

FINAL ROAD CONSTRUCTION, GRADING AND STORMWATER MANAGEMENT PLANS

OXFORD SQUARE

"A HOWARD COUNTY GREEN NEIGHBORHOOD"

Saint Margarets Boulevard (Sta. 6+62.30 to Sta. 12+52.60 & Banbury drive (Sta. 11+98 to Sta. 15+60.84)

(Being A Resubdivision Of Parcel 'H' To Create Parcel 'M', Banbury Drive And Saint Margarets Boulevard Right-Of-Way, As Shown On Plats Entitled "Oxford Square, "Green Neighborhood", Parcels 'C' Thru 'L' And Open Space Lots 1 And 2" And Recorded Among The Land Records Of Howard County, Maryland As Plat Nos. 22390 Thru 22395)

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ROADWAY INFORMATION CHART				
ROAD NAME	CLASSIFICATION	DESIGN SPEED	POSTED SPEED LIMIT	R/W WIDTH
SAINT MARGARETS BOULEVARD	MAJOR COLLECTOR	30 MPH	25 MPH	VARIES
BANBURY DRIVE	MAJOR COLLECTOR	30 MPH	25 MPH	VARIES

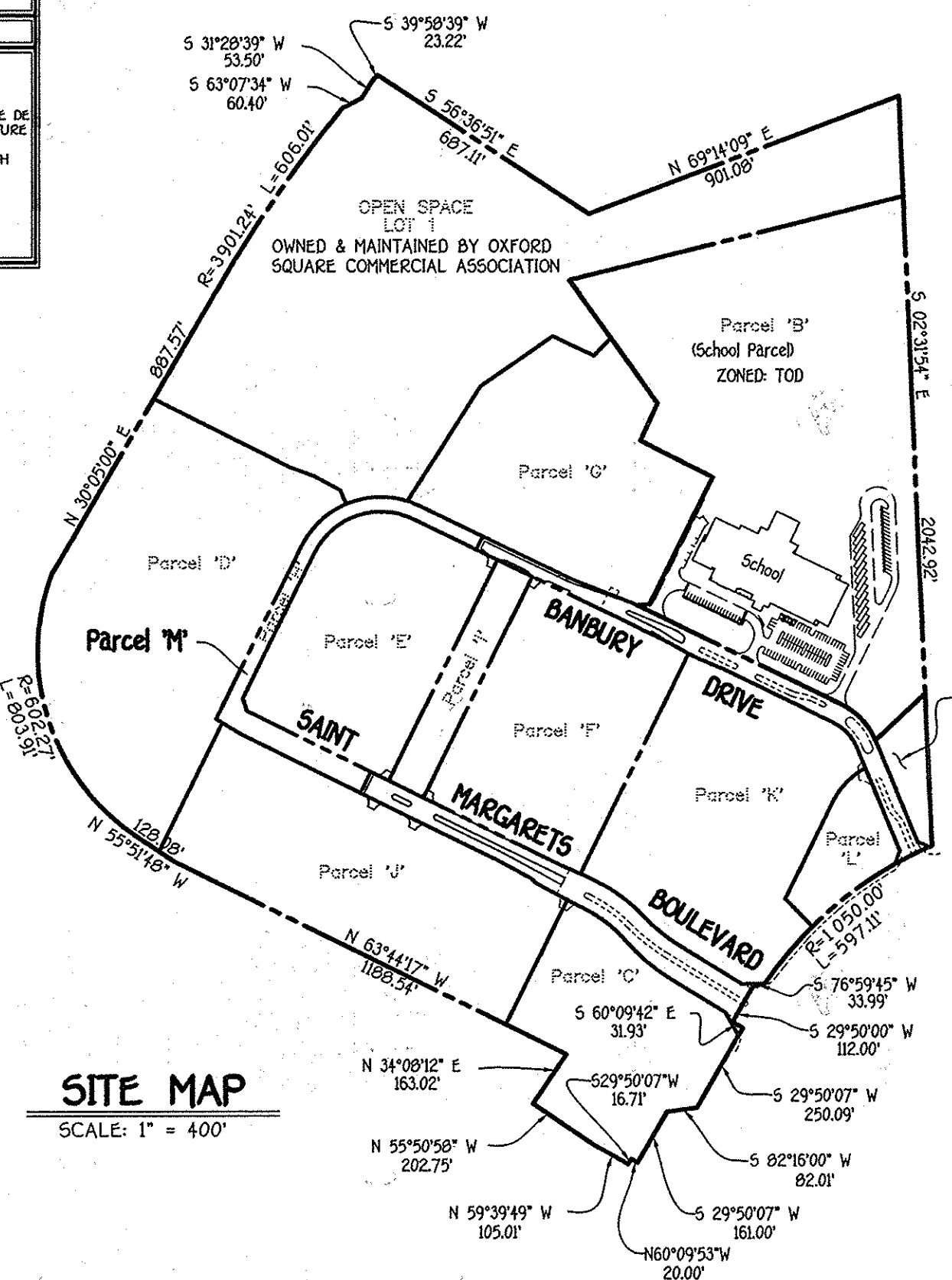
TRAFFIC CONTROL SIGNS				
ROAD NAME	CENTERLINE STA.	OFFSET	POSTED SIGN	SIGN CODE
BANBURY DRIVE	9+50	1' R	KEEP RIGHT	R4-7
	14+72 - MOUNT ON LIGHT POLE	12.5' R	END SCHOOL ZONE	55-2
	13+20 - MOUNT ON LIGHT POLE	12.5' R	SPEED LIMIT 25 w/PHOTO ENFORCED	R2-1
	12+56	16' R	ROAD CLOSED 300 FT.	W20-3
SAINT MARGARETS BOULEVARD	15+65 - MOUNT TO BARRICADE	---	ROAD CLOSED	R11-2
	15+65 - MOUNT TO BARRICADE	---	ROAD CLOSED	R11-2

TRAFFIC CONTROL SIGNS				
ROAD NAME	CENTERLINE STA.	OFFSET	POSTED SIGN	SIGN CODE
SAINT MARGARETS BOULEVARD	6+65	8' R	KEEP RIGHT w/ OBJECT MARKER	R4-7 OM-1
	7+20	6' R	SPEED LIMIT 25	R2-1
	7+49 - MOUNT ON LIGHT POLE	39.7' L	NO PARKING HERE TO CORNER	R4-7
	9+44 - MOUNT ON LIGHT POLE	35' R	ROAD CLOSED 300 FT.	W20-3
	9+44	5' R	ROAD CLOSED 300 FT.	W20-3
	10+00	5' L	SPEED LIMIT 25	R2-1
	10+52	3' L	KEEP RIGHT w/ OBJECT MARKER	OM-1
	10+85	5' L	STOP w/ ONE WAY SIGN	R1-1 R6-1L R6-1R
	11+30	2' R	KEEP RIGHT w/ OBJECT MARKER	OM-1
	11+56 - MOUNT ON LIGHT POLE	35.5' L	NO STOPPING	R4-7
11+56	33' R	NO STOPPING	R4-7	
11+78	4' L	KEEP RIGHT w/ OBJECT MARKER	R4-7 OM-1	
12+29	5' R	STOP w/ ONE WAY SIGN	R1-1 R6-1L R6-1R	
BANBURY DRIVE	12+50 - MOUNT TO BARRICADE	---	ROAD CLOSED	R11-2
	12+55 - MOUNT TO BARRICADE	---	ROAD CLOSED	R11-2
	12+55 - MOUNT TO BARRICADE	---	ROAD CLOSED	R11-2
	12+55 - MOUNT TO BARRICADE	---	ROAD CLOSED	R11-2

STREET LIGHT CHART			
STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
SAINT MARGARETS BOULEVARD	6+64	35.2' L	175 W/HT METAL HALIDE TRAP
	6+67	35.2' R	200W FIBERGLASS POLE WITH SHROUD USING A 4" ARM
	6+72	35.2' L	175 W/HT METAL HALIDE TRAP
	6+72	35.2' R	200W FIBERGLASS POLE WITH SHROUD USING A 4" ARM
	7+20	37.5' R	100 W/HT METAL HALIDE TRAP
	7+24	35.5' R	100 W/HT METAL HALIDE TRAP
	7+24	35.5' R	100 W/HT METAL HALIDE TRAP
	7+29	35.5' R	100 W/HT METAL HALIDE TRAP
	9+03	35.5' L	100 W/HT METAL HALIDE TRAP
	9+06	35.5' L	100 W/HT METAL HALIDE TRAP
9+10	35.5' L	100 W/HT METAL HALIDE TRAP	
9+14	35.5' R	100 W/HT METAL HALIDE TRAP	

STREET LIGHT CHART			
STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
BANBURY DRIVE	11+25	22.0' R	100 W/HT METAL HALIDE TRAP
	11+25	22.0' R	100 W/HT METAL HALIDE TRAP
	11+25	22.0' R	100 W/HT METAL HALIDE TRAP
	11+25	22.0' R	100 W/HT METAL HALIDE TRAP
	11+25	22.0' R	100 W/HT METAL HALIDE TRAP
	11+25	22.0' R	100 W/HT METAL HALIDE TRAP
	11+25	22.0' R	100 W/HT METAL HALIDE TRAP
	11+25	22.0' R	100 W/HT METAL HALIDE TRAP
	11+25	22.0' R	100 W/HT METAL HALIDE TRAP
	11+25	22.0' R	100 W/HT METAL HALIDE TRAP

LEGEND	
SYMBOL	DESCRIPTION
---	EXISTING CONTOUR 2' INTERVAL
---	EXISTING CONTOUR 10' INTERVAL
---	PROPOSED CONTOUR 2' INTERVAL
---	PROPOSED CONTOUR 10' INTERVAL
---	SILT FENCE
---	DRAINAGE LIMITS
---	LIMIT OF DISTURBANCE
---	EXISTING GASMAIN
---	EXISTING TREELINE
---	WETLANDS BUFFER
---	WETLANDS LIMITS
---	FLOODPLAIN LIMITS
---	STORMWATER MANAGEMENT DEVICE
---	STORM DRAIN
---	BORING LOCATION
---	PROPOSED STREET TREE
---	EXISTING STREET TREE
---	PROPOSED STREET LIGHT
---	EXISTING STREET LIGHT



Zoning: TOD

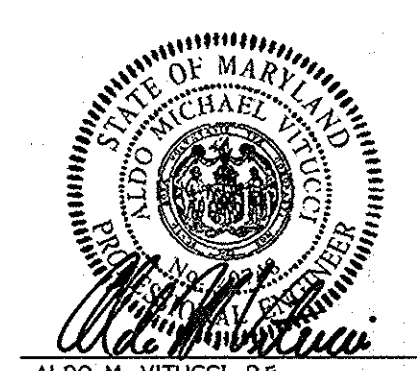
Tax Map: 38 Parcel: 761 Grid: 20

First Election District

Howard County, Maryland

Owner
Kellogg-CCP, LLC
c/o David P. Scheffacker, Jr.
Managing Member
2330 West Joppa Road, Suite 190
Lutherville, Maryland 21093-4614
Ph: 410-296-3800

Developer
Preston Scheffacker Properties
2330 West Joppa Road, Suite 190
Lutherville, Maryland 21093-4614
Ph: 410-296-3800



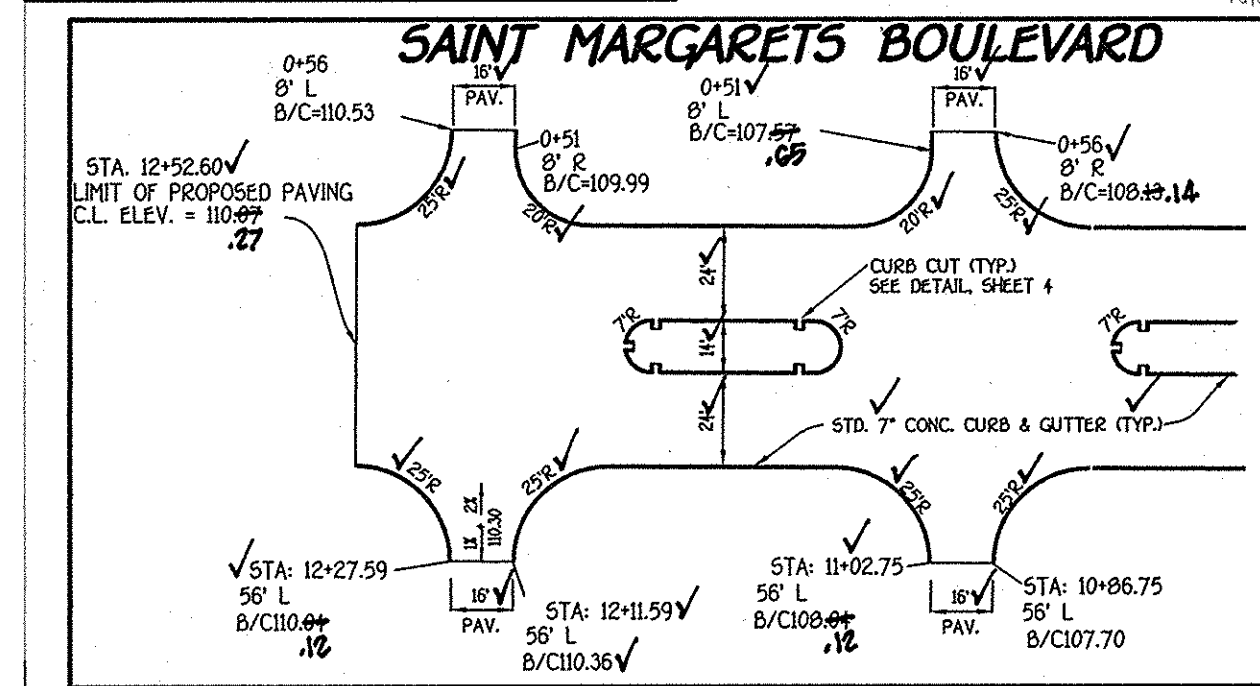
ALSO A VITUCO DATE 01/06/14
Professional Certification I hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Engineer under the laws of the State of Maryland, License No. 20746, Expiration Date 5-25-15.

APPROVED: DEPARTMENT OF PUBLIC WORKS
William J. ... 1-21-14
 CHIEF, BUREAU OF HIGHWAYS
 APPROVED: DEPARTMENT OF PLANNING AND ZONING
West ... 2/19/14
 CHIEF, DIVISION OF LAND DEVELOPMENT
... 2.7.14
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

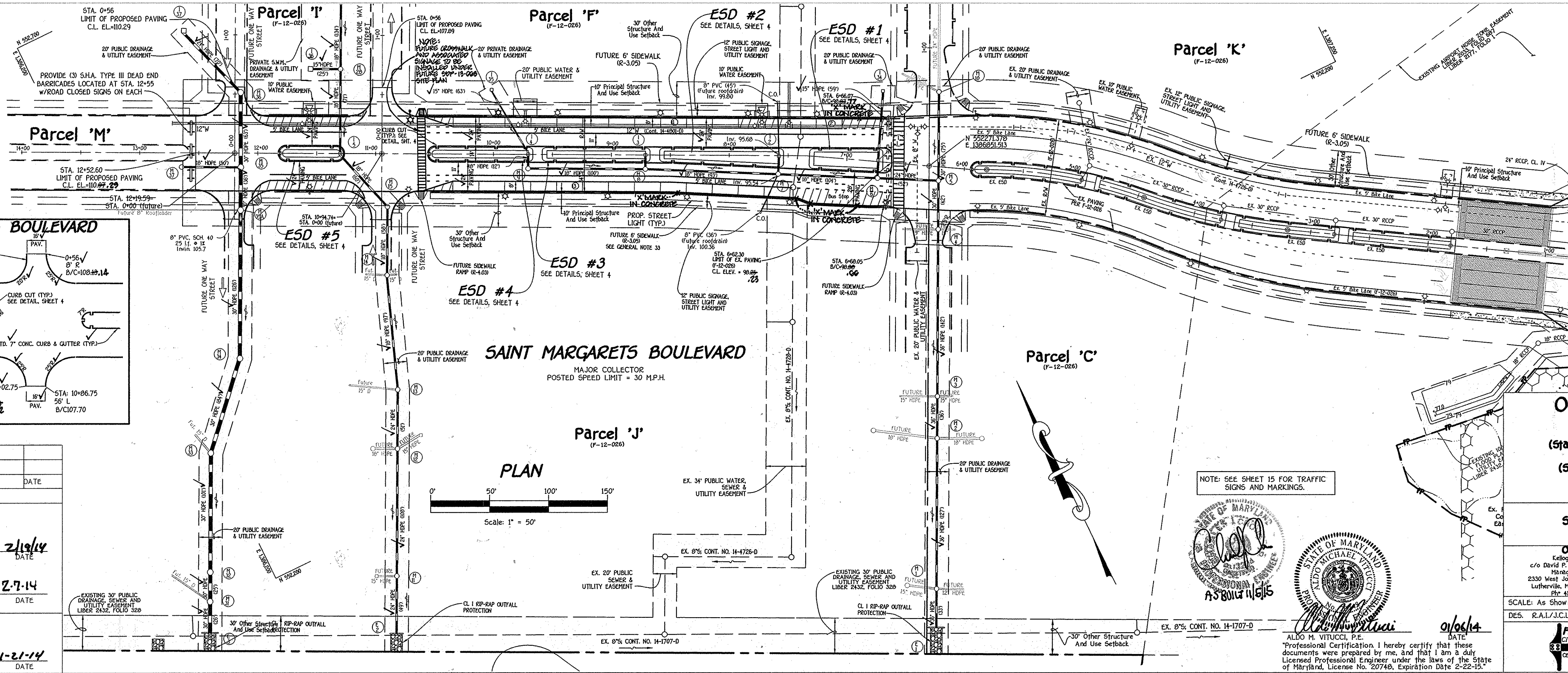
GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS HMA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS / BUREAU OF ENGINEERING / CONSTRUCTION INSPECTION DIVISION AT 410-313-8000 AT LEAST 48 HOURS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "M&E UTILITY" AT 410-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- THIS SUBDIVISION PLAN IS SUBJECT TO THE APPROVED FINAL EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE 2010-13 ZONING REGULATIONS PER COUNCIL BILL NO. 30-2012 DEVELOPMENT OR CONSTRUCTION ON THESE LOTS OR PARCELS MUST COMPLY WITH SETBACKS AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF A BUILDING OR GRADING PERMIT APPLICATION.
- COORDINATES BASED ON MAJOR MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS NO. 300A AND NO. 300A
 Station No. 300A (N 156°56'32.23" E 1190221.4576) Elev. = 108.60'
 Station No. 300A (N 50°57'23.73" E 1190232.2953) Elev. = 80.70'
- SUBJECT PROPERTY ZONED TOD PER 22-10964 DATED 9/15/08, ZRA-HQ DATED 6/16/12 & ZB-10281 DATED 1/17/13.
- BACKGROUND INFORMATION:
 a. SUBDIVISION NAME: OXFORD SQUARE
 b. TAX MAP NO.: 38 & 4
 c. PARCELS NOS.: 761
 d. ZONING: TOD
 e. ELECTION DISTRICT: 20
 f. GROSS AREA OF THIS SUBDIVISION - 41.54 ACRES
 g. NUMBER OF PARCELS: 8
 h. NUMBER OF OPEN SPACE LOTS: 0
 i. AREA OF PARCELS: 40.32 ACRES
 j. AREA OF OPEN SPACE LOTS: 0
 k. AREA OF PUBLIC ROADWAY TO BE DEDICATED: 1.199 ACRES
 l. PREVIOUS FILE NUMBERS: 5-07-066, 9-07-076, F-08-095, F-09-005, SGP-09-075, F-10-125, F-10-099, SGP-10-041, F-10-024, SGP-10-055, ZB-10094, W-11-130, F-11-057, W-11-147, F-11-001, ECP-11-046, F-12-005, ZB-10281
 m. AREA OF FLOORPLAN - 1.889 ACRES (PARCEL 'C')
 n. AREA OF USE OR GREATER SLOPES - NONE WITH THIS SUBDIVISION
 o. NET AREA OF SUBDIVISION - 39.372 AC.
 p. AVENUE REQUIREMENTS: TOD DEVELOPMENT SHALL INCLUDE AN AVENUE AREA PER SECTION 12.2.1.1.1 OF THE ZONING REGULATIONS AND THE ROUTE 1 MANUAL.
 q. AVENUE AREA REQUIRED: 2.12 ACRES FOR THE ENTIRE PROJECT (0.0509 x 100)
 r. TOTAL AVENUE AREA PROVIDED: 0.00 AC. (UNLESS SHOWN OTHERWISE)
 s. ALL FILL AREAS WITHIN ROADWAYS AND UNDER STRUCTURES SHALL BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T-100.
 t. NOISE STUDY WAS PREPARED BY H&M GROUP DATED NOVEMBER 2009. THE 650A NOISE CONTOUR LINE DRAWN ON THIS PLAN IS ADVISORY AS REQUIRED BY THE HOWARD COUNTY DESIGN MANUAL CHAPTER 5, REVISED FEBRUARY 1992, AND CANNOT BE CONSIDERED TO EXACTLY LOCATE THE 650A NOISE EXPOSURE. THE 650A NOISE LINE WAS ESTABLISHED BY HOWARD COUNTY TO ALLEVIATE DEVELOPERS, BUSINESS AND FUTURE RESIDENTS CONCERN THAT AREAS BEYOND THIS THRESHOLD MAY EXCEED GENERALLY ACCEPTED NOISE LEVELS ESTABLISHED BY THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.
 u. EXISTING WATER IS PUBLIC - CONTRACT NO. H-1777-D & H-1729-D
 EXISTING SEWER IS PUBLIC - CONTRACT NO. H-1777-D & H-1729-D
 v. SOILS INFORMATION TAKEN ECS SOIL SURVEY DATED NOVEMBER 2, 2009. THE PROPERTY LIES WITHIN THE DEEP RUN TRIBUTARY TO THE PATAPUSCO RIVER WATERSHED (0203960). MOST OF THE PARCEL 'C' CONSISTS OF OVERBANK FLOOD HAZARD ZONING (OFZ) AREAS. IT IS THE DEVELOPER'S RESPONSIBILITY TO OBTAIN NECESSARY PERMITS FROM THE HOWARD COUNTY SOIL SURVEY MAPS DATED JULY 1980 DO NOT APPLY, AS A RESULT OF THIS SITE CONDITION. THE OWNER/DEVELOPER HAS CONTRACTED ECS-HD ATLANTIC, LLC OF HANOVER, MARYLAND. THE SOIL REPORT IS DATED NOVEMBER 2009 WITH AN ADDENDUM DATED FEBRUARY 2010 THAT SUPPLEMENTED THE SOIL GROUPS REQUIRED FOR THIS BARN REPORT.
 w. BOUNDARY OUTLINE BASED ON FIELD SURVEY PERFORMED BY FISHER COLLINS AND CARTER, INC. DATED JANUARY, 2008 AND SUPPLEMENTED WITH FIELD RUN TOPOGRAPHY PREPARED BY FISHER COLLINS AND CARTER, INC. DATED MAY, 2009.
 x. TOPOGRAPHIC CONTOURS BASED ON AERIAL SURVEY PERFORMED BY HARPOD AERIAL SURVEYS, INC. DATED JANUARY, 2008 AND SUPPLEMENTED WITH FIELD RUN TOPOGRAPHY PREPARED BY FISHER COLLINS AND CARTER, INC. DATED MAY, 2009.
 y. THESE IS ONE AREA OF STEEP SLOPES LOCATED ON THIS PROPERTY AS DEFINED BY THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS, SECTION 16.01.01, 02.00 AND 03.00.
 z. STORMWATER MANAGEMENT WILL BE PROVIDED IN ACCORDANCE WITH THE 2007 H&M CHAPTER 5 REGULATIONS AND THE LATEST HOWARD COUNTY DESIGN MANUAL, VOL. 1. CHAPTER 5 ADDED ON OR AROUND MAY 4, 2008. RESERVE VOLUME PROTECTION THROUGH THE USE OF A STONE RESERVOIR, WATER QUALITY AND FLOW PROTECTION VOLUME WILL BE PROVIDED BY SCOURPROTECTOR, SANDWATER, INVESTIGATING MICRO-RETENTION FACILITIES & A SURFACE SAND FILTER. OVERBANK FLOOD PROTECTION VOLUME AND EXTENSIVE FLOOD VOLUMES ARE NOT REQUIRED FOR THIS SITE. ALL STONE RESERVOIR, SCOURPROTECTOR, SANDWATER, INVESTIGATING MICRO-RETENTION FACILITIES AND SURFACE SAND FILTERS SHALL BE MAINTAINED BY THE H&M OR COMMERCIAL ASSOCIATION. THE STREET TREES WITHIN ESO FACILITIES, PERFORATED UNDERDRAINS, FEEDERS, PLANTINGS AND SHALLS WILL BE PRIVATELY OWNED AND MAINTAINED BY OXFORD SQUARE COMMERCIAL ASSOCIATION. HOWARD COUNTY WILL ONLY MAINTAIN THE INLET STRUCTURES WITHIN THE MICRO-RETENTION FACILITIES ADJACENT TO THE RIGHT-OF-WAY.
 aa. GENERAL SPECIES TREES ARE KNOWN TO BE LOCATED WITHIN THE EXISTING FOREST; HOWEVER THEY WERE NOT SURVEYED BECAUSE THERE WILL BE NO PROPOSED DISTURBANCES WITHIN THE EXISTING FOREST.
 ab. FLOORPLAN LINES SHOWN FOR THE OVERALL OXFORD SQUARE PROJECT WAS PREPARED BY WATSON REARDMAN AND ASSOCIATES AND IS DELINEATED ON PLAT 9924 07-09-0699. FOR THE LIMITS OF THIS SUBDIVISION, NO FLOORPLAN LINES ARE DELINEATED.
 ac. THE FOREST CONSERVATION ACT REGULATIONS FOR THE OXFORD SQUARE DEVELOPMENT WERE SATISFIED BY F-12-025.
 ad. THE FOREST STAND DELINEATION AND WETLAND DELINEATION FOR THIS PROJECT WAS PREPARED BY ECO-SYSTEM PROFESSIONALS, INC. DATED MARCH 17, 2011 AND APPROVED UNDER 9-10-081 & ECP-10-044.
 ae. THIS PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
 af. NO COMPLETES OR HISTORIC STRUCTURES EXIST WITHIN THE SUBDIVISION.
 ag. STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURES AND POLES SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME 1B (2006), SECTION 5.5.A. A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY STREET TREE.
 ah. TRAFFIC CONTROL DEVICES
 ai. THE 24" STOP SIGN AND THE STREET NAME SIGN SIGNS REQUIRED FOR THIS DEVELOPMENT MUST BE INSTALLED BEFORE THE BASE PAVING IS COMPLETED.
 aj. THE TRAFFIC CONTROL DEVICE LOCATIONS SIGNS & PAVEMENT MARKINGS SHOWN ON THE PLANS ARE APPROXIMATE AND MUST BE FIELD APPROVED BY THE HOWARD COUNTY TRAFFIC DIVISION (410-313-5750) PRIOR TO THE INSTALLATION OF THESE TRAFFIC CONTROL DEVICES.
 ak. TRAFFIC CONTROL DEVICES SHALL BE INSTALLED WITHIN THE LATEST EDITION OF THE "MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (9/8/2011).
 al. ALL SIGN POSTS USED FOR TRAFFIC CONTROL, SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL PERFORATED SQUARE TUBE POST ON GAUGES INSERTED INTO A 2-1/2" GALVANIZED STEEL PERFORATED SQUARE TUBE POST OR SHALL BE MOUNTED ON TOP OF EACH POST.
 am. THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY THE TRAFFIC GROUP, DATED MARCH 2009 PER THIS STUDY, ONCE THE TOTAL WEEKDAY EVENING PEAK HOUR TRIP GENERATION EXCEEDS 100 TRIPS, THE ULTIMATE ROAD IMPROVEMENTS ARE NEEDED AT THE INTERSECTION OF COCA COLA DRIVE & PARK CIRCLE DRIVE. AN ADEQUATE ROAD RE-EVALUATION WILL BE PERFORMED FOR PARK CIRCLE DRIVE & COCA COLA DRIVE IN 2017 FOR EVENING PEAK HOUR.
 an. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE WETLANDS, STREAMS, THEIR REGULATED BUFFERS OR THEIR EXTENDED GREEN NEIGHBORHOOD BUFFERS, UNLESS THE ACTIVITIES ARE CONSIDERED NECESSARY OR WARRIES ARE APPROVED BY THE DEPARTMENT OF PLANNING AND ZONING. ACTIVITIES PROPOSED IN WETLANDS, STREAMS, THEIR BUFFERS, AND THEIR EXTENDED GREEN NEIGHBORHOOD BUFFERS AS PART OF THE APPROVED STREAM AND WETLAND RESTORATION AND MANAGEMENT PLANS ARE CONSIDERED NECESSARY BY THE DEPARTMENT OF PLANNING AND ZONING.
 ao. PRESEWER LANDSCAPING SHALL BE ADDRESSED IN ACCORDANCE WITH SECTION 15.04 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL, AS PART OF SITE DEVELOPMENT PLAN STAGES.
 ap. ON JANUARY 14, 2012, A LETTER WAS RECEIVED FROM HOWARD COUNTY PLANNING AND ZONING REGARDING A DESIGN MANUAL CHANGE FOR THE FOLLOWING SECTIONS OF DMV 1B: 2.2.4.0.5 (STOP THROUGH LANE), SECTIONS 2.3.1.1.1 (OPEN SPACE), 2.3.1.1.2 (OPEN SPACE), 2.3.1.1.3 (OPEN SPACE), 2.3.1.1.4 (OPEN SPACE), 2.3.1.1.5 (OPEN SPACE), 2.3.1.1.6 (OPEN SPACE), 2.3.1.1.7 (OPEN SPACE), 2.3.1.1.8 (OPEN SPACE), 2.3.1.1.9 (OPEN SPACE), 2.3.1.1.10 (OPEN SPACE), 2.3.1.1.11 (OPEN SPACE), 2.3.1.1.12 (OPEN SPACE), 2.3.1.1.13 (OPEN SPACE), 2.3.1.1.14 (OPEN SPACE), 2.3.1.1.15 (OPEN SPACE), 2.3.1.1.16 (OPEN SPACE), 2.3.1.1.17 (OPEN SPACE), 2.3.1.1.18 (OPEN SPACE), 2.3.1.1.19 (OPEN SPACE), 2.3.1.1.20 (OPEN SPACE), 2.3.1.1.21 (OPEN SPACE), 2.3.1.1.22 (OPEN SPACE), 2.3.1.1.23 (OPEN SPACE), 2.3.1.1.24 (OPEN SPACE), 2.3.1.1.25 (OPEN SPACE), 2.3.1.1.26 (OPEN SPACE), 2.3.1.1.27 (OPEN SPACE), 2.3.1.1.28 (OPEN SPACE), 2.3.1.1.29 (OPEN SPACE), 2.3.1.1.30 (OPEN SPACE), 2.3.1.1.31 (OPEN SPACE), 2.3.1.1.32 (OPEN SPACE), 2.3.1.1.33 (OPEN SPACE), 2.3.1.1.34 (OPEN SPACE), 2.3.1.1.35 (OPEN SPACE), 2.3.1.1.36 (OPEN SPACE), 2.3.1.1.37 (OPEN SPACE), 2.3.1.1.38 (OPEN SPACE), 2.3.1.1.39 (OPEN SPACE), 2.3.1.1.40 (OPEN SPACE), 2.3.1.1.41 (OPEN SPACE), 2.3.1.1.42 (OPEN SPACE), 2.3.1.1.43 (OPEN SPACE), 2.3.1.1.44 (OPEN SPACE), 2.3.1.1.45 (OPEN SPACE), 2.3.1.1.46 (OPEN SPACE), 2.3.1.1.47 (OPEN SPACE), 2.3.1.1.48 (OPEN SPACE), 2.3.1.1.49 (OPEN SPACE), 2.3.1.1.50 (OPEN SPACE), 2.3.1.1.51 (OPEN SPACE), 2.3.1.1.52 (OPEN SPACE), 2.3.1.1.53 (OPEN SPACE), 2.3.1.1.54 (OPEN SPACE), 2.3.1.1.55 (OPEN SPACE), 2.3.1.1.56 (OPEN SPACE), 2.3.1.1.57 (OPEN SPACE), 2.3.1.1.58 (OPEN SPACE), 2.3.1.1.59 (OPEN SPACE), 2.3.1.1.60 (OPEN SPACE), 2.3.1.1.61 (OPEN SPACE), 2.3.1.1.62 (OPEN SPACE), 2.3.1.1.63 (OPEN SPACE), 2.3.1.1.64 (OPEN SPACE), 2.3.1.1.65 (OPEN SPACE), 2.3.1.1.66 (OPEN SPACE), 2.3.1.1.67 (OPEN SPACE), 2.3.1.1.68 (OPEN SPACE), 2.3.1.1.69 (OPEN SPACE), 2.3.1.1.70 (OPEN SPACE), 2.3.1.1.71 (OPEN SPACE), 2.3.1.1.72 (OPEN SPACE), 2.3.1.1.73 (OPEN SPACE), 2.3.1.1.74 (OPEN SPACE), 2.3.1.1.75 (OPEN SPACE), 2.3.1.1.76 (OPEN SPACE), 2.3.1.1.77 (OPEN SPACE), 2.3.1.1.78 (OPEN SPACE), 2.3.1.1.79 (OPEN SPACE), 2.3.1.1.80 (OPEN SPACE), 2.3.1.1.81 (OPEN SPACE), 2.3.1.1.82 (OPEN SPACE), 2.3.1.1.83 (OPEN SPACE), 2.3.1.1.84 (OPEN SPACE), 2.3.1.1.85 (OPEN SPACE), 2.3.1.1.86 (OPEN SPACE), 2.3.1.1.87 (OPEN SPACE), 2.3.1.1.88 (OPEN SPACE), 2.3.1.1.89 (OPEN SPACE), 2.3.1.1.90 (OPEN SPACE), 2.3.1.1.91 (OPEN SPACE), 2.3.1.1.92 (OPEN SPACE), 2.3.1.1.93 (OPEN SPACE), 2.3.1.1.94 (OPEN SPACE), 2.3.1.1.95 (OPEN SPACE), 2.3.1.1.96 (OPEN SPACE), 2.3.1.1.97 (OPEN SPACE), 2.3.1.1.98 (OPEN SPACE), 2.3.1.1.99 (OPEN SPACE), 2.3.1.1.100 (OPEN SPACE).
 aq. SECTION 2.2.0.2 (BUS STOPS) - APPROVED FOR STA. 7+00 SAINT MARGARETS BLVD AND STA. 20+00 BANBURY DRIVE
 ar. SECTION 2.3.1.1.1 (OPEN SPACE) - REQUEST TO REDUCE THE DESIGN SPEED FROM 40 MPH TO 30 MPH (POSTED SIGN) + 25 MPH WAS APPROVED. THE REQUEST TO REDUCE HIGHWAY CENTERLINE ROAD WAS APPROVED FOR SAINT MARGARETS BLVD, STA. 3+00, 4+00 AND 5+00 FOR BANBURY DRIVE, STA. 11+00. THE SIGN DEFINITE EASEMENT WAS ADOPTED DURING APPROVAL FOR THIS LOCATION FOR BANBURY DRIVE, STA. 19+25.
 as. SECTION 2.3.1.1.1 (OPEN SPACE) - REQUEST MODIFICATIONS TO ALLOW DIVIDED ROADWAY ON A MAJOR COLLECTOR AND REDUCTION OF MEDIAN WIDTH FROM 10' TO 14'. THESE REQUESTS ARE ACCEPTABLE WITH THE SIGN DEFINITE EASEMENT TO BE MAINTAINED BY H&M OR COMMERCIAL ASSOC. ALONG SAINT MARGARETS BLVD. THE MEDIAN FOR BANBURY DRIVE WAS APPROVED SUBJECT TO ADJUSTING MEDIAN GRADES TO PROVIDE A SUFFICIENT CLEARANCE. THIS WAS PROVIDED ON THE PLAN.
 at. SECTION 2.3.1.1.1 (OPEN SPACE) - REQUEST A VARIABLE RIGHT-OF-WAY WIDTH TO EXTEND ONE FOOT BEHIND FACE OF CURB. THIS WAS APPROVED CONTINGENT ON PROVIDING AN EASEMENT ALONG SAINT MARGARETS BLVD. AND AN EASEMENT ALONG BANBURY DRIVE. THE EASEMENTS WERE PROVIDED.
 au. SECTION 2.3.1.1.1 (OPEN SPACE) - REQUEST SAINT MARGARETS BLVD. HAVE LANE WIDTHS OF 10' AND ALL OTHER ROADS HAVE A TOTAL WIDTH OF 20' FOR ONE WAY AND 22' FOR TWO WAY TRAFFIC. APPROVED FOR ALL LOCATIONS EXCEPT THREE ALONG BANBURY DRIVE AT STA. 19+75, THE OUTSIDE ISLAND WAS PROVIDED. THE OTHER TWO LOCATIONS NARROW TRAFFIC CIRCLE AND COMMUNITY CENTER ARE DEFERRED UNTIL A FUTURE SITE PLAN PHASE. WHEN FINAL PLANS AND TIDING MOVEMENTS WILL BE PROVIDED.
 av. SECTION 2.3.1.1.1 (OPEN SPACE) - REQUEST INTERSECTION SPACING OF 100 FEET. DMV RECOMMENDS APPROVAL OF THE INTERSECTIONS ALONG BANBURY DRIVE FOR FUTURE DEVELOPMENTS. THIS WAS APPROVED.
 aw. SECTION 2.5. TABLE 2.5.0.3 (CURB FILLET SPACING) - REQUEST A REDUCTION IN THE MINIMUM CURB FILLET SPACING WAS APPROVED FOR SAINT MARGARETS BLVD AND BANBURY DRIVE.
 ax. SECTION 2.5. TABLE 2.5.0.3 (CURB FILLET SPACING) - REQUEST THAT THE CURB CLEARANCE BE REDUCED FROM 7.5' TO 5' AND SPACING BETWEEN INTERSECTIONS BE REDUCED FROM 250' TO 100'. THE SPACING BETWEEN INTERSECTIONS REDUCTION TO 100' IS ACCEPTABLE. THE CURB CLEARANCE REDUCTION TO 5' IS ACCEPTABLE.
 ay. SECTION 2.5. TABLE 2.5.0.3 (CURB FILLET SPACING) - REQUEST THAT OFF-SET PARKING BE REDUCED FROM 2.0 SPACES PER DWELLING UNIT TO 2.0 SPACES PER DWELLING UNIT. THIS REQUEST WAS DEFERRED UNTIL FUTURE SITE PLAN PHASE ON A PARCEL BASIS.
 az. SECTION 2.5.0.4 (STREET LIGHT LOCATION) - REQUEST THAT THE DISTANCE FROM A CENTRALIZED CURB STORAGE AREA TO A MULTI-PURPOSE AREA BE INCREASED FROM 200' TO 300'. APPROVAL WAS GRANTED.
 ba. SECTION 2.5.0.4 (STREET LIGHT LOCATION) - REQUEST THAT THE MINIMUM ASLE WIDTHS BETWEEN ROWS OF PARKING BE REDUCED FROM 24' TO 22'. THIS WAS DENIED THIS REQUEST.
 bb. SECTION 2.5.0.4 (STREET LIGHT LOCATION) - REQUEST THAT THE MINIMUM ASLE WIDTHS BETWEEN ROWS OF PARKING BE REDUCED FROM 24' TO 22'. THIS WAS DENIED THIS REQUEST.
 bc. IN ACCORDANCE WITH THE DESIGN MANUAL WARRIES OUTLINED IN GENERAL NOTE NO. 28 FOR REDUCED PUBLIC ROAD R/W, ALL PUBLIC ROADS SHALL PROVIDE A PUBLIC STORAGE, STREET LIGHT AND UTILITY EASEMENT.
 bd. STREAM AND WETLAND RESTORATION AND THE HABITAT MANAGEMENT PLAN SHALL BE IMPLEMENTED WITHIN 3 YEARS OF FINAL APPROVAL OF THE SITE DEVELOPMENT PLAN ASSOCIATED WITH CONSTRUCTION OF THE 190A RESIDENTIAL UNIT. A COPY OF THE JOINT FEDERAL/STATE APPLICATION FOR AUTORIZATION OF REGULATED ACTIVITIES ASSOCIATED WITH THE STREAM AND WETLAND RESTORATION AND HABITAT MANAGEMENT PLAN SHALL BE SUBMITTED TO ESO AS PART OF THE SITE DEVELOPMENT PLAN APPLICATION ASSOCIATED WITH CONSTRUCTION OF THE 190A RESIDENTIAL UNIT.
 be. THIS PLAN IS SUBJECT TO WATERS PETITION W-10-147 TO WAIVE SUBSECTIONS 15.04(h) AND 15.04(i) OF THE HOWARD COUNTY CODE. THIS ACTION RELIEVES THE REQUIREMENT TO SUBMIT A PRELIMINARY SUBDIVISION PLAN OR A PRELIMINARY EQUIVALENT SKETCH PLAN IN ORDER TO RECEIVE A GREEN NEIGHBORHOOD ALLOCATION. WATERS PETITION W-10-147 WAS APPROVED ON APRIL 27, 2011 BY THE DEPARTMENT OF PLANNING AND ZONING.
 bf. THE HANOVER AVIATION ADMINISTRATION (HAA) APPROVED THIS PLAN ON 12/22/13. FOR SEWER AND GROUND CONTROL, STORMWATER MANAGEMENT AND LANDSCAPING PRIOR TO THE SIGNING OF ANY BUILDING PERMIT. AN APPROVED AIRPORT ZONING PERMIT MUST BE OBTAINED. THE HAA ALSO DETERMINED THAT ALTHOUGH OUTSIDE THE AIRPORT NOISE ZONE, OCCUPANTS OF THIS SUBDIVISION WILL EXPERIENCE NOISE FROM AIRPORT OVERLIGHTS AND OTHER OPERATIONS DUE TO THE PROXIMITY OF THIS SITE TO THE AIRPORT.
 bg. THIS PLAN IS SUBJECT TO W-10-147 WHICH THE PLANNING DIRECTOR APPROVED ON JUNE 5, 2012 TO WAIVE SUBSECTIONS 15.04(h), 15.04(i) AND 15.04(j) WHICH REQUIRES ALL COMMERCIAL, INDUSTRIAL AND APARTMENTS TO HAVE A MINIMUM OF 60' OF FRONTAGE ON A PUBLIC ROAD. OPEN SPACE LOTS WILL HAVE FRONTAGE ON A PUBLIC ROAD AND THE DEVELOPER SHALL PROVIDE FOR THE CONSTRUCTION OF SIDEWALKS. WATERS APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:
 1. A PETITIONER SHALL SUBMIT A FINAL PLAN PROVIDING NO LESS THAN 60 FEET OF FRONTAGE ON AN APPROVED PUBLIC ROAD TO COMMERCIAL AND APARTMENT PARCELS PRIOR TO OR CONCURRENT WITH THE SUBMISSION OF A SITE DEVELOPMENT PLAN FOR COMMERCIAL OR RESIDENTIAL DEVELOPMENT OF SAID PARCELS.
 2. A PETITIONER SHALL PROVIDE NO LESS THAN 40 FEET OF FRONTAGE ON AN APPROVED PUBLIC ROAD TO OPEN SPACE LOTS 1 FOR ACCESS BY PEDESTRIANS AND MAINTENANCE VEHICLES UPON SIGNATURE DRAWING OF THE FINAL PLAN FOR SAID OPEN SPACE LOTS.
 3. A PETITIONER SHALL PROVIDE NO LESS THAN 40 FEET OF FRONTAGE ON AN APPROVED PUBLIC ROAD TO OPEN SPACE LOTS 2 FOR ACCESS BY PEDESTRIANS AND MAINTENANCE VEHICLES UPON SIGNATURE DRAWING OF THE FINAL PLAN FOR SAID OPEN SPACE LOTS.
 4. A PETITIONER SHALL SUBMIT AND FINANCIAL SURETY POSTED FOR CONSTRUCTION OF SAID PUBLIC ROAD NO LATER THAN 60 DAYS FOLLOWING SUBMISSION OF THE ASSOCIATED ROAD CONSTRUCTION DRAWING TO THE HOWARD COUNTY BUREAU OF HIGHWAYS FOR REVIEW AND APPROVAL.
 5. A PETITIONER SHALL SUBMIT A FINAL PLAN PROVIDING NO LESS THAN 60 FEET OF FRONTAGE ON A SUBDIVISION PLAT TO BE SUBMITTED FOR SIGNATURE AND RECORDATION NO LATER THAN 120 DAYS FOLLOWING SUBMISSION OF THE ASSOCIATED ROAD CONSTRUCTION DRAWING ORIGINALS.
 6. PETITIONER SHALL UPON APPROVAL OF THE FIRST SITE DEVELOPMENT PLAN FOR A RESIDENTIAL, OFFICE, COMMERCIAL OR RECREATIONAL USE ADJUTING SAINT MARGARETS BLVD. SUBMIT A REDLINE VERSION OF FINAL PLAN FOR REVIEW AND APPROVAL OF THE FIRST SITE DEVELOPMENT PLAN FOR A RESIDENTIAL, OFFICE, COMMERCIAL OR RECREATIONAL USE ADJUTING BANBURY DRIVE. THE SUBMIT A REDLINE VERSION OF FINAL PLAN FOR REVIEW AND APPROVAL OF THE FIRST SITE DEVELOPMENT PLAN FOR A RESIDENTIAL, OFFICE, COMMERCIAL OR RECREATIONAL USE ADJUTING BANBURY DRIVE. THE SUBMIT A REDLINE VERSION OF FINAL PLAN FOR REVIEW AND APPROVAL OF THE FIRST SITE DEVELOPMENT PLAN FOR A RESIDENTIAL, OFFICE, COMMERCIAL OR RECREATIONAL USE ADJUTING BANBURY DRIVE. THE SUBMIT A REDLINE VERSION OF FINAL PLAN FOR REVIEW AND APPROVAL OF THE FIRST SITE DEVELOPMENT PLAN FOR A RESIDENTIAL, OFFICE, COMMERCIAL OR RECREATIONAL USE ADJUTING BANBURY DRIVE. THE SUBMIT A REDLINE VERSION OF FINAL PLAN FOR REVIEW AND APPROVAL OF THE FIRST SITE DEVELOPMENT PLAN FOR A RESIDENTIAL

CURB CUT DATA		
CURB CUT STATION	ROAD NAME	OFFSET
6+77	Saint Margarets Blvd	116' R & 98' L
6+99	Saint Margarets Blvd	93' R & 104' L
7+23	Saint Margarets Blvd	79' R & 114' L
7+79	Saint Margarets Blvd	7' R & 10' L
7+99	Saint Margarets Blvd	7' R & 92' L
8+23	Saint Margarets Blvd	7' R & 81' L
8+49	Saint Margarets Blvd	7' L & R
8+73	Saint Margarets Blvd	7' L & R
8+93	Saint Margarets Blvd	7' L & R
9+23	Saint Margarets Blvd	7' L & R
9+49	Saint Margarets Blvd	7' L & R
9+73	Saint Margarets Blvd	7' L & R
9+99	Saint Margarets Blvd	7' L & R
10+23	Saint Margarets Blvd	7' L & R
10+49	Saint Margarets Blvd	7' L & R
10+56	Saint Margarets Blvd	0.00'
11+37	Saint Margarets Blvd	7' L & R
11+71	Saint Margarets Blvd	7' L & R
11+83	Saint Margarets Blvd	0.00'



NO.	DESCRIPTION	DATE
	REVISIONS	
APPROVED: DEPARTMENT OF PLANNING AND ZONING		
	<i>V. S. Seaton</i> CHIEF, DIVISION OF LAND DEVELOPMENT	2/19/14
	<i>Chad Edwards</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	2-7-14
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS		
	<i>Walter Miller</i> CHIEF, BUREAU OF HIGHWAYS	1-21-14



LEGEND	
SYMBOL	DESCRIPTION
G	EXISTING GASHAIN
---	WETLANDS BUFFER
---	WETLANDS LIMITS
FP	FLOODPLAIN LIMITS
ESD #1	STORMWATER MANAGEMENT DEVICE
SD	STORM DRAIN
B-33	BORING LOCATION
○	PROPOSED STREET LIGHT
○	EXISTING STREET LIGHT

OXFORD SQUARE
"A HOWARD COUNTY GREEN NEIGHBORHOOD"
Saint Margarets Boulevard
(Sta. 6+62.30 to Sta. 12+52.60 & Banbury Drive (Sta. 11+90 to Sta. 15+60.84))

Zone 6B T00
Tax Map 38, Parcel 781, Grid 69
First Election District - Howard County, Maryland

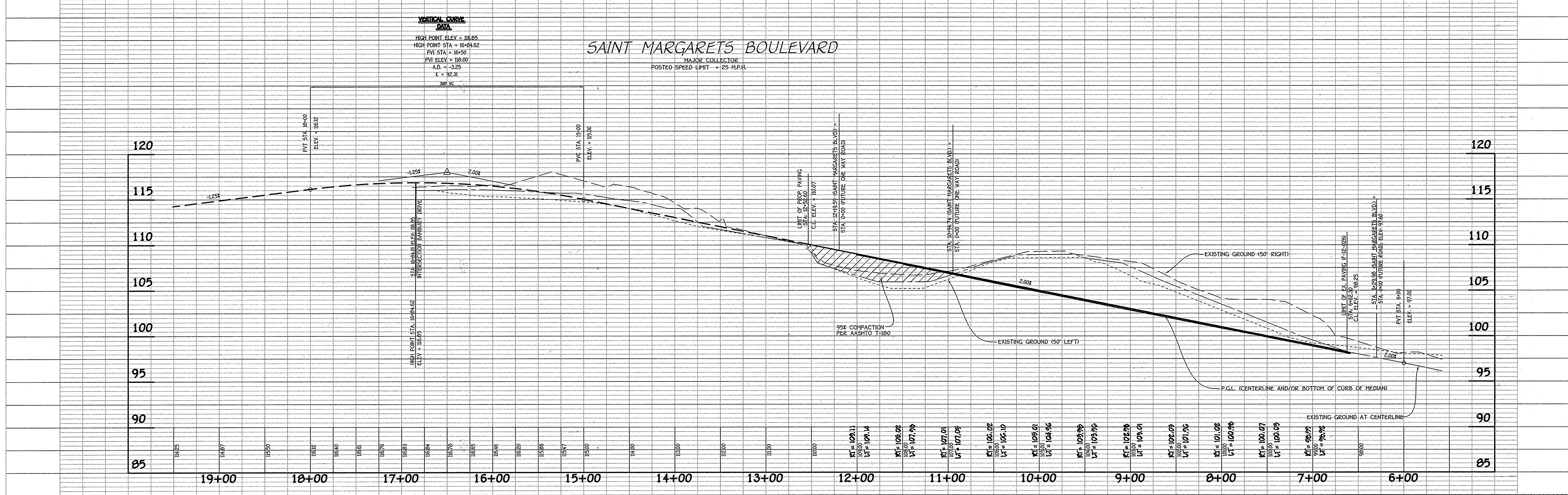
Saint Margarets Boulevard
PLAN AND PROFILE

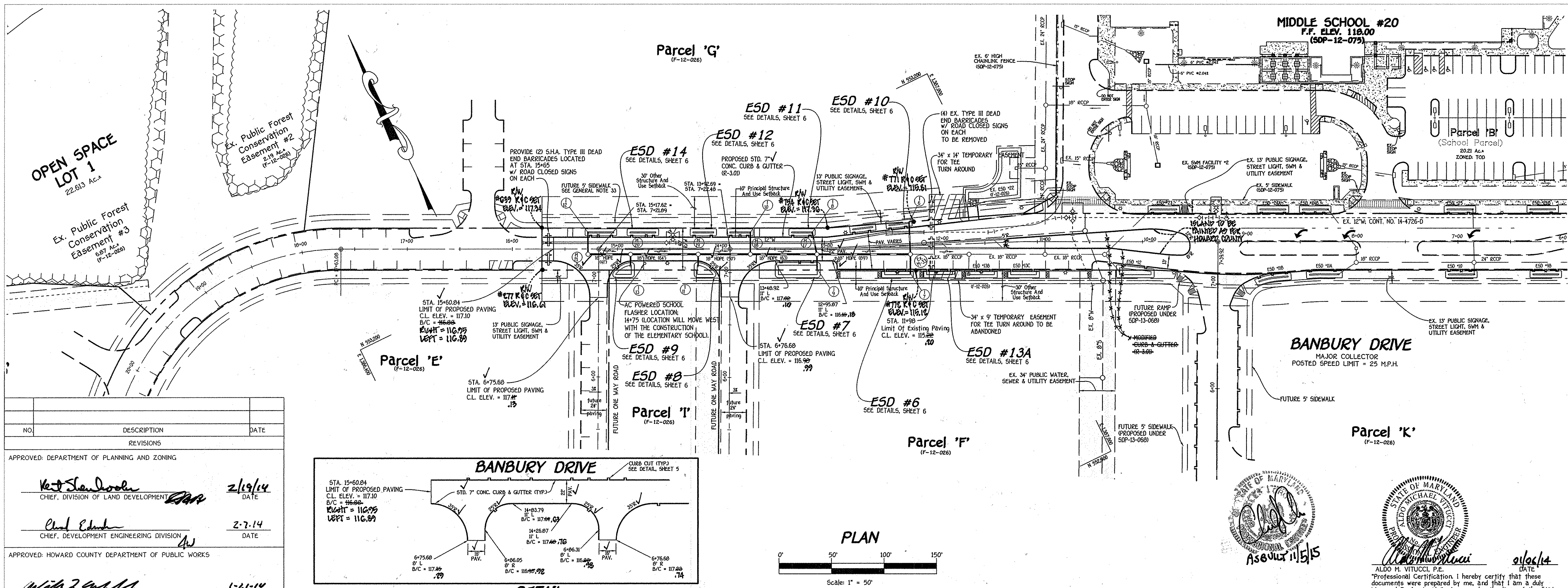
Owner: Kellogg-CP, LLC
c/o David F. Scheffner, Jr., Managing Member
2330 West Joppa Road, Suite 190
Lutherville, Maryland 21093-4614
Ph: 410-296-3800

Developer: Preston + Scheffner Properties
2330 West Joppa Road, Suite 190
Lutherville, Maryland 21093-4614
Ph: 410-296-3800

SCALE: As Shown DATE: January 6, 2014 DWG. NO. 2 OF 24
DES. R.A.I./J.C.L. DRN. J.C.L. CHK. A.M.V.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 1072 BALTIMORE NATIONAL PIKE
ELKLOTT CITY, MARYLAND 21242
(410) 481 - 2995





LEGEND	
SYMBOL	DESCRIPTION
G	EXISTING GASMAIN
W	WETLANDS BUFFER
W	WETLANDS LIMITS
FP	FLOODPLAIN LIMITS
SM	STORMWATER MANAGEMENT DEVICE
SD	STORM DRAIN
BL	BORING LOCATION
SL	PROPOSED STREET LIGHT
EL	EXISTING STREET LIGHT

NOTE: SEE SHEET 16 FOR TRAFFIC SIGNS AND MARKINGS.

OXFORD SQUARE
 "A HOWARD COUNTY GREEN NEIGHBORHOOD"
 Saint Margarets Boulevard
 (Sta. 6+62.30 to Sta. 12+52.60 & Banbury Drive
 (Sta. 11+98 to Sta. 15+60.84))

Zone 100
 Tax Map 30, Parcel 791, Grid 20
 First Election District - Howard County, Maryland

BANBURY DRIVE
 PLAN AND PROFILE

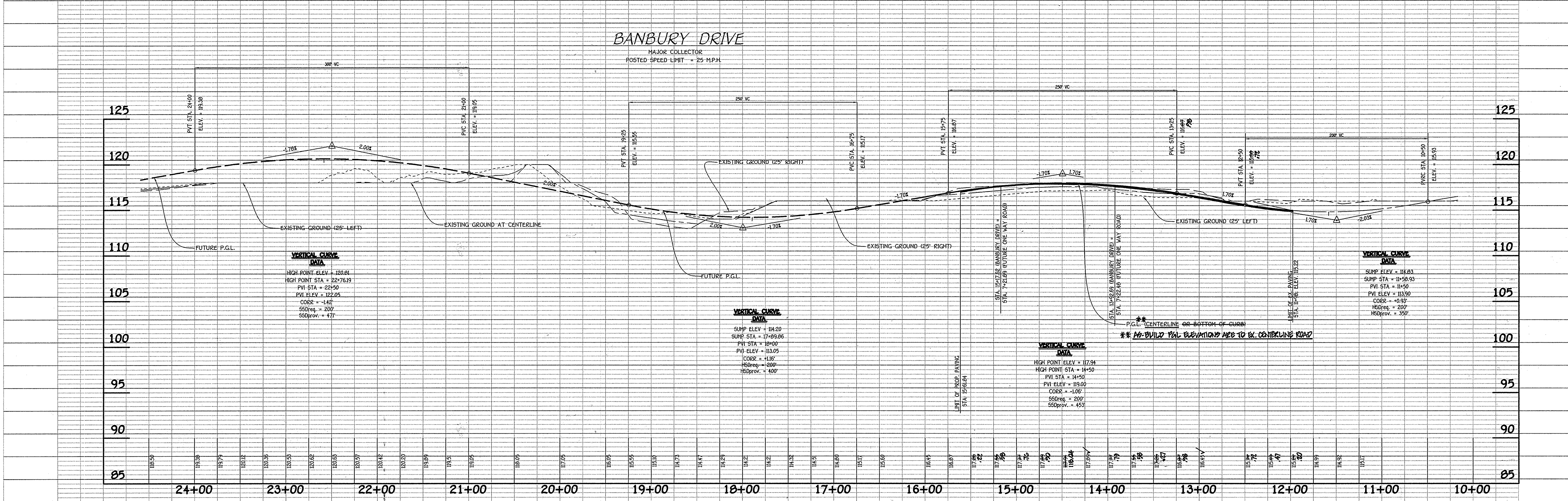
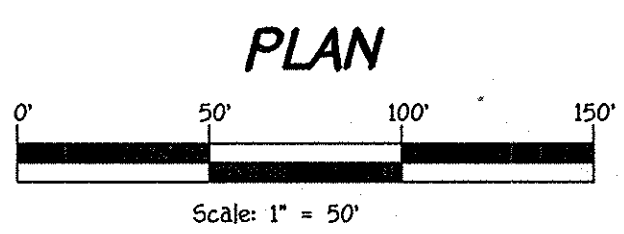
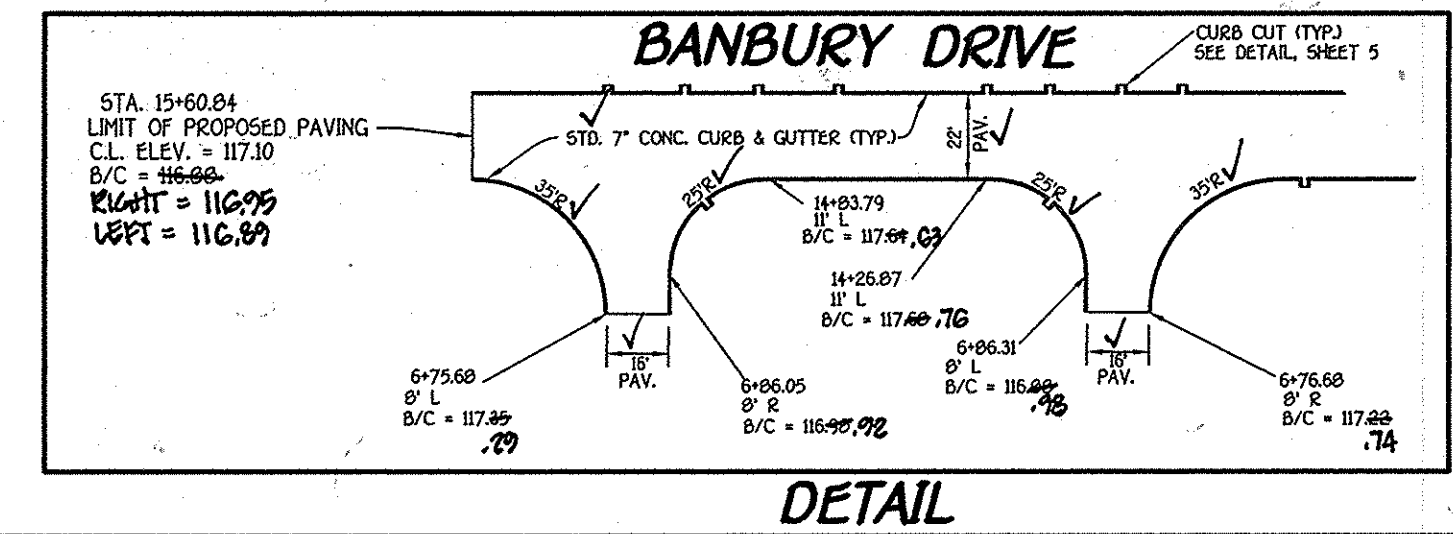
Owner: Ecology-COR, LLC
 c/o David P. Scheffener, Jr., Managing Member
 2330 West Joppa Road, Suite 190
 Lutherville, Maryland 21093-1614
 Ph: 410-296-3800

Developer: Preston - Scheffener Properties
 2330 West Joppa Road, Suite 190
 Lutherville, Maryland 21093-1614
 Ph: 410-296-3800

SCALE: As Shown DATE: January 6, 2014 DWG. NO. 3 OF 24
 DES. R.A.I./J.C.L. DRN. J.C.L. CHK. A.M.V.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL FREE
 ELLICOTT CITY, MARYLAND 21114
 (410) 481 - 2005

NO.	DESCRIPTION	DATE
	REVISIONS	
APPROVED: DEPARTMENT OF PLANNING AND ZONING		
	<i>Neil Sheeja</i> CHIEF, DIVISION OF LAND DEVELOPMENT	2/19/14 DATE
	<i>Paul Edwards</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	2-7-14 DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS		
	<i>Walter J. Campbell</i> CHIEF, BUREAU OF HIGHWAYS	1-21-14 DATE



VERTICAL CURVE DATA

HIGH POINT ELEV = 120.61
 HIGH POINT STA = 22+76.19
 PVI STA = 22+50
 PVI ELEV = 122.05
 CORR = -1.42
 550' req. = 200'
 550' prov. = 431'

VERTICAL CURVE DATA

SUMP ELEV = 114.20
 SUMP STA = 17+09.86
 PVI STA = 19+00
 PVI ELEV = 113.05
 CORR = -1.86
 550' req. = 200'
 550' prov. = 400'

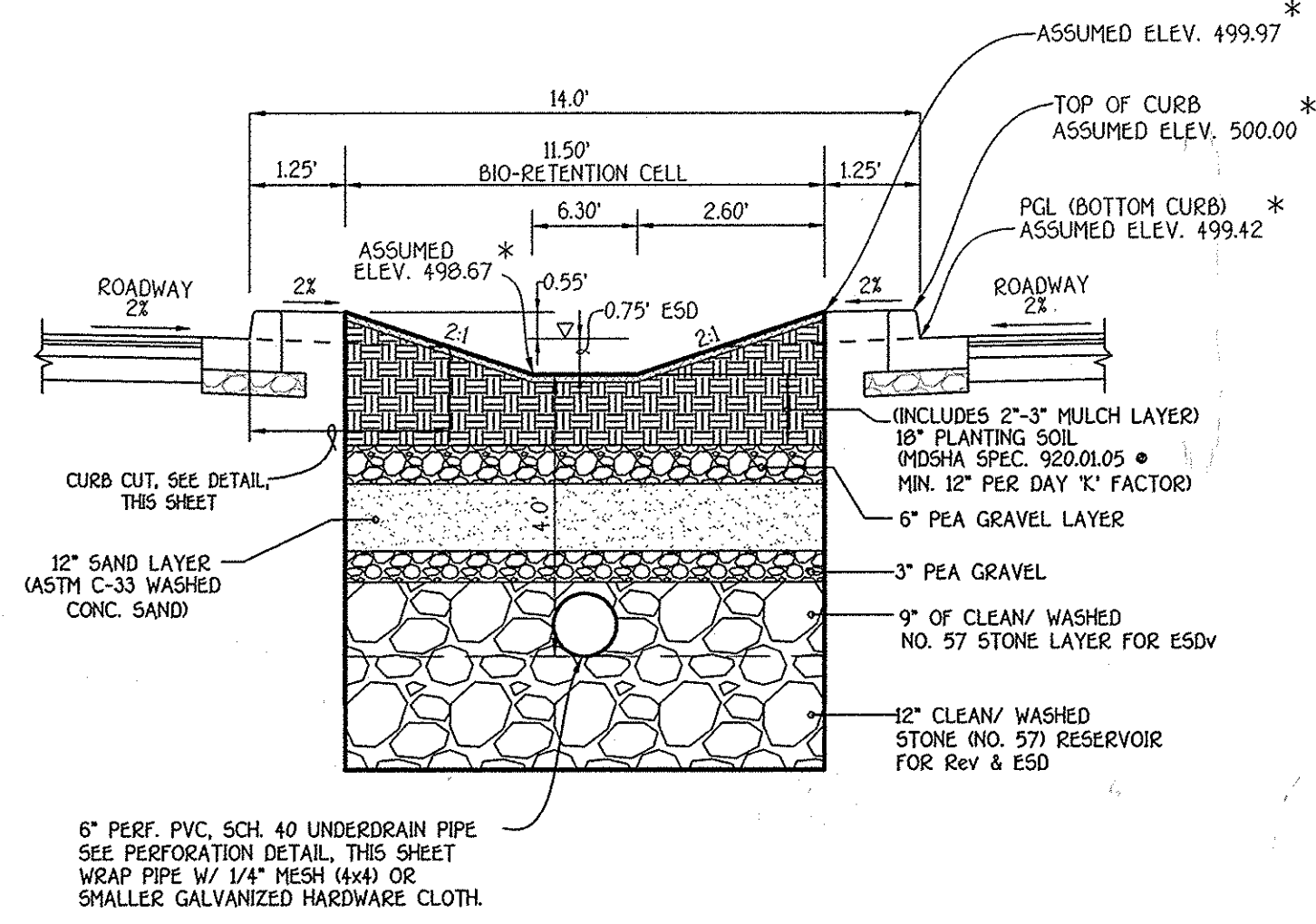
VERTICAL CURVE DATA

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 HIGH POINT STA = 14+50
 PVI STA = 14+50
 PVI ELEV = 119.00
 CORR = -1.06
 550' req. = 200'
 550' prov. = 453'

VERTICAL CURVE DATA

SUMP ELEV = 114.83
 SUMP STA = 11+58.93
 PVI STA = 11+50
 PVI ELEV = 113.90
 CORR = +0.93
 550' req. = 200'
 550' prov. = 350'

I:\2009\09014\dwg\Finals - Phase Two\09014 sheet 2-3 road plans.dwg, sheet 3, 1/6/2014 8:31:19 AM, 1:1



TYPICAL BIO-RETENTION IN MEDIAN ALONG SAINT MARGARETS BOULEVARD CURB CUT
NO SCALE

6\"/>

NOTES:
STAGE ONE PIPE SHALL BE 2\"/>

PERFORATIONS SHALL BE 1/2\"/>

GRAVEL LAYER SHALL BE PEA GRAVEL (1/8\"/>

PERFORATIONS SHALL BE 1/2\"/>

GRAVEL LAYER SHALL BE PEA GRAVEL (1/8\"/>

PERFORATIONS SHALL BE 1/2\"/>

GRAVEL LAYER SHALL BE PEA GRAVEL (1/8\"/>

PERFORATIONS SHALL BE 1/2\"/>

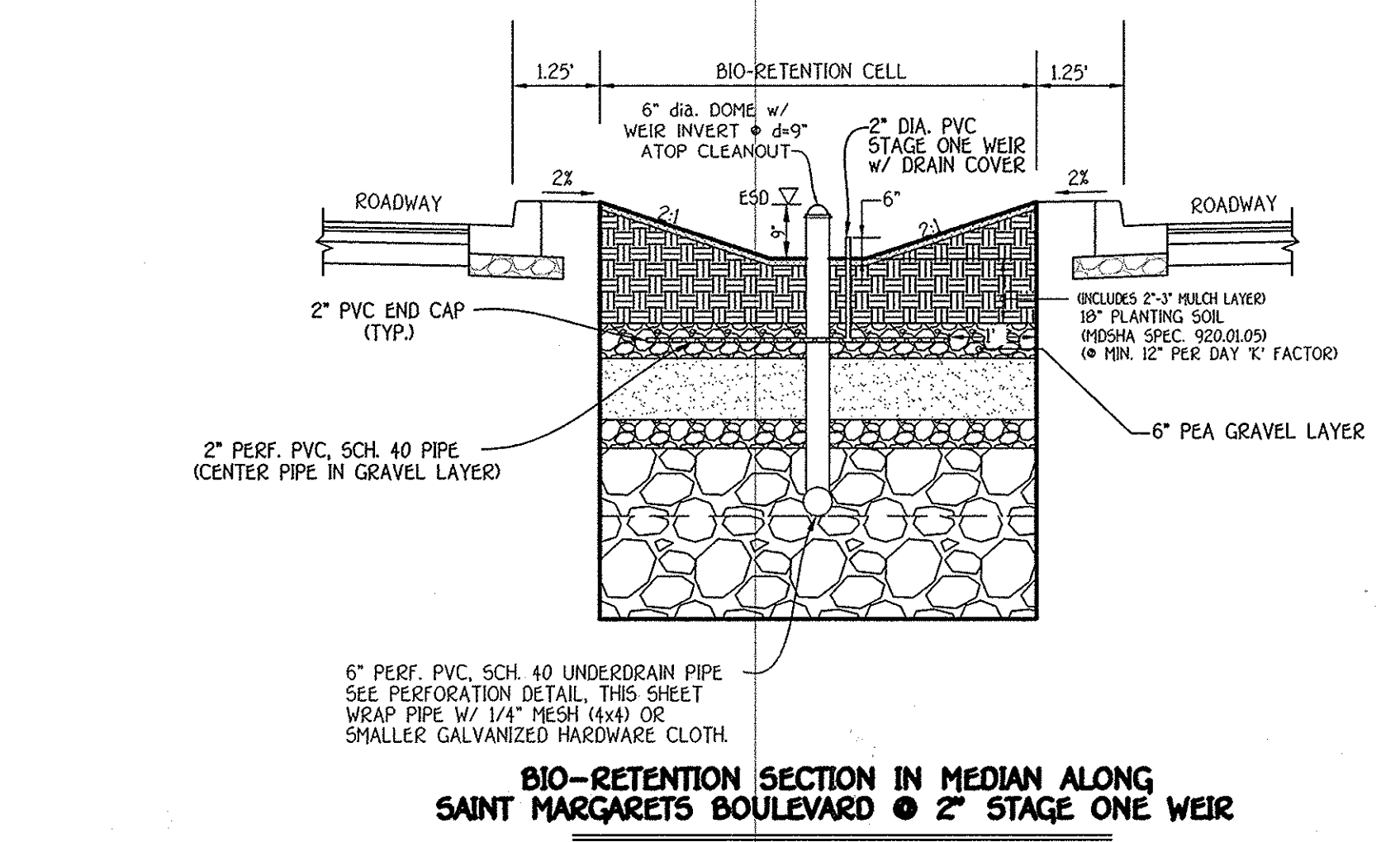
GRAVEL LAYER SHALL BE PEA GRAVEL (1/8\"/>

PERFORATIONS SHALL BE 1/2\"/>

GRAVEL LAYER SHALL BE PEA GRAVEL (1/8\"/>

PERFORATIONS SHALL BE 1/2\"/>

GRAVEL LAYER SHALL BE PEA GRAVEL (1/8\"/>



BIO-RETENTION SECTION IN MEDIAN ALONG SAINT MARGARETS BOULEVARD 2\"/>

PERFORATIONS SHALL BE 1/2\"/>

GRAVEL LAYER SHALL BE PEA GRAVEL (1/8\"/>

PERFORATIONS SHALL BE 1/2\"/>

GRAVEL LAYER SHALL BE PEA GRAVEL (1/8\"/>

PERFORATIONS SHALL BE 1/2\"/>

GRAVEL LAYER SHALL BE PEA GRAVEL (1/8\"/>

PERFORATIONS SHALL BE 1/2\"/>

GRAVEL LAYER SHALL BE PEA GRAVEL (1/8\"/>

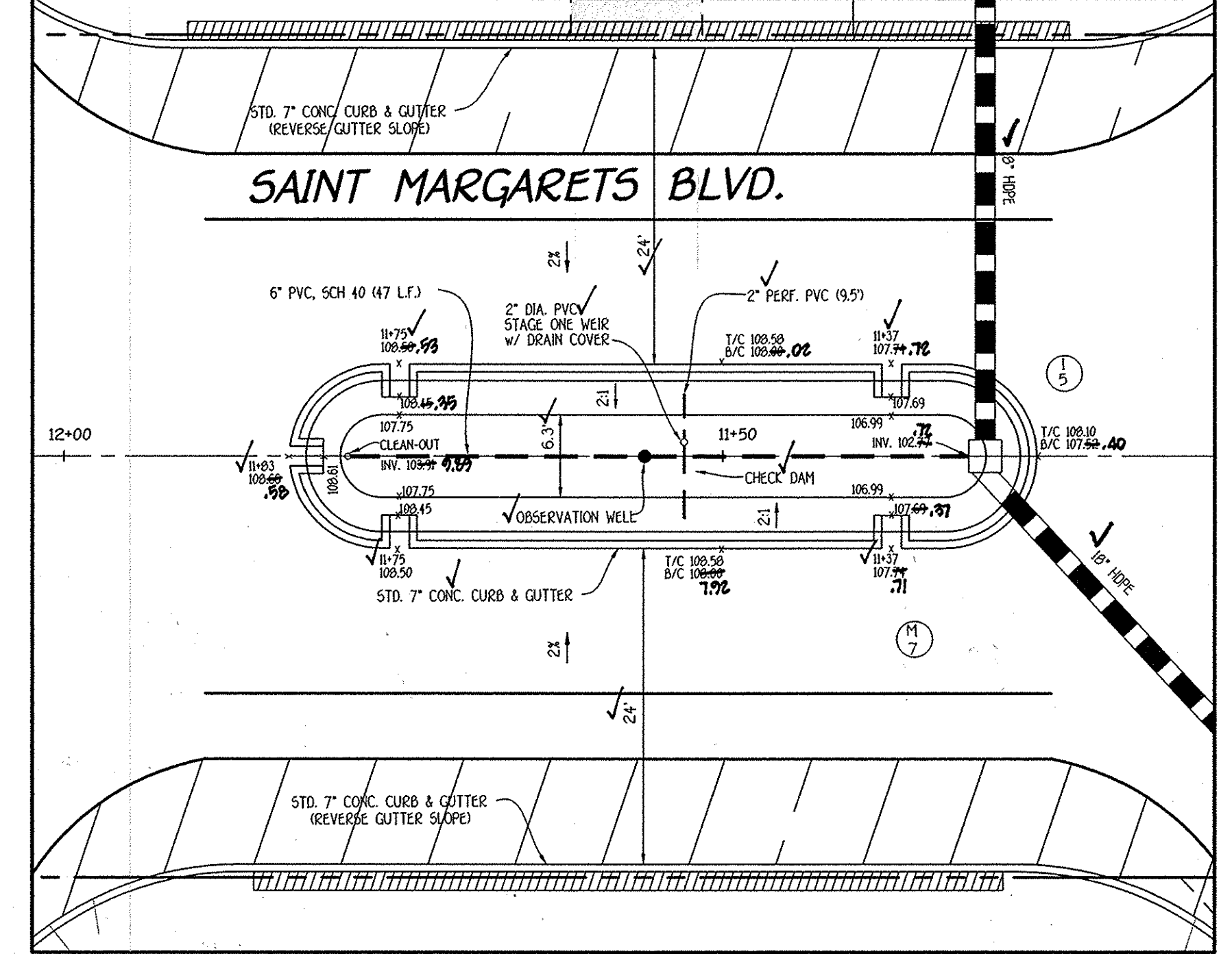
PERFORATIONS SHALL BE 1/2\"/>

GRAVEL LAYER SHALL BE PEA GRAVEL (1/8\"/>

PERFORATIONS SHALL BE 1/2\"/>

GRAVEL LAYER SHALL BE PEA GRAVEL (1/8\"/>

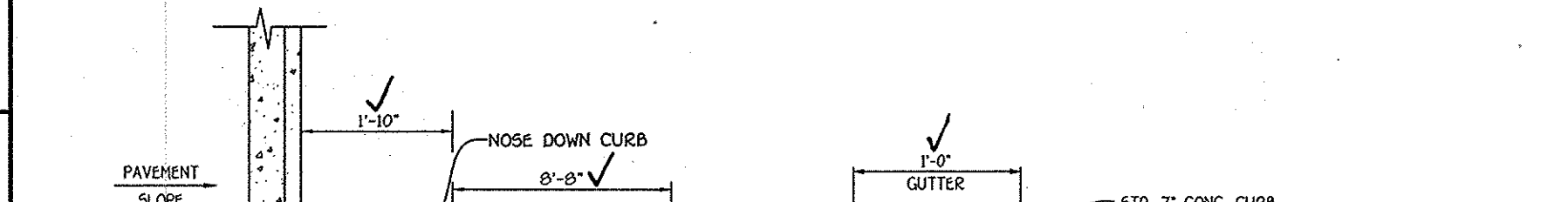
PERFORATIONS SHALL BE 1/2\"/>



PROPOSED MICRO BIO-RETENTION (M-6) ESD No. 5 PLAN VIEW
SCALE: 1\"/>



CURB SECTION
NO SCALE



SECTION THRU MEDIAN
STANDARD CURB OPENING DETAIL FOR CONCRETE CURB ALONG SAINT MARGARETS BOULEVARD
NO SCALE

Approved: Department Of Planning And Zoning

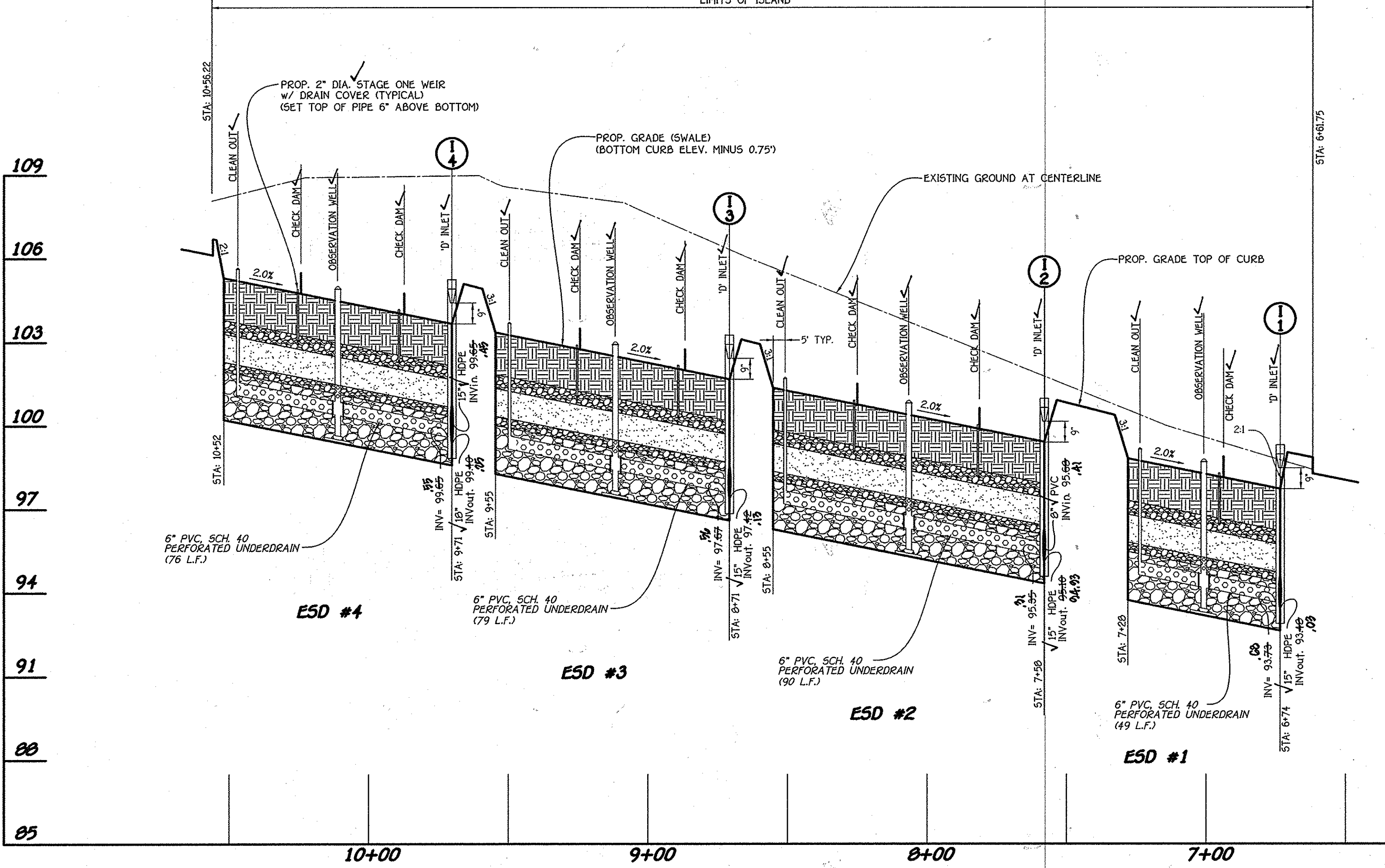
West Sle... 2/19/14
Chief, Division Of Land Development Date

Chad... 2-7-14
Chief, Development Engineering Division Date

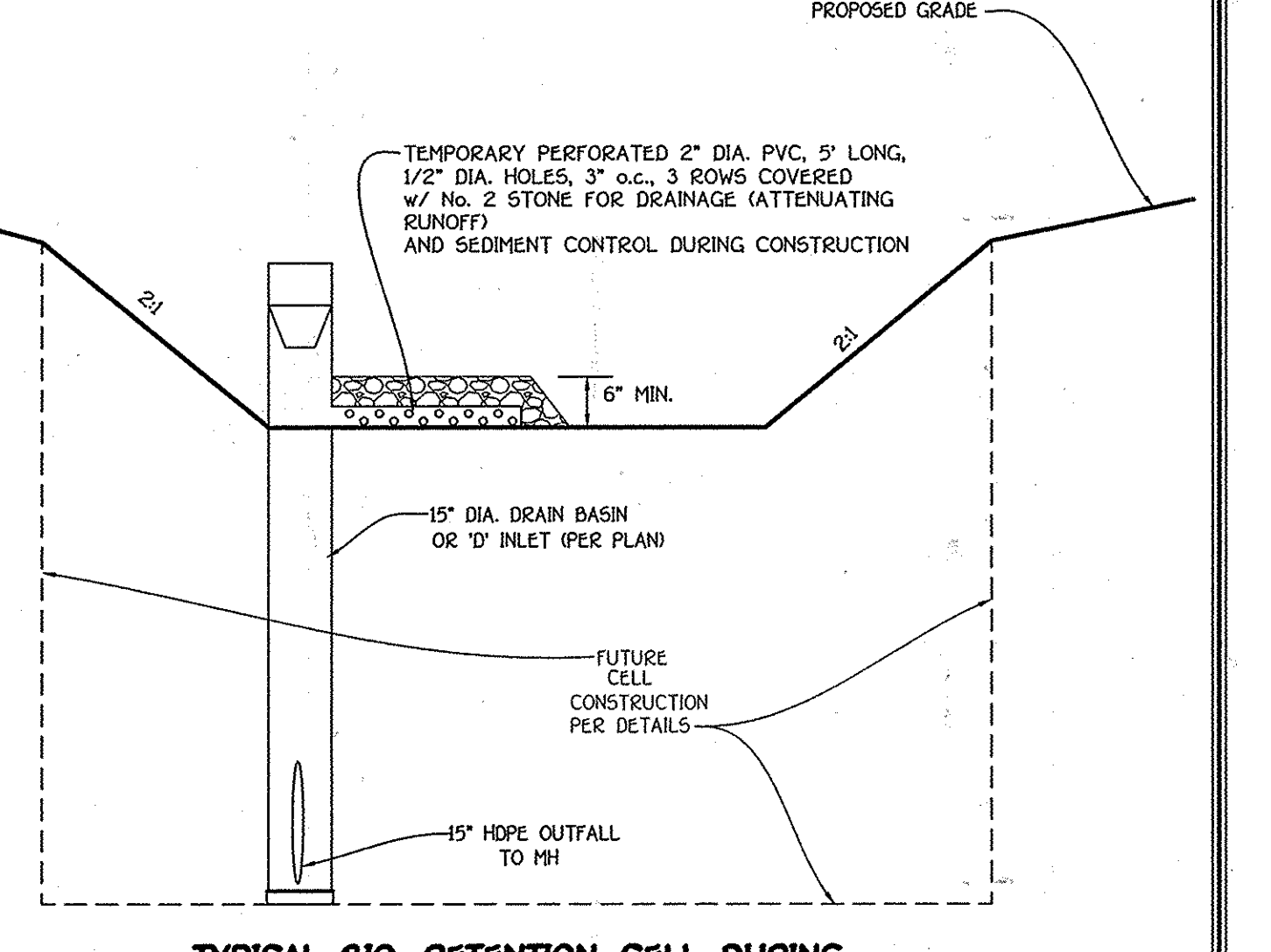
Approved: Howard County Department Of Public Works

W... 1-21-14
Chief, Bureau Of Highways Date

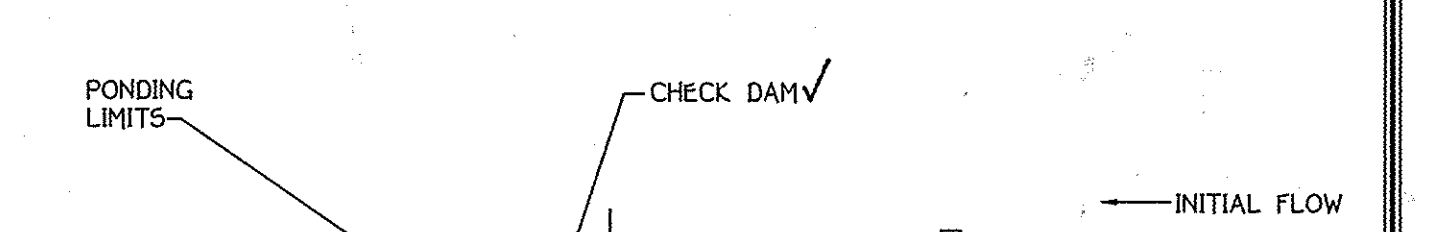
NO.	DESCRIPTION	DATE



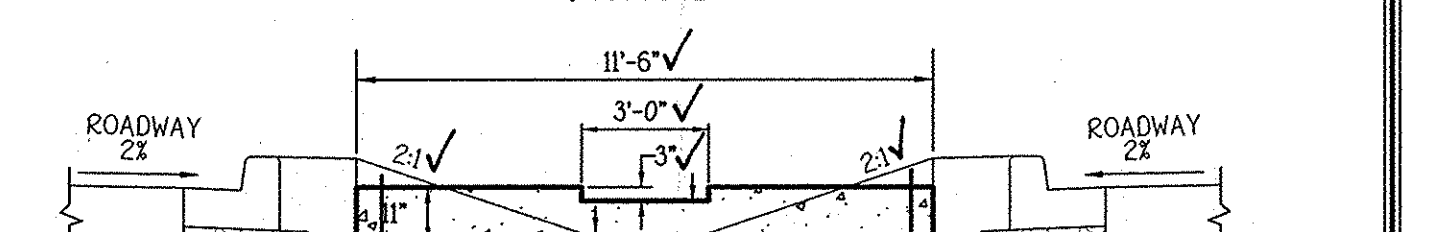
BIO-RETENTION (M-6) IN MEDIAN SECTION ALONG SAINT MARGARETS BOULEVARD
SCALE: HOR. : 1\"/>



TYPICAL BIO-RETENTION CELL DURING INITIAL CONSTRUCTION PHASE PRIOR TO DRAINAGE AREA BEING STABILIZED
NO SCALE



CONCRETE CHECK DAM DETAIL
NO SCALE



STORMWATER MANAGEMENT NOTES & DETAILS (SAINT MARGARETS BOULEVARD) OXFORD SQUARE
"A HOWARD COUNTY GREEN NEIGHBORHOOD"
Saint Margarets Boulevard (Sta. 6+62.30 to Sta. 12+52.60 & Banbury drive (Sta. 11+98 to Sta. 15+60.84)

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENAL SQUARE OFFICE PARK - 10275 BALTIMORE NATIONAL PIKE
ELLSWORTH CITY, MARYLAND 21042
(410) 461-2995

Owner
Kellogg-CCP, LLC
c/o David P. Schefferacker, Jr.,
Managing Member
2330 West Joppa Road, Suite 190
Lutherville, Maryland 21093-4614
Ph: 410-296-3800

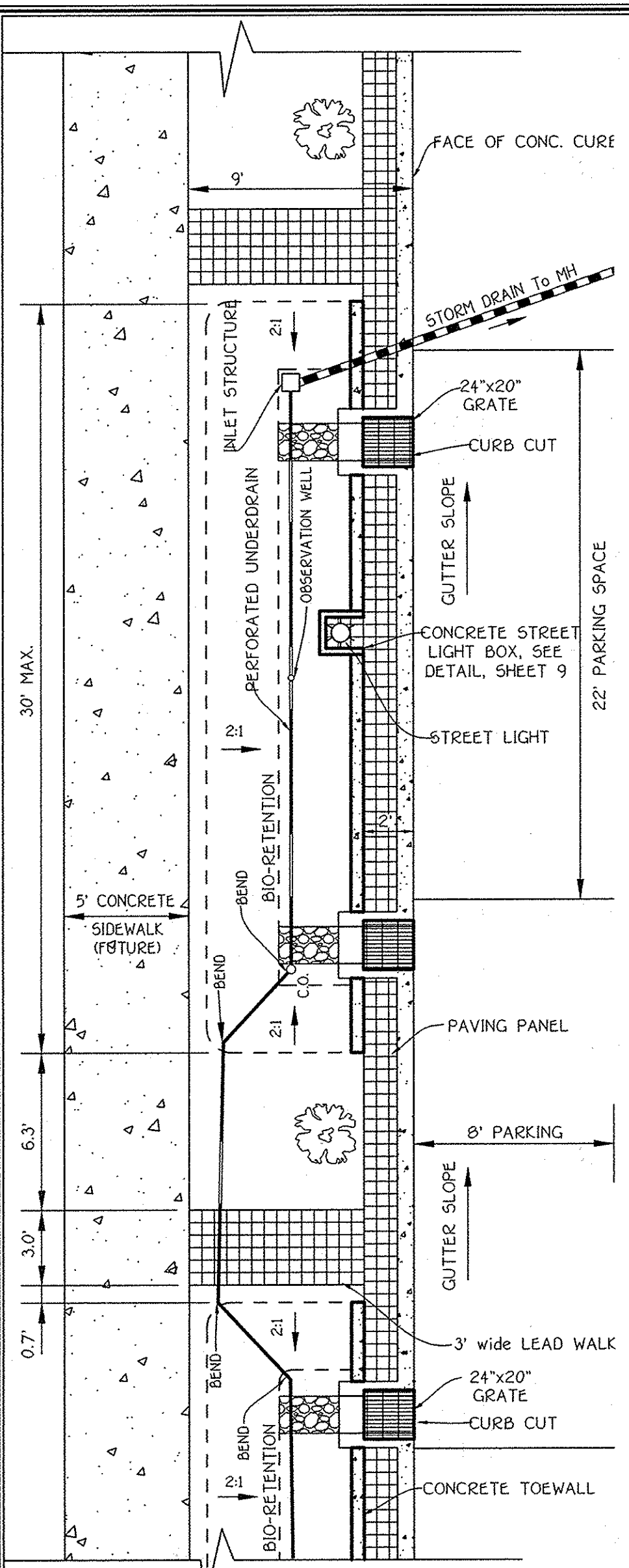
Developer
Preston - Schefferacker Properties
2330 West Joppa Road, Suite 190
Lutherville, Maryland 21093-4614
Ph: 410-296-3800

Professional Engineer
ALDO H. VITUCCI, P.E.
DATE: 2/16/14
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. 20740, Expiration Date 2-22-15.

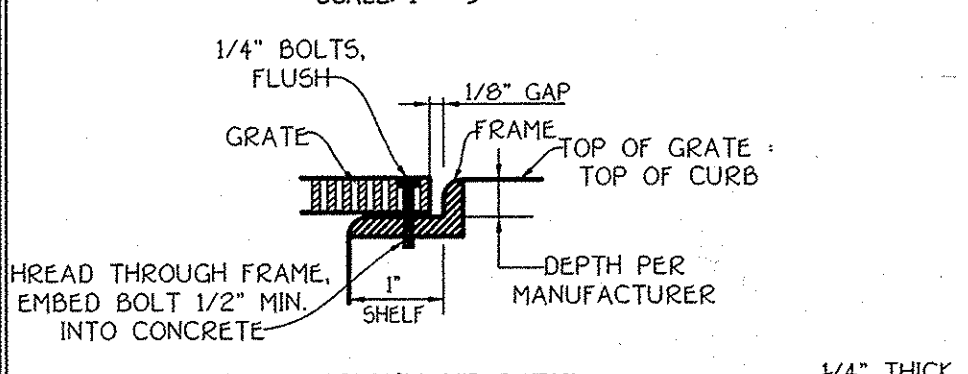
Professional Engineer
ASB0104 11/15/13

Zoned: TOD
Tax Map: 38, Parcel: 761, Grid: 20
First Election District - Howard County, Maryland
Date: January 6, 2014
Sheet 4 of 24

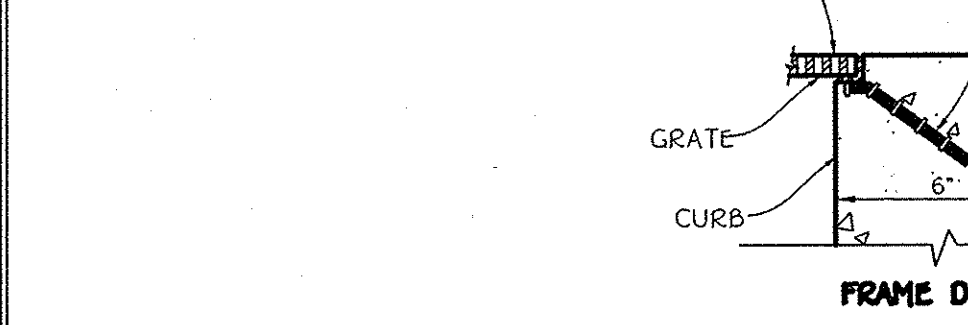
Approved: Department Of Planning And Zoning		
<i>Vest Seelbach</i>	2/19/14	Date
Chief, Division Of Land Development	<i>Chris</i>	
<i>Chris Edmunds</i>	2-7-14	Date
Chief, Development Engineering Division		
Approved: Howard County Department Of Public Works		
<i>William R. Muhl</i>	1-21-14	Date
Chief, Bureau Of Highways		
NO.	DESCRIPTION	DATE



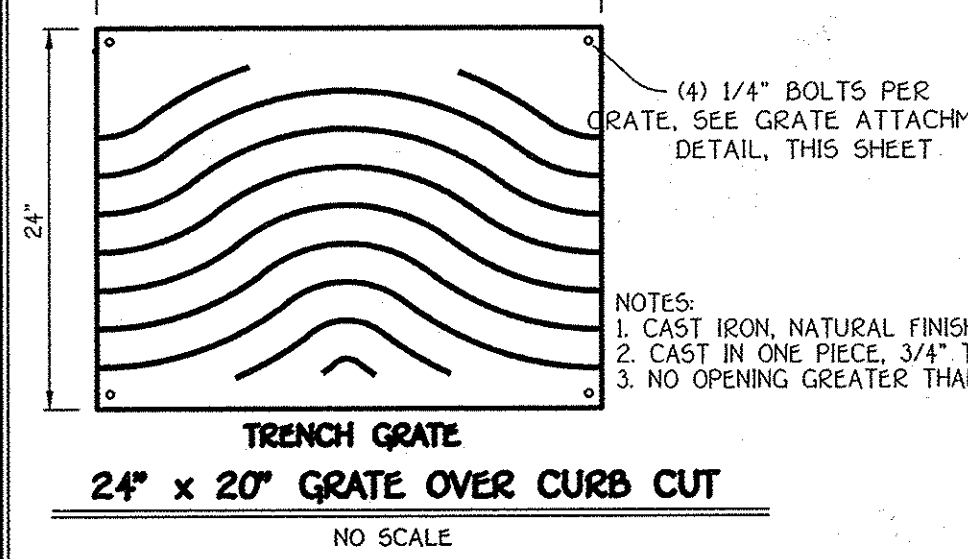
TYPICAL DOUBLE BIO-RETENTION CELL PLAN ALONG PARKING
SCALE: 1" = 5'



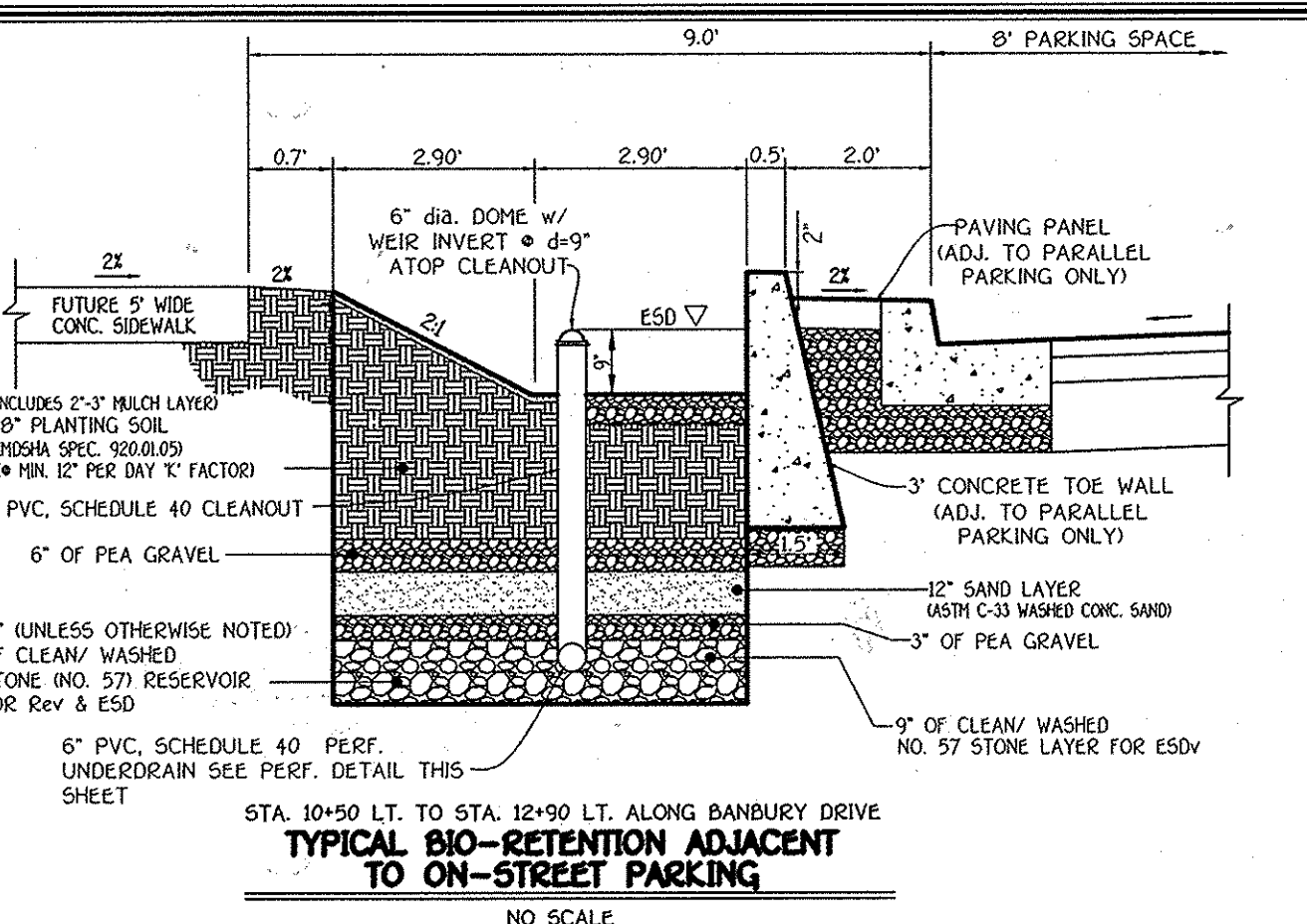
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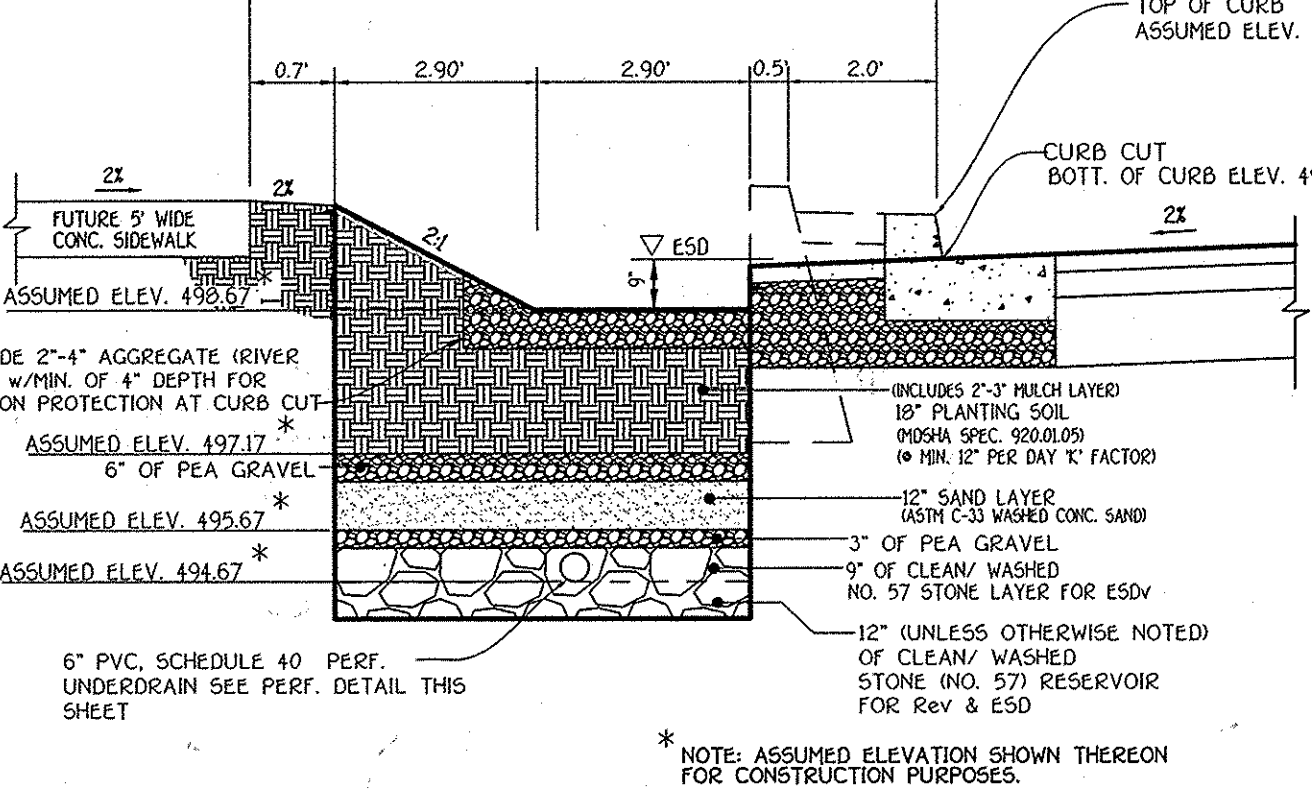
FRAME DETAIL



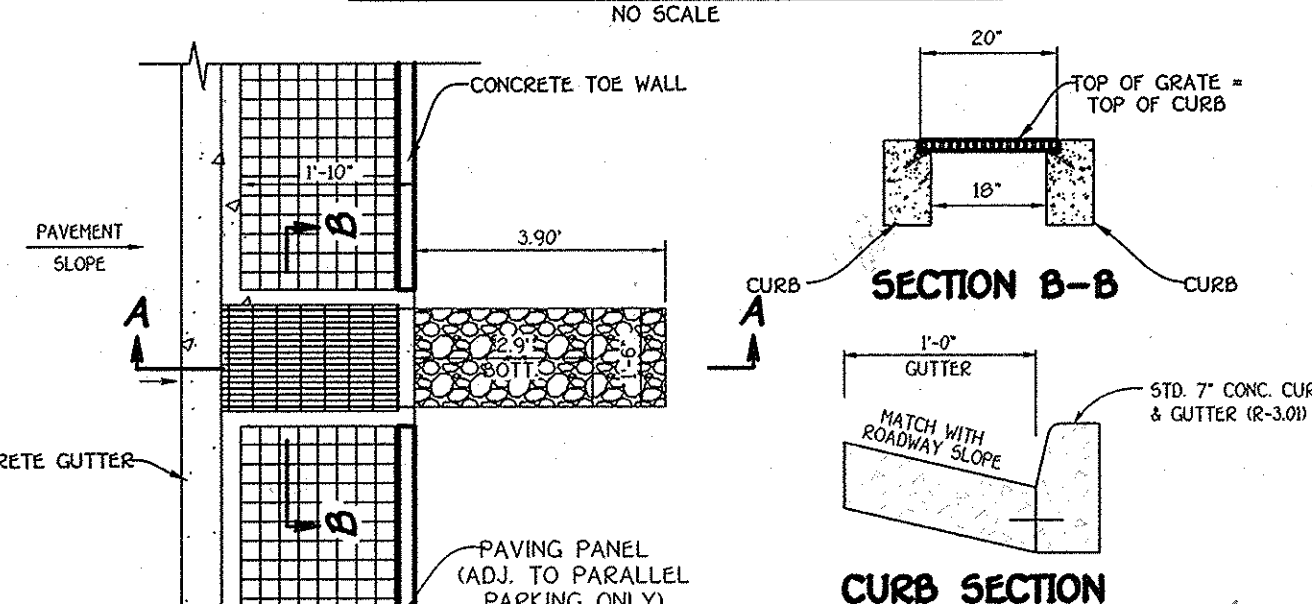
TRENCH GRATE 24" x 20" GRATE OVER CURB CUT
NO SCALE



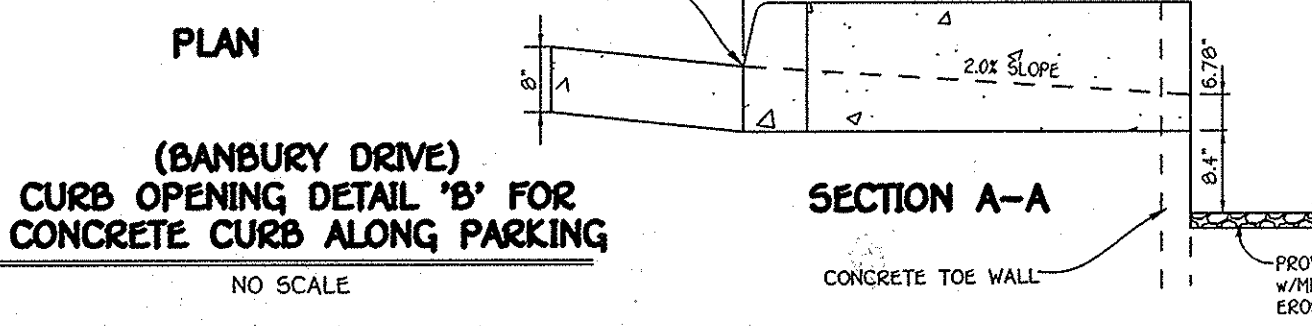
TYPICAL BIO-RETENTION CELL ADJACENT TO ON-STREET PARKING
NO SCALE



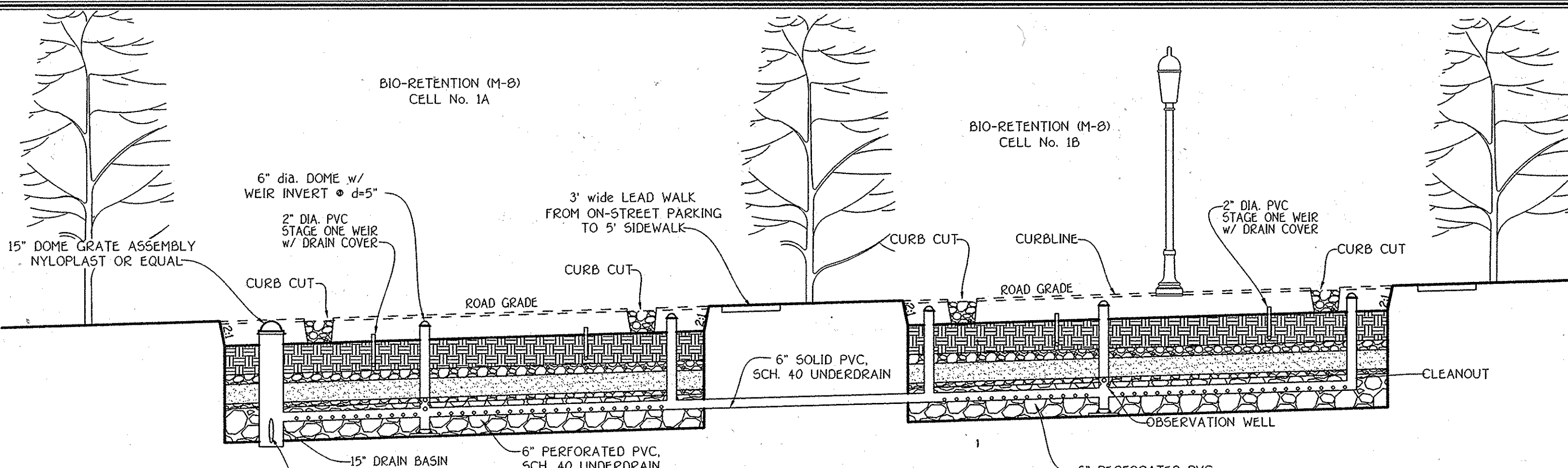
TYPICAL BIO-RETENTION (M-B) ADJACENT TO ON-STREET PARKING & CURB CUT
NO SCALE



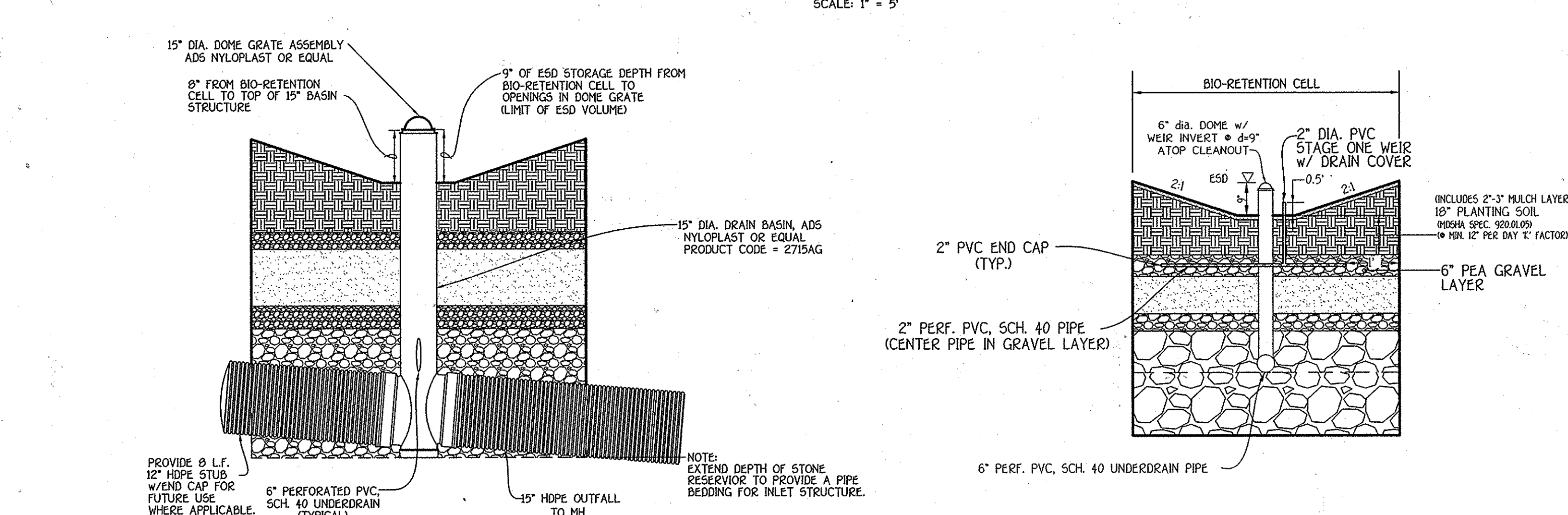
(BANBURY DRIVE) CURB OPENING DETAIL 'B' FOR CONCRETE CURB ALONG PARKING
NO SCALE



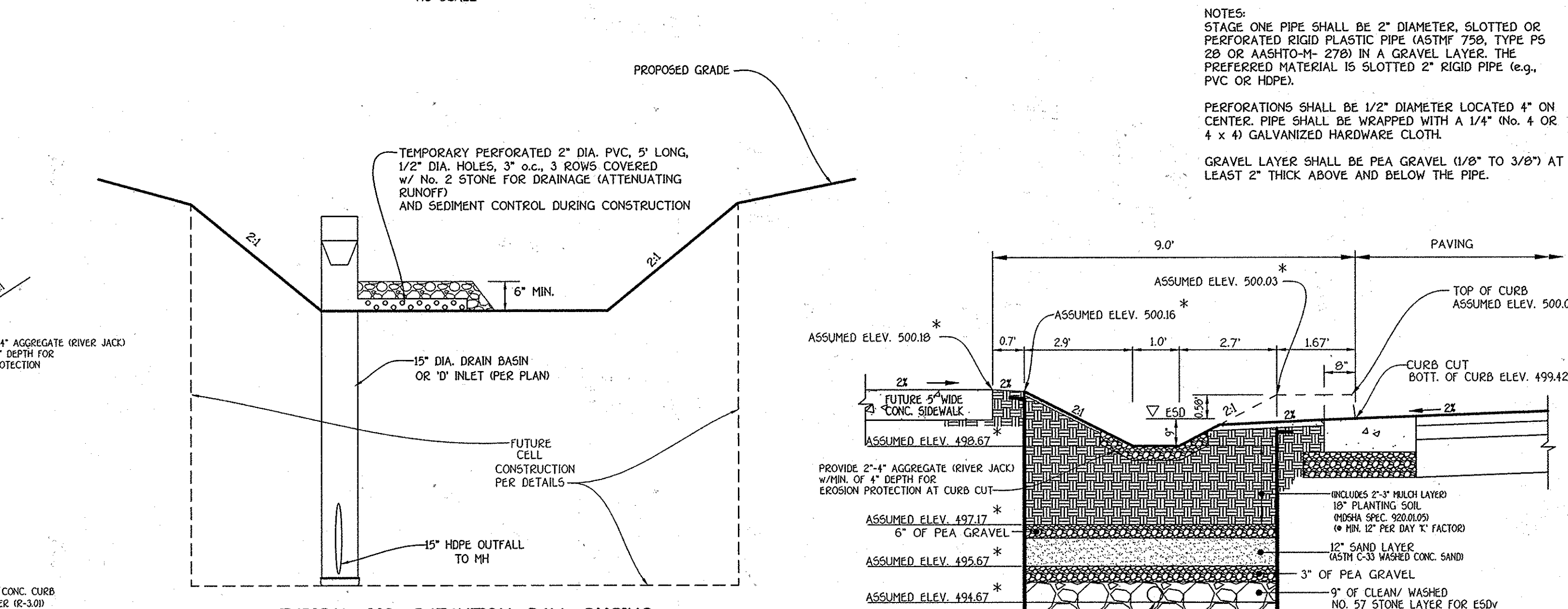
(BANBURY DRIVE) CURB OPENING DETAIL 'A' FOR CONCRETE CURB ALONG ROADWAY
NO SCALE



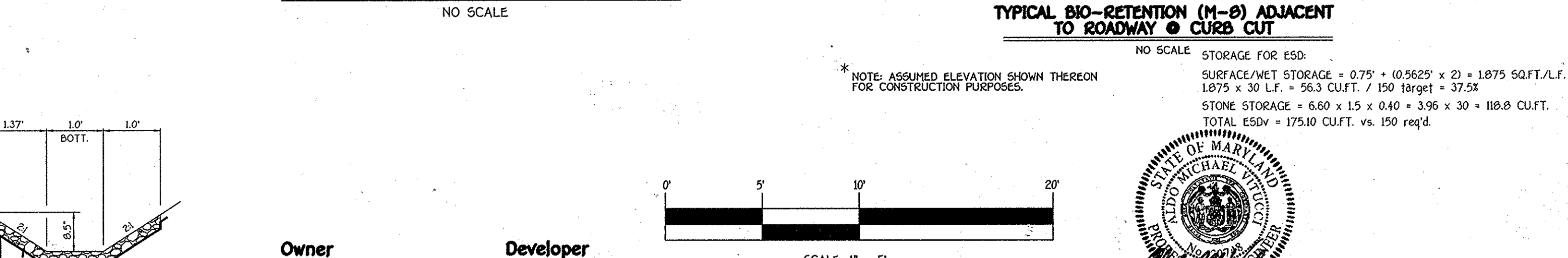
TYPICAL DOUBLE BIO-RETENTION CELL SECTION ALONG ROADWAY
SCALE: 1" = 5'



TYPICAL INLET STRUCTURE DETAIL BIO-RETENTION
NO SCALE



TYPICAL BIO-RETENTION CELL DURING INITIAL CONSTRUCTION PHASE PRIOR TO DRAINAGE AREA BEING STABILIZED
NO SCALE



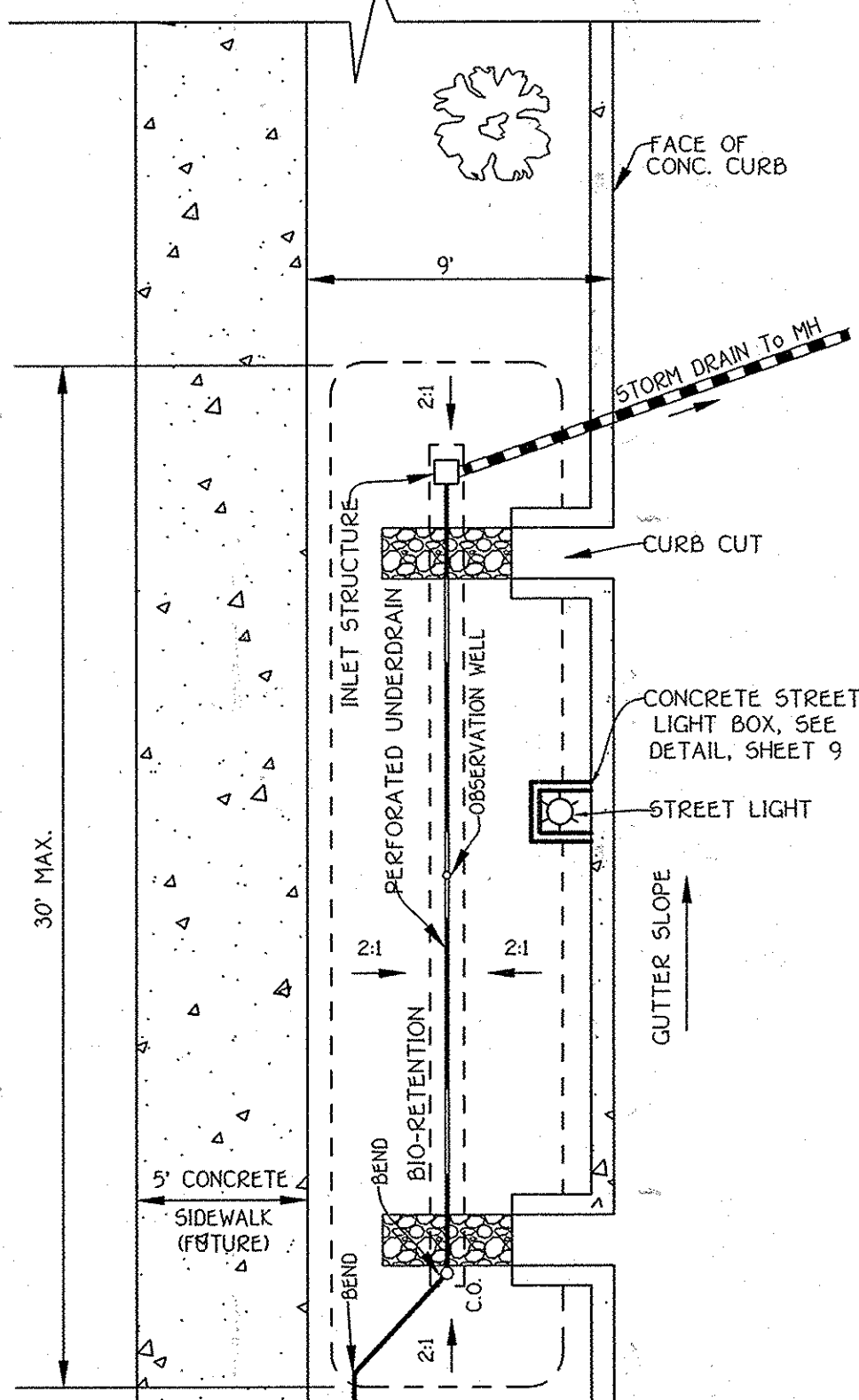
TYPICAL BIO-RETENTION (M-B) ADJACENT TO ROADWAY & CURB CUT
NO SCALE

NOTE: ASSUMED ELEVATION SHOWN THEREON FOR CONSTRUCTION PURPOSES.

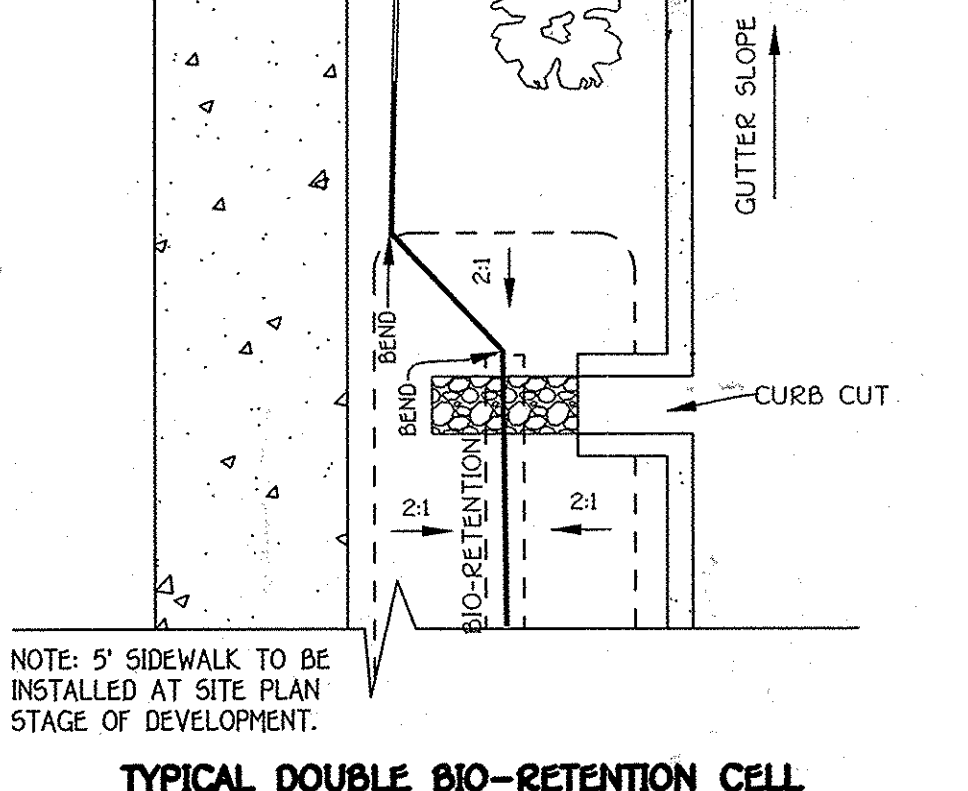
STORAGE FOR ESD:
SURFACE/NET STORAGE = 0.75' x 10.5625' x 21' = 1875 SQ.FT./LT.
1875 x 30' LT. = 56,250 CU.FT. / 150 (target) = 375.5
STONE STORAGE = 6.60 x 15 x 0.40 = 3.96 x 30 = 118.8 CU.FT.
TOTAL ESD = 175.10 CU.FT. vs. 150 req'd.



ALDO M. VITUCCI, P.E.
DATE: 2/10/14
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. 20740, Expiration Date 2-22-15.



TYPICAL DOUBLE BIO-RETENTION CELL PLAN ALONG ROADWAY
SCALE: 1" = 5'



BIO-RETENTION SECTION ALONG BANBURY DRIVE @ 2" STAGE ONE WEIR
NO SCALE

NOTES:
STAGE ONE PIPE SHALL BE 2" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTM F759, TYPE P5 2B OR AASHTO-M-278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED 2" RIGID PIPE (e.g. PVC OR HDPE).
PERFORATIONS SHALL BE 1/2" DIAMETER LOCATED 4" ON CENTER. PIPE SHALL BE WRAPPED WITH A 1/4" No. 4 OR 4 x 4 GALVANIZED HARDWARE CLOTH.
GRAVEL LAYER SHALL BE PEA GRAVEL (1/8" TO 3/8") AT LEAST 2" THICK ABOVE AND BELOW THE PIPE.

STORMWATER MANAGEMENT NOTES & DETAILS (BANBURY DRIVE)

OXFORD SQUARE
"A HOWARD COUNTY GREEN NEIGHBORHOOD"
Saint Margarets Boulevard
(Sta. 6+62.30 to Sta. 12+52.60 & Banbury drive
(Sta. 11+98 to Sta. 15+60.04)

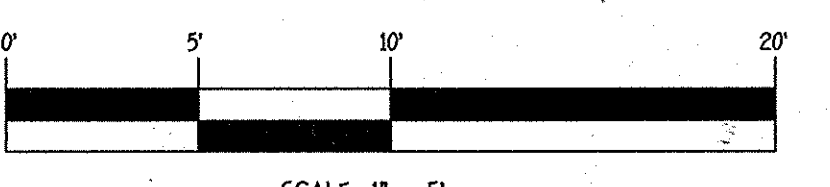
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Tax Map: 30, Parcel: 751, Grid: 20
First Election District - Howard County, Maryland
Date: January 6, 2014
Sheet 5 of 24

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FISHER, COLLINS & CARTER, INC.
Civil, Engineering Consultants & Land Surveyors
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PRZ
ELKTON CITY, MARYLAND 22042
(410) 461-2855

Owner
Kellogg-CCP, LLC
c/o David P. Schefferacker, Jr., Managing Member
2330 West Joppa Road, Suite 190
Lutherville, Maryland 21093-4614
Ph: 410-296-3800

Developer
Preston - Schefferacker Properties
2330 West Joppa Road, Suite 190
Lutherville, Maryland 21093-4614
Ph: 410-296-3800



THERE IS NO AS-BUILT INFORMATION ON THIS SHEET

Approved: Department Of Planning And Zoning

K.A.S. Kaulbach 2/19/14
 Chief, Division Of Land Development DATE

Paul Coleman 2-7-14
 Chief, Development Engineering Division DATE

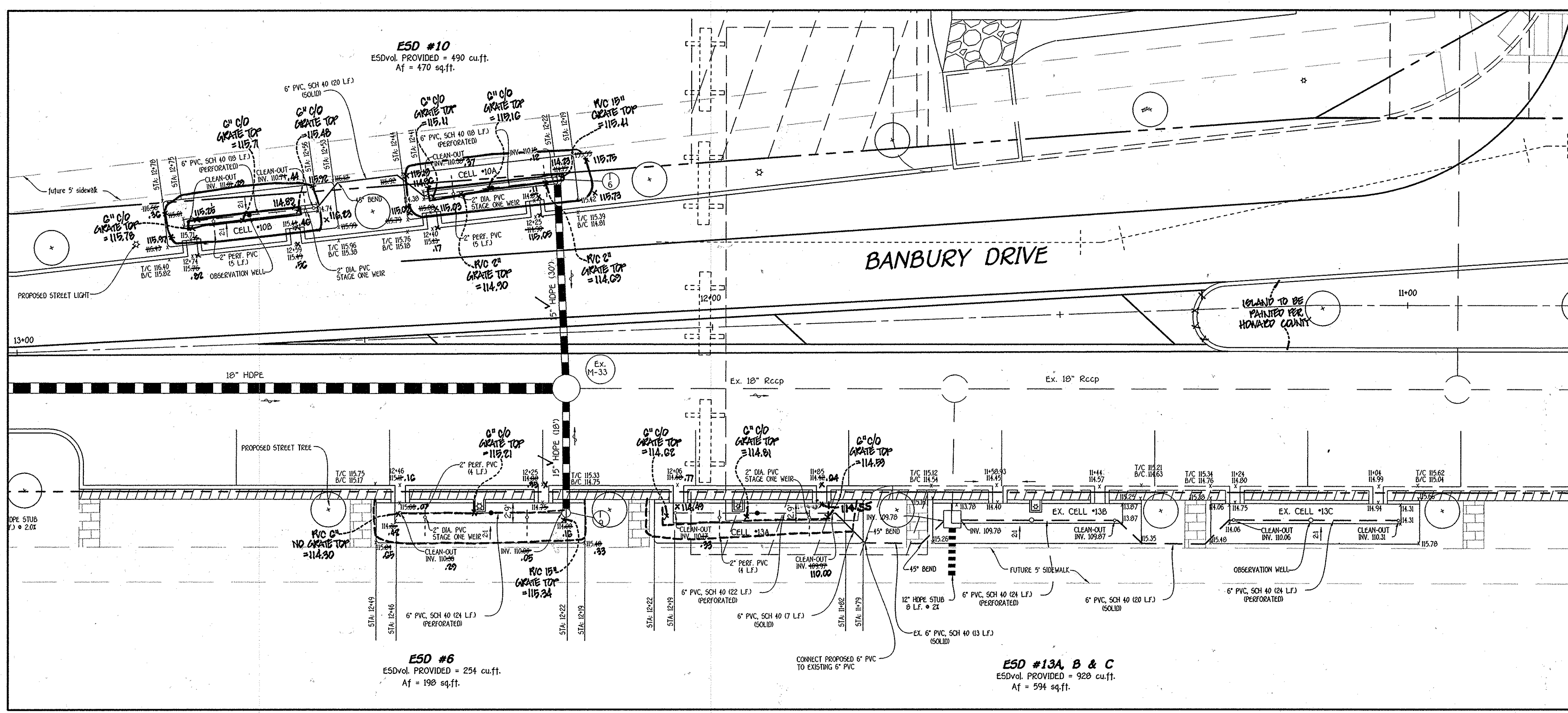
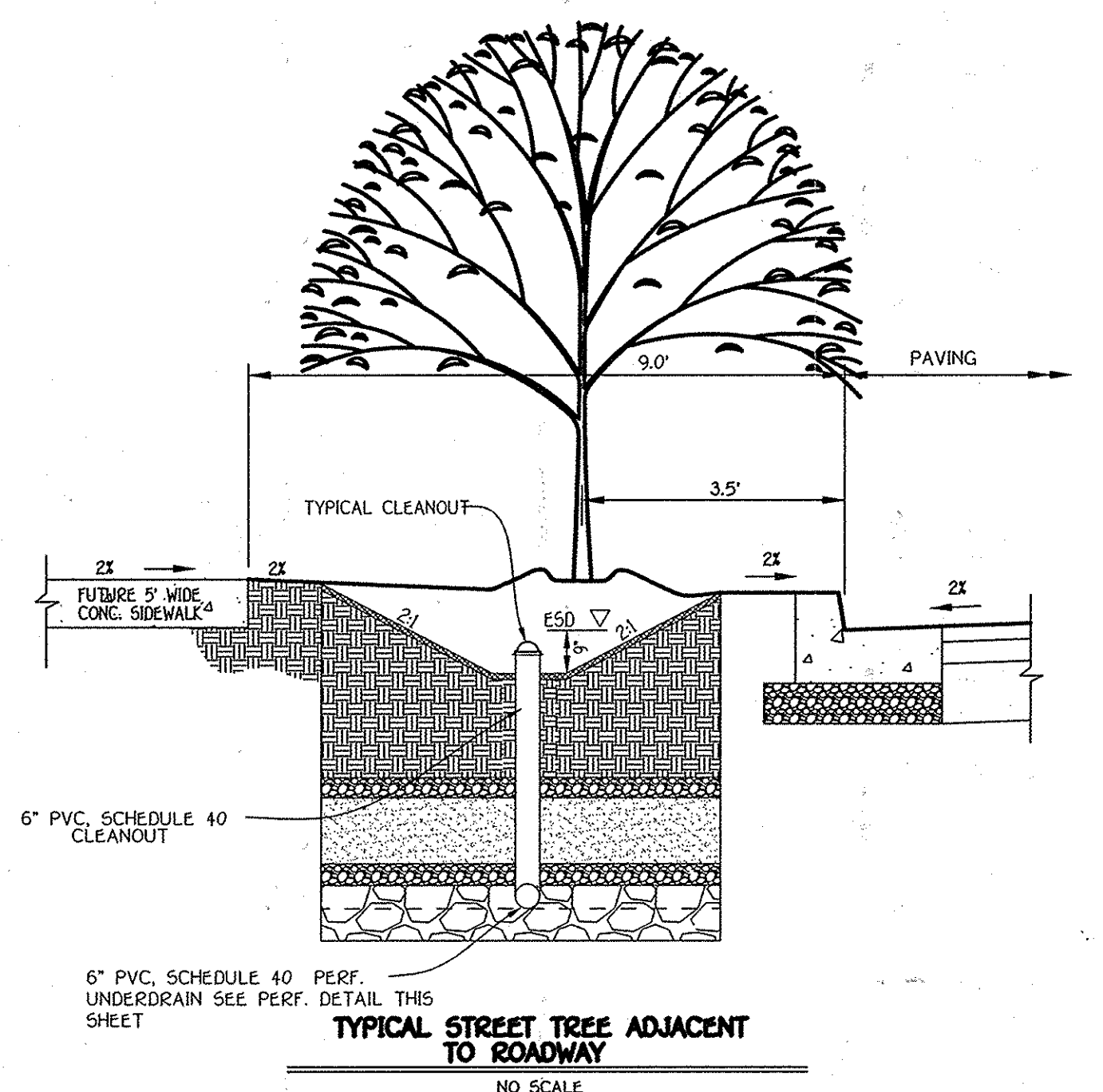
Approved: Howard County Department Of Public Works

Will R. Gull 1-21-14
 Chief, Bureau Of Highways DATE

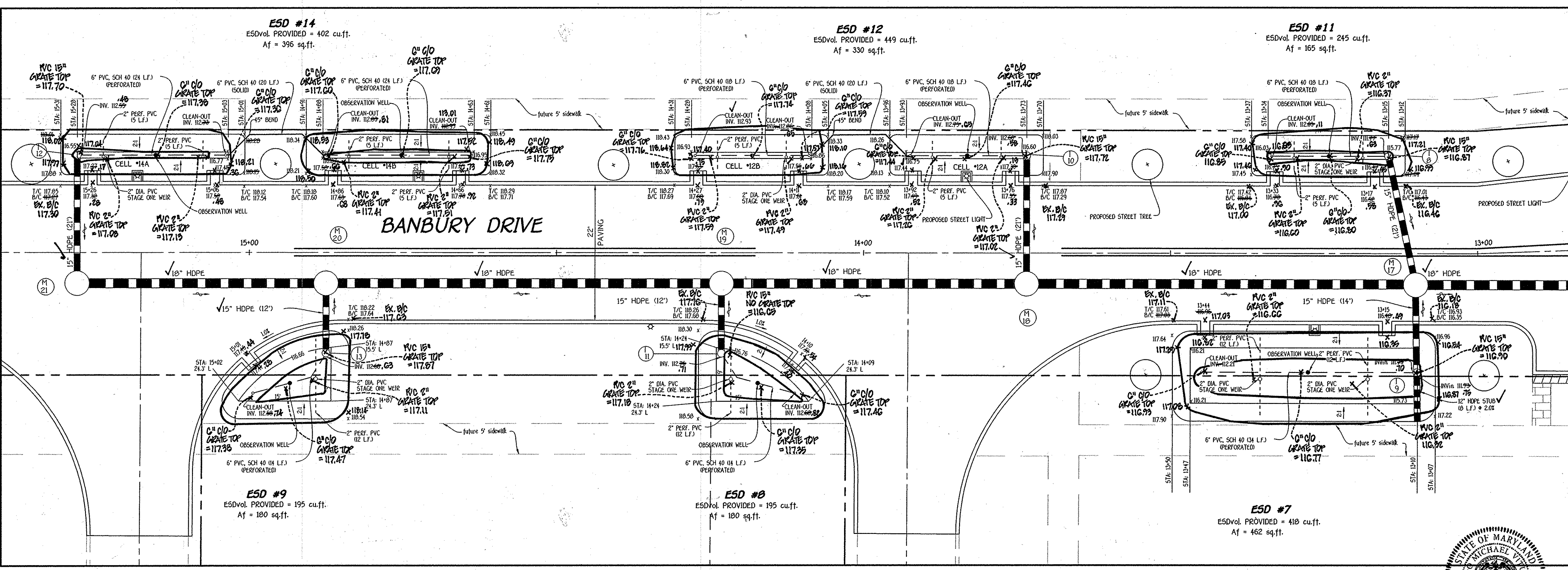
REVISIONS		
NO.	DESCRIPTION	DATE

STORMWATER MANAGEMENT MAINTENANCE NOTE

ALL STORMWATER MANAGEMENT FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED BY THE OXFORD SQUARE COMMERCIAL ASSOCIATION, INC. THE STREET TREES, TREES WITHIN THE BIO-RETENTION, PERFORATED UNDERDRAINS, FEEDERS, PLANTINGS AND SWALES WILL ALSO BE PRIVATELY OWNED AND MAINTAINED BY THE OXFORD SQUARE COMMERCIAL ASSOCIATION. HOWARD COUNTY WILL ONLY MAINTAIN THE INLET STRUCTURE WITHIN THE MICRO BIO-RETENTION FACILITIES ADJACENT TO THE RIGHT-OF-WAY.

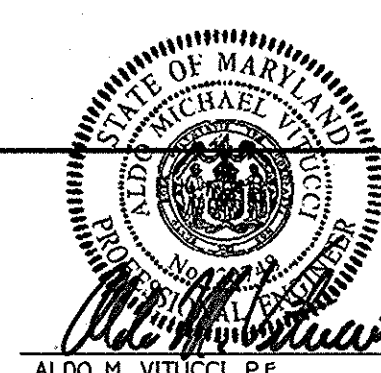


**PROPOSED MICRO BIO-RETENTION (M-6)
 ESD Nos. 6, 10 & 13A PLAN VIEW**
 SCALE: 1" = 10'

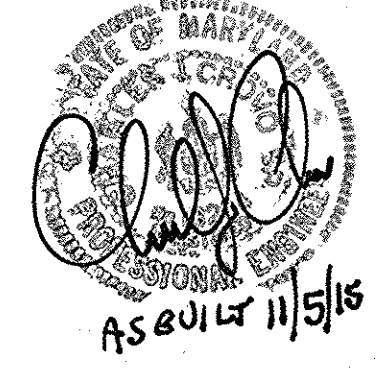


**PROPOSED MICRO BIO-RETENTION (M-6)
 ESD Nos. 7 thru 9, 11, 12 & 14 PLAN VIEW**
 SCALE: 1" = 10'

Owner	Developer
Kellogg-CCR, LLC c/o David P. Scheffner, Jr., Managing Member 2330 West Joppa Road, Suite 190 Lutherville, Maryland 21093-4614 PH: 410-296-3000	Preston + Scheffner Properties 2330 West Joppa Road, Suite 190 Lutherville, Maryland 21093-4614 PH: 410-296-3000

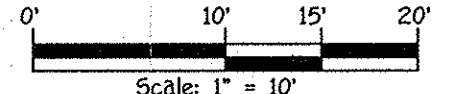


DATE: 01/06/14



**STORMWATER MANAGEMENT PLANS
 OXFORD SQUARE**
 "A HOWARD COUNTY GREEN NEIGHBORHOOD"
 Saint Margarets Boulevard
 (Sta. 6+62.30 to Sta. 12+52.60 &
 Banbury Drive
 (Sta. 11+98 to Sta. 15+60.84)

Zoned: TOD
 Tax Map: 38, Parcel: 76L, Grid: 20
 First Election District: Howard County, Maryland
 Date: January 6, 2014
 Sheet 6 of 24



Infiltration and Filter System Construction Specifications

Infiltration and filter systems either take advantage of existing permeable soils or create a permeable medium such as sand for infiltration, and the v. in some instances where permeability is great, these facilities may be used for Qo as well. The most common systems include infiltration trenches, infiltration basins, sand filters, and organic filters.

When properly planted, vegetation will thrive and enhance the functioning of these systems. For example, pre-treatment buffers will trap sediments that often are bound with phosphorus and metals. Vegetation planted in the facility will aid in nutrient uptake and water storage. Additionally, plant roots will provide arteries for stormwater to permeate soil for groundwater recharge. Finally, successful plantings provide aesthetic value and wildlife habitat making these facilities more desirable to the public.

Design Constraints:

- > Planting buffer strips of at least 20 feet will cause sediments to settle out before reaching the facility, thereby reducing the possibility of clogging.
- > Determine areas that will be saturated with water and water table depth so that appropriate plants may be selected. Hydrology will be similar to bioretention facilities, see figure A.5 and Table A.4 for planting material guidance.
- > Plants known to send down deep taproots should be avoided in systems where filter fabric is used as part of facility design.
- > Test soil conditions to determine if soil amendments are necessary.
- > Plants shall be located so that access is possible for structure maintenance.
- > Stabilize heavy flow areas with erosion control mats or sod.
- > Temporarily divert flows from seeded areas until vegetation is established.
- > See Table A.5 for additional design considerations.

Bio-retention

Soil Bed Characteristics

The characteristics of the soil for the bioretention facility are perhaps as important as the facility location, size, and treatment volume. The soil must be permeable enough to allow runoff to filter through the media, while having characteristics suitable to promote and sustain a robust vegetation cover crop. In addition, much of the nutrient pollutant uptake (nitrogen and phosphorus) is accomplished through absorption and microbial activity within the soil profile. Therefore, soils must balance their chemical and physical properties to support biotic communities above and below ground.

The planting soil should be a sandy loam, loamy sand, loam (USDA), or a loam/sand mix (should contain a minimum 35 to 60% sand, by volume). The clay content for these soils should be less than 25% by volume. Environmental Quality Resources (EQRS), 1996; Engineering Technology Inc. and Substrates, Inc. (CTA) 1993. Soils should fall within the S4, M, SC classifications of the Unified Soil Classification System (USCS). A permeability of at least 1.0 feet per day (0.25 in/hr) is required (a conservative value of 0.5 feet per day is used for design). The soil should be free of stones, stumps, roots, or other woody material over 1" in diameter. Branch or seeds from noxious weeds (e.g., Johnson Grass, Mugwort, Nutcase, and Canada Thistle or other noxious weeds as specified under COMAR 15.08.01.05) should not be present in the soil. Placement of the planting soil should be to 15 to 18 lifts that are loosely compacted (loosely with a backhoe bucket or traversed by dozer tracks). The specific characteristics are presented in Table A.3.

Table A.3 Planting Soil Characteristics

Parameter	Value
pH range	5.2 to 7.00
Organic matter	1.5 to 4.0% (by weight)
Magnesium	35 lbs. per acre, minimum
Phosphorus (phosphate - P2O5)	75 lbs. per acre, minimum
Potassium (potash - K2O)	85 lbs. per acre, minimum
Soluble salts	500 ppm
Clay	10 to 25 %
Silt	30 to 55 %
Sand	35 to 60%

Mulch Layer

The mulch layer plays an important role in the performance of the bioretention system. The mulch layer helps maintain soil moisture and avoids surface sealing, which reduces permeability. Mulch helps prevent erosion, and provides a microenvironment suitable for soil biota at the mulch/soil interface. It also serves as a pretreatment layer, trapping the finer sediments, which remain suspended after the primary pretreatment.

The mulch layer should be standard landscape style, single or double shredded hardwood mulch or chips. The mulch layer should be well aged (stockpiled or stored for at least 12 months), uniform in color, and free of other materials, such as weed seeds, soil roots, etc. The mulch should be applied to a maximum depth of three inches. Grass clippings should not be used as a mulch material.

Planting Guidance

Plant material selection should be based on the goal of simulating a terrestrial forested community of native species. Bioretention simulates an upland-species ecosystem. The community should be dominated by trees, but have a distinct community of understory trees, shrubs and herbaceous materials. By creating a diverse, dense plant cover, a bioretention facility will be able to treat stormwater runoff and withstand urban stresses from insects, disease, drought, temperature, wind, and exposure. The proper selection and installation of plant materials is key to a successful system. There are essentially three zones within a bioretention facility (Figure A.5). The lowest elevation supports plant species adapted to standing and fluctuating water levels. The middle elevation supports plants that like drier soil conditions, but can still tolerate occasional inundation by water. The outer edge is the highest elevation and generally supports plants adapted to drier conditions. For appropriate plant materials for bioretention facilities, refer to MSA Approved Species List. The layout of plant material should be flexible, but should follow the general principles described in Table A.5. The objective is to have a system, which resembles a random, and natural plant layout, while maintaining optimal conditions for plant establishment and growth. For a more extensive bioretention plan, consult ETAB, 1993 or Clayton and Schaefer, 1997.

Operation And Maintenance Schedule For Commercial Association Owned & Maintained Bio-Retention Areas (M-6)

- The owner shall maintain the plant material, mulch layer and soil layer annually. Maintenance of mulch and soil is limited to correcting areas of erosion or wash out. Any mulch replacement shall be done in the spring. Plant material shall be checked for disease and insect infestation and maintenance will address dead material and pruning. Acceptable replacement plant material is limited to the following 2000 Maryland stormwater design manual volume II, Table A.4.1 and 2.
- The owner shall perform a plant in the spring and in the fall each year. During the inspection, the owner shall remove dead and diseased vegetation considered beyond treatment, replace dead plant material with acceptable replacement plant material. Treat diseased trees and shrubs and replace all deficient stakes and wires.
- The owner shall inspect the mulch each spring. The mulch shall be replaced every two to three years. The previous mulch layer shall be removed before the new layer is applied.
- The owner shall correct soil erosion on an as needed basis, with a minimum of once per month and after each heavy storm.
- The owner shall maintain all observation wells, clean-outs and perforated underdrains.
- Filter material must be replaced when water remains on the surface of the filter bed for more than 24 hours following a 1 or 2 year storm event or more than 48 hours following a 10 year storm event.

B.4.C Specifications for Micro-Bioretention, Rain Gardens, Landscape Infiltration & Infiltration Berms

1. Material Specifications

The allowable materials to be used in these practices are detailed in Table B.4.1.

2. Filtering Media or Planting Soil

The soil shall be a uniform mix, free of stones, stumps, roots or other similar objects larger than two inches. No other materials or substances shall be mixed or dumped within the micro-bioretention practice that may be harmful to plant growth, or prove a hindrance to the planting or maintenance operations. The planting soil shall be free of noxious grass, Quackgrass, Johnson grass, or other noxious weeds as specified under COMAR 15.08.01.05.

The planting soil shall be tested and shall meet the following criteria:

Soil Component - Loamy Sand or Sandy Loam (USDA Soil Textural Classification)

Organic Content - Minimum 10% by dry weight (ASTM D 2974). In general, this can be met with a mixture of loamy sand 100%-650 and compost 03% to 40% or sandy loam 03%, coarse sand 030, and compost 400.

Clay Content - Media shall have a clay content of less than 5%.

pH Range - Should be between 5.5 - 7.0. Amendments (e.g., lime, iron sulfate plus sulfur) may be mixed into the soil to increase or decrease pH.

There shall be at least one soil test per project. Each test shall consist of both the standard soil test for pH and additional tests of organic matter, and soluble salts. A textural analysis is required from the site stockpiled topsoil. If topsoil is imported, then a texture analysis shall be performed for each location where the topsoil was excavated.

3. Compaction

It is very important to minimize compaction of both the base of bioretention practices and the required backfill. When possible, use excavation hoses to remove original soil. If practices are excavated using a loader, the contractor should use wide track or marsh track equipment, or light equipment with turf type tires. Use of equipment with narrow tracks or narrow tires, rubber tires with large lugs, or high-pressure tires will cause excessive compaction resulting in reduced infiltration rates and is not acceptable. Compaction will significantly contribute to design failure.

Compaction can be alleviated at the base of the bioretention facility by using a primary tilling operation such as a chisel plow, ripper, or subsoiler. These tilling operations are to restructure the soil profile through the 12 inch completion zone. Substitute methods must be approved by the engineer. Rototillers typically do not till deep enough to reduce the effects of compaction from heavy equipment.

Rototill 2 to 3 inches of sand into the base of the bioretention facility before backfilling the optional sand layer. Pump any ponded water before preparing (rototilling) base.

When backfilling the topsoil over the sand layer, first place 3 to 4 inches of topsoil over the sand, then rototill the sand/topsoil to create a gradation zone. Backfill the remainder of the topsoil to final grade.

When backfilling the bioretention facility, place soil in lifts 12" to 18". Do not use heavy equipment within the bioretention basin. Heavy equipment can be used around the perimeter of the basin to supply soils and sand. Grade bioretention materials with light equipment such as a compact loader or a dozer/loader with marsh tracks.

4. Plant Material

Recommended plant material for micro-bioretention practices can be found in Appendix A, Section A.2.3.

5. Plant Installation

Compost is a better organic material source, is less likely to float, and should be placed in the invert and other low areas. Mulch should be placed in surrounding to a uniform thickness of 2" to 3". Shredded or chipped hardwood mulch is the only accepted mulch. Pine mulch and wood chips will float and move to the perimeter of the bioretention area during a storm event and are not acceptable. Shredded mulch must be well aged 60 to 12 months for acceptance.

Rootstock of the plant material shall be kept moist during transport and on-site storage. The plant root ball should be planted so 1/8th of the ball is above final grade surface. The diameter of the planting pit shall be at least six inches larger than the diameter of the planting ball. Set and maintain the plant straight during the entire planting process. Thoroughly water ground bed cover after installation.

Trees shall be braced using 2" by 2" stakes only as necessary and for the first growing season only. Stakes are to be equally spaced on the outside of the tree ball.

Grasses and legume seed should be drilled into the soil to a depth of at least one inch. Grass and legume plugs shall be planted following the non-grass ground cover planting specifications.

The topsoil specifications provide enough organic material to adequately supply nutrients from natural cycling. The primary function of the bioretention structure is to improve water quality. Adding fertilizers defeats, or at a minimum, impedes this goal. Only add fertilizer if wood chips or mulch are used to amend the soil. Rototill urea fertilizer at a rate of 2 pounds per 1000 square feet.

6. Underdrains

Underdrains should meet the following criteria:

Pipe - Should be 4" to 6" diameter, slotted or perforated rigid plastic pipe (ASTM F756, Type PS 28, or ASHTO-M-278) in a gravel layer. The preferred material is slotted, 4" rigid pipe (e.g., PVC or HDPE).

Perforations - If perforated pipe is used, perforations should be 3/8" diameter located 6" center with a minimum of four holes per row. Pipe shall be wrapped with a 1/4" (No. 4 or 4x4) galvanized hardware cloth.

Gravel - The gravel layer (No. 57 stone preferred) shall be at least 3" thick above and below the underdrain.

The main collector pipe shall be at a minimum 0.5% slope.

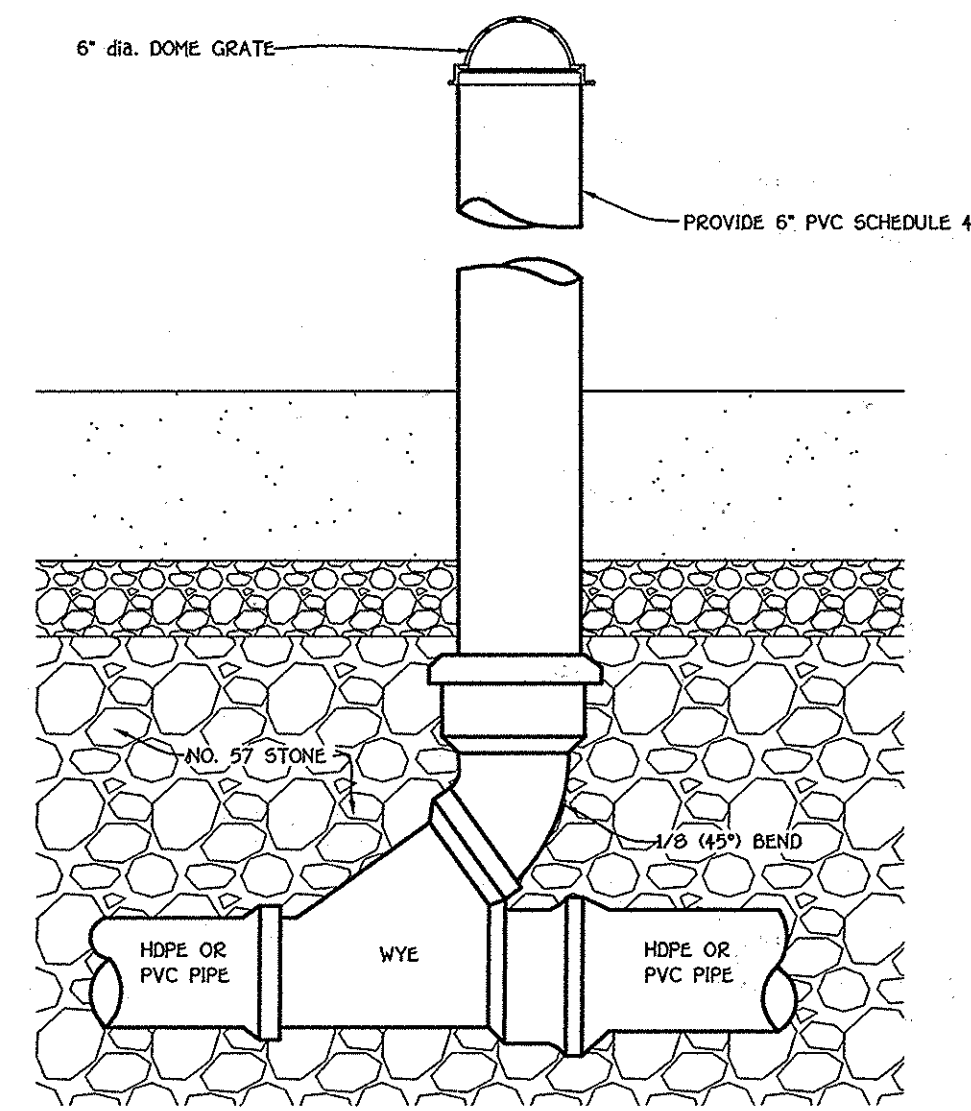
A rigid, non-perforated observation well must be provided (one per every 1000 square feet) to provide a clean-out port and monitor performance of the filter.

A 4" layer of pea gravel (1/8" to 3/8" stone) shall be located between the filter media and underdrain to prevent migration of fines into the underdrain. This layer may be considered part of the filter bed when bed thickness exceeds 24".

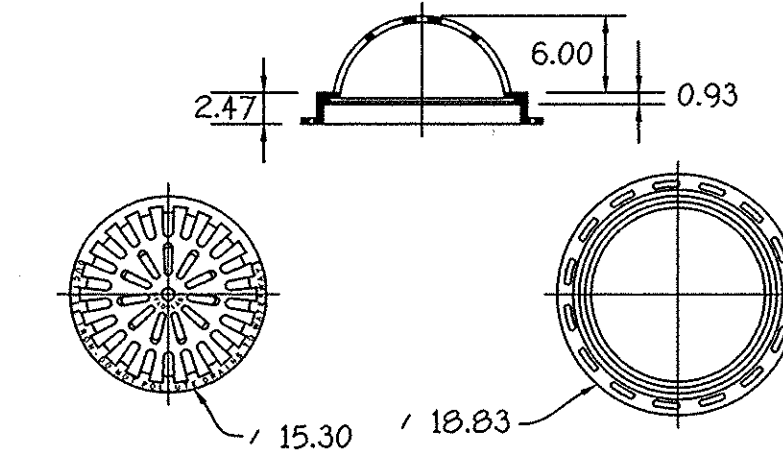
The main collector pipe for underdrain systems shall be constructed at a minimum slope of 0.5%. Observation wells and/or clean-out pipes must be provided (one minimum per every 1000 square feet of surface area).

7. Miscellaneous

These practices may not be constructed until all contributing drainage area has been stabilized.



TYPICAL CLEAN-OUT DETAIL
NO SCALE



ALL DIMENSIONS IN INCHES UNLESS NOTED OTHERWISE
QUALITY: MATERIAL SHALL CONFORM TO ASTM
A536 GRADE 70-50-05
*PAINT: CASTINGS ARE FURNISHED WITH A BLACK PAINT
LOCKING DEVICE AVAILABLE UPON REQUEST
SEE DRAWING NO.
7001-110-230

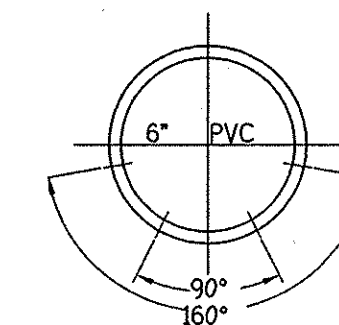
Nyloplast

3130 VERONA AVE
BUFORD, GA 30518
PHN (770) 932-2443
FAX (770) 932-2490
www.nyloplast-us.com

15" DOME GRATE ASSEMBLY NYLOPLAST OR EQUAL

STORMWATER MANAGEMENT MAINTENANCE NOTE

ALL STORMWATER MANAGEMENT FACILITIES WILL BE PRIVATELY OWNED AND MAINTAINED BY THE OXFORD SQUARE COMMERCIAL ASSOCIATION, INC. THE STREET TREES, TREES WITHIN THE BIO-RETENTION, PERFORATED UNDERDRAINS, FEEDERS, PLANTINGS AND SWALES WILL ALSO BE PRIVATELY OWNED AND MAINTAINED BY THE OXFORD SQUARE COMMERCIAL ASSOCIATION. HOWARD COUNTY WILL ONLY MAINTAIN THE INLET STRUCTURE WITHIN THE MICRO BIO-RETENTION FACILITIES ADJACENT TO THE RIGHT-OF-WAY.



SCH 40 PVC PERFORATED UNDERDRAIN PIPE DETAIL FOR HORIZONTAL DRAIN PIPE

NO SCALE

Approved: Department Of Planning And Zoning

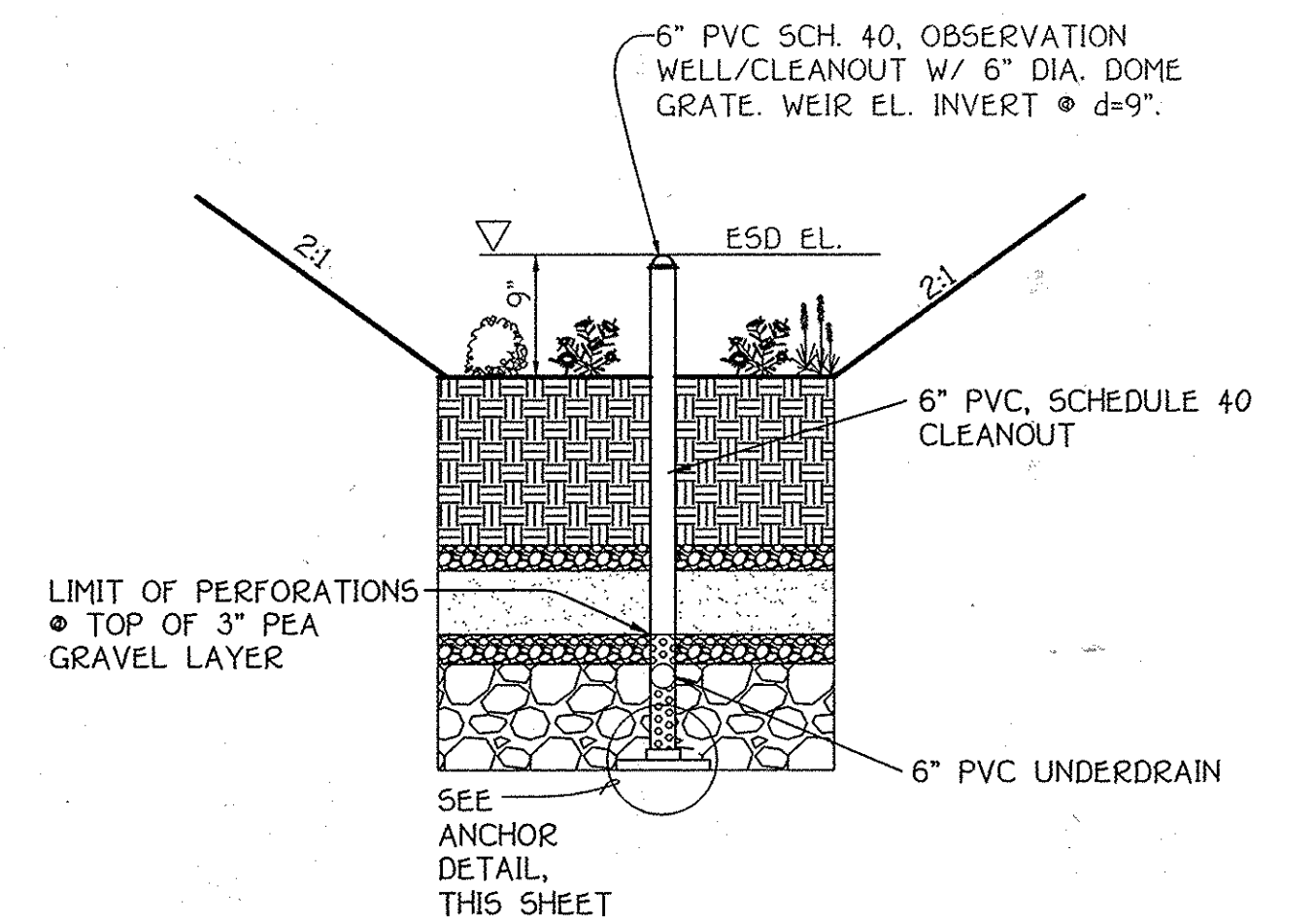
Kurt Seidman 2/19/14
Chief, Division Of Land Development Date

Chad Edwards 2-7-14
Chief, Development Engineering Division Date

Approved: Howard County Department Of Public Works

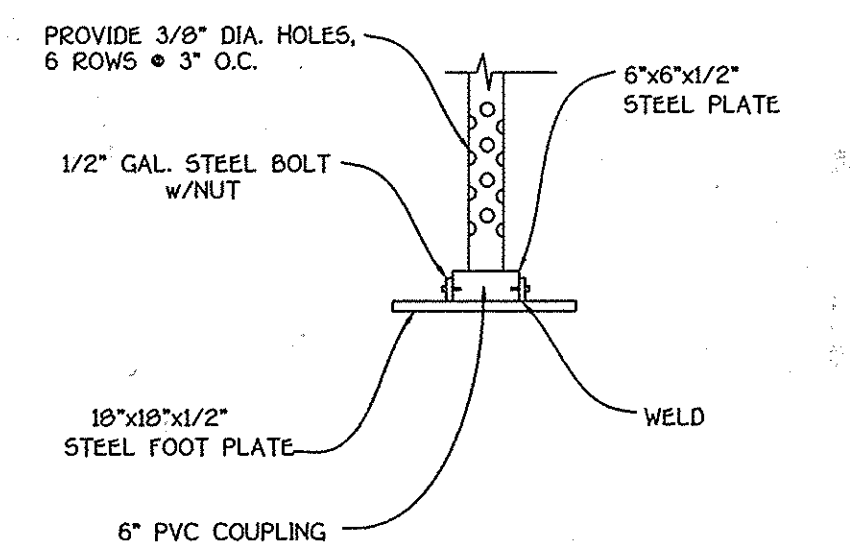
W. R. ... 1-21-14
Chief, Bureau Of Highways Date

REVISIONS		
NO.	DESCRIPTION	DATE



SECTION @ OBSERVATION WELL LOCATION

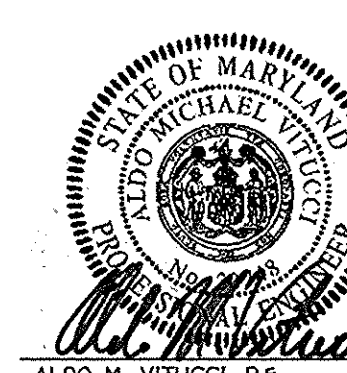
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ANCHOR DETAIL

NO SCALE

STORMWATER MANAGEMENT
NOTES & DETAILS
OXFORD SQUARE
"A HOWARD COUNTY GREEN NEIGHBORHOOD"
Saint Margarets Boulevard
(Sta. 6+62.30 to Sta. 12+52.60 &
Banbury drive
(Sta. 11+98.70 to Sta. 15+60.84)



ALDO M. VITUCCI, P.E.
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. 20748, Expiration Date 2-22-15.

2/16/14
DATE

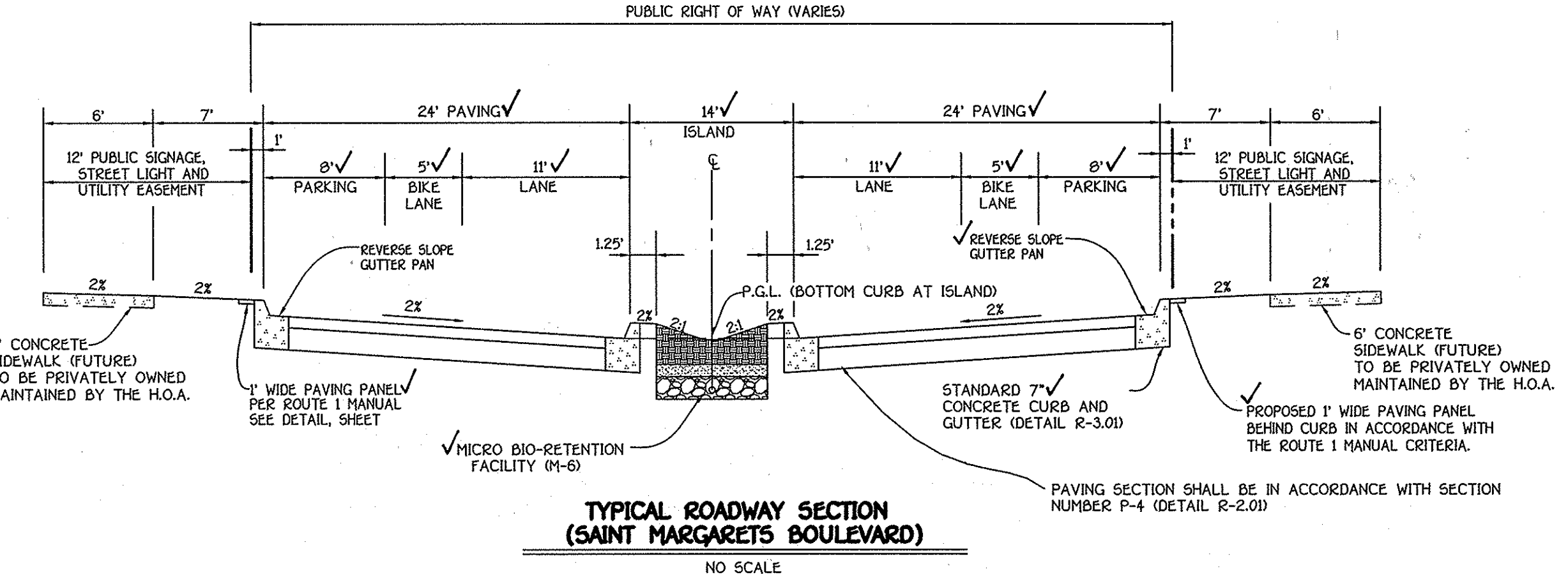
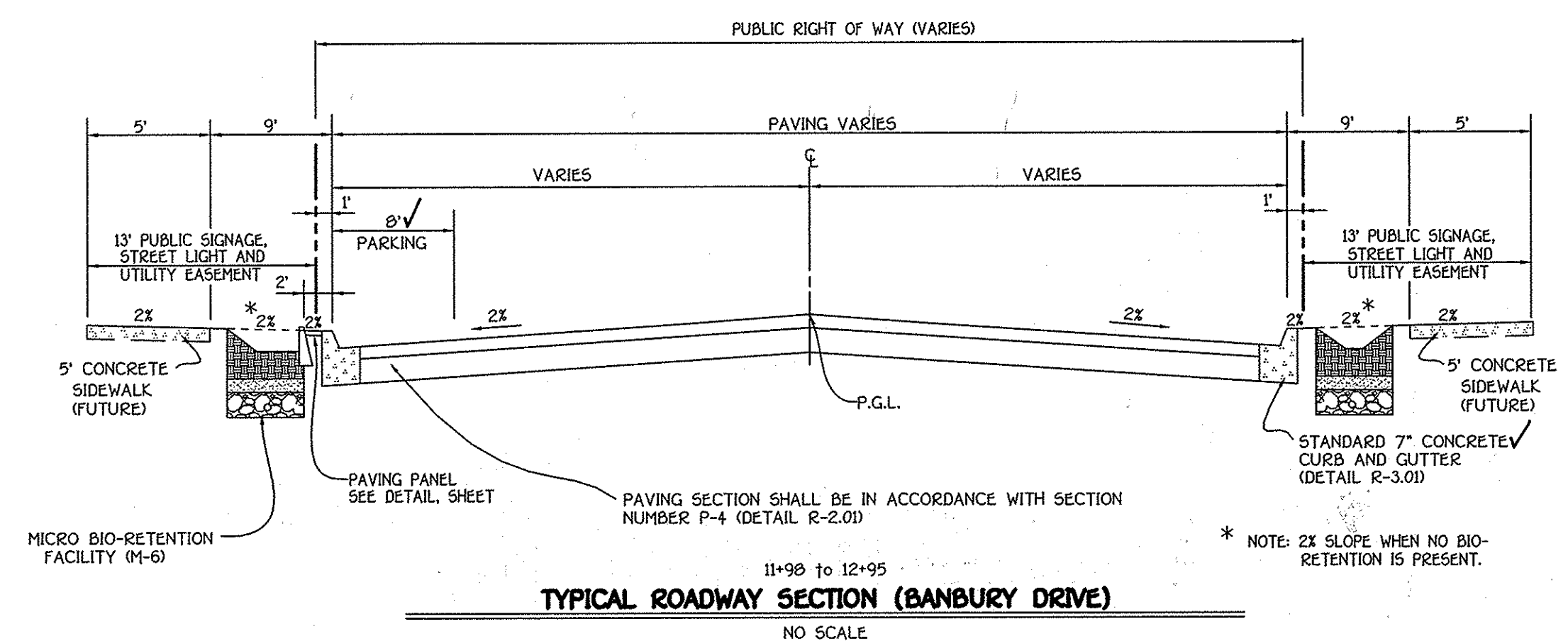
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Tax Map: 38, Parcel: 761, Grid: 20
First Election District: Howard County, Maryland
Date: January 6, 2014
Sheet 7 of 24

APPROVED: DEPARTMENT OF PUBLIC WORKS
W. R. Galt 1-21-14
 CHIEF, BUREAU OF HIGHWAYS DATE

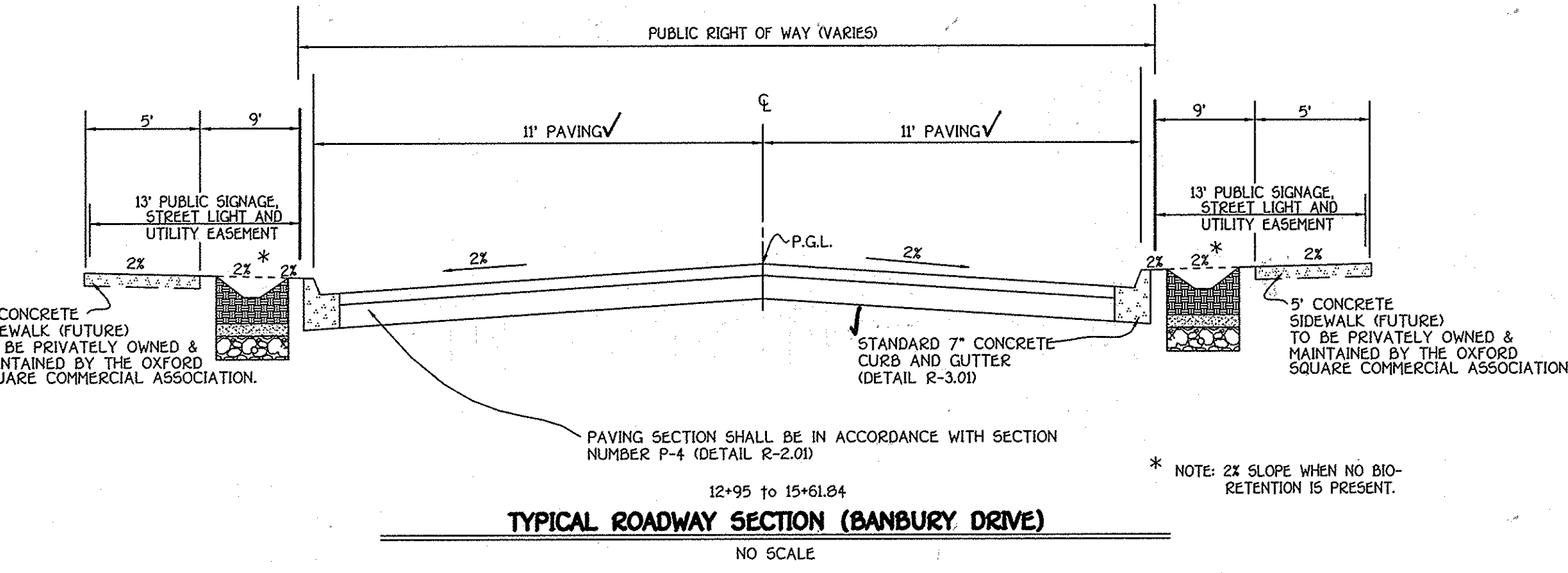
APPROVED: DEPARTMENT OF PLANNING AND ZONING
K. S. ... 2/19/14
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Chad ... 2-7-14
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

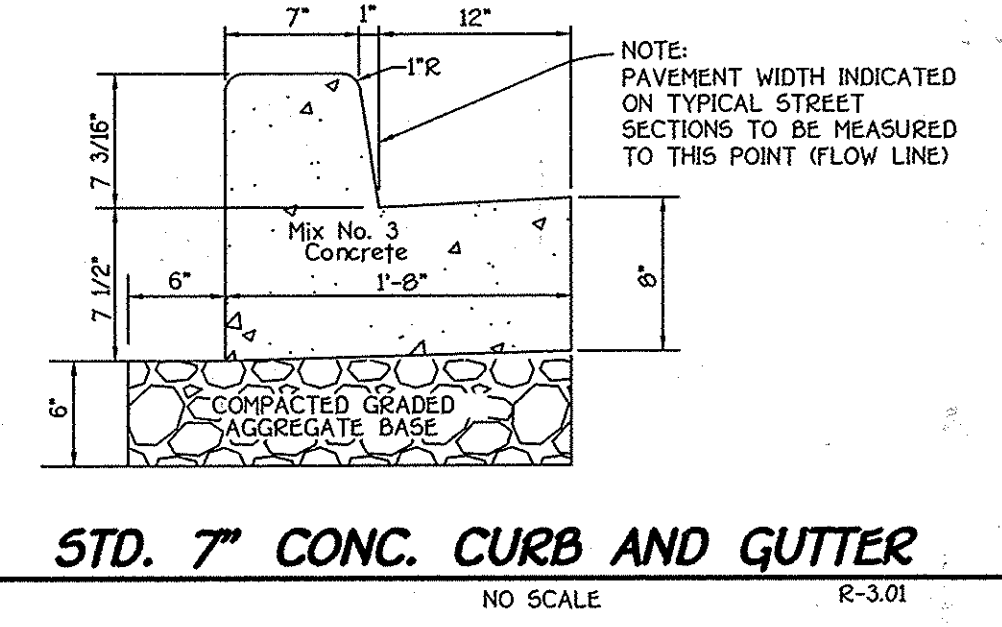
REVISIONS		
NO.	DESCRIPTION	DATE



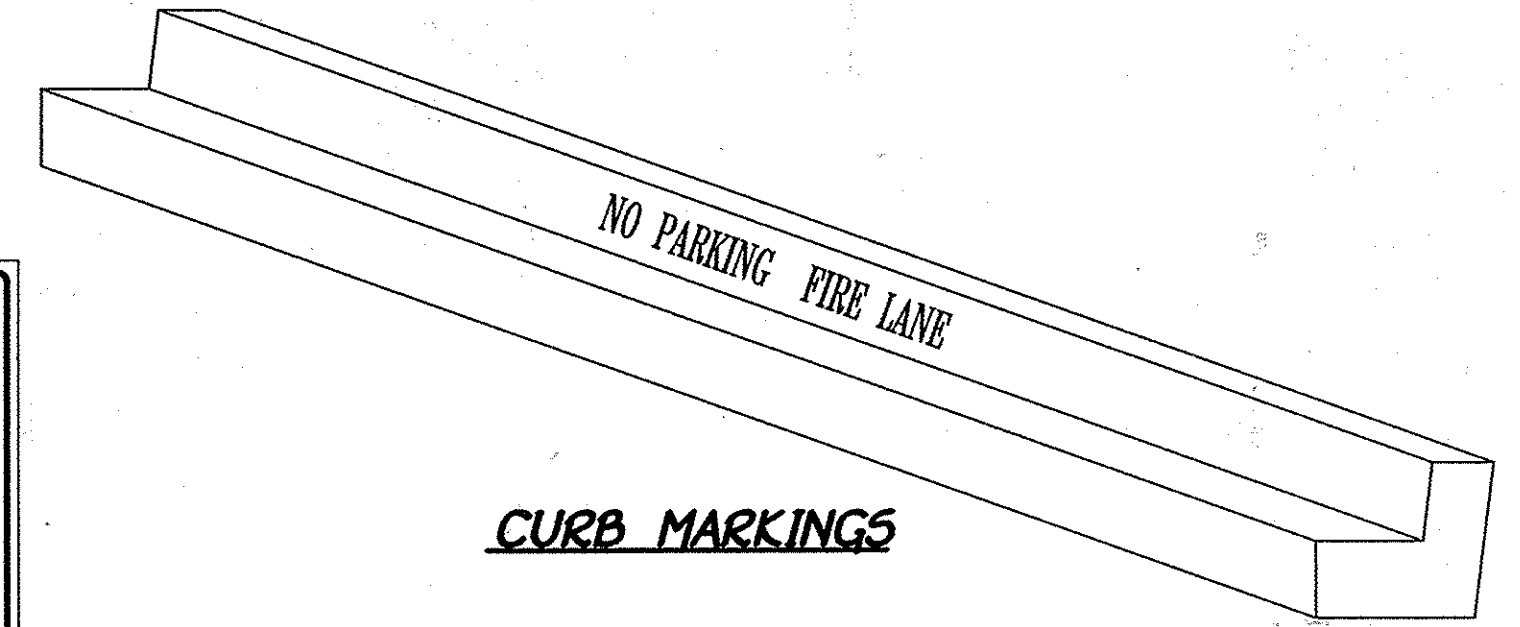
SAINT MARGARETS BLVD. S.W.M. NOTE:
 MICRO BIO-RETENTION FACILITIES AND STORM DRAIN PIPE TO MANHOLE AT MEDIANS SHALL BE PRIVATELY OWNED AND MAINTAINED BY THE OXFORD SQUARE COMMERCIAL ASSOCIATION, INC.



SIDEWALK NOTE:
 FUTURE CONCRETE SIDEWALKS TO BE PRIVATELY OWNED & MAINTAINED BY THE OXFORD SQUARE COMMERCIAL ASSOCIATION, INC. AS RESIDENTIAL AND COMMERCIAL LOTS/PARCELS ARE DEVELOPED. PERIMETER SIDEWALKS ON EACH LOT/PARCEL SHALL BE CONSTRUCTED WITH EACH FUTURE SITE DEVELOPMENT PLAN EXCEPT FOR THE PROPOSED SIDEWALK ON OPEN SPACE LOT 2. ADDITIONALLY, SIDEWALKS FROM RESIDENTIAL LOTS/PARCELS SHALL BE CONTINUED ON AND OVER ADJACENT RESIDENTIAL LOTS/PARCELS TO PROVIDE A CONTINUOUS WALKWAY FROM THE GUTTER TO THE SUBJECT LOT/PARCEL UNDER DEVELOPMENT TO THE PUBLIC SCHOOL SITE.



SECTION NUMBER	ROAD AND STREET CLASSIFICATION	CALIFORNIA BEARING RATIO (CBR)						
		3 TO 4.5	5 TO 7	7	3 TO 4.5	5 TO 7	7	
P-4	MINOR COLLECTORS: NON-RESIDENTIAL MAJOR COLLECTORS:	PAVEMENT MATERIAL (INCHES)		MIN HMA WITH GAB		HMA WITH CONSTANT GAB		
		HMA SUPERPAVE FINAL SURFACE 12.5 MM, PG 64-22, LEVEL 2 (LOW ESAL)	2.0	2.0	2.0	2.0	2.0	2.0
		HMA SUPERPAVE INTERMEDIATE SURFACE 12.5 MM, PG 64-22, LEVEL 2 (LOW ESAL)	2.0	2.0	2.0	2.0	2.0	2.0
		HMA SUPERPAVE BASE 19.0 MM, PG 64-22, LEVEL 2 (LOW ESAL)	4.0	4.0	3.0	6.0	5.0	3.0
		GRADED AGGREGATE BASE (GAB)	13.0	7.0	4.0	6.0	6.0	

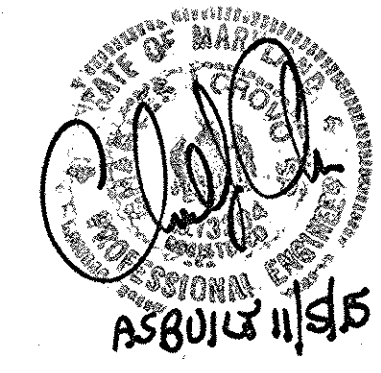


NOTE: FIRE LANE CURB MARKINGS ARE FOR PRIVATE ROADS ONLY.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10732 BALTIMORE NATIONAL PIKE
 ELLEICOTT CITY, MARYLAND 21114
 MD 98 - 2855

Owner
 Kellogg-CCP, LLC
 c/o David P. Scheffenaeker, Jr.,
 Managing Member
 2330 West Joppa Road, Suite 190
 Lutherville, Maryland 21093-4614
 Ph: 410-296-3800

Developer
 Preston - Scheffenaeker Properties
 2330 West Joppa Road, Suite 190
 Lutherville, Maryland 21093-4614
 Ph: 410-296-3800



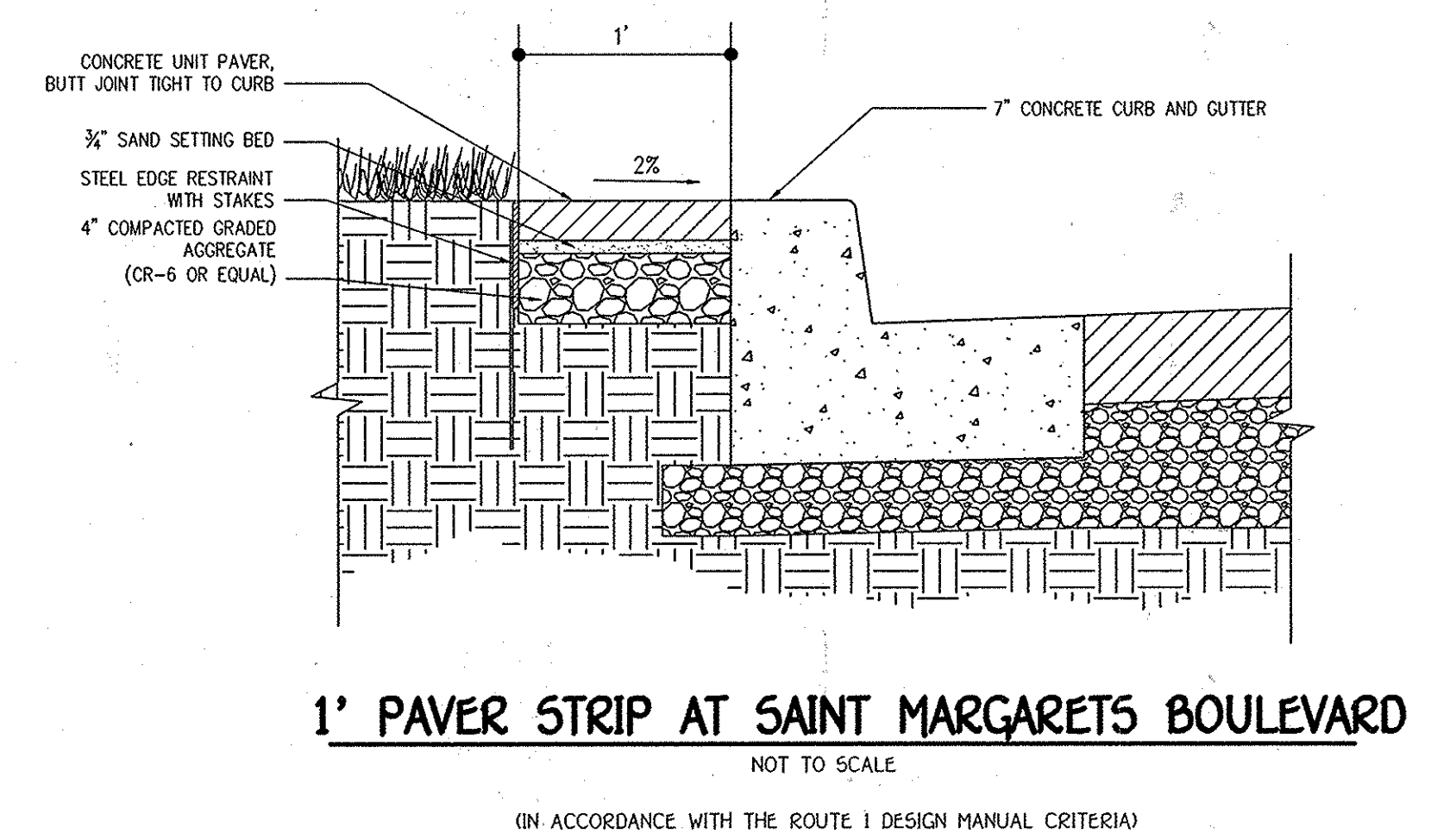
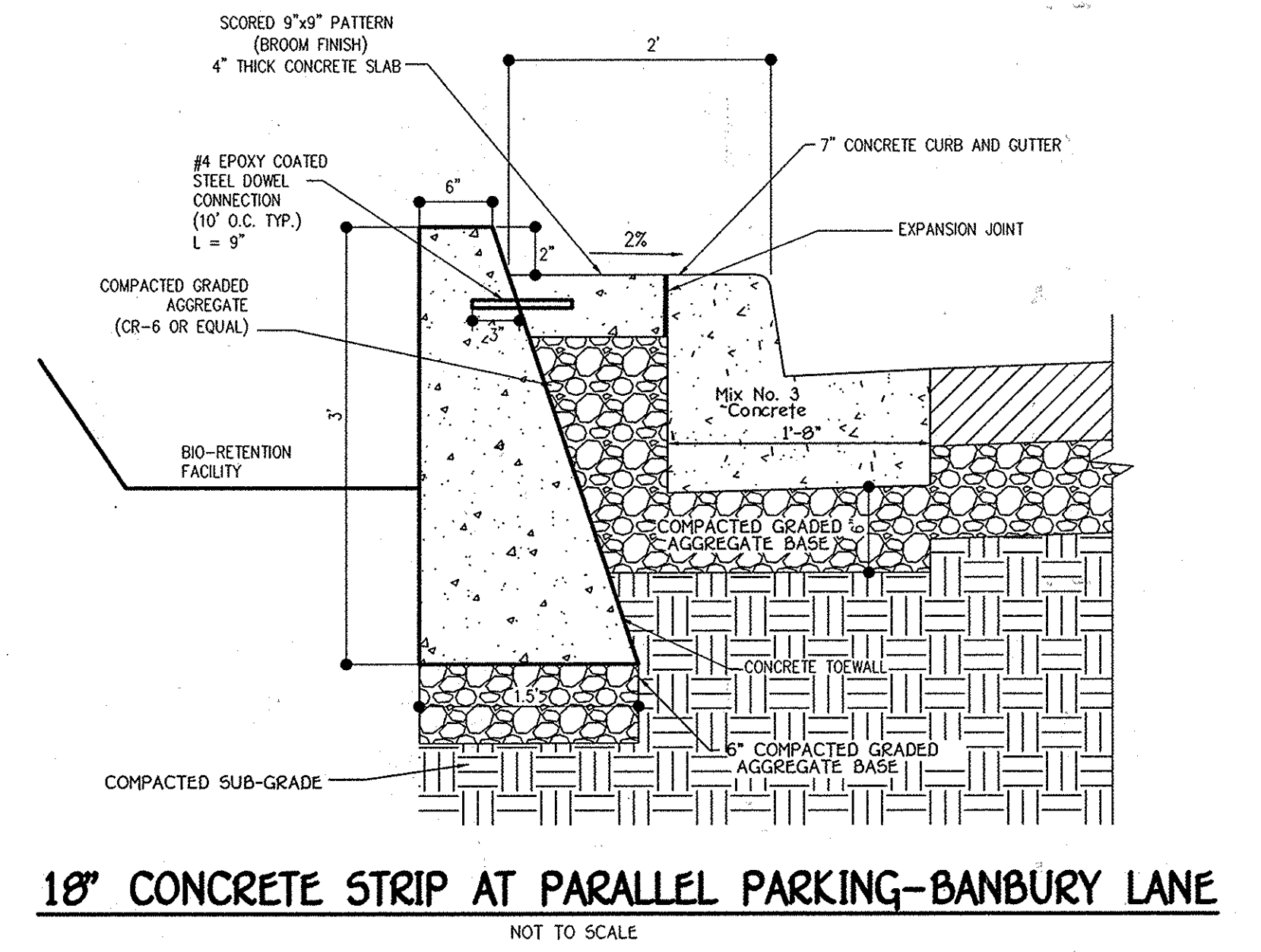
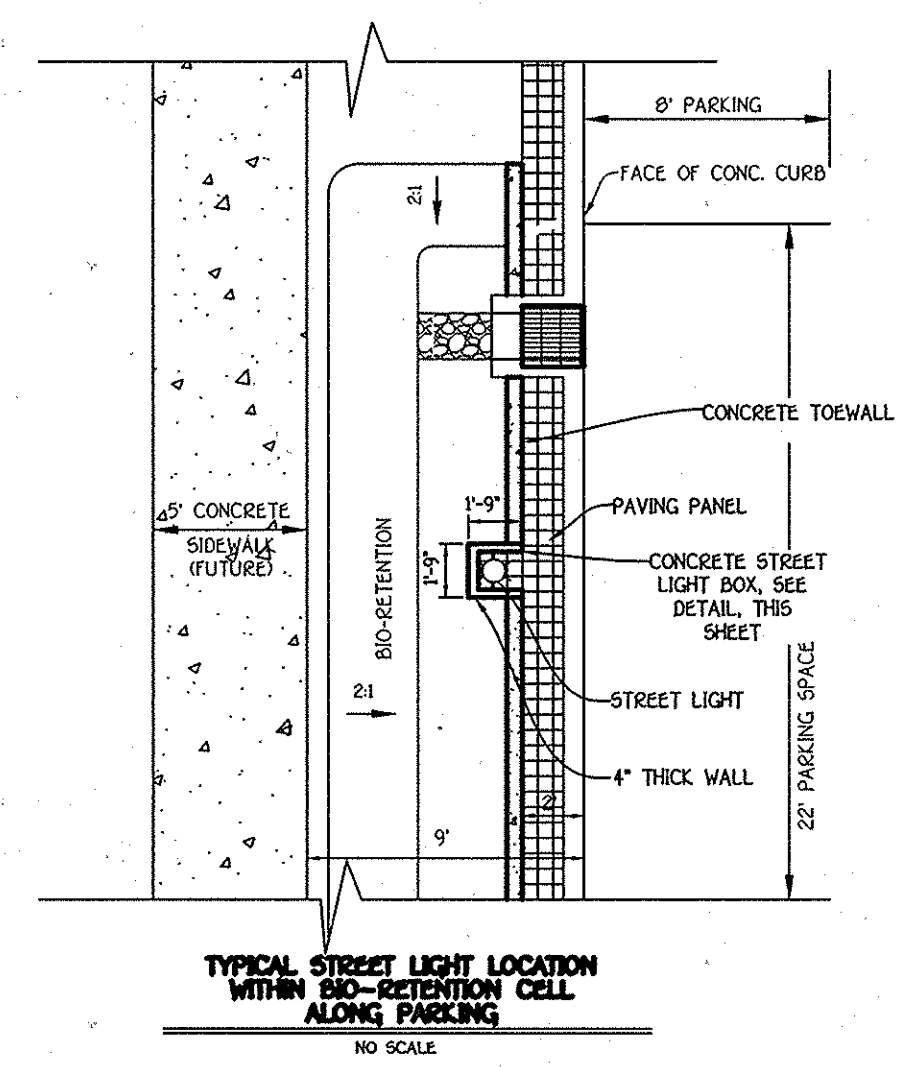
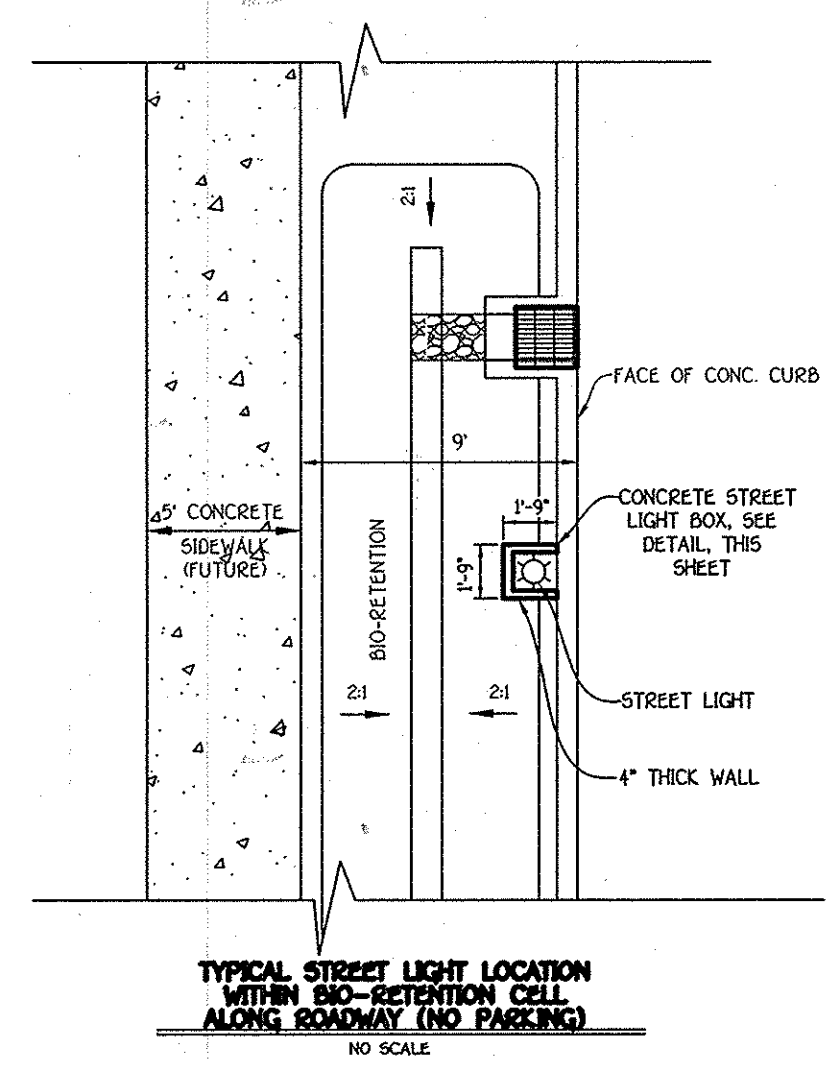
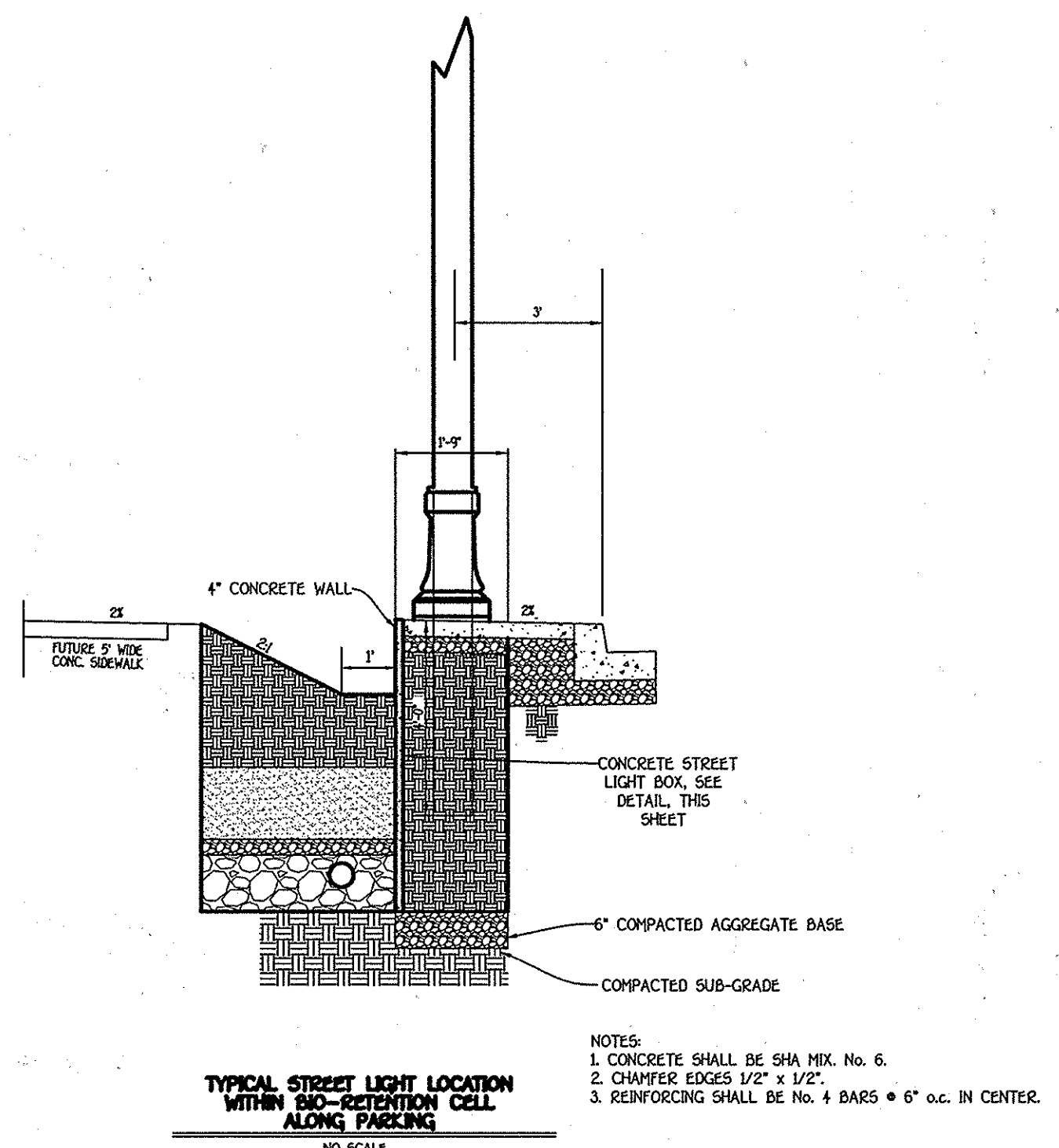
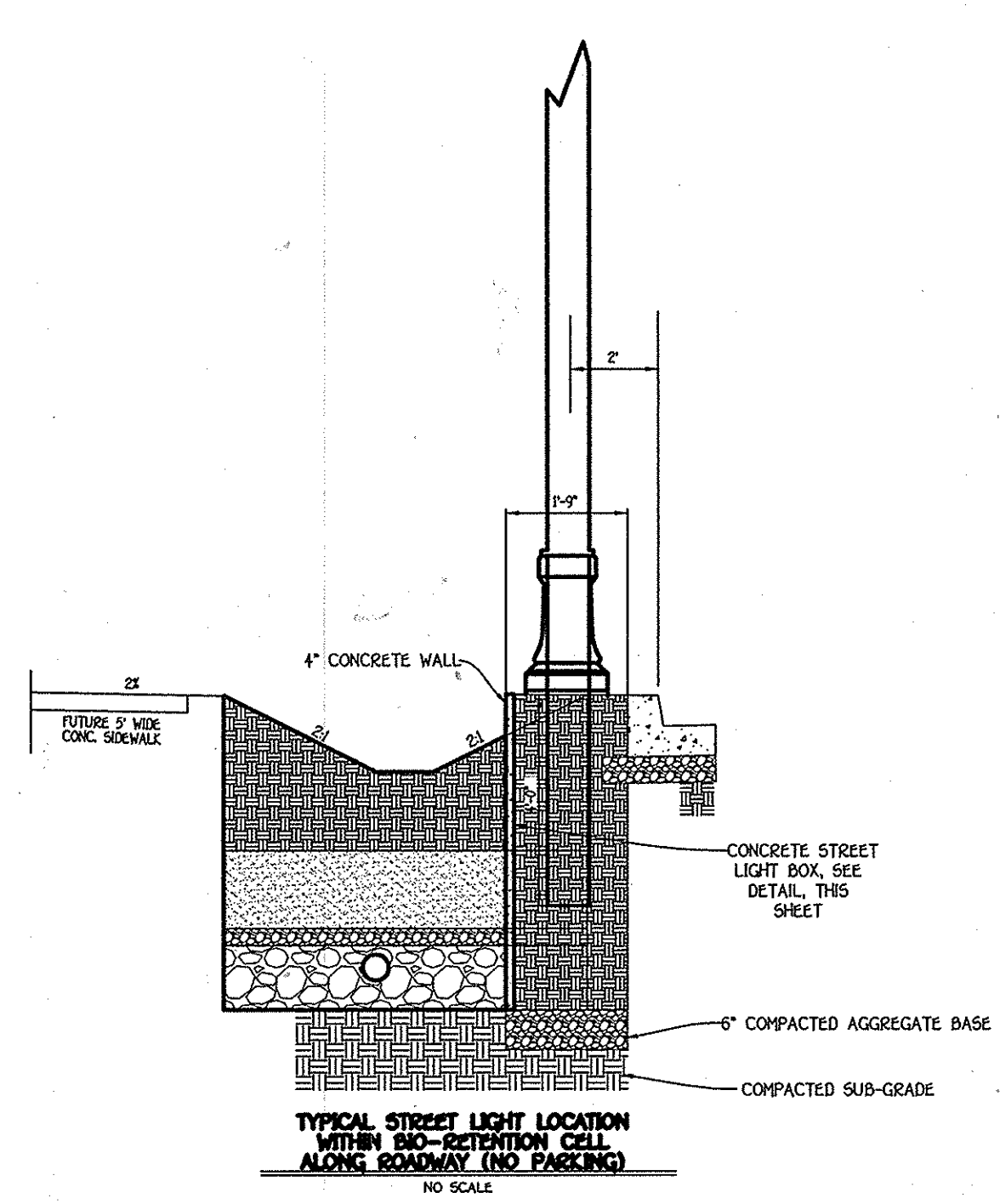
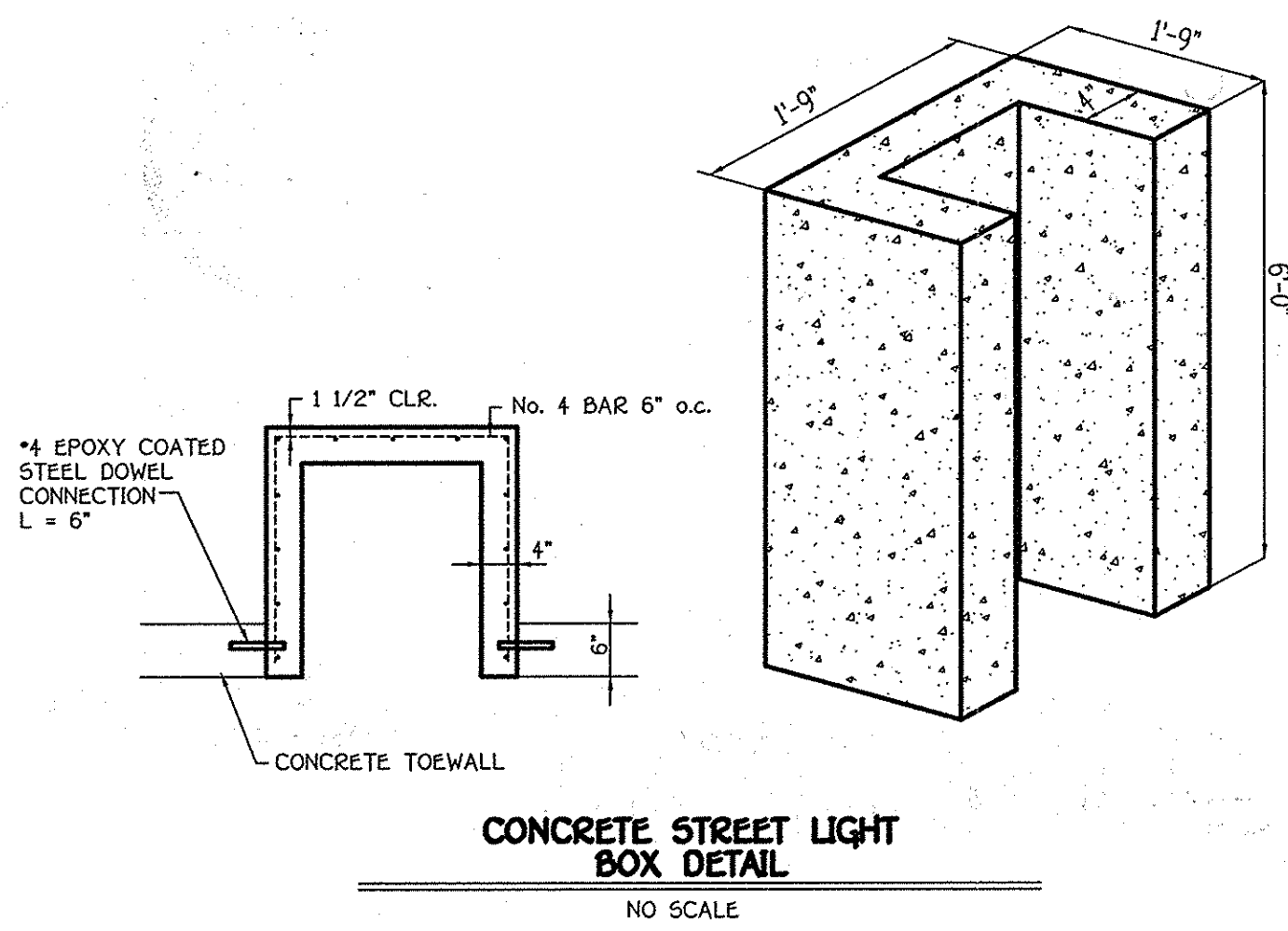
ROADWAY DETAILS
OXFORD SQUARE
 "A HOWARD COUNTY GREEN NEIGHBORHOOD"
 Saint Margarets Boulevard
 (Sta. 6+62.30 to Sta. 12+52.60 &
 Banbury drive
 (Sta. 11+98 to Sta. 15+60.84)

Zoned: TOD
 Tax Map: 38, Parcel: 761, Grid: 20
 First Election District - Howard County, Maryland
 Date: January 6, 2014
 Sheet 2 of 24

I:\2009\09014\dwg\Finals - Phase Two\09014 sheet 8 road details.dwg, sheet 8, 1/6/2014 8:59:33 AM, 1:1

Approved: Department Of Planning And Zoning
Karl Seidenman Chief, Division Of Land Development 2/19/14 Date
Chad Edman Chief, Development Engineering Division 2-7-14 Date
 Approved: Howard County Department Of Public Works
Walter R. ... Chief, Bureau Of Highways 1-21-14 Date

REVISIONS		
NO.	DESCRIPTION	DATE



FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21042
 410-461-2000

Owner
 Kellogg-CCP, LLC
 c/o David P. Scheffnacker, Jr.,
 Managing Member
 2330 West Joppa Road, Suite 190
 Lutherville, Maryland 21093-4614
 Ph: 410-296-3800

Developer
 Preston - Scheffnacker Properties
 2330 West Joppa Road, Suite 190
 Lutherville, Maryland 21093-4614
 Ph: 410-296-3800

ALDO H. VITUCCI, P.E.
 ALDO H. VITUCCI, P.E.
 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. 20748, Expiration Date 2-22-15.

ROADWAY DETAILS
OXFORD SQUARE
 "A HOWARD COUNTY GREEN NEIGHBORHOOD"
 Saint Margarets Boulevard
 (Sta. 6+62.30 to Sta. 12+52.60 & Banbury drive (Sta. 11+90 to Sta. 15+60.84))

Zoned: TOD
 Tax Map: 38, Parcel: 761, Grid: 20
 First Election District - Howard County, Maryland
 Date: January 6, 2014
 Sheet: 9 of 24

THERE IS NO AS-BUILT INFORMATION ON THIS SHEET

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ENGINEER'S CERTIFICATE
 I hereby certify that this plan for Erosion and Sediment Control represents a true and correct copy of the original as prepared in accordance with the provisions of the Howard County Soil Conservation District.
 Signature of Engineer: *[Signature]* Date: 01/06/14

DEVELOPER'S CERTIFICATE
 I/we certify that all development and construction will be done according to this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction project will have a certificate of attendance at a department of natural resources approved training program for the control of sediment and erosion before beginning the project. I also authorize periodic on-site inspection by the Howard County Soil Conservation District or their authorized agents as are deemed necessary.
 Signature of Developer: *[Signature]* Date: 01/06/14

Approved: This development is approved for erosion and sediment control by the Howard County Soil Conservation District.
 District Howard Soil Conservation Dist. *[Signature]* Date: 1/16/14

Approved: Department of Planning and Zoning
 Chief, Division of Land Development *[Signature]* Date: 2/19/14

Approved: Chief, Development Engineering Division *[Signature]* Date: 2-7-14

Approved: Howard County Department of Public Works
 Chief, Bureau of Highways *[Signature]* Date: 1-21-14

NO.	REVISIONS	DATE

BASIN No. 4 (F-12-026)
 REVISED BAFFLE DESIGN
 DISTANCE = 22'
 TOP BAFFLE = 95.00
 Wet/A(24) = 44'
 2' x Wet = 96'
 L = 115'

EXISTING TEMPORARY SEDIMENT BASIN No. 1 (F-12-026)
 INITIAL D.A. = 10.00 Ac.
 FINAL D.A. = 10.00 Ac.
 STORAGE REQUIRED
 WET = 1,800 x 10.00 = 18,000 Cuft.
 DRY = 1,800 x 10.00 = 18,000 Cuft.
 STORAGE PROVIDED
 WET = 18,954 Cuft. @ ELEV. 79.29
 DRY = 37,908 Cuft. @ ELEV. 81.00
 BOTTOM ELEV. = 77.00
 STORAGE DEPTH = 9.07
 TOP OF EMBANKMENT (7' wide) = 96.85 CONSTRUCTED
 CLEAN OUT ELEV. = 78.20
 RISER CREST ELEV. = 82.50
 1 YR. ORIFICE INV. = 79.30
 Q1 exist. = 6.7 c.f.s.
 Q1 prop. = 5.5 c.f.s. @ EL. = 81.45

EXISTING TEMPORARY SEDIMENT BASIN No. 4 (F-12-026)
 INITIAL D.A. = 2.41 Ac.
 FINAL D.A. = 11.61 Ac.
 STORAGE REQUIRED
 WET = 1,800 x 11.61 = 20,898 Cuft.
 DRY = 1,800 x 11.61 = 20,898 Cuft.
 STORAGE PROVIDED
 WET = 20,898 Cuft. @ ELEV. 93.62
 DRY = 41,796 Cuft. @ ELEV. 95.62
 BOTTOM ELEV. = 91.00
 STORAGE DEPTH = 9.40'
 TOP OF EMBANKMENT (6' wide) = 102.35 CONSTRUCTED
 CLEAN OUT ELEV. = 92.40
 RISER CREST ELEV. = 96.50
 1 YR. ORIFICE INV. = 93.60
 Q1 exist. = 1.5 c.f.s.
 Q1 prop. = 1.1 c.f.s. @ EL. = 96.50

SEDIMENT CONTROL LEGEND

- Sf—Sf—Sf— SUPER-SILT FENCE
- Sf—Sf—Sf— SILT FENCE
- Sf/TP—Sf/TP— SILT FENCE AND TREE PROTECTION FENCE
- S.C.E. STABILIZED CONSTRUCTION ENTRANCE
- TYPE A-2 EARTH DIKE
- L.O.D. LIMIT OF DISTURBANCE
- R.R.P. RIP-RAP INFLOW PROTECTION
- S.I.P. STANDARD INLET PROTECTION
- S.I.P. STANDARD INLET PROTECTION w/SUPER SILT FENCE
- C.I.P. CURB INLET PROTECTION
- R.P.S. REMOVEABLE PUMPING STATION
- F.B. FILTER BAG

REVISED BASIN NO. 4 AFTER BY-PASS PIPE INSTALLATION
 FINAL D.A. = 5.70 Ac.
 STORAGE REQUIRED
 WET = 1,800 x 5.70 = 10,260 Cuft.
 DRY = 1,800 x 5.70 = 10,260 Cuft.
 STORAGE PROVIDED
 WET = 10,260 Cuft. @ ELEV. 93.79
 DRY = 20,520 Cuft. @ ELEV. 95.85
 BOTTOM ELEV. = 91.00
 STORAGE DEPTH = 9.40'
 TOP OF EMBANKMENT (6' wide) = 102.35 CONSTRUCTED
 CLEAN OUT ELEV. = 92.80
 RISER CREST ELEV. = 96.50
 1 YR. ORIFICE INV. = 93.60
 Q1 exist. = 1.5 c.f.s.
 Q1 prop. = 0.80 c.f.s. @ EL. = 97.25

CONTRACTOR NOTES:

- CONTRACTOR SHALL PUMP THE SEDIMENT TRAPS/BASINS COMPLETELY DRY THROUGH A FILTERING DEVICE TO A CLEAN WATER OUTFALL WITHIN 24 HOURS FOLLOWING ANY RAINFALL EVENT.
- CONTRACTOR SHALL REMOVE ANY AND ALL JUNK, DEBRIS AND TRASH FROM WITHIN THE FLOODPLAIN, STREAMS, WETLANDS & THEIR BUFFERS.
- SHOULD THE STOCKPILE AREA EXCEED 15 FEET IN HEIGHT, IT MUST BE BENCHED.

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 1000 NATIONAL SQUARE OFFICE PARK - 10722 BALTIMORE NATIONAL FEE
 ELICOTT CITY, MARYLAND 21042
 410.481.2929

NOTE: SEE SHEET 36 FOR SEDIMENT CONTROL DETAILS.



OWNER
 Kellogg-CCR, LLC
 c/o David P. Scheffner, Jr.,
 Managing Member
 2330 West Joppa Road, Suite 190
 Lutherville, Maryland 21093-1614
 Ph: 410-296-3800

DEVELOPER
 Preston & Scheffner Properties
 2330 West Joppa Road, Suite 190
 Lutherville, Maryland 21093-1614
 Ph: 410-296-3800

DATE
 01/06/14

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. 20746, Expiration Date 2-22-15.

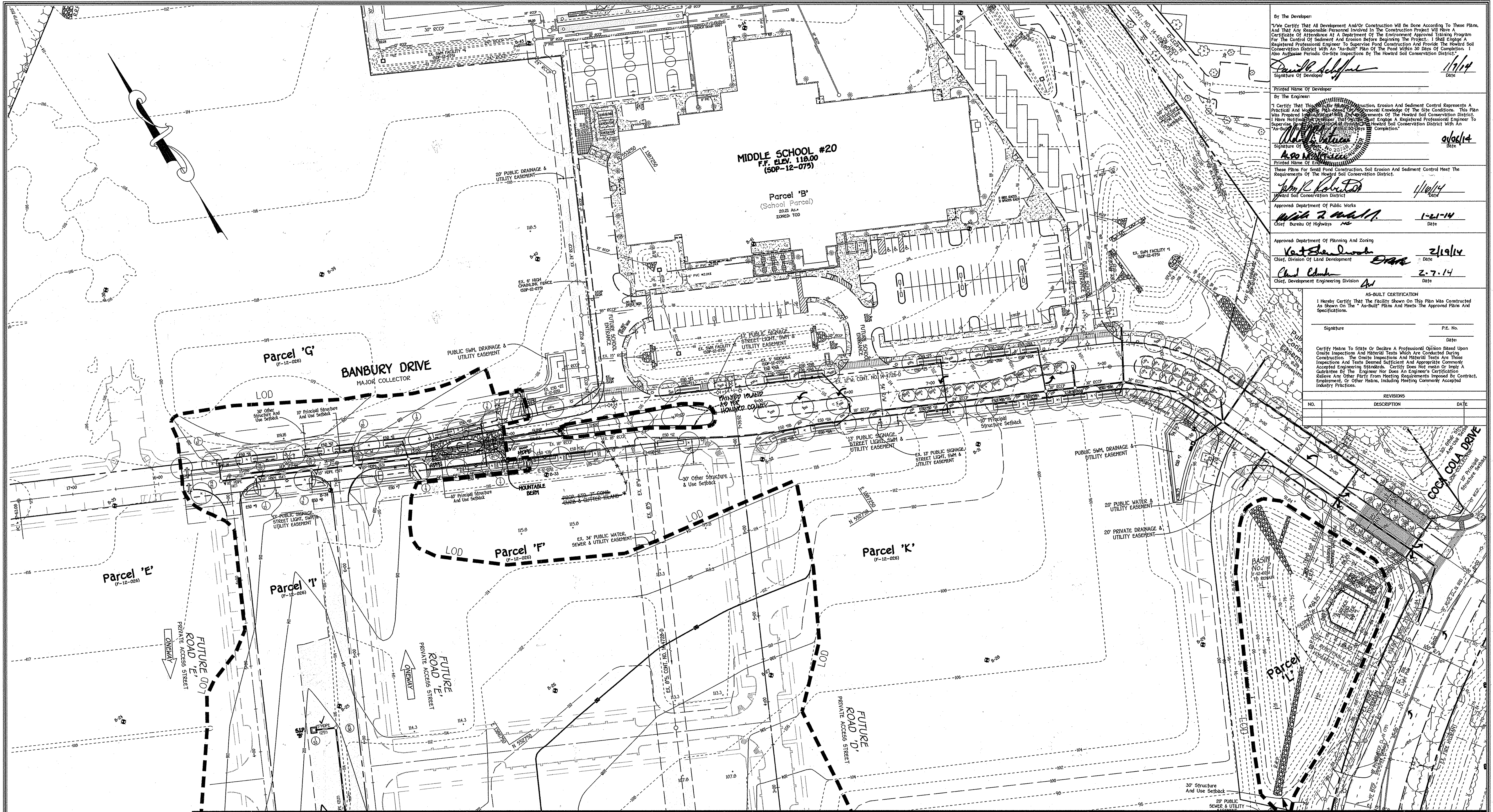
GRADING & SEDIMENT CONTROL PLAN
OXFORD SQUARE
 "A HOWARD COUNTY GREEN NEIGHBORHOOD"
 Saint Margarets Boulevard
 (Sta. 6+62.30 to Sta. 12+52.60 & Banbury drive
 (Sta. 11+98 to Sta. 15+60.84))

Zone: T00
 Tax Map: 38, Parcel: 761, Grid: 20
 First Election District - Howard County, Maryland
 Date: January 6, 2014
 Sheet 10 of 24

MATCH LINE SEE SHEET 11

PLAN
 Scale: 1" = 50'

AS-BUILT F-13-095



By The Developer:
 I/We Certify That All Development And/Or Construction Will Be Done According To These Plans, 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 Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion. I Also Authorize Periodic On-Site Inspections By The Howard Soil Conservation District.
 Signature Of Developer: *David P. Scheffacker* Date: 1/16/14

By The Engineer:
 I Certify That This Plan For Sedimentation, Erosion And Sediment Control Represents A Practical And Workable Plan Based On My Professional Knowledge Of The Site Conditions. This Plan Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District. I Have Notified The Developer That I Shall Engage A Registered Professional Engineer To Supervise Pond Construction And Provide The Howard Soil Conservation District With An "As-Built" Plan Of The Pond Within 30 Days Of Completion.
 Signature Of Engineer: *Alfred H. Vitucci* Date: 01/16/14
 Printed Name Of Engineer: **Alfred H. Vitucci**

These Plans For Small Pond Construction Soil Erosion And Sediment Control Meet The Requirements Of The Howard Soil Conservation District.
 Approved: Department of Public Works
 Signature: *John R. Kolbert* Date: 1/16/14
 Chief, Bureau of Highways

Approved: Department of Planning And Zoning
 Signature: *Kate Schenck* Date: 2/19/14
 Chief, Division Of Land Development

Signature: *Chad Clark* Date: 2-7-14
 Chief, Development Engineering Division

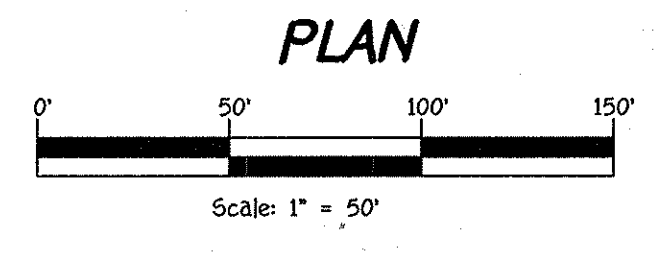
AS-BUILT CERTIFICATION
 I Herby Certify That The Facility Shown On This Plan Was Constructed As Shown On The "As-Built" Plans And Meets The Approved Plans And Specifications.
 Signature: _____ P.E. No. _____
 Date: _____

Certify Means To State Or Declare A Professional Opinion Based Upon On-site Inspections And Material Tests Which Are Conducted During Construction. The On-site Inspections And Material Tests Are Those Inspections And Tests Deemed Sufficient And Appropriate Commonly Accepted Engineering Practice. Certify Does Not Mean To Imply A Guarantee By The Engineer Nor Does An Engineer's Certification Release Him Or Her From Meeting Requirements Imposed By Contract, Equipment, Or Other Means, Including Meeting Commonly Accepted Industry Practices.

NO.	DESCRIPTION	DATE

MATCH LINE SEE SHEET 10

EXISTING TEMPORARY SEDIMENT BASIN No. 2 (F-12-026)
 INITIAL D.A. = 13.45 Ac.
 FINAL D.A. = 13.45 Ac.
 STORAGE REQUIRED
 WET = 1,800 x 13.45 = 24,210 Cuft.
 DRY = 1,800 x 13.45 = 24,210 Cuft.
 STORAGE PROVIDED
 WET = 24,210 Cuft. @ ELEV. 80.60
 DRY = 48,420 Cuft. @ ELEV. 83.90
 BOTTOM ELEV. = 73.00
 STORAGE DEPTH = 17.25'
 TOP OF EMBANKMENT (6' wide) = 91.64' CONSTRUCTED
 CLEAN OUT ELEV. = 77.60
 RISER CREST ELEV. = 85.50
 1 YR. ORIFICE INV. = 82.60
 Q1 exist. = 12.7 c.f.s.
 Q1 prop. = 3.9 c.f.s. @ EL. = 83.70

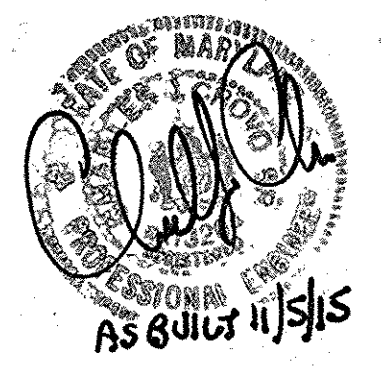


Owner
 Kellogg-CCP, LLC
 c/o David P. Scheffacker, Jr., Managing Member
 2330 West Joppa Road, Suite 190
 Lutherville, Maryland 21093-4614
 Ph: 410-296-3800

Developer
 Preston - Scheffacker Properties
 2330 West Joppa Road, Suite 190
 Lutherville, Maryland 21093-4614
 Ph: 410-296-3800

CONTRACTOR NOTES:

- CONTRACTOR SHALL PUMP THE SEDIMENT TRAPS/BASINS COMPLETELY DRY THROUGH A FILTERING DEVICE TO A CLEAN WATER OUTFALL WITHIN 24 HOURS FOLLOWING ANY RAINFALL EVENT.
- CONTRACTOR SHALL REMOVE ANY AND ALL JUNK, DEBRIS AND TRASH FROM WITHIN THE FLOODPLAIN, STREAMS, WETLANDS & THEIR BUFFERS.



GRADING & SEDIMENT CONTROL PLAN
OXFORD SQUARE
 "A HOWARD COUNTY GREEN NEIGHBORHOOD"
 Saint Margarets Boulevard
 (Sta. 6+62.30 to Sta. 12+52.60 & Banbury Drive
 (Sta. 11+98 to Sta. 15+60.84)

Zoned: TOD
 Tax Map: 38, Parcel: 761, Grid: 20
 First Election District - Howard County, Maryland
 Date: January 6, 2014
 Sheet 11 of 24

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21114
 410-461-2055

I:\2009\09014\dwg\Finals - Phase Two\09014 sheet-10-11 grading sediment control.dwg, sheet 11, 1/6/2014 9:14:57 AM, 1:1

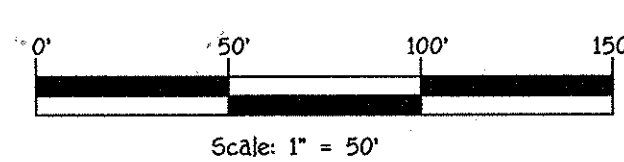
STRUCTURE SCHEDULE

STRUCTURE NO.	TOP ELEVATION	INV.IN	INV.OUT	LOCATION	ROAD STA./COORDINATE	OFFSET	TYPE AND WIDTH	REMARKS	
I-1	98.48	98.79 (67)	98.48 (157)	SANT MARGARETS BOULEVARD	6+74	FR	TYPE 'D' INLET	D - 4.10	
I-2	100.40	99.60 (67)	99.60 (157)	SANT MARGARETS BOULEVARD	7+57	ZL	TYPE 'D' INLET	D - 4.10	
I-3	102.42	97.44 (67)	97.44 (157)	SANT MARGARETS BOULEVARD	8+71	---	TYPE 'D' INLET	D - 4.10	
I-4	104.40	99.44 (67)	99.44 (157)	SANT MARGARETS BOULEVARD	9+71	---	TYPE 'D' INLET	D - 4.10	
I-5	107.44	102.44 (67)	102.44 (157)	SANT MARGARETS BOULEVARD	11+30	---	TYPE 'D' INLET	D - 4.10	
I-6	114.44	110.44 (67)	110.44 (157)	BANBURY DRIVE	12+21.54	21.5' R	15" BASIN	Nyloplast OR EQUAL	
I-7	114.44	110.44 (67)	110.44 (157)	BANBURY DRIVE	12+22.69	26.6' L	15" BASIN	Nyloplast OR EQUAL	
I-8	116.44	112.44 (67)	112.44 (157)	BANBURY DRIVE	13+14.54	15.9' R	15" BASIN	Nyloplast OR EQUAL	
I-9	116.44	112.44 (67)	112.44 (157)	BANBURY DRIVE	13+09.89	19.4' L	15" BASIN	Nyloplast OR EQUAL	
I-10	117.44	113.44 (67)	113.44 (157)	BANBURY DRIVE	13+73.45	15.9' R	15" BASIN	Nyloplast OR EQUAL	
I-11	117.44	113.44 (67)	113.44 (157)	BANBURY DRIVE	14+23.15	16.4' L	15" BASIN	Nyloplast OR EQUAL	
I-12	117.44	113.44 (67)	113.44 (157)	BANBURY DRIVE	15+28.05	15.9' R	15" BASIN	Nyloplast OR EQUAL	
I-13	117.44	113.44 (67)	113.44 (157)	BANBURY DRIVE	14+87.52	16.4' L	15" BASIN	Nyloplast OR EQUAL	
I-14	117.44	113.44 (67)	113.44 (157)	BANBURY DRIVE	15+28.05	15.9' R	15" BASIN	Nyloplast OR EQUAL	
I-34	100.40	99.60 (67)	99.60 (157)	SANT MARGARETS BOULEVARD	6+74.37	59.9' R	TYPE 'D' INLET	D - 4.10	
I-35	107.44	102.44 (67)	102.44 (157)	SANT MARGARETS BOULEVARD	10+01.82	54.5' R	TYPE 'D' INLET	D - 4.10	
I-36	105.40	100.40 (67)	100.40 (157)	SANT MARGARETS BOULEVARD	N 552575.26	E 1386415.69	---	TYPE 'D' INLET	D - 4.10
I-36A	100.40	99.60 (67)	99.60 (157)	SANT MARGARETS BOULEVARD	N 552595.37	E 1386474.94	---	TYPE 'D' INLET	D - 4.10
I-37	100.40	99.60 (67)	99.60 (157)	SANT MARGARETS BOULEVARD	12+63.36	103.3' R	TYPE 'D' INLET	D - 4.10	
I-53	110.44	106.44 (67)	106.44 (157)	SANT MARGARETS BOULEVARD	N 552886.31	E 1386588.94	---	TYPE 'D' INLET	D - 4.10
M-1	95.00	94.78	94.78	SANT MARGARETS BOULEVARD	N 551915.91	E 1386699.76	---	5" DIA. MANHOLE	G - 5.13
M-2	96.00	95.71	95.71	SANT MARGARETS BOULEVARD	N 552060.50	E 1386756.29	---	5" DIA. MANHOLE	G - 5.13
M-3	96.44	96.18	96.18	SANT MARGARETS BOULEVARD	N 552092.48	E 1386772.07	---	5" DIA. MANHOLE	G - 5.13
M-4	96.44	96.18	96.18	SANT MARGARETS BOULEVARD	6+17.21	53.1' L	5" DIA. MANHOLE	G - 5.13	
M-5	97.44	97.18	97.18	SANT MARGARETS BOULEVARD	6+21	11.7' L	5" DIA. MANHOLE	G - 5.13	
M-6	98.44	98.18	98.18	SANT MARGARETS BOULEVARD	6+73	14.0' L	4" DIA. MANHOLE	G - 5.12	
M-7	100.44	100.18	100.18	SANT MARGARETS BOULEVARD	7+78	15.2' L	4" DIA. MANHOLE	G - 5.12	
M-8	102.44	102.18	102.18	SANT MARGARETS BOULEVARD	8+71	12.0' L	4" DIA. MANHOLE	G - 5.12	
M-9	104.44	104.18	104.18	SANT MARGARETS BOULEVARD	9+71	12.0' L	4" DIA. MANHOLE	G - 5.12	
M-10	106.44	106.18	106.18	SANT MARGARETS BOULEVARD	6+26.95	63.3' R	5" DIA. MANHOLE	G - 5.13	
M-11	105.44	105.18	105.18	SANT MARGARETS BOULEVARD	N 552256.56	E 1386293.00	---	4" DIA. MANHOLE	G - 5.12
M-12	105.44	105.18	105.18	SANT MARGARETS BOULEVARD	N 552254.42	E 1386340.79	---	4" DIA. MANHOLE	G - 5.12
M-13	105.44	105.18	105.18	SANT MARGARETS BOULEVARD	N 552298.47	E 1386363.02	---	4" DIA. MANHOLE	G - 5.12
M-14	106.44	106.18	106.18	SANT MARGARETS BOULEVARD	10+09.75	103.1' L	4" DIA. MANHOLE	G - 5.12	
M-15	107.44	107.18	107.18	SANT MARGARETS BOULEVARD	10+09.75	44.9' L	4" DIA. MANHOLE	G - 5.12	
M-17	116.44	116.18	116.18	BANBURY DRIVE	13+10	5.0' L	4" DIA. MANHOLE	G - 5.12	
M-18	117.44	117.18	117.18	BANBURY DRIVE	13+73	5.0' L	4" DIA. MANHOLE	G - 5.12	
M-19	117.44	117.18	117.18	BANBURY DRIVE	14+23	5.0' L	4" DIA. MANHOLE	G - 5.12	
M-20	117.44	117.18	117.18	BANBURY DRIVE	14+87	5.0' L	4" DIA. MANHOLE	G - 5.12	
M-21	117.44	117.18	117.18	BANBURY DRIVE	15+28	5.0' L	4" DIA. MANHOLE	G - 5.12	
M-33	115.09	114.83	114.83	BANBURY DRIVE	12+21	12.1' L	4" DIA. MANHOLE	G - 5.12	
M-28	108.44	108.18	108.18	SANT MARGARETS BOULEVARD	N 552563.97	E 1386438.54	---	4" DIA. MANHOLE	G - 5.12
M-29	108.44	108.18	108.18	SANT MARGARETS BOULEVARD	N 552684.08	E 1386497.81	---	4" DIA. MANHOLE	G - 5.12
M-30	108.44	108.18	108.18	SANT MARGARETS BOULEVARD	N 552874.89	E 1386591.99	---	4" DIA. MANHOLE	G - 5.12
M-31	108.44	108.18	108.18	SANT MARGARETS BOULEVARD	N 552205.59	E 1386412.22	---	5" DIA. MANHOLE	G - 5.13
M-32	108.44	108.18	108.18	SANT MARGARETS BOULEVARD	N 552229.01	E 1386528.29	---	5" DIA. MANHOLE	G - 5.13
M-33	107.44	107.18	107.18	SANT MARGARETS BOULEVARD	N 552393.58	E 1386983.97	---	5" DIA. MANHOLE	G - 5.13
M-34	107.44	107.18	107.18	SANT MARGARETS BOULEVARD	N 552300.98	E 1386254.31	---	5" DIA. MANHOLE	G - 5.13
M-35	109.44	109.18	109.18	SANT MARGARETS BOULEVARD	12+14.34	12.0' L	5" DIA. MANHOLE	G - 5.13	
M-35A	110.44	110.18	110.18	SANT MARGARETS BOULEVARD	12+14.34	48.3' L	5" DIA. MANHOLE	G - 5.13	
M-36	110.44	110.18	110.18	SANT MARGARETS BOULEVARD	12+14.74	51.4' R	5" DIA. MANHOLE	G - 5.13	
M-37	110.44	110.18	110.18	SANT MARGARETS BOULEVARD	12+64.58	12.0' L	4" DIA. MANHOLE	G - 5.12	
E-1	91.40	91.40	91.40	---	N 551915.08	E 1386685.04	---	TYPE 'C' ENDWALL	D - 5.21
E-2	90.44	90.44	90.44	---	N 552112.46	E 1386271.25	---	TYPE 'C' ENDWALL	D - 5.21
E-3	95.44	95.44	95.44	---	N 552183.29	E 1386129.67	---	TYPE 'C' ENDWALL	D - 5.21
S-6	80.27	80.27	80.27	---	N 551868.89	E 1386945.50	---	FLARED END SECTION	***

* - DENOTES TOP OF 15" BASIN ELEVATION
 ** - DENOTES THROAT ELEVATION
 *** - A.D.S. FLARED END SECTION OR EQUAL

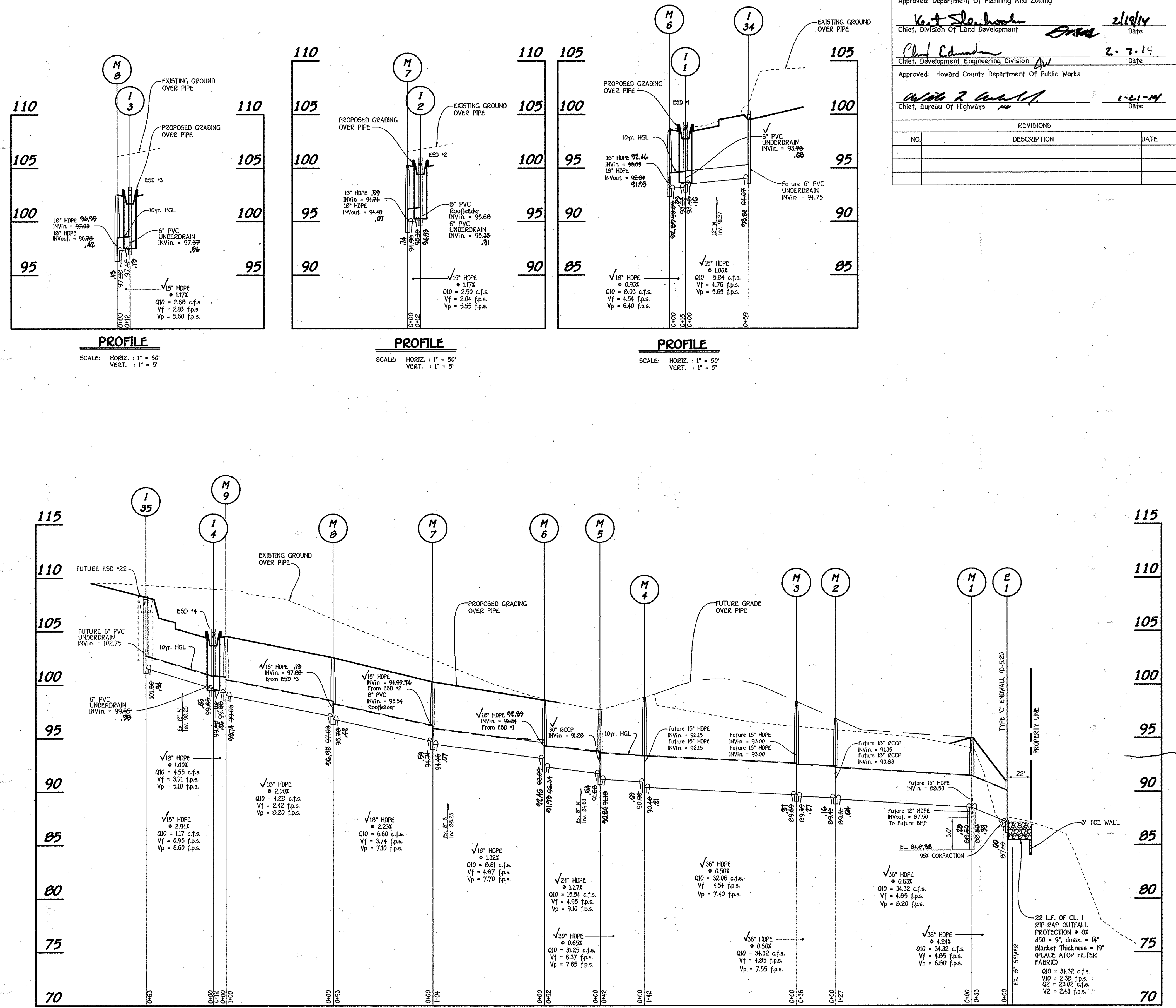
SIZE	CLASS	LENGTH
6"	PVC SCH. 40 (PERFORATED)	587 Lf.
6"	PVC SCH. 40 (SOLID)	67 Lf.
8"	PVC SCH. 40 (SOLID)	106 Lf.
15"	HDPE	370 Lf.
18"	HDPE	1,801 Lf.
24"	HDPE	330 Lf.
30"	HDPE	578 Lf.
36"	HDPE	338 Lf.
36"	HDPE (Temporary)	266 Lf.

NOTE: TEMPORARY 36" HDPE FOR SEDIMENT CONTROL.



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 CENTRAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21114
 410-418-2899

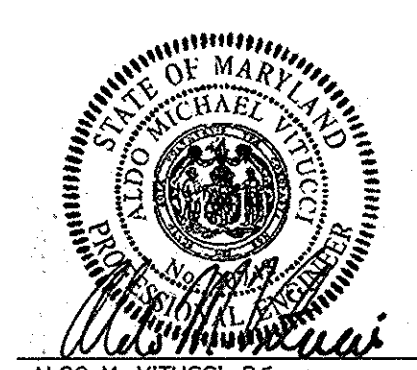
Nyloplast
 3130 VERONA AVE
 BUFORD, GA 30618
 PHN (770) 832-2440
 FAX (770) 832-2400
 www.nyloplast-us.com



PROFILE
 SCALE: HORIZ. : 1" = 50'
 VERT. : 1" = 5'

Owner
 Kellogg-CCP, LLC
 c/o David P. Scheffenaeker, Jr.
 Managing Member
 2330 West Joppa Road, Suite 190
 Lutherville, Maryland 21093-4614
 PH: 410-296-3800

Developer
 Preston - Scheffenaeker Properties
 2330 West Joppa Road, Suite 190
 Lutherville, Maryland 21093-4614
 PH: 410-296-3800



ALDO H. VITUCCI, P.E.
 DATE: 2/19/14
 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. 20746, Expiration Date 2-25-15.



Kent S. Edwards, P.E.
 DATE: 2/19/14
 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. 20746, Expiration Date 2-25-15.

Approved: Department Of Planning And Zoning
 Chief, Division of Land Development
 Kent S. Edwards, P.E. 2/19/14
 Approved: Chief, Development Engineering Division
 Howard County Department of Public Works
 Chief, Bureau Of Highways
 2-7-14
 1-21-14

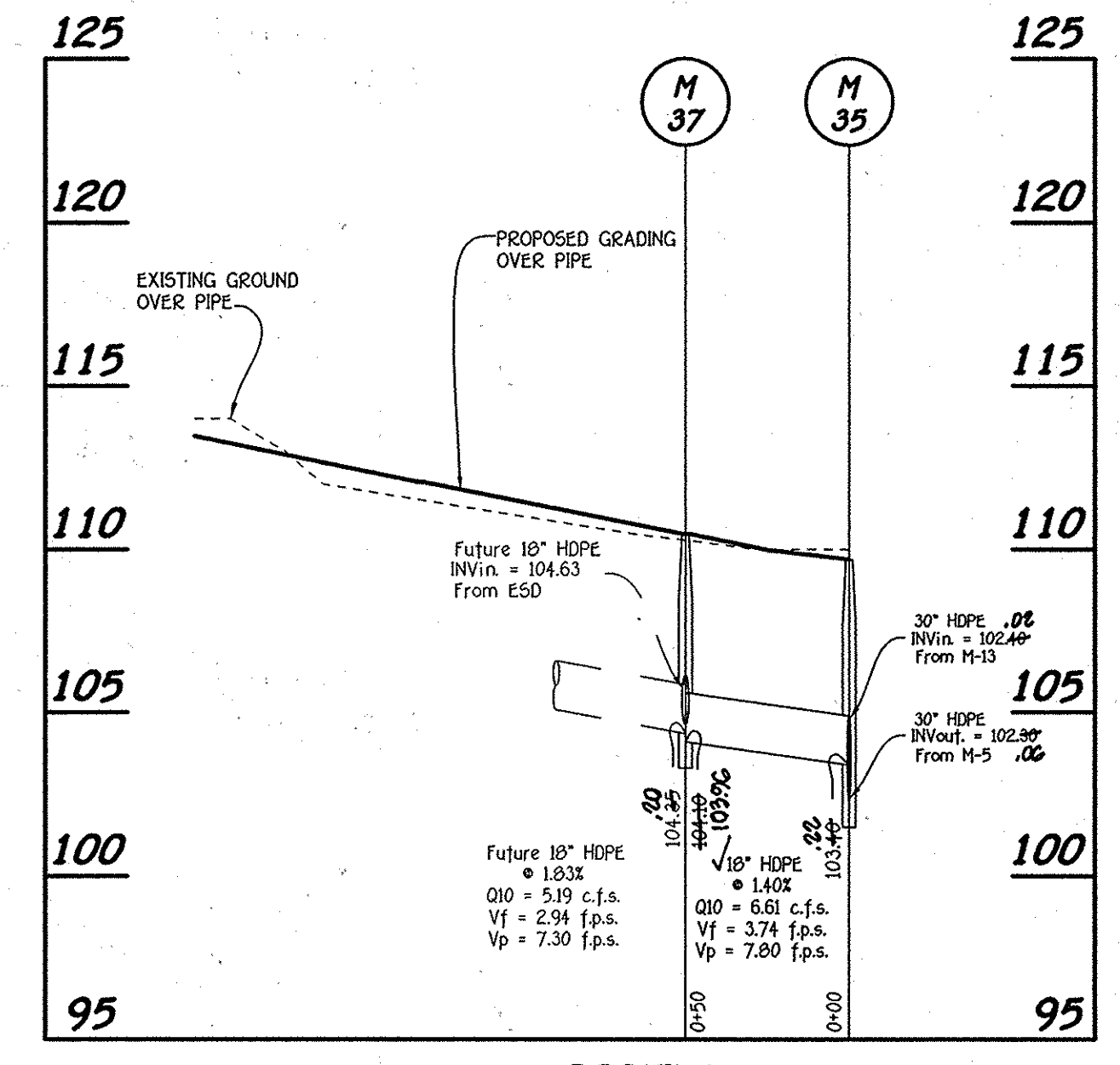
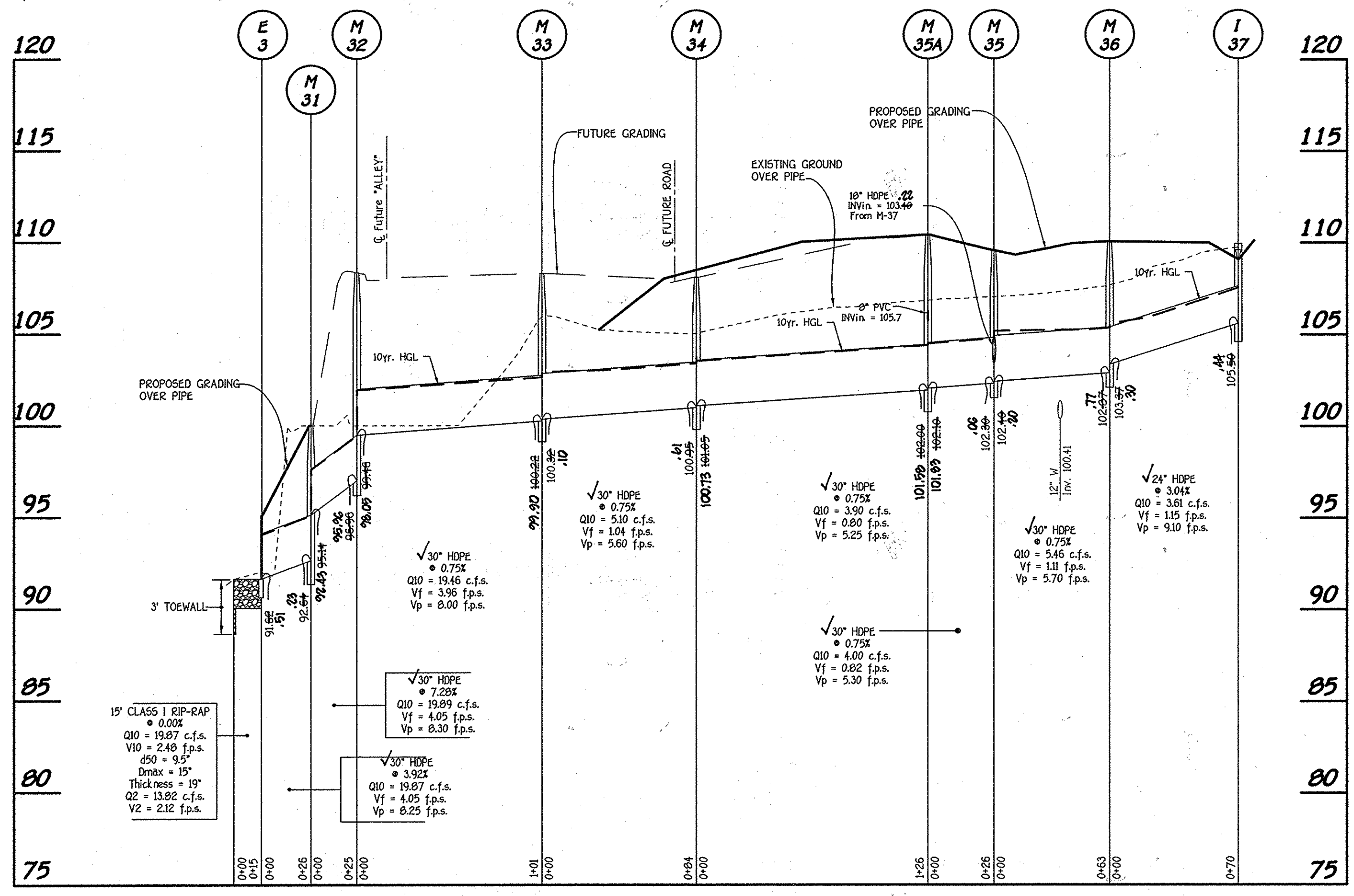
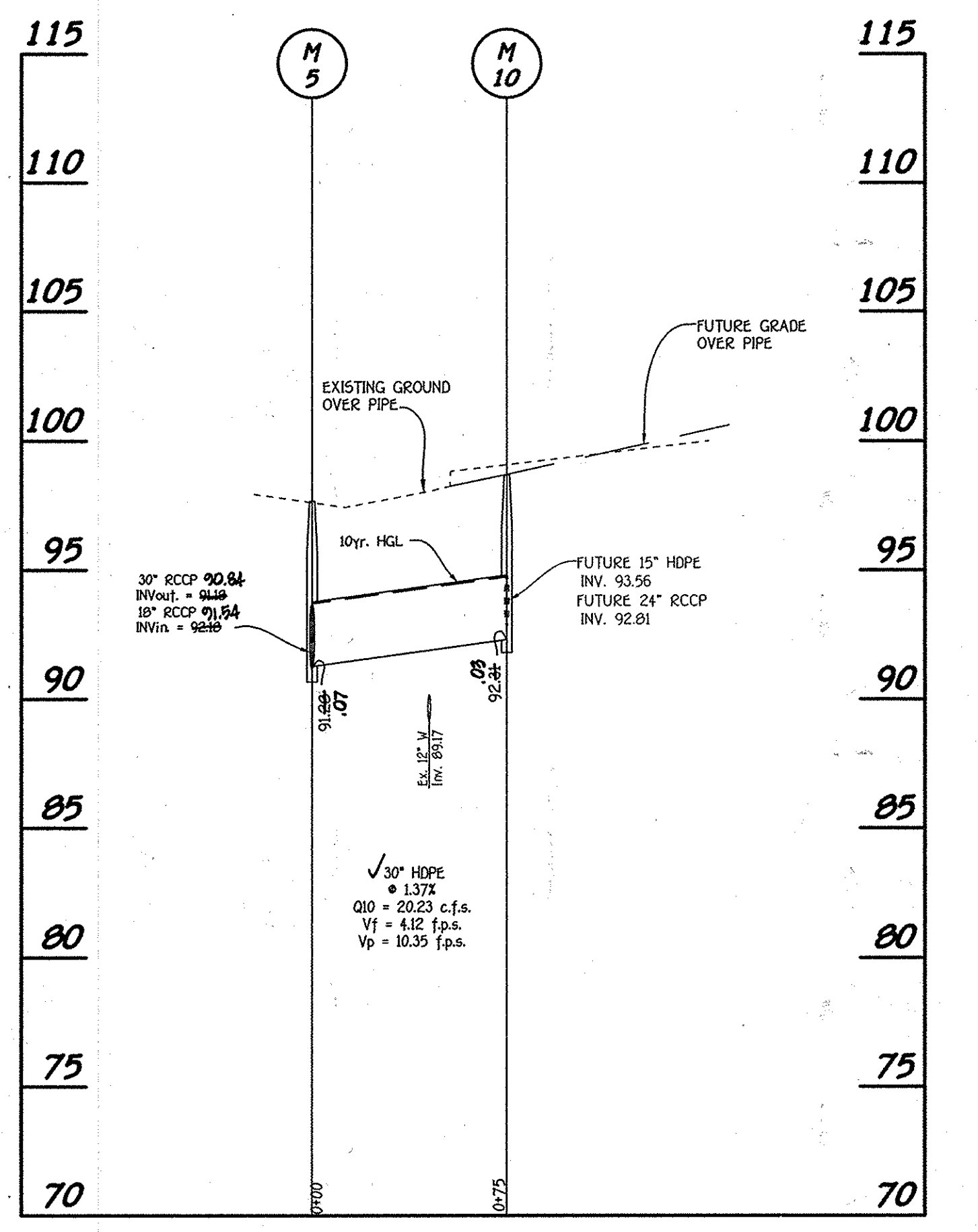
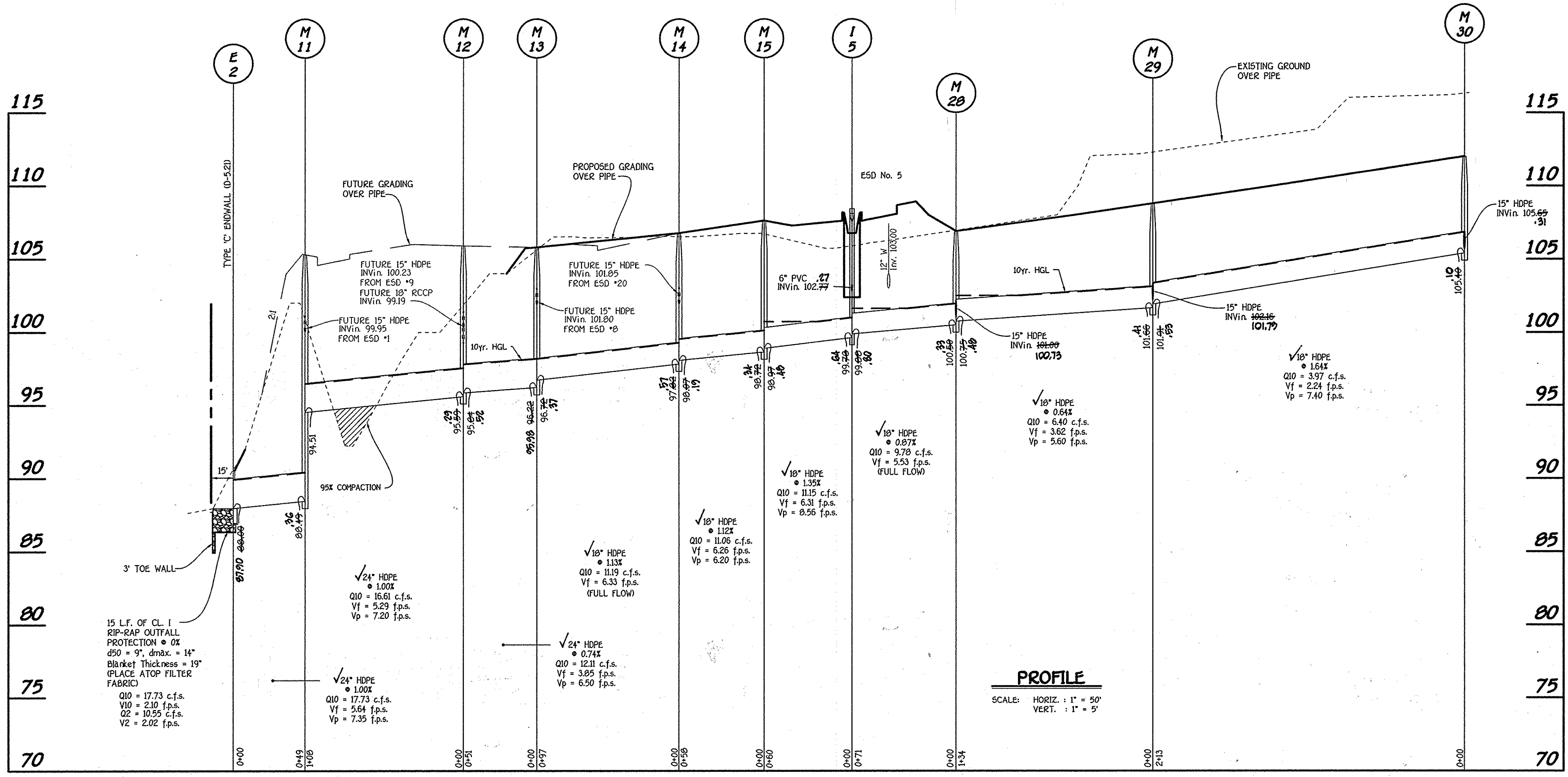
NO.	DESCRIPTION	DATE

STORM DRAIN PROFILES
OXFORD SQUARE
 "A HOWARD COUNTY GREEN NEIGHBORHOOD"
 Saint Margarets Boulevard
 (Sta. 6+62.30 to Sta. 12+52.60 & Banbury drive (Sta. 11+98 to Sta. 15+60.84))

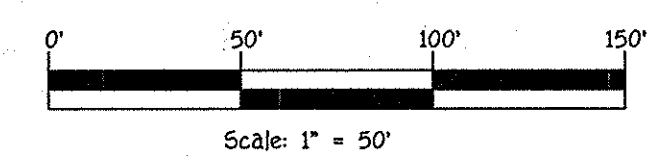
Zoned: TOD
 Tax Map: 38, Parcel: 761, Grid: 20
 First Election District - Howard County, Maryland
 Date: January 6, 2014
 Sheet 18 of 24

Approved: Department Of Planning And Zoning
 Chief, Division Of Land Development *Kevin Balaban* Date: **2/19/14**
 Chief, Development Engineering Division *Chris Edwards* Date: **2-7-14**
 Approved: Howard County Department Of Public Works
 Chief, Bureau Of Highways *Michelle Zappella* Date: **1-21-14**

REVISIONS		
NO.	DESCRIPTION	DATE

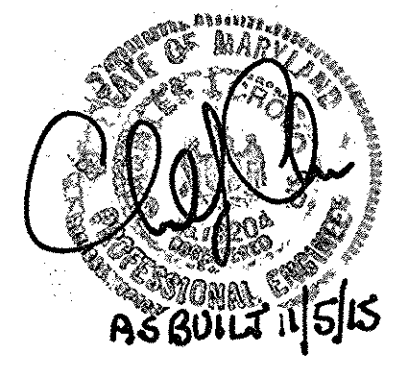
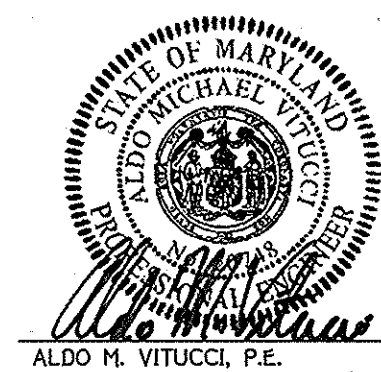


FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE
 ELLICOTT CITY, MARYLAND 21114
 410-484-2955



Owner
 Kellogg-CCP, LLC
 c/o David P. Scheffener, Jr.,
 Managing Member
 2330 West Joppa Road, Suite 190
 Lutherville, Maryland 21093-16H
 Ph: 410-296-3800

Developer
 Preston - Scheffener Properties
 2330 West Joppa Road, Suite 190
 Lutherville, Maryland 21093-16H
 Ph: 410-296-3800



STORM DRAIN PROFILES
OXFORD SQUARE
 "A HOWARD COUNTY GREEN NEIGHBORHOOD"
 Saint Margarets Boulevard
 (Sta. 6+62.30 to Sta. 12+52.60 &
 Banbury Drive
 (Sta. 11+98 to Sta. 15+60.84)

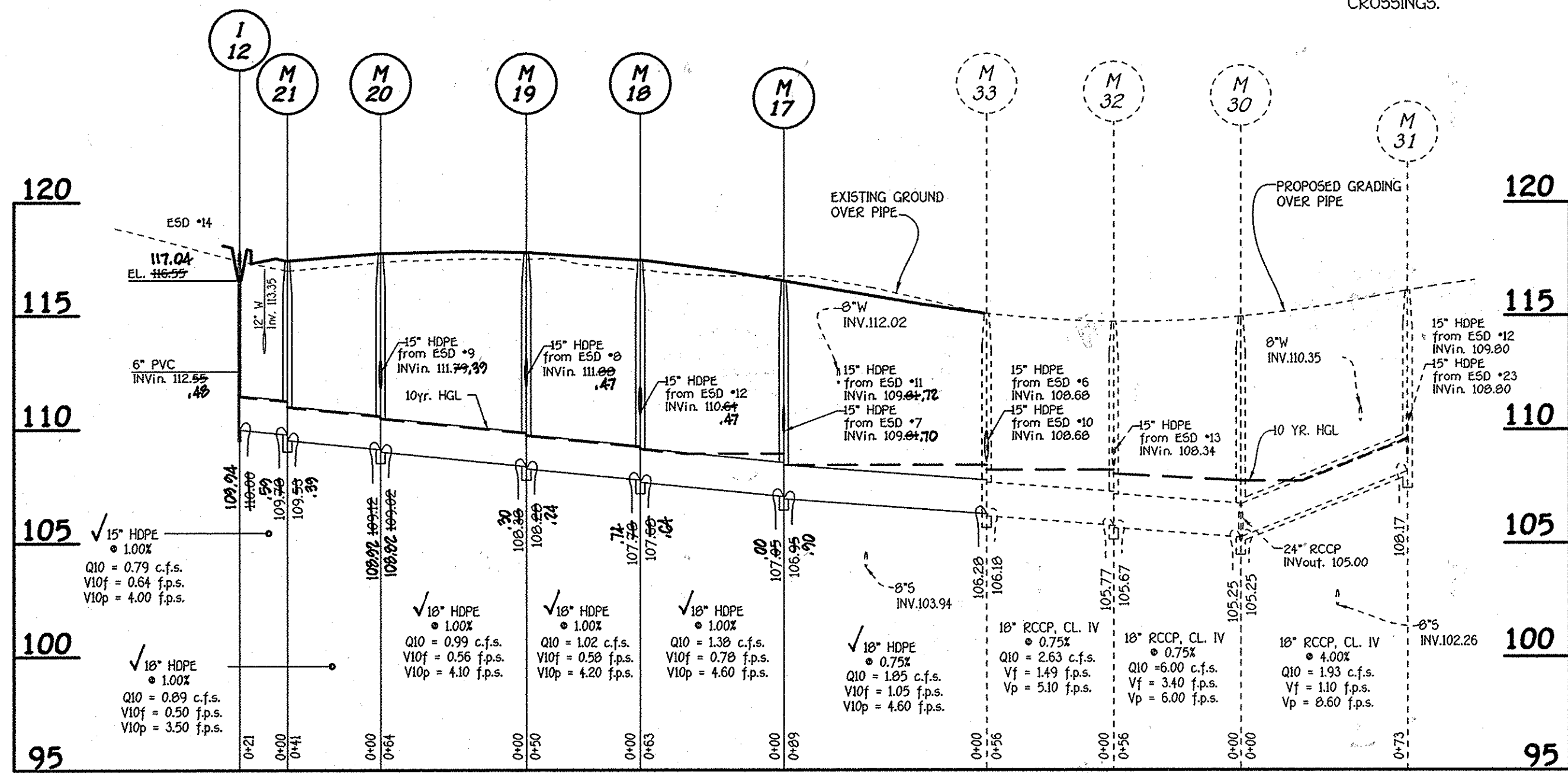
ALDO M. VITUCCI, P.E.
 "Professional Certification I hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Engineer under the laws of the State of Maryland. License No. 20746, Expiration Date 2-22-15."
 DATE: *ayach*

Zoned: TOD
 Tax Map: 38, Parcel: 761, Grid: 20
 First Election District - Howard County, Maryland
 Date: January 6, 2014
 Sheet 13 of 24

I:\2009\09\01\14\dwg\Finals - Phase Two\090114.dwg\Finals - Phase Two\12-14 storm drain profiles.dwg, sheet 13, 1/6/2014 9:27:37 AM, 1:1

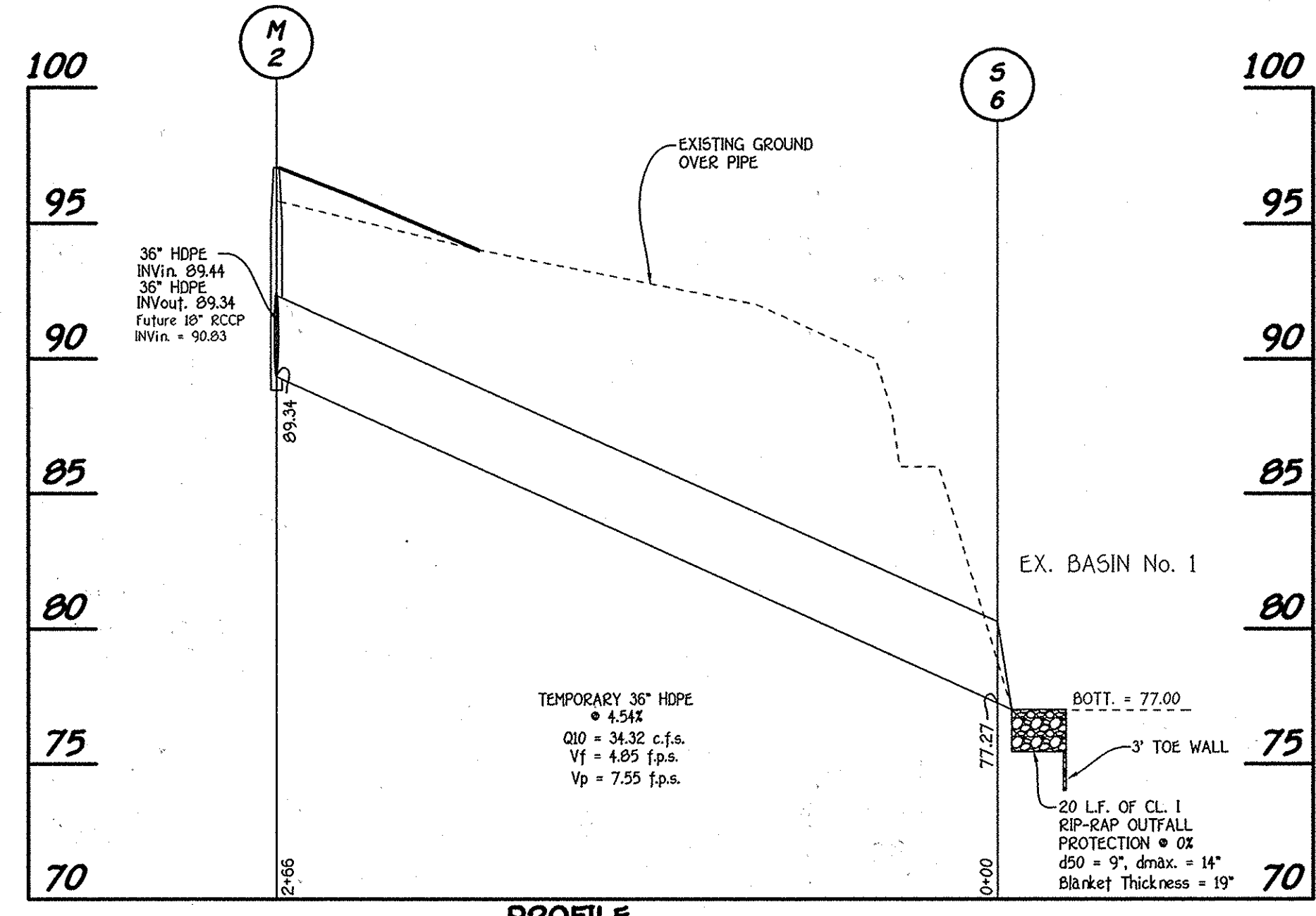
BANBURY DRIVE

NOTE: STORM DRAIN PIPE THICKNESS IS SHOWN AT CROSSINGS ONLY. PROVIDE 1.0' MINIMUM CLEARANCE AT ALL CROSSINGS.



PROFILE

SCALE: HORIZ. : 1" = 50'
VERT. : 1" = 5'



PROFILE

SCALE: HORIZ. : 1" = 50'
VERT. : 1" = 5'

Approved: Department Of Planning And Zoning

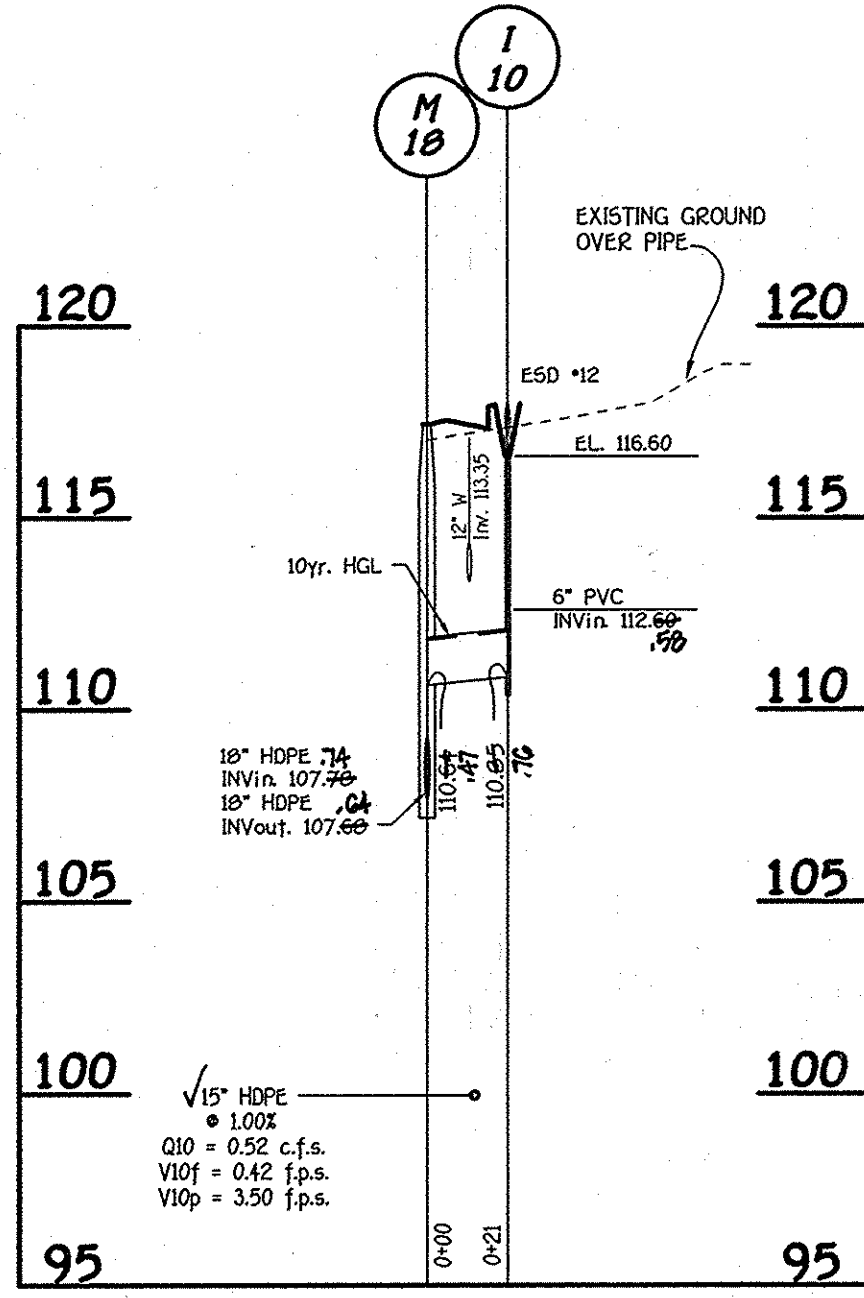
Kent Stauden 2/19/14
Chief, Division Of Land Development Date

Chris Edman 2-7-14
Chief, Development Engineering Division Date

Approved: Howard County Department Of Public Works

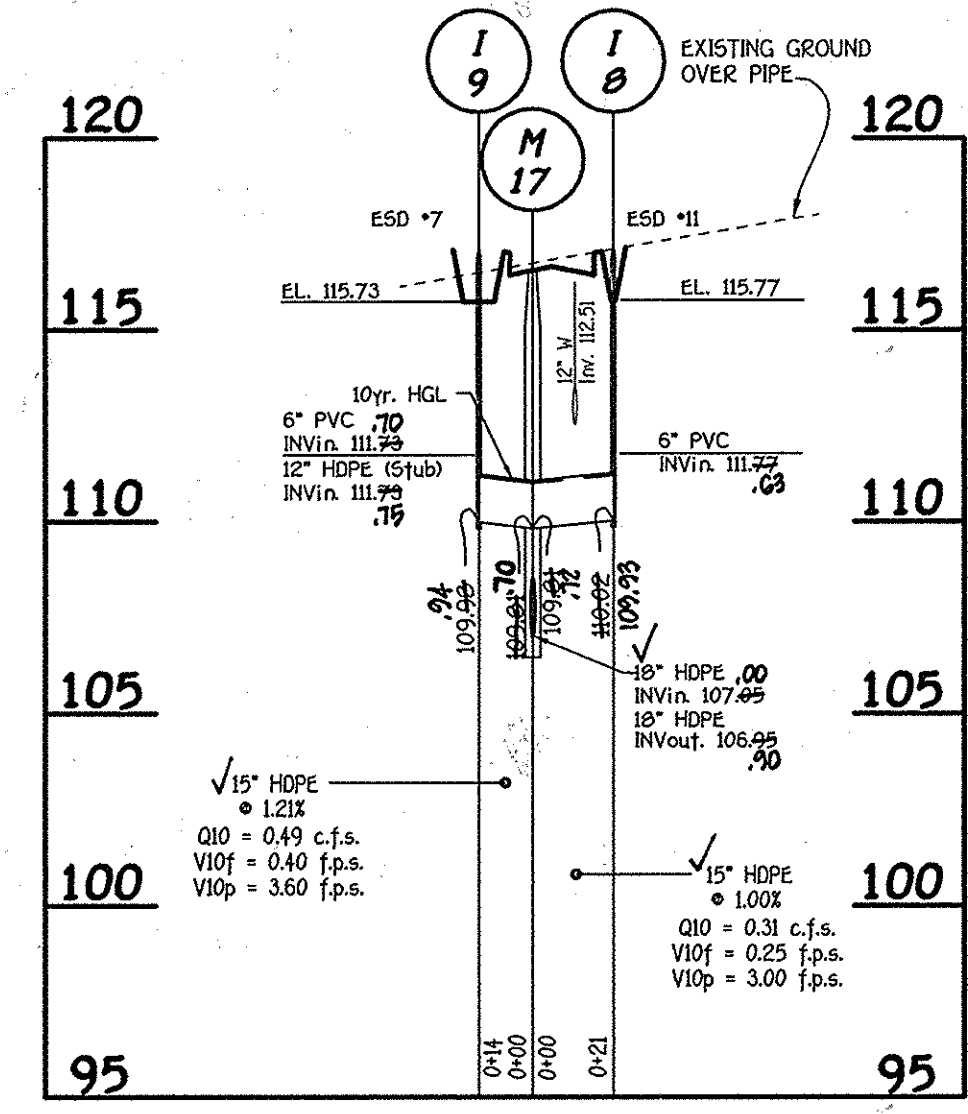
With 2 sheets 1-21-14
Chief, Bureau Of Highways Date

REVISIONS		
NO.	DESCRIPTION	DATE



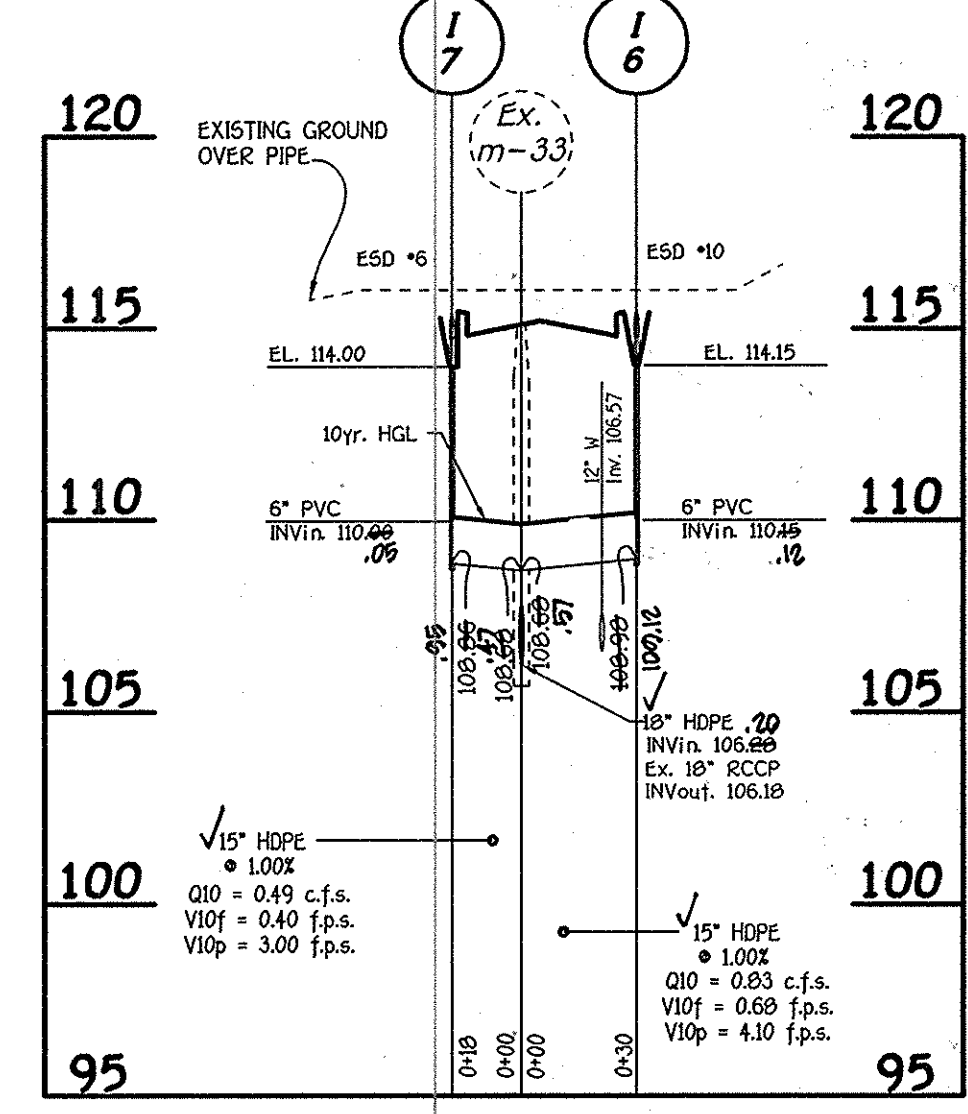
PROFILE

SCALE: HORIZ. : 1" = 50'
VERT. : 1" = 5'



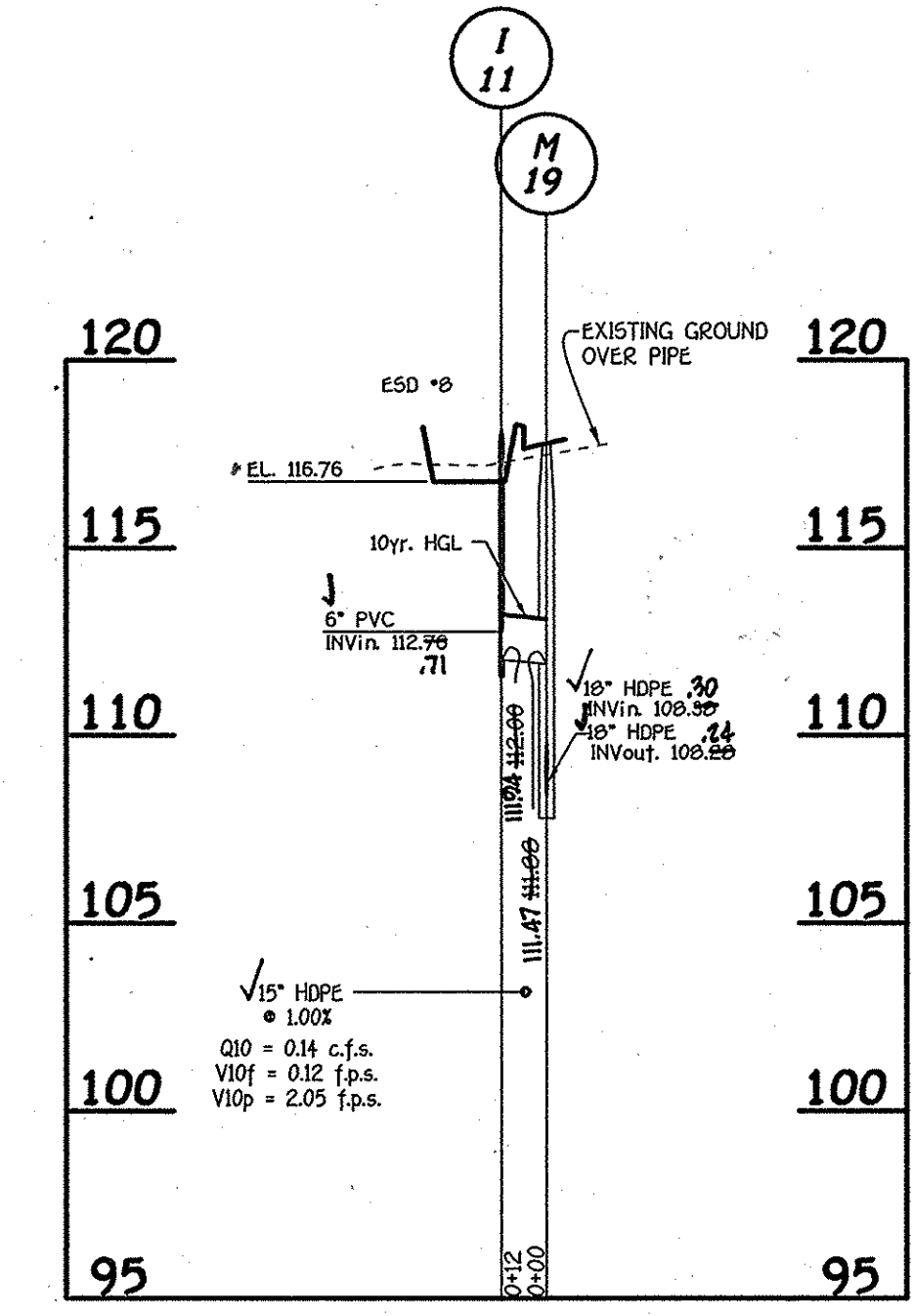
PROFILE

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VERT. : 1" = 5'



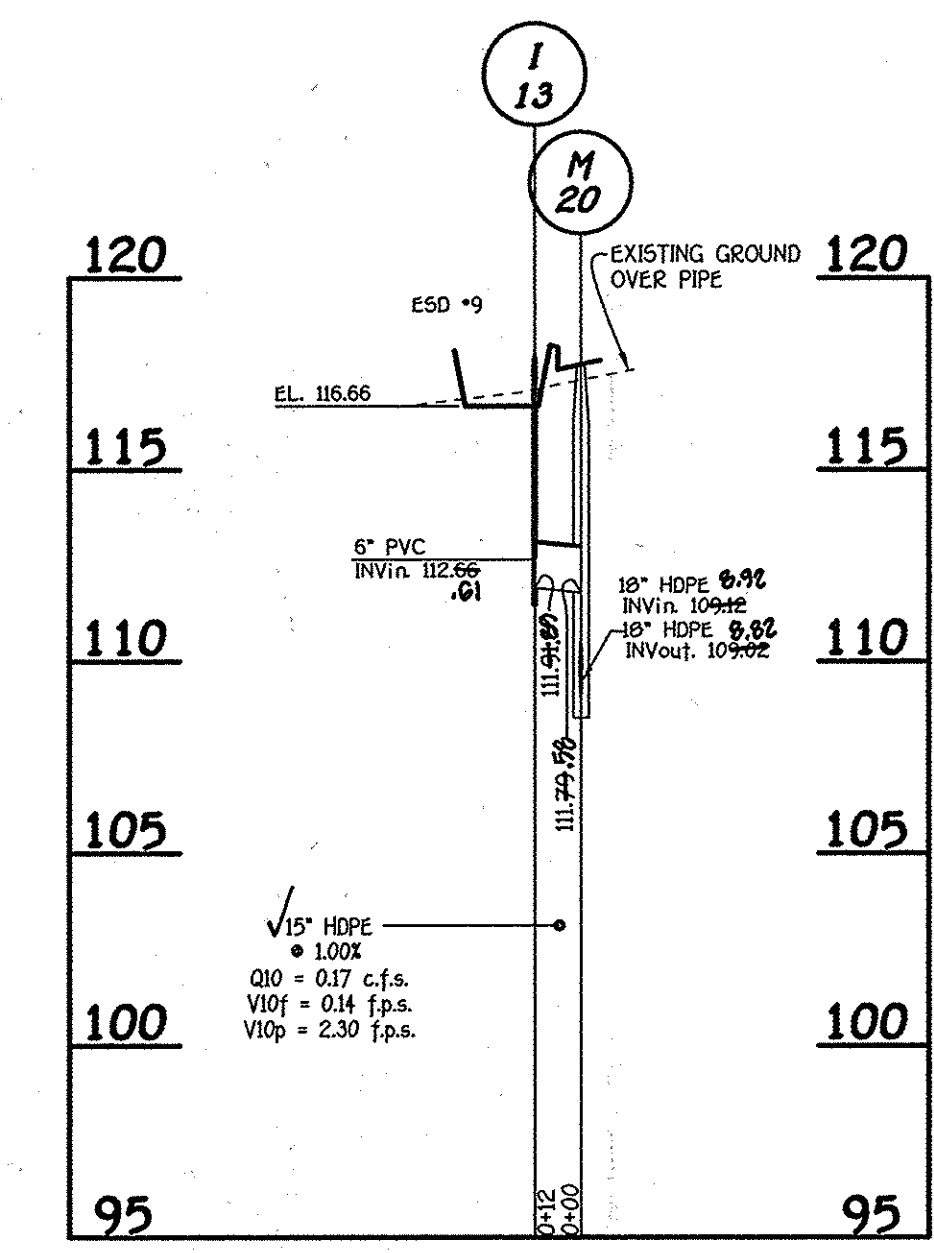
PROFILE

SCALE: HORIZ. : 1" = 50'
VERT. : 1" = 5'



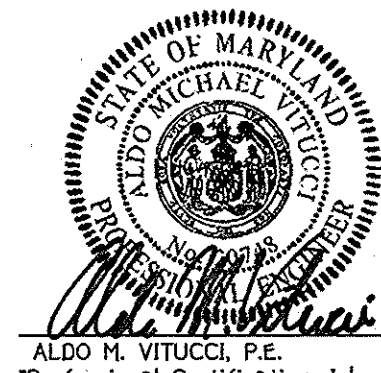
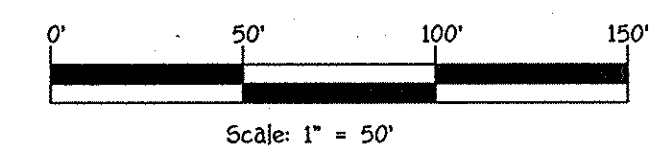
PROFILE

SCALE: HORIZ. : 1" = 50'
VERT. : 1" = 5'

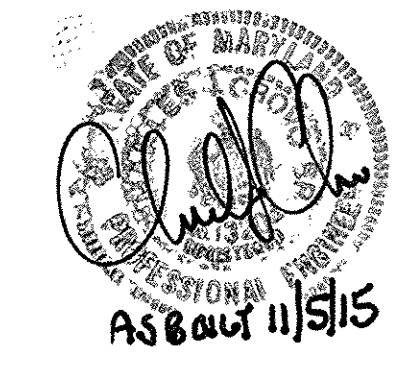


PROFILE

SCALE: HORIZ. : 1" = 50'
VERT. : 1" = 5'



ALDO H. VITUCCI, P.E.
DATE: 2/19/14
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. 20748, Expiration Date 2-25-15.



STORM DRAIN PROFILES
OXFORD SQUARE
"A HOWARD COUNTY GREEN NEIGHBORHOOD"
Saint Margarets Boulevard
(Sta. 6+62.30 to Sta. 12+52.60 &
Banbury drive
(Sta. 11+98 to Sta. 15+60.84)

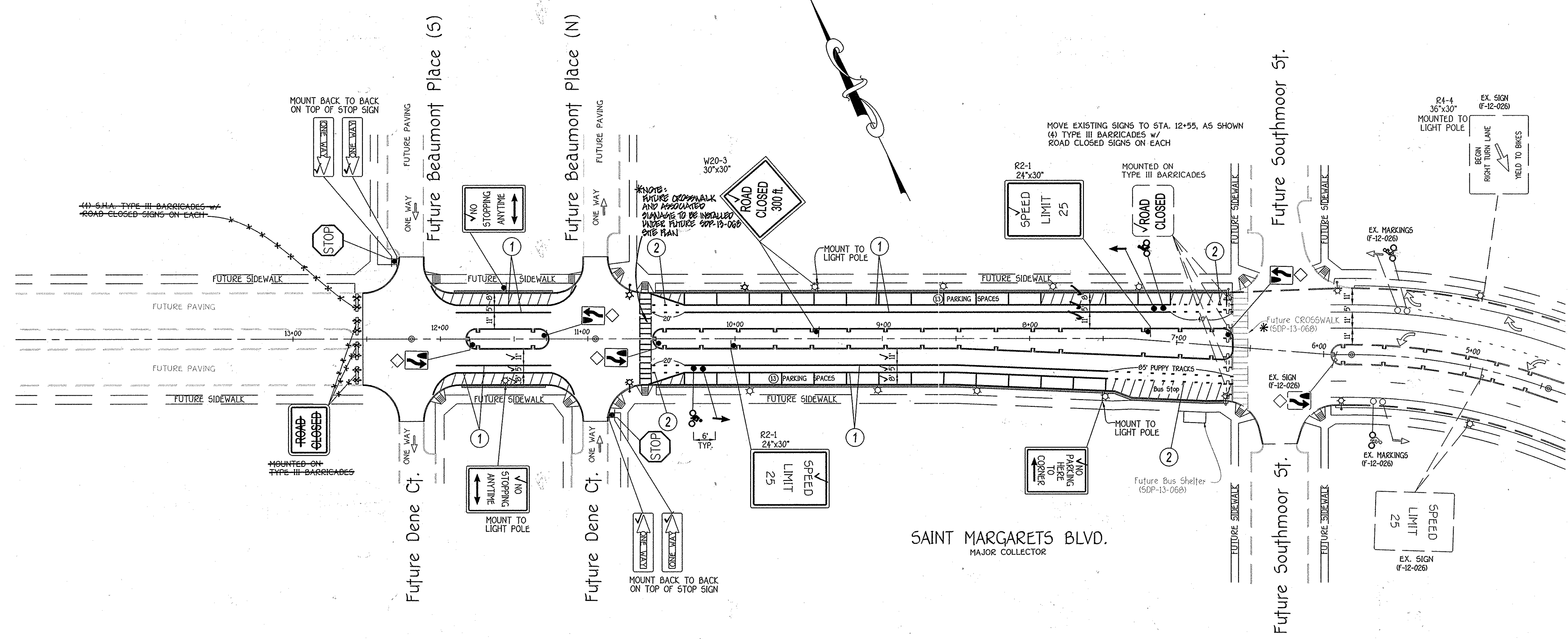
Zoned: TOD
Tax Map: 38, Parcel: 761, Grid: 20
First Election District - Howard County, Maryland
Date: January 6, 2014
Sheet 14 of 24

APPROVED: DEPARTMENT OF PUBLIC WORKS
W. Z. ... 1-21-14
 CHIEF, BUREAU OF HIGHWAYS DATE

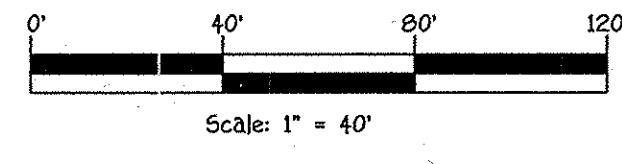
APPROVED: DEPARTMENT OF PLANNING AND ZONING
K. ... 2/15/14
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

C. ... 2-7-14
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

REVISIONS		
NO.	DESCRIPTION	DATE



SIGNING AND PAVEMENT MARKING PLAN



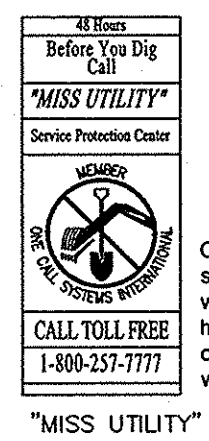
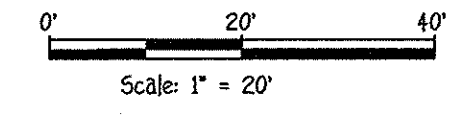
SIGNING LEGEND			
Description	Size	Color	
	R4-7	24" x 30"	Black/White
	R1-1	36" x 36"	Red/White
	OM-1(1)	18" x 18"	Yellow
	W20-3	36" x 36"	Black/Orange
	R2-1	24" x 30"	Black/White
	R6-1L R6-1R	36" x 12"	Black/White
		12" x 18"	Red/White
		12" x 18"	Red/White

MARKING LEGEND	
Item	Description
1	Install 5 in. solid white line.
2	Install 5 in. wide solid white dotted pavement marking for lane line. (2 ft. segment - 6 ft. gap)

NOTES:

- ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, QUICK PUNCH SQUARE TUBE POST (4 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED SQUARE TUBE SLEEVE (2 GAUGE) - 3' LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
- ALL SIGN LOCATIONS AND ALL PAVEMENT MARKINGS SHALL BE APPROVED BY HOWARD COUNTY TRAFFIC PRIOR TO ANY SIGNING OR PAVEMENT MARKING INSTALLATIONS.
- ALL PARKING LINES AND HATCHING IN PARKING SPACES TO BE 5" WHITE THERMOPLASTIC OR HEAT APPLIED PREFORMED THERMO TAPE.

BUS STOP TURNING MOVEMENT



Call "MISS UTILITY" at 1-800-257-7777, 48 hours prior to the start of work the excavator must notify all public utility companies with underground facilities in the area of proposed excavation and have those facilities located by the utility companies prior to commencing excavation, the excavator is responsible for compliance with requirements of Chapter 36a of the Montgomery County Code.

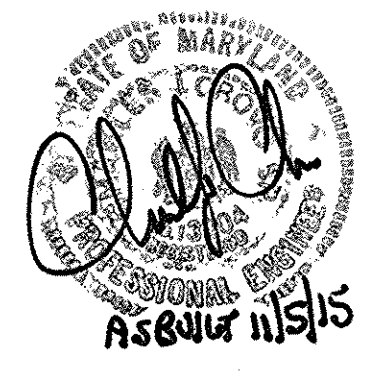
FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
 ELLEOTT CITY, MARYLAND 21114
 (410) 461-2925

Owner
 Kellogg-CCP, LLC
 c/o David P. Scheffnacker, Jr.
 Managing Member
 2330 West Joppa Road, Suite 190
 Lutherville, Maryland 21093-4614
 Ph: 410-296-3800

Developer
 Preston - Scheffnacker Properties
 2330 West Joppa Road, Suite 190
 Lutherville, Maryland 21093-4614
 Ph: 410-296-3800



ALDO M. VITUGCI, P.E.
 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. 20740, Expiration Date 2-22-15.



SIGNING AND PAVEMENT MARKING PLAN
 Saint Margarets Boulevard
OXFORD SQUARE
 "A HOWARD COUNTY GREEN NEIGHBORHOOD"
 Saint Margarets Boulevard
 (Sta. 6+62.30 to Sta. 12+52.60 & Banbury drive (Sta. 11+98 to Sta. 15+60.84))

Zoned: TOD
 Tax Map: 38, Parcel: 761, Grid: 20
 First Election District - Howard County, Maryland
 Date: January 6, 2014
 Sheet 15 of 24

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Veit Seidman 2/19/14
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

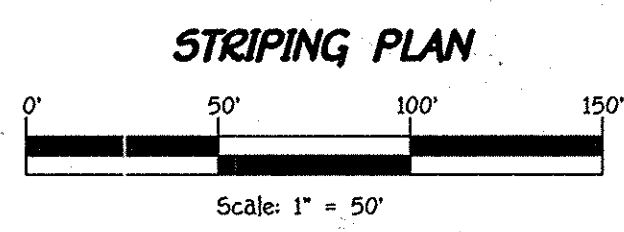
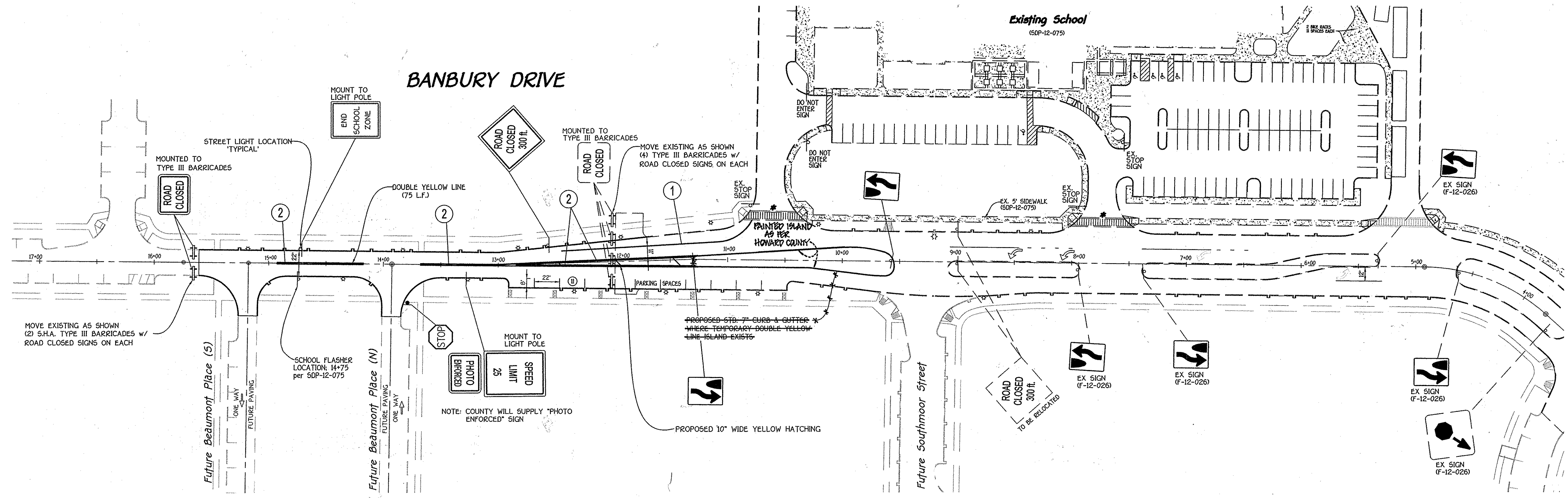
Chad Edwards 2-7-14
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Walter R. Smith 1-21-14
 CHIEF, BUREAU OF HIGHWAYS DATE

REVISIONS		
NO.	DESCRIPTION	DATE

*NOTE: CROSSWALK LOCATIONS PER SDP-12-075.



MARKING LEGEND	
Item	Description
1	Install 5 in. solid white line.
2	Install 5 in. wide solid double yellow pavement marking for center line.

SIGNING LEGEND			
Item	Description	Size	Color
1	R4-7	24" x 30"	Black/White
2	W20-3	30" x 30"	Black/Orange
3	R11-2	30" x 30"	Black/White
4	S5-2	24" x 30"	Black/White
5	R2-1	24" x 30"	Black/White
6	R1-1	36" x 36"	Red/White

NOTES:

- 1) ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, QUICK PUNCH SQUARE TUBE POST (4 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (2 GAUGE) - 3' LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
- 2) ALL SIGN LOCATIONS AND ALL PAVEMENT MARKINGS SHALL BE APPROVED BY HOWARD COUNTY TRAFFIC PRIOR TO ANY SIGNING OR PAVEMENT MARKING INSTALLATIONS.
- 3) ALL CROSSWALK LOCATIONS WILL BE FINALIZED ONLY AFTER SDP PLAN FOR THE PROPOSED SCHOOL IS REVIEWED AND APPROVED.

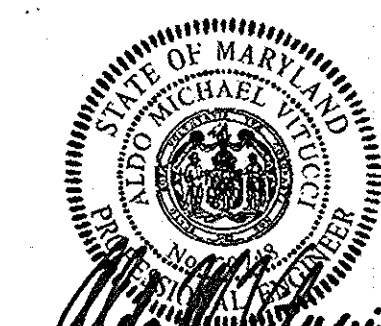


Call "MISS UTILITY" at 1-800-251-7777, 48 hours prior to the start of work the excavator must notify all public utility companies with underground facilities in the area of proposed excavation and have those facilities located by the utility companies prior to commencing excavation. The excavator is responsible for compliance with requirements of Chapter 36a of the Montgomery County Code.

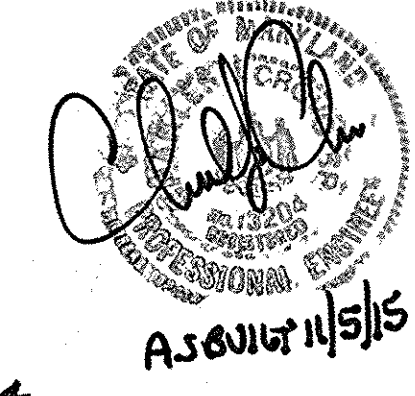
FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 10722 BALTIMORE NATIONAL PKWY
 ELKOTT CITY, MARYLAND 21042
 410-991-2955

Owner
 Kellogg-CCR, LLC
 c/o David P. Scheffener, Jr., Managing Member
 2330 West Joppa Road, Suite 190
 Lutherville, Maryland 21093-4614
 Ph: 410-296-3800

Developer
 Preston + Scheffener Properties
 2330 West Joppa Road, Suite 190
 Lutherville, Maryland 21093-4614
 Ph: 410-296-3800



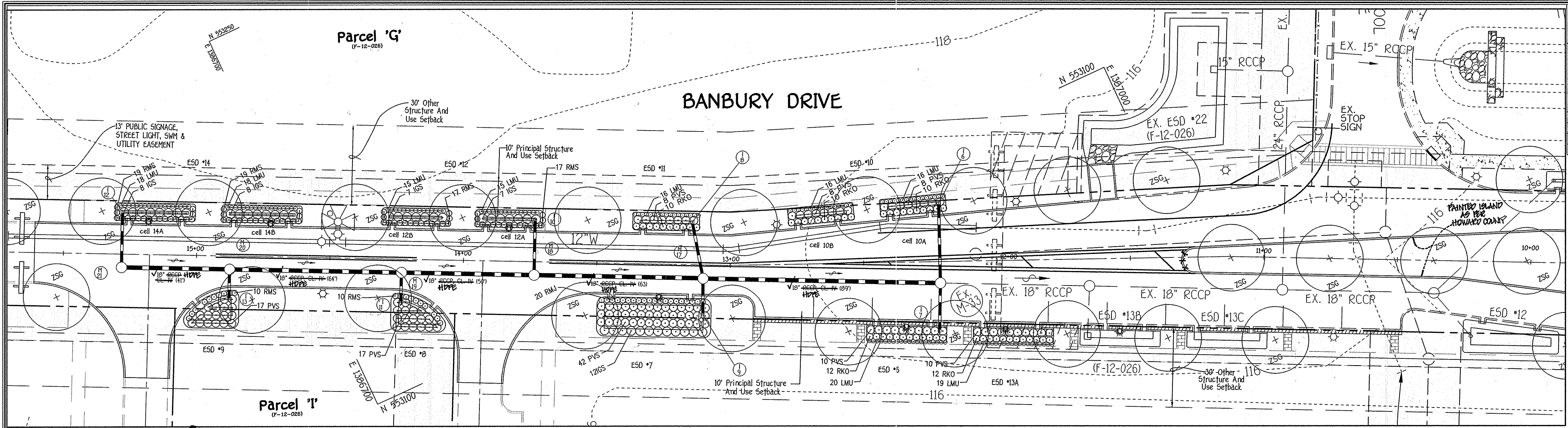
ALDO M. VITUCCI, P.E.
 Professional Certification I hereby certify that these documents were prepared by me, and that I am a duly Licensed Professional Engineer under the laws of the State of Maryland, License No. 20740, Expiration Date 2-22-15.



SIGNING AND PAVEMENT MARKING PLAN
 Banbury Drive
OXFORD SQUARE
 "A HOWARD COUNTY GREEN NEIGHBORHOOD"
 Saint Margarets Boulevard
 (Sta. 6+62.30 to Sta. 12+52.60 & Banbury drive
 (Sta. 11+98 to Sta. 15+60.84)

Zoned: TOD
 Tax Map: 38, Parcel: 761, Grid: 20
 First Election District - Howard County, Maryland
 Date: January 6, 2014
 Sheet 16 of 24

I:\2009\09014\dwg\Finals - Phase Two\09014 sheet 16 Banbury Drive striping.dwg, SHT 16, 1/6/2014 9:37:10 AM, 1:1

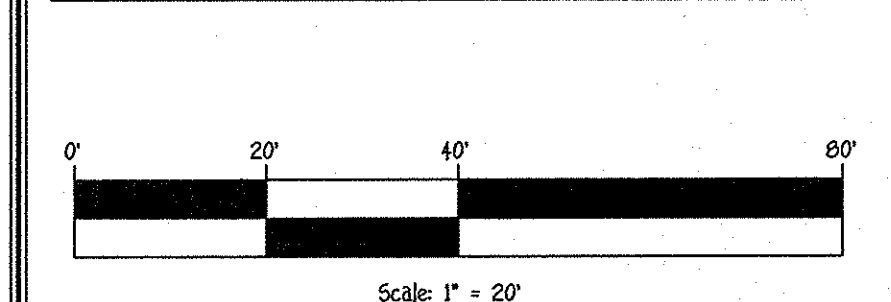
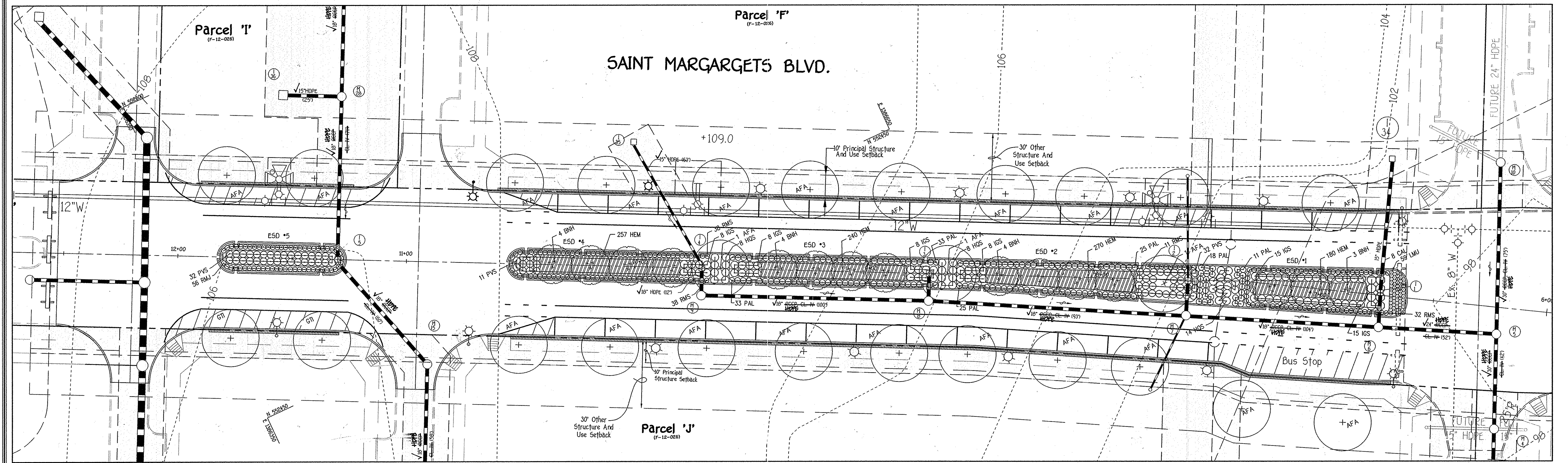
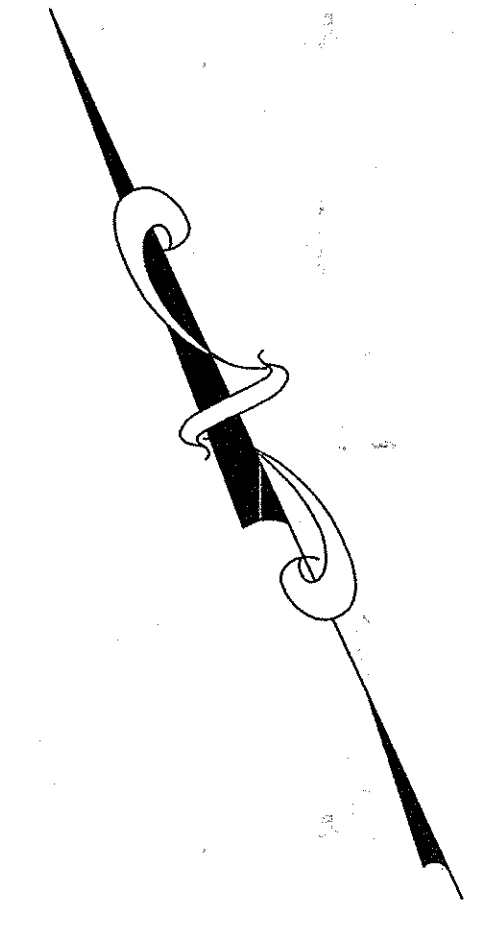


Approved Department of Public Works
 Chief Bureau of Highways
 Date 1-21-14

Approved Department of Planning and Zoning
 Chief, Division of Land Development
 Date 2/19/14

Chief, Development Engineering Division
 Date 2-7-14

NO.	REVISIONS DESCRIPTION	DATE



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 letter of landscape installation accompanied by an executed one year guarantee of plant materials will be submitted to the Department of Planning and Zoning.

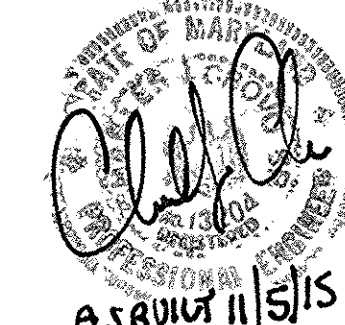
David P. Scheffacker
 Name: _____ Date: 1/7/14

Owner
 Kellogg-CP, LLC
 c/o David P. Scheffacker, Jr.,
 Managing Member
 2330 West Joppa Road, Suite 190
 Lutherville, Maryland 21093-4614
 Ph: 410-296-3800

Developer
 Preston - Scheffacker Properties
 2330 West Joppa Road, Suite 190
 Lutherville, Maryland 21093-4614
 Ph: 410-296-3800



ALDO M. VITUCCI, P.E.
 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. 20746, Expiration Date 2-22-15.



STREET TREE AND LANDSCAPE PLAN
OXFORD SQUARE
 "A HOWARD COUNTY GREEN NEIGHBORHOOD"
 Saint Margarets Boulevard
 (Sta. 6+62.30 to Sta. 12+52.60 &
 Banbury Drive
 (Sta. 11+98 to Sta. 15+60.04)

Zoned: TOD
 Tax Map: 38, Parcel: 761, Grid: 20
 First Election District - Howard County, Maryland
 Date: January 6, 2014
 Sheet 17 of 24

I:\2009\09014\dwg\Finals - Phase Two\09014 sheet 17-18 landscape plan.dwg, sheet 17, 1/6/2014 9:41:30 AM, 11

Approved: Department of Public Works
 Chief, Bureau of Highways
 Date: 1-21-14

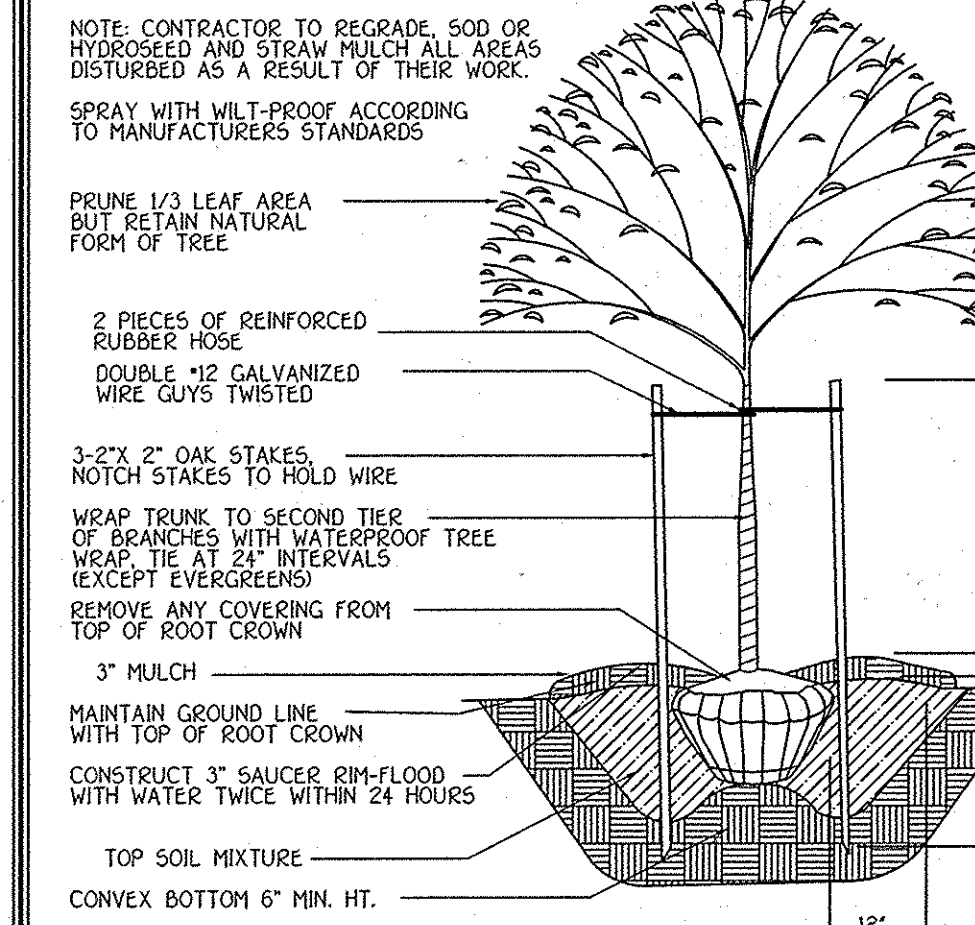
Approved: Department of Planning and Zoning
 Chief, Division of Land Development
 Date: 2/19/14

Approved: Department of Engineering
 Chief, Development Engineering Division
 Date: 2-7-14

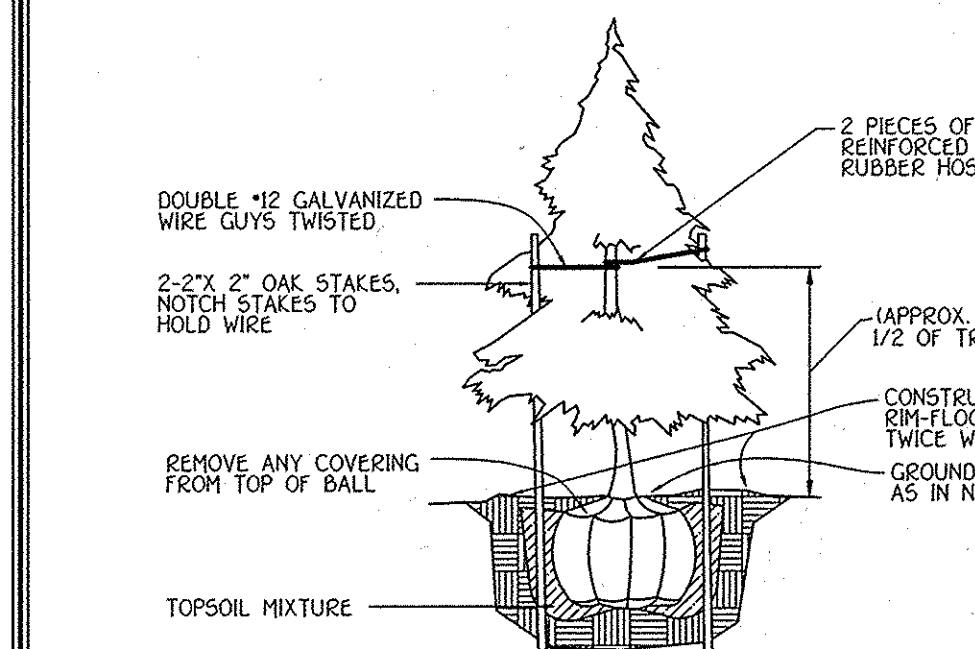
NO.	DESCRIPTION	DATE

PLANTING SPECIFICATIONS

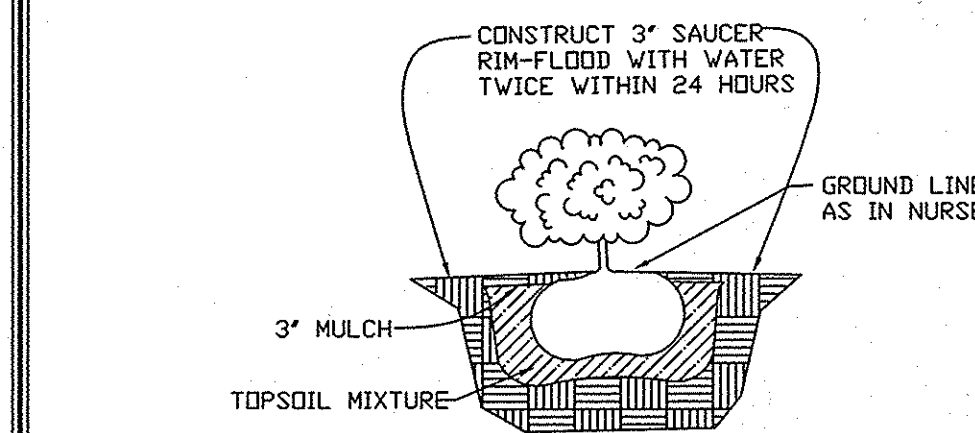
Plants, related material, and operations shall meet the detailed description as given on the plans and as described herein. All plant material, unless otherwise specified, shall be nursery grown, uniformly branched, have a vigorous root system, and shall conform to the species, size, root and shape shown on the plant list and the American Association of Nurserymen (AAO) Standards. Plant material shall be healthy, vigorous, free from defects, decay, distorting roots, sun scald injuries, abrasions of the bark, plant disease, insect pest eggs, borers and all forms of insect infestations or objectionable disfigurements. Plant material that is weak or which has been cut back from larger grades to meet specified requirements will be rejected. Trees with forked leaders will not be accepted. All plants shall be freshly dug no heat-in plants from cold storage will be accepted. Unless otherwise specified, all general conditions, planting operations, details and planting specifications 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 Architects, latest edition, including all appendices. 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 the responsibility 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. Bid 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 plant list 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 standard fertilizer per cubic yard of planting mix. Topsoil shall conform to the Landscape Guidelines. Need 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 suitability 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. All areas intended for landscape use only. See other plan sheets for more information on grading, sediment control, layout, etc.



SHADE TREE PLANTING DETAIL
NO SCALE



EVERGREEN TREE PLANTING DETAIL
NO SCALE



SHRUB PLANTING DETAIL
NO SCALE

PERIMETER	SCHEDULE A PERIMETER LANDSCAPE EDGE (PER F-12-026)							
	P1	P2	P3	P4	P5	P6	P7	P8
CATEGORY	Front to Roadway (residential)	Adjacent to Roadway (non-residential)	Non-Res. Adjacent to Non-Res.	Non-Res. Adjacent to Non-Res.	Non-Res. Adjacent to Non-Res.	Non-Res. Adjacent to Non-Res.	Non-Res. Adjacent to Non-Res.	Non-Res. Adjacent to Non-Res.
LANDSCAPE TYPE	N/A	B	C	C	C	C	C	C
LINEAR FEET OF PERIMETER	376.08'	506.98'	470.63'	1108.54'	931.99'	1630.70'	1588.13'	2042.92'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	-	NO	NO	NO	NO	YES-350'	100% CREDIT	YES-225'
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE IF NEEDED)	-	NO	NO	NO	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED (SHADE TREES, EVERGREEN TREES, SHRUBS)	0	10	12	30	23	32	0	46
NUMBER OF PLANTS PROVIDED (SHADE TREES, EVERGREEN TREES, SHRUBS)	0	13	24	60	47	64	0	51
NUMBER OF PLANTS PROVIDED (OTHER TREES (2:1 SUBSTITUTION) SHRUBS (0:1 SUBSTITUTION) (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	0	-	-	-	-	-	0	-

NOTE: SCHEDULE 'A' LANDSCAPING SHALL BE DEFERRED UNTIL SITE PLAN STAGE.

PLANT MATERIAL-BIO-RETENTION ESD No. 1

QUANTITY	NAME	MAXIMUM SPACING (FT.)
180	MIXED PERENNIALS	12' o.c.
70	SHRUBS	10'-36' o.c.

PLANT MATERIAL-BIO-RETENTION ESD No. 10B

QUANTITY	NAME	MAXIMUM SPACING (FT.)
34	SHRUBS	10'-36' o.c.

PLANT MATERIAL-BIO-RETENTION ESD No. 2

QUANTITY	NAME	MAXIMUM SPACING (FT.)
270	MIXED PERENNIALS	12' o.c.
76	SHRUBS	10'-36' o.c.

PLANT MATERIAL-BIO-RETENTION ESD No. 11

QUANTITY	NAME	MAXIMUM SPACING (FT.)
34	SHRUBS	10'-36' o.c.

PLANT MATERIAL-BIO-RETENTION ESD No. 3

QUANTITY	NAME	MAXIMUM SPACING (FT.)
240	MIXED PERENNIALS	12' o.c.
82	SHRUBS	10'-36' o.c.

PLANT MATERIAL-BIO-RETENTION ESD No. 12A

QUANTITY	NAME	MAXIMUM SPACING (FT.)
40	SHRUBS	10'-36' o.c.

PLANT MATERIAL-BIO-RETENTION ESD No. 4

QUANTITY	NAME	MAXIMUM SPACING (FT.)
257	MIXED PERENNIALS	12' o.c.
95	SHRUBS	10'-36' o.c.

PLANT MATERIAL-BIO-RETENTION ESD No. 12B

QUANTITY	NAME	MAXIMUM SPACING (FT.)
40	SHRUBS	10'-36' o.c.

PLANT MATERIAL-BIO-RETENTION ESD No. 5

QUANTITY	NAME	MAXIMUM SPACING (FT.)
88	SHRUBS	10'-36' o.c.

PLANT MATERIAL-BIO-RETENTION ESD No. 13A

QUANTITY	NAME	MAXIMUM SPACING (FT.)
41	SHRUBS	10'-36' o.c.

PLANT MATERIAL-BIO-RETENTION ESD No. 6

QUANTITY	NAME	MAXIMUM SPACING (FT.)
42	SHRUBS	10'-36' o.c.

PLANT MATERIAL-BIO-RETENTION ESD No. 14A

QUANTITY	NAME	MAXIMUM SPACING (FT.)
45	SHRUBS	10'-36' o.c.

PLANT MATERIAL-BIO-RETENTION ESD No. 7

QUANTITY	NAME	MAXIMUM SPACING (FT.)
74	SHRUBS	10'-36' o.c.

PLANT MATERIAL-BIO-RETENTION ESD No. 14B

QUANTITY	NAME	MAXIMUM SPACING (FT.)
45	SHRUBS	10'-36' o.c.

PLANT MATERIAL-BIO-RETENTION ESD No. 8

QUANTITY	NAME	MAXIMUM SPACING (FT.)
27	SHRUBS	10'-36' o.c.

NOTES:
Plant Material Must Cover At Least 50% Of The Surface Area Of The Bio-retention
See Plant Material Charts For Quantities And Spacing

PLANT MATERIAL-BIO-RETENTION ESD No. 9

QUANTITY	NAME	MAXIMUM SPACING (FT.)
27	SHRUBS	10'-36' o.c.

LEGEND
HEM - Hemerocallis Mix Variety for all season bloom 1 Gal. Cont. 18" O.C.
NOTE: Hemerocallis Fulva is invasive and is not acceptable for use in this project. Common names for H. Fulva, Tawny Daylily, Common Orange Daylily, Roadside Ditch Daylily and Tigerlily.
LMU - Liriope Muscari 'Big Blue' Big Blue Lilyturf 1 Gal. Cont. 24" O.C.
PVS - Panicum virgatum 'Shenandoah' Red Switch Grass 1 Gal. Cont. 36" O.C.
RKO - Rosa 'Blushing Knockout Rose' Light Pink Knockout Rose 24"-30" ht. Cont. or B&B 30" O.C.
RMH - Rosa 'Heipicdevoj' Icy Drift Rose 1 Gal. Cont. 24" O.C.

PLANT MATERIAL-BIO-RETENTION ESD No. 10A

QUANTITY	NAME	MAXIMUM SPACING (FT.)
34	SHRUBS	10'-36' o.c.

NOTES:

Should any tree designated for preservation for which landscaping credit is given, die prior to release of bonds, the owner will be required to replace the tree with the equivalent species or with a tree which will obtain the same height, spread and growth characteristics. The replacement tree must be a minimum of 3 inches in caliper and installed as required in the Howard County Landscape Manual. At the time of plant installation, all trees listed and approved on the Landscape Plan, shall comply with the proper height requirement in accordance with the Howard County Landscape Manual. In addition, no substitutions or relocations of the required plantings may be made without prior review and approval from the Department of Planning and Zoning. Any deviations from the 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 the road drawing plans. The Owner, tenants and/or their agents shall be responsible for maintenance of the required perimeter landscaping. 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 the other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced.

QTY. REQUIRED	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
1/40 l.f. = 591/40 x 2 = 30 trees	Acer x Frémontii 'Autumn Blaze' Autumn Blaze Freeman Maple (seedless only) 24 provided	4'-4 1/2 CAL.	ALONG PUBLIC R/W SAINT MARGARETS BLVD. (SEE PLAN)
1/40 l.f. = 362/40 x 2 = 18 trees	Gleditsia triacanthos var. 'Insignis' 'Silkyline' Thornless 2 provided Betula Nigra 'heritage' River Birch 15 provided	4'-4 1/2 CAL. 10'-12' HT. 3 Trunks (min)	ALONG PUBLIC R/W BANBURY DRIVE (SEE PLAN)
1/40 l.f. = 362/40 x 2 = 18 trees	Zelkova Serrata 'Green Vase' 22 provided	4'-4 1/2 CAL.	ALONG PUBLIC R/W BANBURY DRIVE (SEE PLAN)

NOTE: FINAL PLACEMENT OF STREET TREES WILL OCCUR IN THE FIELD AND BE PLACED A MINIMUM OF 30 FEET FROM ALL SIGNS AND INTERSECTIONS WHEN PLANTED BETWEEN SIDEWALK AND CURB, BE LOCATED WITH CONSIDERATION OF UNDERGROUND UTILITIES AND STRUCTURES AND MAINTAIN A MINIMUM 5 FEET DISTANCE ON CENTER FROM A DRAIN INLET STRUCTURE, 5 FEET FROM AN OPEN SPACE ACCESS STRIP AND 10 FEET FROM A DRIVEWAY.

SYMBOL	QTY.	BOTANICAL AND COMMON NAME	SIZE
ZSC	22	Zelkova Serrata 'Green Vase'	4'-4 1/2 CAL.
AFA	24	Acer x Frémontii 'Autumn Blaze' Autumn Blaze Freeman Maple (seedless only)	4'-4 1/2 CAL.
GR	2	Gleditsia triacanthos var. 'Insignis' 'Silkyline' Thornless	4'-4 1/2 CAL.
BH	15	Betula Nigra 'heritage' River Birch	10'-12' HT. 3 Trunks (min)

FINANCIAL SURETY FOR THE REQUIRED 48 STREET TREES PLUS 9 ADDITIONAL UNDER THE PLAN AND 11 ADDITIONAL FROM P-12-026 USE (ALL CREDIT IS 1 (GREENSBORO) TRUSS TOTAL HAS BEEN ISSUED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$20,000.00
NOTE: THE DEVELOPER IS PROPOSING 03 TOTAL STREET TREES. (SEE THE PLAN)

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 letter of landscape installation accompanied by an executed one year guarantee of plant materials will be submitted to the Department of Planning and Zoning.

David M. Vitucci Name
1/17/14 Date

Owner
Kellogg-CCR, LLC
c/o David P. Scheffacker, Jr.,
Managing Member
2330 West Joppa Road, Suite 190
Lutherville, Maryland 21093-1614
Ph: 410-296-3800

Developer
Preston + Scheffacker Properties
2330 West Joppa Road, Suite 190
Lutherville, Maryland 21093-1614
Ph: 410-296-3800



DATE: 01/06/14
ALDO M. VITUCCI, P.E.
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. 20740, Expiration Date 2-22-15.

LANDSCAPE NOTES & DETAILS
OXFORD SQUARE
"A HOWARD COUNTY GREEN NEIGHBORHOOD"
Saint Margarets Boulevard
(Sta. 6+62.30 to Sta. 12+52.60 & Banbury Drive - (Sta. 11+98 to Sta. 15+60.84))

Zoned: T0D
Tax Map: 38, Parcel: 761, Grid: 20
First Election District - Howard County, Maryland
Date: January 6, 2014
Sheet 18 of 24

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

- A. Soil Preparation**
- Temporary Stabilization
 - Seeded preparation consists of loosening soil to a depth of 3 to 5 inches by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened, it must not be rolled or disped 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 contains less than 40 percent clay but enough fine grained material (greater than 30 percent silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception: if legumes will be planted, 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 scarified 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 lawn 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 roughen the surface where site conditions will not permit seeded preparation. Track slopes 3:1 or flatter with tracked equipment 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 friable. Seeded loosening may be unnecessary on newly disturbed areas.

- B. 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 gradation.
 - Topsoil salvaged from an existing site may be used provided it meets the standards as 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 Soil 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 is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
 - 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: Soil to be used as topsoil must meet the following criteria:
 - Topsoil must be a loam, sandy loam, clay loam, silt 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 approval authority. Topsoil must not be a mixture of contrasting textured subsoils and must contain less than 5 percent by volume of cinders, stones, slag, coarse fragments, gravel, sticks, 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 Bermuda grass, quack grass, Johnson grass, net sedge, poison ivy, thistle, or others as specified.
 - Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
- 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 seeding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling 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 muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seeded preparation.

- C. Soil Amendments (Fertilizer and Lime Specifications)**
- Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas of 5 acres or more. 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 in composition, free flowing and suitable for accurate application by appropriate equipment. Nitrate 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 warranty of the producer.
 - Lime materials must be ground limestone (hydrated or burnt lime may be substituted except when hydroseeding) which contains at least 50 percent total oxide (calcium oxide plus magnesium oxide). Limestone must be ground to such fineness that at least 90 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 either highly acidic or composed of heavy clays, spread ground limestone at the rate of 4 to 8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil.

- TEMPORARY SEEDING NOTES (B-4-4)**
- Definition
To stabilize disturbed soils with vegetation for up to 6 months.
- Purpose
To use fast growing vegetation that provides cover on disturbed soils.
- Conditions Where Practice Applies
Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.

- Criteria
- Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardness 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					
Hardness Zone (from Figure B.3):			Fertilizer Rate (10-20-20)		Lime Rate
Seed Mixture (from Table B.1):					
Species	Application Rate (lb./ac)	Seeding Dates	Seeding Depth		
BARLEY	96	3/1 - 5/15 8/15 - 10/15	1"	436 lb./ac (10 lb./1000 sf)	2 tons/ac (90 lb./1000 sf)
OATS	72	3/1 - 5/15 8/15 - 10/15	1"		
RYE	112	3/1 - 5/15 8/15 - 10/15	1"		

PERMANENT SEEDING NOTES (B-4-5)

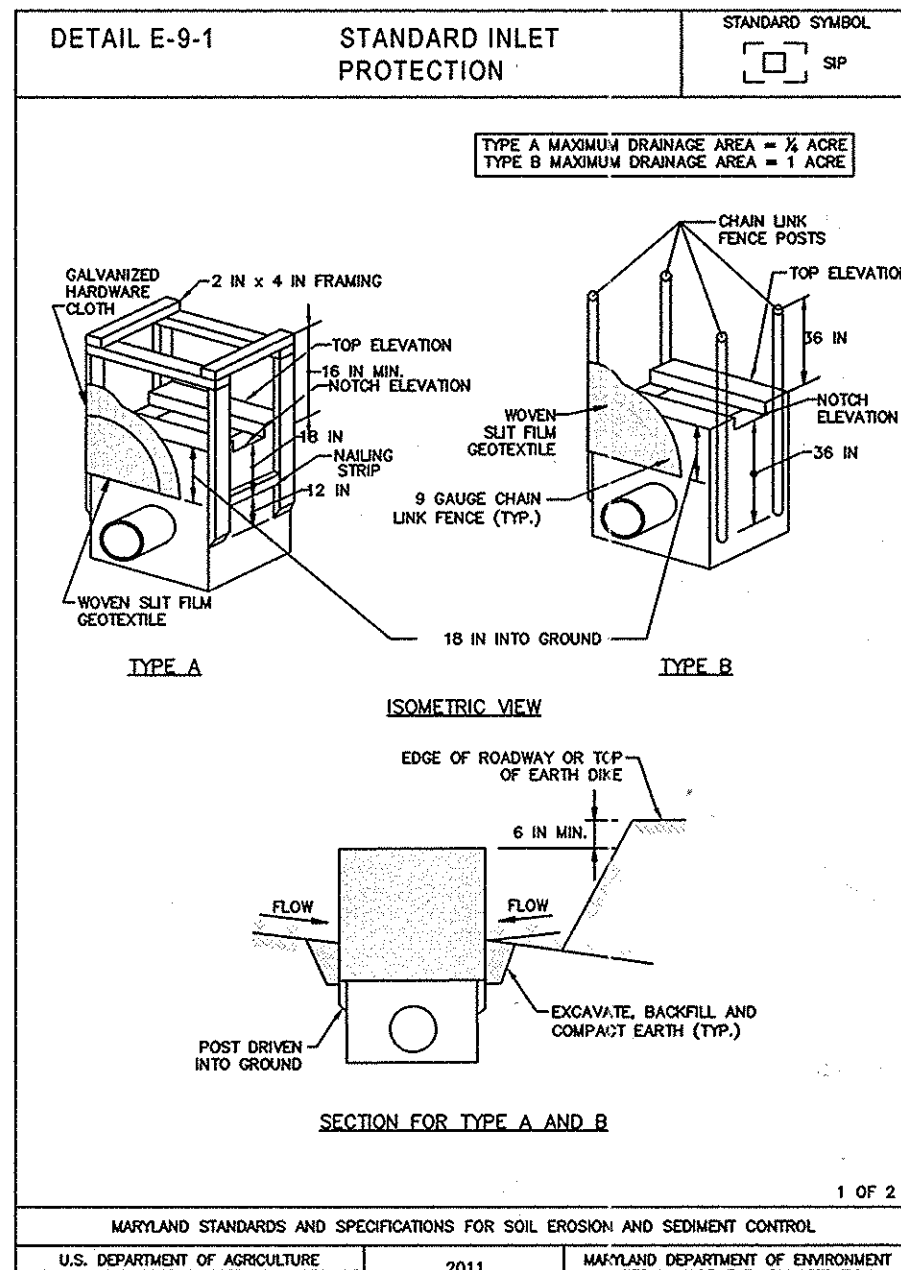
- A. Seed Mixtures**
- General Use
- Select one or more of the species or mixtures listed in Table B.3 for the appropriate Plant Hardness Zone (from Figure B.3) and based on the site condition or purpose found on Table B.2 enter selected mixture(s), application rates, and seeding dates in the Permanent Seeding Summary. The Summary is to be placed on the plan.
 - Additional planting specifications for exceptional sites such as shorelines, stream banks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-NRCS Technical Field Office Guide, Section 342 - Critical Area Planting.
 - For sites having disturbed areas over 5 acres, use and show the rates recommended by the soil testing agency.
 - For areas receiving low maintenance, apply urea form fertilizer (46-0-0) at 3 1/2 pounds per 1000 square feet (150 pounds per acre) at the time of seeding in addition to the soil amendments shown in the Permanent Seeding Summary.
- 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, bright light 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 Ryegrass:** 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 drought prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes: Certified Tall Fescue Cultivars 95 to 100 percent, Certified Kentucky Bluegrass Cultivars 0 to 5 percent. Seeding Rate: 5 to 8 pounds per 1000 square feet. One or more cultivars may be blended.
- 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.

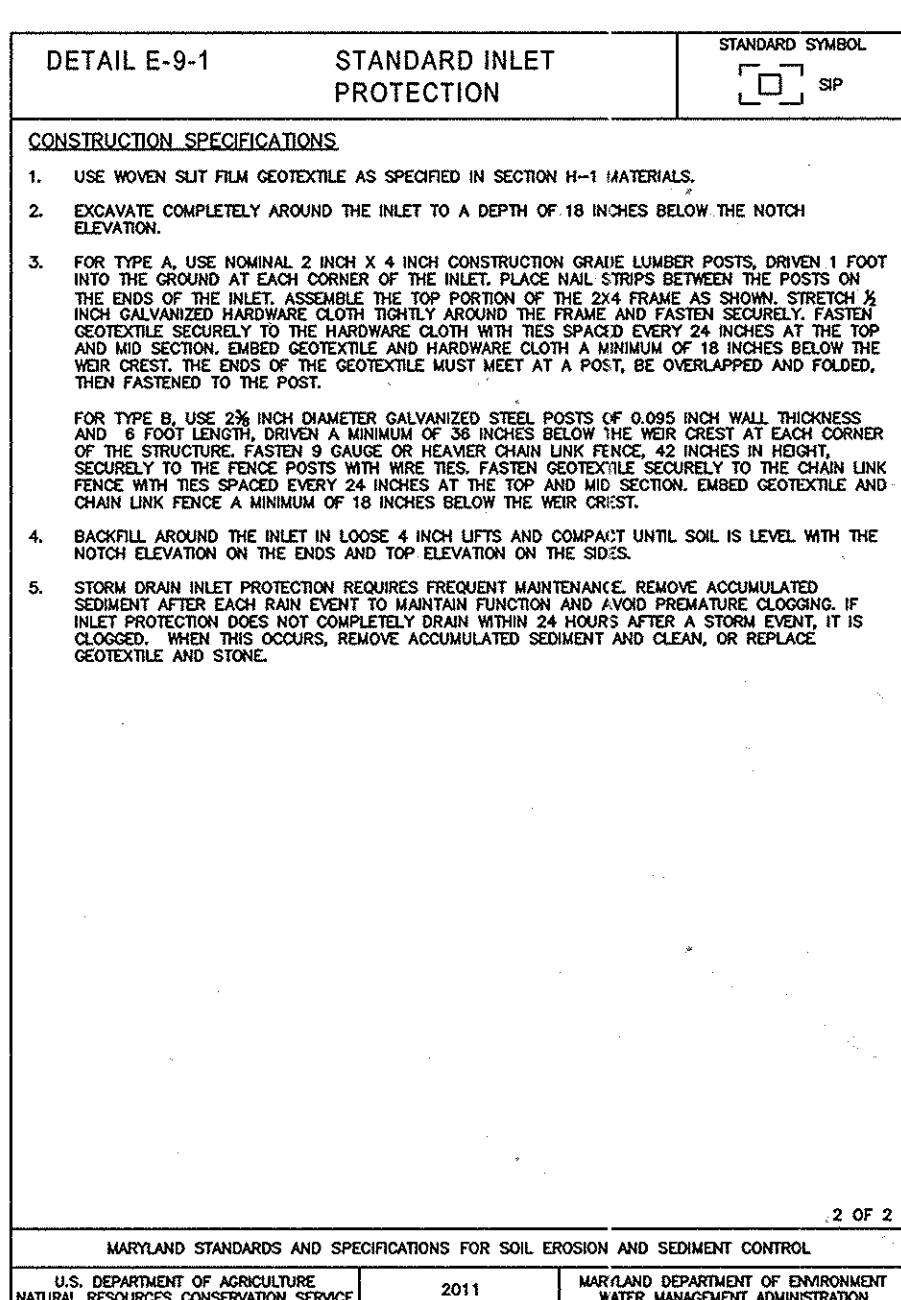
- Notes:
Select turfgrass varieties from those listed in the most current University of Maryland Publication, Agronomy Memo #77, "Turfgrass Cultivar Recommendations for Maryland".
- Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provides a reliable means of consumer protection and assures a pure genetic line.
- Ideal Times of Seeding for Turf Grass Mixtures Western MD: March 15 to June 1, August 1 to October 1 (Hardness Zones: 5b, 6a) Central MD: March 1 to May 15, August 15 to October 15 (Hardness Zone: 6b) Southern MD, Eastern Shore: March 1 to May 15, August 15 to October 15 (Hardness Zones: 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 in such condition that future mowing of grasses will pose no difficulty.
 - If soil moisture is deficient, apply new seedlings 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					
Hardness Zone (from Figure B.3):			Fertilizer Rate (10-20-20)		Lime Rate
Seed Mixture (from Table B.3):					
No.	Species	Application Rate (lb./ac)	Seeding Dates	Seeding Depth	
1	TALL FESCUE	100	Mar. 1-May 15 Aug. 1-Oct. 15	1/4-1/2 in.	45 lbs. per acre (1.0 lb./1000 sf)
					90 lb./ac (2 lb./1000 sf)
					90 lb./ac (2 lb./1000 sf)
					2 tons/ac (90 lb./1000 sf)

Standard Stabilization Note					
FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:					
a.) THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND					
b.) SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.					



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



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

SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMITS. (2 WEEKS)
- NOTIFY "MISS UTILITY" AT LEAST 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION DIVISION AT 410-313-1870 AT LEAST 24 HOURS BEFORE STARTING ANY WORK. IN ADDITION, NOTIFY AHEAD PRIOR TO ANY ACTIVITY WITHIN THEIR EASEMENT.
- INSTALL STABILIZED CONSTRUCTION ENTRANCE, SUPER-SILT FENCE AND TREE PROTECTION WHERE SHOWN ON THE PLANS. CLEAR AND GRUB WHERE NECESSARY FOR ROADWAY CONSTRUCTION. (1 WEEK)
- THE MAIN PERIMETER SEDIMENT CONTROL MEASURES ARE TO BE PROVIDED BY EXISTING SEDIMENT BASINS NO. 1, 2 AND 4 (OXFORD SQUARE, PHASE ONE, F-12-026)
- INSTALL CLEAN WATER DIVERSION DIKE AND TEMPORARY CLEAN WATER STORM DRAIN PIPE FROM 1-37 TO E-3, FOLLOWING THIS TIE, EXISTING SEDIMENT BASIN NO.4 MAY BE DIVOLVED AND RE-GRADED AS SHOWN ON SHEET 10. (1 WEEK)
- INSTALL REMAINING PERIMETER SEDIMENT CONTROL MEASURE AS SHOWN AND INSERT/REPAIR EXISTING EXISTING DIKES (F-12-026) AS NECESSARY.
- STABILIZE ALL DISTURBED AREAS WITH TEMPORARY SEEDING. CONTACT THE COUNTY SEDIMENT EROSION CONTROL INSPECTOR BEFORE PROCEEDING. (2 DAYS)
- INSTALL STORM DRAIN M-4 TO M-10 UNDER EXISTING ST. MARGARETS BLVD. PAVING AS INITIAL PHASE OF CONSTRUCTION. (2 DAYS)
- GRADE SITE TO MASS GRADING CONTOURS AND GRADE ROADWAYS TO SUB BASE. (8 WEEKS)
- STABILIZE ALL DISTURBANCE WITH TEMPORARY SEEDING. RECEIVE PERMISSION TO CONTINUE FROM THE EROSION AND SEDIMENT CONTROL INSPECTOR. (2 DAYS)
- INSTALL PROPOSED STORM DRAIN INCLUDING CONNECTIONS TO EACH OF THE SWM FACILITIES, WATER LINE AND SEWER LINE CONSTRUCTION FOR SAINT MARGARETS LANE. (4 WEEKS)
- ONCE STORM DRAINS ARE INSTALLED, PLACE STANDARD INLET PROTECTION AT THE INLETS AS SHOWN IN SAINT MARGARETS BOULEVARD. WRAP ALL THE INLETS WITH SUPER-SILT FENCE EXCEPT 1-35. THE DRAINAGE AREA TO THIS INLET IS LESS THAN 0.25 AC. THE CONSTRUCTION OF THE FILTER MEDIA, UNDERDRAIN AND PLANTINGS FOR EACH BIO-RETENTION CELL SHALL BE DELAYED UNTIL THE CONTRIBUTING DRAINAGE AREA IS PERMANENTLY STABILIZED. PLACE ROADWAY SUB-BASE WITHIN SAINT MARGARETS LANE. PAVE SAINT MARGARETS LANE AND ASSOCIATED UP TO THE INTERMEDIATE SURFACE LAYER WITHIN THE P-4 PAVING SECTION. SEE R-2.01 OF THE HOWARD COUNTY DESIGN MANUAL VOLUME IV. (5 DAYS)
- NOTE: FUTURE SITE PLANS WILL PROTECT BIO-RETENTION FACILITIES WITH SILT FENCE AS WELL.
- INSTALL STORM DRAIN INLETS, WATER LINE AND SEWER LINE PER PLAN FOR BANBURY DRIVE. ONCE STORM DRAINS ARE INSTALLED, PLACE STANDARD INLET PROTECTION AT THE INLETS AS SHOWN IN SAINT MARGARETS LANE. THE CONSTRUCTION OF THE FILTER MEDIA, UNDERDRAIN AND PLANTINGS FOR EACH BIO-RETENTION CELL SHALL BE DELAYED UNTIL THE CONTRIBUTING DRAINAGE AREA IS PERMANENTLY STABILIZED. (6 WEEKS)
- NOTE: FUTURE SITE PLANS WILL PROTECT BIO-RETENTION FACILITIES WITH SILT FENCE AS WELL.
- INSTALL SUB-BASE WITHIN BANBURY DRIVE. PAVE BANBURY DRIVE UP TO THE INTERMEDIATE SURFACE LAYER WITHIN THE P-4 SECTION. SEE R-2.01 OF HOWARD COUNTY DESIGN MANUAL VOLUME IV. (1 WEEK)
- INSTALL BASE COURSE OF PAVING FOR BANBURY DRIVE AND SAINT MARGARETS LANE. (2 WEEKS)
- STABILIZE ALL DISTURBED AREAS THAT DRAIN ONTO BANBURY DRIVE WITH PERMANENT SEEDING. INSTALL THE PROPOSED MICRO BIO-RETENTION FACILITIES INCLUDING THE FILTER MEDIA AND UNDERDRAINS LOCATED OUTSIDE OF THE ROADWAY. (3 WEEKS)
- INSTALL THE PROPOSED SWM DEVICES WITHIN THE MEDIUM OF SAINT MARGARETS LANE. ONCE THIS AREA IS STABILIZED, REMOVE THE INLET PROTECTION LOCATED AROUND THE INLETS. (4 DAYS)
- NOTE: REMOVAL OF THE PERIMETER SEDIMENT CONTROL FEATURES AND BASINS SHALL BE COORDINATED WITH FUTURE SITE PLANS BEFORE THE FINAL SWM CONVEYANCES TAKE PLACE AS SHOWN ON THIS PLAN.
- PROVIDE PERMANENT SEEDING TO ANY DISTURBED AREAS ONSITE AND STABILIZE THE ENTIRE SITE. (3 DAYS)
- WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, START REMOVING ANY SEDIMENT CONTROL FEATURES NOT REQUIRED TO REMAIN FOR FUTURE SITE PLAN PHASES AND STABILIZE THE AREAS WITH PERMANENT SEEDING. (1 WEEK)
- NOTE: CONTRACTOR SHALL PUMP THE SEDIMENT TRAPS/BASINS COMPLETELY DRY THROUGH A FILTERING DEVICE TO A CLEAN WATER OUTFALL WITHIN 24 HOURS FOLLOWING ANY RAINFALL EVENT.
- HOWEVER, THE CONTRACTOR SHALL REPLACE ANY TREES IMPACTED BY THE BREACHING AND FOLDING WETLAND/STREAM RESTORATION EFFORTS.
- THE CONTRACTOR SHALL COORDINATE WITH THE INSPECTOR IN REGARDS TO THE REQUIREMENT THAT NO MORE THAN 20-ACRES OF "OPEN" GROUND SHALL BE DISTURBED AT ANY GIVEN TIME. THIS MAY BE ACCOMPLISHED BY GRADING ONE ROAD AT A TIME.
- NOTE: CONTRACTOR SHALL CLEAN AND RESTORE THE RECEIVING PONDS OF ANY AND ALL SEDIMENT, TO THEIR ORIGINALLY DESIGNED GRADE.
- NOTE: THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE ON ALL SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON AFTER EACH RAINFALL AND ON A DAILY BASIS. REMOVE SEDIMENT FROM SEDIMENT BASIN NO.'S 1 & 2 ALONG WITH STONE OUTFLET SEDIMENT TRAP #1 WHEN CLEANOUT ELEVATIONS ARE REACHED. ALL SEDIMENT MUST BE PLACED UPSTREAM OF AN APPROVED BASIN DEVICE.
- NOTE: ALL CONSTRUCTION WASTE MUST BE MANAGED IN ACCORDANCE WITH THE CONSTRUCTION WASTE MANAGEMENT PLAN.

ENGINEER'S CERTIFICATE

I hereby certify that this plan for Erosion and Sediment Control Represents an Accurate and Workable Plan Based on My Personal Knowledge of the Site and That It Was Prepared in Accordance with the Requirements of the Howard Soil Conservation District.

Signature of Engineer: *[Signature]* Date: 01/08/14

DEVELOPER'S CERTIFICATE

"I/we Certify that All Development and Construction will be Done According to This Plan of Development and Plan for Erosion and Sediment Control and That All Responsible Personnel Involved in the Construction Project will Have a Certificate of Attendance at a Department of Natural Resources Approved Training Program for the Control of Sediment and Erosion Before Beginning the Project. I also Authorize Periodic On-Site Inspections by the Howard Soil Conservation District or Their Authorized Agents, As Are Deemed Necessary."

Signature of Developer: *[Signature]* Date: 1/7/14

Approved: This Development is Approved For Erosion and Sediment Control By The Howard Soil Conservation District.

Signature: *[Signature]* Date: 1/16/14

Approved: Department of Planning And Zoning

Signature: *[Signature]* Date: 2/19/14

Signature: *[Signature]* Date: 2-7-14

Approved: Howard County Department of Public Works

Signature: *[Signature]* Date: 1-21-14

REVISIONS		
NO.	DESCRIPTION	DATE

HOWARD SOIL CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES		
1)	A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (410-313-1895).	
2)	ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THEREOF.	
3)	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, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1; b) 7 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.	
4)	ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE. IN ACCORDANCE WITH THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, FOR 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.	
5)	ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.	
6)	SITE ANALYSIS: TOTAL AREA OF SITE: 41,451 ACRES AREA DISTURBED: 17.95 ACRES AREA TO BE ROOFED OR PAVED: 1.2 ACRES AREA TO BE VEGETATIVELY STABILIZED: 18.75 ACRES TOTAL CUT: 23,672 CU.YDS. TOTAL FILL: 33,854 CU.YDS. OFFSITE WASTE/BORROW AREA LOCATION: N/A	
7)	ANY SEDIMENT CONTROL PRACTICE THAT IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.	
8)	ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.	
9)	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 MADE.	
10)	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.	
11)	ANY CHANGES OR REVISIONS TO THE SEQUENCE OF CONSTRUCTION MUST BE REVIEWED AND APPROVED BY THE PLAN APPROVAL AUTHORITY PRIOR TO PROCEEDING WITH CONSTRUCTION.	
12)	A PROJECT IS TO BE SEQUENCED SO THAT GRADING ACTIVITIES BEGIN ON ONE GRADING UNIT (MAXIMUM ACREAGE 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 IN THE PRECEDING GRADING UNIT HAS BEEN STABILIZED AND APPROVED BY THE ENFORCEMENT AUTHORITY, UNLESS OTHERWISE SPECIFIED AND APPROVED BY THE APPROVAL AUTHORITY, NO MORE THAN 30 ACRES CUMULATIVELY MAY BE DISTURBED AT A GIVEN TIME.	

SEDIMENT AND EROSION CONTROL NOTES & DETAILS

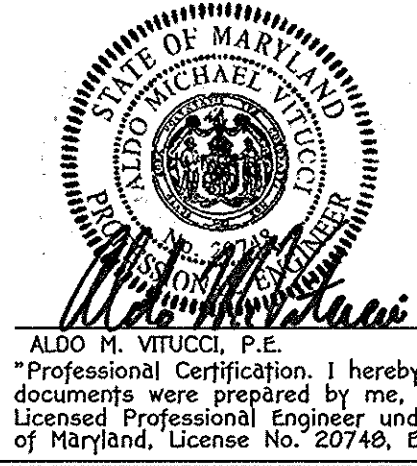
OXFORD SQUARE

"A HOWARD COUNTY GREEN NEIGHBORHOOD"

Saint Margarets Boulevard
(Sta. 6+62.30 to Sta. 12+52.60 & Banbury drive

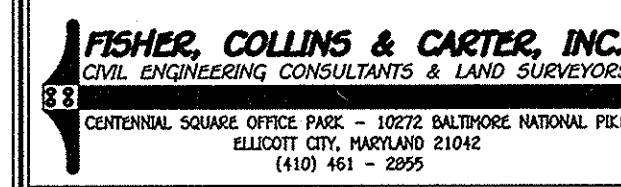
(Sta. 11+98 to Sta. 15+60.84)

Zoned: T00
Tax Map: 08, Parcel: 761, Grid: 20
First Election District - Howard County, Maryland
Date: January 6, 2014
Sheet 19 of 24



Owner
Kelllogg-COP, LLC
c/o David P. Scheffacker, Jr.,
Managing Member
2330 West Joppa Road, Suite 190
Lutherville, Maryland 21093-4614
Ph 410-296-3800

Developer
Preston + Scheffacker Properties
2330 West Joppa Road, Suite 190
Lutherville, Maryland 21093-4614
Ph 410-296-3800



ENGINEER'S CERTIFICATE

I hereby certify that this Plan for Erosion and Sediment Control Represents A Feasible and Workable Plan Based On My Personal Knowledge Of Site Conditions And That It Was Prepared In Accordance With The Requirements Of The Howard Soil Conservation District.

Signature Of Engineer: *[Signature]* Date: 01/06/14

DEVELOPER'S CERTIFICATE

"I We Certify That All Development And Construction Will Be Done According To This Plan Of Development And Plan For Erosion And Sediment Control And That All Responsible Personnel Involved In The Construction Project Will Have A Certificate Of Attendance At A Department Of Natural Resources 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 Or Their Authorized Agents As Are Deemed Necessary."

Signature Of Developer: *[Signature]* Date: 1/7/14

Approved: This Development Is Approved For Erosion And Sediment Control By The Howard Soil Conservation District.

Signature: *[Signature]* Date: 1/16/14

District: Howard Soil Conservation Dist.

Approved: Department Of Planning And Zoning

Signature: *[Signature]* Date: 2/19/14

Chief, Division Of Land Development

Signature: *[Signature]* Date: 2-7-14

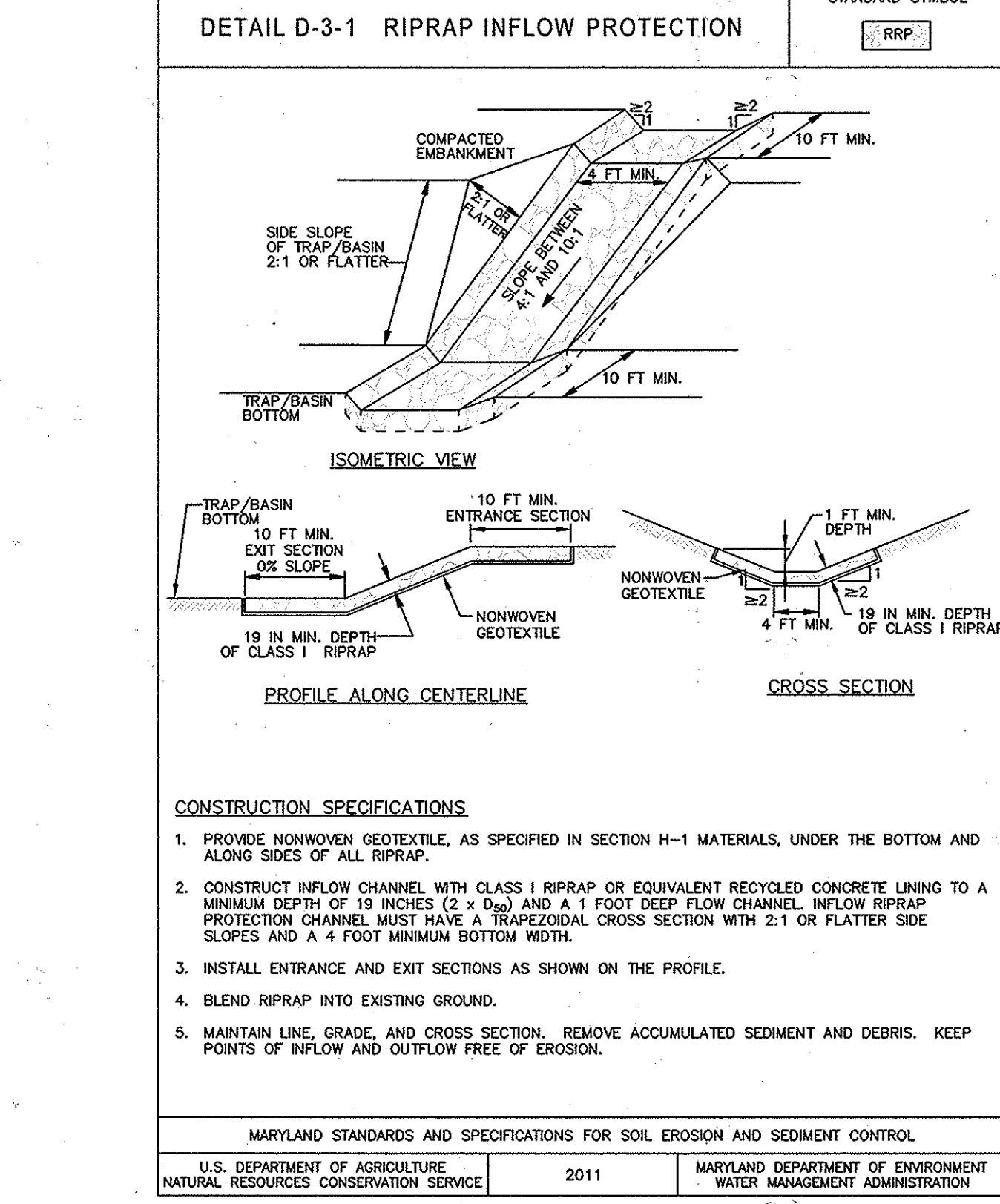
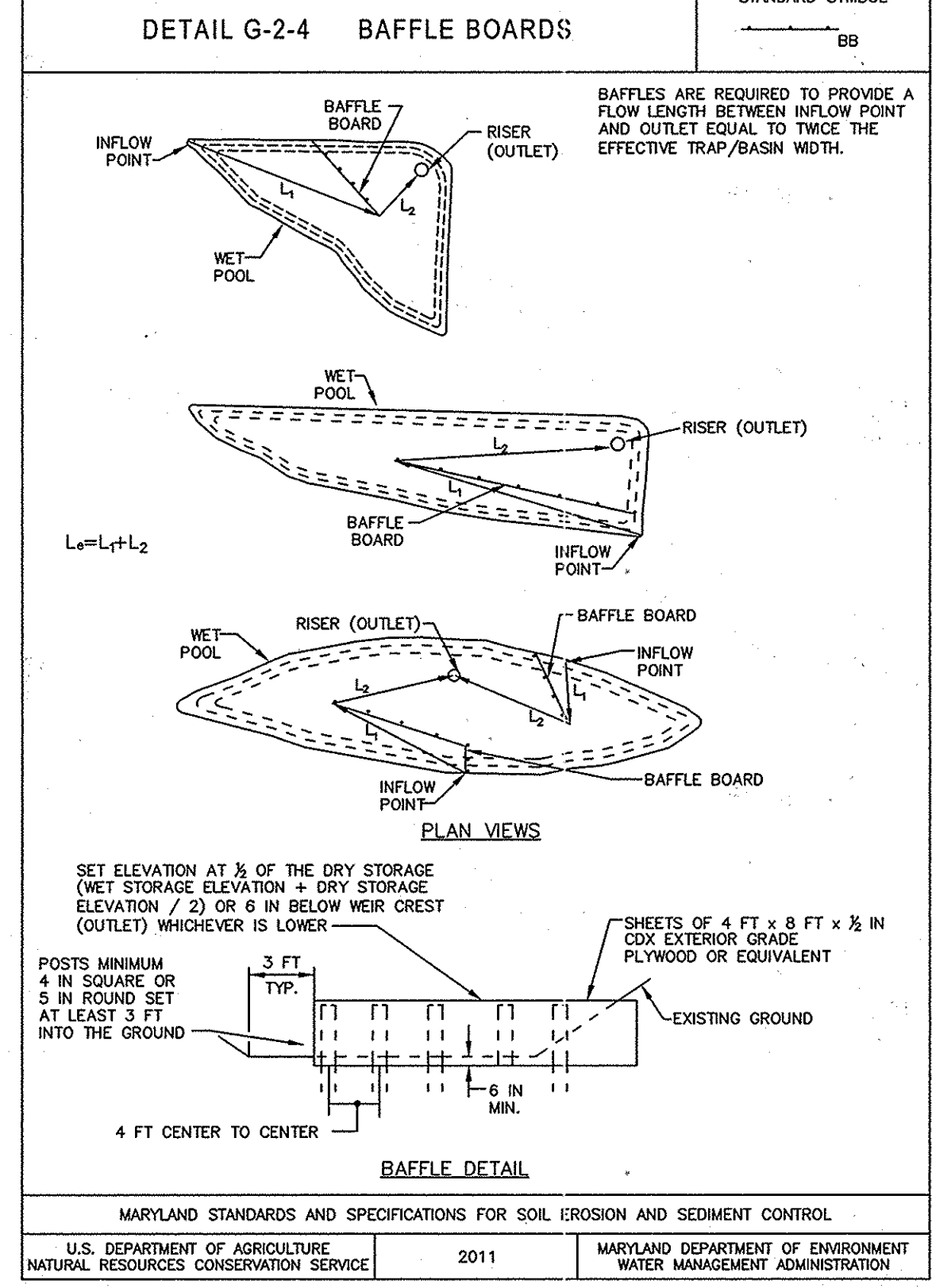
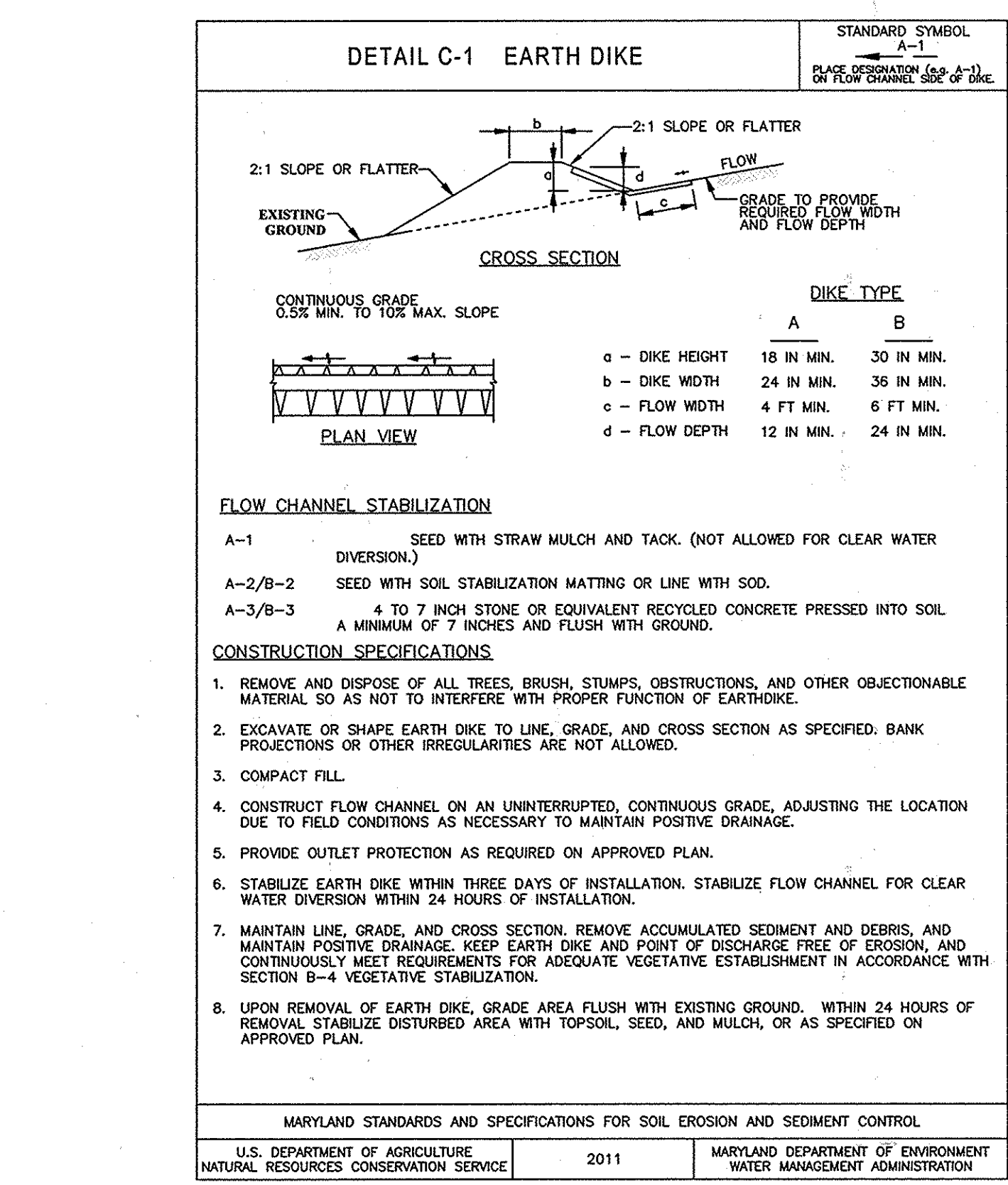
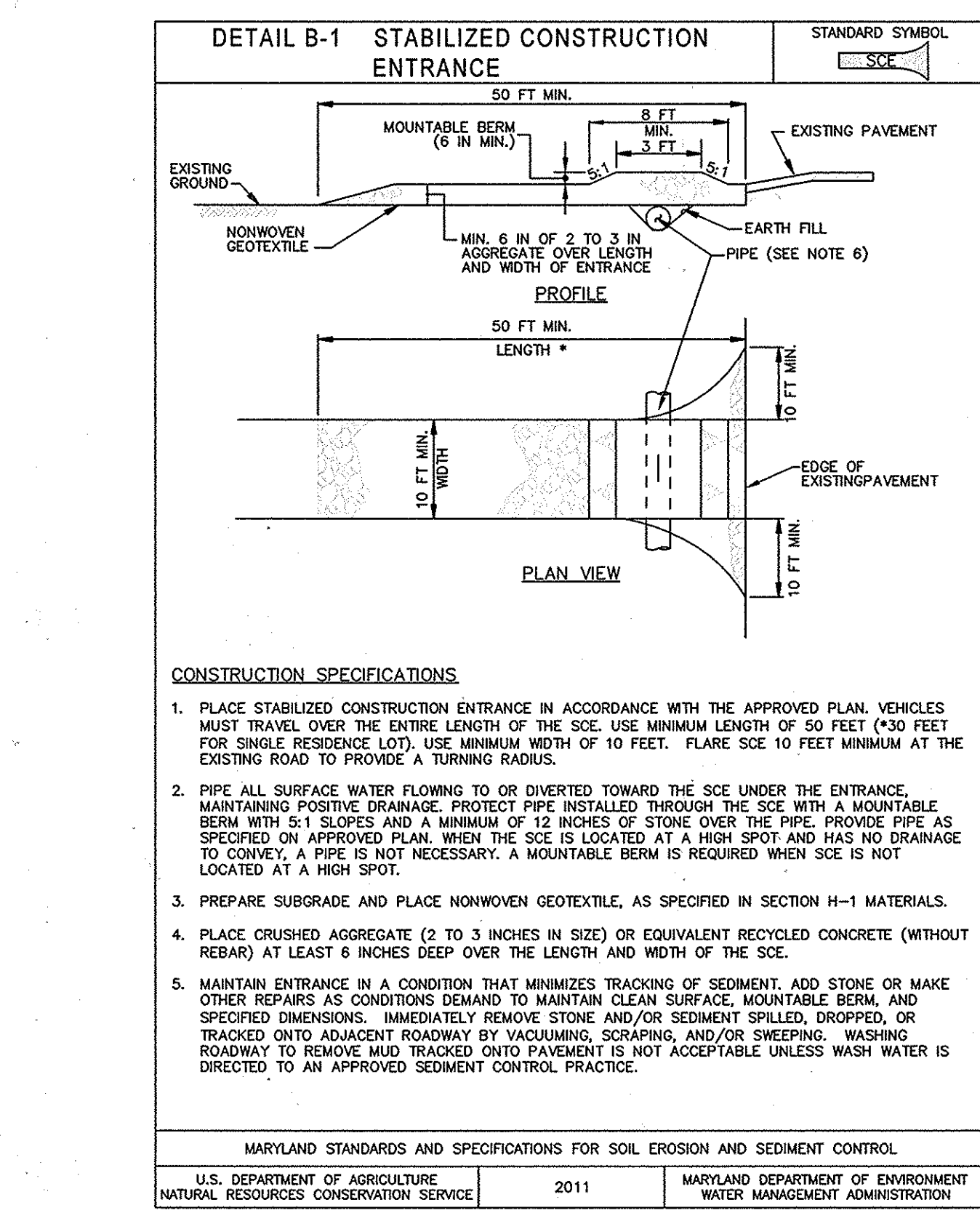
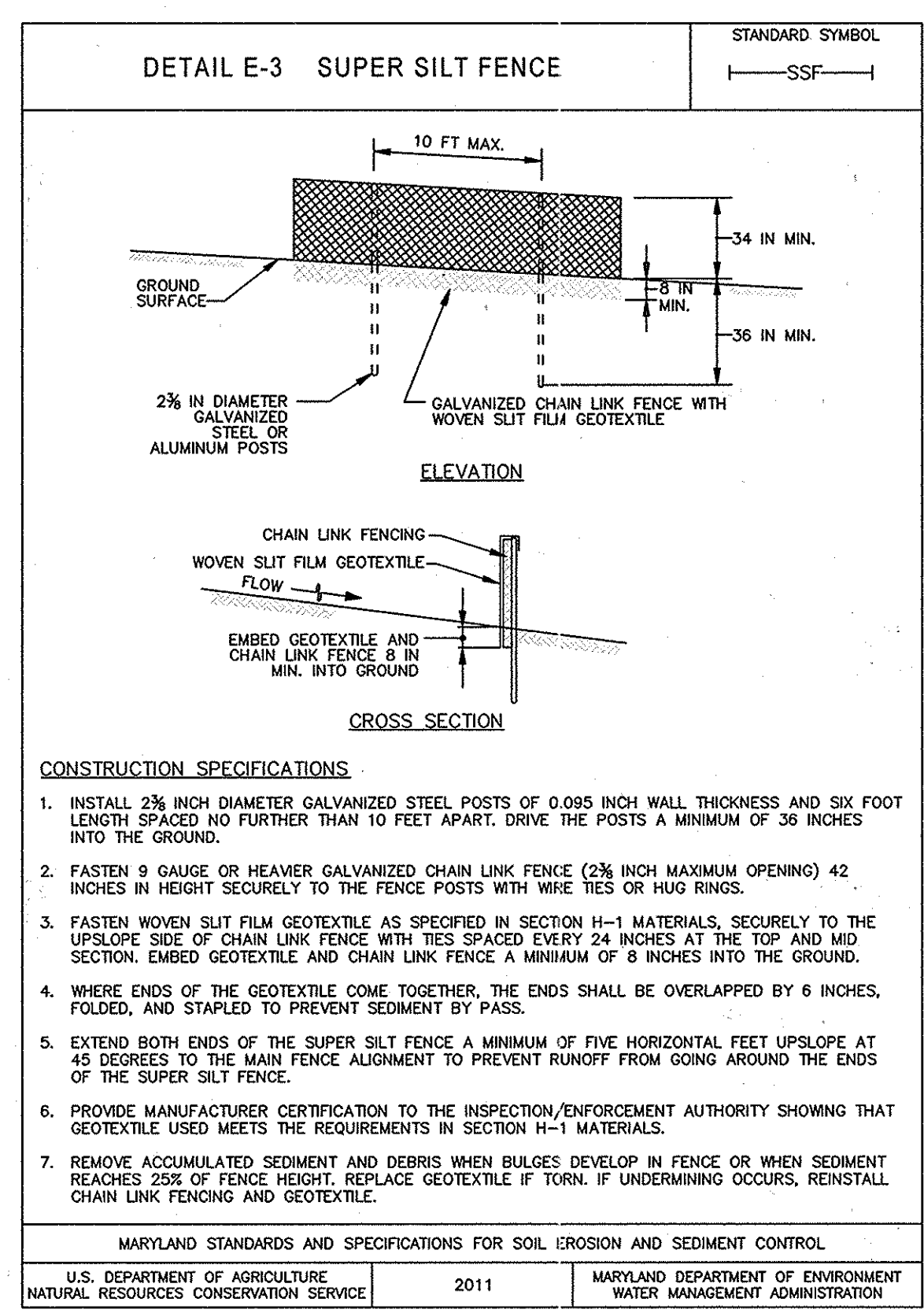
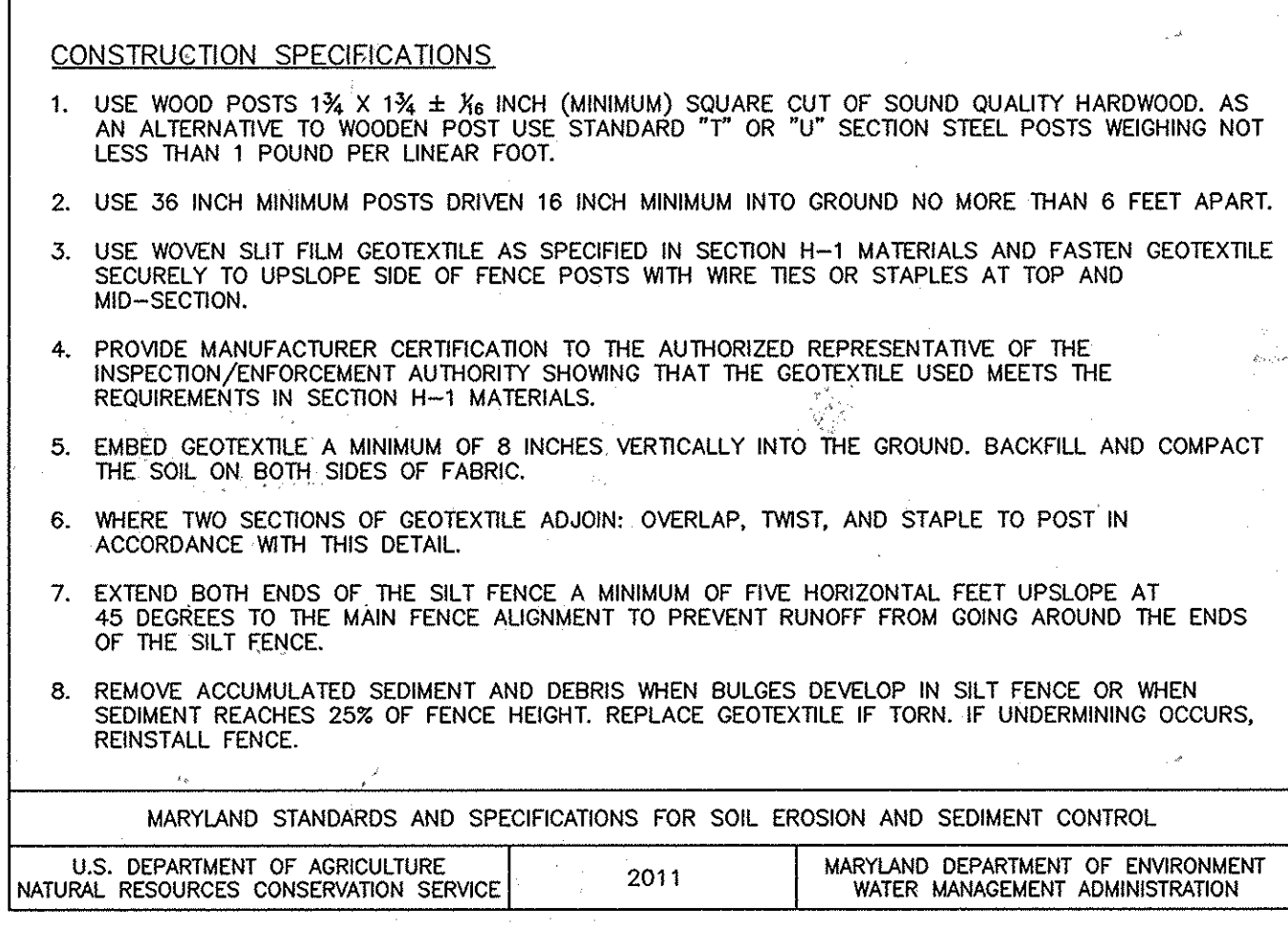
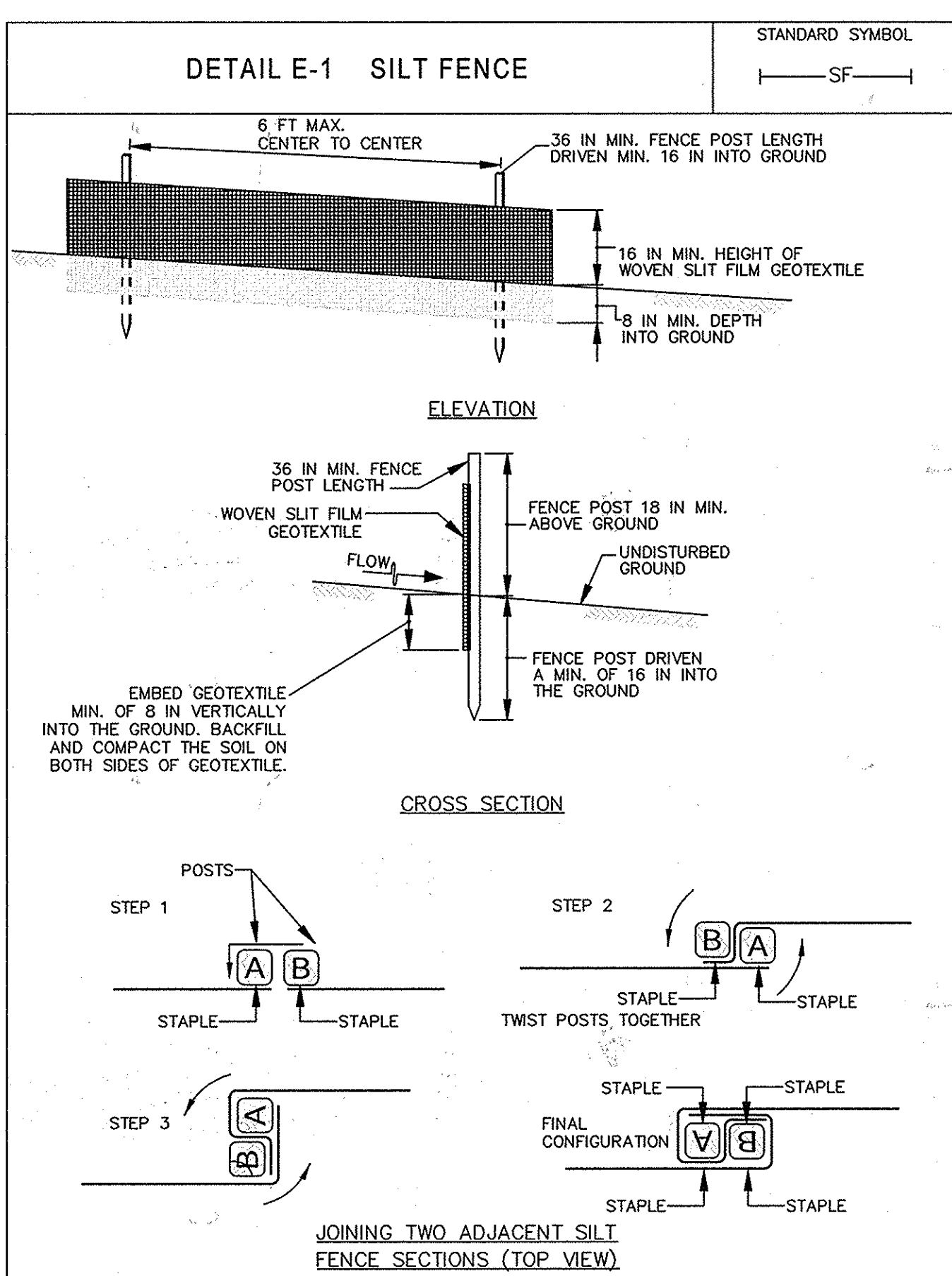
Chief, Development Engineering Division

Approved: Howard County Department Of Public Works

Signature: *[Signature]* Date: 1-21-14

Chief, Bureau Of Highways

REVISIONS	
NO.	DATE

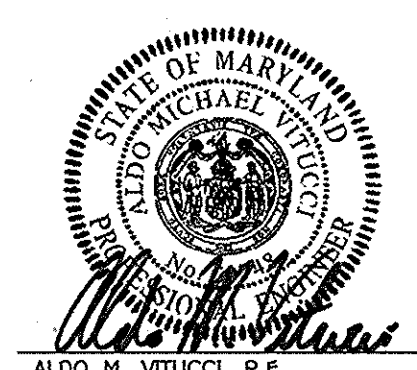


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FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTRAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PLACE
 ELKLOTT CITY, MARYLAND 21142
 (410) 461-3000

Owner
 Kellogg-CCP, LLC
 c/o David P. Scheffenaeker, Jr.,
 Managing Member
 2330 West Joppa Road, Suite 190
 Lutherville, Maryland 21093-4614
 Ph: 410-296-3800

Developer
 Preston Scheffenaeker Properties
 2330 West Joppa Road, Suite 190
 Lutherville, Maryland 21093-4614
 Ph: 410-296-3800



ALDO VITUCCI, P.E. Date: 01/06/14
 "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. 20746, Expiration Date 2-22-15."

SEDIMENT AND EROSION CONTROL
 NOTES & DETAILS
OXFORD SQUARE
 "A HOWARD COUNTY GREEN NEIGHBORHOOD"
 Saint Margarets Boulevard
 (Sta. 6+62.30 to Sta. 12+52.60 &
 Banbury drive
 (Sta. 11+98 to Sta. 15+60.84)

Zoned: TOD
 Tax Map: 38, Parcel: 761, Grid: 20
 First Election District - Howard County, Maryland
 Date: January 6, 2014
 Sheet 20 of 24

THERE IS NO AS-BUILT INFORMATION ON THIS SHEET F-13-095

Approved: Department of Public Works
W. J. R. ... 1-21-14
 Chief, Bureau of Highways Date

Approved: Department of Planning and Zoning
V. ... 2/19/14
 Chief, Division of Land Development Date

C. ... 2-7-14
 Chief, Development Engineering Division Date

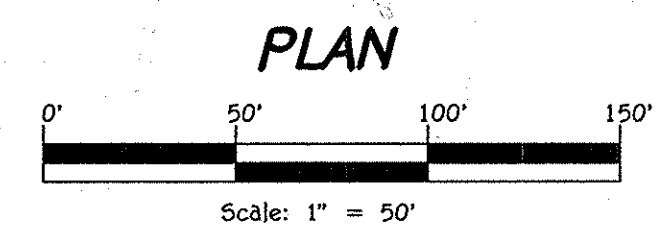
REVISIONS
 NO. DESCRIPTION DATE

MATCH LINE SEE SHEET 22



DRAINAGE AREA DATA					
STRUCTURE NO.	DRAINAGE AREA	AREA	'C'	ZONED	% IMP.
I-1	A	0.31 AC.	0.72	TOD	68
I-2	B	0.38 AC.	0.67	TOD	71
I-3	C	0.37 AC.	0.74	TOD	70
I-4	D	0.49 AC.	0.71	TOD	65
I-5	E	0.32 AC.	0.67	TOD	60
I-6	F	0.26 AC.	0.33	TOD	12
I-7	G	0.09 AC.	0.56	TOD	45
I-8	H	0.14 AC.	0.30	TOD	7
I-9	I	0.09 AC.	0.57	TOD	45
I-10	J	0.16 AC.	0.34	TOD	13
I-11	K	0.03 AC.	0.86	TOD	87
I-12	L	0.15 AC.	0.34	TOD	13
I-13	M	0.04 AC.	0.42	TOD	24
I-34	N	3.10 AC.	0.84	TOD	84
I-35	O	0.18 AC.	0.70	TOD	64
I-36	P	0.57 AC.	0.53	TOD	40
I-36A	Q	1.25 AC.	0.39	TOD	20
I-37	R	2.72 AC.	0.36	TOD	15
I-53	S	1.75 AC.	0.30	TOD	7

NOTE: SOIL TYPES ARE BASED ON GEOTECHNICAL REPORT BY ECS-MID-ATLANTIC, LLC DATED FEBRUARY 2, 2010.



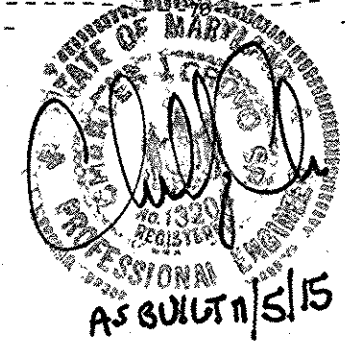
FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PARK
 ELLICOTT CITY, MARYLAND 21042
 (410) 461-2899

Owner
 Kellogg-CCP, LLC
 c/o David P. Scheffnacker, Jr.,
 Managing Member,
 2330 West Joppa Road, Suite 190
 Lutherville, Maryland 21093-4614
 Ph# 410-296-3800

Developer
 Preston - Scheffnacker Properties
 2330 West Joppa Road, Suite 190
 Lutherville, Maryland 21093-4614
 Ph# 410-296-3800



ALDO M. VITUCCI, P.E.
 DATE 2/19/14
 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. 20748, Expiration Date 2-22-15.



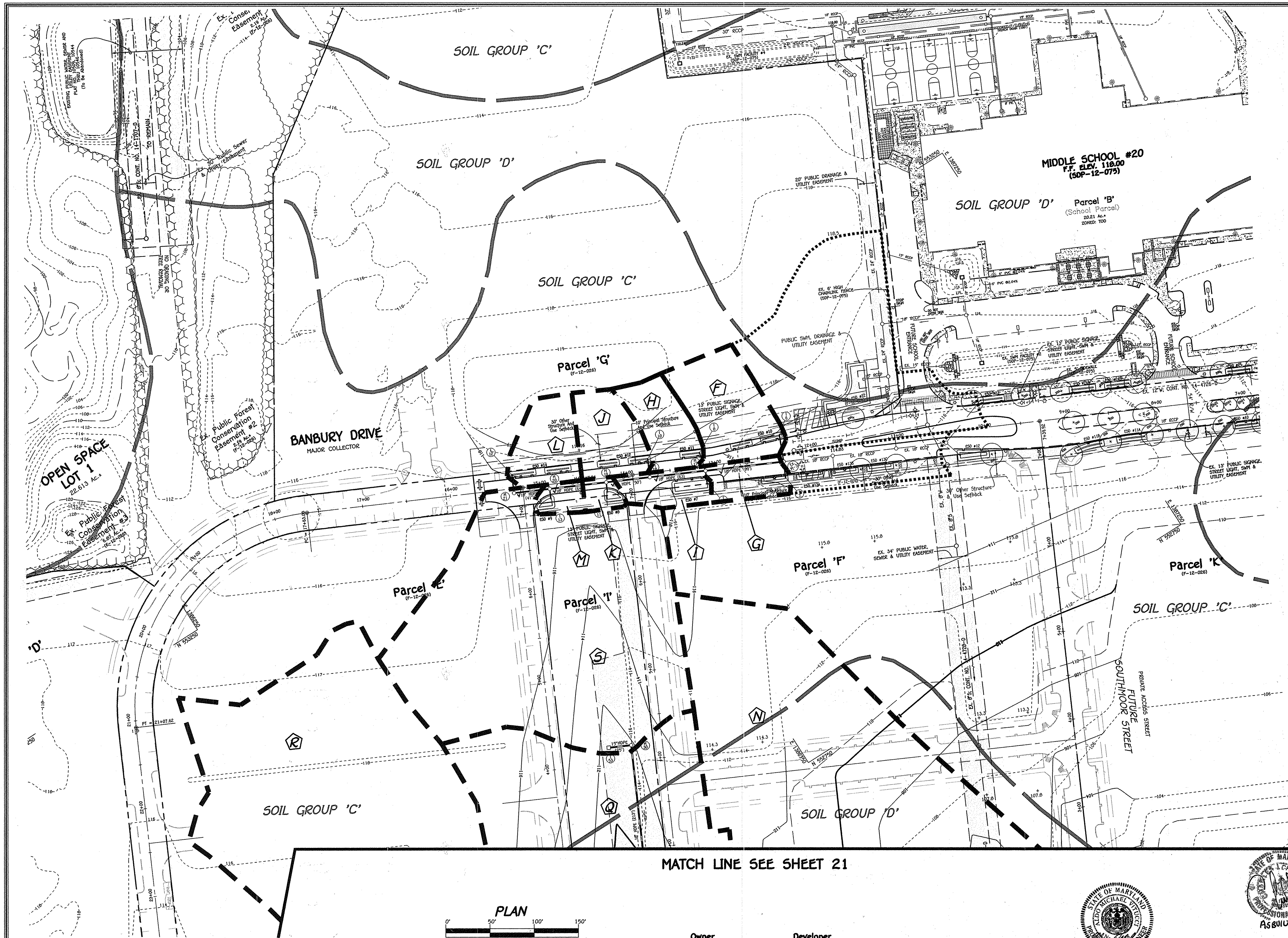
DRAINAGE AREA MAP
OXFORD SQUARE
 "A HOWARD COUNTY GREEN NEIGHBORHOOD"
 Saint Margarets Boulevard
 (Sta. 6+62.30 to Sta. 12+52.60 &
 Banbury drive
 (Sta. 11+98 to Sta. 15+60.04)

Zoned: TOD
 Tax Map: 38, Parcel: 761, Grid: 20
 First Election District - Howard County, Maryland
 Date: January 6, 2014
 Sheet 21 of 24

AS-BUILT F-13-095

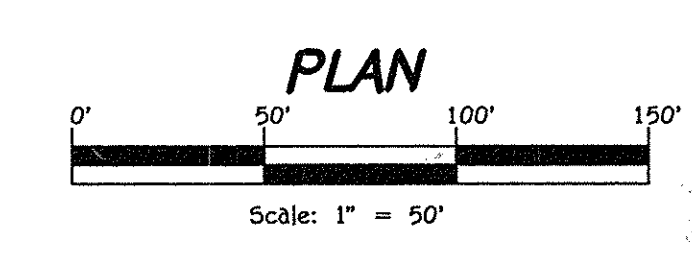
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Approved: Department of Public Works		<i>Will Ruppel</i>	1-21-14
Chief, Bureau of Highways			Date
Approved: Department of Planning and Zoning		<i>Ken Schaefer</i>	2/19/14
Chief, Division of Land Development			Date
Approved: <i>Chad Edwards</i>			2-7-14
Chief, Development Engineering Division		<i>AW</i>	Date
NO.	DESCRIPTION	DATE	



NOTE: SOIL TYPES ARE BASED ON GEOTECHNICAL REPORT BY ECS-MID-ATLANTIC, LLC DATED FEBRUARY 2, 2010.

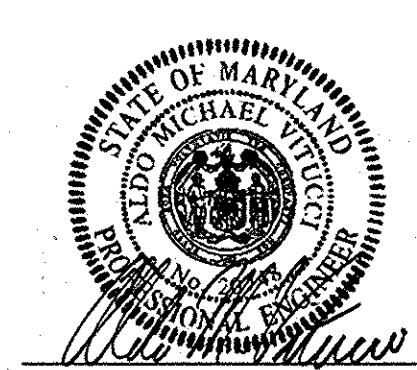
MATCH LINE SEE SHEET 21



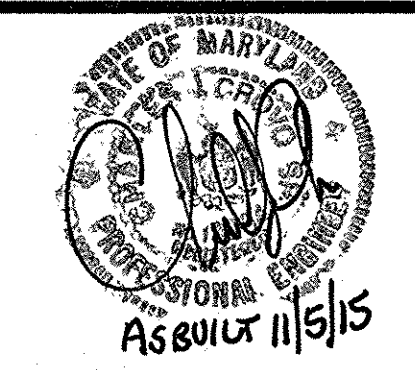
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 CENTRAL SQUARE OFFICE PARK - 10772 BALTIMORE NATIONAL PIKE
 ELKOTT CITY, MARYLAND 21042
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Developer
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 Ph: 410-296-3800



ALDO M. VITUCCI, P.E.
 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. 20740, Expiration Date 2-22-15.



DRAINAGE AREA MAP
OXFORD SQUARE
 "A HOWARD COUNTY GREEN NEIGHBORHOOD"
 Saint Margarets Boulevard
 (Sta. 6+62.30 to Sta. 12+52.60 &
 Banbury drive
 (Sta. 11+90 to Sta. 15+60.04)

Zoned: T00
 Tax Map: 38, Parcel: 761, Grid: 20
 First Election District - Howard County, Maryland
 Date: January 6, 2014
 Sheet 22 of 24

I:\2009\09014\dwg\Finals - Phase Two\09014 sheet 21-22 drainage area map.dwg, sheet 22, 1/6/2014 10:08:58 AM, 1:1

GREEN NEIGHBORHOOD COMPLIANCE CHECKLIST

Credit No.	Credit	Champion (Name, Role)	Requirement	Final Plan (F-13-95) GN Strategies	Documentation Location	Max Points	Required Points
A-1	Green Development Plan	HCM/Planners	Shows how plans meet criteria, includes checklist, natural resource inventory and energy analysis	Provide documentation	GN Plan GN Report	REQD	
A-2	Interdisciplinary Project Team	HCM/Planner	Includes U.S. Green Building Council Leadership in Energy and Environmental Design (LEED) Accredited professional, ecologist / environmental professional / landscape architect, and engineer	The design team includes a LEED AP professional, an ecologist, a civil engineer, an architect and landscape architect	GN Plan GN Report	REQD	
A-3	Third Party Certification	HCM/Planner	Certification of credits by independent LEED accredited professional	Alexander Design Studio	GN Plan GN Report	REQD	
A-4a	Innovative Design A	HCM/Planners	Green Streets	Green Streets	GN Report Final Plan (F-13-95) Sheet	1	1
A-4b	Innovative Design B	HCM/Planners	Priority Parking for Fuel Efficient Cars	Reserve 6% for Priority Parking for Fuel Efficient Cars	GN Plan Reference: SDP (SDP-12-075)	1	1
A-4c	Innovative Design C	HCM/Planners	Compact Development	Residential Development w/ exceed 20 DU / ADU	GN Plan Reference: Sketch Plan (S-14-001)	1	1
A-4d	Innovative Design D	HCM/Planners	Walkable Streets	More than 80% building frontage oriented low and public spaces; Less than 20% service and garage openings to public spaces	GN Plan Reference: Sketch Plan (S-14-001) SDP (SDP-12-075)	1	1
B-1a	Redevelopment Site	HCM/Planners	Re-use of previously developed site (minimum 25% existing impervious, w/ its siting scale for credits based on amount or % impervious)	More than 25% area previously developed (former sand and gravel operation)	GN Plan Reference: Sketch Plan (S-14-001)	4	2
B-1b	Redevelopment Site (Brown Field)	N/A	Brown field cleanup of redevelopment site	N/A	N/A	8	0
B-2	Historic Buildings	N/A	Preserve, restore or rehabilitate historic properties	N/A	N/A	4	0
B-3a	Transect Access & Amenities for Reduced Auto Dependence (Stop)	HCM/Planners	Site is served by transit stop w/ 1/2 mile (1 point) or 1/4 mile (2 points) walk from property	Private Shuttle Service w/ 2 stops (100% DU w/ 1/4 mile walking distance)	GN Plan F Plan (F-13-095) Sheets 2, 15 Reference: Sketch Plan (S-14-001)	2	2
B-3b	Transect Access & Amenities for Reduced Auto Dependence (Shelter)	HCM/Planners	Provide a county-specified transit shelter w/ 1/2 mile of property and provided pedestrian link to stop if	Provide HOV2 transit approved shelter for private shuttle service	GN Plan Future Residential SDP Reference: Sketch Plan (S-14-001)	4	4
B-4	Proximity to Community Resources	N/A	Onsite for 1/2 mile proximity to existing or proposed community resources such as schools, parks, library, post office, etc.	N/A	N/A	5	0
C-1	Diversity of Uses	HCM/Planners	1 point per different building, minimum 100 SF for each non-residential per DU. Minimum of 149,000 SF each of office, institutional, and civic use, per 1,492 DU	Provide 3 Uses: institutional, Civic, Office	GN Plan Reference: Sketch Plan (S-14-001) SDP (SDP-12-075)	3	3
C-2	Planned Service Area	HCM/Planners	Locate the project w/ in the Planned Service Area	The project is w/ in the Planned Service Area	GN Plan	5	5
C-3a	Pedestrian System (In)	HCM/Planners	Provide an off-site path system w/ 2 connections to internal or external sidewalk w/ 1/2 mile of property and provided pedestrian link to stop if	Provide a shared use path system	GN Plan Reference: Sketch Plan (S-14-001) SDP (SDP-12-075)	2	2
C-3b	Pedestrian System (Connections)	N/A	Provide an off-site path system w/ 2 connections to internal or external sidewalk w/ 1/2 mile of property and provided pedestrian link to stop if	N/A	N/A	2	0
C-3c	Pedestrian System (Amenities)	HCM/Planners	Provide at least two different pedestrian experience features	Provide pedestrian amenities at trailheads, the law in and school site	GN Plan Reference: Sketch Plan (S-14-001) SDP (SDP-12-075)	2	2
C-4	Connected On-site Street Network	HCM/Planners	Provide a grid street network	More than 70% connected streets	GN Plan GN Report Reference: Sketch Plan (S-14-001)	2	2
C-5	Parking does not exceed Required Minimum	HCM/Planners	Surface parking lots do not exceed required parking ratios (1 point), plan takes advantage of shared parking provisions parking structure provided (in deck or beneath building, does not include garages within individual units) (4 points)	Provide common parking structures (4 points)	GN Report GN Plan Reference: Sketch Plan (S-14-001)	4	4
C-6	Exceed Minimum Open Space Requirements	HCM/Planners	1 point for every 5% above required minimum open space for the TOD zone, 1 point for every 10% of non-buildable HOA parcels above 50% of the site (up to 3 points)	Provide more than 25% increase in amenity space above the required minimum amenity space (TOD zoning regulations)	GN Plan Reference: Sketch Plan (S-14-001)	5	5
C-7	Green Spaces and Amenity Areas	HCM/Planners	Open space along sidewalks and roads available for public use	Publicly accessible open space w/ be provided at the nature trail and clubhouse and pool	GN Plan Reference: Sketch Plan (S-14-001)	2	2

Credit No.	Credit	Champion (Name, Role)	Requirement	Final Plan (F-13-95) GN Strategies	Documentation Location	Max Points	Required Points
D-1	Stream Restoration or Wetland Creation or Restoration	EcoScience	Restoration of degraded or wetland creation on-site	Restoration of degraded wetlands or creation of additional wetlands (siting scale based on % of length of stream restored and % of wetland created or restored)	Provide wetland restoration for 91,000 SF and stream restoration for intermittent stream segment SF-2 (100-150 FT of channel)	16	16
D-2	Habitat Management Plan	EcoScience	Prepare and implement plan to identify, conserve and enhance natural resources and ecological communities (may include clean up of debris, removal of invasives, etc.)	Prepare and implement plan to identify, conserve and enhance natural resources and ecological communities (may include clean up of debris, removal of invasives, etc.)	Provide Habitat Management Plan	4	4
D-3	25% Slope Preservation	N/A	Protect all existing steep slopes as defined by County regulations	Protect all existing steep slopes as defined by County regulations	N/A	2	0
D-4	15% Slope Preservation	FOOCH/ HCM/Planners	Protect existing 15% slopes (protect minimum 1/2 acre, w/ siting scale based on area % protected)	Protect existing 15% slopes (protect minimum 1/2 acre, w/ siting scale based on area % protected)	GN Plan Reference: Sketch Plan (S-14-001)	4	3
D-5	Minimize Grading and Site Disturbance	FOOCH/ HCM/Planners	Minimize limit of disturbance based on at least 20% of site undisturbed (1 point), 30% (2 points), 40% (3 points) balanced and fill on site (2 points), retaining walls 3-5' (deduct 1 point) retaining walls 6-8' (deduct 2 points), walls 9' and higher (deduct 3 points), no new created steep slopes over 25% (1 point), amend soil nutrients in turf and planting areas (1 point)	Balance On and Off on entire site - 2 points Balance Retaining Walls - 0 points (no new > 25% steep slopes - 1 point Leave more than 30% of site undisturbed - 2 points)	GN Plan GN Report Reference: Sketch Plan (S-14-001)	6	5
D-6	Exceed Minimum Forest Conservation Requirements	EcoScience FOOCH/ HCM/Planners	1 point for every 10% of existing forest retained above break-even point, 1 point for every 10% of on-site forest planted in excess of forestation obligation	1 point for every 10% of existing forest retained above break-even point, 1 point for every 10% of on-site forest planted in excess of forestation obligation	Provide 5.25 acres of planting area (50% over forestation obligation)	5	5
D-7	Save Trees above 12" Minimum Caliper	N/A	1 point for protecting each 25% of all specimen trees (does not include specimen trees w/ in forest conservation area or w/ in forests that are being cleared)	N/A	N/A	4	0
D-8a	Exceed Minimum Stream Buffer Requirements	FOOCH/ HCM/Planners	75' buffer required for perennial and intermittent streams inside PSA, 100' buffer required for perennial and intermittent streams outside PSA	75' buffer required for perennial and intermittent streams inside PSA, 100' buffer required for perennial and intermittent streams outside PSA	Reference: Sketch Plan (S-14-001)	REQD	
D-8b	Exceed Minimum Stream Buffer Requirements	EcoScience FOOCH/ HCM/Planners	2 points for each additional 25' of buffer provided in excess of requirements in D-8a outside wetland buffer or floodplain	Provide 150 FT Stream Buffer for (75 FT enhanced buffer) - 6 points	Reference: Sketch Plan (S-14-001)	6	6
D-9	Exceed Minimum Wetland Buffer Requirements	EcoScience FOOCH/ HCM/Planners	2 points for each additional 25' of wetland buffer buffer outside stream buffer or floodplain	N/A	N/A	4	0
D-10	Floodplain Buffer	N/A	1 point for each 25' of buffer to floodplain outside required or provided wetland or stream buffer	N/A	N/A	2	0
E-1	Site Landscaping Requirements	N/A	1 point for each 10% increase in number of plants (must be native plants) provided above total minimum required in Landscape Manual; retain or plant trees on south and west sides of buildings and increase trees in the parking areas and along sidewalk and paths	Provide 20% increase in Landscape Requirements	GN Report F-Plan (F-13-095) Sheet 18	5	2
E-2	Native Plants	N/A	1 point for 80%, 2 points for 90%, 3 points for 100% of all plants native to the 200 miles of site	N/A	N/A	3	0
E-3	No Invasive Plants	HCM/Planners	No plants that are on CNR, USDA or Cooperative Extension Service lists of invasive plants	Will not plant invasive plants	GN Plan F Plan (F-13-095) Sheet 18 Reference: Sketch Plan (S-14-001)	REQD	
E-4	Limit Turf	HCM/Planners	Turf does not exceed 50% of unpaved site (1 point); no turf on new created steep slopes 25%+ or in densely shaded areas (1 point); non-turf areas must be planted in native vegetation	Will not plant conventional turf in densely shaded areas and on newly created >25% steep slopes	GN Plan Future SDP Reference: Sketch Plan (S-14-001)	2	1

Credit No.	Credit	Champion (Name, Role)	Requirement	Final Plan (F-13-95) GN Strategies	Documentation Location	Max Points	Required Points
F-1	Rainwater Harvesting System	Straghan	Collect and make use of water runoff from minimum 50% of roof area; provide storage system and monitoring device and maintenance / management program	Provide rainwater harvesting for school and recreational fields	GN Report Reference: Sketch Plan (S-14-001) SDP (SDP-12-075)	5	5
F-2	Water-Permeable Pavements	N/A	Use water permeable materials in 5% or more of parking areas; provide maintenance program	N/A	N/A	4	0
F-3a	Low Impact Development (LID) Stormwater Treatment	FOOCH/ HCM/Planners	Meets minimum design Manual requirements; no dry ponds allow ext	No dry ponds	GN Plan F Plan (F-13-95) Sheets 4-7 Reference: Sketch Plan (S-14-001)	REQD	
F-3b	Low Impact Development (LID) Stormwater Treatment	FOOCH/ HCM/Planners	Exceeds Design Manual requirements; maximize use of detention (esp. for parking lots), rain gardens, rain barrels, stormwater wetlands, green roof, etc.	Will provide more than 5% w/ water quality volume stored and infiltration-used On-Site	GN Plan GN Report F Plan (F-13-95) Sheets 4-7 Reference: Sketch Plan (S-14-001)	8	6
G-1	Light Pollution Reduction	FOOCH/ HCM/Planners	Shield all site lighting fixtures to reduce light and spillover below county code requirements; install sensors or timers on all exterior site lighting fixtures	N/A	N/A	4	0
G-2	Solar Orientation	N/A	Orient 50% (1 point) or 75% (2 points) or 100% (3 points) of buildings to make available for solar strategies	N/A	N/A	3	0
G-3	Infrastructure Energy Efficiency	N/A	Select high efficiency fixtures for parking lot and other site light fixtures	N/A	N/A	6	0
H-1	Environmentally Preferable Site Products	Straghan FOOCH/ HCM/Planners	Select products from a list including recycled materials (concrete, asphalt, steel, plastic, etc.), materials with recycled content, salvaged or engineered materials;	Use 25%-50% environmentally preferable materials	GN Plan GN Report	8	4
H-2	Reduce Heat Island Effect of Paving	N/A	Use light-colored or high albedo materials and/or porous paving w/ a minimum Solar Reflectance Index of 0.6 or over for at least 30% of the site hardscape	N/A	N/A	2	0
H-3	Site Construction Waste Management	Straghan	Develop and implement a construction waste management plan to direct, reuse, recycle or reduce the amount of site material sent to the landfill by 25% (2 points) or 50% (3 points) or 75% (4 points)	Direct 75% of more site construction waste	GN Report	4	4
H-4	Regionally Provided Materials	Straghan FOOCH/ HCM/Planners	20% of common and public infrastructure materials from within 200 miles	Use regionally produced materials for 20% of total site materials	GN Report	3	3
I-1	HCA Documents	Straghan	Include information about green site features and maintenance requirements in HCA documents	Provide HCA documents	Under review w/ in SDP-13-068	REQD	
I-2	Maintenance Manual for Owner/HOA / Manager	Straghan	Provide a manual that includes information on how to maintain the green features of the site, including parking materials, landscaping and stormwater management and encourages additional green activities such as recycling, gardening, etc.	Provide manual	Under review w/ in SDP-13-068	REQD	
I-3	Public Awareness of Sustainable Community	Straghan/HCM	Develop a program to advertise the environmental benefits of the community	Implement public awareness strategy	Under review w/ in SDP-13-068	REQD	
TOTAL GREEN NEIGHBORHOOD SITE POINTS						167	101
Number of points required to obtain Green Neighborhood Allocations						90	
Third Party Certification							
By affixing my signature below, the undersigned does hereby declare and affirm to How and County that the targeted Green Neighborhood Site credits and point total as specified in this Green Neighborhood Site Compliance Checklist, are reasonable and achievable.							
Signature: <u>David P. Scheffnacker</u>						Date: <u>1-9-14</u>	
Title: <u>President</u>						Organization: <u>Alexander Design Studio</u>	
Submission (mark "X" where applicable): <input type="checkbox"/> Final Plan (F-13-095)							

APPROVED
HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
GREEN NEIGHBORHOOD PLAN FOR SITES

Beth Brown 2-19-14
CHIEF, RESOURCE CONSERVATION DIVISION DATE

LEED ACCREDITED PROFESSIONAL CERTIFICATE
GREEN NEIGHBORHOOD PLAN FOR SITES

I hereby certify that this plan represents a practical and workable plan for achieving the targeted credits and point total shown on the Green Neighborhood for Sites Compliance Checklist.

Matthew J. Fitzsimmons 10007912 1/6/14
MATTHEW J. FITZSIMMONS, LEED AP LEED ACCREDITATION NUMBER DATE

APPROVED - DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED - DEPARTMENT OF PLANNING AND ZONING

Kevin Shanley 2/19/14
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Chad Edwards 2-10-14
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTRAL SQUARE OFFICE, SUITE 1002 BALTIMORE NATIONAL PLACE
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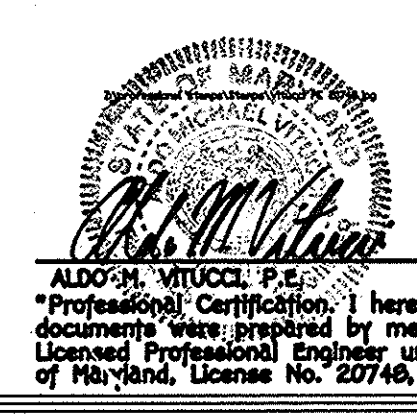
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Owner

Kellogg-COP, LLC
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2330 West Joppa Road, Suite 190
Lutherville, Maryland 21093-4614
Ph: 410-296-3800

Developer

Preston - Scheffnacker Properties
2330 West Joppa Road, Suite 190
Lutherville, Maryland 21093-4614
Ph: 410-296-3800



1/7/14 DATE

OXFORD SQUARE
"A HOWARD COUNTY GREEN NEIGHBORHOOD"
Saint Margarets Boulevard
(Sta. 6+62.30 to Sta. 12+52.60 &
Banbury drive
(Sta. 11+98 to Sta. 15+60.84)

Zoned: TOD
Tax Map: 38, Parcel: 761, Grid: 20
First Election District: Howard County, Maryland
Date: November 28, 2010
Sheet 23 of 24

THERE IS NO AD-BUILT INFORMATION ON THIS SHEET F-13-095

GREEN NEIGHBORHOOD NOTES:

- A-2 THE DESIGN AND DEVELOPMENT TEAM INCLUDES A LEED AP (MATTHEW FITZSIMMONS-HORD COPLAN MACHT), ENVIRONMENTAL PROFESSIONAL (JOHN CANOLES-ECO-SCIENCE PROFESSIONALS, INC.), LANDSCAPE ARCHITECT (JOSH KILRAIN-HORD COPLAN MACHT) AND AN ENGINEER (ALDO VITUCCI-FISHER, COLLINS & CARTER INC.)
- A-3 THE THIRD PARTY CERTIFICATION IS PROVIDED BY CHARLES ALEXANDER, LEED-AP OF ALEXANDER DESIGN STUDIOS.
- B-1a THE 111.1 ACRES GREEN NEIGHBORHOOD BOUNDARY AREA CONSISTS OF 28.4 ACRES OF PREVIOUSLY DEVELOPED LAND (25.6% OF THE OXFORD SQUARE DEVELOPMENT).
- B-3a OXFORD SQUARE WILL PROVIDE TWO TRANSIT STOPS FOR THE PROPOSED PRIVATE SHUTTLE SERVICE CONNECTING OXFORD SQUARE TO THE DORSEY MARC COMMUTER RAIL STATION. THE STOPS WILL BE WITHIN 1/4 WALKING DISTANCE TO ALL DWELLING UNITS.
- B-3b OXFORD SQUARE WILL PROVIDE ONE SHELTER AT ONE OF THE PRIVATE SHUTTLE STOPS. THE SHELTER WILL COMPLY WITH COUNTY -APPROVED CRITERIA INCLUDING BENCHES AND LIGHTING.
- C-1 OXFORD SQUARE WILL PROVIDE THREE DIVERSE USES OTHER THAN RESIDENTIAL: INSTITUTIONAL (MIDDLE SCHOOL BUILDING AND OUTDOOR CLASSROOM SPACE, ELEMENTARY SCHOOL) AND CIVIC (SCHOOL'S RECREATIONAL PLAYING FIELDS AND SHARED-USE PATH) AND OFFICE.
- C-2 OXFORD SQUARE IS LOCATED WITHIN THE EXISTING PLANNED WATER AND SEWER SERVICE AREA.
- C-3c OXFORD SQUARE WILL PROVIDE A MINIMUM OF TWO PEDESTRIAN SYSTEM AMENITY EXPERIENCES: 1) SHARED USE PATH AND NATURE TRAIL (TRAIL SIGNS AND MARKERS, BENCHES, LITTER RECEPTACLES, INFORMATIONAL SIGNS, BIKE RACKS), 2) THE LAWN (BENCHES, EXTERIOR LIGHTING, SHADE TREES, INFORMATIONAL SIGNS), 3) RESIDENTIAL COURTYARDS AND MEWS (BENCHES), AND 4) SCHOOL SITES (PLAYING FIELDS, BENCHES, BIKE RACKS).
- D-8b OXFORD SQUARE WILL PROVIDE A MINIMUM 75 FT ENHANCED STREAM BUFFER.
- E-3 OXFORD SQUARE WILL NOT PLANT INVASIVE PLANTS.
- E-4 OXFORD SQUARE WILL NOT PLANT TURF IN DENSELY SHADED AREAS.
- F-3b OXFORD SQUARE WILL PROVIDE AT LEAST 51% WATER QUALITY VOLUME STORED AND INFILTRATED/RE-USED ON-SITE.

GREEN NEIGHBORHOOD CALCULATIONS & TABLES:

A-4b Priority Parking for Low-Emitting and Fuel Efficient Vehicles

Total Number of Off-Street Parking Spaces:	3,459 Spaces
Total Number of Proposed Preferred Parking Spaces:	173 Spaces
Percent of Preferred Parking Spaces:	5.0%

A-4c Compact Development

Total Dwelling Units:	1,492 DU
Residential Land Area:	41.0 AC
Residential Density:	36.39 DU/AC

A-4d Walkable Streets

Length of Buildings Frontage Oriented Towards the Public Spaces:	10,135 FT
Total Length of Building Frontage:	11,426 FT
% of Building Frontage Oriented Towards the Public Spaces:	88.7%

Length of Building Frontage with Service or Garage Openings:	754 FT
Total Length of Building Frontage Oriented Towards Public Spaces (Including Service and Garage Openings):	10,889 FT
% of Building Frontage with Service or Garage Openings:	6.9%

B-1a Redevelopment Site

Gross Site Area:	111.1 Acres
Area of Existing Development (Impervious Area):	28.4 Acres
Percent of Previously Developed:	25.6%

B-3a Transit Access & Amenities for Reduced Auto Dependence (Stop)

Residential Buildings within 1/4 Mile	Total Number of Qualifying Units	Percent of All Units
All Buildings:	1,492 DU	100%

C-1 Diversity of Uses

Residential Uses	Number of Units	Percent of Total Units
Apartments and townhouses	1,492 DU	100%
Nonresidential Uses		
Office	154,000 SF	103 SF/DU
Institutional:		
Middle School ¹	95,747 SF	
Middle School Outdoor Classroom Space ¹	2,500 SF	
Elementary School	101,014 SF	
Institutional Subtotal:	199,261 SF	134 SF/DU
Civic:		
Recreational Playing Fields (School Site) ¹	236,139 SF	
Northern Loop Shared-Use Path (8 FT wide) ² and Trail heads ²	19,504 SF	
Southern Loop Shared-Use Path (8 FT wide) and Trail heads ²	9,240 SF	
Civic Subtotal:	264,883 SF	178 SF/DU

¹ Revised per the approved Middle School SDP (SDP-12-075)
² 12,801 SF of Shared-Use Path will be constructed on Middle School site (SDP-12-075)

C-3a Pedestrian System (Paths and Trails)

Northern Shared Use Path:	Width of Path: 8 FT Length: 2,438 FT (0.46 Miles)
Northern Shared Use Path:	Width of Path: 8 FT Length: 1,155 FT (0.22 Miles)
Mulch Nature Trail:	Width of Path: 5 FT Length: 595 FT

C-4 Street Connections

Street Name / ID	Street Length	Qualifying Street
Saint Margarets Boulevard	1,684 FT	Yes
Banbury Drive	2,580 FT	Yes
Road A	230 FT	No
Road B	514 FT	No
Road C	228 FT	No
Road D	740 FT	Yes
Road E (North and South)	1,240 FT	Yes
Road F	1,016 FT	Partial
Road G	228 FT	No
Road H	228 FT	No
Road I	465 FT	Yes
Road J	245 FT	No

Summary	
Total Street Length:	9,607 FT
Total Connected Street Length:	7,993 FT
Percent Connected Streets:	77.0%

Note: Final Plan (P-13-093) contributes 4'-192 linear feet of Saint Margarets Boulevard and 4'-362 linear feet of Banbury Drive to the complete build out per Sketch Plan (S-14-001).
 Street Names are based on the submitted Sketch Plan (S-14-001).

C-5 Parking Does Not Exceed Required Minimum

	Complete Build Out	F-Plan
Number of Surface Parking Required:	3,647 spaces	0 spaces
Number of Spaces Provided:	4,592 spaces	33 spaces
Number of Shared Spaces (Public On-Street):	99 spaces	33 spaces
Number of Shared Spaces (Private On-Street):	170 spaces	0 spaces
Number of Spaces within a Common Parking Structure:	2,759 spaces	0 spaces
Number of Spaces within Private/Integral Garages:	470 spaces	0 spaces
Number of Spaces in Surface Parking Lots:	700 spaces	0 spaces
Number of Driveway Spaces:	394 spaces	0 spaces

Note: Complete Build Out Calculations are based on the submitted Sketch Plan (S-14-001).

C-6 Exceed Minimum Open Space

Net Acreage:	101.6 AC
Required Amenity Space (TOD: 10% of Net Acreage):	10.2 AC
Provided Amenity Space:	15.7 AC
Percent Increase above the Minimum Required:	53.8 %

C-7 Green Spaces and Amenity Areas

Parcel	Road Frontage	Amenity Type	Amenity Area
Open Space 1: The Nature Trail (Future SDP)	100 FT	Nature Trail, Benches, Trail Signage, Education	31,266 SF (0.72 AC)
Open Space 2: Pool House and Pool (SDP-13-068)	4'-138 FT (length along Private Road 'B')	Pool house, Pool, Fitness Room, and Warning Kitchen	11,282 SF (0.26 AC)

D-4 15% Slope Preservation

Total Area of Slopes 15-24.9%:	504,072 SF
Area of Undisturbed Slopes 15-24.9%:	289,178 SF
Percent of Undisturbed Slopes:	57.4 %

Note: The area of undisturbed slopes is the summation of slopes impacted by the greatest extent of LODs accumulated from the entire development.

Complete Build Out includes Approved Sketch Plan (S-14-001), Approved Final Plan (F-13-026), Approved Middle School SDP (SDP-12-075) and future environmental restoration work.

F-Plan submission land area is located within the Complete Build Out LOD therefore there are no impacts to undisturbed areas.

APPROVED - DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF HIGHWAYS
 APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT
 APPROVED: DEPARTMENT OF PLANNING AND ZONING
 CHIEF, RESOURCE CONSERVATION DIVISION
 DATE: 2/19/14
 DATE: 2-10-14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 GREEN NEIGHBORHOOD PLAN FOR SITES
 DATE: 2-19-14
 LEED ACCREDITED PROFESSIONAL CERTIFICATE
 GREEN NEIGHBORHOOD PLAN FOR SITES
 I hereby certify that this plan represents a practical and workable plan for achieving the targeted credits and point total shown on the Green Neighborhood for Sites Compliance Checklist.
 DATE: 1/6/14
 LEED ACCREDITATION NUMBER: 10007912

D-5 Minimize Grading and Site Disturbance

	Complete Build Out	F-Plan ¹
Gross Area of Site (GN Boundary)	111.1 AC	- AC
Existing Impervious Cover	28.4 AC	- AC
Area of Site to Remain Undisturbed	82.7 AC	- AC
Percent of Site to Remain Undisturbed:	74.2 %	- %
Ratio of Cut to Fill:	1.13 Ratio	1.27 Ratio
Retaining Wall:	0 FT	0 FT

Note: Complete Build Out Calculations are based on the aggregate greatest extent of LOD's from the submitted Sketch Plan (S-14-001), Approved Final Plan (F-13-026) and Approved Middle School SDP (SDP-12-075).

¹ F-Plan submission land area is located within the Complete Build Out LOD therefore there are no impacts to undisturbed areas.

D-6 Exceed Minimum Forest Conservation Requirements

Afforestation Obligation:	3.50 AC
Afforestation Provided in Excess of Obligation:	1.75 AC
Percentage of Provided in Excess of Obligation:	50.00 %

D-8b Exceed Minimum Stream Buffer Requirements

Total Stream Buffer Width:	150 FT
Width of Buffer Exceeding Requirements:	75 FT
Total Length of Stream Buffer:	1,984.2 FT
Length of Stream Buffer Outside Other Buffers:	1,352.3 FT
Percent of Stream Buffer Outside Other Buffers:	68.2 %

E-1 Landscaping

Plants Required	Shade Trees	Evergreen	Shrubs	Total	Percent
Number of Plants Required by Landscape Manual	48	0	0	48	
Number Excess Plants Provided for GN Credit	10	0	0	10	20.8
Landscape Manual and GN Requirements	58	0	0	58	

Plants Provided

	Shade Trees	Evergreen	Evergreen (Substitute)	Other Trees (Substitute)	Shrubs (Substitute)	Shrub (Substitute)	Total
Number of Plants Provided to Meet Landscape Manual Requirements	48	0	0	0	0	0	48
Number of Plants Provided to Meet GN Credits	9	0	0	0	0	0	9
Total Number of Plants Provided	57	0	0	0	0	0	57

Note: 1. Excess Native Shade Trees (bonded): (9 BNH)
 2. This plan requires 1 Excess Native Shade Tree to satisfy the 20% Goal. This Excess Native Shade Tree will be provided on another Plan Submission.