

GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- ALL TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MdMUTCD).
- STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURES AND POLES SHALL BE IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL, VOLUME III (2006), SECTION 5.5.A. A MINIMUM OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- THE TOPOGRAPHY SHOWN HEREON IS BASED ON AN AERIAL TOPOGRAPHIC SURVEY PREPARED BY POTOMAC AERIAL SERVICES, INC. DATED APRIL, 2005.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL, WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 31EA AND 31EB WERE USED FOR THIS PROJECT.
- WATER AND SEWER FOR THIS PROJECT WILL BE PUBLIC. WATER WILL BE PROVIDED THROUGH CONTRACT NO. 14-4095-D, AND 208-W. SEWER WILL BE CONNECTED TO CONTRACT NO. 10-1214-D.
- STORM WATER MANAGEMENT TO BE PROVIDED FOR THIS DEVELOPMENT BY ENVIRONMENTAL SITE DESIGN UTILIZING MICRO BIO RETENTION, RAIN BARRELS, PERVIOUS DRIVEWAYS AND SIDEWALKS. COUNTRY WILL MAINTAIN INLET STRUCTURES WITHIN EACH MICRO BIO RETENTION, AND HOA SHALL MAINTAIN STREET TREES, PERFORATED UNDER DRAINS, FEEDERS, SWALES, AND DRIVEWAY CULVERTS WITHIN THE EASEMENT. THE MICRO BIO RETENTION FACILITIES WILL BE JOINTLY MAINTAINED BY HOWARD COUNTY AND THE HOA. PERVIOUS DRIVEWAYS AND RAIN BARRELS WILL BE PRIVATELY MAINTAINED BY THE INDIVIDUAL HOMEOWNERS.
- EXISTING UTILITIES ARE BASED ON HOWARD COUNTY RECORDS AND FIELD SURVEY.
- THERE IS NO 100-YR FLOODPLAIN WITHIN THE LIMITS OF THIS PROJECT.
- STREAMS AND WETLANDS SHOWN ON-SITE ARE BASED ON A FIELD INVESTIGATION PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED FEBRUARY 2, 2009. THERE ARE NO PROPOSED DISTURBANCE TO STREAMS, WETLANDS OR ASSOCIATED BUFFERS.
- A TRAFFIC STUDY IS NOT REQUIRED FOR THIS PROJECT SINCE THERE IS NOT A STUDY INTERSECTION WITHIN 1-1/2 MILES OF THE SITE.
- THE PROJECT BOUNDARY IS BASED ON A BOUNDARY SURVEY PREPARED BY ROBERT H. VOGEL ENGINEERING, INC DATED DECEMBER OF 2005.
- FOREST STAND DELINEATION PLAN WAS PREPARED BY ROBERT H. VOGEL ENGINEERING INC AND MCCARTHY AND ASSOCIATES, DATED NOVEMBER 3, 2008.
- FOREST CONSERVATION PLAN PREPARED BY ROBERT H. VOGEL ENGINEERING, INC.
- TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO CEMETERIES OR GRAVE SITES LOCATED ON THE SUBJECT PROPERTY.
- THIS PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS. DEVELOPMENT OR CONSTRUCTION OF THESE LOTS MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION, OR BUILDING AND GRADING PERMITS.
- THE SUBDIVISION PLAN IS SUBJECT TO THE FOLLOWING DPZ FILES S-06-006, WP-09-092, WP-10-002 AND SP-10-001.
- THE SUBJECT PROPERTY IS ZONED "R-20" AND "R-ED" IN ACCORDANCE WITH THE 2/2/04 COMPREHENSIVE ZONING PLAN AND THE COMP. LITE ZONING REGULATIONS EFFECTIVE ON 7/28/06.
- TOTAL OF 64 LOTS AND OPEN SPACE LOTS ARE PROPOSED UNDER THIS PLAN. THE LOTS HAVE BEEN CREATED BY A SUBDIVISION OF PARCEL 115.
- OPEN SPACE LOTS 65, 66, 67, 68 AND 69 TO BE OWNED AND MAINTAINED BY THE HOA. THE GENERAL PURPOSE OF THE OPEN SPACE IS RESERVED FOR COMMON USE OF THE RESIDENTS. SPECIFICALLY, LOTS 65 AND 69 ARE FOR COMMON USE, LOT 67 IS FOR SWM PURPOSES AND COMMON USE, LOT 68 IS FOR A PORTION OF SWM AND FOR ENVIRONMENTAL FEATURES, AND LOT 68 IS FOR RECREATIONAL OPEN SPACE AND AVAILABLE FOR GENERAL PUBLIC USE.
- ALL DRIVEWAY ENTRANCES SHALL UTILIZE HOWARD COUNTY STANDARD DETAIL NO. R-6.03 MODIFIED FOR SIDEWALK ADJACENT TO CURB.
- REFUSE COLLECTION, SNOW REMOVAL, AND MAINTENANCE FOR LOTS 23 THROUGH 28, AND 33 THROUGH 36 SHALL BE PROVIDED AT THE JUNCTION OF PRIVATE USE-IN-COMMON ACCESS EASEMENT AND THE RIGHT-OF-WAY OF PROPOSED ROAD.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE, LANDSCAPE MANUAL AND GREEN NEIGHBORHOOD REQUIREMENTS WITH 151 SHADE TREES, 62 EVERGREEN TREES AND 10 SHRUBS. PROVIDED WITH LANDSCAPE SURETY IN THE AMOUNT OF \$54,000.00 TO BE PROVIDED WITH THE DPW DEVELOPER'S AGREEMENT. (THE UNIT PRICES TO BE USED FOR ESTABLISHING REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE ADOPTED COUNTY FEE SCHEDULE WHICH IS \$300.00 PER SHADE TREE, \$150.00 PER EVERGREEN/ORNAMENTAL TREE, AND \$30.00 PER SHRUBS).
- ILCHESTER ROAD AND BEECHWOOD ROAD ARE SCENIC ROADS. A TYPE B LANDSCAPE BUFFER WILL BE PROVIDED ALONG BOTH ROAD FRONTS EXCEPT WHERE A FOREST CONSERVATION EASEMENT IS TO BE ESTABLISHED.
- STREET PROTECTION FENCING WILL BE PROVIDED AT THE LIMITS OF DISTURBANCE WHERE GRADING IS ADJACENT TO ENVIRONMENTAL AREAS AND RETENTION FOREST CONSERVATION AREAS.
- TREE TREES ARE PROVIDED FOR THIS SUBDIVISION IN ACCORDANCE WITH SECTION 16.124(e)(1) OF THE SUBDIVISION REGULATIONS AND THE LANDSCAPE MANUAL. A FINANCIAL SURETY IN THE AMOUNT OF \$37,500.00 TO BE POSTED AS PART OF THE DEVELOPER AGREEMENT FOR THE REQUIRED 125 STREET TREES. THE STREET TREES WITHIN THE 18' EASEMENT SHALL BE OWNED AND MAINTAINED BY LOCUST CHAPEL HOMEOWNER ASSOCIATION.
- THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.120 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION MANUAL. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT. HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
- TOTAL FOREST CONSERVATION OBLIGATION IS 9.40 AC. TO BE FULFILLED BY RETENTION OF 13.24 ACRES. TOTAL FINANCIAL SURETY OBLIGATION IS \$115,347.00 (\$76,734.40 X 0.20 = \$15,348.88).
- 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 (12 GAUGE) INSERTED INTO GALVANIZED STEEL PERFORATED SQUARE TUBE SLEEVE (12 GAUGE - 3' LONG). A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON THE TOP OF EACH POST.
- NO CLEARING, GRADING, OR CONSTRUCTION IS PERMITTED WITHIN THE WETLANDS, STREAMS, OR THEIR BUFFERS. NO CLEARING, GRADING, OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENTS.
- SEDIMENT AND EROSION CONTROL WILL BE PROVIDED FOR THIS SITE.
- A NOISE STUDY IS NOT REQUIRED FOR THIS SUBDIVISION.
- THERE ARE EXISTING STRUCTURES LOCATED ON PARCEL 115. THE EXISTING HOUSE AND EXISTING OUTBUILDING ON LOT 64 IS TO REMAIN. THE EXISTING SHED LOCATED ON LOT 66 IS TO BE REMOVED PRIOR TO PLAT RECORDATION.
- USING THE NEIGHBORHOOD PRESERVATION EXCHANGE OPTION DESCRIBED IN SECTION 128.L OF THE ZONING REGULATIONS, THE RIGHTS FOR ONE OF THE RESIDENTIAL LOTS SHOWN ON THE SUBDIVISION PLAN FOR LOCUST CHAPEL, SECTION I HAS BEEN TRANSFERRED FROM PARCEL 703, TAX MAP 31, GRID 22, BREWER PROPERTY.
- A TEMPORARY ACCESS EASEMENT OVER AND ACROSS OPEN SPACE LOT 69, LOTS 61, 62 AND 63 IS REQUIRED TO ACCOMMODATE THE EXISTING DRIVEWAY TO THE RESIDENCE ON PARCEL 122. THIS EASEMENT WILL BECOME NULL AND VOID, CEASE TO EXIST, AND ALL RIGHTS GRANTED TO THE OWNER(S) OF PARCEL 122 SHALL REVERT TO THE OWNERS OF OPEN SPACE LOT 69, LOTS 61, 62 AND 63 SUBSEQUENT TO RECORDING OF THE PLAT FOR THIS SUBDIVISION AND THE CONNECTION TO THE DRIVEWAY TO A PUBLIC ROAD.
- THE EXISTING PRIVATE WELL EASEMENT WILL BE EXTINGUISHED AND THE WELL ABANDONED SUBSEQUENT TO CONSTRUCTION OF THE PUBLIC WATER MAIN AND CONNECTION OF PARCEL 122 TO THE PUBLIC WATER MAIN.
- THIS PLAN IS SUBJECT TO WP-09-92 APPROVED JANUARY 21, 2009 TO WAIVE SECTION 16.147 OF THE REGULATIONS AND PERMITS THE CONSOLIDATION OF 856 AND 115 BY ADJOINER DEED.
- THIS PLAN IS SUBJECT TO WP-10-002 APPROVED JULY 14, 2009 TO WAIVE SECTION 16.147 OF THE REGULATIONS, AND PERMITS THE CONSOLIDATION OF 856 AND 115 BY ADJOINER DEED. THE DEEDS, AGREEMENTS, AND EASEMENTS REQUIRED BY THE WAIVER WERE RECORDED ON AUGUST 6, 2009. APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS:
 - A. PLAN STATUS FOR S-06-006 - THE NEW PRELIMINARY EQUIVALENT SKETCH PLAN (SP) WHICH IS COMING IN FOR CONSOLIDATED PARCELS 856 AND 115 WILL DESIGNATE THE WELSH'S LAND (PARCEL 122) AS SECTION 2 AND WILL INCLUDE A NOTE EXPLAINING THAT PARCEL 122 WILL RETAIN THE 20 HOUSING UNIT ALLOCATIONS REQUESTED AS PART OF S-06-006. THIS REPRESENTATION OF PARCEL 122 WILL ALLOW S-06-006 TO REMAIN IN HOLDING BIN FOR ALLOCATIONS (ELK RIDGE).
 - B. DEVELOPMENT PHASING - WHEN PARCEL 122 IS LATER SUBDIVIDED, IT WILL REQUIRE A NEW SP (OR COMPLIANCE WITH THE THEN-EFFECTIVE REGULATIONS). IF HOUSING ALLOCATIONS IN EXCESS OF THE 20 ASSOCIATED WITH S-06-006 ARE NEEDED, THEY WILL HAVE TO BE ACQUIRED IN CONJUNCTION WITH THE NEW SP. BASED ON CONVERSATION WITH THE WELSH'S AND THEIR CONSULTANT, IT IS ANTICIPATED THAT THE SP FOR PARCEL 122 WILL "STAND ALONE" IN TERMS OF FOREST CONSERVATION (FC), STORM WATER MANAGEMENT (SWM), OPEN SPACE (OS), ETC.
 - C. RECORDATION OF THE FOLLOWING AGREED UPON DEEDS/EASEMENTS SHALL BE DONE PRIOR TO THE SUBMISSION OF THE SP FOR CONSOLIDATED PARCELS 856 AND 115.
 - THE DEEDS ADJUSTING THE BOUNDARY BETWEEN PARCELS 856 AND 122 (TO RECTIFY THE BARN SETBACK ENCROACHMENT);
 - THE CONSOLIDATED DEED FOR PARCEL 856 AND 115;
 - THE EXISTING EASEMENT/MAINTENANCE AGREEMENT FOR THE PORTION OF THE EXISTING DRIVEWAY ON PARCEL 856 WHICH SERVES PARCEL 122; AND,
 - AN EASEMENT FOR THE EXISTING WELL WHICH IS LOCATED ON PARCEL 856 AND SERVES THE WELSH'S DWELLING(S) ON PARCEL 122.
- ALL OF THESE DOCUMENTS MUST BE RECORDED AND COPIES SUBMITTED TO THIS DEPARTMENT FOR FILE RETENTION PURPOSES WITHIN 60-DAYS OF THE DATE OF THIS WAIVER APPROVAL (ON OR BEFORE SEPTEMBER 12, 2009).

FINAL ROAD CONSTRUCTION PLAN LOCUST CHAPEL - SECTION I A GREEN NEIGHBORHOOD

LOTS 1-64, OPEN SPACE 65-69
A SUBDIVISION OF PARCEL 115
HOWARD COUNTY, MARYLAND

LOT TABULATION:

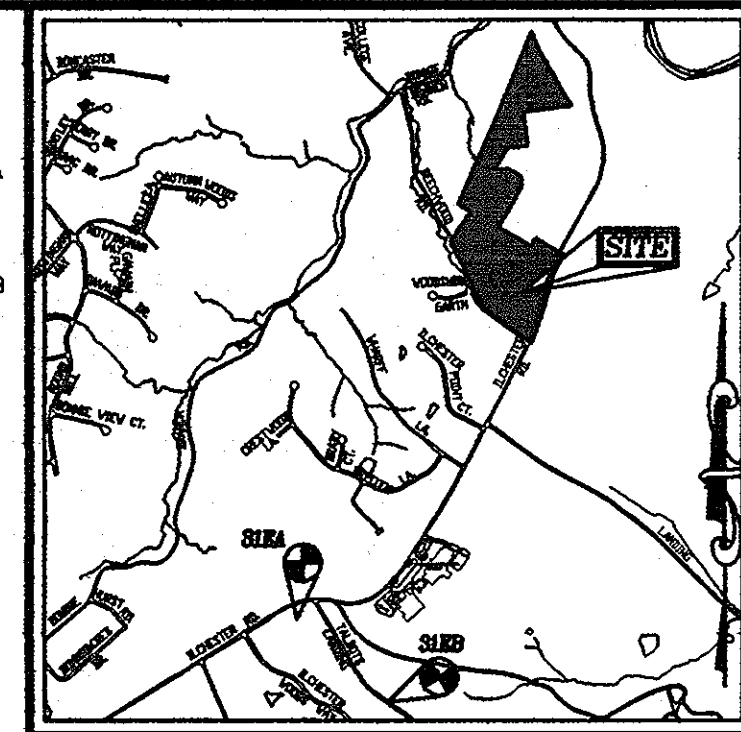
NO. OF BUILDABLE LOTS: 64
NO. OF OPEN SPACE LOTS: 5
TOTAL NO. OF PROPOSED LOTS: 69
TOTAL 64 DWELLING UNITS FOR THIS SUBMISSION

BENCHMARKS

BENCHMARK NO. 1: COUNTY CONTROL #31EA
3/4" REBAR 0.8' BELOW SURFACE
N. 569,841.129, E. 1,374,816.027
BENCHMARK NO. 2: COUNTY CONTROL #31EB
3/4" REBAR 0.6' BELOW SURFACE
N. 568,730.996, E. 1,376,273.570

LEGEND

- RIGHT-OF-WAY LINE
- BOUNDARY LINE
- ADJACENT PROPERTY LINE
- FOREST CONSERVATION EASEMENT (RETENTION)
- LIMIT OF WETLAND
- WETLAND BUFFER



VICINITY MAP

SCALE = 1"=2000'
ADC MAP COORDINATES: 4936 G-1&2

SITE DATA

TAX MAP 31, GRID 4, PARCEL 115
DEED REFERENCE: L. 11977, F. 404
ELECTION DISTRICT: 1ST
LOCATION: WEST SIDE OF ILCHESTER ROAD, NORTH SIDE OF BEECHWOOD RD.

EXISTING ZONING: R-20, UTILIZING R-ED OPTION PER SECTION 108.F.3.
R-ED

GROSS AREA: 36.54 AC
NET AREA OF PARCELS: 31.94 AC
AREA OF 100 YEAR FLOODPLAIN: 0.00 AC
AREA OF STEEP SLOPES: 4.60 AC

BASE DENSITY
2 LOTS PER NET ACRE (2x31.94): 63 LOTS
BASE DENSITY (R-ED PORTION)
2 LOTS PER NET ACRE (2x7.02): 14 LOTS

BASE DENSITY (R-20 PORTION)
2 LOTS PER NET ACRE (2x24.92): 49 LOTS - SECTION 108.A
5 LOTS - PER SECTION 108.F.2

TOTAL LOTS ALLOWED (63+5): 68 LOTS
NUMBER OF PROPOSED RESIDENTIAL LOTS (SFD): 64 LOTS
AREA OF PROPOSED RESIDENTIAL LOTS (SFD): 12.95 AC
TOTAL AREA OF ROAD RIGHT OF WAY: 3.18 AC
OPEN SPACE REQUIRED: 50 % OF GROSS AREA: 18.27 AC
TOTAL AREA OF OPEN SPACE PROPOSED: 20.41 AC (55.8% AC)
REC OPEN SPACE: 300 SF/DWELLING UNIT x 64: 19,200 SF OR 0.44 AC
REC OPEN SPACE PROVIDED: 31,398 SF
EXISTING USE OF SITE: AGRICULTURAL, SFD
PROPOSED USE OF SITE: SINGLE FAMILY DETACHED
PROPOSED WATER SYSTEM: PUBLIC
PROPOSED SEWER SYSTEM: PUBLIC
OPEN SPACE LOTS 65, 66, 67, 68, & 69 TO BE OWNED AND MAINTAINED BY THE HOA.
MINIMUM LOT AREA: 6,000 SF

DENSITY EXCHANGE CHART

RECEIVING PARCEL INFORMATION	LOCUST CHAPEL SECTION I
TOTAL AREA OF SUBDIVISION	36.54 AC.
NET ACREAGE OF SUBDIVISION	31.94 AC.
ALLOWED BASE DENSITY UNITS	63 UNITS
BONUS DENSITY UNITS	5 UNITS (UP TO 10% MORE UNITS)
PROPOSED DENSITY UNITS	64 UNITS
NUMBER OF NEIGHBORHOOD PRESERVATION UNITS REQUIRED PER DWELLING UNIT	1 RIGHTS* = 64 DWELLING UNITS
SENDING PARCEL INFORMATION	DEED FROM SENDING PARCEL BREWER PROPERTY L.5023, F.661 TAX MAP: 31, PARCEL: 703, GRID 22

OWNER/DEVELOPER

WELSH PROPERTY, LLC
4640 ILCHESTER ROAD, LLC
C/O LAND DESIGN & DEVELOPMENT, INC.
5300 DORSEY HALL DR. STE 102
ELLICOTT CITY, MARYLAND 21042-7819
ATTN: MR. DONALD R. REUWER
443-367-0422

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MINIMUM LOT SIZE CHART

LOT NO.	GROSS AREA	PIPESTEM AREA	NET LOT SIZE
23	6,718 SF	452 SF	6,266 SF
24	7,187 SF	710 SF	6,477 SF
25	8,492 SF	973 SF	7,519 SF
26	7,679 SF	976 SF	6,703 SF
27	7,064 SF	737 SF	6,327 SF
28	6,696 SF	496 SF	6,200 SF
33	6,709 SF	513 SF	6,196 SF
34	6,907 SF	821 SF	6,086 SF
35	7,380 SF	1,112 SF	6,268 SF
36	8,132 SF	838 SF	7,294 SF

- CONFIRMATION THAT THE EXISTING STRUCTURE ON PARCEL 122 MEETS ZONING SETBACKS RELATIVE TO THE COMMON BOUNDARY BETWEEN PARCELS 856 AND 122 WILL BE REQUIRED. A STATEMENT OF CONFIRMATION SHOULD ACCOMPANY THE REQUESTED COPIES OF ALL DEEDS.
- PARCEL 122 HOOKUP TO PUBLIC WATER AND SEWER: PER THE DEVELOPER AGREEMENT FOR SECTION 1, THE DEVELOPER OF THAT SECTION WILL BE RESPONSIBLE FOR EXTENDING PUBLIC WATER AND SEWER TO THE EXISTING HOME ON PARCEL 122. THIS CONNECTION SHALL BE MADE BEFORE THE EXISTING WELL IS ABANDONED.
- COMPLIANCE WITH THE DEVELOPMENT ENGINEERING DIVISION'S COMMENT: "NO FURTHER DEVELOPMENT WILL BE PERMITTED ON PARCELS 115 AND 856 WITHOUT PRIOR SUBDIVISION. IT IS NOTED THAT THE DEVELOPER OF PARCELS 856 AND 115 HAS HAD PRELIMINARY MEETINGS FOR THE DEVELOPMENT OF A GREEN NEIGHBORHOOD DESIGN WITH THE COUNTY."
- A NUMBER OF DISCREPANCIES EXIST WITHIN THE ACREAGE GIVEN FOR PARCEL 856 AND THE RESIDUE OF PARCEL 122. THIS WAIVER APPROVAL INVOLVES THE RECOGNITION OF TWO (2) PARCELS ONLY: PARCEL 122 AND THE NEW CONSOLIDATED PARCEL 856/115. NO OTHER PARCEL IS BEING LEGALLY ENDORSED.
- ALTHOUGH NOT A CONDITION OF THIS WAIVER APPROVAL, SECTION 107.E OF THE ZONING REGULATIONS REQUIRES PLANNING BOARD (PB) APPROVAL OF A PRELIMINARY EQUIVALENT SKETCH PLAN FOR R-ED ZONED PROPERTY - SINCE PARCEL 115 IS NOT SHOWN ON ZB-1071M IT MUST BE PRESENTED AND APPROVED BY THE PLANNING BOARD.
- ALTHOUGH NOT A CONDITION OF THIS WAIVER APPROVAL, THE SUBMISSION OF DEVELOPMENT PLANS WHICH INCLUDE THE ACREAGE OF CURRENT PARCEL 115, MAY REQUIRE CONSIDERATION BY THE HISTORIC DISTRICT COMMISSION (HDC).
- ALL WALKS AND PATHS WITHIN PROJECT BOUNDARY TO BE WATER PERMEABLE.
- LOCUST CHAPEL SECTION II, PARCEL 122, RETAINS 20 HOUSING UNIT ALLOCATIONS REQUESTED AS PART OF S-06-006.
- THE HISTORIC BUILDINGS ON THE SITE HAVE BEEN ADDED TO THE MARYLAND INVENTORY OF HISTORIC PROPERTIES, AND WILL BE ADDED TO THE HOWARD COUNTY HISTORIC SITES INVENTORY AS 1H-978.
- THE EXISTING WELL ON PARCEL 115 SERVING THE EXISTING HOUSE ON PARCEL 122 MUST BE PROPERLY ABANDONED AND THE EXISTING HOUSE CONNECTED TO PUBLIC WATER.
- TEST PITS TO DETERMINE GROUND WATER AND ROCK ELEVATIONS WERE PERFORMED UNDER PRELIMINARY EQUIVALENT SKETCH PLAN SP-10-001 AND WERE INCLUDED IN THE SWM REPORT.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO THE ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO INSURE SAFE ACCESS FOR FIRE EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
 - A. WIDTH -- 12'(16' SERVING MORE THAN ONE RESIDENCE).
 - B. SURFACE -- 12" ASTM C-33 3/4" TO 2" STONE WITH PERMEABLE CONCRETE.
 - C. GRADE -- MAX. 1% GRADE. MAX. 10' TURNING RADIUS.
 - D. STRUCTURES (CULVERTS/BRIDGES) -- CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING).
 - E. DRAINAGE ELEMENTS -- CAPABLE OF SAFELY PASSING 100-YEAR FLOOD WITH NO MORE THAN 1 FOOT OF DEPTH OVER DRIVEWAY SURFACE.
 - F. MAINTENANCE -- SUFFICIENT TO INSURE ALL WEATHER USE.
- REFERENCE: PLANNING BOARD CASE 388 DECISION AND ORDER APPROVAL DATED 4/13/2010.
- THE FOREST STAND DELINEATION WAS SUBMITTED AND APPROVED UNDER SP-10-001.
- PER SECTION 108.F.3.D., STRUCTURES ARE REQUIRED TO BE SET BACK 75 FEET FROM PROJECT BOUNDARIES ADJOINING SINGLE-FAMILY DETACHED DEVELOPMENTS. THIS PROPOSED DEVELOPMENT MEETS THESE REQUIREMENTS.
- A PRIVATE RANGE OF ADDRESS SIGN ASSEMBLY SHALL BE FABRICATED AND INSTALLED AT ALL USE IN COMMON DRIVEWAY BY HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPERS/OWNERS EXPENSE. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-313-5752 FOR DETAILS AND COST ESTIMATES.
- THIS PROJECT IS SUBJECT TO A DESIGN MANUAL WAIVER APPROVED JULY 19, 2010 TO ALLOW FOR AN OPEN SECTION ROAD WITH A SIDEWALK ALONG ILCHESTER ROAD. SEE TYPICAL SECTION ON SHEET 6.
- STREET LIGHTS TO BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION, BUT THE DESIGN AND LOCATION SHALL REMAIN UNDER THE PURVIEW OF HOWARD COUNTY DPW-TRAFFIC.
- THIS PROJECT IS SUBJECT TO A DESIGN MANUAL WAIVER TO ALLOW FOR THE CONSTRUCTION OF A SIDEWALK ALONG THE PROJECTS ILCHESTER ROAD FRONTAGE WITHOUT CURB AND GUTTER.
- THE PROPOSED SIDEWALK AND CONNECTIONS TO ILCHESTER ROAD AND BEECHWOOD ROAD SHALL MEET ALL ADA REQUIREMENTS.

APPROVED: DEPARTMENT OF PUBLIC WORKS
10-21-10
DATE
CHIEF, BUREAU OF HIGHWAYS
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE

**FINAL ROAD CONSTRUCTION PLAN
LOCUST CHAPEL - SECTION I
A GREEN NEIGHBORHOOD**

COVER SHEET

ZONED: (R-20 AND R-ED) LOTS 1-64 & OPEN SPACE 65-69 WP-09-92, S-06-006
A SUBDIVISION OF PARCEL 115 WP-10-002
TAX MAP #31 GRID 4 HOWARD COUNTY, MARYLAND PARCEL 115
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**ROBERT H. VOGEL
ENGINEERING, INC.**
ENGINEERS • SURVEYORS • PLANNERS
8407 MAIN STREET TEL: 410-461-7666
ELICOTT CITY, MD 21043 FAX: 410-461-8961

DESIGN BY: JAR
DRAWN BY: KC
CHECKED BY: RHV
DATE: AUGUST 2010
SCALE: 1"=200'
W.O. NO.: 04-151

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. EXPIRATION DATE: 08-27-2012

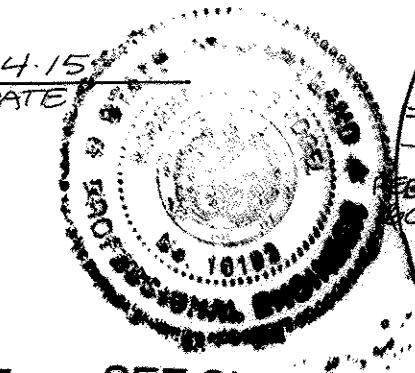
1 SHEET OF 25

MATCHLINE - SEE SHEET 3

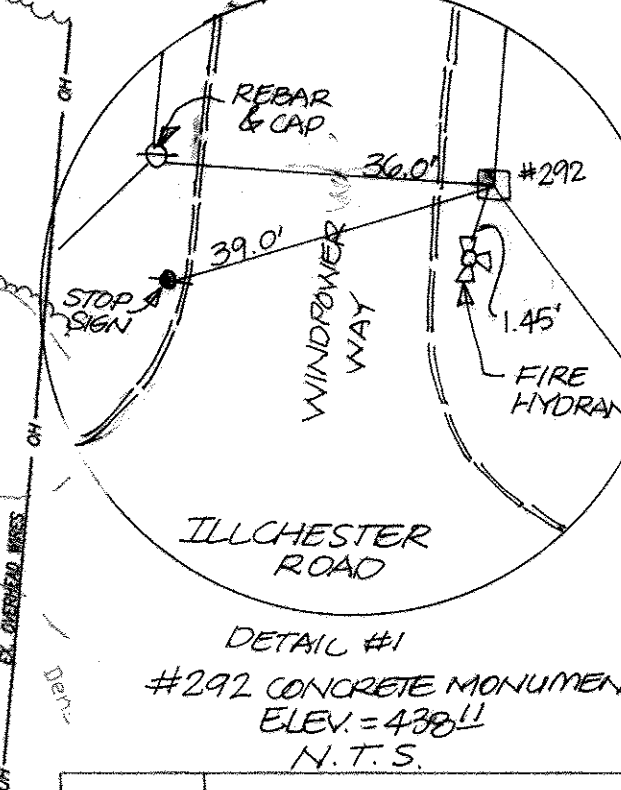
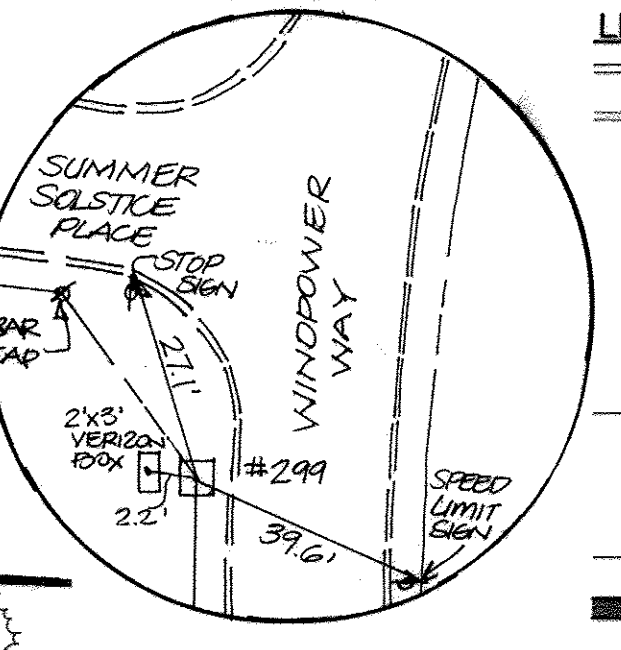
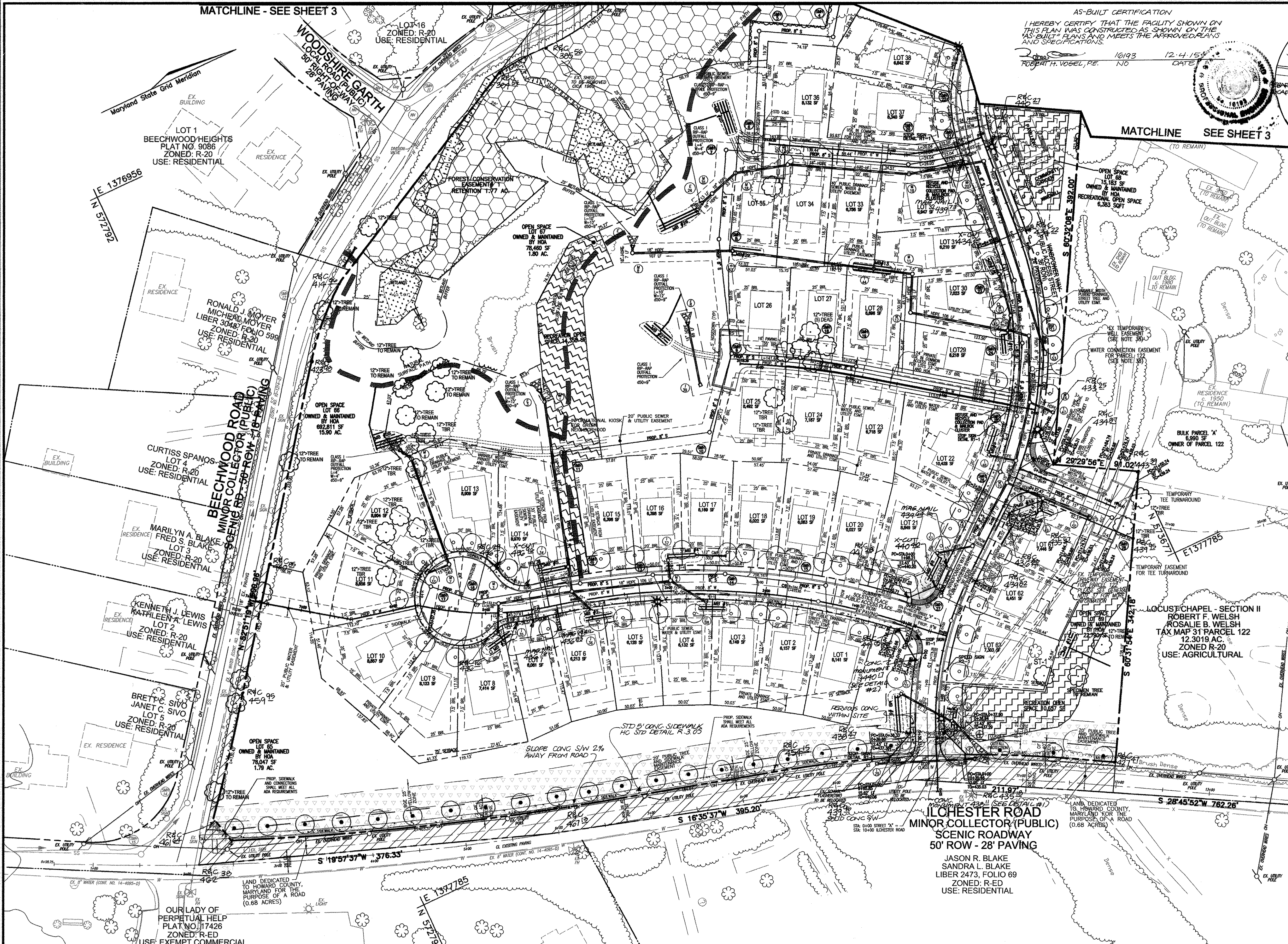
AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE AS-BUILT PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

10/19/13 DATE
ROBERT H. VOGEL, P.E. NO



- LEGEND:**
- EXISTING CURB AND GUTTER
 - PROPOSED CURB AND GUTTER
 - EXISTING UTILITY POLE
 - EXISTING LIGHT POLE
 - EXISTING MAILBOX
 - EXISTING SIGN
 - EXISTING SANITARY MANHOLE
 - EXISTING SANITARY LINE
 - EXISTING CLEANOUT
 - EXISTING FIRE HYDRANT
 - EXISTING WATER LINE
 - PROPOSED STORM DRAIN
 - DIRECTION OF FLOW
 - STORM DRAIN FLOW THROUGH STRUCTURE
 - EXISTING TIE LINE (FIELD LOCATED)
 - EXISTING VEGETATION (APPROXIMATE LOCATION)
 - EXISTING FENCE
 - PROPERTY LINE
 - RIGHT-OF-WAY LINE
 - PROPOSED SIDEWALK
 - PROPOSED STREET TREE
 - WETLANDS BUFFER
 - STREAM CENTERLINE
 - STREAM BUFFER
 - PROP. STREET SIGNS
 - FOREST CONSERVATION AREA (RETENTION)
 - RECREATION OPEN SPACE
 - PROP. ROW DEDICATION
 - BGE WIRE ZONES
 - PUBLIC SEWER, WATER, AND UTILITY EASEMENT
 - PRIVATE HOUSING AND UTILITY EASEMENT
 - PUBLIC DRAINAGE, STREET TREE, AND UTILITY EASEMENT
 - PUBLIC TREE AND SIDEWALK MAINT. EASEMENT
 - EX. TEMP. DRIVEWAY EASEMENT FOR PARCEL 122
 - PUBLIC DRAINAGE AND UTILITY EASEMENT
 - PRIVATE SEWER, AND UTILITY EASEMENT
 - PRIVATE USE-IN-COMMON ACCESS EASEMENT



OWNER/DEVELOPER
 WELSH PROPERTY, LLC
 4640 ILLCHESTER ROAD, LLC
 C/O LAND DESIGN & DEVELOPMENT, INC.
 5300 DORSEY HALL DR. STE 102
 ELLICOTT CITY, MARYLAND 21042-7819
 ATTN: MR. DONALD R. REUWER
 443-367-0422

NO.	REVISION	DATE
4	REVISE TO CHANGE THE STREETLIGHT TYPE	1/23/18
3	REVISE SIDEWALK FROM PREVIOUS PAVEMENT TO STANDARD PAVEMENT DOW TO ILLCHESTER ROAD	10/13/15

FINAL ROAD CONSTRUCTION PLAN
LOCUST CHAPEL - SECTION I
 A GREEN NEIGHBORHOOD

LAYOUT PLAN

ZONED: (R-20 AND R-ED) LOT 1-64 & OPEN SPACE 65-69
 TAX MAP #31 GRID 4 PARCEL 115 HOWARD COUNTY, MARYLAND
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

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

PROFESSIONAL CERTIFICATE

DESIGN BY: JAR
 DRAWN BY: KGC
 CHECKED BY: RHV
 DATE: AUGUST 2010
 SCALE: 1"=50'
 W.D. NO.: 04-151

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A QUALY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 18183 EXPIRATION DATE: 08-31-2018

2 SHEET OF 25

APPROVED: DEPARTMENT OF PUBLIC WORKS
 10-21-10
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 DATE: 11/2/10
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

DATE: 11/01/10
 CHIEF, DIVISION OF LAND DEVELOPMENT

STREET LIGHT LOCATION CHART (PRIVATELY OWNED AND MAINTAINED)

STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
WINDPOWER WAY	0+63.00	16.00 RT	LED STREET LIGHT #
WINDPOWER WAY	1+88.00	25.00 LT	LED STREET LIGHT #
WINDPOWER WAY	3+79.00	20.00 RT	LED STREET LIGHT #
WINDPOWER WAY	6+92.00	20.00 RT	LED STREET LIGHT #
WINDPOWER WAY	8+20.00	20.50 LT	LED STREET LIGHT #
WINDPOWER WAY	31.96	20.00 LT	LED STREET LIGHT #
WINDPOWER WAY	11+20.00	20.00 LT	LED STREET LIGHT #
WINDPOWER WAY	14+81.30	20.30 LT	LED STREET LIGHT #
WINDPOWER WAY	13+75.00	20.00 LT	LED STREET LIGHT #
SUMMER SOLISTICE PLACE	2+23.00	12.00 LT	LED STREET LIGHT #
SUMMER SOLISTICE PLACE	2+20.00	18.00	LED STREET LIGHT #

* BGE COLONIAL 100W LED 5292 LUMENS, COOPER UT-LD.

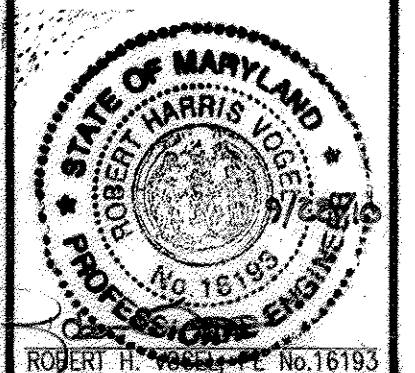
NOTE: THE STREET LIGHT LOCATIONS SHOWN ON SHEETS 2 & 3 ARE APPROXIMATE. EXACT LOCATIONS OF THE POLES AND THE ORIENTATION OF THE FIXTURES WILL BE FIELD DETERMINED BY HOWARD COUNTY DPW-TRAFFIC.

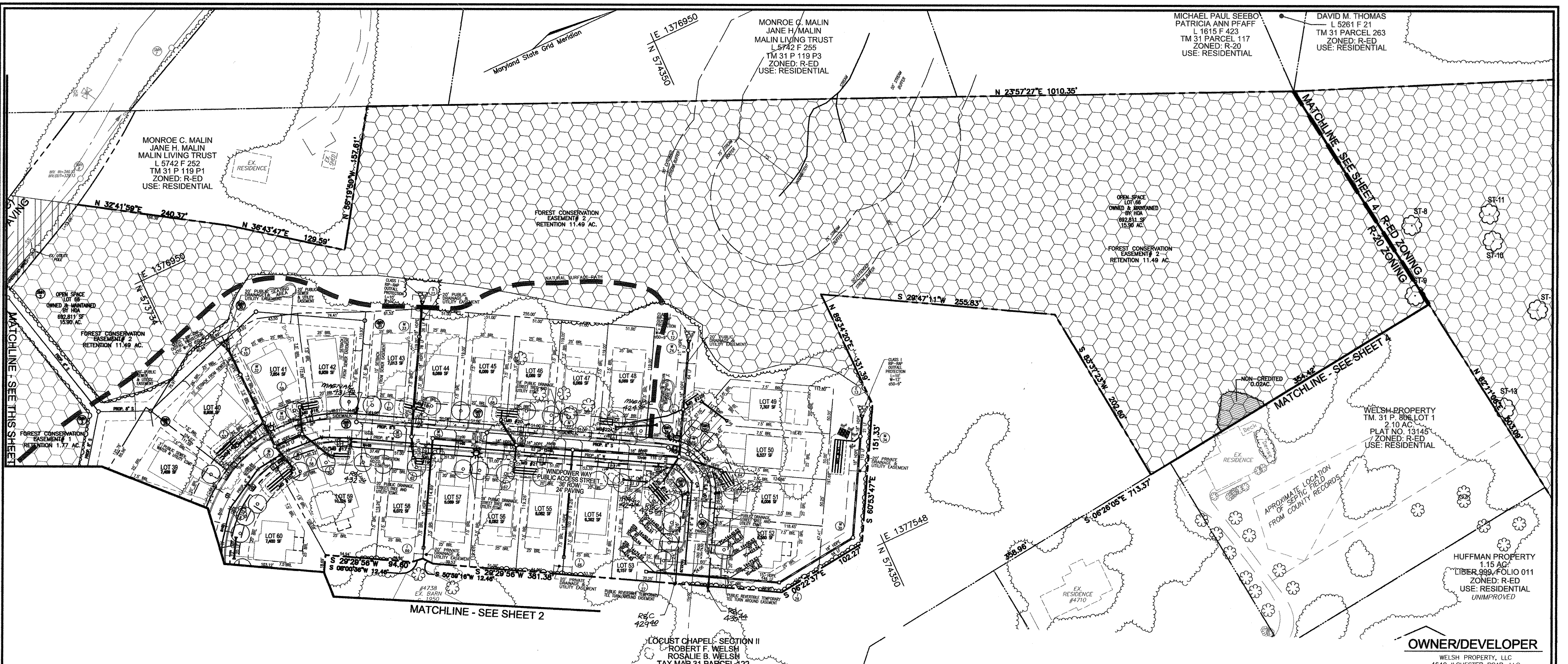
CURVE DATA TABLE

CURVE NO.	RADIUS	LENGTH	TANGENT	CENTRAL ANGLE	CHORD LENGTH	CHORD BEARING
C-1	350.00'	174.37'	89.03'	507.48'	172.58'	N 942.2502 W
C-2	350.00'	288.06'	152.75'	838.33'	279.99'	N 1107.67 W
C-3	140.00'	281.94'	221.39'	2051.2685'	236.65'	N 501.2082 E
C-4	38.00'	59.69'	38.00'	53.74'	1600.00'	N 1324.4260 W
C-5	250.00'	469.67'	341.83'	1913.8043'	403.58'	S 118.7718 E
C-6	744.16'	415.16'	213.57'	569.3483'	410.56'	S 485.1286 W
C-7	133.27'	76.87'	39.54'	587.4781'	75.81'	S 494.1935 W

STREET SIGN LOCATION CHART

STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
WINDPOWER WAY	0+27.50	18' LT	STOP SIGN R1-1
WINDPOWER WAY	1+17.30	15' RT	SPEED LIMIT SIGN R2-1
SUMMER SOLISTICE PLACE	0+24.46	23' LT	STOP SIGN R1-1
PRIVATE DRIVEWAY	INTERSECTION OF WINDPOWER WAY AND PRIVATE DRIVEWAY		STOP SIGN R1-1





LEGEND:

	EXISTING CURB AND GUTTER		EXISTING VEGETATION (APPROXIMATE LOCATION)
	PROPOSED CURB AND GUTTER		EXISTING FENCE
	EXISTING UTILITY POLE		PROPERTY LINE
	EXISTING LIGHT POLE		RIGHT-OF-WAY LINE
	EXISTING MAILBOX		PROPOSED SIDEWALK
	EXISTING SIGN		PROPOSED STREET TREE
	EXISTING SANITARY MANHOLE		WETLANDS BUFFER
	EXISTING SANITARY LINE		STREAM CENTERLINE
	EXISTING CLEANOUT		STREAM BUFFER
	EXISTING FIRE HYDRANT		PROP. STREET SIGNS
	EXISTING WATER LINE		FOREST CONSERVATION AREA (RETENTION)
	PROPOSED STORM DRAIN		OPEN SPACE
	DIRECTION OF FLOW		PUBLIC DRAINAGE, STREET TREE, AND UTILITY EASEMENT
	STORM DRAIN FLOW THROUGH STRUCTURE		PUBLIC TREE AND SIDEWALK MAINT. EASEMENT
	EXISTING TREE LINE (FIELD LOCATED)		EX. TEMP. DRIVEWAY EASEMENT FOR PARCEL 122
	RECREATION OPEN SPACE		PUBLIC DRAINAGE AND UTILITY EASEMENT
	PROP. ROW DEDICATION		PRIVATE USE IN-COMMON ACCESS EASEMENT
	BIG WIRE ZONES		
	PUBLIC SEWER, WATER, AND UTILITY EASEMENT		
	PRIVATE DRAINAGE AND UTILITY EASEMENT		
	PUBLIC SEWER AND UTILITY EASEMENT		
	PRIVATE USE IN-COMMON ACCESS EASEMENT		

OWNER/DEVELOPER

WELSH PROPERTY, LLC
4540 WILCHESTER ROAD, LLC
C/O LAND DESIGN & DEVELOPMENT, INC.
5300 DORSEY HALL DR. STE 102
ELLICOTT CITY, MARYLAND 21042-7819
ATTN: MR. DONALD R. REUWER
443-367-0422

4	REVISE TO CHANGE THE STREETLIGHT TYPE	1/23/18
NO.	REVISION	DATE

**FINAL ROAD CONSTRUCTION PLAN
LOCUST CHAPEL - SECTION I
A GREEN NEIGHBORHOOD**

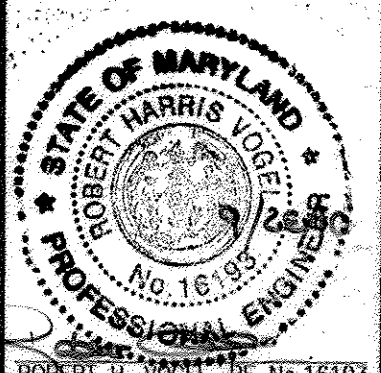
LAYOUT PLAN

ZONED: (R-20 AND R-ED)
TAX MAP #31 GRID 4
1ST ELECTION DISTRICT

LOTS 1-64 & OPEN SPACE 65-69
A SUBDIVISION OF PARCEL 115
HOWARD COUNTY, MARYLAND

SP_10_001
WP-09-92, S-06-006
WP-10-002
PARCEL 115
HOWARD COUNTY, MARYLAND

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



DESIGN BY: JAR
DRAWN BY: KG
CHECKED BY: RHV
DATE: AUGUST 2010
SCALE: 1"=50'
W.O. NO.: 04-151

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. MY LICENSE NO. IS 16195. EXPIRATION DATE: 08-27-2012.

3 SHEET OF 25

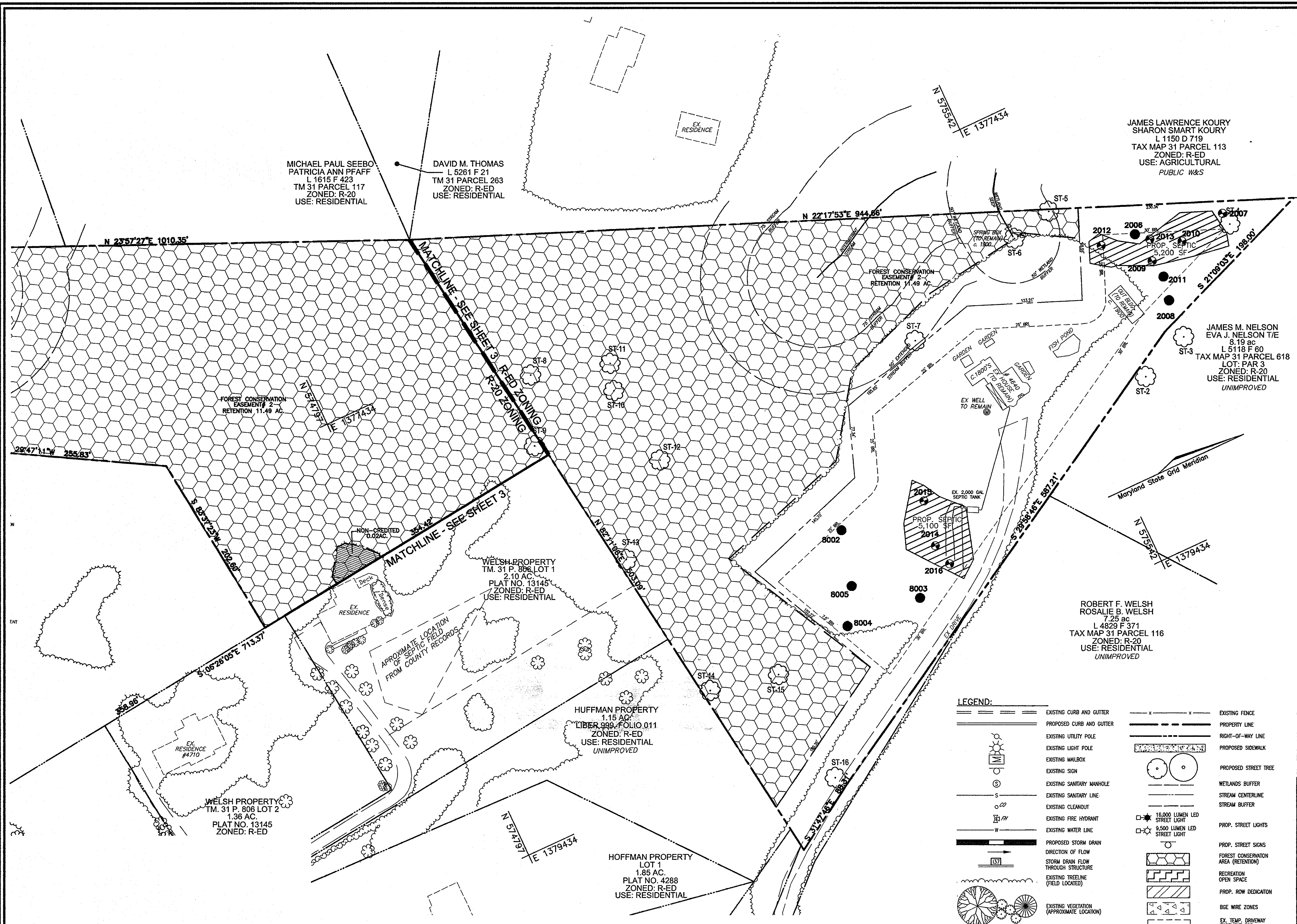
AS-BUILT CERTIFICATION
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE AS-BUILT PLAN AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

10/93 12-4-15
NO. DATE
ROBERT H. VOGEL, PE.

APPROVED: DEPARTMENT OF PUBLIC WORKS
10-21-10
DATE
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
10/20/10
DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION

10/10/10
DATE
CHIEF, DIVISION OF LAND DEVELOPMENT



MICHAEL PAUL SEEBO
PATRICIA ANN PFAFF
L 1615 F 423
TM 31 PARCEL 117
ZONED: R-20
USE: RESIDENTIAL

DAVID M. THOMAS
L 5261 F 21
TM 31 PARCEL 263
ZONED: R-ED
USE: RESIDENTIAL

JAMES LAWRENCE KOURY
SHARON SMART KOURY
L 1150 D 719
TAX MAP 31 PARCEL 113
ZONED: R-ED
USE: AGRICULTURAL
PUBLIC W&S

JAMES M. NELSON
EVA J. NELSON T/E
8.19 ac
L 5118 F 60
TAX MAP 31 PARCEL 618
LOT: PAR 3
ZONED: R-20
USE: RESIDENTIAL
UNIMPROVED

ROBERT F. WELSH
ROSALIE B. WELSH
7.25 ac
L 4829 F 371
TAX MAP 31 PARCEL 116
ZONED: R-20
USE: RESIDENTIAL
UNIMPROVED

HUFFMAN PROPERTY
LOT 1
1.85 AC.
PLAT NO. 4288
ZONED: R-ED
USE: RESIDENTIAL

WELSH PROPERTY
TM. 31 P. 806 LOT 2
1.36 AC.
PLAT NO. 13145
ZONED: R-ED

WELSH PROPERTY
TM. 31 P. 806 LOT 1
2.10 AC.
PLAT NO. 13145
ZONED: R-ED
USE: RESIDENTIAL

OWNER/DEVELOPER

WELSH PROPERTY, LLC
4640 ILCHESTER ROAD, LLC
C/O LAND DESIGN & DEVELOPMENT, INC.
5300 DORSEY HALL DR. STE 102
ELLCOTT CITY, MARYLAND 21042-7819
ATTN: MR. DONALD R. REUWER
443-367-0422

LEGEND:

	EXISTING CURB AND GUTTER		EXISTING FENCE
	PROPOSED CURB AND GUTTER		PROPERTY LINE
	EXISTING UTILITY POLE		RIGHT-OF-WAY LINE
	EXISTING LIGHT POLE		PROPOSED SIDEWALK
	EXISTING MAILBOX		PROPOSED STREET TREE
	EXISTING SIGN		WETLANDS BUFFER
	EXISTING SANITARY MANHOLE		STREAM CENTERLINE
	EXISTING SANITARY LINE		STREAM BUFFER
	EXISTING CLEANOUT		PROP. STREET LIGHTS
	EXISTING FIRE HYDRANT		PROP. STREET SIGNS
	EXISTING WATER LINE		FOREST CONSERVATION AREA (RETENTION)
	PROPOSED STORM DRAIN		RECREATION OPEN SPACE
	DIRECTION OF FLOW		PROP. ROW DEDICATION
	STORM DRAIN FLOW THROUGH STRUCTURE		BSE WIRE ZONES
	EXISTING TREELINE (FIELD LOCATED)		EX. TEMP. DRIVEWAY EASEMENT FOR PARCEL 122
	EXISTING VEGETATION (APPROXIMATE LOCATION)		PUBLIC DRAINAGE AND UTILITY EASEMENT
	PUBLIC SEWER, WATER, AND UTILITY EASEMENT		PUBLIC SEWER AND UTILITY EASEMENT
	PRIVATE DRAINAGE AND UTILITY EASEMENT		PRIVATE USE-IN-COMMON ACCESS EASEMENT

NO.	REVISION	DATE

FINAL ROAD CONSTRUCTION PLAN
LOCUST CHAPEL - SECTION I
A GREEN NEIGHBORHOOD

LAYOUT PLAN

ZONED: (R-20 AND R-ED) LOTS 1-64 & OPEN SPACE 65-69 WP-09-92, S-06-006
TAX MAP #31 GRID 4 A SUBDIVISION OF PARCEL 115 WP-10-002
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND PARCEL 115 HOWARD COUNTY, MARYLAND

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

PROFESSIONAL CERTIFICATE

STATE OF MARYLAND
ROBERT H. VOGEL
LICENSE NO. 16193
EXPIRES 08-27-2012

DESIGN BY: JAR
DRAWN BY: KLG
CHECKED BY: RHV
DATE: AUGUST 2010
SCALE: 1"=50'
W.D. NO.: 04-151

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 08-27-2012

4 SHEET OF 25

APPROVED: DEPARTMENT OF PUBLIC WORKS

William R. Williams 10-21-10
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

William R. Williams 10/20/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Robert H. Vogel 11/01/10
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

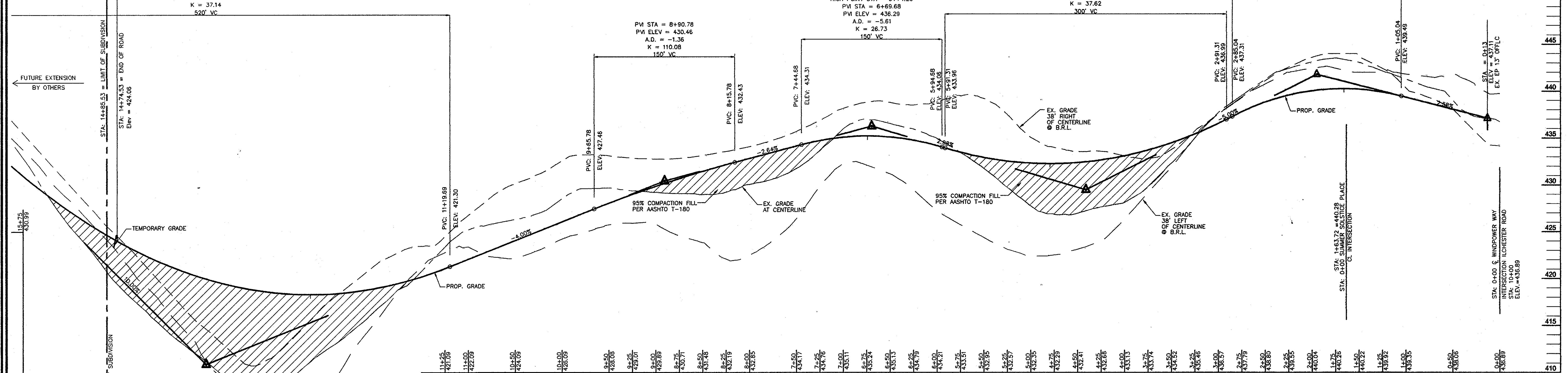
LOW POINT ELEV = 418.33
 LOW POINT STA = 12+68.27
 PVI STA = 13+79.69
 PVI ELEV = 410.90
 A.D. = 14.00
 K = 37.14
 520' VC

PVI STA = 8+90.78
 PVI ELEV = 430.46
 A.D. = -1.36
 K = 110.08
 150' VC

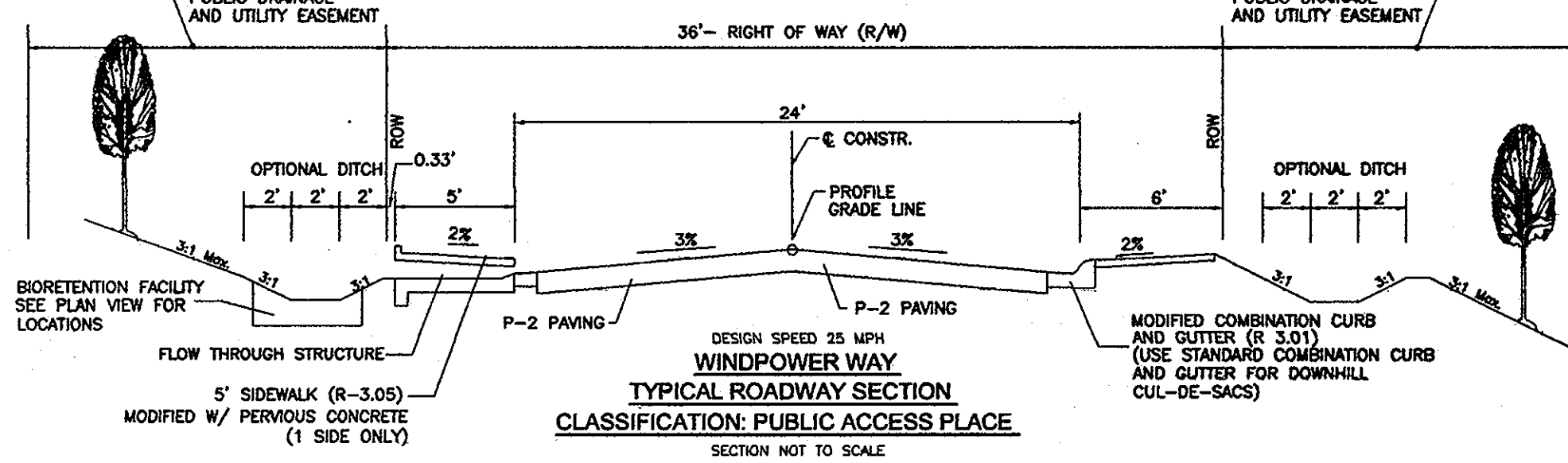
HIGH POINT ELEV = 435.24
 HIGH POINT STA = 6+74.20
 PVI STA = 6+69.68
 PVI ELEV = 436.29
 A.D. = -5.61
 K = 28.73
 150' VC

LOW POINT ELEV = 432.29
 LOW POINT STA = 4+79.39
 PVI STA = 4+41.31
 PVI ELEV = 429.49
 A.D. = 7.98
 K = 37.62
 300' VC

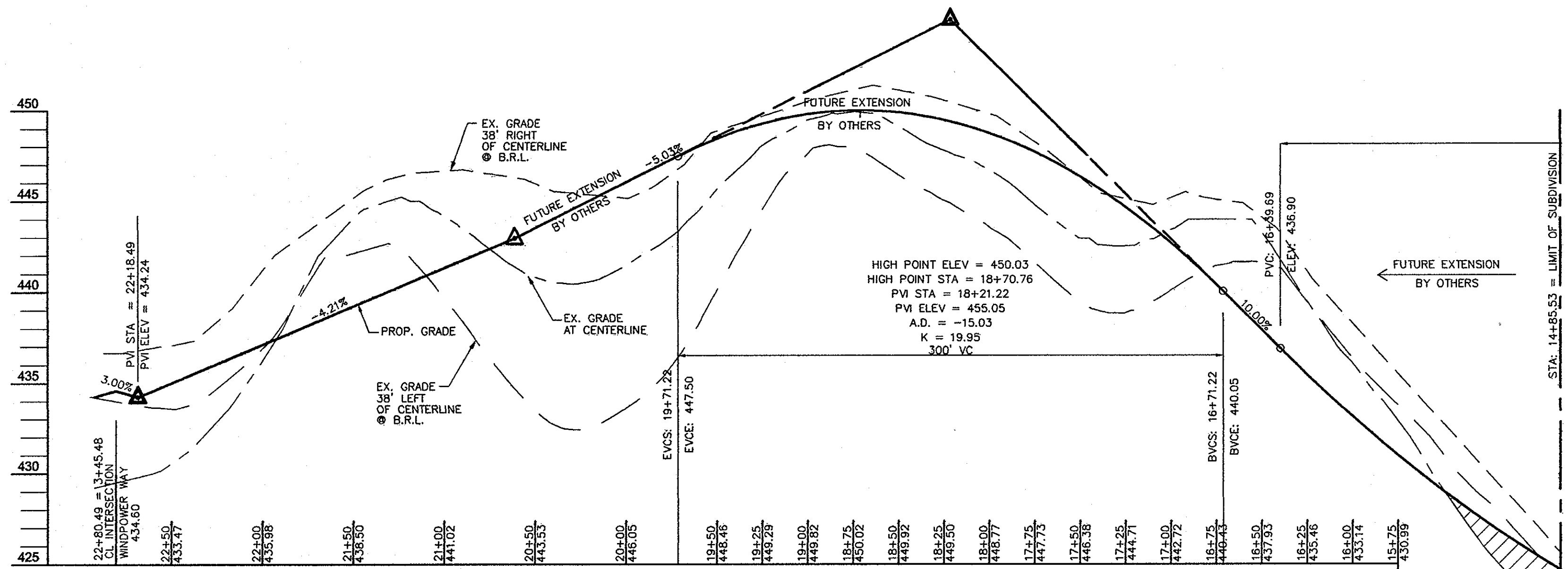
HIGH POINT ELEV = 440.28
 HIGH POINT STA = 1+66.31
 PVI STA = 1+95.04
 PVI ELEV = 441.81
 A.D. = -7.28
 K = 22.50
 180' VC



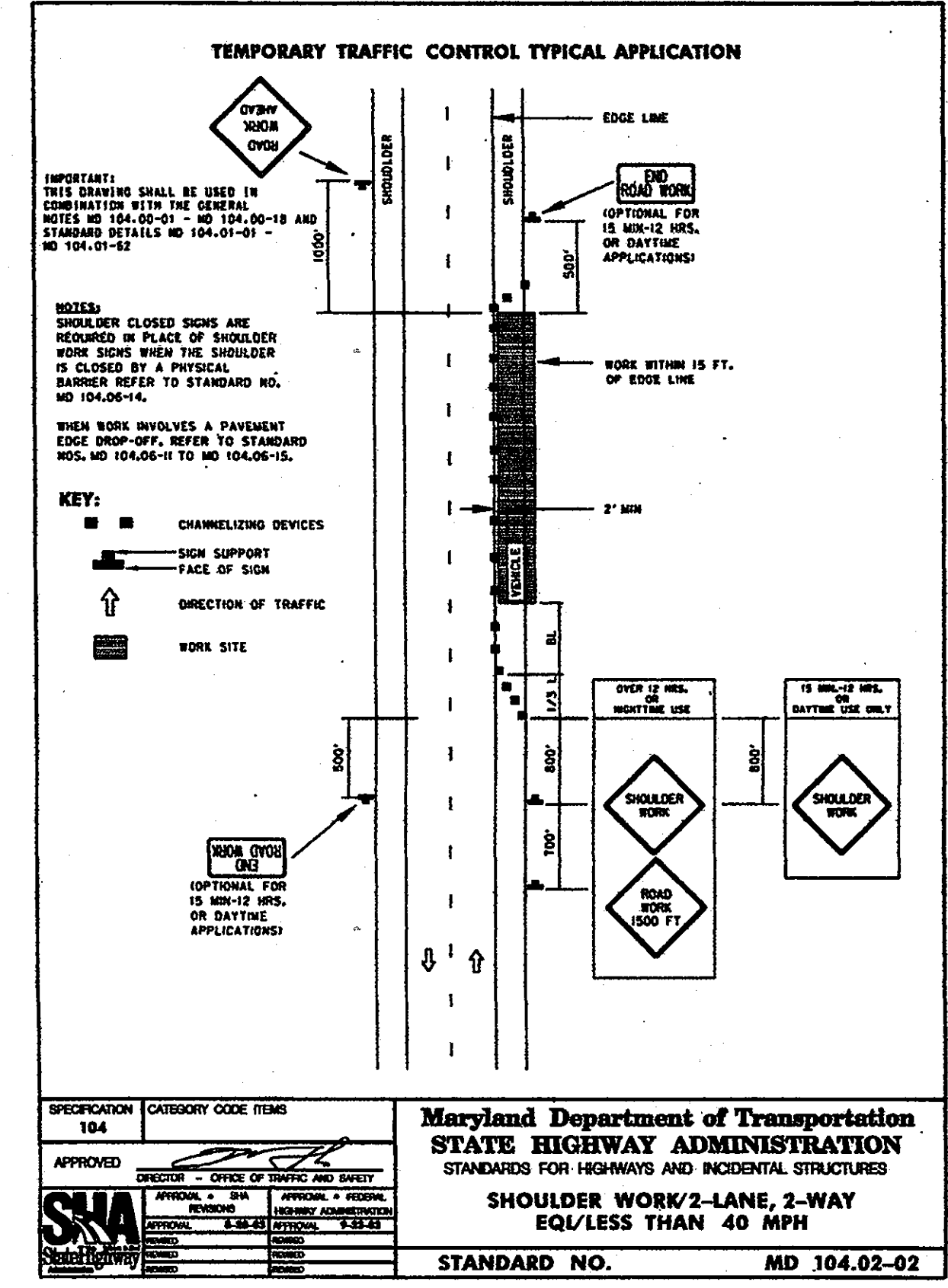
WINDPOWER WAY
 PUBLIC ACCESS STREET
 DESIGN SPEED=30 MPH
 SCALE
 VERT. 1"=5'
 HORIZ. 1"=50'



15+50	429.01
15+75	427.20
16+00	425.50
16+25	423.80
16+50	422.10
16+75	420.40
17+00	418.70
17+25	417.00
17+50	415.30
17+75	413.60
18+00	411.90
18+25	410.20
18+50	408.50
18+75	406.80
19+00	405.10
19+25	403.40
19+50	401.70
19+75	400.00
20+00	398.30
20+25	396.60
20+50	394.90
20+75	393.20
21+00	391.50
21+25	389.80
21+50	388.10
21+75	386.40
22+00	384.70
22+25	383.00
22+50	381.30
22+75	379.60
23+00	377.90
23+25	376.20
23+50	374.50
23+75	372.80
24+00	371.10
24+25	369.40
24+50	367.70
24+75	366.00
25+00	364.30
25+25	362.60
25+50	360.90
25+75	359.20
26+00	357.50
26+25	355.80
26+50	354.10
26+75	352.40
27+00	350.70
27+25	349.00
27+50	347.30
27+75	345.60
28+00	343.90
28+25	342.20
28+50	340.50
28+75	338.80
29+00	337.10
29+25	335.40
29+50	333.70
29+75	332.00
30+00	330.30
30+25	328.60
30+50	326.90
30+75	325.20
31+00	323.50
31+25	321.80
31+50	320.10
31+75	318.40
32+00	316.70
32+25	315.00
32+50	313.30
32+75	311.60
33+00	309.90
33+25	308.20
33+50	306.50
33+75	304.80
34+00	303.10
34+25	301.40
34+50	299.70
34+75	298.00
35+00	296.30
35+25	294.60
35+50	292.90
35+75	291.20
36+00	289.50
36+25	287.80
36+50	286.10
36+75	284.40
37+00	282.70
37+25	281.00
37+50	279.30
37+75	277.60
38+00	275.90
38+25	274.20
38+50	272.50
38+75	270.80
39+00	269.10
39+25	267.40
39+50	265.70
39+75	264.00
40+00	262.30
40+25	260.60
40+50	258.90
40+75	257.20
41+00	255.50
41+25	253.80
41+50	252.10
41+75	250.40
42+00	248.70
42+25	247.00
42+50	245.30
42+75	243.60
43+00	241.90



WINDPOWER WAY
 FUTURE ROAD EXTENSION
 PUBLIC ACCESS STREET
 DESIGN SPEED=30 MPH



OWNER/DEVELOPER
 WELSH PROPERTY, LLC
 4540 ILLCHESTER ROAD, LLC
 C/O LAND DESIGN & DEVELOPMENT, INC.
 5300 DORSEY HALL DR. STE 102
 ELLICOTT CITY, MARYLAND 21042-7819
 ATTN: MR. DONALD R. REUWER
 443-367-0422

NO.	REVISION	DATE

FINAL ROAD CONSTRUCTION PLAN
LOCUST CHAPEL - SECTION I
 A GREEN NEIGHBORHOOD
ROAD CONSTRUCTION
PROFILES AND DETAILS

ZONED: (R-20 AND R-ED) LOTS 1-64 & OPEN SPACE 65-69 WP-09-92, S-06-006
 TAX MAP #31 GRID 4 A SUBDIVISION OF PARCEL 115 WP-10-002
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND PARCEL 115

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PROFESSIONAL CERTIFICATE
 DESIGN BY: JAR
 DRAWN BY: KG
 CHECKED BY: RHY
 DATE: AUGUST 2010
 SCALE: AS SHOWN
 W.O. NO.: 04-151

STATE OF MARYLAND
 PROFESSIONAL ENGINEER
 ROBERT H. VOGEL, PE No.16193

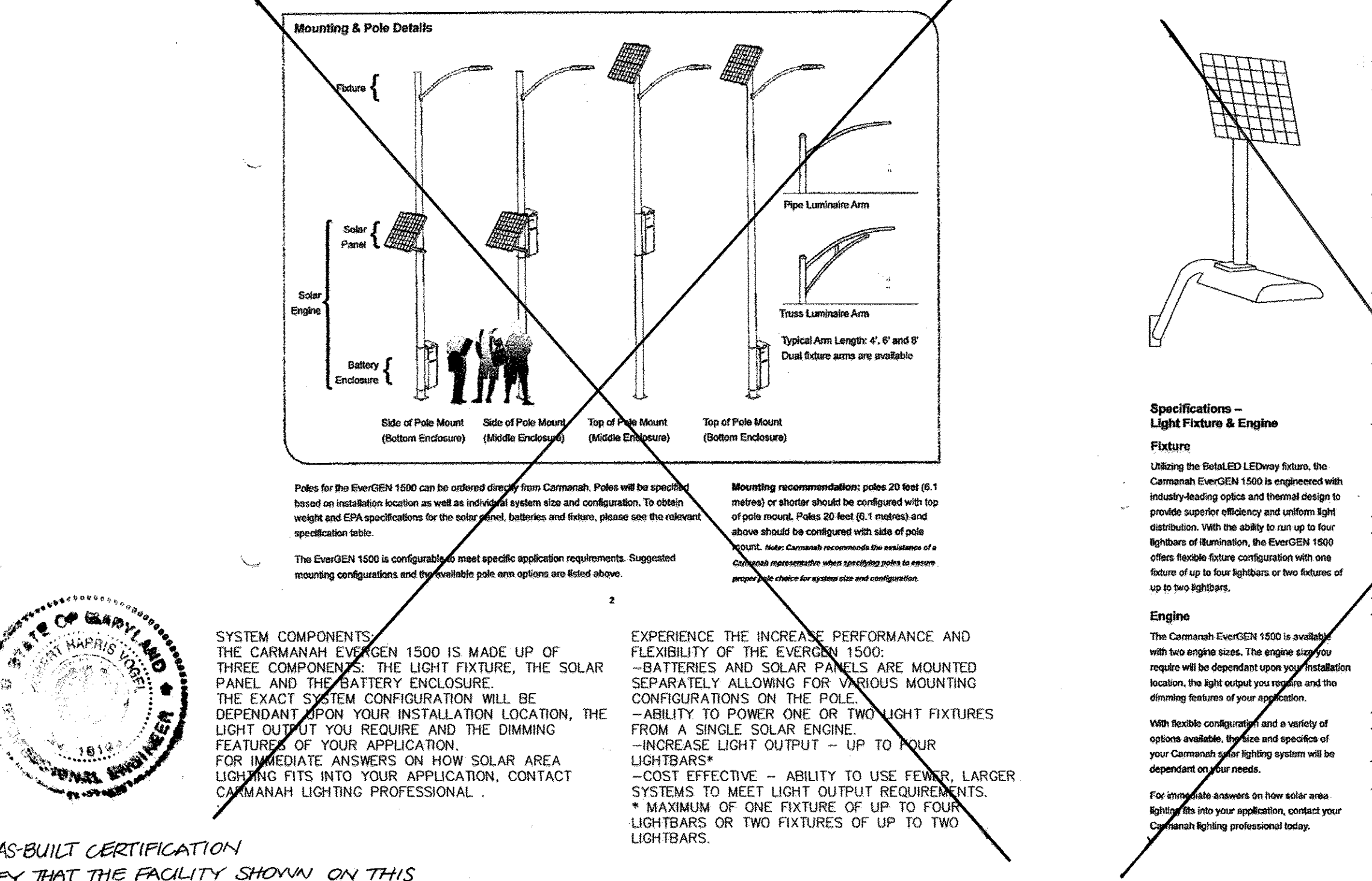
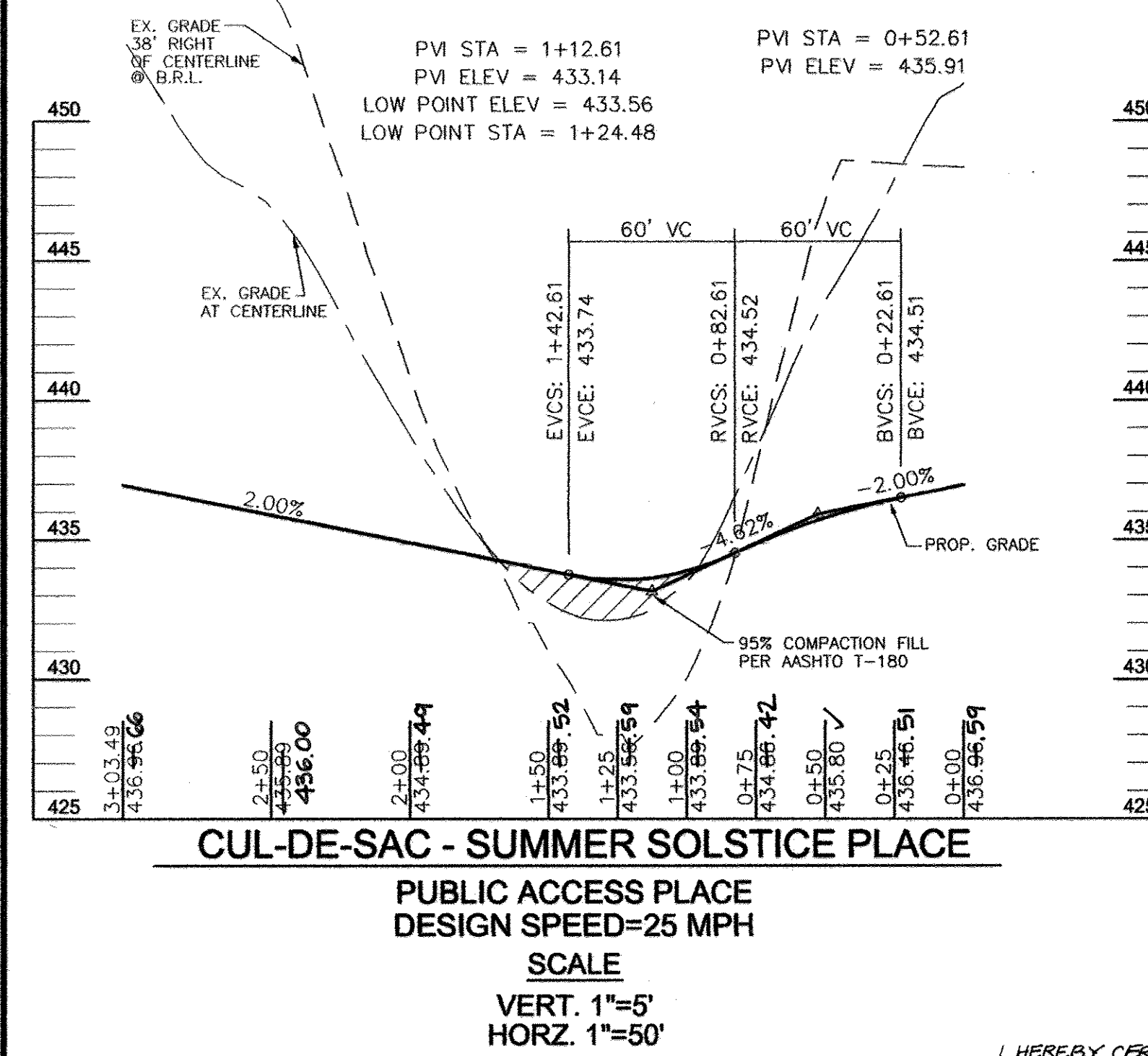
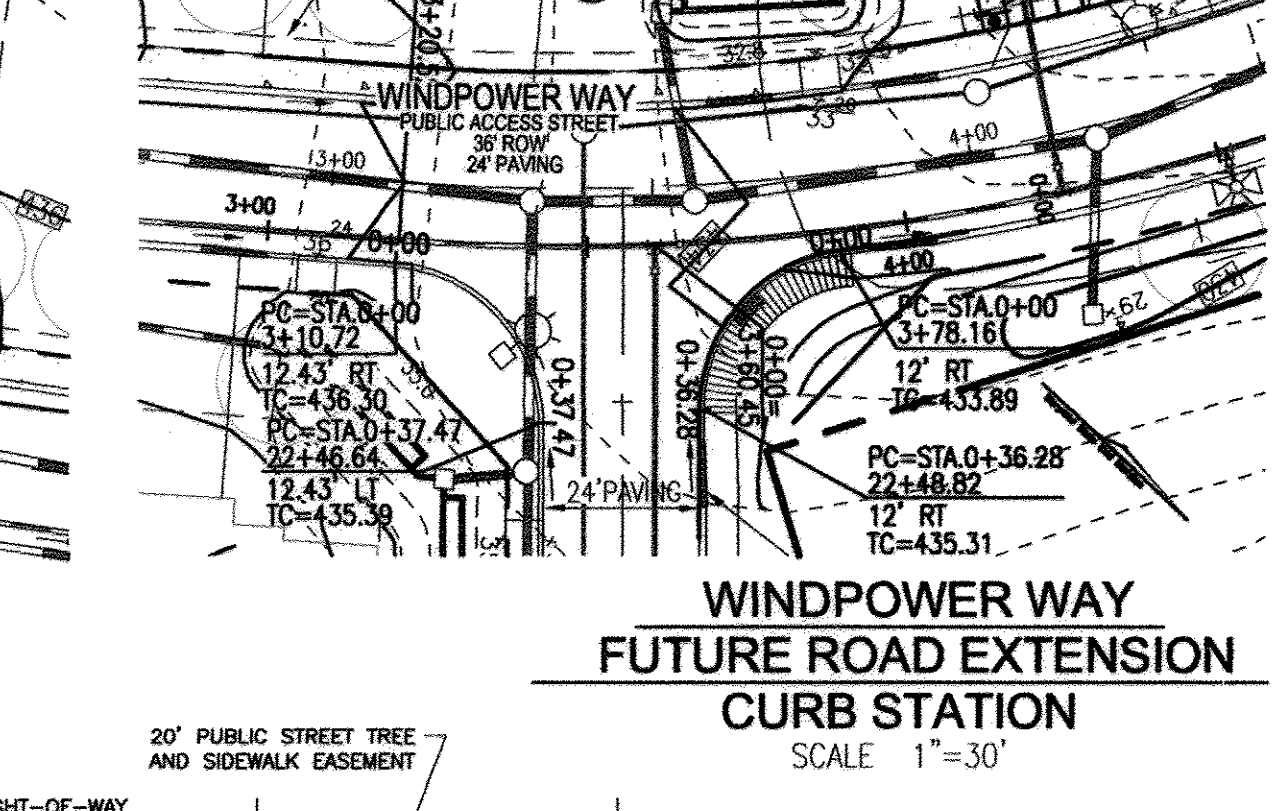
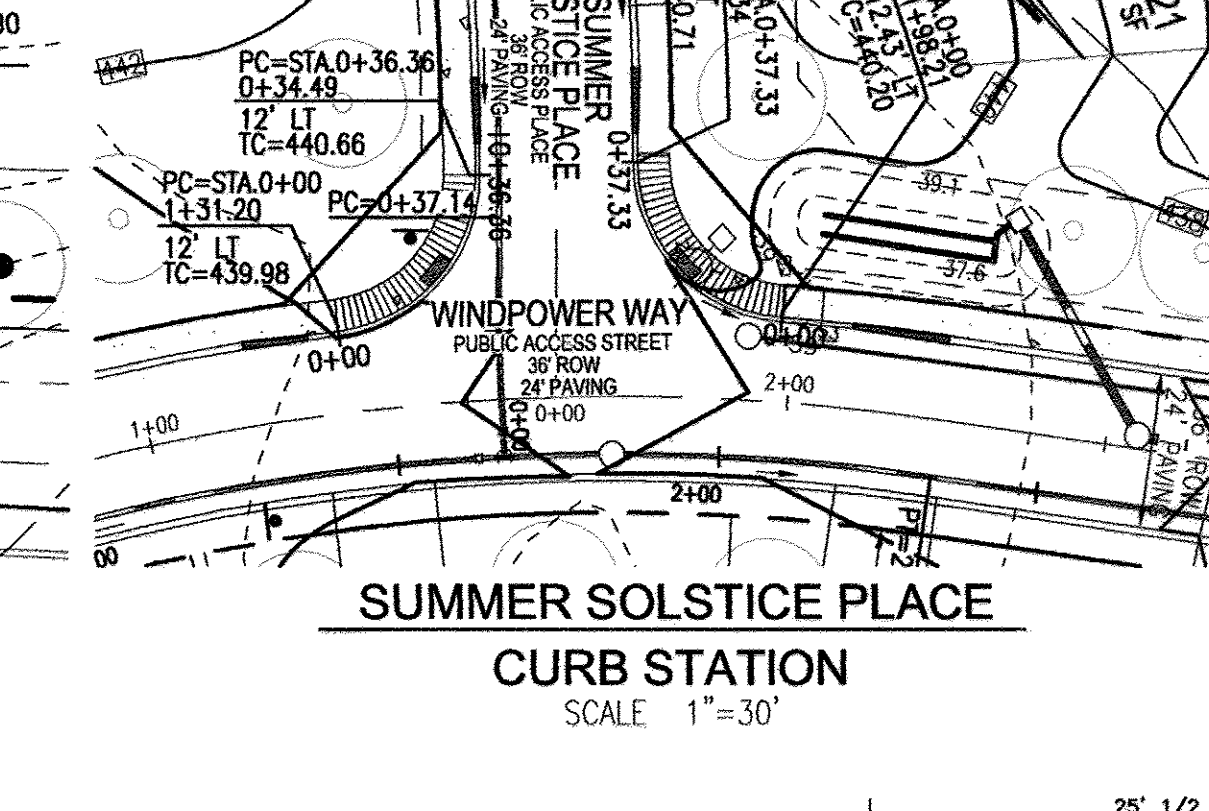
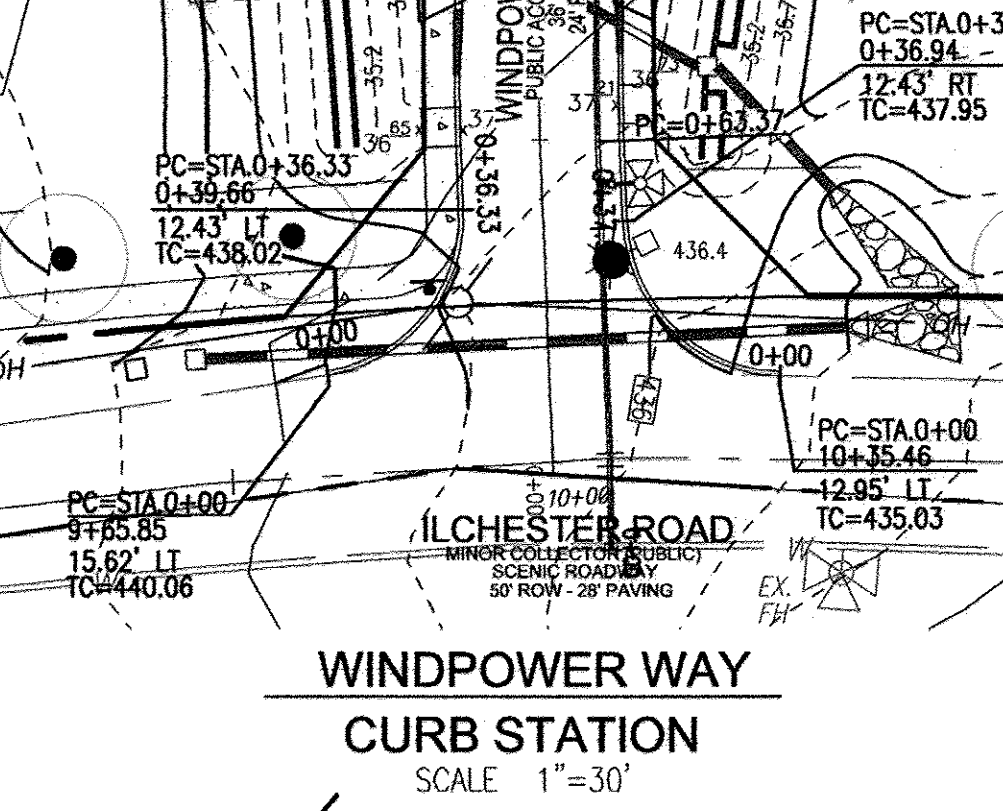
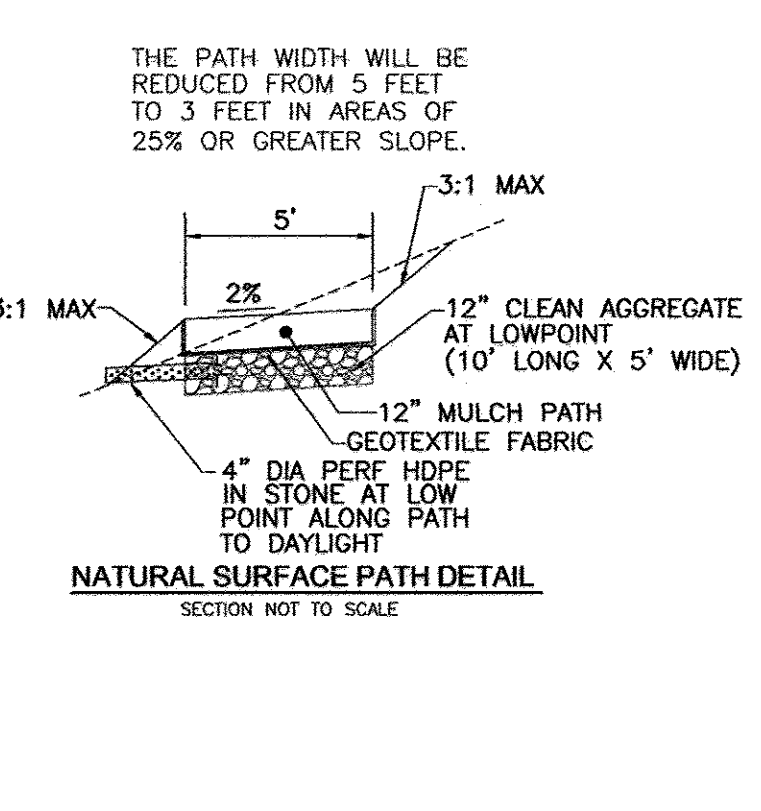
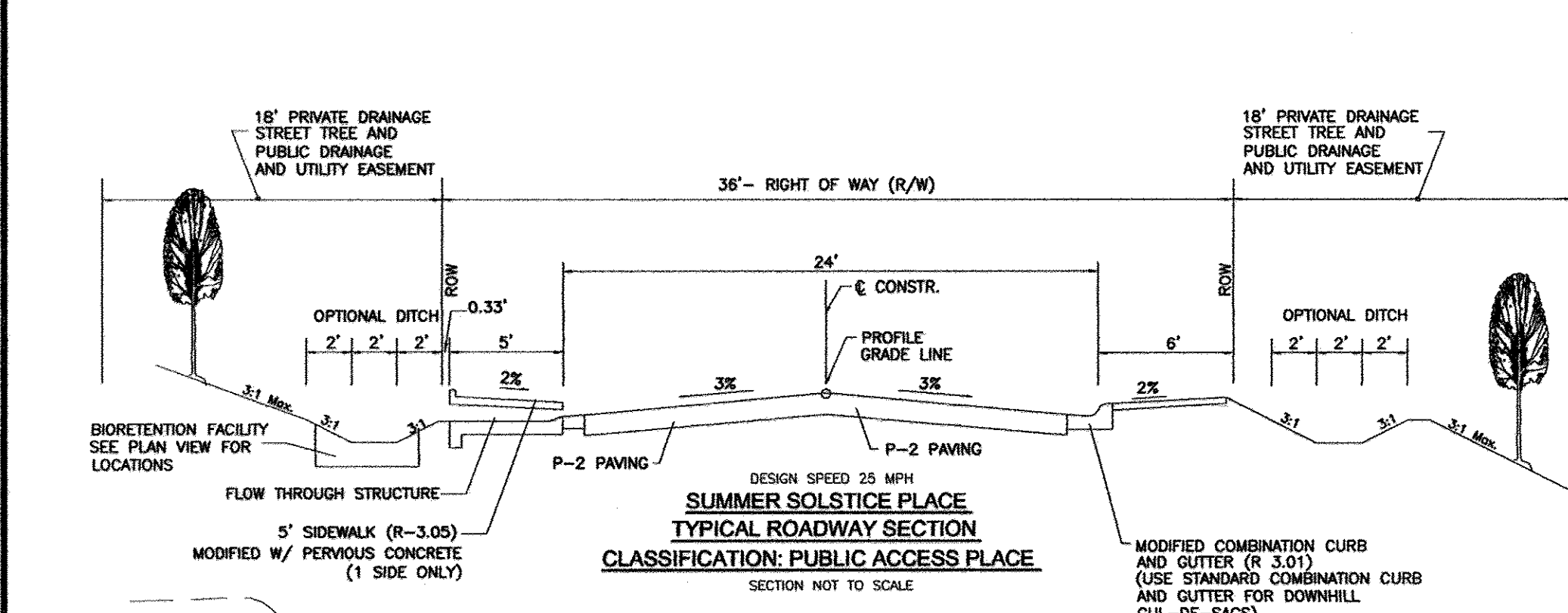
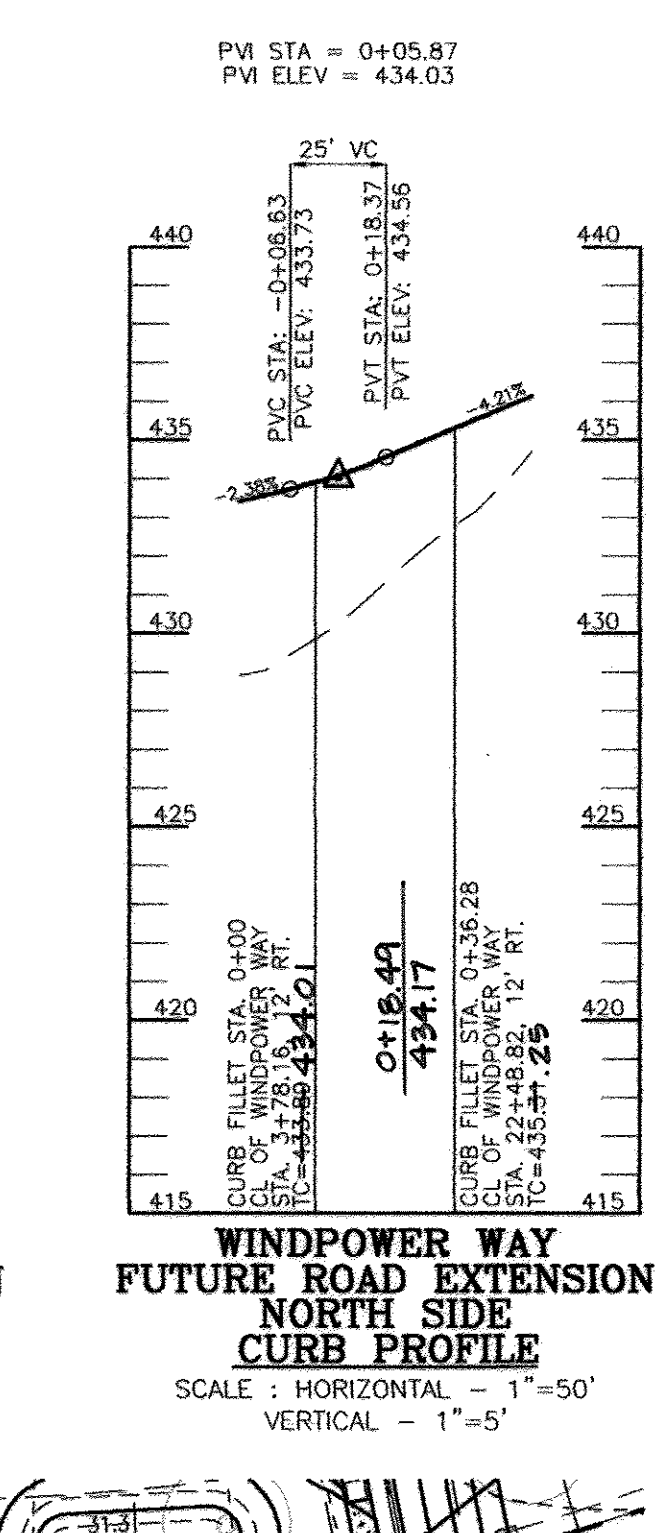
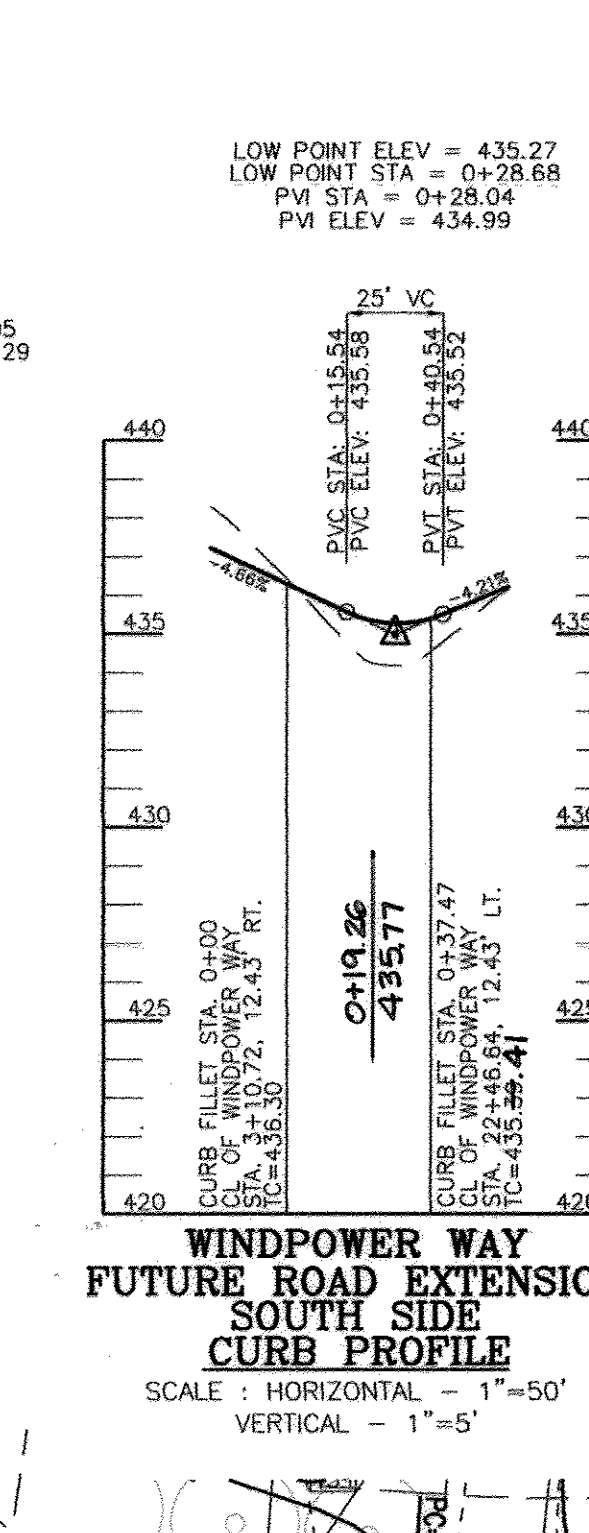
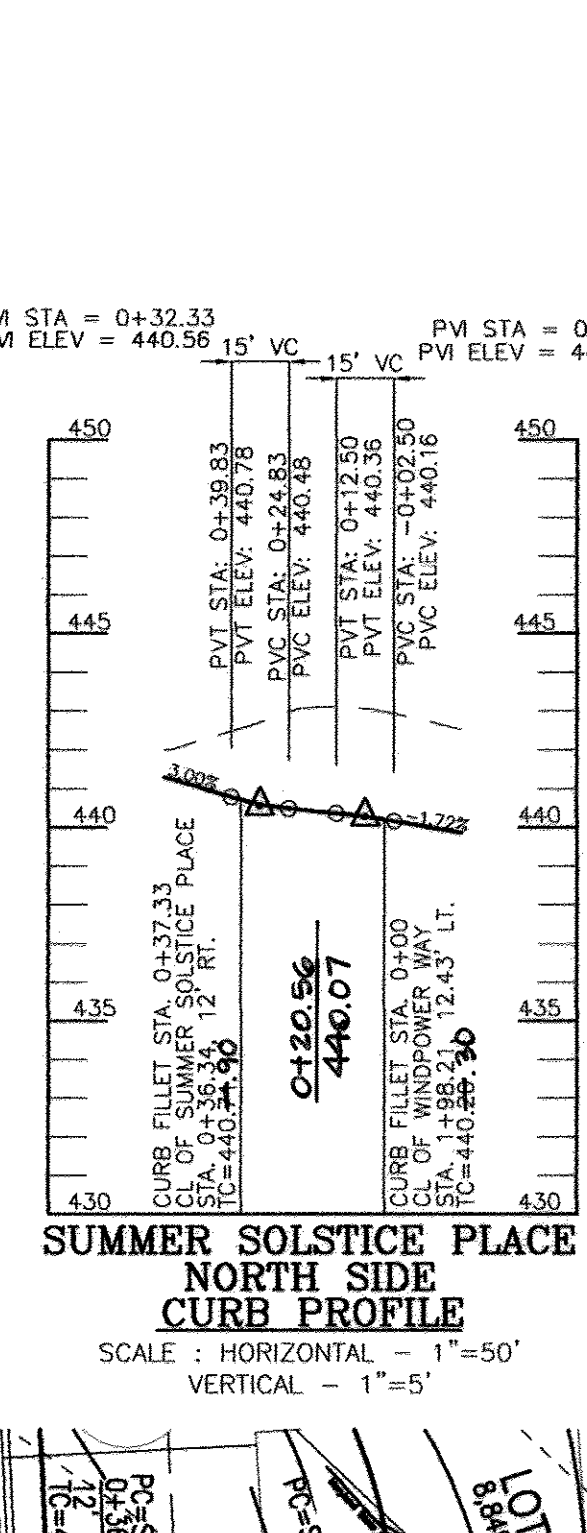
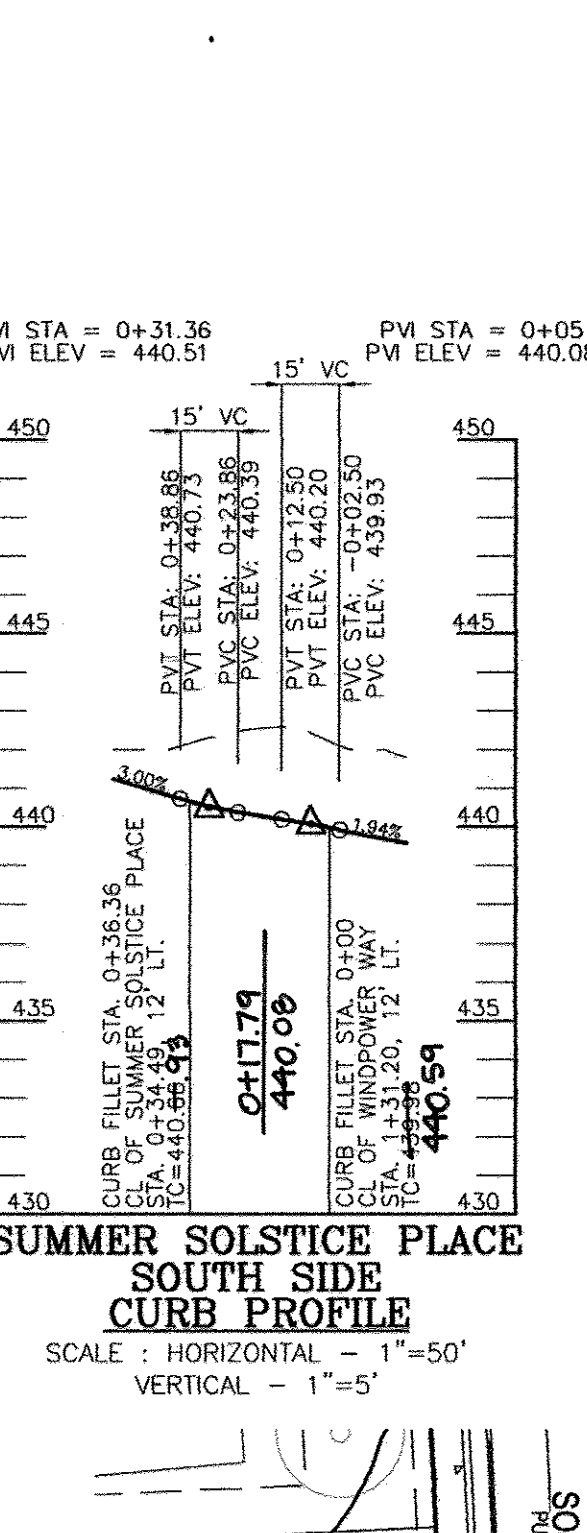
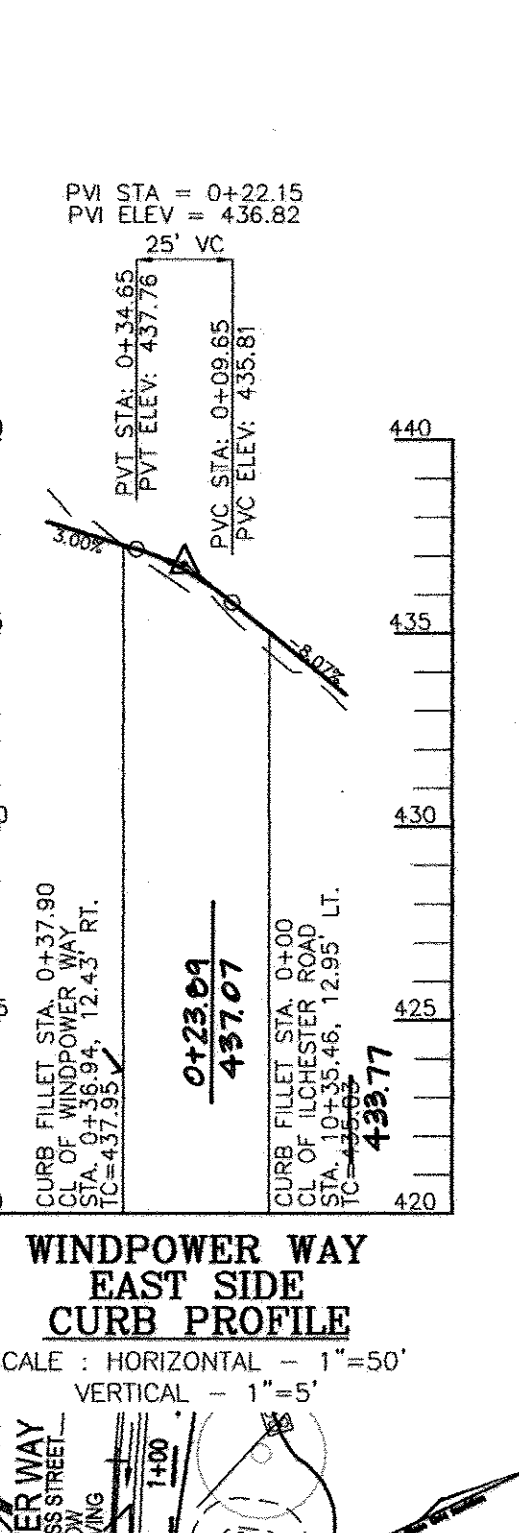
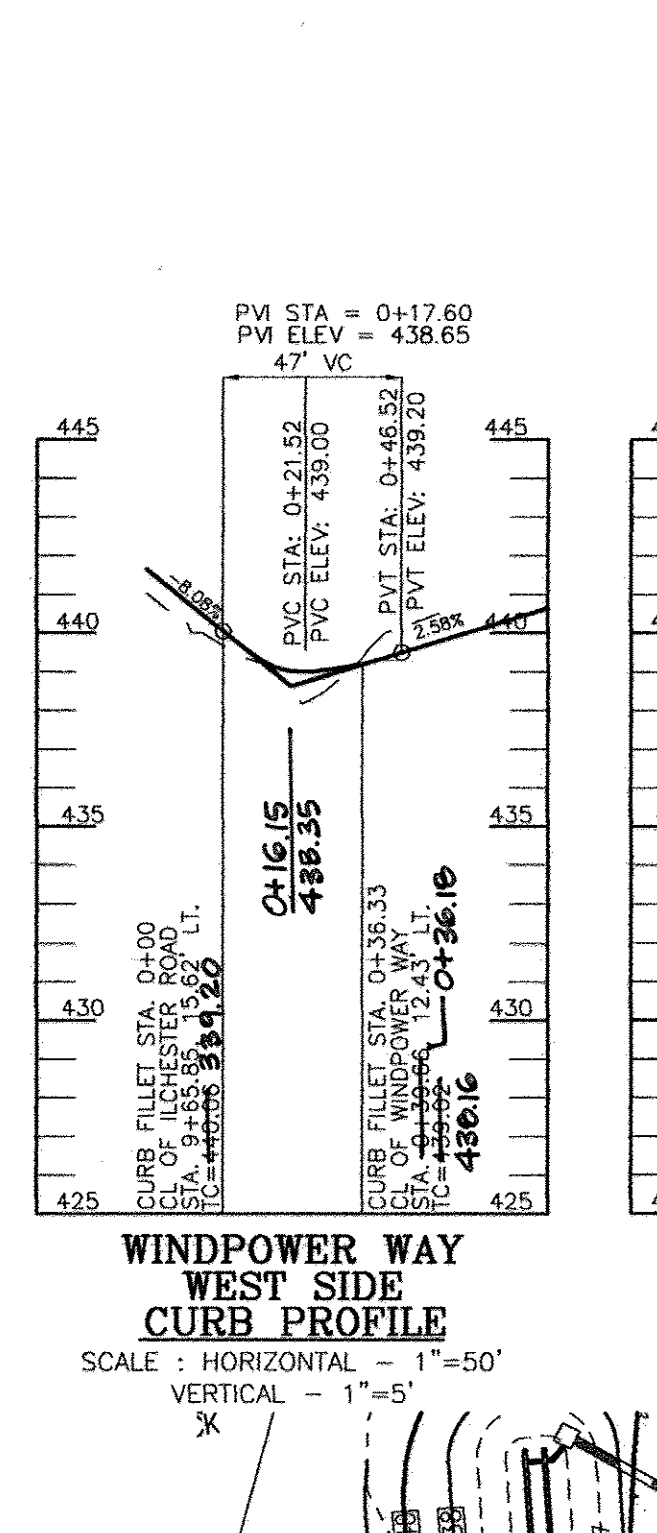
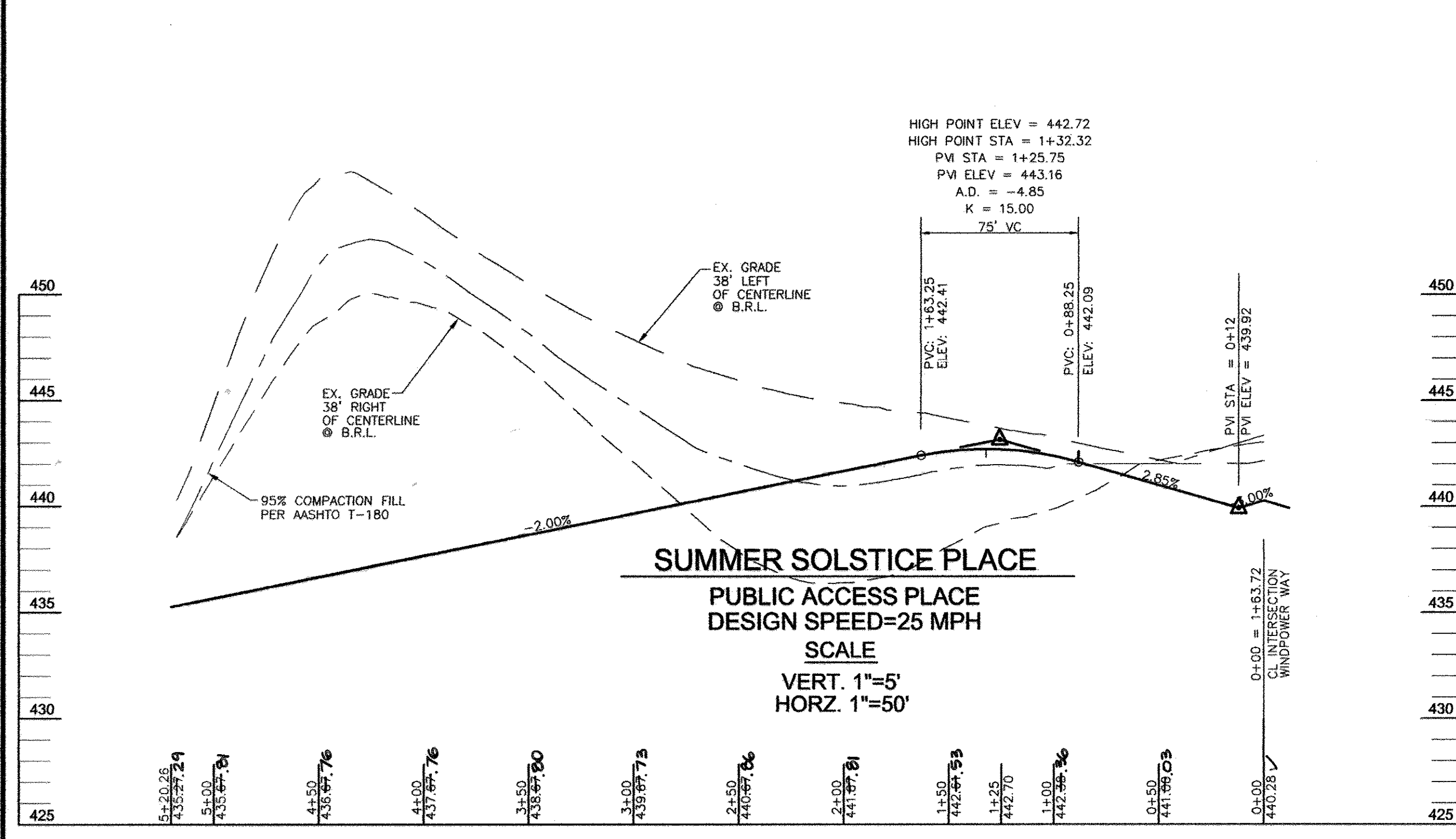
5 SHEET OF 25

APPROVED: DEPARTMENT OF PUBLIC WORKS
 [Signature] 10-21-10
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 10/20/10
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

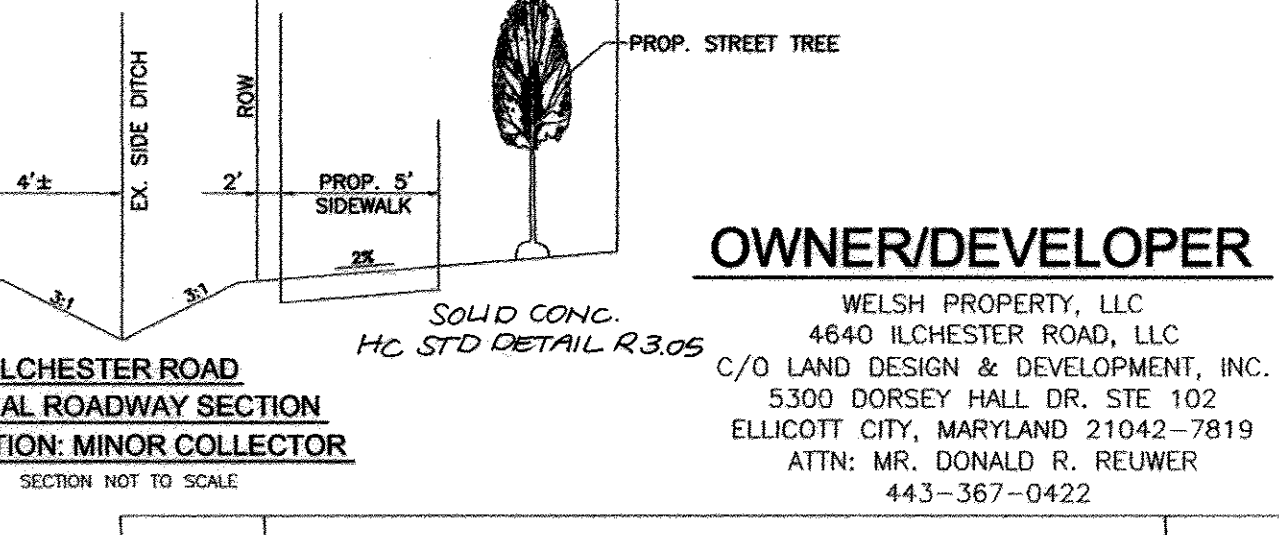
[Signature] 11/01/10
 CHIEF, DIVISION OF LAND DEVELOPMENT

Maryland Department of Transportation
STATE HIGHWAY ADMINISTRATION
 STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES
SHOULDER WORK/2-LANE, 2-WAY
 EQ/LESS THAN 40 MPH
 STANDARD NO. MD 104.02-02



Please note: The table below represents preliminary specification information.

FEATURE	DESCRIPTION	QUANTITY
PHOTOMETRICS	Lighting technology	1, 2, 3, 4 high-intensity LED lights with non-toxic secondary optics
	Light Distribution	80/20 Type II B.I.V.V.
	Output power	600-650W
	Remote mounting	up to 100' from solar panel (using 1/2" galvanized steel pipe)
MECHANICAL	Housing	Die cast aluminum
	Finish	Colorfast DuPont "Dacron" finish
	Hardware	Corrosion resistant
	Aggress protection (IP)	IP65 (NEMA 4X)
DIMENSIONS	Height	4.7 ft (142 cm)
	Width	10.8 ft (329 cm)
	Length	1 Light bar - 17.5 ft (544.5 cm) 2 to 3 Light bars - 22 ft (670 cm) 4 Light bars - 33 ft (1006 cm)
	Weight	1 Light bar (LED) 2 to 3 Light bars (60 to 80) 4 Light bars (80 LED) 22 lb (10 kg) 22 lb (10 kg) 22 lb (10 kg) 22 lb (10 kg)
EFFECTIVE PROJECTED AREA (EPA) (sqm)	1 Light bar	0.52 sq (5.6 sq ft)
	2 to 3 Light bars	0.65 sq (7.0 sq ft)
	4 Light bars	0.82 sq (8.8 sq ft)
	Engine	1500
MECHANICAL	Mounting angles	0° increments between 30°-90°
	Solar Panel	50 lb (22.7 kg)
	Battery Enclosure	22.0 lb (10.0 kg)
	Solar Panel Enclosure	10.2 lb (4.6 kg)
DIMENSIONS	Height	1.37 ft (41.8 cm)
	Width	41.5 ft (126.5 cm)
	Length	20.8 ft (633.8 cm)
	Weight	14 lb (6.3 kg)
ENCLOSURE	Height	14 in (35.5 cm)
	Width	14 in (35.5 cm)
	Length	14 in (35.5 cm)
	Weight	52 lb (23.6 kg)
COMMON SPECIFICATIONS	Housing	Corrosion resistant aluminum
	Support bracket	Hot-dip galvanized aluminum
	Opening profile	Configurable (see mounting profile)
	Operating temperature range	Standard: -20° to 120° F (-30° to 50° C) Steady wind speed not to exceed 100 mph (157 km/h)
ENVIRONMENTAL	Wind load**	Steady wind speed not to exceed 100 mph (157 km/h)
	Shock	1 Hz, 12" amplitude, 20 yrs.
	Vibration	Direct sunlight required
	Other	Direct sunlight required



NO.	REVISION	DATE
4	REVISE TO CHANGE THE STREETLIGHT TYPE	1/23/18
3	REVISE SIDEWALK FROM PERVIOUS PAVEMENT TO STANDARD PAVEMENT ADS TO ILCHESTER ROAD	10/13/15

OWNER/DEVELOPER
 WELSH PROPERTY, LLC
 4640 ILCHESTER ROAD, LLC
 C/O LAND DESIGN & DEVELOPMENT, INC.
 5300 DORSEY HALL DR. STE 102
 ELLICOTT CITY, MARYLAND 21042-7819
 ATTN: MR. DONALD R. REUMER
 443-367-0422

FINAL ROAD CONSTRUCTION PLAN
LOCUST CHAPEL - SECTION I
 A GREEN NEIGHBORHOOD
ROAD CONSTRUCTION
PROFILES AND DETAILS

ZONED: (R-20 AND R-ED) WP-09-92, S-06-006
 TAX MAP #31 GRID 4 HOWARD COUNTY, MARYLAND
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET ELLICOTT CITY, MD 21043 TEL: 410.461.7666 FAX: 410.461.8561

DESIGN BY: JAR
 DRAWN BY: KG
 CHECKED BY: RHY
 DATE: AUGUST 2010
 SCALE: AS SHOWN
 W.O. NO.: 04-151

6 SHEET OF 25

APPROVED: DEPARTMENT OF PUBLIC WORKS
 [Signature] 10-21-10
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 10/20/10
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 11/01/10
 CHIEF, DIVISION OF LAND DEVELOPMENT

AS-BUILT CERTIFICATION
 I HEREBY 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] 10/19/13
 Robert H. Vogel, P.E.

[Signature] 12-4-15
 DATE

STREET LIGHT DETAIL
 NTS

MATCHLINE - SEE SHEET 8

BASIN #1 DATA

EX. DRAINAGE AREA:	3.4 AC
PROP. DRAINAGE AREA:	5.1 AC
WET STORAGE REQUIRED:	8,180 CF
WET STORAGE PROVIDED:	9,283 CF
DRY STORAGE REQUIRED:	9,180 CF
DRY STORAGE PROVIDED:	17,245 CF
TOTAL STORAGE REQUIRED:	18,360 CF
TOTAL STORAGE PROVIDED:	26,528 CF
BOTTOM ELEVATION:	414.00
WEIR ELEVATION:	421.10
WET STORAGE ELEVATION:	414.00-417.70
DRY STORAGE ELEVATION:	417.70-421.10
TOTAL STORAGE DEPTH:	7.10
TOP OF EMBANKMENT:	424.00
CLEANOUT ELEVATION:	415.8
SIDE SLOPES:	3:1
EMERGENCY SPILLWAY:	N/A

BASIN #2 DATA

EX. DRAINAGE AREA:	7.2 AC
PROP. DRAINAGE AREA:	4.8 AC
WET STORAGE REQUIRED:	8,280 CF
WET STORAGE PROVIDED:	8,622 CF
DRY STORAGE REQUIRED:	8,280 CF
DRY STORAGE PROVIDED:	28,956 CF
TOTAL STORAGE REQUIRED:	16,560 CF
TOTAL STORAGE PROVIDED:	29,278 CF
BOTTOM ELEVATION:	411.00
WEIR ELEVATION:	411.00
WET STORAGE ELEVATION:	404.00-407.20
DRY STORAGE ELEVATION:	407.20-411.00
TOTAL STORAGE DEPTH:	7.00
TOP OF EMBANKMENT:	412.70
CLEANOUT ELEVATION:	406.60
SIDE SLOPES:	3:1
EMERGENCY SPILLWAY:	1' @ 411.00

LEGEND:

	EXISTING CONTOUR		WETLANDS BUFFER
	PROPOSED CONTOUR		LIMIT OF WETLAND
	PROPOSED SPOT ELEVATION		STREAM CENTERLINE
	EXISTING SPOT ELEVATION		STREAM BUFFER
	EXISTING CURB AND GUTTER		16,000 LUMEN LED STREET LIGHT
	PROPOSED CURB AND GUTTER		8,500 LUMEN LED STREET LIGHT
	EXISTING UTILITY POLE		PROP. STREET SIGNS
	EXISTING LIGHT POLE		FOREST CONSERVATION AREA (RETENTION)
	EXISTING MAILBOX		RECREATION OPEN SPACE
	EXISTING SIGN		PROP. ROW DEDICATION
	EXISTING SANITARY MANHOLE		STEEP SLOPES (<25%)
	EXISTING SANITARY LINE		MODERATE SLOPES (0-24.9%)
	EXISTING CLEANOUT		EARTHWORK
	EXISTING FIRE HYDRANT		DIRECTION OF FLOW
	EXISTING WATER LINE		EXISTING TREE LINE (FIELD LOCATED)
	PROPOSED STORM DRAIN		EXISTING TREE LINE (APPROXIMATE LOCATION)
	DIRECTION OF FLOW		PROPOSED SIDEWALK
	EXISTING TREE LINE (FIELD LOCATED)		SILT FENCE
	EXISTING FENCE		SUPER SILT FENCE
	PROPERTY LINE		LIMIT OF DISTURBANCE
	RIGHT-OF-WAY LINE		CURB INLET PROTECTION
	SOILS BOUNDARY		AT GRADE INLET PROTECTION
	BGE WIRE ZONES		STABILIZED CONSTRUCTION ENTRANCE
	PUBLIC SEWER, WATER, AND UTILITY EASEMENT		PROPOSED STREET TREE
	PRIVATE DRAINAGE AND UTILITY EASEMENT		PUBLIC SEWER AND UTILITY EASEMENT
	PUBLIC DRAINAGE, STREET TREE, AND UTILITY EASEMENT		PRIVATE USE-IN-COMMON ACCESS EASEMENT
	PUBLIC TREE AND SIDEWALK MAINT. EASEMENT		
	EX. TEMP. DRIVEWAY EASEMENT FOR PARCEL 122		
	PUBLIC DRAINAGE AND UTILITY EASEMENT		

SEDIMENT TRAP #1 DATA

TRAP TYPE:	TYPE II
PROP. DRAINAGE AREA:	1.9 AC
WET STORAGE REQUIRED:	3,240 CF
WET STORAGE PROVIDED:	3,837 CF
DRY STORAGE REQUIRED:	3,280 CF
DRY STORAGE PROVIDED:	4,510 CF
TOTAL STORAGE REQUIRED:	6,480 CF
TOTAL STORAGE PROVIDED:	8,197 CF
BOTTOM ELEV.:	398.0
TOP EMBANKMENT ELEV.:	402.0
WEIR ELEVATION:	399.9@91'2"
WET STORAGE ELEVATION:	398.0-398.9
DRY STORAGE ELEVATION:	398.9-399.9

SEDIMENT TRAP #2 DATA

TRAP TYPE:	TYPE II
PROP. DRAINAGE AREA:	1.9 AC
WET STORAGE REQUIRED:	3,420 CF
WET STORAGE PROVIDED:	3,512 CF
DRY STORAGE REQUIRED:	3,420 CF
DRY STORAGE PROVIDED:	3,468 CF
TOTAL STORAGE REQUIRED:	6,840 CF
TOTAL STORAGE PROVIDED:	6,980 CF
BOTTOM ELEV.:	392.0
TOP EMBANKMENT ELEV.:	396.0
WEIR ELEVATION:	394.9@96'
WET STORAGE ELEVATION:	392.0-393.6
DRY STORAGE ELEVATION:	393.9-394.9

OWNER/DEVELOPER
 WELSH PROPERTY, LLC
 4640 ILCHESTER ROAD, LLC
 C/O LAND DESIGN & DEVELOPMENT, INC.
 5300 DORSEY HALL DR. STE 102
 ELLICOTT CITY, MARYLAND 21042-7819
 ATTN: MR. DONALD R. REUWER
 443-367-0422

NO.	REVISION	DATE
3	REVISE SIDEWALK FROM PAVEMENT TO STANDARD PAVEMENT DOW TO ILLICOTT ROAD	10/13/15
2	REVISE SWM	8/15/12
1	REDUCE SIZE OF TR #42 #2	6/20/12

FINAL ROAD CONSTRUCTION PLAN
LOCUST CHAPEL - SECTION I
 A GREEN NEIGHBORHOOD
GRADING, SEDIMENT AND EROSION CONTROL PLAN

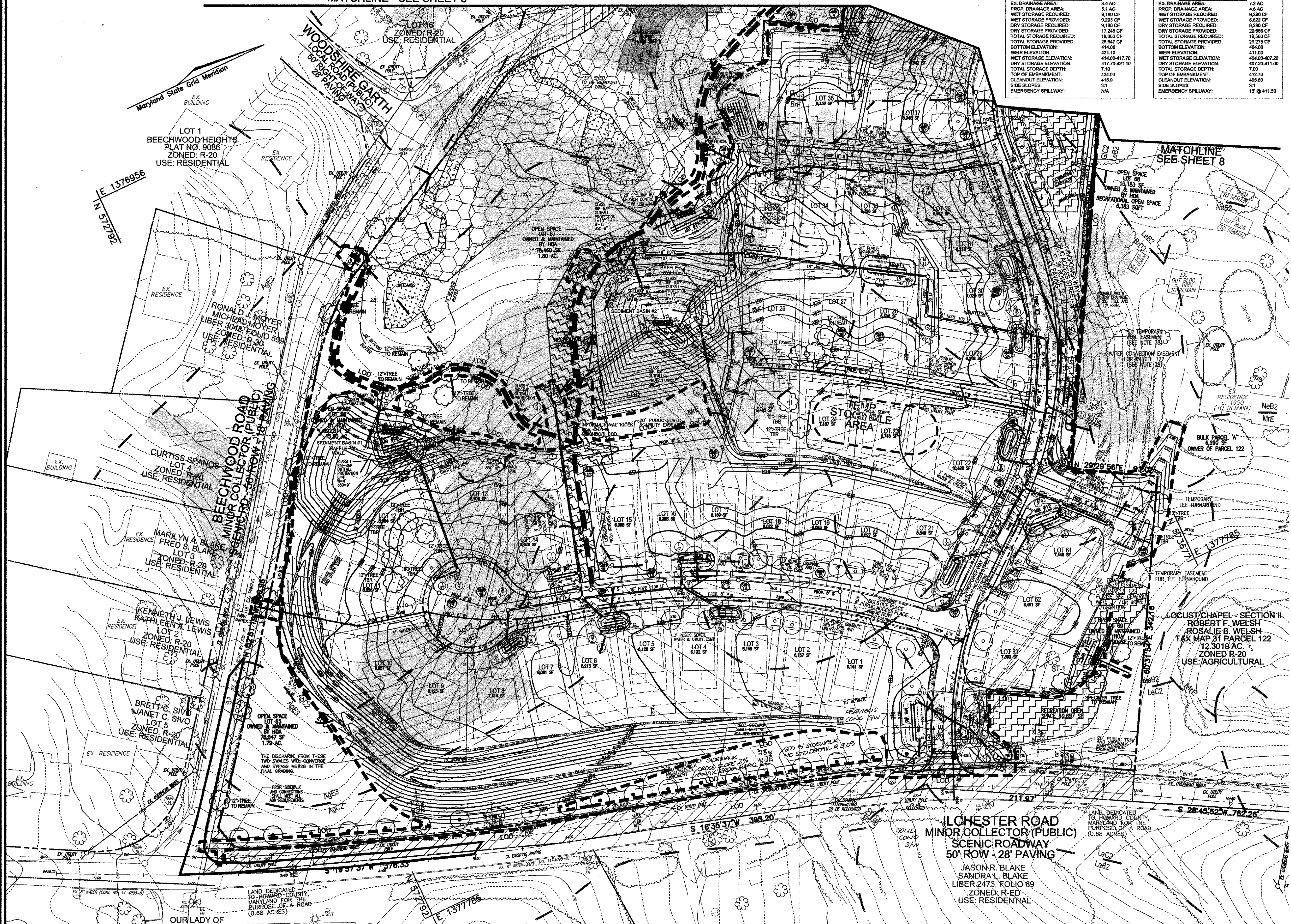
ZONED: (R-20 AND R-ED) LOTS 1-64 & OPEN SPACE 65-69 WP-09-92 SP-10-001
 TAX MAP #31 GRID 4 A SUBDIVISION OF PARCEL 115 HOWARD COUNTY, MARYLAND WP-10-002
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND PARCEL 115

ROBERT H. VOGEL
ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET TEL: 410-461-7666
 ELLICOTT CITY, MD 21043 FAX: 410-461-8961

DESIGN BY: JAR
 DRAWN BY: KG
 CHECKED BY: RHY
 DATE: AUGUST 2010
 SCALE: 1"=50'
 W.O. NO.: 04-151

PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRES 08-31-2011.

7 SHEET OF 25



APPROVED: DEPARTMENT OF PUBLIC WORKS
 10-21-10
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 10/21/10

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

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

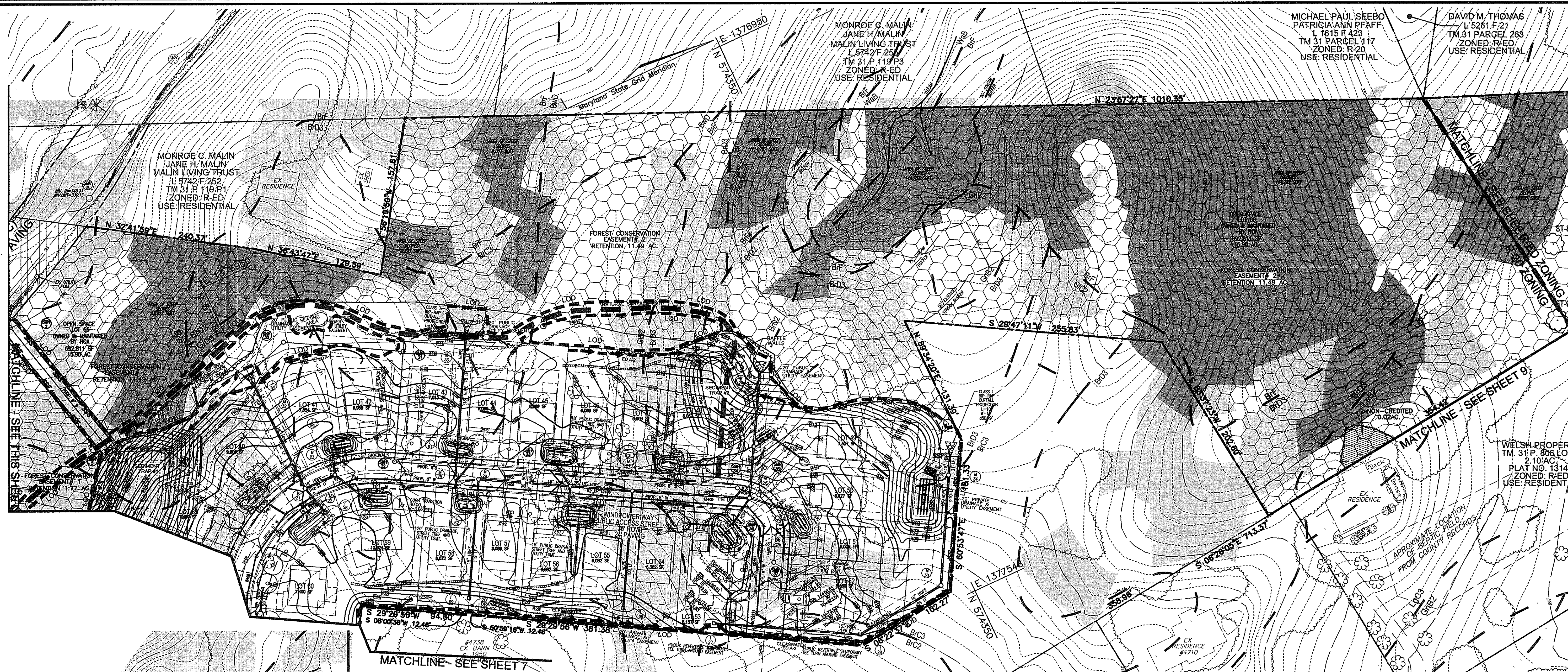
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

APPROVED: DEPARTMENT OF PUBLIC WORKS
 10-21-10
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 10/21/10

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

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



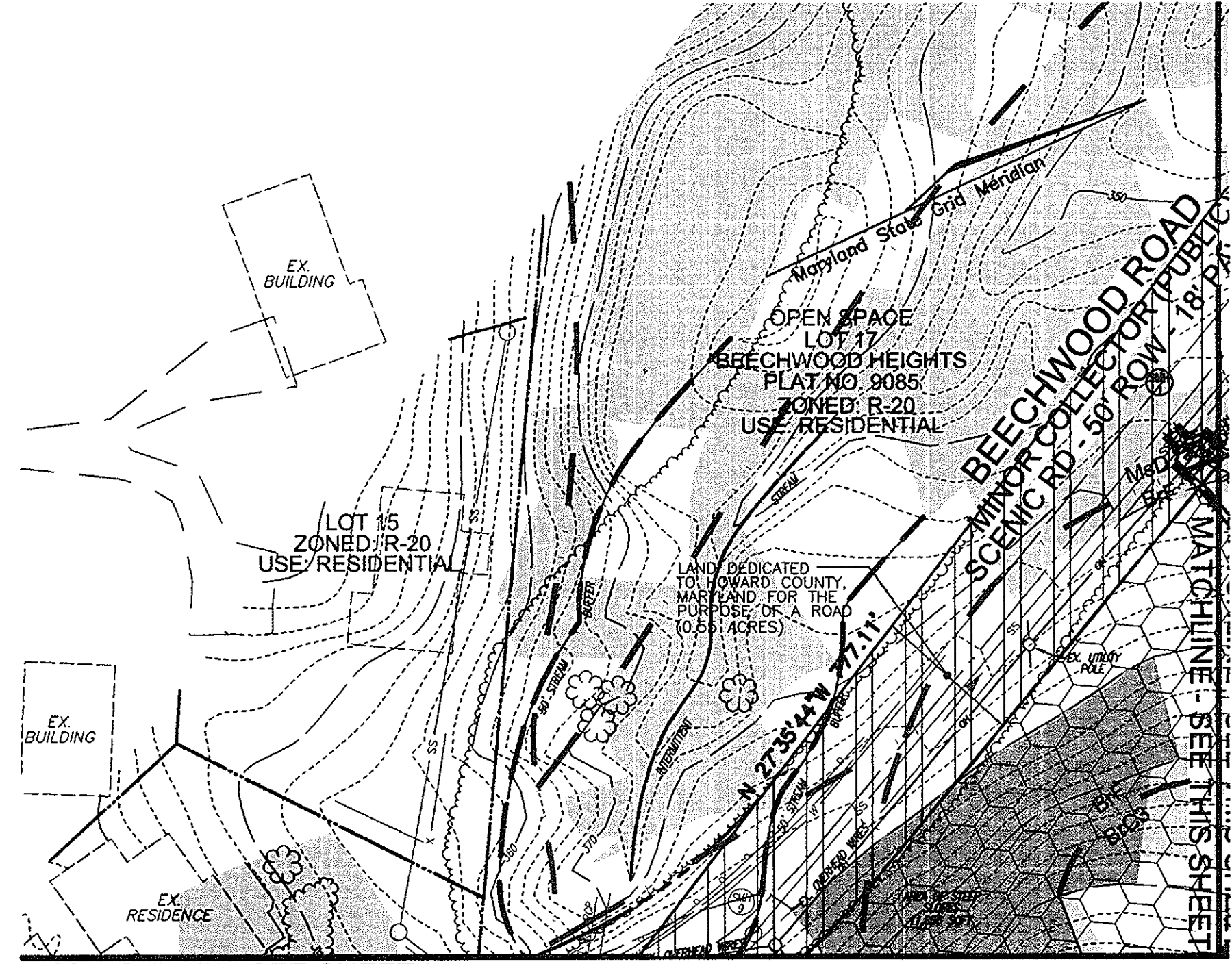
MICHAEL PAUL SEEBO
PATRICIA ANN PFAFF
L 1815 F 423
TM 31 PARCEL 117
ZONED: R-20
USE: RESIDENTIAL

DAVID M. THOMAS
L 5261 F 21
TM 31 PARCEL 263
ZONED: R-ED
USE: RESIDENTIAL

MONROE C. MALIN
JANIE H. MALIN
MALIN LIVING TRUST
L 5742 F 253
TM 31 P 119 P3
ZONED: R-ED
USE: RESIDENTIAL

MONROE C. MALIN
JANIE H. MALIN
MALIN LIVING TRUST
L 5742 F 253
TM 31 P 119 P3
ZONED: R-ED
USE: RESIDENTIAL

WELSH PROPERTY
TM 31 P 806 LOT
2.10 AC.
PLAT NO. 13145
ZONED: R-ED
USE: RESIDENTIAL



OWNER/DEVELOPER
WELSH PROPERTY, LLC
4640 ILLCHESTER ROAD, LLC
C/O LAND DESIGN & DEVELOPMENT, INC.
5300 DORSEY HALL DR. STE 102
ELICOTT CITY, MARYLAND 21042-7819
ATTN: MR. DONALD R. REUWER
443-367-0422

LEGEND:

---	EXISTING CONTOUR	---	SILT FENCE	[Hatched]	FOREST CONSERVATION AREA (RETENTION)
---	PROPOSED CONTOUR	---	SUPER SILT FENCE	[Stippled]	STEEP SLOPES (<25%)
+	EXISTING SPOT ELEVATION	---	LIMIT OF DISTURBANCE	[Diagonal Lines]	MODERATE SLOPES (0-24.9%)
---	EXISTING CURB AND GUTTER	[CIP]	CURB INLET PROTECTION	[Dotted]	EARTHDIKE
---	PROPOSED CURB AND GUTTER	[AGP]	AT GRADE INLET PROTECTION	[Dashed]	EXISTING FENCE
---	EXISTING UTILITY POLE	[Circle]	PROPOSED STREET TREE	[Dashed]	PROPERTY LINE
[Sun]	EXISTING LIGHT POLE	[Circle]	WETLANDS BUFFER	[Dashed]	RIGHT-OF-WAY LINE
[Box]	EXISTING MAILBOX	[Line]	LIMIT OF WETLAND	[Dashed]	SOILS BOUNDARY
[Circle]	EXISTING SIGN	[Line]	STREAM CENTERLINE	[Dashed]	PROPOSED SIDEWALK
[Circle]	EXISTING SANITARY MANHOLE	[Line]	STREAM BUFFER	[Dashed]	RECREATION OPEN SPACE
---	EXISTING SANITARY LINE	[Star]	PROP. STREET LIGHT	[Dashed]	PROP. ROW DEDICATION
---	EXISTING CLEANDOUT	[Star]	9,500 LUMEN LED STREET LIGHT	[Dashed]	BGE WIRE ZONES
---	EXISTING FIRE HYDRANT	[Star]	16,000 LUMEN LED STREET LIGHT	[Dashed]	PUBLIC SEWER, WATER, AND UTILITY EASEMENT
---	EXISTING WATER LINE	[Star]	EXISTING VEGETATION (APPROXIMATE LOCATION)	[Dashed]	PRIVATE DRAINAGE AND UTILITY EASEMENT
---	PROPOSED STORM DRAIN	[Star]	PUBLIC TREE AND SIDEWALK MAINT. EASEMENT	[Dashed]	PUBLIC SEWER, AND UTILITY EASEMENT
---	DIRECTION OF FLOW	[Star]	EX. TEMP. DRIVEWAY EASEMENT FOR PARCEL 122	[Dashed]	PRIVATE USE-IN-COMMON ACCESS EASEMENT
---	EXISTING TIE LINE (FIELD LOCATED)	[Star]		[Dashed]	
---	PUBLIC DRAINAGE, AND UTILITY EASEMENT	[Star]		[Dashed]	

SEE SHEET 7 FOR TRAP DATA.

APPROVED: DEPARTMENT OF PUBLIC WORKS
[Signature]
CHIEF, BUREAU OF HIGHWAYS
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature]
CHIEF, DEVELOPMENT ENGINEERING DIVISION
[Signature]
CHIEF, DIVISION OF LAND DEVELOPMENT

BY THE DEVELOPER:
I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.
[Signature]
SIGNATURE OF DEVELOPER
9/30/10
DATE

BY THE ENGINEER:
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
[Signature]
SIGNATURE OF ENGINEER
9/28/10
DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
[Signature]
HOWARD S.C.D.
DATE

NO.	REVISION	DATE
2	REVISE SWM	8/15/12

FINAL ROAD CONSTRUCTION PLAN
LOCUST CHAPEL - SECTION I
A GREEN NEIGHBORHOOD
GRADING, SEDIMENT AND EROSION CONTROL PLAN
ZONED: (R-20 and R-ED)
TAX MAP #31 GRID 4
1ST ELECTION DISTRICT

LOTS 1-64 & OPEN SPACE 65-69
A SUBDIVISION OF PARCEL 115
HOWARD COUNTY, MARYLAND

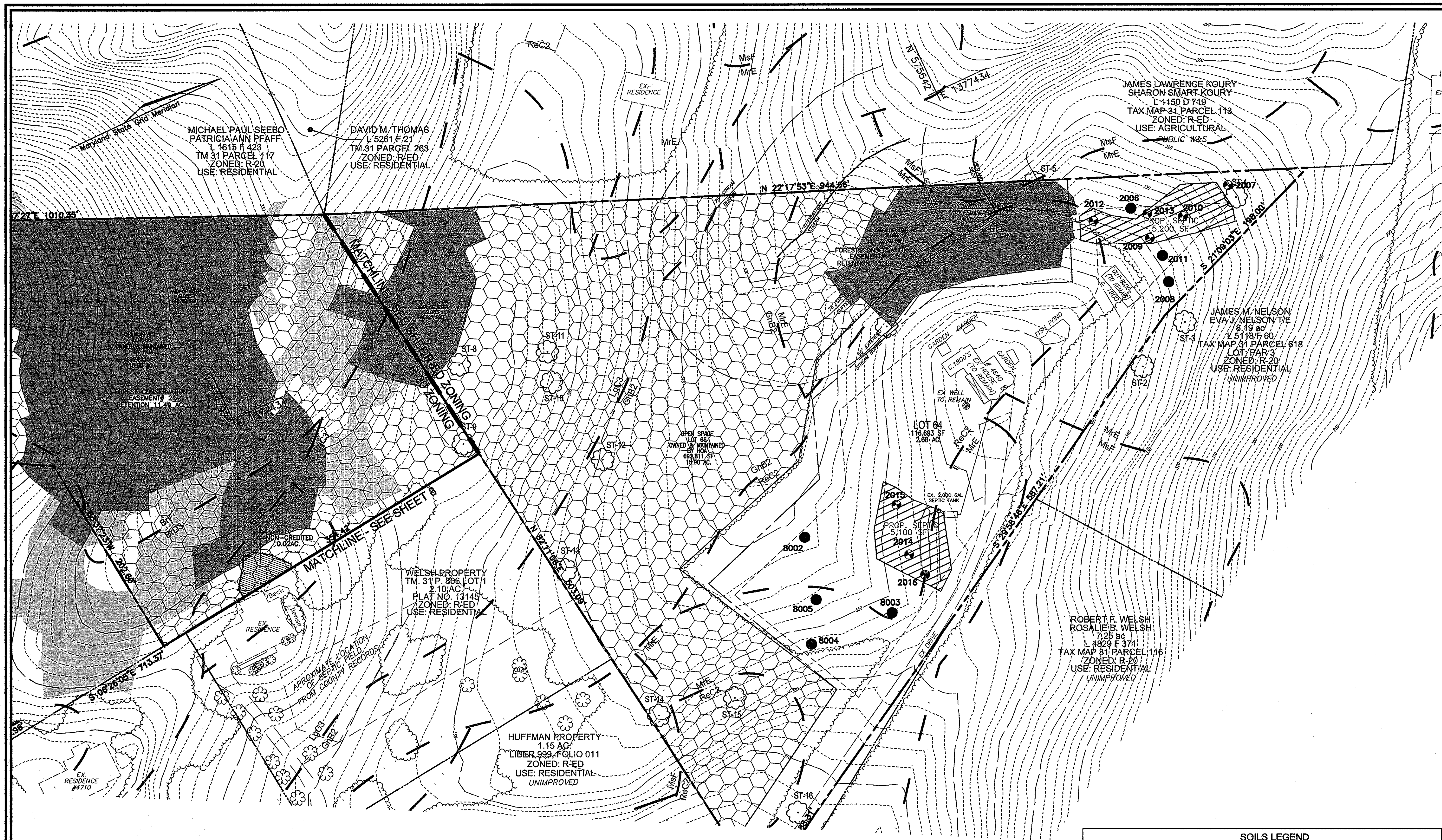
SP-10-001
WP-09-92, S-06-006
WP-10-002
PARCEL 115
HOWARD COUNTY, MARYLAND

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FAX: 410.461.8961

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 18193, EXPIRATION DATE: 09-27-2012

DESIGN BY: JAR
DRAWN BY: KG
CHECKED BY: RHY
DATE: AUGUST 2010
SCALE: 1"=50'
W.O. NO.: 04-151

8 SHEET OF 25



LEGEND:

	EXISTING CONTOUR
	PROPOSED CONTOUR
	PROPOSED SPOT ELEVATION
	EXISTING SPOT ELEVATION
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING MAILBOX
	EXISTING SIGN
	EXISTING TREE LINE (FIELD LOCATED)
	EXISTING VEGETATION (APPROXIMATE LOCATION)
	EXISTING FENCE
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	SOILS BOUNDARY
	SILT FENCE
	SUPER SILT FENCE
	LIMIT OF DISTURBANCE
	WETLANDS BUFFER
	LIMIT OF WETLAND
	STREAM CENTERLINE
	STREAM BUFFER
	FOREST CONSERVATION AREA (RETENTION)
	STEEP SLOPES (<25%)
	MODERATE SLOPES (0-24.9%)
	EARTHWORK
	RECREATION OPEN SPACE
	PROP. ROW DEDICATION
	BGE WIRE ZONES
	PUBLIC SEWER, WATER, AND UTILITY EASEMENT
	PRIVATE DRAINAGE AND UTILITY EASEMENT
	PUBLIC DRAINAGE, STREET TREE, AND UTILITY EASEMENT
	PUBLIC TREE AND SIDEWALK MAINT. EASEMENT
	EX. ROW OF ROADWAY EASEMENT FOR PARCEL 122
	PUBLIC DRAINAGE, AND UTILITY EASEMENT
	PUBLIC SEWER, AND UTILITY EASEMENT
	PRIVATE USE-IN-COMMON ACCESS EASEMENT

OWNER/DEVELOPER
 WELSH PROPERTY, LLC
 4640 ILCHESTER ROAD, LLC
 C/O LAND DESIGN & DEVELOPMENT, INC.
 5300 DORSEY HALL DR. STE 102
 ELLICOTT CITY, MARYLAND 21042-7819
 ATTN: MR. DONALD R. REUWER
 443-367-0422

SOILS LEGEND

SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	"K" FACTOR
AgC2	AURA GRAVELLY LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED	B	NO	0.32
AgE3	AURA GRAVELLY LOAM, 10 TO 30 PERCENT SLOPES, SEVERELY ERODED	B	NO	0.24
Ba	BALE SILT LOAM	D	YES	0.43
Brc2	BRANDYWINE LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	C	NO	0.24
Brc3	BRANDYWINE LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	C	NO	0.24
BrD2	BRANDYWINE LOAM, 15 TO 25 PERCENT SLOPES, MODERATELY ERODED	C	NO	0.20
BrD3	BRANDYWINE LOAM, 15 TO 25 PERCENT SLOPES, SEVERELY ERODED	C	NO	0.20
BrF	BRANDYWINE LOAM, 20 TO 60 PERCENT SLOPES	C	NO	0.20
BwD	BRANDYWINE VERY STONY LOAM, 3 TO 25 PERCENT SLOPES	C	NO	0.20
GIB2	GLENELG LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B	NO	0.32
GIC2	GLENELG LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B	NO	0.32
GIC3	GLENELG LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B	NO	0.32
GrB2	GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	C	NO*	0.32
LeB2	LEGORE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B	NO	0.24
LeC2	LEGORE SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B	NO	0.24
LgC3	LEGORE SILTY CLAY LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B	NO	0.24
MdD	MONTALTO AND RELAY VERY STONY SILT LOAMS, 3 TO 25 PERCENT SLOPES	C	NO	0.32
MrE	MONTALTO AND RELAY SOILS, 15 TO 45 PERCENT SLOPES	C	NO	0.24
MrF	MONTALTO AND RELAY SOILS, VERY STONY SILT LOAMS, 25-60% SLOPES	C	NO	0.32
NaB2	NESHAMINY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B	NO	0.32
NcC2	NESHAMINY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B	NO	0.32
RcC2	RELAY SILT LOAM, 3 TO 15 PERCENT SLOPES, MODERATELY ERODED	B	NO	0.24
W6B	WATCHUNG SILT LOAM, 3 TO 8 PERCENT SLOPES	D	YES	0.43

* MAY POTENTIALLY CONTAIN HYDRIC INCLUSIONS
 SOURCE: USDA - SCS, 1988 SOIL SURVEY OF HOWARD COUNTY, MARYLAND.

NO.	REVISION	DATE

FINAL ROAD CONSTRUCTION PLAN
LOCUST CHAPEL - SECTION I
 A GREEN NEIGHBORHOOD
GRADING, SEDIMENT AND EROSION CONTROL PLAN

ZONED: (R-20 and R-ED) LOTS 1-64 & OPEN SPACE 65-69 WP-09-92, S-06-006
 TAX MAP #31 GRID 4 A SUBDIVISION OF PARCEL 115 WP-10-002
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND PARCEL 115 HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET TEL: 410.461.7666
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PROFESSIONAL CERTIFICATE
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DESIGN BY: JAR
 DRAWN BY: KG
 CHECKED BY: RHV
 DATE: AUGUST 2010
 SCALE: 1"=50'
 W.O. NO.: 04-151

9 SHEET OF 25

APPROVED: DEPARTMENT OF PUBLIC WORKS

 CHIEF, BUREAU OF HIGHWAYS
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

 CHIEF, DEVELOPMENT ENGINEERING DIVISION

 CHIEF, DIVISION OF LAND DEVELOPMENT

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

SIGNATURE OF DEVELOPER
 DATE: 9/30/10

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

SIGNATURE OF ENGINEER
 DATE: 9/28/10

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

HOWARD S.C.D.
 DATE: 9/28/10



SITE LEGEND

- SITE PROPERTY LINE
- - - EX. 2' CONTOUR
- - - EX. 10' CONTOUR
- ~ ~ ~ EX. WOODS LINE
- - - SOIL GROUP DIVIDE
- - - HYDROLOGIC SOIL GROUP DIVIDE
- - - PROPOSED DRAINAGE SUBAREA
- ▨ FOREST CONSERVATION AREA (RETENTION)
- ⊙ RAINWATER HARVESTING & ROOFTOP DISCONNECTS (RAIN BARRELS)
- ▨ RAIN BARREL ONLY
- ▨ PERMEABLE PAVEMENT (PAVERS)
- ▨ PERMEABLE PAVEMENT (PERMEABLE CONCRETE)
- ▨ PAVEMENT
- ← GRASS SWALE
- ▨ ROOFTOP DISCONNECTS

PLAN
SCALE: 1" = 30'

OWNER/DEVELOPER
WELSH PROPERTY, LLC
4640 ILCHESTER ROAD, LLC
C/O LAND DESIGN & DEVELOPMENT, INC.
5300 DORSEY HALL DR. STE 102
ELLCOTT CITY, MARYLAND 21042-7819
ATTN: MR. DONALD R. REUWER
443-367-0422

NO.	REVISION	DATE

FINAL ROAD CONSTRUCTION PLAN
LOCUST CHAPEL - SECTION I
A GREEN NEIGHBORHOOD
STORMDRAIN AND ESD DA MAP

ZONED: (R-20 AND R-4D) LOTS 1-64 AND OPEN SPACE 65-69 WP-09-92, S-06-006
TAX MAP #31 GRID 4 A SUBDIVISION OF PARCEL 115 WP-10-002
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND PARCEL 115 HOWARD COUNTY, MARYLAND

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

PROFESSIONAL CERTIFICATE

DESIGN BY: JAR
DRAWN BY: KG
CHECKED BY: RHY
DATE: AUGUST 2010
SCALE: AS SHOWN
W.O. NO.: 04-151

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2013

11 SHEET OF 25

APPROVED: DEPARTMENT OF PUBLIC WORKS
10-21-10
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
10/21/10
11/1/10
11/1/10



PLAN
SCALE: 1" = 30'

- SITE LEGEND**
- SITE PROPERTY LINE
 - - - EX. 2' CONTOUR
 - - - EX. 10' CONTOUR
 - ~ ~ ~ EX. WOODS LINE
 - - - SOIL GROUP DIVIDE
 - - - HYDROLOGIC SOIL GROUP DIVIDE
 - - - PROPOSED DRAINAGE SUBAREA
 - [Pattern] FOREST CONSERVATION AREA (RETENTION)
 - [Pattern] RAINWATER HARVESTING & ROOFTOP DISCONNECTS (RAIN BARRELS)
 - [Pattern] RAIN BARREL ONLY
 - [Pattern] PERMEABLE PAVEMENT (PAVERS)
 - [Pattern] PERMEABLE PAVEMENT (PERMEABLE CONCRETE)
 - [Pattern] PAVEMENT
 - ← GRASS SWALE
 - [Pattern] ROOFTOP DISCONNECTS

LOCATION	DRAINAGE AREA (AC)	IMPERVIOUS %	"C" FACTOR
MB-1	0.20	58%	0.56
MB-2	0.17	62%	0.60
MB-3	0.19	51%	0.52
MB-4	0.24	60%	0.58
MB-5	0.21	53%	0.53
MB-6	0.38	41%	0.44
MB-7	0.17	56%	0.55
MB-8	0.20	54%	0.54
MB-9	0.16	64%	0.62
MB-10	0.15	69%	0.65
MB-11	0.15	67%	0.64
MB-12	0.30	51%	0.53
MB-13	0.42	22%	0.34
MB-14	0.26	79%	0.72
MB-15	0.48	28%	0.38
MB-16	0.17	85%	0.75
MB-17	0.13	46%	0.50
MB-18	0.16	81%	0.73
MB-19	0.16	38%	0.44
MB-20	0.15	75%	0.69
MB-21	0.21	70%	0.66
MB-22A	0.19	49%	0.53
MB-22B	0.17	5%	0.24
MB-23	0.16	88%	0.78
MB-24	0.33	65%	0.63
MB-25	0.44	55%	0.56
MB-26	0.28	69%	0.65
MB-27	0.43	72%	0.67
MB-28	0.45	65%	0.62
MB-29	0.44	20%	0.32
MB-30	0.78	11%	0.27
MB-31	0.41	34%	0.43
DA-4	0.43	12%	0.27
DA-5	0.41	19%	0.29
DA-6	0.91	0%	0.02
DA-8	1.23	15%	0.26
DA-9	0.59	18%	0.28
DA-10	1.71	18%	0.16
DA-14	0.88	7%	0.24

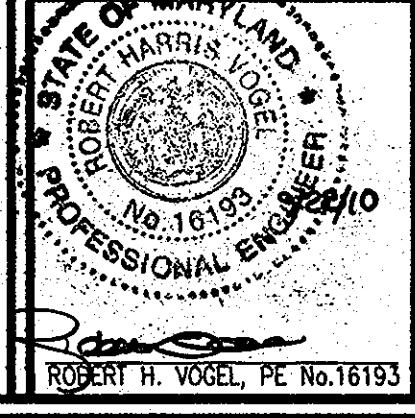
OWNER/DEVELOPER
 WELSH PROPERTY, LLC
 4640 ILLCHESTER ROAD, LLC
 C/O LAND DESIGN & DEVELOPMENT, INC.
 5300 DORSEY HALL DR. STE 102
 ELLICOTT CITY, MARYLAND 21042-7819
 ATTN: MR. DONALD R. REUWER
 443-367-0422

NO.	REVISION	DATE

FINAL ROAD CONSTRUCTION PLAN
LOCUST CHAPEL - SECTION I
 A GREEN NEIGHBORHOOD
STORMDRAIN AND ESD DA MAP

ZONED: (R-20 AND R-ED) LOTS 1-84 & OPEN SPACE 65-69 WP-09-92, S-06-006
 A SUBDIVISION OF PARCEL 115 WP-10-002
 TAX MAP #31 GRID 4 HOWARD COUNTY, MARYLAND PARCEL 115
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET TEL: 410.461.7666
 ELLICOTT CITY, MD 21043 FAX: 410.461.6961



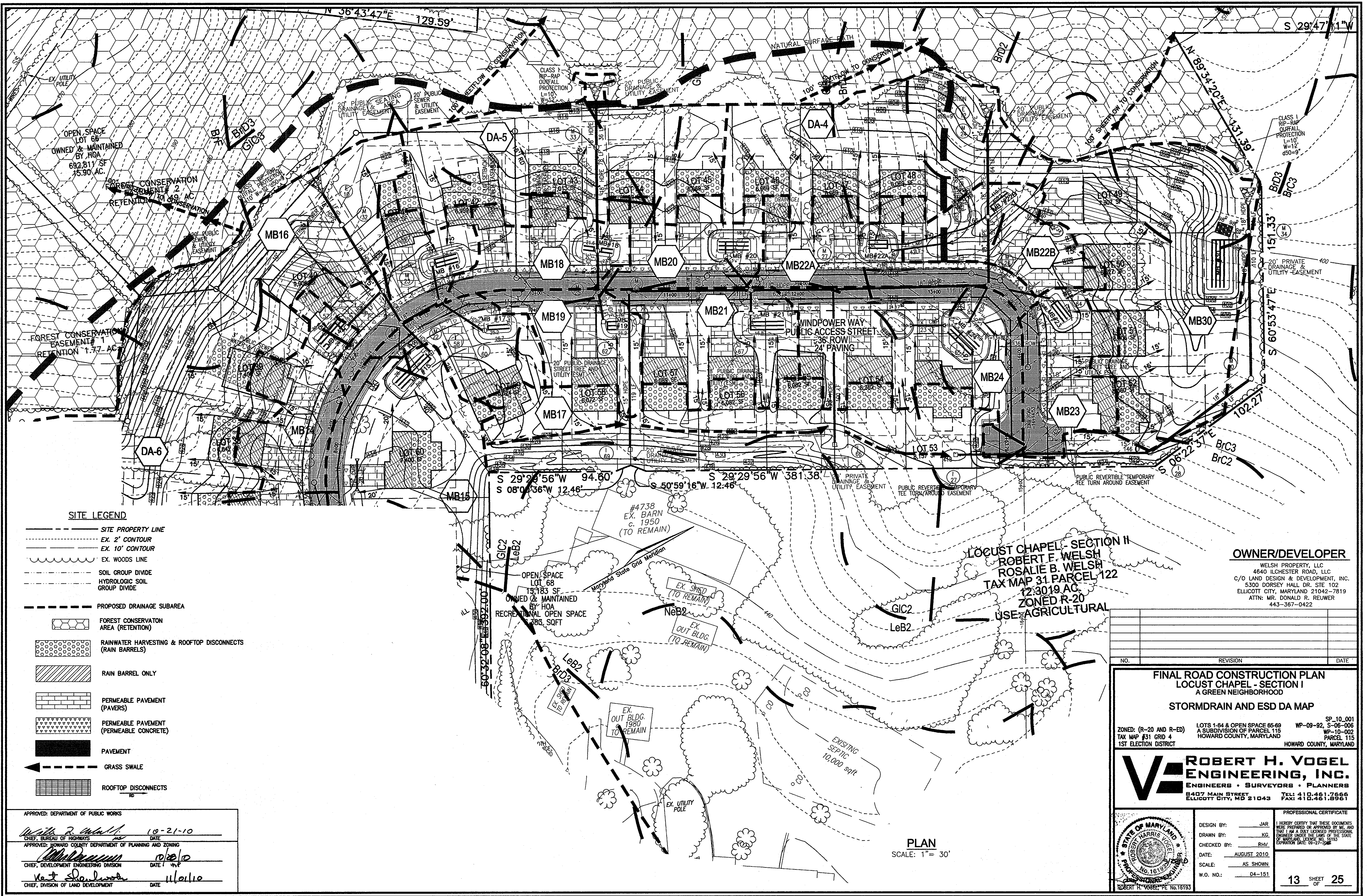
PROFESSIONAL CERTIFICATE

DESIGN BY: JAR
 DRAWN BY: KG
 CHECKED BY: RHY
 DATE: AUGUST 2010
 SCALE: AS SHOWN
 W.O. NO.: 04-151

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A duly LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE 08-27-2012.

12 SHEET OF 25

APPROVED: DEPARTMENT OF PUBLIC WORKS
Matthew J. Smith 10-21-10
 CHIEF, BUREAU OF HIGHWAYS
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Robert H. Vogel 10/21/10
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
Kent S. Schaefer 11/01/10
 CHIEF, DIVISION OF LAND DEVELOPMENT



SITE LEGEND

- SITE PROPERTY LINE
- - - EX. 2' CONTOUR
- - - EX. 10' CONTOUR
- - - EX. WOODS LINE
- - - SOIL GROUP DIVIDE
- - - HYDROLOGIC SOIL GROUP DIVIDE
- - - PROPOSED DRAINAGE SUBAREA
- [Pattern] FOREST CONSERVATION AREA (RETENTION)
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- [Pattern] PERMEABLE PAVEMENT (PERMEABLE CONCRETE)
- [Pattern] PAVEMENT
- ← GRASS SWALE
- [Pattern] ROOFTOP DISCONNECTS

APPROVED: DEPARTMENT OF PUBLIC WORKS
Walter R. Walsh 10-21-10
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Robert H. Vogel 10/21/10
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Neil S. Shaw 11/11/10
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

PLAN
 SCALE: 1" = 30'

OWNER/DEVELOPER

WELSH PROPERTY, LLC
 4640 ILLICESTER ROAD, LLC
 C/O LAND DESIGN & DEVELOPMENT, INC.
 5300 DORSEY HALL DR. STE 102
 ELLICOTT CITY, MARYLAND 21042-7819
 ATTN: MR. DONALD R. REUWER
 443-367-0422

LOCUST CHAPEL - SECTION II
 ROBERT F. WELSH
 ROSALIE B. WELSH
 TAX MAP 31 PARCEL 122
 12,3019 AC.
 ZONED R-20
 USE AGRICULTURAL

NO.	REVISION	DATE

FINAL ROAD CONSTRUCTION PLAN
LOCUST CHAPEL - SECTION I
 A GREEN NEIGHBORHOOD
STORMDRAIN AND ESD DA MAP

ZONED: (R-20 AND R-E) LOTS 1-64 & OPEN SPACE 65-69 SP_10_001
 TAX MAP #31 GRID 4 A SUBDIVISION OF PARCEL 115 WP-09-92, S-06-006
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND PARCEL 115 WP-10-002

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

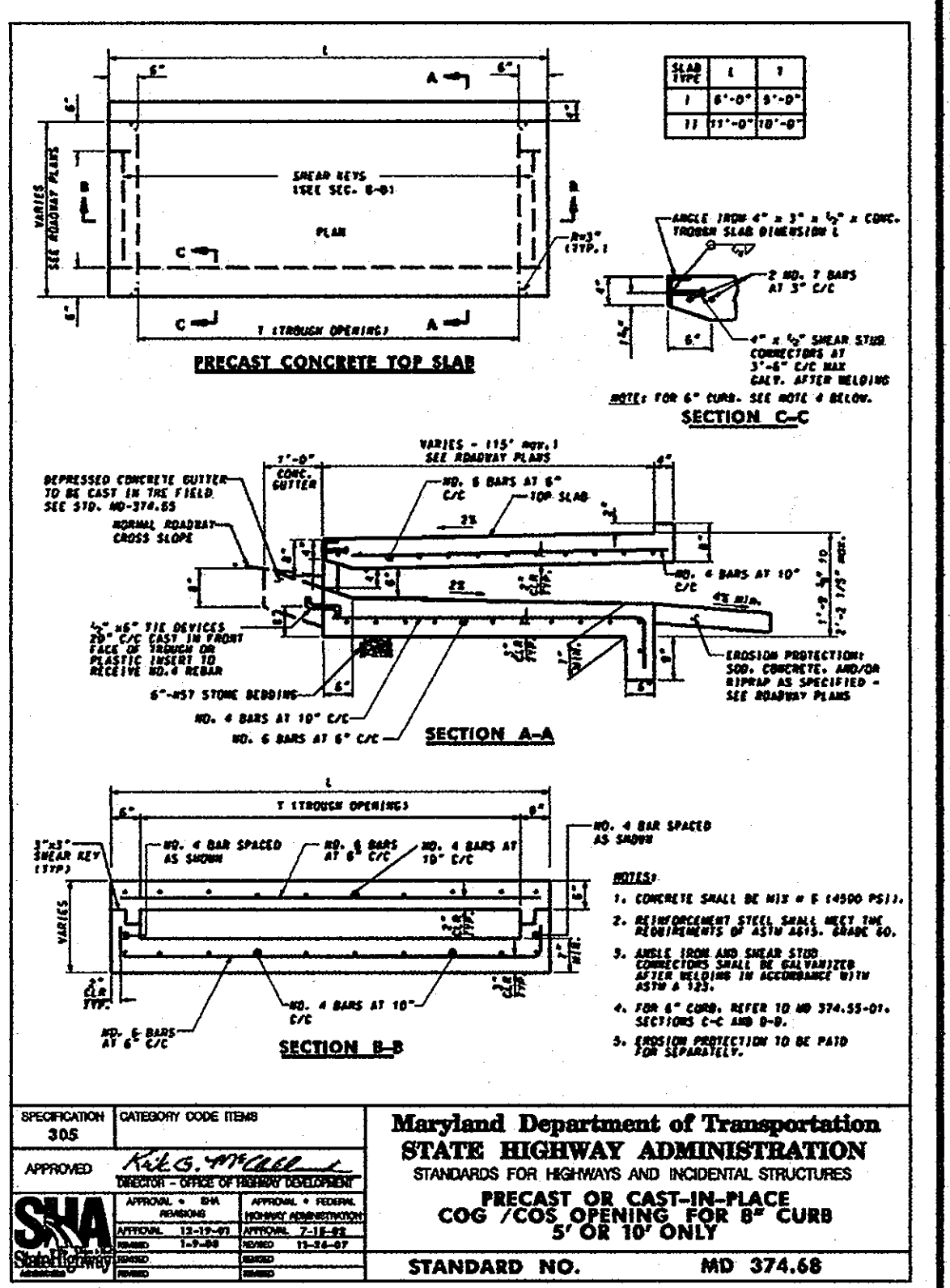
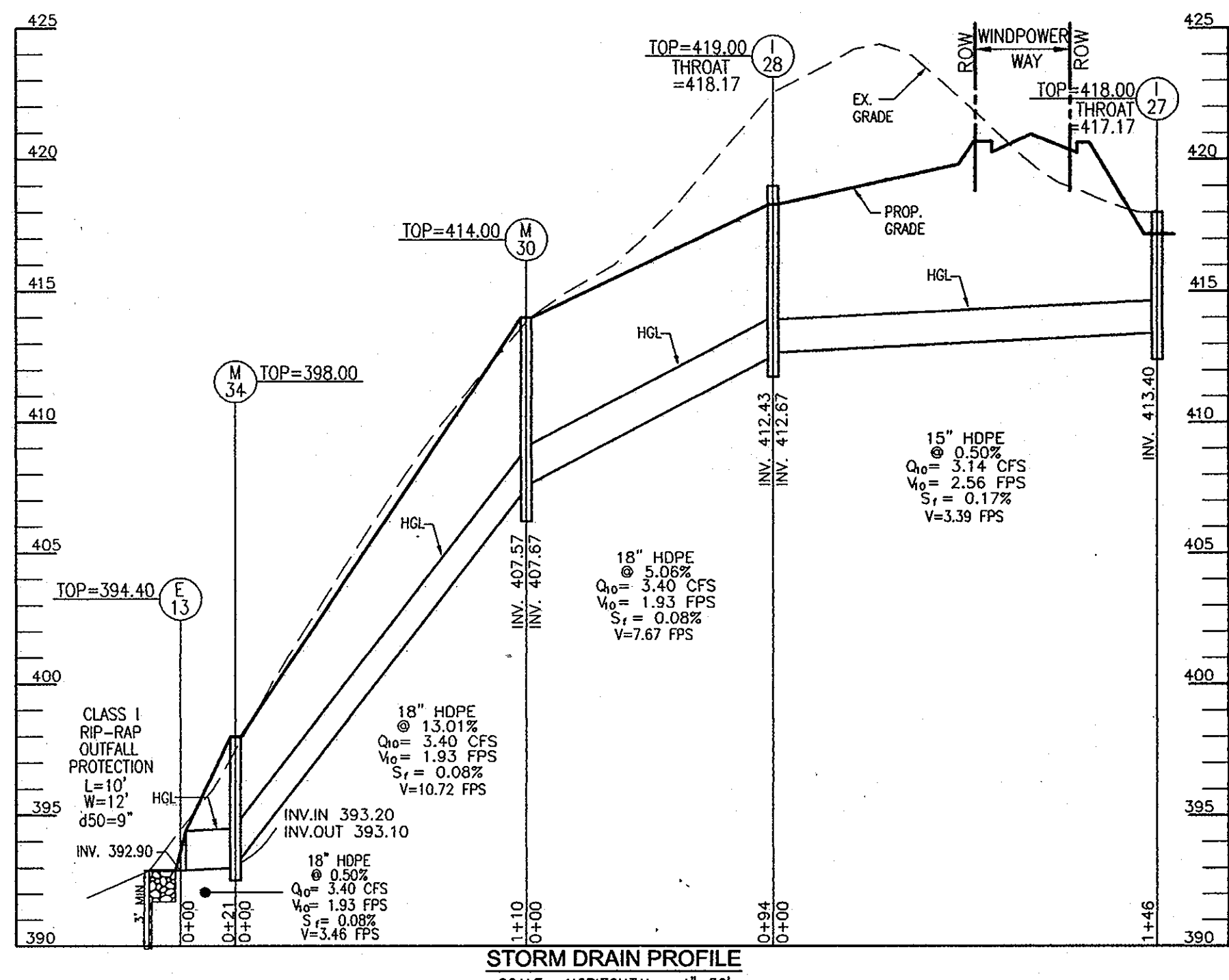
DESIGN BY: JAR
 DRAWN BY: KG
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13 SHEET OF 25

INLET SCHEDULE																			
NO.	TYPE	LOCATION	TOP ELEV.*	THROAT	INV. IN	INV. OUT	REMARKS	UNDER DRAIN INV. OUT	NO.	TYPE	LOCATION	TOP ELEV.*	THROAT	INV. IN	INV. OUT	REMARKS	UNDER DRAIN INV. OUT		
1-1	MD SHA 5' PRECAST COG INLET	SUMMER SOLSTICE PLACE 2+48.89, 12.43' LT.	440.92	440.32	-	-	MD 374.68	-	1-36	TYPE 'D' INLET	N 573085.50 E 137757.96	437.72	436.89	-	430.57	D-4.10	433.22		
1-2	MD SHA 5' PRECAST COG INLET	SUMMER SOLSTICE PLACE 3+69.90, 12.43' LT.	438.50	437.90	-	-	MD 374.68	-	1-37	TYPE 'D' INLET	N 573182.62 E 137756.88	439.50	438.67	-	435.46	D-4.10	435.00*		
1-3	MD SHA 5' PRECAST COG INLET	SUMMER SOLSTICE PLACE 4+62.67, 12.43' LT.	436.65	436.05	-	-	MD 374.68	-	1-38	TYPE 'D' INLET	N 573201.22 E 137762.65	440.14	439.31	-	432.86	D-4.10	435.64		
1-4	MD SHA 5' PRECAST COG INLET	SUMMER SOLSTICE PLACE 2+81.21, 12.43' RT.	440.28	439.68	-	-	MD 374.68	-	1-39	TYPE 'D' INLET	N 573292.2 E 1377409.52	425.23	423.40	-	420.40	D-4.10	-		
1-5	MD SHA 5' PRECAST COG INLET	SUMMER SOLSTICE PLACE 4+21.38, 12.43' RT.	437.47	436.87	-	-	MD 374.68	-	1-43	TYPE 'D' INLET	N 573382.59 E 1377296.92	414.83	414.00	405.43	405.33	D-4.10	-		
1-6	MD SHA 5' PRECAST COG INLET	WINDPOWER WAY 0+52.41, 12.43' LT.	438.36	437.76	-	-	MD 374.68	-	1-44	TYPE 'D' INLET	N 573510.71 E 1377378.78	419.00	418.17	410.85	410.75	D-4.10	414.50		
1-7	MD SHA 5' PRECAST COG INLET	WINDPOWER WAY 0+55.22, 12.43' RT.	438.43	437.83	-	-	MD 374.68	-	1-45	TYPE 'D' INLET	N 573614.57 E 1377495.84	431.33	430.50	428.13	420.00	D-4.10	427.25		
1-8	MD SHA 5' PRECAST COG INLET	WINDPOWER WAY 2+01.31, 12.43' LT.	440.16	439.56	-	-	MD 374.68	-	1-46	TYPE 'D' INLET	N 573631.37 E 1377437.59	432.79	431.96	-	428.70	D-4.10	428.29*		
1-9	MD SHA 5' PRECAST COG INLET	WINDPOWER WAY 3+78.09, 12.43' LT.	433.89	433.29	-	-	MD 374.68	-	1-47	TYPE 'D' INLET	N 573621.77 E 1377595.10	431.00	430.17	-	425.20	D-4.10	-		
1-10	MD SHA 5' PRECAST COG INLET	WINDPOWER WAY 4+71.54, 12.43' LT.	432.53	431.93	-	-	MD 374.68	-	1-48	TYPE 'D' INLET	N 573540.60 E 1377606.99	433.11	432.28	-	426.70	D-4.10	428.261		
1-11	MD SHA 5' PRECAST COG INLET	WINDPOWER WAY 5+68.38, 12.43' LT.	433.57	432.97	-	-	MD 374.68	-	1-49	TYPE 'D' INLET	N 573564.99 E 1377682.98	436.09	435.26	-	427.77	D-4.10	431.59		
1-12	MD SHA 5' PRECAST COG INLET	WINDPOWER WAY 2+98.53, 12.43' RT.	436.87	436.27	-	-	MD 374.68	-	1-50	TYPE 'D' INLET	N 573610.19 E 1377713.24	436.00	435.17	-	430.90	D-4.10	-		
1-12A	MD SHA 5' PRECAST COG INLET	WINDPOWER WAY 2+28.61, 12.43' LT.	436.15	435.55	-	-	MD 374.68	-	1-51	TYPE 'D' INLET	N 573446.75 E 1377678.10	439.38	438.55	-	430.87	D-4.10	434.98		
1-14	MD SHA 5' PRECAST COG INLET	WINDPOWER WAY 8+50.18, 12.43' LT.	431.70	431.10	-	-	MD 374.68	-	1-53	TYPE 'A-5' INLET	WINDPOWER WAY 4+71.99, 12.43' RT.	432.43	431.60	-	425.33	D-4.01	-		
1-15	MD SHA 5' PRECAST COG INLET	WINDPOWER WAY 8+81.15, 12.43' RT.	430.75	430.15	-	-	MD 374.68	-	1-57	TYPE 'D' INLET	N 573754.06 E 1377155.94	430.92	430.09	-	424.10	D-4.10	426.42		
1-16	MD SHA 5' PRECAST COG INLET	WINDPOWER WAY 9+38.85, 12.43' LT.	428.73	428.13	-	-	MD 374.68	-	1-58	TYPE 'D' INLET	N 573787.30 E 1377205.55	429.97	429.14	-	423.15	D-4.10	425.47		
1-17	MD SHA 5' PRECAST COG INLET	WINDPOWER WAY 9+68.32, 12.43' RT.	427.58	426.98	-	-	MD 374.68	-	1-59	TYPE 'D' INLET	N 573828.97 E 1377155.65	427.95	427.12	-	422.10	D-4.10	423.45		
1-18	MD SHA 5' PRECAST COG INLET	WINDPOWER WAY 10+53.23, 12.43' LT.	424.19	423.59	-	-	MD 374.68	-	1-60	TYPE 'D' INLET	N 573842.46 E 1377209.93	427.07	426.24	-	422.07	D-4.10	422.57		
1-19	MD SHA 5' PRECAST COG INLET	WINDPOWER WAY 10+63.41, 12.43' RT.	423.78	423.18	-	-	MD 374.68	-	1-61	TYPE 'D' INLET	N 573945.54 E 1377200.80	423.41	422.58	415.81	415.71	D-4.10	418.91		
1-20	MD SHA 5' PRECAST COG INLET	WINDPOWER WAY 11+64.97, 12.43' LT.	420.00	419.40	-	-	MD 374.68	-	1-62	TYPE 'D' INLET	N 573929.83 E 1377250.59	430.00	422.17	-	416.30	D-4.10	418.50		
1-21	MD SHA 5' PRECAST COG INLET	WINDPOWER WAY 11+89.13, 12.43' RT.	419.40	418.80	-	-	MD 374.68	-	1-63	TYPE 'D' INLET	N 574211.71 E 1377325.12	410.94	410.17	405.59	405.49	D-4.10	-		
1-22	MD SHA 5' PRECAST COG INLET	WINDPOWER WAY 12+66.71, 12.43' LT.	418.56	417.96	-	-	MD 374.68	-	1-64	TYPE 'D' INLET	N 574221.75 E 1377402.90	419.25	418.37	-	411.11	D-4.10	-		
1-23	MD SHA 5' PRECAST COG INLET	WINDPOWER WAY 13+70.80, 12.00' LT.	419.98	419.38	-	-	MD 374.68	-	1-65	TYPE 'D' INLET	N 574158.55 E 1377388.11	417.78	416.95	-	411.03	D-4.10	-		
1-24	MD SHA 5' PRECAST COG INLET	WINDPOWER WAY 12+66.65, 12.43' RT.	418.56	417.96	-	-	MD 374.68	-	1-66	TYPE 'D' INLET	N 574034.70 E 1377401.39	419.00	418.17	-	412.40	D-4.10	-		
1-27	TYPE 'D' INLET	N 574101.44 E 1377467.74	418.00	417.17	-	413.40	D-4.10	-	1-61	TYPE 'D' INLET	N 573945.54 E 1377200.80	423.41	422.58	415.81	415.71	D-4.10	418.91		
1-28	TYPE 'D' INLET	N 574228.19 E 1377539.28	419.00	418.17	412.67	412.43	D-4.10	-	1-68	TYPE 'D' INLET	N 574025.74 E 1377244.89	419.22	418.39	-	413.00	D-4.10	-		
1-29	TYPE 'D' INLET	N 573294.09 E 1377853.73	440.00	439.17	-	435.00	D-4.10	-	1-69	TYPE 'D' INLET	N 573891.99 E 1377342.16	431.46	430.63	-	417.00	D-4.10	-		
1-30	TYPE 'D' INLET	N 573385.75 E 1377846.26	437.06	436.23	433.51	433.27	D-4.10	432.56*											
1-31	TYPE 'D' INLET	N 573348.81 E 1377797.36	436.98	436.15	-	434.12	D-4.10	432.48*											
1-33	TYPE 'A-5' INLET	N 572944.49 E 1377466.22	434.63	434.03	-	427.63	D-4.01	-											
1-34	TYPE 'D' INLET	N 573083.06 E 1377524.69	436.69	435.86	427.78	427.68	D-4.10	432.19											
1-35	TYPE 'D' INLET	N 572985.28 E 1377557.99	435.87	435.04	-	428.80	D-4.10	-											

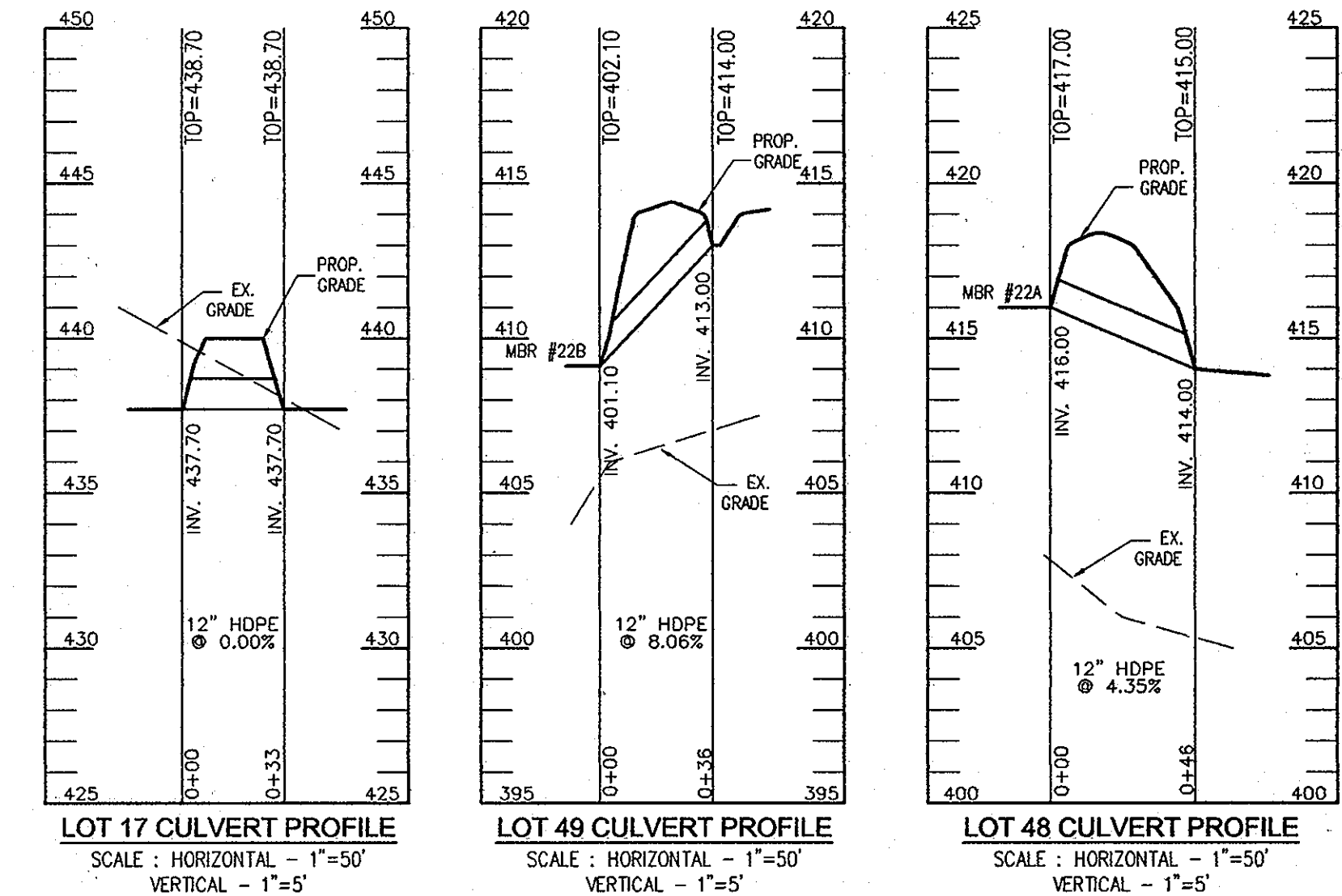
*TOP ELEV.=CENTER OF THE INLET FOR TYPE S INLET.
 *TOP ELEV.=TOP OF THE CURB AT CENTER OF THE INLET FOR A-5 INLET.
 *TOP ELEV.=TOP OF THE FRAME & COVER FOR TYPE D INLET.

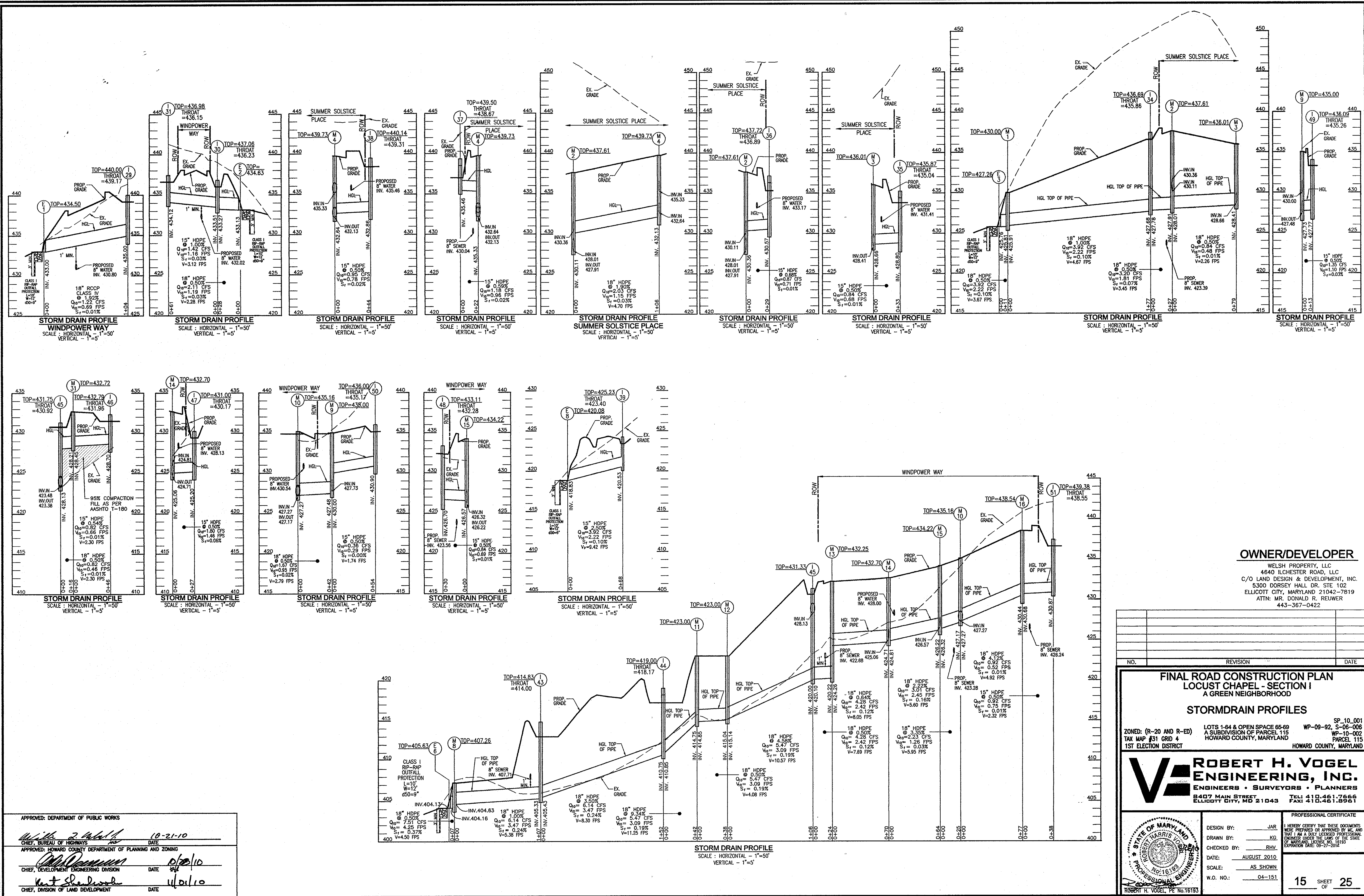


MANHOLE SCHEDULE						
NO.	TYPE	LOCATION	TOP ELEV.*	INV. IN	INV. OUT	REMARKS
M-1	STANDARD 4' PRECAST MANHOLE	N 573134.10 E 1377355.30	430.00	425.91	425.81	G-5.12
M-2	STANDARD 4' PRECAST MANHOLE	SUMMER SOLSTICE PLACE 4+00.00, 2.00' RT.	437.61	436.36	427.91	G-5.12
M-3	STANDARD 4' PRECAST MANHOLE	SUMMER SOLSTICE PLACE 4+79.97, 2.00' RT.	436.01	428.66	428.41	G-5.12
M-4	STANDARD 4' PRECAST MANHOLE	SUMMER SOLSTICE PLACE 2+94.14, 2.00' RT.	439.73	435.33	432.13	G-5.12
M-6	STANDARD 4' PRECAST MANHOLE	N 572979.36 E 1377349.99	426.00	422.04	421.04	G-5.12
M-7	STANDARD 4' PRECAST MANHOLE	N 572968.68 E 1377468.76	435.51	427.51	427.26	G-5.12
M-8	STANDARD 4' PRECAST MANHOLE	N 573285.62 E 1377251.91	407.26	404.63	404.26	G-5.12
M-9	STANDARD 4' PRECAST MANHOLE	N 573573.54 E 1377673.39	435.00	430.00	427.48	G-5.12
M-10	STANDARD 4' PRECAST MANHOLE	WINDPOWER WAY 3+31.32, 2.00' RT.	435.16	427.27	427.17	G-5.12
M-11	STANDARD 4' PRECAST MANHOLE	N 573545.88 E 1377401.34	423.00	414.85	414.75	G-5.12
M-12	STANDARD 4' PRECAST MANHOLE	N 573528.34 E 1377434.72	423.00	415.14	415.04	G-5.12
M-13	STANDARD 4' PRECAST MANHOLE	WINDPOWER WAY 4+92.76, 8.01' LT.	432.25	424.26	424.21	G-5.12
M-14	STANDARD 4' PRECAST MANHOLE	WINDPOWER WAY 4+19.84, 2.00' RT.	432.70	425.06	424.71	G-5.12
M-15	STANDARD 4' PRECAST MANHOLE	WINDPOWER WAY 3+56.53, 2.45' RT.	434.22	426.57	426.22	G-5.12
M-16	STANDARD 4' PRECAST MANHOLE	WINDPOWER WAY 2+54.85, 2.00' LT.	438.54	430.68	430.44	G-5.12
M-17	STANDARD 4' PRECAST MANHOLE	N 573475.47 E 1377236.98	422.00	413.54	413.44	G-5.12
M-18	STANDARD 4' PRECAST MANHOLE	N 573421.30 E 1377221.32	417.00	408.54	408.47	G-5.12
M-19	STANDARD 4' PRECAST MANHOLE	N 57588.83 E 1377300.76	431.00	422.54	422.44	G-5.12
M-20	STANDARD 4' PRECAST MANHOLE	WINDPOWER WAY 8+82.96, 2.00' RT.	435.16	424.28	424.02	G-5.12
M-21	STANDARD 4' PRECAST MANHOLE	WINDPOWER WAY 8+94.73, 2.00' LT.	430.46	422.99	421.51	G-5.12
M-22	STANDARD 4' PRECAST MANHOLE	WINDPOWER WAY 9+27.14, 2.00' LT.	428.87	422.07	421.77	G-5.12
M-23	STANDARD 4' PRECAST MANHOLE	N 573790.53 E 1377145.89	430.50	423.91	421.27	G-5.12
M-24	STANDARD 4' PRECAST MANHOLE	N 574243.45 E 1377269.30	400.00	395.15	395.05	G-5.12
M-25	STANDARD 4' PRECAST MANHOLE	WINDPOWER WAY 10+46.93, 2.00' RT.	424.15	416.21	415.96	G-5.12
M-26	STANDARD 4' PRECAST MANHOLE	WINDPOWER WAY 13+39.26, 2.05' LT.	418.94	410.76	410.76	G-5.12
M-27	STANDARD 4' PRECAST MANHOLE	WINDPOWER WAY 12+23.24, 2.00' RT.	418.54	411.54	411.44	G-5.12
M-28	STANDARD 4' PRECAST MANHOLE	WINDPOWER WAY 11+61.44, 2.00' RT.	419.80	412.80	412.70	G-5.12
M-29	STANDARD 4' PRECAST MANHOLE	WINDPOWER WAY 10+70.13, 2.00' RT.	424.13	416.40	416.16	G-5.12
M-30	STANDARD 4' PRECAST MANHOLE	N 574321.50 E 1377528.91	414.00	407.67	407.57	G-5.12
M-31	STANDARD 4' PRECAST MANHOLE	N 573624.09 E 1377482.91	432.72	428.45	428.21	G-5.12
M-32	STANDARD 4' PRECAST MANHOLE	N 573789.35 E 1377087.75	422.00	416.76	416.66	G-5.12
M-33	STANDARD 4' PRECAST MANHOLE	N 573983.76 E 1377132.66	416.00	408.37	408.27	G-5.12
M-34	STANDARD 4' PRECAST MANHOLE	N 574374.88 E 1377432.66	398.00	393.20	393.10	G-5.12
M-35	STANDARD 4' PRECAST MANHOLE	N 573389.51 E 1377230.87	408.00	402.17	402.07	G-5.12

END SECTION SCHEDULE					
NO.	TYPE	LOCATION	TOP ELEV.*	INV. IN	INV. OUT
E-1	18" CONC. END SECTION	N 573388.71 E 1377892.23	434.50	433.00	-
E-2	18" ADS HDPE END SECTION	N 573395.26 E 1377871.54	434.63	433.13	-
E-3	18" ADS HDPE END SECTION	N 573134.25 E 1377344.92	427.26	425.76	-
E-4	15" ADS HDPE END SECTION	N 572976.10 E 1377343.71	422.25	421.00	-
E-6	18" ADS HDPE END SECTION	N 573288.01 E 1377247.40	405.63	404.13	-
E-8	15" ADS HDPE END SECTION	N 573308.13 E 1377343.35	419.45	418.20	-
E-9	15" ADS HDPE END SECTION	N 573440.89 E 1377185.25	412.54	411.29	-
E-10	15" ADS HDPE END SECTION	N 573788.78 E 1377059.54	417.75	416.50	-
E-11	18" ADS HDPE END SECTION	N 574001.25 E 1377101.80	414.90	408.09	-
E-12	21" ADS HDPE END SECTION	N 574247.45 E 1377262.41	396.75	395.00	-
E-13	18" ADS HDPE END SECTION	N 574384.79 E 1377415.23	394.40	392.90	-
E-24	15" ADS HDPE END SECTION	N 573377.44 E 1377234.67	402.25	401.00	-

PIPE SCHEDULE		
PIPE SIZE	TYPE	TOTAL LENGTH
12"	CMP	216 LF
15"	HDPE	1,298 LF
18"	HDPE	2,538 LF
18"	PROP CLASS IV	104 LF
21"	HDPE	9 LF





APPROVED: DEPARTMENT OF PUBLIC WORKS
 [Signature] 10-21-10
 CHIEF, BUREAU OF HIGHWAYS
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 10/20/10
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 [Signature] 11/01/10
 CHIEF, DIVISION OF LAND DEVELOPMENT

OWNER/DEVELOPER
 WELSH PROPERTY, LLC
 4640 LICHETER ROAD, LLC
 C/O LAND DESIGN & DEVELOPMENT, INC.
 5300 DORSEY HILL DR. STE 102
 ELLICOTT CITY, MARYLAND 21042-7819
 ATTN: MR. DONALD R. REUWER
 443-367-0422

NO.	REVISION	DATE

FINAL ROAD CONSTRUCTION PLAN
LOCUST CHAPEL - SECTION I
 A GREEN NEIGHBORHOOD
STORMDRAIN PROFILES

ZONED: (R-20 AND R-ED) LOTS 1-84 & OPEN SPACE 65-69 WP-09-92, S-06-006
 A SUBDIVISION OF PARCEL 115 WP-10-002
 TAX MAP #31 GRID 4 HOWARD COUNTY, MARYLAND
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

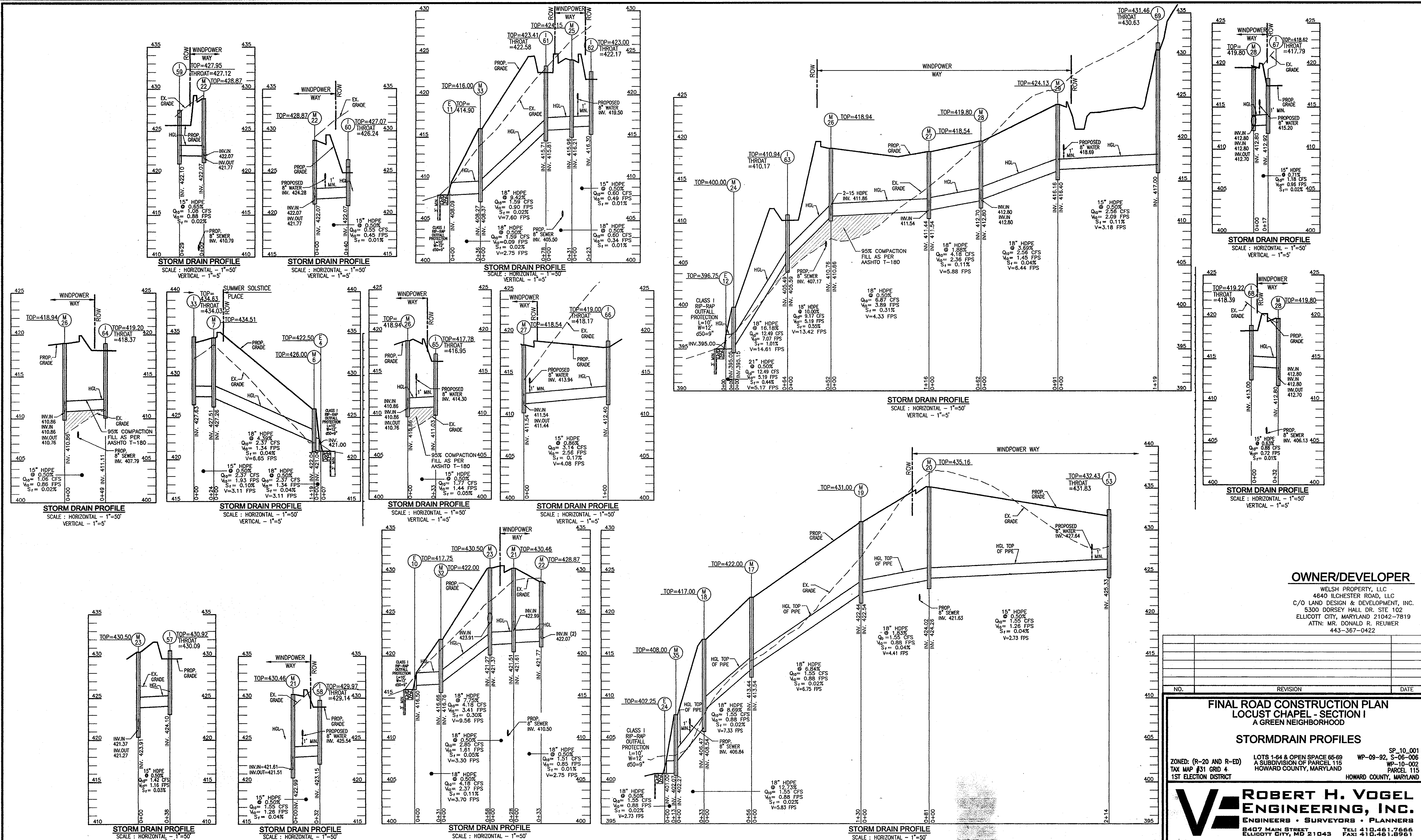
ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 8407 MAIN STREET TEL: 410.461.7666
 ELLICOTT CITY, MD 21043 FAX: 410.461.8961

PROFESSIONAL CERTIFICATE

DESIGN BY: JAR
 DRAWN BY: KG
 CHECKED BY: RHV
 DATE: AUGUST 2010
 SCALE: AS SHOWN
 W.O. NO.: 04-151

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

15 SHEET OF 25



APPROVED: DEPARTMENT OF PUBLIC WORKS
W. J. M. H. 10-21-10
 CHIEF, BUREAU OF HIGHWAYS
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 10/20/10
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
[Signature] 10/10/10
 CHIEF, DIVISION OF LAND DEVELOPMENT

OWNER/DEVELOPER
 WELSH PROPERTY, LLC
 4640 ILCHESTER ROAD, LLC
 C/O LAND DESIGN & DEVELOPMENT, INC.
 5300 DORSEY HALL DR. STE 102
 ELLICOTT CITY, MARYLAND 21042-7819
 ATTN: MR. DONALD R. REUWER
 443-367-0422

NO.	REVISION	DATE

FINAL ROAD CONSTRUCTION PLAN
LOCUST CHAPEL - SECTION I
 A GREEN NEIGHBORHOOD

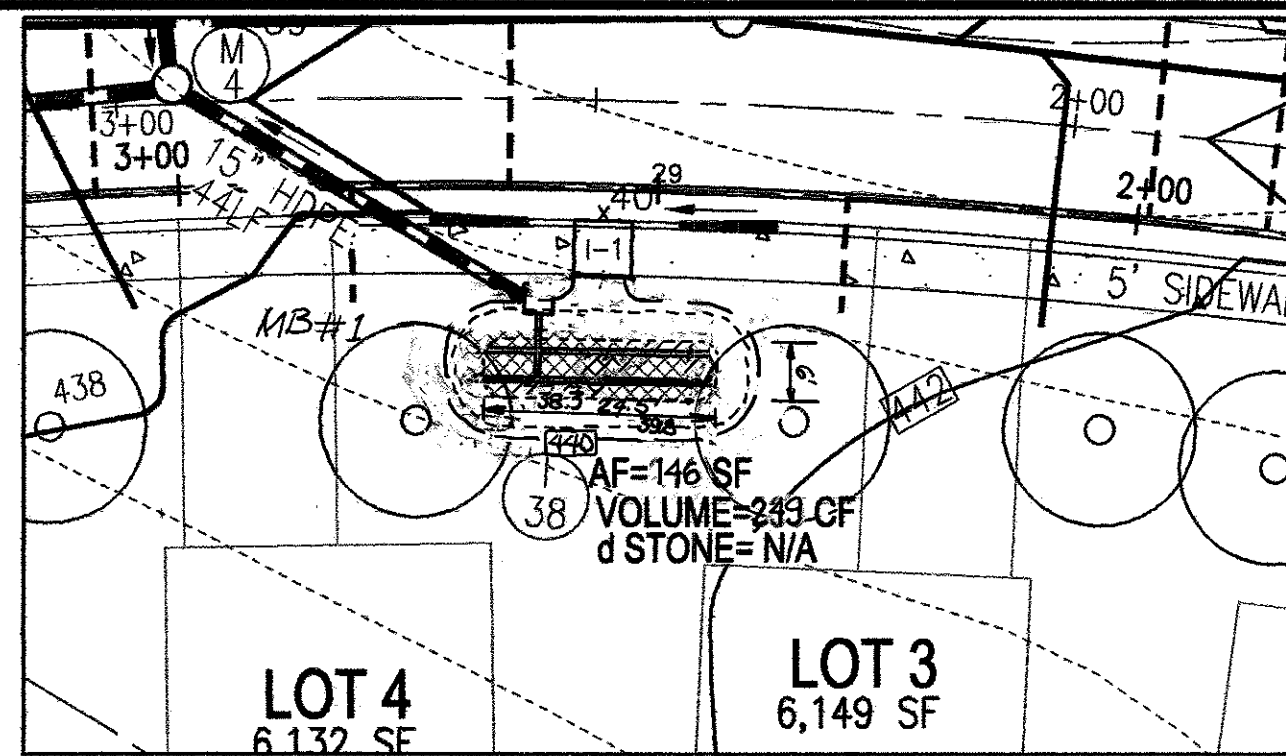
STORMDRAIN PROFILES

ZONED: (R-20 AND R-ED) LOTS 1-64 & OPEN SPACE 65-69 WP-09-92, S-06-006
 A SUBDIVISION OF PARCEL 115 WP-10-002
 TAX MAP #31 GRID # HOWARD COUNTY, MARYLAND PARCEL 115
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

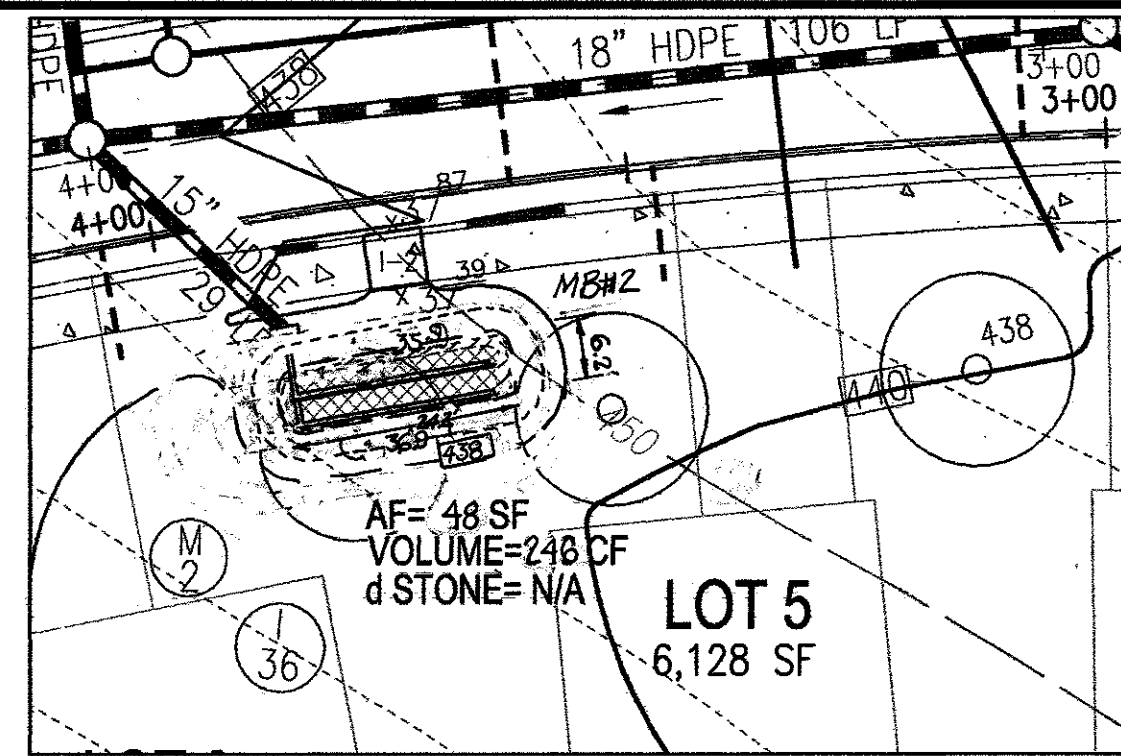
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 CHECKED BY: RHV
 DATE: AUGUST 2010
 SCALE: AS SHOWN
 W.O. NO.: 04-151

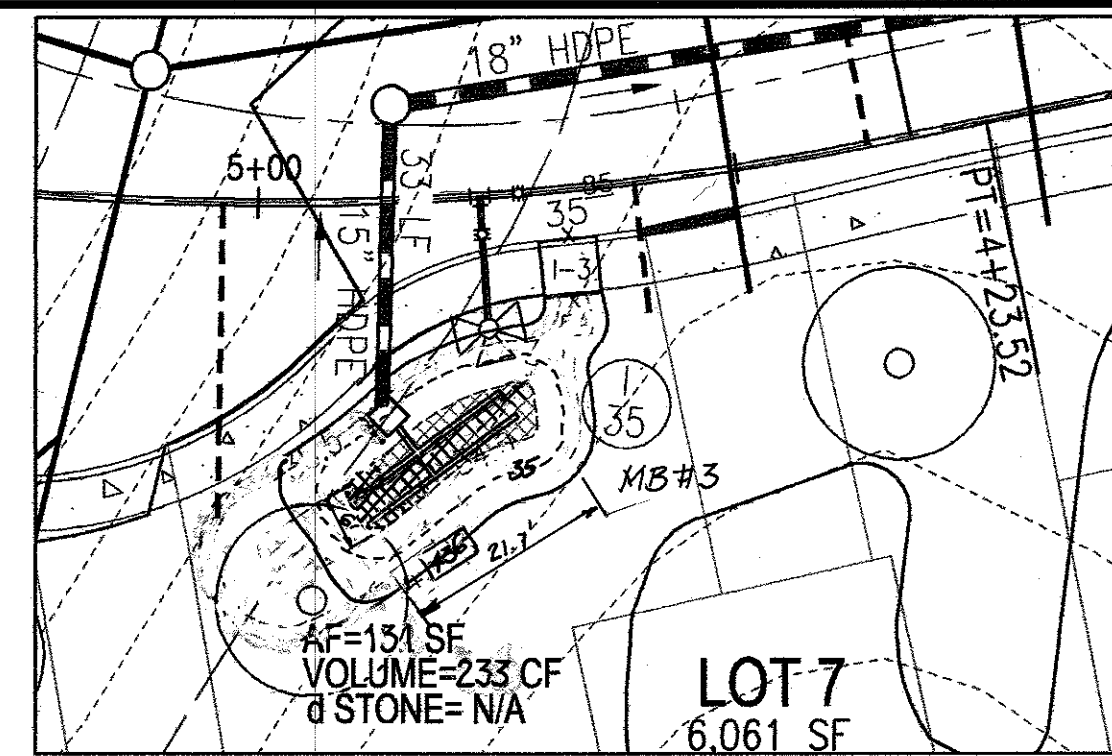
16 SHEET OF 25



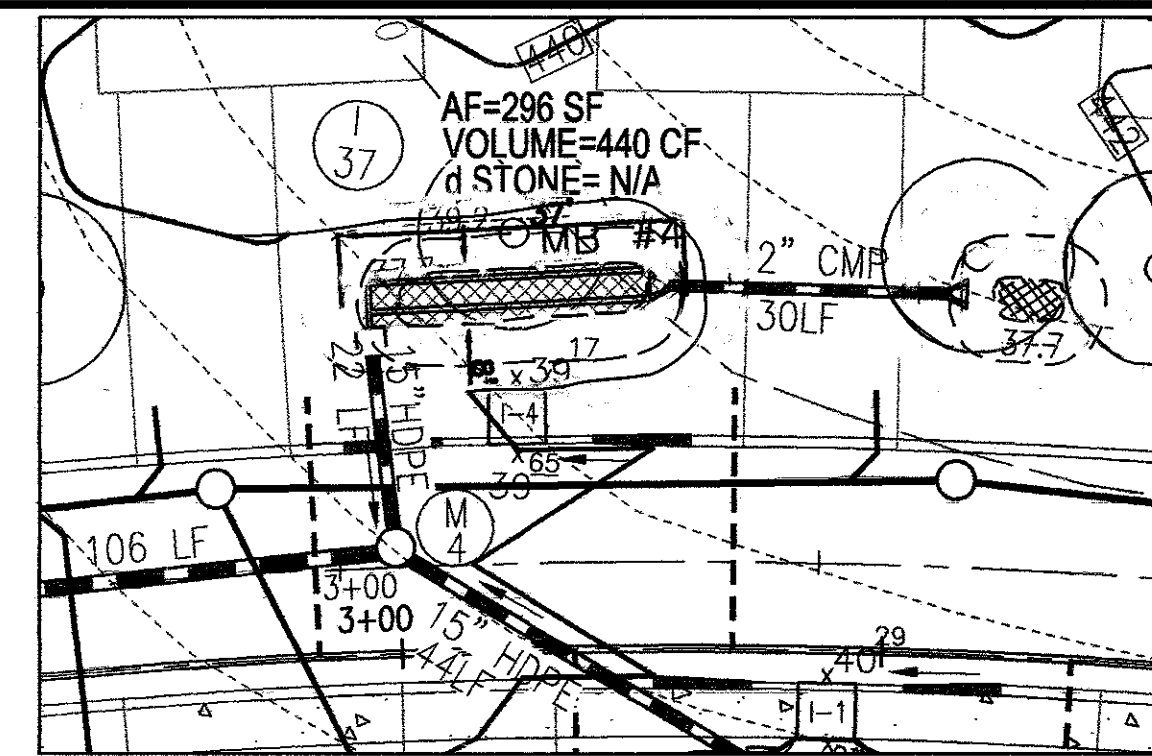
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SCALE: 1"=20'



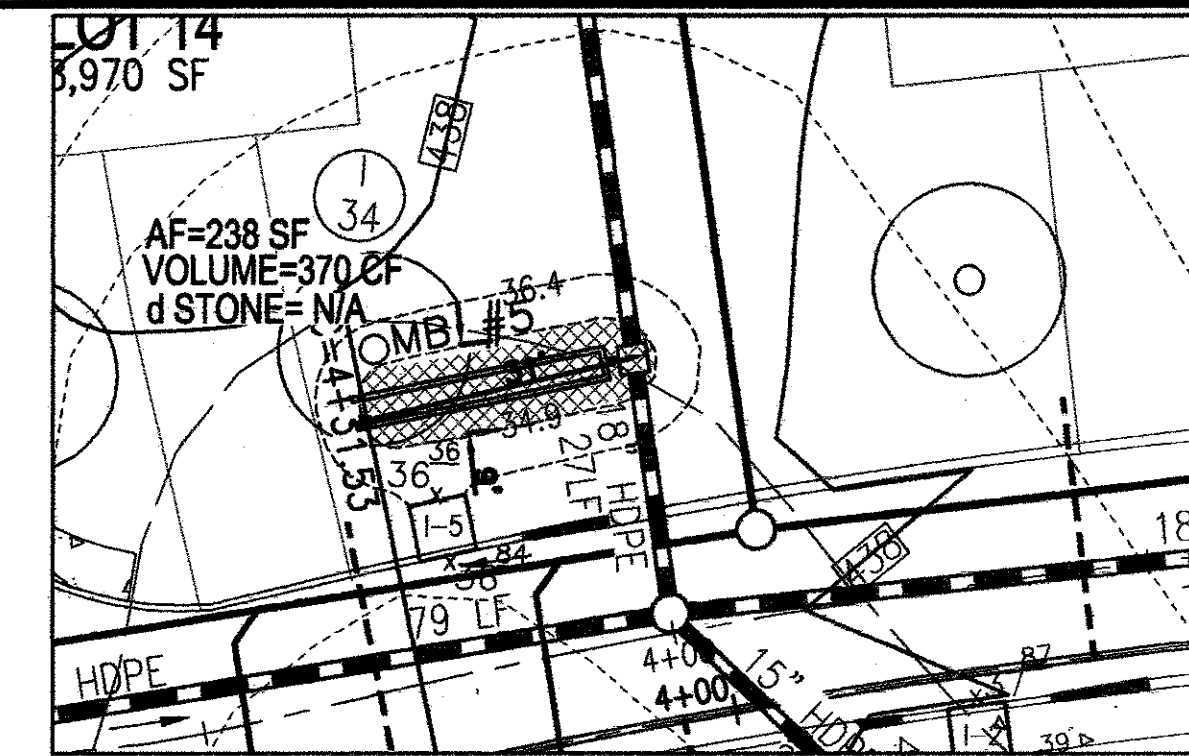
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SCALE: 1"=20'



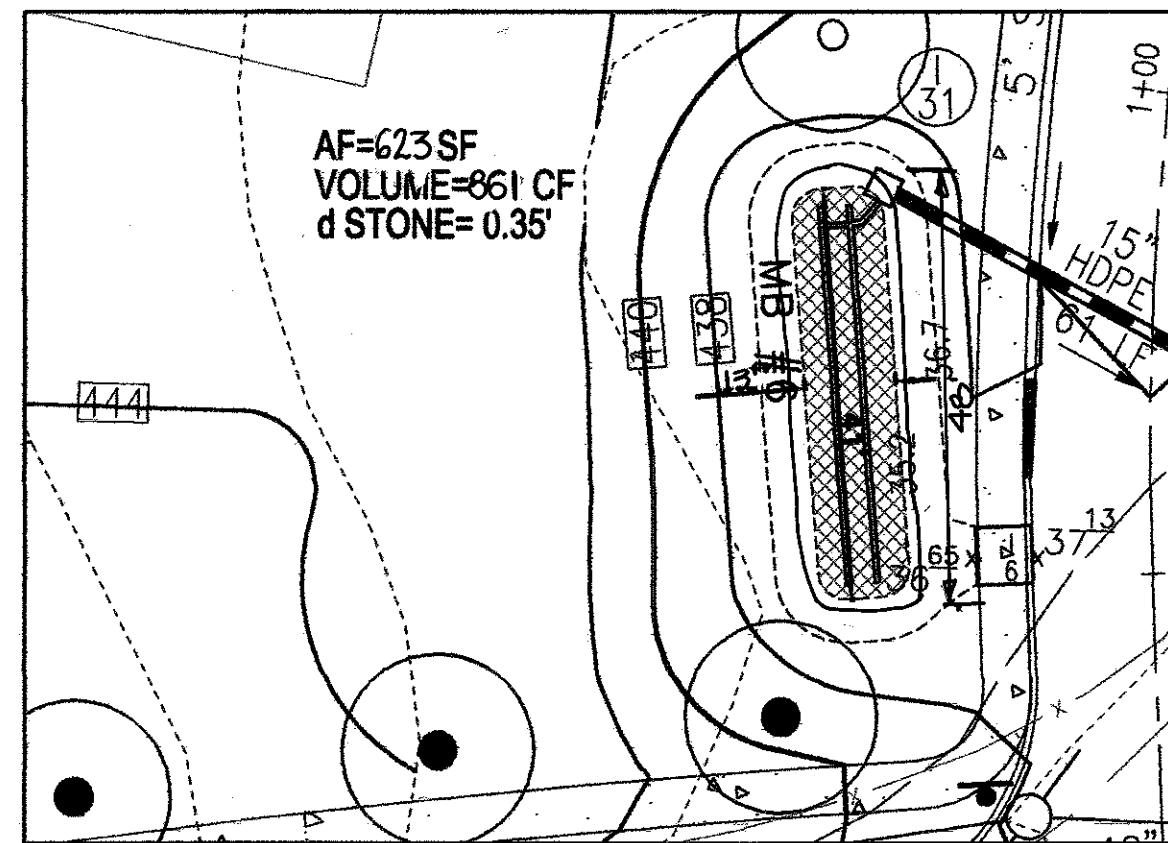
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SCALE: 1"=20'



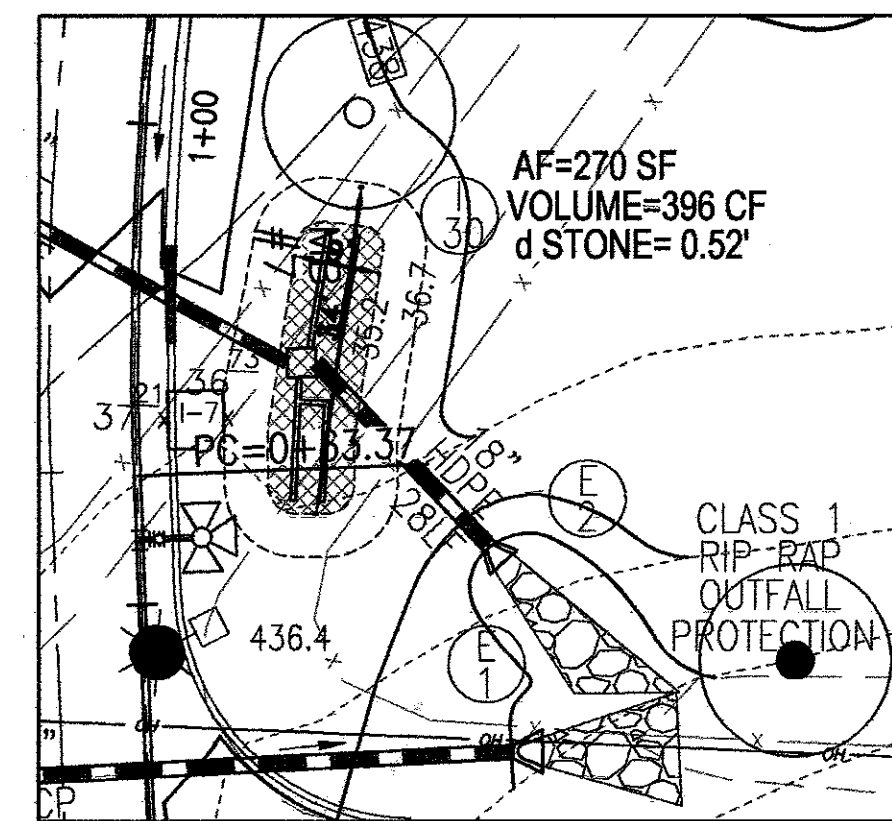
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SCALE: 1"=20'



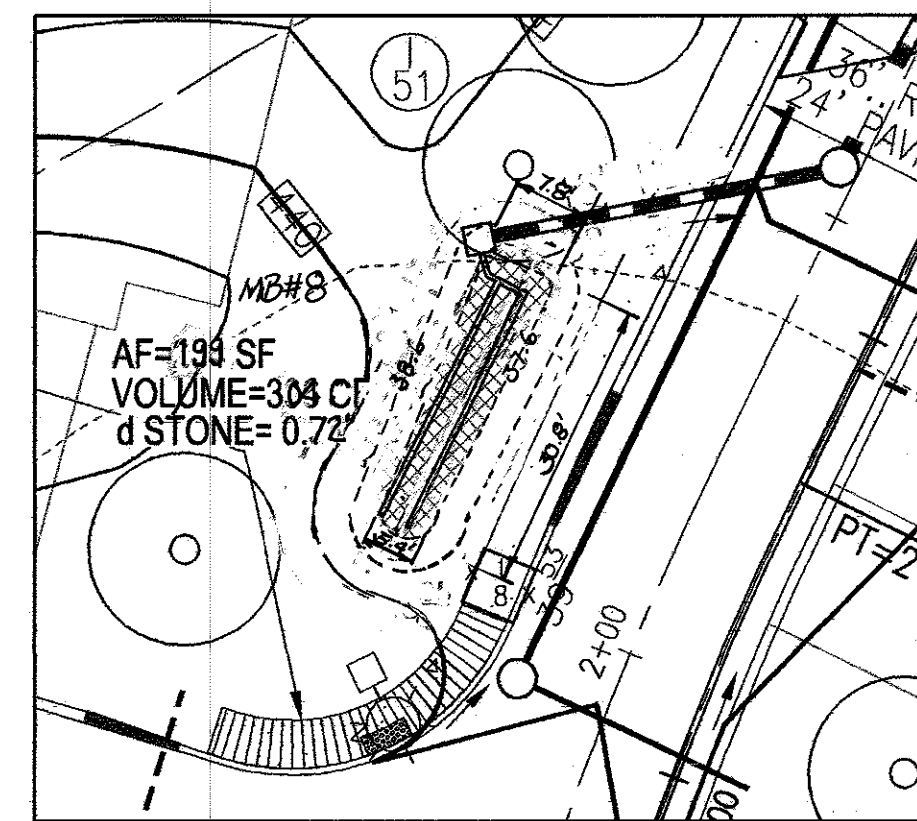
DETAIL - MICRO BIO-RETENTION #5
SCALE: 1"=20'



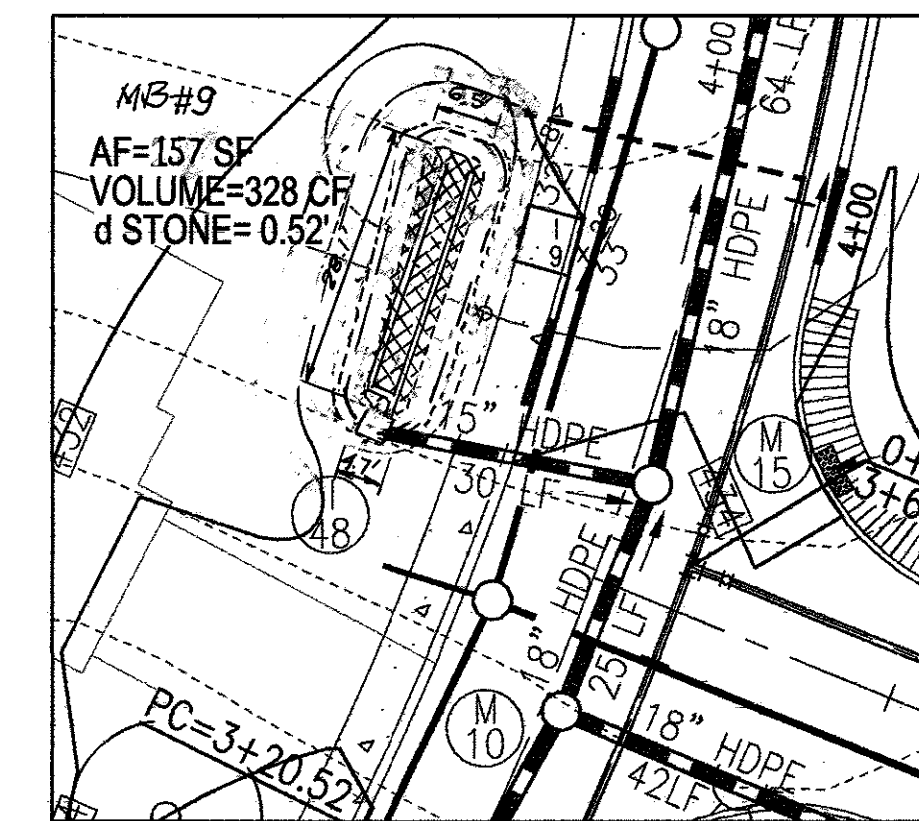
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SCALE: 1"=20'



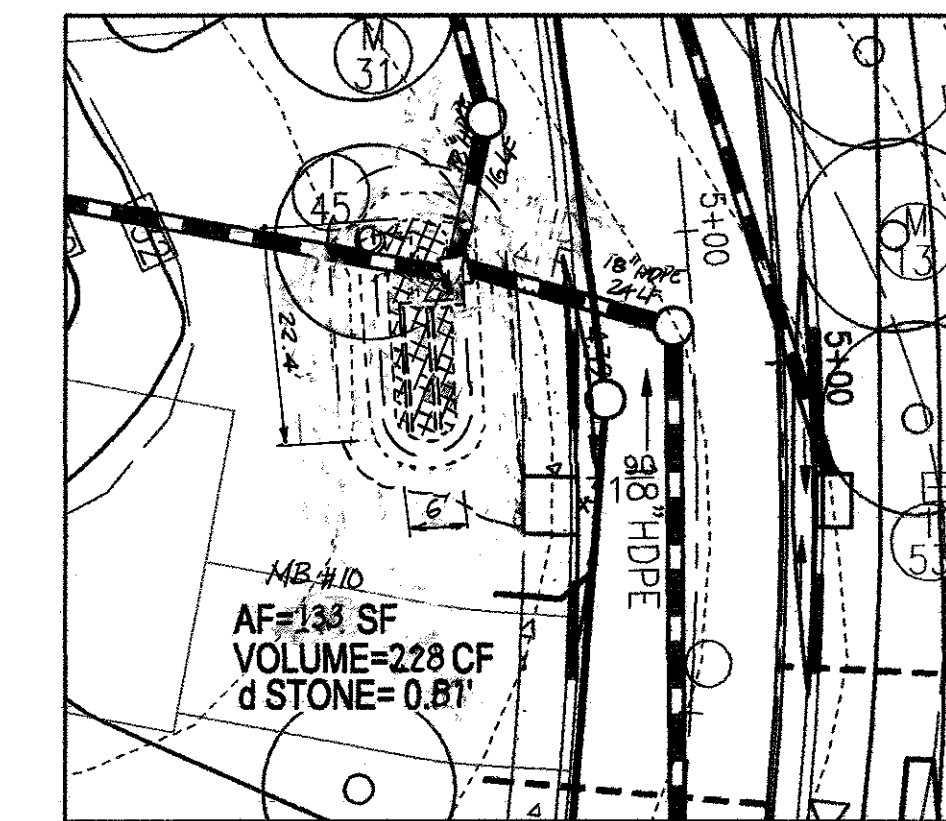
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SCALE: 1"=20'



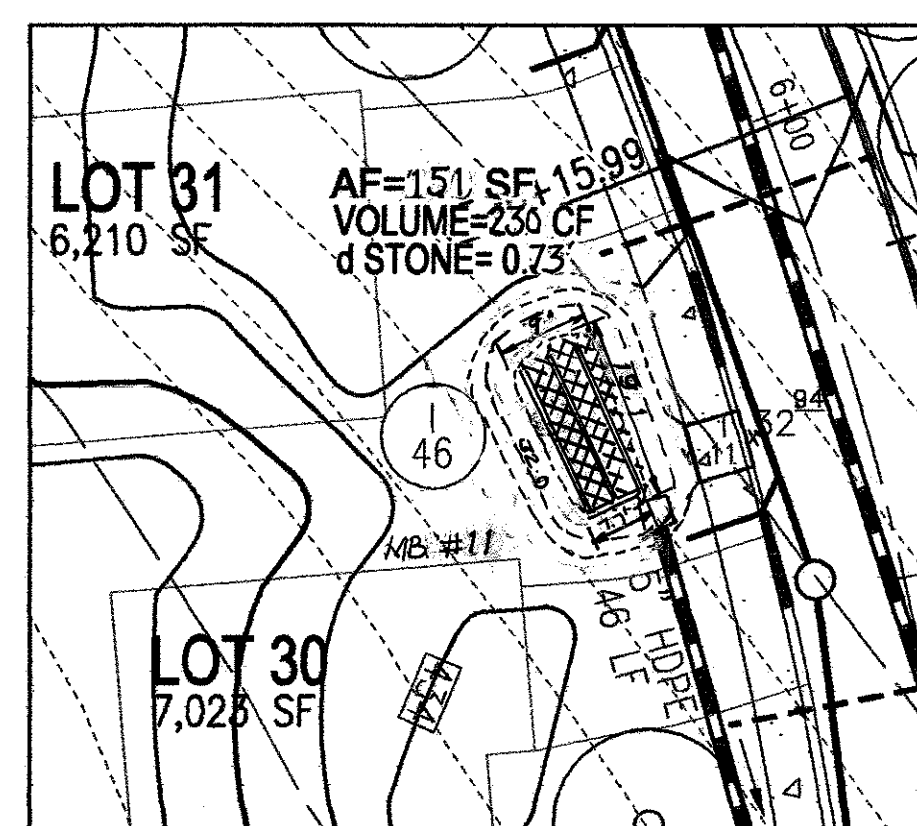
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SCALE: 1"=20'



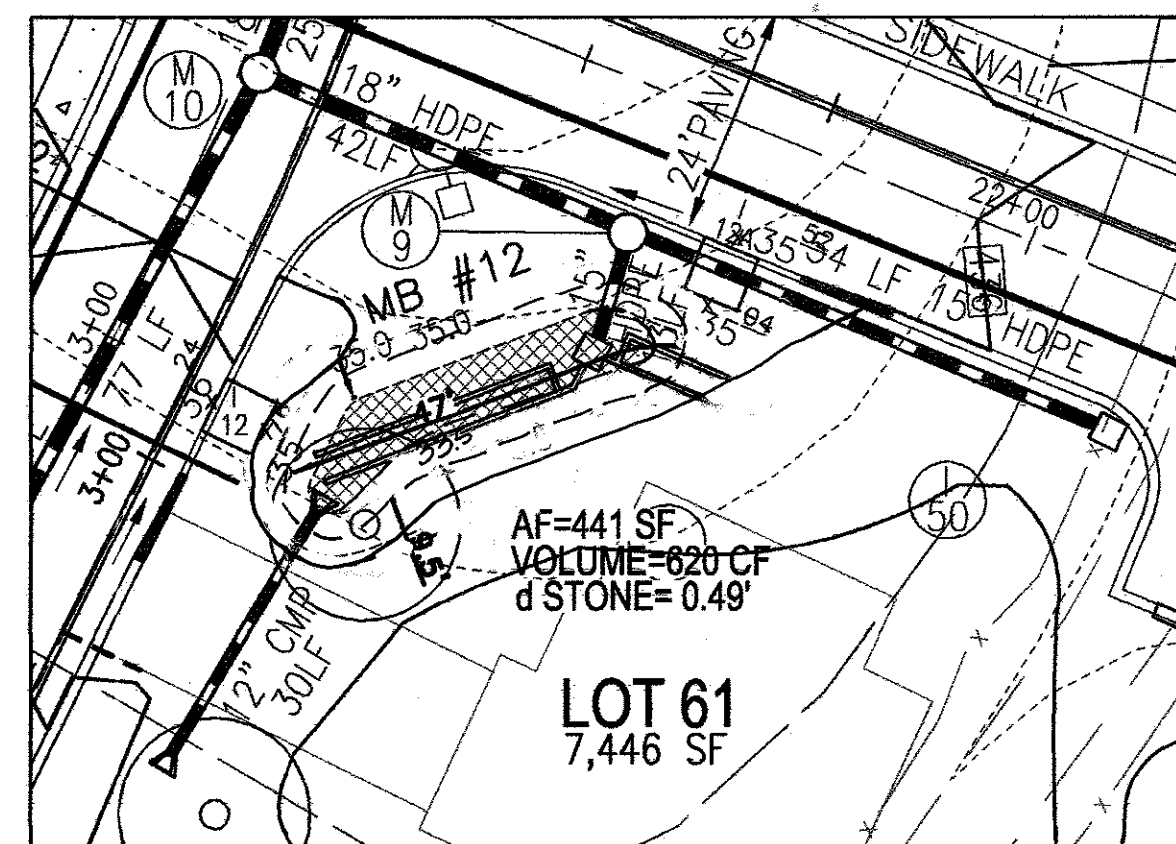
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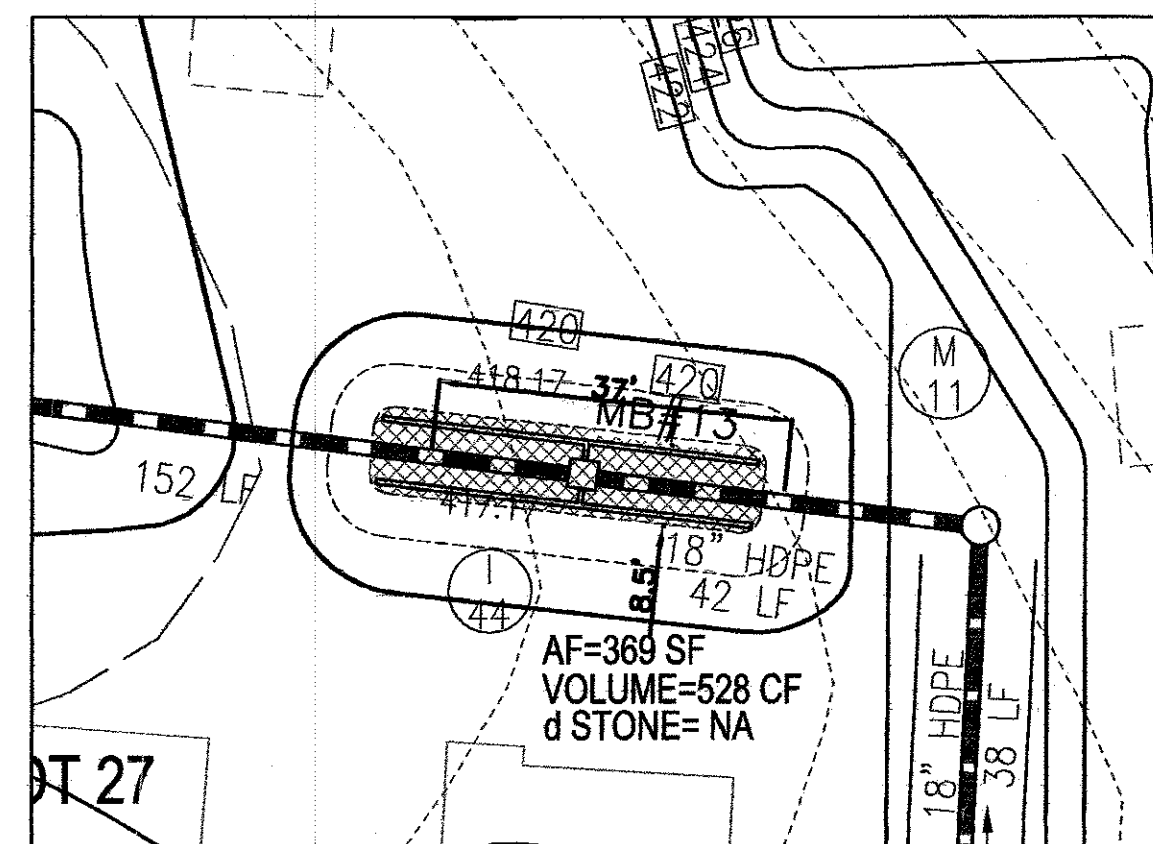
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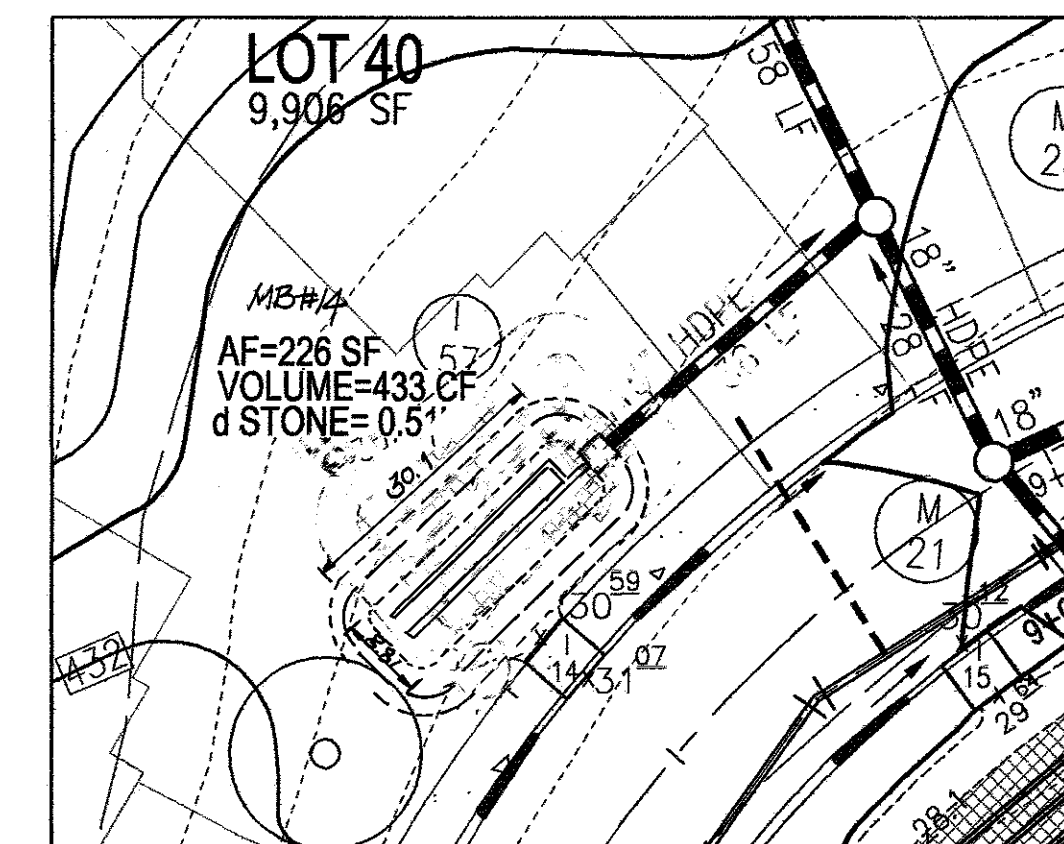
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SCALE: 1"=20'



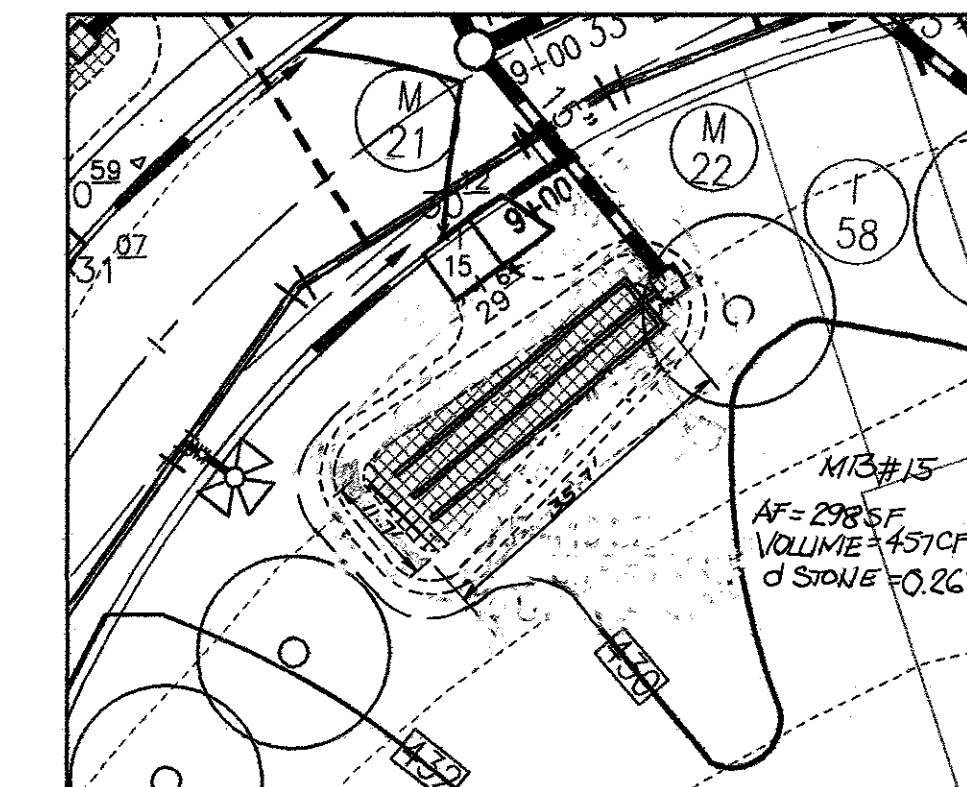
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SCALE: 1"=20'



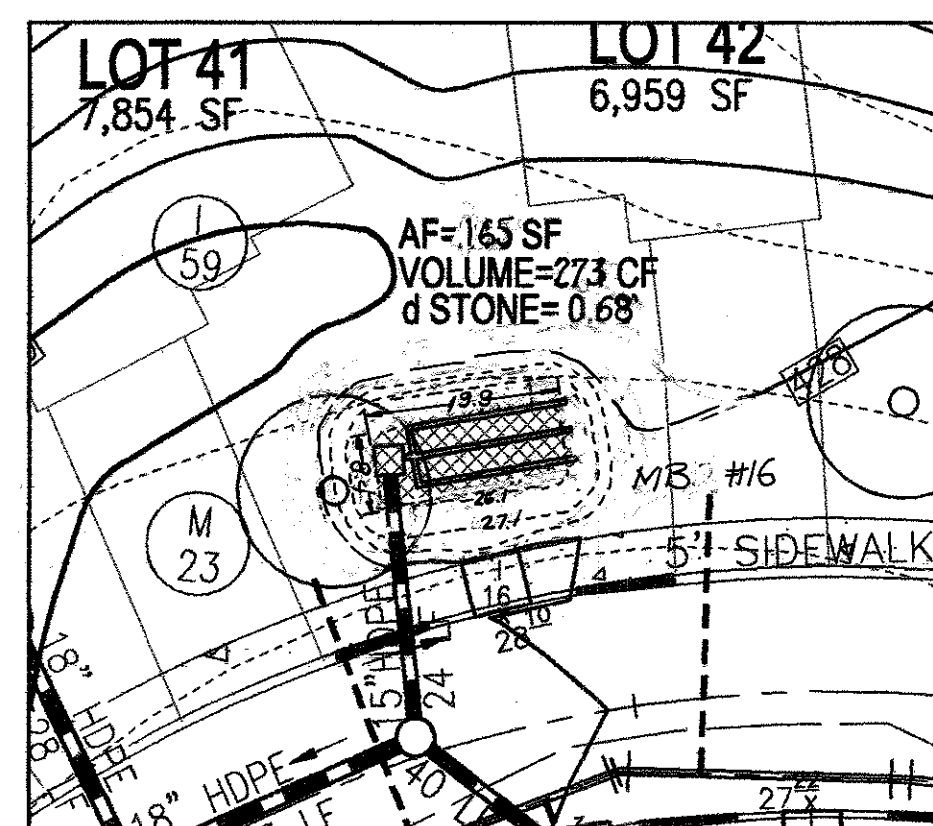
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SCALE: 1"=20'



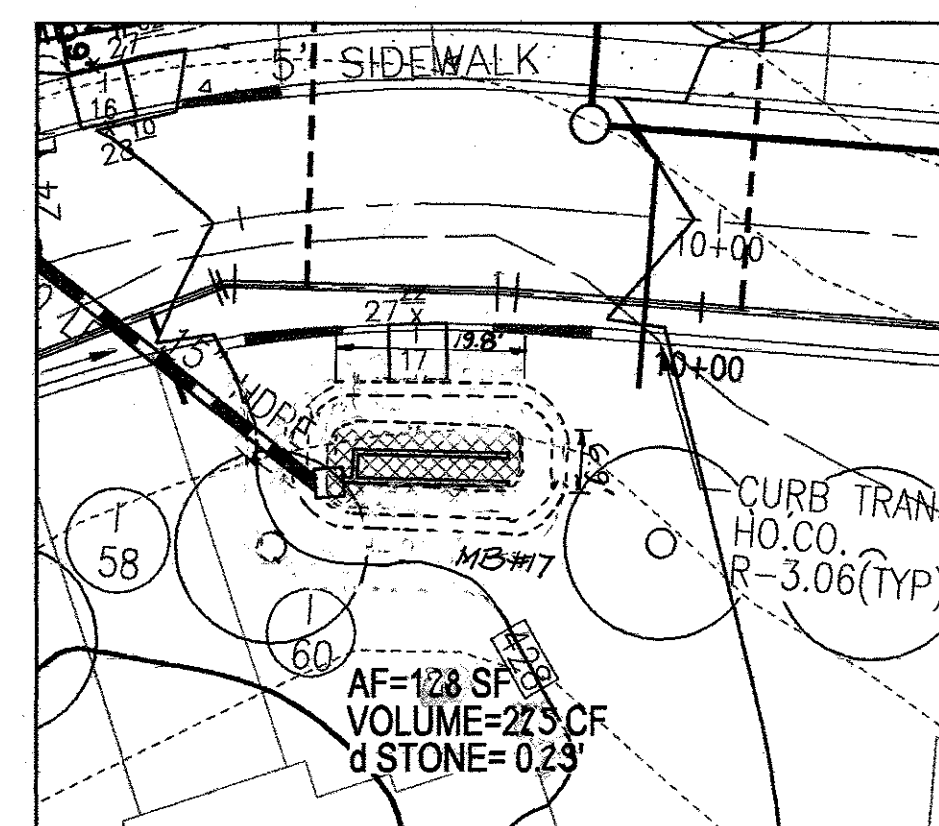
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SCALE: 1"=20'



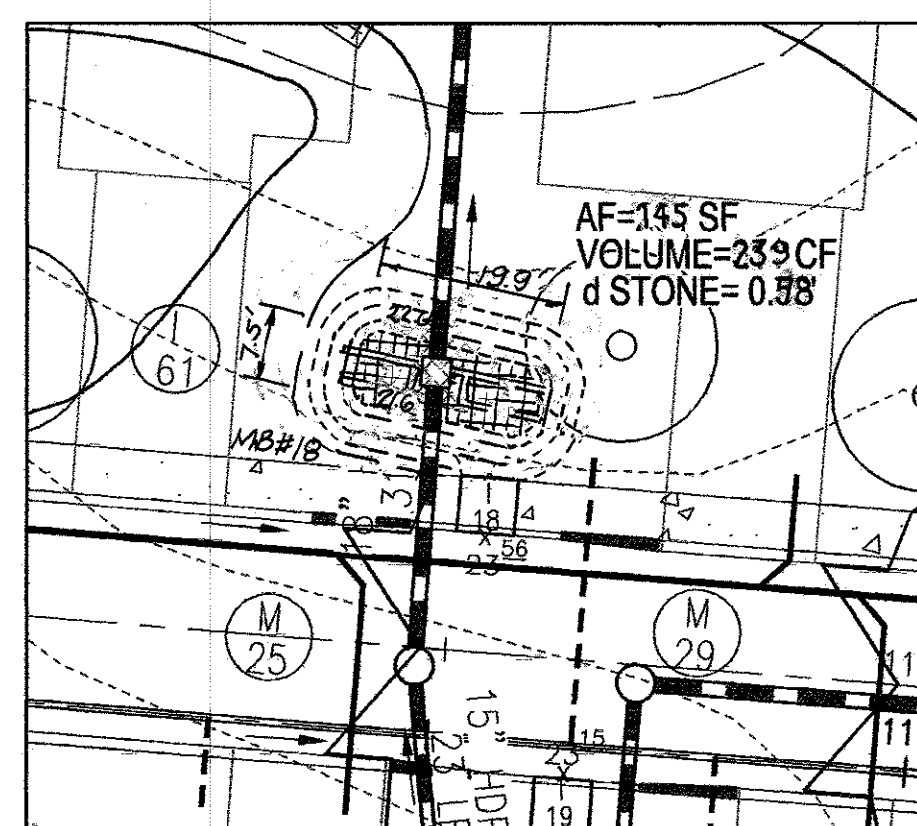
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SCALE: 1"=20'



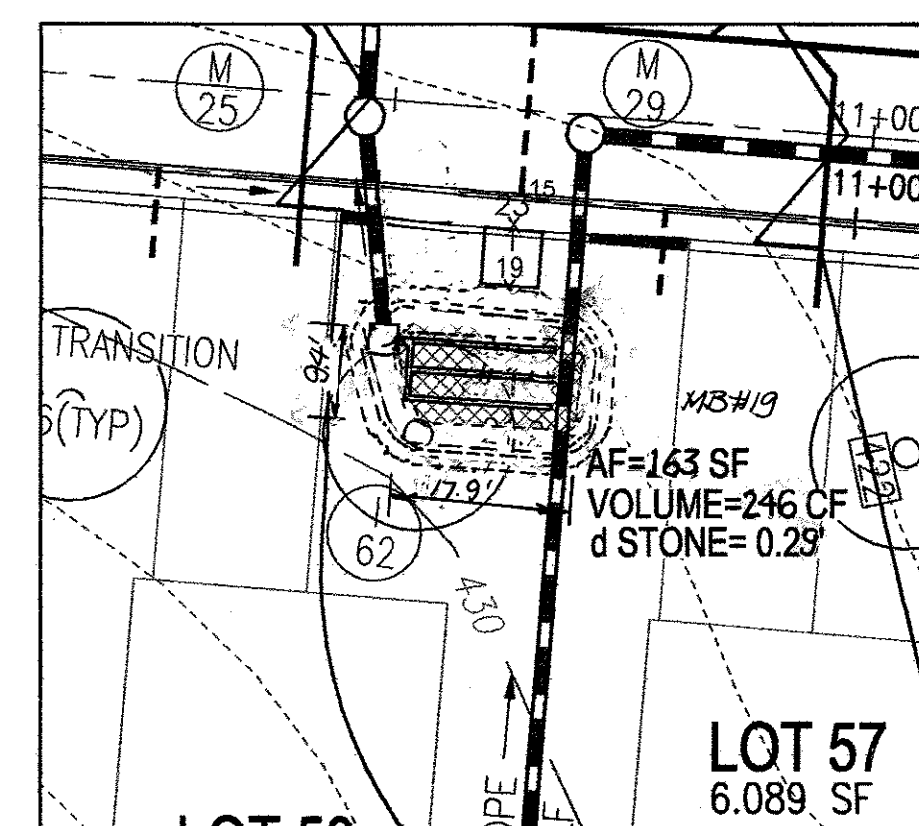
DETAIL - MICRO BIO-RETENTION #16
SCALE: 1"=20'



DETAIL - MICRO BIO-RETENTION #17
SCALE: 1"=20'



DETAIL - MICRO BIO-RETENTION #18
SCALE: 1"=20'



DETAIL - MICRO BIO-RETENTION #19
SCALE: 1"=20'

NO.	REVISION	DATE
3	REVISE SIDEWALK FROM PREVIOUS CEMENT TO STANDARD PAVEMENT DES TO ILLICOTT ROAD	10/13/15
2	REVISE SWIM	8/15/12

FINAL ROAD CONSTRUCTION PLAN
LOCUST CHAPEL - SECTION I
A GREEN NEIGHBORHOOD

STORMWATER MANAGEMENT DETAILS

ZONED: (R-20 AND R-ED) TAX MAP #31 GRID 4 1ST ELECTION DISTRICT

LOTS 1-64 & OPEN SPACE 65-89 A SUBDIVISION OF PARCEL 115 HOWARD COUNTY, MARYLAND

SP_10_001 WP-09-92, S-06-006 WP-10-002 PARCEL 115 HOWARD COUNTY, MARYLAND

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

DESIGN BY:	JAR	PROFESSIONAL CERTIFICATE
DRAWN BY:	KB	I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193 EXPIRATION DATE 09-27-2012
CHECKED BY:	RHV	
DATE:	AUGUST 2010	
SCALE:	1"=20'	
W.O. NO.:	04-151	

APPROVED: DEPARTMENT OF PUBLIC WORKS
10-21-10
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
10/23/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION

11/01/10
CHIEF, DIVISION OF LAND DEVELOPMENT

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

9/30/10
SIGNATURE OF DEVELOPER

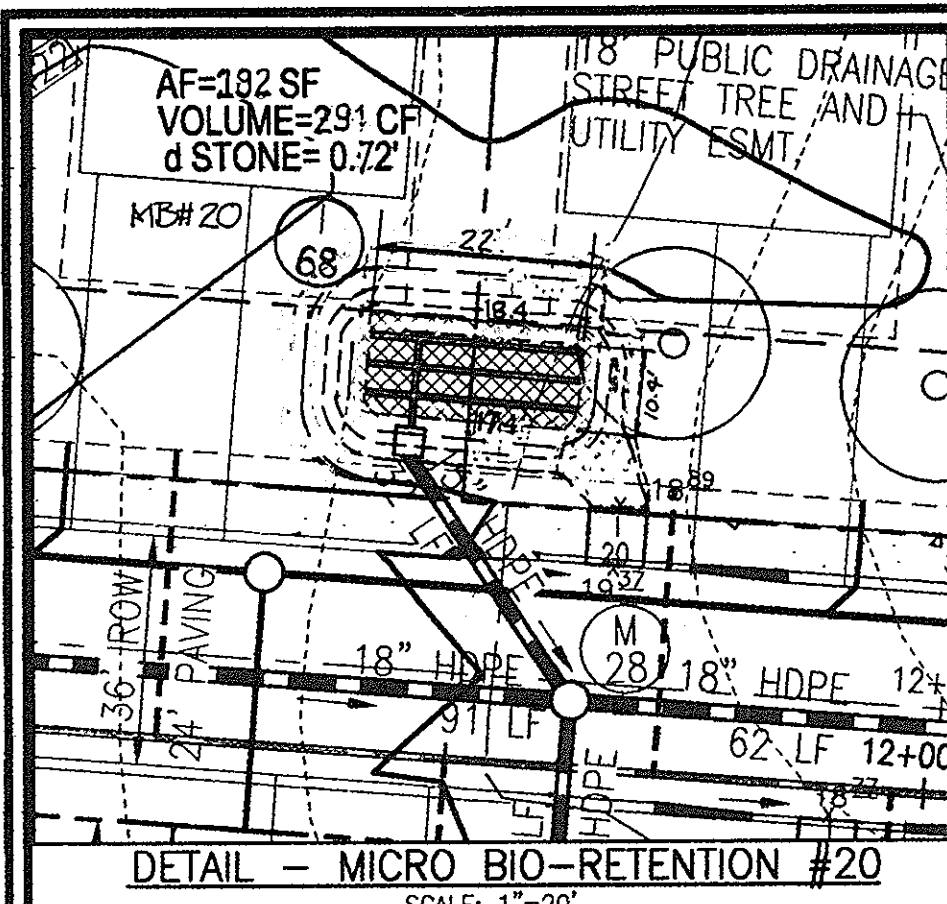
9/22/10
SIGNATURE OF ENGINEER

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

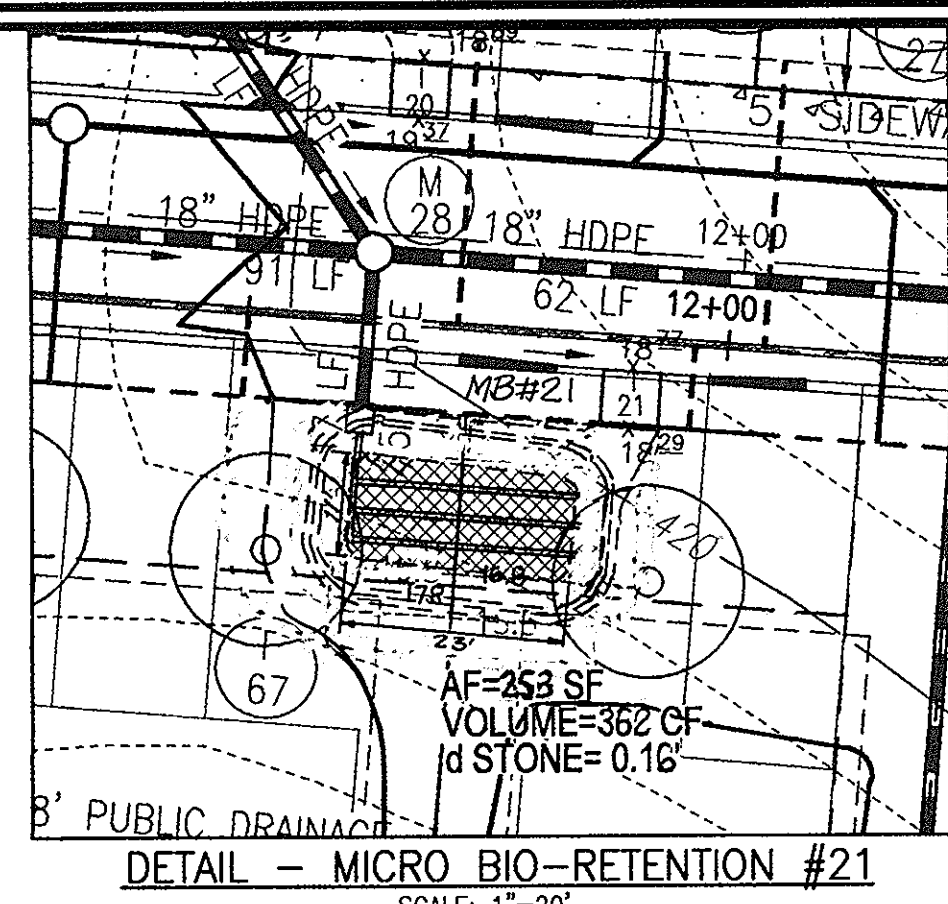
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD S.C.D. DATE

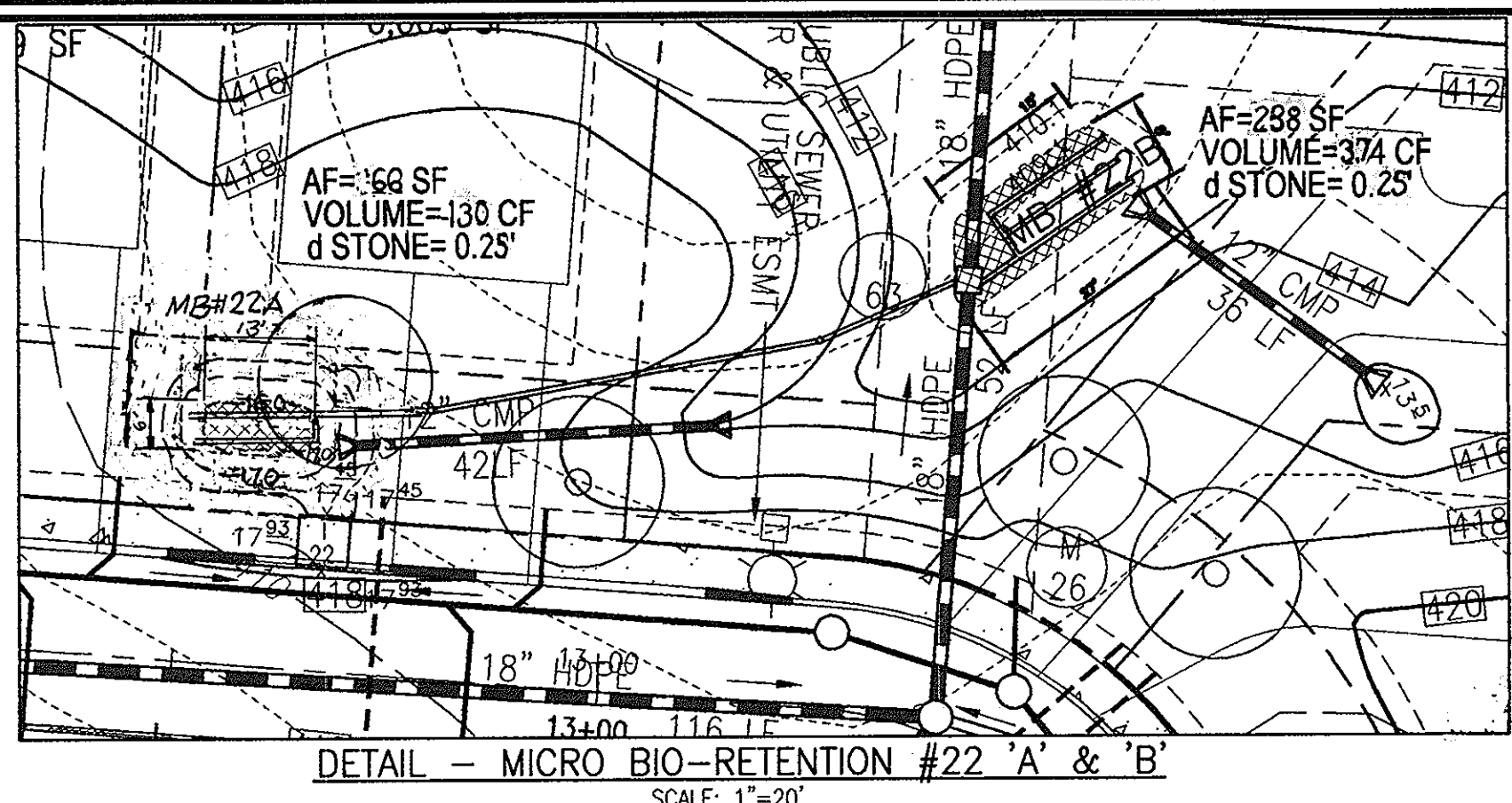
OWNER/DEVELOPER
WELSH PROPERTY, LLC
4640 ILLICOTT ROAD, LLC
C/O LAND DESIGN & DEVELOPMENT, INC.
5300 DORSEY HALL DR. STE 102
ELLICOTT CITY, MARYLAND 21042-7819
ATTN: MR. DONALD R. REUWER
443-367-0422



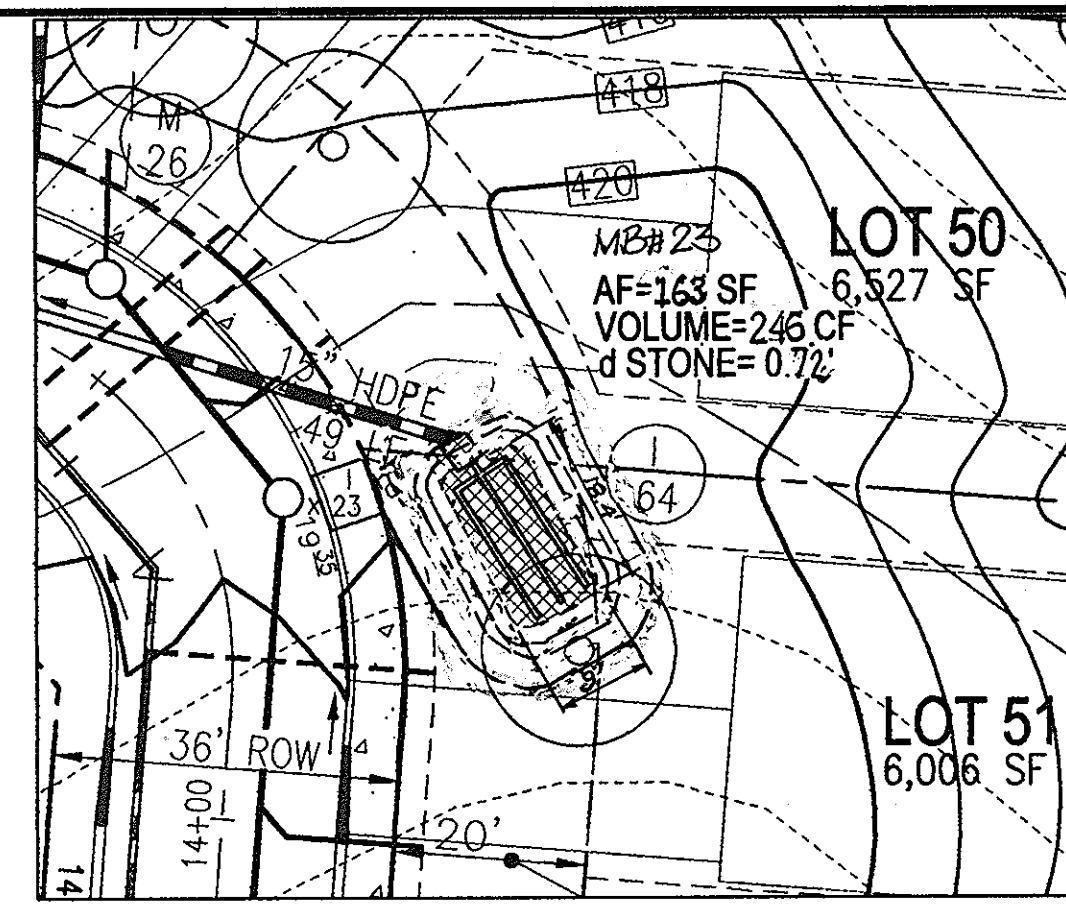
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SCALE: 1"=20'



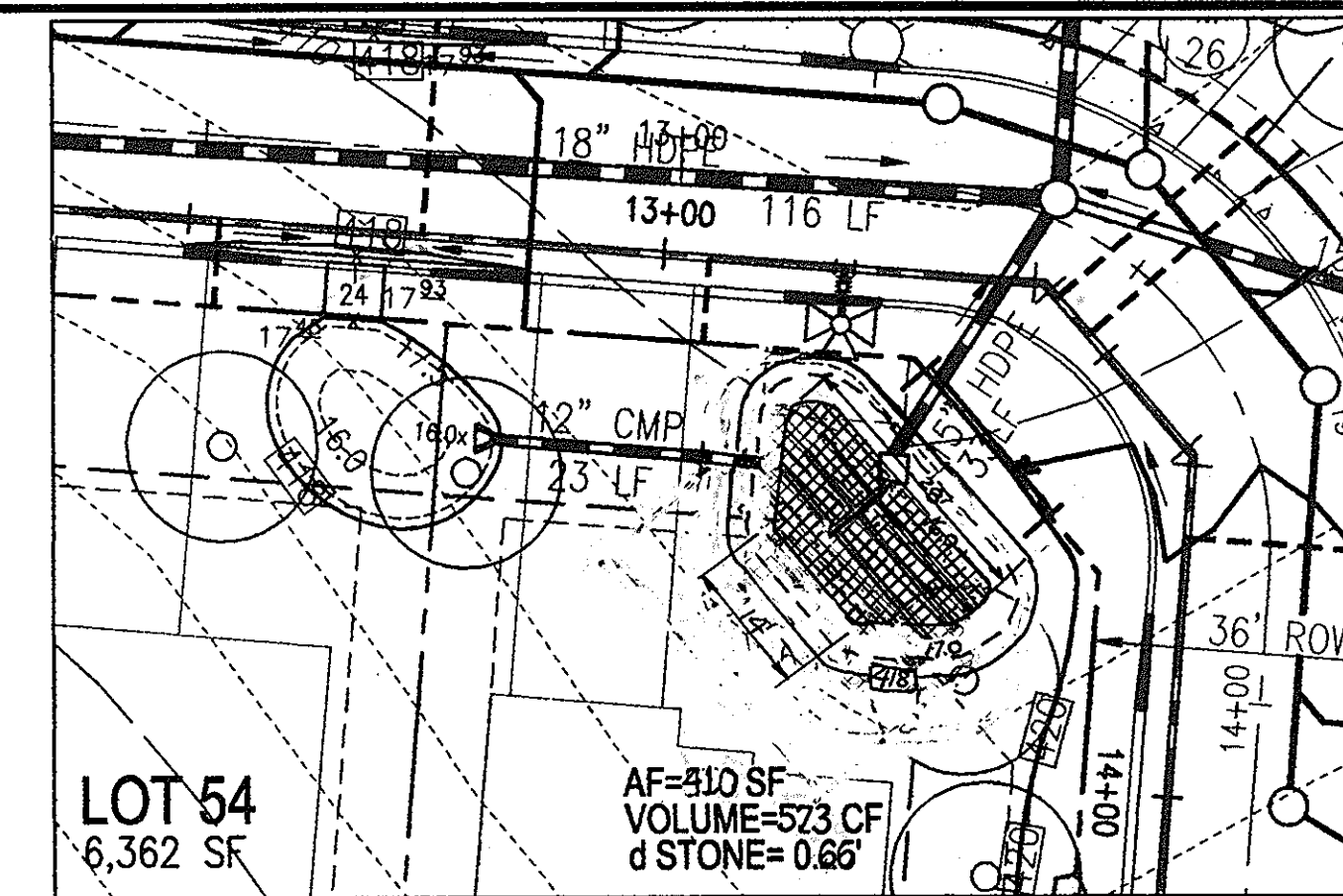
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SCALE: 1"=20'



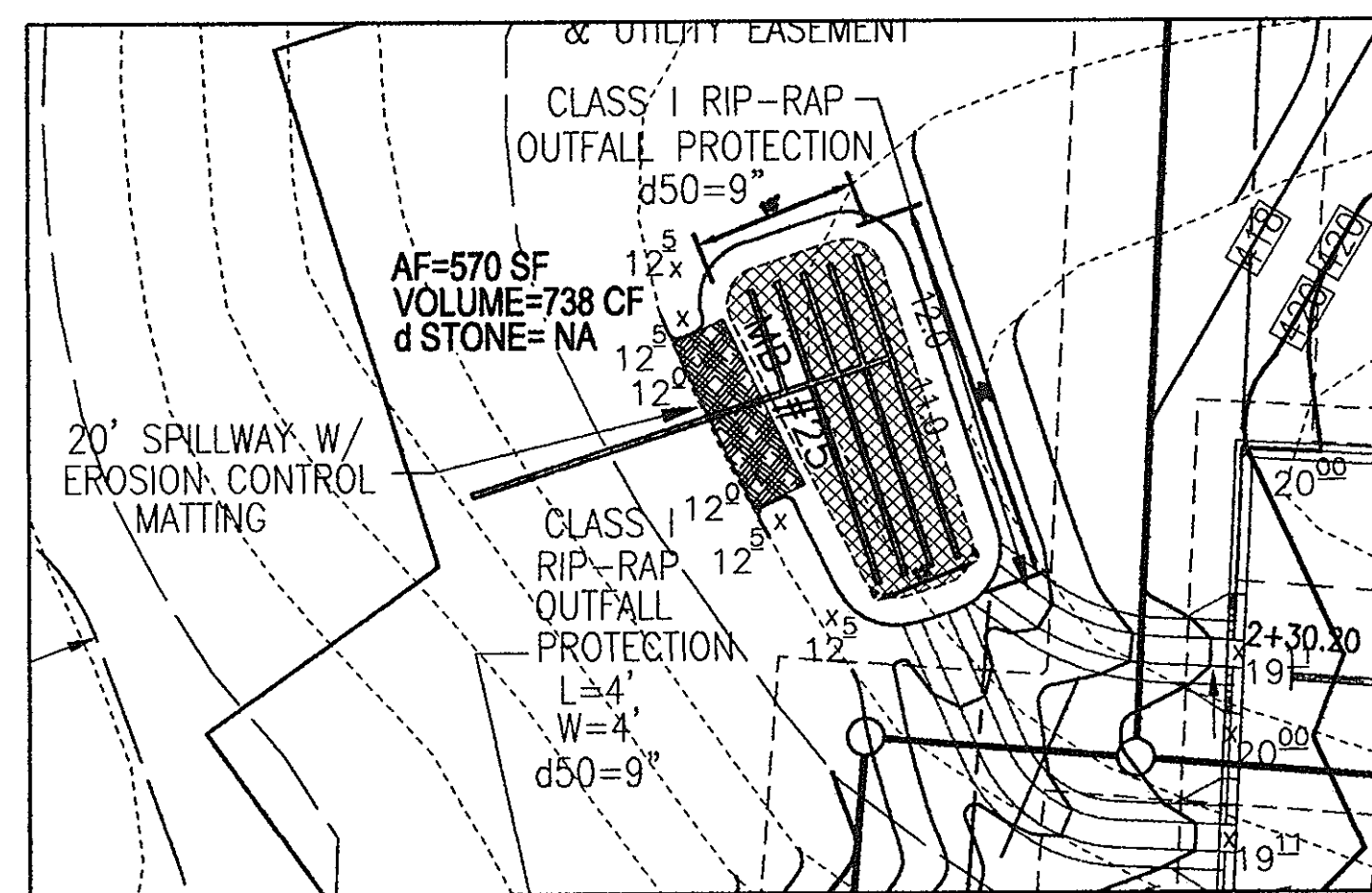
DETAIL - MICRO BIO-RETENTION #22 'A' & 'B'
SCALE: 1"=20'



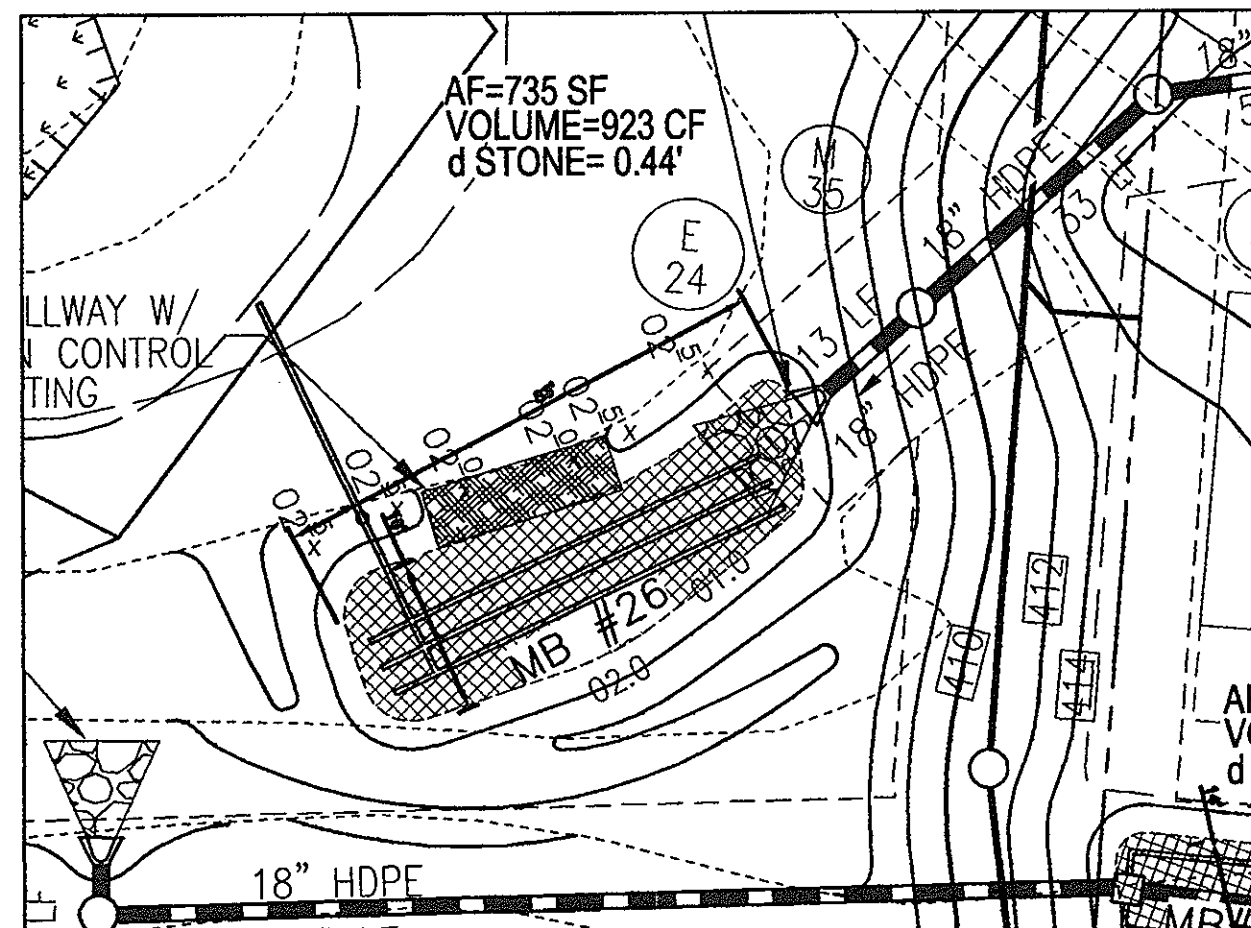
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SCALE: 1"=20'



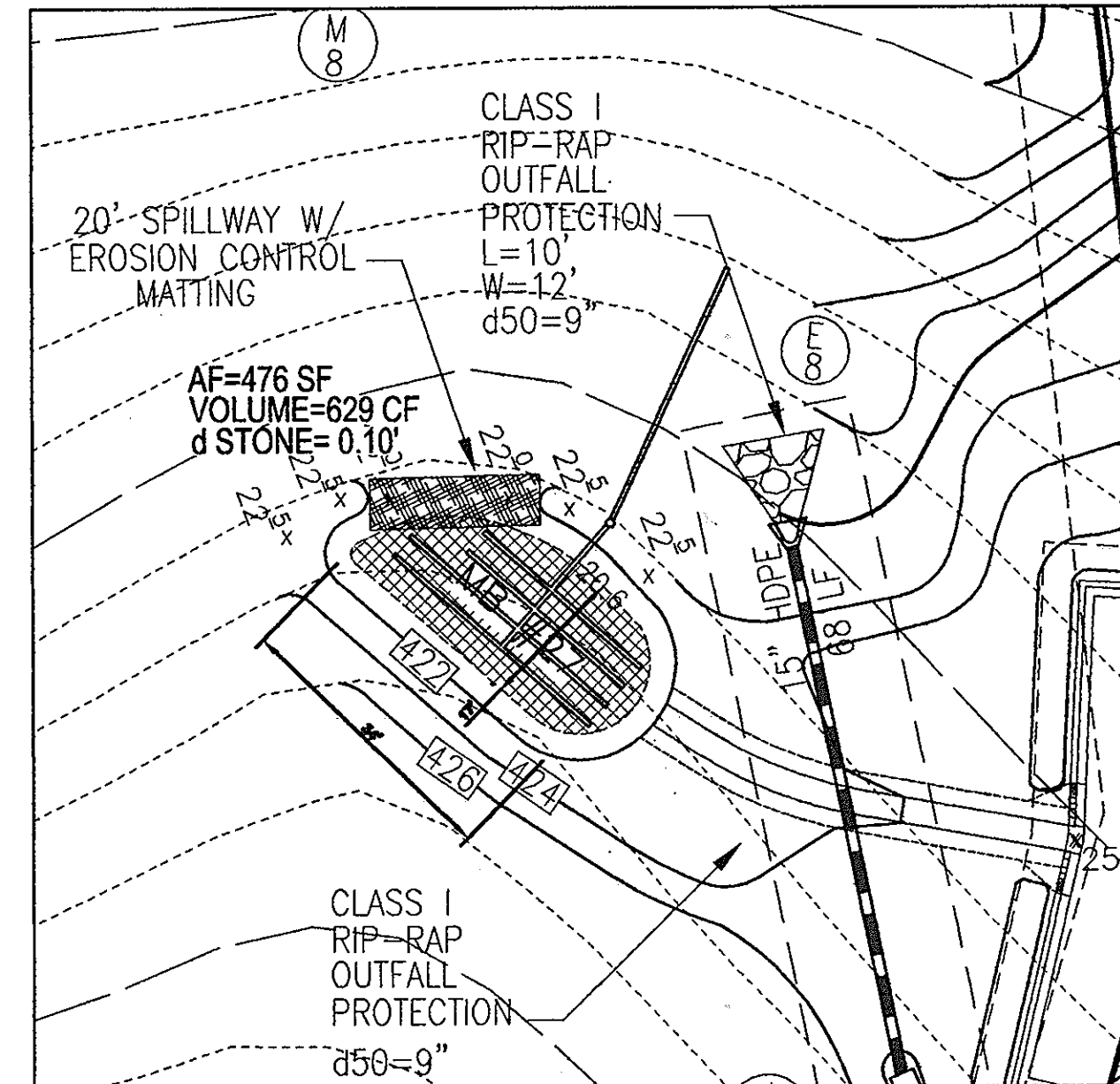
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SCALE: 1"=20'



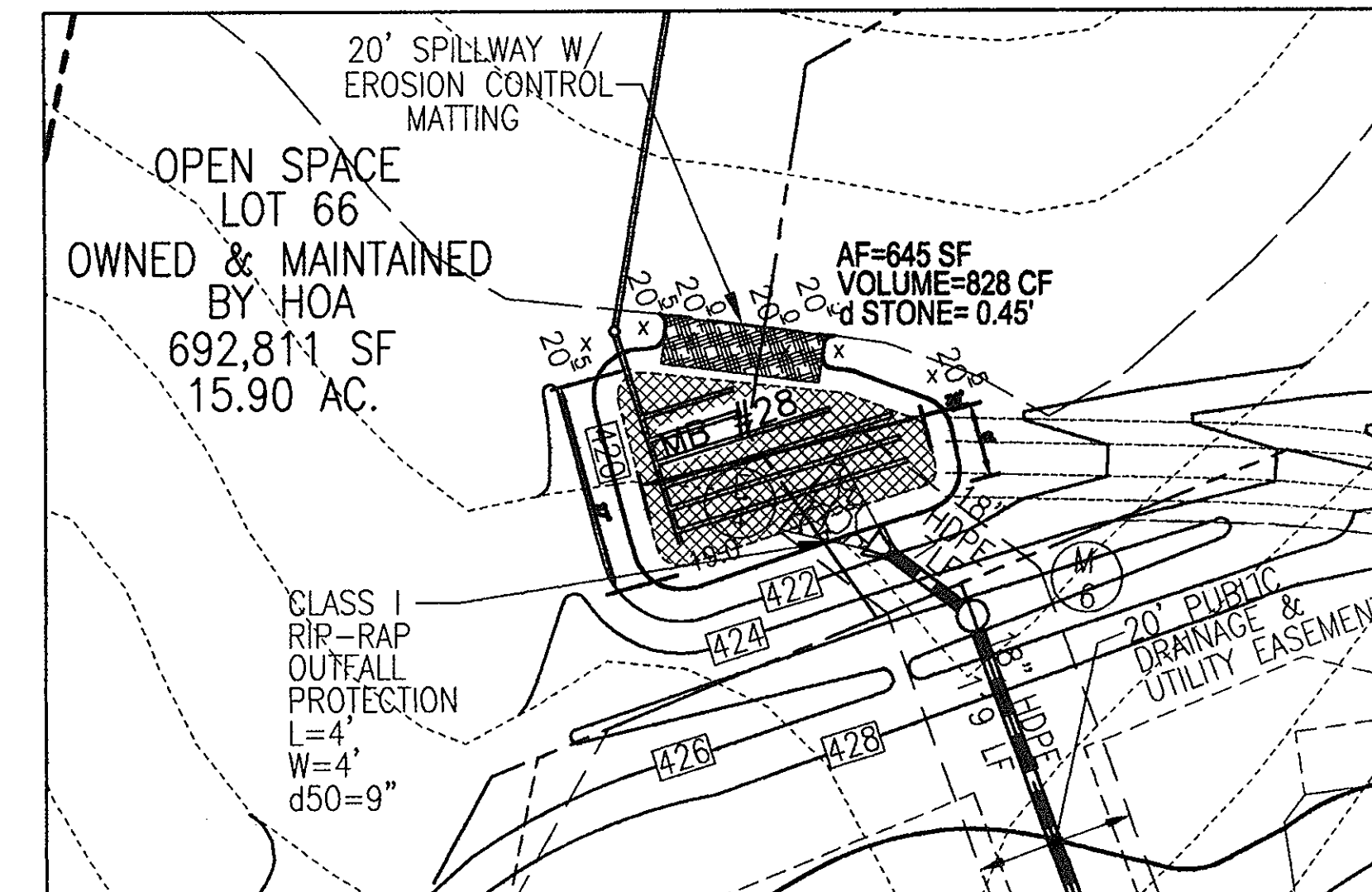
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SCALE: 1"=20'



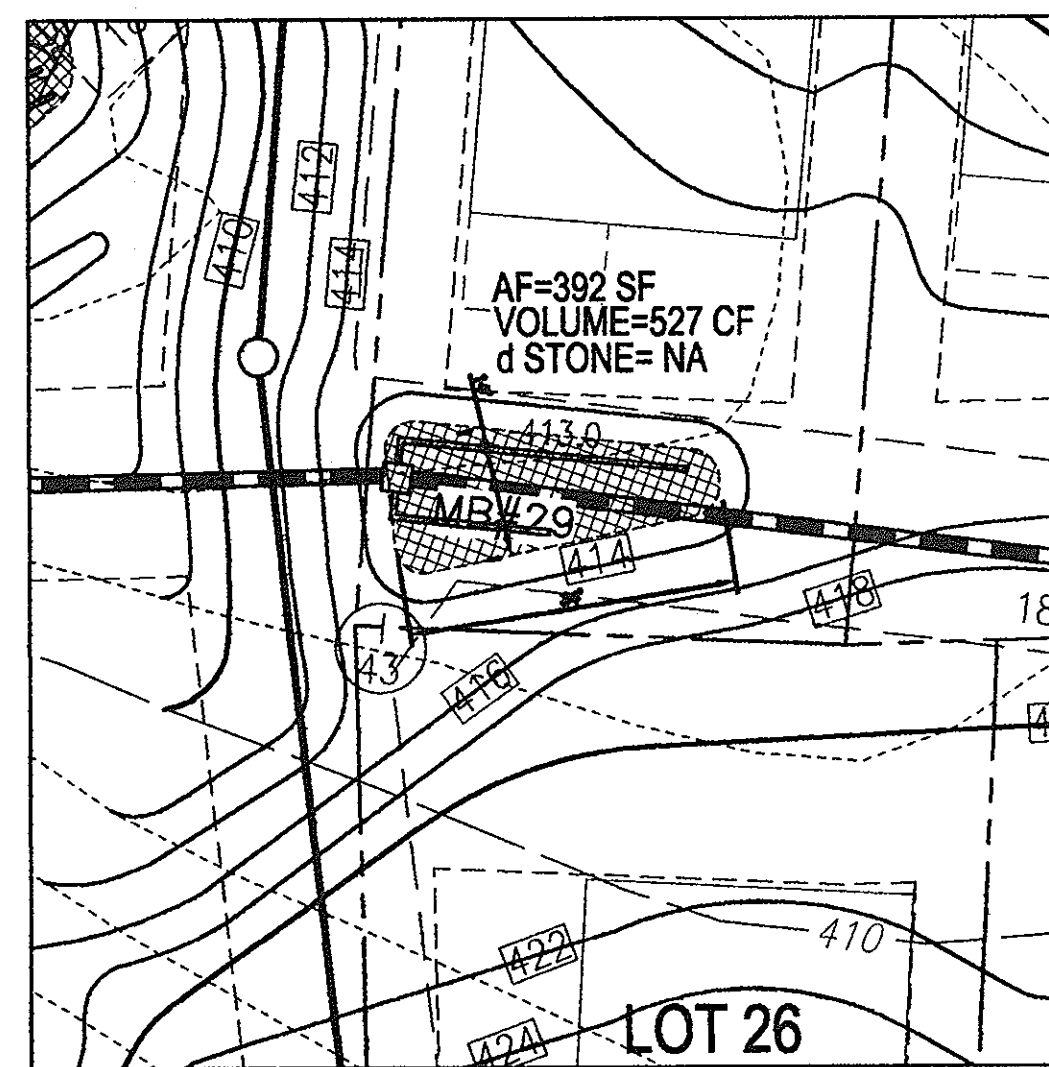
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SCALE: 1"=20'



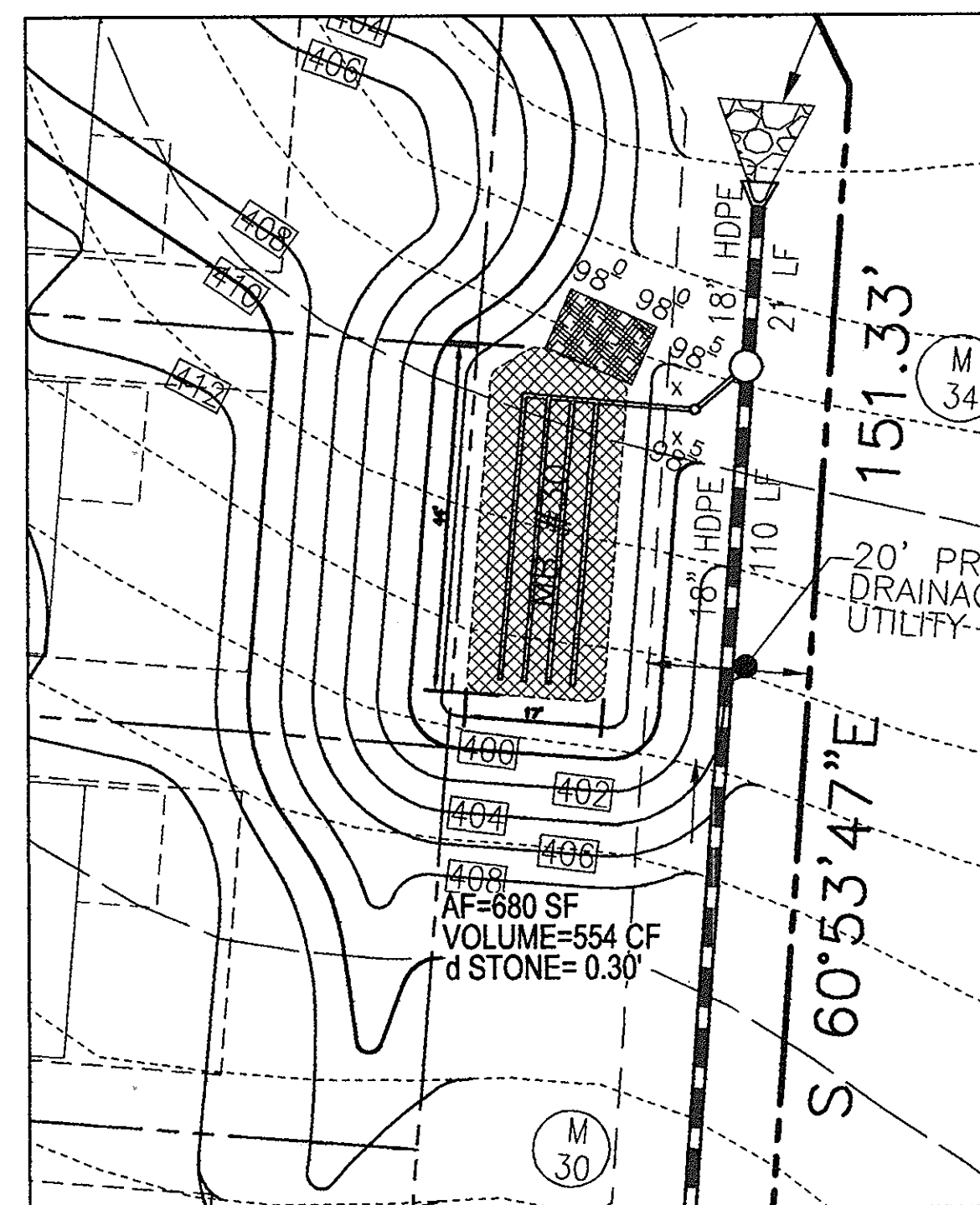
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SCALE: 1"=20'



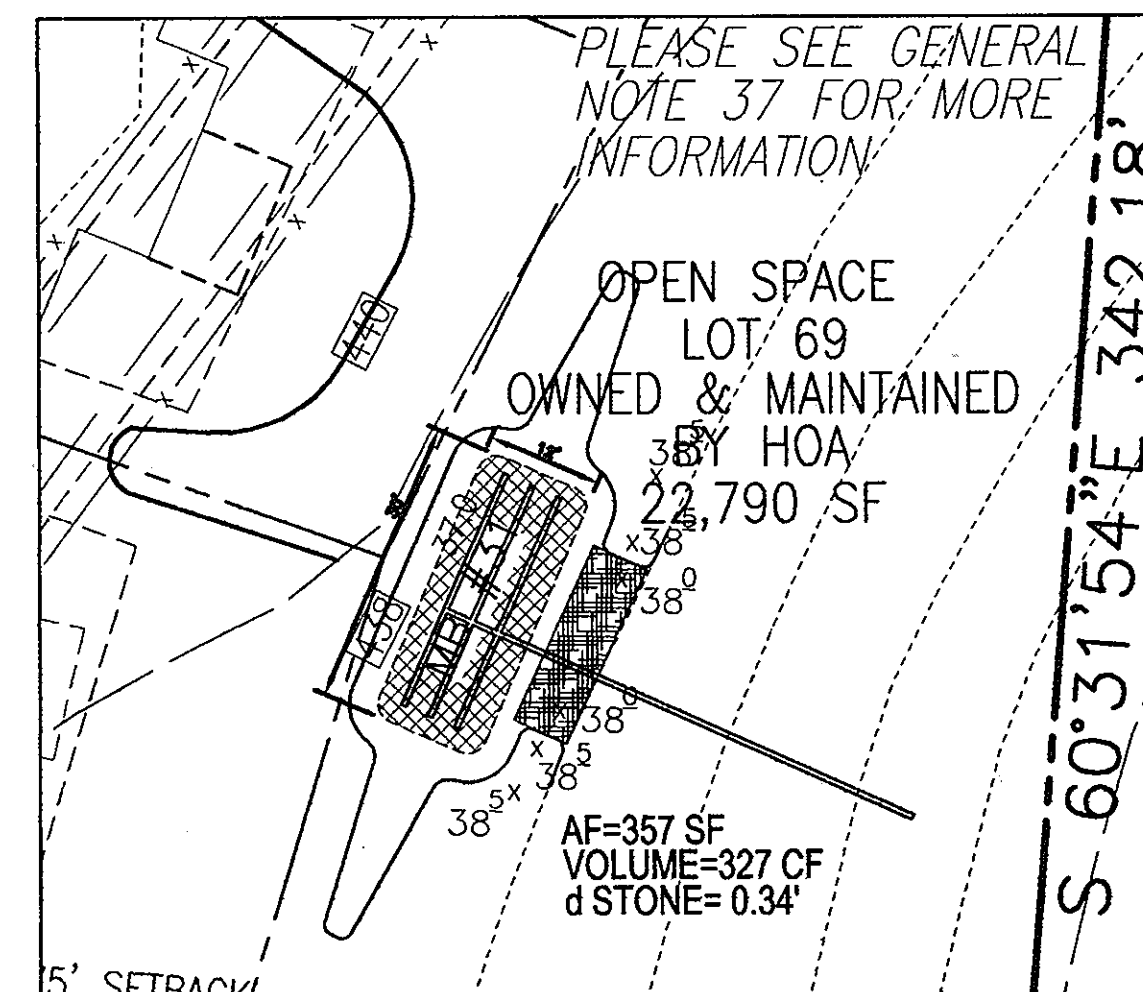
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SCALE: 1"=20'



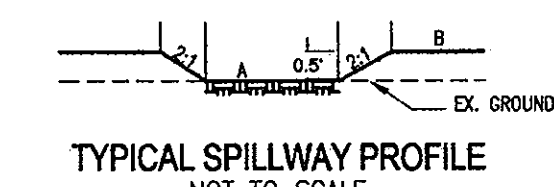
DETAIL - MICRO BIO-RETENTION #29
SCALE: 1"=20'



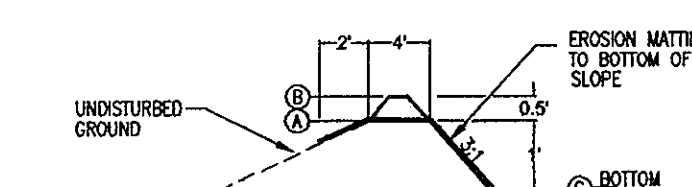
DETAIL - MICRO BIO-RETENTION #30
SCALE: 1"=20'



DETAIL - MICRO BIO-RETENTION #31
SCALE: 1"=20'



TYPICAL SPILLWAY PROFILE
NOT TO SCALE



TYPICAL SPILLWAY SECTION
NOT TO SCALE

OWNER/DEVELOPER

WELSH PROPERTY, LLC
4640 ILCHESTER ROAD, LLC
C/O LAND DESIGN & DEVELOPMENT, INC.
5300 DORSEY HALL DR. STE 102
ELLCOTT CITY, MARYLAND 21042-7819
ATTN: MR. DONALD R. REUWER
443-367-0422

NO.	REVISION	DATE
2	REVISE SWM	8/15/12

**FINAL ROAD CONSTRUCTION PLAN
LOCUST CHAPEL - SECTION I
A GREEN NEIGHBORHOOD
STORM WATER MANAGEMENT DETAILS**

ZONED: (R-20 AND R-ED) LOTS 1-64 & OPEN SPACE 65-69 WP-09-92, S-06-006
A SUBDIVISION OF PARCEL 115 WP-10-002
TAX MAP #31 GRID 4 HOWARD COUNTY, MARYLAND PARCEL 115
1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND

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

PROFESSIONAL CERTIFICATE

DESIGN BY: JAR
DRAWN BY: KC
CHECKED BY: RHY
DATE: AUGUST 2010
SCALE: 1"=20'
W.O. NO.: 04-151

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 07-27-2014.

19 SHEET OF 25

APPROVED: DEPARTMENT OF PUBLIC WORKS
W. P. ... 10-21-10
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
... 10/20/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

... 11/10/10
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

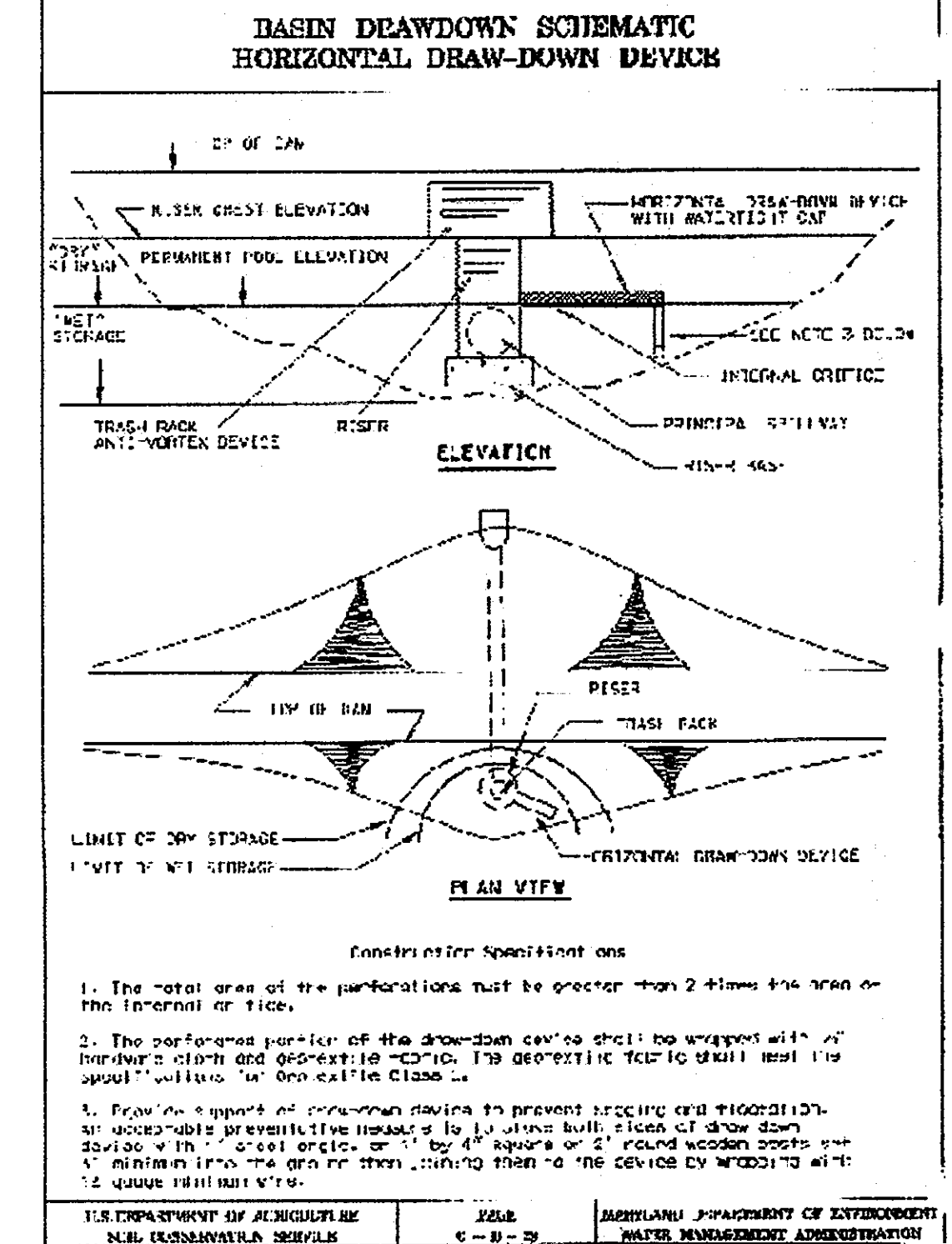
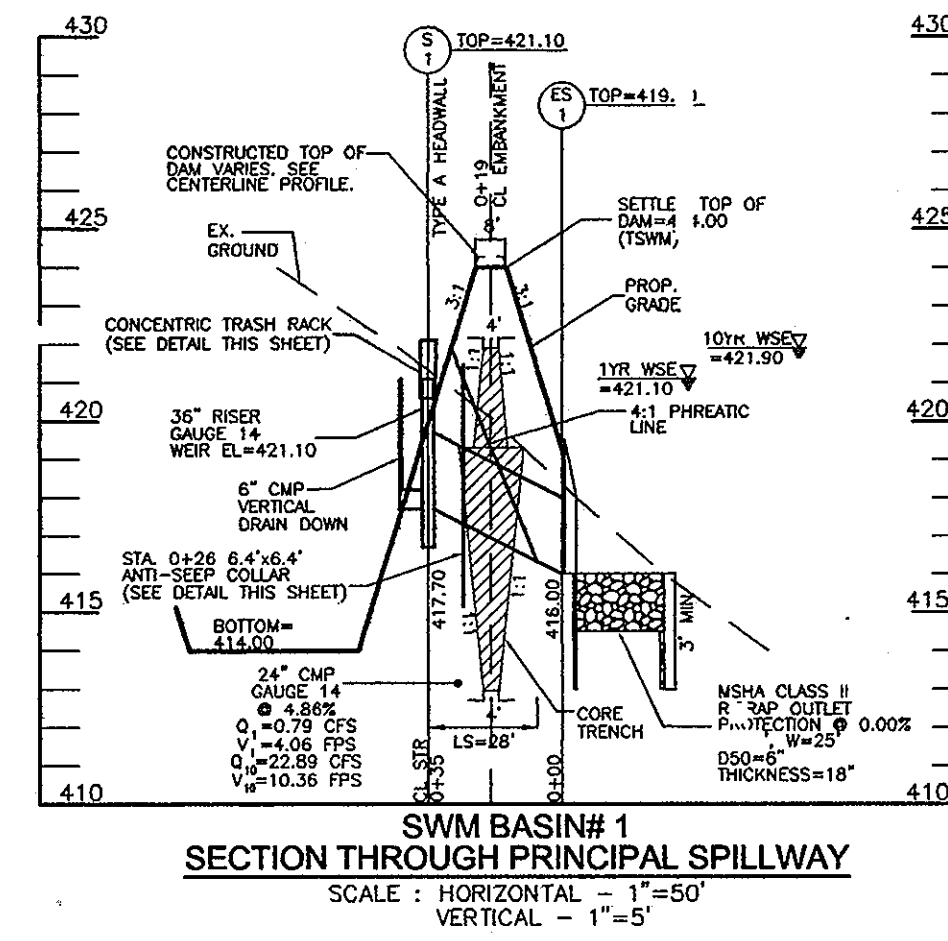
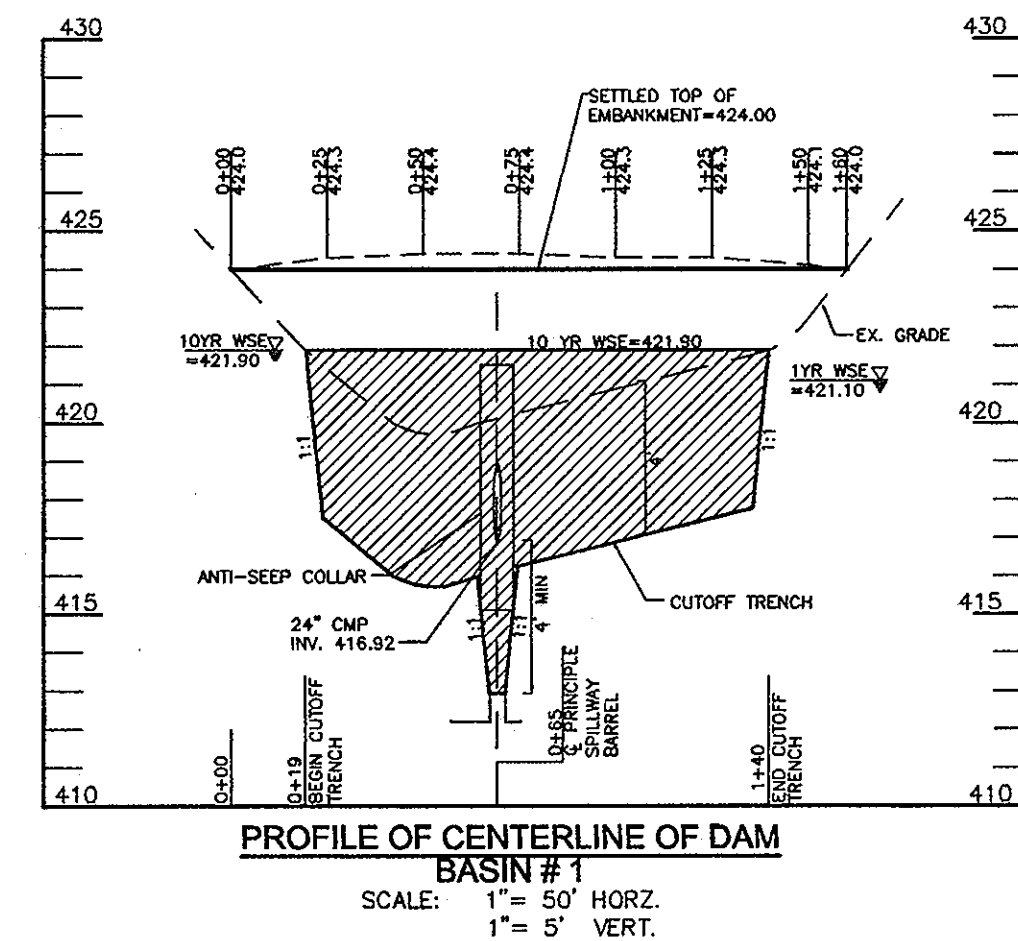
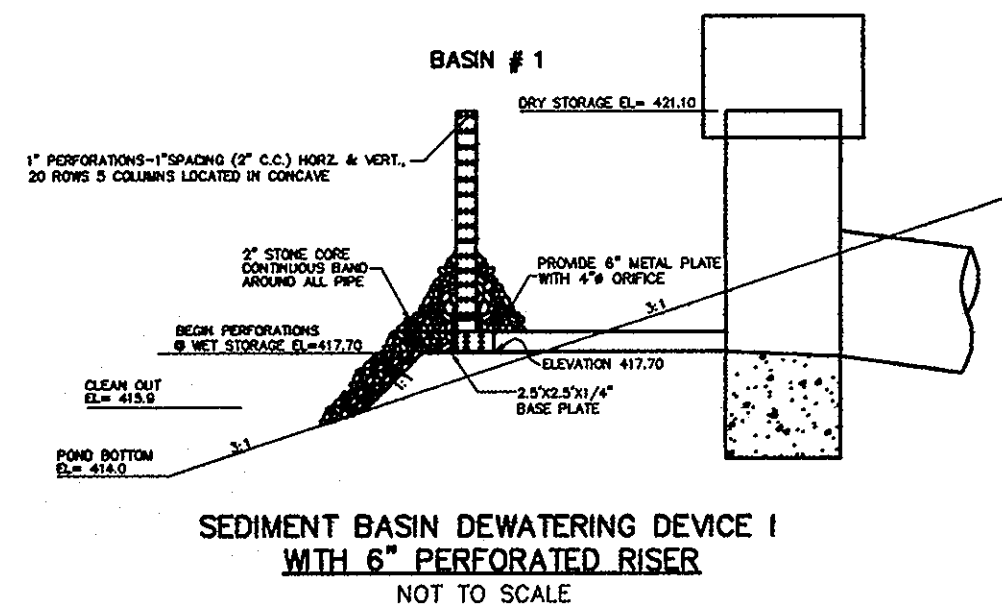
BY THE DEVELOPER:
"I WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."
... 9/30/10
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... 9/20/10
SIGNATURE OF ENGINEER DATE

DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
...
HOWARD S.C.D. DATE

BASIN #1

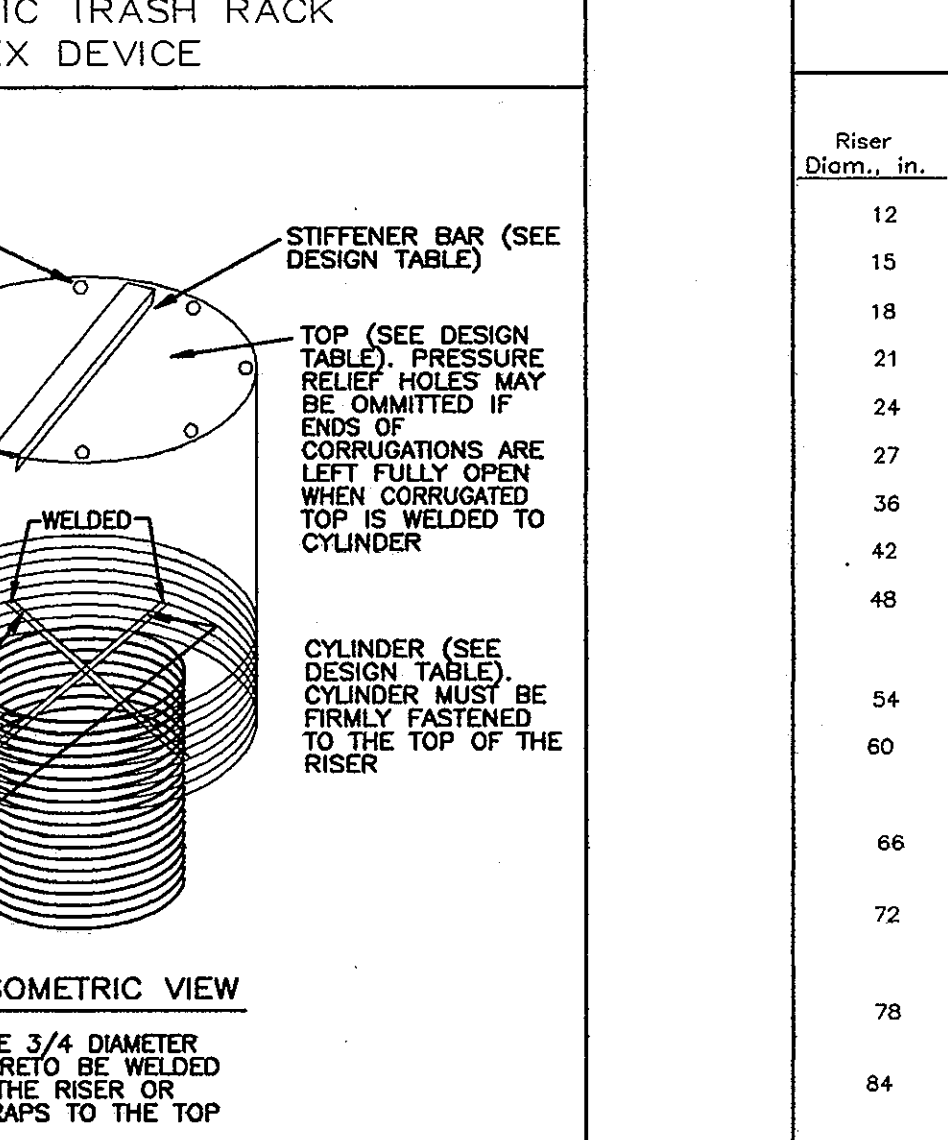
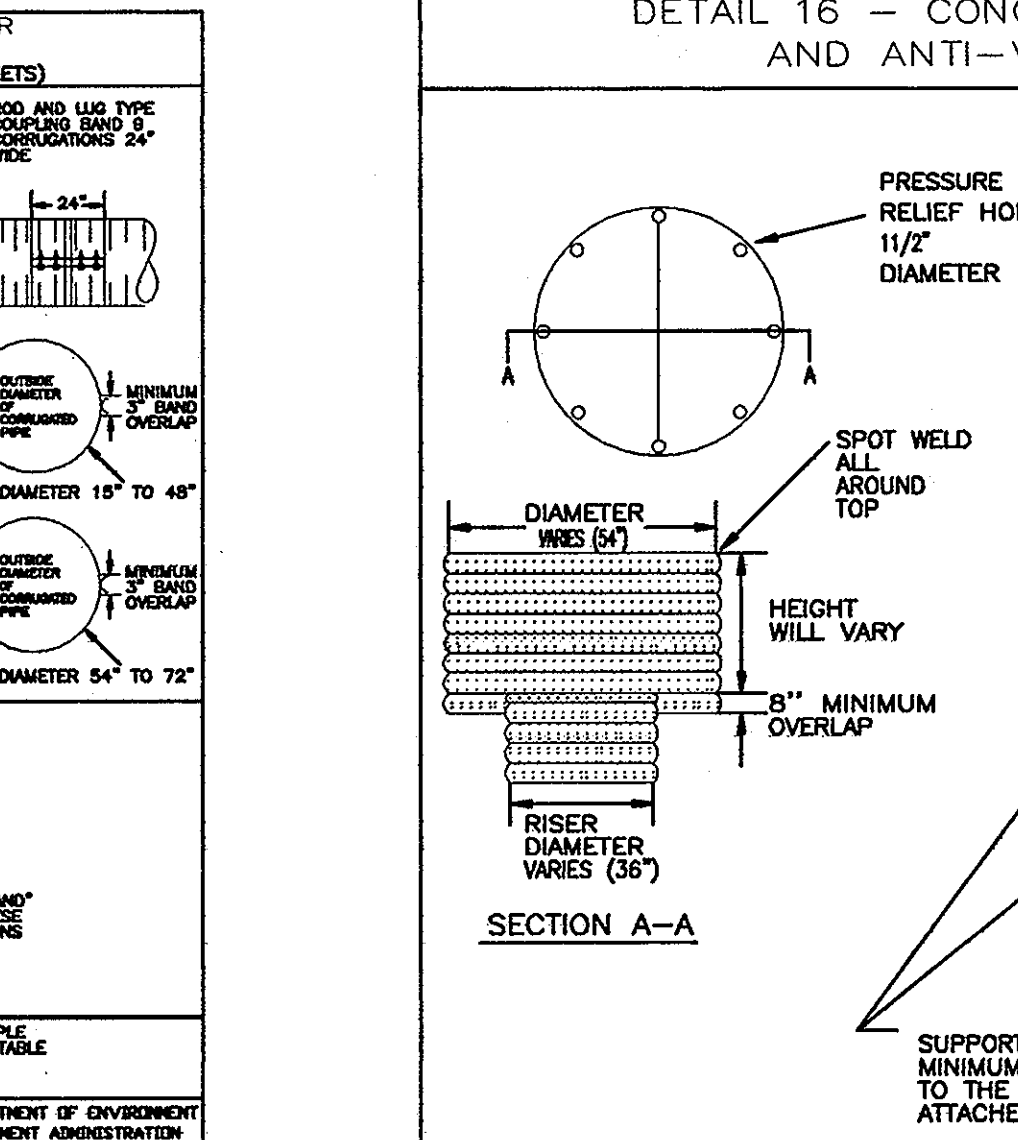
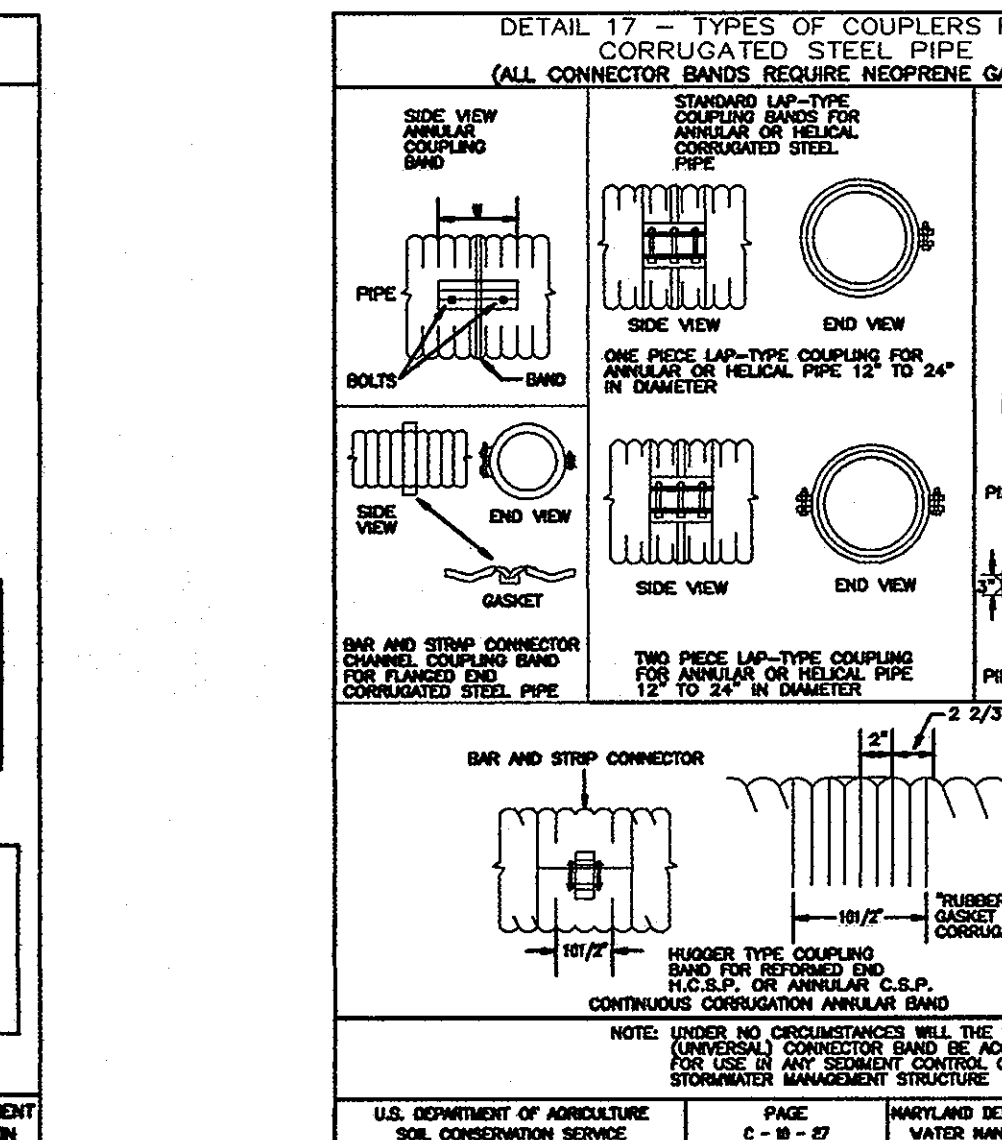
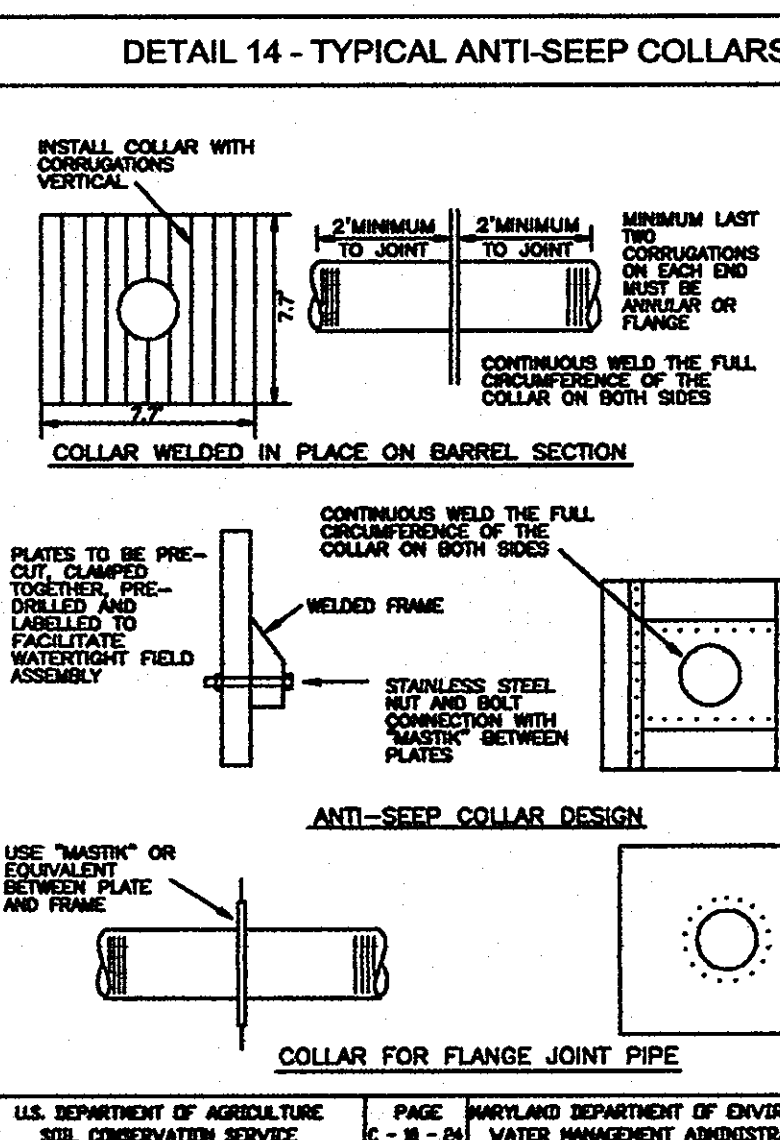
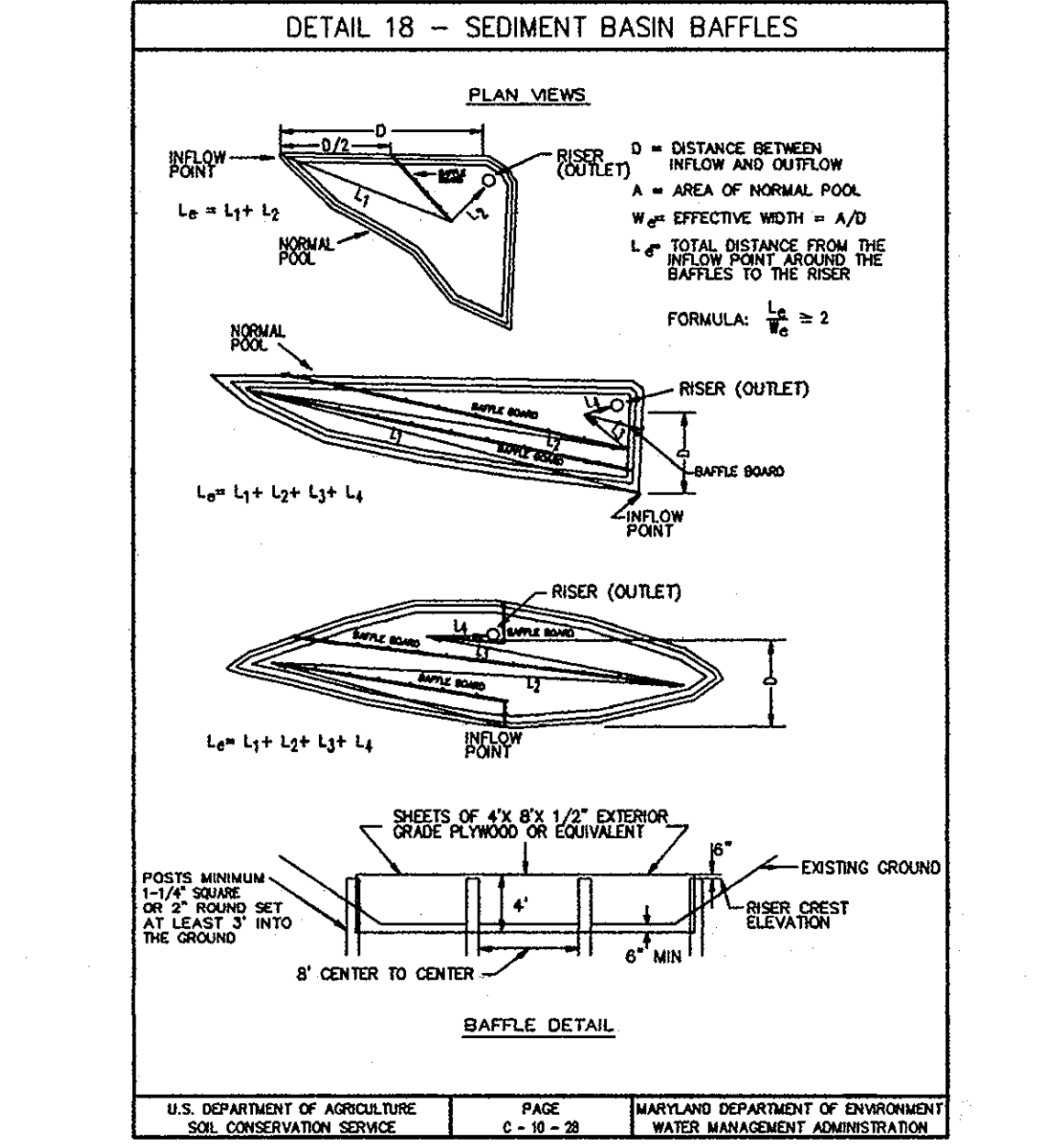
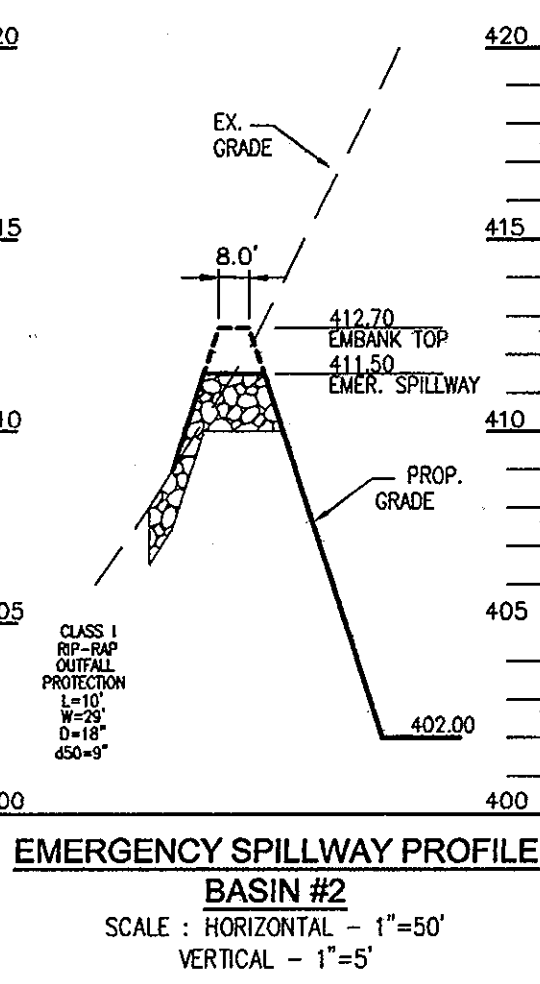
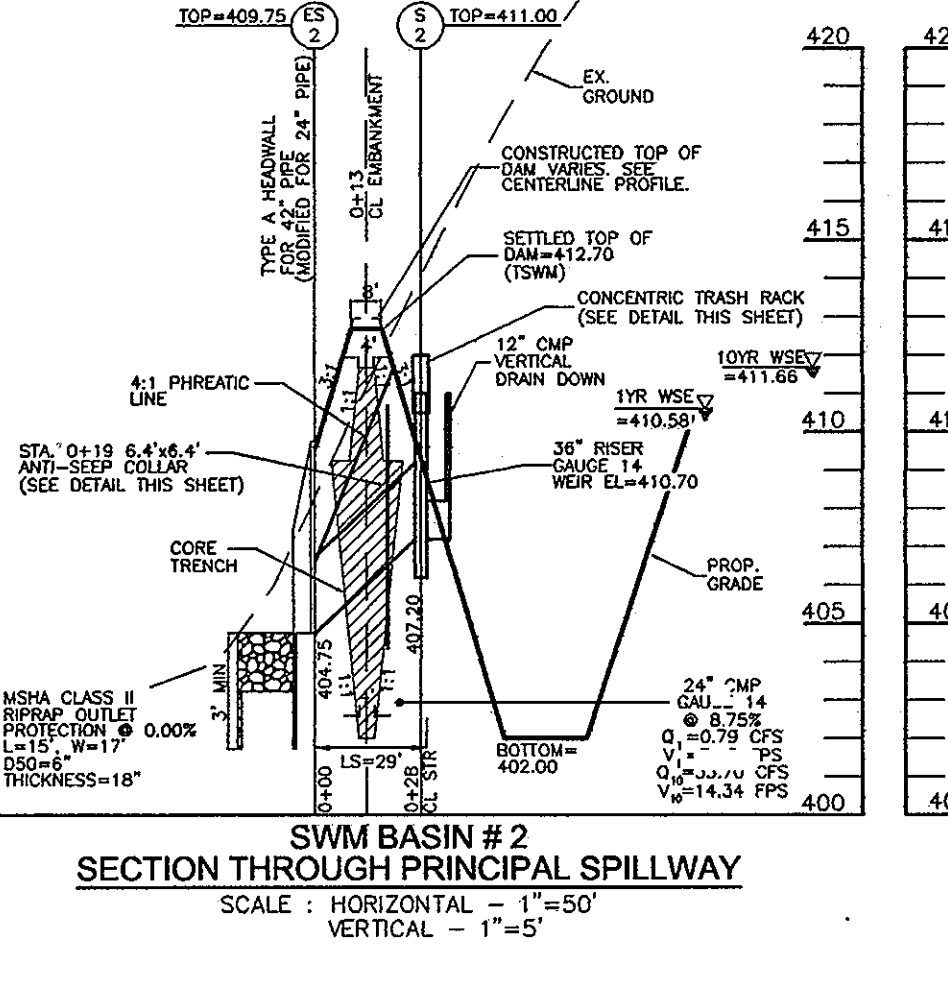
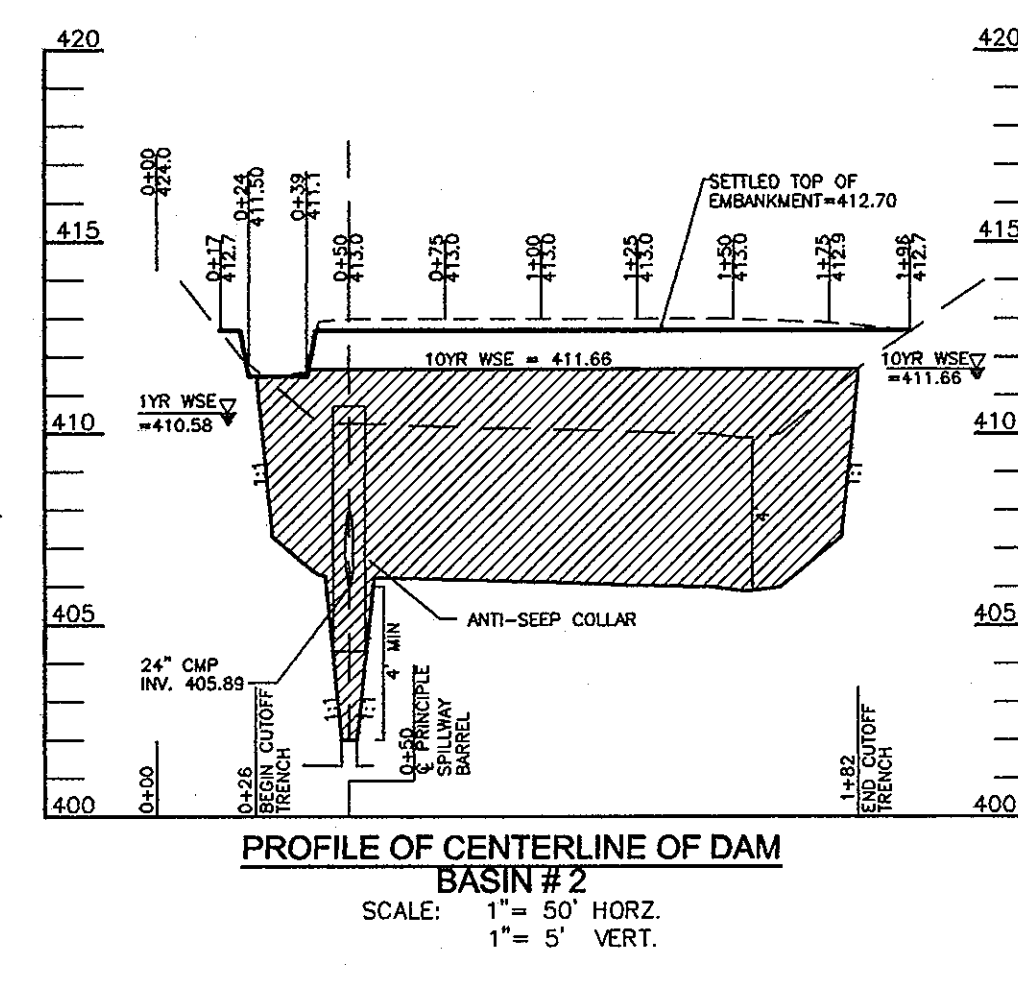
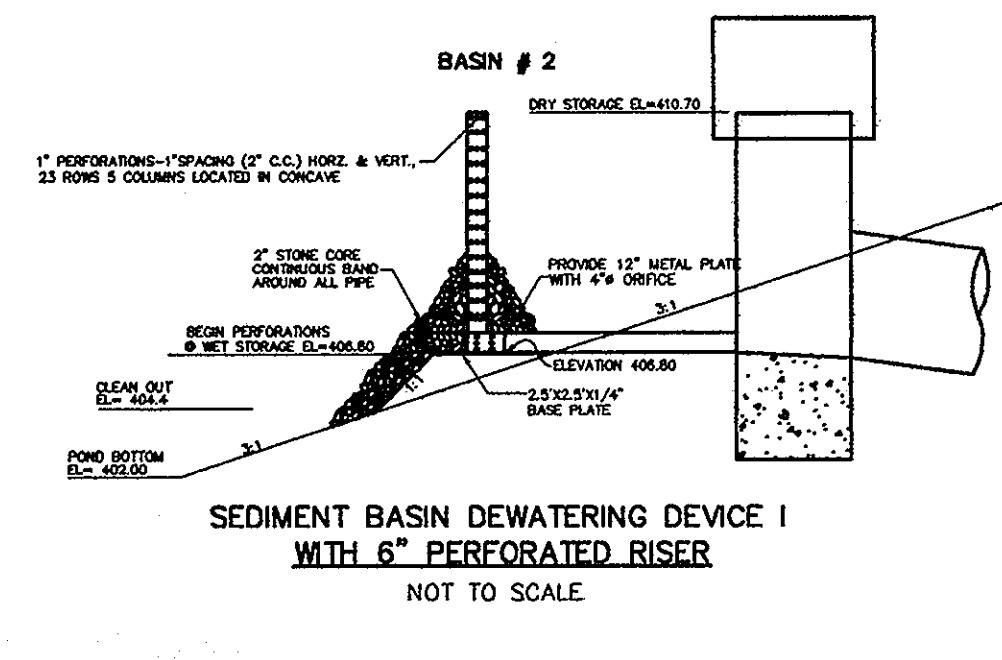
EX. DRAINAGE AREA: 3.4 AC
 PROP. DRAINAGE AREA: 5.1 AC
 WET STORAGE REQUIRED: 9,180 CF
 WET STORAGE PROVIDED: 9,293 CF
 DRY STORAGE REQUIRED: 9,180 CF
 DRY STORAGE PROVIDED: 17,245 CF
 TOTAL STORAGE REQUIRED: 18,360 CF
 TOTAL STORAGE PROVIDED: 26,547 CF
 BOTTOM ELEVATION: 414.00
 WEIR ELEVATION: 421.10
 WET STORAGE ELEVATION: 414.00-417.70
 DRY STORAGE ELEVATION: 417.70-421.10
 TOTAL STORAGE DEPTH: 7.10
 TOP OF EMBANKMENT: 424.00
 CLEANOUT ELEVATION: 415.9
 SIDE SLOPES: 3:1
 EMERGENCY SPILLWAY: N/A



1. The total area of the perforations must be greater than 2 times the area of the internal orifice.
 2. The perforated portion of the draw-down device shall be wrapped with a hardware cloth and galvanized mesh. The geometric size shall not be greater than 1/4 inch.
 3. Provide a support of corrugated metal to prevent racking and vibration.
 4. Acceptable preventive measures to prevent racking and vibration are:
 a. Provide a support of corrugated metal to prevent racking and vibration.
 b. Provide a support of corrugated metal to prevent racking and vibration.
 c. Provide a support of corrugated metal to prevent racking and vibration.

BASIN #2

EX. DRAINAGE AREA: 7.2 AC
 PROP. DRAINAGE AREA: 4.6 AC
 WET STORAGE REQUIRED: 12,960 CF
 WET STORAGE PROVIDED: 13,370 CF
 DRY STORAGE REQUIRED: 12,960 CF
 DRY STORAGE PROVIDED: 20,500 CF
 TOTAL STORAGE REQUIRED: 25,920 CF
 TOTAL STORAGE PROVIDED: 33,870 CF
 BOTTOM ELEVATION: 402.00
 WEIR ELEVATION: 410.70
 WET STORAGE ELEVATION: 402.00-406.80
 DRY STORAGE ELEVATION: 406.80-410.70
 TOTAL STORAGE DEPTH: 8.70
 TOP OF EMBANKMENT: 412.70
 CLEANOUT ELEVATION: 404.40
 SIDE SLOPES: 3:1
 EMERGENCY SPILLWAY: 15' @ 411.50



Riser Diam., in.	Trash Rack Cyl. Diam., in.	Trash Rack Cyl. Thick., in.	H., in.	Minimum Size Support Bar	Minimum Top Thickness	Stiffener
12	18	16	6	#6 Rebar	16 go.	--
15	21	16	7	"	"	--
18	27	16	8	"	"	--
21	30	16	11	"	"	--
24	36	16	13	"	14 go.	--
27	42	16	15	"	14 go.	--
36	54	14	17	#8 Rebar	12 go.	--
42	60	14	19	"	"	--
48	72	12	21	1-1/4" pipe or 1-1/4 x 1-1/4 x 1/4 angle	10 go.	--
54	78	12	25	"	"	--
60	90	12	29	1-1/2" pipe or 1-1/2 x 1-1/2 x 1/4 angle	8 go.	--
66	96	10	33	2" pipe or 2x2x3/16 angle	8 go. w/stiffener	2x2x1/4 angle
72	102	10	36	"	"	2-1/2x2-1/2 angle
78	114	10	39	2-1/2" pipe or 2x2x1/4 angle	"	"
84	120	10	42	2-1/2" pipe or 2-1/2x2-1/2x1/4 angle	"	2-1/2 x 2-1/2 x 5/16 angle

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 8-10-28 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 8-10-27 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE C-10-28 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE C-10-28 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE C-10-28 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

APPROVED: DEPARTMENT OF PUBLIC WORKS
 [Signature] 10-2-10
 CHIEF, BUREAU OF HIGHWAYS
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 10/2/10
 CHIEF, ENGINEERING DIVISION
 APPROVED: [Signature] 10/2/10
 CHIEF, DIVISION OF LAND DEVELOPMENT

BY THE DEVELOPER:
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL 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/WE ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
 [Signature] 9/30/10
 SIGNATURE OF DEVELOPER DATE

BY THE ENGINEER:
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
 [Signature] 9/28/10
 SIGNATURE OF ENGINEER DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.
 [Signature] 10/7/10
 HOWARD S.C.D. DATE

OWNER/DEVELOPER
 WELSH PROPERTY, LLC
 4640 ILCHESTER ROAD, LLC
 C/O LAND DESIGN & DEVELOPMENT, INC.
 5300 DORSEY HALL DR. STE 102
 ELLICOTT CITY, MARYLAND 21042-7819
 ATTN: MR. DONALD R. REUWER
 443-367-0422

NO.	REVISION	DATE

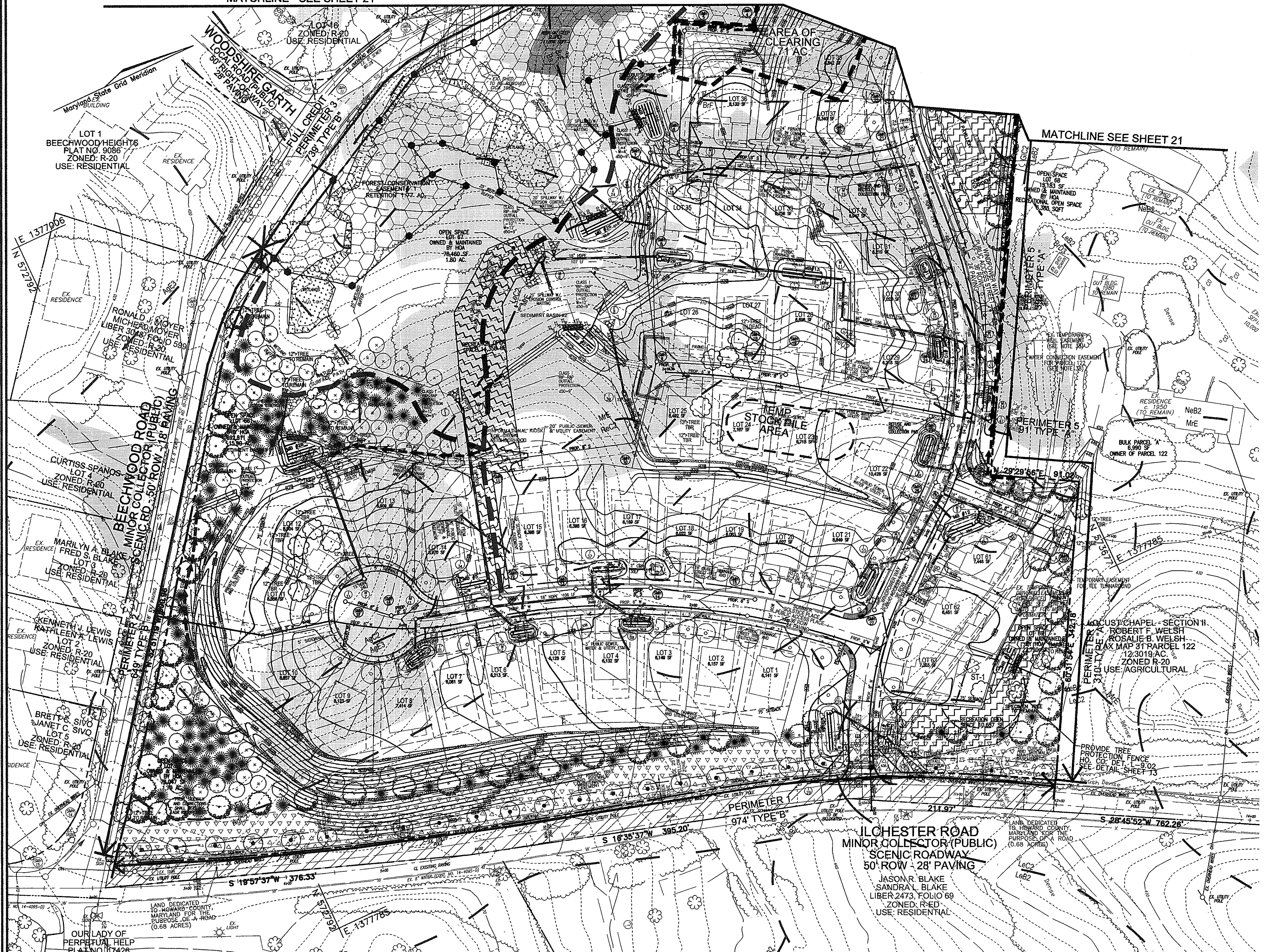
FINAL ROAD CONSTRUCTION PLAN
LOCUST CHAPEL - SECTION I
 A GREEN NEIGHBORHOOD
TEMPORARY STORMWATER MANAGEMENT
NOTES AND DETAILS

ZONED: (R-20 AND R-ED) LOTS 1-64 & OPEN SPACE 65-69 WP-09-92, S-06-006
 TAX MAP #31 GRID 4 A SUBDIVISION OF PARCEL 115 WP-10-002
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND PARCEL 115 HOWARD COUNTY, MARYLAND

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

PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DAILY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 18193 EXPIRATION DATE: 09-27-2018
 DESIGN BY: JAR
 DRAWN BY: KG
 CHECKED BY: RHY
 DATE: AUGUST 2010
 SCALE: AS SHOWN
 W.O. NO.: 04-151
 20 SHEET OF 25

MATCHLINE - SEE SHEET 21



LEGEND:

	EXISTING CONTOUR		PROPOSED STREET TREE
	PROPOSED CONTOUR		WETLANDS BUFFER
	EXISTING CURB AND GUTTER		STREAM CENTERLINE
	PROPOSED CURB AND GUTTER		STREAM BUFFER
	EXISTING UTILITY POLE		16,000 LUMEN LED STREET LIGHT
	EXISTING LIGHT POLE		9,500 LUMEN LED STREET LIGHT
	EXISTING MAILBOX		PROP. STREET LIGHTS
	EXISTING SIGN		PROP. STREET SIGNS
	EXISTING SANITARY MANHOLE		SPECIMEN TREE
	EXISTING SANITARY LINE		TREE PROTECTION FENCE HO.D.
	EXISTING CLEANOUT		DETAIL L-9.02
	EXISTING FIRE HYDRANT		LIMIT OF DISTURBANCE
	EXISTING WATER LINE		FOREST CONSERVATION AREA (RETENTION)
	PROPOSED STORM DRAIN		RECREATION OPEN SPACE
	EXISTING TREE LINE (FIELD LOCATED)		PROP. ROW DEDICATION
	EXISTING VEGETATION (APPROXIMATE LOCATION)		BCKG ZONES
	EXISTING FENCE		TREE PROTECTION FENCE
	PROPERTY LINE		AREA OF FOREST TO BE CLEARED
	RIGHT-OF-WAY LINE		SOILS BOUNDARY
	FOREST CONSERVATION SIGNS		LIMIT OF DISTURBANCE
	PROPOSED SHADE TREE		PROPOSED SIDEWALK
	PROPOSED EVERGREEN TREE		PROPOSED SHRUBS
	STEEP SLOPES (<25%)		LANDSCAPE PERIMETER
	MODERATE SLOPES (0-24.9%)		EX. TEMP. DRIVEWAY EASEMENT FOR PARCEL 122
	PUBLIC SEWER, WATER, AND UTILITY EASEMENT		PUBLIC DRAINAGE AND UTILITY EASEMENT
	PRIVATE DRAINAGE AND UTILITY EASEMENT		PUBLIC SEWER AND UTILITY EASEMENT
	PUBLIC DRAINAGE STREET TREE AND UTILITY EASEMENT		PRIVATE USE-IN-COMMON ACCESS EASEMENT
	PUBLIC TREE AND SIDEWALK MAINT. EASEMENT		

OWNER/DEVELOPER

J. Chris Ogle
 J. CHRIS OGLE
 DNR QUALIFIED PROFESSIONAL

WELSH PROPERTY, LLC
 4640 ILCHESTER ROAD, LLC
 C/O LAND DESIGN & DEVELOPMENT, INC.
 5300 DORSEY HALL DR. STE 102
 ELLICOTT CITY, MARYLAND 21042-7819
 ATTN: MR. DONALD R. REUWER
 443-367-0422

NO.	REVISION	DATE
2	REVISE SW/M	8/15/12
1	REDUCE SIZE OF MRR#4-B#12	6/20/12

**FINAL ROAD CONSTRUCTION PLAN
 LOCUST CHAPEL - SECTION I
 A GREEN NEIGHBORHOOD**

LANDSCAPE AND FOREST CONSERVATION PLAN

ZONED: (R-20 AND R-ED) LOTS 1-64 & OPEN SPACE 65-69 SP-10_001
 TAX MAP #31 GRID 4 A SUBDIVISION OF PARCEL 115 WP-09-92, S-06-006
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND PARCEL 115 WP-10-002

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

PROFESSIONAL CERTIFICATE

DESIGN BY: JAR
 DRAWN BY: KG
 CHECKED BY: RHY
 DATE: AUGUST 2010
 SCALE: 1"=50'
 W.O. NO.: 04-151

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LICENSED PROFESSIONAL ENGINEER ACT OF THE STATE OF MARYLAND. EXPIRATION DATE: 08-27-2012

21 SHEET OF 25

APPROVED: DEPARTMENT OF PUBLIC WORKS

William J. Mullen 10-21-10
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

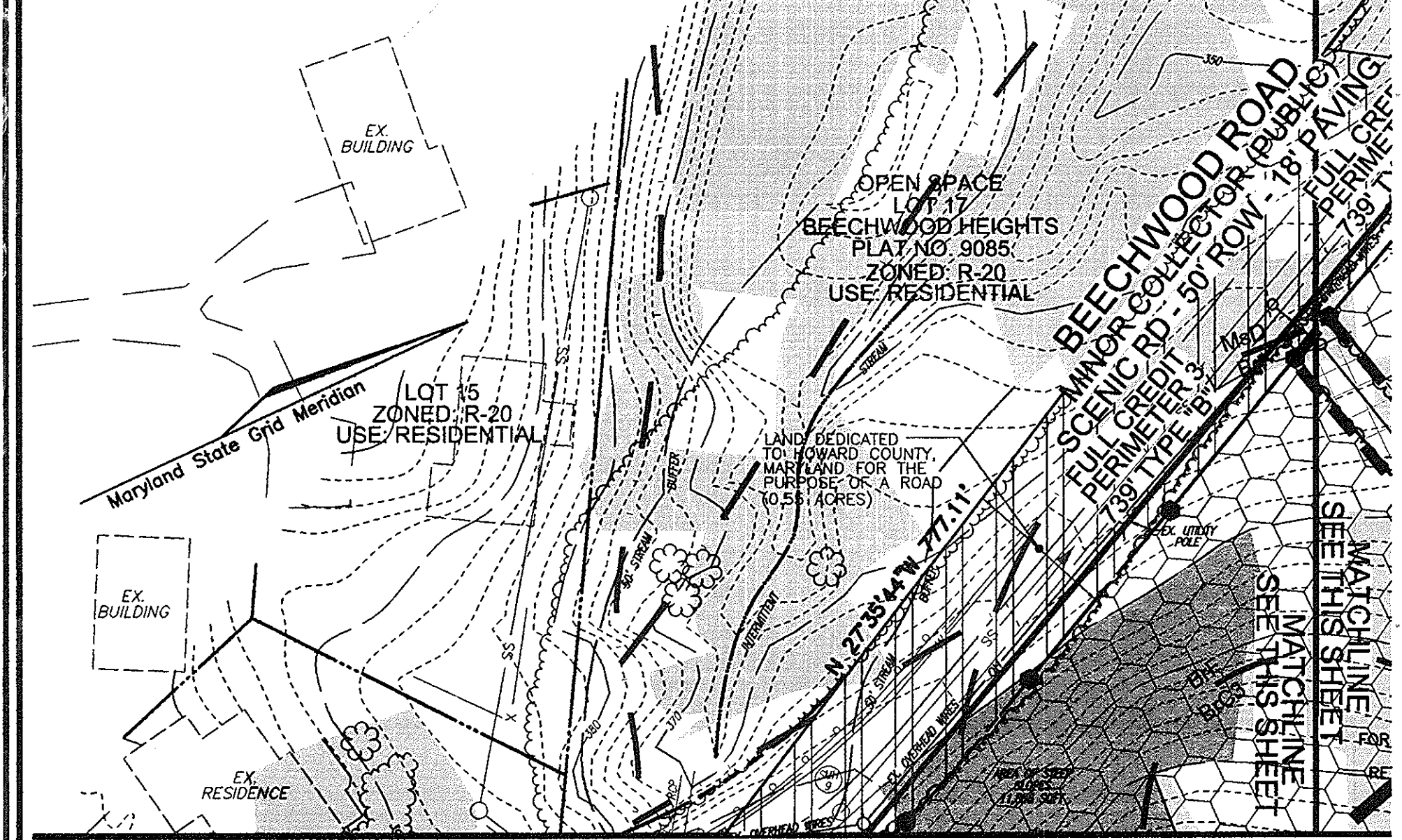
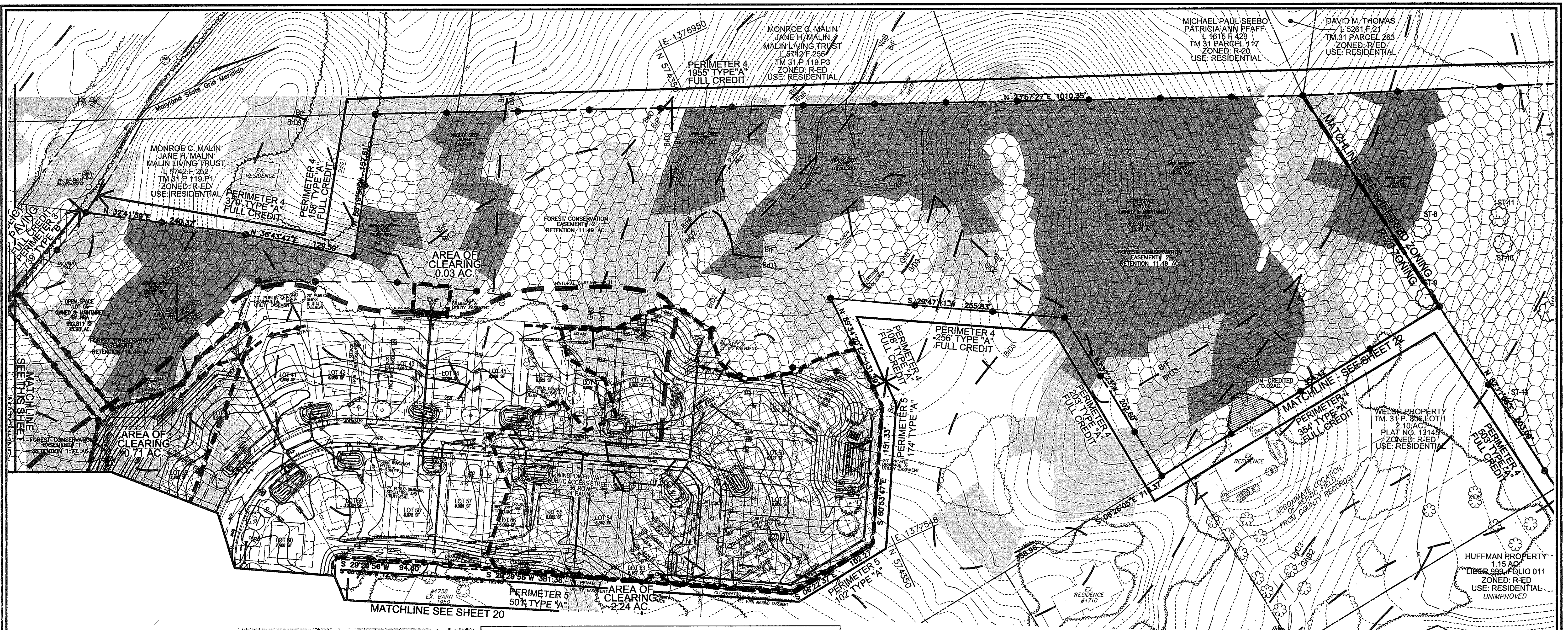
William J. Mullen 10/21/10
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Walter S. Schaefer 10/11/10
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DEVELOPER'S/BUILDER'S CERTIFICATE

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

Jason R. Blake 9/30/10
 SIGNATURE OF DEVELOPER DATE



SOILS LEGEND				
SYMBOL	NAME / DESCRIPTION	GROUP	HYDRIC	"K" FACTOR
AgC2	AURA GRAVELLY LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED	B	NO	0.32
AgE3	AURA GRAVELLY LOAM, 10 TO 30 PERCENT SLOPES, SEVERELY ERODED	B	NO	0.24
Ba	BAILE SILT LOAM	D	YES	0.43
BrC2	BRANDYWINE LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	C	NO	0.24
BrC3	BRANDYWINE LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	C	NO	0.24
BrD2	BRANDYWINE LOAM, 15 TO 25 PERCENT SLOPES, MODERATELY ERODED	C	NO	0.20
BrD3	BRANDYWINE LOAM, 15 TO 25 PERCENT SLOPES, SEVERELY ERODED	C	NO	0.20
BrF	BRANDYWINE LOAM, 20 TO 60 PERCENT SLOPES	C	NO	0.20
BwD	BRANDYWINE VERY STONY LOAM, 3 TO 25 PERCENT SLOPES	C	NO	0.20
GIB2	GLENELG LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B	NO	0.32
GIC2	GLENELG LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B	NO	0.32
GIC3	GLENELG LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B	NO	0.32
GhB2	GLENVILLE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	C	NO*	0.32
LeB2	LEGORE SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B	NO	0.24
LeC2	LEGORE SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B	NO	0.24
LgC3	LEGORE SILTY CLAY LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B	NO	0.24
Msd	MONTALTO AND RELAY VERY STONY SILT LOAMS, 3 TO 25 PERCENT SLOPES	C	NO	0.32
MrE	MONTALTO AND RELAY SOILS, 15 TO 45 PERCENT SLOPES	C	NO	0.24
Msf	MONTALTO AND RELAY SOILS, VERY STONY SILT LOAMS, 25-60% SLOPES	C	NO	0.32
NeB2	NESHAMINY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B	NO	0.32
NeC2	NESHAMINY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B	NO	0.32
ReC2	RELAY SILT LOAM, 3 TO 15 PERCENT SLOPES, MODERATELY ERODED	B	NO	0.24
WgB	WATCHUNG SILT LOAM, 3 TO 8 PERCENT SLOPES	D	YES	0.43

* MAY POTENTIALLY CONTAIN HYDRIC INCLUSIONS
SOURCE: USDA - SCS, 1989 SOIL SURVEY OF HOWARD COUNTY, MARYLAND.

LEGEND:	
	EXISTING CONTOUR
	PROPOSED CONTOUR
	EXISTING CURB AND GUTTER
	PROPOSED CURB AND GUTTER
	EXISTING UTILITY POLE
	EXISTING LIGHT POLE
	EXISTING MAILBOX
	EXISTING SIGN
	EXISTING SANITARY MANHOLE
	EXISTING SANITARY LINE
	EXISTING CLEANOUT
	EXISTING FIRE HYDRANT
	EXISTING WATER LINE
	PROPOSED STORM DRAIN
	EXISTING TREE LINE (FIELD LOCATED)
	EXISTING VEGETATION (APPROXIMATE LOCATION)
	EXISTING FENCE
	PROPERTY LINE
	RIGHT-OF-WAY LINE
	SOILS BOUNDARY
	LIMIT OF DISTURBANCE
	PROPOSED SIDEWALK
	FOREST CONSERVATION SIGNS
	MODERATE SLOPES (0-24.9%)
	PROPOSED STREET TREE
	WETLANDS BUFFER
	STREAM CENTERLINE
	STREAM BUFFER
	PROP. STREET LIGHT
	PROP. STREET SIGNS
	SPECIMEN TREE TREE PROTECTION FENCE (10' x 10' DETAIL 1-3'02)
	LIMIT OF DISTURBANCE
	FOREST CONSERVATION AREA (RETENTION)
	PROP. ROW DEDICATION
	TREE PROTECTION FENCE
	AREA OF FOREST TO BE CLEARED
	PROPOSED SHADE TREE
	PROPOSED EVERGREEN TREE
	PROPOSED SHRUBS
	LANDSCAPE PERIMETER
	STEEP SLOPES (>25%)

OWNER/DEVELOPER
 WELSH PROPERTY, LLC
 4640 ILCHESTER ROAD, LLC
 C/O LAND DESIGN & DEVELOPMENT, INC.
 5300 DORSEY HALL DR. STE 102
 ELLICOTT CITY, MARYLAND 21042-7819
 ATTN: MR. DONALD R. REUWER
 443-367-0422

NO.	REVISION	DATE
2	REVISE SWIM	8/15/12

FINAL ROAD CONSTRUCTION PLAN
LOCUST CHAPEL - SECTION I
 A GREEN NEIGHBORHOOD

LANDSCAPE AND FOREST CONSERVATION PLAN

ZONED: (R-20 AND R-ED)
 TAX MAP #31 GRID 4
 1ST ELECTION DISTRICT

LOTS 1-64 & OPEN SPACE 65-69
 A SUBDIVISION OF PARCEL 115
 HOWARD COUNTY, MARYLAND

SP_10_001
 WP-09-92, S-06-006
 WP-10-002
 PARCEL 115
 HOWARD COUNTY, MARYLAND

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

PROFESSIONAL CERTIFICATE

DESIGN BY: JAR
 DRAWN BY: KG
 CHECKED BY: RHV
 DATE: AUGUST 2010
 SCALE: 1"=50'
 W.O. NO.: 04-151

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A duly LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 18193 EXPIRATION DATE: 08-27-2012

22 SHEET OF 25

APPROVED: DEPARTMENT OF PUBLIC WORKS

Walter R. Walsh 10-21-10
 CHIEF, BUREAU OF HIGHWAYS

Robert H. Vogel 10/20/10
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

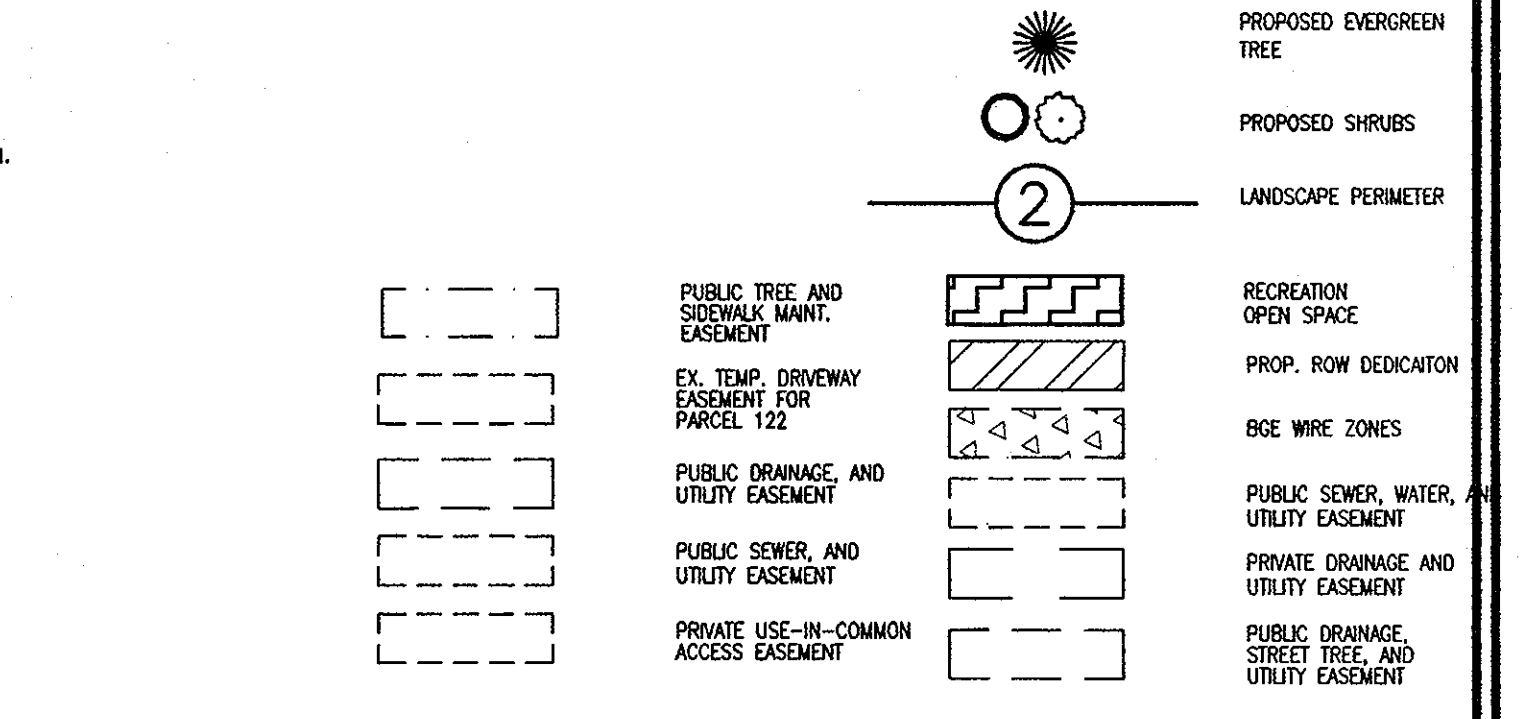
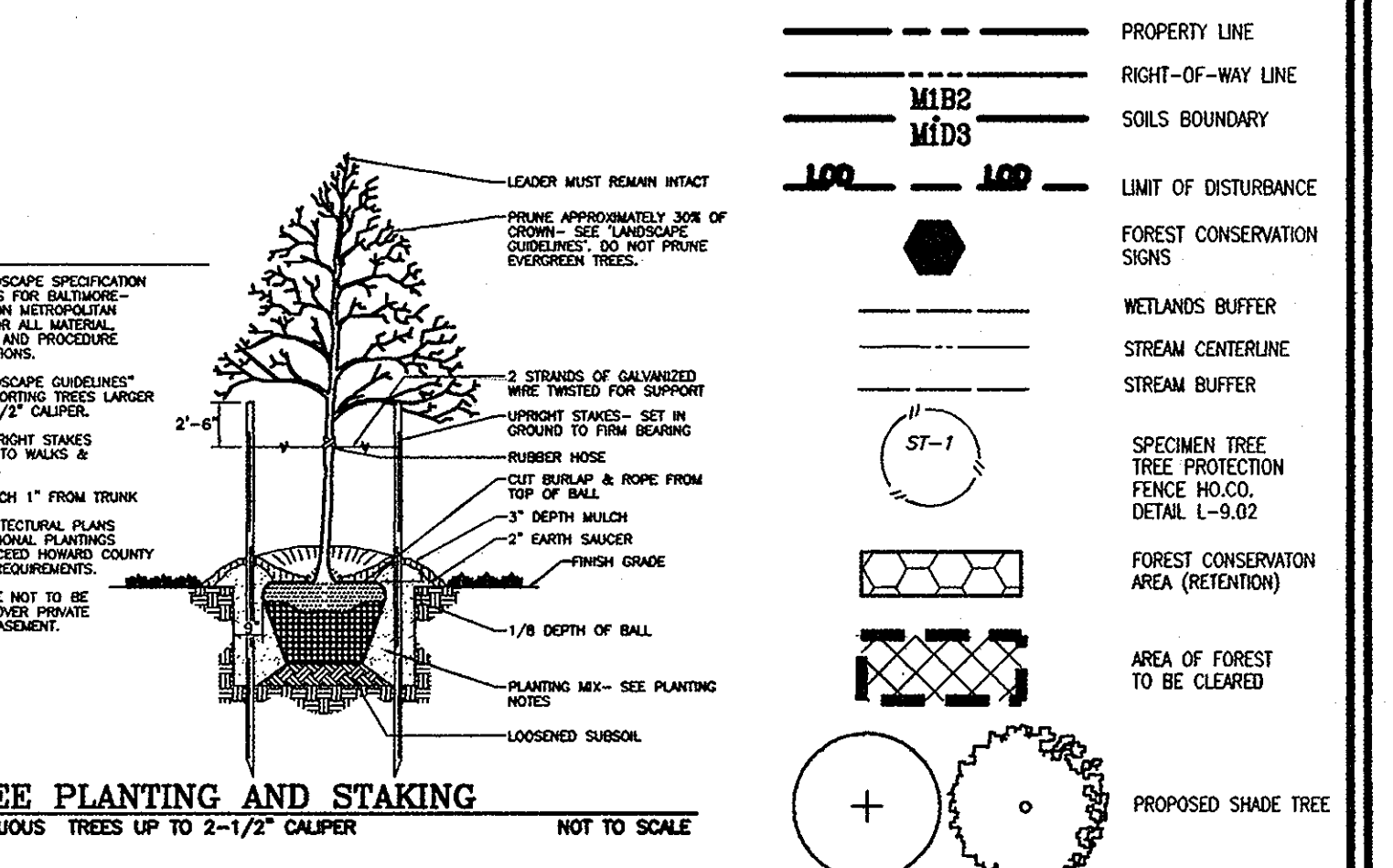
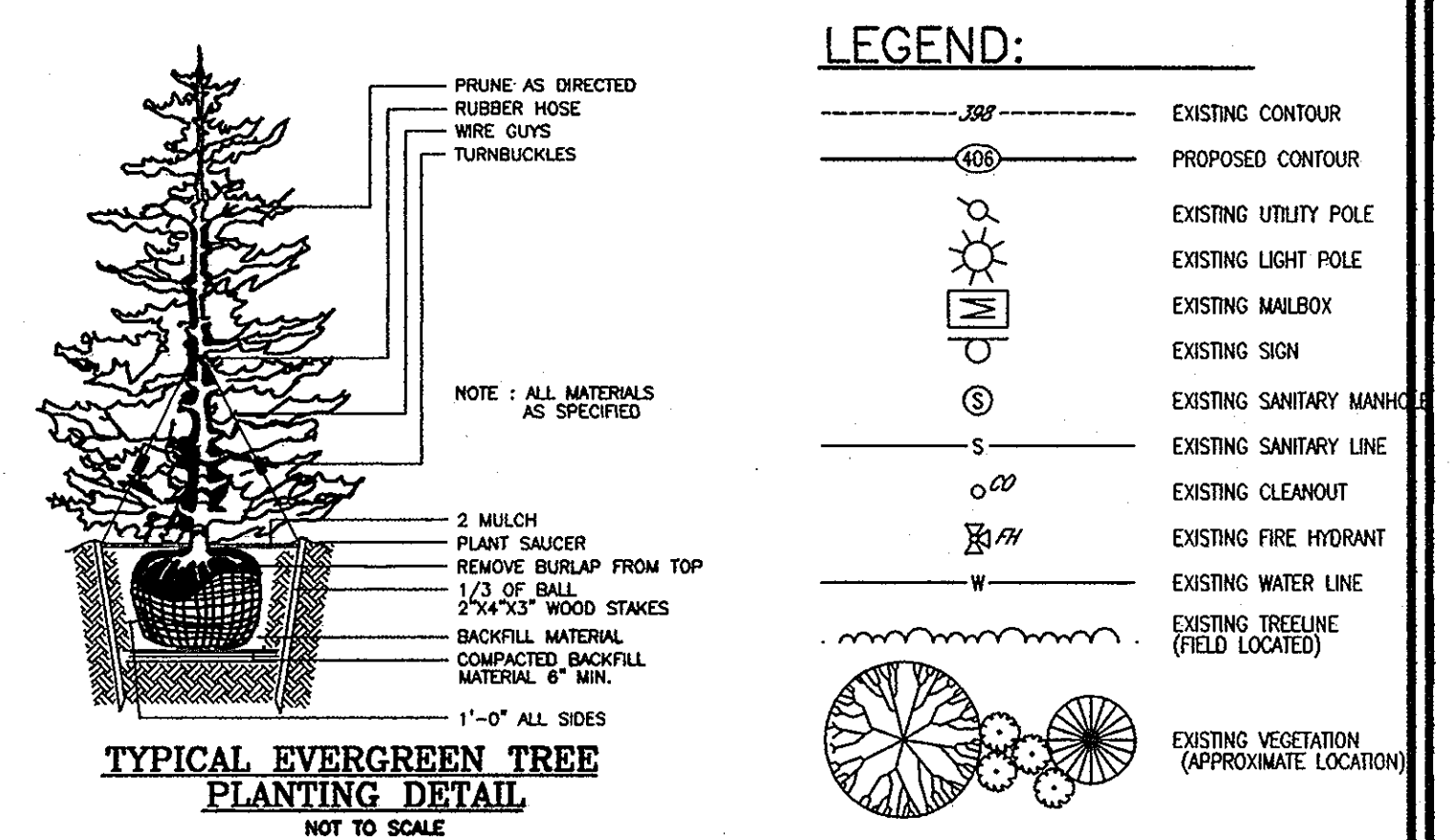
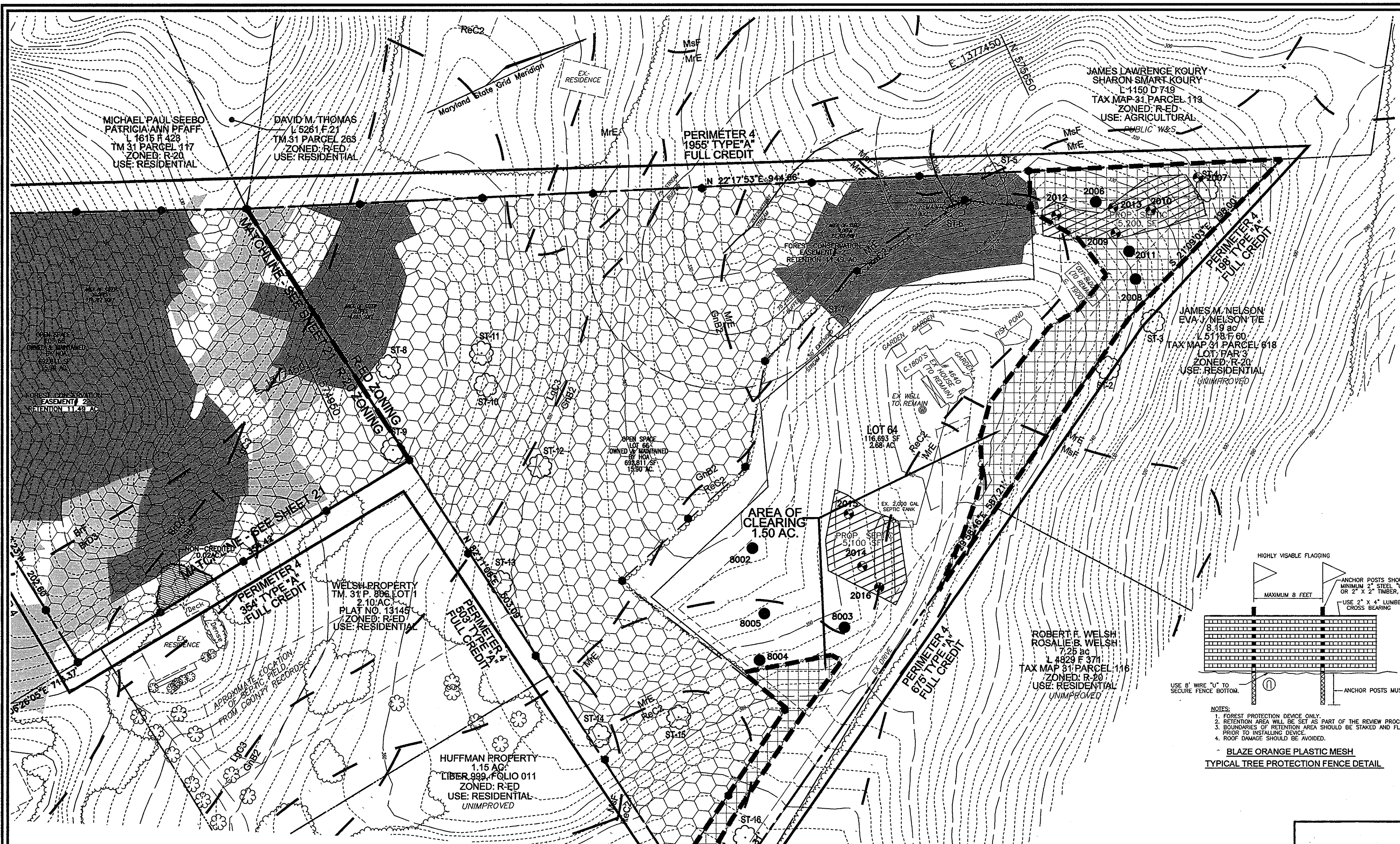
Robert H. Vogel 10/10/10
 CHIEF, DIVISION OF LAND DEVELOPMENT

DEVELOPER'S/BUILDER'S CERTIFICATE

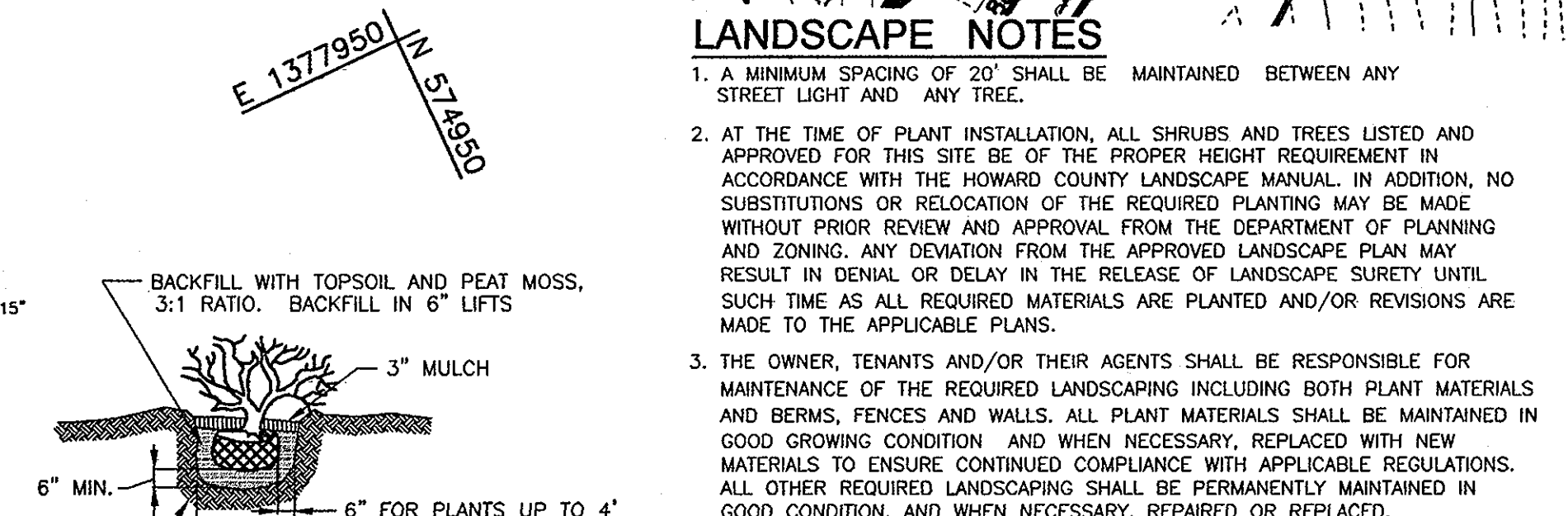
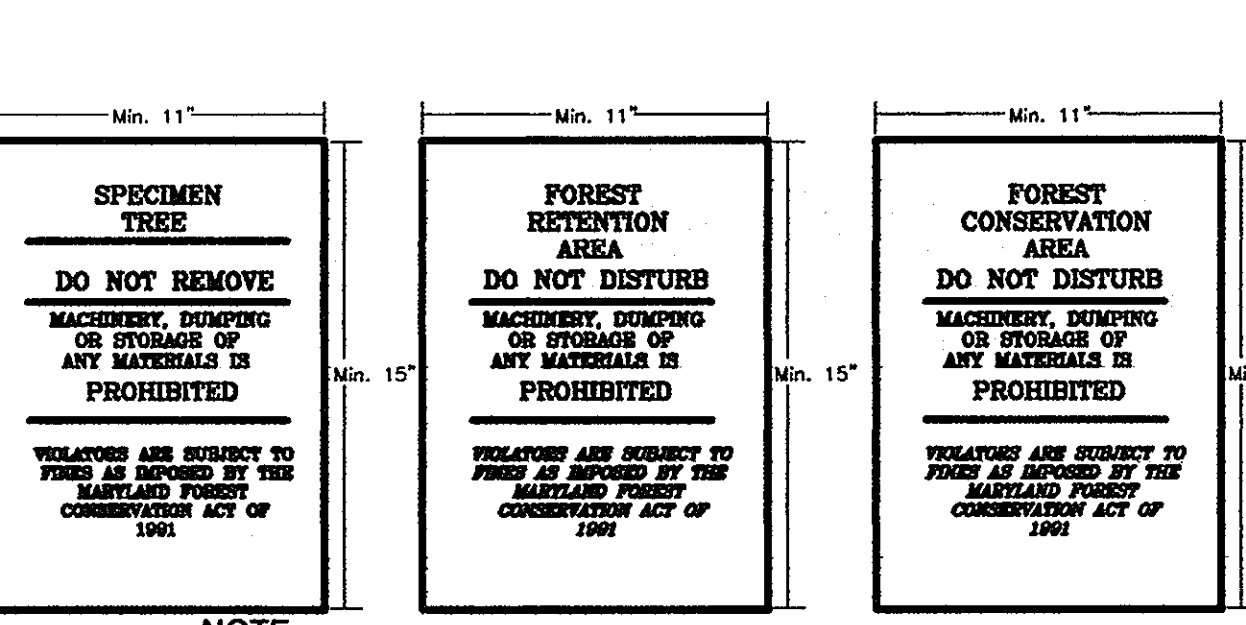
I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE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

Robert H. Vogel 9/30/10
 SIGNATURE OF DEVELOPER DATE

	RECREATION OPEN SPACE	<input type="checkbox"/>
	BCE WIRE ZONES	<input type="checkbox"/>
	PUBLIC SEWER, WATER, AND UTILITY EASEMENT	<input type="checkbox"/>
	PRIVATE DRAINAGE AND UTILITY EASEMENT	<input type="checkbox"/>
	PUBLIC DRAINAGE, STREET TREE, AND UTILITY EASEMENT	<input type="checkbox"/>
	PUBLIC TREE AND SIDEWALK MAINT. EASEMENT	<input type="checkbox"/>
	EX. TEMP. DRIVEWAY EASEMENT FOR PARCEL 122	<input type="checkbox"/>
	PUBLIC DRAINAGE, AND UTILITY EASEMENT	<input type="checkbox"/>
	PUBLIC SEWER, AND UTILITY EASEMENT	<input type="checkbox"/>
	PRIVATE USE-IN-COMMON ACCESS EASEMENT	<input type="checkbox"/>



OWNER/DEVELOPER
 WELSH PROPERTY, LLC
 4640 ILCHESTER ROAD, LLC
 C/O LAND DESIGN & DEVELOPMENT, INC.
 5300 DORSEY HALL DR, STE 102
 ELLICOTT CITY, MARYLAND 21042-7819
 ATTN: MR. DONALD R. REUWER
 443-367-0422



NOTE:
 1. BOTTOM OF SIGNS TO BE HIGHER THAN TOP OF TREE PROTECTION FENCE.
 2. SIGNS TO BE PLACED APPROXIMATELY 50-100' FEET APART, CONDITIONS ON SITE AFFECTING VISIBILITY MAY WARRANT PLACING SIGNS CLOSER OR FARTHER APART.
 3. ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.
 4. ALL FOREST CONSERVATION SIGNAGE SHALL BE IN PLACE FOR PERPETUITY.

APPROVED: DEPARTMENT OF PUBLIC WORKS
 [Signature] 10-21-10
 CHIEF, BUREAU OF HIGHWAYS
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 10/28/10
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
APPROVED: DEPARTMENT OF LAND DEVELOPMENT
 [Signature] 10/11/10
 CHIEF, DIVISION OF LAND DEVELOPMENT

LANDSCAPE NOTES
 1. A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
 2. AT THE TIME OF PLANT INSTALLATION, ALL SHRUBS AND TREES LISTED AND APPROVED FOR THIS SITE BE OF THE PROPER HEIGHT REQUIREMENT IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF THE REQUIRED PLANTING MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THE APPROVED LANDSCAPE PLAN MAY RESULT IN 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 APPLICABLE PLANS.
 3. THE OWNER, TENANTS AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.
 4. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE, THE LANDSCAPE MANUAL AND GREEN NEIGHBORHOOD REQUIREMENTS.
 5. NO CLEARING OF EXISTING VEGETATION IS PERMITTED WITHIN THE LANDSCAPE EDGE FOR WHICH CREDIT IS BEING TAKEN; HOWEVER, LANDSCAPE MAINTENANCE IS AUTHORIZED.
 6. CONTRACTOR SHALL CERTIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
 7. FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.

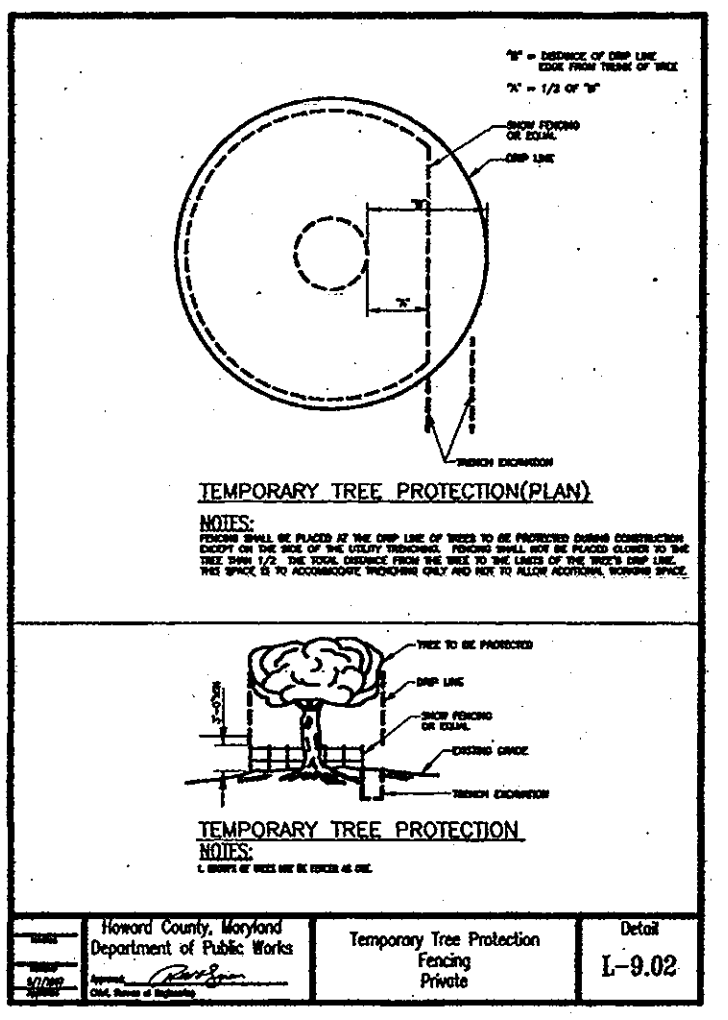
FOREST PROTECTION NOTES
PRE-CONSTRUCTION ACTIVITIES
 1. FOR RETENTION AREAS, INSTALL BLAZE ORANGE FENCE AND RETENTION SIGNS BEFORE CONSTRUCTION BEGINS.
 2. FENCING SHALL BE MAINTAINED IN GOOD CONDITION AND PROMPTLY REPAIRED OR RESTORED AS THE SITUATION WARRANTS.
 3. A QUALIFIED TREE CARE EXPERT SHALL DETERMINE IF ROOT PRUNING IS REQUIRED ALONG THE LIMIT OF DISTURBANCE. ROOT PRUNE TREES AS REQUIRED. WATER ANY ROOT-PRUNED TREES IMMEDIATELY AFTER ROOT-PRUNING AND MONITOR FOR SIGNS OF STRESS DURING CONSTRUCTION.

DEVELOPER'S AGREEMENT
 STREET TREES ARE PROVIDED FOR THIS PROJECT IN ACCORDANCE WITH SECTION 16.124(e)(1) OF THE SUBDIVISION REGULATIONS AND THE LANDSCAPE MANUAL. A FINANCIAL SURETY IN THE AMOUNT OF \$37,500.00 TO BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT FOR THE REQUIRED 125 PUBLIC STREET TREES.

FINANCIAL SURETY FOR THE REQUIRED PERIMETER LANDSCAPING PROVIDED PER THE MANUAL TO BE POSTED WITH THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$54,900.00 FOR THE REQUIRED 151 SHADE TREES, 62 EVERGREEN TREES, AND 10 SHRUBS.

DEVELOPER'S/BUILDER'S CERTIFICATE
 I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.
 [Signature] 9/30/10
 SIGNATURE OF DEVELOPER DATE

B G & E NOTES:
 1. THE LANDSCAPING ON WIREZONE (40' FROM BGE POLES) IS IN ACCORDANCE WITH BGE LIST OF TREES AND PLANTS.
 2. LINE THAT IN THE OPINION OF BGE SHALL BE DEEMED A HAZARD TO THE SAFE AND RELIABLE DELIVERY OF ELECTRICITY.
 3. THE DEPARTMENT OF PLANNING AND ZONING MAY AUTHORIZE THE TRIMMING OR REMOVAL OF TREES OR VEGETATION IMMEDIATELY ADJACENT TO THE BGE R/W OR EASEMENT, IF BGE DETERMINES THE TREES ARE COMPROMISING THE SAFETY OF A TRANSMISSION LINE LOCATED WITHIN THEIR UTILITY R/W OR EASEMENT, IF BGE



NO.	REVISION	DATE

FINAL ROAD CONSTRUCTION PLAN
LOCUST CHAPEL - SECTION I
 A GREEN NEIGHBORHOOD

LANDSCAPE AND FOREST CONSERVATION PLAN

ZONED: (R-20 and R-ED) LOTS 1-84 & OPEN SPACE 65-69 SP-10_001
 TAX MAP #31 GRID 4 A SUBDIVISION OF PARCEL 115 WP-09-92, S-06-006
 1ST ELECTION DISTRICT HOWARD COUNTY, MARYLAND PARCEL 115 WP-10-002

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

PROFESSIONAL CERTIFICATE
 I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 18143, EXPIRATION DATE: 09-27-2012

DESIGN BY: JAR
 DRAWN BY: KG
 CHECKED BY: RHY
 DATE: AUGUST 2010
 SCALE: 1"=50'
 W.O. NO.: 04-151

STATE OF MARYLAND
ROBERT H. VOGEL, PE No. 16193

23 SHEET OF 25

GREEN NEIGHBORHOOD PLAN SHEET

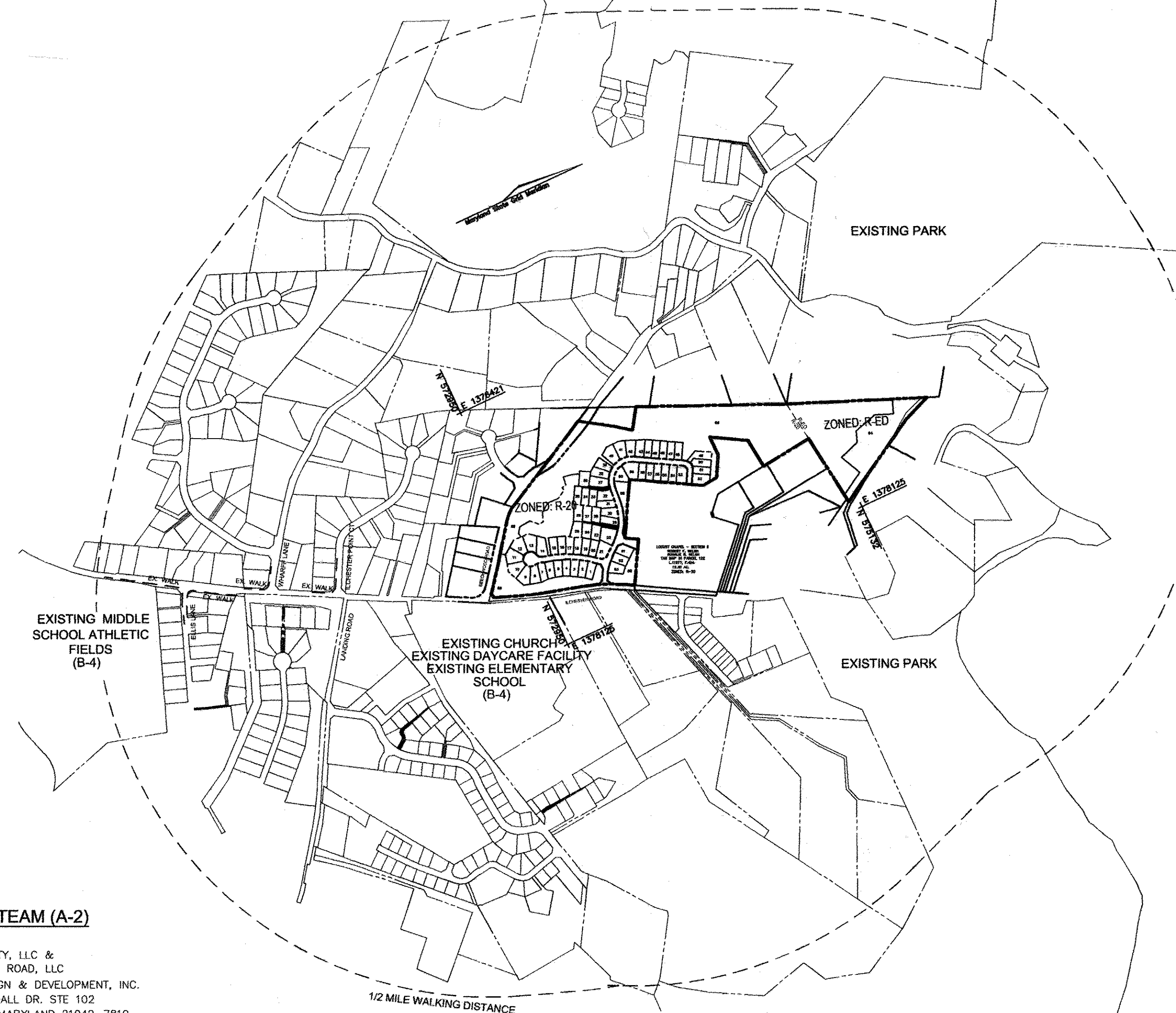
FINAL PLAN SUBMITTAL

LOCUST CHAPEL - SECTION I

A GREEN NEIGHBORHOOD

HOWARD COUNTY, MARYLAND

Credit No.	Credit	Champion (Name, Role)	Preliminary Equivalent Green Plan Strategies	Final Plan Strategies	Site Development Plan Strategies	Documentation Location	Max Points	Request d Points
A-1	Innovative/Integrated Design Process	Robert H. Vogel Engineering	Provided	Provided		GN Plan Sheet provided in Report provided.	RECD	0
A-2	Interdisciplinary Project Team	Developer	Team includes an attorney who is a LEED AP, an environmental consultant, and a professional engineer	Team includes an attorney who is a LEED AP, an environmental consultant, and a professional engineer		Team listed on GN Plan sheet, signature blocks provided. GN Report team members listed.	RECD	0
A-3	Third Party Certification	Developer	Provided	Provided		GN Plan and Report	RECD	0
A-4a	Innovative Design A	Robert H. Vogel Engineering	Reduce width of Public R/W w/ pass through structures, ditch and retain bas retention.	Reduce width of Public R/W w/ pass through structures, ditch and retain bas retention.		Final Road Construction Plans, Sheets 2-3, Detail Sheet 5.	1	1
A-4b	Innovative Design B	Robert H. Vogel Engineering	Provide water permeable walks and paths. (20%)	Provide water permeable walks and paths. (21%)		Final Road Construction Plan, Sheet 17.	1	1
A-4c	Innovative Design C	Developer	Educational Landscape Features	Educational Landscape Features		GN Report	1	1
A-4d	Innovative Design D	Developer	Infrastructure Energy Efficiency	Infrastructure Energy Efficiency		GN Report and F.R.C.P. Sheet 6.	1	1
B	Location, Linkages & Community Context						27	8
B-1a	Redevelopment Site (Brownfield)						4	0
B-1b	Historic Buildings	Developer	Howard Co has determined the bldgs on lot 64 qualify as historic structure to be preserved ad restored.	Howard Co has determined the bldgs on lot 64 qualify as historic structure to be preserved ad restored.		Information to be provided w/ Site Development Plan	4	4
B-3a	Transit Access & Amenities for Reduced Auto Dependence (Stop)						2	0
B-3b	Transit Access & Amenities for Reduced Auto Dependence (Shelter)	Robert H. Vogel Engineering	Church and school located across street and athletic fields located in 1/2 mile of corridor of project. Provided sidewalks for access.	Church School and Day Care located across street of project. Restroom sidewalk connects to resources.		GN Plan Location Map and Community Resource Chart	5	4
B-4	Priority to Community Resources						5	4
C	Compact, Complete & Connected Development						27	13
C-1	Diversity of Uses						3	0
C-2	Planned Service Area	Robert H. Vogel Engineering	Project is located within water and sewer services			Final Public Water and Sewer Construction Plans	5	5
C-3a	Pedestrian System (Path)	Robert H. Vogel Engineering	Natural surface pedestrian path through open space	Natural surface pedestrian path through open space		Final RCP Sheet 2-3, and Detail Sheet 6	2	2
C-3b	Pedestrian System (Connections)	Robert H. Vogel Engineering	Sidewalk connects to checker near intersection with Beechwood across from the Church and to Beechwood east of Woodshire Garth.	Sidewalk connects to checker near intersection with Beechwood across from the Church and to Beechwood east of Woodshire Garth.		Final RCP Sheet 2-3	2	2
C-3c	Pedestrian System (Amenities)	Robert H. Vogel Engineering	Seating areas provided along natural surface path, informational kiosk provided.	Seating areas provided along natural surface path, informational kiosk provided.		Final RCP Sheet 2-3	2	2
C-4	Connected On-site Street Network						2	0
C-5	Parking does not exceed Required						4	0
C-6	Exceed Minimum Open Space Requirements	Robert H. Vogel Engineering	Open space exceed by 5.8% over required	Open space exceed by 5.8% over required		GN Plan C-6 and F.R.C.P. Sheet 1.	5	1
C-7	Green Spaces and Amenity Areas	Robert H. Vogel Engineering	Provide open space parcels along road frontage with pavilion and community garden	Provide open space parcels along road frontage with pavilion and community garden		GN Plan C-7 and F.R.C.P. Sheets 2-3.	2	1
D	Environmental Preservation						52	20
D-1	Stream Restoration or Wetland Creation or Restoration						16	0
D-2	Habitat Management Plan	Environmental Consultant	Habitat management plan for HOA property	Habitat management plan for HOA property		See habitat management plan HOA Report.	4	4
D-3	25% Slope Preservation	Robert H. Vogel Engineering	55% of the Existing 15% slope protected	52% of the Existing 15% slope protected		GN Plan D-4 and F.R.C.P. Sheets 7-9	4	3
D-4	15% Slope Preservation	Robert H. Vogel Engineering	Limit LOC balance site and provide to eliminate retaining walls	Limit LOC balance site and provide to eliminate retaining walls		GN Plan D-5 and F.R.C.P. Sheet 10.	5	5
D-5	Minimize Grading and Site Disturbance	Robert H. Vogel Engineering	Exceeded minimum Forest retained above break even by 47%	Exceeded minimum Forest retained above break even by 41%		GN Plan D-6 and F.R.C.P. Sheet 23.	5	4
D-6	Exceed Minimum Forest Conservation Statements	Robert H. Vogel Engineering	100% of specimen trees protected.	Credit eliminated.			4	0
D-7	Save Trees above 12" Minimum Caliper	Robert H. Vogel Engineering	77 stream buffer provided	77 stream buffer provided		F.R.C.P. Sheets 2-4.	RECD	0
D-8a	Exceed Minimum Stream Buffer Requirements	Robert H. Vogel Engineering	Exceeded stream buffer by additional 50'	Exceeded stream buffer by additional 50'		F.R.C.P. Sheets 2-4.	6	4
D-8b	Exceed Minimum Wetland Buffer Requirements	Robert H. Vogel Engineering	Exceeded wetland buffer by additional 50'	Exceeded wetland buffer by additional 50'		GN Plan D-8 and F.R.C.P. Sheet 23.	4	0
D-10	Site Landscaping Improvements	Robert H. Vogel Engineering	Provided 50% increase in total planting above the required amount within the LS manual	Provided 50% increase in total planting above the required amount within the LS manual		Chart added to GN Plan including summary, F.R.C.P. Sheet 23.	5	5
E-1	Native Plants	Robert H. Vogel Engineering	Provide 100% native plants	Provide 100% native plants		F.R.C.P. Sheet 23.	3	3
E-2	No Invasive Plants	Robert H. Vogel Engineering	Note states no invasive plants will be used	Note states no invasive plants will be used		GN Plan and F.R.C.P. Sheet 23.	1	0
E-4	Limit Turf						17	17
F	Water Conservation/Efficiency/Management						17	17
F-1	Rainwater Harvesting System	Robert H. Vogel Engineering	Rain barrels provided to collect 50% of roof area	Rain barrels provided to collect 50% of roof area		See F.R.C.P. Sheets 11-13 and 17, and SWM Report.	5	5
F-2	Water-Permeable Walkways	Robert H. Vogel Engineering	57% of walks are water permeable	57% of walks are water permeable		GN Plan and F.R.C.P. Sheet 17.	4	4
F-3a	Low Impact Development (LID) Stormwater Treatment	Robert H. Vogel Engineering	The minimum standards of the Howard County SWM manual have been met	The minimum standards of the Howard County SWM manual have been met		SWM Report and F.R.C.P. Sheets 9-10.	RECD	0
F-3b	Low Impact Development (LID) Stormwater Treatment	Robert H. Vogel Engineering	Groundwater recharge and rain water reuse accomplished by permeable walks, rain barrels and bio-retention	Groundwater recharge and rain water reuse accomplished by permeable walks, rain barrels and bio-retention		GN Plan F-3 and F.R.C.P. Sheets 9-10.	8	8
G	Energy Efficiency						13	7
G-1	Light Pollution Reduction	Developer	Provide shielded lights	Provide shielded lights		GN Plan G-1 and F.R.C.P. Sheet 6.	4	4
G-2	Solar Orientation						3	0
G-3	Infrastructure Energy Efficiency	Developer	Reduce LEED certification to LEED Silver	Reduce LEED certification to LEED Silver		GN REPORT	6	3
H	Materials Beneficial to the Environment/Waste Management						17	13
H-1	Environmentally Preferable Site Products	Developer	60% Environmentally Preferable site products will be used	60% Environmentally Preferable site products will be used		GN Plan H-1.	8	5
H-2	Reduce Heat Island Effect of Paving	Developer	Divert 75% of construction waste	Divert 75% of construction waste		Note added to GN Plan, H-3 and GN Report.	4	4
H-3	Site Construction Waste Management	Developer	20% of total site material to be recycled	20% of total site material to be recycled		Note added to GN Plan, H-4 and GN Report.	3	3
H-4	Regionally Provided Materials	Developer					3	0
I	Operations and Maintenance Education						17	13
I-1	HOA Documents	Developer	HOA Documents include information of green site features	HOA Documents include information of green site features		Note added to GN Plan + GN Report.	RECD	0
I-2	Maintenance Manual for HOA/HOA	Developer	HOA Documents include maintenance information for HOA	HOA Documents include maintenance information for HOA		Note added to GN Plan + GN Report.	RECD	0
I-3	Public Awareness of Sustainable Community	Developer	Promote public awareness of Sustainable Community	Promote public awareness of Sustainable Community		Note added to GN Plan + GN Report.	RECD	0
TOTAL GREEN NEIGHBORHOOD SITE POINTS							166	90
Number of points required to obtain Green Neighborhood Allocations							90	



LOCATION MAP (B-4)
SCALE: 1" = 600'

PROJECT TEAM (A-2)

OWNER
WELSH PROPERTY, LLC &
4640 ILLICESTER ROAD, LLC
C/O LAND DESIGN & DEVELOPMENT, INC.
5300 DORSEY HALL DR. STE 102
ELLICOTT CITY, MARYLAND 21042-7819
DREUWER@LDANDD.COM
443-387-0422

DEVELOPER
ELLICOTT CITY LAND HOLDING, INC.
5300 DORSEY HALL DR. STE 102
ELLICOTT CITY, MARYLAND 21042-7819
DREUWER@LDANDD.COM
443-387-0422

CIVIL ENGINEER
ROBERT H. VOGEL, P.E.
ROBERT H. VOGEL ENGINEERING INC
8407 MAIN STREET
ELLICOTT CITY, MARYLAND 21043
410-461-7666
RVOGEL@VOGELENG.COM

REGULATORY AND ENVIRONMENTAL CONSULTANT
KENNETH R. WALACE
MCCARTHY AND ASSOCIATES, INC
14458 OLD MILL ROAD, SUITE 201
UPPER MARLBORO, MARYLAND 20772
301-627-7505

INNOVATIVE DESIGN (A-4)

SEE REPORT FOR SUMMARY OF MODIFIED PUBLIC RIGHT OF WAY, WATER PERMEABLE PATHS AND WALKS, INFRASTRUCTURE ENERGY EFFICIENCY AND LANDSCAPING ORIENTATION SESSIONS

HISTORIC BUILDINGS (B-2)

SEE REPORT FOR SUMMARY, INFORMATION TO BE PROVIDED WITH SITE DEVELOPMENT PLAN.

COMMUNITY RESOURCE (B-4)

COMMUNITY RESOURCE	WALKING DISTANCE
CHURCH	100'
DAYCARE FACILITY	100'
ELEMENTARY SCHOOL	100'

PLANNED SERVICE AREA (C-2)

PROJECT IS LOCATED WITHIN PLANNED SERVICE AREA

PEDESTRIAN SYSTEM PATHS (C-3a)

SEE PES FOR LOCATION OF NATURAL SURFACE PATH
SEE REPORT FOR NARRATIVE

LAW FIRM
MEGAN L. REUWER, ESQUIRE, LEED AP
O'MALLEY, MILES, WYLEN & GILMORE, P.A.
11785 BELTSVILLE DRIVE, 10TH FLOOR
CALVERTON, MARYLAND 20705
301-572-7900
MREUWER@OWING.COM
10387878

PEDESTRIAN SYSTEM CONNECTIONS (C-3b)

A CONNECTION AT BEECHWOOD RD FROM THE PROPOSED NATURAL SURFACE PATH TO THE MAJOR NEIGHBORHOOD ACROSS THE STREET.

PEDESTRIAN SYSTEM AMENITIES (C-3c)

SEATING AREAS PROVIDED ALONG NATURAL SURFACE TRAIL
INFORMATIONAL KIOSK RE: GREEN NEIGHBORHOOD

EXCEED MINIMUM OPEN SPACE REQUIREMENT (C-6)

OPEN SPACE REQUIRED EXCEEDED BY 5% OVER REQUIRED

REQUIRED OPEN SPACE	PROVIDED OPEN SPACE	PERCENTAGE INCREASE
18.27 ac	20.41 ac	5.8 %

GREEN SPACES AND AMENITY AREA (C-7)

PARCEL	PARCEL SIZE ACRES	ROAD FRONTAGE	AMENITY TYPE
Open Space Lot 68	0.15 ac	366 ft	Pavilion and Community Garden

SEE REPORT NARRATIVE FOR SPECIFIC AMENITIES WITHIN PARCELS

HABITAT MANAGEMENT PLAN (D-2)

A HABITAT MANAGEMENT PLAN IS ATTACHED TO THE REPORT

MODERATE SLOPE PROTECTION (D-4)

AREA EXISTING SLOPE (15%-24.9%)	AREA DISTURBED (15%-24.9%)	AREA PROTECTED (15%-24.9%)	% PROTECTED
351,687 SQFT	167,757 SQFT	183,930 SQFT	52%

GRADING AND SITE DISTURBANCE (D-5)

GROSS AREA OF PROJECT	AREA OF EXISTING IMPERVIOUS	NET AREA OF PROJECT	AREA TO REMAIN UNDISTURBED	% UNDISTURBED	RATIO CUT/FILL	RETAINING WALL HGT
36.54 AC	0.28 AC	31.94 AC	20.36 AC	55.7%	1:1	0'

NOTE: 15,600 CY CUT; 15,600 CY FILL

EXCEED MINIMUM FC REQUIREMENTS (D-6)

RETENTION BREAK EVEN POINT	ACRES	PERCENT
FOREST RETAINED ABOVE BREAK EVEN POINT	9.40	41%
AFFORESTATION THRESHOLD	5.48	

SAVE TREES ABOVE 12" MINIMUM CALIPER (D-7)

NOT PURSUING ANY POINTS UNDER THIS CREDIT

MINIMUM STREAM BUFFER REQUIREMENT (D-8A)

MINIMUM BUFFER OF 75' WAS MET

EXCEED MINIMUM STREAM BUFFER (D-8b)

TOTAL STREAM BUFFER WIDTH	WIDTH OF BUFFER EXCEEDING REQ	TOTAL LENGTH OF STREAM	LENGTH OF STREAM BUFFER OUTSIDE OTHER BUFFERS	% OF STREAM BUFFER OUTSIDE OTHER BUFFERS
75'	50' (total 125')	108'	108'	100%

LANDSCAPING (E-1)

REQ. PLANTING BY LS MANUAL	PLANTS REQUIRED				GN % INCREASE
	SHADE TREES	EVERGREEN TREES	SHRUBS	TOTAL	
184	41			225	
92	21			113	50%
TOTAL	276	62		338	

NUMBER OF PLANTS PROVIDED TO MEET LS MANUAL	PLANTS PROVIDED				TOTAL
	SHADE TREES	EVERGREEN TREES (SUBSTITUTE)	OTHER TREES (SUBSTITUTE)	SHRUBS (SUBSTITUTE)	
184	41			225	
92	21			113	
TOTAL	276	62		338	

NATIVE PLANTS (E-2)

100% OF NATIVE PLANTS UTILIZED, SEE LANDSCAPE PLAN

NO INVASIVE PLANTS (E-3)

NO INVASIVE PLANTS WILL BE USED

RAINWATER HARVESTING (F-1)

SEE GREEN REPORT FOR SUMMARY OF RAINWATER HARVESTING

PERMEABLE WALKS (F-2)

81% WALKS ON SITE ARE WATER PERMEABLE CONCRETE.

TYPE OF WATER PERMEABLE MATERIAL	AREA OF WALKWAY OR PATHWAY (SQFT)	% OF TOTAL WALK OR PATHWAY
PRVT WALKS	5,000 SQFT	100%
PUB WALKS	8,000 SQFT	73%

LOW IMPACT DEV. SWM TREATMENT (F-3B)

WQV VOLUME REQUIRED MDE 2000 Manual	VOLUME STORED	% WQV VOLUME STORED
16,672 CUFT	ESDv = 13,753 CF Permeable = 16,380 CF Walks & Drives Permeable = 6326 CF Public Walks Rain Barrels = 4,952 CF Total = 40,411 CF	242%

LIGHT POLLUTION REDUCTION (G-1)

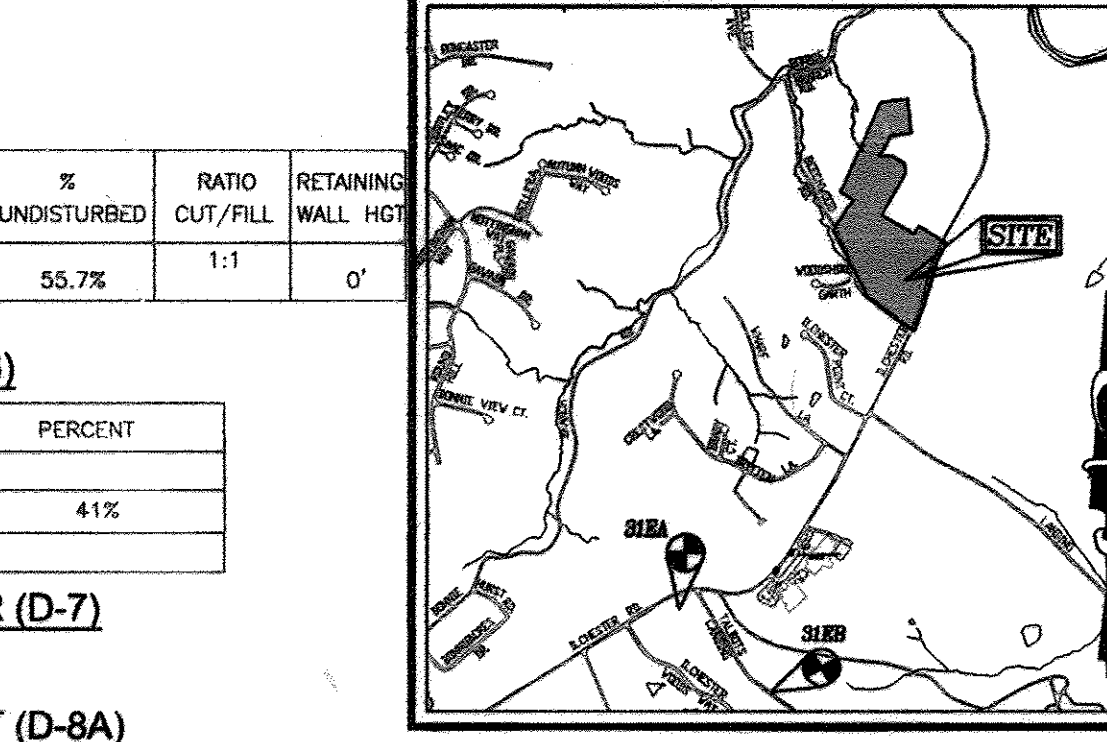
PROVIDE SHIELDED STREET LIGHTS.

INFRASTRUCTURE ENERGY EFFICIENCY (G-3)

15% ENERGY USE REDUCTION PLUS PHOTOVOLTAIC GENERATED ENERGY FOR 10% OF SITE INFRASTRUCTURE.

ENVIRONMENTALLY PREFERABLE SITE PRODUCTS (H-1)

60% OF SITE MATERIAL IS ENVIRONMENTALLY PREFERABLE



VICINITY MAP
SCALE = 1"=2000'
ADC MAP COORDINATES: 4936 G-1&2

SITE CONSTRUCTION WASTE MANAGEMENT (H-3)

75% OF WASTE DIVERTED

REGIONALLY PROVIDED MATERIALS (H-4)

MORE THAN 20% OF THE TOTAL SITE MATERIAL IS GENERATED WITHIN 200 MILES OF SITE

HOA DOCUMENTS IDENTIFY GREEN SITE FEATURES (I-1)

SEE REPORT FOR NARRATIVE

MAINTENANCE MANUAL FOR HOA/OWNER/MANAGER (I-2)

SEE REPORT FOR NARRATIVE

PUBLIC AWARENESS OF SUSTAINABLE COMMUNITY (I-3)

SEE REPORT FOR NARRATIVE

NO AS-BUILT INFORMATION THIS SHEET.

No.	REVISION	DATE
4	REVISE TO CHANGE THE STREETLIGHT TYPE	11/23/10
3	REVISE SIDEWALK FROM PAVEMENT TO STANDARD ASP TO INCREASE ROAD	10/13/15

FINAL ROAD CONSTRUCTION PLAN
LOCUST CHAPEL - SECTION I
A GREEN NEIGHBORHOOD
GREEN NEIGHBORHOOD PLAN

ZONED: R-20 AND R-ED.
TAX MAP #31 GRID 4
1ST ELECTION DISTRICT

LOTS 1-64 & OPEN SPACE 65-69
A SUBDIVISION OF PARCEL 115
HOWARD COUNTY, MARYLAND

WP_09_92_S_06_006
SP-10-001, WP_10_002
PARCEL 115
HOWARD COUNTY, MARYLAND

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DESIGN BY: JAR
DRAWN BY: HD
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SCALE: AS SHOWN
W.O. NO.: 04-151

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193.
EXPIRATION DATE: 09-27-2012