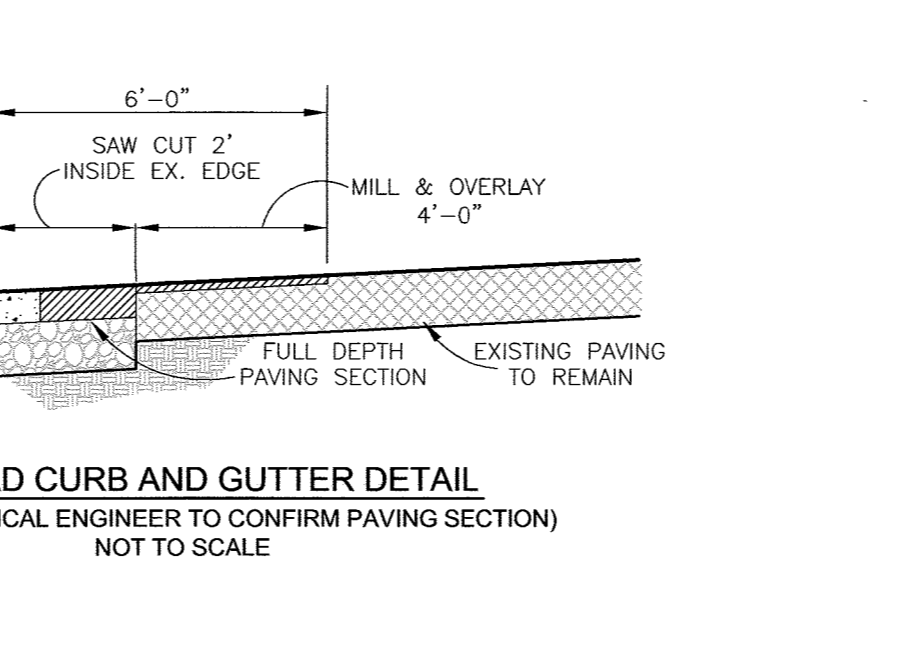
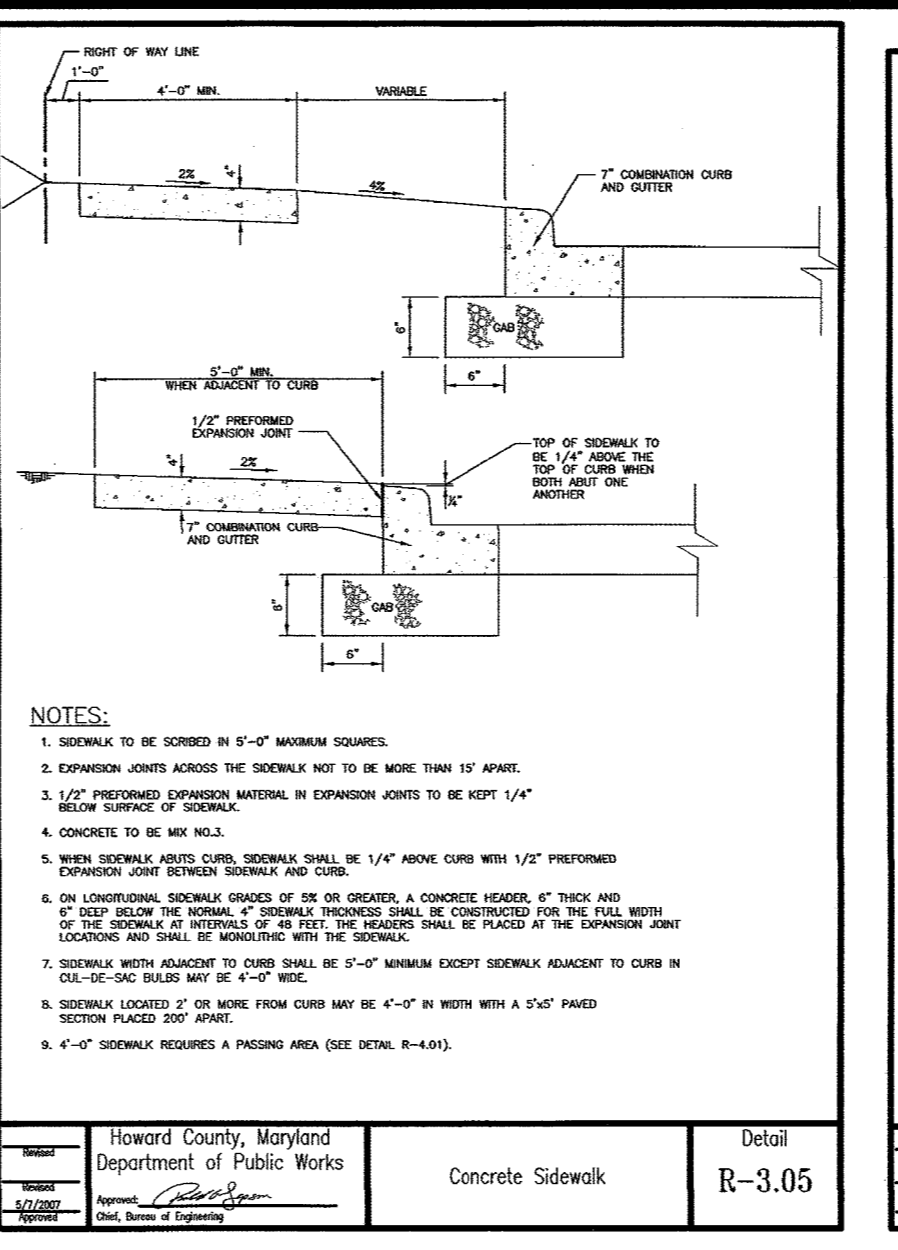
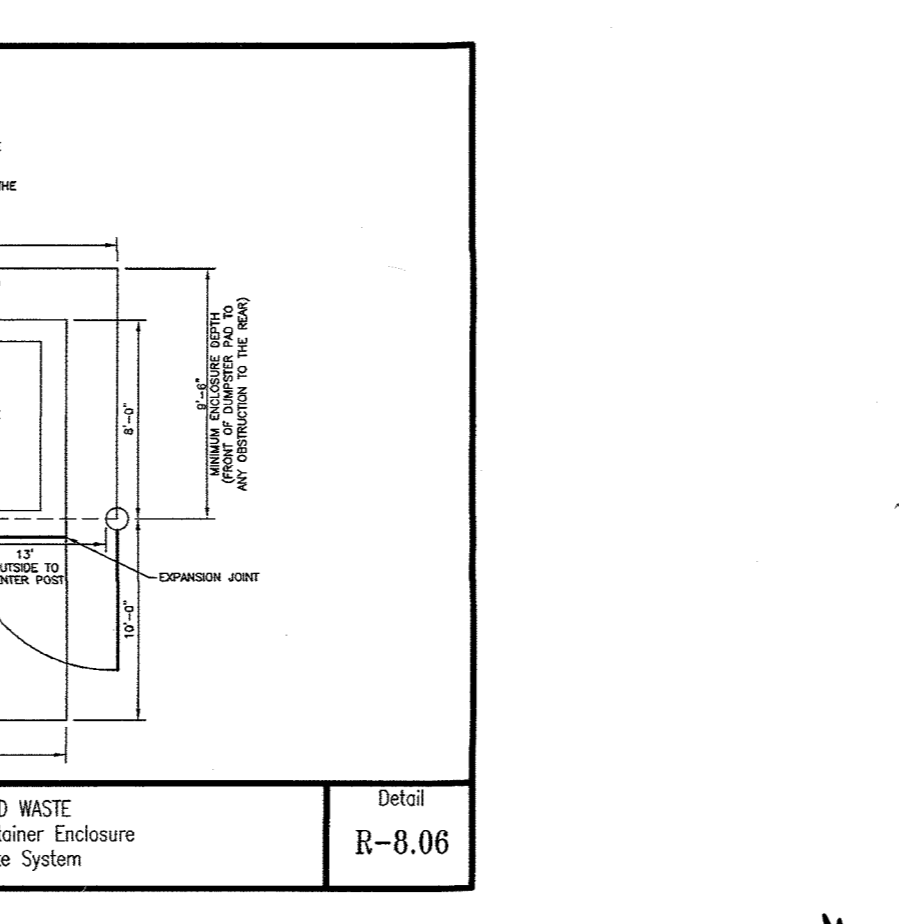
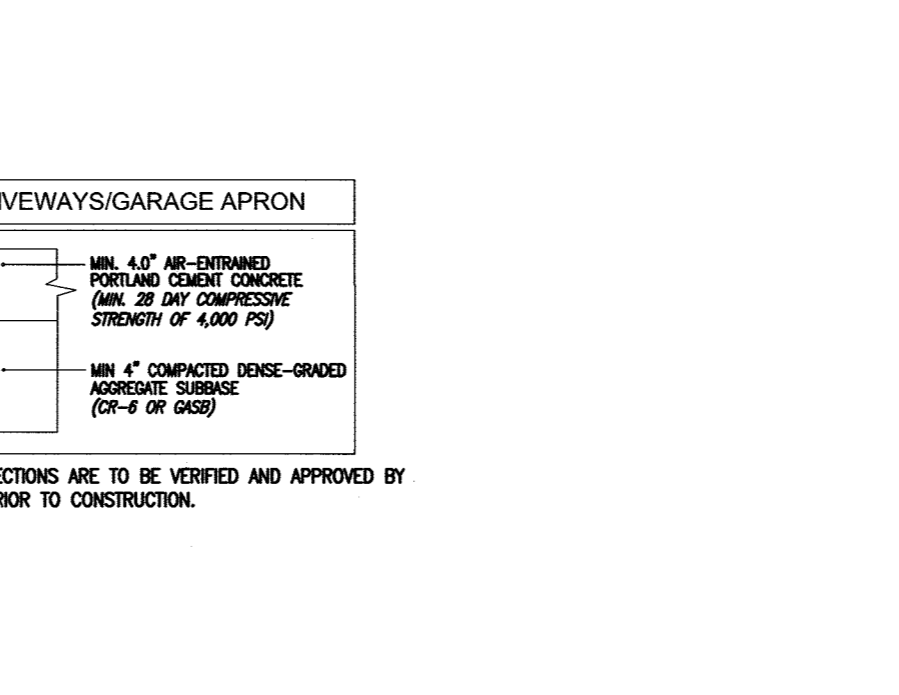
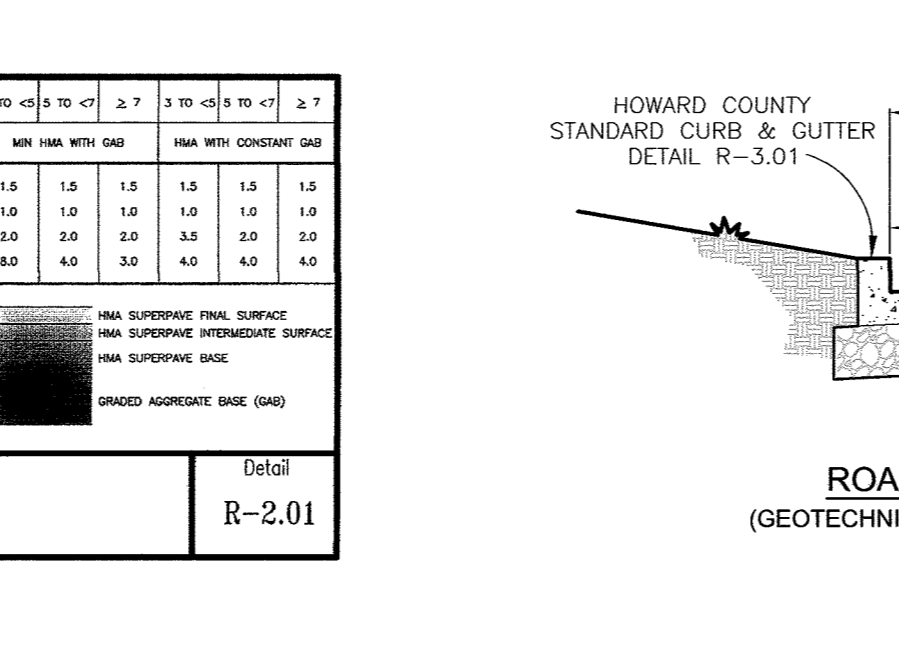
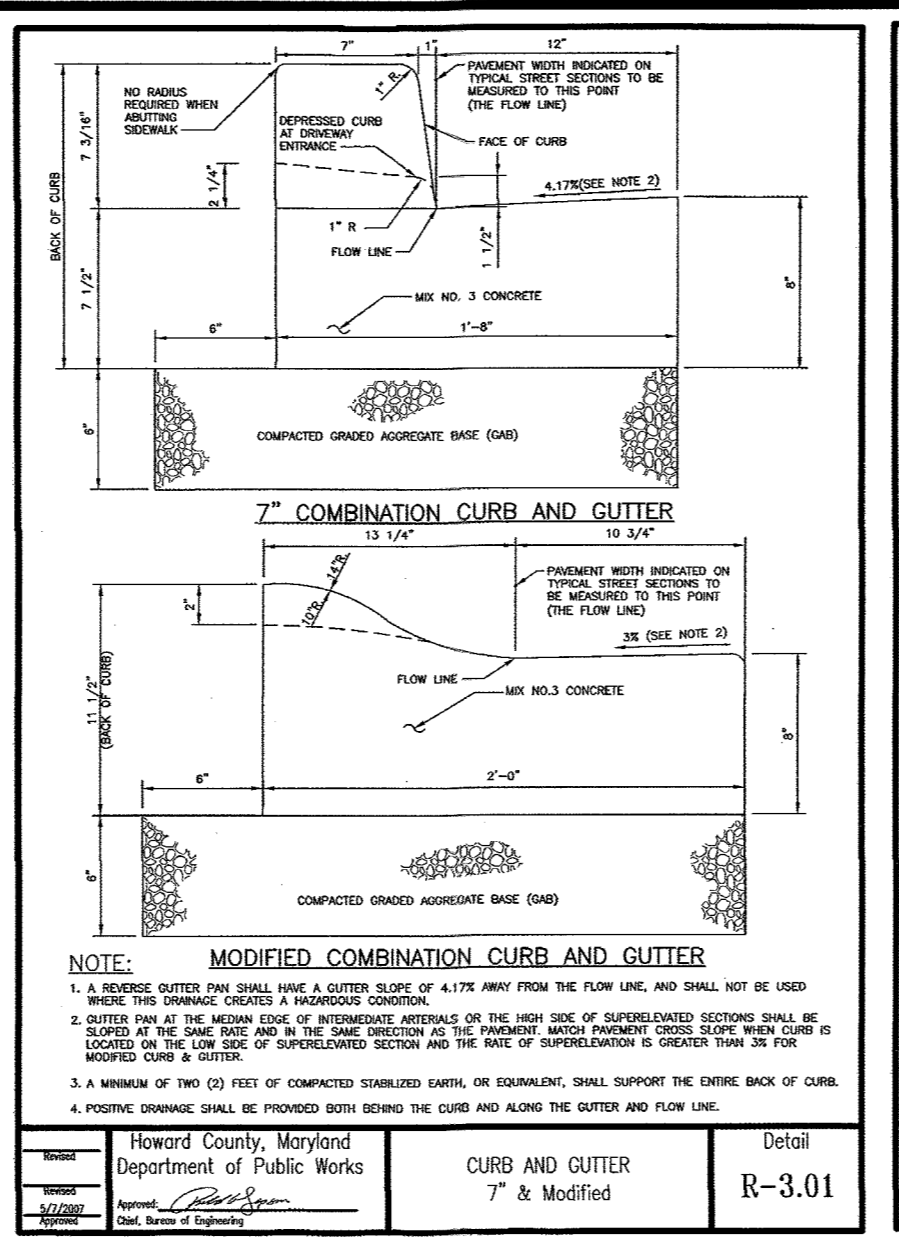
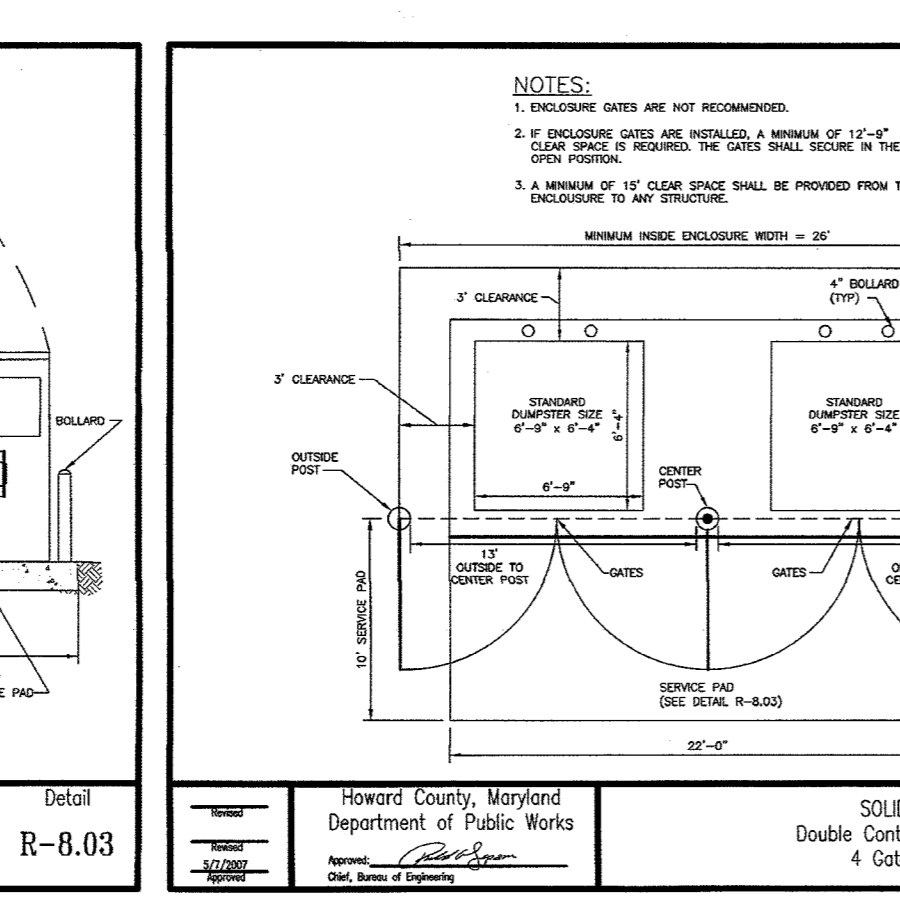
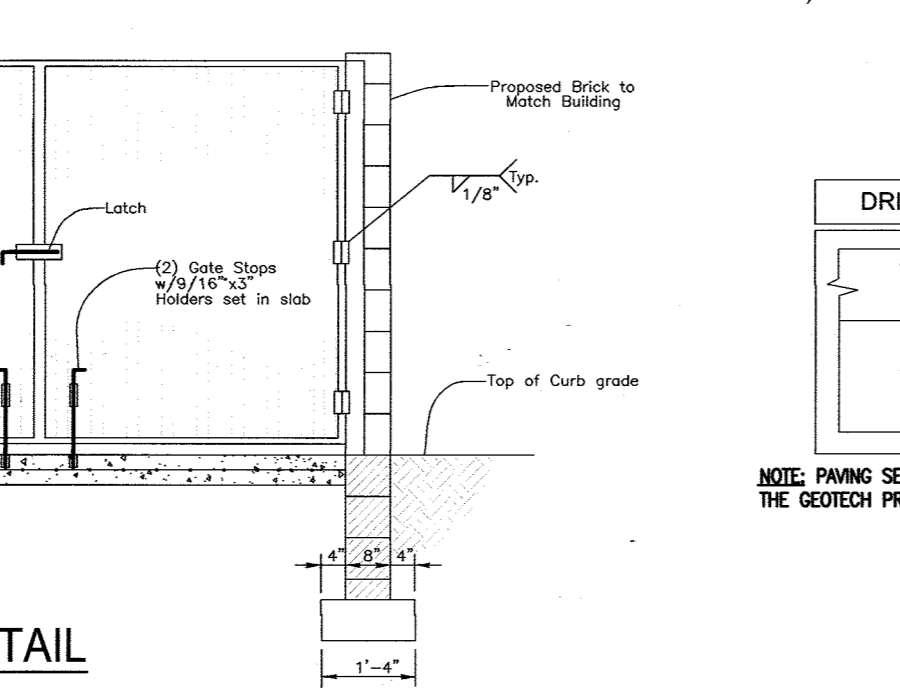


Howard County, Maryland Department of Public Works

Utility Trench Roadway Repairing

Detail G-4.01

SECTION	ROAD AND STREET CLASSIFICATION	CALIFORNIA BOUNDARY DATA	3 TO 40' R-10	4 TO 7	3 TO 40' R-10	4 TO 7
P-2	FINISH GRADE: EXISTING, NEW NON-INTERFERING WITH NO MORE THAN 10% GRADE FOR DRIVE LOCAL ROAD ACCESS DRIVE: 10% MAX. SIDEWALK: 10% MAX. SHOULDER: 10% MAX. SHOULDER: 10% MAX.	PAVEMENT MATERIAL (INCHES)	MIN. 1.5	MIN. 1.5	MIN. 1.5	MIN. 1.5
		MIN. SUPERIMPOSED FINISH SURFACE	1.5	1.5	1.5	1.5
		MIN. SUPERIMPOSED SURFACE	1.5	1.5	1.5	1.5
		MIN. SUPERIMPOSED SURFACE	1.5	1.5	1.5	1.5



Howard County, Maryland Department of Public Works

Utility Trench Roadway Repairing

Detail G-4.01

Howard County, Maryland Department of Public Works

CURB AND GUTTER 7\"/>

Detail R-3.01

Howard County, Maryland Department of Public Works

Concrete Sidewalk

Detail R-3.05

Howard County, Maryland Department of Public Works

SIDEWALK RAMP Layout & Grading Perpendicular to Curb

Detail R-4.05

Howard County, Maryland Department of Public Works

SIDEWALK RAMP Layout & Grading Parallel to Curb & Thru Median

Detail R-4.06

Howard County, Maryland Department of Public Works

Cleanout Cover Assembly For All Paved Areas

Detail S-2.23

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION

CHIEF, DIVISION OF LAND DEVELOPMENT

DIRECTOR

DATE: 8/21/17

DATE: 10/2/17

DATE: 10-2-17

Howard County, Maryland Department of Public Works

SOLID WASTE Service Pad

Detail R-8.03

Howard County, Maryland Department of Public Works

SOLID WASTE Double Container Enclosure 4 Gate System

Detail R-8.06

WOOD VEHICULAR GUARD RAIL WITH 4\"/>

TYPICAL CURB AND GUTTER PER HO. CO. DETAIL R-3.01.

TYPICAL ASPHALT PAVING SECTION PER GEOTECH

GUARD RAIL AT RETAINING WALL #2

SCALE: 1/2"= 1'-0"

6' +/- 1'

RAIL

PICKETS

RAIL

POST

CONCRETE FOOTING (PER LOCAL CODE)

DIMENSIONS

HT	A	B
3 1/2"	40 3/4"	PER LOCAL CODE
ALL DIMENSIONS ARE NOMINAL		

FENCE ATOP WALL #2 (NOT TO SCALE)

NOTE: 42\"/>

RAILS AND 1/2\"/>

J.E. NAME: 16193

P.L.#: 7-13-20

DATE: 7-13-20

NO AS-BUILT INFORMATION ON THIS SHEET

AS-BUILT CERTIFICATION FOR PSWM

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

STATE OF MARYLAND PROFESSIONAL ENGINEER No. 16193

ROBERT H. VOGEL, PE No. 16193

OWNERS: TAYLOR VILLAGE BUSINESS CENTER, LLC AND TAYLOR OFFICE, LLC

DEVELOPER: AUTUMN DEVELOPMENT CORPORATION

MANAGING MEMBER PHIL GUGLIOTTI

4100 COLLEGE AVENUE, ELLICOTT CITY, MD 21043

PHONE: 410-465-3500

PARCEL 4, P10 PARCEL D-1 HOWARD COUNTY, MARYLAND

TAX MAP 31 BLOCK 03 2ND ELECTION DISTRICT

REVISION

NO.

REVISION

DATE

SITE DEVELOPMENT PLAN

SITE DETAILS

VILLAGE CREST SENIOR TOWNS

AGE RESTRICTED ADULT HOUSING UNITS

ZONED: POR

ROBERT H. VOGEL ENGINEERING, INC.

ENGINEERS • SURVEYORS • PLANNERS

8407 MAIN STREET ELLICOTT CITY, MD 21043

TEL: 410.461.7666 FAX: 410.461.8961

DESIGN BY: RHV

DRAWN BY: RHV/MR

CHECKED BY: RHV

DATE: AUG. 2017

SCALE: AS SHOWN

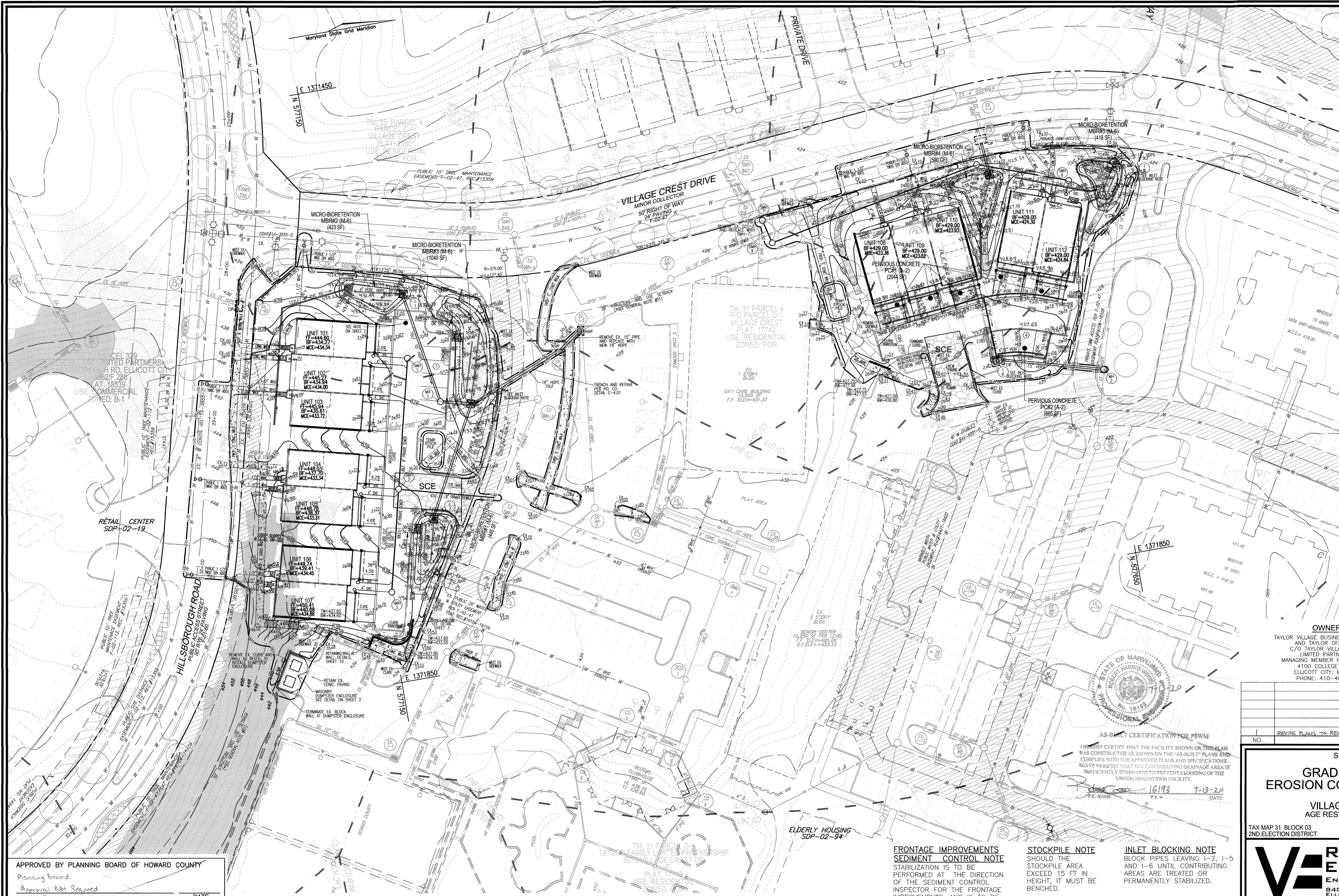
W.O. NO.: 15-33

PROFESSIONAL CERTIFICATE

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. 16193 EXPIRATION DATE: 09-27-2018

3 OF 10

AS-BUILT JUNE 2020



LEGEND

	PROPERTY LINE
	RIGHT-OF-WAY LINE
	ADJACENT PROPERTY LINE
	EXISTING CURB AND GUTTER
	EXISTING 10' CONTOUR
	EXISTING 2' CONTOUR
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING SIGN
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING WATER LINE
	EXISTING STORM DRAIN
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING FENCE
	EXISTING STREET LIGHTS
	EXISTING PRIVATE LIGHTS
	EXISTING TREES
	EXISTING TREE LINE
	PROPOSED TREE LINE
	PROPOSED SANITARY LINE
	PROPOSED WATER LINE
	PROPOSED STORM DRAIN
	PROPOSED STORM DRAIN INLET
	PROPOSED CURB AND GUTTER
	PROPOSED SIDEWALK
	PROPOSED PRIVATE LIGHTS
	MICRO-BIORETENTION
	EX. STEEP SLOPES (25% OR GREATER)
	EX. MODERATE SLOPES (15%-24.99% OR GREATER)
	PERVIOUS PAVING
	EXISTING UTILITY EASEMENT (SEE PLAN FOR SIZE AND TYPE)
	EXISTING ACCESS EASEMENT (SEE PLAN FOR SIZE AND TYPE)
	PROPOSED 10' CONTOUR
	PROPOSED 2' CONTOUR
	PROPOSED SPOT ELEVATION
	SOILS BOUNDARY
	SILT FENCE
	SUPER SILT FENCE
	LIMIT OF DISTURBANCE
	CURB INLET PROTECTION
	STANDARD INLET PROTECTION
	STABILIZED CONSTRUCTION ENTRANCE

STORMWATER MANAGEMENT FACILITIES TO BE PRIVATELY OWNED AND MAINTAINED

OWNERS
TAYLOR VILLAGE BUSINESS CENTER, LLC
AND TAYLOR OFFICE, LLC
C/O TAYLOR VILLAGE FAMILY LIMITED PARTNERSHIP
MANAGING MEMBER: PHIL GUGLIOTTI
4100 COLLEGE AVENUE
ELLCOTT CITY, MD 21043
PHONE: 410-465-3500

DEVELOPER
AUTUMN DEVELOPMENT CORPORATION
RONALD L. SPAIN, PRESIDENT
ROSS TAYLOR, VICE PRESIDENT
5401 TWIN KNOLLS ROAD, SUITE 7
COLUMBIA, MD 21045
PHONE: 410-465-3500



AS-BUILT CERTIFICATION FOR PSWM
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

DATE: 7-13-20
P.E. NAME: [Signature]
P.E. NO.: 16193

NO.	REVISION	DATE
	REVISE PLANS TO REVISE HOUSE TYPES	2-19-19

SITE DEVELOPMENT PLAN
GRADING, SEDIMENT AND EROSION CONTROL PLAN; SOILS MAP

VILLAGE CREST SENIOR TOWNS
AGE RESTRICTED ADULT HOUSING UNITS
ZONED: POR

TAX MAP 31 BLOCK 03 PARCEL 4, P/O PARCEL D-1
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERS, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET TEL: 410.461.7666
ELLCOTT CITY, MD 21043 FAX: 410.461.8961

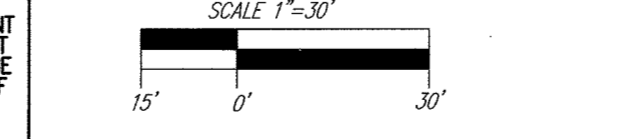


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DESIGN BY: RHV
DRAWN BY: RHV/MR
CHECKED BY: RHV
DATE: AUG. 2017
SCALE: AS SHOWN
W.O. NO.: 15-33

4 SHEET OF 10

GRADING PLAN VIEW



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

DATE: 8/19/17
DESIGNER'S SIGNATURE: [Signature]
ROBERT H. VOGEL
PRINTED NAME
MD REGISTRATION NO. 16193
R.L.S. OR R.L.A. (circle one)

FRONTAGE IMPROVEMENTS SEDIMENT CONTROL NOTE
STABILIZATION IS TO BE PERFORMED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR FOR THE FRONTAGE IMPROVEMENTS, AND IS TO BE STABILIZED AT THE END OF EACH WORKING DAY.

STOCKPILE NOTE
SHOULD THE STOCKPILE AREA EXCEED 15 FT IN HEIGHT, IT MUST BE BENCHED.

INLET BLOCKING NOTE
BLOCK PIPES LEAVING 1-2, 1-5 AND 1-6 UNTIL CONTRIBUTING AREAS ARE TREATED OR PERMANENTLY STABILIZED.

SOILS LEGEND
HOWARD COUNTY SOILS MAP #14

SYMBOL	NAME / DESCRIPTION	GROUP	K FACTOR	ERODIBLE
LeC	LEGORE SILT LOAM, 8 TO 15 PERCENT SLOPES, STONY	C	0.02	NO
LmB	LEGORE-MONTALO SILT LOAMS, 3 TO 8 PERCENT SLOPES	C	0.32	NO
LrD	LEGORE-RELAY GRAVELLY LOAMS, 15 TO 25 PERCENT SLOPES, VERY STONY	C	0.20	YES
MoC	MOUNT LUCAS SILT LOAM, 8 TO 15 PERCENT SLOPES, STONY	C/D	0.32	YES

APPROVED BY PLANNING BOARD OF HOWARD COUNTY
Planning Board
Approval Not Required
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DATE: 8/21/17
DATE: 10/2/17
DATE: 10-2-17

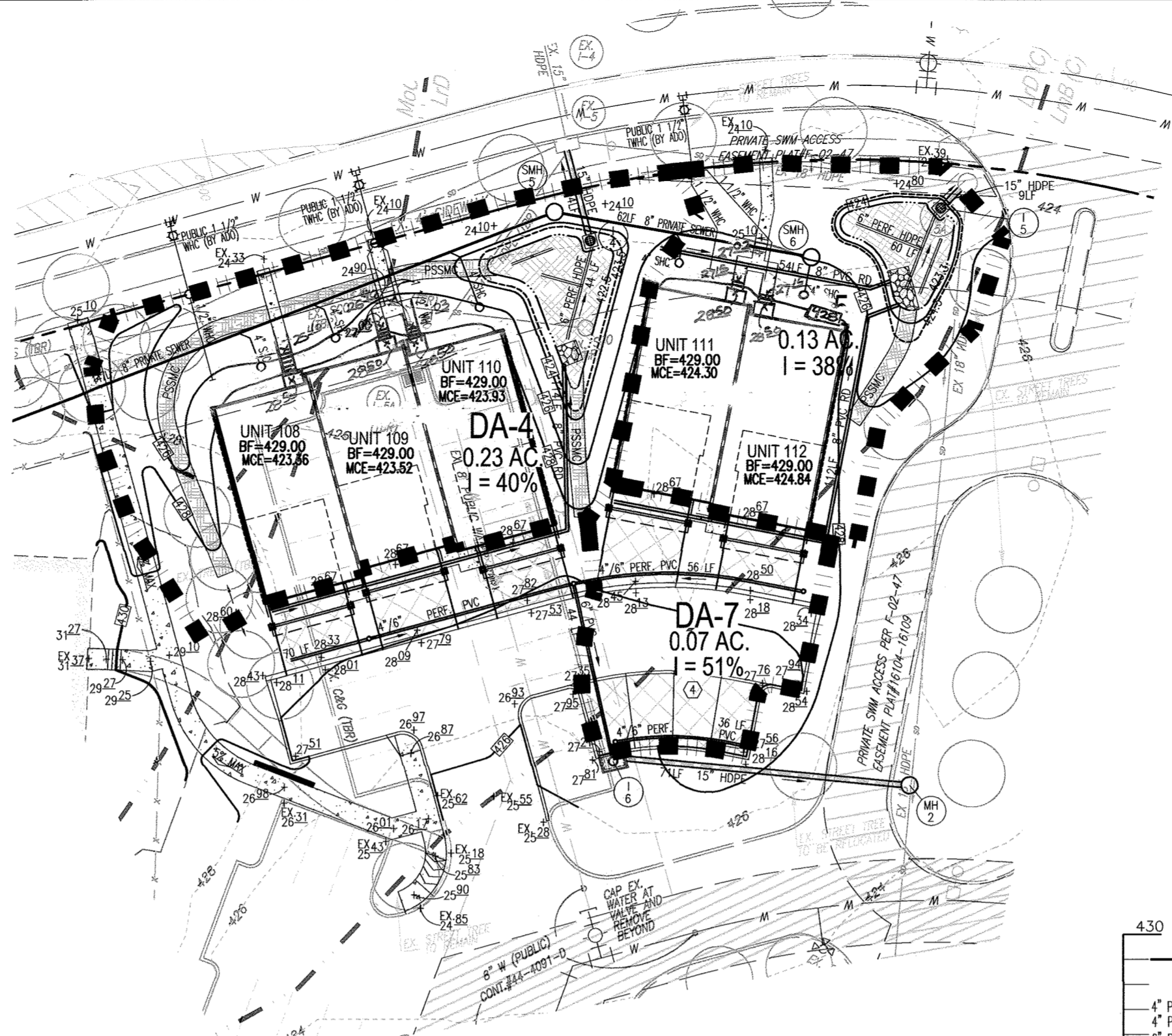
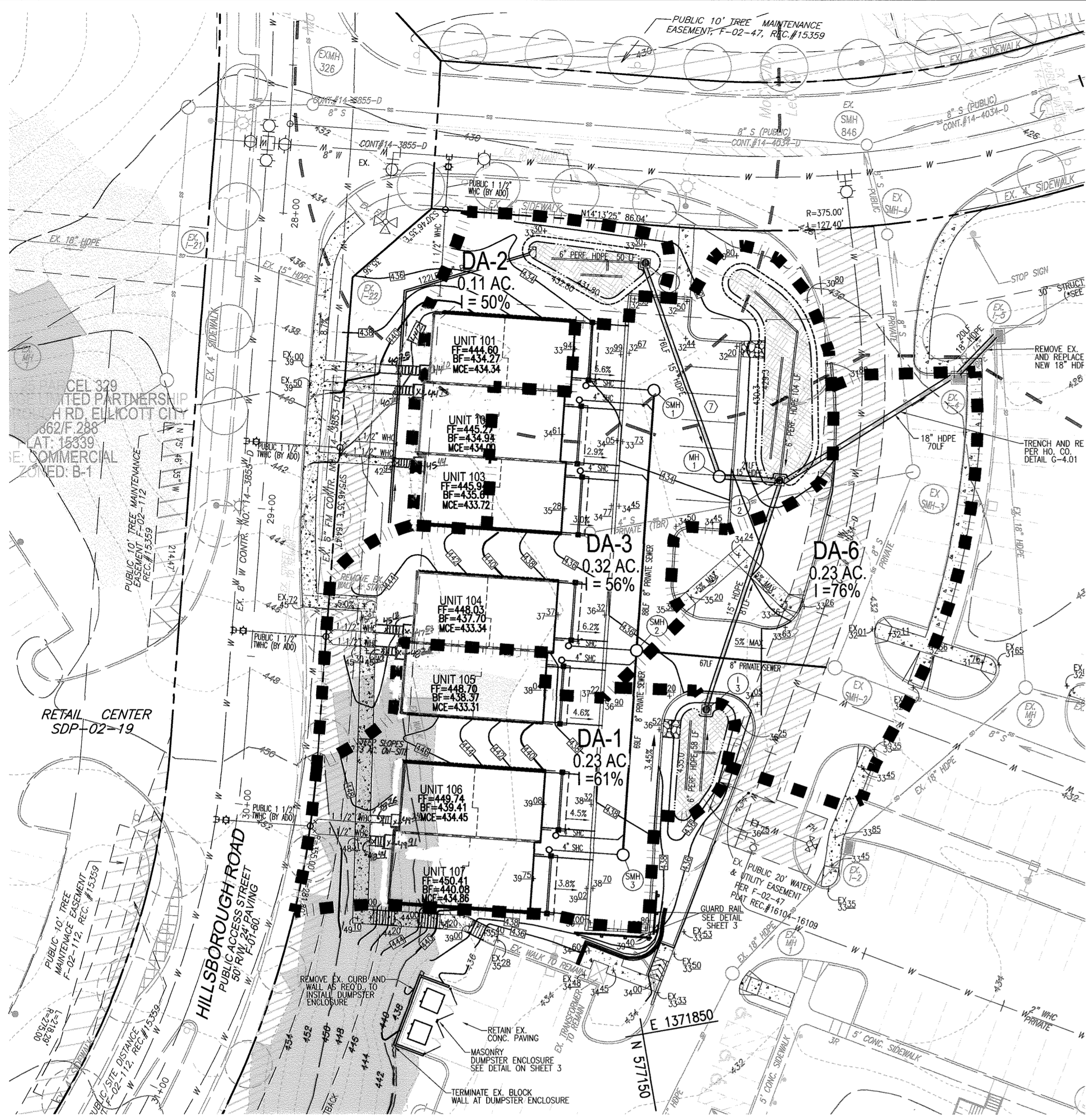
CHIEF, DEVELOPMENT ENGINEERING DIVISION
CHIEF, DIVISION OF LAND DEVELOPMENT
DIRECTOR

OWNER/DEVELOPER CERTIFICATION:
I/WE 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 ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARIAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR 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.

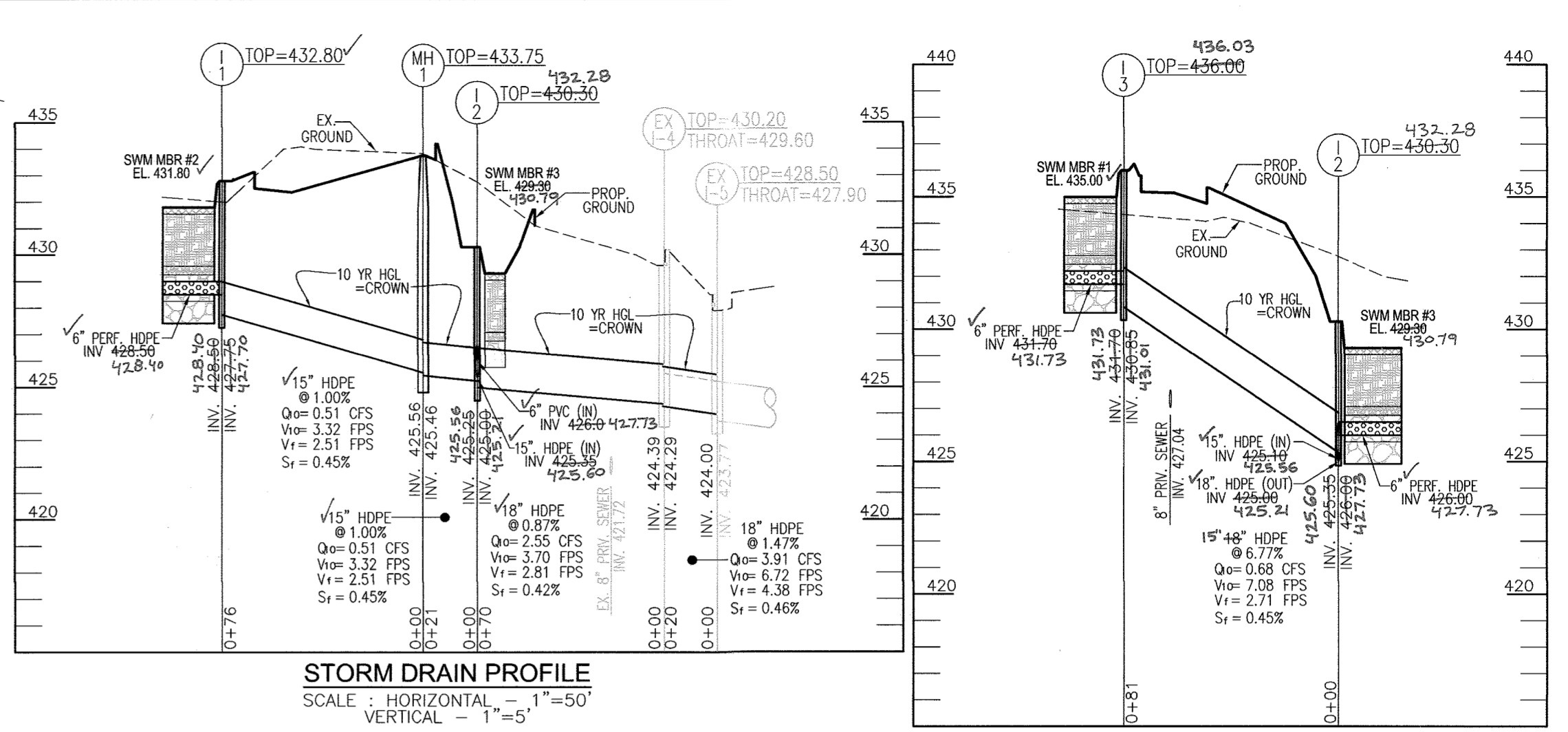
OWNER/DEVELOPER SIGNATURE: [Signature]
DATE: 8/17/17
PRINTED NAME & TITLE: ROSS TAYLOR, Vice President

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.

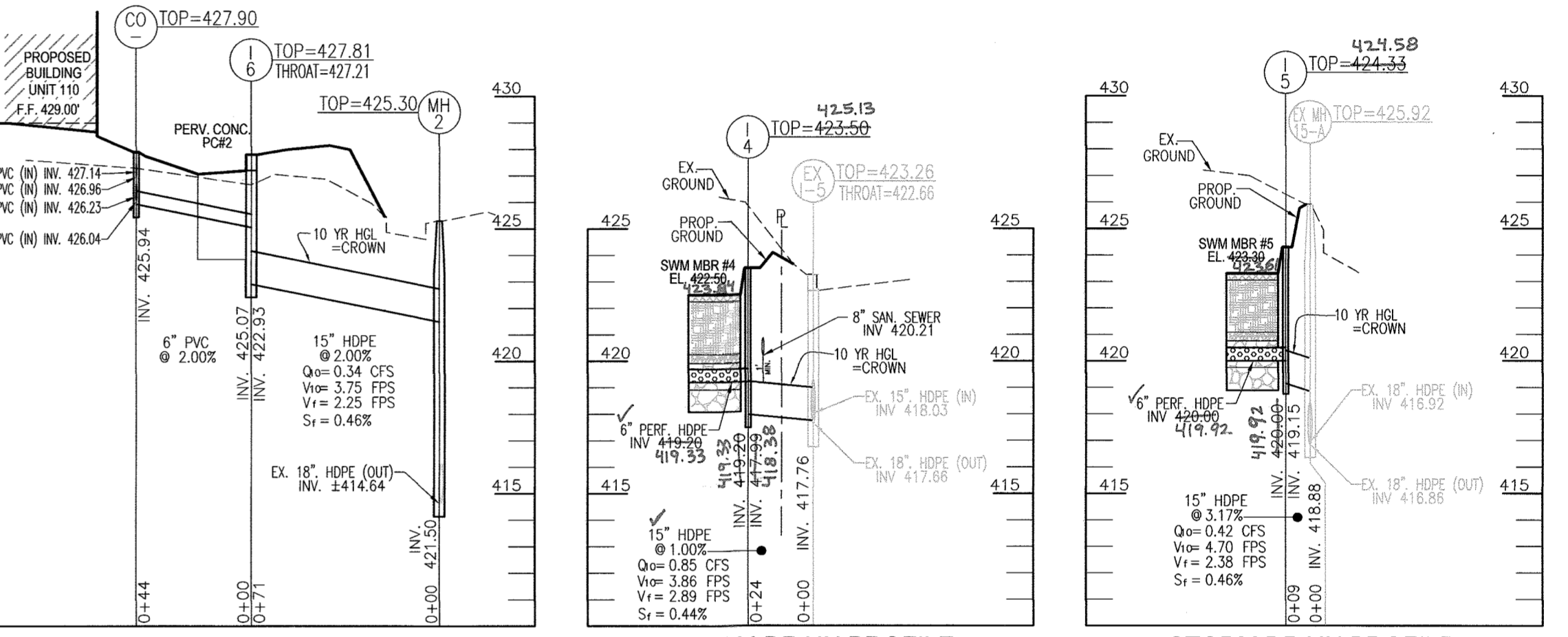
DESIGNER'S SIGNATURE: [Signature]
DATE: 8/19/17
PRINTED NAME: ROBERT H. VOGEL
MD REGISTRATION NO. 16193
R.L.S. OR R.L.A. (circle one)



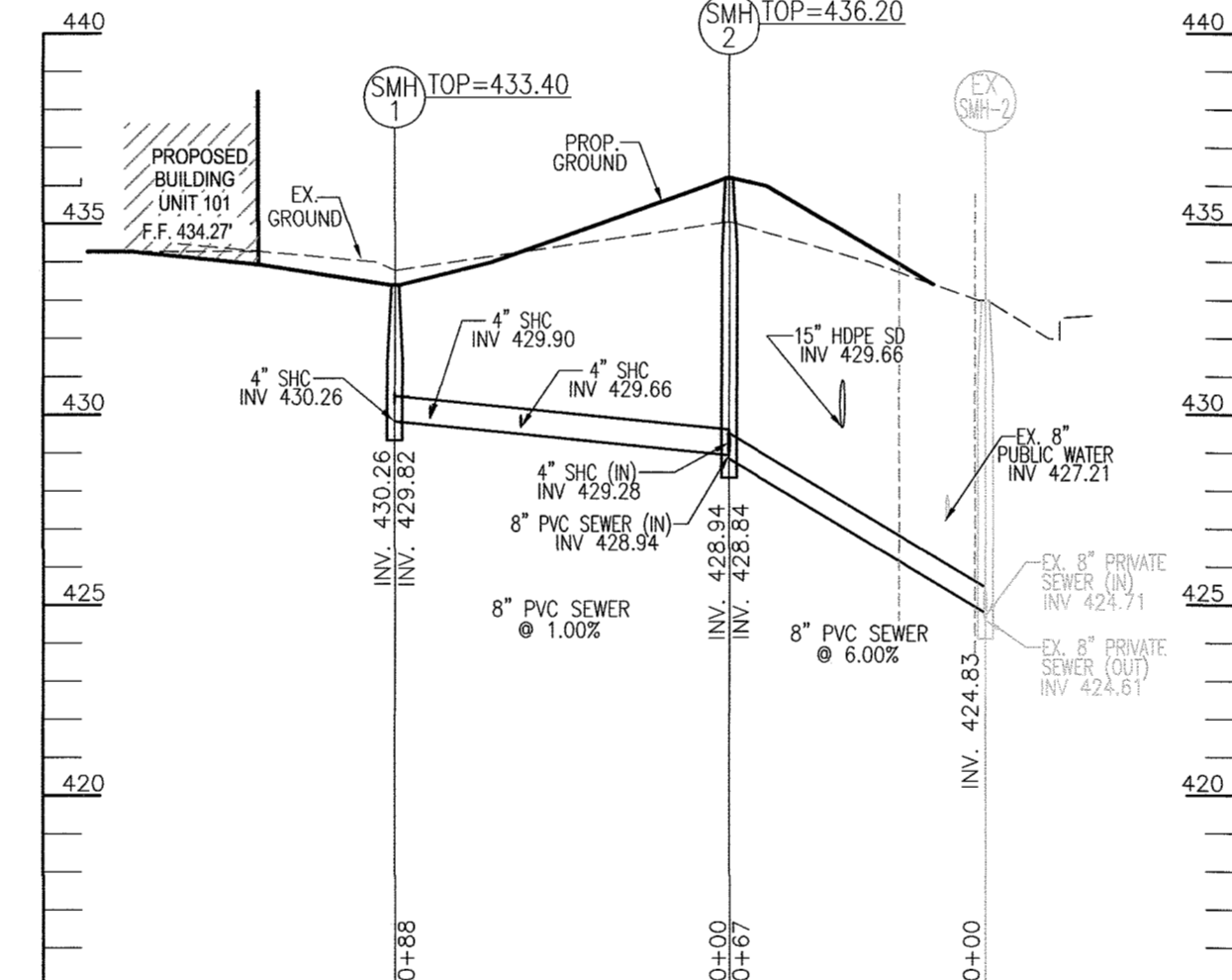
STORM DRAIN DRAINAGE AREA MAPS
SCALE: 1"=30'



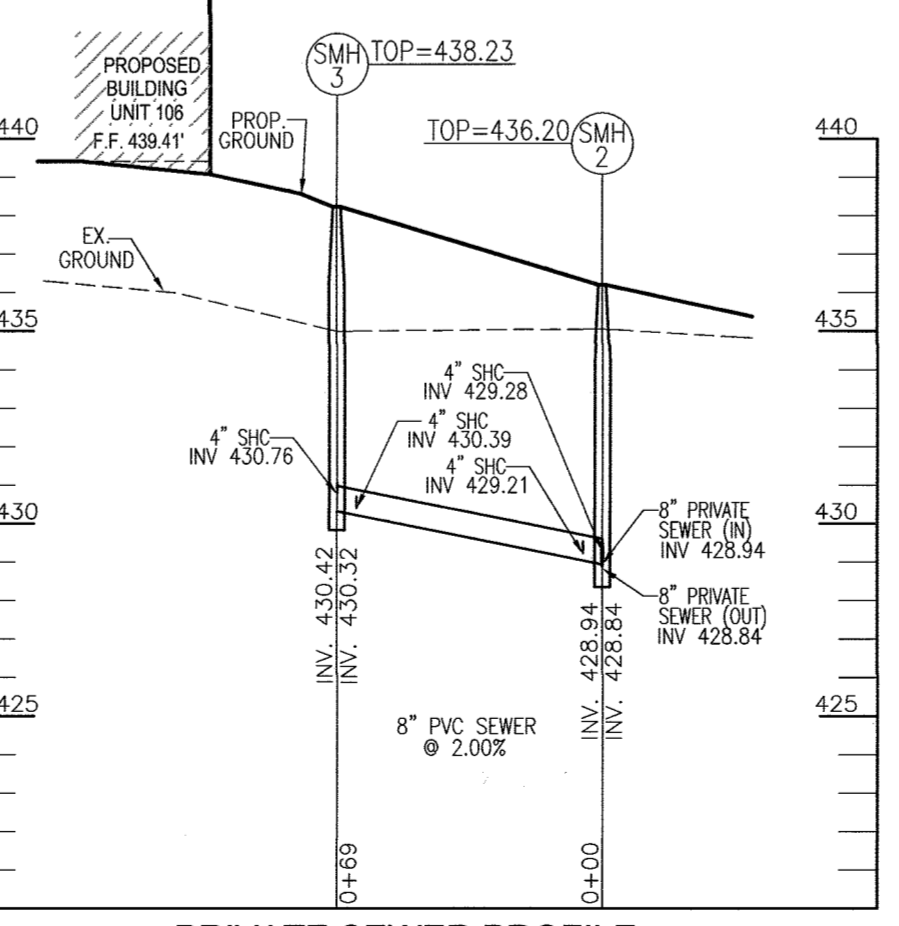
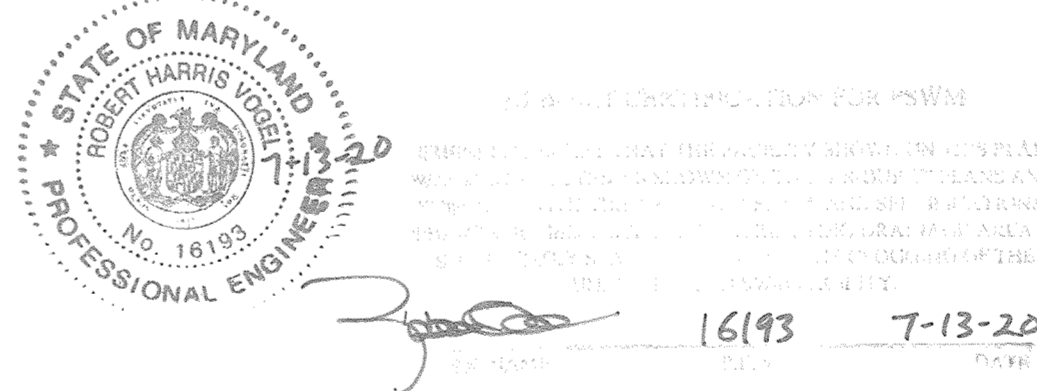
STORM DRAIN PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



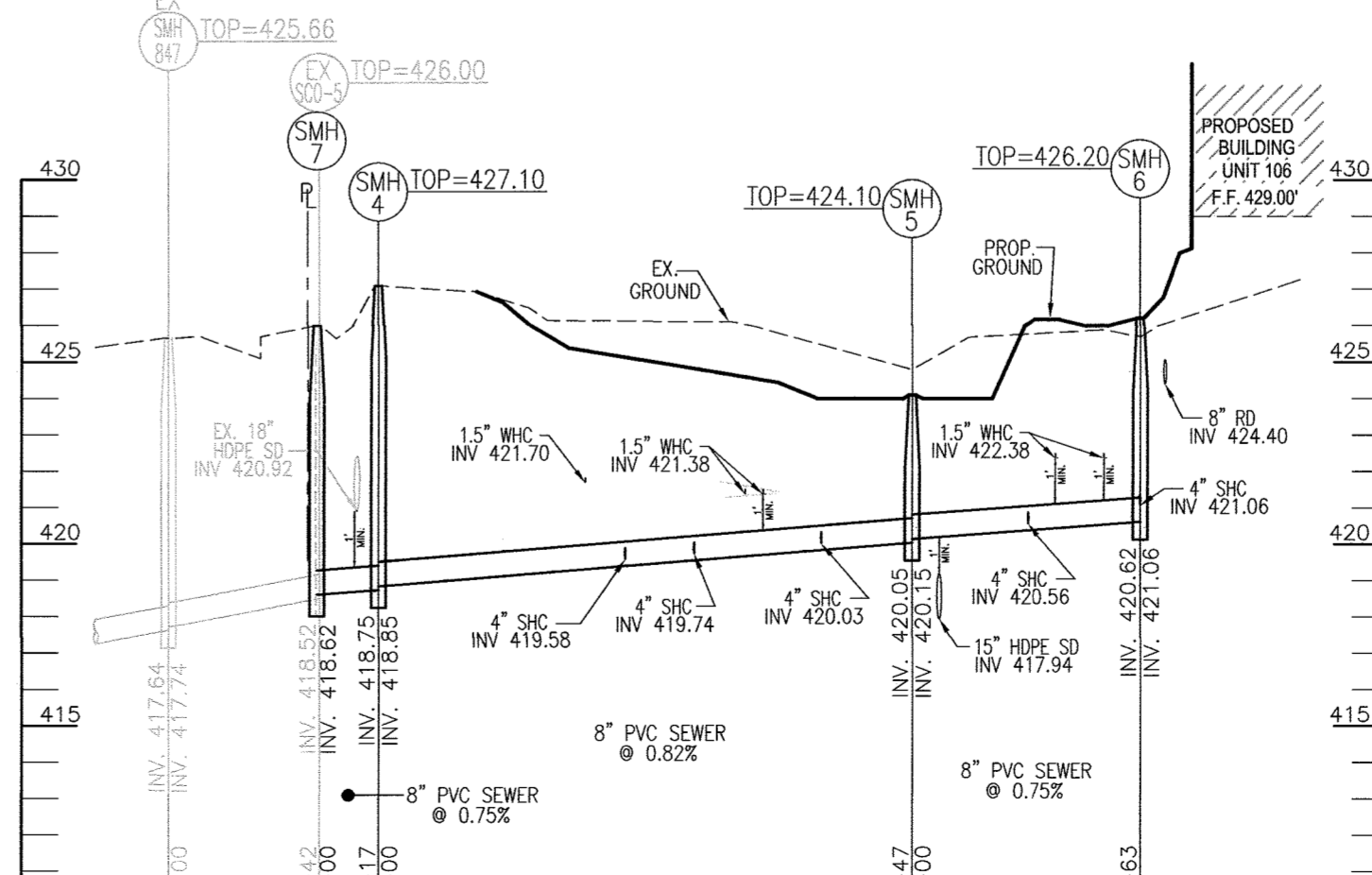
STORM DRAIN PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



PRIVATE SEWER PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



PRIVATE SEWER PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



PRIVATE SEWER PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'

NO.	TYPE	LOCATION	TOP ELEV.	THROAT ELEV.	INV. IN	INV. OUT	COMMENTS
I-1	TYPE 'S' INLET	N 577196.13 E 1371583.93	432.80	432.80	429.82	427.20	HO. CO. STD. D-4.14
I-2	TYPE 'S' INLET	N 577228.10 E 1371674.13	432.26	432.26	429.84	427.20	HO. CO. STD. D-4.14
I-3	TYPE 'S' INLET	N 577190.12 E 1371745.89	432.60	432.60	429.84	427.20	HO. CO. STD. D-4.14
I-4	TYPE 'S' INLET	N 577597.37 E 1371583.78	425.50	425.50	429.84	427.20	HO. CO. STD. D-4.14
I-5	TYPE 'S' INLET	N 577681.56 E 1371590.63	425.30	425.30	429.84	427.20	HO. CO. STD. D-4.14
I-6	TYPE A-5 INLET (SFT INSIDE DEPTH)	N 577580.98 E 1371705.24	427.81	427.21	425.07	422.93	HO. CO. STD. D-4.14
MH-1	STANDARD 4" PRECAST MANHOLE	N 577208.24 E 1371669.30	433.75	425.56	425.46	425.46	HO. CO. STD. G-5.12
MH-2	DOGHOUSE MANHOLE	N 577650.10 E 1371725.39	425.30	421.50	414.64	414.64	HO. CO. STD. G-5.14

NOTE: ALL CLEANOUTS WITHIN PAVING TO BE TRAFFIC-BEARING
* CONSTRUCT MANHOLE OVER AND CONNECT TO EXISTING PIPE.

SIZE	TYPE	LENGTH
4"	PERF. PVC (SWM)	162 LF
6"	SOLID PVC (SWM)	44 LF
6"	PERF. PVC (SWM)	162 LF
6"	PERF. HDPE (SWM)	319 LF
8"	SOLID PVC (RD)	286 LF
8"	PVC (SEWER)	449 LF
4"	PVC SHC (SEWER)	203 LF
15"	HDPE (SD)	282 LF
18"	HDPE (SD)	90 LF
1-1/2"	COPPER WHC (WATER)	261 LF

NO.	DESCRIPTION	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT	COMMENTS
SMH-1	STANDARD 4" PRECAST MANHOLE	N 577191.54 E 1371636.74	433.40	430.26	429.82	427.20	HO. CO. STD. G-5.12
SMH-2	STANDARD 4" PRECAST MANHOLE	N 577170.47 E 1371722.18	436.20	434.84	428.84	427.20	HO. CO. STD. G-5.12
SMH-3	STANDARD 4" PRECAST MANHOLE	N 577153.91 E 1371789.32	438.23	430.76	430.32	427.20	HO. CO. STD. G-5.12
SMH-4	STANDARD 4" PRECAST MANHOLE	N 577445.87 E 1371603.40	427.10	418.85	418.75	427.20	HO. CO. STD. G-5.12
SMH-5	STANDARD 4" PRECAST MANHOLE	N 577590.06 E 1371575.49	424.10	420.15	420.05	427.20	HO. CO. STD. G-5.12
SMH-6	STANDARD 4" PRECAST MANHOLE	N 577649.00 E 1371596.83	426.20	420.72	421.06	427.20	HO. CO. STD. G-5.12
SMH-7	STANDARD 4" PRECAST MANHOLE	N 577441.83 E 1371587.46	425.92	418.62	418.52	427.20	HO. CO. STD. G-5.12

NOTE: ALL CLEANOUTS WITHIN PAVING TO BE TRAFFIC-BEARING

UNIT#	EL. MAIN	TYPE	DIST. TO CO	EL. CO	MCE
101	430.26	SHC	23'	430.74	434.34
102	429.90	SHC	25'	430.40	434.00
103	429.66	SHC	23'	430.12	433.72
104	429.28	SHC	23'	429.74	433.34
105	429.21	SHC	23'	429.71	433.31
106	430.39	SHC	23'	430.85	434.45
107	430.76	SHC	25'	431.26	434.86
108	419.58	SHC	9'	419.76	423.36
109	419.74	SHC	9'	419.92	423.52
110	420.03	SHC	15'	420.33	423.93
111	420.56	SHC	7'	420.70	424.30
112	421.06	SHC	9'	421.24	424.84

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 8/21/17
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 [Signature] 10/2/17
 CHIEF, DIVISION OF LAND DEVELOPMENT
 [Signature] 10-2-17
 DIRECTOR

OWNERS
 TAYLOR VILLAGE BUSINESS CENTER, LLC
 AND TAYLOR OFFICE, LLC
 C/O TAYLOR VILLAGE FAMILY LIMITED PARTNERSHIP
 MANAGING MEMBER PHIL GUGLIOTTI
 4100 COLLEGE AVENUE
 ELLICOTT CITY, MD 21043
 PHONE: 410-465-3500

DEVELOPER
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 RONALD L. SPAIN, PRESIDENT
 ROSS TAYLOR, VICE PRESIDENT
 5401 TWIN KNOLLS ROAD, SUITE 7
 COLUMBIA, MD 21045
 PHONE: 410-216-3500

NO.	REVISION	DATE
1	REVISE PLANS TO REVISE HOUSE TYPES	2-19-19

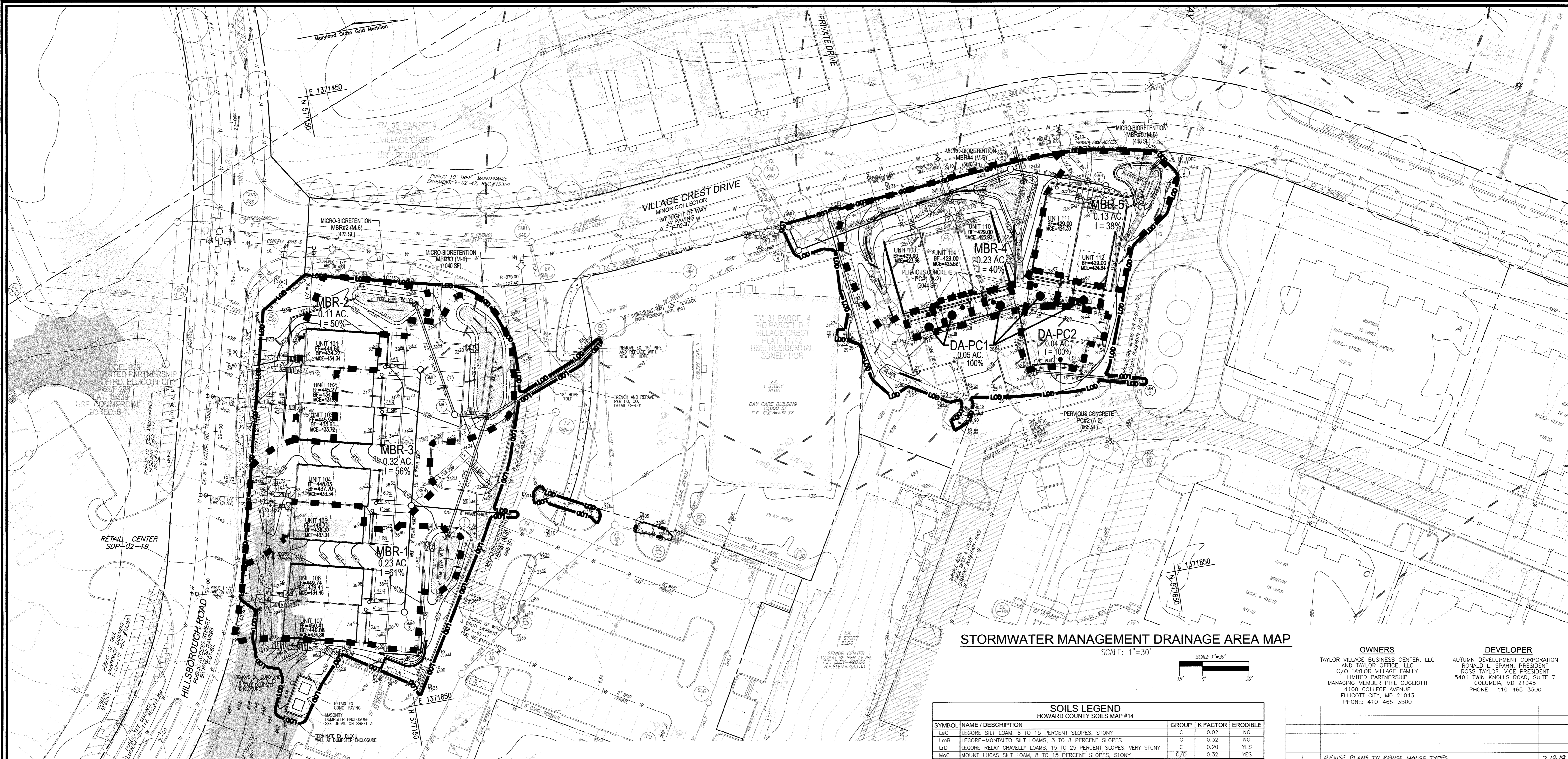
SITE DEVELOPMENT PLAN
STORM DRAIN DRAINAGE AREA MAP AND UTILITY PROFILES
 VILLAGE CREST SENIOR TOWNS
 AGE RESTRICTED ADULT HOUSING UNITS
 ZONED: POR
 TAX MAP 31 BLOCK 03
 2ND ELECTION DISTRICT
 PARCEL 4, P/O PARCEL D-1
 HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET
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 FAX: 410.461.8961

DESIGN BY: RHV
 DRAWN BY: RHV/MR
 CHECKED BY: RHV
 DATE: AUG. 2017
 SCALE: AS SHOWN
 W.O. NO.: 15-33

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. 16193, EXPIRATION DATE: 09-27-2018

6 SHEET OF 10



STORMWATER MANAGEMENT DRAINAGE AREA MAP
SCALE: 1"=30'

OWNERS
TAYLOR VILLAGE BUSINESS CENTER, LLC
AND TAYLOR OFFICE, LLC
C/O TAYLOR VILLAGE FAMILY
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ROSS TAYLOR, VICE PRESIDENT
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COLUMBIA, MD 21045
PHONE: 410-465-3500

SOILS LEGEND
HOWARD COUNTY SOILS MAP #14

SYMBOL	NAME / DESCRIPTION	GROUP	K FACTOR	ERODIBLE
LsC	LEGORE SILT LOAM, 8 TO 15 PERCENT SLOPES, STONY	C	0.02	NO
LmB	LEGORE-MONTALTO SILT LOAMS, 3 TO 8 PERCENT SLOPES	C	0.32	NO
LdD	LEGORE-RELY GRAVELLY LOAMS, 15 TO 25 PERCENT SLOPES, VERY STONY	C	0.20	YES
McC	MOUNT LUCAS SILT LOAM, 8 TO 15 PERCENT SLOPES, STONY	C/D	0.32	YES

PART OF PARCEL D-1
ENVIRONMENTAL SITE DESIGN PRACTICE (CF)

DRAINAGE AREA #	AREA TREATED	FACILITY NUMBER	PERMEABLE PAVEMENT		MICRO BIORETENTION		SAND FILTER	GRAVEL DRY WELL		X	ESDv VOL/IME
			BELOW	PP	BELOW	MBR		BELOW	SF		
MBR1	10625	MBR1	0	0	593	0	0	0	0	0	593
MBR2	4780	MBR2	0	0	564	0	0	0	0	0	564
MBR3	14150	MBR3	0	0	1392	0	0	0	0	0	1392
MBR4	10018	MBR4	0	0	667	0	0	0	0	0	667
MBR5	6600	MBR5	0	0	568	0	0	0	0	0	568
PC1	2044	PC1	327	0	0	0	0	0	0	0	327
PC2	1858	PC2	106	150	0	0	0	0	0	0	256

TOTAL AREA TREATED: 50075 SF
TOTAL AREA TREATED: 1.15 AC
TOTAL ESDv PROVIDED PARCEL D-1: 4357

PROJECT: TAYLOR VILLAGE P/O PARCEL D-1, 12 NEW UNITS

AREA	AREA	PERCENT IMPERVIOUS	RV	ESDv MIN	ESDv MAX	ESDv PROVIDED
AREA 1:	38283 SF	LOD				
TARGET Pe:	1.8	IN				
ESDv:	2986 CF	REQUIRED				
ESDv:	2549 CF	PROVIDED				
ACTUAL Pe:	1.54	IN				
AREA 2:	26442 SF	LOD				
TARGET Pe:	1.8	IN				
ESDv:	1864 CF	REQUIRED				
ESDv:	1772 CF	PROVIDED				
ACTUAL Pe:	1.71	IN				

AS-BUILT CERTIFICATION FOR PSWM

DRAINAGE AREA	IMPERVIOUS AREA	GRASS AREA	TOTAL AREA	PERCENT IMPERVIOUS	RV	ESDv MIN	ESDv MAX	ESDv PROVIDED
MBR1	6475	4150	10625	0.61	0.60	530	1378	593
MBR2	2400	2380	4780	0.50	0.50	200	520	564
MBR3	7939	6211	14150	0.56	0.55	654	1701	1392
MBR4	4007	6011	10018	0.40	0.41	342	890	667
MBR5	2520	4080	6600	0.38	0.39	217	563	558
PC1	2044	0	2044	1.00	0.95	162	421	327
PC2	1858	0	1858	1.00	0.95	147	382	256

TOTAL ESDv REQUIRED: 4850
TOTAL ESDv PROVIDED: 4357
ESDv TO THE MAXIMUM EXTENT POSSIBLE

LEGEND

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING CURB AND GUTTER
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING WATER LINE
- EXISTING STORM DRAIN
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING FENCE
- EXISTING STREET LIGHTS
- EXISTING PRIVATE LIGHTS
- EXISTING TREES
- EXISTING TREELINE
- PROPOSED TREELINE
- PROPOSED SANITARY LINE
- PROPOSED WATER LINE
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN INLET
- PROPOSED CURB AND GUTTER
- PROPOSED SIDEWALK
- PROPOSED PRIVATE LIGHTS
- MICRO-BIORETENTION
- EX. STEEP SLOPES (25% OR GREATER)
- EX. MODERATE SLOPES (15%-24.99% OR GREATER)
- PERVIOUS PAVING
- EXISTING UTILITY EASEMENT (SEE PLAN FOR SIZE AND TYPE)
- EXISTING ACCESS EASEMENT (SEE PLAN FOR SIZE AND TYPE)
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- PROPOSED SPOT ELEVATION
- SOILS BOUNDARY
- PROPOSED SWM/STORM DRAIN DRAINAGE AREA
- LOD FOR ESDv

STORMWATER MANAGEMENT FACILITIES TO BE PRIVATELY OWNED AND MAINTAINED

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DATE: 8/21/17
DATE: 10/2/17
DATE: 10-2-17



16193
7-13-20

NO AS-BUILT INFORMATION ON THIS SHEET

SITE DEVELOPMENT PLAN
STORMWATER MANAGEMENT DRAINAGE AREA MAP
VILLAGE CREST SENIOR TOWNS
AGE RESTRICTED ADULT HOUSING UNITS
ZONED: POR

TAX MAP 31 BLOCK 03
2ND ELECTION DISTRICT

PARCEL 4, P/O PARCEL D-1
HOWARD COUNTY, MARYLAND

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DESIGN BY: RHV
DRAWN BY: RHV/MR
CHECKED BY: RHV
DATE: AUG. 2017
SCALE: AS SHOWN
W.O. NO.: 15-33

PROFESSIONAL CERTIFICATE
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. 16193, EXPIRATION DATE: 09-27-2018.

7 OF 10

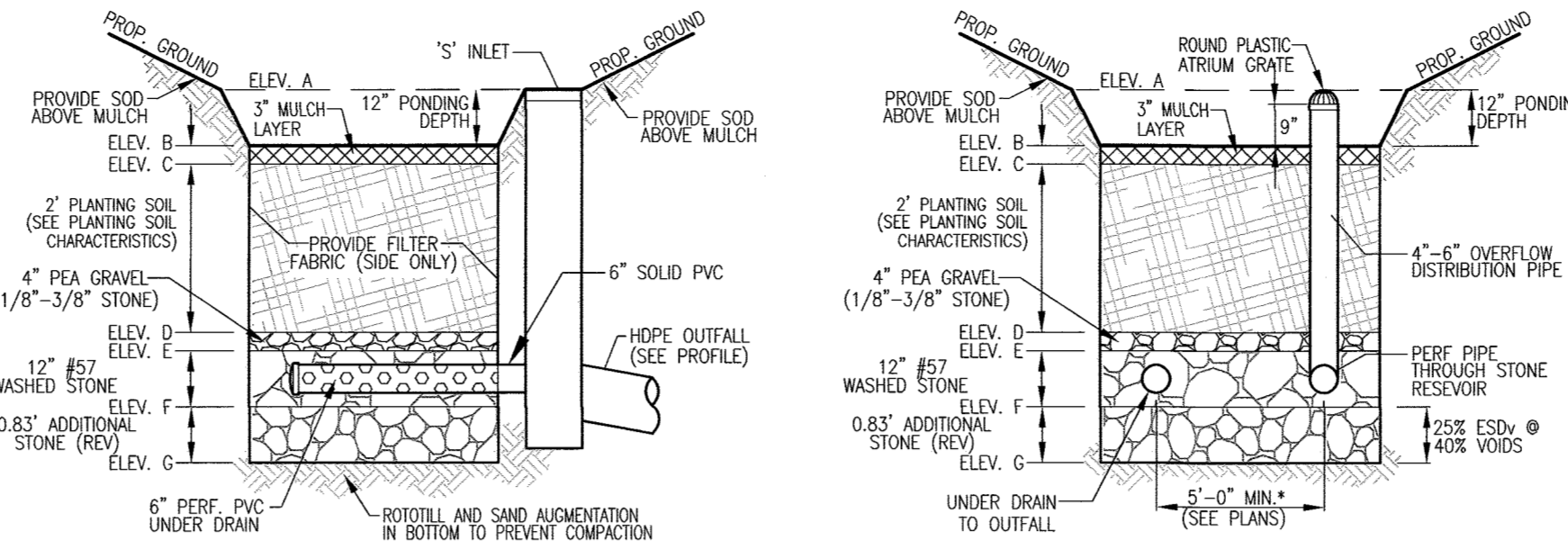
AS-BUILT JUNE 2020 SDP-17-007

APPENDIX B.4.C SPECIFICATIONS FOR MICRO-BIORETENTION, RAIN GARDEN, LANDSCAPE INFILTRATION & INFILTRATION BERMS

- 1. MATERIAL SPECIFICATIONS**
THE ALLOWABLE MATERIALS TO BE USED IN THESE PRACTICES ARE DETAIL IN TABLE B.4.1.
- 2. FILTERING MEDIA OR PLANTING SOIL**
THE SOIL SHALL BE A UNIFORM MIX OF STONES, STONES, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DAMPED WITHIN THE MICRO-BIORETENTION PRACTICE THAT MAY BE HARMFUL TO PLANT GROWTH OR PROVE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE OF BERKMAN GRASS, QUACKGRASS, JOHNSON GRASS, OR OTHER NOXIOUS WEEDS AS SPECIFIED UNDER COMMON 15.000.00.
THE PLANTING SOIL SHALL BE TESTED AND SHALL MEET THE FOLLOWING CRITERIA:
• SOIL COMPONENT - LOAMY SAND OR SANDY LOAM (AS PER ASTM D 2922)
• 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 (LIME 40% OR SANDY LOAM LOAM, GRAVEL AND LOAM), AND COMPOST (40%).
• CLAY CONTENT - MEDIA SHALL HAVE A CLAY CONTENT OF LESS THAN 2%.
• PH - SHOULD BE BETWEEN 5.5 - 7.0. ADJUSTMENTS (E.G., LIME, IRON SULFATE PLUS SULFUR) MAY BE MIXED IN TO THE SOIL TO INCREASE OR DECREASE PH.
THESE 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 CLAY. A TEXTURAL ANALYSIS IS REQUIRED FROM THE SITE-SELECTED TOPSOIL. A TOPSOIL IS IDENTIFIED, THEN A TEXTURE ANALYSIS SHALL BE PERFORMED FOR EACH LOCATION WHERE THE TOPSOIL WAS IDENTIFIED.
- 3. COMPACTION**
IT IS MOST IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF BIORETENTION PRACTICES AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE EXCAVATION HES TO REMOVE ORIGINAL SOIL. IF PRACTICES ARE EXCAVATED USING LOADERS, THE CONTRACTOR SHOULD USE WIDE TRACK OR MARCH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH TUFF 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 ON OR ALTHOUGH THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILTING OPERATION SUCH AS CHESS PLUM, ROLLER, OR SUBSOILER. THESE TILTING OPERATIONS ARE TO RESTRUCTURE THE SOIL PROFILE THROUGHOUT THE 12 INCH COMPACTION ZONE. SUBSTITUTE METHODS MUST BE APPROVED BY THE ENGINEER. ROLLERS TYPICALLY DO NOT FILL DEEP ENOUGH TO REMOVE THE EFFECTS OF COMPACTION FROM HEAVY EQUIPMENT. ROLLERS 2 TO 3 INCHES OF SAND INTO THE BASE OF THE BIORETENTION FACILITY BEFORE BACKFILLING THE ORIGINAL SAND LAYER. PUMP ANY PAVED WATER BEFORE PREPARING (ROTATING) BASE.
WHEN BACKFILLING THE TOPSOIL OVER THE SAND LAYER, FIRST PLACE 3 TO 4 INCHES OF TOPSOIL OVER THE SAND, THEN ROTATE 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 SUPPORT SOILS AND GRAVEL. BIORETENTION MATERIALS WITH LIGHT EQUIPMENT SUCH AS A COMPACT LOADER OR A DOZER/LOADER WITH WASH 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 4". SHREDED OR CRIPPLED HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. FINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STRONG EVENT AND UNACCEPTED MULCH MUST BE WELL ACED (6 TO 12 MONTHS) FOR ACCEPTANCE.
ROOTS OF THE PLANT MATERIAL SHALL BE KEPT MOIST DURING TRANSPORT AND ON-SITE STORAGE. THE PLANT ROOT BALL SHOULD BE PLANTED SO 1/2" OF THE BALL IS ABOVE FINAL GRADE SURFACE. THE DENSITY OF THE PLANTING OF SHALL BE AT LEAST 3 INCHES LARGER THAN THE DIAMETER OF THE PLANTING BALL. SET AND WATER THE PLANT STRONG DURING THE FIRST PLANTING PERIOD. ADDITIONAL WATER DURING SOON AFTER INSTALLATION. TREES SHALL BE SPACED USING 7" BY 7" STAKES ONLY AS NECESSARY AND FOR THE FIRST GROWING SEASON ONLY. STAKES ARE TO BE EQUALLY SPACED ON THE OUTSIDE OF THE BALL.
GRASSES AND LEGUME SEED SHOULD BE BROADCAST TO A DEPTH OF AT LEAST ONE INCH. GRASS AND LEGUME PLUGS SHALL BE PLANTED FOLLOWING THE NON-GRASS DESIGN DESIGN 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, OR AT A MINIMUM, IMPROVES THIS GOAL. ONLY USE FERTILIZER IF WOOD CHIPS OR MULCH ARE USED TO MAINTAIN THE SOIL. ROTILLING UNDER 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 RIBBED PLASTIC PIPE (ASTM F 798, TYPE PS 28, OR AASHTO M-278) IN A GRAVEL LAYER.
• PERFORATED MATERIAL - SLOTTED, 4" DIA. RIBBED, 1/2" DIA. HOLES.
• PERFORATIONS - IF PERFORATED PIPE IS USED, PERFORATIONS SHOULD BE 3/8" DIAMETER LOCATED AT 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH 1/4" (NO. 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 POINT 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 IS CONSIDERED PART OF THE FILTER BED WITH BED THICKNESS EXCEEDS.
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.

Appendix B.4. Construction Specifications for Environmental Site Design Practices

Material	Specifications	Notes
Planting soil	See Appendix A, Table A.4	Planting are site-specific
Filter fabric	USDA soil type loamy sand or sandy loam; clay content < 3% (2" to 4" deep)	
Organic content	Min. 10% by dry weight (ASTM D 2974)	
Pea gravel diaphragm	pea gravel: ASTM-D-448	aged 6 months, minimum; no pine or wood chips
Certain drain	ornamental stone: washed cobbles	stone: 2" to 5"
Concrete	AASHTO M-43	PE Type I nonwoven
Gravel (underdrains and infiltration berms)	AASHTO M-43	NO. 57 OR NO. 4 AGGREGATE (SEE PLAN)
Underdrain piping	F 798, Type PS 28 or AASHTO M-278	4" to 6" rigid schedule 40 PVC or SDR35
Perforated pipe (concrete if required)	MSHA Min No. 1, P = 3500 psi @ 28 days, normal weight, air-entrained, reinforcing to meet ASTM-A-108	Slotted or perforated pipe, 3/8" perf. @ 6" on center, 4 holes per row, minimum of 3" of gravel over pipes; not necessary underdrain pipes. Perforated pipe shall be wrapped with 1/4-inch galvanized hardware cloth.
Sand	AASHTO-M-6 or ASTM-C-33	0.02" to 0.04"



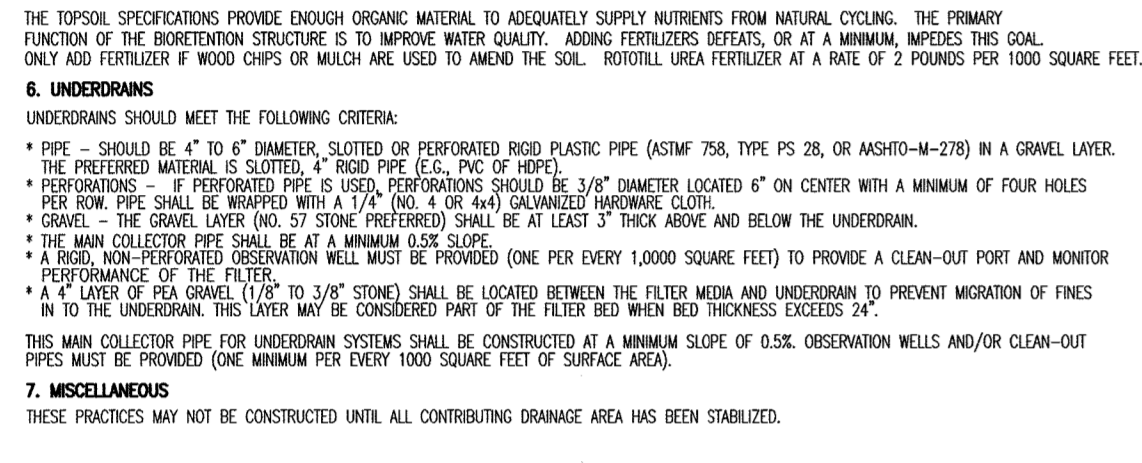
MICRO-BIORETENTION (UNDERDRAIN) NOT TO SCALE **MICRO-BIORETENTION (OVERFLOW) NOT TO SCALE**

- MICROBIORETENTION NOTES:**
- ONLY THE SURFACES OF MICROBIORETENTION ARE TO BE WRAPPED IN FILTER FABRIC. FILTER FABRIC BETWEEN LAYER OR AT THE BOTTOM OF THE MICROBIORETENTION WILL CAUSE THE MBR TO FAIL AND THEREFORE SHALL NOT BE INSTALLED.
 - WRAP THE PERFORATED MBR UNDERDRAIN PIPE WITH 1/4" MESH (4x4) OR SMALLER GALVANIZED HARDWARE CLOTH.
 - PROVIDE 5" MINIMUM SPACING BETWEEN UNDER DRAIN AND PERFORATED PIPE THROUGH STONE RESERVOIR OR SPACE PIPE EQUALLY ACROSS BOTTOM FOR SMALL BIOS. (SEE PLANS)

MBR Facility	Ponding Elevation ELEV. A	Ponding Depth (ft)	Top of Mulch ELEV. B	Bottom of Mulch ELEV. C	Bottom of Plant Mix ELEV. D	Bottom of Pea Gravel ELEV. E	Depth of Stone (ft)	Invert of Underdrain (ft)	Invert of 4" Overflow	Bottom of Stone ELEV. F	Depth of REV Stone (ft) (25% ESD x 40% Voids)	Bottom of REV Stone ELEV. G
SWMF #1	496.00	1.00	495.00	434.75	432.75	432.42	1.00	430.42	431.70	431.42	0.83	430.59
SWMF #2	492.80	1.00	491.80	431.55	429.55	429.22	1.00	427.22	428.50	428.22	0.83	427.39
SWMF #3	490.30	1.00	489.30	429.05	427.05	426.72	1.00	424.72	426.00	425.72	0.83	424.89
SWMF #4	483.50	1.00	482.50	422.25	420.25	419.92	1.00	417.92	419.20	418.92	0.83	418.09
SWMF #5	424.30	1.00	423.30	423.05	421.05	420.72	1.00	418.72	420.00	419.72	0.83	418.89

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED PERMEABLE PAVEMENT (A-2)

- THE OWNER SHALL PERIODICALLY SWEEP (OR VACUUM POROUS CONCRETE PAVEMENT) THE PAVEMENT SURFACES TO REDUCE SEDIMENT ACCUMULATION AND ENSURE CONTINUED SURFACE POROSITY. SWEEPING SHOULD BE PERFORMED AT LEAST TWICE ANNUALLY WITH A COMMERCIAL CLEANING UNIT. WASHING OR COMPRESSED AIR UNITS SHOULD NOT BE USED TO PERFORM SURFACE CLEANING.
- THE OWNER SHALL PERIODICALLY CLEAN DRAINAGE PIPES, INLETS, STONE EDGE DRAINS AND OTHER STRUCTURES WITHIN OR DRAINING TO THE SURFACE.
- THE OWNER SHALL USE DEICERS IN MODERATION. DEICERS SHOULD BE NON-TOXIC AND BE APPLIED EITHER AS CALCIUM MAGNESIUM ACETATE OR AS PRETREATED SALT.
- THE OWNER SHALL ENSURE SNOW PLOWING IS PERFORMED CAREFULLY WITH BLADES SET ONE INCH ABOVE THE SURFACE. PLOWED SNOW PILES AND SNOWMELT SHOULD NOT BE DIRECTED TO PERMEABLE PAVEMENT.



PERMEABLE CONCRETE PARKING SPACES (FOR ELEVATIONS AND INVERTS, SEE PROFILES) NOT TO SCALE

PC NO.	ADDITIONAL STONE DEPTH
1	0
2	0.75'

- NOTE:**
- PAVEMENT CROSS SECTION TO BE CONFIRMED BY GEOTECHNICAL ENGINEER
 - POROUS CONCRETE SECTION TO CONFORM TO APPENDIX B.4.B (SPECIFICATIONS FOR PERMEABLE PAVEMENTS) AND DESIGNED BY THE PROJECT GEOTECHNICAL ENGINEER
 - UNDERDRAINS/OVERDRAINS SHALL CONNECT INTO A TRAFFIC BEARING CLEANOUT AS SHOWN ON THE PLANS.

B.4.B SPECIFICATIONS FOR PERMEABLE PAVEMENTS & REINFORCED TURF

- 1. PERVIOUS CONCRETE SPECIFICATIONS**
DESIGN THICKNESS - PERVIOUS CONCRETE APPLICATIONS SHALL BE DESIGNED SO THAT THE THICKNESS OF THE CONCRETE SLAB SHALL SUPPORT THE TRAFFIC AND VEHICLE TYPES THAT WILL BE CARRIED. APPLICATIONS MAY BE DESIGNED USING EITHER STANDARD PAVEMENT PROCEDURES (E.G., AASHTO, ACI 325.9R, ACI 330R) OR USING STRUCTURAL VALUES DERIVED FROM FLEXIBLE PAVEMENT DESIGN PROCEDURES.
MIX & INSTALLATION - TRADITIONAL PORTLAND CEMENTS (ASTM C 150, C 1157) MAY BE USED IN PERVIOUS CONCRETE APPLICATIONS. PHOSPHORUS ADMIXTURES MAY ALSO BE USED. MATERIALS SHOULD BE TESTED (E.G., TRIAL BATCHING) PRIOR TO CONSTRUCTION TO DETERMINE CRITICAL PROPERTIES (E.G., SETTLING TIME, RATE OF STRENGTH DEVELOPMENT, POROSITY, PERMEABILITY) CAN BE DETERMINED.
AGGREGATE - PERVIOUS CONCRETE CONTAINS A LIMITED FINE AGGREGATE CONTENT. COMMONLY USED GRADATIONS INCLUDE ASTM C 33 NO. 67 (3/4" TO NO. 4), NO. 8 (3/8" TO NO.16) AND NO. 89 (3/8" TO NO.50) SIEVES.
SINGLE-SIZED AGGREGATE (UP TO 1" INCH) MAY ALSO BE USED.
WATER CONTENT - WATER-TO-CEMENT RATIOS BETWEEN 0.27 AND 0.30 ARE USED ROUTINELY WITH PROPER INCLUSION OF CHEMICAL ADMIXTURES. WATER QUALITY SHOULD MEET ACI 308. AS A GENERAL RULE, POTABLE WATER SHOULD BE USED ALTHOUGH RECYCLED CONCRETE PRODUCTION WATER MEETING ASTM C 896 (ASHTO M 157) MAY ALSO BE USED.
ADMIXTURES - CHEMICAL ADMIXTURES (E.G., RETARDERS OR HYDRATION-STABILIZERS) ARE USED TO OBTAIN SPECIAL PROPERTIES IN PERVIOUS CONCRETE. USE OF ADMIXTURES SHOULD MEET ASTM C 494 (CHEMICAL ADMIXTURES) AND ASTM C 260 (AIR ENTRAINING ADMIXTURES) AND CLOSELY FOLLOW MANUFACTURER'S RECOMMENDATIONS. BASE COURSE - THE BASE COURSE SHALL BE ASHTO NO. 3 OR 4 COURSE AGGREGATE WITH AN ASSUMED OPEN PORE SPACE OF 30% (0-30%).

OPERATION AND MAINTENANCE SCHEDULE FOR LANDSCAPE INFILTRATION (M-3), MICRO-BIORETENTION (M-6), RAIN GARDENS (M-7), BIORETENTION SWALE (M-8), AND ENHANCED FILTERS (M-9)

- THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. MAINTENANCE OF MULCH AND SOIL 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, PRUNING, ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUME II, TABLE A-4.1 AND 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 EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.
- THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED UNDERGROUND FACILITIES

- THE UNDERGROUND STORMWATER MANAGEMENT FACILITY IS PRIVATELY OWNED AND IT SHALL BE THE RESPONSIBILITY OF THE OWNER TO PERIODICALLY INSPECT AND CLEAN THE FACILITY TO MAINTAIN ITS OPERATION AND FUNCTION.
- THE UNDERGROUND STORMWATER MANAGEMENT FACILITY SHALL BE INSPECTED YEARLY AT A MINIMUM AND AFTER ESPECIALLY SEVERE STORM EVENTS.
- WHEN SEDIMENT ACCUMULATION OF MORE THAN 2" IS OBSERVED OR ANY DEBRIS THAT MIGHT OBSTRUCT THE OUTFALL IS OBSERVED, THE FACILITY SHALL BE CLEANED.
- THE FACILITY SHALL BE CLEANED IMMEDIATELY AFTER PETROLEUM SPILLS. THE OWNER SHALL CONTACT THE APPROPRIATE REGULATORY AGENCIES NOTIFYING THEM OF THE SPILL AND CLEANUP OPERATION.
- THE SEDIMENT AND DEBRIS SHALL BE REMOVED FROM THE UNDERGROUND STORMWATER MANAGEMENT FACILITY BY VACUUM TRUCK OR OTHER MANUAL MEANS. THE OWNER SHALL FOLLOW PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIAL AND LIQUID.
- THE INLET AND OUTLET PIPES SHALL BE CHECKED FOR ANY OBSTRUCTIONS AT LEAST ONCE EVERY SIX (6) MONTHS. IF OBSTRUCTIONS ARE FOUND, THE OWNER SHALL HAVE THEM REMOVED AND PROPERLY DISPOSED OF.

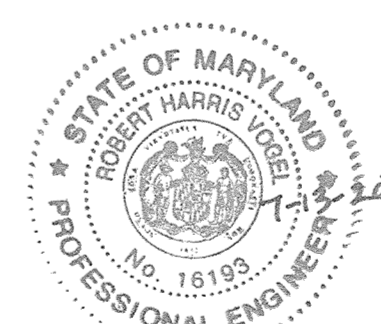


VILLAGE CREST DR. BUILDING ELEVATIONS - UNITS 108-112



HILLSBOROUGH DR. BUILDING ELEVATIONS - UNITS 101-107

NOT TO SCALE



AS-BUILT CERTIFICATION FOR PSWM
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.
DATE: 16-93
P.E. # 7-13-20

OWNERS
TAYLOR VILLAGE BUSINESS CENTER, LLC AND TAYLOR OFFICE, LLC
C/O TAYLOR VILLAGE FAMILY LIMITED PARTNERSHIP
MANAGING MEMBER PHIL GUGLIOTTI
4100 COLLEGE AVENUE
ELLCOTT CITY, MD 21043
PHONE: 410-465-3500

DEVELOPER
AUTUMN DEVELOPMENT CORPORATION
RONALD L. SPAHN, PRESIDENT
ROSS TAYLOR, VICE PRESIDENT
5401 TWIN KNOLLS ROAD, SUITE 7
COLUMBIA, MD 21045
PHONE: 410-465-3500

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DATE: 8-21-17
DATE: 10-2-17
DATE: 10-2-17

STORMWATER MANAGEMENT FACILITIES TO BE PRIVATELY OWNED AND MAINTAINED

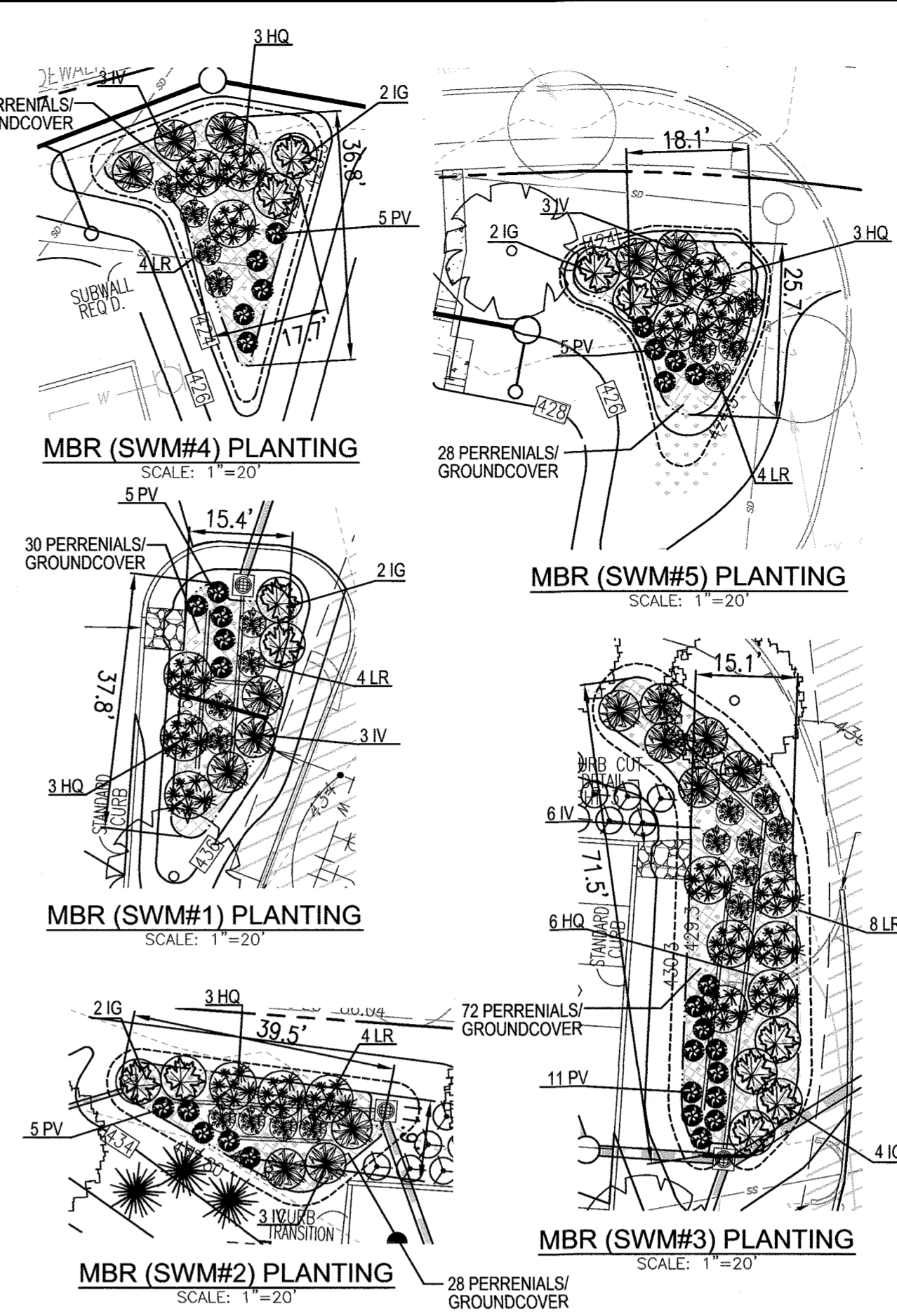
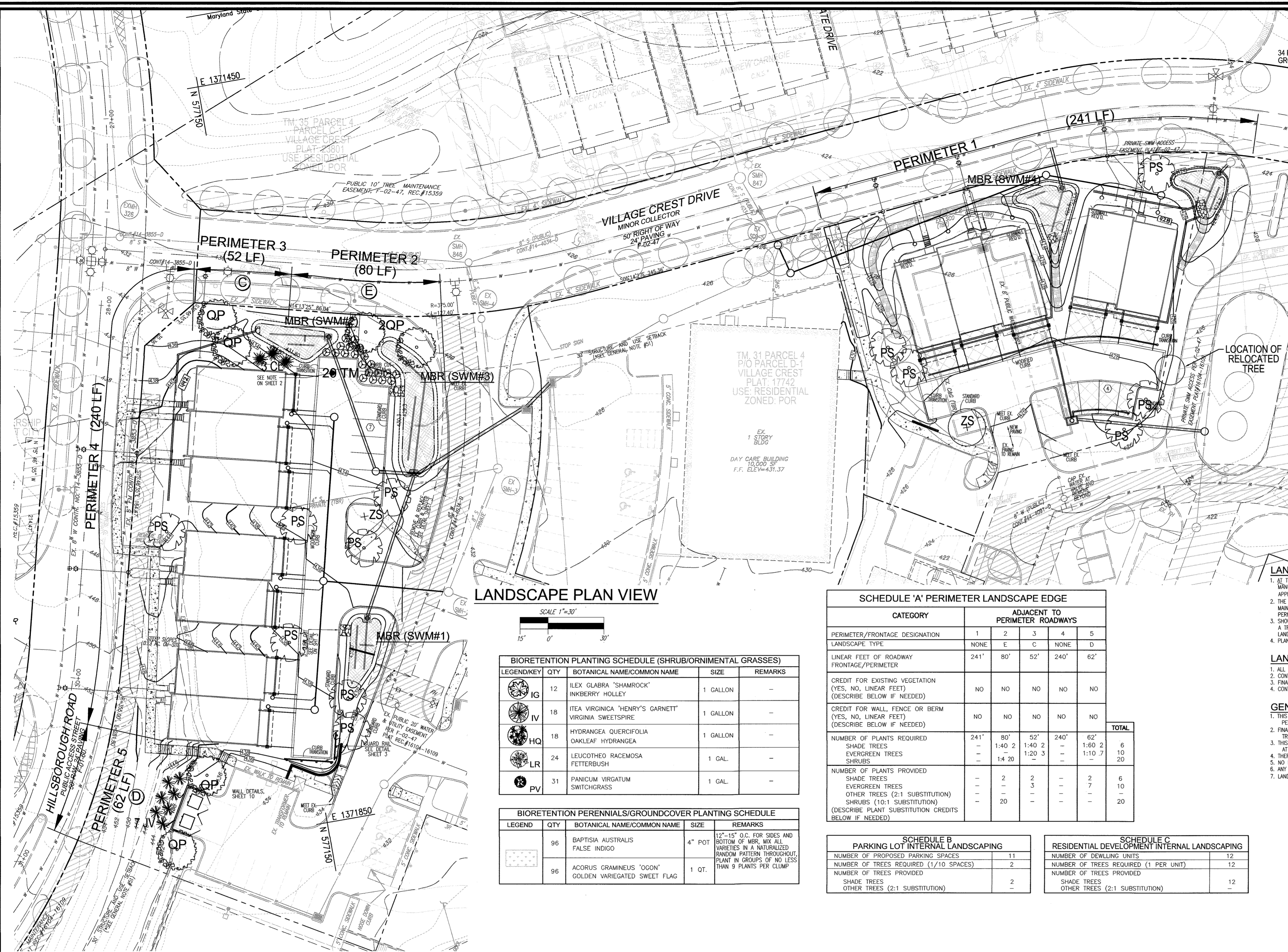
ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET
ELLCOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961

DESIGN BY: RHV
DRAWN BY: RHV/MR
CHECKED BY: RHV
DATE: AUG. 2017
SCALE: AS SHOWN
W.O. NO.: 15-33

PROFESSIONAL CERTIFICATE
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. 16193, EXPIRATION DATE: 08-27-2018.

8 SHEET OF 10

AS-BUILT JUNE 2020



LEGEND

	PROPERTY LINE
	RIGHT-OF-WAY LINE
	ADJACENT PROPERTY LINE
	EXISTING CURB AND GUTTER
	EXISTING 10' CONTOUR
	EXISTING 2' CONTOUR
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING SIGN
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING WATER LINE
	EXISTING STORM DRAIN
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING FENCE
	EXISTING STREET LIGHTS
	EXISTING PRIVATE LIGHTS
	EXISTING TREES
	EXISTING TREE LINE
	PROPOSED TREE LINE
	PROPOSED SANITARY LINE
	PROPOSED WATER LINE
	PROPOSED STORM DRAIN
	PROPOSED STORM DRAIN INLET
	PROPOSED CURB AND GUTTER
	PROPOSED SIDEWALK
	PROPOSED PRIVATE LIGHTS
	MICRO-BIORETENTION
	EX. STEEP SLOPES (25% OR GREATER)
	EX. MODERATE SLOPES (15%-24.9% OR GREATER)
	PERVIOUS PAVING
	EXISTING UTILITY EASEMENT (SEE PLAN FOR SIZE AND TYPE)
	EXISTING ACCESS EASEMENT (SEE PLAN FOR SIZE AND TYPE)
	PROPOSED 10' CONTOUR
	PROPOSED 2' CONTOUR

LANDSCAPE NOTES

- AT THE TIME OF PLANT INSTALLATION, ALL SHRUBS AND TREES LISTED AND APPROVED ON THE LANDSCAPE PLAN, SHALL COMPLY WITH THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATIONS OF THE REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THE APPROVED LANDSCAPE PLAN MAY RESULT IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO THE APPLICABLE PLANS.
- THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
- SHOULD ANY TREE DESIGNATED FOR PRESERVATION FOR WHICH LANDSCAPING CREDIT IS GIVEN, DIE PRIOR TO RELEASE OF BONDS, THE OWNER WILL BE REQUIRED TO REPLACE THE TREE WITH THE EQUIVALENT SPECIES OR WITH A TREE WHICH WILL OBTAIN THE SAME HEIGHT, SPREAD, AND GROWTH CHARACTERISTICS. THE REPLACEMENT TREE MUST BE A MINIMUM OF 3 INCHES IN CALIPER AND INSTALLED AS REQUIRED IN THE HOWARD COUNTY LANDSCAPE MANUAL.
- PLANTINGS SHOWN HEREON ARE THE RESPONSIBILITY OF THE DEVELOPER TO INSTALL DURING THE CONSTRUCTION OF THE FINAL PLAN.

LANDSCAPE SCHEDULE NOTE:

- ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT ANN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HED PLANTING SPECIFICATIONS.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO BIDDING.
- FINAL LOCATION OF PLANT MATERIAL MAY VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
- CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING; IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

GENERAL NOTES:

- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. THE REQUIRED PARKING AND PERIMETER THE REQUIRED PARKING AND PERIMETER LANDSCAPING WILL BE BONDED FOR THIS SUBMISSION.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT FOR THIS SITE DEVELOPMENT PLAN IN THE AMOUNT OF \$8,100 FOR THE REQUIRED 20 SHADE TREES, 10 EVERGREEN TREES, AND 20 SHRUBS.
- THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, DEVELOPMENT OR CONSTRUCTION OF THESE LOTS MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WATER PROTECTION, OR BUILDING AND GRADING PERMITS.
- THERE ARE NO BURIAL GROUNDS, CEMETERIES, OR HISTORIC STRUCTURES LOCATED ON THIS PROPERTY.
- NO LANDSCAPING TO BE INSTALLED WITHIN ANY PUBLIC EASEMENT FOR WATER, SEWER, OR STORMDRAIN.
- ANY EXISTING STREET TREES DAMAGED OR DESTROYED DURING CONSTRUCTION WILL BE REPLACED BY THE CONTRACTOR.
- LANDSCAPING IS NOT PERMITTED WITHIN 7.5' ON EACH SIDE OF THE FIRE DEPARTMENT CONNECTION. PROVIDE A CLEAR, UNOBSTRUCTED ACCESS PATH TO THE FIRE DEPARTMENT CONNECTION. NFA-11.13.14

OWNERS	DEVELOPER
TAYLOR VILLAGE BUSINESS CENTER, LLC AND TAYLOR OFFICE, LLC C/O TAYLOR VILLAGE FAMILY LIMITED PARTNERSHIP MANAGING MEMBER PHIL CUGLIOTTI 4100 COLLEGE AVENUE ELLCOTT CITY, MD 21043 PHONE: 410-465-3500	AUTUMN DEVELOPMENT CORPORATION RONALD V. SPAIN, PRESIDENT ROSS TAYLOR, VICE PRESIDENT 5401 TWIN KNOLLS ROAD, SUITE 7 COLUMBIA, MD 21045 PHONE: 410-465-3500

BIORETENTION PLANTING SCHEDULE (SHRUB/ORNAMENTAL GRASSES)

LEGEND/KEY	QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
IG	12	ILEX GLABRA 'SHAMROCK'	1 GALLON	
IV	18	ITEA VIRGINICA 'HENRY'S GARNETT'	1 GALLON	
HQ	18	HYDRANGEA QUERCIFOLIA OKLEAF HYDRANGEA	1 GALLON	
LR	24	LEUCOTHEO RACEMOSA FETTERBUSH	1 GAL.	
PV	31	PANICUM VIRGATUM SWITCHGRASS	1 GAL.	

BIORETENTION PERENNIALS/GROUND COVER PLANTING SCHEDULE

LEGEND	QTY	BOTANICAL NAME/COMMON NAME	SIZE	REMARKS
	96	BAPTISIA AUSTRALIS FALSE INDIGO	4" POT	12"-15" O.C. FOR SIDES AND BOTTOM OF MBR. MIX ALL VARIETIES IN A NATURALIZED RANDOM PATTERN THROUGHOUT. PLANT IN GROUPS OF NO LESS THAN 9 PLANTS PER CLUMP.
	96	ACORUS GRAMINEUS 'OGON' GOLDEN VARIEGATED SWEET FLAG	1 QT.	

SCHEDULE 'A' PERIMETER LANDSCAPE EDGE

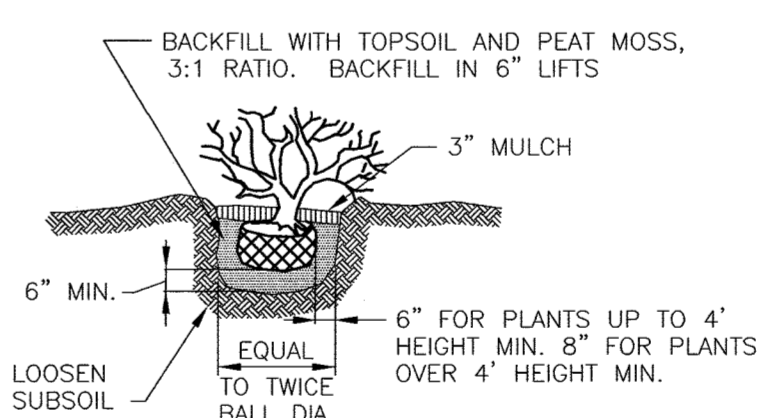
CATEGORY	1	2	3	4	5
PERIMETER/FRONTAGE DESIGNATION	1	2	3	4	5
LANDSCAPE TYPE	NONE	E	C	NONE	D
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	241'	80'	52'	240'	62'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED	241'	80'	52'	240'	62'
SHADE TREES	1:40 2	1:40 2		1:60 2	10
EVERGREEN TREES			1:20 3		1:10 7
SHRUBS	14	20			6
NUMBER OF PLANTS PROVIDED					
SHADE TREES		2	2		2
EVERGREEN TREES			3		7
OTHER TREES (2:1 SUBSTITUTION)					10
SHRUBS (10:1 SUBSTITUTION)		20			20
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)					

SCHEDULE B PARKING LOT INTERNAL LANDSCAPING

NUMBER OF PROPOSED PARKING SPACES	11
NUMBER OF TREES REQUIRED (1/10 SPACES)	2
NUMBER OF TREES PROVIDED	
SHADE TREES	2
OTHER TREES (2:1 SUBSTITUTION)	

SCHEDULE C RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING

NUMBER OF DWELLING UNITS	12
NUMBER OF TREES REQUIRED (1 PER UNIT)	12
NUMBER OF TREES PROVIDED	
SHADE TREES	12
OTHER TREES (2:1 SUBSTITUTION)	

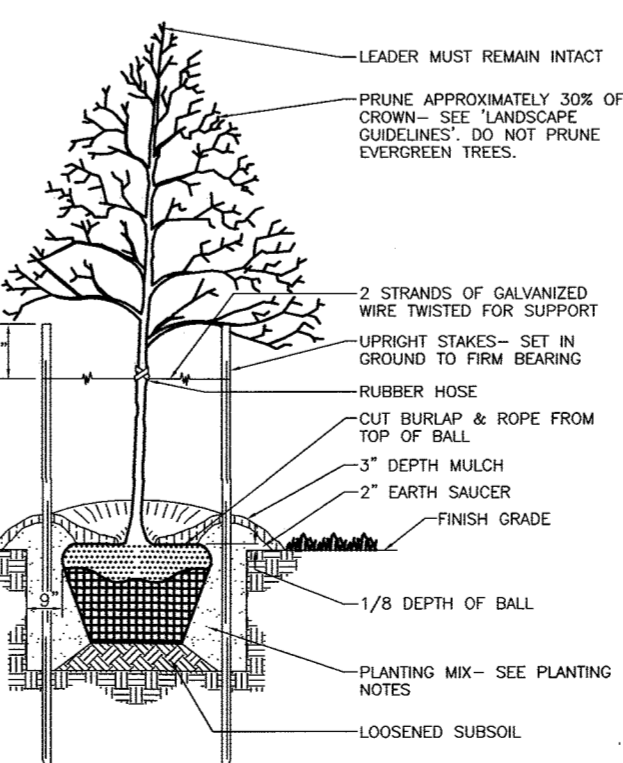


SHRUB PLANTING DETAIL

NOT TO SCALE

NOTES

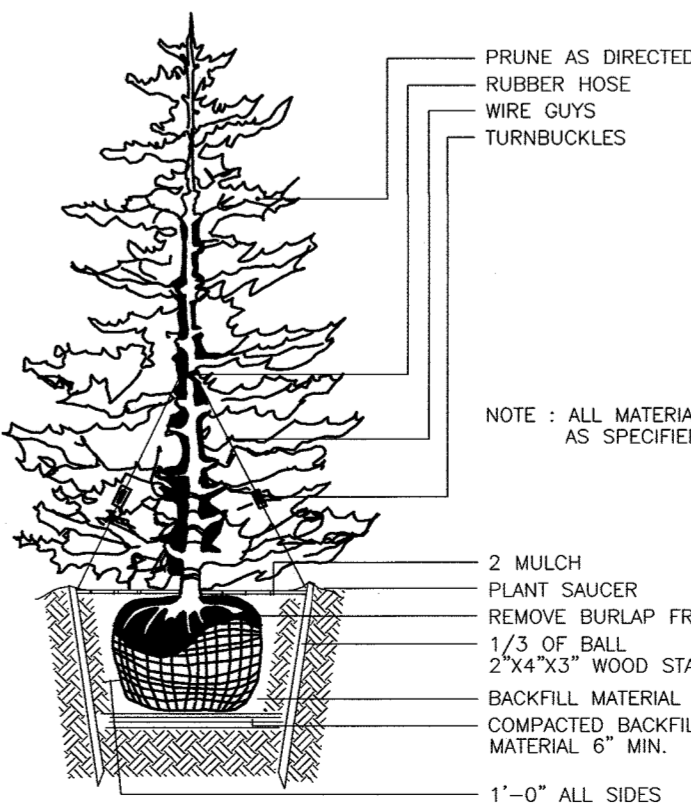
- SEE "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE SUBURBAN METROPOLITAN AREAS" FOR ALL MATERIAL, PRODUCT, AND PROCEDURE SPECIFICATIONS.
- SEE "LANDSCAPE GUIDELINES" FOR SUPPORTING TREES LARGER THAN 2-1/2" CALIPER.
- PLACE UPRIGHT STAKES PARALLEL TO TRUNKS & BUILDINGS.
- KEEP MULCH 1" FROM TRUNK.
- SEE ARCHITECTURAL PLANS FOR ADDITIONAL PLANTINGS WHICH EXCEED HOWARD COUNTY MINIMUM REQUIREMENTS.
- TREES ARE NOT TO BE PLANTED OVER PRIVATE SEWER EASEMENT.



TREE PLANTING AND STAKING

DECIDUOUS TREES UP TO 2-1/2" CALIPER

NOT TO SCALE



TYPICAL EVERGREEN TREE PLANTING DETAIL

NOT TO SCALE

LANDSCAPE SCHEDULE

KEY	QUAN.	BOTANICAL NAME	SIZE	CAT.
ZS	2	ZELCOVA SERRATA 'VILLAGE GREEN'	2 1/2"-3" CAL.	B & B
QP	6	QUERCUS PHELLOS 'WILLOW OAK'	2 1/2"-3" CAL.	B & B
CL	3	CUPRESSOCYPRIS LEYLANDII 'LEYLAND CYPRESS'	6"-8" HT.	B & B
JV	7	JUNIPERUS VIRGINIANA 'HILLSPIRE'	6"-8" HT.	B & B
PS	12	PRUNUS SARGENTII 'SARGENT CHERRY'	2 1/2"-3" CAL.	B & B
TM	20	TAXUS MEDIA 'DENSIFORMIS' 'DENSIFORMIS YEW'	2 1/2"-3" HT.	B & B

MICRO-BIORETENTION PLANTING REQUIREMENTS

MBR #	LF	AREA	STEMS REQUIRED (0.0227)	STEMS PROVIDED	IG	IV	HQ	LR	PV	BA	AG	TOTAL
1	97	445	14	17	2	3	3	4	5	15	15	30
2	93	423	13	17	2	3	3	4	5	14	14	28
3	373	1040	32	35	4	6	6	8	11	36	36	72
4	92	500	15	17	2	3	3	4	5	17	17	34
5	86	418	13	17	2	3	3	4	5	14	14	28
TOTALS:	541	2826	87	103	12	18	18	24	31	96	96	192

BIORETENTION AREAS ARE TO BE PLANTED BASED ON A MINIMUM DENSITY OF 3000 STEMS PER PLANTED ACRE (0.0227 STEMS PER SQUARE FOOT).

AS-BUILT CERTIFICATION FOR PSWM

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

DATE: 7-13-20
P.E. NAME: [Signature]
P.E. NO.: 16193

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature]
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 8/1/17

[Signature]
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 10-2-17

[Signature]
DIRECTOR
DATE: 10-2-17

DEVELOPER'S/BUILDER'S CERTIFICATE
I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

[Signature]
SIGNATURE OF DEVELOPER
DATE: 8/1/17

[Signature]
VICE PRESIDENT

NO AS-BUILT INFORMATION ON THIS SHEET

SITE DEVELOPMENT PLAN

LANDSCAPE AND SWM PLANTING PLAN

TAX MAP 31 BLOCK 03
2ND ELECTION DISTRICT

PARCEL 4, PIO PARCEL D-1
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERS, INC.

ENGINEERS • SURVEYORS • PLANNERS

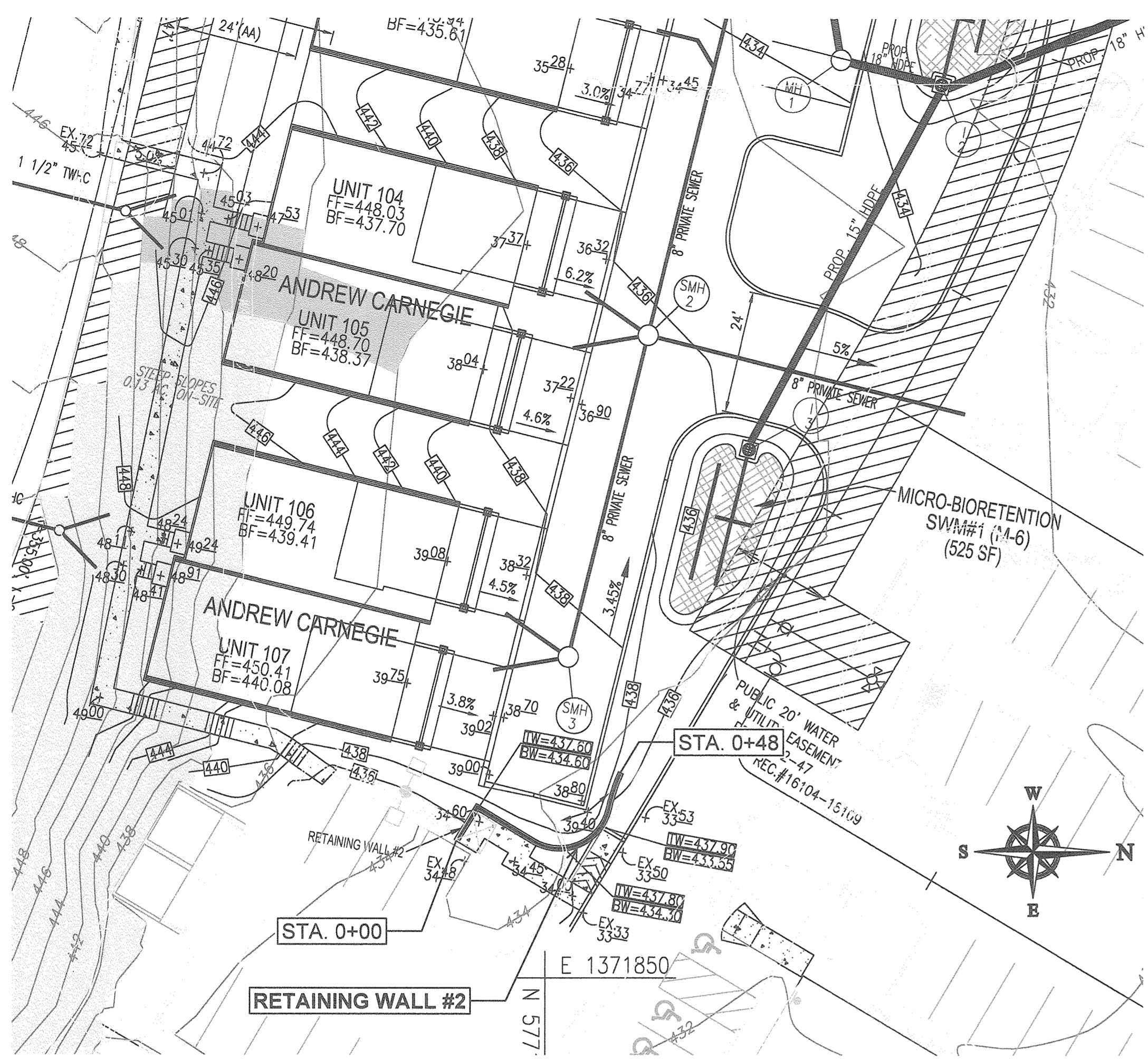
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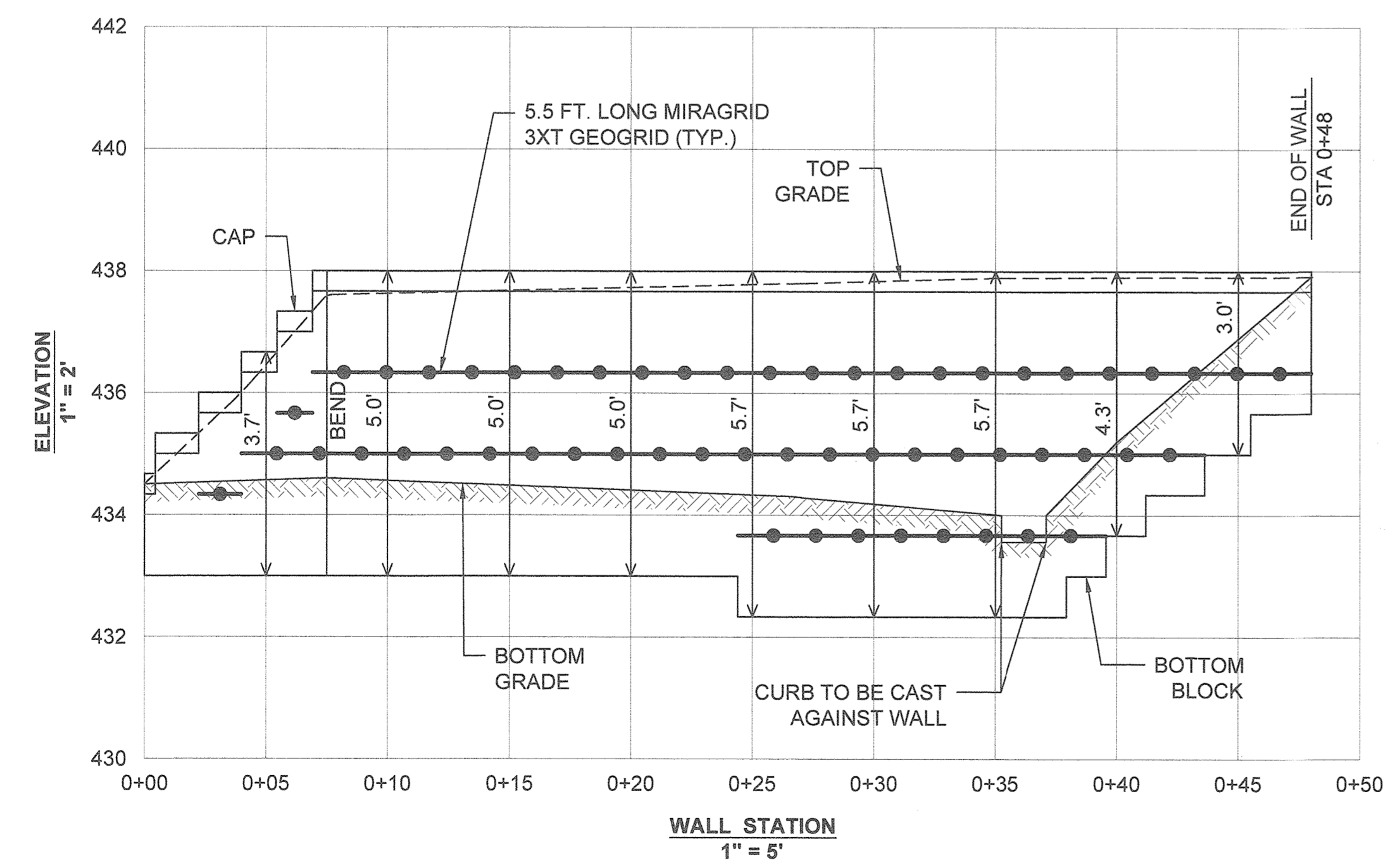
DESIGN BY: RHV
DRAWN BY: RHV/MR
CHECKED BY: RHV
DATE: AUG. 2017
SCALE: AS SHOWN
W.O. NO.: 15-33

PROFESSIONAL CERTIFICATE
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. 16193 EXPIRATION DATE: 09-27-2018

9 SHEET OF 10



WALL LOCATION PLAN
1" = 20'



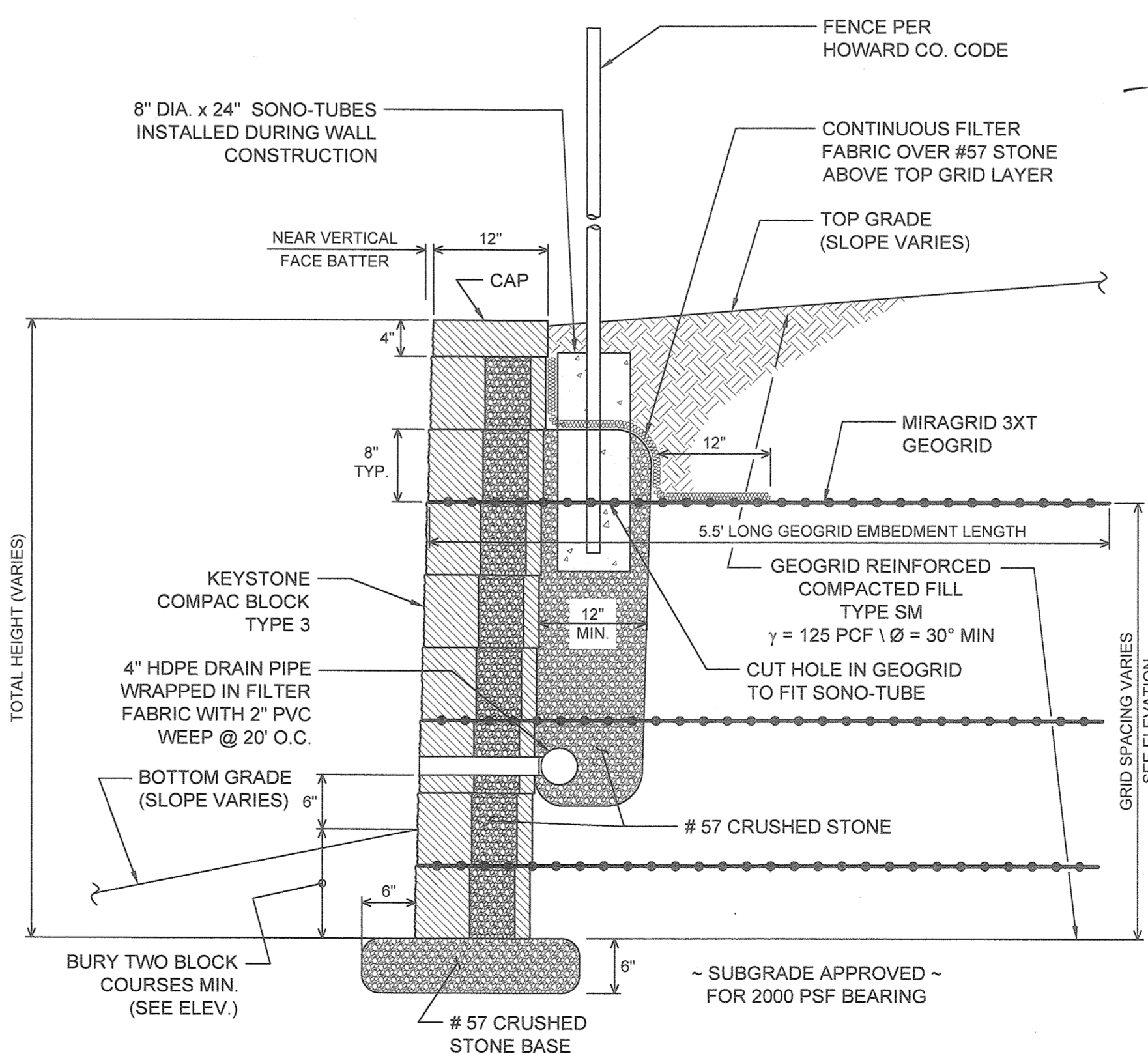
WALL #2 ELEVATION
1" = 5'

- GENERAL NOTES:**
- No trees shall be planted within 10 feet of the top of the retaining wall.
 - Retaining wall shall only be constructed under the observation of a registered professional engineer and a (NICET, WACEL, or equiv.) certified soils technician.
 - The required bearing pressure beneath the wall system shall be verified in the field by a certified soils technician. Testing documentation must be provided to the Howard County Inspector prior to start of construction. The required bearing test shall be the Dynamic Cone Penetrometer test ASTM STP-399.
 - The suitability of fill material shall be confirmed by the on-site soils technician. Each 8" lift must be compacted to a minimum 95% standard proctor density and the testing report shall be made available to the Howard County Inspector upon completion of construction.
 - Wall shall not be constructed on uncertified fill materials.
 - Wall shall not be constructed within a Howard Co. right-of-way or easement.

SPECIFICATIONS
MODULAR CONCRETE BLOCK RETAINING WALL

- PART 1: GENERAL**
- 1.01 DESCRIPTION**
- WORK SHALL CONSIST OF FURNISHING AND CONSTRUCTION OF A MODULAR RETAINING WALL SYSTEM IN ACCORDANCE WITH THESE SPECIFICATIONS AND IN REASONABLY CLOSE CONFORMITY WITH THE LINES, GRADES, DESIGN, AND DIMENSIONS SHOWN ON THE PLANS.
 - WORK INCLUDES PREPARING FOUNDATION SOIL, FURNISHING AND INSTALLING LEVELING PAD, UNIT DRAINAGE FILL AND BACKFILL TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS.
 - WORK INCLUDES FURNISHING AND INSTALLING GEGRID SOIL REINFORCEMENT OF THE TYPE, SIZE, LOCATION, AND LENGTHS DESIGNATED ON THE CONSTRUCTION DRAWINGS.
- 1.02 DELIVERY, STORAGE AND HANDLING**
- CONTRACTOR SHALL CHECK ALL MATERIALS UPON DELIVERY TO ASSURE THAT THE PROPER TYPE, GRADE, COLOR, AND CERTIFICATION HAS BEEN RECEIVED.
 - CONTRACTOR SHALL PROTECT ALL MATERIALS FROM DAMAGE DUE TO JOB SITE CONDITIONS AND IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS. DAMAGED MATERIALS SHALL NOT BE INCORPORATED INTO THE WORK.
- PART 2: PRODUCTS**
- 2.01 MODULAR CONCRETE RETAINING WALL UNITS**
- MODULAR CONCRETE UNITS SHALL CONFORM TO THE FOLLOWING ARCHITECTURAL REQUIREMENTS:
FACE COLOR - COLOR MAY BE SPECIFIED BY THE OWNER.
FACE FINISH - SCULPTURED ROCK FACE IN ANGULAR TRI-PLANNER OR FLAT CONFIGURATION. OTHER FACE FINISHES WILL NOT BE ALLOWED WITHOUT WRITTEN APPROVAL OF OWNER.
BOND CONFIGURATION - RUNNING WITH BONDS NOMINALLY LOCATED AT MIDPOINT VERTICALLY ADJACENT UNITS, IN BOTH STRAIGHT AND CURVED ALIGNMENTS.
EXPOSED SURFACES OF UNITS SHALL BE FREE OF CHIPS, CRACKS OR OTHER IMPERFECTIONS WHEN VIEWED FROM A DISTANCE OF 10 FEET UNDER DIFFUSED LIGHTING.
 - MODULAR CONCRETE MATERIALS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C1372 - STANDARD SPECIFICATIONS FOR SEGMENTAL RETAINING WALL UNITS.
 - MODULAR CONCRETE UNITS SHALL CONFORM TO THE FOLLOWING STRUCTURAL AND GEOMETRIC REQUIREMENTS MEASURED IN ACCORDANCE WITH APPROPRIATE REFERENCES:
COMPRESSIVE STRENGTH = 3000 PSI MINIMUM; ABSORPTION = 8% MAXIMUM (6% IN NORTHERN STATES) FOR STANDARD WEIGHT AGGREGATES.
DIMENSIONAL TOLERANCES = ±1/8" FROM NOMINAL UNIT DIMENSIONS NOT INCLUDING ROUGH SPLIT FACE. ±1/16"
UNIT HEIGHT - TOP AND BOTTOM PLANES, UNIT SIZE - 8" (H) x 18" (W) x 12" (D) MINIMUM.
- 2.02 SHEAR CONNECTORS**
- SHEAR CONNECTORS SHALL BE 1/2 INCH DIAMETER THERMOSET ISOPHTHALIC POLYESTER RESIN-PROTRUDED FIBERGLASS REINFORCEMENT RODS OR EQUIVALENT TO PROVIDE CONNECTION BETWEEN VERTICALLY AND HORIZONTALLY ADJACENT UNITS. STRENGTH OF SHEAR CONNECTORS BETWEEN VERTICAL ADJACENT UNITS SHALL BE APPLICABLE OVER A DESIGN TEMPERATURE OF 10 DEGREES F TO +100 DEGREES F. B. SHEAR CONNECTORS SHALL BE CAPABLE OF HOLDING THE GEGRID IN THE PROPER DESIGN POSITION DURING GRID PRE-TENSIONING AND BACKFILLING.
- 2.03 BASE LEVELING PAD MATERIAL**
- MATERIAL SHALL CONSIST OF A COMPACTED #57 CRUSHED STONE BASE AS SHOWN ON THE CONSTRUCTION DRAWINGS.
- 2.04 UNIT DRAINAGE FILL**
- UNIT DRAINAGE FILL SHALL CONSIST OF #57 CRUSHED STONE.
- 2.05 REINFORCED BACKFILL**
- REINFORCED BACKFILL SHALL TYPE SM, BE FREE OF DEBRIS AND MEET THE FOLLOWING GRADATION TESTED IN ACCORDANCE WITH ASTM D-422 AND MEET OTHER PROPERTIES SHOWN ON THE PLAN.
- | SILO SIZE | PERCENT PASSING |
|-----------|-----------------|
| 2 INCH | 100-75 |
| 3/4 INCH | 100-75 |
| NO. 40 | 0-60 |
| NO. 200 | 0-35 |
- PLASTICITY INDEX (PI) <10 AND LIQUID LIMIT <35 PER ASTM D-4318.
- MATERIAL CAN BE SITE EXCAVATED SOILS WHERE THE ABOVE REQUIREMENTS CAN BE MET. UNSUITABLE SOILS FOR BACKFILL (HIGH PLASTIC CLAYS OR ORGANIC SOILS) SHALL NOT BE USED IN THE REINFORCED SOIL MASS.
- 2.06 GEGRID SOIL REINFORCEMENT**
- GEOSYNTHETIC REINFORCEMENT SHALL CONSIST OF GEGRIDS MANUFACTURED SPECIFICALLY FOR SOIL REINFORCEMENT APPLICATIONS AND SHALL BE

- MANUFACTURED FROM HIGH TENACITY POLYESTER YARN.
- 2.07 DRAINAGE PIPE**
- THE DRAINAGE PIPE SHALL BE PERFORATED CORRUGATED HDPE PIPE MANUFACTURED IN ACCORDANCE WITH ASTM D-1248.
- PART 3: EXECUTION**
- 3.01 EXCAVATION**
- CONTRACTOR SHALL EXCAVATE TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS. OWNER'S REPRESENTATIVE SHALL BE RESPONSIBLE FOR INSPECTING AND APPROVING THE EXCAVATION PRIOR TO PLACEMENT OF LEVELING MATERIAL OR FILL SOILS.
- 3.02 BASE LEVELING PAD**
- LEVELING PAD MATERIAL SHALL BE PLACED TO THE LINES AND GRADES SHOWN ON THE CONSTRUCTION DRAWINGS, TO A MINIMUM THICKNESS OF 6 INCHES AND EXTEND LATERALLY A MINIMUM OF 6" IN FRONT AND BEHIND THE MODULAR WALL UNIT.
 - LEVELING PAD SHALL BE PREPARED TO INSURE FULL CONTACT TO THE BASE SURFACE OF THE CONCRETE UNITS.
- 3.03 MODULAR UNIT INSTALLATION**
- FIRST COURSE OF UNITS SHALL BE PLACED ON THE LEVELING PAD AT THE APPROPRIATE LINE AND GRADE. ALIGNMENT AND LEVEL SHALL BE CHECKED IN ALL DIRECTIONS AND INSURE THAT ALL UNITS ARE IN FULL CONTACT WITH THE BASE AND PROPERLY SEATED.
 - PLACE THE FRONT OF UNITS SIDE-BY-SIDE. DO NOT LEAVE GAPS BETWEEN ADJACENT UNITS. LAYOUT OF CORNERS AND CURVES SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
 - INSTALL SHEAR/CONNECTING DEVICES PER MANUFACTURER'S RECOMMENDATIONS.
 - PLACE AND COMPACT DRAINAGE FILL WITHIN AND BEHIND WALL UNITS. PLACE AND COMPACT BACKFILL SOIL BEHIND DRAINAGE FILL FOLLOW WALL ERECTION AND DRAINAGE FILL CLOSELY WITH STRUCTURE BACKFILL.
 - MAXIMUM STACKED VERTICAL HEIGHT OF WALL UNITS, PRIOR TO UNIT DRAINAGE FILL AND BACKFILL PLACEMENT AND COMPACTION, SHALL NOT EXCEED THREE COURSES.
- 3.04 STRUCTURAL GEGRID INSTALLATION**
- GEGRID SHALL BE ORIENTED WITH THE HIGHEST STRENGTH AXIS PERPENDICULAR TO THE WALL ALIGNMENT.
 - GEGRID REINFORCEMENT SHALL BE PLACED AT THE STRENGTHS, LENGTHS, AND ELEVATIONS SHOWN ON THE CONSTRUCTION DESIGN DRAWINGS OR AS DIRECTED BY THE ENGINEER.
 - THE GEGRID SHALL BE LAID HORIZONTALLY ON COMPACTED BACKFILL AND ATTACHED TO THE MODULAR WALL UNITS. PLACE THE NEXT COURSE OF MODULAR CONCRETE UNITS OVER THE GEGRID. THE GEGRID SHALL BE PULLED TAUT, AND ANCHORED PRIOR TO BACKFILL PLACEMENT ON THE GEGRID.
 - GEGRID REINFORCEMENTS SHALL BE CONTINUOUS
- 3.05 REINFORCED BACKFILL PLACEMENT**
- REINFORCED BACKFILL SHALL BE PLACED, SPREAD, AND COMPACTED IN SUCH A MANNER THAT MINIMIZES THE DEVELOPMENT OF SLACK IN THE GEGRID AND INSTALLATION DAMAGE.
 - REINFORCED BACKFILL SHALL BE PLACED AND COMPACTED IN LIFTS NOT TO EXCEED 8 INCHES WHERE HAND COMPACTION IS USED, OR 8 - 10 INCHES WHERE HEAVY COMPACTION EQUIPMENT IS USED. LIFT THICKNESS SHALL BE DECREASED TO ACHIEVE THE REQUIRED DENSITY AS REQUIRED.
 - REINFORCED BACKFILL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY AS DETERMINED BY ASTM D958. THE MOISTURE CONTENT OF THE BACKFILL MATERIAL PRIOR TO AND DURING COMPACTION SHALL BE UNIFORMLY DISTRIBUTED THROUGHOUT EACH LAYER AND SHALL BE + 3% TO - 3% OF OPTIMUM.
 - ONLY LIGHTWEIGHT HAND-OPERATED EQUIPMENT SHALL BE ALLOWED WITHIN 3 FEET FROM THE TAIL OF THE MODULAR CONCRETE UNIT.
 - TRACKED CONSTRUCTION EQUIPMENT SHALL NOT BE OPERATED DIRECTLY UPON THE GEGRID REINFORCEMENT. A MINIMUM FILL THICKNESS OF 6 INCHES IS REQUIRED PRIOR TO OPERATION OF TRACKED VEHICLES OVER THE GEGRID. TRACKED VEHICLE TURNING SHOULD BE KEPT TO A MINIMUM TO PREVENT TRACKS FROM DISPLACING THE FILL AND DAMAGING THE GEGRID.
 - RUBBER Tired EQUIPMENT MAY PASS OVER GEGRID REINFORCEMENT AT SLOW SPEEDS, LESS THAN 10 MPH. SUDDEN BRAKING AND SHARP TURNING SHALL BE AVOIDED.
 - AT THE END OF EACH DAY'S OPERATION, THE CONTRACTOR SHALL SLOPE THE LAST LIFT OF REINFORCED BACKFILL AWAY FROM THE WALL UNITS TO DIRECT RUNOFF AWAY FROM WALL FACE. THE CONTRACTOR SHALL NOT ALLOW SURFACE RUNOFF FROM ADJACENT AREAS TO ENTER THE WALL CONSTRUCTION SITE.
- 3.06 CAP INSTALLATION**
- CAP UNITS SHALL BE GLUED TO UNDERLYING UNITS WITH AN ALL-WEATHER ADHESIVE RECOMMENDED BY THE MANUFACTURER.
- 3.07 FIELD QUALITY CONTROL**
- THE OWNER SHALL ENGAGE INSPECTION AND TESTING SERVICES, INCLUDING INDEPENDENT LABORATORIES TO PROVIDE QUALITY ASSURANCE AND TESTING SERVICES DURING CONSTRUCTION.
 - AS A MINIMUM, QUALITY ASSURANCE TESTING SHOULD INCLUDE FOUNDATION SOIL INSPECTION, SOIL AND BACKFILL TESTING, VERIFICATION OF DESIGN PARAMETERS, AND OBSERVATION OF CONSTRUCTION FOR GENERAL COMPLIANCE WITH DESIGN DRAWINGS AND SPECIFICATIONS.

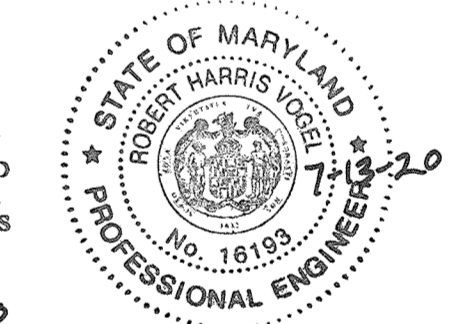


TYPICAL WALL SECTION
N.T.S.

AS-BUILT CERTIFICATION FOR PSWM

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND COMPLIES WITH THE APPROVED PLANS AND SPECIFICATIONS. I HAVE VERIFIED THAT THE CONTRIBUTING DRAINAGE AREA IS SUFFICIENTLY STABILIZED TO PREVENT CLOGGING OF THE UNDERGROUND SWM FACILITY.

DATE: 7-13-20
P.E. # 16193



OWNERS
TAYLOR VILLAGE BUSINESS CENTER, LLC
AND TAYLOR OFFICE, LLC
C/O TAYLOR VILLAGE FAMILY LIMITED PARTNERSHIP
4100 COLLEGE AVE
ELLCOTT CITY, MD 21043

DEVELOPER
AUTUMN DEVELOPMENT CORPORATION
RONALD L. SPAHN, PRESIDENT
ROSTAN D. VICE PRESIDENT
5401 TWIN KNOLLS ROAD
SUITE 7
COLUMBIA, MD 21045

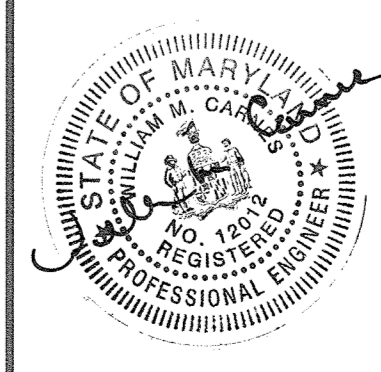
NO.	REVISION	DATE

RETAINING WALL #2
CONSTRUCTION DETAILS

VILLAGE CREST SENIOR TOWNS
AGE RESTRICTED ADULT HOUSING UNITS
ZONED: POR
TAX MAP 31 BLOCK 08 L 12580/F 001 & L 12580/F 011 PARCEL 4, P/O PARCEL D-1
2ND ELECTION DISTRICT L 11702/F 63 L 11702/F 63 HOWARD COUNTY, MARYLAND

HILLIS-CARNES
ENGINEERING ASSOCIATES

10975 Guilford Road, Suite A Annapolis Junction, Maryland
(410) 880-4788 WWW.HCEA.COM Fax: (410) 880-4098



DESIGN BY: AL
DRAWN BY: AL
CHECKED BY: RWS
DATE: AUG. 2017
SCALE: AS SHOWN
HCEA NO.: 06198-B

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER IN THE STATE OF MARYLAND. LICENSE NO. 18129. EXPIRATION DATE: 06/16/18.

10 SHEET OF 10

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 8-21-17

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 10/2/17

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DIRECTOR
DATE: 10-2-17

NO AS-BUILT INFORMATION ON THIS SHEET

AS-BUILT JUNE 2020