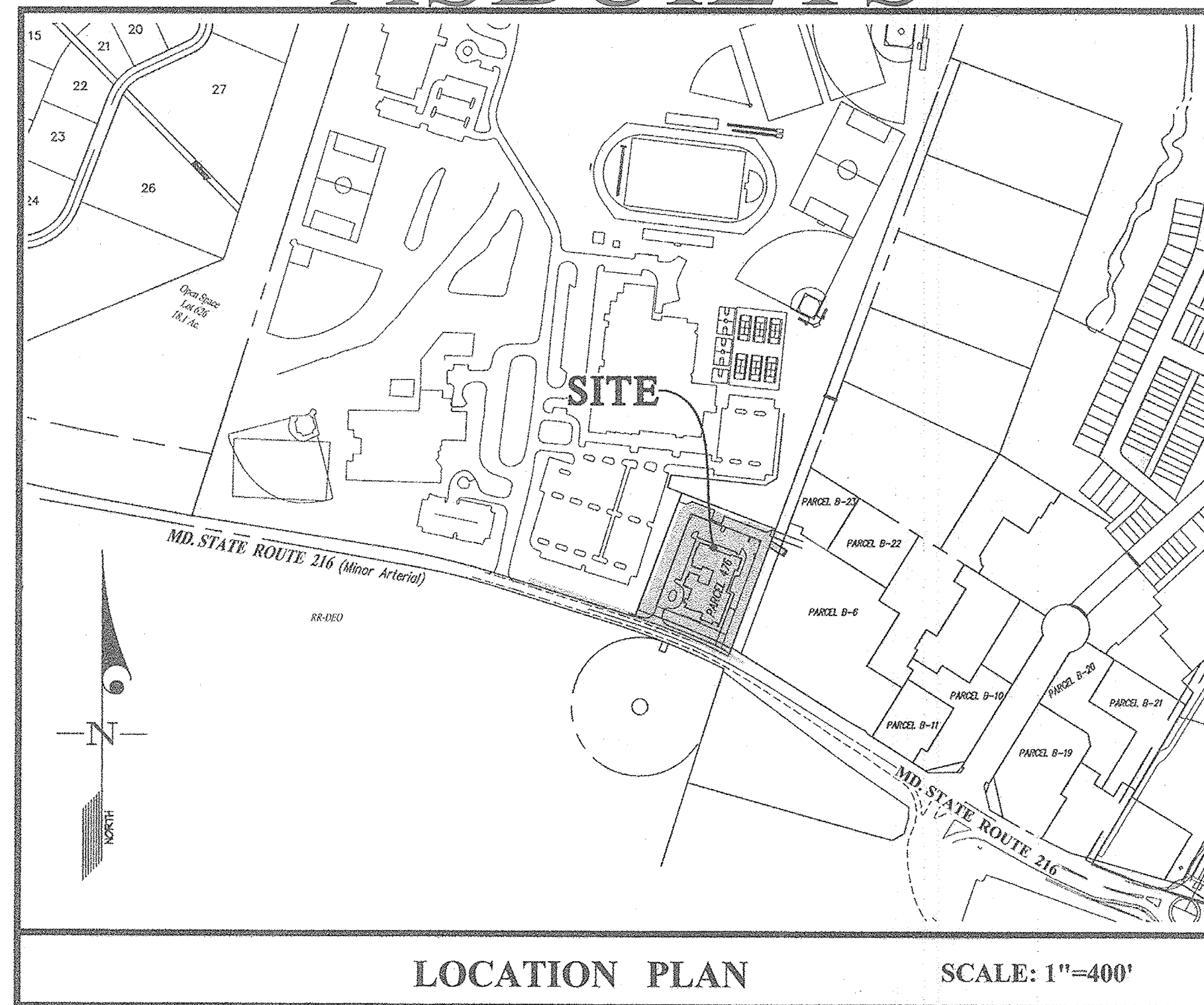


# SITE DEVELOPMENT PLAN ARBOR TERRACE FULTON

## PARCEL A LIBER 9293 FOLIO 183 ASBUILTS

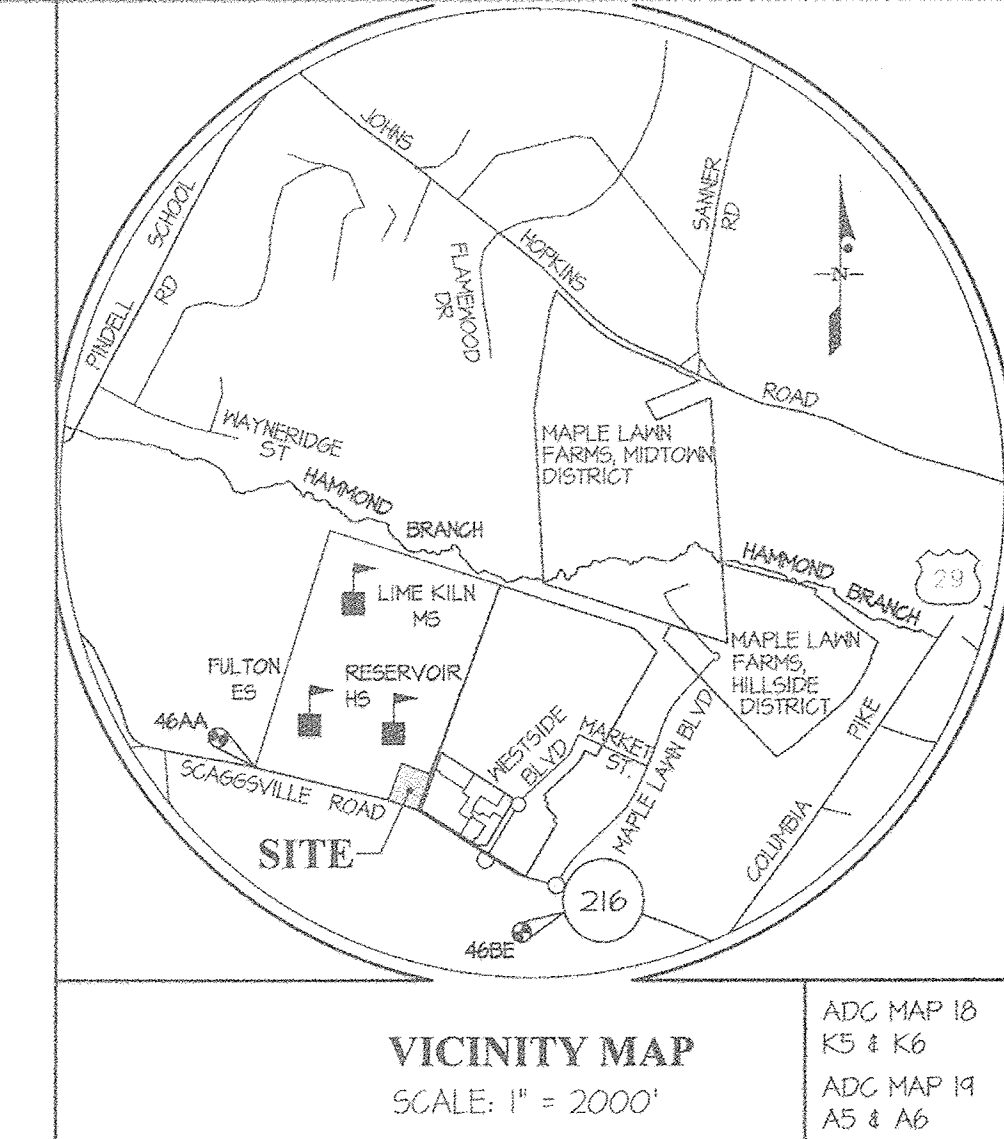
- GENERAL NOTES**
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
  - THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS, BUREAU OF ENGINEERING, CONSTRUCTION INSPECTION DIVISION AT (410) 319-1800 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
  - THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-251-1771 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
  - PROJECT BACKGROUND:  
LOCATION: TAX MAP #41, GRID 21  
ZONING: CCT  
ELECTION DISTRICT: 5TH  
PARCEL 476 AREA: 3.0 AC.  
REG. REF.: PLAT No. N/A
  - THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS, BUREAU OF UTILITIES AT (410) 319-4000 AT LEAST FIVE (5) WORKING DAYS PRIOR TO STARTING ANY EXCAVATION WORK.
  - PROPOSED USE: RESIDENTIAL CARE FACILITY
  - ALL PLAN DIMENSIONS ARE TO FACE OF BUILDING UNLESS OTHERWISE NOTED. DIMENSIONS ARE MEASURED PERPENDICULAR OR RADIIALLY BETWEEN ITEMS UNLESS OTHERWISE NOTED.
  - EXISTING TOPOGRAPHY IS SHOWN PER FIELD RUN SURVEY INFORMATION BY GUTSCHICK, LITTLE & WEBER, P.A. BY DESIGN GRADES FROM DESIGN PLANS FOR CONSTRUCTION.
  - COORDINATES AND BEARINGS ARE BASED UPON THE '83 MD STATE COORDINATE SYSTEM (NAD 83) AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 468E AND 46AA.
  - SITE IS BEING DEVELOPED UNDER CCT REGULATIONS PER HOWARD COUNTY ZONING AND ORDINANCES
  - THE PREVIOUS DEPARTMENT OF PLANNING AND ZONING FILE NUMBERS: ECP-16-060, P-17-041, W-18-180, CONT-144-1545-D, DPW CONT #44-3503 & ADO 2713 ALTERNATIVE COMPLIANCE APPROVED WITH W-18-180 SECTION 16.1205 (a)(7) TO ALLOW REMOVAL OF ONE SPECIMEN TREE 30" IN DIAMETER OR GREATER.  
APPROVAL OF THE ALTERNATIVE COMPLIANCE IS SUBJECT TO THE FOLLOWING CONDITIONS:  
1. REMOVAL OF THE ONE (1) SPECIMEN TREE WILL REQUIRE REPLACEMENT MITIGATION AT A RATIO OF TWO (2) LARGER CALIBER TREES (AT LEAST THREE (3) INCHES DBH) FOR EACH SPECIMEN TREE REMOVED (TWO TREES TOTAL). THE MITIGATION PLANTING CAN BE PROVIDED AS PART OF THE REQUIRED PERIMETER LANDSCAPING FOR THIS PROJECT. WITH THE SITE DEVELOPMENT PLAN FOR THIS PROPERTY, YOU MUST INCLUDE PLAN SHEETS THAT SHOW HOW YOU PLAN TO ADDRESS THIS ALTERNATIVE FOREST CONSERVATION/LANDSCAPE MITIGATION.  
2. SUBMISSION OF A SITE DEVELOPMENT PLAN APPLICATION, INCLUDING A SITE DEVELOPMENT PLAN THAT INCLUDES PLAN SHEETS THAT ADDRESS ALTERNATIVE FOREST CONSERVATION/LANDSCAPE MITIGATION.
  - WATER AND SEWER SERVICE IS PUBLIC PER CONTRACT No. 44-3503.
  - ALL ON-SITE STORM DRAIN SYSTEMS ARE PRIVATE.
  - STORMWATER MANAGEMENT, SATISFYING ENVIRONMENTAL SITE DESIGN (ESD) CRITERIA, PROPOSED BY THESE PLANS, INCLUDES 5 MICRO BIO-RETENTION (M-B) FACILITIES. THESE STORMWATER MANAGEMENT PRACTICES WILL BE PRIVATELY OWNED AND MAINTAINED.
  - EXISTING UTILITIES ARE BASED ON DESIGN PLANS AND UTILITY COMPANY RECORDS.
  - THERE ARE NO KNOWN CEMETERIES, GRAVE SITES OR HISTORIC STRUCTURES LOCATED ON THE SUBJECT PROPERTY.
  - THERE ARE NO SCENIC ROADS WITHIN OR ADJACENT TO THE SUBJECT PROPERTY.
  - THERE ARE NO FLOODPLAINS OR WETLANDS WITHIN THE SUBJECT PROPERTY.
  - A NOISE STUDY WAS COMPLETED IN OCTOBER 2016 BY SHROPSHIRE ASSOCIATES LLC. THE BUILDING SHALL PROVIDE ADDITIONAL MEASURES TO REDUCE THE INTERIOR NOISE LEVELS BELOW 45DB. THE BUILDING CONSTRUCTION SHALL BE MODIFIED WITH THE BUILDING PERMIT SUBMITTALS ILLUSTRATING THE NEEDED MITIGATION.
  - THE TRAFFIC STUDY (AFFO) WAS PREPARED BY THE TRAFFIC GROUP, INC. DATED APRIL 8, 2016.
  - THE BUILDING SHALL BE EQUIPPED WITH AN AUTOMATIC FIRE PROTECTION SPRINKLER SYSTEM W/ AN INSIDE METER.
  - ALL EXTERIOR LIGHT FIXTURES SHALL BE ORIENTED TO DIRECT LIGHT INWARDS AND DOWNWARDS AWAY FROM ALL ADJOINING RESIDENTIAL USE AREAS AND PUBLIC ROADS IN ACCORDANCE WITH SECTION 134.0 OF THE HOWARD COUNTY ZONING REGULATIONS.
  - FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING SHALL BE POSTED AS PART OF THE DEVELOPER'S AGREEMENTS AS NOTED ON SHEET 12. THE SURETY IS IN THE AMOUNT OF \$12,450.00. THE LANDSCAPE PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.24 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
  - SETBACK REQUIREMENTS DO NOT APPLY TO WALLS AND FENCES WHICH SERVE AS ENTRANCE FEATURES FOR A SUBDIVISION OR DEVELOPMENT IN ALL ZONING DISTRICTS PROVIDED THE ENTRANCE FEATURE DOES NOT EXCEED 6 FEET IN HEIGHT AND DOES NOT INTERFERE WITH SIGHT DISTANCE ALONG PUBLIC ROADS IN ACCORDANCE WITH SECTION 128.0 OF THE ZONING REGULATIONS.
  - THERE IS NO LOWER LEVEL BASEMENT SPACE IN THE BUILDING.
  - APPROVAL OF THIS SITE DEVELOPMENT PLAN (SDP-17-018) DOES NOT ENSURE APPROVAL OF BUILDING PERMIT APPLICATIONS ASSOCIATED WITH THIS PLAN. PLANS FOR THE RESIDENTIAL CARE FACILITY TO BE CONSTRUCTED WITHIN THE LIMITS DESCRIBED BY SDP-17-018 WILL REQUIRE REVIEW AND APPROVAL BY THE STATE DEPARTMENT OF HEALTH AND MENTAL HYGIENE, OFFICE OF HEALTH CARE QUALITY (410-402-8000)
  - THE RESIDENTIAL CARE FACILITY SHALL BE REGISTERED WITH THE GREEN BUILDING COUNCIL IN ACCORDANCE WITH THE HOWARD COUNTY GREEN BUILDING LAW PRIOR TO SIGNATURE APPROVAL OF THIS SDP BY THE DEPARTMENT OF PLANNING AND ZONING. THE PROJECT'S LEED ACCREDITED PROFESSIONAL SHALL SUBMIT TO DPZ:  
1. DOCUMENTATION SHOWING THAT THE LEED REGISTRATION FEE HAS BEEN PAID AND  
2. A SIGNED AND DATED LEED CHECKLIST
  - IN ACCORDANCE WITH SECTION 128.0 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS OR EXTERIOR STAIRWAYS NOT MORE THAN 16 FEET IN WIDTH MAY PROJECT NOT MORE THAN 4 FEET INTO ANY SETBACKS, PORCHES, OR DECKS, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACK.
  - NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE LIMITS OF WETLANDS, STREAMS, OR THEIR REQUIRED BUFFERS, FLOODPLAIN AND FOREST CONSERVATION EASEMENT AREAS.
  - THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, HOWEVER FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.  
1. THE FOREST CONSERVATION SURETY AMOUNT IS \$3,3594.00  
2. 0.15 (1/7) ACRES OR (6,719 SF.) OF THE FOREST CONSERVATION OBLIGATION WILL BE MET VIA ON-SITE REFORESTATION.  
3. AN OFF-SITE FOREST CONSERVATION BANK WILL BE USED TO FULFILL THE REMAINING 1.08 (1/7) ACRES (47,045 SF.) FOREST CONSERVATION OBLIGATION FOR THIS DEVELOPMENT.  
4. THE BANK THAT IS EXPECTED TO BE USED FOR THE OFF-SITE FOREST CONSERVATION IS LOCATED AT CATTAIL CREEK (SDP-14-031).
  - THE EXISTING WELL MUST BE ABANDONED AND SEALED PRIOR TO HEALTH DEPARTMENT APPROVAL OF A SUBSEQUENT DEMOLITION PERMIT AND/OR BUILDING PERMIT. THE HEALTH DEPARTMENT MUST RECEIVE THE WELL ABANDONMENT REPORT IN ORDER TO CONSIDER APPROVAL OF ANY PERMIT FOR DEMOLITION OR CONSTRUCTION.
  - SIGHT DISTANCES WERE MET BY UTILIZING A REDUCED SPEED BASED ON AN 85TH PERCENTILE SPEED STUDY CONDUCTED BY THE TRAFFIC GROUP AND A SIGHT DISTANCE STUDY SIGNED/CERTIFIED BY GUTSCHICK, LITTLE & WEBER, P.A.
  - THE SUBJECT PROPERTY IS ZONED CCT PER THE OCTOBER 6, 2013 COMPREHENSIVE ZONING PLAN.



- SHEET INDEX**
- 1 - COVER SHEET
  - 2 - EXISTING CONDITIONS PLAN
  - 3 - SITE DEVELOPMENT PLAN
  - 4 - SITE PLAN DETAILS and FIRE ACCESS PLAN
  - 5 - SITE PLAN DETAILS and FIRE ACCESS PLAN
  - 6 - SEDIMENT CONTROL PLAN
  - 7 - SEDIMENT CONTROL NOTES and DETAILS - I
  - 8 - SEDIMENT CONTROL NOTES and DETAILS - II
  - 9 - STORM DRAIN PROFILES and DRAINAGE AREA MAP
  - 10 - ESD DRAINAGE AREA MAP
  - 11 - ESD DETAILS
  - 12 - LANDSCAPE PLAN
  - 13 - LANDSCAPE DETAILS
  - 14 - FOREST CONSERVATION PLAN
  - 15 - LIGHTING PLAN
  - 16 - MD RT. 216 DRIVEWAY ENTRANCE AND RD. IMP. PLAN
  - 17 - MD RT. 216 PAVEMENT MARKING AND SIGNING PLAN
  - 18 - MD RT. 216 SIGHT DISTANCE PLAN

- SITE ANALYSIS DATA**
- ZONING: COMMUNITY CENTER TRANSITION (CCT)
  - GROSS AREA OF PARCEL 476 = 130,681 SF. or 3.0 AC. DEED REFERENCE: L: 9283 F: 183
  - LIMIT OF DISTURBED AREA = 3.0 AC. (LIMIT OF PLAN SUBMISSION)
  - PROPOSED USE: RESIDENTIAL CARE FACILITY - 75,000 SF (3 STORIES, 25,000 SF EACH) MAXIMUM NUMBER OF EMPLOYEES: 35 MAXIMUM NUMBER OF TENANTS: 100
  - BUILDING COVERAGE (% OF GROSS SITE AREA): BUILDING (SENIOR HOUSING): 25,000 SF. or 0.56 AC. = 18.1% OF PARCEL 476 (3.00 AC.)
  - FLOOR AREA RATIO (F.A.R.) CALCULATIONS: 75,000 SF./3.0 ACRES = 25,000
  - PARKING: RESIDENTIAL CARE FACILITY: 1 SPACES/2 BEDS  
NUMBER OF BEDS: 100 BEDS  
REQUIRED PARKING: 50 SPACES  
PARKING PROVIDED: 50 SPACES  
HANDICAP PARKING REQUIRED: 3 SPACES  
HANDICAP SPACES PROVIDED: 3 SPACES (INCLUDING 2 VAN SPACES)
  - OWNER: LOIS PETERS, LEROY PETERS ET. AL. /IE
  - APPLICANT: CSH MAPLE LAWN LLC  
1215 PENNSYLVANIA AVE. NW, 2ND FLOOR  
WASHINGTON D.C. 20004  
ATTN: DAVID R. ENNIS  
TEL: (202) 464-8400
  - ZONING STANDARDS: CCT ZONE

	ALLOWED / PERMITTED	PROPOSED
1. BUILDING HEIGHT (SEC. 117.4.D)	40 FT. 44 FT.*	33 FT. - 8 IN. (WITHOUT PARAPET) 42 FT. - 4 IN. (WITH PARAPET)
*PARAPET MAY EXTEND UP TO 4 FEET PAST THE MAXIMUM ALLOWED HEIGHT PER SECTION 128.0.A.3.a OF THE ZONING REGULATIONS		
2. MINIMUM USE SETBACK		
a. FROM RR ZONE	50 FT.	50 FT.
b. FROM ANY OTHER DISTRICT	30 FT.	N/A
c. FROM PUBLIC STREET R/W	30 FT.	43 FT.



- LEGEND**
- EX. 8" S EX. SEWER
  - EX. 16" W EX. WATER
  - EX. 18" RCP EX. STORM DRAIN
  - S PROP. SEWER
  - W PROP. WATER
  - STORM PROP. STORM DRAIN
  - 40 EX. CONTOURS
  - 100 EX. CONTOURS
  - 410 EX. CONTOURS
  - 408 EX. CONTOURS
  - G EX. GAS
  - E EX. ELECTRIC
  - PROP. ELECTRIC
  - PROP. LIMIT OF DISTURBANCE
  - SF STANDARD SILT FENCE
  - SSF SUPER SILT FENCE
  - EX CURB & GUTTER
  - PROP. CURB & GUTTER
  - EX. TREELINE
  - PROP. TREELINE
  - PROP. BUILDING
  - PARKING LOT LIGHT
  - PROP. TRANSFORMER
  - PROP. SIDEWALK
  - PROP. PAVEMENT
  - PROP. CONCRETE
  - PROP. FIRE HYDRANT

### BUILDING ELEVATIONS



**ASBUILT PROFESSIONAL CERTIFICATION**  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 11285, Expiration Date: March 17, 2021.

3.22.19  
Date  
Todd M. Reddan  
Professional Engineer  
Maryland Reg. No. 11285  
For GLNFA

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
Director: *[Signature]* 11-9-17 Date  
Chief, Division of Land Development: *[Signature]* 11-06-17 Date  
Chief, Development Engineering Division: *[Signature]* 10-20-17 Date

**GLWGUTSCHICK LITTLE & WEBER, P.A.**  
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK  
BURTONSVILLE, MARYLAND 20866  
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.

PREPARED FOR:  
APPLICANT:  
CSH MAPLE LAWN LLC,  
1275 PENNSYLVANIA AVE. NW, 2ND FLOOR  
WASHINGTON D.C. 20004  
CONTACT: DAVID R. ENNIS  
TEL: (202) 469-8400

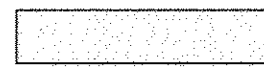

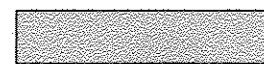
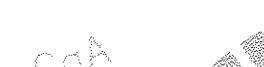
PROFESSIONAL CERTIFICATION  
I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 11285, EXPIRATION DATE: MARCH 17, 2021

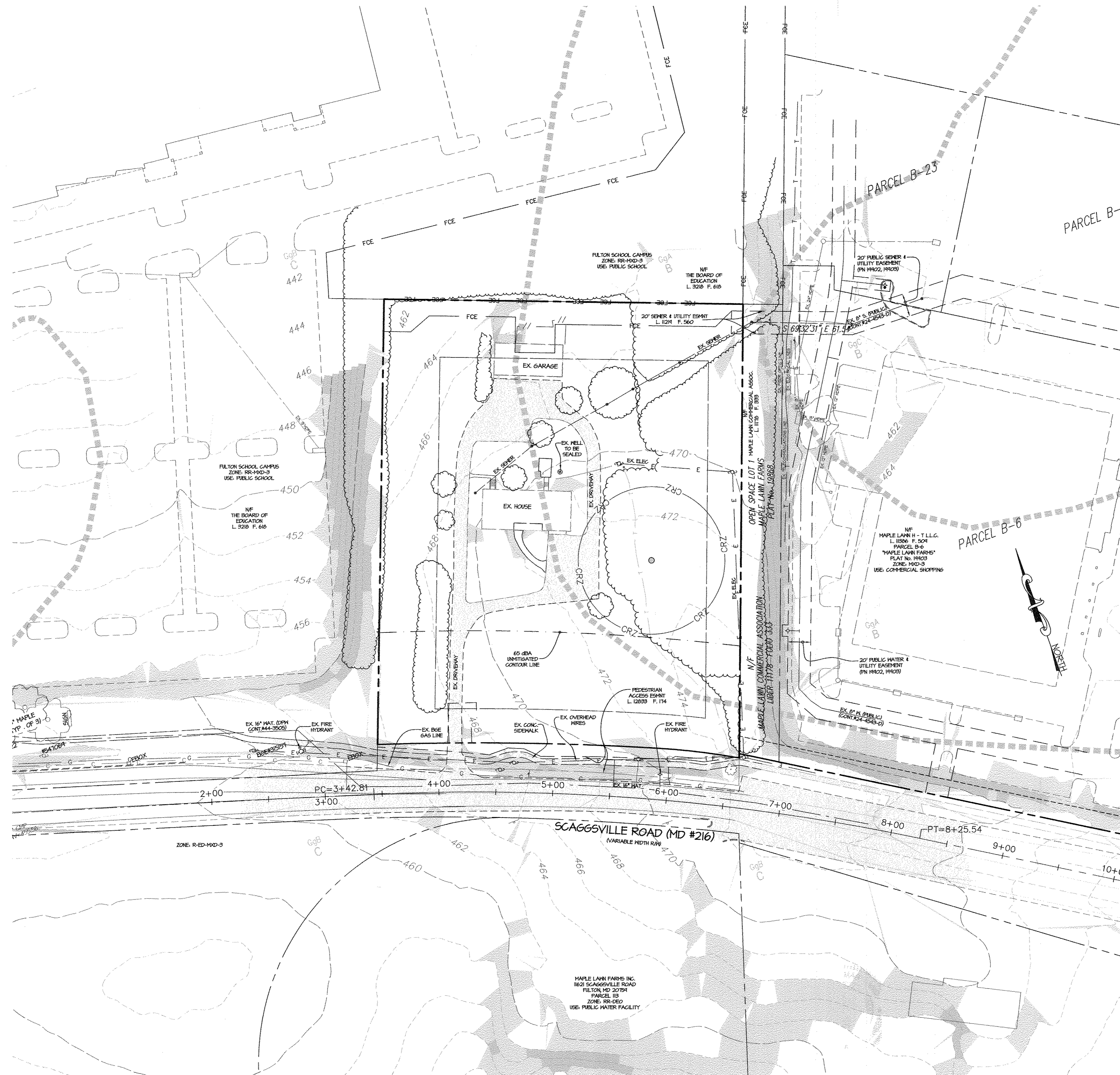
CLARKSVILLE ELECTION DISTRICT No. 5

**ASBUILTS**  
**COVER SHEET**  
**ARBOR TERRACE FULTON**  
**PARCEL A**  
**GREEN RESIDENTIAL CARE BUILDING**  
**LIBER 9293 FOLIO 183**

ADDRESS and PERMIT INFORMATION CHART					
BUILDING ADDRESS:	11584 SCAGGSVILLE ROAD				
SUBDIVISION NAME:	ARBOR TERRACE FULTON	SECTION/AREA:	SEC. N/A AREA: N/A	PARCEL:	A
PLAT Nos.:	17-044	ZONE:	CCT	TAX MAP GRID:	41 21
		ELEC. DIST.:	5	GENUS TRACT:	6091.02
ASBUILT SHEET 1 OF 3					
SCALE:	AS SHOWN	ZONING:	CCT	G. L. W. FILE No.:	16001
DATE:	MAR. 2019	TAX MAP - GRID:	41 - 21	SHEET:	1 OF 18
	JULY, 2017				

**LEGEND**

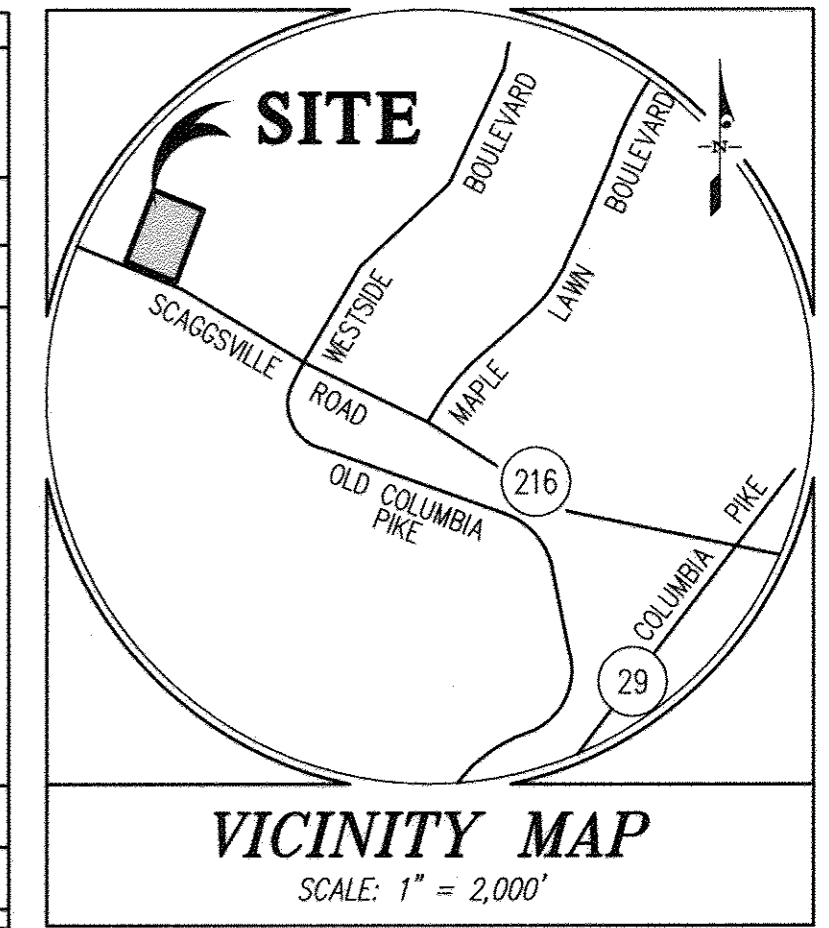
-  EXISTING PAVING
-  10-25% SLOPES
-  +25% SLOPES
-  SOIL TYPE AND DELINEATION



48 Hours  
Before You Dig  
Call  
"MISS UTILITY"  
Service Protection Center

MEMBER  
ONE CALL SYSTEMS INTERNATIONAL

CALL TOLL FREE  
1-800-257-7777

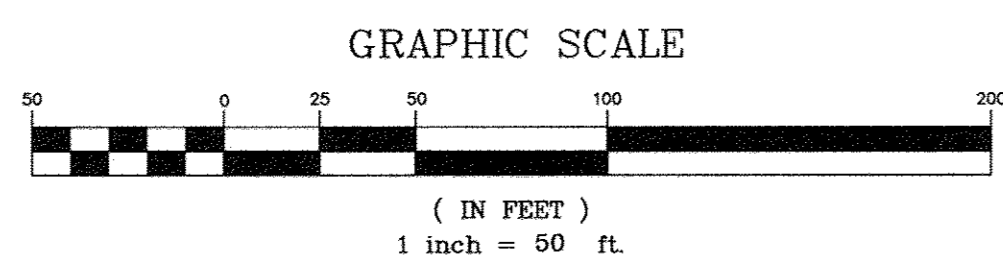


**EXISTING UTILITY NOTES**

1. For marking locations of existing utilities, notify "MISS UTILITY" at 1-800-257-7777, 48 hours prior to any excavation or construction.
2. Information concerning underground utilities was obtained from available records. The contractor must determine the exact locations and elevations of the utilities by digging test pits by hand at all utility crossings well in advance of trenching. If clearances are less than specified on this plan or less than 12 inches when not specified, contact the Engineer, and the owner of the other involved utility before proceeding with construction.
3. For field location of gas line services, notify Washington Gas Light Co., 703-750-1000, 48 hours prior to the start of any excavation or construction.
4. Omissions and/or additions of utilities found during construction shall be the sole responsibility of any contractor engaged in excavation at this site. Gutschick, Little & Weber, P.A., shall be notified immediately of any and all utility information, omissions and additions found by any contractor.
5. Due to the proximity of live underground and overhead utilities, we are not responsible for any damage or injury sustained during construction by any persons, trucks, trailers, or equipment used on or adjacent to the site.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*N. J. J. J.* 11-9-17  
Director Date  
*K. A. A.* 11-06-17  
Chief, Division of Land Development Date  
*C. E. E.* 10-20-17  
Chief, Development Engineering Division Date



**GLW GUTSCHICK LITTLE & WEBER, P.A.**  
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK  
BURTONSVILLE, MARYLAND 20866  
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.

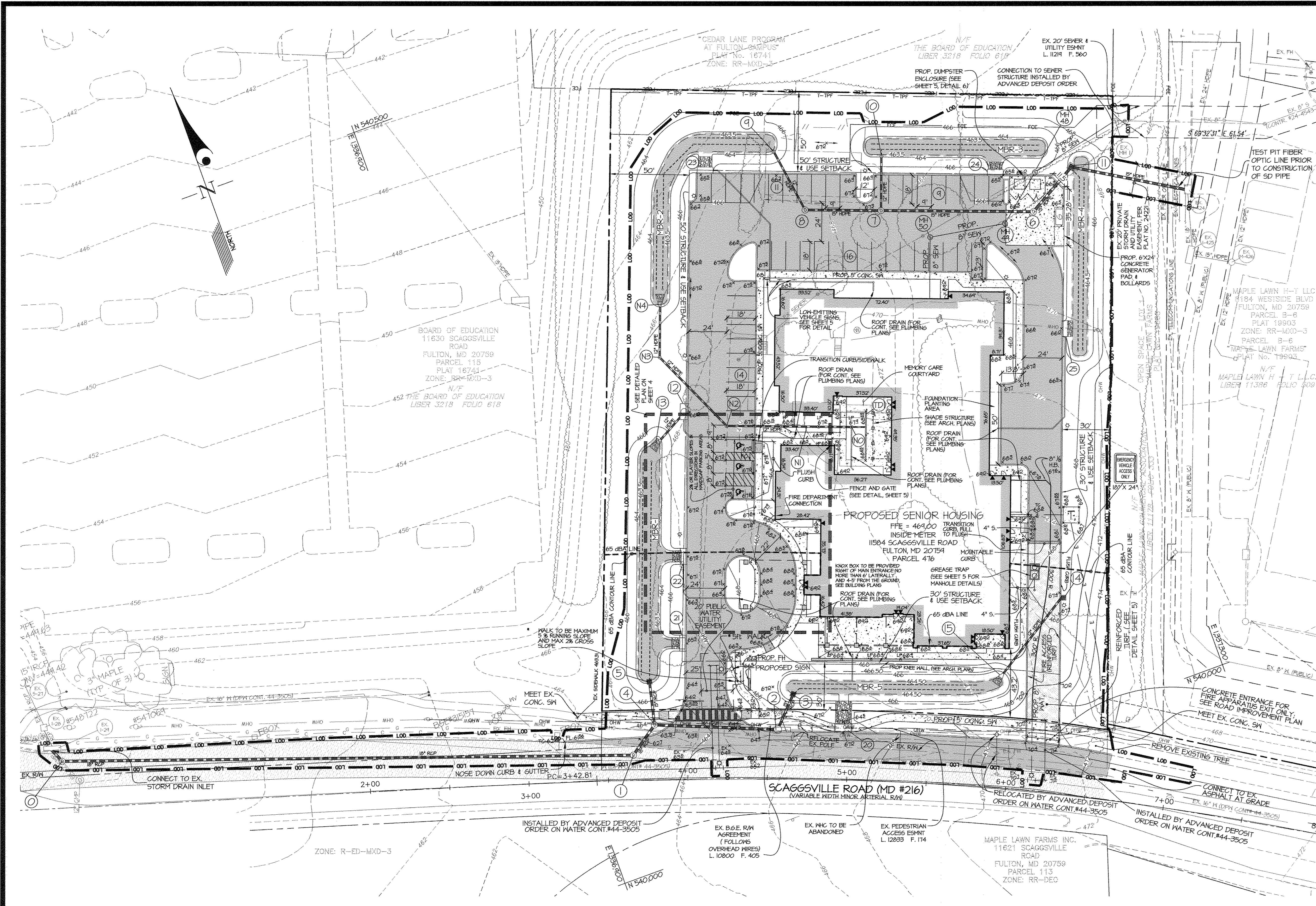
PREPARED FOR:  
APPLICANT:  
CSH MAPLE LAWN LLC.  
1275 PENNSYLVANIA AVE. NW, 2ND FLOOR  
WASHINGTON D.C. 20004  
CONTACT: DAVID R. ENNIS  
TEL. (202) 469-8400

PROFESSIONAL CERTIFICATION  
I HEREBY CERTIFY THAT THESE PLANS 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. 17285, EXPIRATION DATE: MARCH 31, 2018.

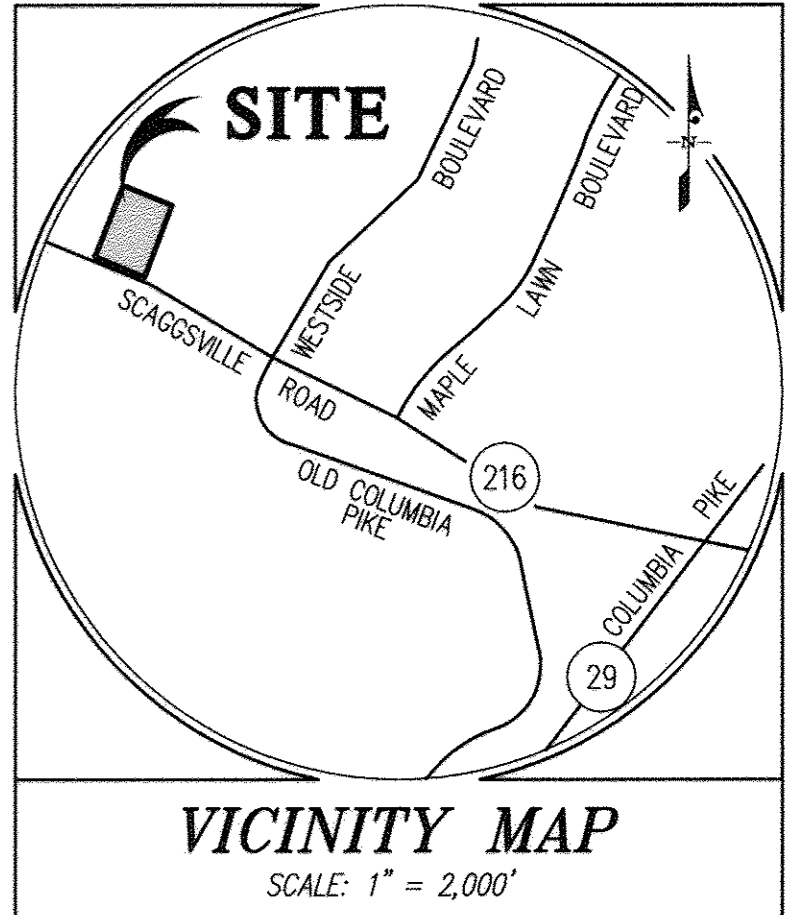
*David R. Ennis*  
David R. Ennis  
Professional Engineer  
9-2-17

**EXISTING CONDITIONS PLAN**  
**ARBOR TERRACE FULTON**  
**PARCEL A**  
GREEN RESIDENTIAL CARE BUILDING  
LIBER 9293 FOLIO 183  
HOWARD COUNTY, MARYLAND

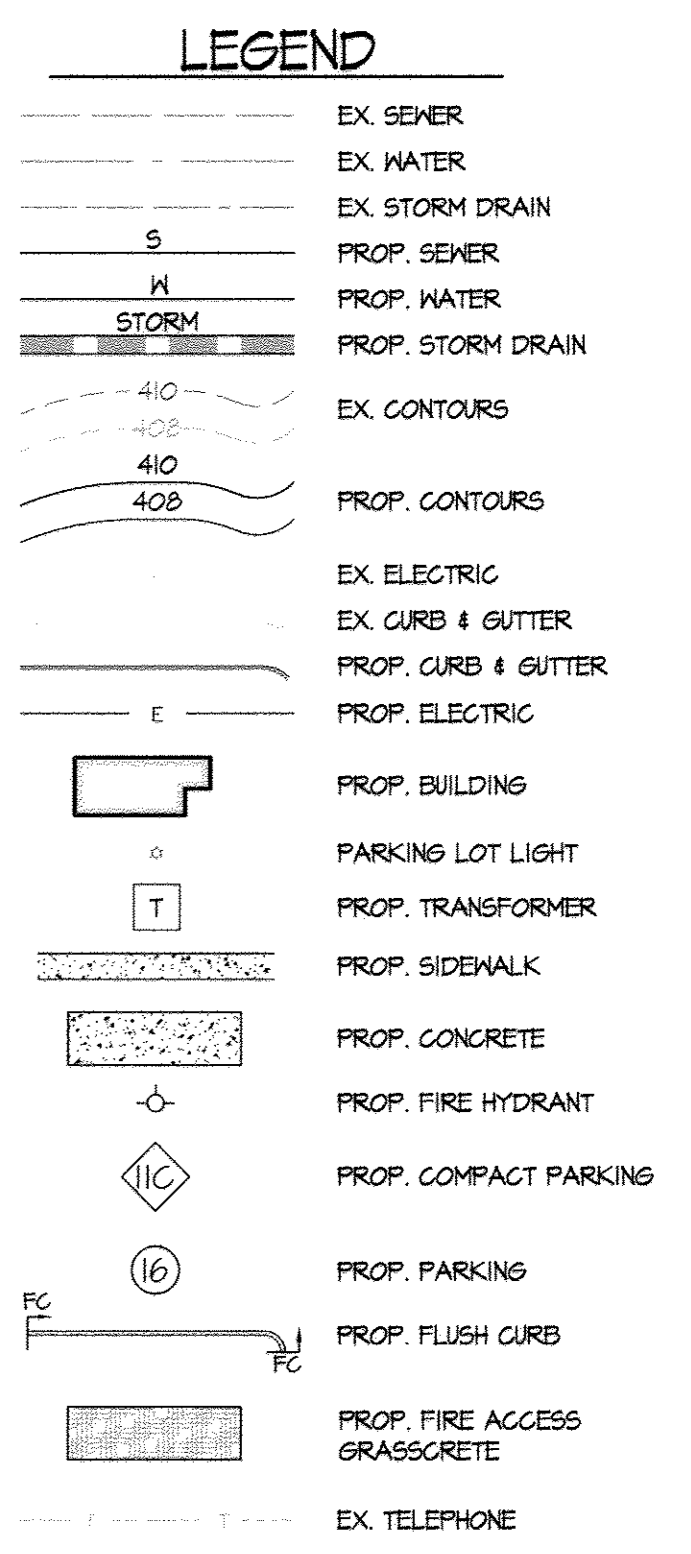
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1"=50'	CCT	16001
DATE	TAX MAP - GRID	SHEET
JULY, 2017	41 - 21	2 OF 18



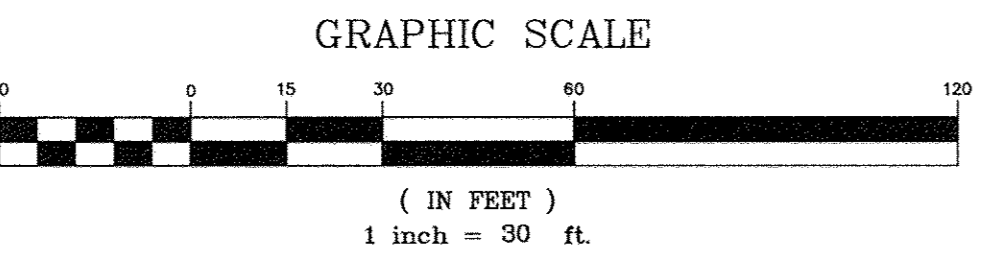
48 Hours  
 Before You Dig  
 Call  
**"MISS UTILITY"**  
 Service Protection Center  
 MEMBER  
  
 CALL TOLL FREE  
 1-800-257-7777



- EXISTING UTILITY NOTES**
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  - For field location of gas line services, notify Washington Gas Light Co., 703-750-1000, 48 hours prior to the start of any excavation or construction.
  - Omissions and/or additions of utilities found during construction shall be the sole responsibility of any contractor engaged in excavation at this site. Otschick, Little & Weber, P.A., shall be notified immediately of any and all utility information, omissions and additions found by any contractor.
  - Due to the proximity of live underground and overhead utilities, we are not responsible for any damage or injury sustained during construction by any persons, trucks, trailers, or equipment used on or adjacent to the site.



- NOTES:**
- TEST PITS AT UTILITY CROSSINGS SHOULD BE PERFORMED PRIOR TO CONSTRUCTION
  - SEE SHEET 6 FOR STORM DRAIN PROFILES AND INFORMATION



**GLWGUTSCHICK LITTLE & WEBER, P.A.**  
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
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PREPARED FOR:  
 APPLICANT:  
 CSH MAPLE LAWN LLC,  
 1275 PENNSYLVANIA AVE. NW, 2ND FLOOR  
 WASHINGTON, D.C. 20004  
 CONTACT: DAVID R. ENNIS  
 TEL. (202) 469-8400

PROFESSIONAL CERTIFICATION  
 I HEREBY CERTIFY THAT THESE PLANS 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. 17282, EXPIRATION DATE: MARCH 31, 2021.

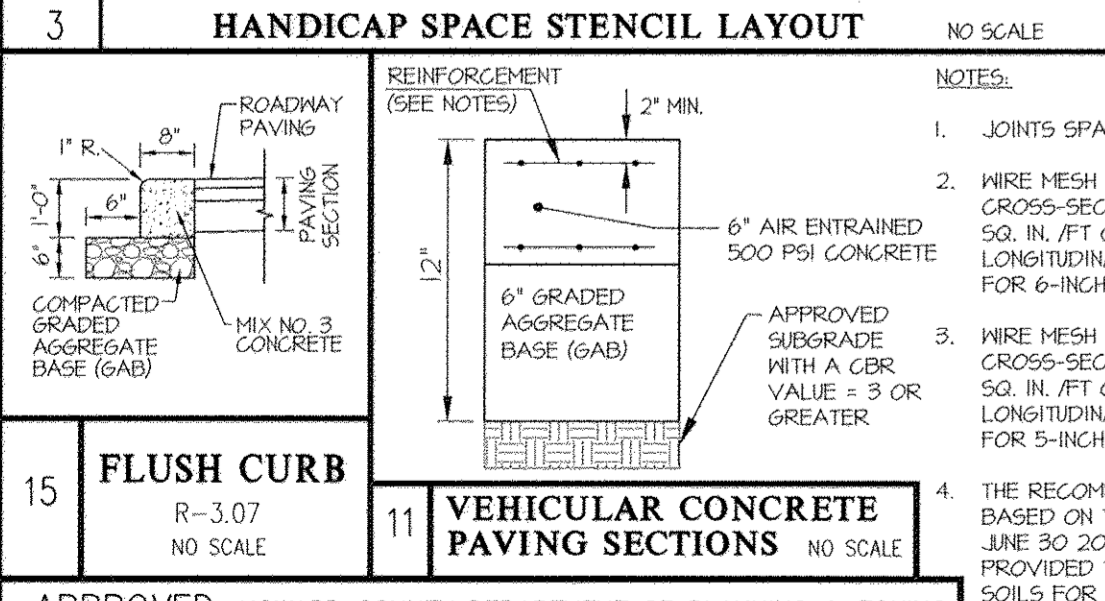
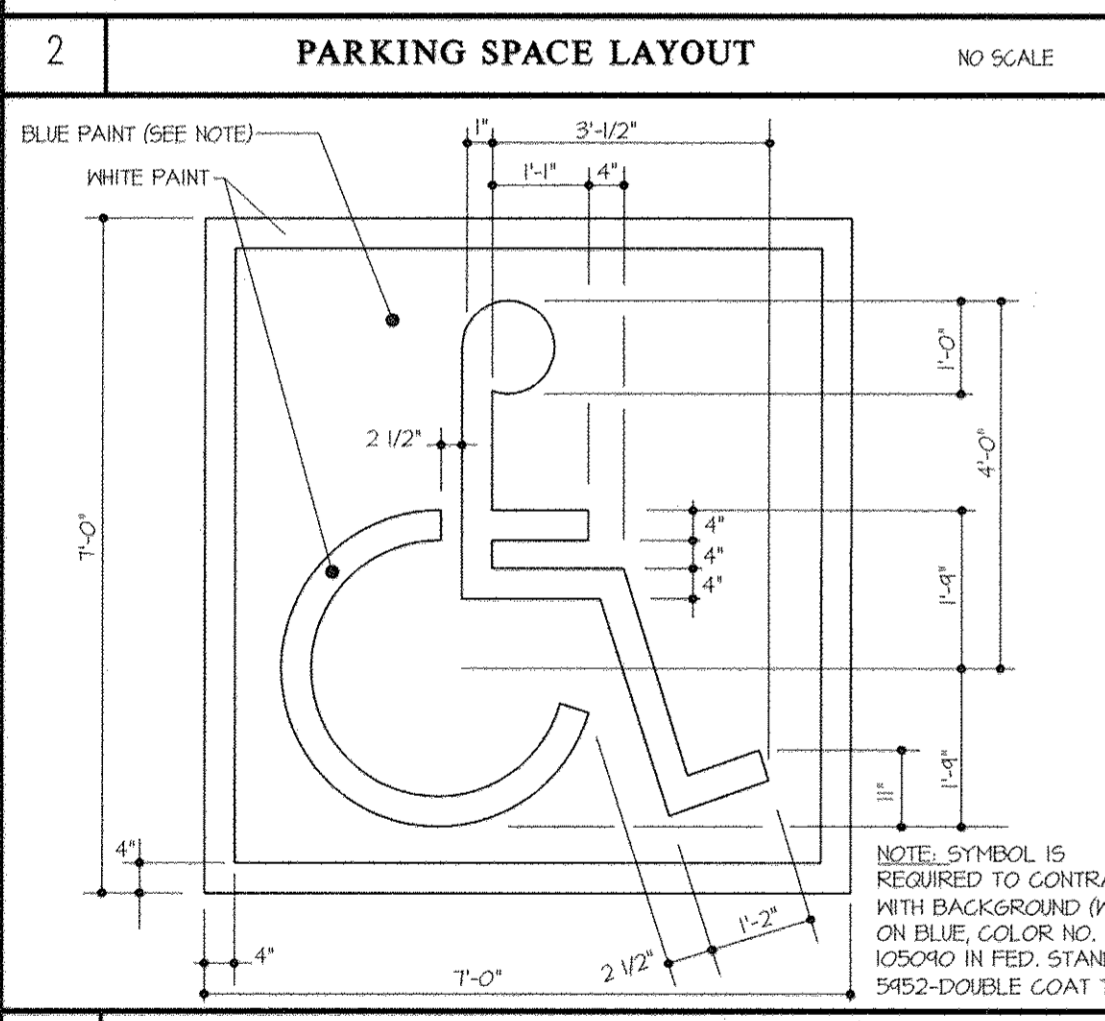
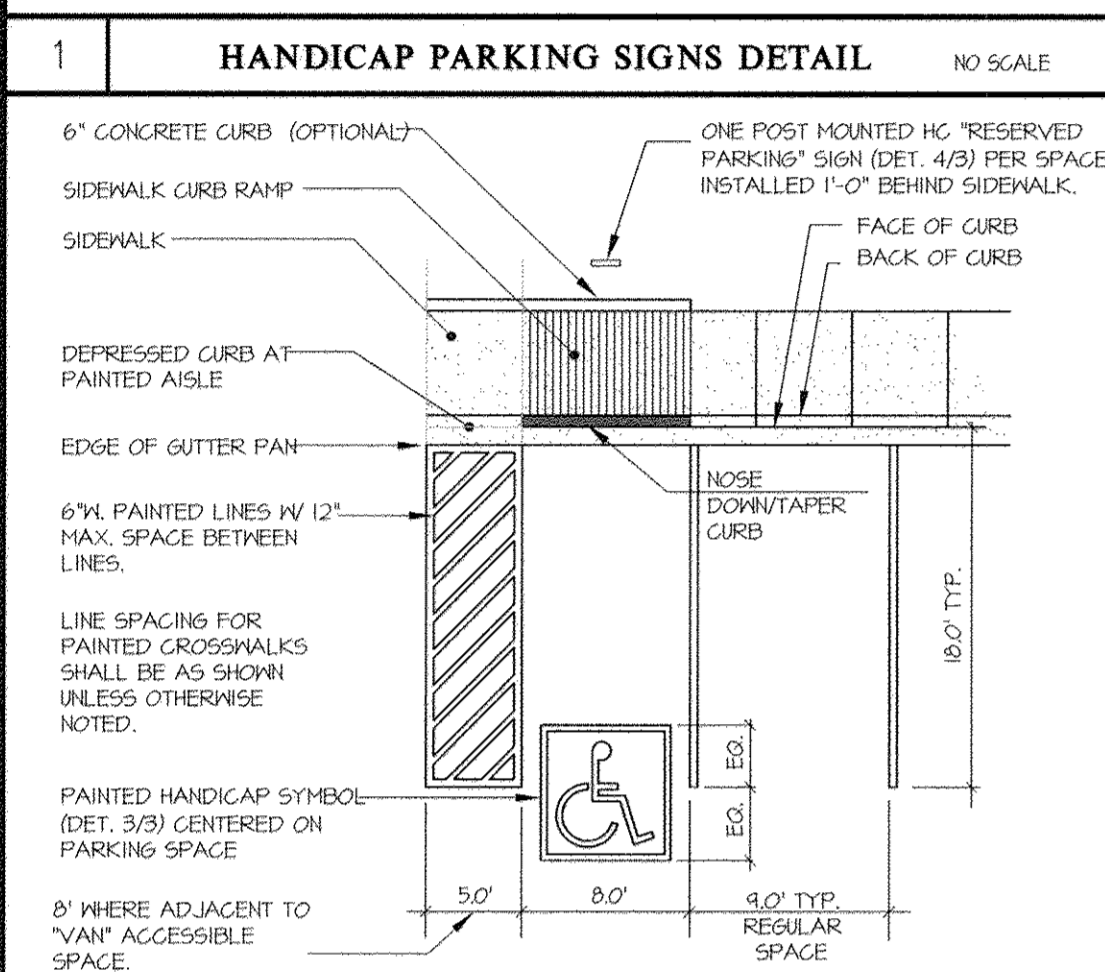
9.21.17

**SITE DEVELOPMENT PLAN**  
**ARBOR TERRACE FULTON**  
**PARCEL A**  
 GREEN RESIDENTIAL CARE BUILDING  
 LIBER 9293 FOLIO 183

SCALE 1"=30'	ZONING CCT	G. L. W. FILE NO. 16001
DATE JULY, 2017	TAX MAP - GRID 41 - 21	SHEET 3 OF 18

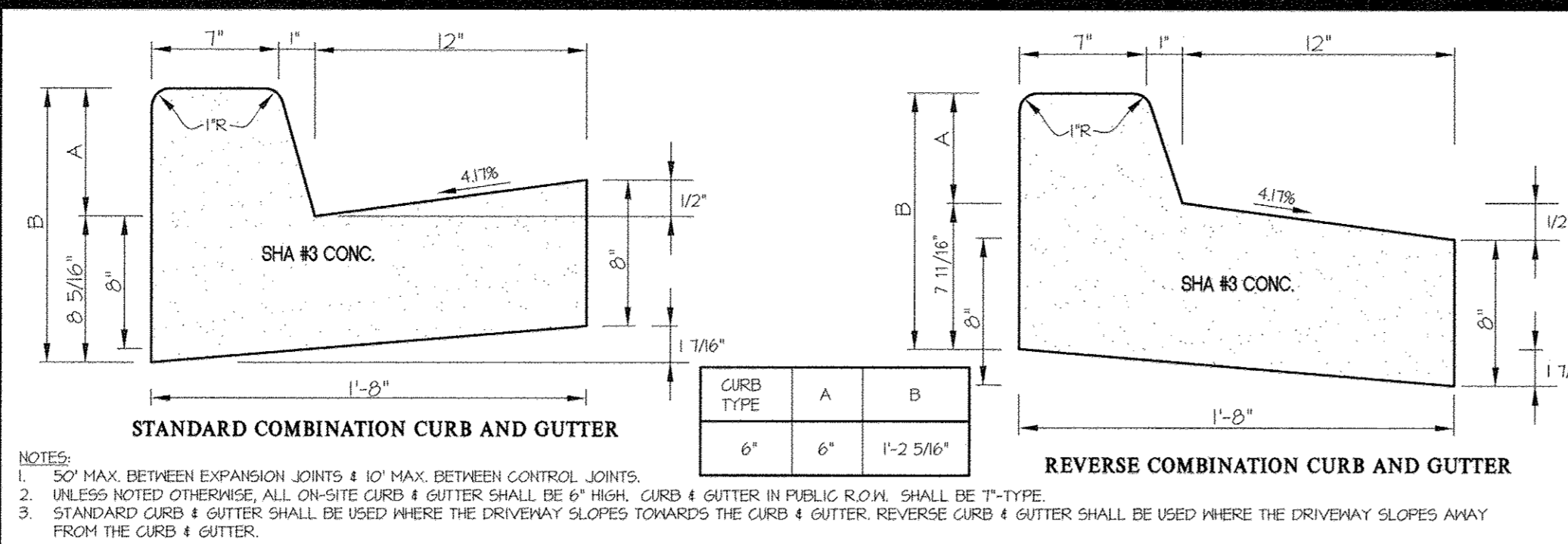


- GENERAL NOTES:  
1. SIGNS SHALL MEET DESIGN STANDARDS OF THE FEDERAL HIGHWAY ADMINISTRATION AND CONFORM TO THE STATE OF MARYLAND STANDARD HIGHWAY SIGN BOOKLET DETAIL RT-8.  
2. ONE SIGN IS REQUIRED PER SPACE PLACED AS SHOWN ON SITE PLAN.  
3. SPACES INDICATED ON SITE PLAN AS "VAN" ACCESSIBLE SHALL BE SIGNED ACCORDINGLY.  
4. SIGNS SHALL BE POLE MOUNTED WITH HOT DIPPED GALVANIZED COUNTY APPROVED PERFORATED CHANNEL POSTS IN THE TOP OF THE SIGN 1'-1" ABOVE FINISHED GRADE OR AS INDICATED ON SITE DRAWINGS.  
5. SIGN SHALL BE ATTACHED TO FLANGED SIDE OF POST. POST SHALL EXTEND INTO GROUND 2'-6" MIN.  
6. COLORS: LEGEND AND BORDER - GREEN  
SYMBOL - WHITE ON BLUE BACKGROUND  
BACKGROUND - WHITE

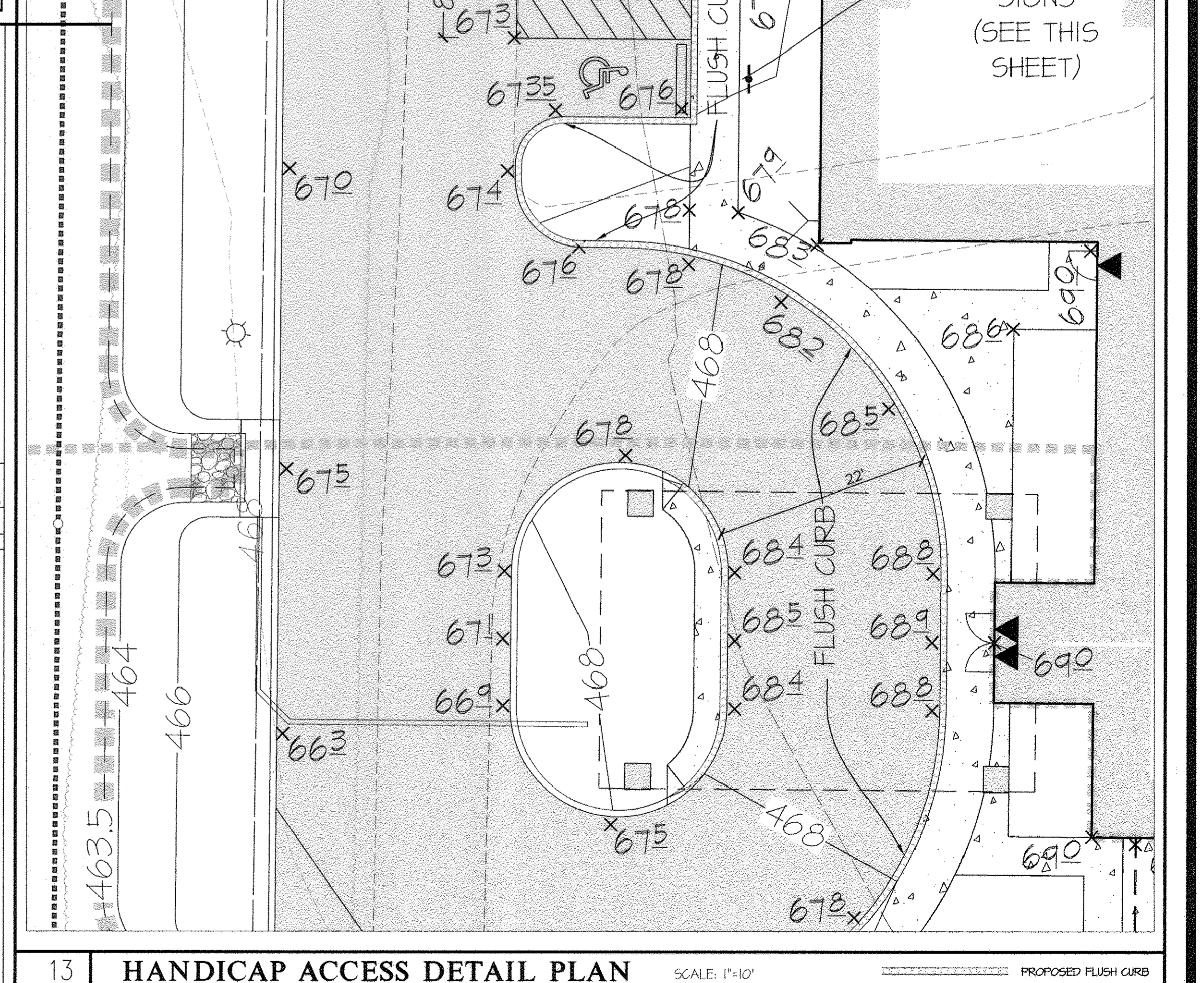
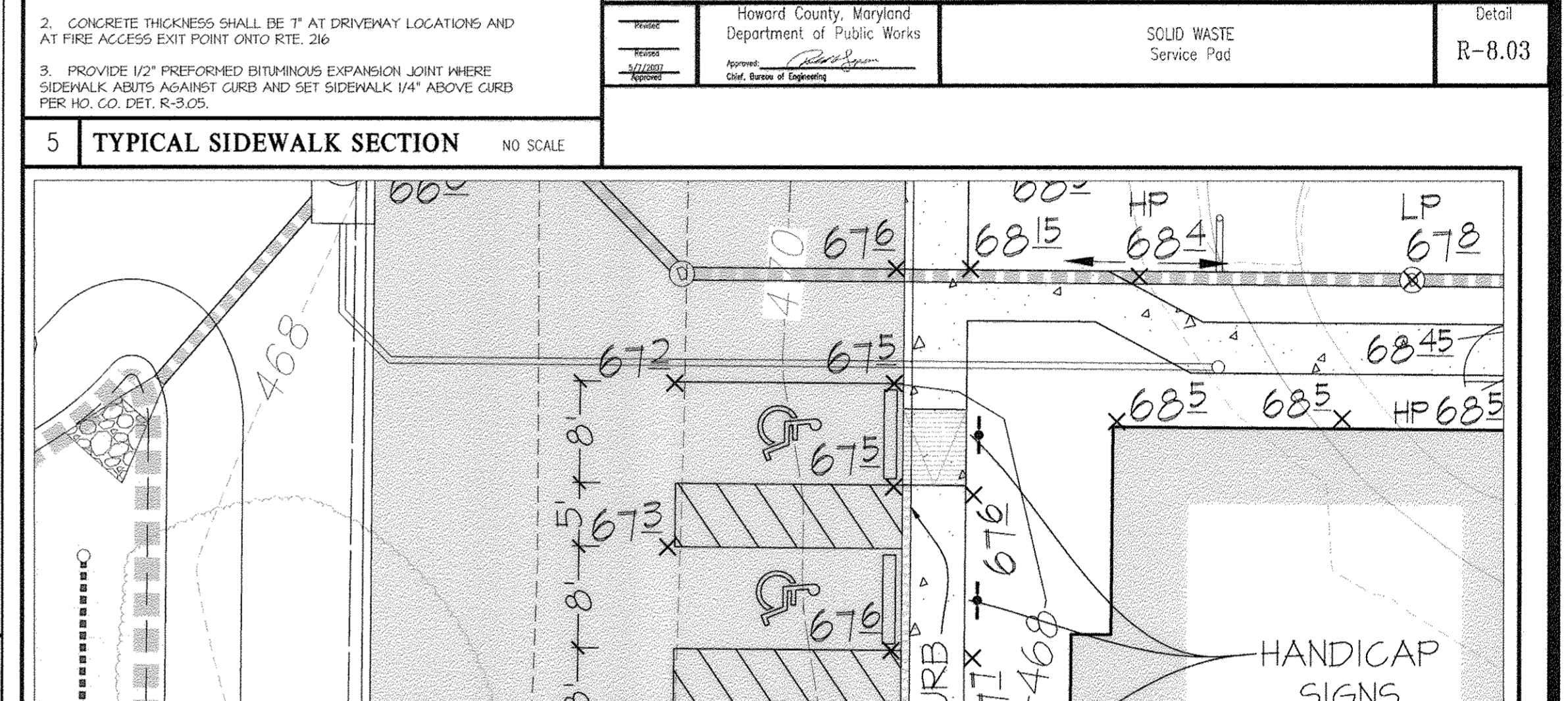
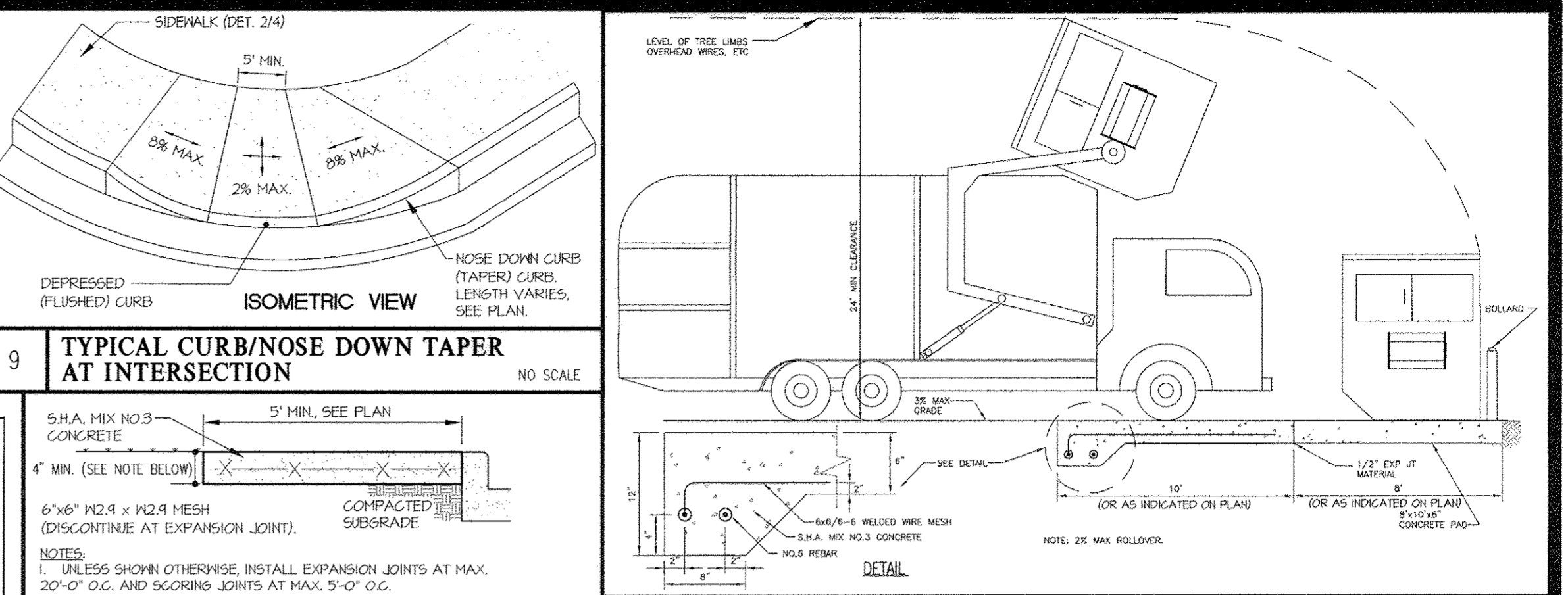
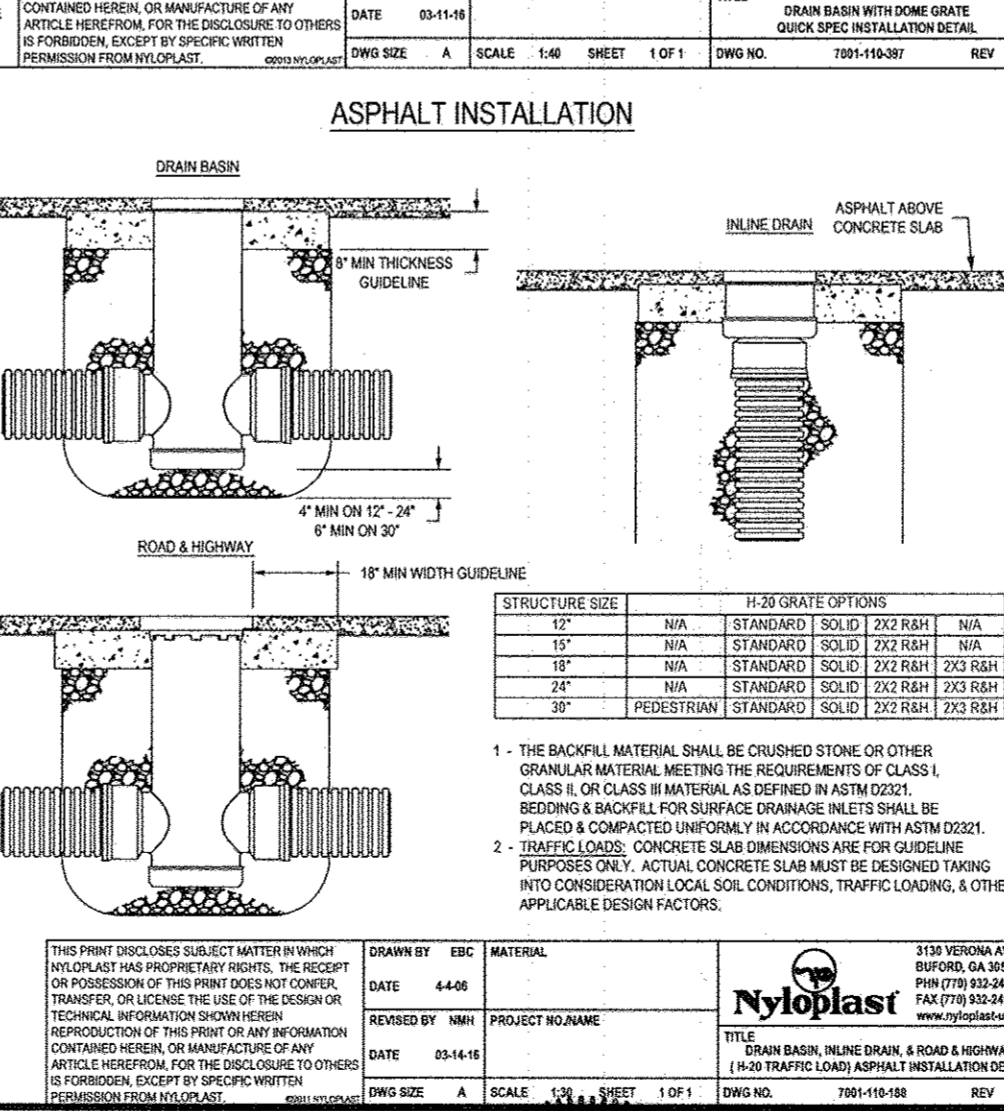
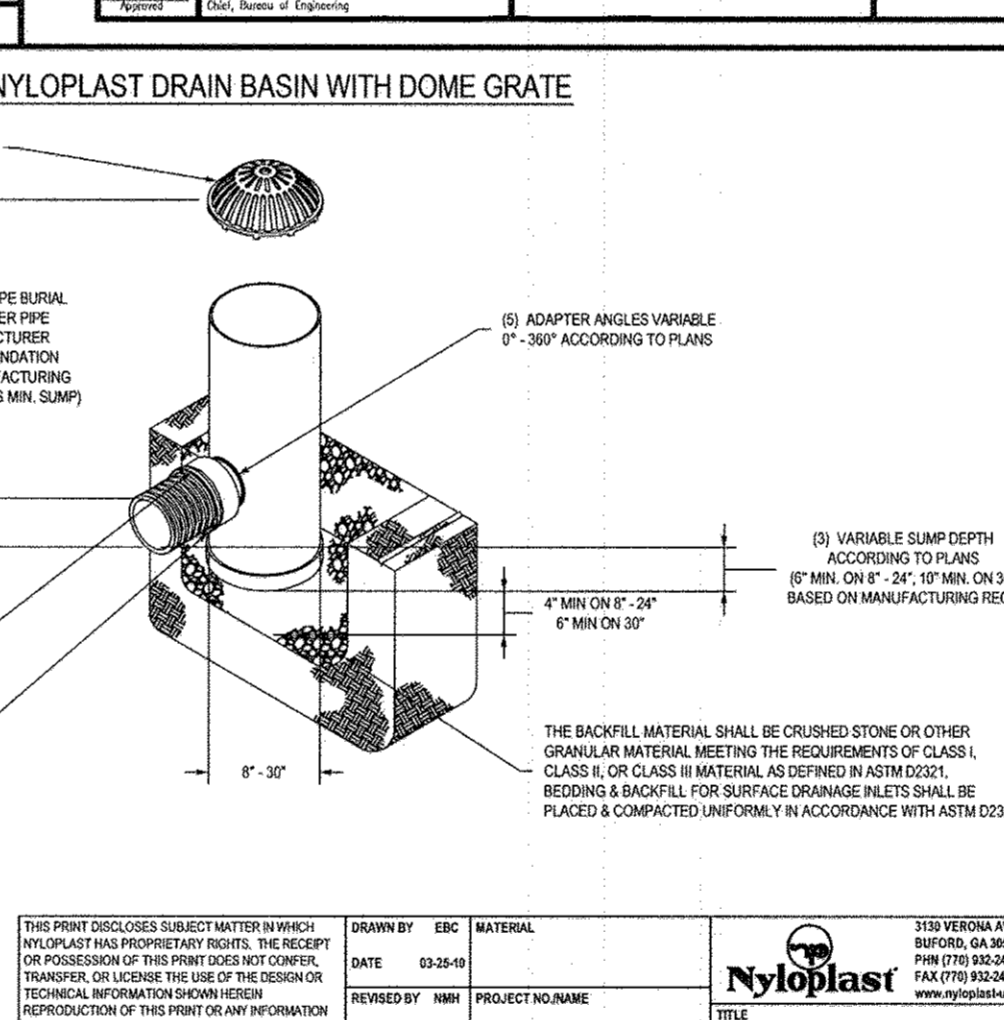
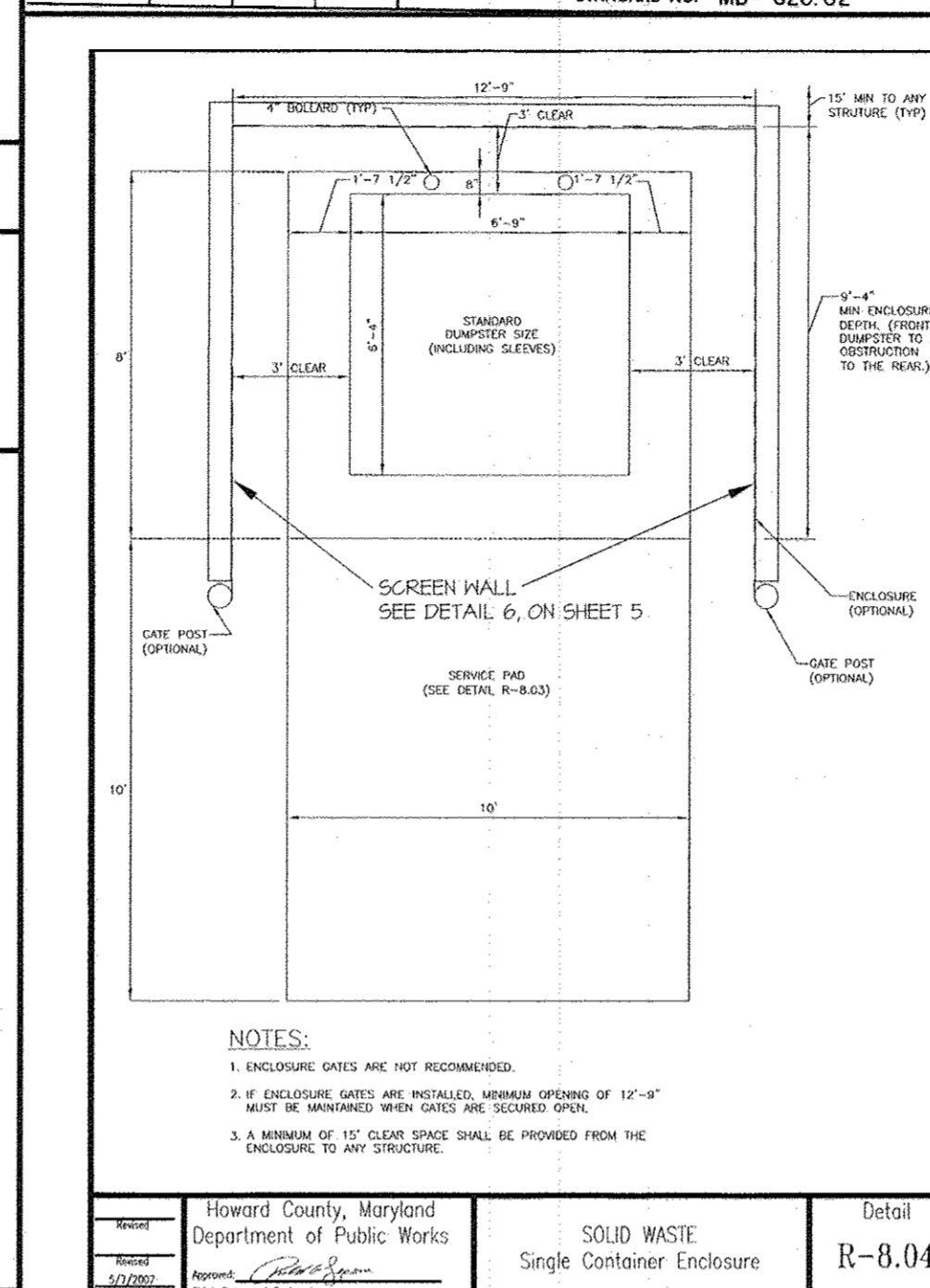
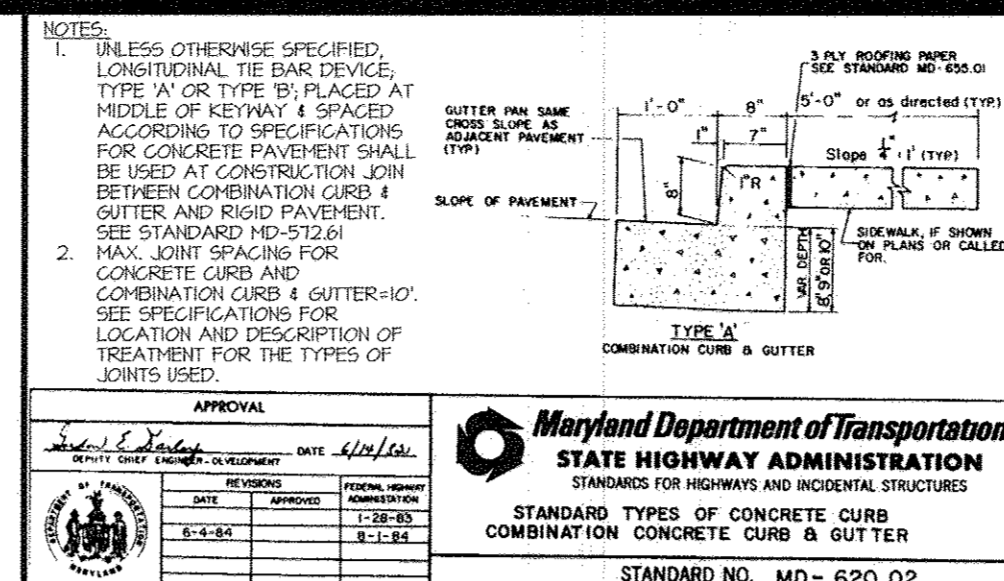
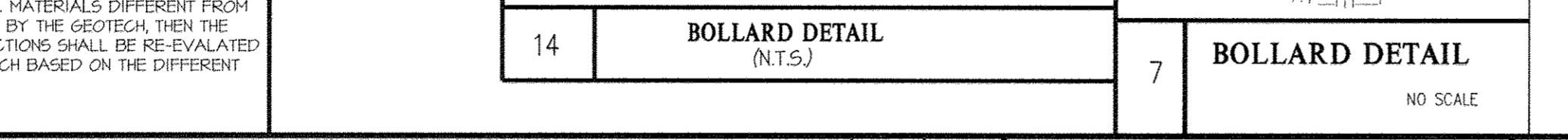
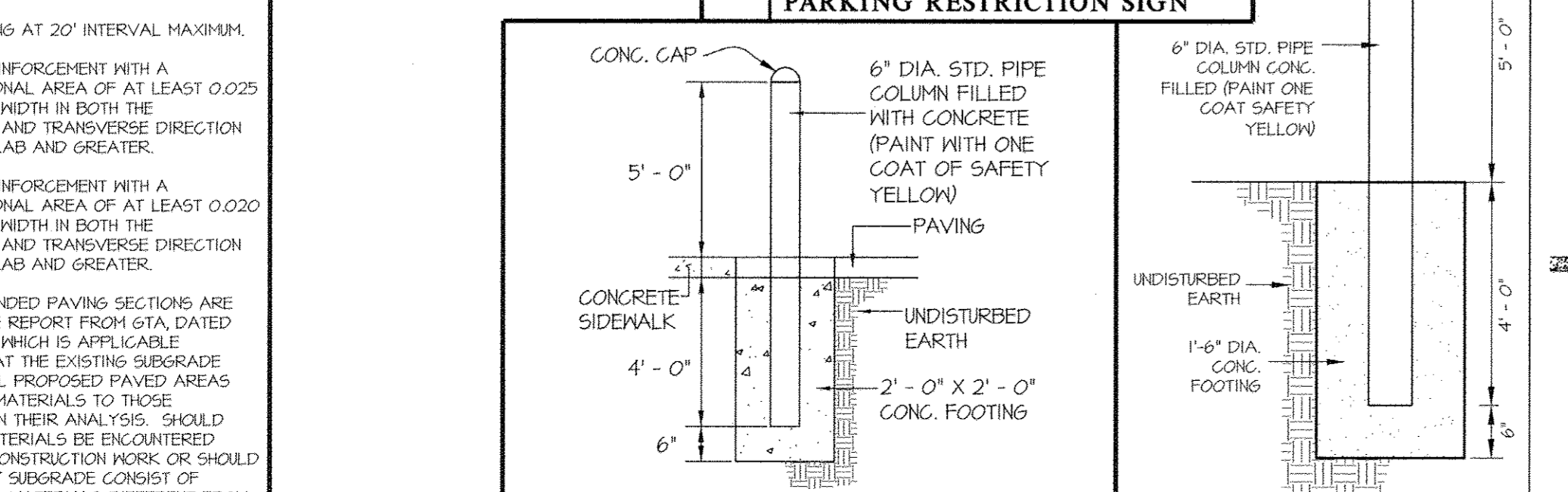
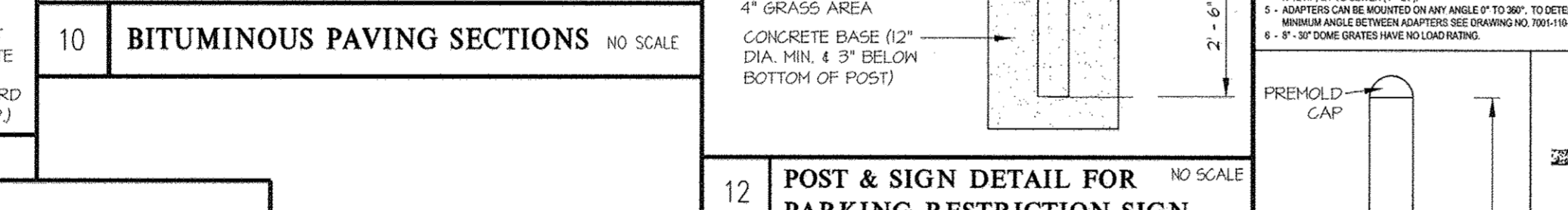
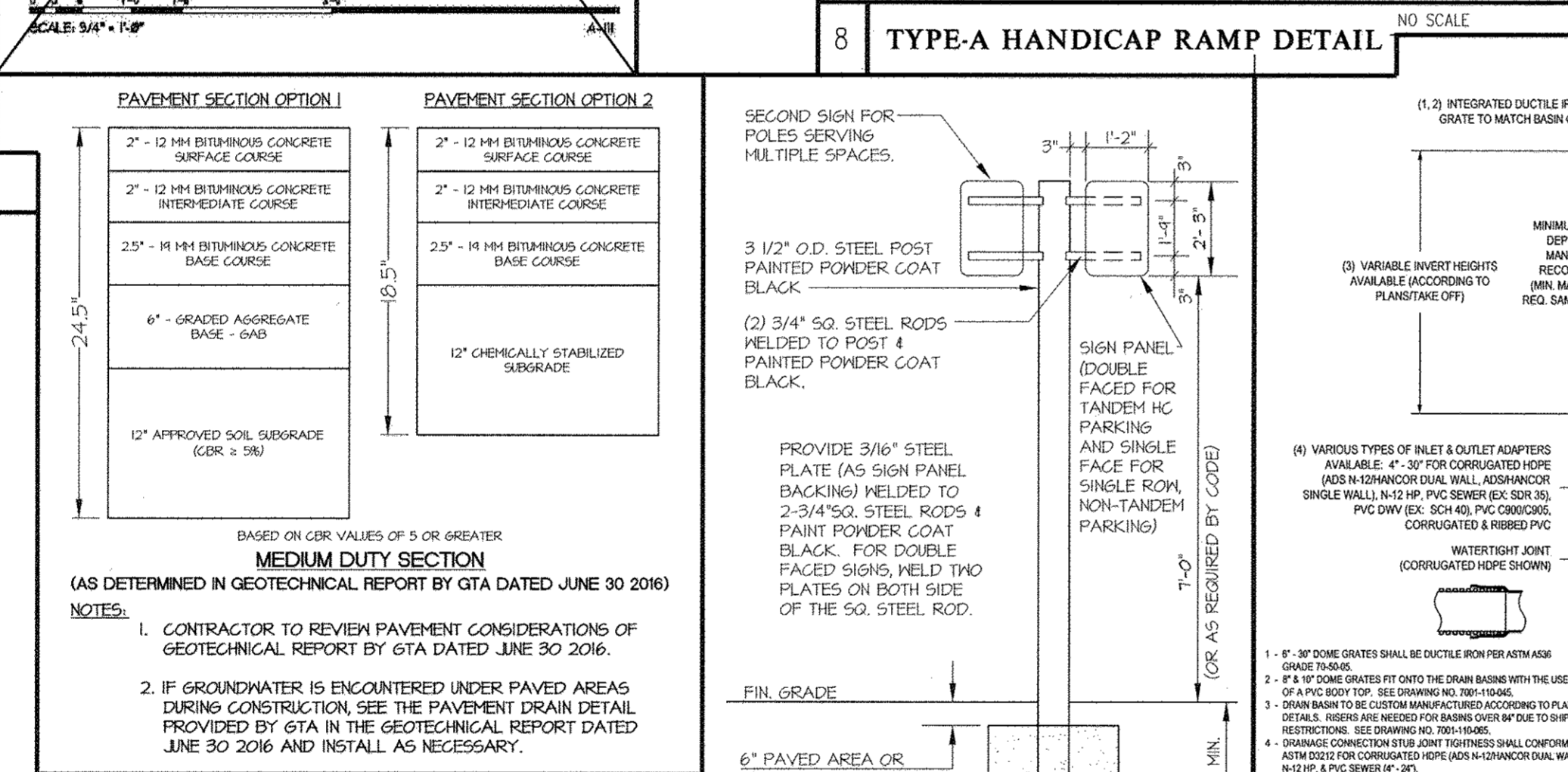
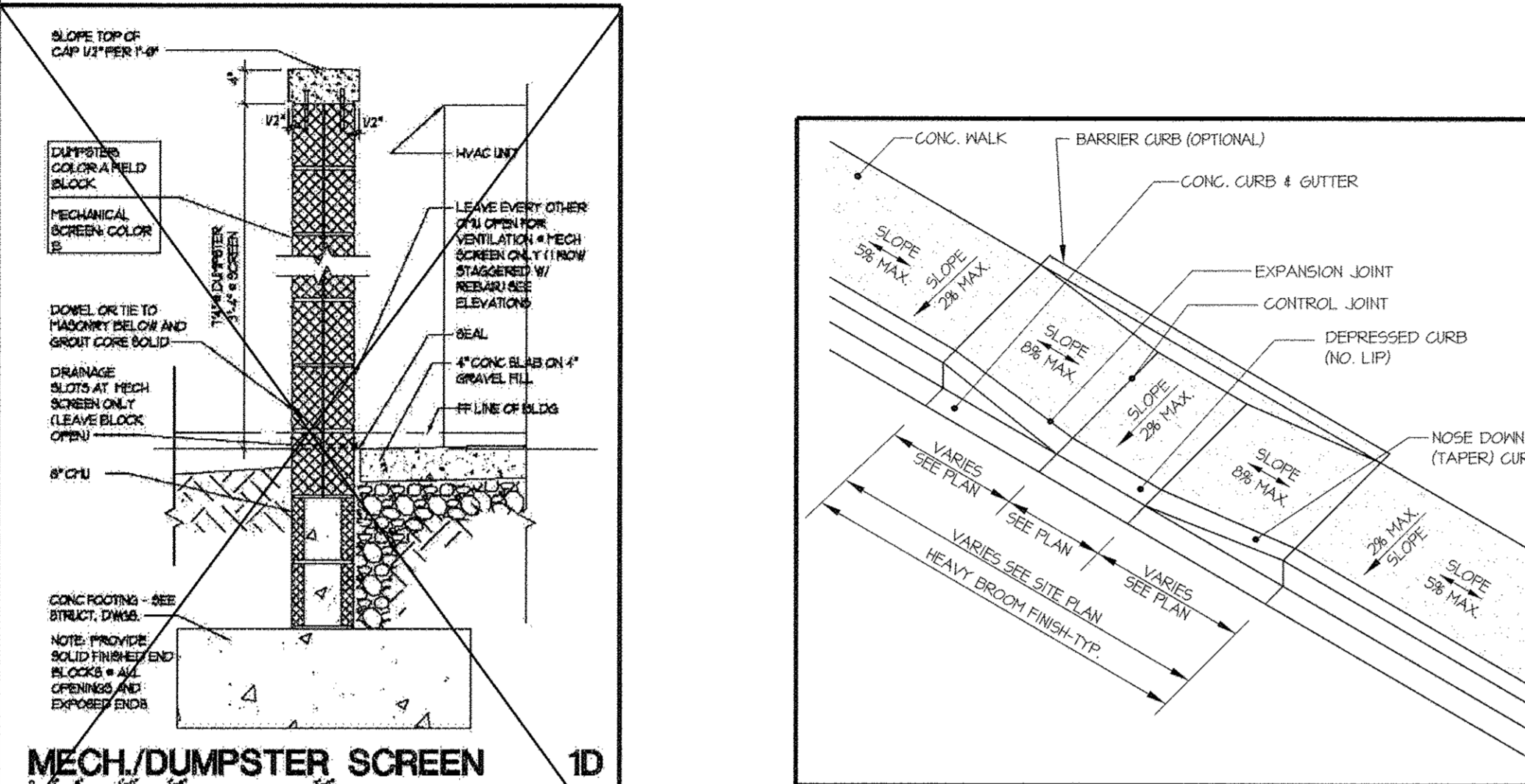


APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
11-9-17  
11-09-17  
10-20-17

GLWGUTSCHICK LITTLE & WEBER, P.A.  
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
3909 NATIONAL DRIVE - SUITE 250 - BURTSMVILLE OFFICE PARK  
BURTSMVILLE, MARYLAND 20866  
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186



- NOTES:  
1. 50" MAX. BETWEEN EXPANSION JOINTS & 107" MAX. BETWEEN CONTROL JOINTS.  
2. UNLESS NOTED OTHERWISE, ALL ON-SITE CURB & GUTTER SHALL BE 6" HIGH. CURB & GUTTER IN PUBLIC R.O.M. SHALL BE 7"-TYPE.  
3. STANDARD CURB & GUTTER SHALL BE USED WHERE THE DRIVEWAY SLOPES TOWARDS THE CURB & GUTTER. REVERSE CURB & GUTTER SHALL BE USED WHERE THE DRIVEWAY SLOPES AWAY FROM THE CURB & GUTTER.



PREPARED FOR:  
APPLICANT:  
1275 PENNSYLVANIA AVE. NW, 2nd FLOOR  
WASHINGTON, D.C. 20004  
CONTACT: DAVID R. ENNIS  
TEL: (202) 469-8400

PROFESSIONAL CERTIFICATION  
I HEREBY CERTIFY THAT THESE PLANS 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. 12285  
EXPIRATION DATE: MARCH 31, 2021

SITE PLAN DETAILS  
ARBOR TERRACE FULTON  
PARCEL A  
GREEN RESIDENTIAL CARE BUILDING  
LIBER 9293 FOLIO 183

SCALE  
1"=30'

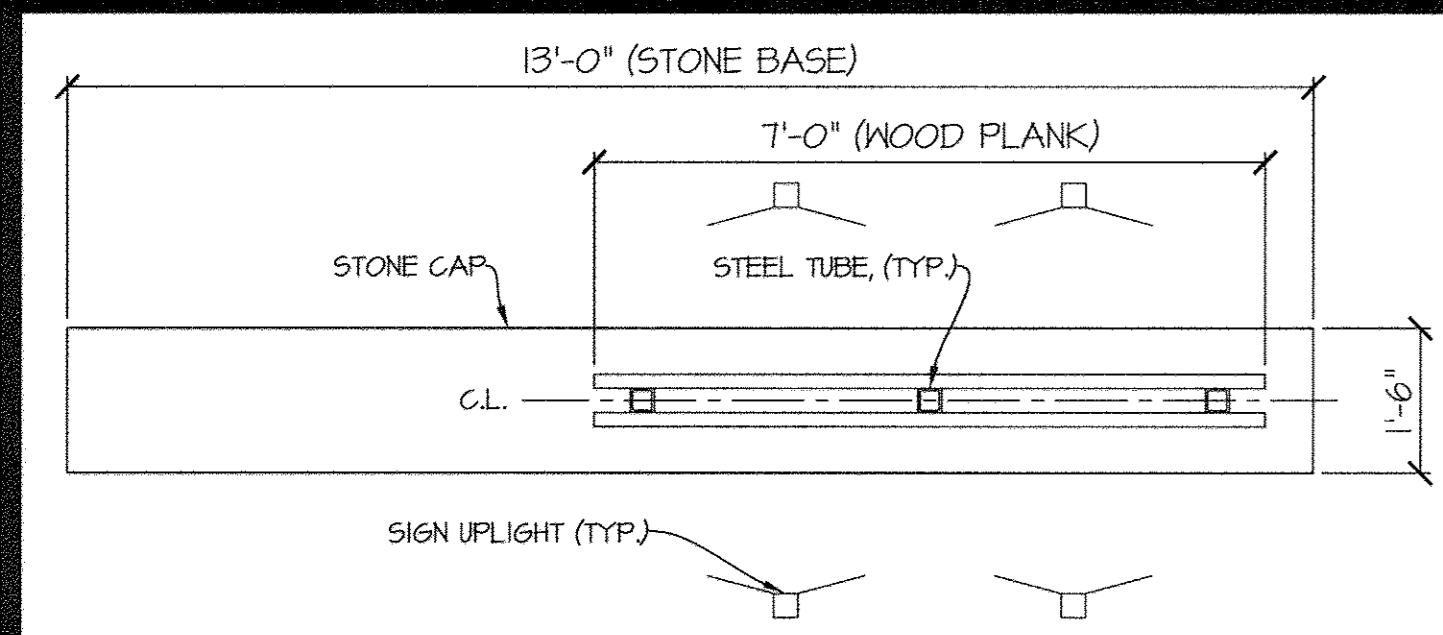
ZONING  
CCT

G. L. W. FILE NO.  
16001

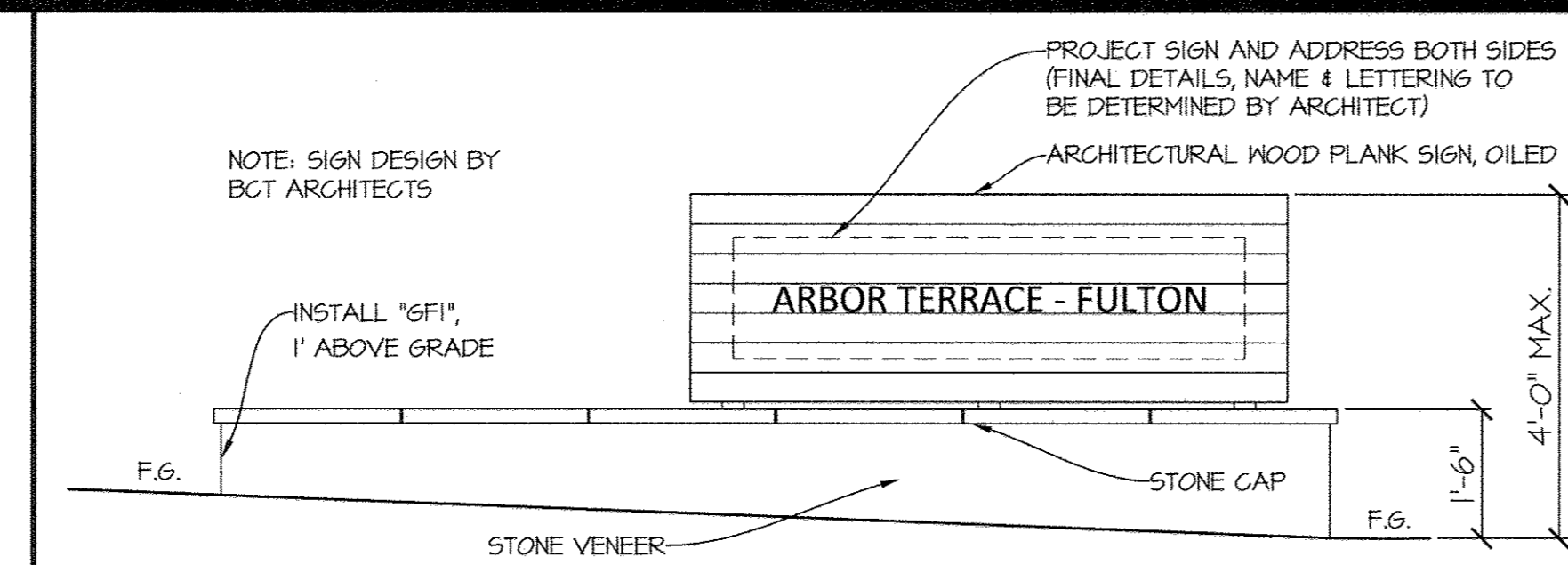
DATE  
JULY, 2017

TAX MAP - GRID  
41 - 21

SHEET  
4 OF 18

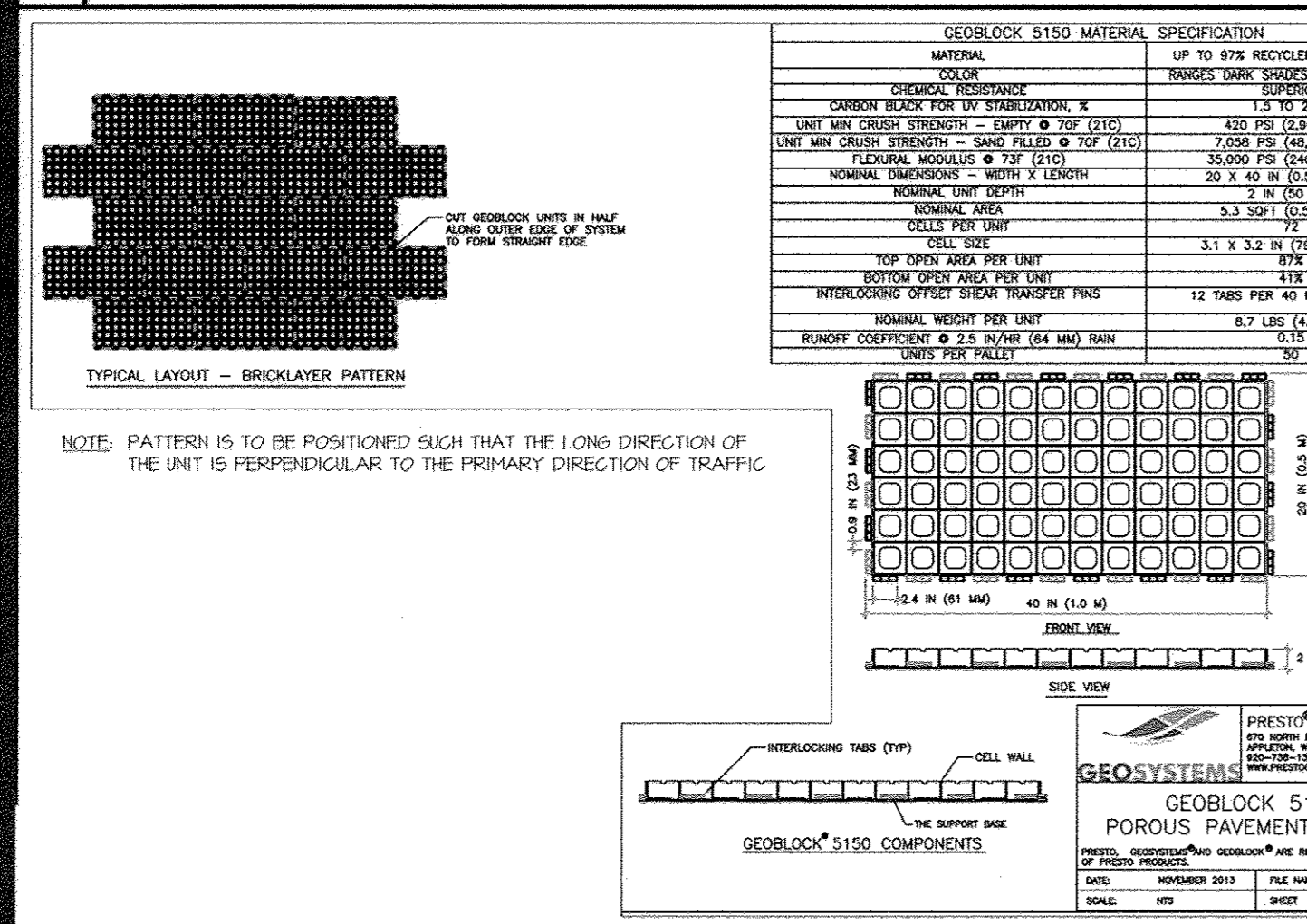
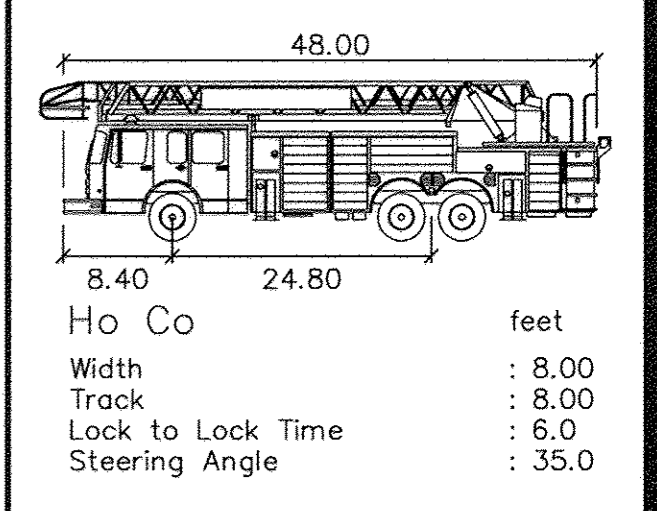


1 ENTRANCE SIGN PLAN SCALE: 1/2" = 1'-0"

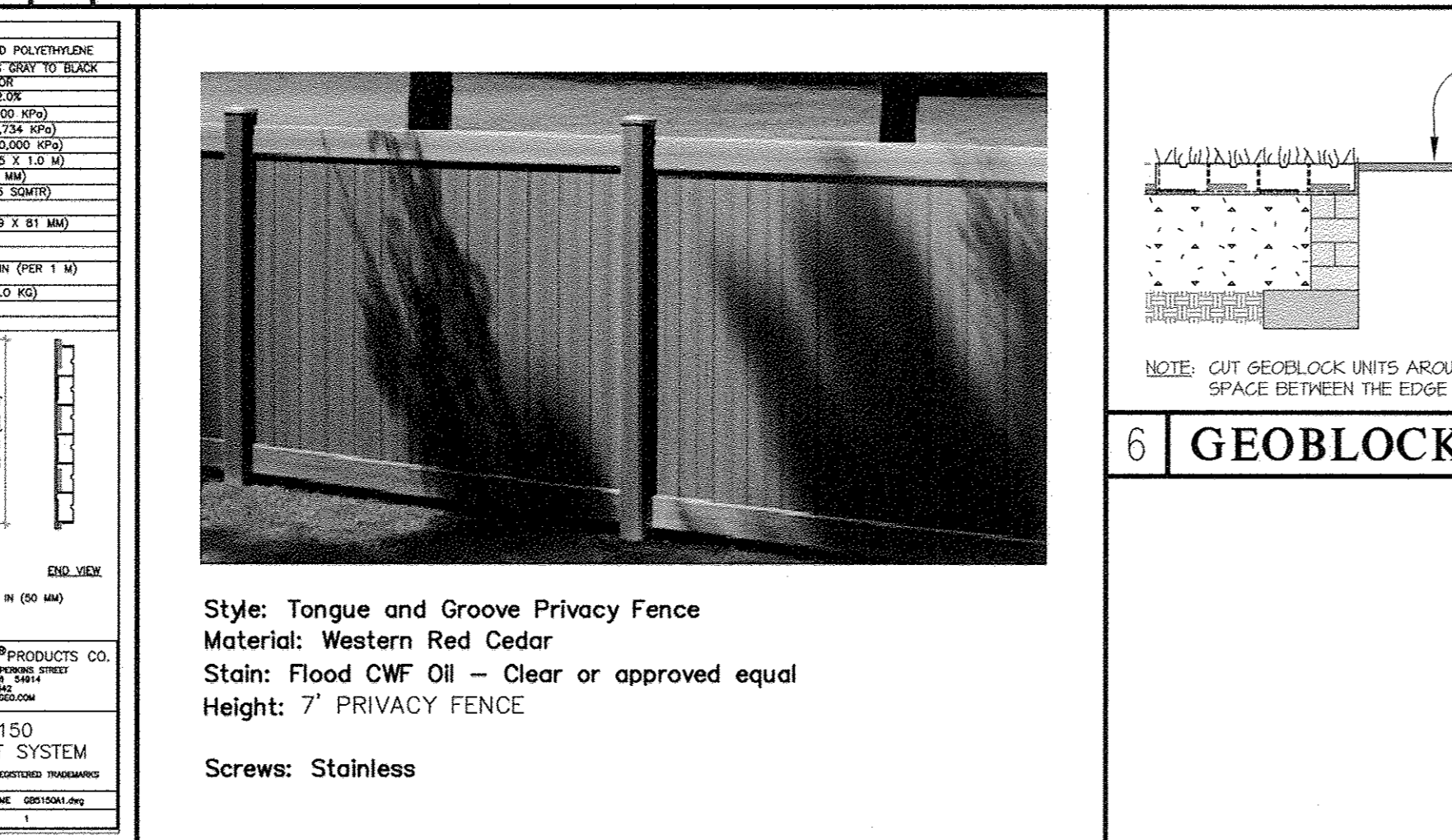


2 ENTRANCE SIGN ELEVATION SCALE: 1/2" = 1'-0"

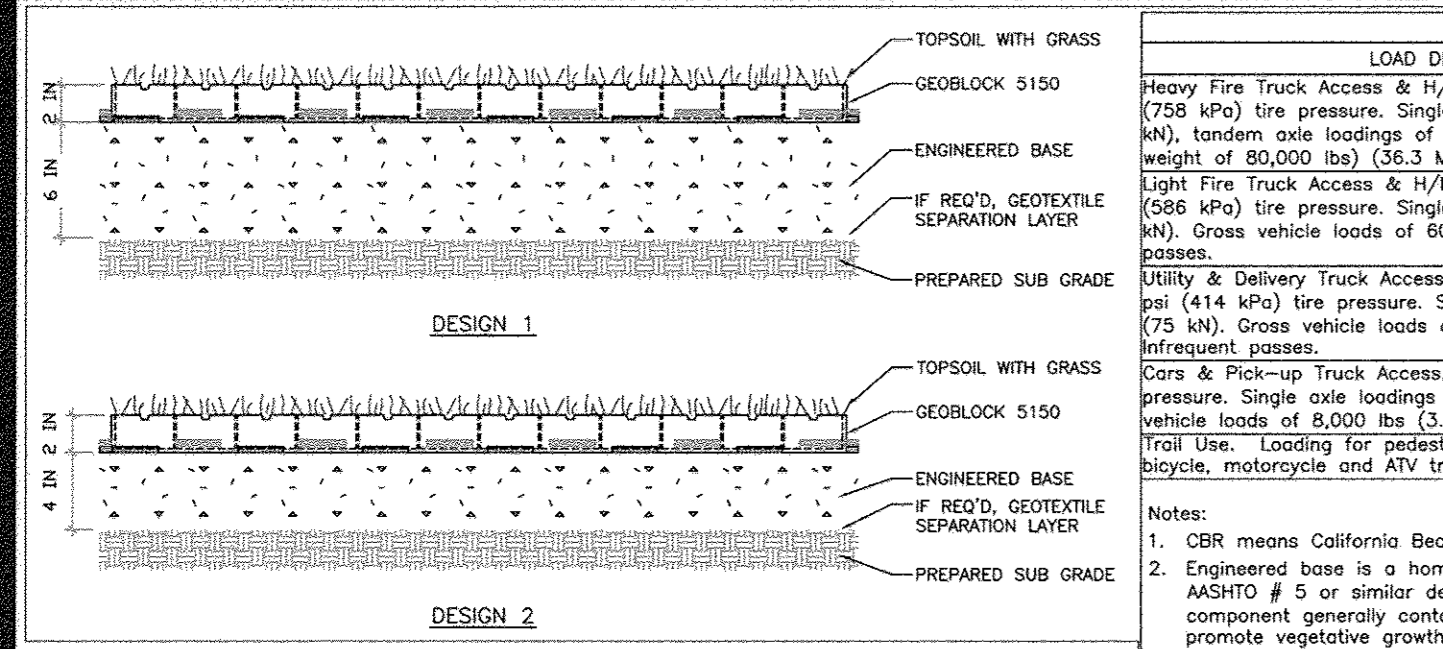
**GEOBLOCK MAINTENANCE AND SEEDING:**  
**SEEDING:**  
 An increase in watering frequency may be necessary when free-draining base materials are used. Use of a free draining base is not recommended. See seeding table below for recommended mixtures and sowing rates. Sod application:  
 Sod can be used for areas where immediate use is desired. Young sod that is free from netting materials is recommended. Mature sod with a more developed root system and sod with netting may be difficult to press/cut into the Geoblock 5150 cells. When sod is used:  
 • Aggressively sweep out the topsoil from the Geoblock 5150 unit to allow room to seat the sod. Enough topsoil must be removed so that the crown of the sod is recessed slightly below the top of the cell after pressing the sod in place. If too much topsoil is removed, the bottom of the sod will not make contact with the topsoil after it is pressed into the cell. Avoid removing too much topsoil.  
 • Place the sod per normal practices.  
 • Press the sod into the partially emptied cells using a roller or other suitable equipment.  
 • Use recommended watering procedures to ensure healthy sod growth.  
**DELIMITATION:**  
 Once healthy turf has been established and good turf maintenance practices are followed, the Geoblock 5150 cell wall structure will have minimal visibility. Delimitation may be desirable to create greater visibility and can include the following: in-ground or above-ground curbing, shrubbery, vegetation, perimeter lighting or delimitation markers, or other suitable systems.  
**MAINTENANCE:**  
**Low Care:**  
 Normal turf care procedures should be followed, including de-thatching and aerating. Some equipment may slightly scar or cut the Geoblock 5150 wall structure during some operations, but will not affect overall structural integrity of the system.  
**Snow Removal:**  
 If required, snow removal should be done using one of the following procedures:  
 • Keep a metal edged plow blade a minimum of 1 inch above the surface during plowing operations, or  
 • Use a plow blade with a flexible rubber edge, or  
 • Use a plow blade with skids on the lower outside corners so that the plow blade does not come in direct contact with the porous pavement system.  
 When deeper ground freeze occurs, the system functions as a typical hard pavement surface. If a sharp metal plow blade comes in direct contact with the surface during plowing, any portion of the Geoblock 5150 system that protrudes above the normal surface could be removed by the blade. NOTE: Damage can occur to the grass and topsoil if plowing above is prevalent.



3 GEOBLOCK FIRE ACCESS TYPICAL DETAIL



6 GEOBLOCK MANHOLE DETAIL

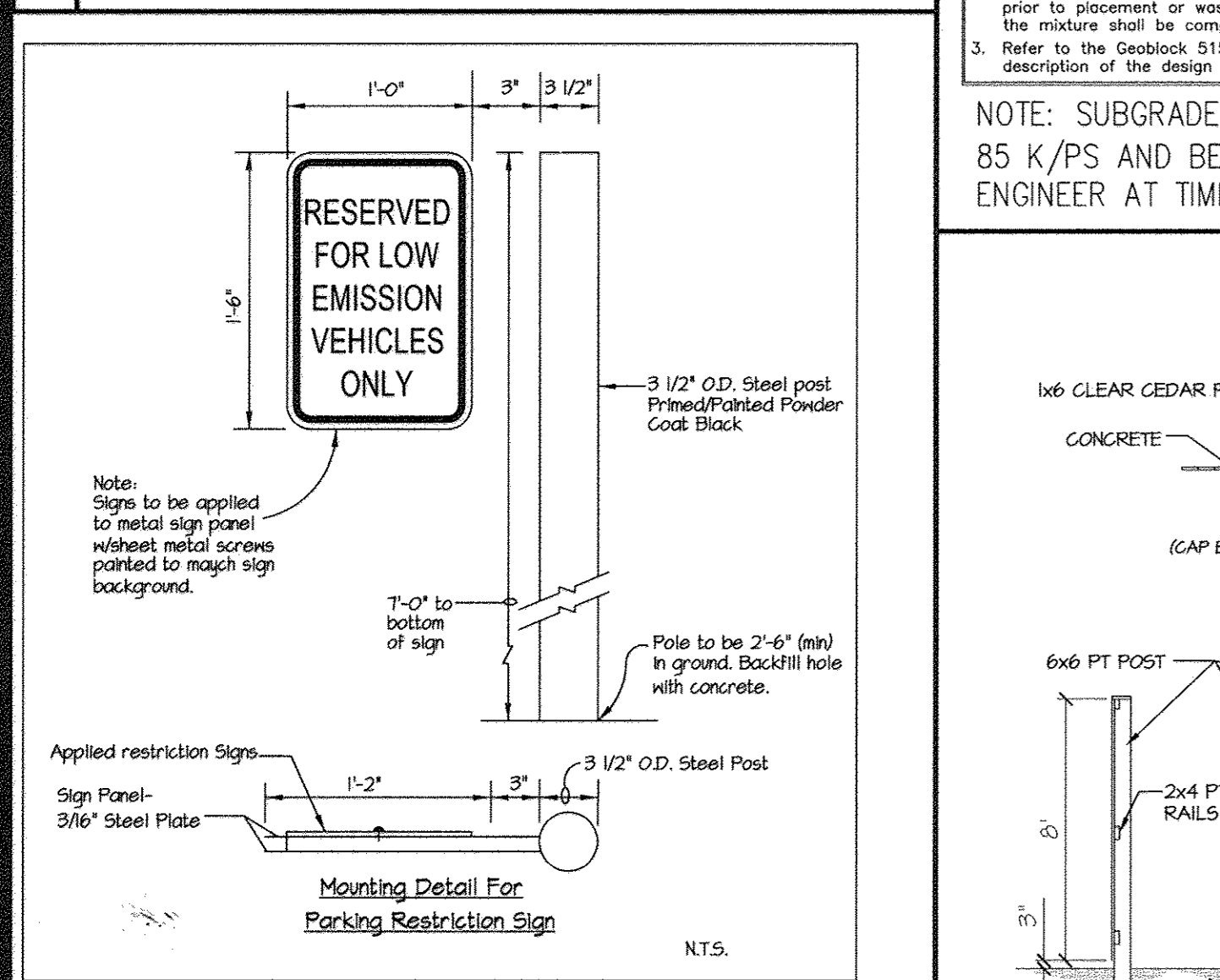


5 GEOBLOCK SUB-BASE DETAIL

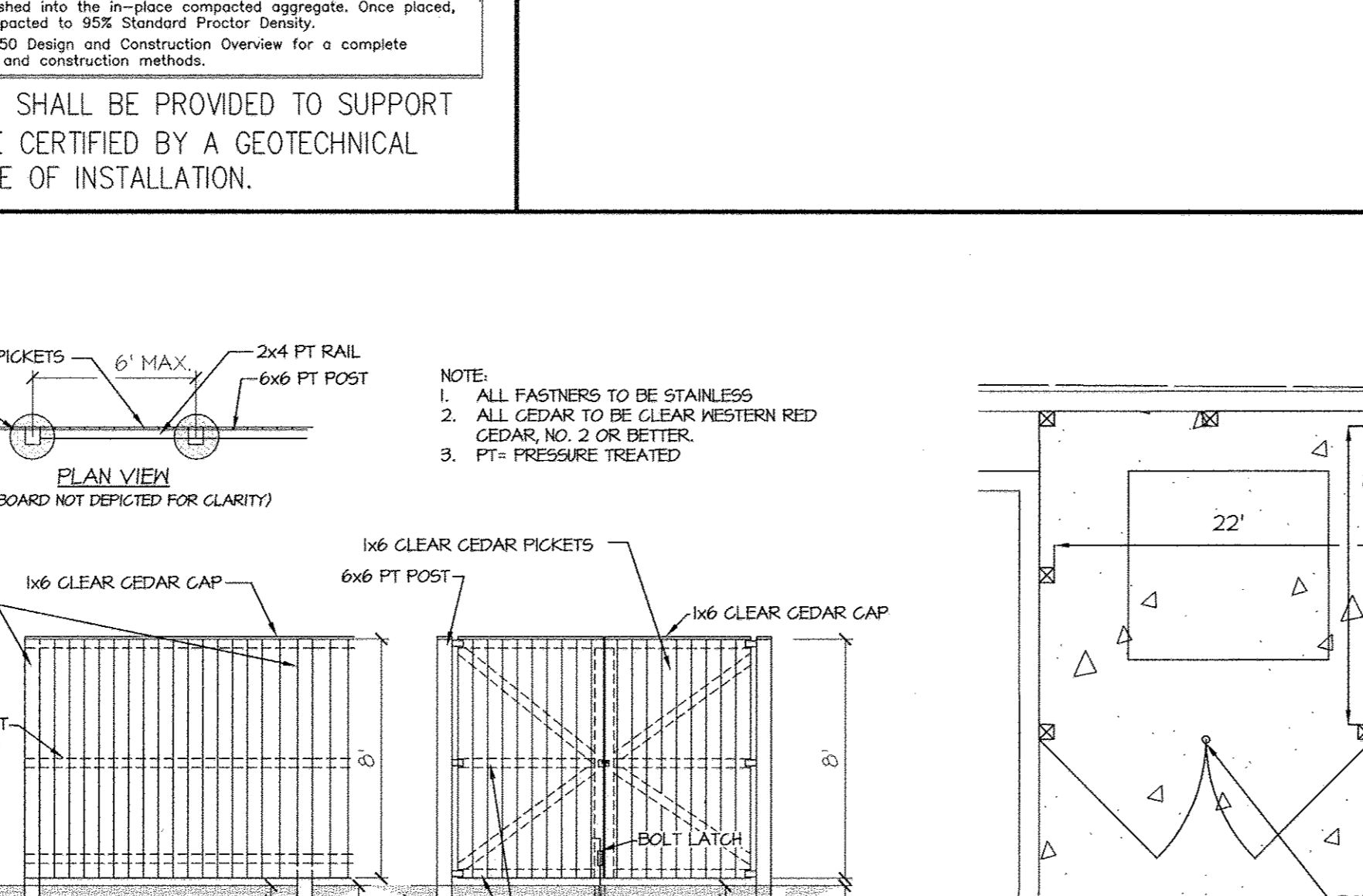
**DESIGN GUIDELINES**

LOAD DESCRIPTION	CBR 2 - 4%	CBR > 4%
Heavy Fire Truck Access & H/HS-20 loading. Typical 110 psi (758 kPa) tire pressure. Single axle loadings of 32 kips (145 kN), tandem axle loadings of 48 kips (220 kN). Gross vehicle weight of 80,000 lbs (36.3 MT). Infrequent passes.	Design 1 - 6" Base	Design 2 - 4" Base
Light Fire Truck Access & H/HS-15 loading. Typical 85 psi (588 kPa) tire pressure. Single axle loadings of 24 kips (110 kN). Gross vehicle loads of 60,000 lbs (27.2 MT). Infrequent passes.	Design 2 - 4" Base	Design 3 - 2" Base
Utility & Delivery Truck Access & H/HS-10 loading. Typical 60 psi (414 kPa) tire pressure. Single axle loadings of 16 kips (75 kN). Gross vehicle loads of 40,000 lbs (18.1 MT). Infrequent passes.	Design 3 - 2" Base	Design 3 - 2" Base
Cars & Pick-up Truck Access. Typical 45 psi (310 kPa) tire pressure. Single axle loadings of 4 kips (18 kN). Gross vehicle loads of 8,000 lbs (3.6 MT). Infrequent passes.	Design 4 - No Base	Design 4 - No Base
Trail Use. Loading for pedestrian, wheelchair, equestrian, bicycle, motorcycle and ATV traffic.	Design 4 - No Base	Design 4 - No Base

**Notes:**  
 1. CBR means California Bearing Ratio.  
 2. Engineered base is a homogeneous mixture consisting of crushed rock having an AASHTO # 5 or similar designation blended with pulverized topsoil and void component generally containing air and/or water. This homogeneous mixture will promote vegetative growth and provide required structural support. The aggregate portion shall have a particle range from 9.5 mm to 25 mm (0.375 to 1.0 in) with a D50 of 13 mm (0.5 in). The percentage void-space of the aggregate portion when compacted shall be at least 30%. The pulverized topsoil portion shall equal 25% +/- of the total volume and be added and blended to produce a homogeneous mixture prior to placement or washed into the in-place compacted aggregate. Once placed, the mixture shall be compacted to 95% Standard Proctor Density.  
 3. Refer to the Geoblock 5150 Design and Construction Overview for a complete description of the design and construction methods.

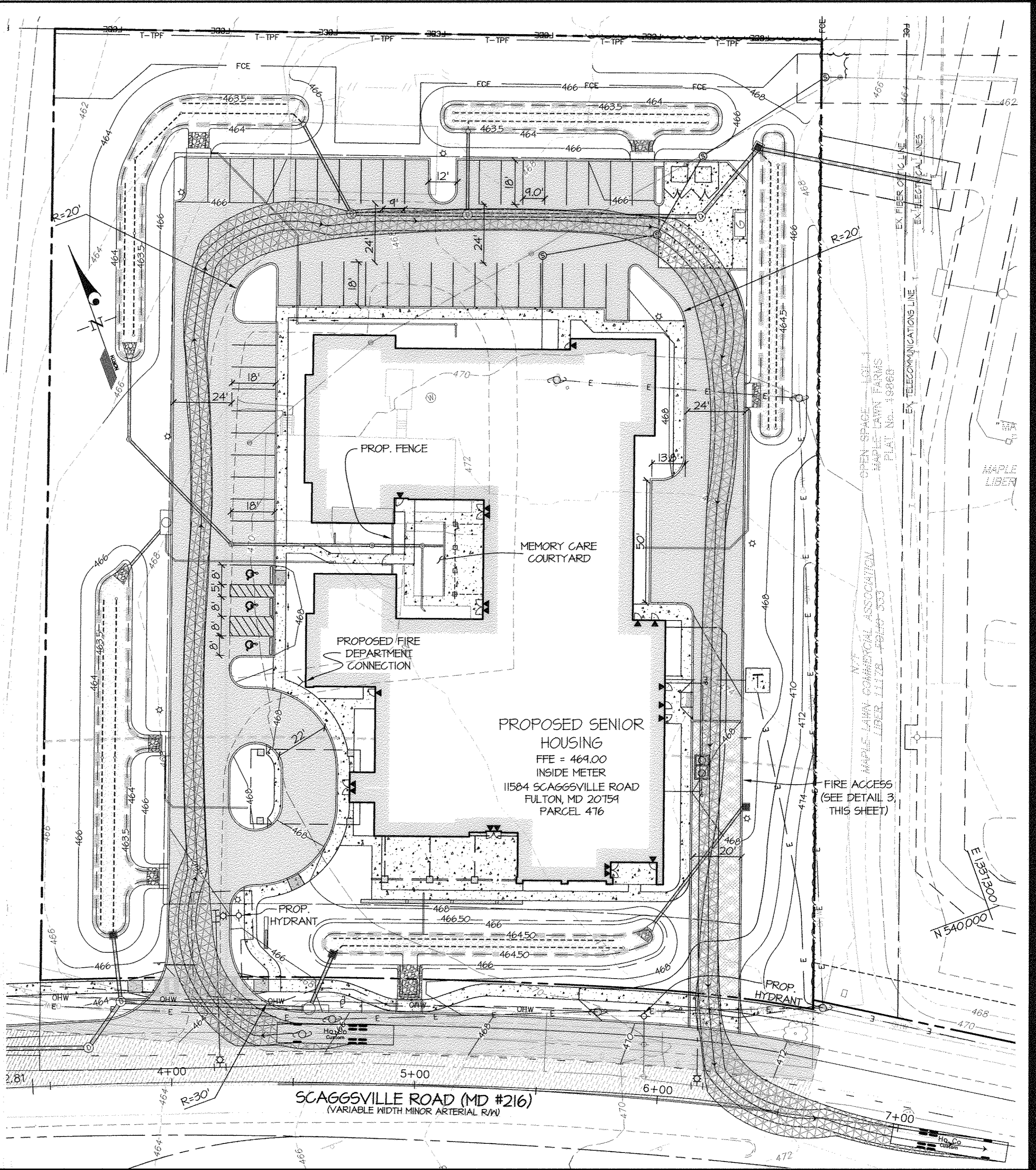


4 PRIVACY FENCE W/ ACCESS GATE



6 DUMPSTER ELEVATION

MIX	SEEDING RATE	SPECIFICATION	APPLICATION
No 2	50 gsm/m <sup>2</sup>	20% Chewing Red Fescue 45% Creeping Red Fescue 5% Browning Fescue 30% Hard Fescue	Fire Access Shaded low maintenance areas



FIRE ACCESS PLAN SCALE: 1" = 30'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
 Director: *William J. Joffe* 11-9-17 Date  
 Chief, Division of Land Development: *Victoria Lamb* 11-26-17 Date  
 Chief, Development Engineering Division: *Phil Choe* 10-20-17 Date

**GLWGUTSCHICK LITTLE & WEBER, P.A.**  
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
 3909 NATIONAL DRIVE - SUITE 205 - BURTONTOWN, MARYLAND 20866  
 TEL: 301-421-4024 BAL: 410-880-1820 DC/WA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APPR.
2017-05-16	APPENDIX 3		

PREPARED FOR:  
 APPLICANT:  
 CSH MAPLE LAWN LLC.  
 1275 PENNSYLVANIA AVE. NW, 2nd FLOOR  
 WASHINGTON D.C. 20004  
 CONTACT: DAVID R. ENNIS  
 TEL: (202) 469-8400

PROFESSIONAL CERTIFICATION  
 I HEREBY CERTIFY THAT THESE PLANS 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. 17285  
 EXPIRATION DATE: MARCH 12, 2019  
*For owner*

**SITE PLAN DETAILS and FIRE ACCESS PLAN**  
**ARBOR TERRACE FULTON**  
**PARCEL A**  
 GREEN RESIDENTIAL CARE BUILDING  
 LIBER 9293 FOLIO 183  
 CLARKSVILLE ELECTION DISTRICT No. 5  
 HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE NO.
1" = 30'	CCT	16001
DATE	TAX MAP - GRID	SHEET
JULY, 2017	41 - 21	5 OF 18

PIPE OUTLET (ST-1) SEDIMENT TRAP #1	
DRAINAGE AREA - INITIAL	0.42 AC
DRAINAGE AREA - FINAL	0.54 AC
TOTAL STORAGE REQUIRED	3,312 CF
TOTAL STORAGE PROVIDED	3,361 CF
NET STORAGE REQUIRED	1,656 CF
NET STORAGE PROVIDED	1,685 CF
DRY STORAGE REQUIRED	1,656 CF
DRY STORAGE PROVIDED	1,682 CF
TRAP BOTTOM ELEVATION	462.75
TRAP BOTTOM DIMENSIONS	130' x 7'
RISER CREST (DRY STORAGE) ELEVATION	465.00
OUTLET (NET STORAGE) ELEVATION	464.50
CLEANOUT ELEVATION	463.63
TOP OF EMBANKMENT ELEVATION	466.00
SIDE SLOPE	2:1
EMBANKMENT TOP WIDTH	4'
PRINCIPAL SPILLWAY MATERIAL	RCP
RISER DIAMETER	N/A (STR.5)
BARREL DIMENSIONS	150' DIA.
TRASH RACK DIAMETER	N/A
TRASH RACK HEIGHT	N/A
ANTI-SEEP COLLAR DIMENSIONS	5.5x5.5'
OUTLET PROTECTION - LENGTH	N/A
OUTLET PROTECTION - WIDTH	N/A
OUTLET PROTECTION - DEPTH	N/A

PIPE OUTLET (ST-1) SEDIMENT TRAP #2	
DRAINAGE AREA - INITIAL	0.41 AC
DRAINAGE AREA - FINAL	0.50 AC
TOTAL STORAGE REQUIRED	1,800 CF
TOTAL STORAGE PROVIDED	2,016 CF
NET STORAGE REQUIRED	900 CF
NET STORAGE PROVIDED	931 CF
DRY STORAGE REQUIRED	900 CF
DRY STORAGE PROVIDED	922 CF
TRAP BOTTOM ELEVATION	462.00
TRAP BOTTOM DIMENSIONS	137' x 6'
RISER CREST (DRY STORAGE) ELEVATION	463.75
OUTLET (NET STORAGE) ELEVATION	463.00
CLEANOUT ELEVATION	462.50
TOP OF EMBANKMENT ELEVATION	465.00
SIDE SLOPE	2:1
EMBANKMENT TOP WIDTH	4'
PRINCIPAL SPILLWAY MATERIAL	HDPE
RISER DIAMETER	150'
BARREL DIMENSIONS	150' DIA.
TRASH RACK DIAMETER	N/A
TRASH RACK HEIGHT	N/A
ANTI-SEEP COLLAR DIMENSIONS	5.5x5.5'
OUTLET PROTECTION - LENGTH	N/A
OUTLET PROTECTION - WIDTH	N/A
OUTLET PROTECTION - DEPTH	N/A

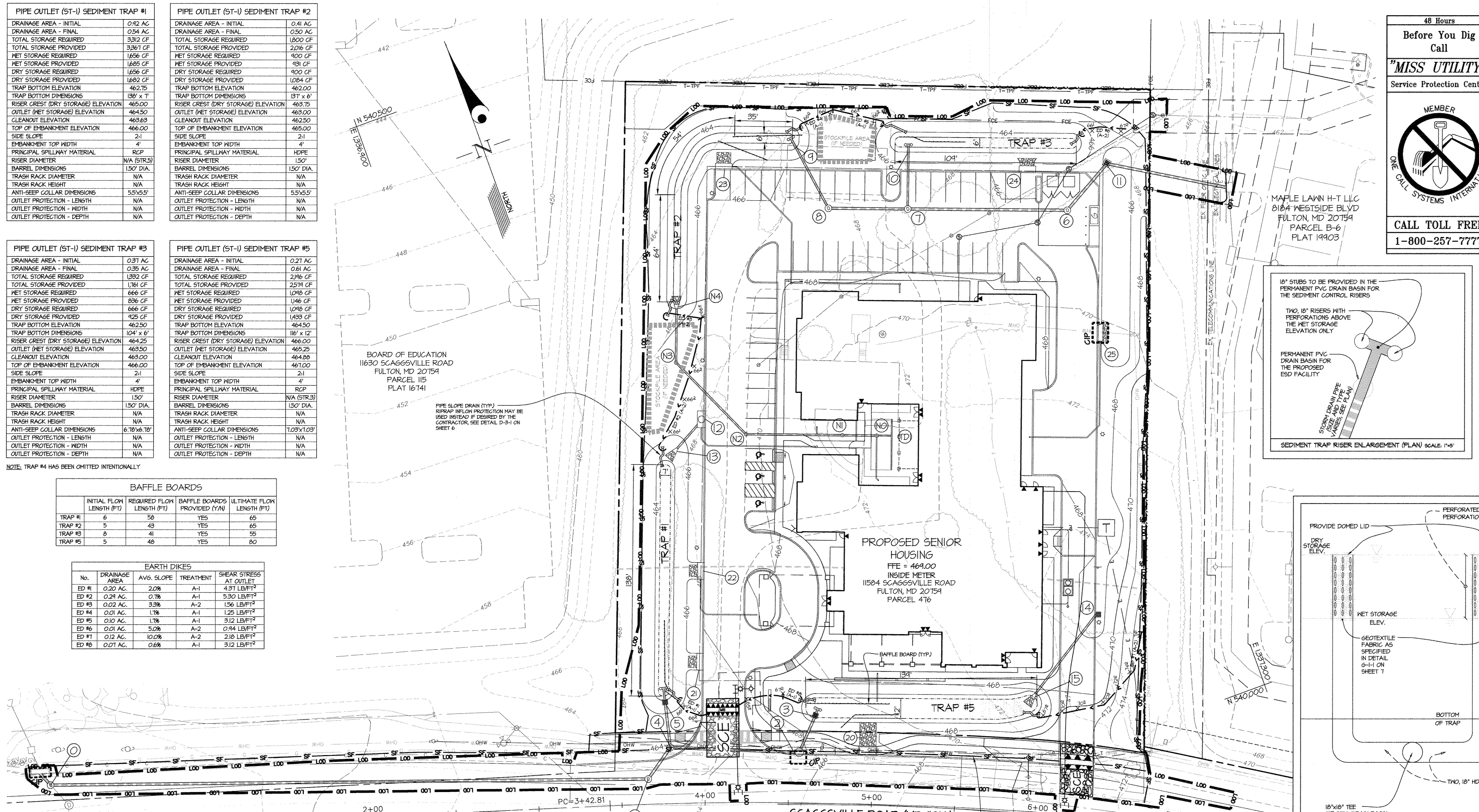
PIPE OUTLET (ST-1) SEDIMENT TRAP #3	
DRAINAGE AREA - INITIAL	0.31 AC
DRAINAGE AREA - FINAL	0.35 AC
TOTAL STORAGE REQUIRED	1,392 CF
TOTAL STORAGE PROVIDED	1,761 CF
NET STORAGE REQUIRED	666 CF
NET STORAGE PROVIDED	836 CF
DRY STORAGE REQUIRED	666 CF
DRY STORAGE PROVIDED	825 CF
TRAP BOTTOM ELEVATION	462.50
TRAP BOTTOM DIMENSIONS	104' x 6'
RISER CREST (DRY STORAGE) ELEVATION	464.25
OUTLET (NET STORAGE) ELEVATION	463.50
CLEANOUT ELEVATION	463.00
TOP OF EMBANKMENT ELEVATION	466.00
SIDE SLOPE	2:1
EMBANKMENT TOP WIDTH	4'
PRINCIPAL SPILLWAY MATERIAL	HDPE
RISER DIAMETER	150'
BARREL DIMENSIONS	150' DIA.
TRASH RACK DIAMETER	N/A
TRASH RACK HEIGHT	N/A
ANTI-SEEP COLLAR DIMENSIONS	6.75x6.75'
OUTLET PROTECTION - LENGTH	N/A
OUTLET PROTECTION - WIDTH	N/A
OUTLET PROTECTION - DEPTH	N/A

PIPE OUTLET (ST-1) SEDIMENT TRAP #5	
DRAINAGE AREA - INITIAL	0.21 AC
DRAINAGE AREA - FINAL	0.81 AC
TOTAL STORAGE REQUIRED	2,136 CF
TOTAL STORAGE PROVIDED	2,514 CF
NET STORAGE REQUIRED	1,028 CF
NET STORAGE PROVIDED	1,146 CF
DRY STORAGE REQUIRED	1,028 CF
DRY STORAGE PROVIDED	1,133 CF
TRAP BOTTOM ELEVATION	464.50
TRAP BOTTOM DIMENSIONS	116' x 12'
RISER CREST (DRY STORAGE) ELEVATION	466.00
OUTLET (NET STORAGE) ELEVATION	465.25
CLEANOUT ELEVATION	464.88
TOP OF EMBANKMENT ELEVATION	467.00
SIDE SLOPE	2:1
EMBANKMENT TOP WIDTH	4'
PRINCIPAL SPILLWAY MATERIAL	RCP
RISER DIAMETER	N/A (STR.3)
BARREL DIMENSIONS	150' DIA.
TRASH RACK DIAMETER	N/A
TRASH RACK HEIGHT	N/A
ANTI-SEEP COLLAR DIMENSIONS	1.03x1.03'
OUTLET PROTECTION - LENGTH	N/A
OUTLET PROTECTION - WIDTH	N/A
OUTLET PROTECTION - DEPTH	N/A

NOTE: TRAP #4 HAS BEEN OMITTED INTENTIONALLY

BAFFLE BOARDS				
TRAP #	INITIAL FLOW LENGTH (FT)	REQUIRED FLOW LENGTH (FT)	BAFFLE BOARDS PROVIDED (Y/N)	ULTIMATE FLOW LENGTH (FT)
TRAP #1	6	58	YES	65
TRAP #2	5	43	YES	65
TRAP #3	9	41	YES	38
TRAP #5	5	48	YES	80

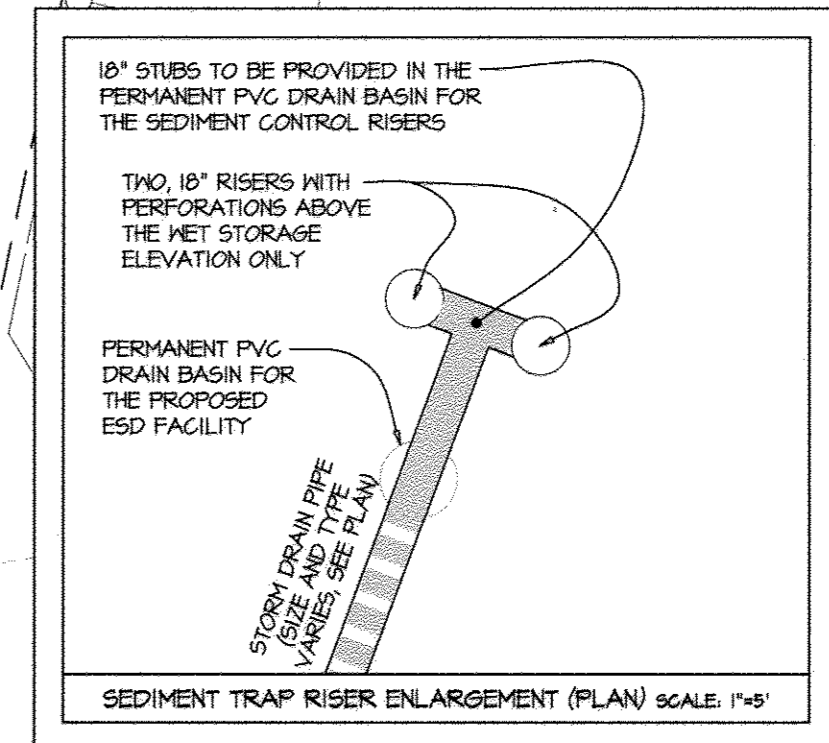
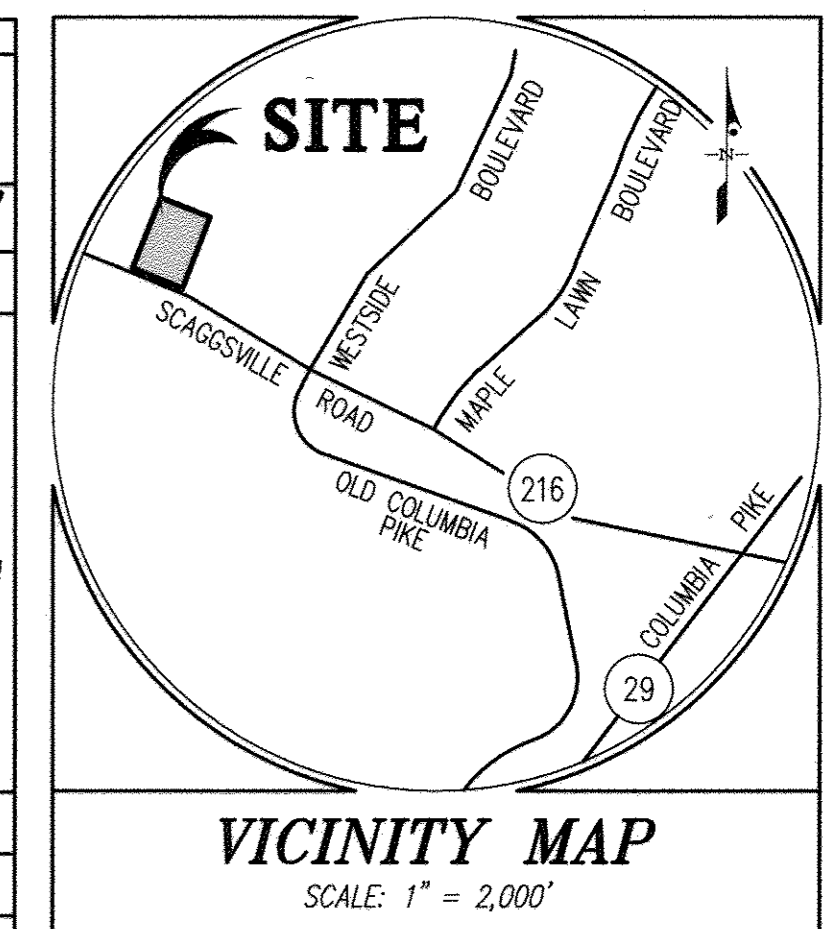
EARTH DIKES				
No.	DRAINAGE AREA	AVG. SLOPE	TREATMENT	SHEAR STRESS AT OUTLET
ED #1	0.20 AC	2.0%	A-1	4.31 LB/FT <sup>2</sup>
ED #2	0.24 AC	0.7%	A-1	5.30 LB/FT <sup>2</sup>
ED #3	0.02 AC	3.3%	A-2	1.56 LB/FT <sup>2</sup>
ED #4	0.01 AC	1.7%	A-1	1.25 LB/FT <sup>2</sup>
ED #5	0.10 AC	1.7%	A-1	3.12 LB/FT <sup>2</sup>
ED #6	0.10 AC	5.0%	A-2	0.44 LB/FT <sup>2</sup>
ED #7	0.12 AC	10.0%	A-2	2.10 LB/FT <sup>2</sup>
ED #8	0.07 AC	0.6%	A-1	3.12 LB/FT <sup>2</sup>



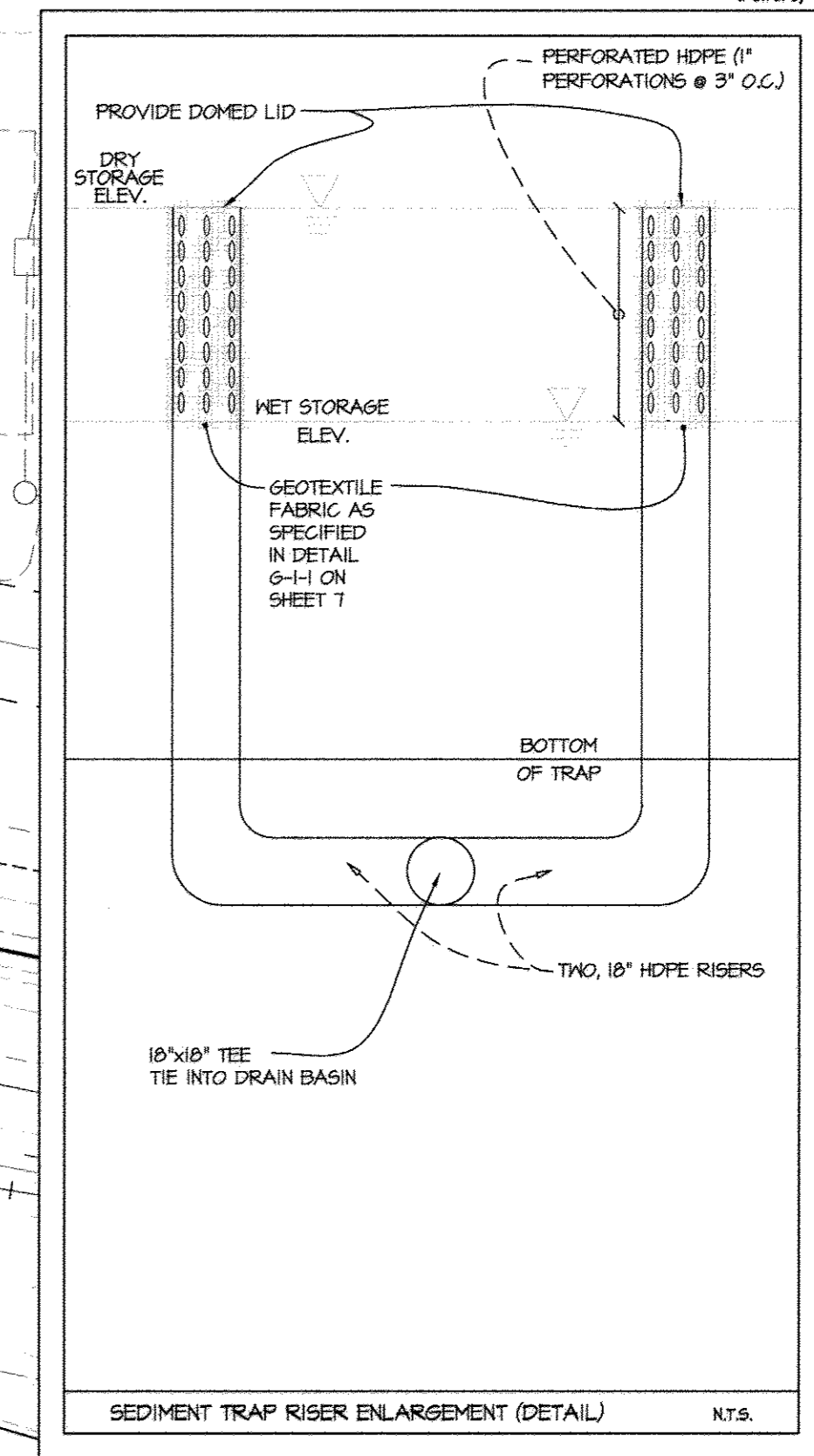
**48 Hours**  
Before You Dig  
Call  
"MISS UTILITY"  
Service Protection Center

MEMBER  
ONE CALL SYSTEMS INTERNATIONAL

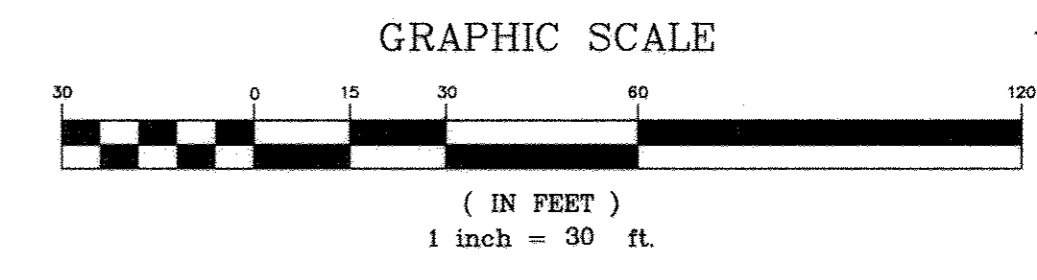
CALL TOLL FREE  
1-800-257-7777



- EXISTING UTILITY NOTES
- For marking locations of existing utilities, notify "MISS UTILITY" at 1-800-257-7777, 48 hours prior to any excavation or construction.
  - Information concerning underground utilities was obtained from available records. The contractor must determine the exact locations and elevations of the utilities by digging test pits by hand at all utility crossings well in advance of trenching. If clearances are less than specified on this plan or less than 12 inches when not specified, contact the Engineer, and the owner of the other involved utility before proceeding with construction.
  - For field location of gas line services, notify Washington Gas Light Co., 703-750-1000, 48 hours prior to the start of any excavation or construction.
  - Omissions and/or additions of utilities found during construction shall be the sole responsibility of any contractor engaged in excavation at this site. Gutschick, Little & Weber, P.A., shall be notified immediately of any and all utility information, omissions and additions found by any contractor.
  - Due to the proximity of live underground and overhead utilities, we are not responsible for any damage or injury sustained during construction by any persons, trucks, trailers, or equipment used on or adjacent to the site.



- LEGEND**
- EX. SEWER
  - EX. WATER
  - EX. STORM DRAIN
  - PROP. SEWER
  - PROP. WATER
  - PROP. STORM DRAIN
  - EX. CONTOURS
  - PROP. CONTOURS
  - EX. ELECTRIC
  - EX. CURB & GUTTER
  - PROP. CURB & GUTTER
  - PROP. ELECTRIC
  - PROP. BUILDING
  - PARKING LOT LIGHT
  - PROP. FIRE HYDRANT
  - STORM DRAIN STRUCTURE LABEL
  - SCE - STABILIZED CONSTRUCTION ENTRANCE
  - SF - SILT FENCE
  - SEDIMENT TRAP BOTTOM
  - MB - MOUNTABLE BERM
  - PIPE SLOPE DRAIN
  - EARTH DIKE
  - BAFFLE BOARD



**ENGINEER'S CERTIFICATE**

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

*Todd Ragan*  
ENGINEER'S SIGNATURE  
9.21.17  
DATE

**DEVELOPER'S/BUILDER'S CERTIFICATE**

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

*John Robinson*  
SIGNATURE OF DEVELOPER/BUILDER  
9/21/17  
DATE

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

*John Robinson*  
Howard S.C.D.  
Date 9/21/17

- NOTES:
- SHOWN STOCKPILE AREAS TO BE USED AT THE DISCRETION OF THE CONTRACTOR.
  - SHOWN PIPE SLOPE DRAINS MAY BE SUBSTITUTED FOR EQUIVALENT RIPRAP INLET PROTECTION DEVICES AT THE DISCRETION OF THE CONTRACTOR, SEE DETAIL D-3-1 ON SHEET 7.
  - CONTRACTOR SHALL FULLY STABILIZE, WITHIN THE SAME WORKING DAY, ALL DISTURBED AREAS THAT DO NOT DRAIN TO AN APPROVED SEDIMENT CONTROL DEVICE.

**SOIL TYPES**

Symbol	Description	Hydrologic Soil Type	K Factor
GgA	Glenns loam, 0 to 5 percent slopes	B	0.28
GgB	Glenns loam, 3 to 8 percent slopes	C	0.37

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*Nellie J. J. J.*  
Director  
11-9-17  
Date

*W. J. J.*  
Chief, Division of Land Development  
11-06-17  
Date

*W. J. J.*  
Chief, Development Engineering Division  
10-20-17  
Date

**GLW GUTSCHICK LITTLE & WEBER, P.A.**  
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
3959 NATIONAL DRIVE - SUITE 250 - BURTONTOWN OFFICE PARK  
BURTONTOWN, MARYLAND 20866  
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4166

DATE	REVISION	BY	APP'R

PREPARED FOR:  
APPLICANT:  
CSH MAPLE LAWN LLC  
1275 PENNSYLVANIA AVE. NW, 2ND FLOOR  
WASHINGTON D.C. 20004  
CONTACT: DAVID R. ENNIS  
TEL. (202) 469-8400

**PROFESSIONAL CERTIFICATION**

I HEREBY CERTIFY THAT THESE PLANS 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. 12288  
EXPIRATION DATE: MARCH 17, 2019

*Todd Ragan*  
9.21.17

**SEDIMENT CONTROL PLAN**

**ARBOR TERRACE FULTON**  
PARCEL A  
GREEN RESIDENTIAL CARE BUILDING  
LIBER 9293 FOLIO 183

CLARKSVILLE ELECTION DISTRICT No. 5

SCALE	ZONING	G. L. W. FILE NO.
1"=30'	CCT	16001
DATE	TAX MAP - GRID	SHEET
JULY, 2017	41 - 21	6 OF 18



**SEDIMENT CONTROL NOTES**

- 1. PRE-CONSTRUCTION MEASURES MUST OCCUR WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS...
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL...
3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION IS REQUIRED WITHIN THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL...
4. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL...
5. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE, AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE CID.

**STANDARD AND SPECIFICATIONS FOR TOPSOIL DEFINITION**

Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.
PURPOSE: To provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, and/or are toxic to plants, and/or unacceptable soil gradation.
CONDITIONS WHERE PRACTICE APPLIES: 1. This practice is limited to areas having 21 or flatter slopes where:
a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
c. The original soil to be vegetated contains material toxic to plant growth.
d. The soil is so acidic that treatment with limestone is not feasible.
CONSTRUCTION AND MATERIAL SPECIFICATIONS: I. Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications...
II. Topsoil specifications - soil to be used as topsoil must meet the following:
1. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand, other soils as specified, or a combination of any of the above...
2. Topsoil must be free of plant parts such as Bermuda grass, quackgrass, Johnson grass, nutgrass, poison ivy, thistle, or others as specified...
3. Topsoil shall be placed on soil which has been with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min) to permit dissipation of photo-toxic materials.

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

Definition: The process of preparing the soils to sustain adequate vegetative stabilization.
PURPOSE: To provide a suitable soil medium for vegetative growth.
CONDITIONS WHERE PRACTICE APPLIES: Where vegetative stabilization is to be established.
CRITERIA: A. Soil Preparation
1. Temporary Stabilization
a. Seedbed preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment...
b. Incorporate lime and fertilizer into the top 3 to 5 inches of soil by disking or other suitable means.
2. Permanent Stabilization
a. A soil test is required for any earth disturbance of 5 acres or more...
b. Topsoil shall be placed over prepared subsoil prior to establishment of permanent vegetation...
c. Topsoiling is limited to areas having 21 or flatter slopes where:
1. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
2. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
3. The original soil to be vegetated contains material toxic to plant growth.
4. The soil is so acidic that treatment with limestone is not feasible.
5. Areas having slopes steeper than 2:1 require special consideration and design.

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

Definition: The application of seed and mulch to establish vegetative cover.
PURPOSE: To protect disturbed soils from erosion during and at the end of construction.
CONDITIONS WHERE PRACTICE APPLIES: To the surface of all perimeter controls, slopes, and any disturbed area not under active grading.
CRITERIA: A. Seeding
1. Specifications
a. All seed must meet the requirements of the Maryland State Seed Law...
b. Mulch alone may be applied between the fall and spring seeding dates only if the ground is frozen...
c. Inoculants: The inoculant for treating legume seed in the seed mixtures must be a pure culture of nitrogen fixing bacteria prepared specifically for the species...
d. Sod or seed mat must not be placed on soil which has been treated with soil sterilants or chemicals used for weed control...
2. Application
a. Dry Seeding: This includes use of conventional drop or broadcast spreaders...
b. Topsoiling
1. Topsoil is placed over prepared subsoil prior to establishment of permanent vegetation...
2. Topsoil salvaged from an existing site may be used provided that it meets the standards as set forth in these specifications...
3. Topsoiling is limited to areas having 21 or flatter slopes where:
1. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
2. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
3. The original soil to be vegetated contains material toxic to plant growth.
4. The soil is so acidic that treatment with limestone is not feasible.
5. Areas having slopes steeper than 2:1 require special consideration and design.

**B-4-4 STANDARDS AND SPECIFICATIONS FOR TEMPORARY STABILIZATION**

Definition: To stabilize disturbed soils with vegetation for up to 6 months.
PURPOSE: To use fast growing vegetation that provides cover on disturbed soils.
CONDITIONS WHERE PRACTICE APPLIES: Exposed soils where ground cover is needed for a period of 6 months or less.
CRITERIA: 1. Select one or more of the species or seed mixtures listed in Table B1 for the appropriate Hardness Zone...
2. For sites having soil tests performed, use and show the recommended rates by the testing agency...
3. When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch area as prescribed in Section B-4-3A.1b and maintain until the next seeding season.
TEMPORARY SEEDING SUMMARY: Hardness Zone (from Figure B.3): 6b. Seed Mixture (from Table B1):
Table with 5 columns: No., Species, Application Rate (lb/acre), Seeding Dates, Seeding Depths, Fertilizer Rate (lb/1000 sq ft), Lime Rate.
TEMPORARY SEEDING NOTES: Apply to graded or cleared areas likely to be redistributed where a short-term vegetative cover is needed.
SEEDBED PREPARATION: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding.
SOIL AMENDMENTS: Apply 600 lbs per acre 10-10-10 fertilizer (4 lbs/1000 sq ft).
SEEDING: For periods March 1 thru April 30, and from August 15 thru November 15, seed with 2+2 bushel per acre of annual ryegrass (B2) lbs/1000 sq ft.
MULCHING: Apply 1/2 to 2 tons per acre (10 to 40 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding.

**B-4-5 STANDARDS AND SPECIFICATIONS FOR PERMANENT STABILIZATION**

PERMANENT SEEDING SUMMARY: Hardness Zone (from Figure B.3): 6b. Seed Mixture (from Table B3):
Table with 5 columns: No., Species, Application Rate (lb/acre), Seeding Dates, Seeding Depths, Fertilizer Rate (lb/1000 sq ft), Lime Rate.
TEMPORARY SEEDING NOTES: Apply to graded or cleared area not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.
SEEDBED PREPARATION: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding.
SOIL AMENDMENTS: Apply 600 lbs per acre 10-10-10 fertilizer (4 lbs/1000 sq ft).
SEEDING: For periods March 1 thru April 30, and from August 15 thru November 15, seed with 2+2 bushel per acre of annual ryegrass (B2) lbs/1000 sq ft.
MULCHING: Apply 1/2 to 2 tons per acre (10 to 40 lbs/1000 sq ft) of unrotted small grain straw immediately after seeding.
MAINTENANCE: Inspect all seeded areas and make needed repairs, replacements and reseedings.
B-4-B STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA: Definition: A mound or pile of soil protected by appropriately designed erosion and sediment control measures.
PURPOSE: To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns.
CONDITIONS WHERE PRACTICE APPLIES: Stockpile areas are utilized when it is necessary to salvage and store soil for later use.
CRITERIA: 1. The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
2. The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1.
3. Runoff from the stockpile area must drain to a suitable sediment control practice.
4. Access the stockpile area from the upgrade side.
5. Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence.
6. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
7. Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization.
8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup.
9. Stockpiles containing contaminated material must be covered with impermeable sheeting.

**DEVELOPER'S/BUILDER'S CERTIFICATE**

I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT 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.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Director: [Signature] Date: 11-9-17
Chief, Division of Land Development: [Signature] Date: 11-06-17
Chief, Development Engineering Division: [Signature] Date: 10-20-17

**DUST CONTROL**

Definition: Controlling dust blowing and movement on construction sites and roads.
PURPOSE: To prevent blowing and movement of dust from exposed soil surfaces, reduce on and off-site damage, health hazards, and improve traffic safety.
CONDITIONS WHERE PRACTICE APPLIES: This practice is applicable to areas subject to dust blowing and movements where on and off-site damage is likely without treatment.
SPECIFICATIONS: 1. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more.
2. Fertilizers must be uniform in composition, free flowing and suitable for accurate application by appropriate equipment.
3. Irrigation - This is generally done as an emergency treatment. Site is sprinkled with water until the surface is moist.
4. Barriers - Solid board fences, silt fences, barbed fences, straw bales, and similar material can be used to control air currents and soil blowing.

**ENGINEER'S CERTIFICATE**

I HEREBY CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.
[Signature] Date: 9-24-17

**PROFESSIONAL CERTIFICATION**

I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.
[Signature] Date: 9-24-17

**SEDIMENT CONTROL NOTES and DETAILS - II**

1. Tilt areas to receive seed by disking or other approved methods to a depth of 2 to 4 inches, level and rake the area to prepare a proper seedbed.
2. If soil moisture is deficient, supply new seedings with adequate water for plant growth (1 to 1 inch every 3 to 4 days depending on soil texture) until they are firmly established.
3. Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization.

GLWGUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE, SUITE 250 - BURTNSVILLE OFFICE PARK
BURTNSVILLE, MARYLAND 20866
TEL: 301-421-4124 FAX: 301-421-4124

Table with 2 columns: DATE, REVISION. Includes rows for DES, DRN, CHK, and APPR.

PREPARED FOR: APPLICANT: CSH MAPLE LAWN LLC, 1275 PENNSYLVANIA AVE. NW, 2ND FLOOR WASHINGTON D.C. 20004 CONTACT: DAVID R. ENNIS TEL: (202) 469-8400

CLARKSVILLE ELECTION DISTRICT NO. 5

ARBOR TERRACE FULTON
GREEN RESIDENTIAL CARE BUILDING
LIBER 9293 FOLIO 183

Table with 4 columns: SCALE (N/A), ZONING (CCT), G. L. W. FILE NO. (16001), SHEET (8 OF 18).

GLWGUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE, SUITE 250 - BURTNSVILLE OFFICE PARK
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TEL: 301-421-4124 FAX: 301-421-4124

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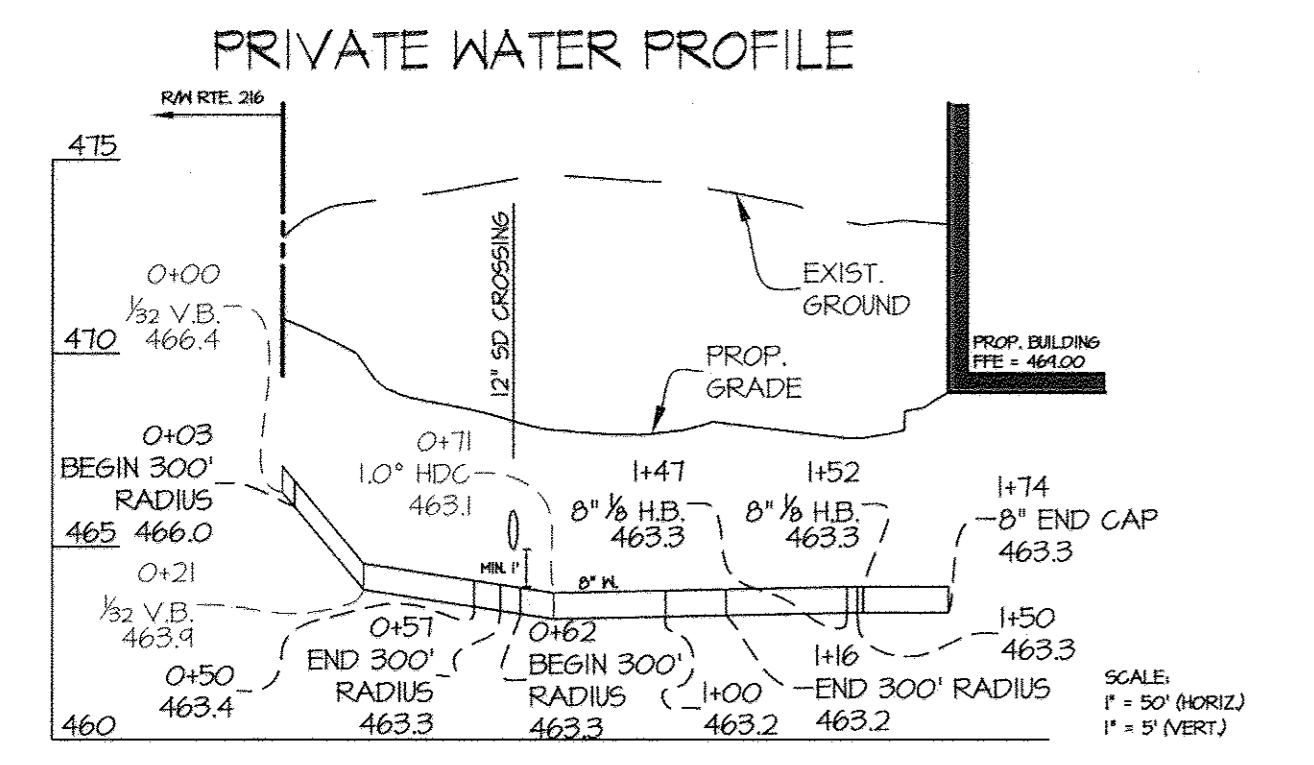
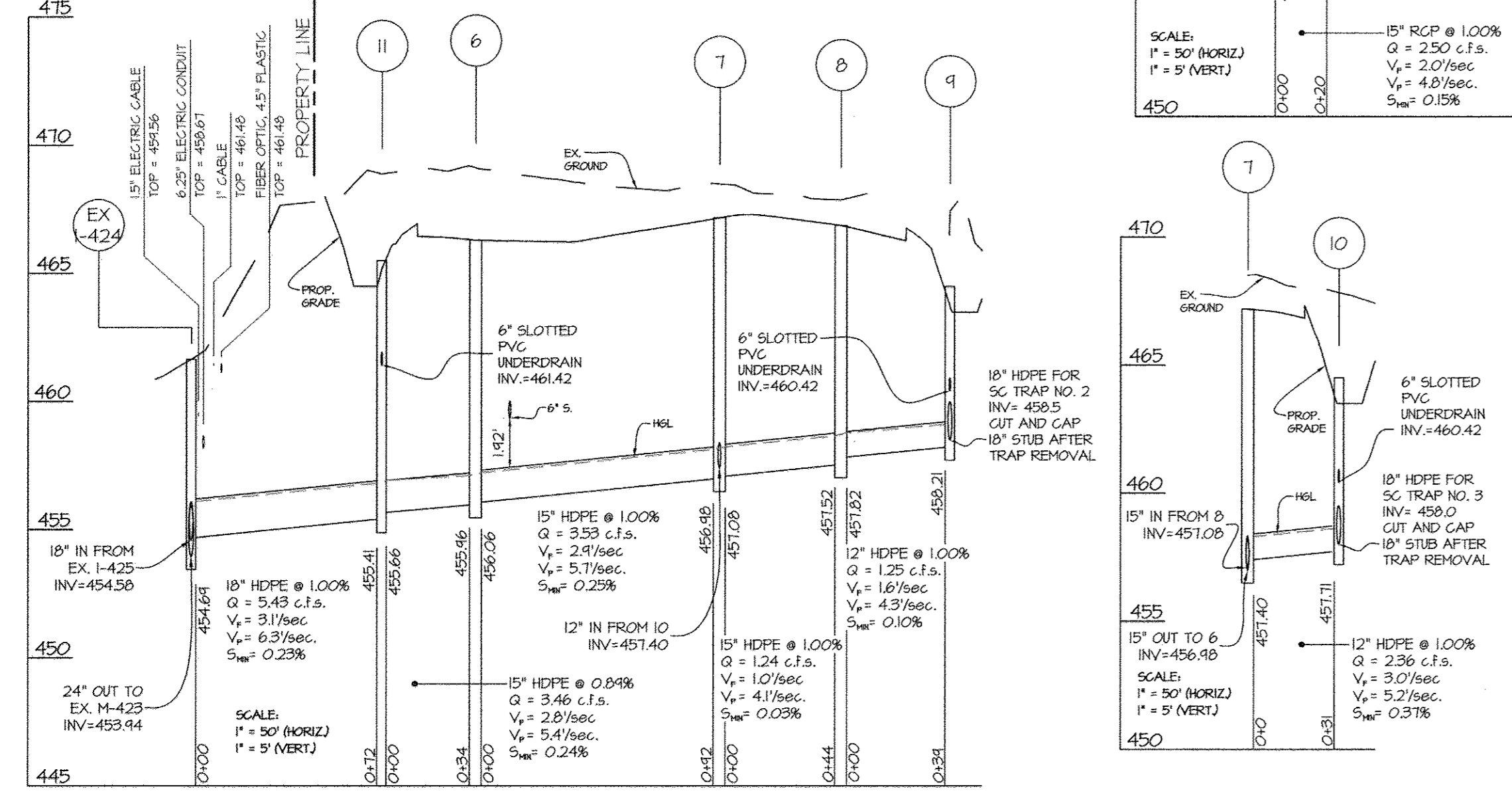
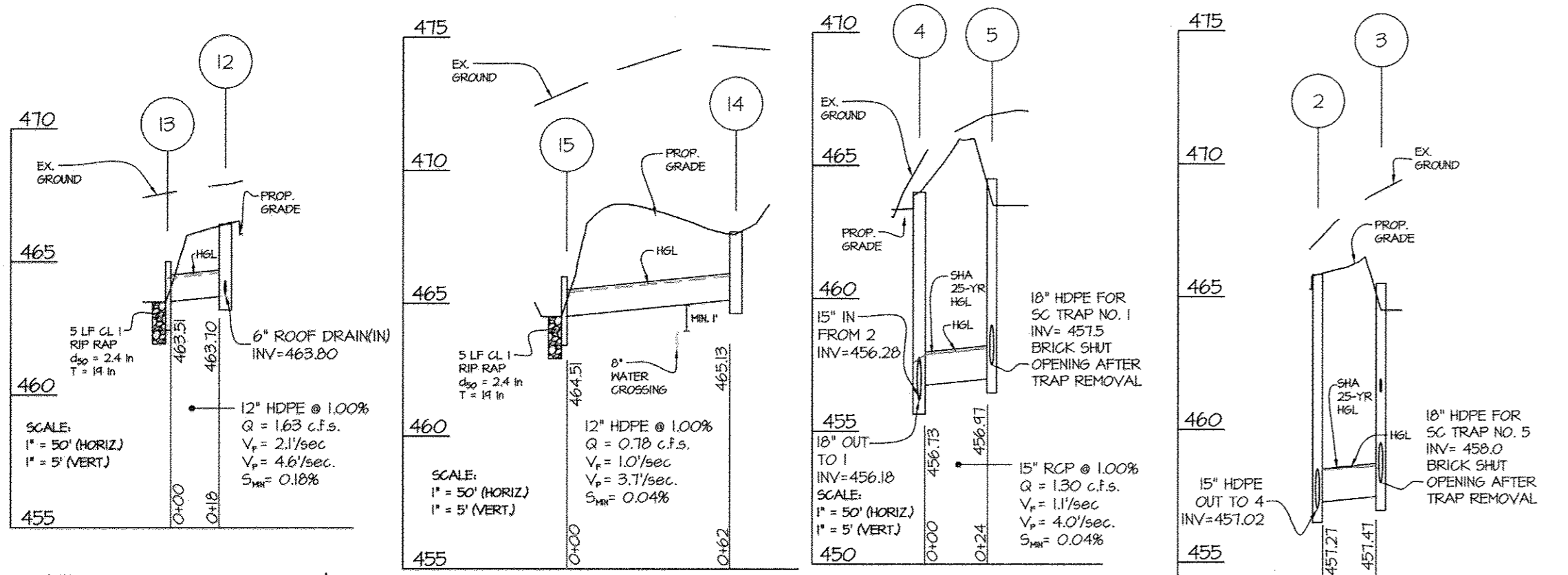
PREPARED FOR: APPLICANT: CSH MAPLE LAWN LLC, 1275 PENNSYLVANIA AVE. NW, 2ND FLOOR WASHINGTON D.C. 20004 CONTACT: DAVID R. ENNIS TEL: (202) 469-8400

CLARKSVILLE ELECTION DISTRICT NO. 5

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GREEN RESIDENTIAL CARE BUILDING
LIBER 9293 FOLIO 183

Table with 4 columns: SCALE (N/A), ZONING (CCT), G. L. W. FILE NO. (16001), SHEET (8 OF 18).





ITEMS	ESTIMATED QUANTITIES	AS-BUILT QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
4" MANHOLE	3 EA.			
8" WATER D.I.P. CLASS 54	174 LF			
8" SEWER PVC SDR 35	166 LF			
8" WATER HDPE	1 EA.			
8" WATER 1/2" H.B.	2 EA.			
8" WATER 1/32" V.B.	2 EA.			

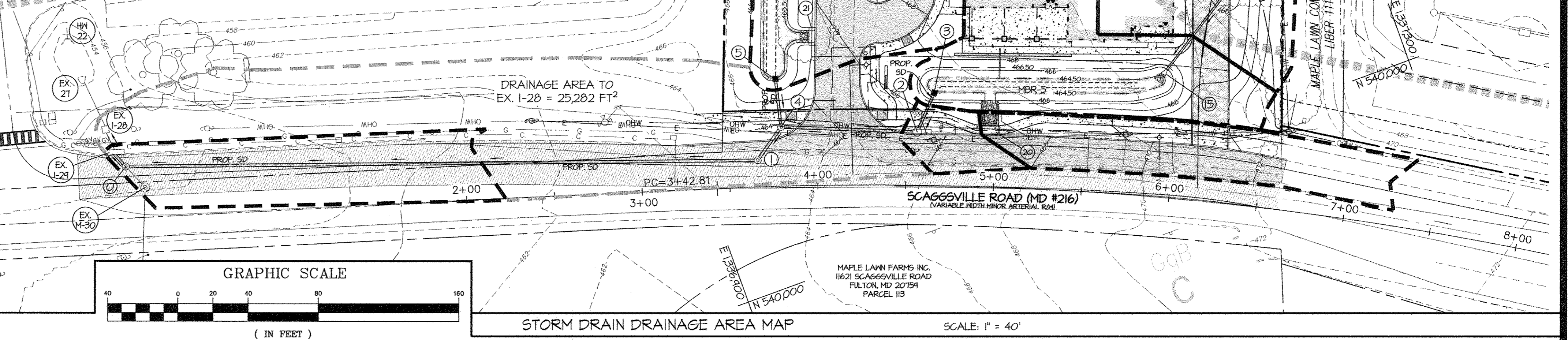
SIZE	TYPE	QUANTITY (IF)	REMARKS
12"	HDPE	311	
15"	HDPE	170	
18"	HDPE	72	
15"	RCP	44	CLASS IV
18"	RCP	453	CLASS IV

HDPE indicates High Density Polyethylene pipe, such as N-12 by ADS, or H-9 by H&O or an approved equal. All RCP pipe is to be Class IV. Trench bedding to be provided per Howard County Detail G 211 & G 212 respectively.

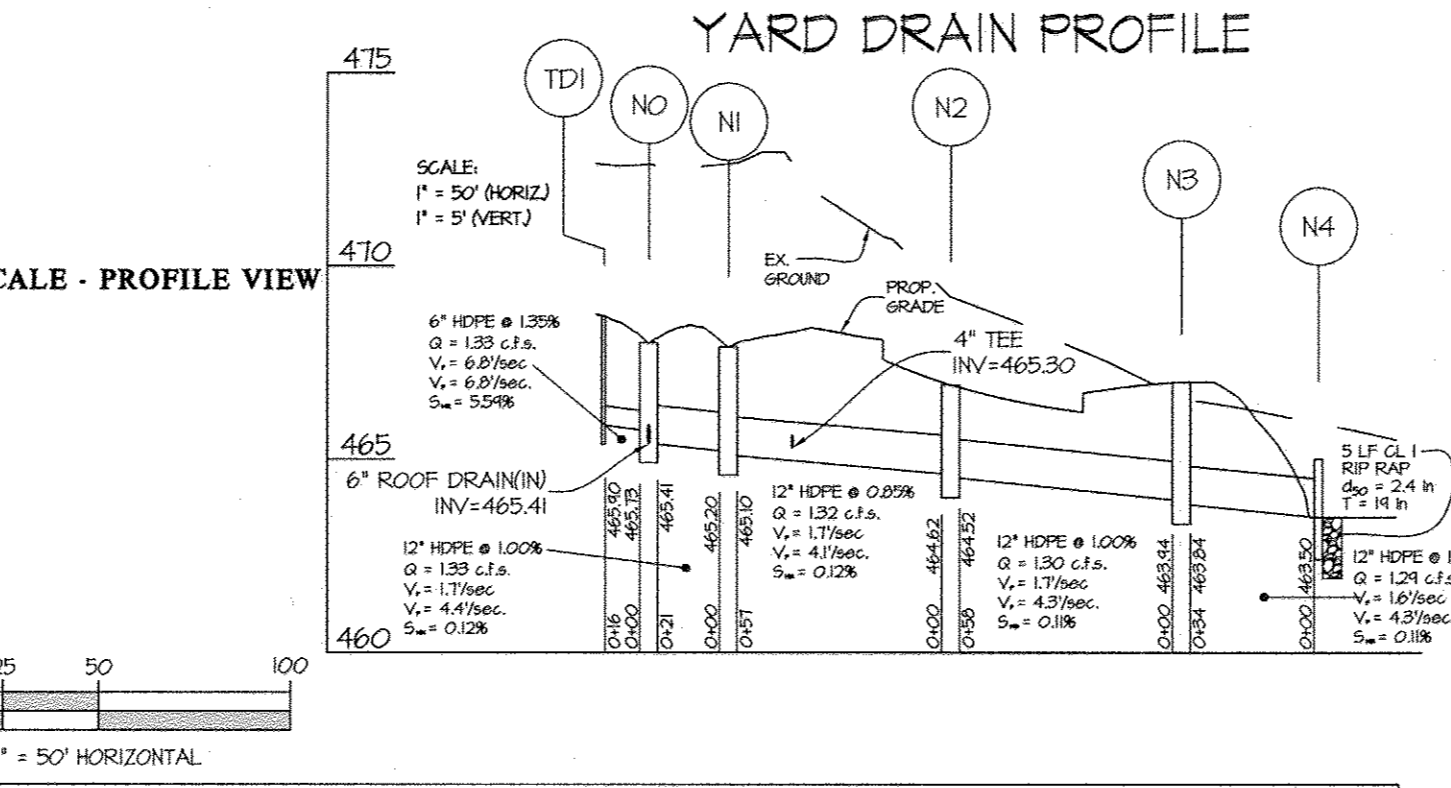
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
 Director: *Valerie J. Joffe* Date: 11-9-17  
 Chief, Division of Land Development  
 Chief, Development Engineering Division

FROM NO.	TO NO.	DIA. (IN) #	L (FT)	TYPE OF PIPE
5	4	15" RCP	24	
3	2	15" RCP	20	
2	4	18" RCP	14	
4	1	18" RCP	11	
1	0	18" RCP	361	
0	EX I-29	18" RCP	T	
9	8	12" HDPE	31	
8	7	15" HDPE	44	
10	7	12" HDPE	44	
7	6	15" HDPE	42	
6	11	15" HDPE	34	
11	EX I-424	15" HDPE	12	
12	13	12" HDPE	18	
14	15	12" HDPE	62	
NO	NI	12" HDPE	21	
NI	N2	12" HDPE	51	
N2	N3	12" HDPE	56	
N3	N4	12" HDPE	34	

STRUCTURE (#)	DRAINAGE AREA (SF)	DRAINAGE AREA (AC)	COMPOSITE 'C' (#,##)	% IMPERVIOUS (%)
2	1,736	0.04	0.72	79%
3	14,447	0.33	0.54	53%
5	12,838	0.29	0.52	50%
9	12,904	0.30	0.50	46%
10	21,519	0.49	0.56	55%
11	20,241	0.46	0.53	52%
12	10,981	0.25	0.76	85%
14	8,128	0.19	0.49	47%
EX-29	7,882	0.18	0.53	50%
NO	8,818	0.20	0.77	87%
20	7,030	0.16	0.70	76%



NOTE: CONTRACTOR IS TO REFER TO GEOTECHNICAL REPORT BY GTA DATED JUNE 30 2016 "REPORT OF GEOTECHNICAL EVALUATION FOR UTILITY SUBGRADE AND BACKFILL RECOMMENDATIONS"



NO	TYPE	WIDTH (INSIDE)	TOP ELEVATION (2)		INVERT		STD. DETAIL	LOCATIONS	REMARKS
			PROPOSED	AS-BUILT	PROPOSED	AS-BUILT			
NO	NYLOPLAST 18" GRATED DRAIN BASIN	1'-6"	467.90	---	465.73	465.41	NYLOPLAST DRAIN	N 540,222 E 1,337,126	8" HDPE SUB FOR BLDG DRAINS
NI	NYLOPLAST 18" GRATED DRAIN BASIN	1'-6"	467.80	---	465.20	465.10	NYLOPLAST DRAIN	N 540,229 E 1,337,105	
N2	NYLOPLAST 18" SOLID DRAIN BASIN	1'-6"	467.00	---	464.62	464.52	NYLOPLAST DRAIN	N 540,247 E 1,337,058	
N3	NYLOPLAST 18" SOLID DRAIN BASIN	1'-6"	466.89	---	463.94	463.84	NYLOPLAST DRAIN	N 540,302 E 1,337,033	H-20 LOADING CAPACITY (SHT.4)
N4	HDPE END SECTION	1'-6"	464.50	---	463.50	---	HO. CO. D-5.1	N 540,333 E 1,337,044	
TD1	20" TRENCH DRAIN	5"	468.65	---	465.90	---	KLASSIKDRAIN - K100	N 540,211 E 1,337,134	

NO	TYPE	WIDTH (INSIDE)	TOP ELEVATION (2)		INVERT		STD. DETAIL	LOCATIONS	REMARKS
			PROPOSED	AS-BUILT	PROPOSED	AS-BUILT			
			UPPER	LOWER	UPPER	LOWER			
0	STANDARD MANHOLE	4'-0"	456.99	---	452.06	451.96	MD 383.01	N 540,193 E 1,336,593	
1	STANDARD MANHOLE	4'-0"	462.81	---	455.84	453.85	MD 383.01	N 540,074 E 1,336,432	
2	PRECAST COG-10 INLET	STD.	466.11	465.71	451.21	451.02	MD 374.62	N 540,055 E 1,337,025	
3	5" RISER	2'-7.5"	465.50	---	---	451.41	HO. CO. D-4.22	N 540,075 E 1,337,040	
4	STANDARD MANHOLE	4'-0"	463.71	---	456.13/456.28	456.18	MD 383.01	N 540,081 E 1,336,451	
5	5" RISER	2'-7.5"	464.50	---	---	456.97	HO. CO. D-4.22	N 540,113 E 1,336,958	
6	STANDARD MANHOLE	4'-0"	466.20	---	456.06	455.96	HO. CO. 6-5.12	N 540,307 E 1,337,285	
7	STANDARD MANHOLE	4'-0"	461.32	---	451.08	456.98	HO. CO. 6-5.12	N 540,341 E 1,337,145	
8	STANDARD MANHOLE	4'-0"	466.60	---	451.82	451.52	HO. CO. 6-5.12	N 540,351 E 1,337,150	
9	NYLOPLAST 24" DOME GRATE INLET	2'-0"	464.50	---	460.42	458.21	NYLOPLAST DOME	N 540,348 E 1,337,144	
10	NYLOPLAST 24" DOME GRATE INLET	2'-0"	464.50	---	460.42	451.71	NYLOPLAST DOME	N 540,312 E 1,337,207	
11	5 INLET	2'-7.5"	465.50	---	461.42/455.66	455.41	HO. CO. D-4.22	N 540,326 E 1,337,171	
12	A-5 INLET	2'-6"	466.51	---	* 463.80	463.70	HO. CO. D-4.01	N 540,264 E 1,337,038	ROOF LINE IN
13	HDPE END SECTION	1'-0"	464.50	---	463.51	---	HO. CO. D-5.1	N 540,252 E 1,337,013	
14	YARD INLET	2'-0"	467.58	467.52	---	465.13	HO. CO. D-4.14	N 540,074 E 1,337,220	
15	HDPE END SECTION	1'-0"	465.51	---	464.51	---	HO. CO. D-5.1	N 540,040 E 1,337,166	
20	PRECAST COG OPENING	10'-0"	467.64	467.10	464.50	464.50	MD 374.68	N 540,042 E 1,337,061	
21	PRECAST COG OPENING	5'-0"	466.16	465.87	---	463.5	MD 374.68	N 540,128 E 1,336,987	
22	PRECAST COG OPENING	5'-0"	468.06	467.94	* 463.5	463.5	MD 374.68	N 540,179 E 1,337,006	ROOF LINE IN
23	PRECAST COG OPENING	5'-0"	466.00	---	* 463.5	463.5	MD 374.68	N 540,400 E 1,337,091	ROOF LINE IN
24	PRECAST COG OPENING	5'-0"	466.00	---	---	463.5	MD 374.68	N 540,333 E 1,337,274	
25	PRECAST COG OPENING	5'-0"	466.56	---	* 464.5	464.5	MD 374.68	N 540,232 E 1,337,217	ROOF LINE IN

COORDINATE POINT GIVEN IS TO THE CENTERLINE OF STRUCTURE AT THE FACE OF CURBS FOR INLETS, TO THE CENTERLINE OF STRUCTURE FOR MANHOLES AND END SECTIONS, AND TO THE CENTER OF RISER STRUCTURES.

GLWGUTSCHICK LITTLE & WEBER, P.A.  
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
 3909 NATIONAL DRIVE - SUITE 250 - BURTNSVILLE OFFICE PARK  
 BURTNSVILLE, MARYLAND 20866  
 TEL: 301-421-4024 FAX: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

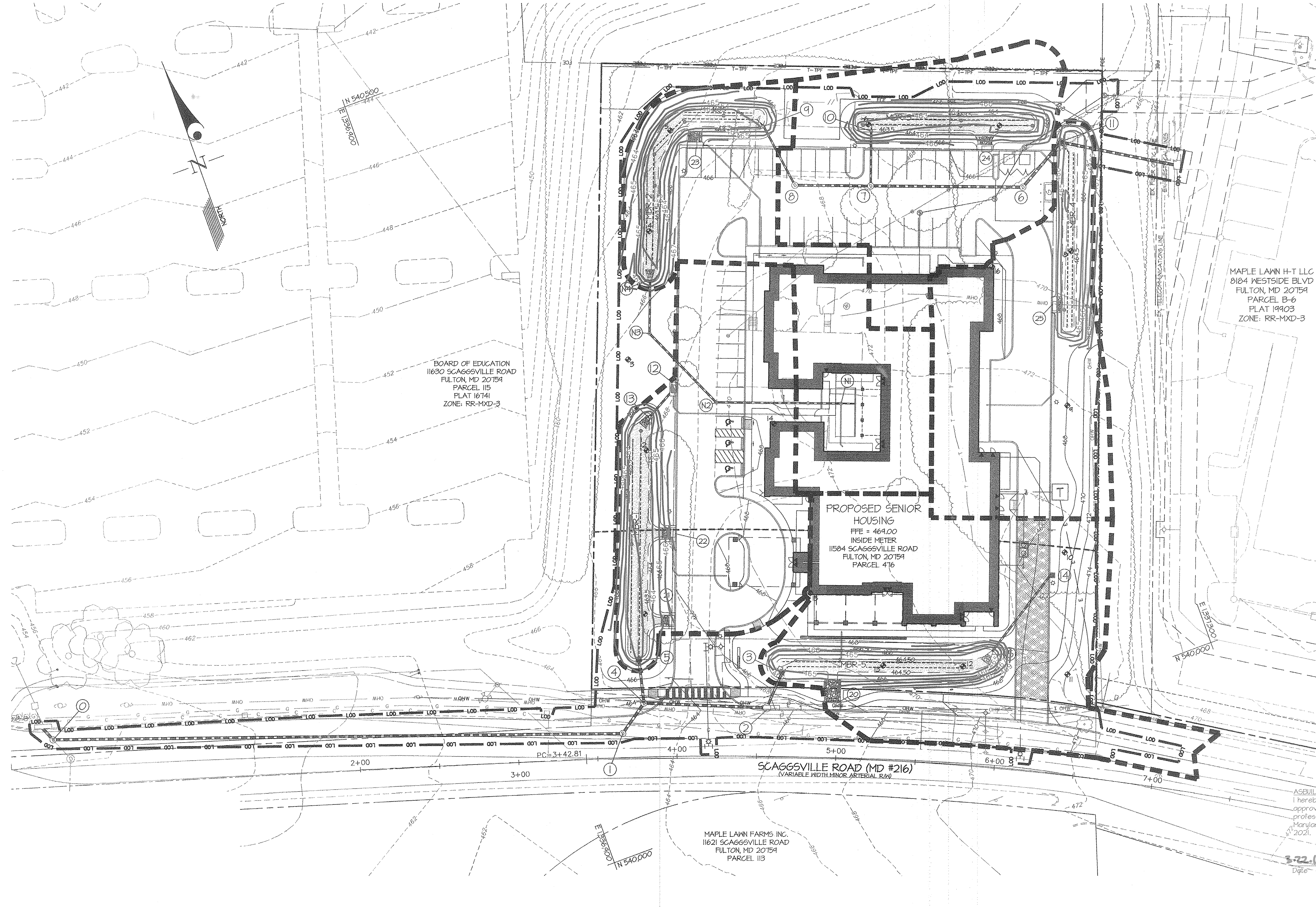
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 CSH MAPLE LAWN LLC,  
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 WASHINGTON, D.C. 20004  
 CONTACT: DAVID R. ENNIS  
 TEL: (202) 469-8400

PROFESSIONAL CERTIFICATION  
 I HEREBY CERTIFY THAT THESE PLANS 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. 17285, EXPIRATION DATE: MARCH 17, 2019.

STORM DRAIN PROFILES and DRAINAGE AREA MAP  
 ARBOR TERRACE FULTON  
 PARCEL A  
 GREEN RESIDENTIAL CARE BUILDING  
 LIBER 9293 FOLIO 183  
 CLARKSVILLE ELECTION DISTRICT No. 5  
 HOWARD COUNTY, MARYLAND

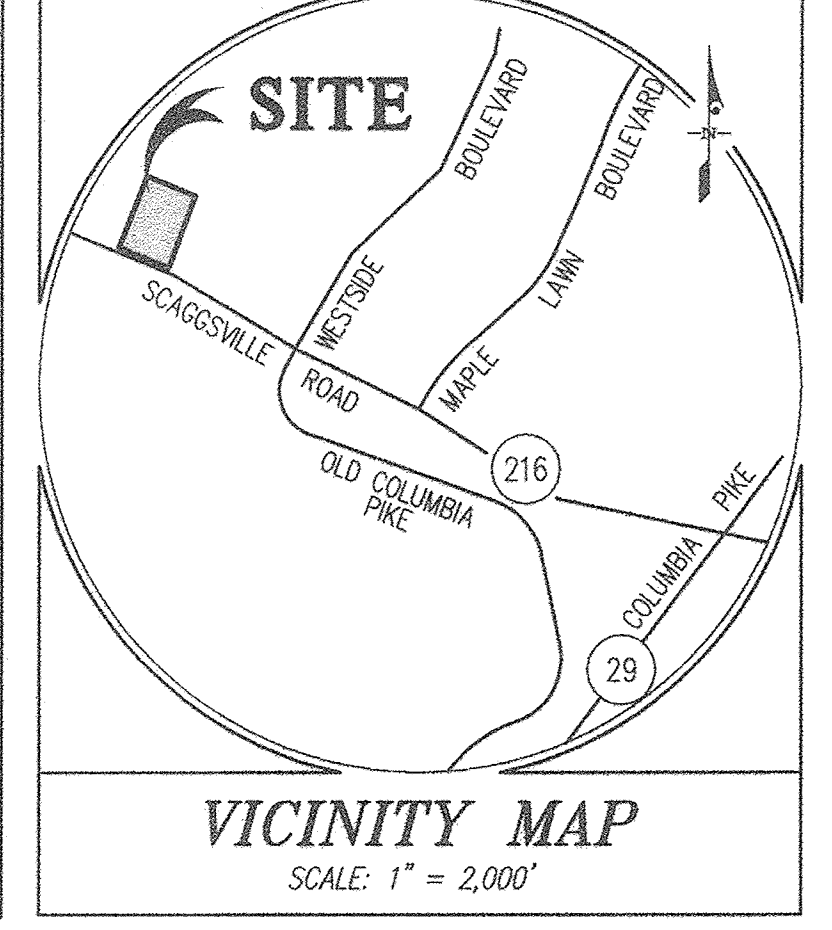
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AS SHOWN	CCT	16001
DATE	TAX MAP - GRID	SHEET
JULY, 2017	41 - 21	9 OF 18



48 Hours  
Before You Dig  
Call  
"MISS UTILITY"  
Service Protection Center

MEMBER  
ONE CALL SYSTEMS INTERNATIONAL

CALL TOLL FREE  
1-800-257-7777



- EXISTING UTILITY NOTES
- For marking locations of existing utilities, notify "MISS UTILITY" at 1-800-257-7777, 48 hours prior to any excavation or construction.
  - Information concerning underground utilities was obtained from available records. The contractor must determine the exact locations and elevations of the utilities by digging test pits by hand at all utility crossings well in advance of trenching. If clearances are less than specified on this plan or less than 12 inches when not specified, contact the Engineer, and the owner of the other involved utility before proceeding with construction.
  - For field location of gas line services, notify Washington Gas Light Co., 703-750-1000, 48 hours prior to the start of any excavation or construction.
  - Omissions and/or additions of utilities found during construction shall be the sole responsibility of any contractor engaged in excavation at this site. Gutschick, Little & Weber, P.A., shall be notified immediately of any and all utility information, omissions and additions found by any contractor.
  - Due to the proximity of live underground and overhead utilities, we are not responsible for any damage or injury sustained during construction by any persons, trucks, trailers, or equipment used on or adjacent to the site.

**LEGEND**

---	EX SEWER
---	EX WATER
---	EX STORM DRAIN
S	PROP. SEWER
W	PROP. WATER
---	PROP. STORM DRAIN
410	EX CONTOURS
405	EX CONTOURS
410	PROP. CONTOURS
405	PROP. CONTOURS
E	EX ELECTRIC
E	EX CURB & GUTTER
E	PROP. CURB & GUTTER
E	PROP. ELECTRIC
▭	PROP. BUILDING
○	PARKING LOT LIGHT
○	PROP. FIRE HYDRANT
○	PROP. SKM FACILITY
#	STORM DRAIN STRUCTURE LABEL
⊕	SOIL BORING LOCATION AND IDENTIFIER
⊕	EX TELEPHONE

ASBUILTS PROFESSIONAL CERTIFICATION  
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 11285, Expiration Date: March 17, 2021.

3-22-19  
Dptlr  
Todd M. Reddan  
Professional Engineer  
Maryland Reg. No. 11285  
for GLWPA

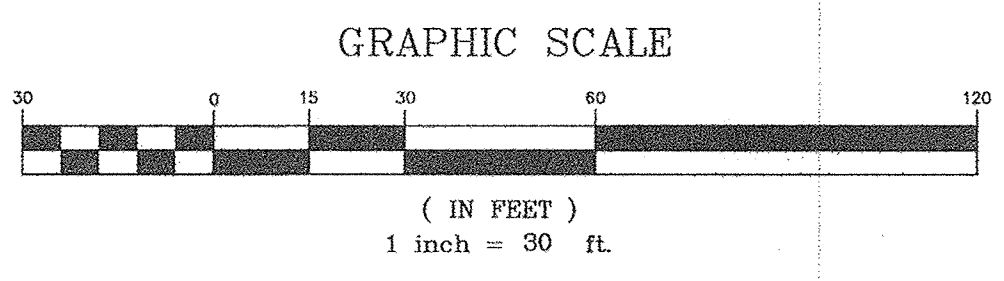
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*N. Williams*  
Director  
Date: 11-9-17

*West Shalanda*  
Chief, Division of Land Development  
Date: 11-06-17

*Paul P. ...*  
Chief, Development Engineering Division  
Date: 10-20-17

**SOIL TYPES**

Symbol	Description	Hydrologic Soil Type	K Factor
oga	Stenely loam, 0 to 3 percent slopes	B	0.28
ogb	Stenely loam, 3 to 8 percent slopes	C	0.31



ESD FACILITY	TOTAL DRAINAGE AREA (GF)	ESD SURFACE AREA (GF)	NET DRAINAGE AREA (GF)	MIN. ESDv (P=1.00") (CF)	ESDv PROVIDED (CF)	BOTTOM ELEVATION	MAXIMUM VOLUME (CF)
MR-1	23,353	2,153	20,201	1164	3,014	463.5	3,234
MR-2	22,356	2,545	19,811	1,238	2,100	463.5	2,100
MR-3	21,640	1,862	19,778	1,008	1,885	463.5	2,621
MR-4	20,120	1,822	18,298	926	2,021	464.5	2,401
MR-5	24,166	1,415	22,751	1,354	1,455	464.5	3,534
TOTAL ESDv REQ. :					11,616		
TOTAL ESDv PROV. :					11,681		

**GLWGUTSCHICK LITTLE & WEBER, P.A.**  
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK  
BURTONSVILLE, MARYLAND 20886  
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.

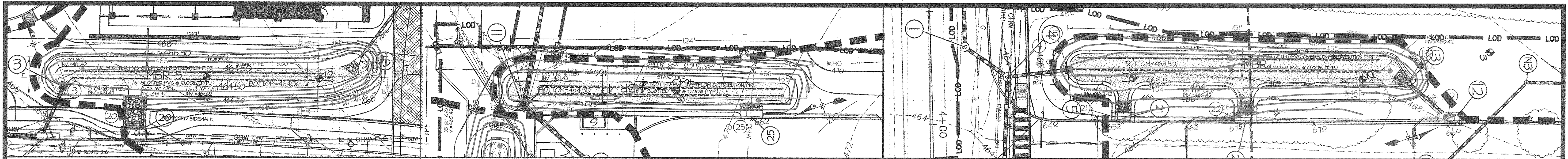
PREPARED FOR:  
APPLICANT:  
CSH MAPLE LAWN LLC,  
1275 PENNSYLVANIA AVE. NW, 2nd FLOOR  
WASHINGTON D.C. 20004  
CONTACT: DAVID R. ENNIS  
TEL: (202) 469-8400

PROFESSIONAL CERTIFICATION  
I HEREBY CERTIFY THAT THESE PLANS 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. 11285, EXPIRATION DATE: MARCH 17, 2021.

3-22-19  
Dptlr  
Todd M. Reddan  
Professional Engineer  
Maryland Reg. No. 11285  
for GLWPA

**ASBUILTS**  
**ESD DRAINAGE AREA MAP**  
**ARBOR TERRACE FULTON**  
**PARCEL A**  
GREEN RESIDENTIAL CARE BUILDING  
LIBER 9293 FOLIO 183  
HOWARD COUNTY, MARYLAND

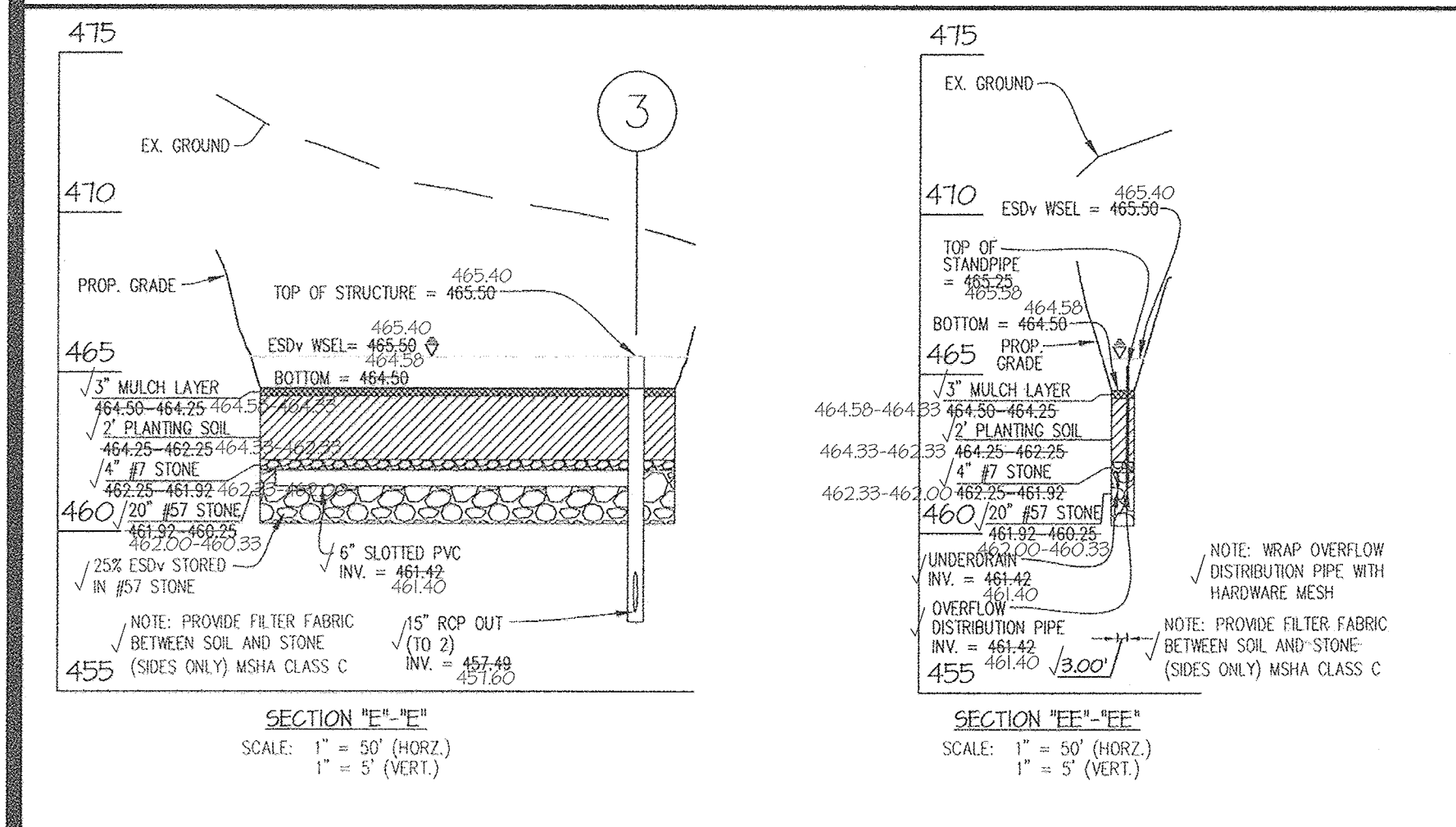
SCALE	ZONING	G. L. W. FILE NO.
1" = 30'	CCT	16001
DATE	TAX MAP - GRID	SHEET
MAR 2019 JULY, 2017	41 - 21	10 OF 18



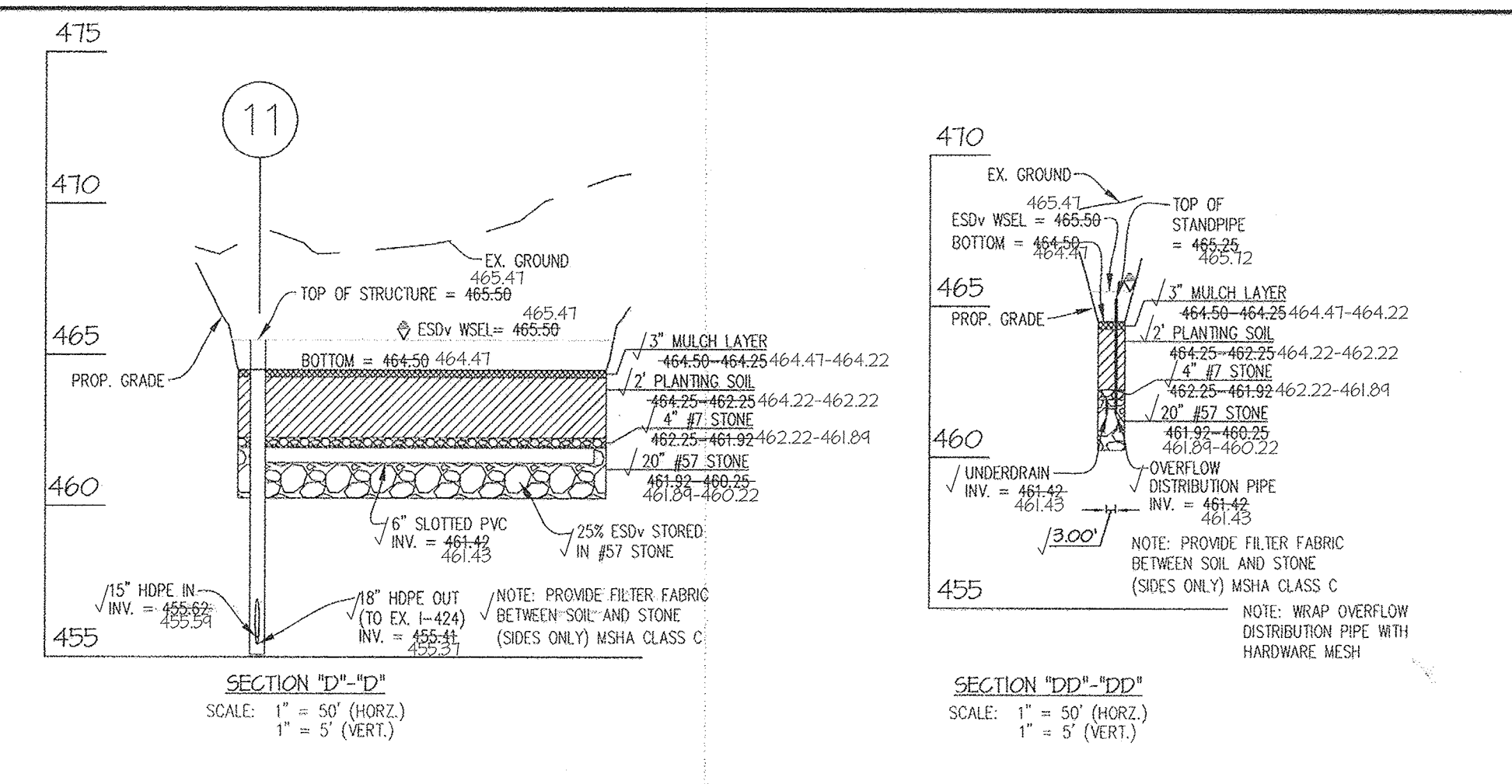
MICRO-BIORETENTION 5 PLAN SCALE: 1" = 20'

MICRO-BIORETENTION 4 PLAN SCALE: 1" = 20'

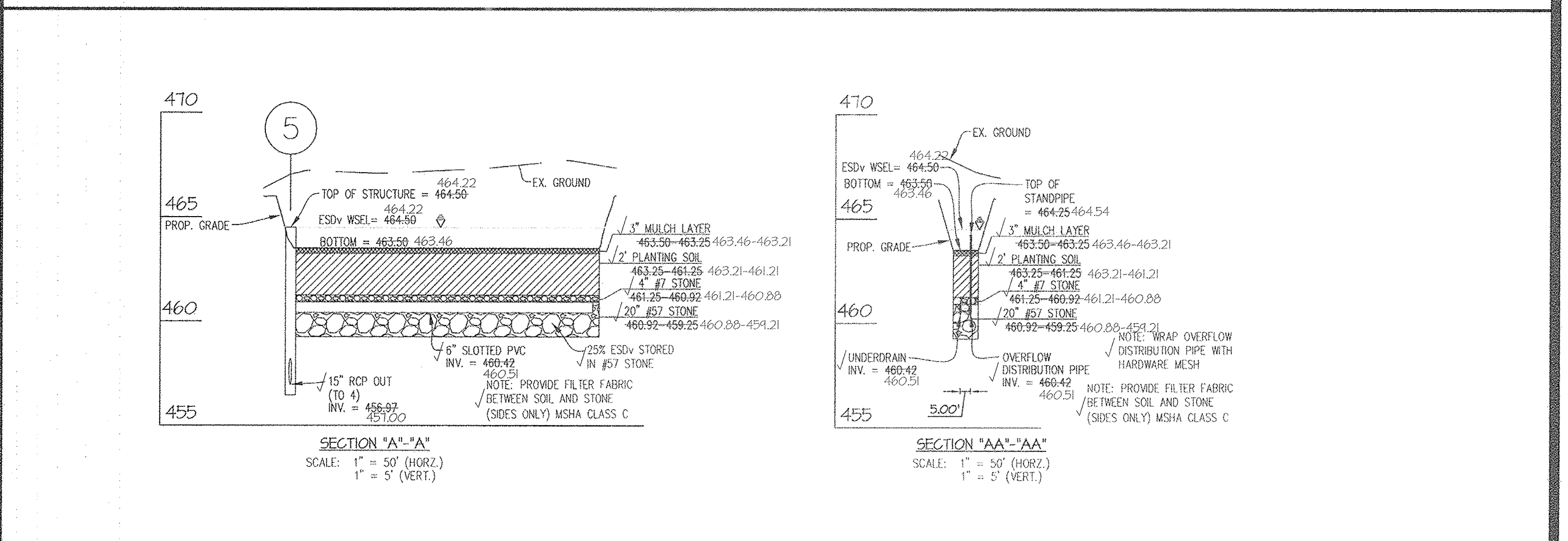
MICRO-BIORETENTION 1 PLAN SCALE: 1" = 20'



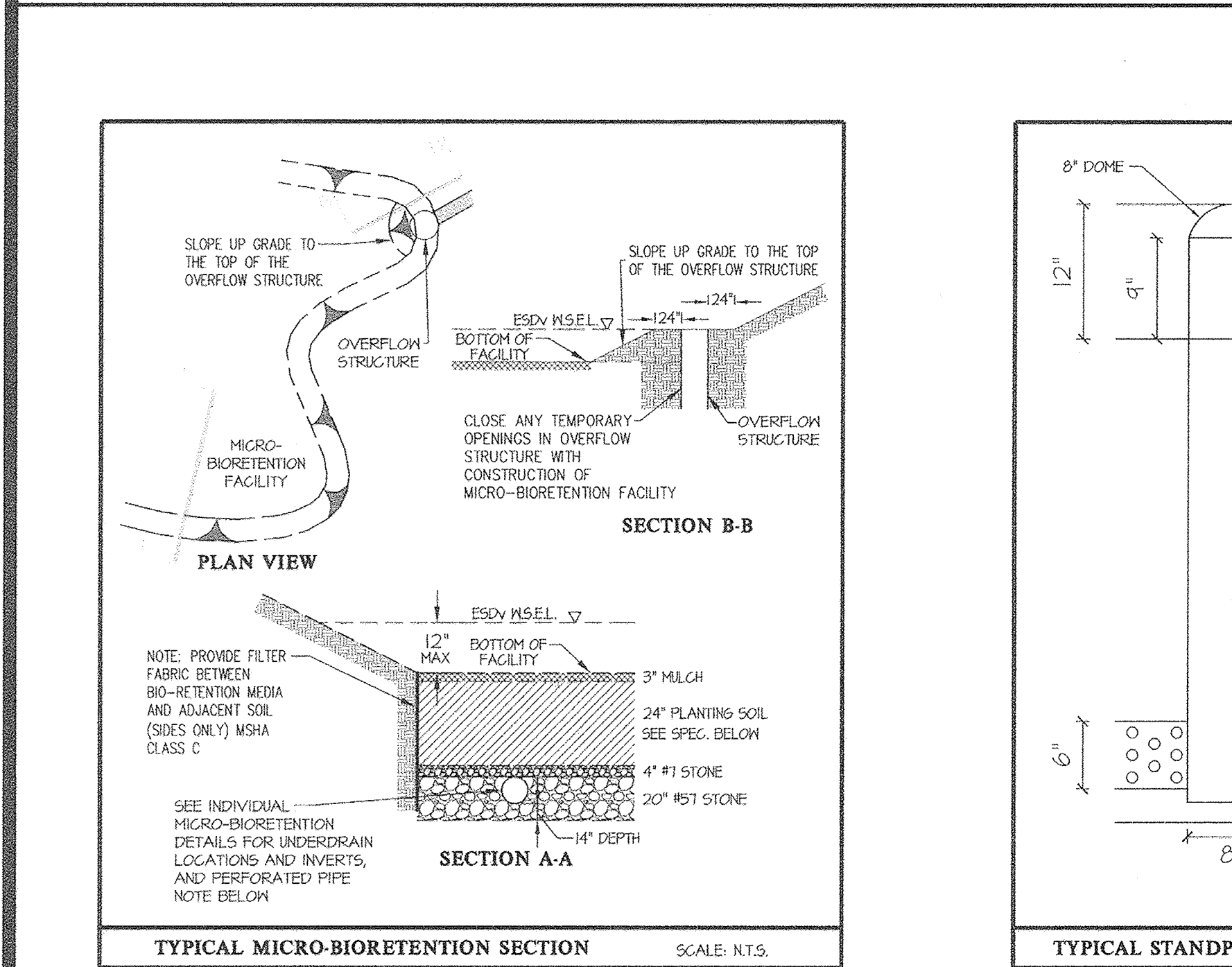
MICRO-BIORETENTION 5 PROFILE



MICRO-BIORETENTION 4 PROFILE



MICRO-BIORETENTION 1 PROFILE



TYPICAL MICRO-BIORETENTION SECTION SCALE: N.T.S.

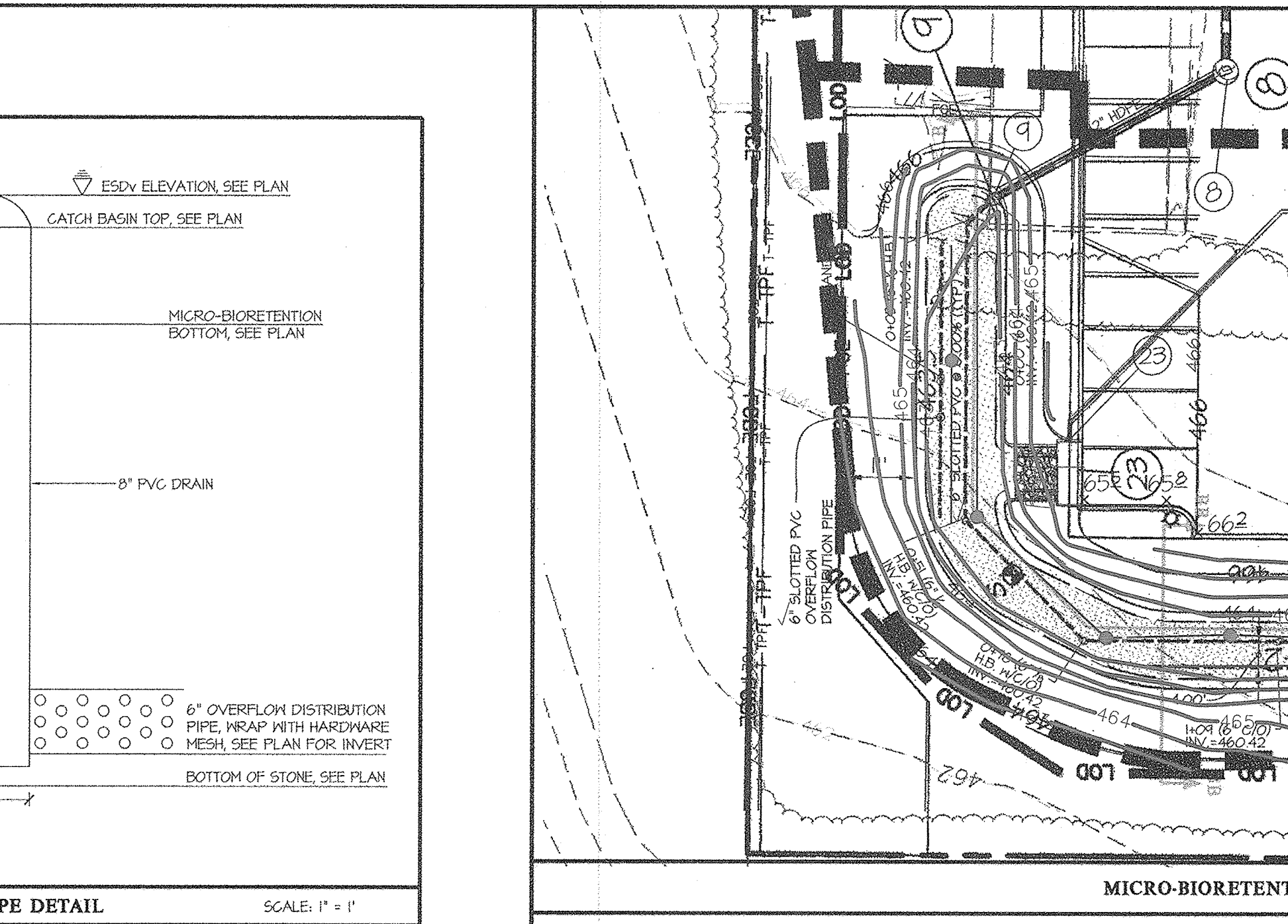
**ASBUILT PROFESSIONAL CERTIFICATION**  
 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 17285, Expiration Date: March 17, 2021.  
 3-22-19 Date  
 Todd M. Reddan  
 Professional Engineer  
 Maryland Reg. No. 17285  
 For GLW/PA

**S.D. PIPE SUMMARY TABLE PRIVATELY OWNED AND MAINTAINED**

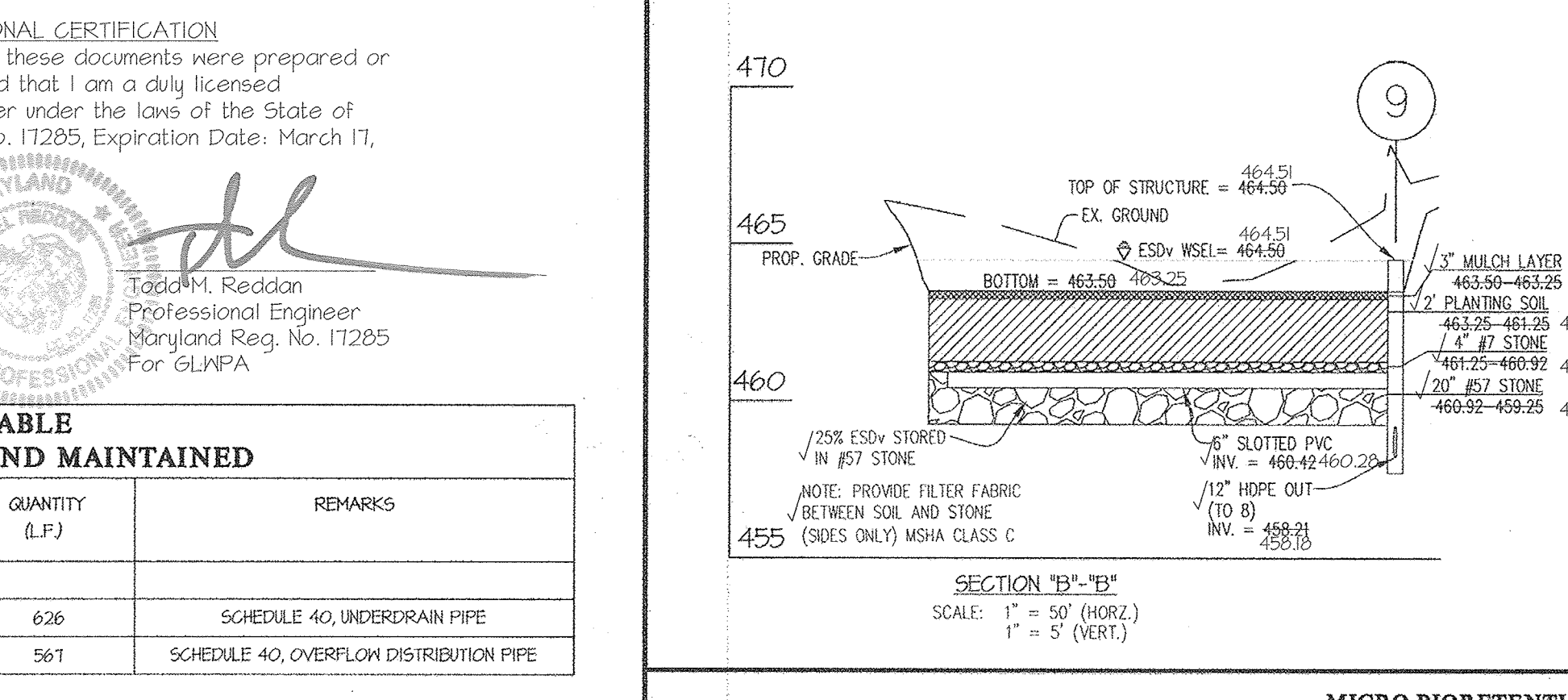
SIZE (INCHES)	TYPE	QUANTITY (L.F.)	REMARKS
6	SLOTTED PVC	626	SCHEDULE 40, UNDERDRAIN PIPE
6	SLOTTED PVC	561	SCHEDULE 40, OVERFLOW DISTRIBUTION PIPE

**APPROVED:** HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
 Director: [Signature] 11-9-17 Date  
 Chief, Division of Land Development: [Signature] 11-06-17 Date  
 Chief, Development Engineering Division: [Signature] 10-20-17 Date

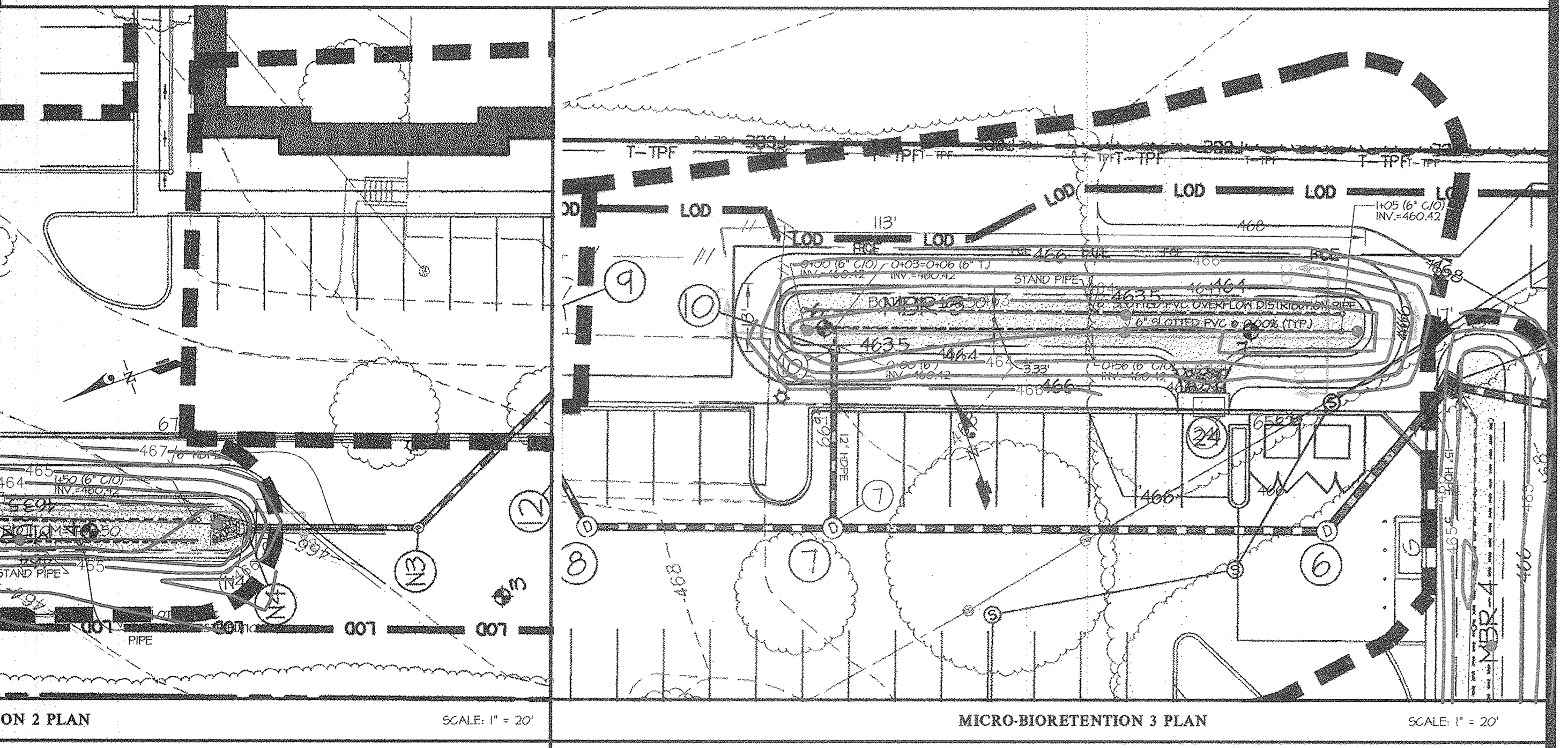
GLWGUTSCHICK LITTLE & WEBER, P.A.  
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
 3909 NATIONAL DRIVE - SUITE 250 - BURTNSVILLE OFFICE PARK  
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 TEL: 301-421-0424 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186



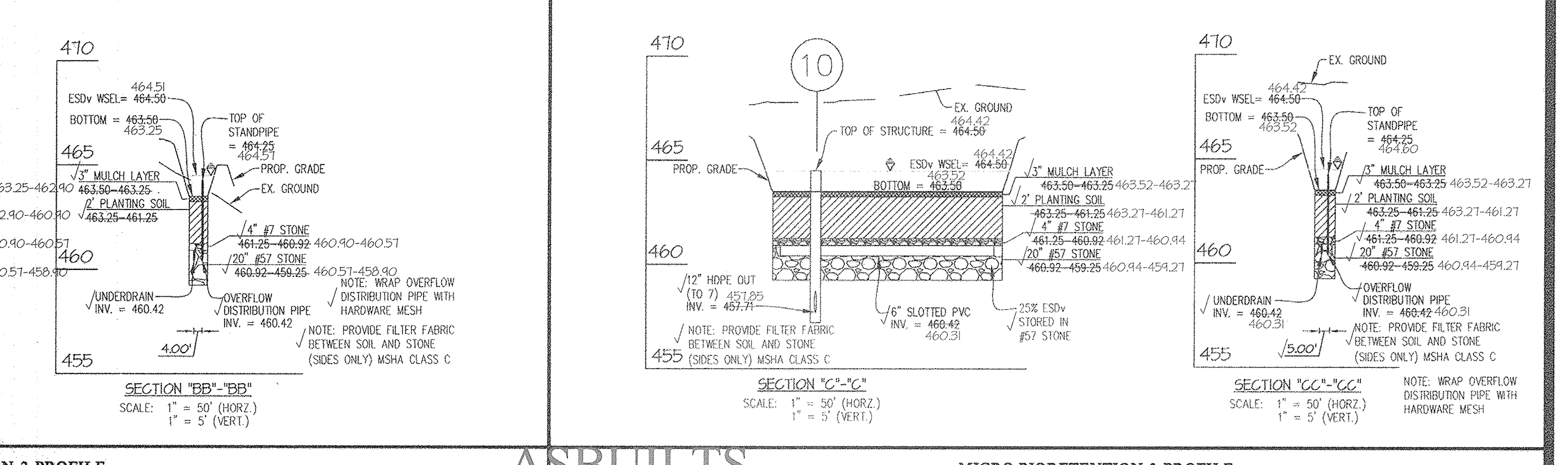
MICRO-BIORETENTION 2 PLAN SCALE: 1" = 20'



MICRO-BIORETENTION 2 PROFILE



MICRO-BIORETENTION 3 PLAN SCALE: 1" = 20'



MICRO-BIORETENTION 3 PROFILE

**ASBUILT'S ESD DETAILS**  
**ARBOR TERRACE FULTON PARCEL A**  
 GREEN RESIDENTIAL CARE BUILDING  
 LIBER 9293 FOLIO 183  
 CLARKSVILLE ELECTION DISTRICT No. 5

PROFESSIONAL CERTIFICATION  
 I HEREBY CERTIFY THAT THESE PLANS 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. 17285, EXPIRATION DATE: MARCH 17, 2019  
 3-22-19 Date  
 Todd M. Reddan  
 Professional Engineer  
 Maryland Reg. No. 17285  
 For GLW/PA

**ASBUILT SHEET 3 OF 3**

SCALE	ZONING	G. L. W. FILE No.
AS SHOWN	CCT	16001
DATE: MAR 2019 JULY, 2017	TAX MAP - GRID 41 - 21	SHEET 11 OF 18

© GLW 2017

ASBUILTSDP-17-018

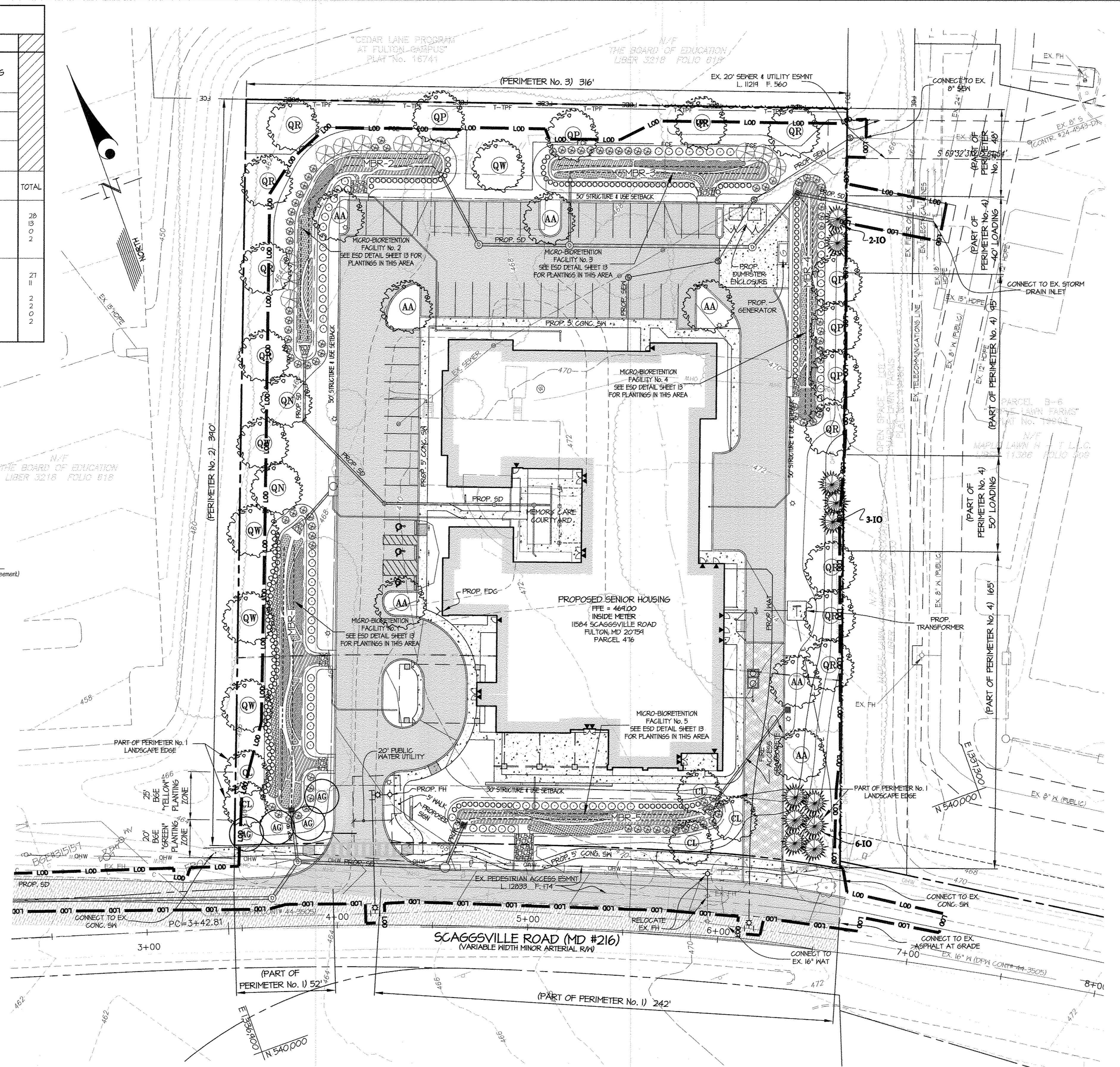
SCHEDULE - A: PERIMETER LANDSCAPE EDGE					
PERIMETER No.	(1)	(2)	(3)	(4)	
USE SITUATION	ADJ. TO ROADWAYS	APTS ADJ. TO PERIMETER PROPERTIES			LOADING
LANDSCAPE TYPE	B	A			C
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	244'	340'	316'	308'	90'
CREDIT FOR EXISTING VEGETATION	NO	NO	NO	NO	NO
CREDIT FOR WALL, FENCE OR BERM	NO	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED					TOTAL
SHADE TREES	6	1	6	6	28
EVERGREEN TREES	0	0	0	0	0
SHRUBS	0	2	0	0	2
LARGE CALIPER SHADE TREES • (Specimen Tree Mitigation, 3" DBH min.)	0	0	0	0	0
NUMBER OF PLANTS PROVIDED					TOTAL
SHADE TREES	5	1	6	6	27
EVERGREEN TREES	6	0	0	0	6
OTHER TREES	2	0	0	0	2
• Ornamentals sub. for Shade Trees (@ 2:1 substitution)	2	0	0	0	2
• Ornamentals sub. for Evergreens (@ 1:1 substitution)	0	0	0	0	0
SHRUBS (0:1 substitution)	2	0	0	0	2
LARGE CALIPER SHADE TREES • (Specimen Tree Mitigation, 3" DBH min.)	0	0	0	0	0

SCHEDULE-B: PARKING LOT INTERNAL LANDSCAPING	
NUMBER OF PARKING SPACES	50 COMMON SURFACE SPACES
NUMBER OF SHADE TREES REQUIRED (1 PER 10 RES. SPACES, 1 PER 20 COMMERCIAL SPACES)	5
NUMBER OF TREES PROVIDED	
SHADE TREES	5
OTHER TREES (2:1 SUBSTITUTION)	0

TABULATION OF LANDSCAPE, PRIVATE STREET TREES & MITIGATION TREES FOR REQUIRED LANDSCAPE SURETY			
	SCHD.-A	SCHD.-B	TOTAL
TOTAL SHADE TREES REQUIRED	30	5	35
TOTAL EVERGRN TREES REQUIRED	0	0	0
\$105,000.00 SURETY REQUIRED FOR 35 SHADE TREES AT \$300/TREE \$1,950,000 SURETY REQUIRED FOR 03 EVERGREEN TREES AT \$150/TREE \$124,500.00 TOTAL LANDSCAPE SURETY REQUIRED (To be posted with the Developer Agreement)			

PLANT LIST FOR SCHEDULE A & B				
SYMBOL	QTY.	NAMES (BOTANICAL / SCIENTIFIC)	SIZE	ROOT/COMMENTS
<b>SHADE TREES</b>				
AA	1	ACER RUBRUM 'ARMSTRONG'/ ARMSTRONG RED MAPLE	2 1/2-3" CAL.	B4B, 6' min. branching height
CL	5	CLADRASTIS KENTUCKIA 'PERKINS PINK'/ PERKINS PINK YELLOWWOOD	2 1/2-3" CAL.	B4B, 6' min. branching height
PA	4	PLATANUS X ACERIFOLIA 'BLOODGOOD'/ BLOODGOOD LONDON PLANETREE	2 1/2-3" CAL.	B4B
QR	4	QUERCUS RUBRA/ NORTHERN RED OAK	2 1/2-3" CAL.	B4B
QN	2	QUERCUS RUBRA/ NORTHERN RED OAK	3" CAL.	B4B (Specimen Tree Mitigation)
QP	6	QUERCUS FALICATA/ PIN OAK	2 1/2-3" CAL.	B4B
QW	5	QUERCUS PHellos/ WILLOW OAK	2 1/2-3" CAL.	B4B
<b>ORNAMENTAL TREES</b>				
AG	4	ACER GRiseum/ PAPERBARK MAPLE	2 1/2-3" CAL.	B4B, INTACT LEADER 6' min. branching height
<b>EVERGREEN TREES</b>				
IO	11	ILEX OPACA/ AMERICAN HOLLY	6-8' HT.	B4B, INTACT LEADER

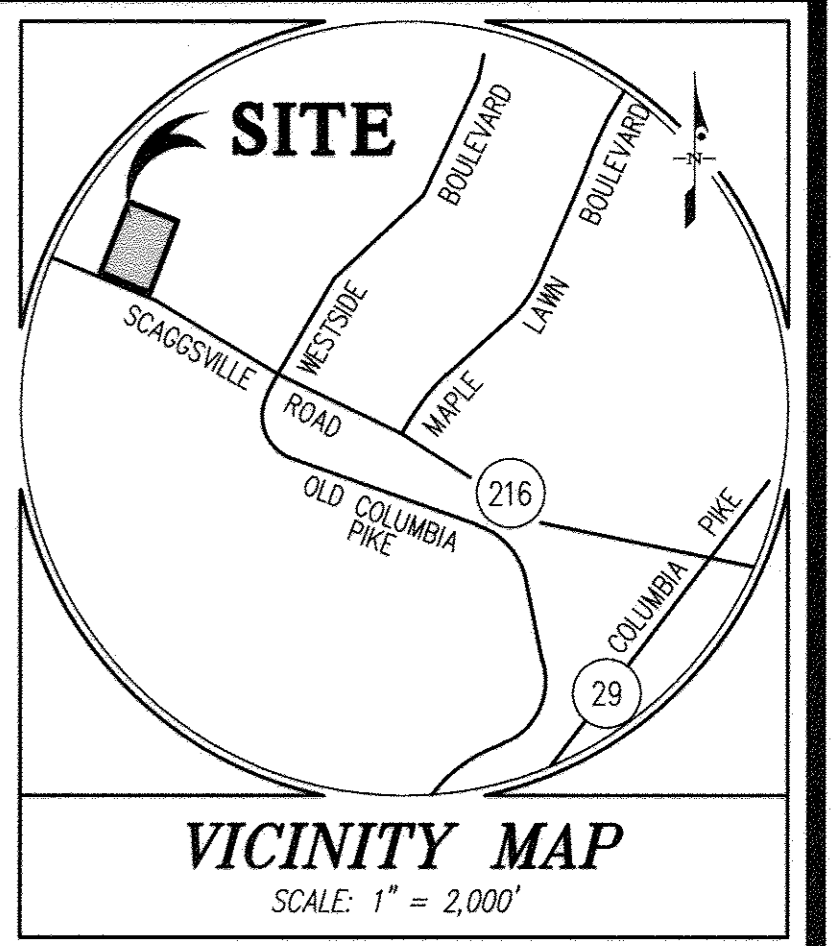
PLANT LIST FOR MICRO-BIORETENTION FACILITIES (SEE SHEET 13)				
<b>SHRUBS</b>				
SYMBOL	QTY.	NAMES (BOTANICAL / SCIENTIFIC)	SIZE	HT. MIN.
IG	11	ILEX GLABRA 'COMPACTA'/ COMPACT INKBERRY	3-4" O.C.	18" Ht. min.
HV	12	HAMAMELIS VIRGINIANA 'ARNOLD PROMISE'/ ARNOLD PROMISE WITCH HAZEL	8-10" O.C.	36" Ht. min.
HP	25	HYDRANGEA PANICULATA 'LIMELIGHT'/ LIMELIGHT HYDRANGEA	5" O.C.	30" Ht. min.
<b>HERBACEOUS</b>				
340		CAREX STRICTA/ TUSSOCK SEDGE	24" O.C.	1.6AL
251		LOBELIA CARDINALIS	30" O.C.	1.6AL
230		MONARDA DIDYMA 'JACOB CLINE' / BEEBALM	30" O.C.	1.6AL
140		PANICUM VIRGATUM 'SHENANDOAH'/ SWITCHGRASS	36" O.C.	1.6AL
95		RUDBECKIA GOLDSTRUM/ BLACK-EYED SUSAN	30" O.C.	1.6AL
105		VERBENA HASTATA/ BLUE VERVAIN	30" O.C.	1.6AL



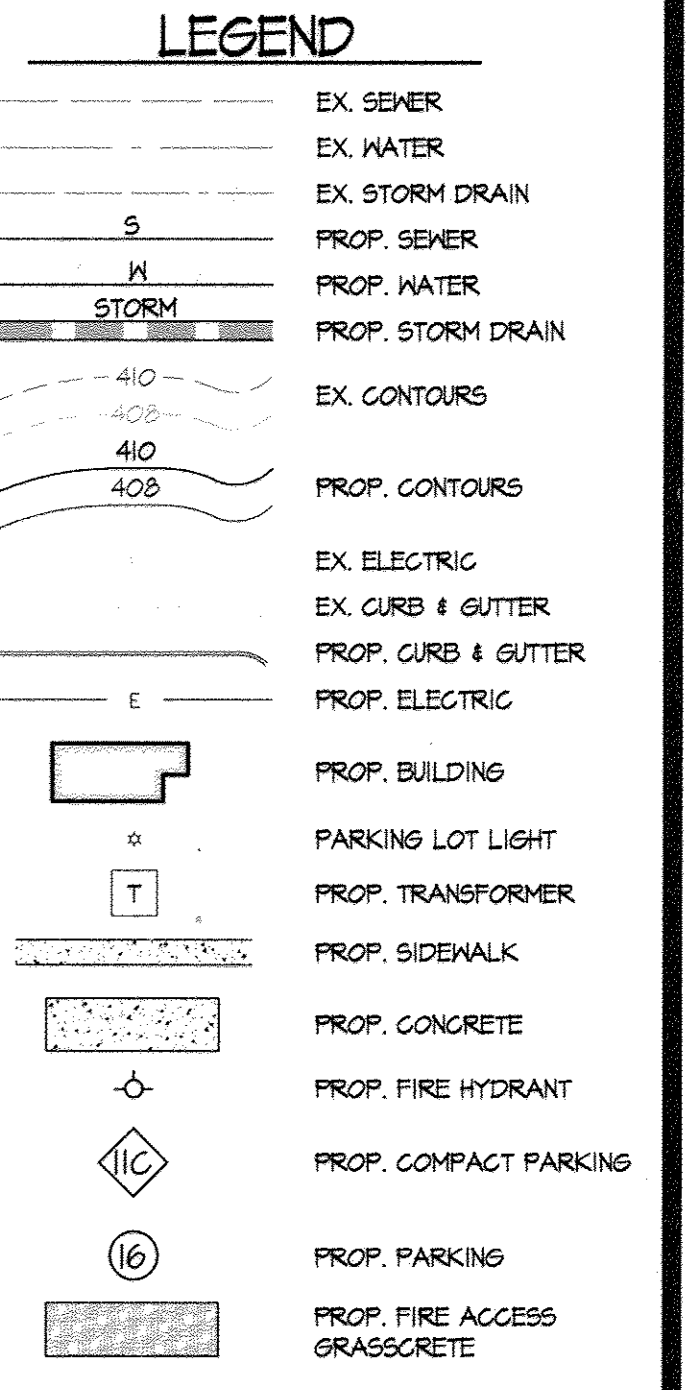
48 Hours  
Before You Dig  
Call  
"MISS UTILITY"  
Service Protection Center

MEMBER  
OF THE  
CALL SYSTEMS INTERNATIONAL

CALL TOLL FREE  
1-800-257-7777



- EXISTING UTILITY NOTES
- For marking locations of existing utilities, notify "MISS UTILITY" at 1-800-257-7777, 48 hours prior to any excavation or construction.
  - Information concerning underground utilities was obtained from available records. The contractor must determine the exact locations and elevations of the utilities by digging test pits by hand at all utility crossings well in advance of trenching. If clearances are not as specified on this plan or less than 12 inches when not specified, contact the Engineer, and the owner of the other involved utility before proceeding with construction.
  - For field location of gas line services, notify Washington Gas Light Co., 703-750-1000, 48 hours prior to the start of any excavation or construction.
  - Omissions and/or additions of utilities found during construction shall be the sole responsibility of any contractor engaged in excavation at this site. Outschick, Little & Weber, P.A., shall be notified immediately of any and all utility information, omissions and additions found by any contractor.
  - Due to the proximity of live underground and overhead utilities, we are not responsible for any damage or injury sustained during construction by any persons, trucks, trailers, or equipment used on or adjacent to the site.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

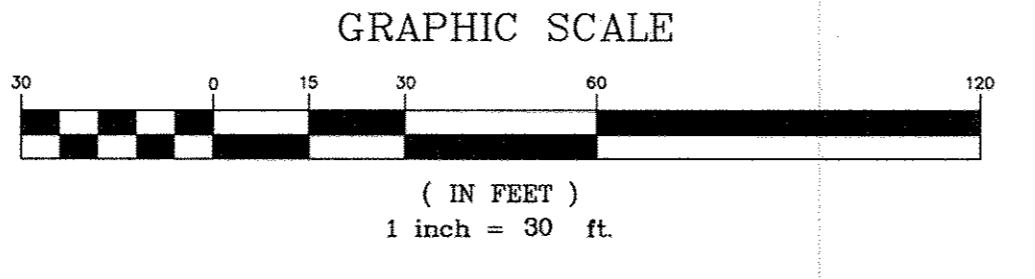
*Naomi Griffin* 11-9-17  
Director Date

*Kate L. Lane* 11-06-17  
Chief, Division of Land Development Date

*Oliver* 10-10-17  
Chief, Development Engineering Division Date

STATE OF MARYLAND  
Michael B. Tran  
REGISTERED ARCHITECT

*Michael B. Tran* 09-21-17  
DATE



DEVELOPER'S/OWNER'S CERTIFICATE

I HEREBY CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.24 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I FURTHER CERTIFY THAT UPON COMPLETION A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

*Joseph F. McElwee* 7/6/17  
NAME DATE

**GLWGUTSCHICK LITTLE & WEBER, P.A.**  
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK  
BURTONSVILLE, MARYLAND 20866  
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

PREPARED FOR:  
APPLICANT:  
CSH MAPLE LAWN LLC,  
1275 PENNSYLVANIA AVE. NW, 2ND FLOOR  
WASHINGTON D.C. 20004  
CONTACT: DAVID R. ENNIS  
TEL. (202) 469-8400

**LANDSCAPE PLAN**  
**ARBOR TERRACE FULTON**  
PARCEL A  
GREEN RESIDENTIAL CARE BUILDING  
LIBER 9293 FOLIO 183

SCALE	ZONING	G. L. W. FILE No.
1"=30'	CCT	16001
DATE	TAX MAP - GRID	SHEET
JULY, 2017	41 - 21	12 OF 18

**LANDSCAPE NOTES**

- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 61.24 OF THE HOWARD COUNTY CODE & THE HOWARD COUNTY LANDSCAPE MANUAL.
- CONTRACTOR SHALL NOTIFY ALL UTILITIES AT LEAST (5) FIVE DAYS BEFORE STARTING WORK. ALL GENERAL NOTES, ESPECIALLY THOSE REGARDING UTILITIES, ON SHEET NO. 1 SHALL APPLY.
- FIELD VERIFY UNDERGROUND UTILITY LOCATIONS AND EXISTING CONDITIONS BEFORE STARTING PLANTING WORK. CONTACT CONSTRUCTION MANAGER OR OWNER IF ANY RELOCATIONS ARE REQUIRED.
- PLANT QUANTITIES SHOWN ON THE PLAN LIST ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. IF DISCREPANCIES EXIST BETWEEN QUANTITIES SHOWN ON THE PLAN AND THOSE SHOWN ON THE PLAN LIST, THE QUANTITIES ON THE PLAN SHALL TAKE PRECEDENCE.
- ALL PLANT MATERIAL SHALL BE FULL HEAVY, WELL FORMED, SYMMETRICAL, AND CONFORM TO THE A.A.S. SPECIFICATIONS. IN ADDITION, ALL REQUIRED PLANTING FOR THE LANDSCAPE ISLANDS IN THE PARKING LOT SHALL CONFORM TO THE HOWARD COUNTY LANDSCAPE MANUAL. ALL PLANT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS AND THIS PLAN.
- NO SUBSTITUTION SHALL BE MADE WITHOUT PRIOR APPROVAL FROM HOWARD COUNTY DPZ AND THE OWNER OR HIS REPRESENTATIVE.
- ALL AREAS DISTURBED BY CONSTRUCTION ACTIVITIES BUT NOT OTHERWISE PLANTED, PAVED, OR MULCHED SHALL BE SOODED OR SEEDED IN ACCORDANCE WITH THE PERMANENT SEEDING SPECIFICATION. A MINIMUM OF 4" OF TOPSOIL SHALL BE PROVIDED TO ALL PLANTING AREAS.
- THE CONTRACTOR SHALL NOTIFY THE OWNER IN WRITING IF HE/SHE ENCOUNTERS SOIL DRAINAGE CONDITIONS THAT MAY BE DETRIMENTAL TO THE GROWTH OF THE PLANTS.
- ALL EXPOSED EARTH WITHIN THE LIMITS OF PLANTING BEDS SHALL BE MULCHED WITH SHREDDED HARDWOOD MULCH PER THE PLANTING DETAILS.
- DO NOT PLANT WITHIN THE PUBLIC WALK, SEWER AND UTILITY EASEMENT.
- VERIFY THE LOCATION AND DEPTH OF THE COMMUNICATION LINES WITHIN THE 4' X 14' RUN RIM TO ANY PLANTING WITHIN THIS RUN. THE CONTRACTOR SHALL CONTACT GUY FOR ANY NECESSARY RELOCATION OF PLANT MATERIALS.
- THE SCHEDULES ON SHEET 12 ARE PROVIDED FOR LANDSCAPE SURETY CALCULATION PURPOSES. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DOW DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$12,450,000 FOR THE FOLLOWING PLANTS:

13 EVERGREEN TREES AT \$150/TREE	= \$ 1,950.00
35 SHADE TREES @ \$300/TREE	= \$10,500.00

TO REQUEST A LANDSCAPE INSPECTION TO OBTAIN THE RELEASE OF THE POSTED LANDSCAPE SURETY, SUBMIT A WRITTEN REQUEST OF LANDSCAPE INSPECTION ALONG WITH A COPY OF THE ONE YEAR LANDSCAPE PLANT WARRANTY, TO THE DIVISION OF LAND DEVELOPMENT, HO. CO. DEPT. OF PLANNING AND ZONING.

**SPECIFICATIONS: PLANT MATERIALS AND PLANTING METHODS**

**A. PLANT MATERIALS**

THE LANDSCAPE CONTRACTOR SHALL FURNISH AND INSTALL AND/OR DIG, BALL, BURLAP AND TRANSPALNT ALL OF THE PLANT MATERIALS CALLED FOR ON DRAWINGS AND/OR LISTED IN THE PLANT SCHEDULE.

**1. PLANT NAMES**

PLANT NAMES USED IN THE PLANT SCHEDULE SHALL CONFORM WITH 'AAN' STANDARDS.

**2. PLANT STANDARDS**

ALL PLANT MATERIAL SHALL BE EQUAL TO OR BETTER THAN THE REQUIREMENTS OF THE 'USA STANDARD FOR NURSERY STOCK' LATEST EDITION AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN (HERE-AFTER REFERRED TO AS 'AAN' STANDARDS). ALL PLANTS SHALL BE TYPICAL OF THEIR SPECIES AND VARIETY, SHALL HAVE A NORMAL HABIT OF GROWTH AND SHALL BE FIRST QUALITY, SOUND, VIGOROUS, WELL-BRANCHED AND WITH HEALTHY, WELL-FURNISHED ROOT SYSTEMS. THEY SHALL BE FREE OF DISEASE, INSECT PESTS AND MECHANICAL INJURIES.

ALL PLANTS SHALL BE NURSERY GROWN AND SHALL HAVE BEEN GROWN UNDER THE SAME CLIMATE CONDITIONS AS THE LOCATION OF THIS PROJECT FOR AT LEAST TWO YEARS BEFORE PLANTING. NEITHER HEEL-IN PLANTS NOR PLANTS FROM COLD STORAGE WILL BE ACCEPTED.

**3. PLANT MEASUREMENTS**

ALL PLANTS SHALL CONFORM TO THE MEASUREMENTS SPECIFIED IN THE PLANT SCHEDULE.

**A. CALIFER MEASUREMENTS SHALL BE TAKEN SIX INCHES (6") ABOVE GRADE FOR TREES UP TO FOUR-INCH (4") CALIFER AND TWELVE (12") ABOVE GRADE FOR TREES GREATER THAN FOUR INCHES (4") IN CALIFER.**

**B. MINIMUM BRANCHING HEIGHT FOR ALL SHADE TREES SHALL BE SIX FEET (6'), MAXIMUM EIGHT FEET (8').**

**C. CALIFER HEIGHT, SPREAD AND SIZE OF BALL SHALL BE GENERALLY AS FOLLOWS:**

CALIFER	HEIGHT	SPREAD	SIZE OF BALL
2" - 2 1/2"	12'-14'	5'-6"	26" DIAMETER
3" - 3 1/2"	14'-16'	6'-8"	32" DIAMETER
3 1/2" - 4"	14'-16'	8'-10"	36" DIAMETER
4" - 4 1/2"	16'-18'	8'-10"	40" DIAMETER
4 1/2" - 5"	16'-18'	10'-12"	44" DIAMETER
5" - 5 1/2"	16'-20'	10'-12"	48" DIAMETER
5 1/2" - 6"	18'-20'	12'-14"	52" DIAMETER

ALL PLANT MATERIAL SHALL GENERALLY AVERAGE THE MEDIAN FOR THE SIZE RANGES INDICATED ABOVE AS INDICATED IN THE 'AAN' STANDARDS.

**4. PLANT IDENTIFICATION**

LEGIBLE LABELS SHALL BE ATTACHED TO ALL SHADE TREES, MINOR TREES, SPECIMEN SHRUBS AND BUNDLES OR BOXES OF OTHER PLANT MATERIAL GIVING THE BOTANICAL AND COMMON NAMES, SIZE AND QUANTITY OF EACH. EACH SHIPMENT OF PLANTS SHALL BEAR CERTIFICATES OF INSPECTION AS REQUIRED BY FEDERAL, STATE AND COUNTY AUTHORITIES.

**5. PLANT INSPECTION**

THE OWNER MAY REQUEST, AT LEAST TEN (10) DAYS PRIOR TO THE INSTALLATION OF ANY PROPOSED PLANT MATERIAL, TO INSPECT ALL PROPOSED PLANT MATERIAL AT THE SOURCE OF ORIGIN.

**B. PLANTING METHODS**

ALL PROPOSED PLANT MATERIALS THAT MEET THE SPECIFICATIONS IN SECTION A ARE TO BE PLANTED IN ACCORDANCE WITH THE FOLLOWING METHODS DURING THE PROPER PLANTING SEASONS AS DESCRIBED IN THE FOLLOWING:

**1. PLANTING SEASONS**

THE PLANTING OF DECIDUOUS TREES, SHRUBS AND VINES SHALL BE FROM MARCH 1ST TO JUNE 15TH AND FROM SEPTEMBER 15TH TO DECEMBER 15TH. PLANTING OF DECIDUOUS MATERIAL MAY BE CONTINUED DURING THE WINTER MONTHS PROVIDING THERE IS NO FROST IN THE GROUND AND FROST-FREE TOPSOIL PLANTING MIXTURES ARE USED.

THE PLANTING OF EVERGREEN MATERIAL SHALL BE FROM MARCH 15TH TO JUNE 15TH AND FROM AUGUST 15TH TO DECEMBER 15TH. NO PLANTING SHALL BE DONE WHEN THE GROUND IS FROZEN OR EXCESSIVELY MOIST. NO FROZEN OR WET TOPSOIL SHALL BE USED AT ANY TIME.

**2. DIGGING**

ALL PLANT MATERIAL SHALL BE DIG, BALLED AND BURLAPPED (BAB) IN ACCORDANCE WITH THE 'AAN STANDARDS'.

**3. EXCAVATION OF PLANT PITS**

THE LANDSCAPE CONTRACTOR SHALL EXCAVATE ALL PLANT PITS, VINE PITS, HEDGE TRENCHES AND SHRUB BEDS IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:

**A. LOCATIONS OF ALL PROPOSED PLANT MATERIAL SHALL BE STAKED AND APPROVED IN THE FIELD BY THE LANDSCAPE ARCHITECT BEFORE ANY OF THE PROPOSED PLANT MATERIAL IS INSTALLED BY THE LANDSCAPE CONTRACTOR.**

**B. ALL PITS SHALL BE GENERALLY CIRCULAR IN OUTLINE, VERTICAL SIDES, DEPTH SHALL NOT BE LESS THAN 6" DEEPER THAN THE ROOT BALL, DIAMETER SHALL NOT BE LESS THAN TWO TIMES THE DIAMETER OF THE ROOT BALL AS SET FORTH IN THE FOLLOWING SCHEDULE:**

PLANT SIZE	ROOT BALL	PIT DIA.	PIT DEPTH
2" - 2 1/2" CAL.	26"	56"	24"
3" - 3 1/2" CAL.	32"	64"	28"
3 1/2" - 4" CAL.	36"	72"	32"
4" - 4 1/2" CAL.	40"	80"	36"
4 1/2" - 5" CAL.	44"	88"	40"
5" - 5 1/2" CAL.	48"	96"	44"
5 1/2" - 6" CAL.	52"	104"	48"

**C. IF AREAS ARE DESIGNATED AS SHRUB BEDS OR HEDGE TRENCHES, THEY SHALL BE EXCAVATED TO AT LEAST 12" DEPTH MINIMUM. AREAS DESIGNATED FOR GROUND COVERS AND VINES SHALL BE EXCAVATED TO AT LEAST 12" IN DEPTH MINIMUM.**

**D. DIAMETER AND DEPTH OF TREE PITS SHALL GENERALLY BE AS FOLLOWS:**

A 20% COMPACTION FIGURE OF SOIL TO BE REMOVED IS ASSUMED AND WILL BE ALLOWED IN CALCULATION OF EXTRA TOPSOIL. THE TABULATED PIT SIZES ARE FOR PURPOSES OF UNIFORM CALCULATION AND SHALL NOT OVERRIDE THE SPECIFIED DEPTHS BELOW THE BOTTOMS OF THE ROOT BALLS.

**4. STAKING, GUYING AND WRAPPING**

ALL PLANT MATERIAL SHALL BE STAKED OR GUYED, AND WRAPPED IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS:

**A. STAKES:** SHALL BE SOUND WOOD 2" X 2" ROUGH SAWN OAK OR SIMILAR DURABLE WOODS, OR LENGTHS, MINIMUM 7'-0" FOR MAJOR TREES AND 5'-0" MINIMUM FOR MINOR TREES.

**B. WIRE AND CABLE:** WIRE SHALL BE #10 GA. GALVANIZED OR BETHANIZED ANNEALED STEEL WIRE. FOR TREES OVER 3" CALIFER, PROVIDE 3/8" TURN BUCKLES, EYE AND EYE WITH 4" TAKE-UP. FOR TREES OVER 3" CALIFER, PROVIDE 3/8" TURN BUCKLES, EYE AND EYE WITH 4" TAKE-UP. FOR TREES OVER 3" CALIFER, PROVIDE 3/8" TURN BUCKLES, EYE AND EYE WITH 4" TAKE-UP. FOR TREES OVER 3" CALIFER, PROVIDE 3/8" TURN BUCKLES, EYE AND EYE WITH 4" TAKE-UP.

**C. HOSE:** SHALL BE NEW 2 PLY REINFORCED RUBBER HOSE, MINIMUM 1/2" I.D. 'PLASTIC LOCK TIES' OR 'PAUL'S TREE BRACES' MAY BE USED IN PLACE OF WIRE AND HOSE ON TREES UP TO 3" IN CALIFER.

**D. ALL TREES UNDER 3" IN CALIFER ARE TO BE PLANTED AND STAKED IN ACCORDANCE WITH THE ATTACHED PLANTING DETAILS.**

**5. PLANT FINISHING, EDGING AND MULCHING**

**A. EACH TREE SHRUB OR VINE SHALL BE FINISHED IN AN APPROPRIATE MANNER TO ITS PARTICULAR REQUIREMENTS, IN ACCORDANCE WITH ACCEPTED STANDARD PRACTICE. BROKEN OR BRUISED BRANCHES SHALL BE REMOVED WITH CLEAN CUTS FLUSH WITH THE ADJACENT TRUNK OR BRANCHES. ALL CUTS OVER 1" IN DIAMETER SHALL BE PAINTED WITH AN APPROVED ANTISETTIC TREE WOUND DRESSING.**

**B. ALL TRENCHES AND SHRUB BEDS SHALL BE EDGED AND CULTIVATED TO THE FULL DIAMETER OF THE PIT. SOIL WHICH HAS BEEN REMOVED AND STACKED SHALL BE USED TO TRIM THE EDGES OF ALL EXCAVATED AREAS TO THE NEAT LINES OF THE PLANT PIT SAUCERS, THE EDGES OF SHRUB AREAS, HEDGE TRENCHES AND VINE POCKETS.**

**C. AFTER CULTIVATION, ALL PLANT MATERIALS SHALL BE MULCHED WITH A 3" LAYER OF FINE, SHREDDED PINE BARK, PEAT MOSS, OR ANOTHER APPROVED MATERIAL OVER THE ENTIRE AREA OF THE BED OR SAUCER.**

**6. PLANT INSPECTION AND ACCEPTANCE**

THE DESIGN REVIEW COMMITTEE SHALL BE RESPONSIBLE FOR INSPECTING ALL PLANTING PROJECTS ON A PERIODIC BASIS TO ASSURE THAT ALL WORK IS PROCEEDING IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.

**7. PLANT GUARANTEE**

ALL PLANT MATERIAL SHALL BE GUARANTEED FOR THE DURATION OF ONE FULL GROWING SEASON, AFTER FINAL INSPECTION AND ACCEPTANCE OF THE WORK IN THE PLANTING PROJECT. PLANTS SHALL BE ALIVE AND IN SATISFACTORY GROWING CONDITION AT THE END OF THE GUARANTEE PERIOD.

**A. FOR THIS PURPOSE, THE 'GROWING SEASON' SHALL BE THAT PERIOD BETWEEN THE END OF THE 'SPRING' PLANTING SEASON AND THE COMMENCEMENT OF THE 'FALL' PLANTING SEASON.**

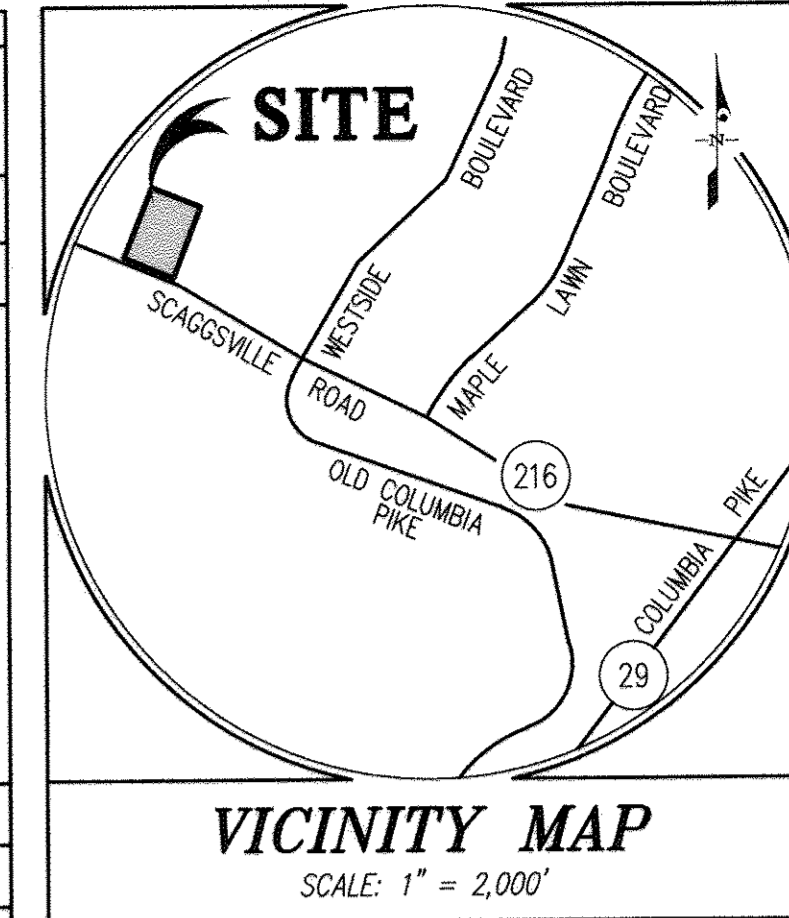
**B. GUARANTEE FOR PLANTS PERFORMED AFTER THE SPECIFIED END OF THE 'SPRING' PLANTING SEASON, SHALL BE EXTENDED THROUGH THE END OF THE NEXT FOLLOWING 'SPRING' PLANTING SEASON.**

**SOODING**

ALL SOODING SHALL BE IN ACCORDANCE TO THE 'LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS' LATEST EDITION, APPROVED BY THE LANDSCAPE CONTRACTORS ASSOCIATION OF METROPOLITAN WASHINGTON AND THE AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS.

ALL SOOD SHALL BE STRONGLY ROOTED SOOD, NOT LESS THAN TWO YEARS OLD AND FREE OF WEEDS AND UNDESIRABLE NATIVE GRASSES. PROVIDE ONLY SOOD CAPABLE OF GROWTH DEVELOPMENT WHEN PLANTED AND IN STRIPS NOT MORE THAN 18" WIDE X 4' LONG. PROVIDE SOOD COMPOSED PRINCIPALLY OF IMPROVED STRAIN KENTUCKY BLUEGRASS, SUCH AS, COLUMBIA, VICTA, OR ESCORT.

48 Hours  
Before You Dig  
Call  
"MISS UTILITY"  
Service Protection Center  
MEMBER  
ONE CALL SYSTEMS INTERNATIONAL  
CALL TOLL FREE  
1-800-257-7777

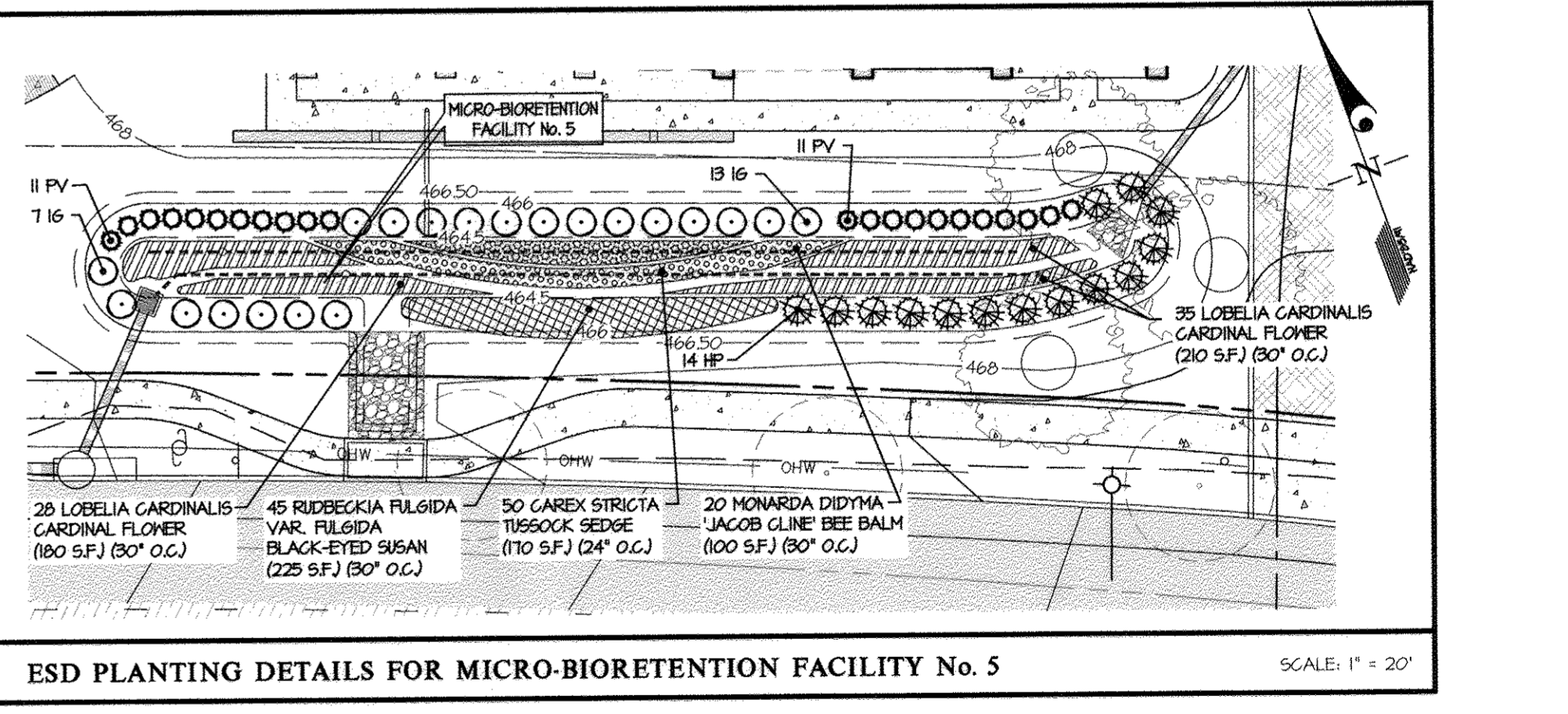
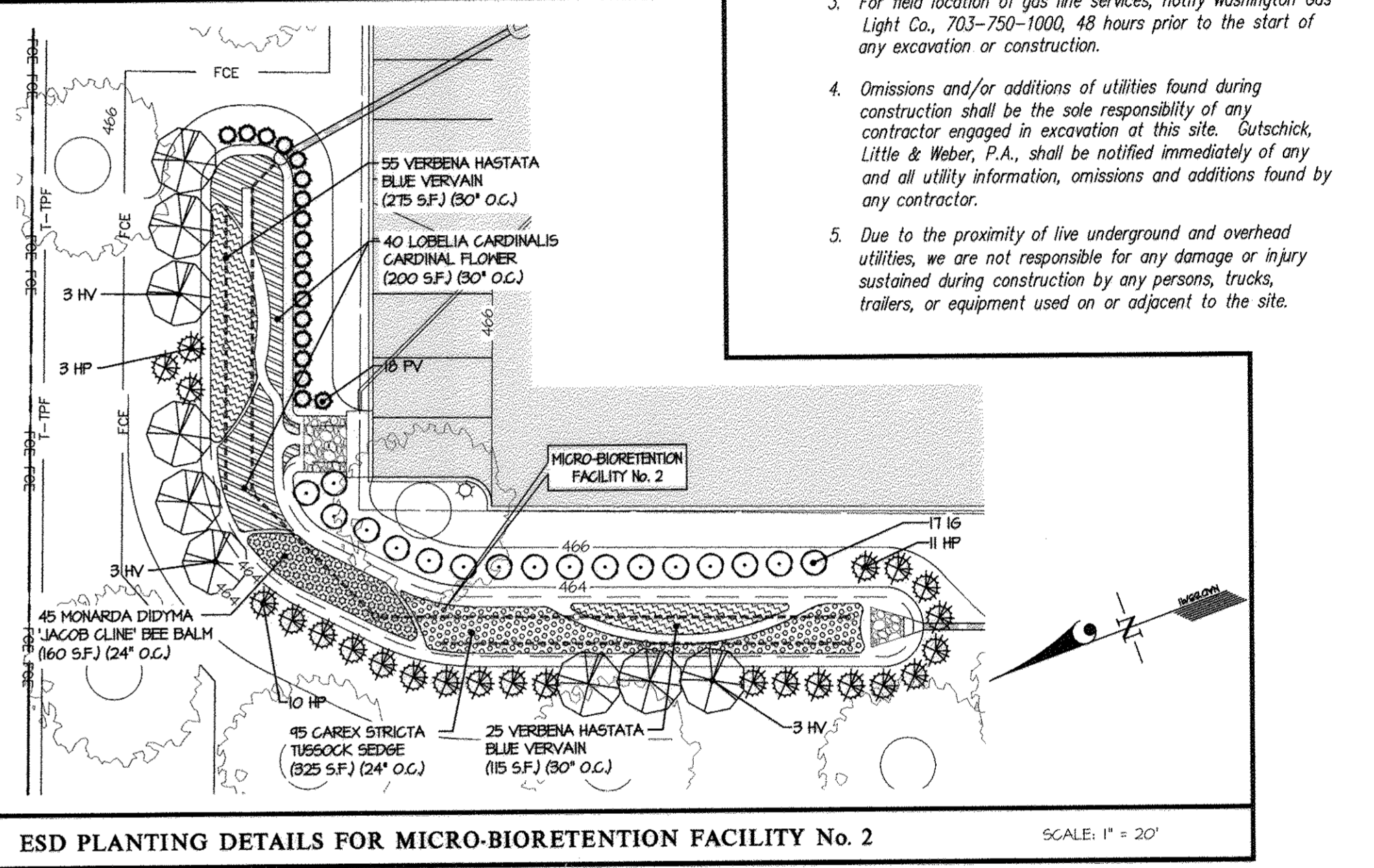
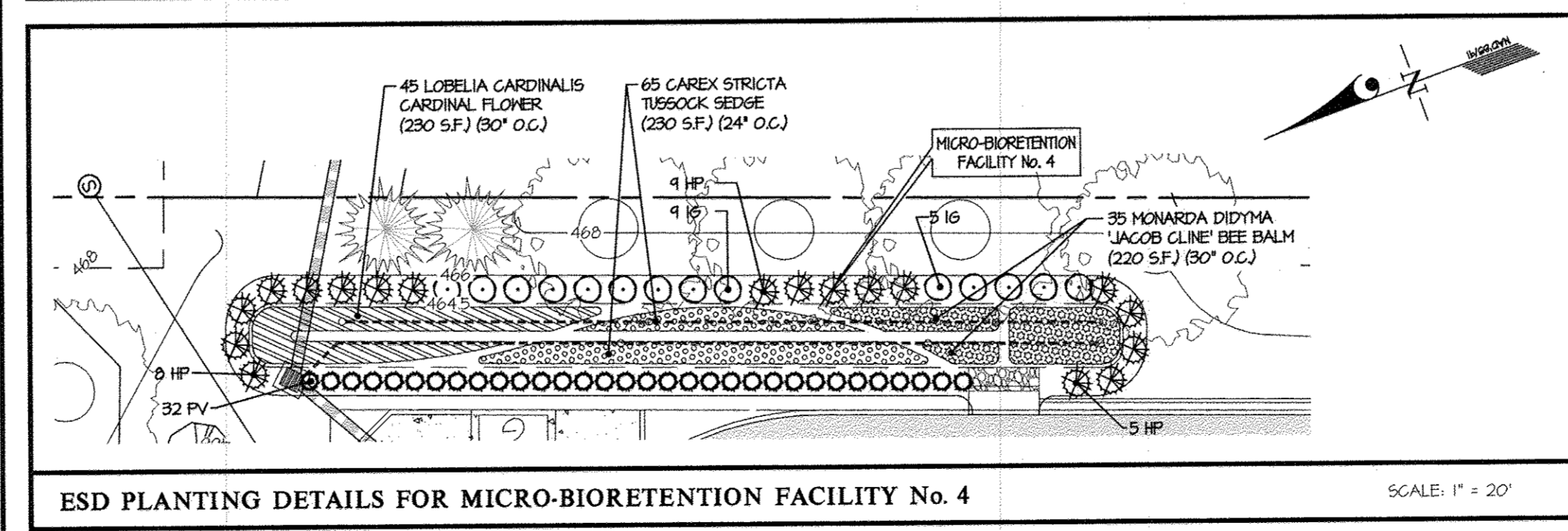
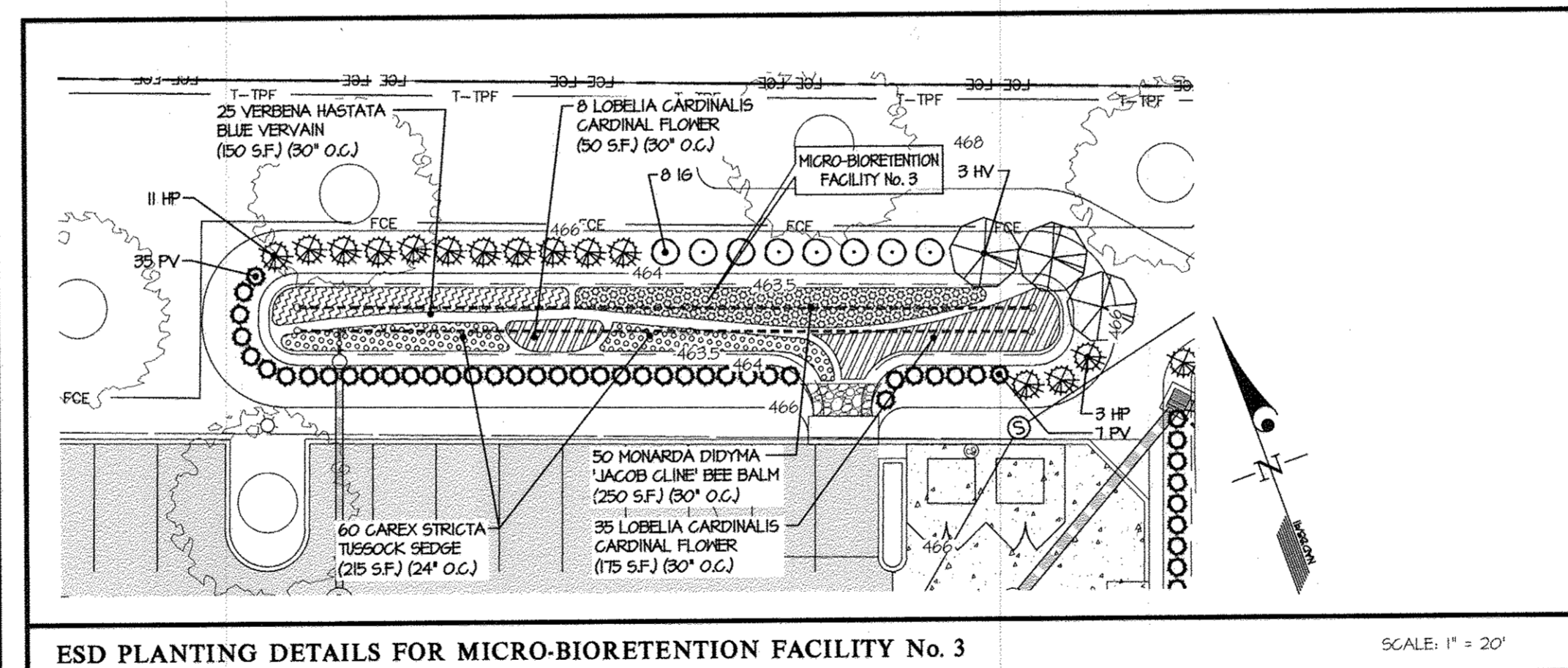
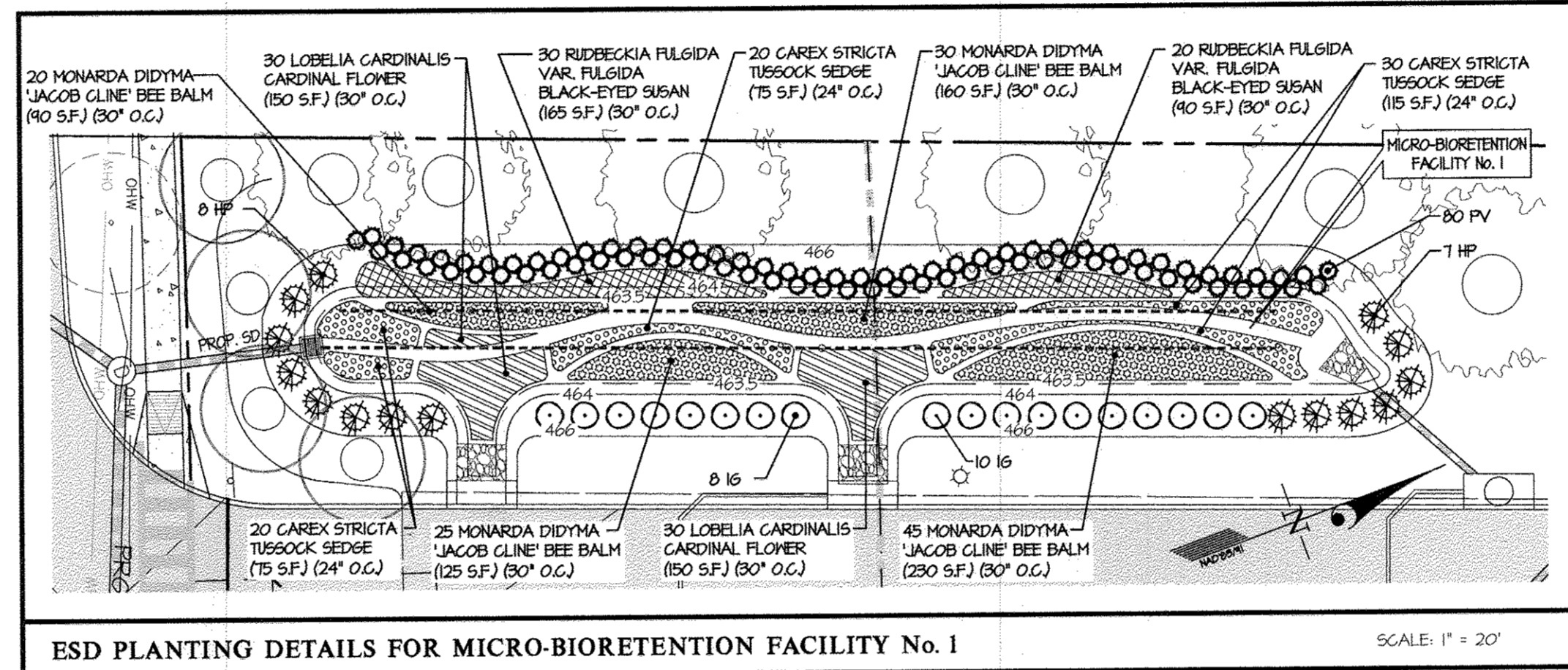
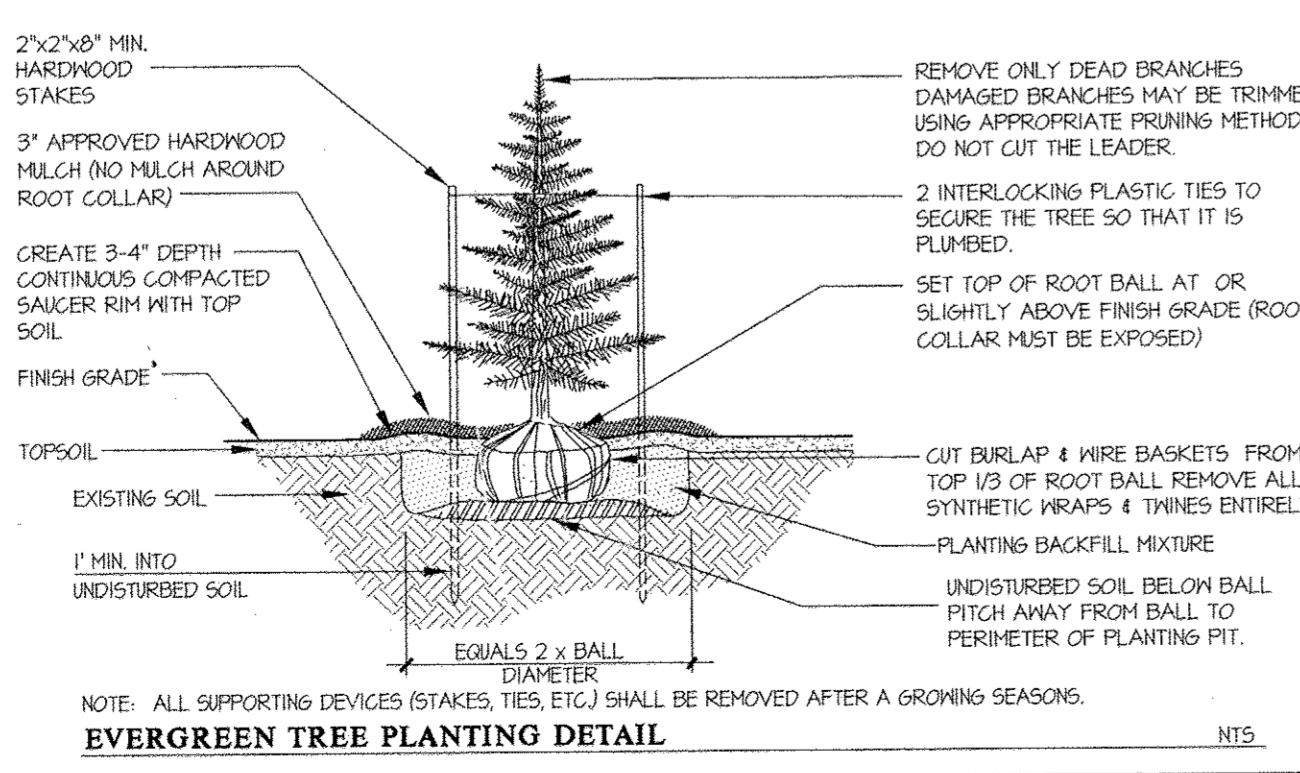
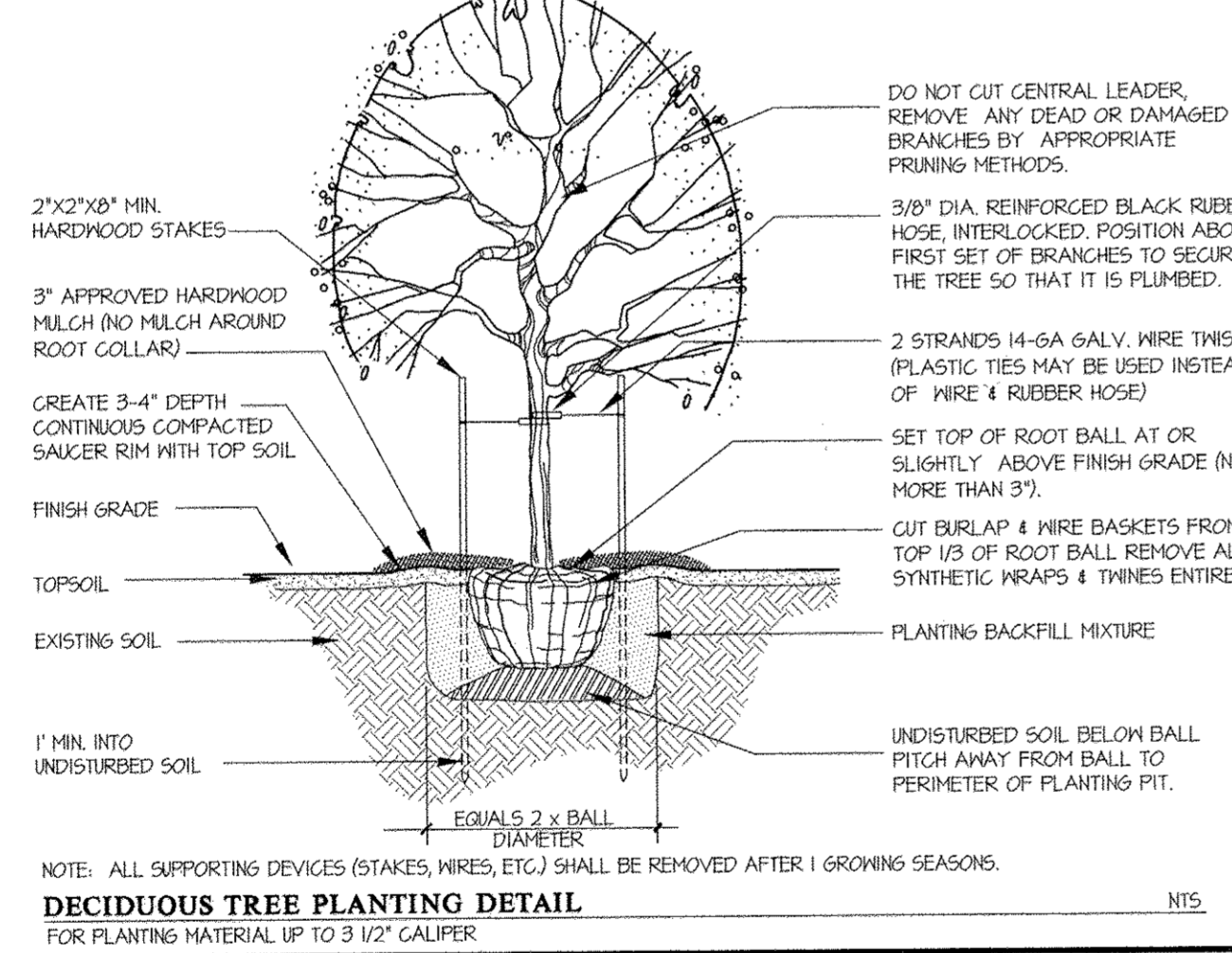
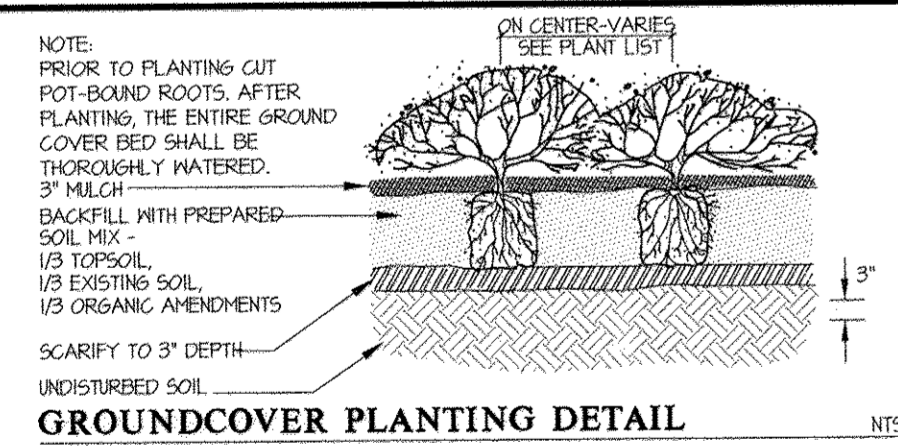
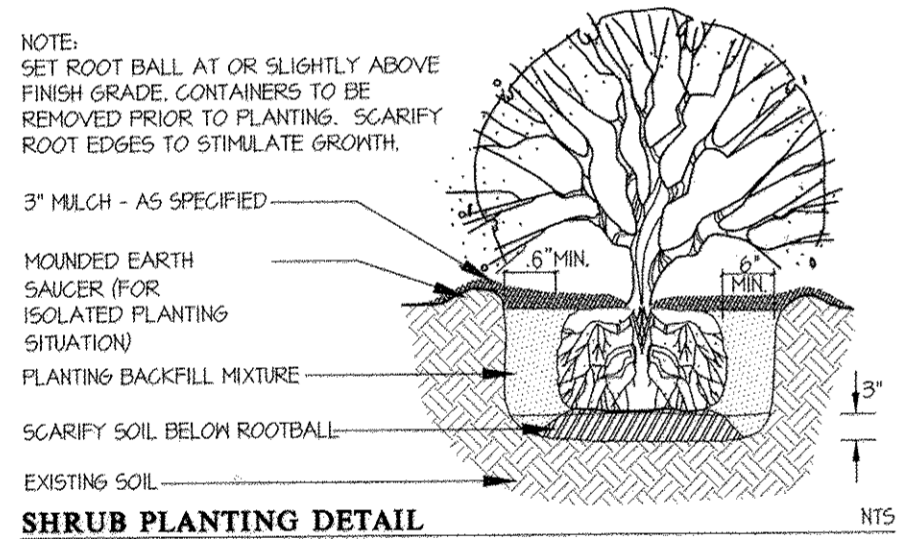


**VICINITY MAP**

SCALE: 1" = 2,000'

**EXISTING UTILITY NOTES**

- For marking locations of existing utilities, notify "MISS UTILITY" at 1-800-257-7777, 48 hours prior to any excavation or construction.
- Information concerning underground utilities was obtained from available records. The contractor must determine the exact locations and elevations of the utilities by digging test pits by hand at all utility crossings well in advance of trenching. If clearances are less than specified on this plan or less than 12 inches when not specified, contact the Engineer, and the owner of the other involved utility before proceeding with construction.
- For field location of gas line services, notify Washington Gas Light Co., 703-750-1000, 48 hours prior to the start of any excavation or construction.
- Omissions and/or additions of utilities found during construction shall be the sole responsibility of any contractor engaged in excavation at this site. Outschick, Little & Weber, P.A., shall be notified immediately of any and all utility information, omissions and additions found by any contractor.
- Due to the proximity of live underground and overhead utilities, we are not responsible for any damage or injury sustained during construction by any persons, trucks, trailers, or equipment used on or adjacent to the site.



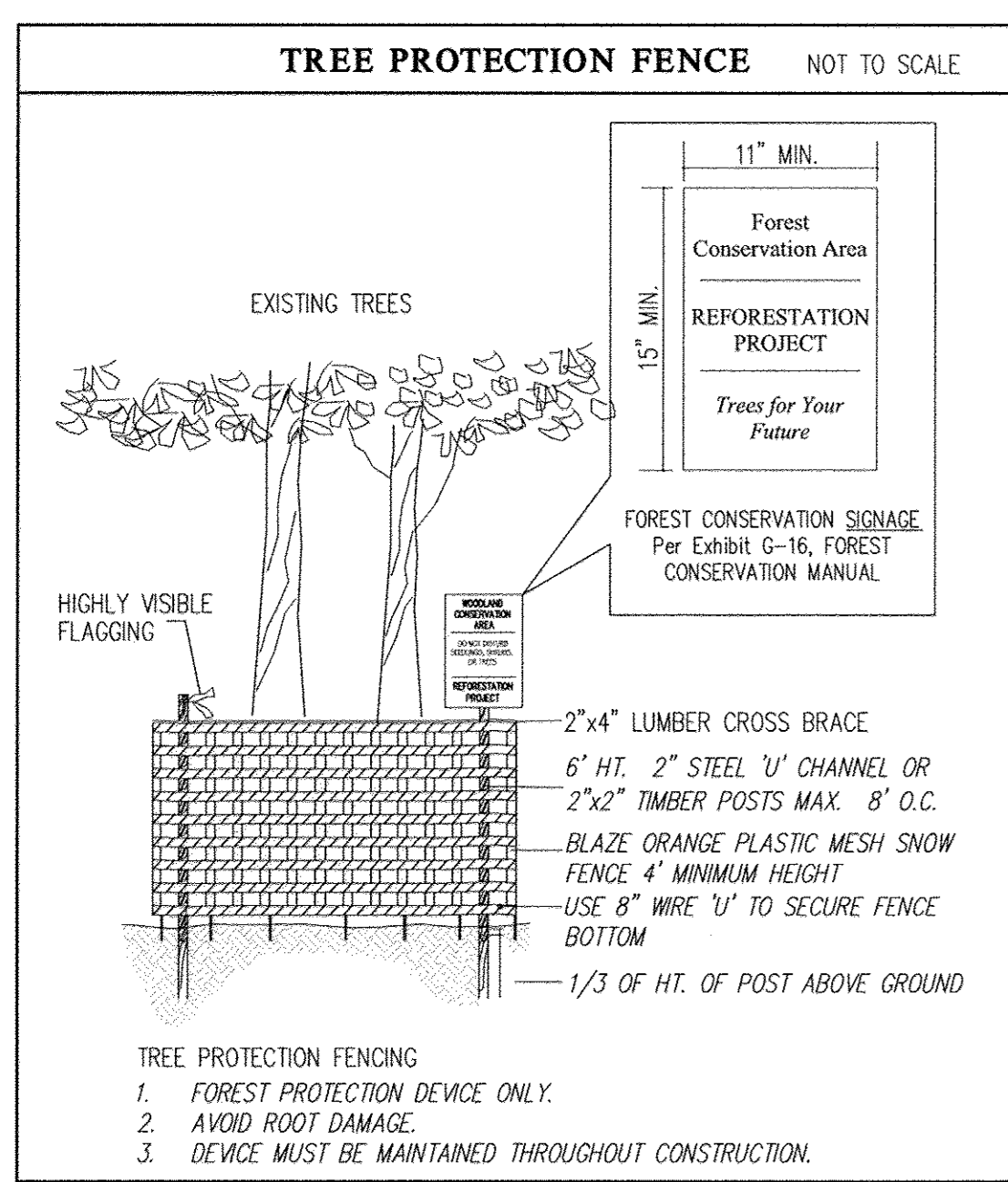
STATE OF MARYLAND  
Michael B. Troj  
REGISTERED ARCHITECT  
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
Director: [Signature] 11-9-17  
Chief, Division of Land Development: [Signature] 11-06-17  
Chief, Development Engineering Division: [Signature] 10-30-17

**DEVELOPER'S/OWNER'S CERTIFICATE**  
I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN SECTION 61.24 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.  
NAME: [Signature] DATE: 7/31/17

**GLWGUTSCHICK LITTLE & WEBER, P.A.**  
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK  
BURTONSVILLE, MARYLAND 20866  
TEL: 301-421-4024 BAL: 410-880-1820 DC/WA: 301-989-2524 FAX: 301-421-4186

PREPARED FOR:  
APPLICANT:  
CSH MAPLE LAWN LLC,  
1275 PENNSYLVANIA AVE. NW, 2ND FLOOR  
WASHINGTON D.C. 20004  
CONTACT: DAVID R. ENNIS  
TEL: (202) 469-8400

**LANDSCAPE DETAILS**  
**ARBOR TERRACE FULTON**  
PARCEL A  
GREEN RESIDENTIAL CARE BUILDING  
LIBER 9293 FOLIO 183  
HOWARD COUNTY, MARYLAND  
SCALE: 1" = 30'  
ZONING: CCT  
G. L. W. FILE NO.: 16001  
DATE: JULY, 2017  
TAX MAP - GRID: 41 - 21  
SHEET: 13 OF 18



### TREE PLANTING AND MAINTENANCE CALENDAR

TASKS	MONTHS											
	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC
TRANSPLANT OF 2" DBH OR GREATER												
PLANTING SEEDLINGS, WHIPS												
MINIMUM MONITORING	*							*				*
FERTILIZER + (IF NEEDED)												
WATER ++												
PRUNING												

KEY

- ACTIVITIES DURING THESE MONTHS ARE DEPENDENT UPON GROUND CONDITIONS
- GREATLY RECOMMENDED
- RECOMMENDED WITH ADDITIONAL CARE
- RECOMMENDED
- DEPENDANT UPON SITE CONDITIONS
- DEPENDANT UPON SITE CONDITIONS; WEEKLY WATERING IS GREATLY RECOMMENDED FROM MAY THROUGH OCTOBER UNLESS WEEKLY RAINFALL EQUALS 1"

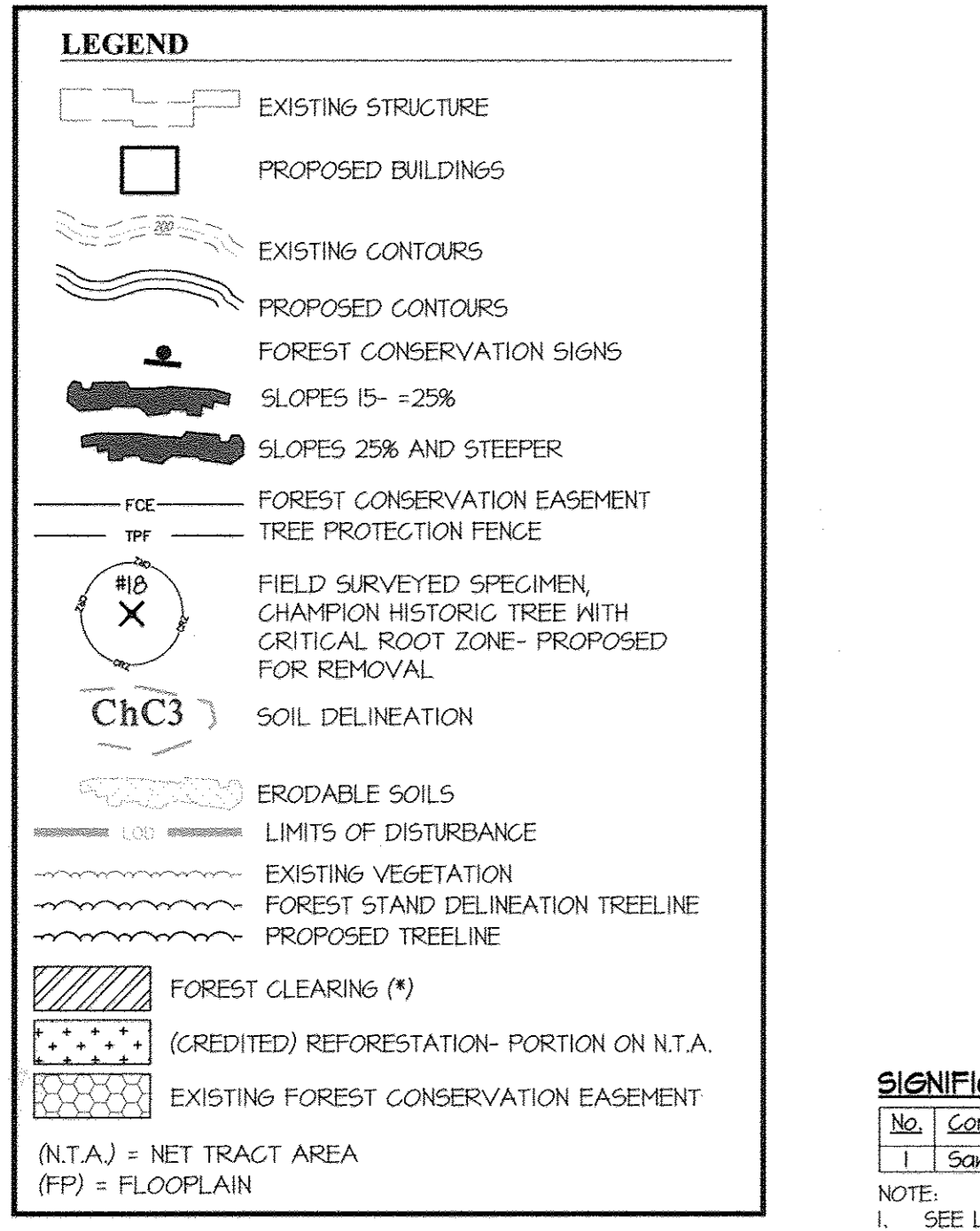
NOTE:  
The planting and care of trees is most successful when coordinated with the local climatic conditions. This calendar summarizes some of the recommended time frames for basic reforestation and stress reduction activities.

SOURCE: adapted from the Maryland State FOREST CONSERVATION MANUAL

adapted from the Maryland State FOREST CONSERVATION MANUAL

NOTES:

- THE TREE PROTECTION FENCING SHOWN ON THESE PLANS IS TEMPORARY AND SHALL REMAIN IN PLACE DURING CONSTRUCTION ACTIVITY, BUT THE FOREST CONSERVATION SIGNAGE IS PERMANENT AND SHALL REMAIN IN PLACE AROUND THE FOREST CONSERVATION EASEMENTS AFTER THE REMOVAL OF THE TREE PROTECTION FENCING.
- FOREST CONSERVATION SIGNAGE SHALL BE INSTALLED ALONG THE PERIMETER OF THE CONSERVATION EASEMENT AT 50' TO 100' APART AND AT ALL CORNERS WHERE THE EASEMENT CHANGES DIRECTION.
- ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.



### FOREST CONSERVATION PLANTING QUANTITY SCHEDULE

FOREST PLANTING LOCATION NO.	FCE-1	TOTAL
AREA TO BE PLANTED (IN AC.)	0.15	0.15
BASE QUANTITY OF 2" CAL. TREES REQUIRED (AT 100 TREES/AC.)	15	15
CREDIT FOR LANDSCAPE TREES TO BE PLANTED (SEE LANDSCAPE PLAN)	3	3
REQUIRED QUANTITY OF 2" CAL. TREES TO BE PLANTED	12	12

### FOREST CONSERVATION PLANT LIST

PLANT NAME (BOTANICAL/COMMON)	FCE-1	TOTAL
ACER RUBRUM/ RED MAPLE	6	6
QUERCUS RUBRA/ RED OAK	6	6
TOTAL	12	12

NOTE:

- THE QUANTITY SHOWN ABOVE IS FOR PLANTING WITH 2" CAL. TREES AT 20' X 20' SPACING.
  - DOUBLE THE QUANTITY SHOWN FOR 1" CAL. TREES (APPROXIMATE SPACING 15'X15')
  - WHIPS WITH THREE SHIELTERS MAY BE USED INSTEAD AT 350 PER ACRES (APPROXIMATE SPACING 11' X 11')
- SUBSTITUTIONS AMONG THE ABOVE PLANTS ARE ALLOWED IF A PARTICULAR PLANT IS NOT AVAILABLE LOCALLY (IN THE MID-ATLANTIC AREA).

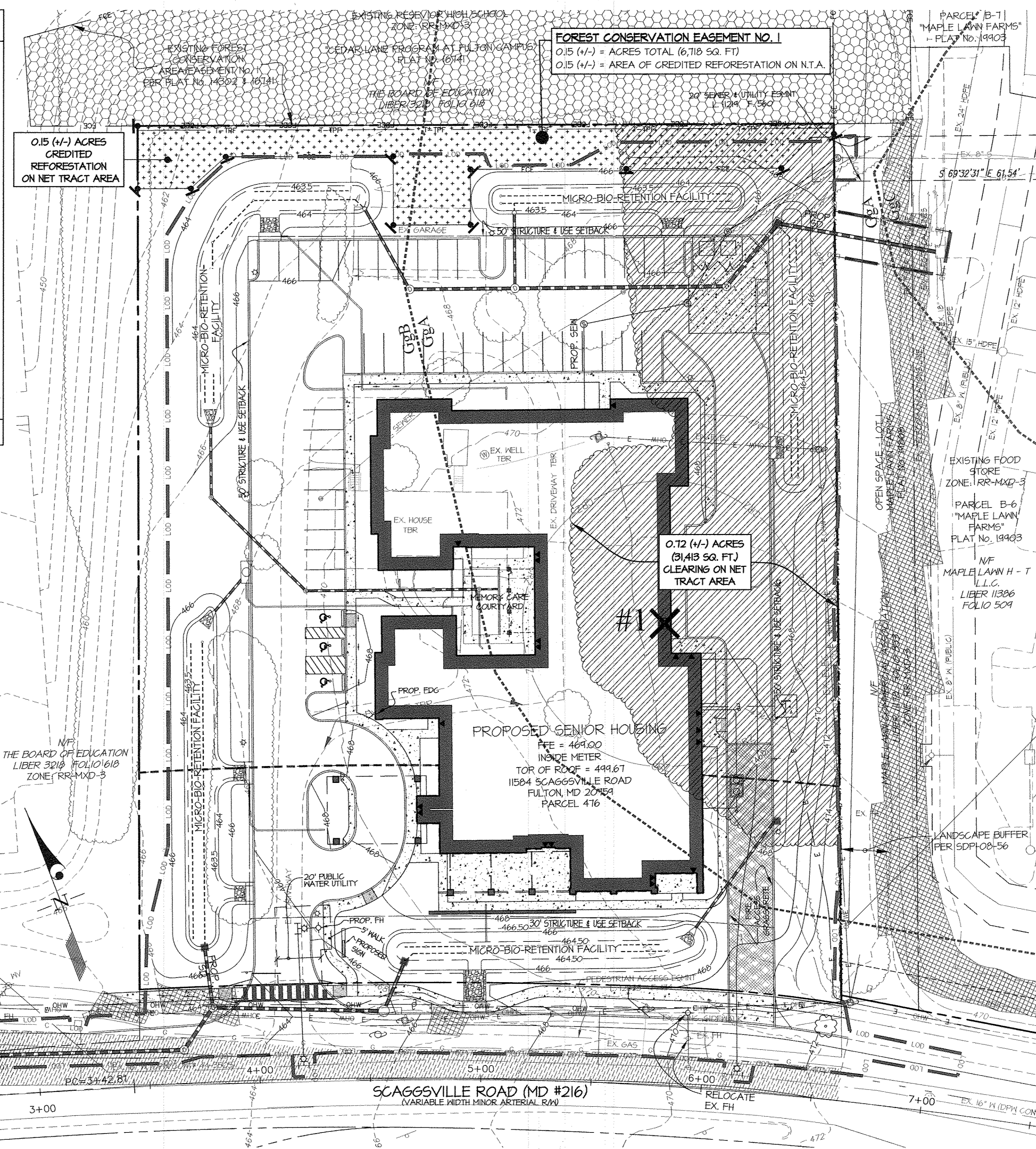
### SIGNIFICANT/SPECIMEN TREE LIST

No.	Common Name	Species Name	DBH (in.)	Condition	To be Removed (Yes/No)
1	Sawtooth Oak	Quercus acutissima	43	Good	Yes

NOTE:  
1. SEE LANDSCAPE PLAN SHEET 12 FOR MITIGATION TREES TO BE PLANTED.

### SOIL TYPES

cgA glenelg loam, 0 to 3 percent slopes  
cgB glenelg loam, 3 to 8 percent slopes



### GENERAL NOTES:

- DNR WATERSHED NO. 02-13-11  
DNR WATERSHED NAME: PATUXENT RIVER
- THIS RETENTION PLAN IS PROVIDED IN ACCORDANCE WITH THE REQUIREMENTS OF SUBTITLE 12 "FOREST CONSERVATION" OF THE HOWARD COUNTY CODE.
- IMPLEMENTATION OF THIS PLAN MUST BE PERFORMED BY A CONTRACTOR THAT IS KNOWLEDGEABLE AND EXPERIENCED IN AFFORESTATION/REFORESTATION TECHNIQUES AND PRACTICES.
- THE OWNER IS RESPONSIBLE FOR A 2-YEAR (MIN) POST-CONSTRUCTION MAINTENANCE PERIOD WHICH INVOLVES ACTIVITIES NECESSARY TO ENSURE SURVIVAL AND GROWTH OF THE CONSERVATION AREA. TWO INSPECTIONS PER YEAR BY A QUALIFIED PROFESSIONAL AT BEGINNING AND END OF THE GROWING SEASON, ARE RECOMMENDED IN ORDER TO TAKE REMEDIAL STEPS AS NECESSARY. IF, AFTER ONE YEAR, THE POSSIBILITY EXISTS THAT THE ORIGINAL PLANTING (IF APPLICABLE) WILL NOT MEET SURVIVAL RATE STANDARDS, THE APPLICANT MAY CHOOSE TO ESTABLISH REINFORCEMENT PLANTINGS.
- AT THE END OF THE POST-CONSTRUCTION MANAGEMENT AND PROTECTION PERIOD, THE COUNTY WILL INSPECT THE FOREST CONSERVATION EASEMENT AREAS FOR BOND RELEASE PRECEDING.
- THE DEVELOPER/BUILDER SHALL (IN WRITING) NOTIFY ALL HOME OWNERS IN THIS DEVELOPMENT OF THE EXISTENCE OF FOREST CONSERVATION AREAS AND THAT DISTURBANCE TO THE FOREST CONSERVATION AREAS OR THE REMOVAL OF FOREST CONSERVATION SIGNS IS PROHIBITED.

- WHERE APPLICABLE, REFORESTATION/AFFORESTATION TREE PLANTINGS SHOULD BE INSTALLED IN A CURVILINEAR PATTERN TO FACILITATE MAINTENANCE BUT AVOID A GRID APPEARANCE. EACH SPECIES OF TREE SHALL BE DISTRIBUTED EVENLY WITHIN EACH FOREST CONSERVATION EASEMENT AREA.
- THE REMOVAL OF INVASIVE SPECIES MAY BE REQUIRED IF THE INSPECTOR DETERMINES THAT THE EASEMENT IS DOMINATED BY INVASIVE SPECIES.
- 1P-1618 ADDRESS' CLEARING OF SPECIMEN TREES SHOWN HEREIN. SEE LANDSCAPE PLAN SHEET 12 FOR MITIGATION TREES.
- THE 0.15 ACRES (6,710 SQ. FT.) OF FOREST CONSERVATION EASEMENT AREA IS PERMITTED ON THIS SITE IN ACCORDANCE WITH THE DPZ FOREST CONSERVATION POLICY DATED 11/01/10, SINCE THIS FOREST CONSERVATION EASEMENT IS LOCATED ADJACENT TO AN ADJOINING RECORDED OFF-SITE FOREST CONSERVATION EASEMENT, WHEN COMBINED WITH THIS FOREST CONSERVATION EASEMENT, TOTALS MORE THAN 10,000 SQ. FT. IN AREA.

### FOREST NARRATIVE

The existing parcel contains a single family house and detached garage. There are no streams, wetlands, floodplain or similar environmentally sensitive areas. The property is mostly lawn and the site terrain slopes from the high point in the middle of the site and downgrades towards the property lines. A Forest Conservation Easement is proposed on site that will be adjacent to the existing Forest Conservation Easement to the North of the site.

The band of forest within the North and East property lines is approximately 0.12 Acres. This forest is young and dominated by mostly pioneer species including Honey Locust and White Mulberry with an average DBH of less than 3". There is one Specimen Tree located in the central portion of the site that will be removed. The proposed development maximizes the usage of the site and removal of the existing forested area is unavoidable.

### FOREST CONSERVATION WORKSHEET

Project Name: MAPLE LAWN SENIOR HOUSING DPZ File No.: SP-17-018

Item	Description	Acres
<b>1 Site Data</b>		
A.	Gross Site Area	3.000
B.	Area within 100-yr floodplain, if any	0.000
C.	Area of existing easement for major utility transmission lines, if any	0.000
D.	Net Tract Area	3.000
E.	Land Use Category	Institutional
<b>2 Input Data</b>		
A.	Net Tract Area	3.000
B.	Reforestation Threshold (percent of net tract = 20 %)	0.600
C.	Afforestation Threshold (percent of net tract = 15 %)	0.450
D.	Existing Forest on Net Tract Area	0.721
E.	Forest Clearing on Net Tract Area	0.721
F.	Forest Retention on Net Tract Area	0.000
<b>3 Reforestation and/or Afforestation Calculations</b>		
A.	Net tract forest clearing above reforestation threshold, if applicable	0.121
B.	Net tract forest clearing below reforestation threshold, if applicable	0.600
C.	Planting up to afforestation threshold, if applicable	0.000
D.	Reforestation planting required for clearing above threshold (3A x 0.25)	0.030
E.	Reforestation planting required for clearing below threshold (3B x 2.0)	1.200
F.	Net tract forest retention above reforestation threshold (2F-2B, available credit)	0.000
G.	Total reforestation planting required (3C+3D+3E - 3F)	1.230
<b>4 Break Even Point (BEP) Calculations</b>		
A.	Maximum clearing allowed with no reforestation planting (2D-2B)/1.25	0.097
B.	Minimum net tract retention at BEP 0.20(2D-2B)+2B or 2D-4A	0.624
<b>5 Forest Conservation Required</b>		
A.	Forest Retention Area (2F)	0.000
B.	Forest Planting Area (3G)	1.230
C.	Total minimum FCE required for retention and reforestation	1.230

### FOREST CONSERVATION PROGRAM SEQUENCE:

- OBTAIN ALL NECESSARY PERMITS.
- STAKEOUT LIMITS OF DISTURBANCE.
- FIELD MEETING TO REVIEW AND VERIFY LIMIT OF DISTURBANCE FOR THE SITE GRADING AND CONSTRUCTION.
- INSTALL FOREST CONSERVATION SIGNS AND FOREST PROTECTION DEVICES (FENCES) ALONG THE PORTION OF THE LIMIT OF DISTURBANCE (THAT INVOLVES CLEARING AND/OR RETENTION OF TREES).
- COMMENCE SITE CONSTRUCTION.
- PREPARE SITE SOIL BY MULCHING AND REMOVAL OF TRASH AND NEEDS INCLUDING AN APPLICATION OF HERBICIDES TO CONTROL NOXIOUS WEEDS AND INVASIVE SPECIES.
- INSPECTION BY HOWARD COUNTY FOR THE RELEASE OF THE CONSTRUCTION PERIOD OBLIGATIONS; START OF POST-CONSTRUCTION MANAGEMENT PERIOD.
- POST-CONSTRUCTION MANAGEMENT FOR A PERIOD OF 2 YEARS (MIN).
- FINAL INSPECTION BY HOWARD COUNTY FOR THE RELEASE OF THE OWNER'S FOREST CONSERVATION OBLIGATIONS.

### CONSTRUCTION PERIOD PROTECTION PROGRAM:

- THE LIMIT OF FOREST RETENTION SHALL BE STAKED AND FLAGGED.
- A PRE-CONSTRUCTION MEETING AT THE SITE SHOULD BE HELD TO CONFIRM THE LIMITS OF CLEARING SPECIFIED. THE MEETING SHOULD INCLUDE THE OWNER OR THE OWNER'S REPRESENTATIVE, THE ON-SITE FOREMAN IN CHARGE OF LAND DISTURBANCE, THE ENVIRONMENTAL CONSULTANT AND THE APPROPRIATE HOWARD COUNTY INSPECTORS.
- FOREST PROTECTION DEVICES AND SIGNS (SEE DETAILS) SHALL BE INSTALLED PRIOR TO ANY CLEARING OR GRADING. THE PROTECTION DEVICES AND SIGNS SHALL BE MAINTAINED DURING THE ENTIRE CONSTRUCTION PERIOD. NONE OF THE DEVICES SHALL BE ANCHORED OR ATTACHED IN ANY WAY TO THE TREES TO BE SAVED.
- EQUIPMENT, VEHICLES AND BUILDING MATERIALS SHALL NOT BE WITHIN THE PROTECTED AREA. ACTIVITIES STRICTLY TO IMPLEMENT ANY REFORESTATION PLANTING AND MAINTENANCE (IE: WATERING, FERTILIZING, THINNING, PRUNING, REMOVAL OF DEAD AND DISEASED TREES WHERE NECESSARY, ETC.) OF THE CONSERVATION AREA ARE PERMITTED. CLEARING FOR THE PURPOSE OF SODDING OR PLANTING GRASS IS NOT PERMITTED WITHIN THE FOREST CONSERVATION AREAS ONCE THEY'RE ESTABLISHED.
- AT THE END OF THE CONSTRUCTION PERIOD, REQUEST FOR A FOREST CONSERVATION INSPECTION FROM HOWARD COUNTY TO INITIATE THE 2-YEAR (MIN) POST-CONSTRUCTION MANAGEMENT AND PROTECTION PERIOD.

### FOREST CONSERVATION OBLIGATION & SURETY:

THE FOREST CONSERVATION OBLIGATION FOR THIS DEVELOPMENT AS CALCULATED IN THE FOREST CONSERVATION WORKSHEET IS 0.004 ACRES OF FOREST RETENTION AND 1.234 ACRES OF REFORESTATION PLANTING FOR TOTAL OF 1.234 ACRES OF FOREST CONSERVATION EASEMENT TO BE RECORDED.

PROPOSED METHOD OF SATISFYING THE ABOVE FOREST CONSERVATION ON-SITE:

- RECORD ONE (1) FOREST CONSERVATION EASEMENTS TOTALING 0.151 ACRES OF WHICH 0.151 ACRES ARE CREDITED REFORESTATION PLANTING ON THE NET TRACT.

- THE FOREST CONSERVATION SURETY POSTED WITH THE DEVELOPER AGREEMENT IS \$0.50/SF OF THE REFORESTATION PLANTING. THE SURETY FOR THE ON-SITE REFORESTATION FOR THIS PHASE WOULD BE:

TOTAL SURETY:  
FCE No. 1: 0.15 Ac. (+/-) (6,710 SQ. FT.) @ \$0.50/SF = \$3,359.00 (rounded)

- THERE IS A DEFICIT OF 1.08 (+/-) ACRES (47,045 SQ. FT.) OF REFORESTATION PLANTING. AT LEAST 1.08 AC. OF FOREST CONSERVATION BANK CREDIT IS PURCHASED FROM CATTAIL CREEK (SDP-14-03), BY ECOTONE INC.

STATE OF MARYLAND  
Michael B. Tran  
REGISTERED ARCHITECT  
938  
Landscape Architect  
9.21.17

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
Director: 11-9-17  
Chief, Division of Land Development: 11-06-17  
Chief, Development Engineering Division: 10-20-17

GLWGUTSCHICK LITTLE & WEBER, P.A.  
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
3909 NATIONAL DRIVE, SUITE 230 • BURTONSVILLE OFFICE PARK  
BURTONSVILLE, MARYLAND 20886  
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

### GRAPHIC SCALE

( IN FEET )  
1 inch = 30 ft.

DATE	REVISION	BY	APPR.

PREPARED FOR:  
APPLICANT:  
CSH MAPLE LAWN LLC,  
1275 PENNSYLVANIA AVE. NW, 2nd FLOOR  
WASHINGTON, D.C. 20004  
CONTACT: DAVID R. ENNIS  
TEL: (202) 469-8400

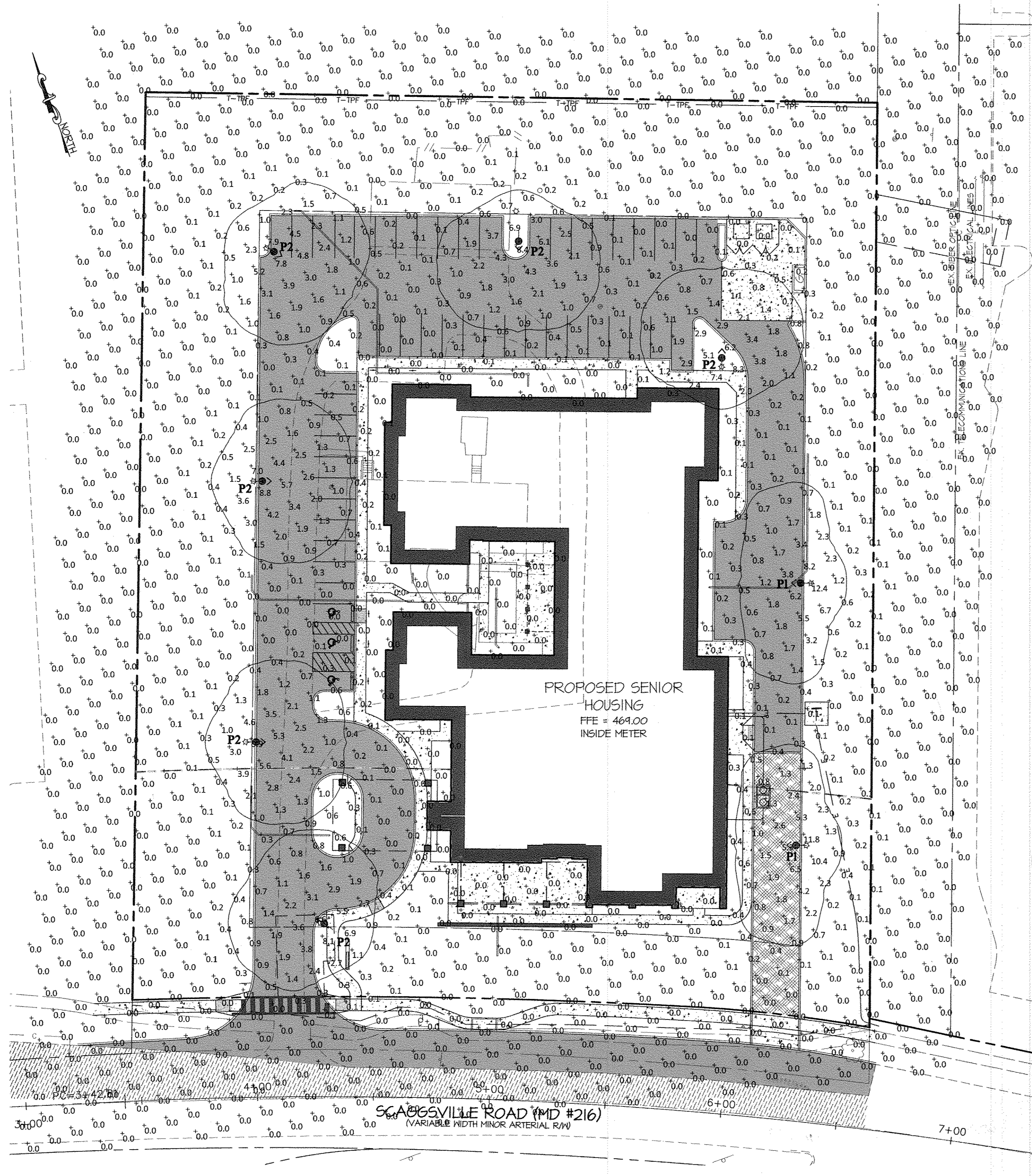
FOREST CONSERVATION PLAN, NOTES and DETAILS  
ARBOR TERRACE FULTON  
PARCEL A  
GREEN RESIDENTIAL CARE BUILDING  
LIBER 9293 FOLIO 183

SCALE	ZONING	G. L. W. FILE NO.
1"=30'	CCT	16001
DATE	TAX MAP - GRID	SHEET
JULY, 2017	41 - 21	14 OF 18

CLARKSVILLE ELECTION DISTRICT No. 5  
HOWARD COUNTY, MARYLAND

Luminaire Schedule								
Project: Project								
Symbol	Qty	Label	Description	Arrangement	LLF	Lum. Lumens	Lum. Watts	BUG Rating
●	6	P2	DMS50-90W80LED4K-R-LE4F - 12' POLE	SINGLE	0.912	8915	87	B2-U0-G2
●	2	P1	DMS50-90W80LED4K-R-LE3F - 12' POLE	SINGLE	0.912	9626	87.8	B3-U0-G2

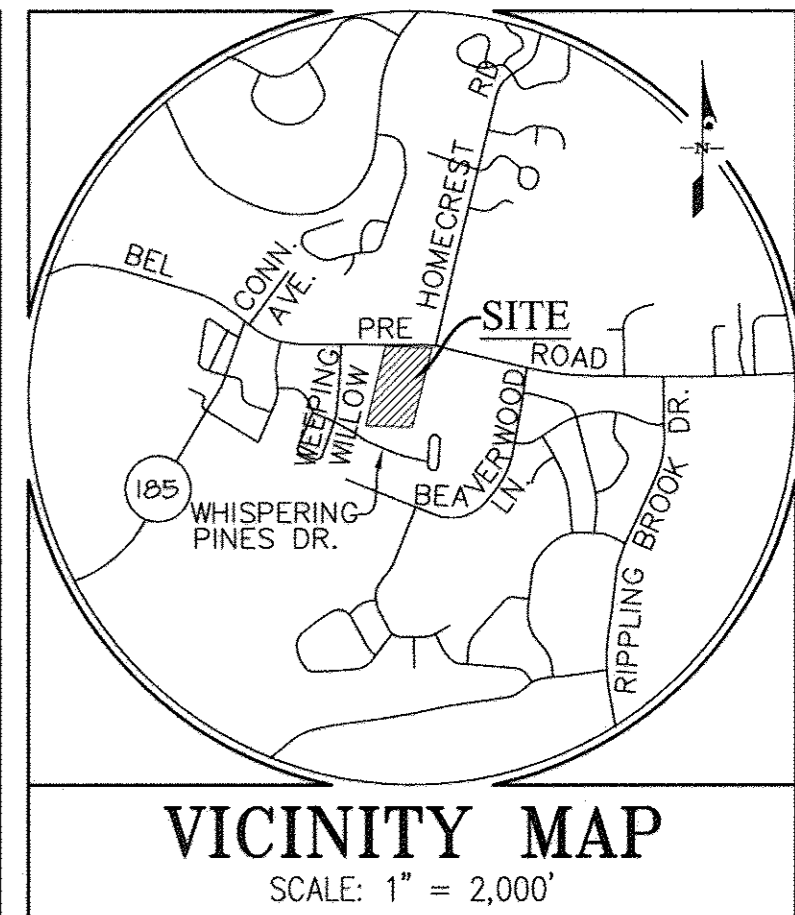
Numeric Summary									
Project: Project									
Label	Avg	Max	Min	Avg/Min	Max/Min	Units	CalcType	PtSpCr	PtSpTb
FULL SITE	0.40	12.4	0.0	N.A.	N.A.	Fc	Illuminance	10	10
PARKING LOT	1.13	8.8	0.0	N.A.	N.A.	Fc	Illuminance		



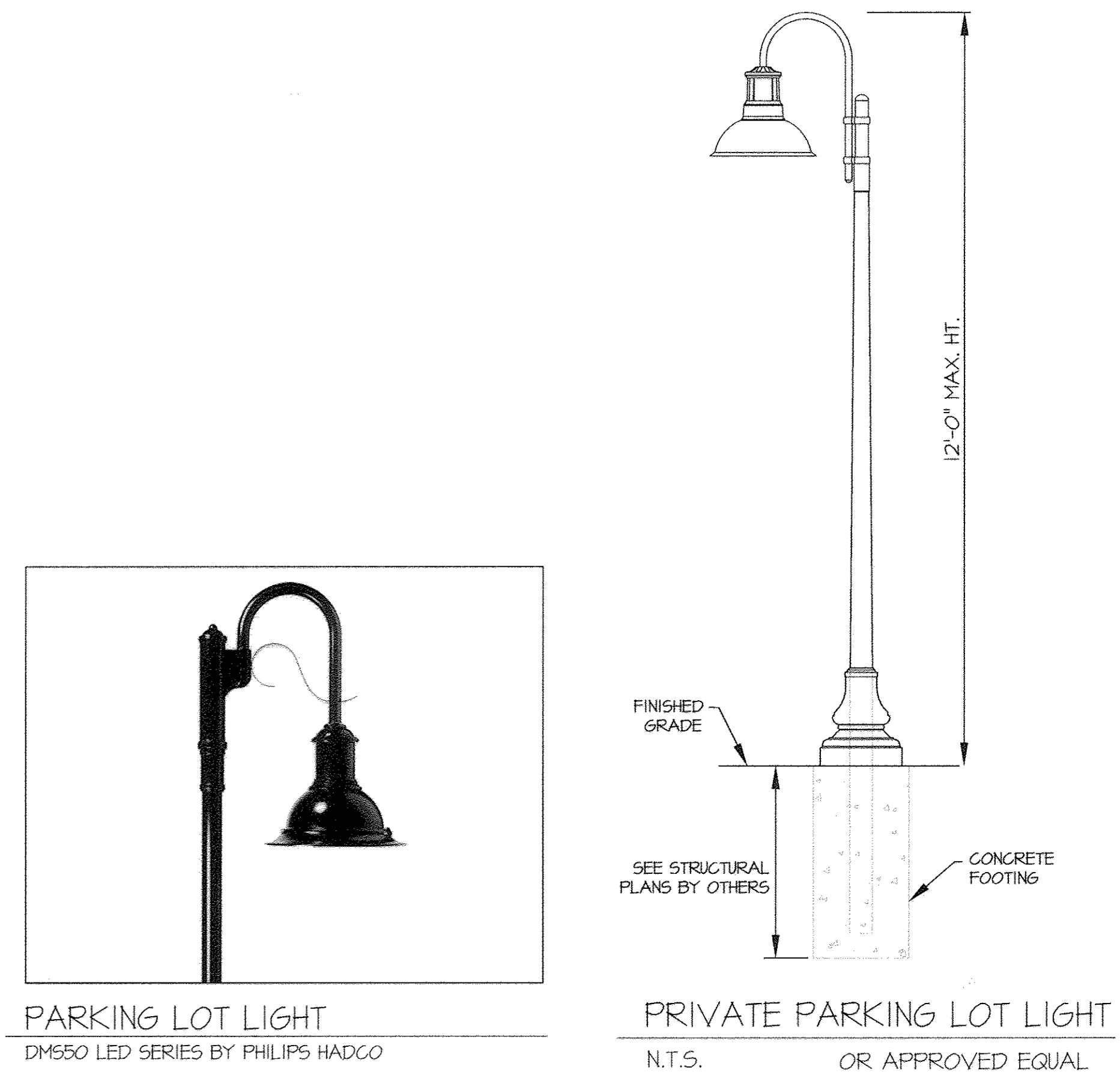
48 Hours  
Before You Dig  
Call  
"MISS UTILITY"  
Service Protection Center

MEMBER  
ONE CALL SYSTEMS INTERNATIONAL

CALL TOLL FREE  
1-800-257-7777



- EXISTING UTILITY NOTES
- For marking locations of existing utilities, notify "MISS UTILITY" at 1-800-257-7777, 48 hours prior to any excavation or construction.
  - Information concerning underground utilities was obtained from available records. The contractor must determine the exact locations and elevations of the utilities by digging test pits by hand at all utility crossings well in advance of trenching. If clearances are less than specified on this plan or less than 12 inches when not specified, contact the Engineer, and the owner of the other involved utility before proceeding with construction.
  - For field location of gas line services, notify Washington Gas Light Co., 703-750-1000, 48 hours prior to the start of any excavation or construction.
  - Omissions and/or additions of utilities found during construction shall be the sole responsibility of any contractor engaged in excavation at this site. Gutschick, Little & Weber, P.A., shall be notified immediately of any and all utility information, omissions and additions found by any contractor.
  - Due to the proximity of live underground and overhead utilities, we are not responsible for any damage or injury sustained during construction by any persons, trucks, trailers, or equipment used on or adjacent to the site.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*Nathan Jolin* 11-9-17  
Director Date

*Kevin Deane* 11-06-17  
Chief, Division of Land Development Date

*Chad Clark* 10-20-17  
Chief, Development Engineering Division Date

**GLWGUTSCHICK LITTLE & WEBER, P.A.**  
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK  
BURTONSVILLE, MARYLAND 20866  
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.

PREPARED FOR:  
APPLICANT:  
CSH MAPLE LAWN LLC.  
1275 PENNSYLVANIA AVE. NW, 2nd FLOOR  
WASHINGTON D.C. 20004  
CONTACT: DAVID R. ENNIS  
TEL. (202) 469-8400

PROFESSIONAL CERTIFICATION  
I HEREBY CERTIFY THAT THESE PLANS 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. 12785, EXPIRATION DATE: MARCH 17, 2019

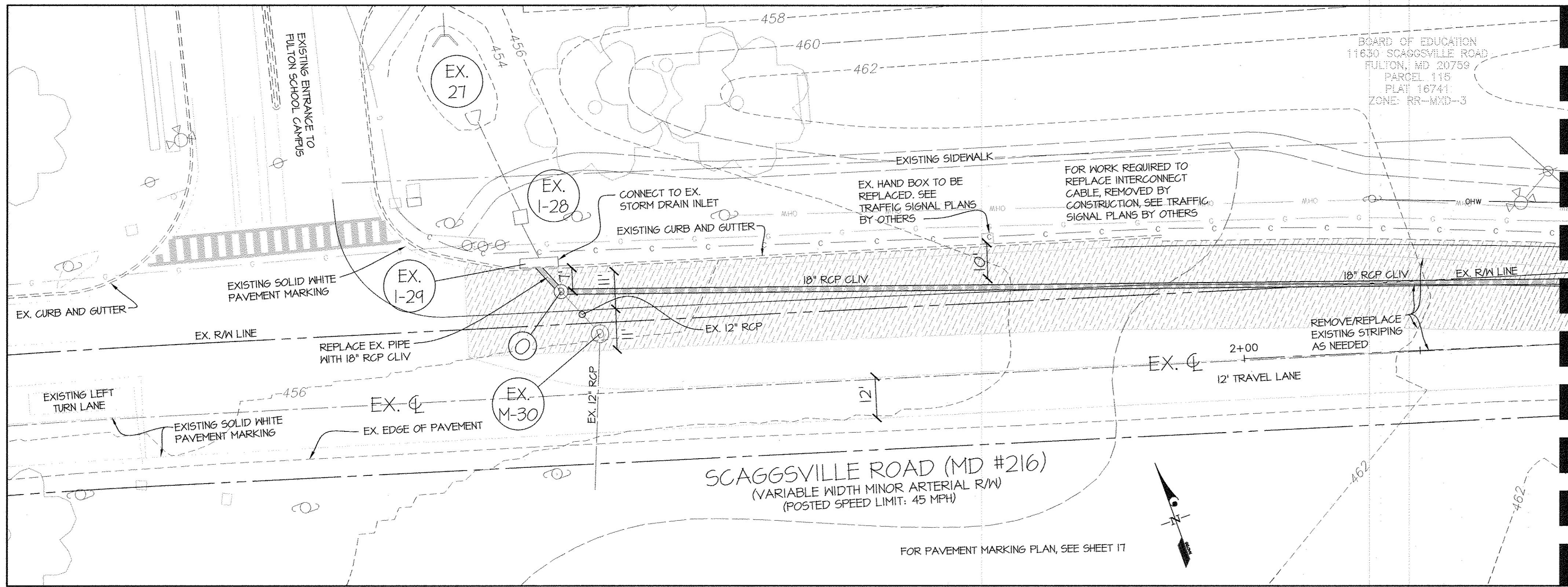
*David R. Ennis*  
Professional Engineer

LIGHTING PLAN

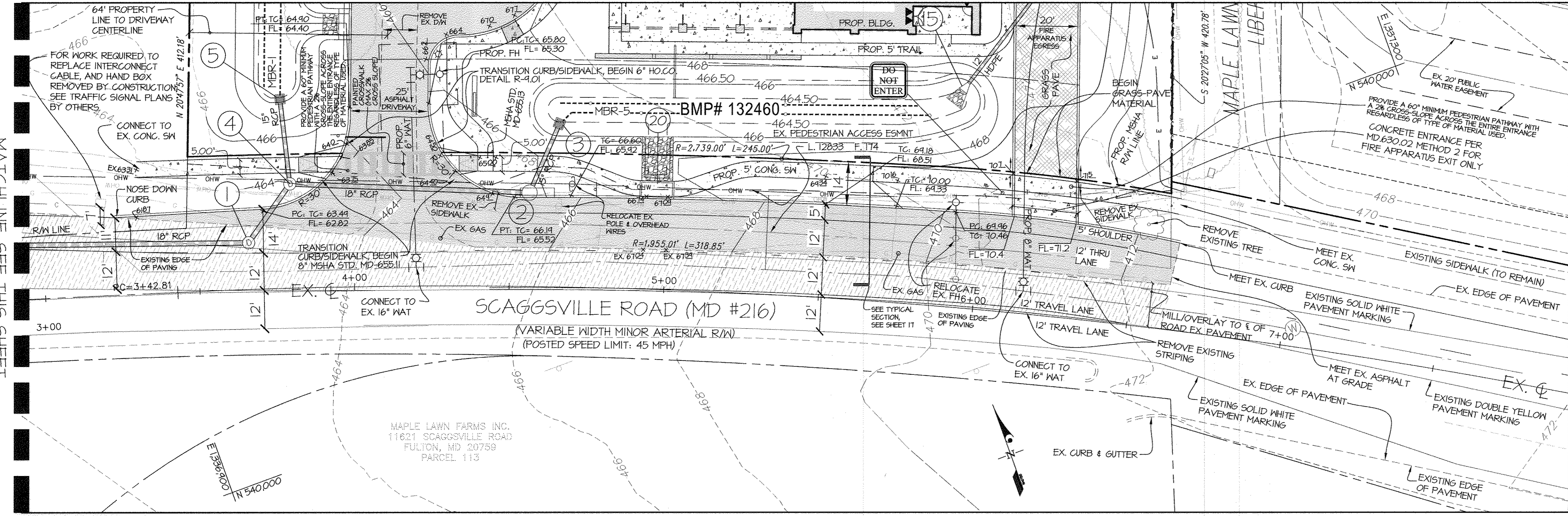
**ARBOR TERRACE FULTON  
PARCEL A  
GREEN RESIDENTIAL CARE BUILDING**  
LIBER 9293 FOLIO 183

SCALE: 1"=30'  
DATE: JULY, 2017  
CLARKSVILLE, ELECTION DISTRICT No. 5  
HOWARD COUNTY, MARYLAND

SCALE	ZONING	G. L. W. FILE No.
1"=30'	CCT	16001
DATE	TAX MAP - GRID	SHEET
JULY, 2017	41 - 21	15 OF 18



MATCHLINE, SEE THIS SHEET



MATCHLINE, SEE THIS SHEET

**SHA LANDSCAPE NOTES**

- SHA LANDSCAPE NOTES. LANDSCAPE CONSTRUCTION WITHIN THE RIGHT OF WAY OF THE MARYLAND STATE HIGHWAY ADMINISTRATION (SHA) SHALL CONFORM TO THESE NOTES.
- SHA STANDARD SPECIFICATIONS. LANDSCAPE CONSTRUCTION SHALL CONFORM TO SECTIONS 101 THROUGH 116 AND LANDSCAPE MATERIALS SHALL CONFORM TO SECTION 120 OF THE SHA 2009 STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, INCLUDING ALL REVISIONS AND SUPPLEMENTS, AND AS SPECIFIED IN THESE NOTES. THESE REQUIREMENTS SHALL SUPERSEDE ALL OTHER SPECIFICATIONS FOR WORK WITHIN THE SHA RIGHT OF WAY.
- EROSION AND SEDIMENT CONTROL MANAGER (ESCM). SOIL DISTURBANCE SUCH AS GRADING, EXCAVATION, SOIL PLACEMENT OR OTHER ACTIVITIES THAT INVOLVE SOIL DISTURBANCE WITHIN THE SHA RIGHT OF WAY SHALL BE SUPERVISED BY AN ESCM WITH A VALID SHA "YELLOW CARD" IN CONFORMANCE WITH SHA 2009 SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS AND ANY APPLICABLE EROSION AND SEDIMENT CONTROL PERMIT.
- TEMPORARY STABILIZATION SHALL BE INSTALLED IN CONFORMANCE WITH SECTION 104 TO ENSURE THAT AREAS OF SOIL DISTURBANCE ARE PROTECTED FROM WIND, RAINFALL, AND FLOWING WATER UNTIL PERMANENT STABILIZATION IS INSTALLED.
  - TEMPORARY MULCH EITHER AS TEMPORARY STRAW MULCH OR TEMPORARY MATTING MULCH SHALL BE INSTALLED AT THE END OF EACH WORKING DAY TO PROVIDE "SAME DAY STABILIZATION" UNLESS OTHER APPROVED STABILIZATION IS INSTALLED.
  - TEMPORARY STRAW MULCH SHALL BE INSTALLED ON AREAS AND SLOPES FLATTER THAN 4:1. TEMPORARY MATTING MULCH SHALL BE APPLIED ON SLOPES 4:1 AND STEEPER, AND TO AREAS WITHIN CHANNELS.
  - TEMPORARY SEED SHALL BE INSTALLED IN LIEU OF TEMPORARY MULCH WHEN SOIL RESTORATION IS EXPECTED MORE THAN 30 DAYS AFTER SOIL DISTURBANCE. THE REQUIRED APPLICATION RATE OF 15-30-15 FERTILIZER SHALL BE REDUCED TO 150 LBS PER ACRE.
- EXCAVATION AND DEBRIS REMOVAL. DEBRIS RELATED TO THE DEMOLITION OF SIDEWALKS, DRIVEWAYS, CURBS, TREES, STUMPS, FENCES, PILES, AND OTHER MATERIALS THAT MAY INTERFERE WITH LANDSCAPE INSTALLATION OR FUTURE MAINTENANCE WITHIN THE SHA RIGHT OF WAY SHALL BE EXCAVATED AS NECESSARY FOR THEIR COMPLETE REMOVAL AND DISPOSAL.
- SOIL RESTORATION. AREAS OF PAVEMENT REMOVAL, EXCAVATION OR DRILLING IN LANDSCAPED AREAS SHALL REMOVE EXCAVATED DEBRIS AND RESTORE THE SUBGRADE WITH APPROVED SUBSOIL AND TOPSOIL PLACED IN CONFORMANCE WITH SECTION 101 OF THE SHA STANDARD SPECIFICATIONS.
  - A LAYER OF APPROVED TOPSOIL AT LEAST 4 INCH DEPTH SHALL BE PLACED ON ALL DISTURBED AREAS FLATTER THAN 2:1 AND IN ALL CHANNELS PRIOR TO SEEDING, SOILING OR OTHER LANDSCAPING, UNLESS OTHERWISE SPECIFIED.
  - A LAYER OF APPROVED TOPSOIL AT LEAST 2 INCH DEPTH SHALL BE PLACED ON ALL DISTURBED AREAS 2:1 AND STEEPER PRIOR TO SEEDING, SOILING OR OTHER LANDSCAPING, UNLESS OTHERWISE SPECIFIED.
- TURFGRASS SOD ESTABLISHMENT. TURFGRASS SOD ESTABLISHMENT SHALL BE PERFORMED IN ALL DISTURBED AREAS OF THE SHA RIGHT OF WAY, OR WITHIN AREAS INDICATED IN THE PLANS, IN CONFORMANCE WITH SECTION 108 OF THE SHA STANDARD SPECIFICATIONS. THE REQUIRED APPLICATION RATE OF 20-10-12 FERTILIZER SHALL BE REDUCED TO 200 LBS PER ACRE, AND NO FERTILIZER SHALL BE APPLIED FROM NOV. 15 TO MAR. 1.
- SOIL STABILIZATION MATTING SHALL BE INSTALLED IN CONFORMANCE WITH SECTION 101 OF THE SHA STANDARD SPECIFICATIONS, IN CONJUNCTION WITH TURFGRASS ESTABLISHMENT PER SECTION 105 OR MEADOW ESTABLISHMENT AS FOLLOWS:
  - AREAS FLATTER THAN 6:1. TYPE A OR TYPE E MATTINGS MAY BE INSTALLED IN LIEU OF STRAW MULCH AND HYDROMULCH BINDER IN CONJUNCTION WITH TURFGRASS ESTABLISHMENT.
  - AREAS STEEPER THAN 6:1 AND FLATTER THAN 4:1. TYPE A AND TYPE E MATTINGS SHALL BE INSTALLED IN LIEU OF STRAW MULCH AND HYDROMULCH BINDER IN CONJUNCTION WITH TURFGRASS ESTABLISHMENT, UNLESS DELINEATED AND NOTED OTHERWISE ON THE PLANS.

\* FOR REFERENCE TO MSHA STANDARD DETAILS, REFER TO THE MSHA'S WEB SITE AT:  
<http://apps.roads.maryland.gov/businesswithshahabitstdspec/decmanvalstdspubliatonsline/shahabitstd/index.asp>

The following standards are required for this project:

- MD-655.11 SW RAMP DETAIL
- MD-655.18 SIDEWALK RAMPS COMBINATION
- PRECAST OR CAST-IN-PLACE COB/COS OPENING FOR 8" CURB 5' OR 10' ONLY
- STANDARD WR INLET
- MD-510.01 REPAIR IN PAVEMENT OPENINGS FOR UTILITY TRENCHES
- MD-630.02 STD. ENTRANCE METHOD 2
- FOR TRAFFIC CONTROL USE 104.06-01 and 104.03-05

For all standards referred to on the plans the contractor must go to the Book of Standards which will have the most current version. The Book of Standards can be accessed at the above website.

All items are to be constructed in accordance with the current version of the referenced standard at the time of construction.

**STORMWATER MANAGEMENT AS-BUILT CERTIFICATION**

I HEREBY CERTIFY THAT THE STORMWATER MANAGEMENT FACILITY (FACILITIES) SHOWN ON THE PLANS AND INDIVIDUALLY IDENTIFIED BELOW HAS (HAVE) BEEN CONSTRUCTED IN ACCORDANCE WITH THE PLANS INCLUDED UNDER THE STATE HIGHWAY ADMINISTRATION PLAN REVIEW DIVISION APPROVAL, NUMBER - PR - EXCEPT AS NOTED IN GREEN ON THE "AS-BUILT" DRAWINGS. FURTHERMORE, THE GREEN-NOTED EXCEPTIONS DO NOT ADVERSELY AFFECT THE DESIGN AND/OR THE INTENDED PERFORMANCE OF THE FACILITY (FACILITIES).

\_\_\_\_\_

EACH SWM FACILITY IS IDENTIFIED INDIVIDUALLY BY A UNIQUE SWM FACILITY NUMBER.

NAME (PRINTED) \_\_\_\_\_ SIGNATURE \_\_\_\_\_

MARYLAND REGISTRATION NUMBER \_\_\_\_\_ DATE \_\_\_\_\_

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE PLANS 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. 11225, EXPIRATION DATE MARCH 11, 2017.

\*CERTIFY\* MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED ON SUFFICIENT AND APPROPRIATE ON-SITE INSPECTIONS AND MATERIAL TESTS CONDUCTED DURING CONSTRUCTION.

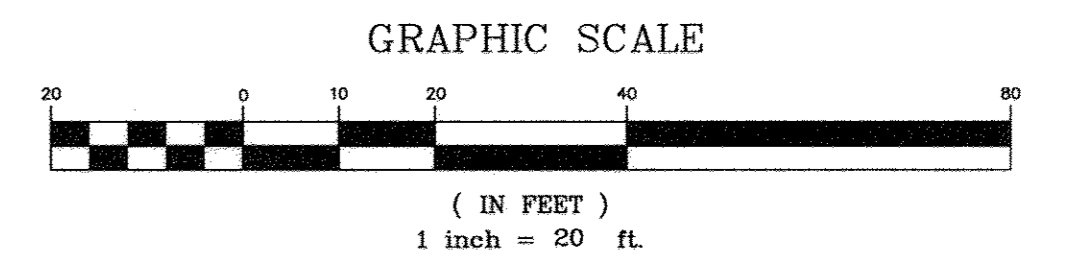
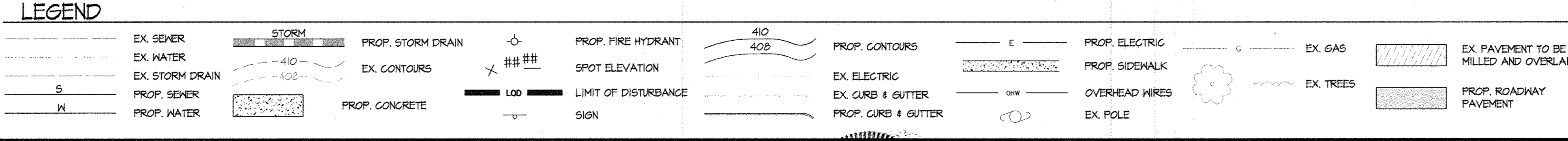
NOTE: AS-BUILT CHECKLISTS CONTAINED IN THE CONTRACT DRAWINGS SHALL BE COMPLETED BY THE AS-BUILT INSPECTOR AND SUBMITTED TO THE SHA ALONG WITH THIS CERTIFICATION.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*Valdis J. Taylor* 11-4-17  
 Director Date

*Walt S. Dool* 11-06-17  
 Chief, Division of Land Development Date

*Paul Chant* 10-26-17  
 Chief, Development Engineering Division Date



**GLWGUTSCHICK LITTLE & WEBER, P.A.**  
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
 3909 NATIONAL DRIVE - SUITE 250 - BURTNSVILLE OFFICE PARK  
 BURTNSVILLE, MARYLAND 20886  
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DATE	REVISION	BY	APP'R.

PROFESSIONAL CERTIFICATION  
 I HEREBY CERTIFY THAT THESE PLANS 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. 11225, EXPIRATION DATE: MARCH 11, 2017

*David R. Ennis*  
 PROFESSIONAL ENGINEER  
 10-23-17  
 2017

PREPARED FOR:  
 CSH MAPLE LAWN LLC  
 1275 PENNSYLVANIA AVE. NW, 2ND FLOOR  
 WASHINGTON D.C. 20004  
 CONTACT: DAVID R. ENNIS  
 TEL: (202) 469-8400

SCALE: 1" = 20'  
 ZONING: CCT  
 DATE: MAR., 2017  
 TAX MAP - GRID: 41 - 21

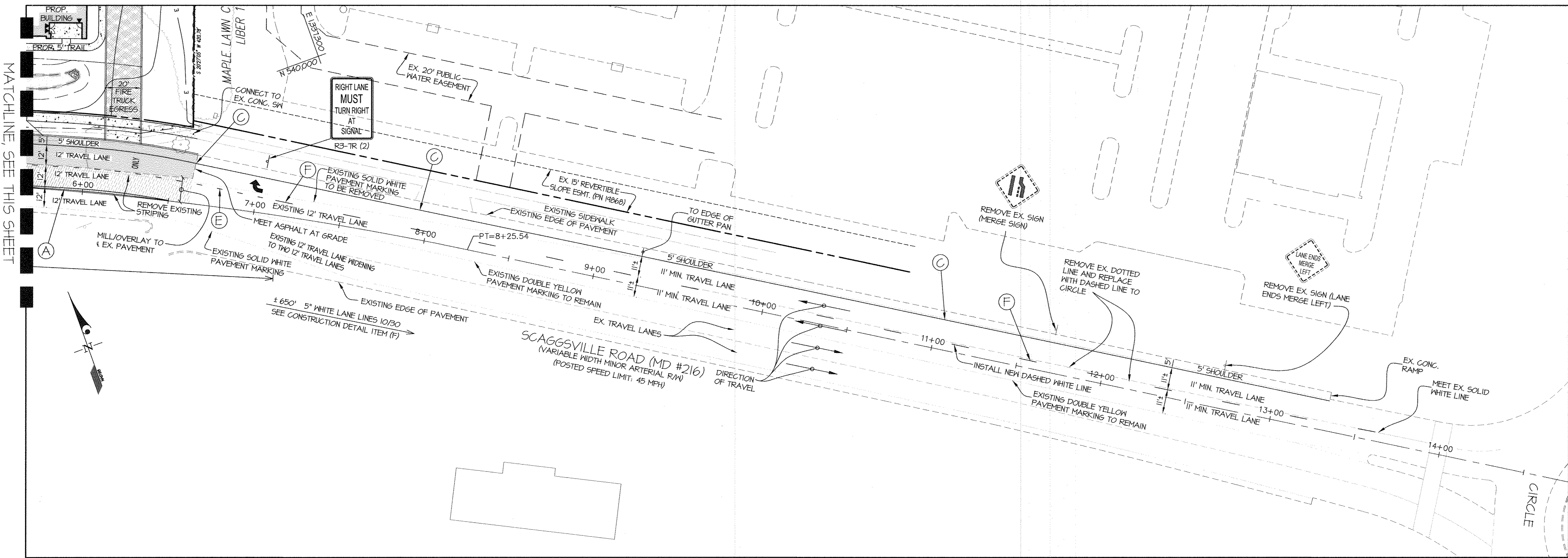
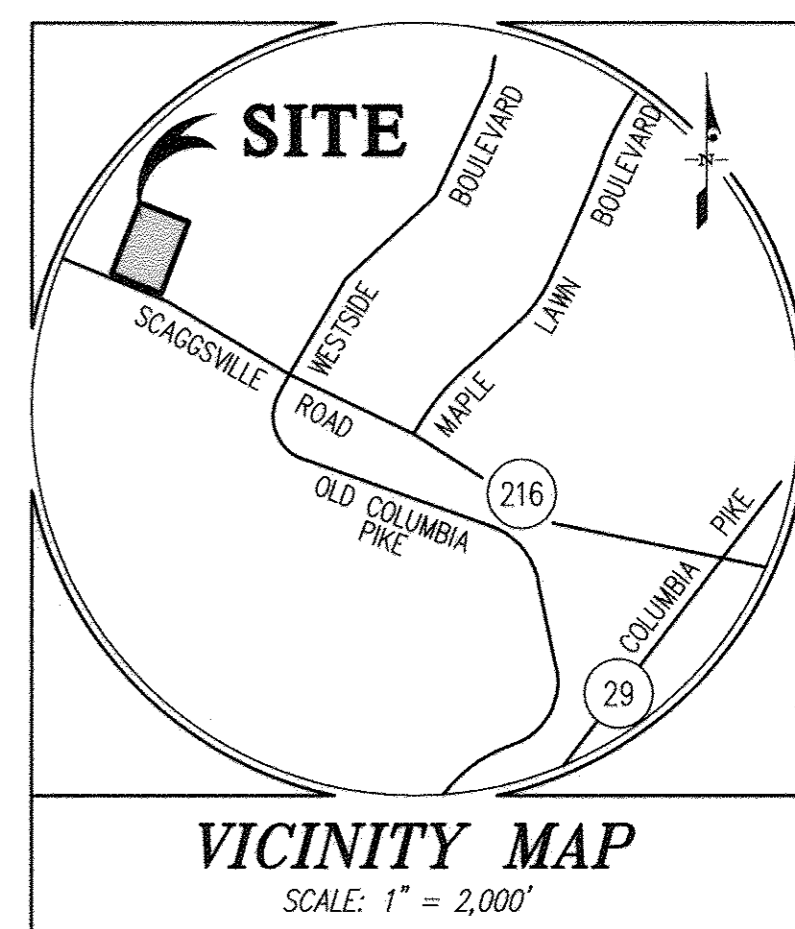
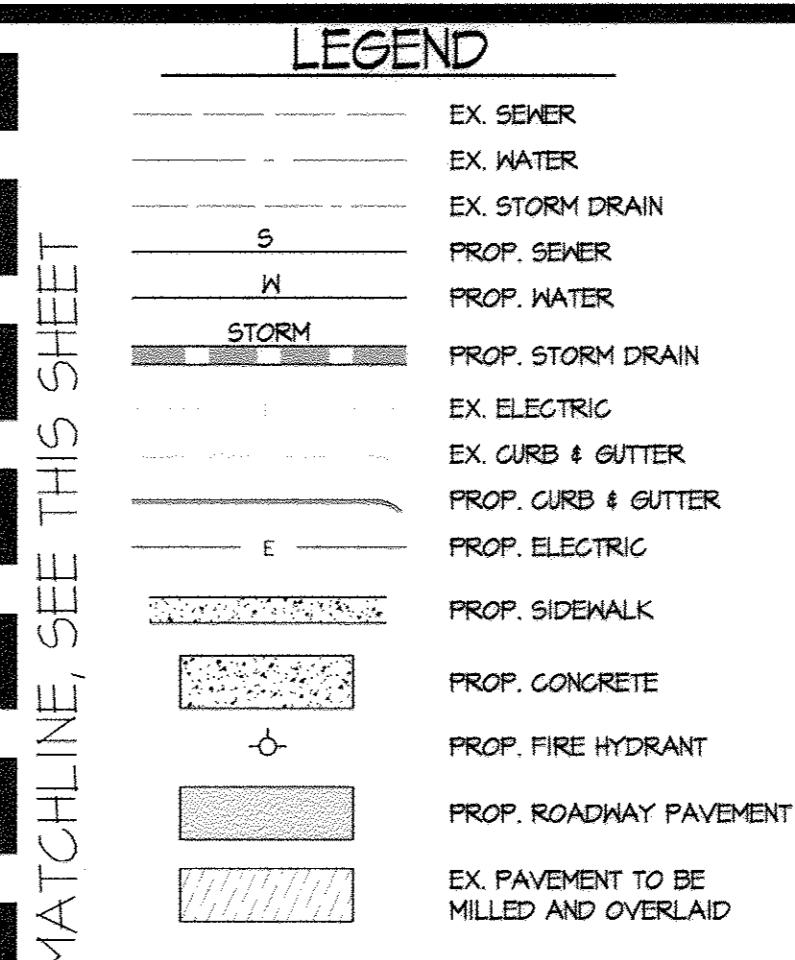
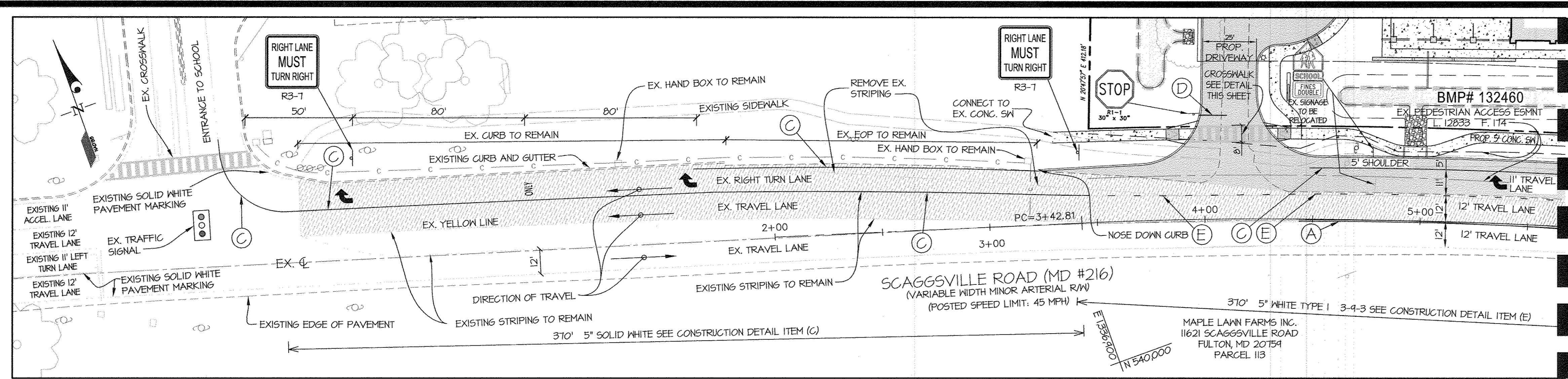
**DRIVEWAY ENTRANCE AND ROAD IMPROVEMENT PLAN**

**ARBOR TERRACE FULTON PARCEL A**  
**GREEN RESIDENTIAL CARE BUILDING**  
 LIBER 9293 FOLIO 183

ELECTION DISTRICT No. 5 HOWARD COUNTY, MARYLAND

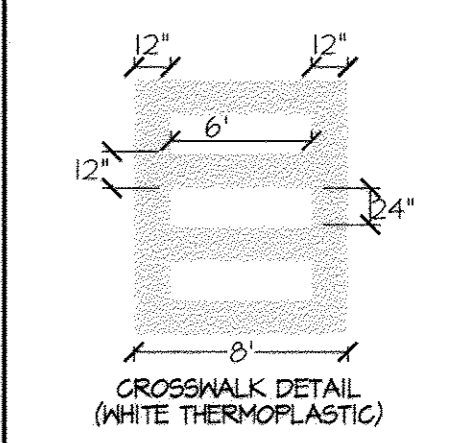
G. L. W. FILE NO. 16001  
 SHEET 16 OF 18



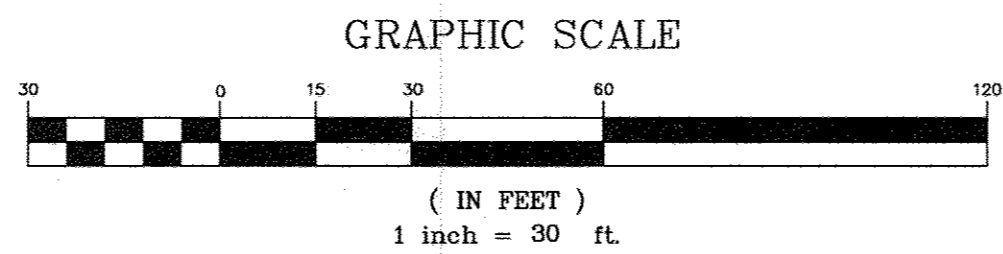


**48 Hours**  
Before You Dig  
Call  
"MISS UTILITY"  
Service Protection Center

CALL TOLL FREE  
1-800-257-7777



- CONSTRUCTION DETAILS:**
- A. INSTALL 5 IN. DOUBLE YELLOW THERMOPLASTIC PAVEMENT MARKING FOR CENTER LINE.
  - B. INSTALL 5 IN. SINGLE YELLOW THERMOPLASTIC PAVEMENT MARKING FOR CENTER LINE.
  - C. INSTALL 5 IN. SOLID WHITE THERMOPLASTIC PAVEMENT MARKING FOR LANE LINE OR EDGE LINE.
  - D. INSTALL 24 IN. SOLID WHITE THERMOPLASTIC PAVEMENT MARKING FOR STOP LINE.
  - E. INSTALL 5 IN. DOTTED (3 FT. SEGMENT, 4 FT. GAP) TYPE I "PUPPY TRACKS" WHITE THERMOPLASTIC PAVEMENT MARKING FOR LANE DIVIDE.
  - F. INSTALL 5 IN. DASHED (10 FT. SEGMENT, 30 FT. GAP) WHITE THERMOPLASTIC PAVEMENT MARKING FOR LANE DIVIDE.
  - G. INSTALL 10 IN. SOLID WHITE THERMOPLASTIC PAVEMENT MARKING FOR EDGE LINE.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*N. J. J. J.* 11.9.17  
Director Date

*K. S. D. D.* 11.06.17  
Chief, Division of Land Development Date

*D. E. L.* 10.26.17  
Chief, Development Engineering Division Date

**GLWGUTSCHICK LITTLE & WEBER, P.A.**  
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
3909 NATIONAL DRIVE - SUITE 250 - BURTENVILLE OFFICE PARK  
BURTENVILLE, MARYLAND 20866  
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-889-2524 FAX: 301-421-4186

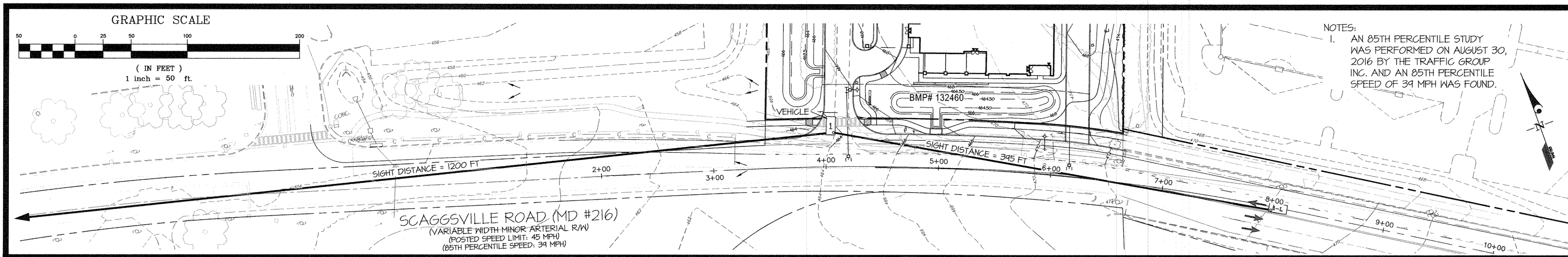
PROFESSIONAL CERTIFICATION  
I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
LICENSE NO. JT295  
EXPIRATION DATE: MARCH 31, 2024

PREPARED FOR:  
CSH MAPLE LAWN LLC  
1275 PENNSYLVANIA AVE. NW, 2ND FLOOR  
WASHINGTON D.C. 20004  
CONTACT: DAVID R. ENNIS  
TEL: (202) 469-8400

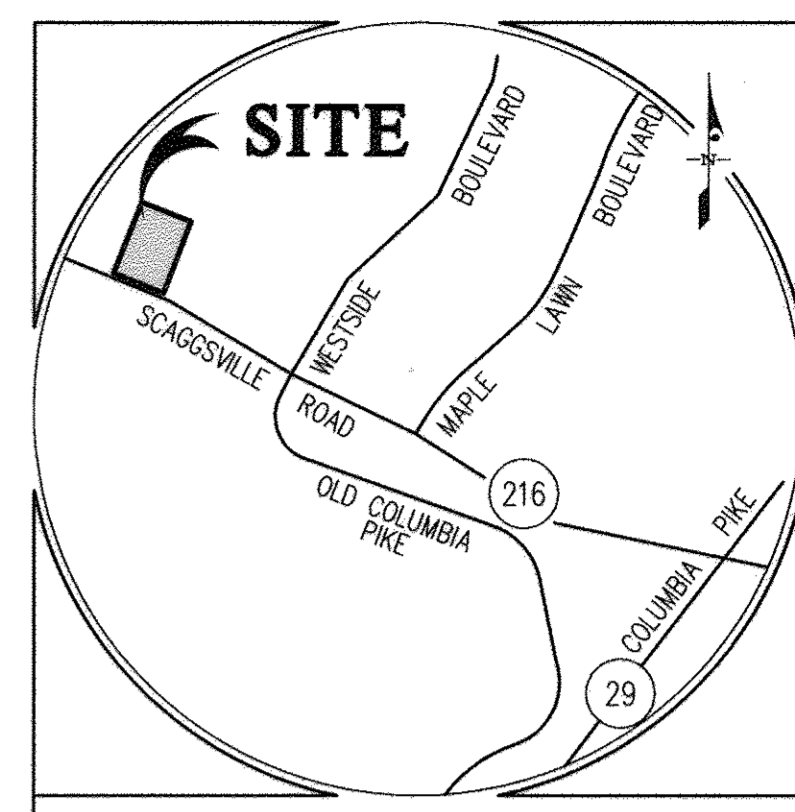
SCALE: 1" = 30'  
ZONING: CCT  
DATE: MAR., 2017  
TAX MAP - GRID: 41 - 21

**MD RT. 216 PAVEMENT MARKING and SIGNING PLAN**  
**ARBOR TERRACE FULTON**  
**PARCEL A**  
**GREEN RESIDENTIAL CARE BUILDING**  
LIBER 9293 FOLIO 183  
ELECTION DISTRICT No. 5  
HOWARD COUNTY, MARYLAND

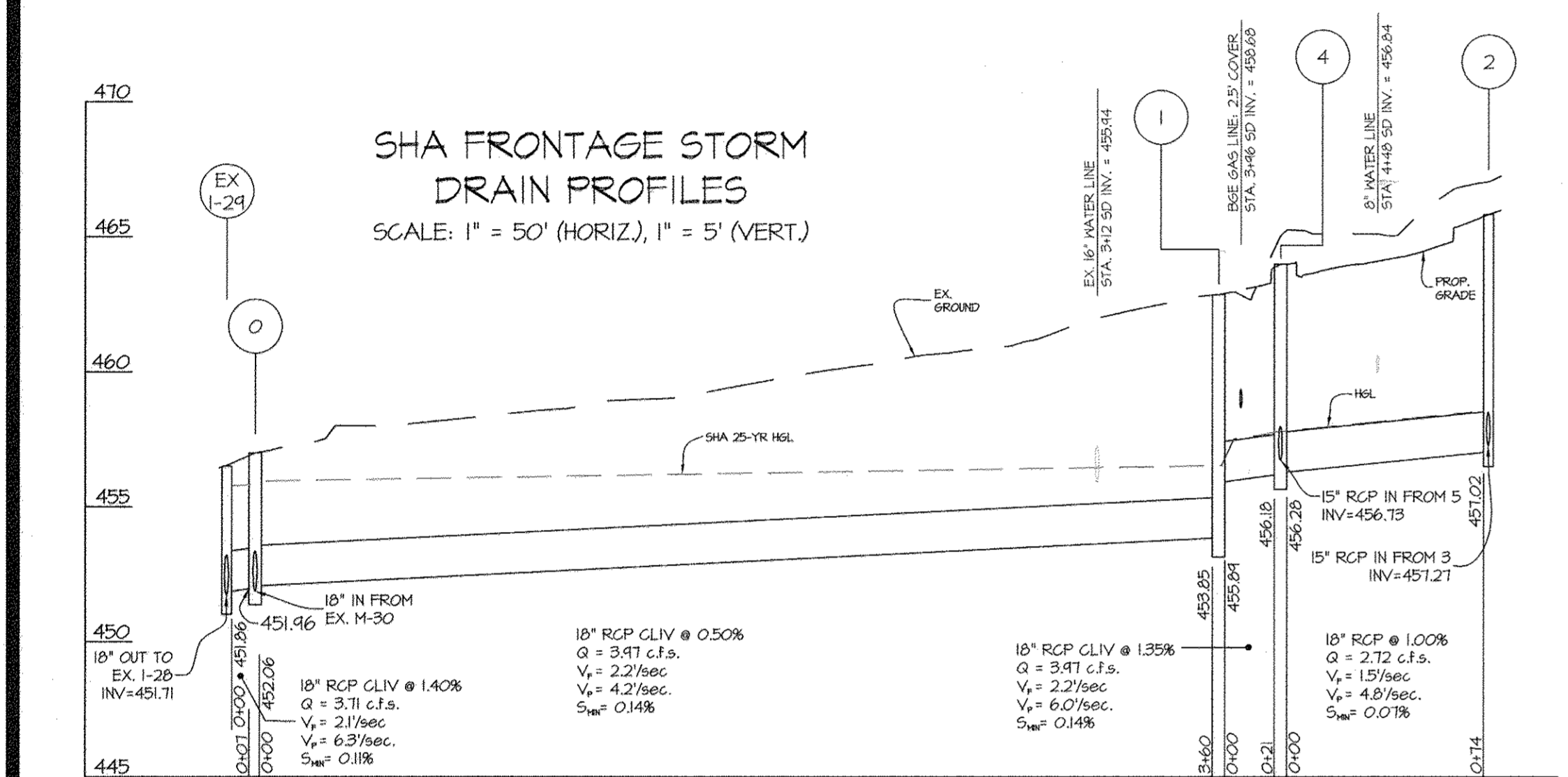
G. L. W. FILE No.  
16001  
SHEET  
17 OF 18



NOTES:  
 1. AN 85TH PERCENTILE STUDY WAS PERFORMED ON AUGUST 30, 2016 BY THE TRAFFIC GROUP INC. AND AN 85TH PERCENTILE SPEED OF 39 MPH WAS FOUND.

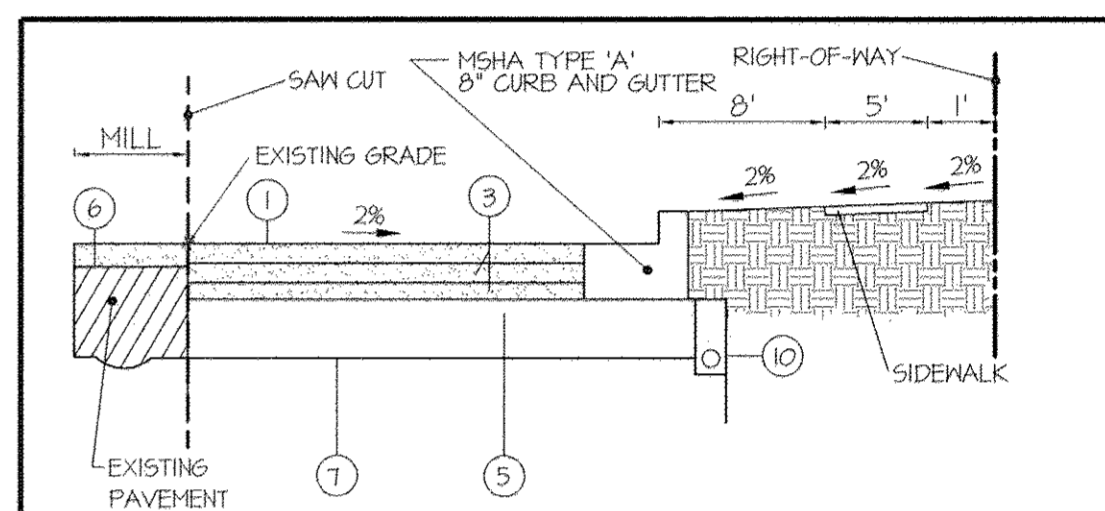


VICINITY MAP  
 SCALE: 1" = 2,000'



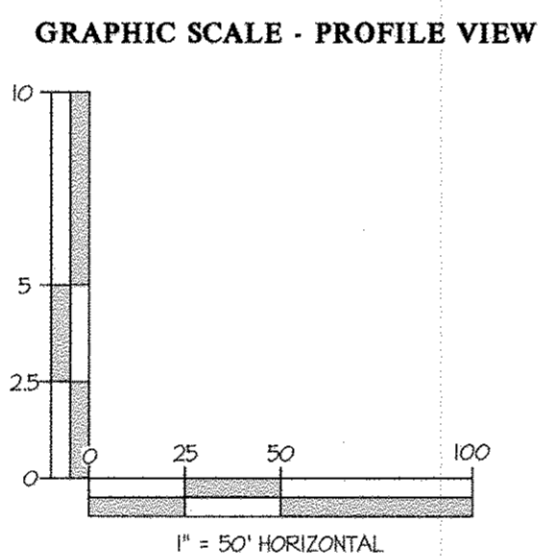
PIPE SCHEDULE						
STRUCTURE FROM	STRUCTURE TO	LENGTH	UPPER INVERT	LOWER INVERT	TYPE	SIZE
2	3	20	451.41	451.21	CLASS IV RCP	15"
4	2	74	451.02	456.28	CLASS IV RCP	18"
4	5	24	456.47	456.73	CLASS IV RCP	15"
1	4	11	456.18	456.03	CLASS IV RCP	18"
0	1	361	454.54	452.06	CLASS IV RCP	18"
EX. I-24	0	7	451.46	451.86	CLASS IV RCP	18"

NOTES:  
 1. SEE SHEET 9 FOR PRIVATE ON-SITE STORM DRAIN INFORMATION.  
 2. ALL RCP PIPE IS TO BE CLASS IV RCP.



MD 216 - TYPICAL OVERLAY & WIDENING SECTION  
 ① 2.0" HOT MIX ASPHALT SUPERPAVE 12.5 MM FOR SURFACE COURSE PG 64-22, LEVEL 2  
 ② 1" HOT MIX ASPHALT SUPERPAVE 19.0 MM FOR BASE COURSE PG 64-22, LEVEL 2 (2-3.5" LIFTS)  
 ③ 6" GRADED AGGREGATE BASE (2-3" LIFTS)  
 ④ TOP OF EXISTING PAVEMENT AFTER CARBIDE GRINDING  
 ⑤ TOP OF SUBGRADE  
 \*\*\* ⑥ LONGITUDINAL UNDERDRAINS (PER MD-3811J) (IF REQUIRED)  
 \*\*\* LONGITUDINAL UNDERDRAINS SHALL BE WRAPPED WITH CLASS 50 TYPE II GEOTEXTILE

STRUCTURE (#)	DRAINAGE AREA (SF)	DRAINAGE AREA (AC)	COMPOSITE 'C' (#,##)	% IMPERVIOUS (%)
2	1,736	0.04	0.12	74%
20	7,030	0.16	0.70	76%
EX. I-24	7,882	0.18	0.53	50%



STORMWATER MANAGEMENT AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE STORMWATER MANAGEMENT FACILITY (FACILITIES) SHOWN ON THE PLANS AND INDIVIDUALLY IDENTIFIED BELOW HAS (HAVE) BEEN CONSTRUCTED IN ACCORDANCE WITH THE PLANS INCLUDED UNDER THE STATE HIGHWAY ADMINISTRATION PLAN REVIEW DIVISION APPROVAL, NUMBER \_\_\_\_\_ - PR \_\_\_\_\_ EXCEPT AS NOTED IN GREEN ON THE "AS-BUILT" DRAWINGS. FURTHERMORE, THE GREEN-NOTED EXCEPTIONS DO NOT ADVERSELY AFFECT THE DESIGN AND/OR THE INTENDED PERFORMANCE OF THE FACILITY (FACILITIES).

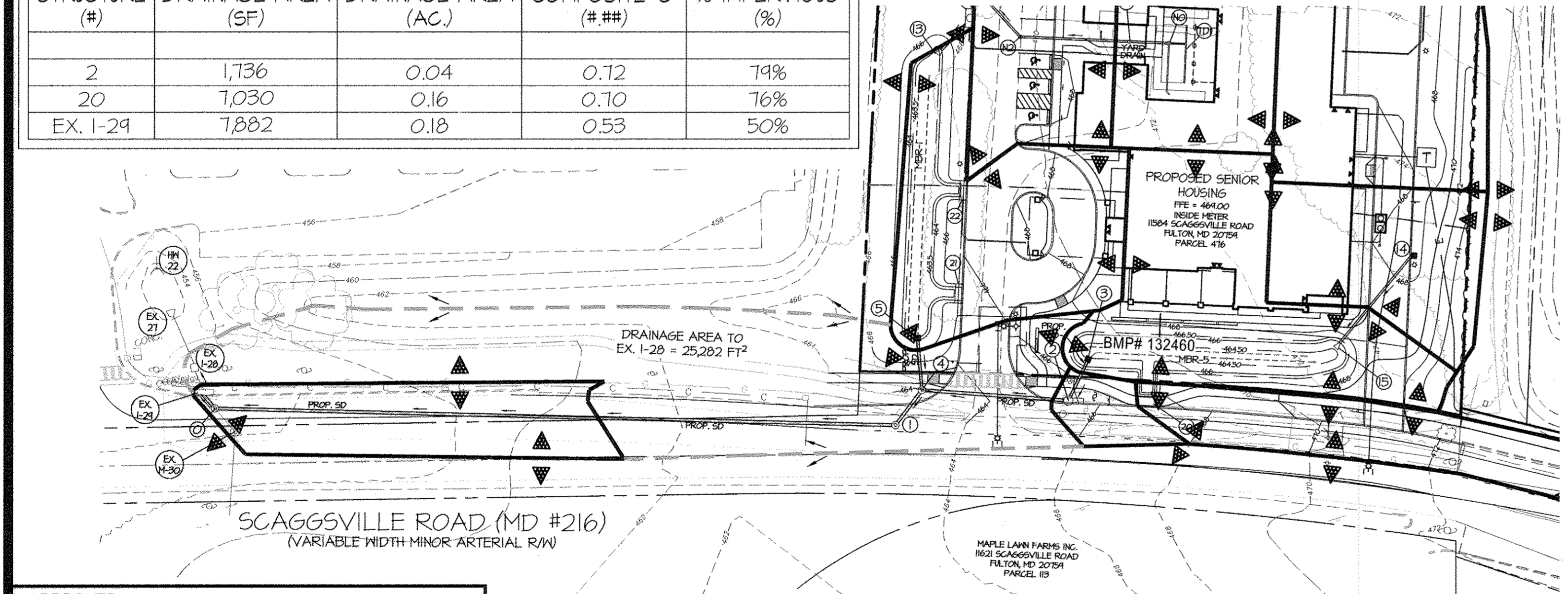
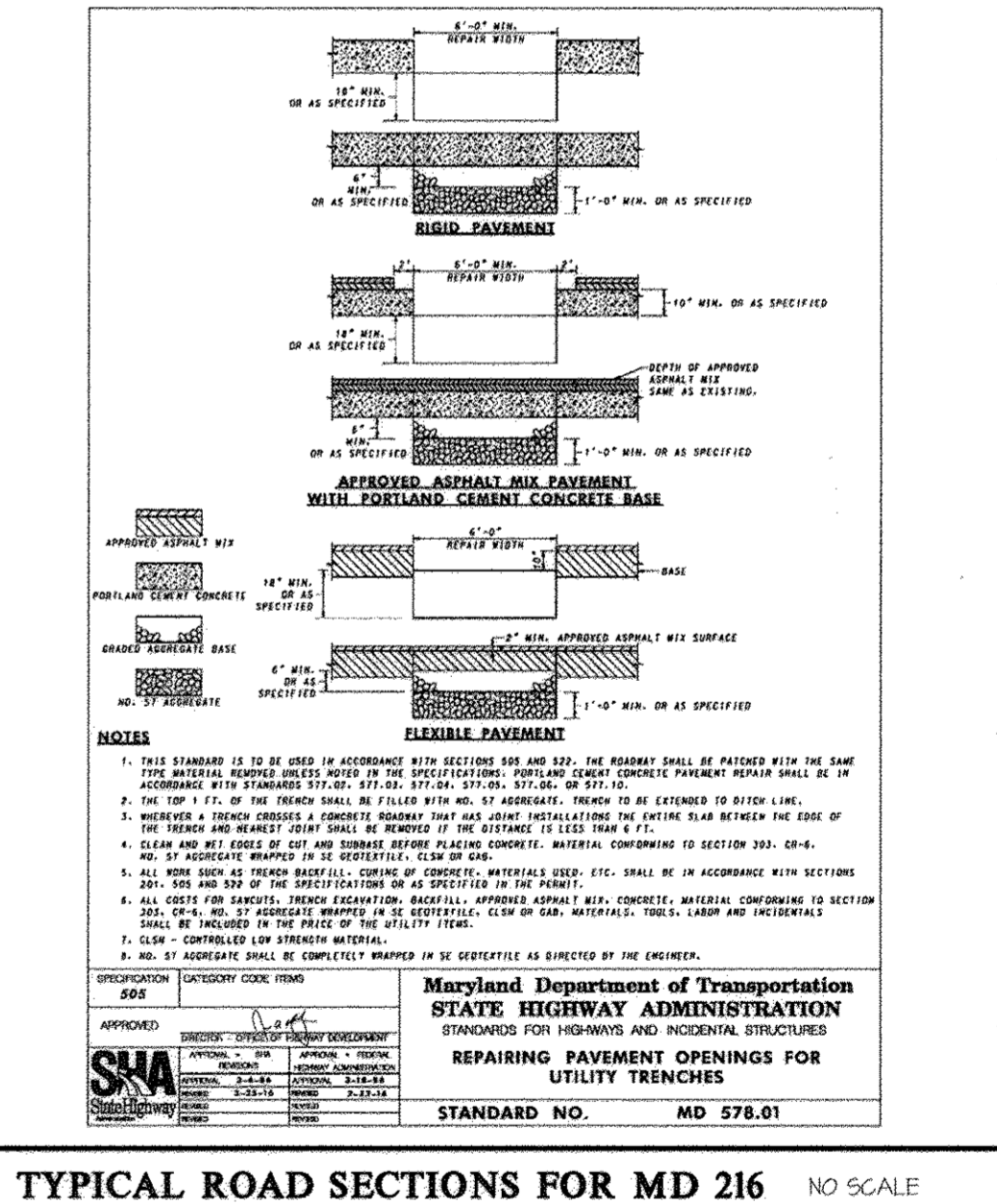
EACH SWM FACILITY IS IDENTIFIED INDIVIDUALLY BY A UNIQUE SWM FACILITY NUMBER.

NAME (PRINTED) \_\_\_\_\_ SIGNATURE \_\_\_\_\_  
 MARYLAND REGISTRATION NUMBER \_\_\_\_\_ DATE \_\_\_\_\_

PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE PLANS 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. 17285, EXPIRATION DATE MARCH 11, 2014.

"CERTIFY" MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED ON SUFFICIENT AND APPROPRIATE ON-SITE INSPECTIONS AND MATERIAL TESTS CONDUCTED DURING CONSTRUCTION.

NOTE: AS-BUILT CHECKLISTS CONTAINED IN THE CONTRACT DRAWINGS SHALL BE COMPLETED BY THE AS-BUILT INSPECTOR AND SUBMITTED TO THE SHA ALONG WITH THIS CERTIFICATION.



SHA FRONTAGE STORM DRAIN DRAINAGE AREA MAP SCALE: 1" = 50'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
 Director: *N. J. J. J.* 11-9-17  
 Chief, Division of Land Development: *W. S. S.* 11-26-17  
 Chief, Development Engineering Division: *D. C. C.* 12-26-17

NO	TYPE	WIDTH (INSIDE)	TOP ELEVATION				INVERT				STD. DETAIL	LOCATIONS	REMARKS
			PROPOSED UPPER	PROPOSED LOWER	AS-BUILT UPPER	AS-BUILT LOWER	PROPOSED UPPER	PROPOSED LOWER	AS-BUILT UPPER	AS-BUILT LOWER			
0	STANDARD MANHOLE	4'-0"	456.99	---	456.99	451.96	452.06	451.96	---	---	MD 383.01	N 540,193 E 1,336,543	
1	STANDARD MANHOLE	4'-0"	462.87	---	462.87	453.85	455.84	453.85	---	---	MD 383.01	N 540,074 E 1,336,932	
2	PRECAST COB-10 INLET	STD.	466.11	465.71	466.11	451.21	451.21	451.02	---	---	MD 374.51	N 540,055 E 1,331,025	
4	STANDARD MANHOLE	4'-0"	463.77	---	463.77	456.18	456.28	456.18	---	---	MD 383.01	N 540,087 E 1,336,951	
20	PRECAST COB OPENING	10'-0"	467.16	467.41	467.16	464.50	464.50	464.50	---	---	MD 374.68	N 540,042 E 1,331,061	

**GLWGUTSCHICK LITTLE & WEBER, P.A.**  
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS  
 3909 NATIONAL DRIVE - SUITE 250 - BURTNSVILLE OFFICE PARK  
 BURTNSVILLE, MARYLAND 20886  
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-889-2524 FAX: 301-421-4186

PROFESSIONAL CERTIFICATION  
 I HEREBY CERTIFY THAT THESE PLANS 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. 17285, EXPIRATION DATE MARCH 11, 2014.

PREPARED FOR:  
 CSH MAPLE LAWN LLC  
 1275 PENNSYLVANIA AVE. NW, 2ND FLOOR  
 WASHINGTON D.C. 20004  
 CONTACT: DAVID R. ENNIS  
 TEL: (202) 469-8400

SCALE: 1" = 50'  
 ZONING: CCT  
 DATE: MAR., 2017  
 TAX MAP - GRID: 41 - 21

MD RT. 216 STORM DRAIN PROFILES and SIGHT DISTANCE PLAN  
**ARBOR TERRACE FULTON  
 PARCEL A  
 GREEN RESIDENTIAL CARE BUILDING**  
 LIBER 923 FOLIO 183  
 ELECTION DISTRICT No. 5  
 HOWARD COUNTY, MARYLAND

G. L. W. FILE No.  
 16001  
 SHEET  
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