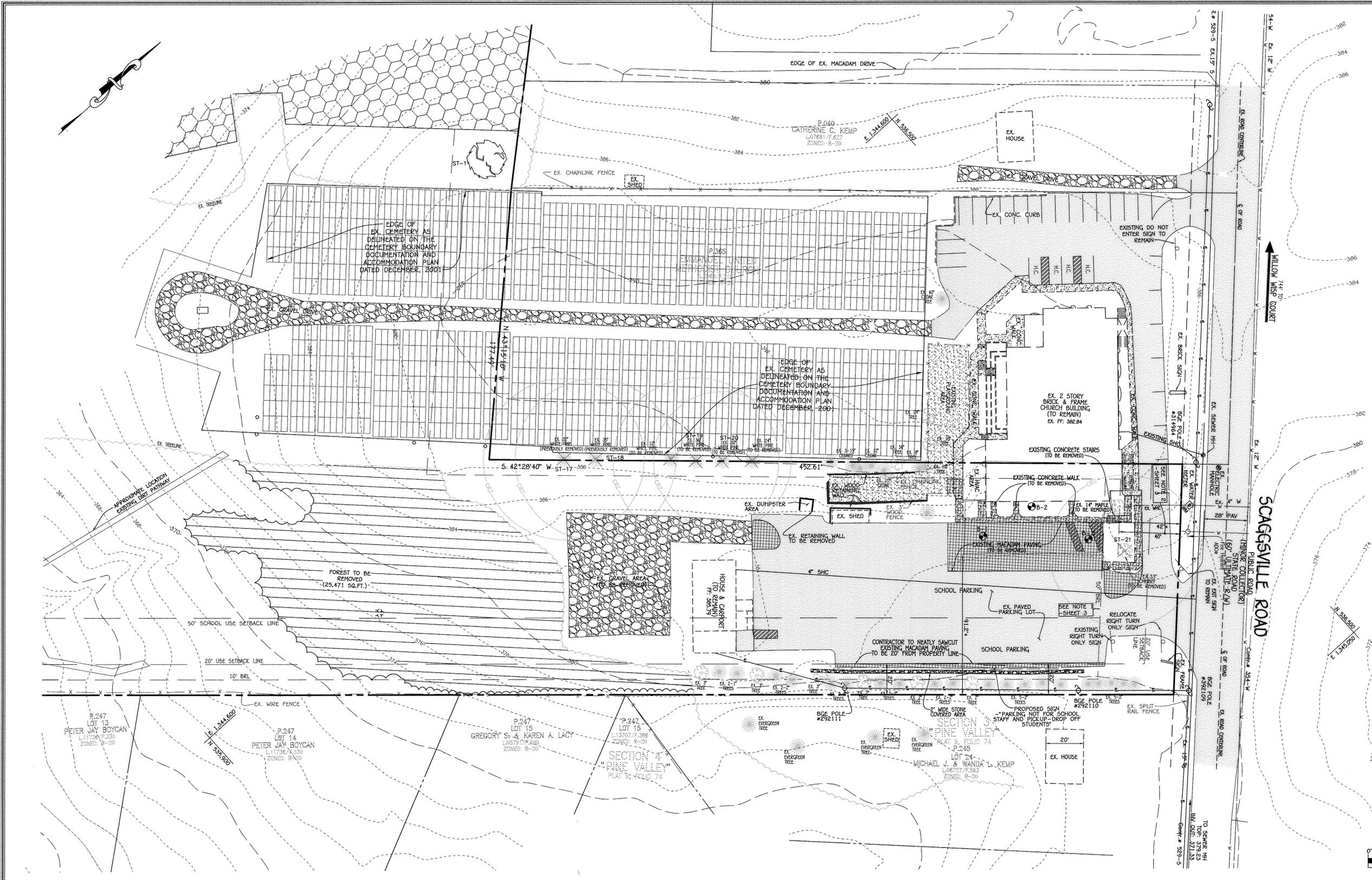


LEGEND	
SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
---	EXISTING CONTOUR 10' INTERVAL
---	EXISTING SAN. SEWER LINE
---	EXISTING STORM DRAIN LINE
---	EXISTING WATER LINE
XXXX	EXISTING CEMETERY
---	EXISTING TREE
---	EXISTING TREE (TO BE REMOVED)
---	PROPOSED TREE
---	EXISTING TREELINE
---	PROPOSED TREELINE
---	BUILDING RESTRICTION LINE/USE SETBACK LINE
X	EXISTING CHAINLINK FENCE
---	EXISTING WOODEN FENCE
---	PROPOSED FENCE
---	PROPOSED CONTOUR 2' INTERVAL
---	PROPOSED CONTOUR 10' INTERVAL
+	PROPOSED SPOT ELEVATION
---	PROPOSED CONCRETE WALK
---	PROPOSED MACADAM PAVING
---	DIVERSION FENCE
---	SUPER SILT FENCE
---	EXISTING CONCRETE WALK
---	EXISTING RETAINING WALL
---	EXISTING CEMETERY
---	PROPOSED LIGHT POLE
---	APPROXIMATE AREA OF DEMOLITION
---	15%-24.9% SLOPES
---	25% SLOPES OR GREATER
---	DENOTES PROPOSED RETAINING WALL
---	DENOTES EXISTING RETAINING WALL
---	FOREST STAND BOUNDARY
F-1	FOREST STAND LABEL
ST-1	SPECIMEN TREE



FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELIZABETH CITY, MARYLAND 21042
 (410) 461-2895

NO.	REVISION	DATE



PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/17.

Mark J. Pranderson 3/23/16
 Signature of Professional Land Surveyors DATE

OWNER AND DEVELOPER
 REVEREND STEPHANIE WADER
 EMMANUEL UNITED
 METHODIST CHURCH
 10755 SCAGGSVILLE ROAD
 LAUREL, MD 20723
 301-725-5200

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

W. McMillan 6-9-16
 Director - Department of Planning and Zoning Date

K. Schuchman 6-9-16
 Chief, Division of Land Development Date

D. Blakely 5-12-16
 Chief, Development Engineering Division Date

PROJECT	SECTION	PARCEL NOS.
EMMANUEL UNITED METHODIST CHURCH	-	A

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
23786 & 23787	11	R-20	46	SIXTH	6068.02

WATER CODE	SEWER CODE
E-10	7550000

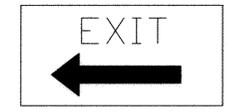
DEMOLITION PLAN

2 STORY MULTI-PURPOSE BLDG. EXT. & PARKING LOT EXT. AND FOREST CONSERVATION RETENTION BANK
EMMANUEL UNITED METHODIST CHURCH
 PARCEL 'A'
 PREVIOUS HOWARD COUNTY FILES: BA 10-034C&V, BA 90 66E&V
 50P-92-027, ECP-13-053 & F-16-052
 ZONED: R-20
 TAX MAP NO.: 46 GRID NO.: 11 PARCEL NO.: 98
 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: 1"=30' DATE: MARCH 12, 2016
 SHEET 2 OF 22 SOP-15-067

K:\Drawings - 4410159 Emmanuel United Methodist Church\SDP - Folder 4410159 SDP - SHEET 2 DEMO.dwg, 3/24/2016 8:40:10 AM, 11

LEGEND	
SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
---	EXISTING CONTOUR 10' INTERVAL
---	EXISTING SAN. SEWER LINE
---	EXISTING STORM DRAIN LINE
---	EXISTING WATER LINE
X X X	EXISTING CEMETERY
○	EXISTING TREE
○	PROPOSED TREE
---	EXISTING TREELINE
---	PROPOSED TREELINE
---	BUILDING RESTRICTION LINE/USE SETBACK LINE
X	EXISTING CHAINLINK FENCE
---	EXISTING WOODEN FENCE
---	PROPOSED FENCE
---	PROPOSED CONTOUR 2' INTERVAL
---	PROPOSED CONTOUR 10' INTERVAL
+380.90	PROPOSED SPOT ELEVATION
---	PROPOSED CONCRETE WALK
---	PROPOSED MACADAM PAVING
---	DIVERSION FENCE
---	SUPER SILT FENCE
---	EXISTING CONCRETE WALK
---	EXISTING RETAINING WALL
X X X	EXISTING CEMETERY
---	PROPOSED LIGHT POLE
---	APPROXIMATE AREA OF DEMOLITION
---	15%-24.9% SLOPES
---	25% SLOPES OR GREATER
---	DENOTES PROPOSED RETAINING WALL
---	DENOTES EXISTING RETAINING WALL
---	FOREST STAND BOUNDARY
F-1	FOREST STAND LABEL
ST-1	SPECIMEN TREE

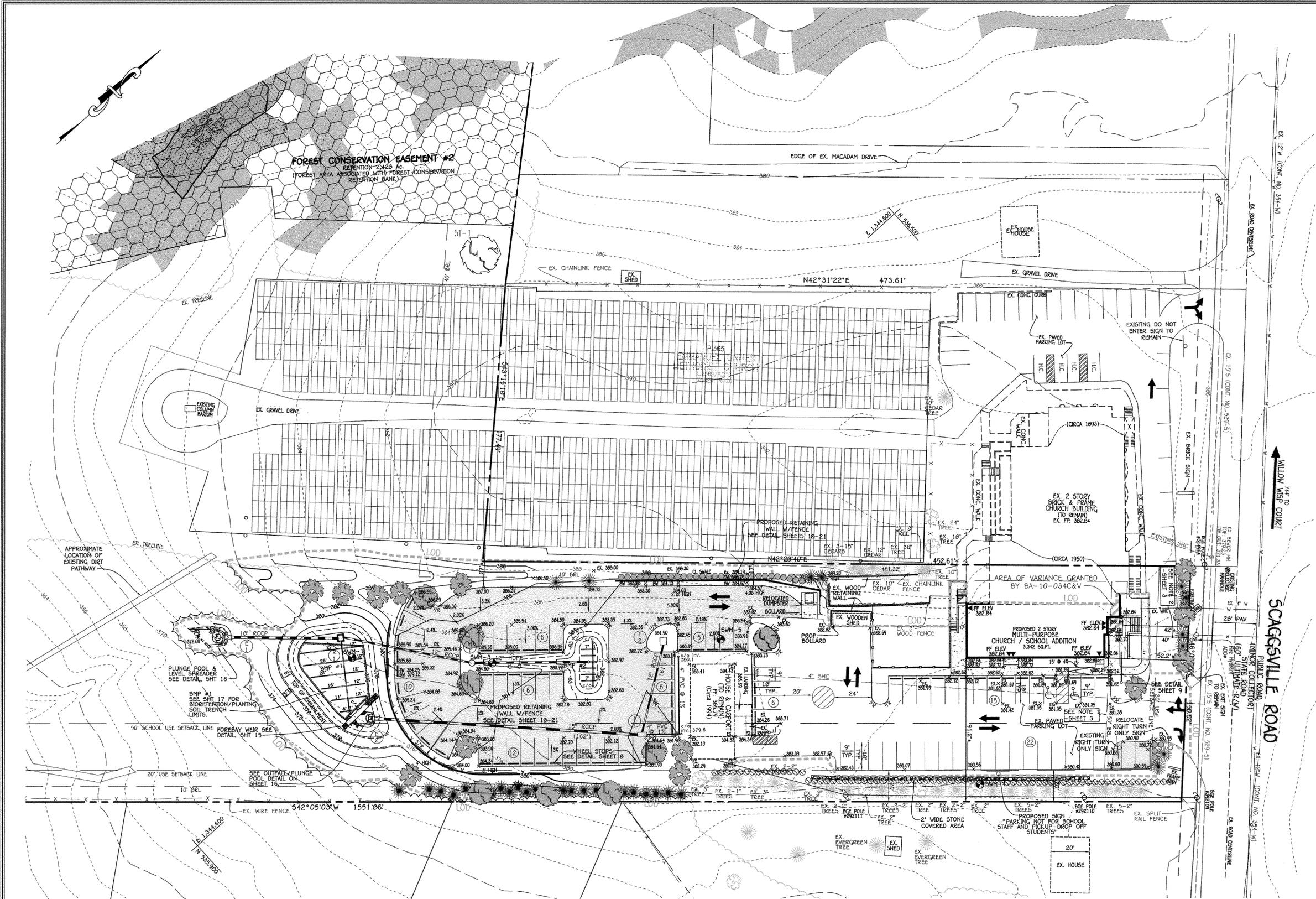
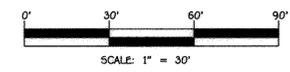
- NOTES**
1. THE 50 FOOT SETBACK FROM SCAGGSVILLE ROAD (MAJOR COLLECTOR) EXTENDS ACROSS THE ENTIRE FRONTAGE OF PARCEL 98.
 2. THE 40 FOOT SETBACK APPROVED WITH BA-10-034 CAV IS FOR A REDUCTION OF THE FRONT 50 FOOT SETBACK ASSOCIATED ONLY WITH THE BUILDING ADDITION CLOSEST TO SCAGGSVILLE ROAD APPROVED WITH BA-10-034 CAV APPROVED ON JUNE 6, 2011 AND LISTED AS GENERAL NOTE NO. 18, BA-10-034C&V, ITEM NO.13.



EXISTING "EXIT" SIGN TO REMAIN



EXISTING "RIGHT TURN ONLY" SIGN TO REMAIN



FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 (410) 461-2895

NO.	REVISION	DATE



PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/17.

Stephanie Vader *3/27/16*
 Signature of Professional Land Surveyors DATE

OWNER AND DEVELOPER
 REVEREND STEPHANIE VADER
 EMMANUEL UNITED
 METHODIST CHURCH
 10795 SCAGGSVILLE ROAD
 LAUREL, MD 20723
 301-725-9200

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

N.M. [Signature] 6-9-16
 Director - Department of Planning and Zoning Date

[Signature] 6-9-16
 Chief, Division of Land Development Date

[Signature] 5-12-16
 Chief, Development Engineering Division Date

PROJECT	SECTION	PARCEL NOS.
EMMANUEL UNITED METHODIST CHURCH	-	A

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
23782	11	R-20	46	SIXTH	6068.02

WATER CODE	SEWER CODE
E-10	7550000

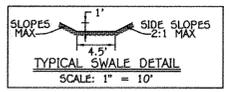
SITE DEVELOPMENT PLAN

2 STORY MULTI-PURPOSE BLDG. EXT. & PARKING LOT EXT. AND FOREST CONSERVATION RETENTION BANK
EMMANUEL UNITED METHODIST CHURCH
 PARCEL 'A'

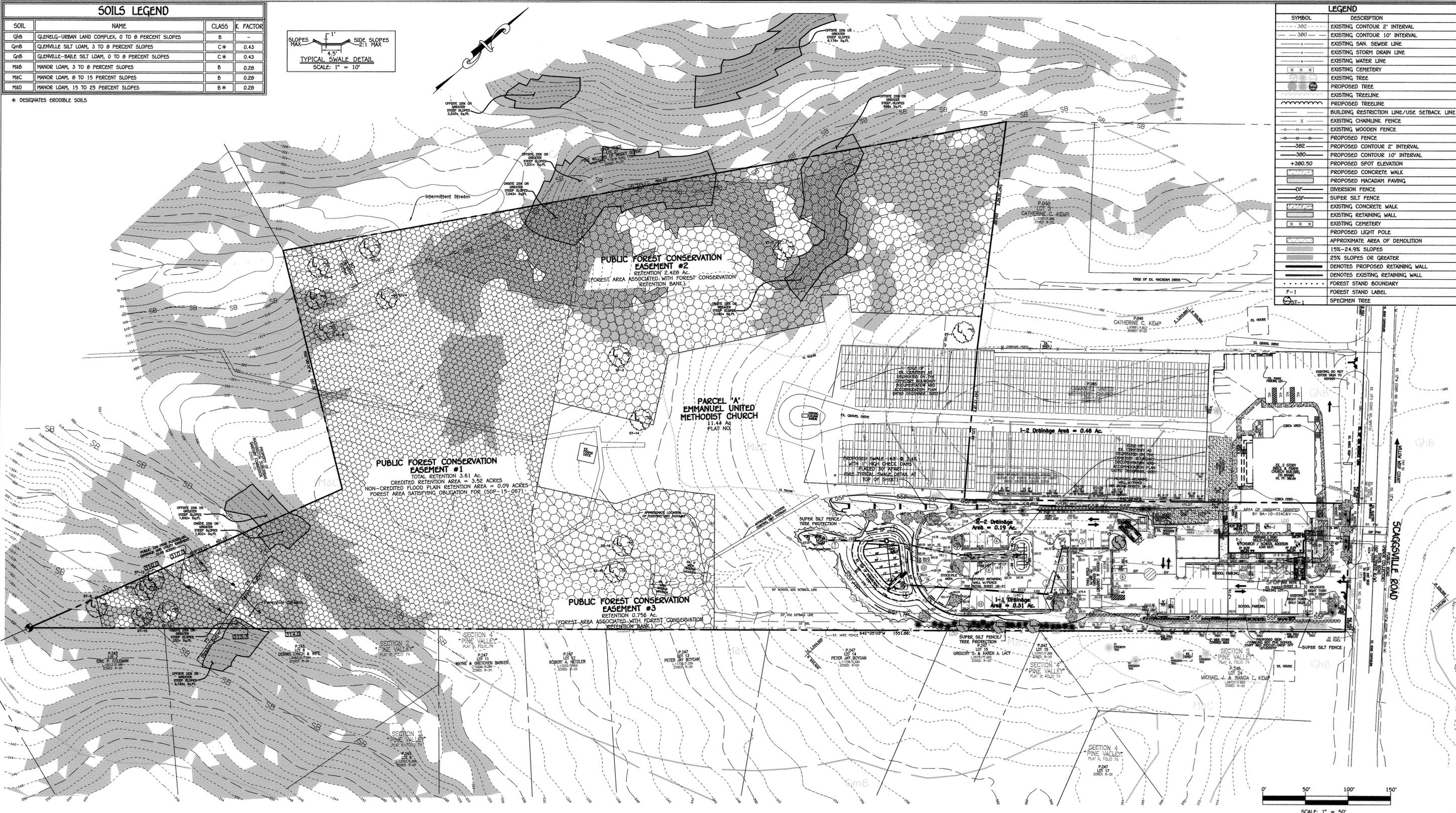
PREVIOUS HOWARD COUNTY FILES: BA 10-034C&V, BA 90 66E&V
 50P-92-027, ECP-13-053 & F-16-052

ZONED: R-20
 TAX MAP NO.: 46 GRID NO.: 11 PARCEL NO.: 98
 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: 1"=30' DATE: MARCH 12, 2016
 SHEET 3 OF 22 50P-15-067

SOILS LEGEND			
SOIL	NAME	CLASS	K FACTOR
GhB	GLENELG-URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	B	-
GmB	GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES	C*	0.43
GnB	GLENVILLE-BAILE SILT LOAM, 0 TO 8 PERCENT SLOPES	C*	0.43
MdB	MANOR LOAM, 3 TO 8 PERCENT SLOPES	B	0.28
MAc	MANOR LOAM, 8 TO 15 PERCENT SLOPES	B	0.28
MAD	MANOR LOAM, 15 TO 25 PERCENT SLOPES	B*	0.28



LEGEND	
SYMBOL	DESCRIPTION
--- 382 ---	EXISTING CONTOUR 2' INTERVAL
--- 380 ---	EXISTING CONTOUR 10' INTERVAL
---	EXISTING SAN. SEWER LINE
---	EXISTING STORM DRAIN LINE
---	EXISTING WATER LINE
⊗ ⊗ ⊗	EXISTING CEMETERY
⊗	EXISTING TREE
⊗	PROPOSED TREE
---	EXISTING TREELINE
---	PROPOSED TREELINE
---	BUILDING RESTRICTION LINE/USE SETBACK LINE
---	EXISTING CHAINLINK FENCE
---	EXISTING WOODEN FENCE
---	PROPOSED FENCE
---	PROPOSED CONTOUR 2' INTERVAL
---	PROPOSED CONTOUR 10' INTERVAL
+380.50	PROPOSED SPOT ELEVATION
---	PROPOSED CONCRETE WALK
---	PROPOSED MACADAM PAVING
---	DIVERSION FENCE
---	SUPER SILT FENCE
---	EXISTING CONCRETE WALL
---	EXISTING RETAINING WALL
⊗ ⊗ ⊗	EXISTING CEMETERY
---	PROPOSED LIGHT POLE
---	APPROXIMATE AREA OF DEMOLITION
---	15%-24.9% SLOPES
---	25% SLOPES OR GREATER
---	DENOTES PROPOSED RETAINING WALL
---	DENOTES EXISTING RETAINING WALL
---	FOREST STAND BOUNDARY
F-1	FOREST STAND LABEL
⊗	SPECIMEN TREE



FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10272 BALDWIN NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21032
 (410) 461 - 2995

NO.	REVISION	DATE



PROFESSIONAL CERTIFICATE
 "I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."
 Signature of Professional: *Frank John Manalansan II* DATE: 3/27/16
 FRANK JOHN MANALANSAN II
BUILDER'S CERTIFICATE
 "I HEREBY CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN 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 THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."
 Signature of Builder: *Rev. Stephanie Vader* DATE: 3/24/16

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
 Signature: *John R. Roberts* DATE: 1/29/16
 HOWARD SCD
OWNER AND DEVELOPER
 REVEREND STEPHANIE VADER
 EMMANUEL UNITED METHODIST CHURCH
 10755 SCAGSVILLE ROAD
 LAUREL, MD 20723
 301-725-5200

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Signature: <i>N. Williams</i>	DATE: 6-9-16
Director - Department of Planning and Zoning	
Signature: <i>W. J. ...</i>	DATE: 6-9-16
Chief, Division of Land Development	
Signature: <i>W. J. ...</i>	DATE: 5-13-16
Chief, Development Engineering Division	

PROJECT	SECTION	PARCEL NOS.
EMMANUEL UNITED METHODIST CHURCH	-	A

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
2378c + 2378f	11	R-20	46	SIXTH	6068.02

WATER CODE	SEWER CODE
E-18	7550000

SEDIMENT/EROSION CONTROL PLAN AND SOILS MAP
 2 STORY MULTI-PURPOSE BLDG, EXT. & PARKING LOT EXT. AND FOREST CONSERVATION RETENTION BANK
EMMANUEL UNITED METHODIST CHURCH
 PARCEL 'A'
 PREVIOUS HOWARD COUNTY FILES: BA 10-034C&V, BA 90 66E&V
 SDP-92-027, ECP-13-053 & F-16-052
 ZONED: R-20
 TAX MAP NO.: 46 GRID NO.: 11 PARCEL NO.: 98
 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: 1"=50' DATE: MARCH 12, 2016
 SHEET 4 OF 22 SDP-15-067

K:\Drawings\4610169 EMMANUEL United Methodist Church\SDP - Folder\40169 SDP - BHEET4 SEC 9-26-14.dwg, 3/24/2016 8:17:50 AM, 11

SOIL PREPARATION, TOPSOILING AND SOIL AMENDMENTS (B-4-2)

- A. SOIL PREPARATION**
- TEMPORARY STABILIZATION**
 - SEEDBED PREPARATION CONSISTS OF LOOSENING SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC, GRADERS OR CHisel PLOWS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT AFTER THE SOIL IS LOOSENING. IT MUST BE BOLLED OR DRAGGED SMOOTH BUT LEFT IN THE ROUGHENED CONDITION. SLOPES 3:1 OR FLATTER ARE TO BE TRACKED WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.
 - APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
 - INCORPORATE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
 - PERMANENT STABILIZATION**
 - A SOIL TEST IS REQUIRED FOR ANY EARTH DISTURBANCE OF 5 ACRES OR MORE. THE MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT ARE:
 - SOIL PH BETWEEN 6.0 AND 7.0.
 - SOLUBLE SALTS LESS THAN 500 PARTS PER MILLION (PPM).
 - SOIL CATIONS LESS THAN 40 PERCENT CLAY BUT ENOUGH FINE GRAINED MATERIAL (GREATER THAN 30 PERCENT LOESS/SILT PLUS CLAY) TO PROVIDE THE CAPACITY TO HOLD A MODERATE AMOUNT OF MOISTURE. AN EXCEPTION: IF LOESS/SILT PLUS CLAY IS PLACED, THEN A SANDY SOIL (LESS THAN 30 PERCENT SILT PLUS CLAY) WOULD BE ACCEPTABLE.
 - SOIL CONTAINS 1.5 PERCENT MINIMUM ORGANIC MATTER BY WEIGHT.
 - SOIL CONTAINS SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION.
 - APPLICATION OF AMENDMENTS OR TOPSOIL IS REQUIRED IF ON-SITE SOILS DO NOT MEET THE ABOVE CONDITIONS. GRADED AREAS MUST BE MAINTAINED IN A TRUE AND EVEN GRADE AS SPECIFIED ON THE APPROVED PLAN, THEN SCORPED OR OTHERWISE LOOSENED TO A DEPTH OF 3 TO 5 INCHES.
 - APPLY SOIL AMENDMENTS AS SPECIFIED ON THE APPROVED PLAN OR AS INDICATED BY THE RESULTS OF A SOIL TEST.
 - MIX SOIL AMENDMENTS INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS. RAKE LEAN AREAS TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANCHES, AND READY THE AREA FOR SEED APPLICATION LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO REMOVE THE SUBSURFACE SITE SPECIFIC PREPARATION. NORMAL SEEDING PREPARATION, TRACK SLOPES 3:1 OR FLATTER WITH TRACKED PLOW LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. LEAVE THE TOP 1 TO 3 INCHES OF SOIL LOOSE AND FRAGILE. SEEDING LOOSENING MAY BE UNNECESSARY ON NEWLY DISTURBED AREAS.
 - TOPSOILING**
 - TOPSOIL IS PLACED OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION. THE PURPOSE IS TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL QUADRATION. TOPSOIL SALVAGED FROM A NEARBY SOURCE MAY BE USED PROVIDED IT MEETS THE STANDARDS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SURVEY PUBLISHED BY USDA-NRCS.
 - TOPSOILING IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
 - THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
 - THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE OF PLANTS IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTAINING SUFFICIENT MOISTURE AND NUTRIENT.
 - THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
 - THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
 - AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN.
 - TOPSOIL SPECIFICATIONS AS TOPSOIL MUST MEET THE FOLLOWING:
 - TOPSOIL MUST BE A LOAM, SANDY LOAM, CLAY LOAM, SILTY LOAM, SANDY CLAY LOAM, OR LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE AGENCY. TOPSOIL MUST NOT BE A MIXTURE OF INTERMIXED TEXTURED SUBSOILS AND MUST CONTAIN LESS THAN 5 PERCENT BY VOLUME OF CHALK, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, SLICES, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2 INCHES IN DIAMETER.
 - TOPSOIL MUST BE FREE OF NOXIOUS PLANTS OR PLANT PARTS, SUCH AS BURNING GRASS, QUACK GRASS, JOHNSON GRASS, NITRUS OR OTHERS AS SPECIFIED.
 - TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE AGENCY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.
 - SOIL APPLICATION
 - EROSION AND SEDIMENT CONTROL PRACTICES MUST BE MAINTAINED WHEN APPLYING TOPSOIL.
 - UNIFORMLY DISTRIBUTE TOPSOIL IN A 5 TO 8 INCH LAYER AND LIGHTLY COMPACT TO A MINIMUM THICKNESS OF 4 INCHES. SPREADING IS TO BE PERFORMED IN SUCH A MANNER THAT SOILING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOP SOILING OR OTHER OPERATIONS MUST BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
 - TOPSOIL MUST NOT BE PLACED IF THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MOIST CONDITION, WHEN THE SURFACE IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER SEEDING AND SEEDLING PREPARATION.
 - SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)**
 - SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATES AND APPLICATION RATES FOR BOTH LIME AND FERTILIZER ON SITES HAVING DISTURBED AREAS OF 5 ACRES OR MORE. SOIL ANALYSIS MAY BE PERFORMED BY A RECOGNIZED PRIVATE OR COMMERCIAL LABORATORY. SOIL SAMPLES TAKEN FOR ENGINEERING PURPOSES MAY ALSO BE USED FOR CHEMICAL ANALYSIS.
 - FERTILIZERS MUST BE UNIFORM, COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION BY APPROPRIATE EQUIPMENT. MANURE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVAL FROM THE APPROPRIATE APPROVAL AUTHORITY. FERTILIZERS MUST ALL BE DELIVERED TO THE SITE FULLY LABELED ACCORDING TO THE APPLICABLE LAWS AND MUST BEAR THE NAME, TRADE NAME OR TRADEMARK AND THE PRODUCTIVITY OF THE PRODUCT.
 - LIME MATERIALS MUST BE GROUND LIMESTONE (HYDRATED OR BURNT LIME) MAY BE SUBSTITUTED EXCEPT WHEN HYDROSEEDING WHICH CONTAINS AT LEAST 50 PERCENT TOTAL OXIDES (CALCIUM OXIDE PLUS MAGNESIUM OXIDE). LIMESTONE MUST BE GROUND TO SUCH FINENESS THAT AT LEAST 50 PERCENT WILL PASS THROUGH A #100 MESH SIEVE AND 98 TO 100 PERCENT WILL PASS THROUGH A #20 MESH SIEVE.
 - LIME AND FERTILIZER ARE TO BE EVENLY DISTRIBUTED AND INCORPORATED INTO THE TOP 3 TO 5 INCHES OF SOIL BY DISKING OR OTHER SUITABLE MEANS.
 - WHERE THE SUBSOIL IS EXTREMELY ACIDIC OR COMPOSED OF HEAVY CLAYS, SPREAD GROUND LIMESTONE AT THE RATE OF 4 TO 6 TONS/ACRE (2000-4000 POUNDS PER 1000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL.

PERMANENT SEEDING NOTES (B-4-5)

- A. SEED MIXTURES**
- GENERAL USE
 - SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED IN TABLE B.3 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3) AND BASED ON THE SITE CONDITION OR PURPOSE FROM TABLE B.2. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
 - ADDITIONAL PLANTING SPECIFICATIONS FOR EXCEPTIONAL SITES SUCH AS SHOULDER, STREAM BANKS, OR DUNES OR FOR SPECIAL PURPOSES SUCH AS WILDLIFE OR AESTHETIC TREATMENT MAY BE FOUND IN USDA-NRCS TECHNICAL FIELD OFFICE GUIDE, SECTION 342 - CRITICAL AREA PLANTING.
 - FOR SITES HAVING DISTURBED AREA OVER 5 ACRES, USE AND SHOW THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY. 0. FOR AREAS RECEIVING LOW MAINTENANCE, APPLY UREA FROM FERTILIZER (46-0-0) AT 3 1/2 POUNDS PER 1000 SQUARE FEET (150 POUNDS PER ACRE) AT THE TIME OF SEEDING IN ADDITION TO THE SOIL AMENDMENTS SHOWN IN THE PERMANENT SEEDING SUMMARY.
 - TURFGRASS MIXTURES
 - AREAS WHERE TURFGRASS MAY BE DESIRED INCLUDE LAWNS, PARKS, PLAYGROUNDS, AND COMMERCIAL SITES WHICH WILL RECEIVE A MEDIUM TO HIGH LEVEL OF MAINTENANCE.
 - SELECT ONE OR MORE OF THE SPECIES OR MIXTURES LISTED BELOW BASED ON THE SITE CONDITIONS OR PURPOSE. ENTER SELECTED MIXTURE(S), APPLICATION RATES, AND SEEDING DATES IN THE PERMANENT SEEDING SUMMARY. THE SUMMARY IS TO BE PLACED ON THE PLAN.
 - KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. IRRIGATION REQUIRED IN THE AREAS OF CENTRAL MARYLAND AND EASTERN SHORE. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS SEEDING RATE: 1.5 TO 2.0 POUNDS PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
 - KENTUCKY BLUEGRASS/PERENNIAL RYE: FULL SUN MIXTURE: FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF WILL RECEIVE MEDIUM TO INTENSIVE MANAGEMENT. CERTIFIED PERENNIAL RYEGRASS CULTIVARS/CERTIFIED KENTUCKY BLUEGRASS SEEDING RATE: 2 POUNDS MIXTURE PER 1000 SQUARE FEET. CHOOSE A MINIMUM OF THREE KENTUCKY BLUEGRASS CULTIVARS WITH EACH RANGING FROM 10 TO 35 PERCENT OF THE TOTAL MIXTURE BY WEIGHT.
 - TALL FESCUE/KENTUCKY BLUEGRASS: FULL SUN MIXTURE: FOR USE IN BROUGHT PRONE AREAS AND/OR FOR AREAS RECEIVING LOW TO MEDIUM MANAGEMENT IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES: CERTIFIED TALL FESCUE CULTIVARS 95 TO 100 PERCENT, CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 0 TO 5 PERCENT. SEEDING RATE: 5 TO 8 POUNDS PER 1000 SQUARE FEET. ONE OR MORE CULTIVARS MAY BE BLENDED.
 - KENTUCKY BLUEGRASS/FINE FESCUE: SHADE MIXTURE: FOR USE IN AREAS WITH SHADE IN BLUEGRASS LAWNS. FOR ESTABLISHMENT IN HIGH QUALITY, INTENSIVELY MANAGED TURF AREA. MIXTURE INCLUDES: CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 30 TO 40 PERCENT AND CERTIFIED FINE FESCUE AND 60 TO 70 PERCENT. SEEDING RATE: 1 1/2 TO 3 POUNDS PER 1000 SQUARE FEET.

- NOTES:**
- SELECT TURFGRASS VARIETIES FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION AGRICULTURE MEMO #77, "TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND" CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVAR PURITY. THE IDENTIFICATION PROGRAM OF THE MARYLAND DEPARTMENT OF AGRICULTURE, TURF AND SEED SECTION, PROVIDES A RELIABLE MEANS OF CONSUMER PROTECTION AND ASSURES A PURE GENETIC LINE.
 - IDEAL TIMES OF SEEDING FOR TURF GRASS MIXTURES WESTERN MD: MARCH 15 TO JUNE 1, AUGUST 1 TO OCTOBER 1 (HARDNESS ZONE: 6B) SOUTHERN MD, EASTERN SHORE: MARCH 1 TO MAY 15, AUGUST 15 TO OCTOBER 15 (HARDNESS ZONE: 7A, 7B)
 - TILL AREAS TO RECEIVE SEED BY DISKING OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 INCHES, LEVEL AND RAKE THE AREAS TO PREPARE A PROPER SEEDBED. REMOVE STONES AND DEBRIS OVER 1 1/2 INCHES IN DIAMETER. THE RESULTING SEEDBED MUST BE FREE OF MOISTURE OR OTHER OBSTACLES TO SEEDING.
 - IF SOIL MOISTURE IS DEFICIENT, SUPPLY NUTRIENT WITH ADEQUATE WATER FOR PLANT GROWTH (1/2 TO 1 INCH EVERY 3 TO 4 DAYS DEPENDING ON SOIL TEXTURE) UNTIL THEY ARE FIRMLY ESTABLISHED. THIS IS ESPECIALLY TRUE WHEN SEEDINGS ARE MADE LATE IN THE PLANTING SEASON, IN ABNORMALLY DRY OR HOT SEASONS, OR ON ADVERSE SITES.

PERMANENT SEEDING SUMMARY

HARDINESS ZONE (FROM FIGURE B.3):	Seed Mixture (from Table B.3.):	FERTILIZER RATE (10-20-20)			LIME RATE
		N	P ₂ O ₅	K ₂ O	
6B	6B	45 LB/ACR	90 LB/ACR	90 LB/ACR	2 TONS/ACR
6B	TALL FESCUE	100	MAR. 1-MAY 15 AUG. 15-OCT. 15	1/4-1/2 1N.	2 TONS/ACR (90 LB/ACR) (1000 SF)

- B. SOD: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER).**
- GENERAL SPECIFICATIONS
 - CLASS OF TURFGRASS SOD MUST BE MARYLAND STATE CERTIFIED. SOD LABELS MUST BE MADE AVAILABLE TO THE JOB FOREMAN AND MANAGER.
 - SOD MUST BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4 INCH PLUS OR MINUS 1/8 INCH AT THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS MUST EXCLUDE TOP GRASS AND TRASH. BROKEN PANS AND TORN OR UNEVEN ENDS WILL NOT BE ACCEPTABLE.
 - STANDARD SIZE SECTIONS OF SOD MUST BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.
 - SOD MUST NOT BE HARVESTED OR TRANSPORTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL.
 - SOD MUST BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPORTED WITHIN THIS PERIOD MUST BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALLATION.
 - SOD INSTALLATION
 - DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE OR IN AREAS HAVING DRY SUBSOIL, LIGHTLY IRRIGATE THE SUBSOIL IMMEDIATELY PRIOR TO LAYING THE SOD.
 - LAY THE FIRST ROW OF SOD IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO IT AND TIGHTLY WEDGED AGAINST EACH OTHER. STAGGER LATERAL JOINTS TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. ENSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE AIR DROPPING OF THE ROOTS.
 - WHEREVER POSSIBLE, LAY SOD WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERING JOINTS. ROLL AND TAMP, PEG OR OTHERWISE SECURE THE SOD TO PREVENT SLIPPAGE ON SLOPES. ENSURE SOLID CONTACT EXISTS BETWEEN SOD ROOTS AND THE UNDERLYING SOIL SURFACE.
 - WATER THE SOD IMMEDIATELY FOLLOWING ROLLING AND TAMPING UNTIL THE UNDERSIDE OF THE NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. COMPLETE THE OPERATIONS OF LAYING, TAMPING, AND IRRIGATING FOR ANY PIECE OF SOD WITHIN EIGHT HOURS.
 - SOD MAINTENANCE
 - IN THE ABSENCE OF ADEQUATE RAINFALL, WATER DAILY DURING THE FIRST WEEK OR AS OFTEN AND SUFFICIENTLY AS NECESSARY TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATER SOD DURING THE HEAT OF THE DAY TO PREVENT WILTING.
 - AFTER THE FIRST WEEK, SOD WATERING IS REQUIRED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE CONTENT. DO NOT MOW UNTIL THE SOD IS FIRMLY ROOTED. NO MORE THAN 1/3 OF THE GRASS LEAF MUST BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. MAINTAIN A GRASS HEIGHT OF AT LEAST 3 INCHES UNLESS OTHERWISE SPECIFIED.

STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:

- THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1 HORIZONTAL TO 1 VERTICAL (3:1); AND
- SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.

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

THE APPLICATION OF SEED AND MULCH TO ESTABLISH VEGETATIVE COVER. TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION. TO MAINTAIN THE INTEGRITY OF THE SOIL SURFACE AND TO PREVENT SOIL LOSS. TO PROTECT DISTURBED SOILS FROM EROSION DURING AND AT THE END OF CONSTRUCTION. TO MAINTAIN THE INTEGRITY OF THE SOIL SURFACE AND TO PREVENT SOIL LOSS.

- DEFINITION**
PURPOSE
CONDITIONS WHERE PRACTICE APPLIES
CRITERIA
- SEEDING
 - ALL SEED MUST MEET THE REQUIREMENT OF THE MARYLAND STATE SEED ACT. ALL SEED MUST BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED USED MUST HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOWING SUCH MATERIAL ON ANY PROJECT. REFER TO TABLE B.4 REGARDING THE QUALITY OF SEED. SEED TAGS MUST BE AVAILABLE UPON REQUEST TO THE INSPECTOR TO VERIFY THE TYPE OF SEED AND SEEDING RATE.
 - MULCH ALONE MAY BE APPLIED BETWEEN THE FALL AND SPRING SEEDING DATES ONLY IF THE GROUND IS FROZEN. THE APPROPRIATE SEEDING MIXTURE MUST BE APPLIED WHEN THE GROUND IS FROZEN.
 - INCULCANTS: THE INCULCANT FOR TREATING LEGUME SEED IN THE SEED MIXTURES MUST BE A PURE CULTURE OF NITROGEN FIXING BACTERIA PREPARED SPECIALLY FOR THE SPECIES. INCULCANTS MUST NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER. ADD FRESH INCULCANTS AS DIRECTED ON THE PACKAGE. USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING. NOTE IT IS VERY IMPORTANT TO KEEP INCULCANT AS COOL AS POSSIBLE UNTIL USED. TEMPERATURES ABOVE 75 TO 80 DEGREES FAHRENHEIT CAN WEAKEN BACTERIA AND MAKE THE INCULCANT LESS EFFECTIVE.
 - SOD OR SEED MUST NOT BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STEERANTS OR CHEMICALS USED FOR WEED CONTROL, UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.
 - APPLICATION
 - DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROPPED OR BROADCAST SPREADERS.
 - INCORPORATE SEED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON TEMPORARY SEEDING TABLE B.1, PERMANENT SEEDING TABLE B.3, OR SITE-SPECIFIC SEEDING SUMMARIES.
 - APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. ROLL THE SEEDED AREA WITH WEIGHTED ROLLERS TO PROVIDE GOOD SEED TO SOIL CONTACT.
 - DRILL OR CULPICKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.
 - CULPICKER SEEDERS ARE REQUIRED TO BURY THE SEED IN SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING SEED. SEED MUST BE FROM AFTER PLANTING.
 - APPLY SEED IN TWO DIRECTIONS, PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. HYDROSEEDING APPLIED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER).
 - IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES SHOULD NOT EXCEED THE FOLLOWING: NITROGEN: 100 POUNDS PER ACRE TOTAL OF SOLUBLE NITROGEN; P (PHOSPHORUS): 200 POUNDS PER ACRE; K₂O (POTASSIUM): 200 POUNDS PER ACRE.
 - LIME: USE ONLY GROUND AGRICULTURAL LIMESTONE UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDROSEEDING. NORMALLY, NOT MORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSEEDING.
 - MIX SEED AND FERTILIZER ON SITE AND SEED IMMEDIATELY AND WITHOUT INTERRUPTION.
 - WHEN HYDROSEEDING DO NOT INCORPORATE SEED INTO THE SOIL.
 - MULCHING
 - MULCH MATERIALS (IN ORDER OF PREFERENCE)
 - STRAW CONSISTING OF THOROUGHLY THRESHED WHEAT, RYE, OAT, OR BARLEY AND REASONABLY BRIGHT IN COLOR. STRAW IS TO BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED IN THE MARYLAND SEED LAW AND NOT MUSTY, MOULDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY. NOTE: USE ONLY STERILE STRAW MULCH IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED.
 - WOOD CELLULOSE FIBER MULCH (WCFM) CONSISTING OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO UNIFORM FIBROUS PHYSICAL STATE.
 - WCFM IS TO BE DYED GREEN OR CONTAIN A GREEN DYE IN THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY SPREAD SLURRY.
 - WCFM MUST BE FREE OF MOISTURE, FERTILIZER, OR OTHER INHIBITING FACTORS.
 - WCFM MATERIALS ARE TO BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH WILL REMAIN IN UNIFORM SUSPENSION IN WATER UNDER AGITATION AND WILL BLEND WITH SEED, FERTILIZER AND OTHER ADDITIVES TO FORM A HOMOGENEOUS SLURRY. THE MULCH MATERIAL MUST FORM A BUTTER-LIKE GROUND COVER ON APPLICATION, HAVING MOISTURE ABSORPTION AND PERCOLATION PROPERTIES AND MUST COVER AND HOLD GRASS SEED IN CONTACT WITH THE SOIL WITHOUT INHIBITING THE GROWTH OF THE GRASS SEEDLINGS.
 - WCFM MATERIALS MUST NOT CONTAIN ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BY PHYTO-TOXIC.
 - WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH OF APPROXIMATELY 10 MILLIMETERS, DIAMETER APPROXIMATELY 1 MILLIMETER, PH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 1.6 PERCENT MAXIMUM AND WATER HOLDING CAPACITY OF 90 PERCENT MAXIMUM.
 - APPLICATION
 - APPLY MULCH TO ALL SEEDING AREAS IMMEDIATELY AFTER SEEDING.
 - WHEN STRAW MULCH IS USED, SPREAD IT OVER ALL SEEDING AREAS AT THE RATE OF 2 TONS PER ACRE TO A UNIFORM LOOSE DEPTH OF 1 TO 2 INCHES. APPLY MULCH TO ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOIL SURFACE IS NOT EXPOSED, WHEN USING A MULCH ANCHORING TONG, INCREASE THE APPLICATION RATE TO 2.5 TONS PER ACRE.
 - WOOD CELLULOSE FIBER USED AS MULCH MUST BE APPLIED TO A NET DRY WEIGHT OF 1500 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER TO ATTAIN A MIXTURE WITH A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
 - ANCHORING
 - PERFORM MULCH ANCHORING IMMEDIATELY FOLLOWING APPLICATION OF MULCH TO MINIMIZE LOSS BY WIND OR OTHER MEANS. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPENDING UPON THE SIZE OF THE AREA AND EROSION HAZARD:
 - A MULCH ANCHORING TONG IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 2 INCHES. THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD FOLLOW THE CONTOUR.
 - WOOD CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. APPLY THE FIBER BINDER AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. MIX THE WOOD CELLULOSE FIBER WITH WATER AT A MAXIMUM OF 50 POUNDS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.
 - SYNTHETIC BINDERS SUCH AS ACRYLIC OIL (AGRO-TACK), DCA-70, PETROSEAL, TERRA TAX II, TERRA TACK OR OTHER APPROVED EQUAL MAY BE USED. FOLLOW APPLICATION RATES AS SPECIFIED BY THE MANUFACTURER. APPLICATION OF LIQUID BINDERS NEEDS TO BE HEAVIER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. USE OF ASPHALT BINDERS IS STRICTLY PROHIBITED.
 - LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4-15 FEET WIDE AND 300 TO 3,000 FEET LONG.

TEMPORARY SEEDING NOTES (B-4-4)

TO STABILIZE DISTURBED SOILS WITH VEGETATION FOR UP TO 6 MONTHS. TO USE FAST GROWING VEGETATION THAT PROVIDES COVER ON DISTURBED SOILS. EXPOSED SOILS GROUND COVER IS NEEDED FOR A PERIOD OF 6 MONTHS OR LESS. FOR LONGER DURATION OF TIME, PERMANENT STABILIZATION PRACTICES ARE REQUIRED.

- DEFINITION**
PURPOSE
CONDITIONS WHERE PRACTICE APPLIES
CRITERIA
- SEEDING
 - SELECT ONE OR MORE OF THE SPECIES OR SEED MIXTURES LISTED IN TABLE B.1 FOR THE APPROPRIATE PLANT HARDINESS ZONE (FROM FIGURE B.3), AND ENTER THEM IN THE TEMPORARY SEEDING SUMMARY BELOW ALONG WITH APPLICATION RATES, SEEDING DATES AND SEEDING DEPTHS. IF THIS SUMMARY IS NOT PUT ON THE PLAN AND COMPLETED, THEN TABLE B.1 PLUS FERTILIZER AND LIME RATES MUST BE PUT ON THE PLAN.
 - FOR SITES HAVING SOIL TESTS PERFORMED, USE AND SHOW THE RECOMMENDED RATES BY THE TESTING AGENCY. SOIL TESTS ARE NOT REQUIRED FOR TEMPORARY SEEDING.
 - WHEN STABILIZATION IS REQUIRED OUTSIDE OF A SEEDING SEASON, APPLY SEED AND MULCH OR STRAW MULCH ALONE AS PRESCRIBED IN SECTION B-4-3.A.1.B AND MAINTAIN UNTIL THE NEXT SEEDING SEASON.

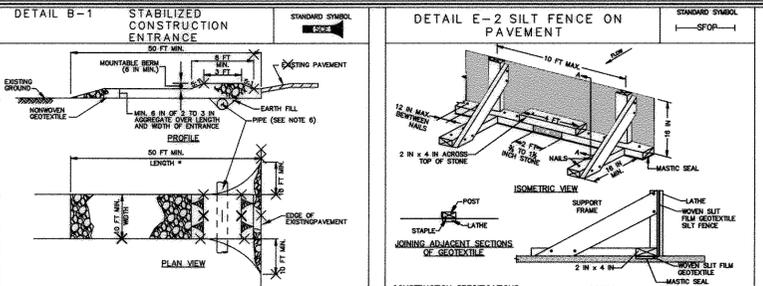
TEMPORARY SEEDING SUMMARY

HARDINESS ZONE (FROM FIGURE B.3):	Seed Mixture (from Table B.1.):	FERTILIZER RATE (10-20-20)		LIME RATE	
		N	P ₂ O ₅		
6B	6B	45 LB/ACR	90 LB/ACR	2 TONS/ACR	
6B	BARLEY	96	3/1 - 5/15, 8/15 - 10/15	1" 436 LB/ACR (10 LB/ACR) (1000 SF)	2 TONS/ACR (90 LB/ACR) (1000 SF)
6B	OATS	72	3/1 - 5/15, 8/15 - 10/15	1" 436 LB/ACR (10 LB/ACR) (1000 SF)	2 TONS/ACR (90 LB/ACR) (1000 SF)
6B	RYE	112	3/1 - 5/15, 8/15 - 10/15	1" 436 LB/ACR (10 LB/ACR) (1000 SF)	2 TONS/ACR (90 LB/ACR) (1000 SF)

HOWARD SOIL CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING PRIOR TO THE START OF ANY CONSTRUCTION (410-313-1855).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THEREOF.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: a) 3 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DITCHES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, b) 7 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL DISTURBED AREAS MUST BE MAINTAINED WITH THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (SEC. B-4-5), TEMPORARY SEEDING (SEC. B-4-4) AND MULCHING (SEC. B-4-3). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN THE OPERATIONAL CONDITION UNTIL PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:

TOTAL AREA OF SITE	11.44 ACRES
AREA DISTURBED	1.70 ACRES
AREA TO BE ROOFED OR PAVED	1.20 ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.49 ACRES
TOTAL CUT	942 CUYDOS.
TOTAL FILL	967 CUYDOS.
N/A	N/A
- OFF-SITE EROSION/SEDIMENT AREA LOCATION
- AN EROSION CONTROL PRACTICE THAT IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING, OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS OBTAINED.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORKDAY, WHICHEVER IS SHORTER.
- ANY CHANGES OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE PLAN APPROVAL AUTHORITY PRIOR TO PROCEEDING WITH CONSTRUCTION.
- A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM AVERAGE OF 20 ACRES PER GRADING UNIT) AT A TIME. WORK MAY PROCEED TO A SUBSEQUENT GRADING UNIT WHEN AT LEAST 50 PERCENT OF THE DISTURBED AREA OF THE PREVIOUS GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE ENFORCEMENT AUTHORITY, UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE ENFORCEMENT AUTHORITY, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.

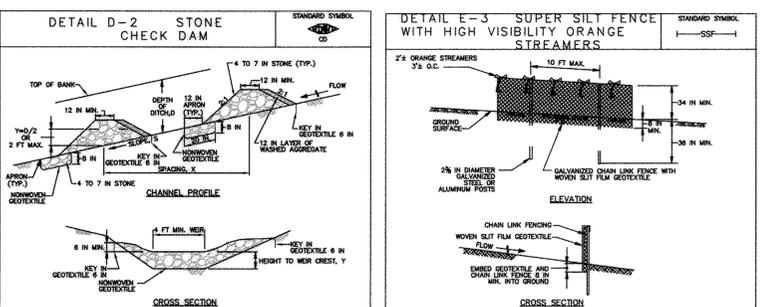


CONSTRUCTION SPECIFICATIONS

- PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE ENTRANCE. MINIMUM LENGTH OF 50 FEET (100 FEET FOR SINGLE PERIMETER LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SIDE 10 FEET MINIMUM.
- PLACE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS UNDER THE BOTTOM AND SIDES OF THE DAM FROM TOP TO PLACEMENT OF STONE. CONSTRUCT THE CHECK DAM WITH WAGERS 4 TO 6 INCHES HIGH AND 12 INCHES WIDE. PLACE STONE TO A MINIMUM OF 12 INCHES. PLACE THE STONE SO THAT IT COMPLETELY COVERS BOTH THE GRASS AND CHANNEL BANKS FROM THE TOP OF THE DAM TO THE BOTTOM. THE STONE SHOULD BE PLACED AT RIGHT ANGLES TO THE FLOW OF WATER. THE STONE SHOULD BE PLACED AT RIGHT ANGLES TO THE FLOW OF WATER. THE STONE SHOULD BE PLACED AT RIGHT ANGLES TO THE FLOW OF WATER.
- PREPARE SURFACE AND PLACE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
- PLACE CURBED ORBASTED (2 TO 3 INCHES IN SIZE) OR EQUIVALENT READY-MIXED CONCRETE (WITHOUT REBAR) AT LEAST 8 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SIE.
- MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE. MOUNTAINOUS SOILS AND SPECIFIED DISTURBANCES. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY OR DRIVEWAY. REMOVE AND REPAIR AS NECESSARY. A REPAIR WHICH IS NOT LOCATED AT A HIGH SPOT.
- MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE. MOUNTAINOUS SOILS AND SPECIFIED DISTURBANCES. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY OR DRIVEWAY. REMOVE AND REPAIR AS NECESSARY. A REPAIR WHICH IS NOT LOCATED AT A HIGH SPOT.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

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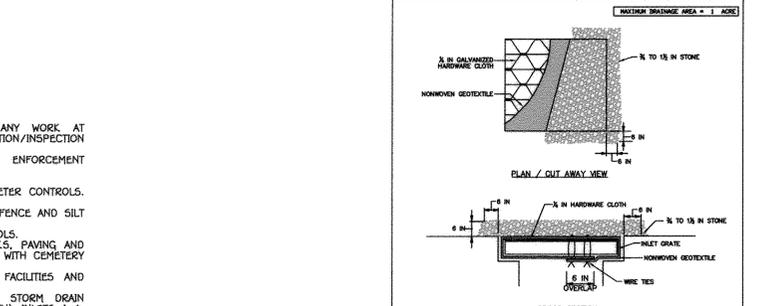


CONSTRUCTION SPECIFICATIONS

- PREPARE WALLS IN ACCORDANCE WITH THE CONSTRUCTION SPECIFICATIONS DESCRIBED IN SECTION B-2.5. STABILIZE AND PROTECT SLOPES ON 4:1 SLOPES OR GREATER BY VEGETATION.
- PLACE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS UNDER THE BOTTOM AND SIDES OF THE DAM FROM TOP TO PLACEMENT OF STONE. CONSTRUCT THE CHECK DAM WITH WAGERS 4 TO 6 INCHES HIGH AND 12 INCHES WIDE. PLACE STONE TO A MINIMUM OF 12 INCHES. PLACE THE STONE SO THAT IT COMPLETELY COVERS BOTH THE GRASS AND CHANNEL BANKS FROM THE TOP OF THE DAM TO THE BOTTOM. THE STONE SHOULD BE PLACED AT RIGHT ANGLES TO THE FLOW OF WATER. THE STONE SHOULD BE PLACED AT RIGHT ANGLES TO THE FLOW OF WATER.
- SET THE HEIGHT FOR THE WEB CRIST EQUAL TO ONE-HALF THE DEPTH OF THE CHANNEL OR UPSTREAM TO A MINIMUM OF 12 INCHES. THE HEIGHT OF THE WEB CRIST SHOULD BE 6 INCHES. FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
- EXTEND BOTH SIDES OF THE SUPER SILT FENCE A MINIMUM OF 6 HORIZONTAL FEET UP-SLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM COMING AROUND THE SIDE OF THE SUPER SILT FENCE.
- PREPARE MANUFACTURER IDENTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
- REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BLAGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 2 INCHES OF GEOTEXTILE. IF TYPICAL, REMOVAL OF SEDIMENT OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE, NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT AND WATER MANAGEMENT ADMINISTRATION
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CONSTRUCTION SPECIFICATIONS

- INSTALL 24 HOUR VISIBILITY GALVANIZED STEEL POSTS OF 1/2 IN. WALL THICKNESS AND 60 FT LENGTH SPACING NO FURTHER THAN 10 FEET APART

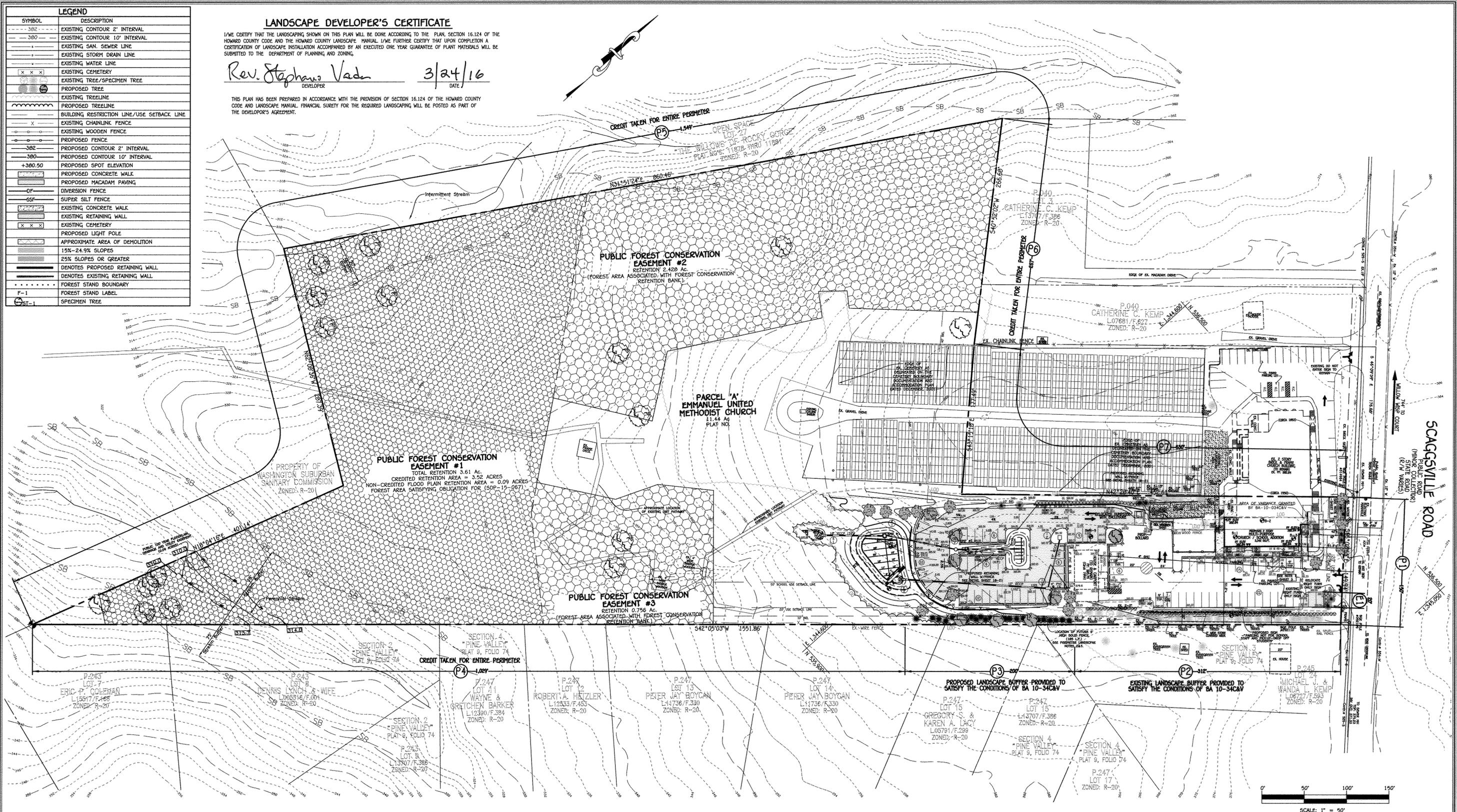
LEGEND	
SYMBOL	DESCRIPTION
--- 382 ---	EXISTING CONTOUR 2' INTERVAL
--- 380 ---	EXISTING CONTOUR 10' INTERVAL
---	EXISTING SAN. SEWER LINE
---	EXISTING STORM DRAIN LINE
---	EXISTING WATER LINE
---	EXISTING CEMETERY
---	EXISTING TREE/SPECIMEN TREE
---	PROPOSED TREE
---	EXISTING TREELINE
---	PROPOSED TREELINE
---	BUILDING RESTRICTION LINE/USE SETBACK LINE
---	EXISTING CHAINLINK FENCE
---	EXISTING WOODEN FENCE
---	PROPOSED FENCE
---	PROPOSED CONTOUR 2' INTERVAL
---	PROPOSED CONTOUR 10' INTERVAL
+380.50	PROPOSED SPOT ELEVATION
---	PROPOSED CONCRETE WALK
---	PROPOSED MACADAM PAVING
---	DIVERSION FENCE
---	SUPER SILT FENCE
---	EXISTING CONCRETE WALK
---	EXISTING RETAINING WALL
---	EXISTING CEMETERY
---	PROPOSED LIGHT POLE
---	APPROXIMATE AREA OF DEMOLITION
---	15% - 24.9% SLOPES
---	25% SLOPES OR GREATER
---	DENOTES PROPOSED RETAINING WALL
---	DENOTES EXISTING RETAINING WALL
---	FOREST STAND BOUNDARY
F-1	FOREST STAND LABEL
---	SPECIMEN TREE

LANDSCAPE DEVELOPER'S CERTIFICATE

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

Rev. Stephan Vadr 3/24/16
 DEVELOPER DATE

THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING WILL BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT.



FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE
 ELLSWORTH CITY, MARYLAND 21042
 (410) 461-2295

NO.	REVISION	DATE



PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/17.

Frank John Manheim 3/23/16
 Signature Of Professional Land Surveyors DATE

OWNER AND DEVELOPER
 REVEREND STEPHAN VADR
 EMMANUEL UNITED METHODIST CHURCH
 10795 SCAGGSVILLE ROAD
 LAUREL, MD 20723
 301-725-5200

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Valdis Jell 6-9-16
 Director - Department of Planning and Zoning DATE

Kathleen 6-9-16
 Chief, Division of Land Development DATE

M. J. ... 5-12-16
 Chief, Development Engineering Division DATE

PROJECT	SECTION	PARCEL NOS.
EMMANUEL UNITED METHODIST CHURCH	-	A

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
23786	11	R-20	46	SIXTH	6068.02

WATER CODE	SEWER CODE
E-18	7550000

LANDSCAPE PLAN

2 STORY MULTI-PURPOSE BLDG. EXT. & PARKING LOT EXT. AND FOREST CONSERVATION RETENTION BANK
EMMANUEL UNITED METHODIST CHURCH
 PARCEL 'A'

PREVIOUS HOWARD COUNTY FILES: BA 10-034C&V, BA 90 66E&V SDP-92-027, ECP-13-053 & F-16-052
 ZONED: R-20
 TAX MAP NO.: 46 GRID NO.: 11 PARCEL NO.: 98
 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: 1" = 50' DATE: MARCH 12, 2016
 SHEET 6 OF 22 SGP-15-067

SCHEDULE A - PERIMETER LANDSCAPE EDGE

PERIMETER	P1	P2 - SEE NOTE #1	P3 SEE NOTE #2	P4	P5	P6	P7	E1
CATEGORY	ADJACENT TO ROADWAY (NON-RES TO RES)	ADJACENT TO PERIMETER PROPERTIES (NON-RES TO RES)	ADJACENT TO PERIMETER PROPERTIES (NON-RES TO RES)	ADJACENT TO PERIMETER PROPERTIES (NON-RES TO RES)	ADJACENT TO PERIMETER PROPERTIES (NON-RES TO RES)	ADJACENT TO PERIMETER PROPERTIES (NON-RES TO RES)	ADJACENT TO PERIMETER PROPERTIES (NON-RES TO RES)	ADJACENT TO ADJACENT ROADWAY
LANDSCAPE TYPE	B	C - ENHANCED	D	B	A	B	A	E
LINEAR FEET OF PERIMETER	150 L.F.	312 L.F.	200 L.F.	1,029 L.F.	1,549 L.F.	267 L.F.	630 L.F.	20 L.F.
CREDIT FOR EXISTING VEGETATION	N/A	YES SEE NOTE 1	N/A	1,029 L.F. OF EX. TREES TO REMAIN	1,549 L.F. OF EX. TREES TO REMAIN	267 L.F. OF EX. TREES TO REMAIN	N/A	N/A
NUMBER OF PLANTS PROVIDED	7 (120/20' = 6) (150/40' = 3.75 OR 4)	24 (312/13' = 23.99 OR 24) (312/13' = 23.99 OR 24)	24 3 per 10'-03/4" CV 21 per 10'-03/4" CV	N/A	N/A	N/A	11 (630/60' = 10.5 OR 11)	1 (20/20' = 1 OR 0.5 OR 1)
CREDIT FOR EXISTING VEGETATION	0	YES 6 SHADE TREES 20 EVERGREEN TREES 74 SHRUBS	SEE GENERAL NOTE #3	0	0	0	YES 3 SHADE TREES 6 EVERGREEN TREES	0
NUMBER OF PLANTS PROVIDED	3	0	3	0	0	0	4 (SUBSTITUTED FOR 1 SHADE TREE) 30	2 (SUBSTITUTED FOR 1 SHADE TREE) 5

PERIMETER LANDSCAPE NOTES:
 1. CREDIT FOR LANDSCAPE PERIMETER P-2 IS BEING TAKEN FOR THE "REPLACEMENT LANDSCAPING FOR SDP-92-027" TO MEET THE REQUIREMENTS OF BOA 10-034C&V. THIS ENHANCED BUFFER WAS PROVIDED TO PARTIALLY FULFILL LINNET PLANTING OBLIGATIONS GENERATED BY SDP-92-027 WITH THE ADDITION OF SHRUBS TO PROVIDE ENHANCED BUFFERING DUE TO REDUCED SETBACKS APPROVED UNDER BOA 10-034C&V.
 2. ACCORDANCE WITH BOA 10-034C&V PERIMETER "P-3" HAS BEEN SPECIFIED AS A 10' BUFFER ALONG EXPECTED LOCATION OF FUTURE BUILDING TO PROVIDE ENHANCED BUFFERING WITH A SOLID FENCE REQUIRED FOR REDUCING THE LANDSCAPE BUFFER TO 10' WIDE.
 3. NO CREDIT REQUIRED FOR THE 10' BUFFER. A 100 L.F. FENCE WILL BE PROVIDED IN PHASE 2, IN ACCORDANCE WITH BOA 10-034C&V.
 4. AS A CONDITION OF APPROVAL WITH WP-16-033, TEN (10) ADDITIONAL TREES HAVE BEEN PROVIDED.

NOTES

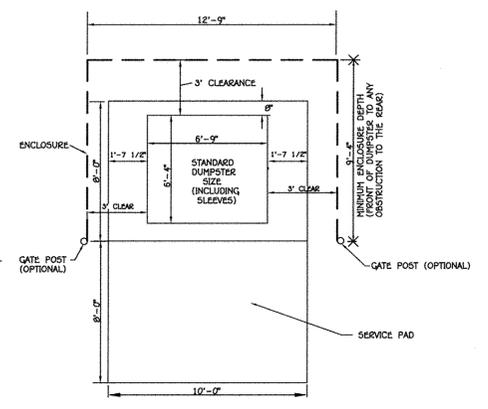
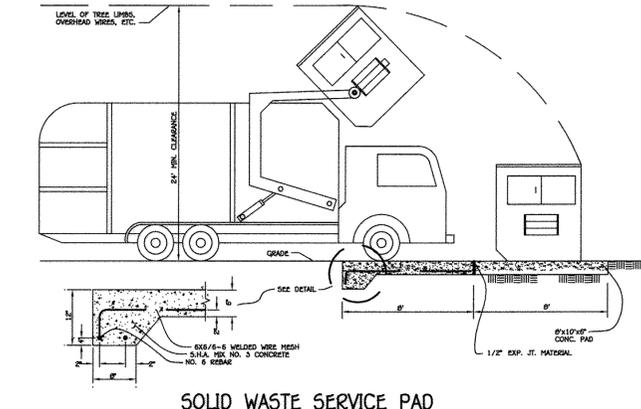
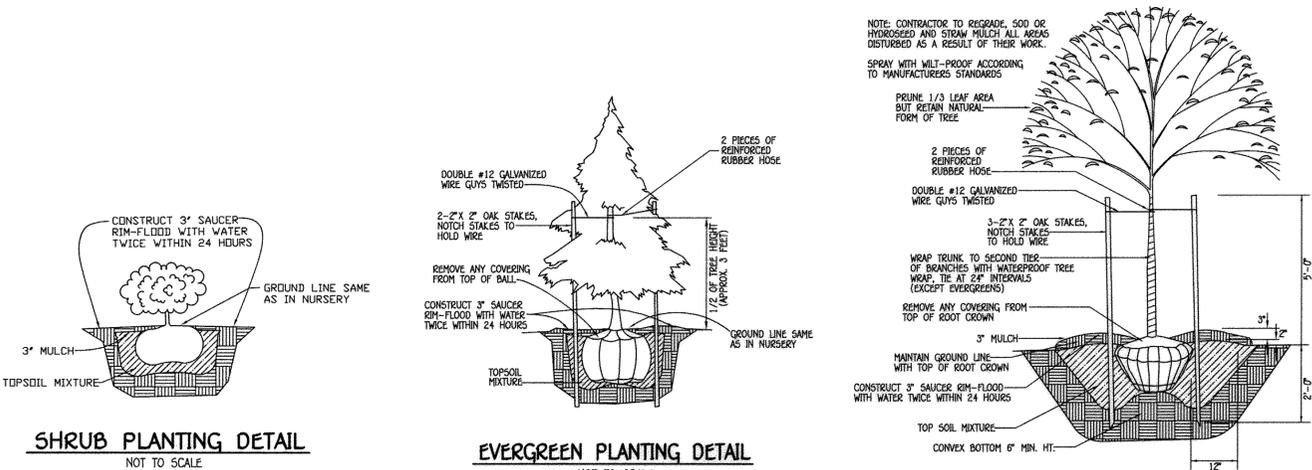
- THE PERIMETER LANDSCAPE OBLIGATION IS REQUIRED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. A LANDSCAPE SURETY IN THE AMOUNT OF \$12,000.00 BASED ON (27) SHADE TREES @ \$300/SHADE TREE, (25) EVERGREEN TREES @ \$150/EVERGREEN TREE, AND (51) SHRUBS @ \$30/SHRUB SHALL BE BONDED AS PART OF THE DPW DEVELOPERS AGREEMENT. THIS SURVEY INCLUDES 10 ADDITIONAL TREES REQUIRED BY WP-16-033 AND F-16-052.
- AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWITH LISTED AND APPROVED FOR THIS SITE, SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPING MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATES.
- THE OWNER, TENANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BENCHES, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.

LANDSCAPING PLANT LIST (SCHEDULE A, B & C)

SYMBOL	QUANTITY	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
	8	QUERCUS PALUSTRIS (PIN OAK)	2 - 2 1/2" CAL.	
	13	ACER GRISEUM PAPERBARK MAPLE	1 1/2" - 2" CAL.	TO BE PLANTED IN BGE "GREEN ZONE"
	21	THUJA PLICATA "GREEN GIANT" GREEN GIANT ARBOREVITAE	6"-8" HT.	
	10	ILEX ATTENUATA "FOSTERI" FOSTER HOLLY	5'-6" HT.	TO BE PLANTED IN BGE "GREEN ZONE" AND WITHIN 20' CEMETERY
	35	PRUNUS LAUROCERASUS "OTTO LUTYKEN" OTTO LUTYKEN CHERRY LAUREL	1 - 1 1/2" CAL.	

SCHEDULE B PARKING LOT INTERNAL LANDSCAPING

NUMBER OF NEW PARKING SPACES	45
NUMBER OF TREES REQUIRED (1:10)	4.5
NUMBER OF TREES PROVIDED	5
SHADE TREES	
OTHER TREES (2:1 SUBSTITUTE)	



PLANTING SPECIFICATIONS

PLANTS, RELATED MATERIAL, AND OPERATIONS SHALL MEET THE DETAILED DESCRIPTION AS GIVEN ON THE PLANS AND AS DESCRIBED HEREIN.

ALL PLANT MATERIAL, UNLESS OTHERWISE SPECIFIED, SHALL BE NURSERY GROWN, UNIFORMLY BRANCHED, HAVE A VIGOROUS ROOT SYSTEM, AND SHALL CONFORM TO THE SPECIES, SIZE, ROOT AND SHAPE SHOWN ON THE PLANT LIST AND THE AMERICAN ASSOCIATION OF NURSERMEN (AAN) STANDARDS. PLANT MATERIAL SHALL BE HEALTHY, VEGEATOUS, FREE FROM DEFECTS, DISEASE, DISTURBED ROOTS, SUN SCALD INJURIES, ABSCISIONS OF THE BARK, PLANT DISEASE, INSECT FEED DAMAGE, AND ALL FORMS OF INSECT INFESTATIONS OR OBJECTIONABLE DEFOLIATIONS. PLANT MATERIAL THAT IS WEAK OR WHICH HAS BEEN CUT BACK FROM LARGE GRADES TO MEET SPECIFIED REQUIREMENTS WILL BE REJECTED. TREES WITH FORKED LEADERS WILL NOT BE ACCEPTED. ALL PLANTS SHALL BE FRESHLY DUG; NO HEALED-IN PLANTS FROM COLD STORAGE WILL BE ACCEPTED.

UNLESS OTHERWISE SPECIFIED, ALL GENERAL CONDITIONS, PLANTING OPERATIONS, DETAILS AND PLANTING SPECIFICATION SHALL CONFORM TO "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS" (HEREINAFTER "LANDSCAPE GUIDELINES") APPROVED BY THE LANDSCAPE CONTRACTORS ASSOCIATION OF METROPOLITAN WASHINGTON AND THE POTOMAC CHAPTER OF THE AMERICAN SOCIETY OF LANDSCAPE ARCHITECT, LATEST EDITION, INCLUDING ALL AGENDA.

CONTRACTOR SHALL BE REQUIRED TO GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE YEAR AFTER DATE OF ACCEPTANCE IN ACCORDANCE WITH THE APPROPRIATE SECTION OF THE LANDSCAPE GUIDELINES. CONTRACTOR'S ATTENTION IS DIRECTED TO THE MAINTENANCE REQUIREMENTS FOUND WITHIN THE ONE YEAR SPECIFICATIONS INCLUDING WATERING AND REPLACEMENT OF SPECIFIED PLANT MATERIAL.

CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING UTILITY COMPANIES, UTILITY CONTRACTORS AND "MISS UTILITY" A MINIMUM OF 48 HOURS PRIOR TO BEGINNING ANY WORK. CONTRACTOR MAY MAKE MINOR ADJUSTMENTS IN SPACING AND LOCATION OF PLANT MATERIAL TO AVOID CONFLICTS WITH UTILITIES. DAMAGE TO EXISTING STRUCTURE AND UTILITIES SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.

PROTECTION OF EXISTING VEGETATION TO REMAIN SHALL BE ACCOMPLISHED BY THE TEMPORARY INSTALLATION OF 4 FOOT HIGH SNOW FENCE OR BLAZE ORANGE SAFETY FENCE AT THE DRIP LINE.

CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL MATERIAL IN THE PROPER PLANTING SEASON FOR EACH PLANT TYPE. ALL PLANTING IS TO BE COMPLETED WITHIN THE GROWING SEASON OF COMPLETION OF SITE CONSTRUCTION.

BD SHALL BE BASED ON ACTUAL SITE CONDITIONS. NO EXTRA PAYMENT SHALL BE MADE FOR WORK ARISING FROM SITE CONDITIONS DIFFERING FROM THOSE INDICATED ON DRAWINGS AND SPECIFICATIONS.

PLANT QUANTITIES ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. IF DISCREPANCIES EXIST BETWEEN QUANTITIES SHOWN ON PLAN AND THOSE SHOWN ON THE PLANT LIST, THE QUANTITIES ON THE PLAN TAKE PRECEDENCE.

ALL SHRUBS SHALL BE PLANTED IN CONTINUOUS TRENCHES OR PREPARED PLANTING BEDS AND MULCHED WITH COMPOSTED HARDWOOD MULCH AS DETAILS AND SPECIFIED EXCEPT WHERE NOTED ON PLANS.

POSITIVE DRAINAGE SHALL BE MAINTAINED IN PLANTING BEDS 2 PERCENT SLOPE.

PLANTING MIX SHALL BE AS FOLLOWS: DECIDUOUS PLANTS - TWO PARTS TOPSOIL, ONE PART WELL-ROTTED COW OR HORSE MANURE. ADD 3 LBS. OF STANDARD FERTILIZER PER CUBIC YARD OF PLANTING MIX. EVERGREEN PLANTS - TWO PARTS TOPSOIL, ONE PART HUMUS OR OTHER APPROVED ORGANIC MATERIAL. ADD 3 LBS. OF EVERGREEN (ACIDIC) FERTILIZER PER CUBIC YARD OF PLANTING MIX. TOPSOIL SHALL CONFORM TO THE LANDSCAPE GUIDELINES.

WEED CONTROL: INCORPORATE A PRE-EMERGENT HERBICIDE INTO THE PLANTING BED FOLLOWING RECOMMENDED RATES ON THE LABEL. CAUTION: BE SURE TO CAREFULLY CHECK THE CHEMICAL USED TO ASSURE ITS ADAPTABILITY TO THE SPECIFIC GROUND COVER TO BE TREATED.

ALL AREAS WITHIN CONTRACT LIMITS DISTURBED DURING OR PRIOR TO CONSTRUCTION NOT DESIGNATED TO RECEIVE PLANTS AND MULCH SHALL BE FINE GRADED AND SEEDED.

THIS PLAN IS INTENDED FOR LANDSCAPE USE ONLY. SEE OTHER PLAN SHEETS FOR MORE INFORMATION ON GRADING, SEDIMENT CONTROL, LAYOUT, ETC.

LANDSCAPE DEVELOPER'S CERTIFICATE

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

Rev. Stephanie Vader 3/24/16
 DEVELOPER DATE

THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISION OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING WILL BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT.

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/17.

Signature of Professional Land Surveyors DATE 3/29/16

OWNER AND DEVELOPER

REVEREND STEPHANIE VADER
 EMMANUEL UNITED METHODIST CHURCH
 10755 SCARSDALE ROAD
 LAUREL, MD 20723
 301-725-5200

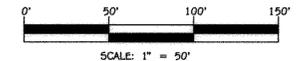
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Director - Department of Planning and Zoning Date 6-9-16
 Chief, Division of Land Development Date 6-9-16
 Chief, Development Engineering Division Date 9-17-16

PROJECT	EMMANUEL UNITED METHODIST CHURCH	SECTION	A
PARCEL NOS.			
PLAT	23780-1	BLOCK NO.	11
	23787	ZONE	R-20
		TAX/ZONE	46
		ELEC. DIST.	SIXTH
		CENSUS TR.	6068.02
WATER CODE	E-18	SEWER CODE	7550000

LANDSCAPE NOTES & DETAILS

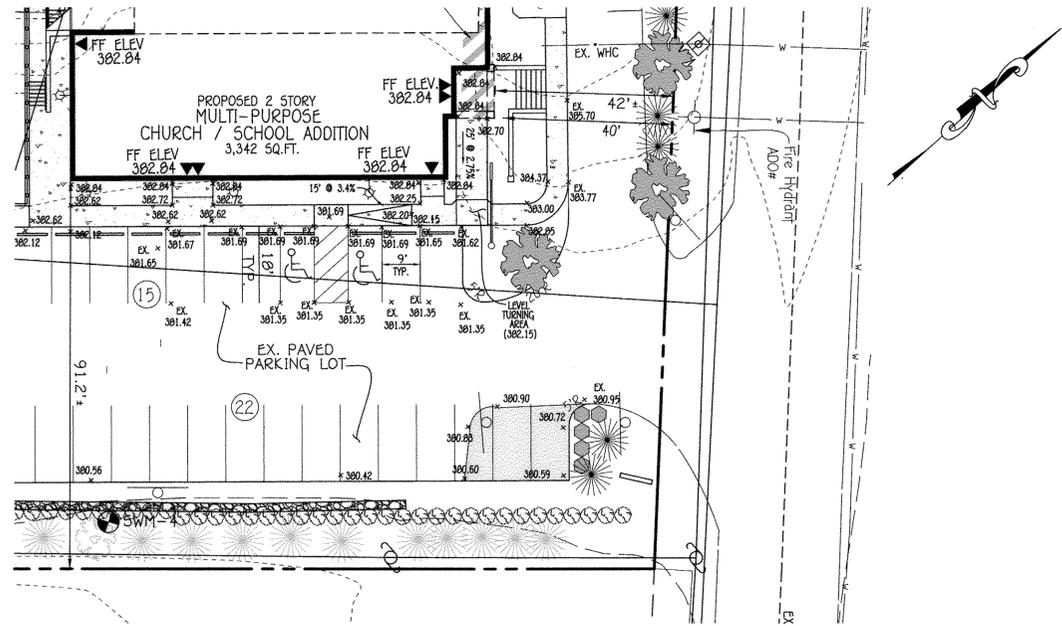
2 STORY MULTI-PURPOSE BLDG. EXT. & PARKING LOT EXT. AND FOREST CONSERVATION RETENTION BANK
EMMANUEL UNITED METHODIST CHURCH
 PARCEL "A"
 PREVIOUS HOWARD COUNTY FILES: BA 10-034C&V, BA 90 66E&V
 SDP-92-027, ECP-13-053 & F-16-052
 ZONED: R-20
 TAX MAP NO.: 46 GRID NO.: 11 PARCEL NO.: 98
 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: 1"=50' DATE: MARCH 12, 2016
 SHEET 7 OF 22



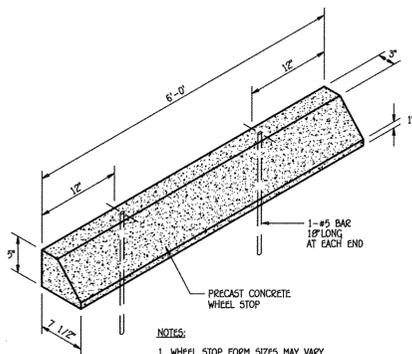
FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELLSWORTH CITY, MARYLAND 21042
 (410) 461 - 2895



NO.	REVISION	DATE

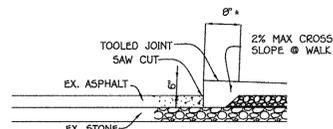


PLAN VIEW
SCALE: 1" = 20'

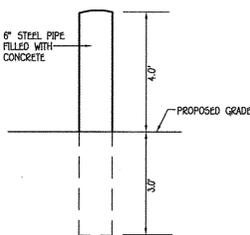


- NOTES:**
1. WHEEL STOP FORM SIZES MAY VARY DEPENDING ON MANUFACTURER.
 2. CONCRETE STRENGTH SHALL BE 4,000 P.S.I. AIR ENTRAINED.

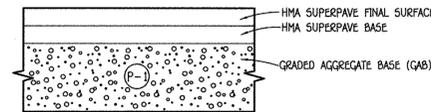
WHEEL STOP DETAIL
NOT TO SCALE



Proposed Turn-Down Sidewalk Detail
NOT TO SCALE

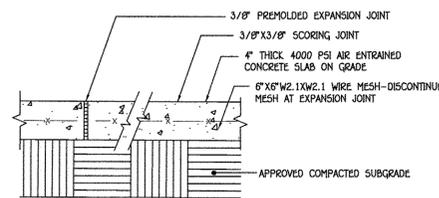


TYPICAL BOLLARD DETAIL
NOT TO SCALE



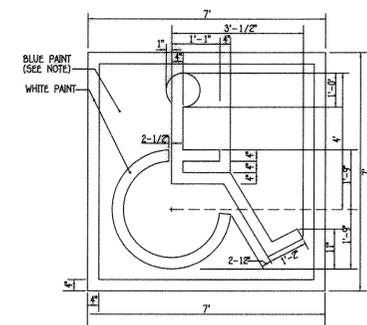
PAVING SECTION NUMBER	ROAD AND STREET CLASSIFICATION	CALIFORNIA BEARING RATIO (CBR)					
		3 TO >5	5 TO <7	>7	3 TO >5	5 TO <7	>7
P-1	PARKING BAYS: RESIDENTIAL AND NON-RESIDENTIAL	HMA SUPERPAVE FINAL SURFACE 9.5 MM PG 64-22, LEVEL 1 (ESAL)					
	PARKING DRIVE AISLES: RESIDENTIAL AND NON-RESIDENTIAL WITH NO MORE THAN 2 HEAVY TRUCKS PER DAY	HMA SUPERPAVE BASE 19.0 MM PG 64-22, LEVEL 1 (ESAL)					
		GRADED AGGREGATE BASE (GAB)					
		1.5	1.5	1.5	1.5	1.5	1.5
		2.0	2.0	2.0	3.5	3.0	2.5
		8.5	7.0	5.0	4.0	4.0	4.0

P-1 PAVING SECTION
NOT TO SCALE



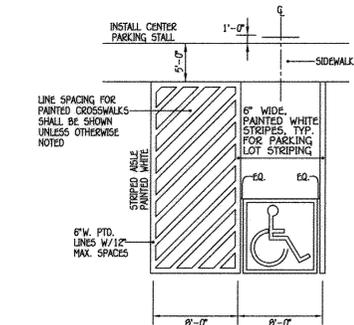
- NOTE:**
- INSTALL EXPANSION JOINTS AT MAX. 15'-0" O.C. AND INSTALL SCORING JOINTS AT MAX. 9'-0" O.C.
 - SLOPE ACROSS SIDEWALK SHALL BE MIN. 1/8"/FT.

CONCRETE WALK DETAIL
HOWARD COUNTY DETAIL NOTED IS FOR REFERENCE ONLY
NOT TO SCALE



- NOTE:**
- SYMBOL IS REQUIRED TO CONTRAST WITH BACKGROUND (WHITE ON BLUE: COLOR NO. 105090 IN FED. STANDARD 595C-DOUBLE COAT TYP.)

HANDICAP SPACE STENCIL LAYOUT
NOT TO SCALE

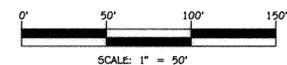


ACCESSIBLE SPACE LAYOUT
NOT TO SCALE

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 R7-8.
2. ONE SIGN IS REQUIRED PER SPACE PLACED AS SHOWN ON SITE IMPROVEMENT PLAN.
3. SIGNS SHALL BE POLE MOUNTED WITH HOT DIP GALVANIZED COUNTY APPROVED PERFORATED CHANNEL POSTS W/TOP OF SIGNS 9'-1" ABOVE FINISHED GRADE OR AS INDICATED ON SITE DRAWINGS.
4. SIGN SHALL BE ATTACHED TO FLANGED SIDE OF POST. POST SHALL EXTEND INTO GROUND 2'-6" MIN.
5. COLORS: LEGEND AND BORDER-GREEN SYMBOL-WHITE ON BLUE BACKGROUND BACKGROUND-WHITE
6. CONTRACTOR SHALL COORDINATE ARROW DIRECTION WITH LOCATION OF ADJACENT AISLE.
7. SPACES INDICATED ON SITE DEVELOPMENT PLANS AS "VAN ACCESSIBLE" SHALL BE SIGNED ACCORDINGLY.

HANDICAP PARKING SIGN DETAIL
NOT TO SCALE



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Frank J. Pruden 3/29/16
Signature of Professional Land Surveyors DATE

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REVEREND STEPHANIE VADER
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METHODIST CHURCH
10755 SCAQSVILLE ROAD
LAUREL, MD 20723
301-725-5200

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Nadine J. Jolin 6-9-16
Director - Department of Planning and Zoning Date
Keith S. D. ... 6-9-16
Chief, Division of Land Development Date
... 5-12-16
Chief, Development Engineering Division Date

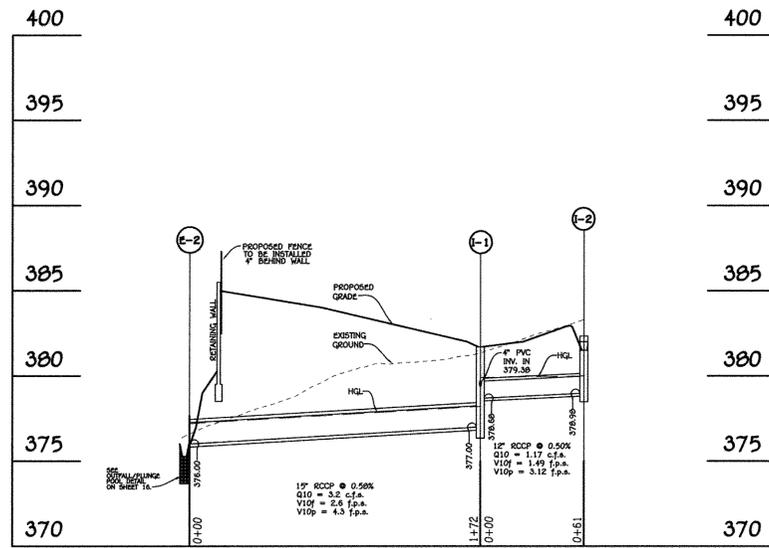
PROJECT	SECTION	PARCEL NOS.			
EMMANUEL UNITED METHODIST CHURCH	-	A			
PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
23796-1	11	R-20	46	SIXTH	6068.02
WATER CODE	SEWER CODE				
E-18	7550000				

HANDICAP PARKING PLANS & DETAILS

2 STORY MULTI-PURPOSE BLDG. EXT. & PARKING LOT EXT.
AND FOREST CONSERVATION RETENTION BANK
**EMMANUEL UNITED
METHODIST CHURCH**
PARCEL 'A'
PREVIOUS HOWARD COUNTY FILES: BA 10-034C&V, BA 90 66E&V
SDP-92-027, ECP-13-053 & F-16-052
ZONED: R-20
TAX MAP NO.: 46 GRID NO.: 11 PARCEL NO.: 98
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MARCH 12, 2016
SHEET 8 OF 22

SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
---	EXISTING CONTOUR 10' INTERVAL
---	EXISTING SAN. SEWER LINE
---	EXISTING STORM DRAIN LINE
---	EXISTING WATER LINE
---	EXISTING CEMETERY
---	EXISTING TREE/SPECIMEN TREE
---	PROPOSED TREE
---	EXISTING TREELINE
---	PROPOSED TREELINE
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---	PROPOSED MACADAM PAVING
---	DIVERSION FENCE
---	SUPER SILT FENCE
---	EXISTING CONCRETE WALK
---	EXISTING MACADAM PAVING
---	EXISTING CEMETERY
---	PROPOSED LIGHT POLE
---	APPROXIMATE AREA OF DEMOLITION

STRUCTURE NO.	AREA	'C'	ZONED	% IMP.
I-1	0.31 AC.	0.78	R-20	84%
I-2	0.46 AC.	0.00	R-20	21%



PROFILE STORMDRAIN 1
SCALE HORZ. 1" = 50'
VERT. 1" = 5'

STRUCTURE NO.	TOP ELEVATION	INV IN	INV OUT	COORDINATES	TYPE	REMARKS
I-1	381.70	378.68 (I-2) 12" PVC	377.00 (S-1) 15"	N 536158.33 E 1344738.35	'S' INLET	D-4.22
I-2	381.50	---	378.98 (I-1) 12"	N 536208.17 E 1344703.15	'D' INLET	D-4.10
I-3	382.30	---	382.00 (E-3)	N 536419.24 E 1344906.35	CDS TRENCH DRAIN SYSTEM	SEE PROFILE THIS SHEET
M-1	384.50	375.56 (R-2) 12"	375.46 (R-1) 12"	N 536108.08 E 1344631.40	MANHOLE	G-5.12
R-1	377.00	372.90 (M-1) 12"	372.36 (E-1) 18"	N 536096.44 E 1344563.19	MODIFIED 'K' INLET	SEE SHEET 14 FOR DETAIL
R-2	382.00	377.50 (BMP#2) 6"	377.40 (M-1) 12"	N 536163.79 E 1344680.92	NYLOPLAST RISER	SEE SHEET 16 FOR DETAIL
E-1	373.92	372.00 (R-1) 18"	---	N 536006.20 E 1344517.28	END SECTION	D-5.51
E-2	377.67	376.00 (I-1) 15"	---	N 536038.29 E 1344615.87	END SECTION	D-5.51
E-3	381.50	379.00 (I-3)	381.50	N 536407.96 E 1344918.94	NYLOPLAST RISER	FOR DETAIL

* DENOTES THROAT OPENING

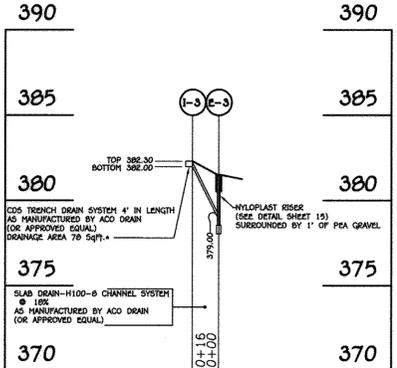
SOIL	NAME	CLASS
GhB	GLENELG-URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	B
GmB	GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES	C
GnB	GLENVILLE-BAILE SILT LOAMS, 0 TO 8 PERCENT SLOPES	C
MdB	MANOR LOAM, 3 TO 8 PERCENT SLOPES	B
MaC	MANOR LOAM, 8 TO 15 PERCENT SLOPES	B
MaD	MANOR LOAM, 15 TO 25 PERCENT SLOPES	B

NOTES:
* HYDRIC SOILS AND/OR CONTAINS HYDRIC INCLUSIONS
** MAY CONTAIN HYDRIC INCLUSIONS
† GENERALLY ONLY WITHIN 100-YEAR FLOODPLAIN AREAS

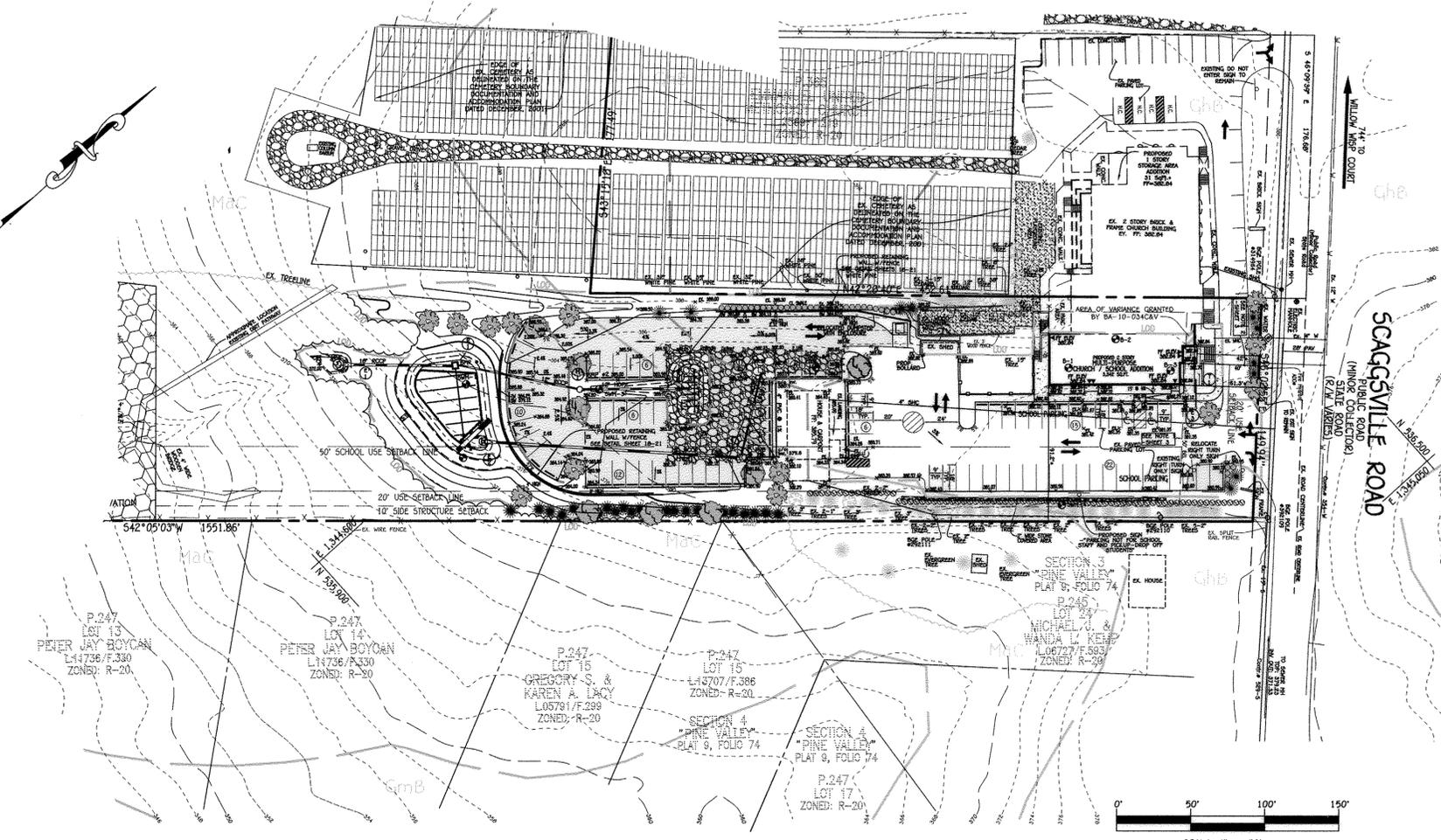
SIZE	CLASS	LENGTH
4"	PVC	71'
12"	HDPE	72'
12"	RCCP	143'
15"	RCCP	172'
18"	RCCP	67'

NOTE: INCLUDES UNDERDRAIN SYSTEM SEE SHEET 12

- NOTES
- THE 50 FOOT SETBACK FROM SCAGGSVILLE ROAD (MAJOR COLLECTOR) EXTENDS ACROSS THE ENTIRE FRONTAGE OF PARCEL 9B.
 - THE 40 FOOT SETBACK APPROVED WITH BA-10-034 C&V IS FOR A REDUCTION OF THE FRONT 50 FOOT SETBACK ASSOCIATED ONLY WITH THE BUILDING ADDITION CLOSEST TO SCAGGSVILLE ROAD APPROVED WITH BA-10-034 C&V APPROVED ON JUNE 6, 2011.



TRENCH DRAIN AND OUTLET
SCALE HORZ. 1" = 50'
VERT. 1" = 5'



SCALE: 1" = 50'

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING, CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PARK
ELLSWORTH CITY, MARYLAND 21042
(410) 461-2895



PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/17.
Frank John Mendenhall Jr. 3/27/16
Signature Of Professional Land Surveyors DATE

OWNER AND DEVELOPER
REVEREND STEPHANIE VADER
EMMANUEL UNITED METHODIST CHURCH
10755 SCAGGSVILLE ROAD
LAUREL, MD 20723
301-725-5200

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

William J. Jell 6-9-16
Director - Department of Planning and Zoning Date

W. J. Jell 6-11-16
Chief, Division of Land Development Date

W. J. Jell 5-12-16
Chief, Development Engineering Division Date

PROJECT	SECTION	PARCEL NOS.
EMMANUEL UNITED METHODIST CHURCH	-	A

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
2376e	11	R-20	46	SIXTH	6068.02

WATER CODE	SEWER CODE
E-18	7550000

STORM DRAIN DRAINAGE AREA MAP AND STORM DRAIN PROFILES
2 STORY MULTI-PURPOSE BLDG. EXT. & PARKING LOT EXT. AND FOREST CONSERVATION RETENTION BANK
EMMANUEL UNITED METHODIST CHURCH
PARCEL 'A'
PREVIOUS HOWARD COUNTY FILES: BA 10-034C&V, BA 90 66E&V
SDP-92-027, ECP-13-053 & F-16-052
ZONED: R-20
TAX MAP NO.: 46 GRID NO.: 11 PARCEL NO.: 98
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1"=50' DATE: MARCH 12, 2016
SHEET 9 OF 22 SDP-15-067

FCE/Bank Sales Acreage Chart FOREST CONSERVATION EASEMENT NO. 2 (3.64 ACRES)			
Sale	Retention Obligation	Project Name	Remaining Acreage
		Beginning Acreage	3.184 Ac.

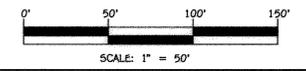
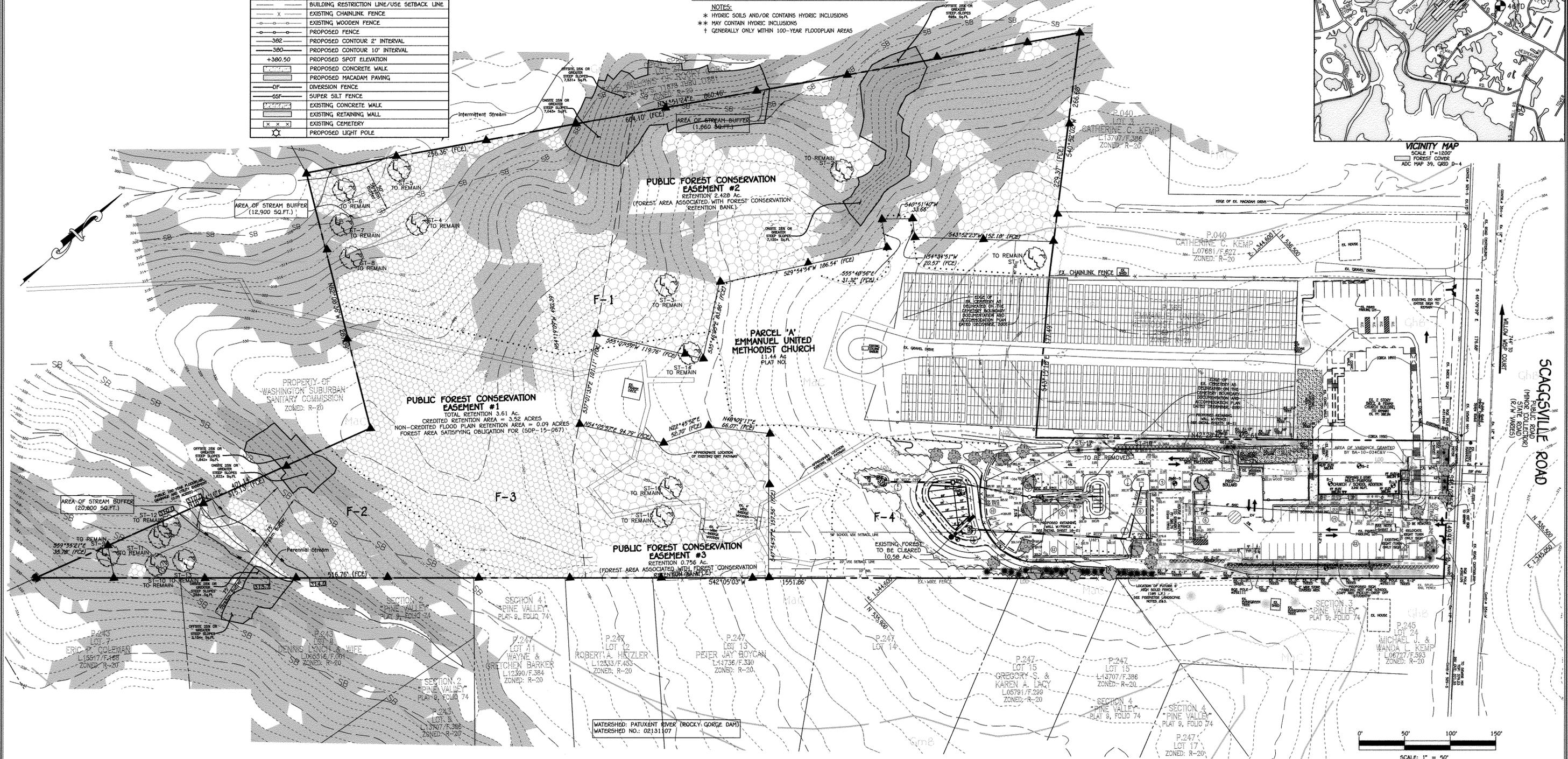
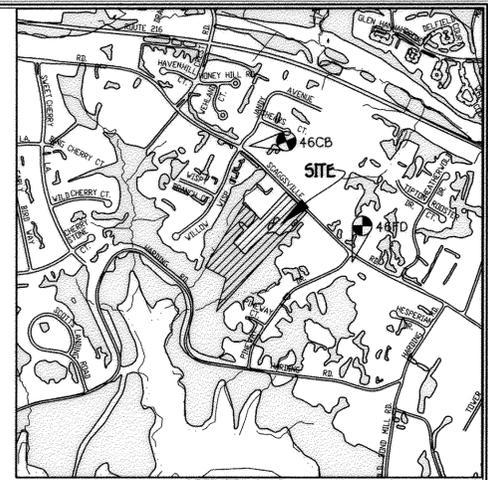
NOTE: THE EXISTING CEMETERY HAS BEEN DELINEATED ON THE CEMETERY DOCUMENTATION AND ACCOMMODATION PLAN DATED DECEMBER, 2001.

LEGEND	
SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
---	EXISTING CONTOUR 10' INTERVAL
---	EXISTING SAN SEWER LINE
---	EXISTING STORM DRAIN LINE
---	EXISTING WATER LINE
---	EXISTING CEMETERY
---	EXISTING TREE/SPECIMEN TREE
---	PROPOSED TREE
---	EXISTING TREELINE
---	PROPOSED TREELINE
---	BUILDING RESTRICTION LINE/USE SETBACK LINE
---	EXISTING CHAINLINK FENCE
---	EXISTING WOODEN FENCE
---	PROPOSED FENCE
---	PROPOSED CONTOUR 2' INTERVAL
---	PROPOSED CONTOUR 10' INTERVAL
---	PROPOSED SPOT ELEVATION
---	PROPOSED CONCRETE WALK
---	PROPOSED MACADAM PAVING
---	DIVERSION FENCE
---	SUPER SILT FENCE
---	EXISTING CONCRETE WALK
---	EXISTING RETAINING WALL
---	EXISTING CEMETERY
---	PROPOSED LIGHT POLE

LEGEND	
SYMBOL	DESCRIPTION
---	APPROXIMATE AREA OF DEMOLITION
---	15%-24.9% SLOPES
---	25% SLOPES OR GREATER
---	DENOTES RETAINING WALL
---	FOREST STAND BOUNDARY
F-1	FOREST STAND LABEL
ST-1	SPECIMEN TREE
FP	PUBLIC 100 YEAR FLOODPLAIN DRAINAGE AND UTILITY EASEMENT
1000.00	ELEVATIONS 100 YEAR FLOOD PLAIN

SOILS LEGEND		
SOIL	NAME	CLASS
GhB	GLENELG-URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES	B
GmB	GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES	C
GhB	GLENVILLE-BAILE SILT LOAM, 0 TO 8 PERCENT SLOPES	C
MdB	MANOR LOAM, 3 TO 8 PERCENT SLOPES	B
MAC	MANOR LOAM, 8 TO 15 PERCENT SLOPES	B
MdB	MANOR LOAM, 15 TO 25 PERCENT SLOPES	B

- NOTES**
- THE 50 FOOT SETBACK FROM SCAGGSVILLE ROAD (MAJOR COLLECTOR) EXTENDS ACROSS THE ENTIRE FRONTAGE OF PARCEL 9B.
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 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK, 10372 BALTIMORE NATIONAL PIKE
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 (410) 461-2895

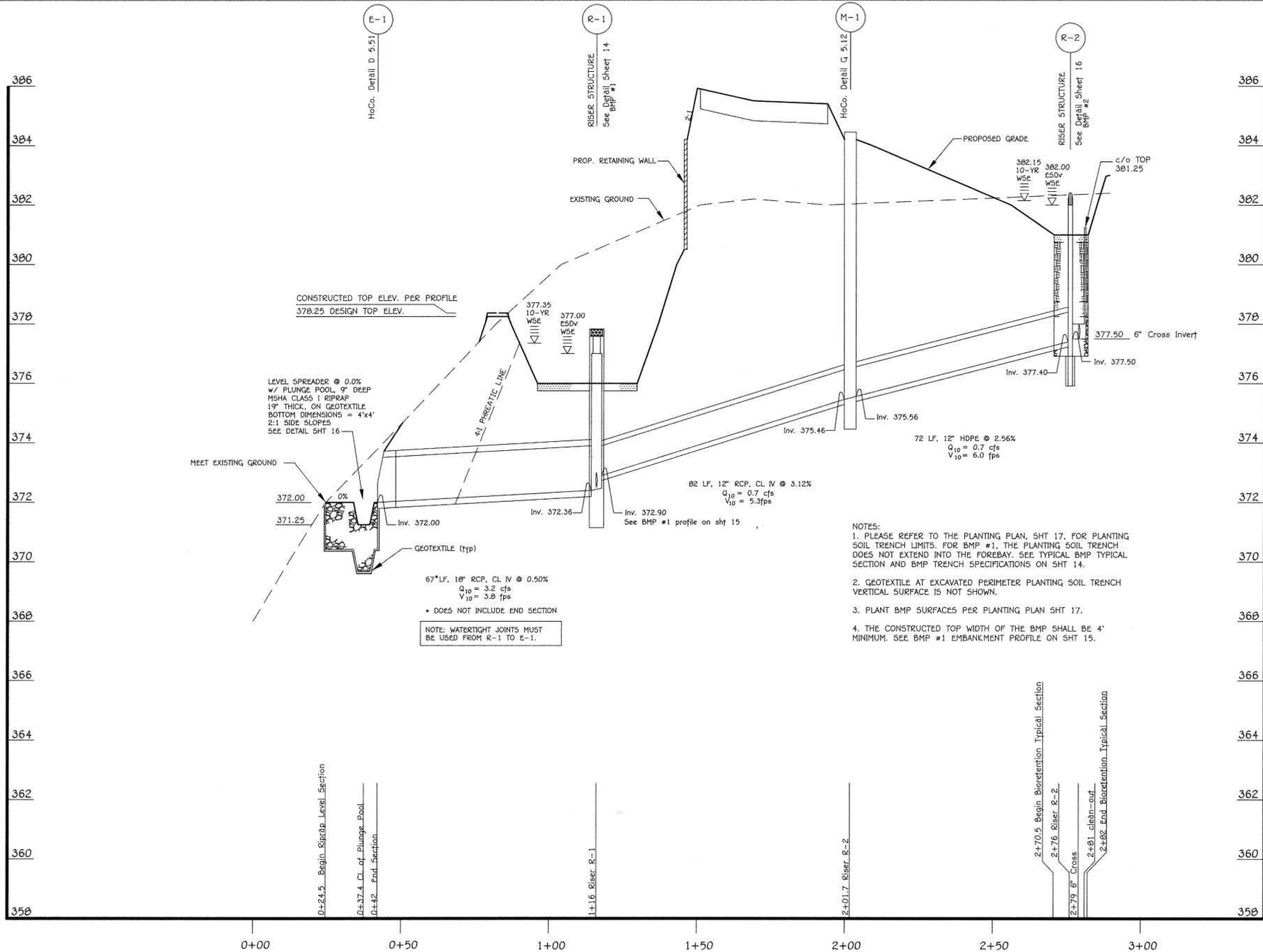
Eco-Science Professionals, Inc.
 CONSULTING ECOLOGISTS
 MD DNR Qualified Professional
 USACE Wetland Delineator
 Certification # WD093M006100448
 John P. Canoles

OWNER AND DEVELOPER
 REVEREND STEPHANIE VADER
 EMMAUEL UNITED METHODIST CHURCH
 10795 SCAGGSVILLE ROAD
 LAUREL, MD 20723
 301-725-5200

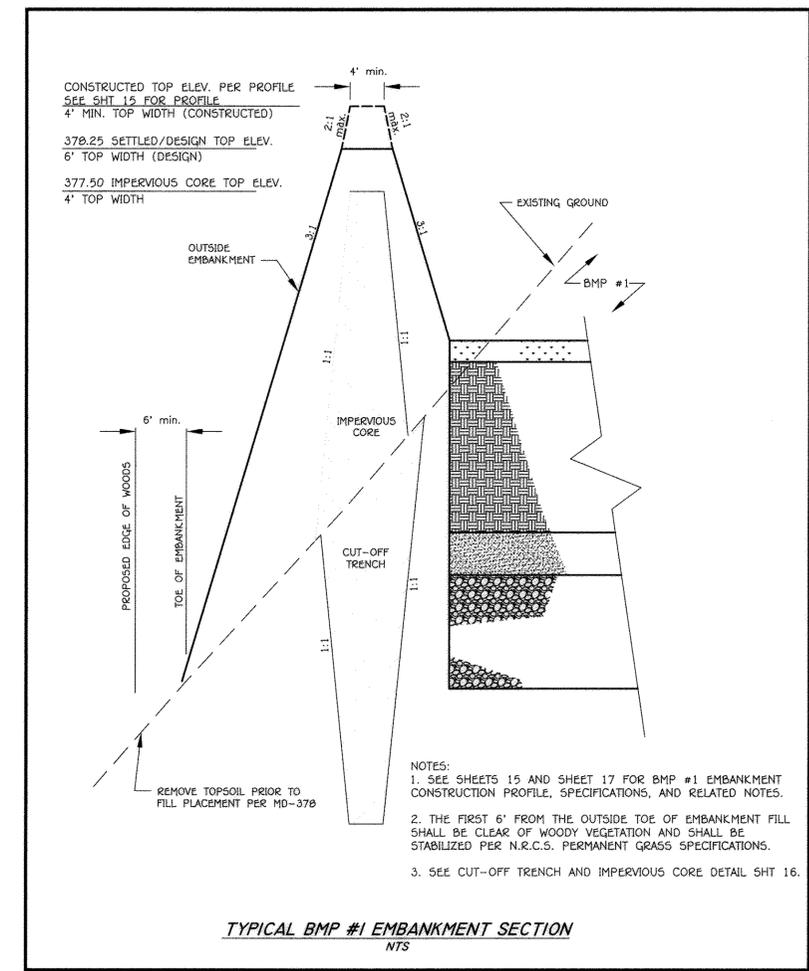
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING					
<i>Nathaniel J. Kelly</i>		6-9-16		Date	
Director - Department of Planning and Zoning					
<i>Kevin J. Lane</i>		6-9-16		Date	
Chief, Division of Land Development					
<i>John P. Canoles</i>		5-12-16		Date	
Chief, Development Engineering Division					
PROJECT	EMMAUEL UNITED METHODIST CHURCH	SECTION	-	PARCEL NOS.	A
PLAT	25784-4	BLOCK NO.	11	ZONE	R-20
WATER CODE	E-18	TAX/ZONE	46	ELEC. DIST.	SIXTH
		CENSUS TR.	6068.02		

FOREST CONSERVATION PLAN
 2 STORY MULTI-PURPOSE BLDG. EXT. & PARKING LOT EXT. AND FOREST CONSERVATION RETENTION BANK
EMMAUEL UNITED METHODIST CHURCH
 PARCEL 'A'
 PREVIOUS HOWARD COUNTY FILES: BA 10-034C&V, BA 90 66E&V SDP-92-027, ECP-13-053 & F-16-052
 ZONED: R-20
 TAX MAP NO.: 46 GRID NO.: 11 PARCEL NO.: 98
 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: 1"=50'
 DATE: MARCH 12, 2016
 SHEET 11 OF 22
 SDP-15-067

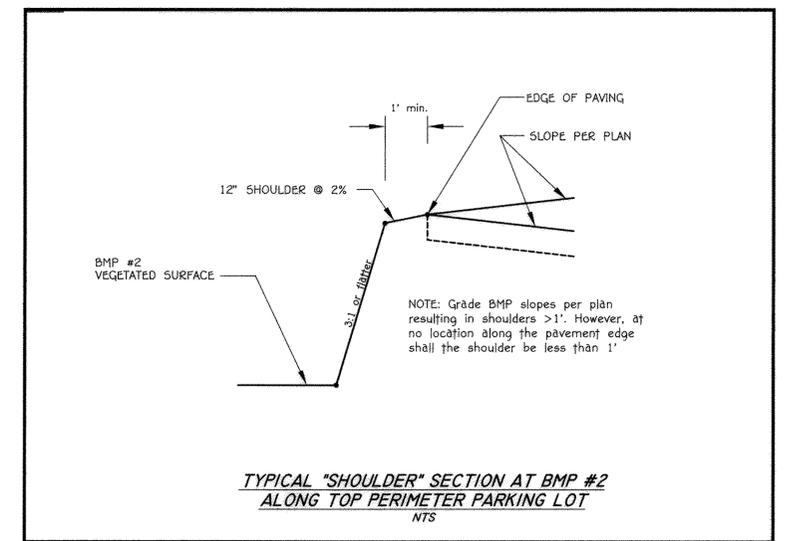
K:\Drawings\401069 Emmauel United Methodist Church\SDP Folder\401069 SDP (SHEET 11) FOREST CONSERVATION PLAN.dwg, 3/25/2016 11:02:11 AM, 11



BMP #1 AND #2 UNDERDRAIN PROFILE
 SCALE:
 HORIZ: 1" = 20'
 VERT: 1" = 2'



TYPICAL BMP #1 EMBANKMENT SECTION
 NTS



TYPICAL "SHOULDER" SECTION AT BMP #2
ALONG TOP PERIMETER PARKING LOT
 NTS

FOR SHM ONLY:
CIVIL DESIGN SERVICES, LC
 6123 Holy Ridge Court, Columbia, Maryland 21044
 410.755.0380 phone/fax
 civildesign@comcast.net



PROFESSIONAL CERTIFICATION
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME AND THAT I AM
 A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF
 MARYLAND, LICENSE NO. 15838, EXPIRATION DATE: 12/17/17.
 Andrew A. Porter, P.E. 3/23/2016 DATE

OWNER AND DEVELOPER
 REVEREND STEPHANIE VADER
 EMMANUEL UNITED
 METHODIST CHURCH
 10759 SCASSVILLE ROAD
 LAUREL, MD 20723
 301-725-5200

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Victoria Jellie 6-9-16
 Director - Department of Planning and Zoning Date

Kate Schuler 6-9-16
 Chief, Division of Land Development Date

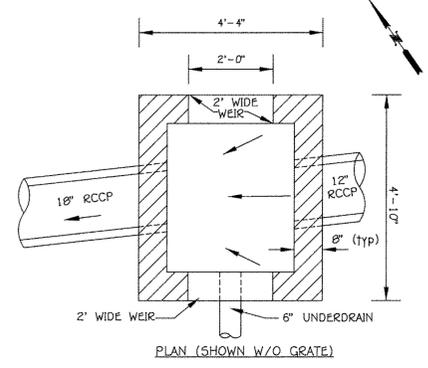
Michael 5-12-16
 Chief, Development Engineering Division Date

PROJECT	SECTION	PARCEL NOS.			
EMMANUEL UNITED METHODIST CHURCH	-	A			
PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
23766	11	R-20	46	SIXTH	6068.02
23787					
WATER CODE	SEWER CODE				
E-18	7550000				

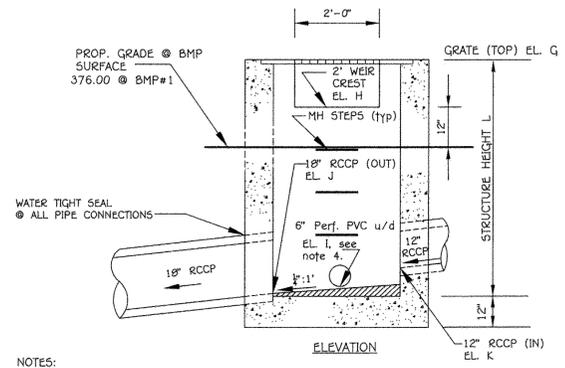
BMP#1 and #2
OUTFALL PROFILE

2 STORY MULTI-PURPOSE BLDG. EXT. & PARKING LOT EXT.
 AND FOREST CONSERVATION RETENTION BANK
EMMANUEL UNITED
METHODIST CHURCH
 PARCEL 'A'

PREVIOUS HOWARD COUNTY FILES: BA 10-034C&V, BA 90 66E&V
 SDP-92-027, ECP-13-053 & F-16-052
 ZONED: R-20
 TAX MAP NO.: 46 GRID NO.: 11 PARCEL NO.: 98
 SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: DATE: MARCH 12, 2016
 SHEET 13 OF 22



PLAN (SHOWN W/O GRATE)

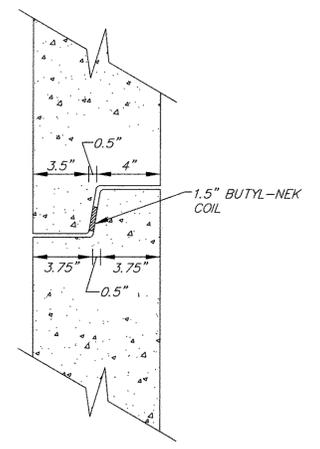


ELEVATION

- NOTES:
- SEE MSHA STD DETAIL MD-378.11 FOR DETAILS NOT SHOWN ABOVE.
 - ALL STRUCTURAL REQUIREMENTS (INCLUDING WALLS) SHALL CONFORM TO THE D-INLET (DETAIL D-4.10) REQUIREMENTS DUE TO THE INCREASED INLET DEPTH.
 - USE DOUBLE OPENING WITH NO CONCRETE GUTTER APPROACHES.
 - PVC UNDERDRAIN MAY ENTER INLET AT AN ANGLE NEAR THE CENTER OF STRUCTURE AND BMP. SEE SITE DEVELOPMENT PLAN (SDP) FOR UNDERDRAIN ENTRANCE LOCATION IN RISER WALL.
 - SLOPE RISER INVERT 1/4":1' TOWARD RCCP OUTFALL.
 - PROVIDE STEPS PER HOCO STD. DETAIL G-5.21.
 - CHAMFER EXPOSED EDGES 1/4"x1/4".

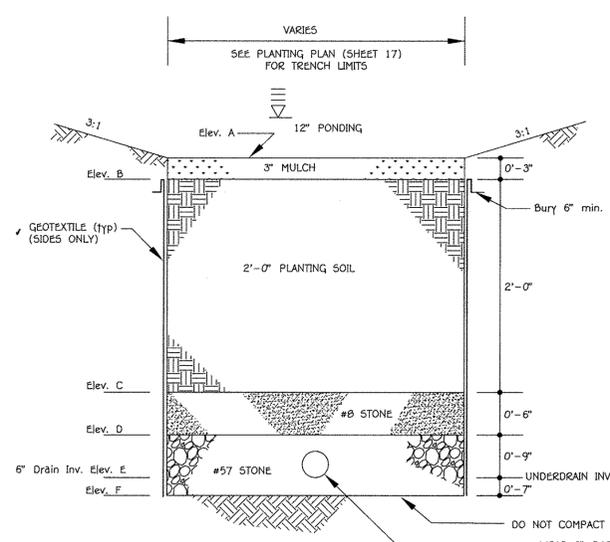
BMP RISER STRUCTURE ELEVATION TABLE		
	R-1 (BMP#1)	NOTES
ELEV. G	377.83	Top of Grate
ELEV. H	377.00	Two (2) 2" Weir Crests
ELEV. I	372.50	Invert 6" Perfor. u/d
ELEV. J	372.36	18" RCCP Invert Out
ELEV. K	372.90	12" RCCP Invert In
HEIGHT L	5'-8"	Structure Height

RISER STRUCTURE R-1
MODIFIED K-INLET TYPICAL SECTION
NTS



RISER JOINT DETAIL
NTS

- NOTES:
- Riser joints shall join evenly and be watertight. Parge joints after installation.
 - The referenced joint and joint sealant material is used by Frederick Precast, Inc. Similar joints may be used with shop drawing approval by the engineer.



BMP BIORETENTION FACILITY ELEVATION TABLE		
	BMP #1	BMP #2
Elev. A	376.00	381.00
Elev. B	375.75	380.75
Elev. C	373.75	378.75
Elev. D	373.25	378.25
Elev. E	372.50	377.50
Elev. F	371.92	376.92

BMP BIORETENTION FACILITY NOTES AND SPECIFICATIONS

- THE LIMITS OF THE TYPICAL SECTION (I.E., PLANTING SOIL, SAND, ETC.) IS THE ENTIRE LEVEL SURFACE OF THE BIORETENTION FACILITIES EXCLUDING THE FOREBAY AREAS AND THE RIPRAP GABION APRONS.
- REFER TO THE 2000 MARYLAND SWM DESIGN MANUAL (AND/OR ONLINE A MDE'S WEB SITE) FOR BIORETENTION SPECIFICATIONS FOR INFORMATION NOT LISTED HEREIN.
- THE BIORETENTION BMP MATERIALS ARE AS FOLLOWS:
 - PLANTING SOIL: PER PLANTING SOIL SPECIFICATIONS OUTLINED IN MDE'S 2000 SWM MANUAL, APPENDIX B.4. DO NOT MECHANICALLY COMPACT PLANTING SOIL (EXCEPT WHERE INDICATED UNDER STRUCTURE R-2). THE PLANTING SOIL CAN BE "WATERED" TO FACILITATE SETTLING. SPECIFICALLY, THE PLANTING SOIL SHALL BE MEET THE FOLLOWING: LOAMY SAND @ 60-65% AND COMPOST 35-40%, OR, 30% SANDY LOAM, 30% COARSE SAND, & 40% COMPOST. SEE MDE APPENDICES A.2.3, B.4.7 AND TABLE A.3 FOR ADDITIONAL INFORMATION. IN ADDITION, THE PLANTING SOIL SHALL BE DESIGNED/MIXED/DESIGNED SO THAT ITS COEFFICIENT OF PERMEABILITY (k) IS BETWEEN 1.0 ft/day to 2 ft/day.
 - SEE PLANTING PLAN (SHT 17) FOR LIMITS OF PLANTING SOIL AND UNDERDRAIN/RECHARGE AGGREGATE.
 - PVC UNDERDRAIN PIPE: SCHEDULE 40, AND PERFORATED WITH 1/2" HOLES. WRAP UNDERDRAIN WITH GALVANIZED 1/4" HARDWARE CLOTH (WELDED WIRE MESH). PROVIDE 4 - 1/2" HOLES AROUND THE 6" UNDERDRAIN PIPE SPACED @ 90° ALONG THE CIRCUMFERENCE. SPACE PERFORATIONS ALONG PIPE AT 6" ON CENTER. PERFORATIONS MUST TOTAL 1.5 sq. inch MIN. PER LF OF PIPE. ADJACENT SETS OF PERFORATIONS SHALL BE STAGGERED/OFFSET @ 45 DEGREES. SLOTTED PATTERNS MAY BE USED WITH ENGINEER'S WRITTEN AGREEMENT. UNDERDRAIN PIPE SHALL BE LEVEL (I.E., NO SLOPE, 0.0%).
 - STONE AGGREGATE: MSHA SPECIFICATIONS AS SHOWN ON TYPICAL SECTION; AGGREGATE MUST BE CLEAN AND WASHED AND BE FREE OF FINES, DIRT & DEBRIS.
 - GEOTEXTILE: PER MDE SWM MANUAL OR MIRAFI 140N.
 - MULCH: SHREDDED, WELL-AGED (6-12 MONTHS) HARDWOOD MULCH; NO WOOD CHIPS OR PINE MULCH.
- THE CONTRACTOR SHALL UNDER NO CIRCUMSTANCES ALLOW SURFACE DRAINAGE INTO THE BIORETENTION BMPs UNTIL ALL UPSTREAM AREAS HAVE BEEN STABILIZED (I.E., PAVED, OR HAVE WELL-ESTABLISHED VEGETATION).
- BOARDS SHALL NOT BE LEFT IN PLACE DURING THE CONSTRUCTION.
- GEOTEXTILE (FILTER FABRIC) SHALL BE PLACED AGAINST EXCAVATED VERTICAL SURFACES. SCARIFY EARTH PRIOR TO GEOTEXTILE INSTALLATION. INSTALL GEOTEXTILE PER MANUFACTURER'S SPECIFICATIONS/RECOMMENDATIONS; USE A 2 FT MINIMUM OVERLAP AND NOTCH ENDS WITH A 6" MINIMUM BURY OR EQUIVALENT ANCHORING METHOD.
- THE CONTRACTOR SHALL OBTAIN INDEPENDENT CERTIFICATION THAT THE SOILS AND OTHER MATERIALS MEET THE SPECIFICATIONS.
- THE BIORETENTION FACILITIES SHALL BE VEGETATED IN ACCORDANCE WITH THE PLANTING SCHEDULE/SPECIFICATIONS AND PER MDE SPECIFICATIONS IN THE 2000 SWM DESIGN MANUAL. CONTACT THE ENGINEER IF ANY DISCREPANCIES.
- USE PERFORATED PVC PIPE INSIDE THE BIORETENTION FACILITIES AND WRAP PERFORATED PIPE WITH 1/4" HARDWARE CLOTH TO PREVENT AGGREGATE FROM ENTERING THE PERFORATIONS.
- INSTALL CLEANOUTS/OBSERVATION WELLS (SOLID PVC PIPE) AS SHOWN. THE CLEANOUT/OBSERVATION WELL TOP SHALL EXTEND 3" ABOVE TOP OF MULCH.
- THE LIMIT OF THE TYPICAL SECTION (I.E., PLANTING SOIL, AGGREGATE, ETC.) IS DETAIL ON THE PLANTING PLAN ON SHEET 17. BASICALLY, THE PLANTING TRENCH AREA (I.E., TYPICAL SECTION ABOVE) IS THE ENTIRE LEVEL SURFACE OF THE BIORETENTION FACILITY EXCLUDING THE FOREBAY/GABION WEIR AND THE AREA NEAR THE RISER AND OVER CONNECTING STORM DRAINS.

BMP BIORETENTION FACILITY TYPICAL SECTION
NTS

FOR SWM ONLY:
CIVIL DESIGN SERVICES, LC
6123 Holly Ridge Court, Columbia, Maryland 21044
246.755.0380 phone/fax
civil@cdsdesign.com



PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 15038, EXPIRATION DATE: 12/17/17.
Andrew A. Porter 3/25/2016
Andrew A. Porter, P.E. DATE

OWNER AND DEVELOPER
REVEREND STEPHANIE VADER
EMMANUEL UNITED
METHODIST CHURCH
10755 SCAGGSVILLE ROAD
LAUREL, MD 20723
301-725-5200

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING					
<i>Nadine J. Jelle</i> Director - Department of Planning and Zoning			6-9-16 Date		
<i>Kathleen</i> Chief, Division of Land Development			6-9-16 Date		
<i>D. White</i> Chief, Development Engineering Division			5-12-16 Date		
PROJECT	SECTION	PARCEL NOS.			
EMMANUEL UNITED METHODIST CHURCH	-	A			
PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
23784-L	11	R-20	46	SIXTH	6068.02
WATER CODE	SEWER CODE				
E-18	7550000				

BMP #1 & #2 RISER DETAILS AND BMP TYPICAL SECTION
2 STORY MULTI-PURPOSE BLDG. EXT. & PARKING LOT EXT. AND FOREST CONSERVATION RETENTION BANK
EMMANUEL UNITED METHODIST CHURCH
PARCEL 'A'
PREVIOUS HOWARD COUNTY FILES: BA 10-034C&V, BA 90 66E&V
SDP-92-027, ECP-13-053 & F-16-052
ZONED: R-20
TAX MAP NO.: 46 GRID NO.: 11 PARCEL NO.: 98
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND DATE: MARCH 12, 2016
SCALE:
SHEET 14 OF 22

GENERAL STORMWATER MANAGEMENT NOTES

1. STORMWATER MANAGEMENT HAS BEEN PROVIDED WITH TWO (2) BIORETENTION FACILITIES. PLEASE REFER TO THE SWM REPORT PREPARED BY FISHER, COLLINS, & CARTER, INC. DATED APRIL 17, 2015.
2. ALL CONSTRUCTION SHALL MEET THE LATEST EDITION OF THE HOWARD COUNTY STANDARDS AND SPECIFICATIONS, SMALL EARTHEN DAM SPECIFICATION MD-378, AND THE MARYLAND DEPARTMENT OF THE ENVIRONMENT'S CURRENT STORMWATER DESIGN MANUAL, OR AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL CONSULT THE ENGINEER SHOULD THERE BE ANY DISCREPANCIES. SEE BIORETENTION FACILITY SPECIFICATIONS ON SHEET 14.
3. THE UTILITY LOCATIONS ARE APPROXIMATE. CONTRACTOR SHALL TEST PIT ALL KNOWN EXISTING UTILITIES TO VERIFY, SIZE, SHAPE, LOCATION, AND TYPE PRIOR TO PERFORMING CONSTRUCTION. ANY UTILITY DAMAGED DUE TO CONSTRUCTION MUST BE REPAIRED IMMEDIATELY.
4. SHOULD THE CONTRACTOR DISCOVER DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS, THE ENGINEER IS TO BE NOTIFIED IMMEDIATELY TO RESOLVE THE SITUATION. IF THE CONTRACTOR MAKES FIELD CORRECTIONS OR ADJUSTMENTS WITHOUT NOTIFYING THE ENGINEER, THEN THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR THOSE CHANGES.
5. CONTRACTOR SHALL NOTIFY MISS UTILITY 1-800-257-7777 AND THE HOWARD COUNTY DEPARTMENT OF INSPECTION LICENSES & PERMITS THREE (3) WORKING DAYS BEFORE BEGINNING CONSTRUCTION.
6. FISHER, COLLINS & CARTER, INC. IS NOT RESPONSIBLE FOR THE CONTRACTOR'S UTILIZATION OF MEN, MATERIALS, EQUIPMENT, OR SAFETY MEASURES IN THE PERFORMANCE OF ANY WORK FOR THIS PROJECT. THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR PERFORMING THE WORK CORRECTLY AND IN CONFORMANCE WITH CODE/SPECIFICATION REQUIREMENTS.
7. THE BMPs MAY BE GRADED, HOWEVER, THE PLANTING SOIL AND UNDERDRAINS IN THE BMPs SHALL NOT BE INSTALLED UNTIL ALL UPSTREAM AREAS HAVE BEEN STABILIZED (i.e., THICK GRASS COVER, OR PAVED).
8. THE STORMWATER MANAGEMENT BIORETENTION BMPs FOR THIS PROJECT WILL BE PRIVATELY OWNED AND MAINTAINED.

OPERATION AND MAINTENANCE SCHEDULE FOR BIORETENTION BMPs #1 & #2

THE BIORETENTION FACILITIES SHALL BE INSPECTED AT LEAST TWICE PER YEAR (ONCE EACH IN THE SPRING AND FALL) AND AFTER HEAVY STORMS. THE OWNER IS RESPONSIBLE FOR MAINTAINING A DETAILED LOG OF THE MAINTENANCE INSPECTION FINDINGS AND A HISTORY OF THE COMPLETED WORK. THE LOG SHALL BE MADE AVAILABLE TO HOWARD COUNTY DPZ AND/OR THE MARYLAND DEPARTMENT OF THE ENVIRONMENT UPON REQUEST.

THE BIORETENTION FACILITY COMPONENTS TO BE INSPECTED AND MAINTAINED INCLUDE THE ITEMS AS FOLLOWS:

1. PLANT MATERIAL: PLANTS SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION. REMOVE AND REPLACE DEAD OR DYING VEGETATION CONSIDERED BEYOND TREATMENT (SEE NOTE BELOW). MAINTENANCE ALSO INCLUDES PRUNING, AND REPLACEMENT OF DEFICIENT STAKES AND WIRE.
2. MULCH LAYER: SHALL BE REPLACED ONCE EVERY SPRING DUE TO THE HEAVY METALS GENERATED FROM THE PARKING LOT. THE OWNER SHALL PROPERLY DISPOSE OF THE OLD MULCH SO AS NOT TO CAUSE STORMWATER CONTAMINATION ELSEWHERE. WASHED OUT AREAS SHALL BE REPAIRED AS NECESSARY.
3. SOIL LAYER: SHOULD STORMWATER POND FOR MORE THE 48 HOURS, THE TOP 6 INCHES (MINIMUM) OF THE SOIL LAYER SHALL BE REPLACED. THE OLD SOIL SHALL BE PROPERLY DISPOSED.
4. SPILLWAY OUTFALL, INTERIOR SLOPES: ERODED AREAS SHALL BE REPAIRED (FILLED IN AND SEEDED) AS NEEDED. BARE AREAS SHALL BE TREATED AND RE-SEEDED.
5. RISER: REPAIR CRACKS, DAMAGED CONCRETE, ETC. AS NECESSARY.
6. REMOVE AND PROPERLY DISPOSE ACCUMULATED SEDIMENT GREATER THAN ONE (1) INCH.

NOTES:

1. IF SPECIFIC PLANTS ARE NOT SURVIVING, THE PLANT TYPE SHOULD BE CHANGED TO BETTER SUITED SPECIES.
2. PLANT WATERING MAY BE NECESSARY DURING PROLONGED DRY PERIODS.

Pond MD-378: N.R.C.S. - JANUARY 2000 CONSTRUCTION SPECIFICATIONS FOR SMALL EARTHEN DAMS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-378. All references to ASTM and AASHTO specifications apply to the most recent version.

Site Preparation

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1. All trees shall be cleared and grubbed within 15 feet of the toe of the embankment. Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush, and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of 25-foot radius around the inlet structure shall be cleared. All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

Earth Fill

Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6" frozen or other objectionable materials. Fill material for the center of the embankment, and cut off trench shall conform to Unified Soil Classification GC, SC, CH, or CL and must have at least 30% passing the #200 sieve. Consideration may be given to the use of other materials in the embankment if designed by a geotechnical engineer. Such special designs must have construction supervised by a geotechnical engineer. Materials used in the outer shell of the embankment must have the capability to support vegetation of the quality required to prevent erosion of the embankment.

Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 8 inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment. Compaction - The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one track of heavy equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble, yet not be so wet that water can be squeezed out. The minimum required density shall not be less than 95% of maximum dry density with a moisture content within ±2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99 (Standard Proctor).

Out Off Trench - The cutoff trench shall be excavated to impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation, with the minimum width being four feet. The depth shall be at least four feet below existing grade or as shown on the plans. The side slopes of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability. Embankment Core - The core shall be parallel to the centerline of the embankment as shown on the plans. The top width of the core shall be a minimum of four feet. The height shall extend up to at least the 10 year water elevation or as shown on the plans. The side slopes shall be 1 to 1 or flatter. The core shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability. In addition, the core shall be placed concurrently with the outer shell of the embankment.

Structure Backfill

Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or pipe. Structure backfill may be flowable fill meeting the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 313 as modified. The mixture shall have a 100-200 psi, 28 day unconfined compressive strength. The flowable fill shall have a minimum pH of 4.0 and a minimum resistivity of 2,000 ohm-cm. Material shall be placed such that a minimum of 6" (measured perpendicular to the outside of the pipe) of flowable fill shall be under (bedding), over and, on the sides of the pipe. It only needs to extend up to the spring line for rigid conduits. Average slump of the fill shall be 7" to assure flowability of the material. Adequate measures shall be taken (sand bags, etc.) to prevent floating the pipe. When using flowable fill, all metal pipe shall be bituminous coated. Any adjoining soil fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material shall completely fill all voids adjacent to the flowable fill zone. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a structure or pipe unless there is a compacted fill of 24" or greater over the structure or pipe. Backfill material outside the structural backfill (flowable fill) zone shall be of the type and quality conforming to that specified for the core of the embankment or other embankment materials.

Pipe Conduits

All pipes shall be circular in cross section. Reinforced Concrete Pipe - All of the following criteria shall apply for reinforced concrete pipe: 1. Materials - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM C-361. 2. Bedding - Reinforced concrete pipe conduits shall be laid in a concrete bedding / cradle for their entire length. This bedding / cradle shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 50% of its out-side diameter with a minimum thickness of 5 inches. Where a concrete cradle is not needed for structural reasons, flowable fill may be used as described in the "Structure Backfill" section of this standard. Gravel bedding is not permitted. 3. Laying pipe - Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 4 feet from the riser. 4. Backfilling shall conform to "Structure Backfill". 5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings. Plastic Pipe - The following criteria shall apply for plastic pipe: 1. Materials - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241. Corrugated High Density Polyethylene (HDPE) pipe, couplings and fittings shall conform to the following: 4" - 10" inch pipe shall meet the requirements of AASHTO M252 Type S, and 12" through 24" inch shall meet the requirements of AASHTO M294 Type S. 2. Joints and connections to anti-seep collars shall be completely watertight. 3. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support. 4. Backfilling shall conform to "Structure Backfill". 5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings. Drainage Diaphragms - When a drainage diaphragm is used, a registered professional engineer will supervise the design and construction inspection.

Concrete

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 414, Mix No. 3.

Rock Riprap

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 311. Geotextile shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 921.09, Class C.

Care of Water During Construction

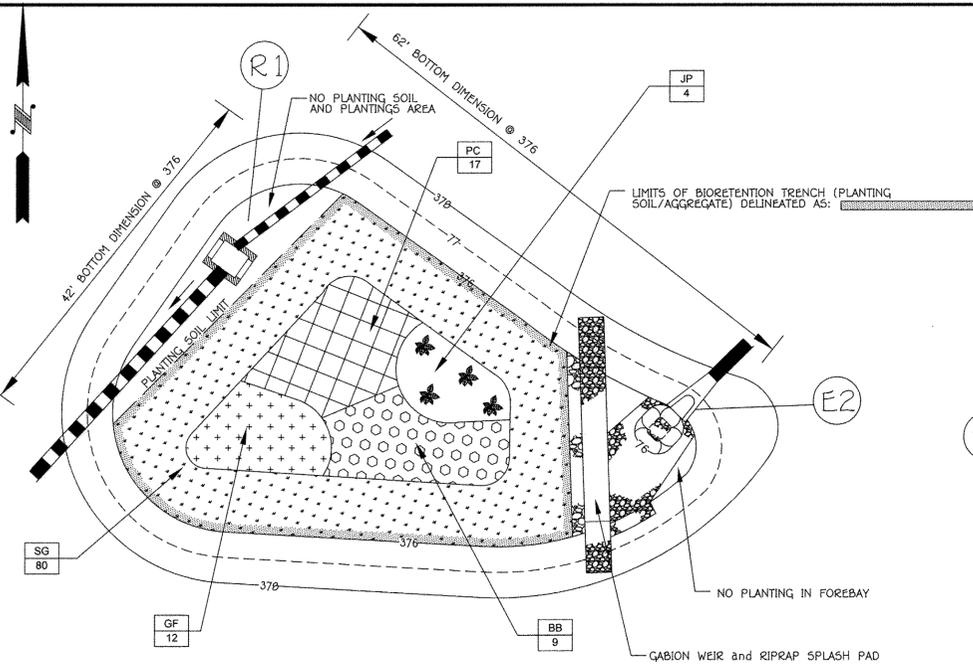
All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, in-stall, operate, and maintain all necessary pumping and other equipment required for removal of water from various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water sumps from which the water shall be pumped.

Stabilization

All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Natural Resources Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the ac-companying drawings.

Erosion and Sediment Control

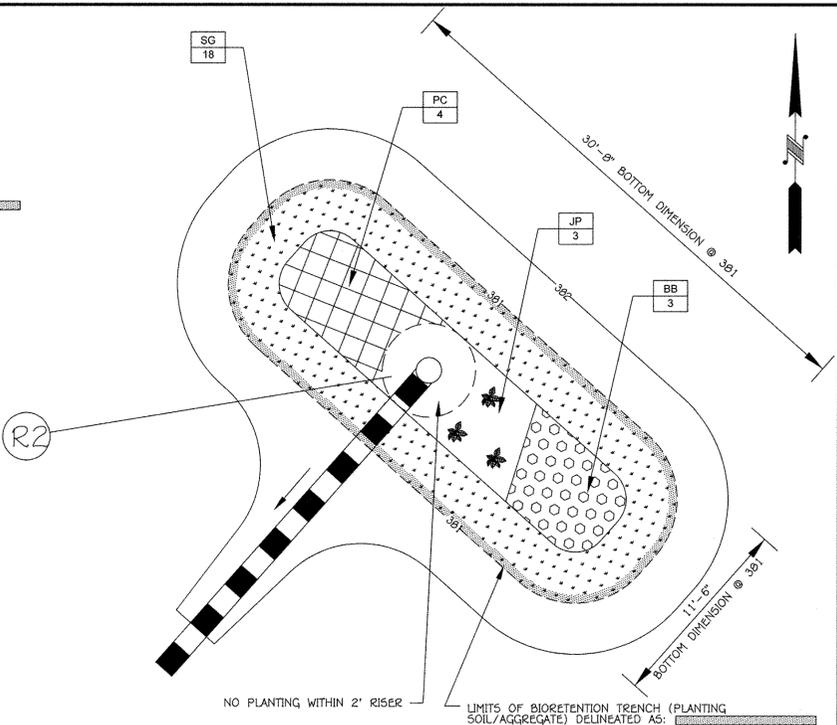
Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures.



BMP #1 PLANTING PLAN

SCALE:
1" = 10'

- NOTES:**
1. THIS PLAN IS FOR PLANTING PURPOSES ONLY
 2. UNDERDRAINS NOT SHOWN FOR CLARITY



BMP #2 PLANTING PLAN

SCALE:
1" = 5'

BIORETENTION FACILITY (BMP) PLANTING SCHEDULE

KEY	PLANT NAME	MIN. SIZE	BMP #1 QUANTITY	BMP #2 QUANTITY	NOTES	SYMBOL
SG	SWITCH GRASS (<i>Panicum virgatum</i>)	1 qt	80	18	Grass @ 3' c/c ±	[Symbol]
GF	GAYFEATHER (<i>Liatris Spicata</i>)	1 qt	12	-	Grass @ 3' c/c ±	[Symbol]
PC	PURPLE CONEFLOWER (<i>Echinacea Purpurea</i>)	1 qt	17	4	Flower @ 3' c/c ±	[Symbol]
JP	JOE PYE WEED (<i>Eupatorium maculatum</i> 'Gateway')	1 gal	4	3	Perennial @ 5' c/c ±	[Symbol]
BB	BEEBALM (<i>Monarda didyma</i>)	1 qt	9	3	Flower @ 4' c/c ±	[Symbol]

PLANTING SPECIFICATIONS:

1. PLANT INSTALLATION SHALL BE PER MDE SPECIFICATIONS IN THE 2000 STORMWATER DESIGN MANUAL.
- ADDITIONAL SPECIFICATIONS: 1. PLANT BMP LEVEL SURFACE AS SHOWN IN THE ABOVE TABLE WITH AN EVEN DISTRIBUTION DENSITY. STABILIZE BMP SIDE SLOPES WITH PERMANENT GRASS SEED PER NRCS SPECIFICATIONS. SIDE SLOPE PERMANENT GRASS AREAS SHALL HAVE 3" OF CLEAN TOPSOIL ON TILLED SUB-SOIL AND CURLEX MATTING, WATER AS NECESSARY UNTIL ESTABLISHED VEGETATION. 2. THE CONTRACTOR SHALL PROVIDE AN UNCONDITIONAL ONE (1) YEAR GUARANTEE FROM THE DATE OF ACCEPTANCE FOR ALL PLANT MATERIALS. 3. PLANT MATERIAL SHALL CONFORM TO THE U.S. STANDARD FOR NURSERY STOCK BY THE AMERICAN ASSOCIATION OF NURSERYMEN. 4. PLANTING PERENNIALS & GRASSES: ROOT SYSTEMS SHALL BE SPLIT OR CRUMBLED. POTTED PLANTS SHALL BE SET SO THAT THE TOP OF THE POT IS EVEN WITH EXISTING GRADE. TREAT THE MULCHED AND PLANTED AREA WITH A PRE-EMERGENT HERBICIDE. 5. ALL PLANTS MUST BE THOROUGHLY AND REGULARLY WATERED PRIOR TO ACCEPTANCE. 6. DO NOT PLANT VEGETATION WITHIN 2 FT OF THE RISER OR AS NOTED ON PLANTING PLAN.



PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED BY ME AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 15038, EXPIRATION DATE: 12/17/17.

Andrew A. Porter 3/23/2016
DATE

OWNER AND DEVELOPER

REVEREND STEPHANIE VADER
EMMANUEL UNITED
METHODIST CHURCH
10755 SCAGSVILLE ROAD
LAUREL, MD 20723
301-725-5200

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

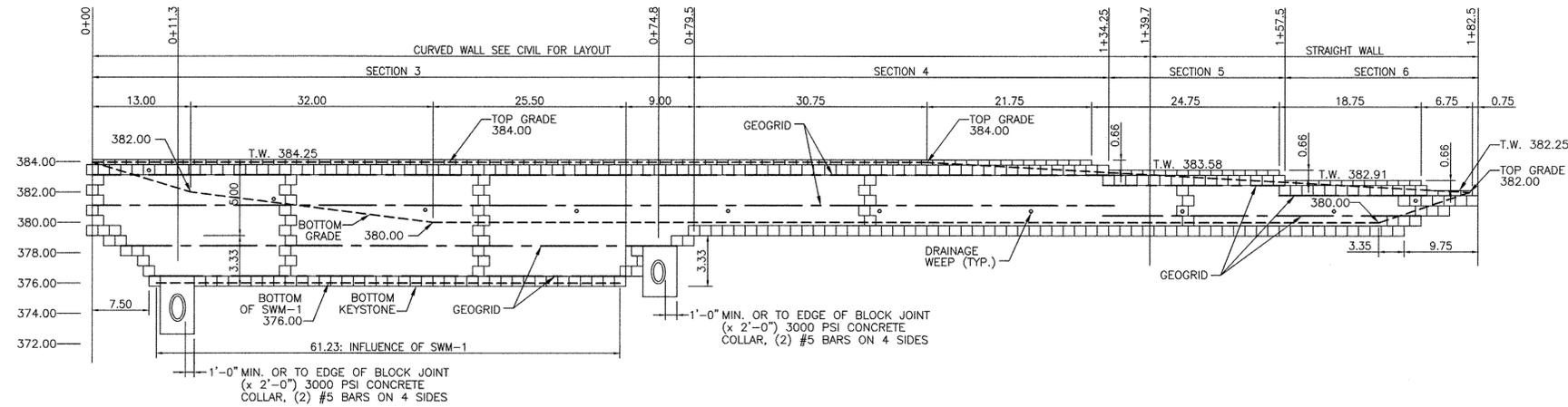
Natalie J. Jelic 6-9-16
Director - Department of Planning and Zoning
Date
Vicki L. Linder 6-9-16
Chief, Division of Land Development
Date
D. J. Linder 5-12-16
Chief, Development Engineering Division
Date

PROJECT	SECTION	PARCEL NOS.			
EMMANUEL UNITED METHODIST CHURCH	-	A			
PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
23786 & 23787	11	R-20	46	SIXTH	6068.02
WATER CODE	SEWER CODE				
E-18	7550000				

STORMWATER MANAGEMENT FACILITY NOTES & SPECIFICATIONS

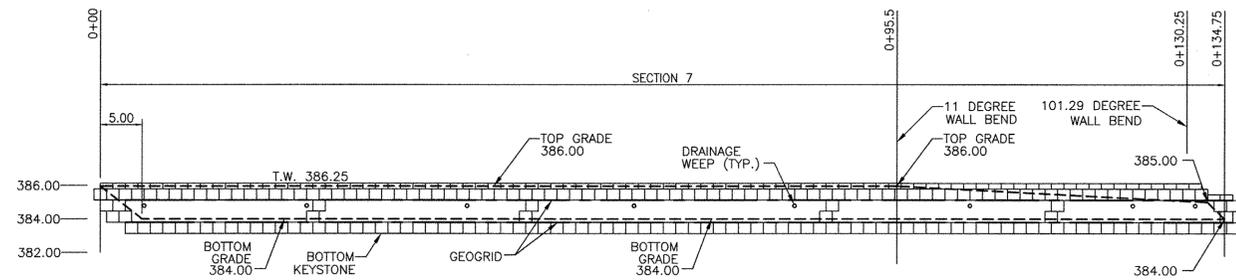
2 STORY MULTI-PURPOSE BLDG. EXT. & PARKING LOT EXT. AND FOREST CONSERVATION RETENTION BANK
EMMANUEL UNITED METHODIST CHURCH
PARCEL 'A'
PREVIOUS HOWARD COUNTY FILES: BA 10-034C&V, BA 90 66E&V
50P-92-027, ECP-13-053 & F-16-052

ZONED: R-20
GRID NO.: 11
PARCEL NO.: 98
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE: MARCH 12, 2016
SHEET 17 OF 22

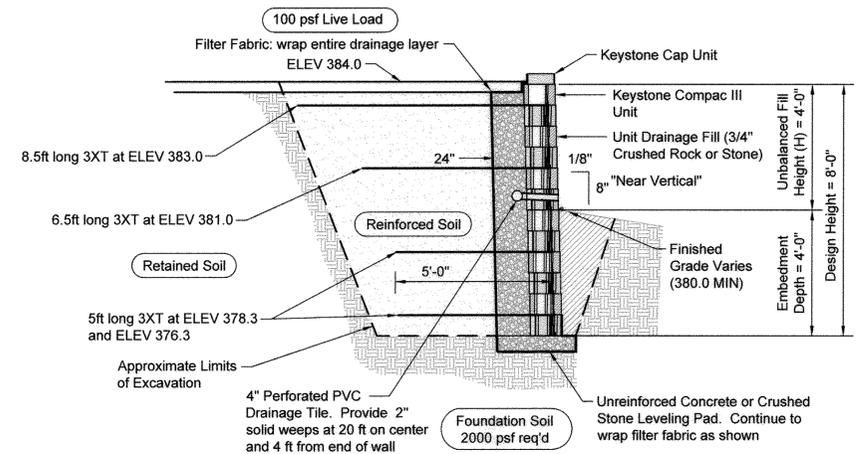


1
19
SEGMENTAL RETAINING WALL 1 ELEVATION
HORIZONTAL SCALE = 1":10'
VERTICAL SCALE = 1":2'

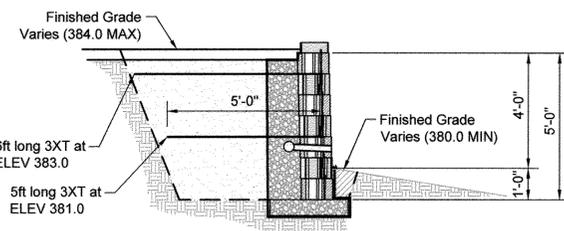
- SEGMENTAL RETAINING WALL NOTES:**
1. SEGMENTAL WALL SHALL BE KEYSTONE BRAND COMPAC III 12" STRAIGHT FACE OR APPROVED EQUAL. COLOR AND FINISHING CAP STYLE TO BE SELECTED/ APPROVED BY OWNER. GEOGRID SHALL CONFORM TO STRATAGRID 200 OR APPROVED EQUAL.
 2. SEE GEOTECHNICAL REPORT BY HILLIS CARNES DATED MARCH 13, 2014 FOR SOIL PREPARATION AND REQUIREMENTS FOR BACKFILL AND LEVELING PAD. ANGLE OF INTERNAL FRICTION OF SOIL = 28 DEGREES MIN. DENSITY 120 PCF ASSUMED. ALLOWABLE BEARING PRESSURE = 2,900 PSF, WHERE SOFT OR LOOSE POCKETS ARE ENCOUNTERED THE UNSUITABLE MATERIALS SHOULD BE UNDERCUT AND REPLACED WITH NEW FILL PLACED AND COMPACTED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT.
 3. SEE TYPICAL WALL DETAIL ON THIS SHEET FOR ADDITIONAL INFORMATION.
 4. FOR FENCE GUIDELINES SEE SHEET 21. SEE CIVIL DRAWINGS FOR FENCE LAYOUT.
 5. FOR ADDITIONAL INFORMATION AND DETAILS ON THE KEYSTONE BRAND SYSTEM REFER TO SHEET 20.
 6. WALL DESIGN PARAMETERS:
 - LIVE LOAD SURCHARGE = 100 PSF
 - F.S. 1.5 FOR MANUFACTURED BLOCK
 - F.S. 2.0 FOR OVERTURNING FAILURE
 - F.S. 2.0 FOR BEARING FAILURE
 7. T.W. DENOTES TOP OF KEYSTONE WALL ELEVATION



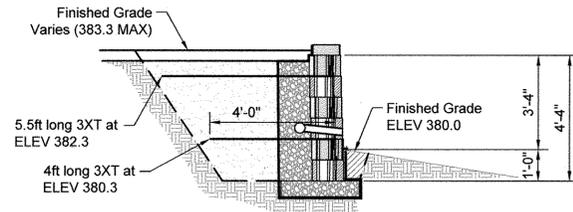
2
19
SEGMENTAL RETAINING WALL 2 ELEVATION
HORIZONTAL SCALE = 1":10'
VERTICAL SCALE = 1":2'



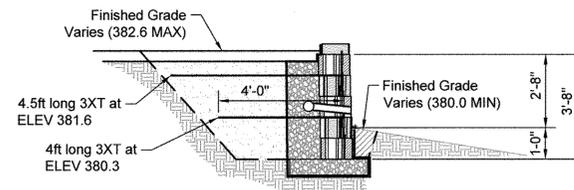
3
19
SEGMENTAL RETAINING WALL 1 SECTION
STA. 0+00 TO 0+79.5
SCALE = 3/4" = 1'-0"



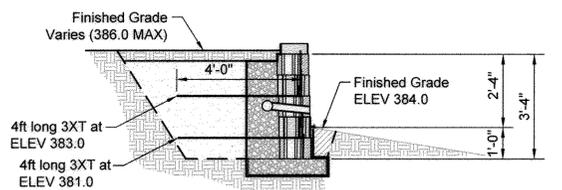
For Additional Detail See Section 1



For Additional Detail See Section 1



For Additional Detail See Section 1



For Additional Detail See Section 1

4
19
SEGMENTAL RETAINING WALL 1 SECTION
STA. 0+79.5 TO 1+34.25
SCALE = 3/4" = 1'-0"

5
19
SEGMENTAL RETAINING WALL 1 SECTION
STA. 1+34.25 TO 1+57.5
SCALE = 3/4" = 1'-0"

6
19
SEGMENTAL RETAINING WALL 1 SECTION
STA. 1+57.5 TO 1+82.5
SCALE = 3/4" = 1'-0"

7
19
SEGMENTAL RETAINING WALL 2 SECTION
SCALE = 3/4" = 1'-0"

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELICOTT CITY, MARYLAND 21042
(410) 461-2855

TEC
Tarantino Engineering Consultants, PC
7678 Midtown Rd.
Fulton, MD 20779
410-921-7678
www.tarantinoec.com



PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 24871, EXPIRATION DATE: 2/28/18.

OWNER AND DEVELOPER
REVEREND STEPHANIE VADER
EMMANUEL UNITED
METHODIST CHURCH
10755 SCAGGSVILLE ROAD
LAUREL, MD 20723
301-498-2893

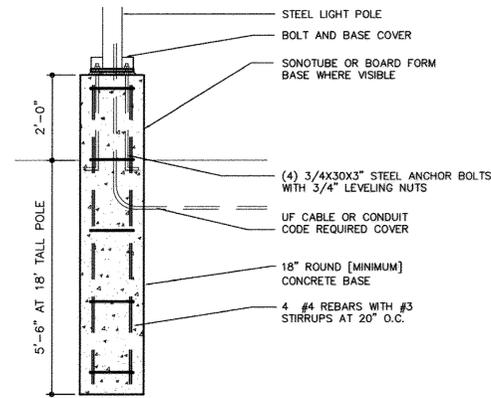
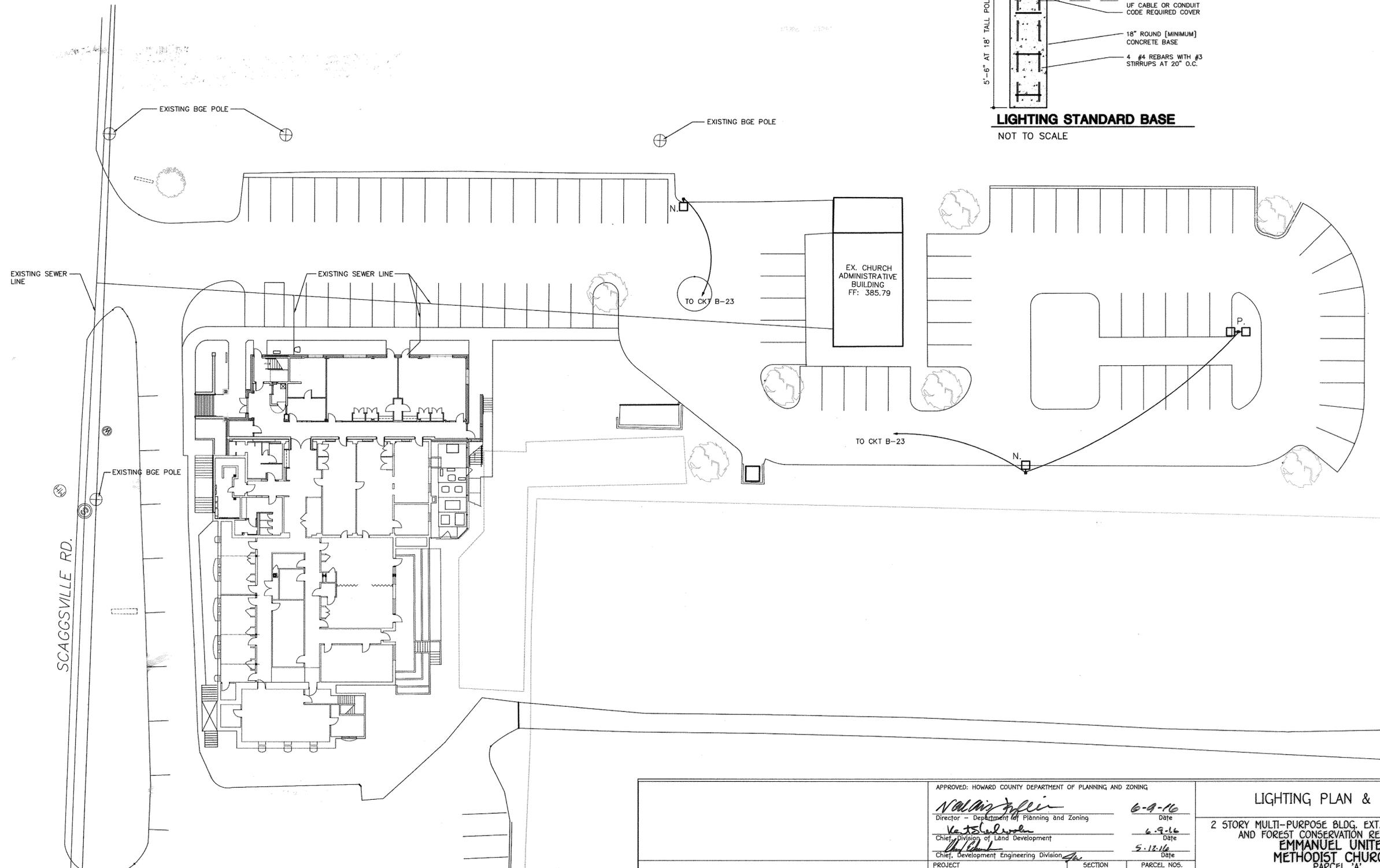
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

William J. Jelinek
Director - Department of Planning and Zoning
Date: 6-9-16
Kevin J. Shuman
Chief, Division of Land Development
Date: 6-9-16
W. J. Jelinek
Chief, Development Engineering Division
Date: 5-17-16

PROJECT	SECTION	PARCEL NOS.			
EMMANUEL UNITED METHODIST CHURCH	-	A			
PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
23786-4 23787-1	11	R-20	46	SIXTH	6068.02
WATER CODE	SEWER CODE				
E-18	7550000				

SITE WALL
ELEVATIONS AND DETAILS

2 STORY MULTI-PURPOSE BLDG. EXT. & PARKING LOT EXT.
AND FOREST CONSERVATION RETENTION BANK
EMMANUEL UNITED
METHODIST CHURCH
PARCEL 'A'
PREVIOUS HOWARD COUNTY FILES: BA 10-034C&V, BA 90 66E&V
SDP-92-027, ECP-13-053 & F-16-052
ZONED: R-20
TAX MAP NO.: 46 GRID NO.: 11 PARCEL NO.: 98
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: DATE: DECEMBER 29, 2015
SHEET 19 OF 22 SDP-15-067



LIGHTING STANDARD BASE
NOT TO SCALE

ELECTRICAL SITE PLAN

1"=20'

OWNER AND DEVELOPER

REVEREND STEPHANIE VADER
EMMANUEL UNITED
METHODIST CHURCH
10755 SCAGGSVILLE ROAD
LAUREL, MD 20723
301-725-5200

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Natalie Miller 6-9-16
Director - Department of Planning and Zoning Date

Kate Schuler 6-9-16
Chief, Division of Land Development Date

M. Brown 5-12-16
Chief, Development Engineering Division Date

PROJECT SECTION PARCEL NOS.
EMMANUEL UNITED METHODIST CHURCH - A

PLAT	BLOCK NO.	ZONE	TAX/ZONE	ELEC. DIST.	CENSUS TR.
2-3766 & 2-3787	11	R-20	46	SIXTH	6068.02

WATER CODE	SEWER CODE
E-18	7550000

LIGHTING PLAN & DETAILS

2 STORY MULTI-PURPOSE BLDG. EXT. & PARKING LOT EXT.
AND FOREST CONSERVATION RETENTION BANK
**EMMANUEL UNITED
METHODIST CHURCH**
PARCEL 'A'
PREVIOUS HOWARD COUNTY FILES: BA 10-034C&V, BA 90 66E&V
SDP-92-027, ECP-13-053 & F-16-052
ZONED: R-20
TAX MAP NO.: 46 GRID NO.: 11 PARCEL NO.: 98
SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: MARCH 30, 2016
SHEET 22 OF 22 SDP-15-067

CORKILL CUSH REEVES, P.A.
ARCHITECTS
10,111 M.L.King, Jr. Hwy., Suite 202, Bowie, MD 20720
architecture · planning · feasibility · landscape · interiors
TEL: 301.577.2486 FAX: 301.577.2102

**EMMANUEL UNITED METHODIST CHURCH
ADDITION AND RENOVATION**
10755 SCAGGSVILLE ROAD
LAUREL, MD 20723



Project No. -NA-
Date 9/2/15
Revisions
Project Architect -NA-
Drawn By -NA-
Checked By -NA-
Scale 1" = 20'
Area
XREF
File Name: E-site.dwg

Title ELECTRICAL
SITE PLAN
Dwg. No. **ES1**
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