

GENERAL NOTES

- ALL ASPECTS OF THE PROJECT ARE IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE UNLESS WAIVERS HAVE BEEN APPROVED.
- 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 TELEPHONE COMPANY 1-410-954-6281
 - HOWARD COUNTY BUREAU OF UTILITIES 410-513-2366
 - M&T CABLE LOCATION DIVISION 1-800-393-3553
 - B.G. & E. CO. CONTRACTOR SERVICES 410-850-4620
 - B.G. & E. CO. UNDERGROUND DAMAGE CONTROL 410-787-4620
 - STATE HIGHWAY ADMINISTRATION 410-531-5533
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISIONS AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO START OF WORK. IN ADDITION, THE CONTRACTOR OR DEVELOPER SHALL CONTACT THE CONSTRUCTION INSPECTION DIVISION 24 HOUR IN ADVANCE OF COMMENCEMENT OF WORK AT (410) 313-1880.
- ANY DAMAGE TO PUBLIC RIGHT-OF-WAY, PAVING, OR EXISTING UTILITIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- THE PROPERTY LINES SHOWN HEREON IS BASED ON A FIELD RUN BOUNDARY SURVEY PERFORMED BY ROBERT H. VOGEL ENGINEERING, INC. DATED SEPTEMBER, 2011. THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT FROM A CERTIFIED TITLE ABSTRACTOR. A TITLE REPORT COULD REVEAL ADDITIONAL CONVEYANCES, EASEMENTS, OR RIGHT-OF-WAYS NOT SHOWN HEREON.
- DEED REFERENCE: DEMIREL PLAZA LLC LIBER 15837 FOLIO 34 DATED OCTOBER 14, 2014
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 0066 AND 2485 WERE USED FOR THIS PROJECT.
- THE SUBJECT PROPERTY IS ZONED OT (OFFICE TRANSITION) PER THE 10/06/13 COMPREHENSIVE ZONING PLAN REFER TO ZB1098M
- 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, WAIVER PETITION APPLICATION OR BUILDING / GRADING PERMIT APPLICATIONS.
- THE EXISTING TOPOGRAPHY SHOWN HEREON IS FROM A FIELD RUN TOPOGRAPHIC SURVEY PREPARED BY ROBERT H. VOGEL ENGINEERING, INC., PERFORMED ON SEPTEMBER, 2011. OFFSITE TOPOGRAPHY FROM HOWARD COUNTY GIS DATA.
- EXISTING UTILITIES LOCATED FROM ROAD CONSTRUCTION PLANS, FIELD SURVEYS, PUBLIC WATER AND SANITARY EXTENSION PLANS AND AVAILABLE RECORD 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.
- SOIL TYPES SHOWN HEREON ARE IN ACCORDANCE WITH THE WEBB SOIL SURVEY, HOWARD COUNTY MARYLAND.
- 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.
- A GEOTECHNICAL ENGINEER TO CONFIRM PAVING SECTION & PERMEABLE SURFACE THICKNESS PRIOR TO CONSTRUCTION. ALL PAVING EXCEPT PERMEABLE SURFACES, TO BE MINIMUM P-2 PAVING, UNLESS OTHERWISE NOTED.
- THERE ARE EXISTING STRUCTURES LOCATED ON SITE TO BE REMOVED.
- TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO BURIAL GROUNDS OR CEMETERIES LOCATED ON THIS PROPERTY.
- THIS SITE IS NOT LOCATED IN A HISTORIC DISTRICT.
 - THE PROJECT HAS A HISTORIC STRUCTURE KNOWN AS #10111 FREDERICK ROAD (H0843)
 - THE PROJECT HAS GONE BEFORE THE HISTORIC DISTRICT COMMISSION ON 9-12-2013. THE HISTORIC DISTRICT COMMISSION HAD NO OBJECTION TO DEMOLITION OF THE STRUCTURE PER LETTER DATED 10-3-2013.
- NO STEEP SLOPES OVER 20.00% SF CONTIGUOUS AREAS LOCATED ON-SITE.
- AN AFPO TRAFFIC STUDY HAS BEEN PREPARED BY MARS GROUP, JULY 2013.
- THIS PORTION OF FREDERICK ROAD IS NOT A SCENIC ROAD.
- FREDERICK ROAD IS CLASSIFIED AS A MINOR ARTERIAL ROAD. A 35MPH SPEED LIMIT IS POSTED.
- A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.
- THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
- THIS SITE IS CURRENTLY SERVED BY PUBLIC WATER VIA CONTRACT NO. 176-W.
- THIS SITE IS CURRENTLY SERVED BY PUBLIC SEWER VIA CONTRACT NO. 286-S.
- WATER AND SEWER FOR THIS PROJECT WILL BE PROVIDED THROUGH A PUBLIC EXTENSION OF WATER CONTRACT 27-W AND PUBLIC / PRIVATE EXTENSION OF SEWER CONTRACT 186-S. PUBLIC WATER EXTENSION SHALL BE COMPLETED UNDER THE HOWARD COUNTY ADD PROVISIONS OF SECTION 18.122.B OF THE HOWARD COUNTY CODE. ALL CONSTRUCTION SHALL BE IN CONFORMANCE WITH ALL HOWARD COUNTY VOLUME II AND IV DETAILS.
- THERE ARE NO FLOODPLAIN, WETLANDS, WETLAND BUFFERS, STREAMS, STREAM BUFFERS OR STEEP SLOPES WITHIN THE PROJECT.
- THERE ARE NO WETLANDS OR STREAMS ON THIS SITE AS DETERMINED BY ECO-SCIENCE PROFESSIONALS, INC. DATED FEBRUARY 2013.
- FOREST STAND DELINEATION PLAN HAS BEEN PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED FEBRUARY 2013.
- THERE ARE SPECIFIC TREES ON-SITE WITHIN THE LOD PROPOSED TO BE REMOVED.
- THIS PROJECT IS SUBJECT TO WP-14-085. ON FEBRUARY 25, 2014; THE PLANNING DIRECTOR ISSUED NO ACTION TO THE REQUEST, TO WAIVE SECTION 16.1205(A)(7) WHICH REQUIRES THE RETENTION OF SPECIMEN TREES HAVING A DIAMETER OF 30" OR MORE. NO ACTION WAS TAKEN UNTIL COMMENTS WERE ADDRESSED.
- IN APRIL 2014, A REQUEST FOR RECONSIDERATION WAS SUBMITTED AND ON APRIL 16, 2014; THE PLANNING DIRECTOR APPROVED THE REQUEST TO WAIVE SECTION 16.1205(A)(7) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS FOR THE REMOVAL OF FOUR SPECIMEN TREES AS PROVIDED BY THE SITE DEVELOPMENT PLAN. APPROVAL IS SUBJECT TO THE FOLLOWING CONDITION:
 - THE PETITIONER SHALL PROVIDE A 1:1 REPLACEMENT PLANTING ON-SITE TO MITIGATE REMOVAL OF THE FOUR SPECIMEN TREES. THE REPLACEMENT PLANTINGS SHALL BE MADE PART OF THE LANDSCAPE PLAN AND SHALL CONSIST OF SPECIES SIMILAR TO THE TREES REMOVED AND EQUAL TO OR GREATER THAN THE SIZES AND SPECIFICATIONS FOUND FOR SUCH PLANTINGS IN THE HOWARD COUNTY LANDSCAPE MANUAL. THE PETITIONER SHALL INDICATE AND IDENTIFY THE REPLACEMENT PLANTINGS ON THE LANDSCAPE PLAN.
- IN ACCORDANCE WITH SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION, THE TOTAL FOREST CONSERVATION OBLIGATION OF 0.30 ACRES (13,068 X 0.75 = \$ 9,801.00) WILL BE FULFILLED BY PAYMENT OF A FEE-IN-LIEU.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. A FINANCIAL SURETY FOR THE PERIMETER LANDSCAPING IN THE AMOUNT OF \$ 20,490.00 FOR THE PROVIDED 16 SHADE TREES (\$4,800), 56 EVERGREENS (\$8,400), 26 SMALL TREES (\$3,900), 4 SHADE TREES / SPECIMEN TREE REPLACEMENT (\$1,200) AND 73 SHRUBS (\$2,190) SHALL BE POSTED WITH THE DEVELOPERS AGREEMENT FOR THIS PLAN.
- STORMWATER MANAGEMENT FOR THE PROJECT IS PROVIDED BY THE USE OF ALTERNATIVE SURFACES (POROUS CONCRETE / PERMEABLE SURFACE) AND MICRO-SCALE PRACTICES IN ACCORDANCE WITH ENVIRONMENTAL SITE DESIGN CRITERIA. MICRO-SCALE PRACTICES INCLUDE MICRO-BIORETENTION. THESE FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED.
- ALL BUILDINGS TO HAVE ROOF LEADERS WHICH EMPTY AND FLOW AS DIRECTED HEREON.
- TEST PITS WERE COMPLETED BY ROBERT H. VOGEL ENGINEERING, INC. DATED APRIL 2013.
- THE PROPOSED BUILDINGS SHALL HAVE AN AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM INSTALLED.
- ALL REINFORCED CONCRETE FOR STORM DRAIN STRUCTURES SHALL HAVE A MINIMUM OF 28 DAYS STRENGTH OF 3500 P.S.I.
- ALL CURB AND GUTTER TO BE HOWARD COUNTY STANDARD DETAIL 3.01, UNLESS OTHERWISE NOTED.
- ALL ELEVATIONS REFER TO FLOWING/BOTTOM OF CURB UNLESS OTHERWISE NOTED.
- ALL DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.
- CONTRACTOR RESPONSIBLE FOR CONSTRUCTING ALL HANDICAP RAMP AND HANDICAP ACCESS IN ACCORDANCE WITH CURRENT ADA REQUIREMENTS.
- ALL EXTERIOR LIGHTING TO COMPLY WITH THE REQUIREMENTS FOUND IN ZONING SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS.
- SIGNAGE SHALL BE PROVIDED ON THE BUILDING IDENTIFYING THE BUILDING ADDRESS, AND EACH SUITE SEPARATED BY LETTER IF APPLICABLE.
- TRAFFIC CONTROL DEVICES:
 - THE R1-(STOP) SIGN FOR THIS DEVELOPMENT MUST BE INSTALLED BEFORE THE BASE PAVING IS COMPLETE.
 - THE TRAFFIC CONTROL DEVICE LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY HOWARD COUNTY TRAFFIC DIVISION (410-313-5752) PRIOR TO THE INSTALLATION OF ANY OF THE TRAFFIC CONTROL DEVICES.
 - ALL TRAFFIC CONTROL DEVICES AND THEIR LOCATIONS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD).
 - ALL SIGN POST USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED QUICK PUNCH, SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED QUICK PUNCH, SQUARE TUBE SLEEVE (12 GAUGE - 3" LONG). A GALVANIZED STEEL POLE (2" DIA) ON THE TOP OF EACH POST.
- ALL SIGN POST USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL.
- TRASH AND RECYCLING SERVICES SHALL BE PROVIDED FOR THIS SITE BY A PRIVATE SERVICE.
- THE PROPOSED HOURS OF OPERATION FOR THIS SITE AS APPROVED IN ZB-1098M ARE:
 - WEEKDAYS - MONDAY - FRIDAY 6:00 AM UNTIL 6:00 PM
 - WEEKENDS - SATURDAY - SUNDAY 7:00 AM UNTIL 10:00 PM

SITE DEVELOPMENT PLAN

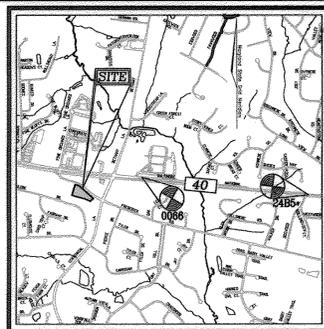
DEMIREL PLAZA

(L.11399/F.313)

2ND ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

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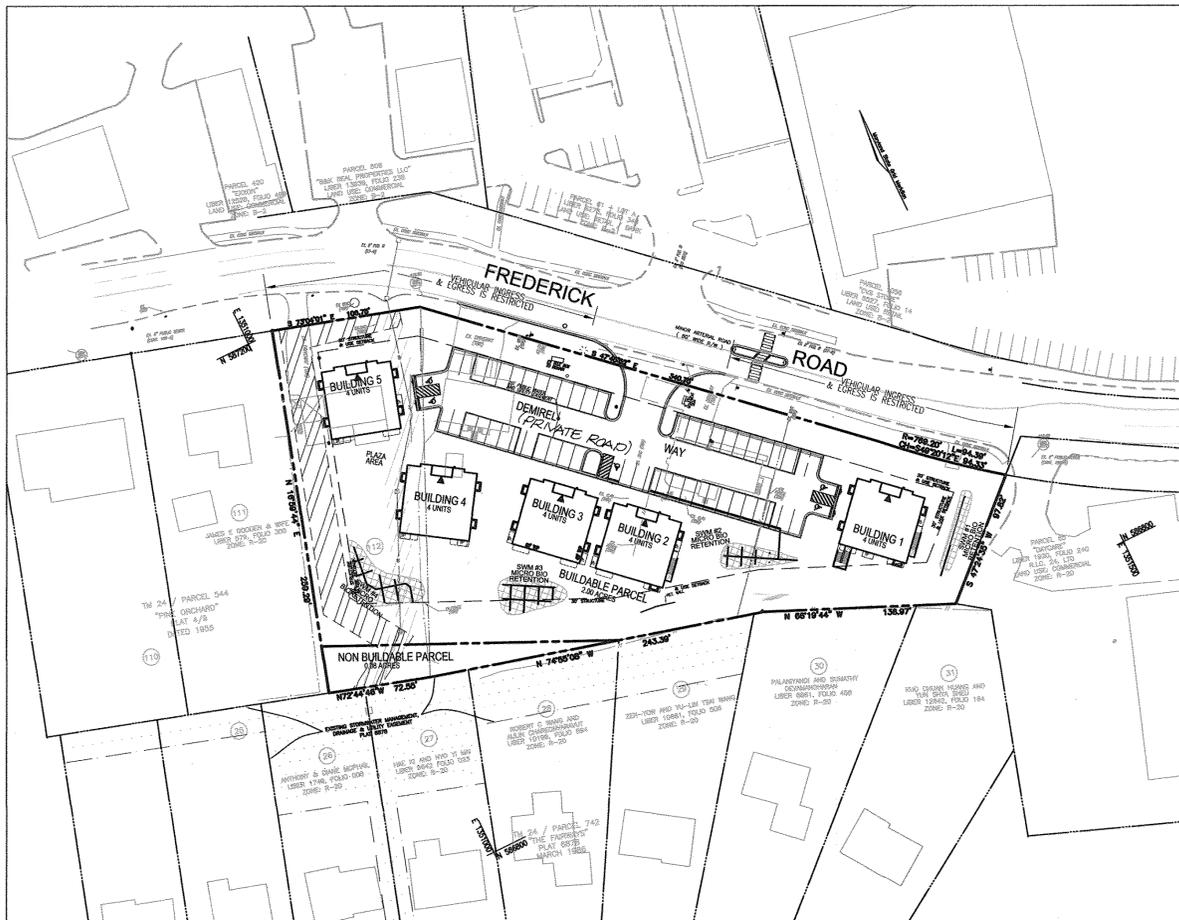


VICINITY MAP
SCALE: 1"=2000'
ADC MAP COORDINATE: 11 G7

BENCHMARKS

HOWARD COUNTY BENCHMARK - 0066
N 587380.5040 E 1352603.4423 ELEV. 386.518
LOCATION: RT 40 BY ENCHANTED FOREST SHOPPING CENTER

HOWARD COUNTY BENCHMARK - 2485
N 586956.2726 E 1356570.7844 ELEV. 390.170
LOCATION: ISLE AT CORNER RT.40 AND DOGWOOD DR.



LOCATION MAP

SCALE: 1" = 60'

PARKING TABULATION

OFFICE	3.3	SPACES PER UNIT = 5	×	6150	2030 SPACES REQUIRED
PERSONAL SERVICE	5	SPACES PER UNIT = 5	×	6150	3075 SPACES REQUIRED
APARTMENTS	2.3	SPACES PER UNIT = 10	×	12300	2830 SPACES REQUIRED
					TOTAL 75 SPACES REQUIRED
					REFER TO SHARED PARKING ANALYSIS
					51 SPACES MINIMUM

* USE OF SHARED PARKING ALLOWED PER SECTION 133.0.F.1.a OF HOWARD COUNTY ZONING REGULATIONS

2. NUMBER OF PARKING SPACES PROVIDED: 57 SPACES (MINIMUM 57)* SEE SHARED PARKING TABULATION

USE	WEEKDAY					WEEKEND				
	MORNING 8AM-12PM	MID-DAY 12PM-3PM	AFTERNOON 3PM-5PM	EVENING 5PM-10PM	OVERNIGHT 10PM-7AM	MORNING 8AM-12PM	MID-DAY 12PM-3PM	AFTERNOON 3PM-5PM	EVENING 5PM-10PM	OVERNIGHT 10PM-7AM
OFFICE	21	21	21	21	0	0	0	0	0	0
PERSONAL SERVICE	20%	20%	20%	20%	0%	0%	0%	0%	0%	0%
APARTMENTS	6.2	18.6	18.6	27.9	0.0	31.0	0.0	0.0	0.0	0.0
TOTAL	19	19	19	20	0	31	0	0	0	0
RESIDENTIAL	80%	60%	60%	100%	100%	100%	100%	100%	100%	100%
23	18.4	13.8	13.8	23.0	23.0	23.0	23.0	23.0	23.0	23.0
19	14	14	14	23	23	23	23	23	23	23
TOTAL	43	54	54	23	23	23	23	23	23	23

MAPPED SOILS TYPES		GROUP	HYDRC	PERCENT	K-FACTOR	PERCENT	PERCENT	PERCENT
SYMBOL	NAME / DESCRIPTION	B/D	NO	NO	0.20	NO	NO	NO
G8B	GLENEGL-URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES							

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY
NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL DRAINABILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT

BUILDING#	STREET ADDRESS
1	3301 A DEMIREL WAY
	3301 B DEMIREL WAY
	3301 C DEMIREL WAY
	3301 D DEMIREL WAY
2	3303 A DEMIREL WAY
	3303 B DEMIREL WAY
	3303 C DEMIREL WAY
	3303 D DEMIREL WAY
3	3305 A DEMIREL WAY
	3305 B DEMIREL WAY
	3305 C DEMIREL WAY
	3305 D DEMIREL WAY
4	3307 A DEMIREL WAY
	3307 B DEMIREL WAY
	3307 C DEMIREL WAY
	3307 D DEMIREL WAY
5	3309 A DEMIREL WAY
	3309 B DEMIREL WAY
	3309 C DEMIREL WAY
	3309 D DEMIREL WAY

PERMIT INFORMATION CHART				
SUBDIVISION NAME	SECTION/ AREA	LOT / PARCEL	ELECT DIST.	CENSUS TR.
DEMIREL PLAZA	-	BUILDINGS 1 - 5	2ND	6023.03
PLAT REF.	BLOCK NO	ZONE	TAX MAP	
23380	1	OT	24	

NO.	REVISION	DATE
1	REVISE PARKING TABULATION	6/27/16
2	REVISE ADDRESS CHART	2/3/16

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division 6-8-15
DATE

Chief, Division of Land Development 7-07-15
DATE

Director 7-7-15
DATE

APPROVED JULY 2014
PLANNING BOARD OF HOWARD COUNTY

APPROVED: FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS

County Health Officer 6/23/2015
DATE

County Health Department

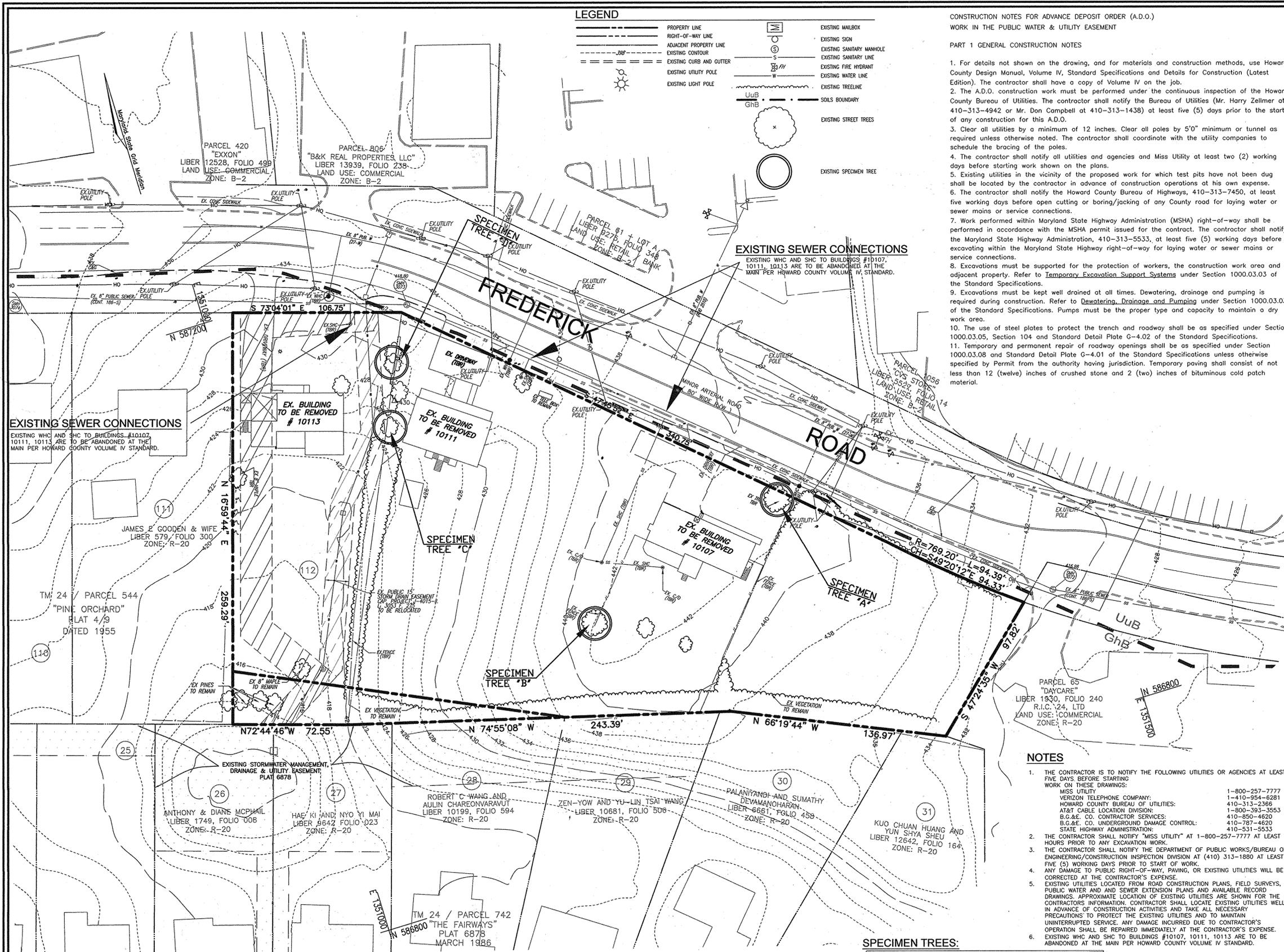
ATTORNEY
SANG OH
TALKIN & OH, LLP
5100 DORSEY HILL DRIVE
ELLCOTT CITY, MD 21042
PHONE: (410) 964-0300

OWNER/DEVELOPER
WELI DEMIREL
44087 HIGH POINT ROAD
ELLCOTT CITY, MD 21042
PHONE: (410) 440-1242

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: 09-27-2016

DESIGN BY: EDS
DRAWN BY: RVE
CHECKED BY: REV
DATE: MAY 2015
SCALE: AS SHOWN
W.O. NO.: 11-011

1 SHEET OF 15



LEGEND

—	PROPERTY LINE	—	EXISTING MAILBOX
- - -	RIGHT-OF-WAY LINE	—	EXISTING SIGN
- · - · -	ADJACENT PROPERTY LINE	—	EXISTING SANITARY MANHOLE
— · — · —	EXISTING CONTOUR	—	EXISTING SANITARY LINE
— · — · —	EXISTING CURB AND GUTTER	—	EXISTING FIRE HYDRANT
— · — · —	EXISTING UTILITY POLE	—	EXISTING WATER LINE
— · — · —	EXISTING LIGHT POLE	—	EXISTING TREE LINE
— · — · —		—	EXISTING STREET TREES
— · — · —		—	EXISTING SPECIMEN TREE

CONSTRUCTION NOTES FOR ADVANCE DEPOSIT ORDER (A.D.O.)
WORK IN THE PUBLIC WATER & UTILITY EASEMENT

- PART I GENERAL CONSTRUCTION NOTES**
- For details not shown on the drawing, and for materials and construction methods, use Howard County Design Manual, Volume IV, Standard Specifications and Details for Construction (Latest Edition). The contractor shall have a copy of Volume IV on the job.
 - The A.D.O. construction work must be performed under the continuous inspection of the Howard County Bureau of Utilities. The contractor shall notify the Bureau of Utilities (Mr. Harry Zellmer at 410-313-4942 or Mr. Don Campbell at 410-313-1438) at least five (5) days prior to the start of any construction for this A.D.O.
 - Clear all utilities by a minimum of 12 inches. Clear all poles by 5'0" minimum or tunnel as required unless otherwise noted. The contractor shall coordinate with the utility companies to schedule the bracing of the poles.
 - The contractor shall notify all utilities and agencies and Miss Utility at least two (2) working days before starting work shown on the plans.
 - Existing utilities in the vicinity of the proposed work for which test pits have not been dug shall be located by the contractor in advance of construction operations at his own expense.
 - The contractor shall notify the Howard County Bureau of Highways, 410-313-7450, at least five working days before open cutting or boring/jacking of any County road for laying water or sewer mains or service connections.
 - Work performed within Maryland State Highway Administration (MSHA) right-of-way shall be performed in accordance with the MSHA permit issued for the contract. The contractor shall notify the Maryland State Highway Administration, 410-313-5533, at least five (5) working days before excavating within the Maryland State Highway right-of-way for laying water or sewer mains or service connections.
 - Excavations must be supported for the protection of workers, the construction work area and adjacent property. Refer to Temporary Excavation Support Systems under Section 1000.03.03 of the Standard Specifications.
 - Excavations must be kept well drained at all times. Dewatering, drainage and pumping is required during construction. Refer to Dewatering, Drainage and Pumping under Section 1000.03.03 of the Standard Specifications. Pumps must be the proper type and capacity to maintain a dry work area.
 - The use of steel plates to protect the trench and roadway shall be as specified under Section 1000.03.05, Section 104 and Standard Detail Plate G-4.02 of the Standard Specifications.
 - Temporary and permanent repair of roadway openings shall be as specified under Section 1000.03.08 and Standard Detail Plate G-4.01 of the Standard Specifications unless otherwise specified by Permit from the authority having jurisdiction. Temporary paving shall consist of not less than 12 (twelve) inches of crushed stone and 2 (two) inches of bituminous cold patch material.

- PART II WATER CONSTRUCTION NOTES**
- All water mains shall be D.I.P., Class 54 minimum, or AWWA C900/C905 P.V.C. pipe, Class DR18 minimum.
 - Tops of all water pipes shall have not less than 4'0" of cover unless otherwise noted.
 - Valves adjacent to tees shall be strapped to tees.
 - Fire hydrants shall be set to the bury line elevations shown on the Plans. All fire hydrants shall be installed in accordance with Standard Details. The soil around the fire hydrant shall be compacted in accordance with Sections 1000 and 1005 of the Standard Specifications.
 - All fittings shall be buttressed or anchored with concrete in accordance with Standard Details unless otherwise provided for on the drawings.
 - The contractor shall notify the Bureau of Utilities at least 48 hours in advance of scheduled shutdowns of the existing water main. Shutdowns of the existing water main for new connections and removal of existing service connections shall be as specified under Section 1002.06 - Connections of the Standard Specifications.
 - The contractor shall not operate any water main valves on the existing water system.
 - Water service connections shall be as specified under Section 1004-Water House Service and Appurtenances of the Standard Specifications and Standard Detail-Plate Service and Appurtenances. The minimum size of a single residential WHC for new residential construction is 1-1/2 inch diameter with 1-inch meter. Installation of the water meter is not part of the A.D.O. construction work. Water service connections include pressure and leak testing, disinfection and bacteriological testing.
 - [For commercial meters] The new water meter assembly shall be the (type) per Howard County Detail Plate W-3.24. Installation of the water meter is not part of the A.D.O. construction work.
 - If the existing water meter will be moved to the new meter connection inside the building, the contractor shall contact the Meter Division of the Bureau of Utilities at 410-313-4948 to schedule relocation of the meter setting.
 - The abandonment of existing water service connections shall be as specified under Section 1015.03 of the Standard Specifications. Removal of the existing corporation stop or tapping saddle requires a scheduled shutdown of the water main. The existing corporation stop shall be removed from the water main and the pipe repaired with a County approved stainless steel full circle repair clamp such as Ford Meter FS2, Mueller 550 or Romac SS2 series.
 - Tracer wire and continuity test stations shall be installed on all water mains in accordance with Detail Plate G-8.21 of the Standard Specifications.
 - Proper Assembly of Gasketed PVC Pipe Joints. The manufacturer's insertion line of gasketed PVC pipe joints indicates the maximum depth of insertion of the spigot into the bell. After assembly of the joint, the line shall remain visible. Dual insertion lines on gasketed PVC pipe indicate the maximum and minimum depth of insertion of the spigot into the bell.
 - Tees, crosses, bends greater than 5 degrees, and similar fittings for use with C-900 PVC water pipe shall be ductile iron conforming to AWWA C153.
 - All changes in horizontal or vertical direction of PVC water pipe shall be made with high-deflection couplings, 5 degree sweeps or standard bends. No bending of pipe or deflection of PVC pipe joints is permitted.
 - Seventeen (17) pound sacrificial anodes shall be installed on all valves and metallic fittings used with PVC water mains in accordance with the Standard Specifications and Details. Magnesium anodes shall be installed on all iron valves and ductile iron fittings including restraints and harnesses. Zinc anodes shall be installed on all stainless steel fittings and saddles used with PVC water mains.

- PART III SEWER CONSTRUCTION NOTES**
- All sewer mains shall be D.I.P. or P.V.C. unless otherwise noted.
 - All manholes shall be 4'0" inside diameter unless otherwise noted.
 - Sewer force mains shall be D.I.P. unless otherwise noted.
 - Sewer house connections shall be as specified under Section 1009.03 of the Standard Specifications and the Standard Details.
 - House(s) with the symbol "C.N.S." indicates that the cellar cannot be served by a gravity sewer service connection.

- NOTES**
- 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
HOWARD COUNTY BUREAU OF UTILITIES: 410-313-2366
AT&T CABLE LOCATION DIVISION: 1-800-393-3553
B.G.&E. CO. CONTRACTOR SERVICES: 410-850-4620
B.G.&E. CO. UNDERGROUND DAMAGE CONTROL: 410-787-4620
STATE HIGHWAY ADMINISTRATION: 410-521-5533
 - THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
 - 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.
 - EXISTING UTILITIES LOCATED FROM ROAD CONSTRUCTION PLANS, FIELD SURVEYS, PUBLIC WATER AND SEWER EXTENSION PLANS AND AVAILABLE RECORD 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.
 - EXISTING WHC AND SHC TO BUILDINGS #10107, 10111, 10113 ARE TO BE ABANDONED AT THE MAIN PER HOWARD COUNTY VOLUME IV STANDARD.

SPECIMEN TREES:

Key	Species, Size (dbh)	Condition	Critical Root Zone (radius)
A	Ginkgo, 42"	Good, non-native	63'
B	Silver maple, 38"	Good	57'
C	Black locust, 42"	Fair, poor shape, leaning over house	65'
D	Silver maple, 31"	Fair, some dieback notes, power lines run through canopy, leaning	46.5'

NOTES:
1. PER THE PLAN PROPOSAL SHOWN HEREON, ALL SPECIMEN TREES ARE TO BE REMOVED. REFER TO GENERAL NOTE 27, SHEET 1 REGARDING WP 14-085

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division: 6-8-15
 Chief, Division of Land Development: 7-7-15
 Director: 7-7-15

APPROVED JULY 17, 2014
 PLANNING BOARD OF HOWARD COUNTY

EXISTING CONDITIONS / DEMO PLAN
 SCALE: 1"=30'
 MAPPED SOILS TYPES - ELLICOTT CITY SW MAP #13

SYMBOL NAME / DESCRIPTION	GROUP	HYDRO	PERCENT SAND	K-FACTOR	PERCENT CLAY	PERCENT SILT
GHD CLEVELAND-URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	B/D	NO	NO	0.20	NO	NO

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY
 K-FACTOR = $K_w \times (0-4)^{-2}$ DEPTH

Eco-Science Professionals, Inc.
 Consulting Ecologists
 P.O. Box 5006 Glen Arve, Maryland 21027 Telephone: (410) 875-2408 Fax: (410) 875-2405

NO. REVISION DATE

SITE DEVELOPMENT PLAN
EXISTING CONDITIONS / DEMO PLAN
DEMIREL PLAZA
 L15837 F345

2ND ELECTION DISTRICT
 TAX MAP: 24 GRID: 1

PARCELS 62, 63 AND P/O 544 (LOT 112)
 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

DESIGN BY: EDS
 DRAWN BY: RVE
 CHECKED BY: RHY
 DATE: MAY 2015
 SCALE: AS SHOWN
 W.O. NO.: 11-01

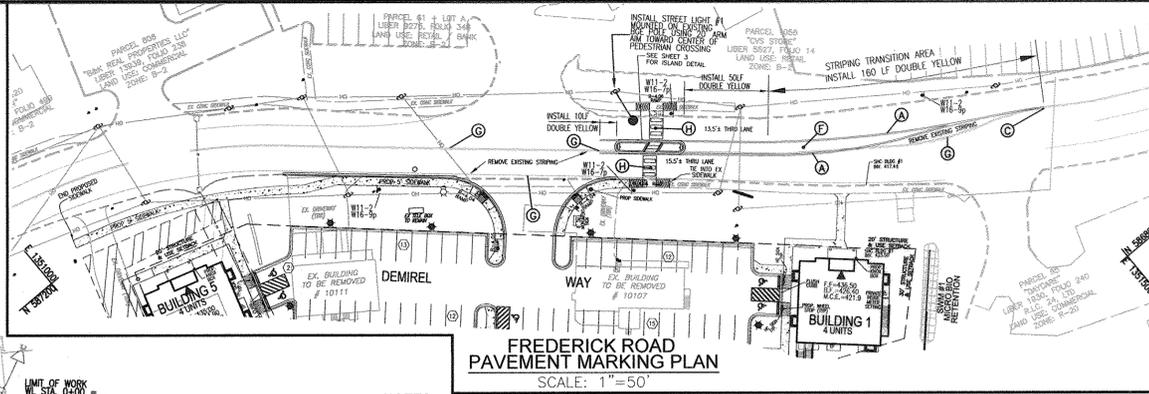
PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2016

ROBERT H. VOGEL, PE No.16193

2 SHEET OF 15

STREET LIGHT LOCATION CHART		
STREET NAME	LOCATION	FIXTURE/POLE TYPE
FREDERICK ROAD	N 587094 E 1351213	400 WATT HPS VAPOR PREMIER POST-TOP FIXTURE - MOUNTED ON 14" BLACK FIBERGLASS POLE
FREDERICK ROAD	NORTHWEST OF PEDESTRIAN CROSSING	250 WATT HPS VAPOR FIXTURE MOUNTED ON EXISTING BGE POLE DETAILED HEREON

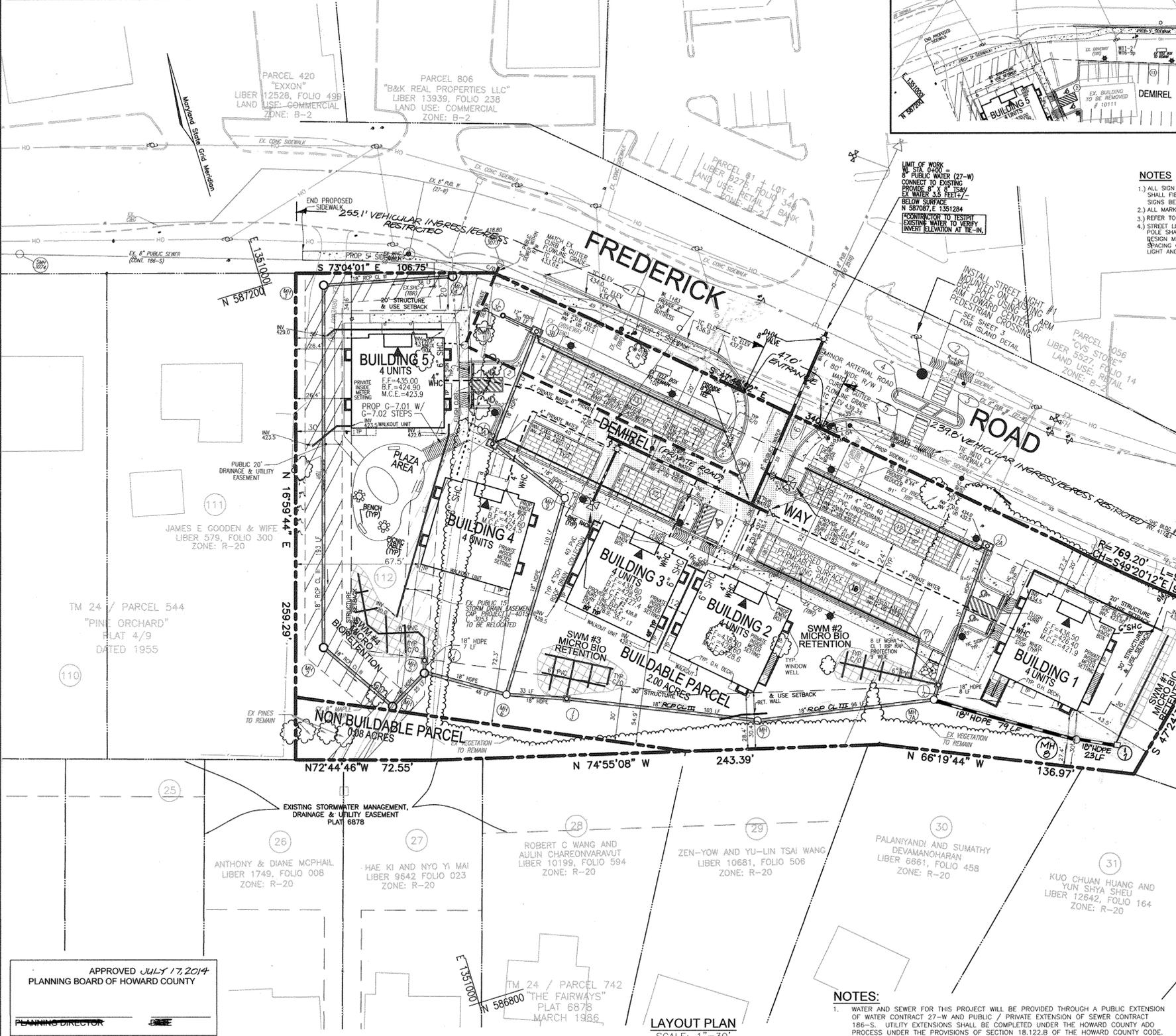
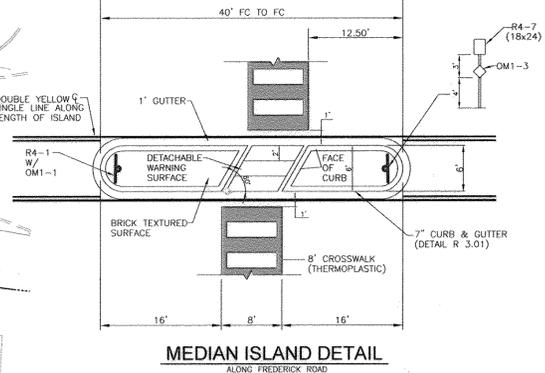
LEGEND	
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	ADJACENT PROPERTY LINE
	EXISTING CURB AND GUTTER
	PROPOSED CURB AND GUTTER
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING MAILBOX
	EXISTING SIGN
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	PROPOSED STORM DRAIN
	PROPOSED STORM DRAIN INLETS
	EXISTING TREE LINE
	MICRO-BIORETENTION FACILITY
	PERMEABLE SURFACE PARKING PAD
	PROPOSED SIDEWALK
	TRASH PAD (4' x 8')
	PROPOSED STREET LIGHT



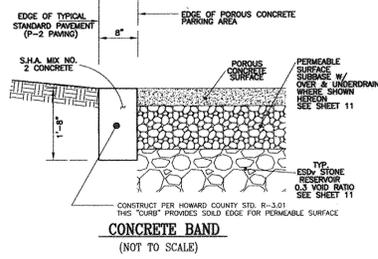
PAVEMENT MARKING LEGEND	
	5" YELLOW PAINT LINE
	5" WHITE PAINT LINE
	TIE TO EXISTING MARKINGS
	10" WIDE YELLOW HATCH MARKINGS - PAINT AS DIRECTED BY HOWARD COUNTY TRAFFIC
	REMOVE EXISTING PAVEMENT MARKINGS BY GRINDING. EXTENT OF REMOVAL AS DIRECTED BY HOWARD COUNTY TRAFFIC
	HOWARD COUNTY CROSSWALK

LEGEND - NUMBER RELATES TO STREET SIGN LOCATION SCHEDULE	
	PROPOSED STREET SIGN

STREET SIGN LOCATION SCHEDULE			
NO.	STREET NAME	STATION / OFFSET	SIGN TYPE / DESCRIPTION
1	FREDERICK ROAD	N 586951 E 1351467	PEDESTRIAN (W11-2) W / 'AHEAD PLAQUE (W16-9)
2	FREDERICK ROAD	N 587039 E 1351346	DBL SIDED FYG PEDESTRIAN (W11-2) W / (W16-7)
3	FREDERICK ROAD	SEE MEDIAN ISLAND DETAIL	R4-7 W / OM1-3
4	FREDERICK ROAD	SEE MEDIAN ISLAND DETAIL	R4-7 W / OM1-3
5	FREDERICK ROAD	N 587018 E 1351300	DBL SIDED FYG PEDESTRIAN (W11-2) W / (W16-7)
6	DEMIREL WAY	N 587033 E 1351268	R1-1 STOP SIGN
7	FREDERICK ROAD	N 587117 E 1351185	PEDESTRIAN (W11-2) W / 'AHEAD PLAQUE (W16-9)



- NOTES:**
- WATER AND SEWER FOR THIS PROJECT WILL BE PROVIDED THROUGH A PUBLIC EXTENSION OF WATER CONTRACT 27-W AND PUBLIC / PRIVATE EXTENSION OF SEWER CONTRACT 186-S. UTILITY EXTENSIONS SHALL BE COMPLETED UNDER THE HOWARD COUNTY ADD PROCESS UNDER THE PROVISIONS OF SECTION 18.122.B OF THE HOWARD COUNTY CODE. ALL CONSTRUCTION SHALL BE IN CONFORMANCE WITH ALL HOWARD COUNTY VOLUME II AND IV DETAILS.
 - REFER TO DETAILS HEREON.
 - A KNOX BOX (FIRE DEPARTMENT ACCESS BOX) IS REQUIRED TO BE PLACED ON THE FRONT OF THE BUILDINGS. IT SHALL BE PLACED TO THE LEFT OF THE MAIN ENTRANCE AT A RANGE OF 4-5 FT IN HEIGHT AND NO MORE THAN 6 FT LATERALLY FROM THE DOOR. THE BOX SHALL BE ELECTRONICALLY SUPERVISED TO NOTIFY THE OWNER THAT IT IS BEING ACCESSED (INTEGRATED WITH THE FIRE ALARM SYSTEM). NFPA-1 10.12.1.
 - THE PROPOSED BUILDINGS WILL BE REQUIRED TO HAVE A SPRINKLER SYSTEM INSTALLED.
 - ALL WATER CONNECTIONS SHALL BE 4" REFERENCE STANDARD DETAIL W-3.24.
 - BUILDINGS SHALL UTILIZE INSIDE COMBINED FIRE / DOMESTIC (1-1/2") WATER METER SETTINGS. THERE ARE FOUR (4) UNITS PER BUILDING: TWO (2) RESIDENTIAL AND TWO (2) COMMERCIAL USES.
 - REFER TO CONSTRUCTION NOTES FOR ADVANCE DEPOSIT ORDER (A.D.O.) WORK IN THE PUBLIC WATER & UTILITY EASEMENT.



- NOTES:**
- FOR STORM DRAIN STRUCTURE SCHEDULE SEE SHEET 9
 - FOR PRIVATE SEWER DRAIN STRUCTURE SCHEDULE SEE SHEET 4
 - FOR PRIVATE WATER PROFILES, REFER TO SHEET 4
 - REFER TO SHEET 13 FOR MICRO-BIORETENTION FACILITY DETAILING

APPROVED JULY 17, 2014
PLANNING BOARD OF HOWARD COUNTY

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: *[Signature]* DATE: 6-8-15

Chief, Division of Land Development: *[Signature]* DATE: 7-07-15

Director: *[Signature]* DATE: 7-7-15

NO.	REVISION	DATE
2	UPDATE SHARED PARKING	6/27/16
1	REVISE STORM DRAIN AND SHG TO BUILDING 1	12-9-15

**SITE DEVELOPMENT PLAN
LAYOUT & PAVEMENT MARKING PLAN
DEMIREL PLAZA**
L.15837.F.345

2ND ELECTION DISTRICT TAX MAP: 24 GRID: 1

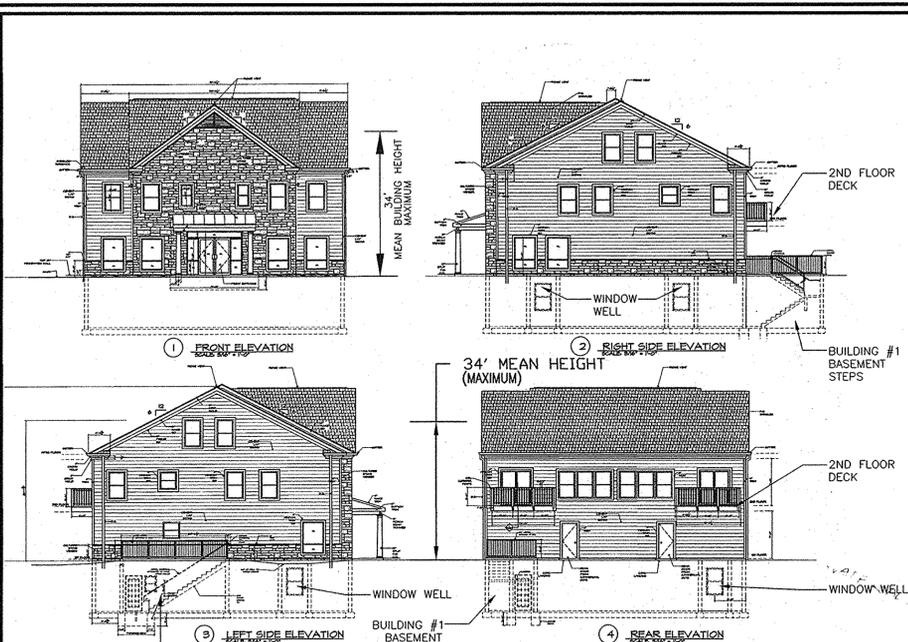
ZONED: 01
PARCELS 62, 63 AND P/O 544 (LOT 112)
HOWARD COUNTY, MARYLAND

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

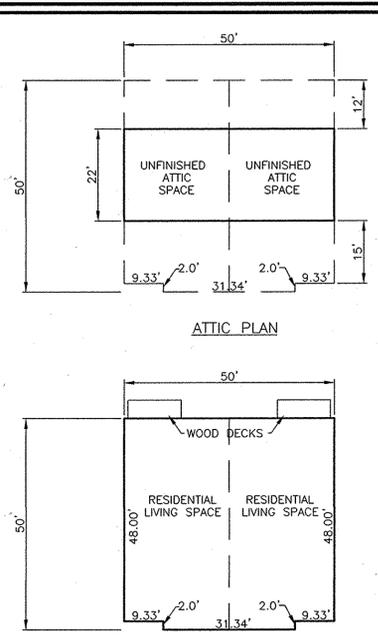
DESIGN BY: EDS.
DRAWN BY: RVE.
CHECKED BY: RHY.
DATE: MAY 2015.
SCALE: AS SHOWN.
W.O. NO.: 11-01.

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. 16163 EXPIRATION DATE: 09-27-2016

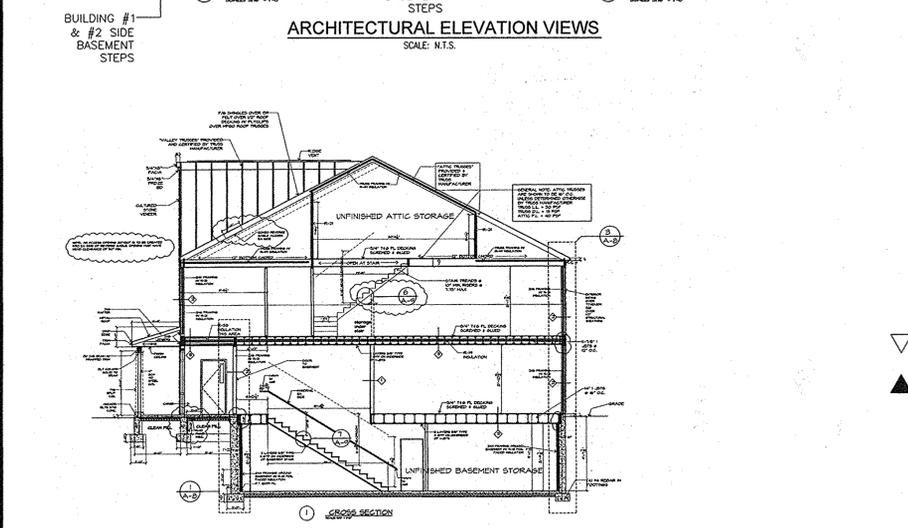
3 SHEET OF 15



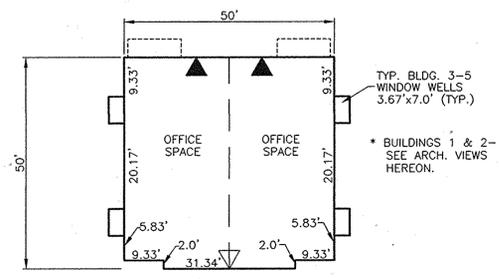
ARCHITECTURAL ELEVATION VIEWS
SCALE: N.T.S.



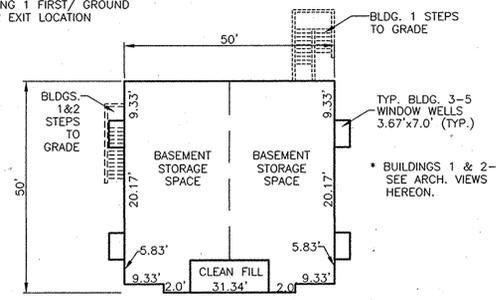
2ND FLOOR PLAN
SCALE: N.T.S.



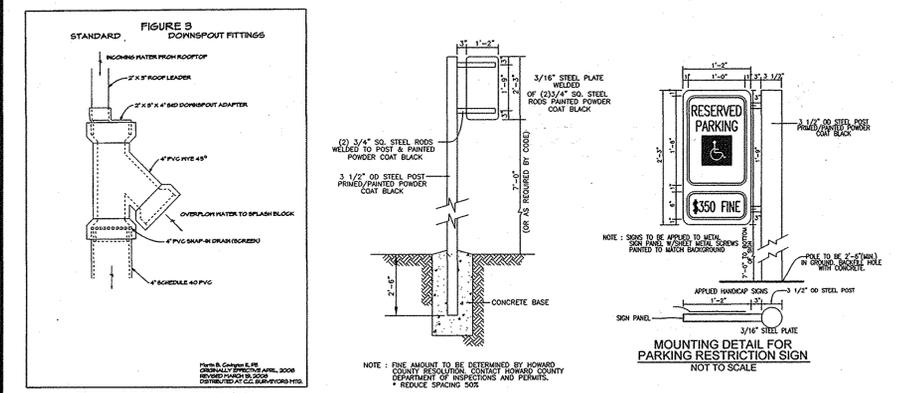
ARCHITECTURAL CROSS SECTION VIEW
SCALE: N.T.S.



GROUND FLOOR PLAN
SCALE: N.T.S.

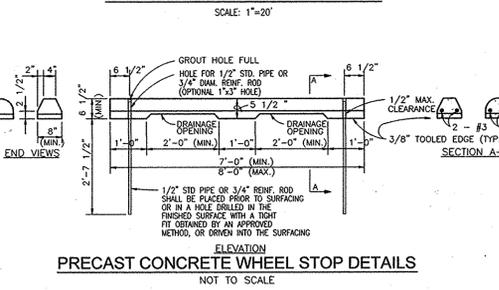


BASMENT PLAN
SCALE: 1"=20'

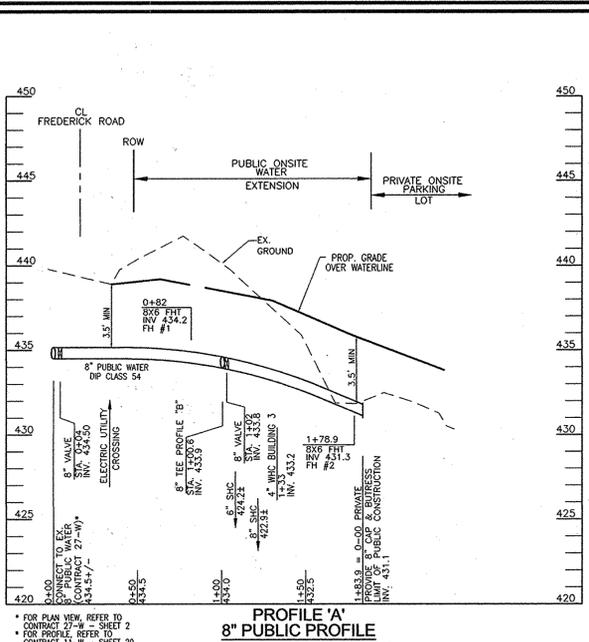


DOWNSPOUT OVERFLOW
1. PROVIDE ABOVE FITTINGS FOR ALL DOWNSPOUT FEEDING ROOFLEADER COLLECTION PIPE SYSTEMS

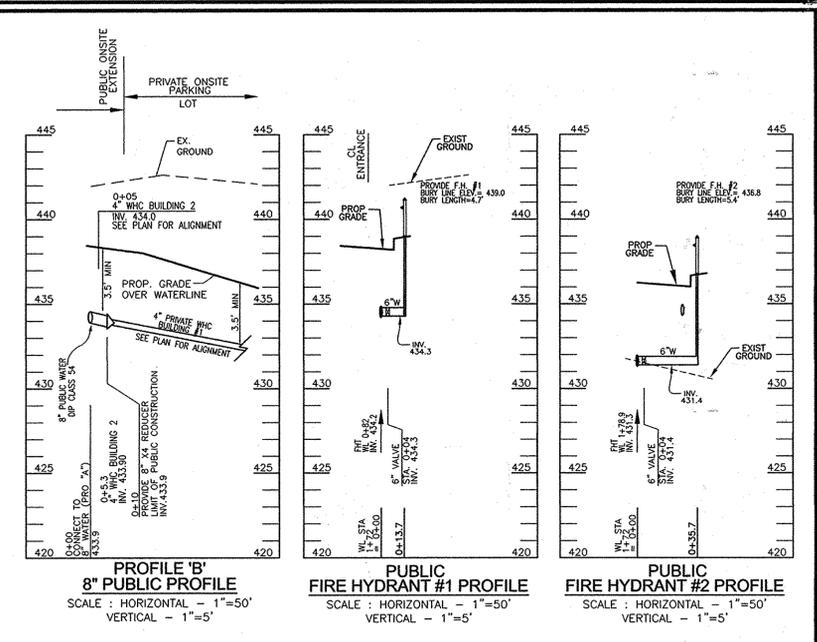
HANDICAP PARKING SIGNS
(NOT TO SCALE)



PRECAST CONCRETE WHEEL STOP DETAILS
NOT TO SCALE



PROFILE 'A' 8\"/>



PROFILE 'B' 8\"/>

PUBLIC FIRE HYDRANT #1 PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'

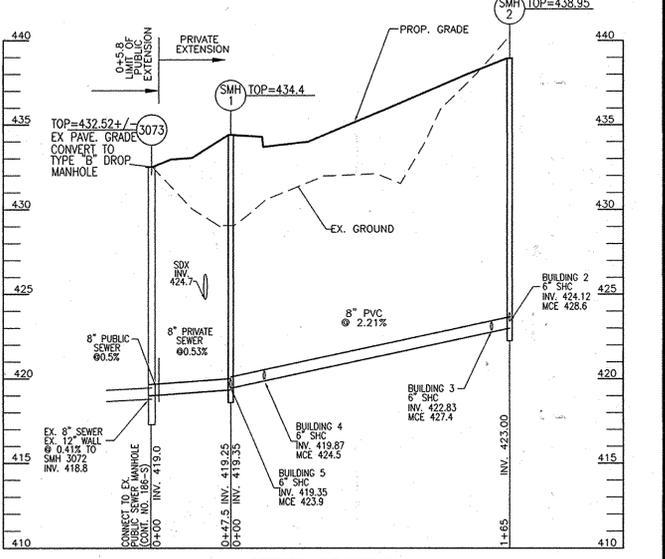
PUBLIC FIRE HYDRANT #2 PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'

- NOTES:**
1. WATER AND SEWER FOR THIS PROJECT WILL BE PROVIDED THROUGH A PUBLIC EXTENSION OF WATER CONTRACT 27-W AND PUBLIC / PRIVATE EXTENSION OF SEWER CONTRACT 186-S. UTILITY EXTENSIONS SHALL BE COMPLETED UNDER THE HOWARD COUNTY ADD PROCESS UNDER THE PROVISIONS OF SECTION 18.122.B OF THE HOWARD COUNTY CODE. ALL CONSTRUCTION SHALL BE IN CONFORMANCE WITH ALL HOWARD COUNTY VOLUME II AND IV DETAILS.
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 3. THE PROPOSED BUILDINGS WILL BE REQUIRED TO HAVE A SPRINKLER SYSTEM INSTALLED.
 4. ALL WATER CONNECTIONS SHALL BE 4\"/>

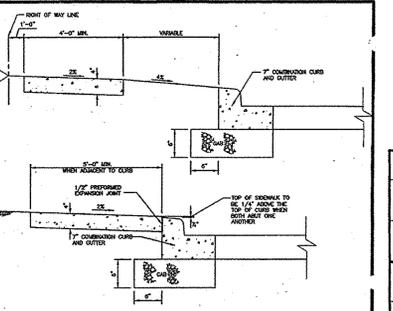
SEWER MANHOLE SCHEDULE

NO.	TYPE	LOCATION	EASTING	NORTHING	TOP ELEV.	INV. IN	INV. OUT
EX 3073	EXISTING MH				432.52±	419.0	418.8"
SMH 1	STD. PRECAST MH HO. CO. STD. DET. G5.12	E 1351095 N 587137	434.4	419.25	419.35		
SMH 2	STD. PRECAST MH HO. CO. STD. DET. G5.12	E 1351217 N 587027	438.95	424.12	423.00		

* CONTRACTOR SHALL VERIFY EXISTING INVERT



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



CONCRETE SIDEWALK
Detail R-3.05

FRANK SQUARES

NO.	REVISION	DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division
 DATE: 6-8-15

APPROVED JULY 17, 2014
 PLANNING BOARD OF HOWARD COUNTY
 DATE: 7-07-15
 DATE: 7-7-16

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 DATE: 7-7-16

ATTORNEY
 SANG OH
 TALKIN & OH, LLP
 5100 DORSEY HALL DRIVE
 ELLICOTT CITY, MD 21042
 PHONE: (410) 964-0300

OWNER/DEVELOPER
 VELI DEMIREL
 44087 HIGH POINT ROAD
 ELLICOTT CITY, MD 21042
 PHONE: (410) 440-1242

SITE DEVELOPMENT PLAN
SITE DETAILS
DEMIREL PLAZA
 L15037 P.345

2ND ELECTION DISTRICT
 TAX MAP: 24 GRID: 1

PARCELS: 62, 63 AND P/O 544 (LOT 112)
 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

DESIGN BY: EDS
 DRAWN BY: RVE
 CHECKED BY: Rthv
 DATE: MAY 2015
 SCALE: AS SHOWN
 W.O. NO.: 11-01

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: 09-27-2016

4 SHEET OF 15

GRADING PLAN
SCALE: 1"=30'

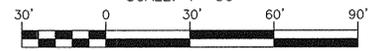


Table B.1: Temporary Seeding for Site Stabilization

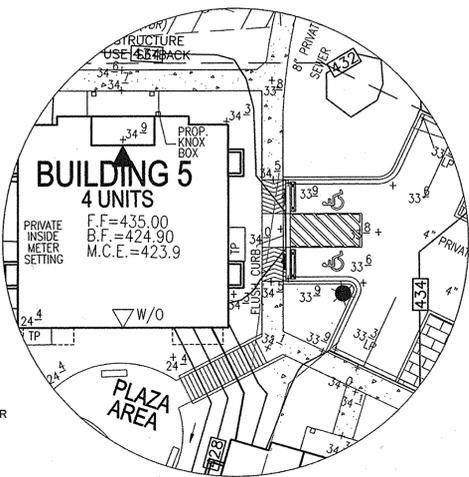
Plant Species	Seeding Rate ¹ lb/ac	Seeding Depth (inches)	Recommended Seeding Dates by Plant Hardiness Zone ²			
			5b and 6a	6b	7a and 7b	7c and 7d
Cool-Season Grasses						
Annual Ryegrass (<i>Lolium perenne</i> spp. multiflorum)	40	1.0	Mar 15 to May 31; Aug 1 to Sep 30	Mar 1 to May 15; Aug 1 to Oct 15	Feb 15 to Apr 30; Aug 15 to Nov 30	
Barley (<i>Hordeum vulgare</i>)	96	2.2	Mar 15 to May 31; Aug 1 to Sep 30	Mar 1 to May 15; Aug 1 to Oct 15	Feb 15 to Apr 30; Aug 15 to Nov 30	
Oats (<i>Avena sativa</i>)	72	1.7	Mar 15 to May 31; Aug 1 to Sep 30	Mar 1 to May 15; Aug 1 to Oct 15	Feb 15 to Apr 30; Aug 15 to Nov 30	
Wheat (<i>Triticum aestivum</i>)	120	2.8	Mar 15 to May 31; Aug 1 to Sep 30	Mar 1 to May 15; Aug 1 to Oct 15	Feb 15 to Apr 30; Aug 15 to Nov 30	
Cereal Rye (<i>Syntherisma condalia</i>)	112	2.8	Mar 15 to May 31; Aug 1 to Oct 31	Mar 1 to May 15; Aug 1 to Nov 15	Feb 15 to Apr 30; Aug 15 to Dec 15	
Warm-Season Grasses						
Proso Millet (<i>Pennisetum glaucum</i>)	30	0.7	Jun 1 to Jul 31	May 16 to Jul 31	May 1 to Aug 14	
Pearl Millet	20	0.5	Jun 1 to Jul 31	May 16 to Jul 31	May 1 to Aug 14	

NOTES:
1¹ Seeding rates for the 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 noted. Adjustments are usually not needed for the cool-season grasses.
2² 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 the nurse crop and twice the depth listed above. For cool-season grasses (annual ryegrass, pearl millet, cereal rye), do not exceed more than 20% by weight of the 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.
3³ Use the recommended nurse crop for warm-season grasses.
4⁴ For steady state plant stands at twice the depth listed above.
5⁵ The planting dates listed are averages for each zone and may require adjustment to reflect local conditions, especially near the boundaries of the zone.

NOTE:
EITHER PERMANENT OR TEMPORARY STABILIZATION IS TO BE APPLIED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR REGARDLESS OF DAYS/DATES IN THE STANDARD SEDIMENT CONTROL NOTES AND/OR SEEDING SPECIFICATIONS.

LEGEND

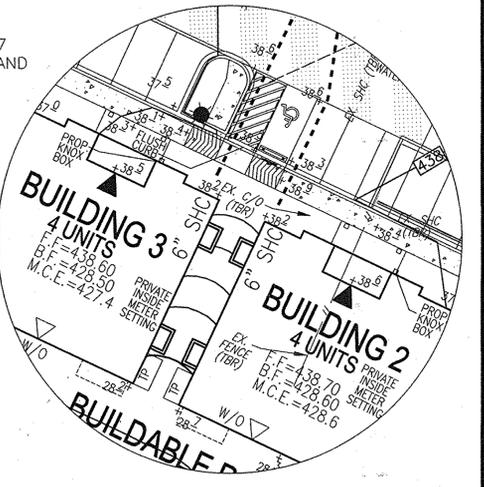
- PROPERTY LINE
- ADJACENT PROPERTY LINE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN INLETS
- EXISTING TREELINE
- SOILS BOUNDARY
- SILT FENCE
- SUPER SILT FENCE
- LIMIT OF DISTURBANCE
- CIP
- AGP
- AT GRADE INLET PROTECTION
- STABILIZED CONSTRUCTION ENTRANCE



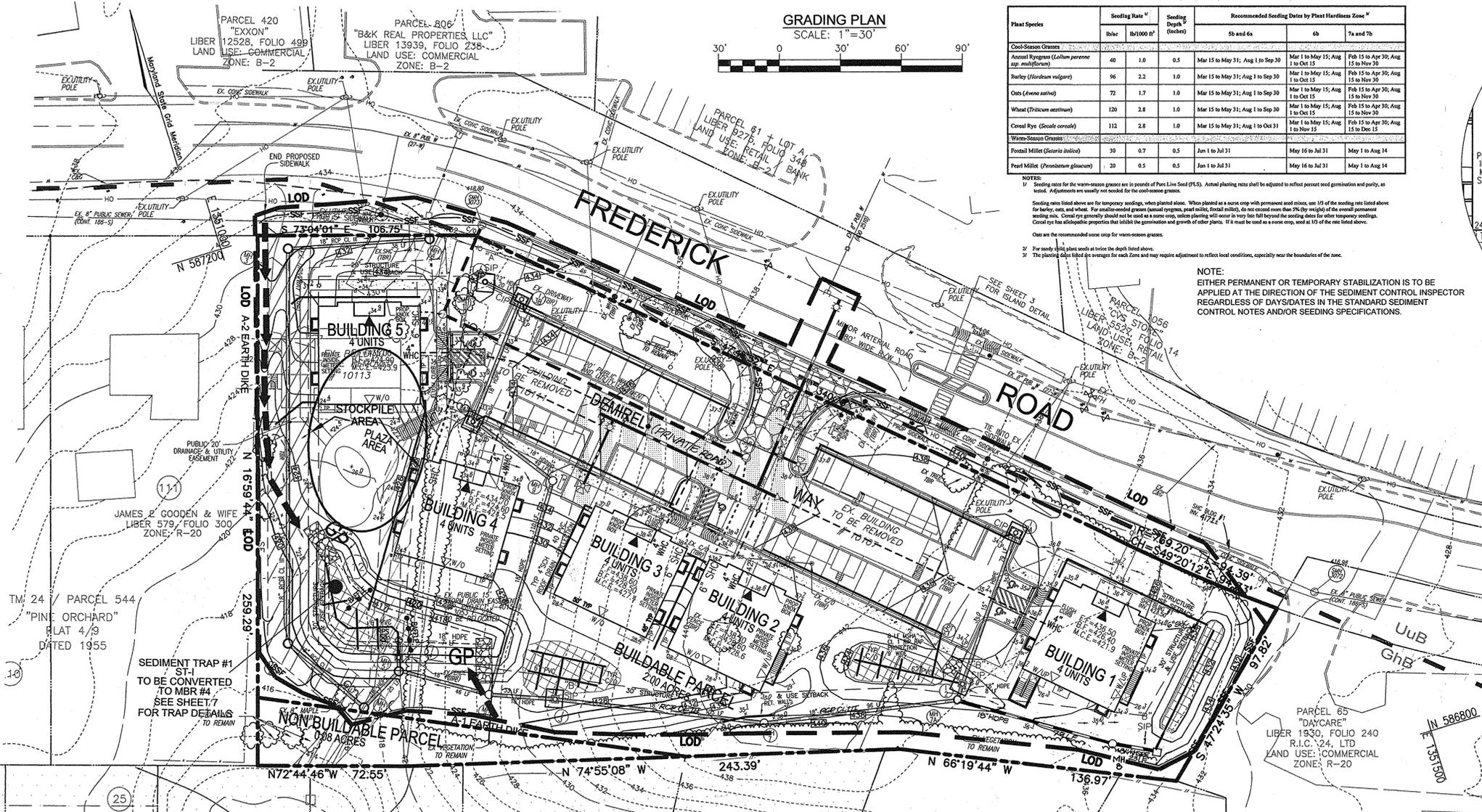
SIDEWALK INSET DETAIL
SCALE: 1"=20'

NOTES

1. REFER TO SHEET 7 FOR SEQUENCE OF CONSTRUCTION
2. REFER TO SHEET 7 FOR TRAP SCHEDULE
3. REFER TO SHEETS 6 & 7 FOR STANDARD DETAILS AND STABILIZATION NOTES



SIDEWALK INSET DETAIL
SCALE: 1"=20'



"THE FAIRWAYS" FB6-155 SWM FACILITY

EX. DRAINAGE AREA:	7.5 AC +/-
PROP. DRAINAGE AREA:	7.8 AC +/-
BOTTOM ELEV.:	411
LOW FLOW INVERT:	411
TOP ELEV.:	416 +/-
Q2 (EX):	N/A
2 YR SWM WSEL:	412.56
Q10 (EX):	18 CFS
10 YR SWM WSEL:	413.81
Q100 (EX):	N/A
100 YR SWM WSEL:	414.68
Q2 (DEV):	7 CFS
2 YR SWM WSEL:	412.46
Q10 (DEV):	16 CFS
10 YR SWM WSEL:	414.06
Q100 (DEV):	29 CFS
100 YR SWM WSEL:	415.37
Q2 (SAFETY*):	10 CFS
2 YR WSEL:	413.27
Q10 (SAFETY*):	24 CFS
10 YR WSEL:	414.71
Q100 (SAFETY*):	34 CFS
100 YR WSEL:	418.12

* ASSUMES FAILURE OF ESD PRACTICES

- NOTE:**
1. CONTRACTOR TO PROVIDE IMMEDIATE REPAIR OF ANY EARTH DIKES INTERRUPTED DURING CONSTRUCTION.
 2. CONTRACTOR TO PROVIDE IMMEDIATE REPAIR OF ANY SEDIMENT CONTROLS INTERRUPTED OR DAMAGED BY THE INSTALLATION OF THE STORM DRAIN SYSTEMS.

APPROVED **JULY 17, 2014**
PLANNING BOARD OF HOWARD COUNTY

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Phil Edmund 6-8-15
CHIEF, DEVELOPMENT ENGINEERING DIVISION

Kate Schuch 7-07-15
CHIEF, DIVISION OF LAND DEVELOPMENT

Valma Jaffe 7-7-15
DIRECTOR

NOTE:

- SILT FENCE IS TO BE REPLACED WITH SUPER SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.
- SILT FENCE SHALL BE CURLED UPHILL WHERE IT RUNS DOWNHILL, NO MORE THAN 35 FEET APART
- DOUBLE ROWS OF SUPER SILT FENCE SHALL BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

NOTE: LOCATE STOCKPILE AS SHOWN HEREON OR AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR. STOCKPILES EXCEEDING 15 FEET IN HEIGHT SHALL BE BENCHED.

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

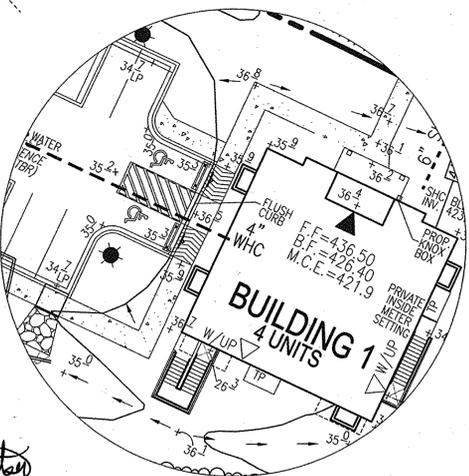
Approved: *John L. Rauten* 6/12/15
Howard SCD

MAPPED SOILS TYPES - ELLICOTT CITY SW MAP #13

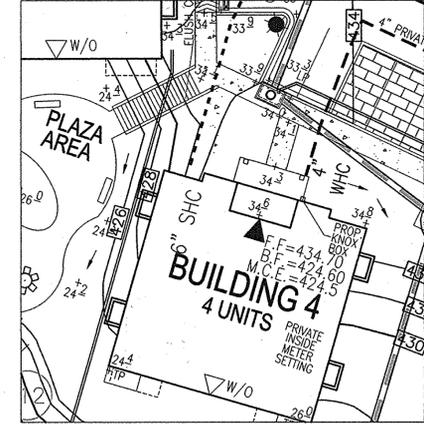
SYMBOL NAME / DESCRIPTION	GROUP	HYDRO	PERCENT	K-FACTOR	PERCENT	PERCENT	PERCENT
CHB GLENGL-URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	B/D	NO	NO	0.20	NO	NO	NO

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY
K-FACTOR = $K_w \times 0.4 \times \text{DEPTH}$

NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL EROSION FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT



SIDEWALK INSET DETAIL
SCALE: 1"=20'



SIDEWALK INSET DETAIL
SCALE: 1"=20'

ATTORNEY
SANG OH
TALKIN & OH, LLP
5100 DORSEY HALL DRIVE
ELLCOTT CITY, MD, 21042
PHONE: (410) 964-0300

OWNER/DEVELOPER
VELI DEMIREL
44087 HIGH POINT ROAD
ELLCOTT CITY, MD 21042
PHONE: (410) 440-1242

NO.	1	REVISE STORM DRAIN AND SHC TO BUILDING 1	12/9/15
REVISION			DATE

SITE DEVELOPMENT PLAN
SOILS, GRADING AND SOIL EROSION AND SEDIMENT CONTROL PLAN
DEMIREL PLAZA
L150837.R345

2ND ELECTION DISTRICT
EX. MAP 24, GRID: 1

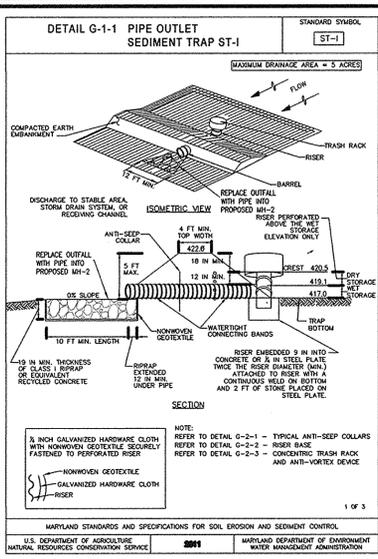
PARCELS 62, 63 AND P/O 544 (LOT 112)
HOWARD COUNTY, MARYLAND

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ELLCOTT CITY, MD 21043
TEL: 410.461.7666
FAX: 410.461.8961

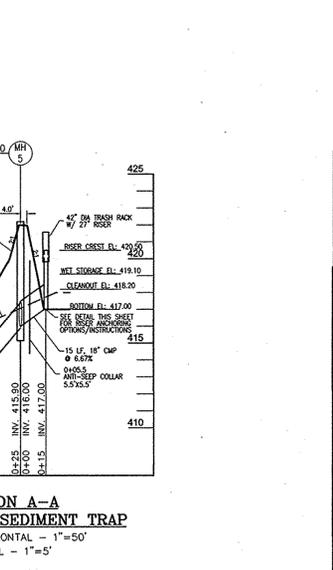
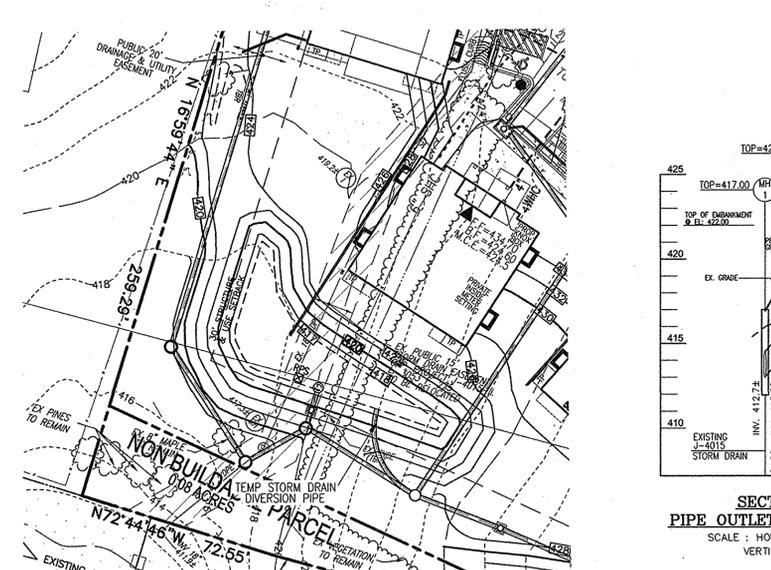
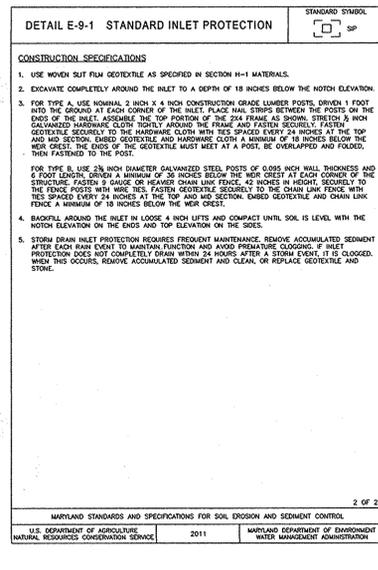
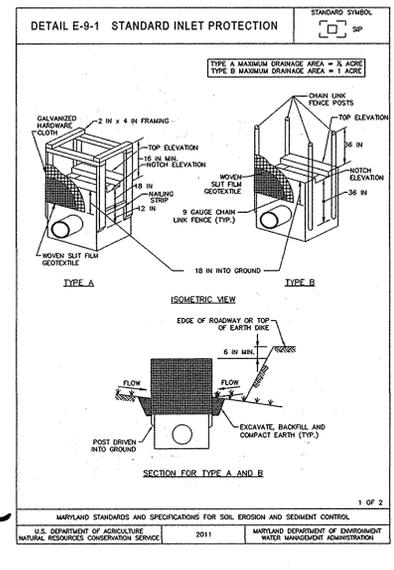
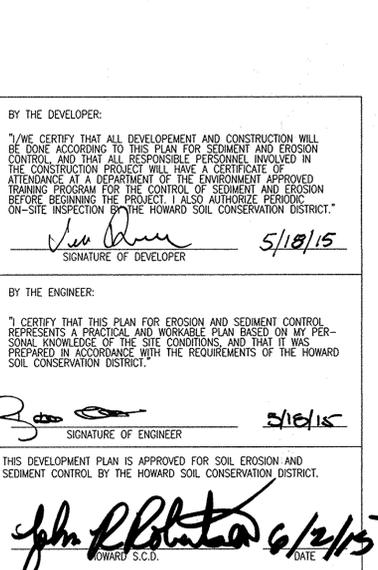
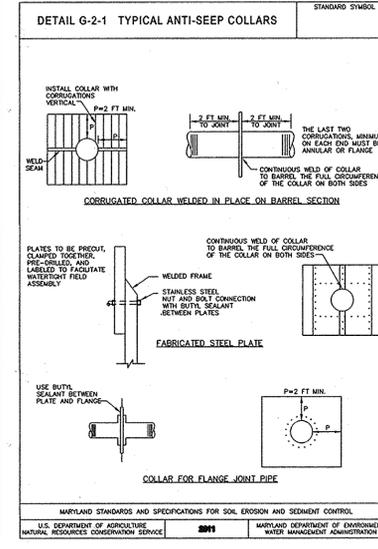
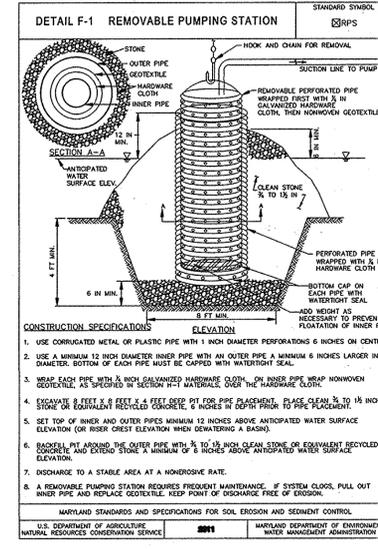
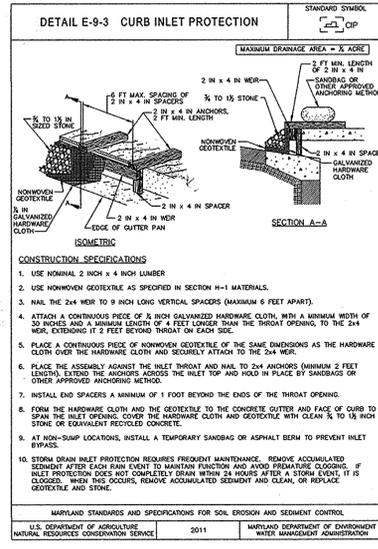
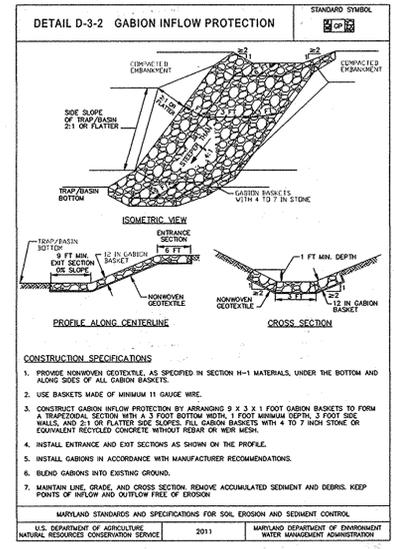
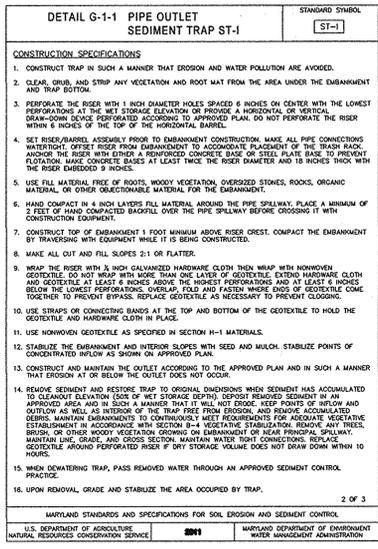
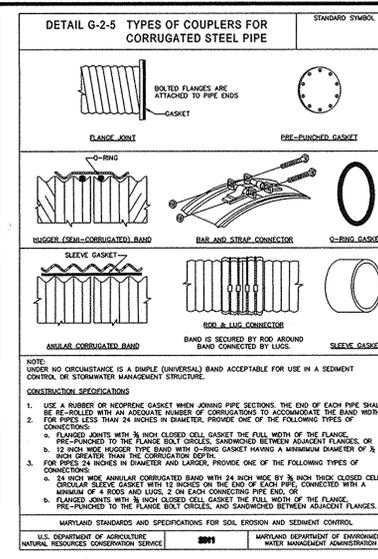
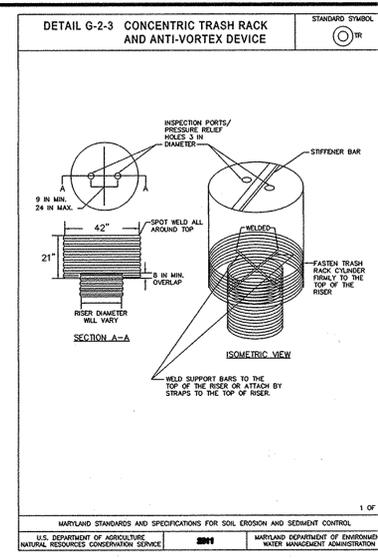
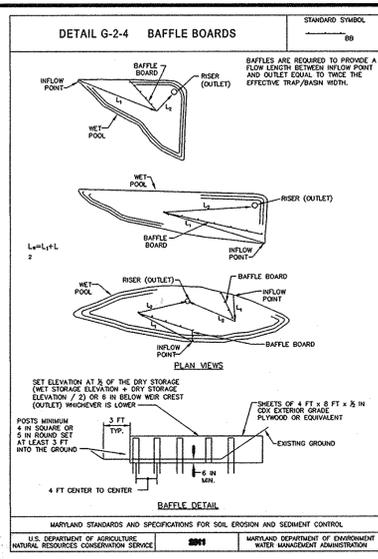
PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16183, EXPIRATION DATE: 09-27-2016

DESIGN BY: EDS
DRAWN BY: RVE
CHECKED BY: Rbv
DATE: MAY 2015
SCALE: AS SHOWN
W.O. NO.: 11-01

5 SHEET OF 15



PIPE OUTLET SEDIMENT TRAP ST-1, TRAP NO. 1	
DRAINAGE AREA - INITIAL	1.30 ACRES
DRAINAGE AREA - FINAL	1.80 ACRES
TOTAL STORAGE REQUIRED	7,200 CF
TOTAL STORAGE PROVIDED	7,218 CF
NET STORAGE REQUIRED	3,600 CF
NET STORAGE PROVIDED	3,617 CF
DRY STORAGE PROVIDED	3,600 CF
TRAP BOTTOM ELEVATION	417.00 FT
TRAP BOTTOM DIMENSIONS	10' X 90' 4" - SEE PLAN
RISER CREST (DRY STORAGE) ELEVATION	420.50 FT
OUTLET (WET STORAGE) ELEVATION	419.10 FT
CLEANOUT ELEVATION	418.20 FT
TOP OF EMBANKMENT ELEVATION	422.00 FT
SIDE SLOPE	2:1
EMBANKMENT TOP WIDTH	4'
PRINCIPAL SPILLWAY MATERIAL (BARREL, RISER, ANTI-SEEP COLLAR)	PER STD. DETAIL
RISER DIAMETER	27" IN
BARREL DIAMETER	18" IN
TRASH RACK DIAMETER	42" IN
TRASH RACK HEIGHT	21" IN
ANTI-SEEP COLLAR DIMENSIONS (OUTLET) THROUGHERS LOWER	5.5" X 5.5" FT
OUTLET PROTECTION - WIDTH	N/A
OUTLET PROTECTION - DEPTH	N/A



SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT. (1 DAY)
 - DEVELOPER / CONTRACTOR SHALL REQUEST A PRE-CONSTRUCTION MEETING WITH THE APPROPRIATE ENFORCEMENT AUTHORITY PRIOR TO BEGINNING CONSTRUCTION. (1 DAY)
 - NOTIFY HOWARD COUNTY BUREAU OF INSPECTORS AND PERMITS (410-313-1880) AT LEAST 24 HOURS BEFORE STARTING ANY WORK. (1 DAY)
- PHASE 1
- THE CONSTRUCTION IS LIMITED TO THE SOUTH WESTERN MOST PORTION OF THE SITE.
- CLEAR AND GRUB FOR THE INSTALLATION OF PERIMETER CONTROLS (1 DAY)
 - INSTALL STABILIZED CONSTRUCTION ENTRANCE AND PERIMETER CONTROLS AS SHOWN HEREON AND STABILIZE DISTURBANCES. (2 DAYS)
 - WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, PROCEED WITH THE INSTALLATION OF OFFSITE DIVERSION STORM DRAIN SYSTEM MH-1 TOWARD MH-3 AND MH-3 TOWARD MH-4. EXISTING STORM DRAIN SYSTEM SHALL REMAIN IN SERVICE UNTIL THE OFFSITE DIVERSION STORM DRAIN SYSTEM INSTALLATION IS COMPLETE - (5 DAYS)
 - TEMPORARILY INSTALL SILT FENCE ALONG THE EXISTING HOME # 10113. THIS STRUCTURE SHALL BE RAZED AT THIS TIME. WITH THIS STRUCTURE REMOVED, THE REMAINDER OF THE OFFSITE DIVERSION STORM DRAIN SYSTEM CAN BE COMPLETED, MH-2 THROUGH MH-4 JUST SOUTH OF FREDERICK ROAD. - (5 DAYS)
- NOTE: EXISTING STORM DRAIN SYSTEM SHALL REMAIN IN SERVICE UNTIL THE OFFSITE DIVERSION STORM DRAIN SYSTEM INSTALLATION IS COMPLETE. THIS REALIGNMENT SHALL BE COMPLETED FROM ITS EXISTING LOCATION TO THE PROPOSED LOCATION PRIOR TO MOVING ON TO THE PHASE 2 WORK. AFTER OBTAINING PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR TO PROCEED TO PHASE 2
- PHASE 2
- WITH FREDERICK ROAD STORM DRAIN DIVERSION IN PLACE AND FUNCTIONING, CLEAR & GRUB AREA COMMON TO THE SEDIMENT TRAP. - (5 DAYS)
 - REMOVE EXISTING MANHOLE NEAR MH-1 AND INSTALL STORM DRAIN SYSTEMS MH-1 TO MH-5 AND MH-5 TO MH-6, WITH TRAP COMPLETE, INSTALL TEMPORARY DIVERSION PIPE INTO SEDIMENT TRAP FROM MH-6. - (5 DAYS)
 - COMPLETE CONSTRUCTION OF SEDIMENT TRAP PER THE DETAILS AND SPECIFICATIONS SHOWN HEREON AND EARTH Dikes CONVEYING RUNOFF TO THE TRAP. EXCAVATED MATERIAL SHALL BE STOCKPILED OR USED AS FILL MATERIAL. PER THE OVERALL SITE GRADING PROFILES, TRAP PIPE OUTLET SHALL BE CONNECTED AND OUTFALL INTO BYPASS STORM DRAIN VIA MH-5 - (5 DAYS)
- NOTE: WITH THE OFFSITE DIVERSION STORM DRAIN SYSTEM IN PLACE THE REMAINING PORTIONS OF THE EXISTING STORM DRAIN, WHICH GOES THROUGH THE TRAP LOCATION, CAN BE REMOVED.
- STABILIZE STABILIZE THE DISTURBED AREAS FROM THE AFOREMENTIONED DISTURBANCES WITH TEMPORARY SEEDING MIXTURE AND STRAW MULCH - (1 DAY)
 - THE SEDIMENT SHALL BE REMOVED FROM THE SEDIMENT TRAP WHEN THE CLEANOUT ELEVATION HAS BEEN REACHED. (2 DAYS)
 - THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON THE SEDIMENT AND EROSION CONTROLS SHOWN HEREON AFTER EACH RAINFALL AND ON A DAILY BASIS - (1 DAY)
 - THE SEDIMENT TRAP SHALL BE Dewatered BY PUMPING. THE ACCUMULATED SEDIMENT FROM THE TRAPS SHALL BE PLACED UP GRADE FROM THE STRUCTURE IN SUCH A MANNER AS NOT TO INTERFERE WITH CONSTRUCTION OPERATIONS OR CAUSE EROSION DOWN GRADE FROM THE STRUCTURE. - (2 DAYS)
 - AFTER OBTAINING PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR TO PROCEED WITH THE REMOVAL OF THE REMAINING EXISTING HOMES AND GRADE THE SITE WITHIN THE INSTALLED PERIMETER CONTROLS, BRINGING SITE TO SUBGRADE ELEVATIONS AND COMPACTED FILLS FOR PROPOSED BUILDING CONSTRUCTION. (2 WEEKS)
 - STABILIZE AREAS PLACED TO FINAL GRADE WITH PERMANENT SEEDING MIXTURE AND STRAW MULCH OR AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR. - (2 DAYS)
 - COMPLETE INSTALLATION OF STORM DRAIN SYSTEM & WATER AND SEWER UTILITY EXTENSIONS. (2 WEEKS)
 - INSTALL INLET PROTECTION AS SHOWN HEREON OR AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR. - (1 DAY)
 - OBTAIN PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR TO PROCEED. - (1 DAY)
 - INSTALL PERMANENT SURFACE PARKING AREA "CURBING", STONE RESERVOIR, STONE SUBBASE AND ASSOCIATED UNDERDRAIN - (5 DAYS)
 - INSTALL REMAINING PARKING LOT CURB AND GUTTER AND GRADE FOR PAVED AREAS - (5 DAYS)
 - INSTALL BASE COURSE PAVEMENT - (1 DAY)
 - INSTALL SIDEWALK. - (5 DAYS)
 - INSTALL LANDSCAPING - (5 DAYS)
 - WITH BUILDING CONSTRUCTION COMPLETE, INSTALL SURFACE COURSE PAVEMENT - (1 DAY)
 - WITH CONTRIBUTE AREA STABILIZED WITH A 2" STAND OF GRASS, CONSTRUCT MICRO-BIOS TO RECEIVE RUNOFF PER SHEET DRAINAGE AREAS - (5 DAYS)
 - UPON COMPLETION OF MICROBIOPRETENTION FACILITIES, IMMEDIATELY STABILIZE PERMANENT SEEDING MIXTURE AND STRAW MULCH AND INSTALL REQUIRED LANDSCAPING - (1 DAY)
 - COMPLETE ANY REMAINING FINE GRADING WITHIN THE INSTALLED PERIMETER CONTROLS AND STABILIZE WITH PERMANENT SEEDING MIXTURE AND STRAW MULCH (5 DAYS)
 - UPON STABILIZATION OF ALL DISTURBED AREAS AND WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROL DEVICES AND STABILIZE DISTURBANCES WITH PERMANENT SEEDING MIXTURE AND STRAW MULCH.
- NOTE: ANY CHANGES OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE PLAN APPROVAL AUTHORITY PRIOR TO PROCEEDING WITH CONSTRUCTION.

BY THE DEVELOPER:

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

[Signature] 5/18/15
SIGNATURE OF DEVELOPER

BY THE ENGINEER:

I 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 THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 5/18/15
SIGNATURE OF ENGINEER

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

[Signature] 6/2/15
HOWARD S.C.D. DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 6-8-15
DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 7-07-15
DATE

CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] 7-7-15
DATE

DIRECTOR

APPROVED JULY 17, 2014
PLANNING BOARD OF HOWARD COUNTY

[Signature]

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 6/2/15
DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 7-07-15
DATE

CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] 7-7-15
DATE

DIRECTOR

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 6/2/15
DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 7-07-15
DATE

CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] 7-7-15
DATE

DIRECTOR

ATTORNEY

SANG OH
TALKON & OH, LLP
5100 DORSEY HALL DRIVE
ELLCOTT CITY, MD 21042
PHONE: (410) 964-0300

NO. _____ REVISION _____ DATE _____

SITE DEVELOPMENT PLAN
GRADING AND SOIL EROSION,
AND SEDIMENT CONTROL PLAN - DETAILS

DEMIREL PLAZA
L15087 F-345

2ND ELECTION DISTRICT
TAX MAP 24 GRID: 1

ZONED: OT
PARCELS 62, 63 AND P/O 544 (LOT 112)
HOWARD COUNTY, MARYLAND

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

8407 MAIN STREET
ELLCOTT CITY, MD 21043
TEL: 410-461-7666
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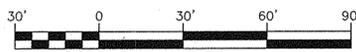
PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 1853, EXPIRATION DATE: 09-27-2016

DESIGN BY: EDS.
DRAWN BY: RVE.
CHECKED BY: RAV.
DATE: MAY 2015.
SCALE: AS SHOWN.
W.O. NO.: 11-01

7 SHEET OF 15

DRAINAGE AREA MAP

SCALE: 1"=30'



MAPPED SOILS TYPES - ELLICOTT CITY SW MAP #13									
SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	PERCENT	K-FACTOR	SLOPE	EROSION	RUSK	SLOPE
GhB	GLENEG-URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES								

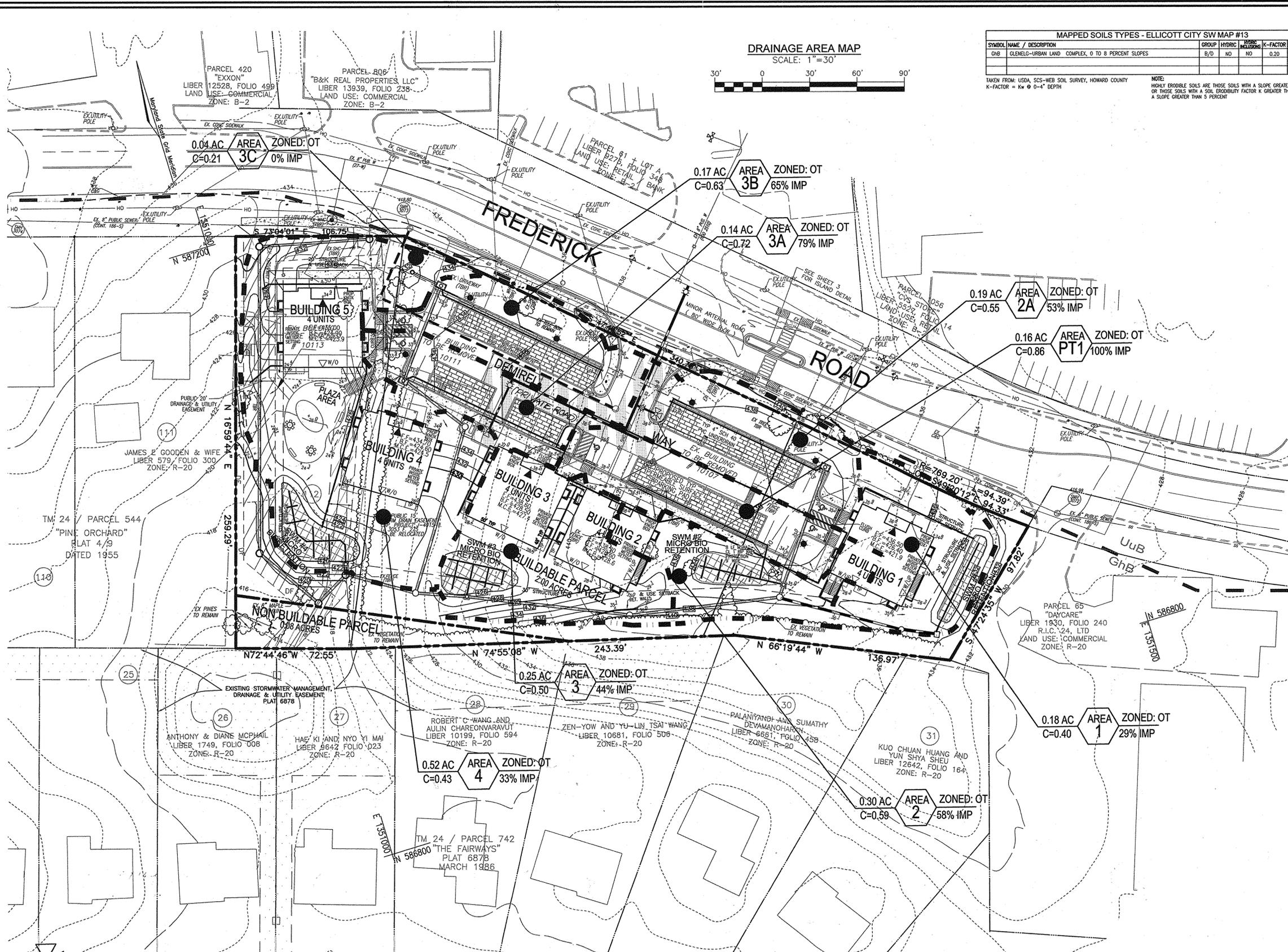
TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY
K-FACTOR = Kw @ 0-4" DEPTH

NOTE:
HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT

LEGEND

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED SPOT ELEVATION
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN INLETS
- EXISTING TREE LINE
- SOILS BOUNDARY
- DRAINAGE DIVIDE

DRAINAGE AREA ZONING
C FACTOR AREA ZONING
% IMPERVIOUS



NOTES:
1. WORST CASE 5 MIN. TC ASSUMED THROUGHOUT DESIGN.

NO.	REVISION	DATE
1	REVISE STORM DRAIN AND SHG TO BUILDING 1	12-9-15

SITE DEVELOPMENT PLAN
STORM DRAIN
DRAINAGE AREA MAP
DEMIREL PLAZA
L18837 F.345

2ND ELECTION DISTRICT TAX MAP: 24 GRID: 1 PARCELS 62, 63 AND P/O 544 (LOT 112) 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
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: 09-27-2016

DESIGN BY: EDS
DRAWN BY: RVE
CHECKED BY: RHY
DATE: MAY 2015
SCALE: AS SHOWN
W.O. NO.: 11-01

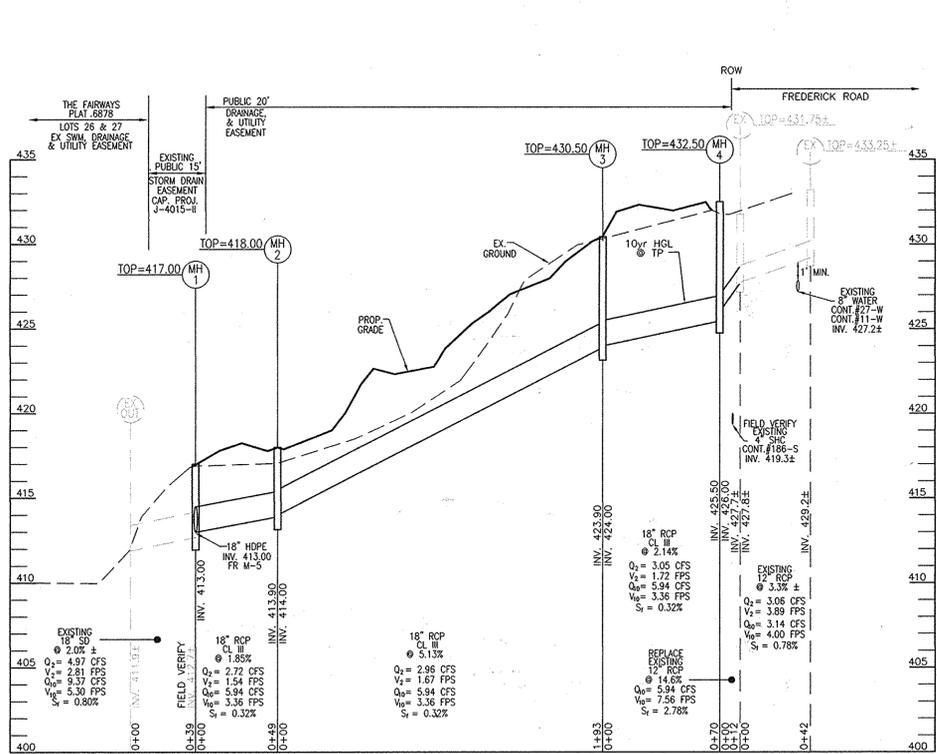
8 SHEET OF 15

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
6-8-15
CHIEF, DEVELOPMENT ENGINEERING DIVISION
7-07-15
CHIEF, DIVISION OF LAND DEVELOPMENT
7-7-15
DIRECTOR

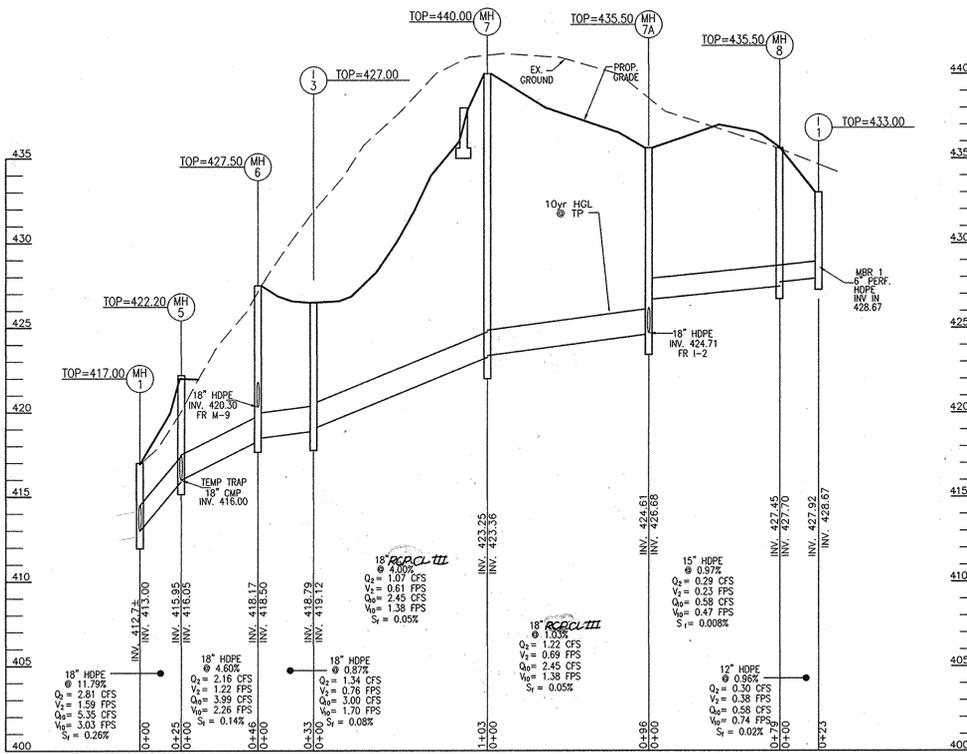
APPROVED JULY 17, 2014
PLANNING BOARD OF HOWARD COUNTY

ATTORNEY
SANG OH
TALKIN & OH, LLP
5100 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
PHONE: (410) 964-0300

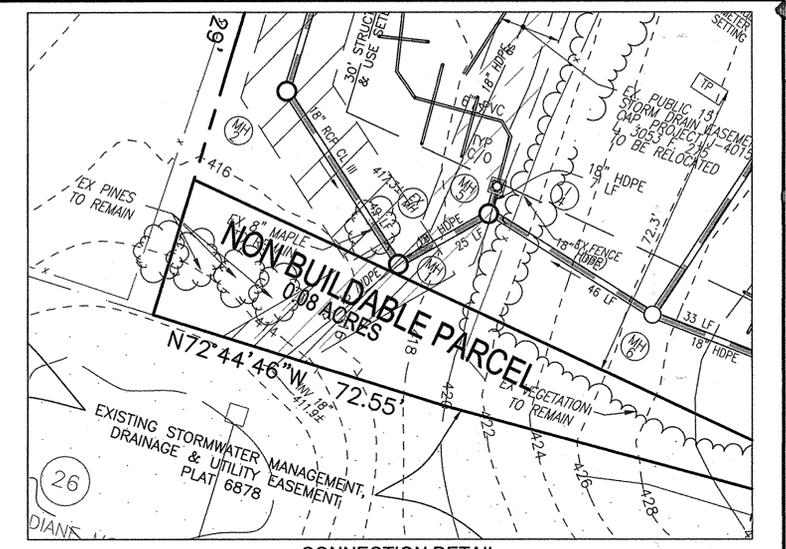
OWNER/DEVELOPER
VELI DEMIREL
44087 HIGH POINT ROAD
ELLICOTT CITY, MD 21042
PHONE: (410) 440-1242



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



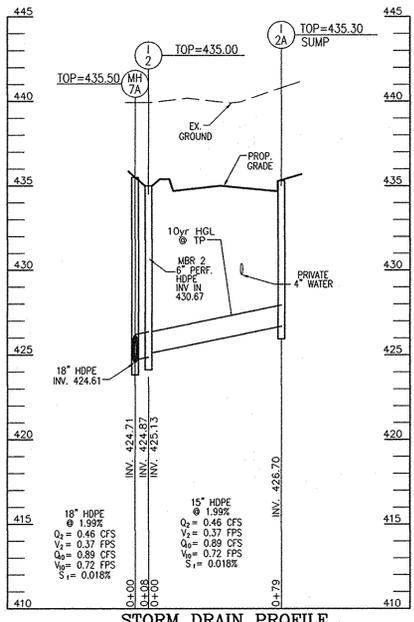
STORM DRAIN PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



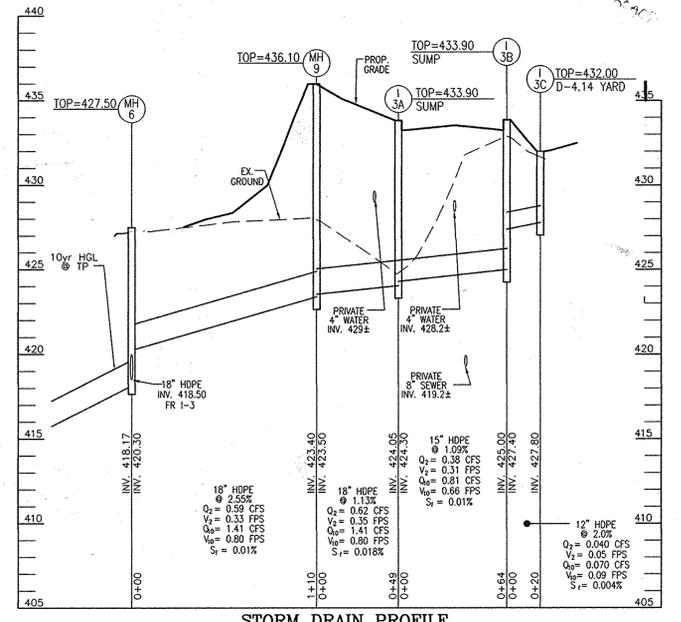
**CONNECTION DETAIL
M-1 TO EX STORM DRAIN**
SCALE: 1"=20'

NOTES

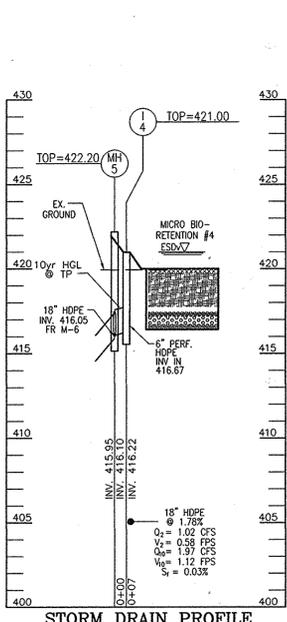
- INSTALL OFFSITE DIVERSION STORM DRAIN SYSTEM MH-1 TOWARD MH-3 AND MH-3 TOWARD MH-4. EXISTING STORM DRAIN SYSTEM SHALL REMAIN IN SERVICE UNTIL THE OFFSITE DIVERSION STORM DRAIN SYSTEM INSTALLATION IS COMPLETE.
- INSTALL SILT FENCE AROUND THE EXISTING HOME # 10113. THIS STRUCTURE SHALL BE RAZED AT THIS TIME. WITH THIS STRUCTURE (#10113) REMOVED, THE REMAINDER OF THE OFFSITE DIVERSION STORM DRAIN SYSTEM CAN BE COMPLETED; MH-2 THROUGH MH-4 JUST SOUTH OF FREDERICK ROAD.



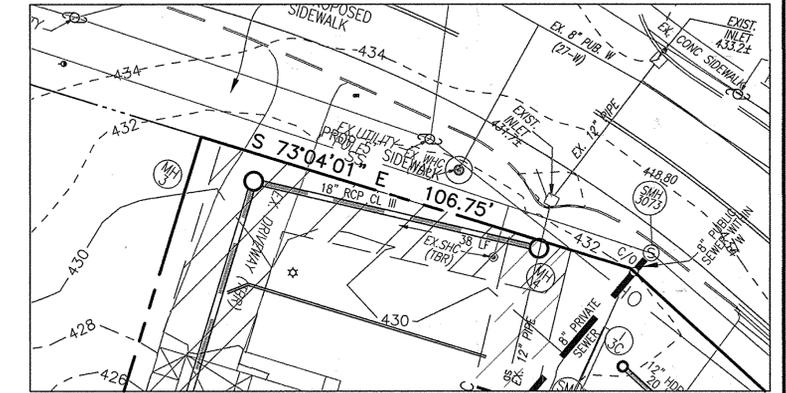
STORM DRAIN PROFILE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



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



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



**CONNECTION DETAIL
M-4 TO EX STORM DRAIN**
SCALE: 1"=20'

STR #	TYPE	INV. IN	INV. OUT	TOP ELEV	THROAT ELEV	DETAIL	LOCATION	REMARKS
I-1	S	428.67	427.92	433.00	-	D-4.22	N 586834.4 E 1351370.9	
I-2	S	425.13	424.87	435.00	-	D-4.22	N 586895.5 E 1351286.4	
I-3A	A-S	428.70	428.70	435.00	-	D-4.01	N 586950.9 E 1351331.7	(1) SLUMP PILEY
I-3	S	419.12	418.79	427.00	-	D-4.22	N 586941.2 E 1351092.7	
I-3A	A-S	424.30	424.05	433.90	-	D-4.01	N 587084.4 E 1351095.4	(1) SLUMP PILEY
I-3B	A-S	427.40	425.00	433.90	-	D-4.01	N 587131.5 E 1351132.8	(1) SLUMP PILEY
I-3C	YARD	427.80	427.80	432.00	-	D-4.14	N 587146.8 E 1351133.4	(1) SLUMP PILEY
I-4	S	416.67	416.22	421.00	-	D-4.22	N 586993.2 E 1351025.3	
PT-1	FLOW THRU	-	-	435.30	-	MD 374.68	N 586906.4 E 1351291.5	(1) Top L#8' Depth#6'
M-1	48" MH	413.00	412.77	417.00	-	G-5.12	N 586984.9 E 1351091.7	(1)
M-2	48" MH	414.00	413.90	418.00	-	G-5.12	N 587005.7 E 1350975.2	(1)
M-3	48" MH	424.00	423.90	430.50	-	G-5.12	N 587190.5 E 1351031.7	(1)
M-4	48" MH	425.00	425.00	432.50	-	G-5.12	N 587174.8 E 1351089.5	(1)
M-5	48" MH	418.05/416.10	418.95	422.00	-	G-5.12	N 587146.8 E 1351133.4	(1)
M-6	48" MH	418.50/420.30	418.17	427.50	-	G-5.12	N 586952.9 E 1351062.3	(1)
M-7	48" MH	423.36	423.25	440.00	-	G-5.12	N 586899.9 E 1351187.8	(1)
M-7A	48" MH	424.71/428.68	424.81	435.50	-	G-5.12	N 586882.7 E 1351281.7	(1)
M-8	48" MH	427.70	427.45	435.50	-	G-5.12	N 586844.4 E 1351030.6	(1)
M-9	48" MH	424.50	425.40	438.10	-	G-5.12	N 587043.8 E 1351122.9	(1)

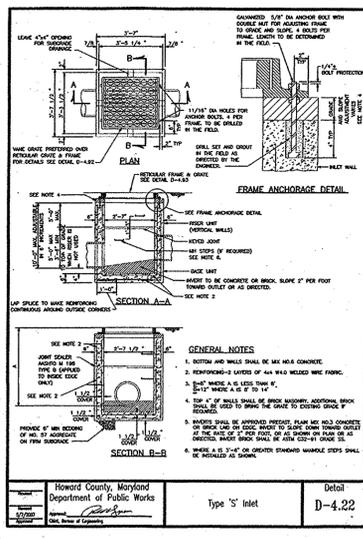
(1) Coordinate for Proposed Structure = Centerline of Structure * FIELD VERIFY

Size	Class	Total Length*
12"	RCP CL III	12
18"	RCP CL III	575
12"	HDPE	43
15"	HDPE	222
18"	HDPE	278

* The total length of pipe is linear feet only.
HDPE is to be smooth interior. Contractor shall install pipe in accordance with manufacturer's specifications

APPROVED JULY 17, 2014
PLANNING BOARD OF HOWARD COUNTY

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division
 Chief, Division of Land Development
 Director



ATTORNEY
SANG OH
TALKIN & OH, LLP
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PHONE: (410) 964-0300

OWNER/DEVELOPER
VELL DEMIREL
44087 HIGH POINT ROAD
ELLICOTT CITY, MD 21042
PHONE: (410) 440-1242

NO. _____ REVISION _____ DATE _____

**SITE DEVELOPMENT PLAN
STORM DRAIN PROFILES**

DEMIREL PLAZA
L15037 F.345

2ND ELECTION DISTRICT TAX MAP: 24 GRID: 1 PARCELS 62, 63 AND P/O 544 ZONED: OT (LOT 112) HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL, INC.
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8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8961

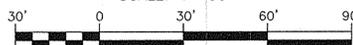
PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2016

DESIGN BY: EDS
DRAWN BY: RVE
CHECKED BY: RHY
DATE: MAY 2015
SCALE: AS SHOWN
W.O. NO.: 11-01

9 SHEET OF 15

STORMWATER MANAGEMENT - DRAINAGE AREA MAP

SCALE: 1"=30'



MAPPED SOILS TYPES - ELLICOTT CITY SW MAP #13						
SYMBOL NAME / DESCRIPTION	GROUP	HYDRIC	PERCENT ORGANICS	K-FACTOR	PERCENT SAND	PERCENT SILT/CLAY
GhB GLENELG-URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	B/D	NO	NO	0.20	NO	NO

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY
K-FACTOR = $K_w \cdot 0.4^{\text{DEPTH}}$

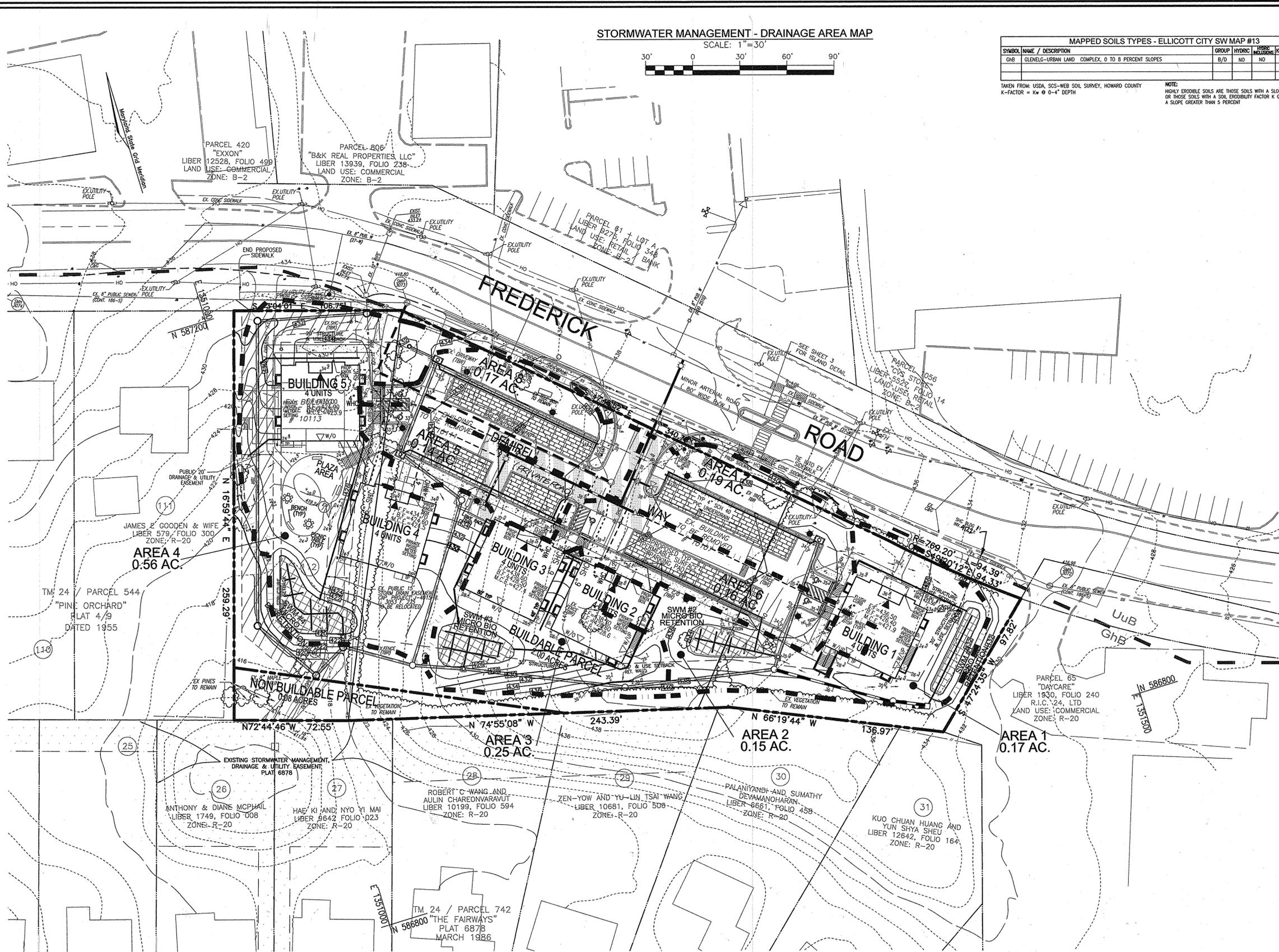
NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT

LEGEND

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING CONTOUR
- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN INLETS
- EXISTING TREELINE
- UuB GbB SOILS BOUNDARY
- MICRO-BIORETENTION FACILITY
- PERMEABLE SURFACE PARKING PAD
- DRAINAGE DIVIDE

AREA 4
0.56 AC.

DRAINAGE AREA DESCRIPTION



NO.	REVISION	DATE
1	REVISE STORM DRAIN AND SHG TO BUILDING 1	12-9-15

SITE DEVELOPMENT PLAN
STORMWATER MANAGEMENT
ESDv DRAINAGE AREA MAP
DEMIREL PLAZA
L15837 R.345

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET, ELLICOTT CITY, MD 21043
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APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DATE: 6-8-15
CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: JULY 17, 2014
PLANNING BOARD OF HOWARD COUNTY

ATTORNEY
SANG OH
TALKIN & OH, LLP
5100 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
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OWNER/DEVELOPER
VELI DEMIREL
44087 HIGH POINT ROAD
ELLICOTT CITY, MD 21042
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APPENDIX B.4.C SPECIFICATIONS FOR MICRO-BIORETENTION, RAIN GARDEN, LANDSCAPE INFILTRATION & INFILTRATION BERMS

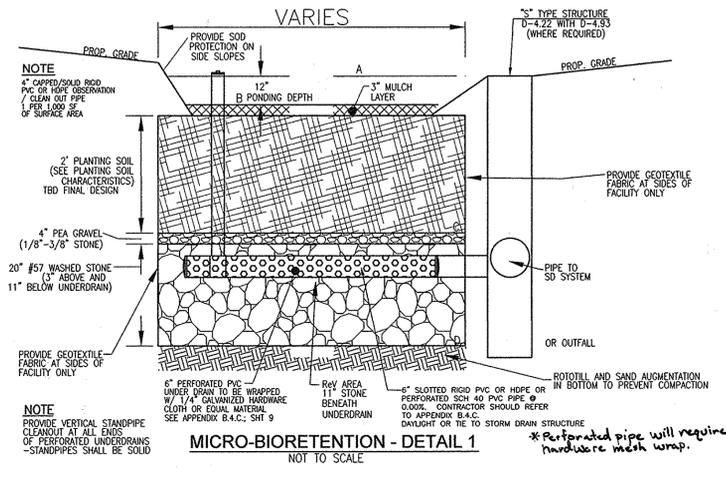
1. MATERIAL SPECIFICATIONS
 THE ALLOWABLE MATERIALS TO BE USED IN THESE PRACTICES ARE DETAILED IN TABLE B.4.1.

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 BLENDED WITHIN THE MICRORETENTION PRACTICE THAT MAY BE HARMFUL TO PLANT GROWTH OR PROVIDE AN OBSTACLE 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 COMP. 15.08.01.05.
 THE PLANTING SOIL SHALL MEET THE FOLLOWING CRITERIA:
 * SOIL COMPONENT - LOAMY SAND OR SANDY LOAM (LOSA OR SLOA) 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 (LOM), COARSE SAND (SO), 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.

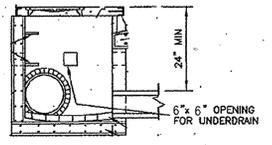
3. COMPACTION
 IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF BIORETENTION PRACTICES AND THE REQUIRED BACKFILL, WHEN POSSIBLE. USE EXCAVATION HOES TO REMOVE ORIGINAL SOIL. IF PRACTICES ARE EXCAVATED USING LOADERS, THE CONTRACTOR SHOULD USE WIDE TRACK OR MESH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH TURF TIRE TYRES, USE OF EQUIPMENT WITH NARROW TRACKS OR NARROW TIRES, RUBBER TIRES WITH LARGE LUOS, 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 AVOIDED AT THE BASE OF THE BIORETENTION FACILITY BY USING A PRIMARY TILLING OPERATION SUCH AS CHISEL PLOW, RIPPER, OR SUBSOILER. THESE TILLING OPERATIONS ARE TO REFRACATURE 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 PONDING 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, THE CONTRACTOR SHALL NOT USE HEAVY EQUIPMENT WITHIN THE BIORETENTION BASIN. HEAVY EQUIPMENT CAN BE USED AROUND THE PERIMETER OF THE BASIN TO SURPLY 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 MOIST 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 BROWN 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 PLOTS SHALL BE PLANTED FOLLOWING THE HIGH-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 IF WOOD CHIPS OR MULCH ARE USED TO AMEND THE SOIL. ROTOTILL UREA FERTILIZER AT A RATE OF 2 POUNDS PER 1000 SQUARE FEET.



MBR FACILITY	A	B	C	D	SURFACE AREA	APPROX. DIMENSIONS
MBR #1	433.00	432.00	429.75	427.75	432 SF	SEE PLAN
MBR #2	435.00	434.00	431.75	429.75	625 SF	SEE PLAN
MBR #3	427.00	426.00	423.75	421.75	800 SF	SEE PLAN
MBR #4	421.00	420.00	417.75	415.75	940 SF	SEE PLAN



6. UNDERDRAINS
 UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:
 * PIPE - SHOULD BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTM 758, TYPE PS 28, OR AASHTO-M-278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED PVC PIPE (E.G., PVC OF HEP).
 * 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 1/4" GALVANIZED HARDWARE CLOTH OR EQUAL MATERIAL. SEE APPENDIX B.4.C, SHT 9.
 * 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 FEA GRAVEL (1 1/2" 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 2".
 THIS 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.

OPERATION AND MAINTENANCE SCHEDULE FOR (M-6) MICROBIORETENTION AREAS

1. ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER AND SOIL LAYER IS REQUIRED. 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 AND PRUNING. ACCEPTABLE PLANT MATERIAL IS LIMITED TO THE FOLLOWING: 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUME II, TABLE A.4.1 AND 2.

2. SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT, TREATMENT OF ALL DISEASED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STAKES AND WIRES.

3. MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONE EVERY 2 TO 3 YEARS.

4. SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.

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

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 (50%), coarse sand (30%) & compost (40%)	n/a	USDA soil types loamy sand or sandy loam; clay content < 5%
Organic content	Min. 10% by dry weight (ASTM D 2974)		
Mulch	shredded hardwood		aged 6 months, minimum; no pine or wood chips
Pea gravel diaphragm	pea gravel: ASTM-D-448	NO. 8 OR NO. 9 (1/8" TO 3/8")	
Curtain drain	ornamental stone: washed cobbles	stone: 2" to 5"	
Geotextile	AASHTO M-43	n/a	PE Type 1 nonwoven
Gravel (underdrains and infiltration berms)	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 SDR35	Slotted or perforated pipe; 3/8" perf. @ 6" on center, 4 holes per row; minimum #2" of gravel over pipes; not necessary underneath pipes. Perforated pipe shall be wrapped with 1/4-inch galvanized hardware cloth
Poured in place concrete (if required)	MSHA Mix No. 3; f _c = 3500 psi @ 28 days, normal weight, air-entrained; reinforcing to meet ASTM-615-60	n/a	on-site testing of poured-in-place concrete required: 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved state or local standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting: ACI Code 308.8R; vertical loading (H-10 or H-20); allowable horizontal loading (based on soil pressures); and analysis of potential cracking. Sand substitutions such as Diabase and Gneiss (AASHTO #10) are not acceptable. No calcium carbonate or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.
Sand	AASHTO-M-6 or ASTM-C-33	0.02" to 0.04"	

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	MOISTURE REGIMEN	K-FACTOR	PERCENT SAND	PERCENT SILT	PERCENT CLAY
SHB	GLEICHEL-URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	S/D	NO	ND	0.20	NO	NO	NO

TAKEN FROM: USDA, SCS-WEB SOIL SURVEY, HOWARD COUNTY
 K-FACTOR = k_w @ 0-4" DEPTH

NOTE:
 HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

6-8-15
 DATE

APPROVED JULY 17, 2014
 PLANNING BOARD OF HOWARD COUNTY

7-07-15
 DATE

7-7-15
 DATE

A-2. PERMEABLE PAVEMENTS

CONSTRUCTION CRITERIA:

THE FOLLOWING ITEMS SHOULD BE ADDRESSED DURING CONSTRUCTION OF PROJECTS WITH PERMEABLE PAVEMENT:

- EROSION AND SEDIMENT CONTROL - FINAL GRADING FOR INSTALLATION SHOULD NOT TAKE PLACE UNTIL THE SURROUNDING SITE IS STABILIZED. IF THIS CANNOT BE ACCOMPLISHED, RUNOFF FROM DISTURBED AREAS SHALL BE DIVERTED AROUND PROPOSED PAVEMENT LOCATIONS.
- SOIL COMPACTION - SUB SOILS SHALL NOT BE COMPACTED. CONSTRUCTION SHOULD BE PERFORMED WITH LIGHTWEIGHT, WIDE TRACK EQUIPMENT TO MINIMIZE COMPACTION. EXCAVATED MATERIALS SHOULD BE PLACED IN A CONTAINED AREA.
- DISTRIBUTION SYSTEMS - OVERDRAIN, UNDERDRAIN, AND DISTRIBUTION PIPES SHALL BE CHECKED TO ENSURE THAT BOTH THE MATERIAL AND PERFORATIONS MEET SPECIFICATIONS (SEE APPENDIX B.4). THE UPSTREAM ENDS OF PIPES SHOULD BE CAPPED PRIOR TO INSTALLATION. ALL UNDERDRAIN OR DISTRIBUTION PIPES USED SHOULD BE INSTALLED FLAT ALONG THE BED BOTTOM.
- SUBBASE INSTALLATION - SUBBASE AGGREGATE SHALL BE CLEAN AND FREE OF FINES. THE SUBBASE SHALL BE PLACED IN LIFTS AND LIGHTLY ROLLED ACCORDING TO THE SPECIFICATIONS (SEE APPENDIX B.4).

INSPECTION:

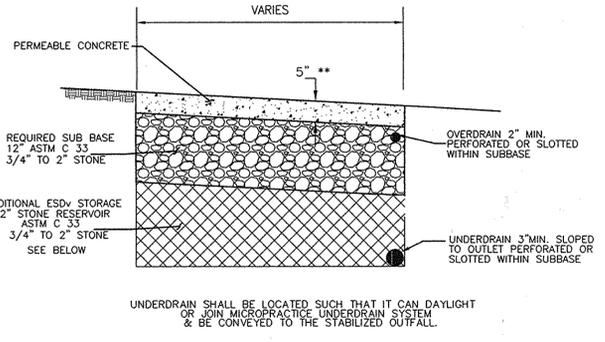
REGULAR INSPECTIONS SHALL BE MADE DURING THE FOLLOWING STAGES OF CONSTRUCTION:

- DURING EXCAVATION TO SUB GRADE.
- DURING PLACEMENT AND BACKFILL OF ANY DRAINAGE OR DISTRIBUTION SYSTEM(S).
- DURING PLACEMENT OF THE CRUSHED STONE SUBBASE MATERIAL.
- UPON COMPLETION OF FINAL GRADING AND ESTABLISHMENT OF PERMANENT STABILIZATION.

MAINTENANCE CRITERIA:

THE FOLLOWING PROCEDURES SHOULD BE CONSIDERED ESSENTIAL FOR MAINTAINING PERMEABLE PAVEMENT SYSTEMS:

- PAVEMENTS SHOULD BE USED ONLY WHERE REGULAR MAINTENANCE CAN BE PERFORMED. MAINTENANCE AGREEMENTS SHOULD CLEARLY SPECIFY HOW TO CONDUCT ROUTINE TASKS TO ENSURE LONG-TERM PERFORMANCE.
- PAVEMENT SURFACES SHOULD BE SWEEP AND VACUUMED TO REDUCE SEDIMENT ACCUMULATION AND ENSURE CONTINUED SURFACE POROSITY. SWEEPING SHOULD BE PERFORMED AT LEAST TWICE ANNUALLY WITH A COMMERCIAL CLEANING UNIT. WASHING SYSTEMS AND COMPRESSED AIR UNITS SHOULD NOT BE USED TO PERFORM SURFACE CLEANING.
- DRAINAGE PIPES, INLETS, STONE EDGE DRAINS, AND OTHER STRUCTURES WITHIN OR DRAINING TO THE SUBBASE SHOULD BE CLEANED OUT AT REGULAR INTERVALS.
- TRUCKS AND OTHER HEAVY VEHICLES CAN GRIND DIRT AND GRIT INTO THE POROUS SURFACES, LEADING TO CLOGGING AND PREATURE FAILURE. THESE VEHICLES SHOULD BE PREVENTED FROM TRACKING AND SPILLING MATERIAL ONTO THE PAVEMENT.
- DEICERS SHOULD BE USED IN MODERATION, WHEN USED, DEICERS SHOULD BE NON-TOXIC AND ORGANIC AND CAN BE APPLIED EITHER AS CALCIUM MAGNESIUM ACETATE OR AS PRETREATED SALT. SNOW PLOWING SHOULD BE DONE CAREFULLY WITH BLADES SET ONE-INCH HIGHER THAN NORMAL. PLOWED SNOW PILES AND SNOW MELT SHOULD NOT BE DIRECTED TO PERMEABLE PAVEMENT.



UNDERDRAIN SHALL BE LOCATED SUCH THAT IT CAN DAYLIGHT OR JOIN MICROPROTECTIVE UNDERDRAIN SYSTEM & BE CONVEYED TO THE STABILIZED OUTFALL.

DETAIL - PERMEABLE CONCRETE PARKING
 NOT TO SCALE

* ALL PERMEABLE CONCRETE THICKNESS, MIX AND SUB-BASE TO BE DETERMINED BY GEOTECHNICAL ENGINEER ON-SITE.

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

THESE SPECIFICATIONS INCLUDE INFORMATION ON ACCEPTABLE MATERIALS FOR TYPICAL APPLICATIONS AND ARE NOT EXCLUSIVE OR LIMITING. THE DESIGNER IS RESPONSIBLE FOR DEVELOPING SPECIFICATIONS FOR INDIVIDUAL PROJECTS AND SPECIFIC CONDITIONS.

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, AD 323.9R, AD 335.0) 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 ADJUTIVES MAY ALSO BE USED. MATERIALS SHOULD BE TESTED (E.G., TYPICAL BATCHING) PRIOR TO CONSTRUCTION SO THAT CRITICAL PROPERTIES (E.G., SETTING 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 IN. TO NO. 4), NO. 8 (3/8 IN. TO NO. 16) AND NO. 89 (3/8 IN. TO NO.50) SIEVES. SINGLE-SIZED AGGREGATE (UP TO 1 INCH) MAY ALSO BE USED.
 WATER CONTENT - WATER-TO-CEMENT RATIOS BETWEEN 0.17 AND 0.26 ARE USED ROUTINELY WITH PROPER INCLUSION OF CHEMICAL ADJUTIVES. WATER QUALITY SHOULD MEET ACT 30A AS A GENERAL RULE. POTABLE WATER SHOULD BE USED ALTHOUGH RECYCLED CONCRETE PRODUCTION WATER MEETING ACT C 94 OR AASHTO M 157 MAY ALSO BE USED.
 CURABLE - CHEMICAL ADJUTIVES (E.G., RETARDERS OR HYDRATION-STABILIZERS) ARE USED TO OBTAIN SPECIAL PROPERTIES IN PERVIOUS CONCRETE. USE OF ADJUTIVES SHOULD MEET ASTM C 494 (GENERAL ADJUTIVES) AND ASTM C 490 (FOR ENTRAINING ADJUTIVES) AND FOLLOW MANUFACTURER'S RECOMMENDATIONS.
 BASE COURSE - THE BASE COURSE SHALL BE AASHTO NO. 3 OR 4 COURSE AGGREGATE WITH AN ASSUMED OPEN PORE SPACE OF 30% (n=0.30).

2. PERVIOUS INTERLOCKING CONCRETE PAVEMENTS (PIP)
 PAPER BLOCKS - BLOCKS SHOULD BE EITHER 32 IN. OR 4 IN. THICK, AND MEET ASTM C 936 OR CSA A231.2 REQUIREMENTS. APPLICATIONS SHOULD HAVE 20% OR MORE (NOT PREFERRED) OF THE SURFACE AREA OPEN. INSTALLATION SHOULD FOLLOW MANUFACTURER'S INSTRUCTIONS, EXCEPT THAT INFILL AND BASE COURSE MATERIALS AND DIMENSIONS SPECIFIED IN THIS APPENDIX SHALL BE FOLLOWED.
 INFILL MATERIALS AND LAYING COURSE - OPENINGS SHALL BE FILLED WITH ASTM C-33 GRADED SAND OR SANDY LOAM. PIP BLOCKS SHALL BE PLACED ON A ONE-INCH THICK LEVELING COURSE OF ASTM C-33 SAND.
 BASE COURSE - THE BASE COURSE SHALL BE AASHTO NO. 3 OR 4 COURSE AGGREGATE WITH AN ASSUMED OPEN PORE SPACE OF 30% (n=0.30).

3. REINFORCED TURF
 REINFORCED GRASS PAVEMENT (RGP) - WHETHER USED WITH GRASS OR GRAVEL, THE RGP THICKNESS SHALL BE AT LEAST 1-3/4" THICK WITH A LOAD CAPACITY CAPABLE OF SUPPORTING THE TRAFFIC AND VEHICLE TYPES THAT WILL BE CARRIED.

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

A. 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.

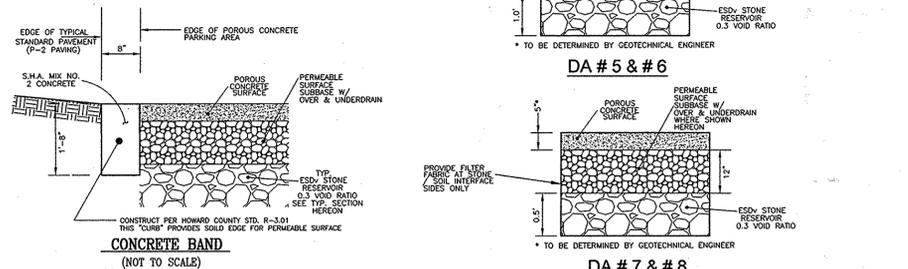
B. THE OWNER SHALL PERIODICALLY CLEAN DRAINAGE PIPES, INLETS, STONE EDGE DRAINS AND OTHER STRUCTURES WITHIN OR DRAINING TO THE SUBBASE.

C. THE OWNER SHALL USE DEICERS IN MODERATION. DEICERS SHOULD BE NON-TOXIC AND BE APPLIED EITHER AS CALCIUM MAGNESIUM ACETATE OR AS PRETREATED SALT.

D. THE OWNER SHALL ENSURE SNOW PLOWING IS PERFORMED CAREFULLY WITH BLADES SET ONE-INCH ABOVE THE SURFACE. PLOWED SNOW PILES AND SNOW MELT SHOULD NOT BE DIRECTED TO PERMEABLE PAVEMENT.

DEMIREL PROPERTY - FINAL PLAN ESDv COMPUTATIONS

DA #	% IMPERV	Rv	ReV (CF)	DA (SF)	DA (AC)	MINIMUM VOLUME	MAXIMUM VOLUME	1.8" VOLUME	VOLUME PROVIDED*	IMPERV (SF)	IMPERV (AC)	GREEN AREA	REMARKS
1	32.27	0.3404	127	7344	0.17	208	542	375	475	2370	0.05	0.11	MICROSCALE MICRO-BIO RETENTION #1 475 432 SF MICRO BIO Recharge Volume 350 0.92 96.6 sf ft cuft
2	10.75	0.1467	167	6514	0.15	80	207	143	625	700	0.02	0.13	MICROSCALE MICRO-BIO RETENTION #2 625 625 SF MICRO BIO Recharge Volume 625 0.92 172.5 sf ft cuft
3	42.02	0.4282	273	11090	0.25	394	1023	708	1020	4635	0.11	0.15	MICROSCALE MICRO-BIO RETENTION #3 1020 1020 SF MICRO BIO Recharge Volume 1020 0.92 281.52 sf ft cuft
4	32.51	0.3426	332	24516	0.56	700	1820	1260	1240	7970	0.18	0.38	MICROSCALE MICRO-BIO RETENTION #4 1240 1130 SF MICRO BIO Recharge Volume 1130 0.92 311.88 sf ft cuft
5	81.81	0.7863	5916	0.14	388	1008	698	679	4840	0.11	0.02		ALT SURFACE PARKING AREA (BUILDING 3 & 4) 269 PERM SURFACE PARKING PAD @ .196 410 STONE UNDER PERM SURFACE PARKING @ 1.0'
6	84.35	0.8091	6971	0.16	470	1222	846	791	5880	0.13	0.03		ALT SURFACE PARKING AREA (BUILDING 1 & 2) 313 PERM SURFACE PARKING PAD @ .196 479 STONE UNDER PERM SURFACE PARKING @ 1.0'
7	54.67	0.5421	8322	0.19	376	977	677	571	4550	0.10	0.09		ALT SURFACE - FREDERICK ROAD EAST PARKING BAY 323 PERM SURFACE PARKING PAD @ .196 248 STONE UNDER PERM SURFACE PARKING @ 0.5'
8	65.78	0.6420	7411	0.17	397	1031	714	617	4875	0.11	0.06		ALT SURFACE - FREDERICK ROAD WEST PARKING BAY 349 PERM SURFACE PARKING PAD @ .196 267 STONE UNDER PERM SURFACE PARKING @ 0.5'
PROJECT TOTALS	45.9	0.4632	899	78024	1.79	3012	7830	5421	6017	35820	0.82	0.97	



PERMEABLE SURFACE TYPICAL SECTIONS (NOT TO SCALE)

NO.	REVISION	DATE

SITE DEVELOPMENT PLAN
STORMWATER MANAGEMENT - NOTES & DETAILS
DEMIREL PLAZA
 L15837 F.345

2ND ELECTION DISTRICT
 TAX MAP: 24 GRID: 1

PARCELS 62, 63 AND P/O 544 (LOT 112)
 HOWARD COUNTY, MARYLAND

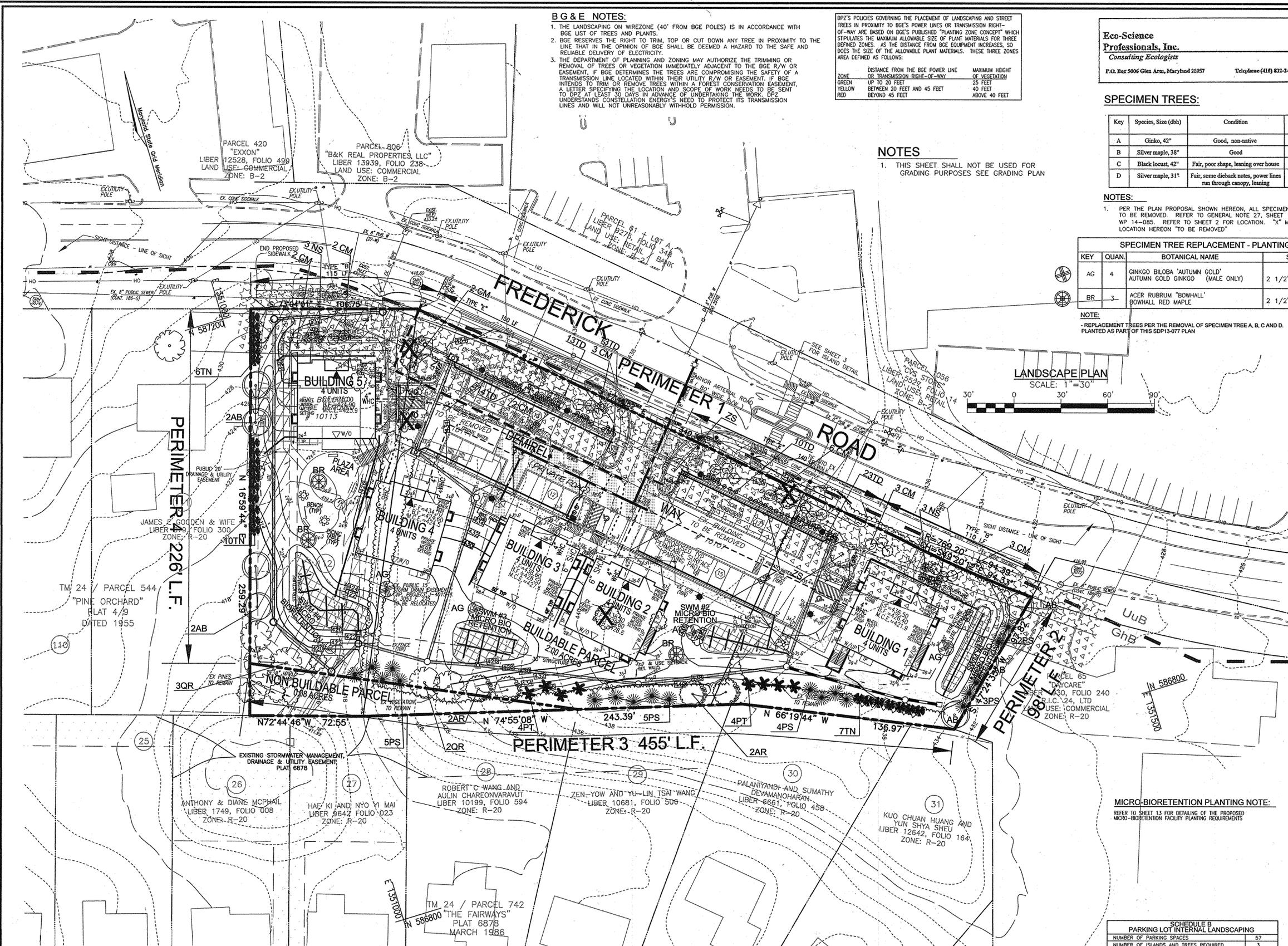
ZONED: OT

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
 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: 09-27-2016

DESIGN BY: EDS
 DRAWN BY: RVE
 CHECKED BY: RHV
 DATE: MAY 2015
 SCALE: AS SHOWN
 W.O. NO.: 11-01

11 SHEET OF 15



B G & E NOTES:

1. THE LANDSCAPING ON WIREZONE (40' FROM BGE POLES) IS IN ACCORDANCE WITH BGE LIST OF TREES AND PLANTS.
2. BGE RESERVES THE RIGHT TO TRIM, TOP OR CUT DOWN ANY TREE IN PROXIMITY TO THE LINE THAT IN THE OPINION OF BGE SHALL BE DEEMED A HAZARD TO THE SAFE AND RELIABLE DELIVERY OF ELECTRICITY.
3. THE DEPARTMENT OF PLANNING AND ZONING MAY AUTHORIZE THE TRIMMING OR REMOVAL OF TREES OR VEGETATION IMMEDIATELY ADJACENT TO THE BGE R/W OR EASEMENT, IF BGE DETERMINES THE TREES ARE COMPROMISING THE SAFETY OF A TRANSMISSION LINE LOCATED WITHIN THEIR UTILITY R/W OR EASEMENT. IF BGE INTENDS TO TRIM OR REMOVE TREES WITHIN A FOREST CONSERVATION EASEMENT, A LETTER SPECIFYING THE LOCATION AND SCOPE OF WORK NEEDS TO BE SENT TO DPZ AT LEAST 30 DAYS IN ADVANCE OF UNDERTAKING THE WORK. DPZ UNDERSTANDS CONSTELLATION ENERGY'S NEED TO PROTECT ITS TRANSMISSION LINES AND WILL NOT UNREASONABLY WITHHOLD PERMISSION.

DPZ'S POLICIES GOVERNING THE PLACEMENT OF LANDSCAPING AND STREET TREES IN PROXIMITY TO BGE'S PUBLISHED "PLANTING ZONE CONCEPT" WHICH STIPULATES THE MAXIMUM ALLOWABLE SIZE OF PLANT MATERIALS FOR THREE DEFINED ZONES, AS THE DISTANCE FROM BGE EQUIPMENT INCREASES, SO DOES THE SIZE OF THE ALLOWABLE PLANT MATERIALS. THESE THREE ZONES ARE DEFINED AS FOLLOWS:

ZONE	DISTANCE FROM THE BGE POWER LINE OR TRANSMISSION RIGHT-OF-WAY	MAXIMUM HEIGHT OF VEGETATION
GREEN	UP TO 20 FEET	25 FEET
YELLOW	BETWEEN 20 FEET AND 45 FEET	40 FEET
RED	BEYOND 45 FEET	ABOVE 40 FEET

NOTES

1. THIS SHEET SHALL NOT BE USED FOR GRADING PURPOSES SEE GRADING PLAN

Eco-Science Professionals, Inc.
Consulting Ecologists
 P.O. Box 5006 Glen Arun, Maryland 21057 Telephone (410) 832-2450 Fax (410) 832-2458

SPECIMEN TREES:

Key	Species, Size (dbh)	Condition	Critical Root Zone (radius)
A	Ginkgo, 42"	Good, non-native	63'
B	Silver maple, 38"	Good	57'
C	Black locust, 42"	Fair, poor shape, leaning over house	63'
D	Silver maple, 31"	Fair, some dieback notes, power lines run through canopy, leaning	46.5'

NOTES:

1. PER THE PLAN PROPOSAL SHOWN HEREON, ALL SPECIMEN TREES ARE TO BE REMOVED. REFER TO GENERAL NOTE 27, SHEET 1 REGARDING WP 14-085. REFER TO SHEET 2 FOR LOCATION. "X" MARKS LOCATION HEREON TO BE REPLACED

SPECIMEN TREE REPLACEMENT - PLANTING SCHEDULE

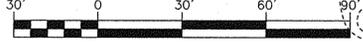
KEY	QUAN.	BOTANICAL NAME	SIZE	REM.
AG	4	GINKGO BILOBA 'AUTUMN GOLD' / AUTUMN GOLD GINKGO (MALE ONLY)	2 1/2"-3" CAL.	B & B
BR	3	ACER RUBRUM 'BOWHALL' / BOWHALL RED MAPLE	2 1/2"-3" CAL.	B & B

NOTE:

- REPLACEMENT TREES PER THE REMOVAL OF SPECIMEN TREE A, B, C AND D. PLANTED AS PART OF THIS SDP13-077 PLAN

LANDSCAPE PLAN

SCALE: 1"=30'



LEGEND

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING CONTOUR
- EXISTING CURB AND GUTTER
- PROPOSED CURB AND GUTTER
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- PROPOSED STORM DRAIN
- PROPOSED STORM DRAIN INLETS
- EXISTING TRENCH
- SOILS BOUNDARY
- MICRO-BIORETENTION FACILITY
- PERMEABLE SURFACE PARKING PAD
- PROPOSED SHADE TREES
- PROPOSED EVERGREEN TREES
- PROPOSED LANDSCAPE BUFFER
- EX. SPECIMEN TREE
- EX. SPECIMEN TREE TO BE REMOVED
- BG & E GREEN ZONE
- BG & E YELLOW ZONE

LANDSCAPE SCHEDULE

KEY	QUAN.	BOTANICAL NAME	SIZE	CAT
AR	4	ACER RUBRUM 'OCTOBER GLORY' RED MAPLE	2 1/2"-3" CAL.	B & B
QR	5	QUERCUS RUBRA 'NORTHER RED OAK	2 1/2"-3" CAL.	B & B
ZS	3	ZELCOVA SERRATA 'VILLAGE GREEN' VILLAGE GREEN JAPANESE ZELCOVA	2 1/2"-3" CAL.	B & B
AB	7	BLOODGOOD JAPANESE RED MAPLE (MAX. HEIGHT=25')	4"-6" HT.	B & B
CM	26	LODICESTRUM TUSCORA 'TUSCORA CRAPPE MYRTLE	4"-8" HT.	B & B
PS	19	PRUNUS STROBILIS 'EASTERN WHITE PINE	6"-8" HT.	B & B
TN	23	TRILIA PLICATA 'GREEN GIANT' GIANT ARBORVITAE	5"-6" HT.	B & B
TD	73	YAXUS MEDIA 'DENSIFORMIS' DENSIFORMIS YEW	2 1/2"-3" HT.	B & B
PT	8	PRUNUS THUNBERGIANA 'JAPANESE BLACK PINE	6"-8" HT.	B & B
NS	6	ILEX 'NELLIE R. STEVENS' NELLIE R. STEVENS HOLLY	5"-6" HT.	B & B

LANDSCAPE SCHEDULE NOTE:

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

MICRO-BIORETENTION PLANTING NOTE:

REFER TO SHEET 13 FOR DETAILING OF THE PROPOSED MICRO-BIORETENTION FACILITY PLANTING REQUIREMENTS

SCHEDULE B PARKING LOT INTERNAL LANDSCAPING

NUMBER OF PARKING SPACES	57
NUMBER OF ISLANDS AND TREES REQUIRED	3
NUMBER OF ISLANDS AND TREES PROVIDED	3
ISLANDS AND SHADE TREES	3
OTHER TREES (2:1 SUBSTITUTION)	3

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division
 DATE: 6-8-15

APPROVED JULY 17, 2014
 PLANNING BOARD OF HOWARD COUNTY

DEVELOPER'S/OWNER'S LANDSCAPE CERTIFICATE
 I/WE CERTIFY THAT LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.12.4 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION OF THE PROJECT, A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.
 DEVELOPER'S/OWNER'S NAME: *Van Der...*

MAPPED SOILS TYPES - ELLICOTT CITY SW MAP #13

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	PERCENT CLAY	K-FACTOR	PERCENT SAND	PERCENT SILT	PERCENT CLAY	PERCENT SILT	PERCENT CLAY
GMB	GLENNEL-URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	B/D	NO	NO	0.20	NO	NO	NO	NO	NO

TAKEN FROM: USDA, SSC-NEB SOIL SURVEY, HOWARD COUNTY
 NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT

ATTORNEY
 SAND CHAI
 TALKIN & OH, LLP
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 ELLICOTT CITY, MD, 21042
 PHONE: (410) 884-0300

OWNER/DEVELOPER
 SAND CHAI
 VELL DEMIREL
 44087 HIGH POINT ROAD
 ELLICOTT CITY, MD 21042
 PHONE: (410) 440-1242

2ND ELECTION DISTRICT
 TAX MAP: 24 GRID: 1

PARCELS 62, 63 AND P/O 544 (LOT 112)
 HOWARD COUNTY, MARYLAND

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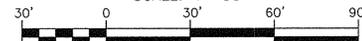
DESIGN BY: EDS.
 DRAWN BY: RVE.
 CHECKED BY: RHY.
 DATE: MAY 2015.
 SCALE: AS SHOWN.
 W.D. NO.: 11-01

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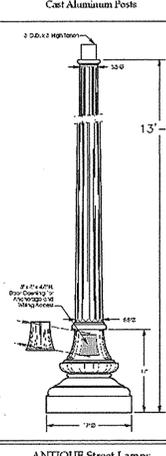
12 SHEET OF 15

LIGHTING PLAN

SCALE: 1"=30'



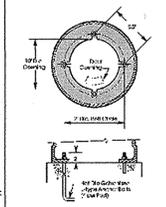
WASHINGTON Series
Cast Aluminum Posts



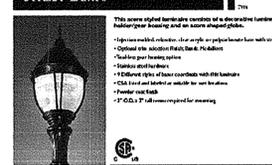
ORDERING INFORMATION

Item	Quantity	Notes
PA W17 12 ANBK Option	1	

ANCHORAGE GUIDE



ANTIQUE RG LED SERIES
STREET LAMPS



Ordering Code	Material	Color	Finish	Options
AD 9	ALUMINUM	BLACK	POWDER COAT	LED ARRAY

LEGEND

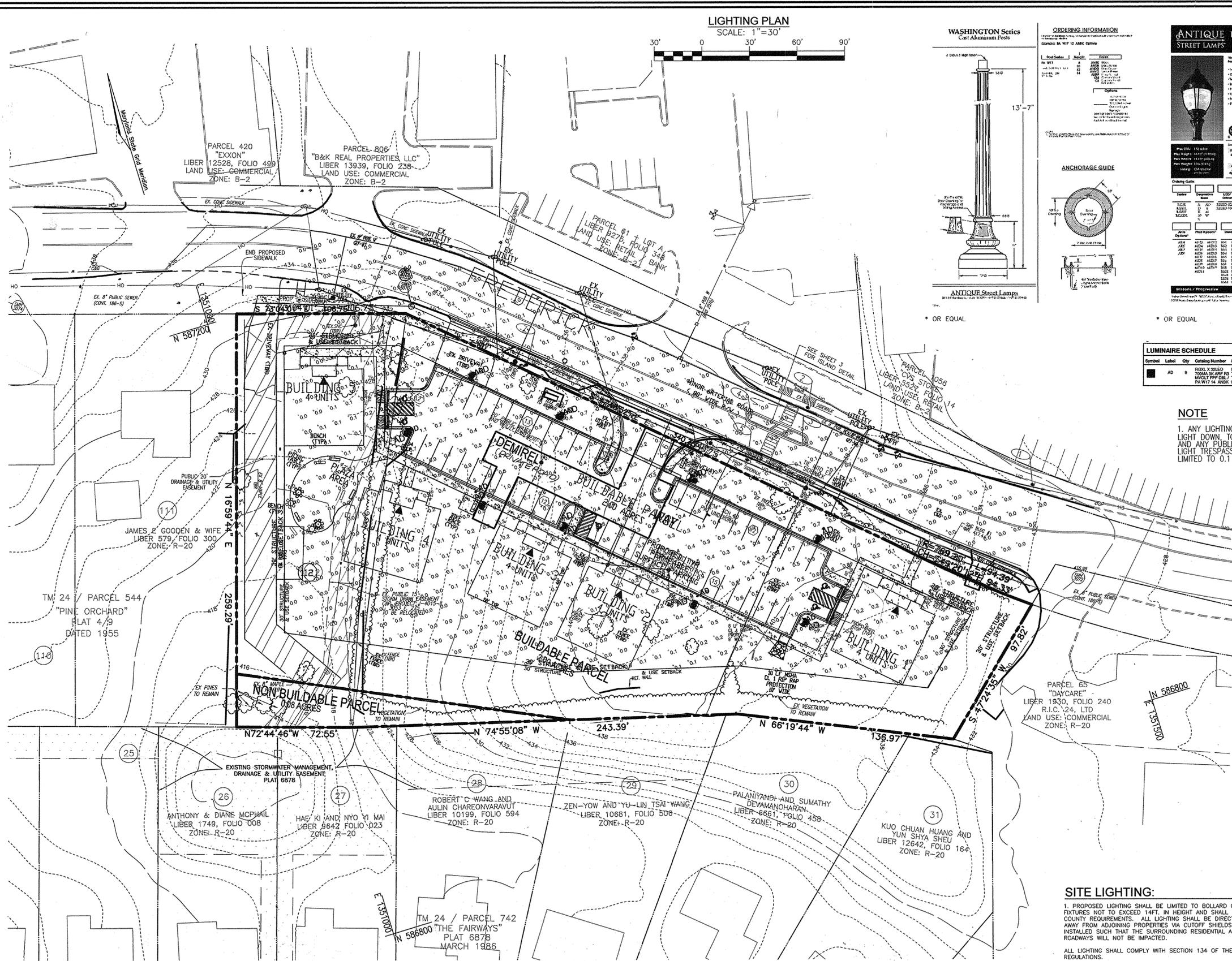
- PROPERTY LINE
- RIGHT-OF-WAY LINE
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- EXISTING SANITARY LINE
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- EXISTING TREELINE

LUMINAIRE SCHEDULE

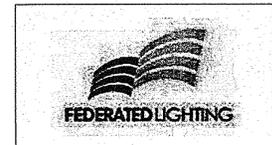
Symbol	Label	Qty	Catalog Number	Description	Lamp	File	Lumens	LLF	Watts
■	AD 9	9	ROUX X 30LED	RG LED ACORN POST	30 LED ARRAY	ROUX X 30LED	10000	0.85	78.5

NOTE

1. ANY LIGHTING TO ILLUMINATE OFF-STREET PARKING AREAS SHALL BE SO ARRANGED AS TO DIRECT THE LIGHT DOWN TOWARDS THE PARKING AREA, AND AWAY FROM THE ADJOINING LOT IN RESIDENTIAL DISTRICTS AND ANY PUBLIC STREET RIGHT-OF-WAY, IN ACCORDANCE WITH SECTION 134.D OF THE ZONING REGULATIONS. LIGHT TRESPASS ONTO ANY OTHER PROPERTY ZONED OR USED FOR RESIDENTIAL PURPOSES SHALL BE LIMITED TO 0.1 FOOT CANDLES.



LIGHTING STUDY (6/18/2013) SHOWN ABOVE COMPLETED BY:



SITE LIGHTING:

- PROPOSED LIGHTING SHALL BE LIMITED TO BOLLARD OR OVERHEAD FIXTURES NOT TO EXCEED 14FT. IN HEIGHT AND SHALL MEET ALL COUNTY REQUIREMENTS. ALL LIGHTING SHALL BE DIRECTED DOWN AND AWAY FROM ADJOINING PROPERTIES VIA CUTOFF SHIELDS AND SHALL BE INSTALLED SUCH THAT THE SURROUNDING RESIDENTIAL AREAS AND ROADWAYS WILL NOT BE IMPACTED.
- ALL LIGHTING SHALL COMPLY WITH SECTION 134 OF THE ZONING REGULATIONS.
- LOCATE LIGHTING POLES A MINIMUM OF 3'-0" BEHIND FACE OF CURB TO CENTER, OR 1'-0" OFF EDGE OF SIDEWALK.
- POLE LOCATIONS SHALL BE COORDINATED WITH LANDSCAPING.

ATTORNEY

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OWNER/DEVELOPER

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PHONE: (410) 440-1242

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 6-8-15
CHIEF, DEVELOPMENT ENGINEERING DIVISION
[Signature] 7-7-15
CHIEF, DIVISION OF LAND DEVELOPMENT
[Signature] 7-7-15
DIRECTOR

APPROVED JULY 17, 2014
PLANNING BOARD OF HOWARD COUNTY

NOTES

Disclaimer:
Calculations are based on procedures established by the IESNA or standard industry practice. Output performance is based on input data as provided to Federated Lighting by others and believed to be accurate.

This study is intended to assist with lighting design and is not a substitute for an independent lighting analysis and testing for lighting safety and suitability. Federated Lighting cannot be held responsible for variations in actual situations which can effect calculated output.

SITE DEVELOPMENT PLAN
LIGHTING PLAN
DEMIREL PLAZA
L.15837.F.345

2ND ELECTION DISTRICT PARCELS 62, 63 AND P/O 544 (LOT 112) HOWARD COUNTY, MARYLAND

ROBERT H. VOGLER ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
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ELLCOTT CITY, MD 21043 FAX: 410.461.8961

DESIGN BY: EDS
DRAWN BY: RVE
CHECKED BY: RHY
DATE: MAY 2015
SCALE: AS SHOWN
W.O. NO.: 11-01

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14 SHEET OF 15

NOTE:

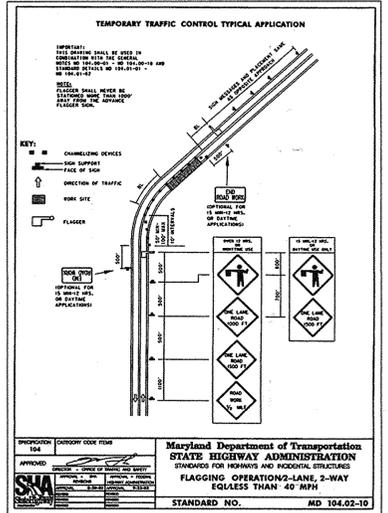
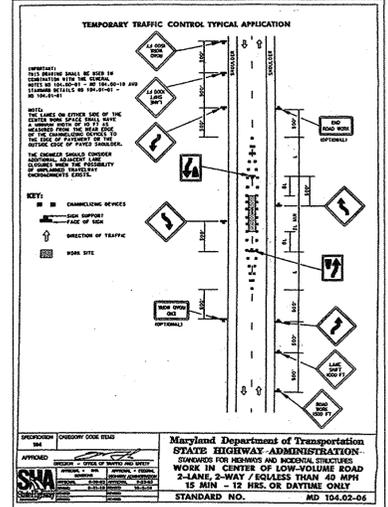
ALL TRAFFIC CONTROL SIGNAGE TO BE LOCATED IN FIELD AS DIRECTED BY HOWARD COUNTY TRAFFIC

NOTE:

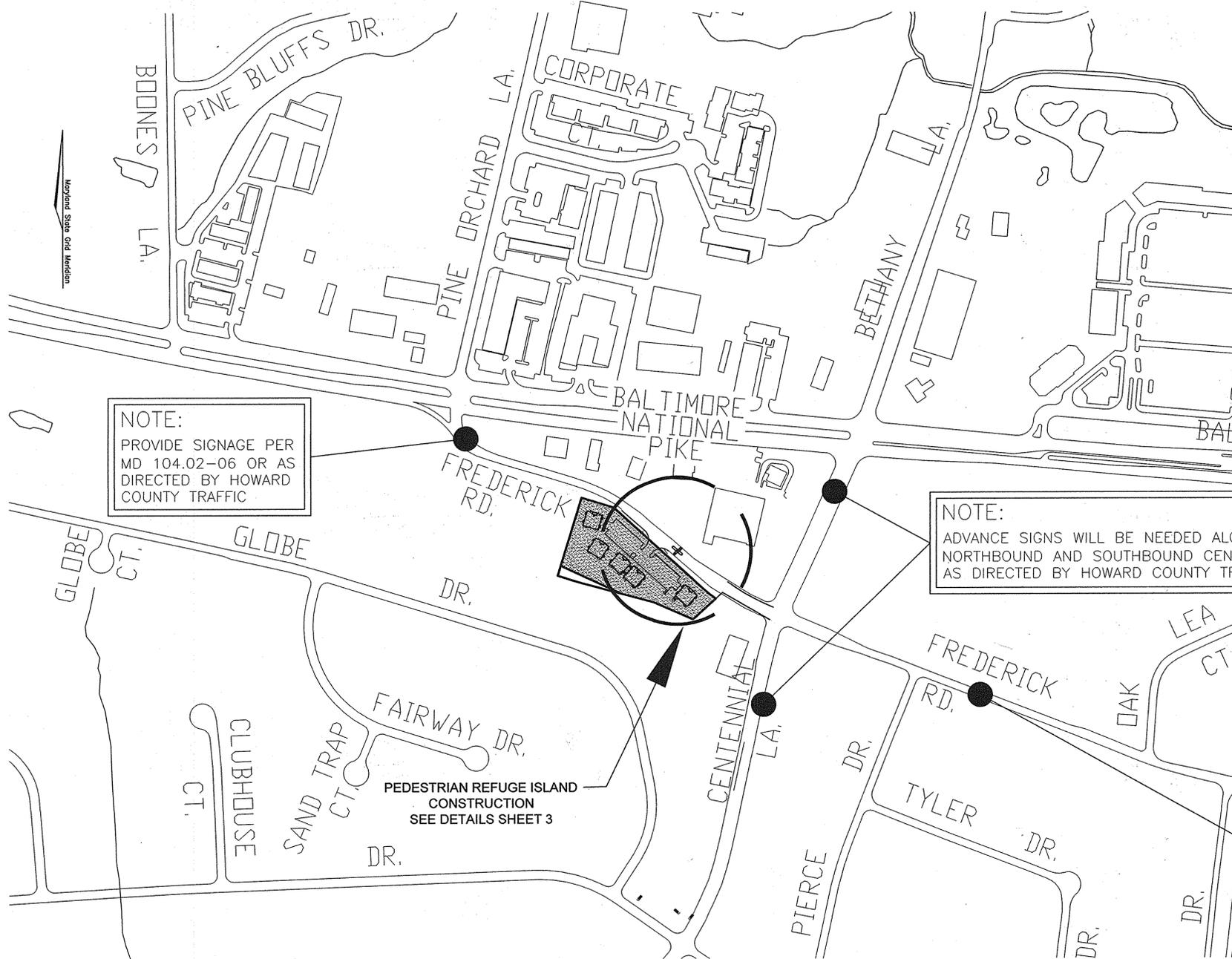
REFER TO SEQUENCE OF CONSTRUCTION - SHEET 7
 PEDESTRIAN REFUGE ISLAND CONSTRUCTION SHALL OCCUR UPON THE COMPLETION OF ONSITE WORK SIMULTANEOUSLY WITH FREDERICK ROAD IMPROVEMENTS AND SITE ENTRANCE WORK.
 CONTACT THE HOWARD COUNTY TRAFFIC DIVISION TO FIELD LOCATE SIGNS FOR EACH REQUIRED CONSTRUCTION SEQUENCE

GENERAL NOTES

1. CONTACT HOWARD COUNTY TRAFFIC DIVISION (410-313-5752) PRIOR TO INSTALLATION OF SIGNS AND STRIPING.
2. SIGNAGE / MAINTENANCE OF TRAFFIC SHALL BE AS DIRECTED BY THE MARYLAND STANDARD MD-104.02-06 (SHOWN HEREON). ANY REVISIONS TO THIS STANDARD SHALL BE AS DIRECTED BY THE HOWARD COUNTY TRAFFIC DIVISION (410) 313-5752
3. HOWARD COUNTY TRAFFIC DIVISION TO INSPECT AND APPROVE CURB FORMS PRIOR TO POURING CONCRETE.
4. PEDESTRIAN CROSSING STRIPING WILL BE PROVIDED IN ACCORDANCE WITH SHEET 3.
5. SEE SHEET 3 FOR SIGNING AND MARKINGS.



NOTE:
 A PRE-CONSTRUCTION MEETING WITH THE TRAFFIC DIVISION AND C.I.D. WILL BE REQUIRED.
 PRIOR TO THE START OF CONSTRUCTION OF THE PEDESTRIAN REFUGE ISLAND, THE CONTRACTOR SHALL MEET WITH THE CONSTRUCTION INSPECTION DIVISION (C.I.D.) INSPECTOR AND HOWARD COUNTY TRAFFIC TO REVIEW THE CONSTRUCTION SEQUENCE AND GO OVER THE MAINTENANCE OF TRAFFIC (M.O.T.) PLAN AND ANY DETAILS NOT INCLUDED ON THESE PLANS



NOTE:
 PROVIDE SIGNAGE PER MD 104.02-06 OR AS DIRECTED BY HOWARD COUNTY TRAFFIC

NOTE:
 ADVANCE SIGNS WILL BE NEEDED ALONG BOTH NORTHBOUND AND SOUTHBOUND CENTENNIAL LANE AS DIRECTED BY HOWARD COUNTY TRAFFIC

NOTE:
 PROVIDE SIGNAGE PER MD 104.02-06 OR AS DIRECTED BY HOWARD COUNTY TRAFFIC

MAINTENANCE OF TRAFFIC PLAN
 SCALE: 1"=200'

NOTE:
 REFER TO SHEET 3 FOR:
 1. FREDERICK ROAD PAVEMENT MARKING DETAILS
 2. PEDESTRIAN REFUGE ISLAND / ROAD SIGNAGE LOCATIONS
 3. PEDESTRIAN REFUGE ISLAND DETAIL

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 6-16-15
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
 [Signature] 7-7-15
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
 [Signature] 7-7-15
 DIRECTOR DATE

ATTORNEY
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SITE DEVELOPMENT PLAN
MAINTENANCE OF TRAFFIC PLAN
DEMIREL PLAZA
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2ND ELECTION DISTRICT PARCELS 62, 63 AND P/O 544 (LOT 112)
 TAX MAP: 24 GRID: 1 HOWARD COUNTY, MARYLAND

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