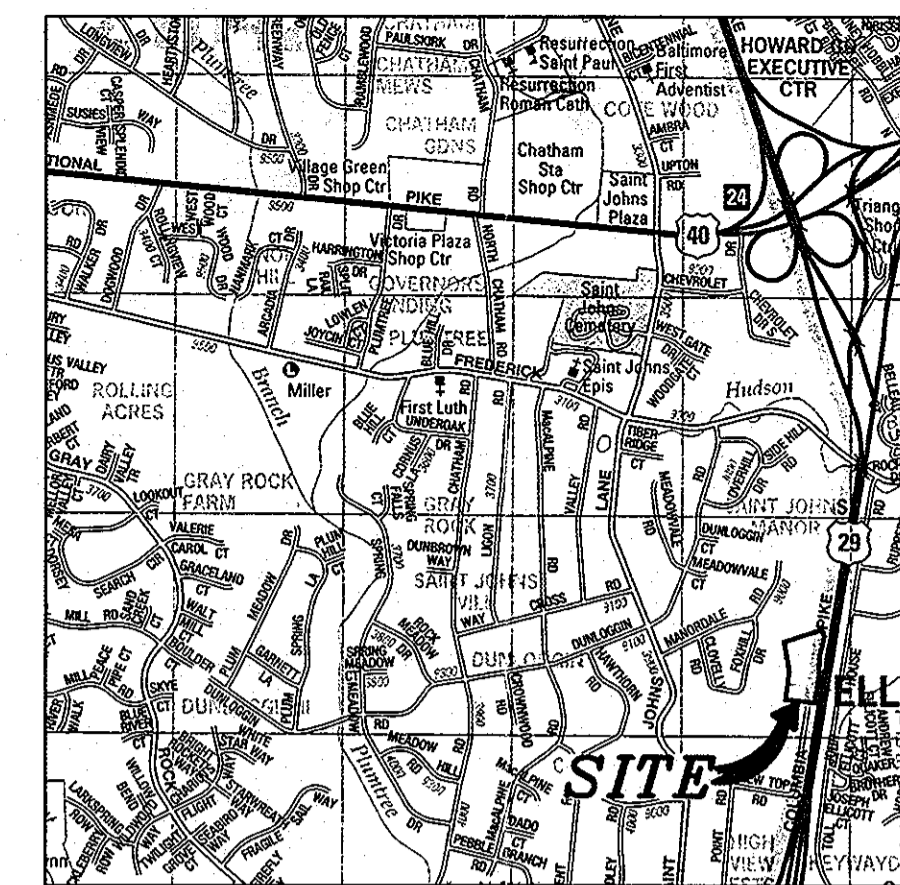


GENERAL NOTES

1. THE SUBJECT PROPERTY IS ZONED R-20 PER THE 2/02/04 COMPREHENSIVE ZONING PLAN AND PER COMP. LITE ZONING AMENDMENTS EFFECTIVE 7/28/08.
2. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY, PLUS ASHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
3. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS, BUREAU OF ENGINEERING, CONSTRUCTION INSPECTION DIVISION AT 410-313-1800 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
4. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" @ 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
5. ALL ASPECTS OF THIS PROJECT SHALL BE IN CONFORMANCE WITH THE LATEST HOWARD COUNTY STANDARDS UNLESS WAIVER(S) HAVE BEEN APPROVED.
6. THE BOUNDARY SHOWN IS BASED ON A MONUMENTED FIELD SURVEY PERFORMED BY BENCHMARK ENGINEERING, INC., DATED MARCH, 2003.
7. THE COORDINATED HIGHWAY HEREON ARE BASED FROM THE HOWARD COUNTY GEODETIC CONTROL MONUMENTS 2418 & 2413, WHICH ARE BASED ON THE MARYLAND STATE PLANE COORDINATE SYSTEM.
8. EXISTING TOPOGRAPHY SHOWN HEREON WAS FIELD RUN BY BENCHMARK ENGINEERING, INC., DATED MARCH 2003 AND SUPPLEMENTED IN NOVEMBER 2006. CONTOUR INTERVAL IS 2 FEET. ADDITIONAL EXISTING TOPOGRAPHY WAS OBTAINED FROM HOWARD COUNTY GEOGRAPHICAL INFORMATION SYSTEMS.
9. EXISTING UTILITIES SHOWN HEREON ARE BASED ON FIELD LOCATIONS AND RECORD DRAWINGS.
10. CONTRACTOR SHALL VERIFY ALL UTILITY LOCATIONS PRIOR TO ANY CONSTRUCTION ACTIVITY AND SHALL ADJUST ALL UTILITIES AND RIM ELEVATIONS AS NEEDED TO MATCH THIS PLAN.
11. THIS PROPERTY IS WITHIN THE METROPOLITAN DISTRICT. WATER AND SEWER SHALL BE PUBLIC, CONNECTING TO EX. CONTRACT NO.845-W88 UNDER CONTR. NO.8-3403. STORMWATER AREA IS WITHIN THE PATAPUSCO RIVER WATERSHED.
12. FOREST STAND DELINEATION PLAN WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED MAY, 2003 AND APPROVED UNDER S-03-017.
13. NO WETLANDS OR 100-YEAR FLOODPLAIN EXIST WITHIN THE LIMITS OF PROJECT AS PER A CERTIFICATION LETTER PREPARED BY ECO-SCIENCE PROFESSIONALS, INC. DATED APRIL, 2003 AND APPROVED UNDER S-03-017.
14. NOISE LINE SHOWN ON PLANS FOR THIS PROJECT BASED ON DATA PROVIDED BY THE MSHA AS PER CONTRACT NO.H060625170 AND APPROVED UNDER S-03-017.
15. THE MOISTURE CONTENT LINE DRAWN ON THIS PLAN IS ADVISORY AS REQUIRED BY THE HOWARD COUNTY DESIGN MANUAL, CHAPTER 5, REVISED FEBRUARY 1992, AND CANNOT BE CONSIDERED TO EXACTLY LOCATE THE 65%BA EXPOSURE. THE 65%BA EXPOSURE WAS ESTABLISHED BY HOWARD COUNTY TO ALERT DEVELOPERS AND FUTURE RESIDENTS TO AREAS BEYOND THIS THRESHOLD MAY EXCEED GENERALLY ACCEPTED MOISTURE LEVELS ESTABLISHED BY THE US DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT.
16. A.P.F.O. TRAFFIC STUDY WAS PREPARED BY THE MARS GROUP, INC. DATED MAY, 2003 AND APPROVED UNDER S-03-017.
17. THE GEOTECHNICAL REPORT FOR THIS PROJECT WAS PREPARED BY HILLIS-CARNE ENGINEERING ASSOCIATES, DATED NOVEMBER 30, 2005 AND APPROVED UNDER S-03-017.
18. THERE IS AN EXISTING DWELLING LOCATED ON-SITE (LOT 1) TO REMAIN. NO NEW BUILDINGS, EXTENSIONS OR ADDITIONS TO THE EXISTING DWELLING ARE TO BE CONSTRUCTED AT A DISTANCE LESS THAN INDICATED IN THE ZONING REGULATIONS REQUIRE.
19. TO THE BEST OF OUR KNOWLEDGE THERE ARE NO CEMETERY LOCATIONS ON-SITE.
20. UNLESS NOTED AS "PRIVATE", ALL EASEMENTS ARE PUBLIC.
21. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
22. BRL INDICATES BUILDING RESTRICTION LINE.
23. ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE BUILDERS EXPENSE.
24. THIS PLAN IS SUBJECT TO THE AMENDED 5th EDITION OF THE HOWARD COUNTY SUBDIVISION REGULATIONS AND THE AMENDED HOWARD COUNTY ZONING REGULATIONS. IT ALSO IS SUBJECT TO THE INFRA. DEVELOPMENT REGULATIONS OF CONCORD, BILL. 45-2003, EFFECTIVE OCTOBER 2, 2003.
25. STORMWATER MANAGEMENT SHALL BE PROVIDED FOR THIS PROJECT BASED ON GUIDELINES ESTABLISHED BY THE 2007 MARYLAND STORMWATER DESIGN MANUAL VOLUMES I AND II. QUALITY CONTROL WILL BE PROVIDED BY A SWM POND WITH SAND FILTER, MICRO-BIORETENTION FACILITIES, ROOFTOP AND HOODTOP CONNECTIONS. QUANTITY CONTROL SHALL BE PROVIDED BY THE SWM POND.
26. ALL MICRO-BIORETENTION FACILITIES EXCEPT FOR "MB-A" WILL BE PRIVATELY OWNED AND MAINTAINED. MICRO-BIORETENTION FACILITY "MB-A" AND THE SWM POND WILL BE PRIVATELY OWNED AND JOINTLY MAINTAINED.
27. TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE MOST CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT. 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 (14 GAUGE), INSERTED INTO A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
28. EXTERIOR LIGHTING SHALL BE DIRECTED/REFLECTED AWAY FROM ALL ADJACENT PUBLIC ROADS AND RESIDENTIAL ZONING DISTRICTS. STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF SECTION 154 OF THE HOWARD COUNTY ZONING REGULATIONS, THE HOWARD COUNTY DESIGN MANUAL, VOL. 1 (1993), AND AS MODIFIED BY GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (1998). A MINIMUM SPACING OF TWENTY FEET (20') SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
30. PERIMETER LANDSCAPING AND TRASH PAD SCREENING SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 16124 OF THE LANDSCAPE MANUAL AND AS SHOWN ON THE LANDSCAPE PLAN SHEET OF THE ROAD CONSTRUCTION DRAWINGS FOR F-07-110. SCREENING SHALL BE THE AMOUNT OF \$15,500.00 FOR 35 SHADE TREES, 18 EVERGREENS AND \$54,667.00 SHRUBS SHALL BE POSTED WITH THE DEVELOPER'S AGREEMENT FOR THIS PLAN F-07-110.
31. FOR FLAG OR PIPESTEM LOTS, REFUSE COLLECTION, SNOW REMOVAL AND ROAD MAINTENANCE OR PROVIDED TO THE JUNCTION OF THE FLAG OR PIPESTEM AND ROAD RIGHT-OF-WAY AND NOT TO THE PIPESTEM LOT BOUNDARY.
32. DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS FOR FIRE AND EMERGENCY VEHICLES FOR THE FOLLOWING MINIMUM REQUIREMENTS:
 - A) WIDTH - 12' (SERVING MORE THAN ONE RESIDENCE)
 - B) SURFACE - 6" OF COMPACT CRUSHER RUN BASE WITH TAR AND CHIP COATING.
 - C) GEOMETRY - 10% GRADE CHANGE & MIN. 45° TURNING RADIUS.
 - D) STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H2S LOAD)
 - E) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 YEAR FLOODPLAIN WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY.
 - F) STRUCTURE CLEARANCES - MINIMUM 12 FEET
 - G) MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.
33. WAIVER PETITION WP-04-72 WAS REQUESTED AND APPROVED ON DECEMBER 28, 2003 TO WAIVE SECTION 16120(c)(2) PER THE FOLLOWING CONDITIONS: THE PROPOSED OPEN SPACE LOT 9 SHALL BE DEDICATED TO THE HOA FOR SWM PURPOSES; MINIMUM RESIDENTIAL LOT SIZES MUST BE 20,000 SF OR GREATER; AND ACCESS TO THESE OPEN SPACE LOTS SHALL BE DIRECTLY FROM THE PROPOSED PUBLIC RIGHT-OF-WAY EXTENSION OF VIEW TOP ROAD.
34. WAIVER PETITION WP-03-137 WAS REQUESTED AND APPROVED ON SEPTEMBER 23, 2003 TO WAIVE SECTION 16120(c)(2) PER THE FOLLOWING CONDITIONS: THE PROPOSED OPEN SPACE LOT 9 SHALL BE DEDICATED TO THE HOA FOR SWM PURPOSES; MINIMUM RESIDENTIAL LOT SIZES MUST BE 20,000 SF OR GREATER; AND ACCESS TO THESE OPEN SPACE LOTS SHALL BE DIRECTLY FROM THE PROPOSED PUBLIC RIGHT-OF-WAY EXTENSION OF VIEW TOP ROAD.
35. WAIVER PETITION WP-04-31, REQUESTED TO WAIVE SECTION 16120(d)(4)(ii)(c), WAS ALLOWED TO EXPIRE AND BECOME NULL & VOID DUE TO INACTIVITY.
36. APPLICABLE HOWARD COUNTY DPZ FILE REFERENCES FOR THIS PROJECT INCLUDE:
 - F-03-190, WP-03-137, WP-04-72, S-03-017, CONTR. #14-4481-D, P-06-000
37. A DESIGN MANUAL WAIVER TO THE DEVELOPMENT ENGINEERING DIVISION AND APPROVED BY LETTER DATED JUNE 22, 2006 FOR DMV II, CHAPTER 2, SECTION 2.4.1, TO ALLOW FOR GRADING DEVIATIONS FROM THE TYPICAL ROADWAY SECTION FOR A PUBLIC ACCESS PLACE (FIGURE 2.09 IN COMBINATION WITH THE EXISTING DRIVEWAY) TO BE CONSIDERED AS A PUBLIC ACCESS PLACE. A COPY OF THIS LETTER IS ON FILE WITH THE DEVELOPMENT ENGINEERING DIVISION AND APPROVED BY LETTER DATED JULY 26, 2003.
38. A DESIGN MANUAL WAIVER WAS SUBMITTED TO THE DEVELOPMENT ENGINEERING DIVISION AND APPROVED BY LETTER DATED JULY 26, 2003. FOR DMV II, CHAPTER 2, SECTION 2.3.2.D.3 TO ALLOW FOR THE MINIMUM LENGTH OF A HORIZONTAL CURVE IN A PUBLIC ROADWAY TO BE LESS THAN 100' FOR A 10'-0" TO 5'-0" LOCAL ROAD IN ORDER TO MEET EXISTING CONDITIONS FOR THE PROPOSED PUBLIC RIGHT-OF-WAY EXTENSION OF VIEW TOP ROAD.
39. FOREST CONSERVATION IN ACCORDANCE WITH SECTION 16120(f) OF THE FOREST CONSERVATION MANUAL. 1.5% PROVIDED BY PLACEMENT OF 2.5 ACRES (104,500 SF) OF REGENERATED REFORESTATION AND AN OFF-SITE EASEMENT ON THE MARLEWOOD FARMS FOREST MITIGATION BANK UNDER F-13-066 (PLAT 22666-22667), THE FOREST CONSERVATION EASEMENT HAS BEEN SHOWN ON SHEET 11 OF 307-2110 NEW COUNTY VILLAGE. DPZ HAS DETERMINED THAT A REDLINE REVISION SHALL BE MADE TO SDP-07-110 TO SHOW 2.51 ACRES OF AFFORESTATION DEDUCTED FROM THE TOTAL FEA EASEMENT LOCATED ON ROSEBARK. SURETY IN THE AMOUNT OF \$100,000 IN ORDER TO MEET EXISTING CONDITIONS FOR THE PROPOSED PUBLIC RIGHT-OF-WAY EXTENSION OF VIEW TOP ROAD.
40. WAIVER PETITION WP-12-61, REQUESTED TO WAIVE SECTION 1614(d) and (g) REGARDING PAYMENT OF FEES, POSTING OF ALL MONIES AND FILING OF APPROPRIATE SURETY AND SUBMITTAL OF THE ORIGINAL PLAN TO THE HOA WAS APPROVED ON NOVEMBER 8, 2011 AND EXTENDED THE DEADLINE FOR PAYMENT OF FEES AND POSTING OF SURETY TO OCTOBER 30, 2012 AND SUBMITTAL OF THE FINAL PLAN WITH TO DECEMBER 30, 2012.

HAWES PROPERTY SUBDIVISION (RE-SUBDIVISION OF LOT 2) LOTS 3 THRU 8, OPEN SPACE LOT 9 AND NON-BUILDABLE BULK PARCEL 'A' PARCEL 253 / ZONE: R-20 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND REVISED FINAL ROAD CONSTRUCTION PLANS F-07-110

BENCH MARKS - NAD '83
 HO. CO. #2478 EL=423.279
 N-582652.103 E-1,364,255.930
 STAMPED DISC ON CONC. MONUMENT 42'
 NW FROM PK SET ALONG N. EDGE OF
 MANAHAN ROAD, 128' FROM EX. T.W.H.S.E.;
 WITHIN TRANSMISSION LINE R/W
 HO. CO. #2413 EL=404.482
 N-580,648.804 E-1,364,974.471
 STAMPED DISC ON CONC. MONUMENT 159'
 NE FROM BGE POLE #501794; 97.3' SE
 FROM EX. 10" CEDAR TREE IN CENTER OF
 TRANSMISSION LINE R/W



VICINITY MAP
 ADC MAP 4815 GRID 3-5
 SCALE: 1"=2000'

LEGEND

- SOILS CLASSIFICATION: AbC1
- SOILS DELINEATION: [Symbol]
- EXISTING CONTOURS: [Symbol]
- PROPOSED CONTOURS: [Symbol]
- EXISTING WOODS LINE: [Symbol]
- PROPOSED WOODS LINE: [Symbol]
- EXISTING STRUCTURE: [Symbol]
- PROPOSED STRUCTURE: [Symbol]
- STEEP SLOPES 15% TO 24.9%: [Symbol]
- STEEP SLOPES 25% OR GREATER: [Symbol]
- LIMIT OF DISTURBANCE: [Symbol]
- STABILIZED CONSTRUCTION ENTRANCE: [Symbol]
- SILT DIVERSION FENCE: [Symbol]
- SUPER SILT FENCE: [Symbol]
- INLET PROTECTION: [Symbol]
- EARTH DIKE: [Symbol]
- RIP-RAP: [Symbol]
- PIPE SLOPE DRAIN: [Symbol]

MINIMUM LOT SIZE CHART

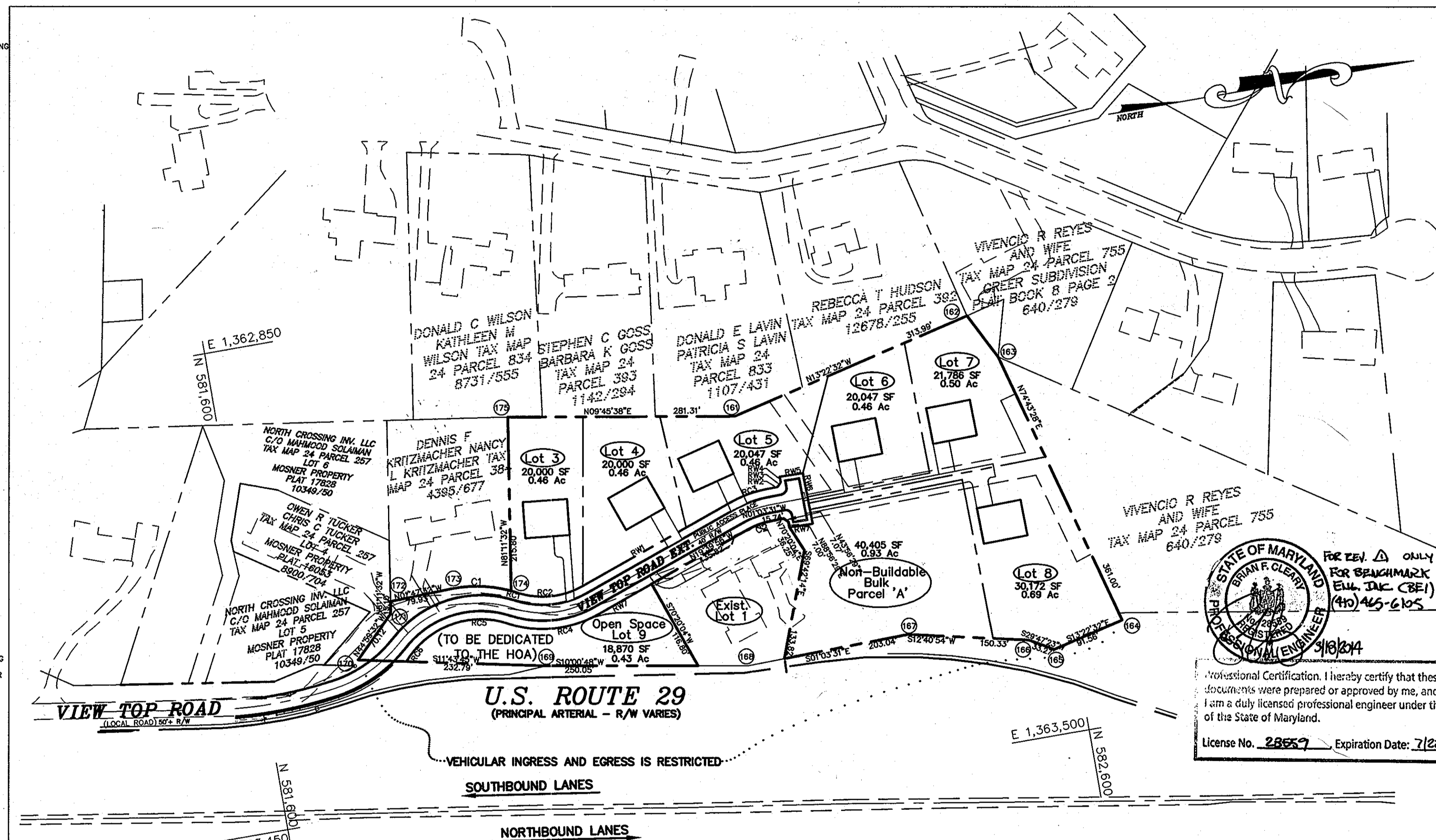
LOT #	GROSS AREA (SF)	PIPESTEM AREA (SF)	MIN. LOT SIZE (SF)
7	23,021	1,235	21,786
8	31,711	1,539	30,172

RIGHT-OF-WAY CURVE DATA

CURVE	RADIUS	ARC	DELTA	TANGENT	CHORD
RC1	164.87'	8.27'	02°52'26"	4.14'	N26°24'42"E 8.27'
RC2	101.00'	83.76'	47°30'57"	44.46'	N04°05'29"E 81.38'
RC3	140.00'	65.46'	13°38'25"	22.93'	N102°14'37"W 45.27'
RC4	141.00'	116.97'	47°31'51"	62.08'	S04°55'58"W 113.64'
RC5	107.30'	125.70'	67°07'07"	71.18'	S05°29'43"E 118.63'
RC6	188.00'	14.32'	04°21'54"	7.16'	S39°59'37"E 14.32'

SITE DATA TABULATION

- 1) GENERAL SITE DATA
 - a. PRESENT ZONING: R-20
 - b. LOCATION: TAX MAP 24 - GRID 17 - PARCEL 253
 - c. APPLICABLE DPZ FILE REFERENCES: S-03-017, F-03-190, WP-03-137, WP-04-072, P-06-000, CONTR. #14-4481-D
 - d. DEED REFERENCE: L7868 / F.646 (PLAT REFERENCE: 16325)
 - e. PROPOSED USE OF SITE: 7 SFD HOMES (INCLUDES 1 EXIST. SFD ON LOT 1)
 - f. PROPOSED WATER AND SEWER SYSTEMS: PUBLIC
- 2) AREA TABULATION
 - a. TOTAL AREA OF SITE: 5.61 AC± (INCL. LOT 1)
 - b. AREA OF 100 YEAR FLOODPLAIN (APPROX.): N/A
 - c. AREA OF STEEP SLOPES (25% OR GREATER): 0.84 AC±
 - d. NET AREA OF SITE: 4.77 AC±
 - e. AREA OF THIS PLAN SUBMISSION: 113.64 AC±
 - f. LIMIT OF DISTURBANCE (APPROX.): 5.61 AC±
- h. AREA OF OPEN SPACE LOTS: 0.43 AC±
- i. AREA OF PROPOSED PUBLIC ROAD: 0.59 AC±
- j. AREA OF PROPOSED PUBLIC R/W DEDICATION: 0.59 AC±
- 3) UNIT/LOT TABULATION
 - a. MINIMUM RESIDENTIAL LOT SIZE SELECTED: 20,000 S.F.
 - b. OPEN SPACE REQUIRED FOR TOTAL AREA OF SITE (5% OF 5.61 AC±): 0.34 AC±
 - c. TOTAL AREA OF PROPOSED OPEN SPACE LOTS PROVIDED WITH THIS SUBMISSION: 0.43 AC±
 - 1) OPEN SPACE AREAS LESS THAN 35'
 - 2) TOTAL AREA OF OPEN SPACE MEETING MINIMUM OPEN SPACE REQUIREMENTS (CREDITED): 0.43 AC±
 - d. AREA OF RECREATIONAL OPEN SPACE REQUIRED: N/A
 - 1) TOTAL AREA OF RECREATIONAL OPEN SPACE PROVIDED: 0.00 AC±



Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
 License No. 28657 Expiration Date: 7/22/2014

LOCATION PLAN

SCALE: 1"=100'

SHEET INDEX

NO.	DESCRIPTION
1	COVER SHEET
2	ROAD CONSTRUCTION PLAN, NOTES AND DETAILS
3	ROADWAY PROFILE, NOTES, AND DETAILS
4	GRADING PLAN
5	SEDIMENT & EROSION CONTROL PLAN, NOTES, AND DETAILS
6	EROSION AND SEDIMENT CONTROL PLAN
7	(SHEET ELIMINATED)
8	STORMWATER MANAGEMENT PROFILES, NOTES AND DETAILS
9	STORM DRAIN AREA AND SOILS MAP
10	STORM DRAIN PROFILES
11	LANDSCAPE PLAN, NOTES AND DETAILS
12	(SHEET ELIMINATED)
13	MISCELLANEOUS SITE PLAN PROFILES, NOTES AND DETAILS
14	RETAINING WALL CONSTRUCTION DETAILS
15	OFF-SITE FOREST CONSERVATION PLAN, NOTES AND DETAILS
16	MICRO-BIORETENTION FACILITY SECTIONS AND DETAILS

BOUNDARY CURVE DATA

CURVE	RADIUS	ARC	DELTA	TANGENT	CHORD
C1	164.87'	72.13'	25°04'05"	36.65'	S12°26'28"W 71.56'
C2	100.00'	32.47'	18°36'24"	18.38'	S10°21'44"E 32.33'

BOUNDARY COORDINATE

TABLE (NAD '83)

NO.	NORTHING	EASTING
161	582,233.9625	1,363,040.6109
162	582,639.4364	1,362,967.9745
163	582,588.6933	1,363,024.9128
164	582,663.8030	1,363,373.1586
165	582,574.7231	1,363,394.3404
166	582,545.8458	1,363,377.8090
167	582,399.1802	1,363,344.8090
168	582,196.1755	1,363,348.5375
169	581,949.9344	1,363,305.0797
170	581,722.0094	1,363,257.7577
171	581,771.5999	1,363,208.1806
172	581,773.9120	1,363,193.2587
173	581,853.8017	1,363,190.7589
174	581,923.6813	1,363,206.1755
175	581,956.7245	1,362,992.9202

RIGHT-OF-WAY BEARINGS AND DISTANCES

LINE	BEARING	DIST.
RW1	N18°39'56"W	211.22'
RW2	N01°03'31"W	15.72'
RW3	N46°03'31"W	7.07'
RW4	S88°56'29"W	7.00'
RW5	N01°03'31"E	29.00'
RW6	N88°56'29"E	64.00'
RW7	S01°03'31"E	29.00'
RW8	S19°39'56"E	75.40'

THE PURPOSE OF THESE PLANS IS TO PROVIDE A REVISED LOT LAYOUT AND TO REVISE THE STORMWATER MANAGEMENT DESIGN.

PROFESSIONAL CERTIFICATION

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 40091 Expiration Date 2-13-2013

OWNER/DEVELOPER

3804 VIEW TOP, LLC
 1055 WEST JOPPA ROAD
 TOWSON, MARYLAND 21284
 ATTN: RUSSELL HAWES

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

John R. Robertson 4/18/12
 HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

William R. Wall 4-16-12
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Jeffrey Sloman 4/27/12
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Walt Sheehan 4/30/12
 CHIEF, DIV. OF LAND DEVELOPMENT DATE

BY THE OWNER / DEVELOPER:

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

[Signature] 3/11/12
 OWNER / DEVELOPER - OWNER'S AGENT

BY THE ENGINEER:

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

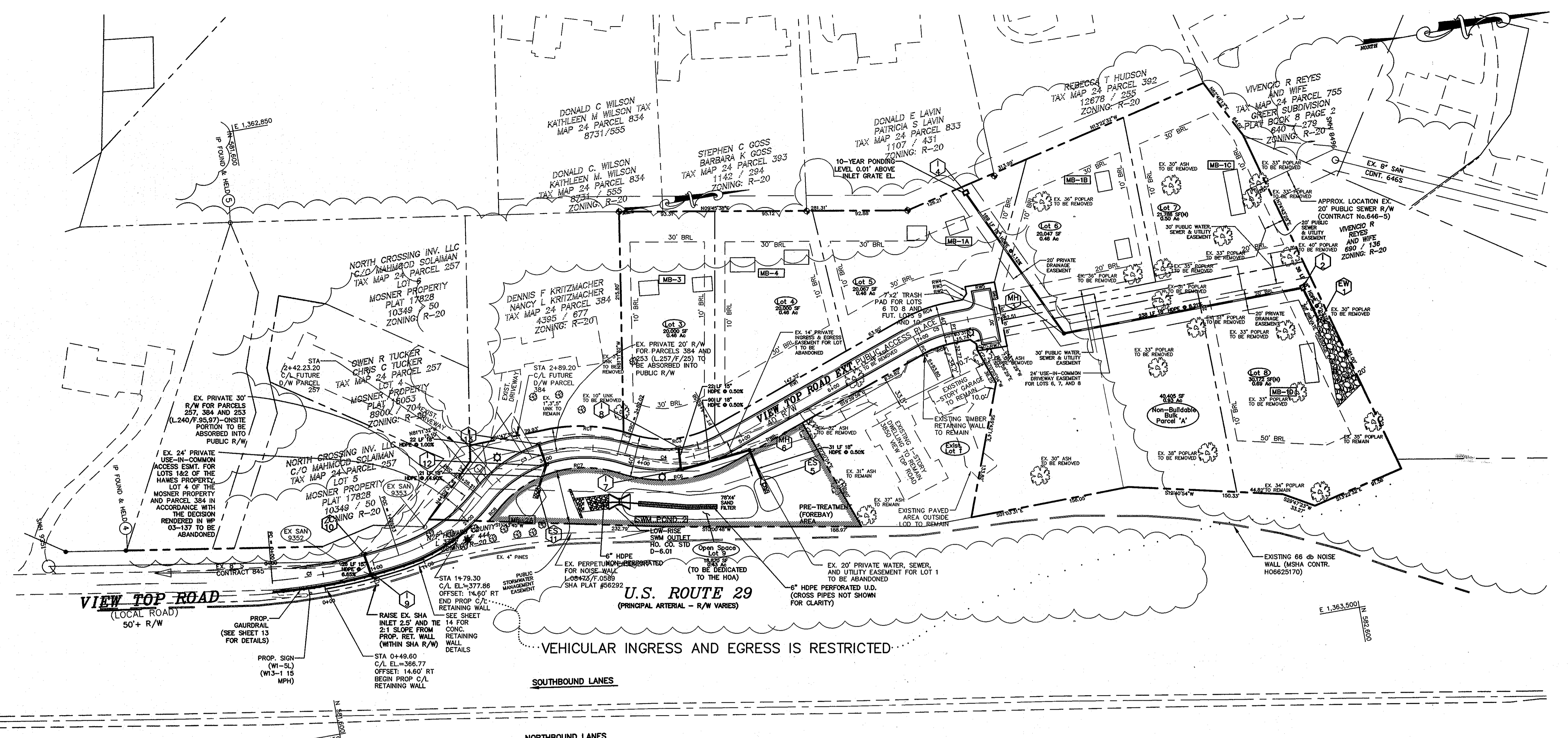
[Signature] 3/1/12
 ENGINEER: JEFFREY SLOMAN, PE #40091

date	project	revision
SEP 2011	10-024	1
10-024	illustration	JLS
	approval	JLS
	scale	1"=60'

date	description	revision
3-18-14	REVISED NOT #26 PER HOWARD COUNTY COMMENTS	2/2/2012
11/2/2011	RESPOND TO HOWARD COUNTY COMMENTS	

HAWES PROPERTY
 LOTS 3 THRU 8, O.S. LOT 9, AND NON-BUILDABLE BULK PARCEL 'A'
 TAX MAP 24 GRID 17 PARCEL 253
 HOWARD COUNTY, MARYLAND
 2nd ELECTION DISTRICT
 COVER SHEET

MILDENBERG, BOENDER & ASSOC., INC.
 Surveyors
 Engineers
 Planners
 6800 Deepoath Road, Suite 150, Ellicott City, Maryland 21115
 (410) 987-0288 Fax
 (410) 987-0288 Bait.



NOTE: THIS SHEET REPLACES SHEET 2 OF 15 OF THE PREVIOUSLY APPROVED PLANS (F-07-110) BY BENCHMARK ENGINEERING

NOTE: MODIFIED CURB AND GUTTER PER HO. CO. STD. R-3.01 TO BE USED EXCEPT WHERE NOTED OTHERWISE

NOTE: TRANSITION CURB AND GUTTER PER HO. CO. STD R-3.06 TO BE USED AT PROPOSED CURB INLETS

SEE SHEET 16 FOR MICROBIORETENTION DETAILS AND STRUCTURE DATA

OWNER/DEVELOPER
 3804 NEW TOP LLC
 1055 WEST JOPPA ROAD
 APT. 330
 TOWSON, MARYLAND 21284
 ATTN: RUSSELL HAWES

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 [Signature] 4-16-12
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 4/27/12
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature] 4/30/12
 CHIEF, DIV. DIRECTOR
 LAND DEVELOPMENT

VIEW TOP ROAD - STREET LIGHT SCHEDULE

SYMBOL	DESCRIPTION	LOCATION
★	150 WATT HPS PREMIERE PO I-TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE	STA 1+88.9 OFFSET:19.3' R
☆	100 WATT HPS PREMIERE PO I-TOP FIXTURE MOUNTED ON A 14' BLACK FIBERGLASS POLE	* STA 2+62.0 OFFSET:18.0' L STA 4+18.9 OFFSET:17.1' R STA 7+50.0 OFFSET:13.0' R

* LIGHT FIXTURE SHALL HAVE A "BLACKOUT LENS" IN THE REAR PLANE FACING ADJOINING PARCELS 384 AND 257

STORMWATER MANAGEMENT POND 'SWM POND 2' AND MICRO-BIORETENTION FACILITY 'MB-A' ARE TO BE PRIVATELY OWNED AND JOINTLY MAINTAINED.

NOTE: THE HOMEOWNER'S ASSOCIATION SHALL BE RESPONSIBLE FOR REMOVAL OF GRAFFITI FROM RETAINING WALLS

STORM LEGEND

- EW 100 END WALL NUMBER
- ES 100 END SECTION NUMBER
- MH 100 STORM MANHOLE NUMBER
- I 100 STORM INLET NUMBER
- MB-Z MICRO-BIORETENTION FACILITY NUMBER

CENTERLINE CURVE DATA

CURVE	STATION	RADIUS	ARC LENGTH	DELTA	TANGENT	CHORD BEARING & DISTANCE
C1	PC=0+00.00 POC=1+26.13	551.00'	126.13'	13'06"56"	63.34'	N01°29'11" W 125.85'
C2	PC=1+26.13 POC=2+26.21	168.00'	100.08'	34°07"55"	51.57'	N25°06'37" W 98.61'
C3	PC=2+26.21 POC=3+82.02	127.30'	155.81'	70°07'40"	89.35'	S07°08'44" E 146.26'
C4	PC=3+82.02 POC=4+82.58	121.00'	100.56'	47°37'01"	53.39'	N04°08'35" E 97.69'
C5	PC=4+82.58 POC=7+32.77	120.00'	38.97'	18°36'24"	19.66'	S10°21'44" E 38.80'

CENTERLINE CONTROL DATA - COORDINATES

DESCRIPTION	STATION	NORTHING	EASTING
POB = PC C1	0+00.00	581,561.3241	1,363,290.6520
PCC C1 - C2	1+26.13	581,687.1365	1,363,287.3872
PCC C2 - C3	2+26.13	581,776.4242	1,363,245.5424
PCC C3 - C4	3+82.02	581,921.5636	1,363,227.4326
PT - C4	4+82.58	582,018.9993	1,363,234.4903
CS - PC	6+93.60	582,217.8994	1,363,163.4086
PT - C5	7+32.77	582,256.0656	1,363,156.4299
EOP TEE - TURNAROUND	7+75.51	582,299.0901	1,363,155.6348
END PUBLIC R/W	7+82.51	582,305.7971	1,363,155.5108

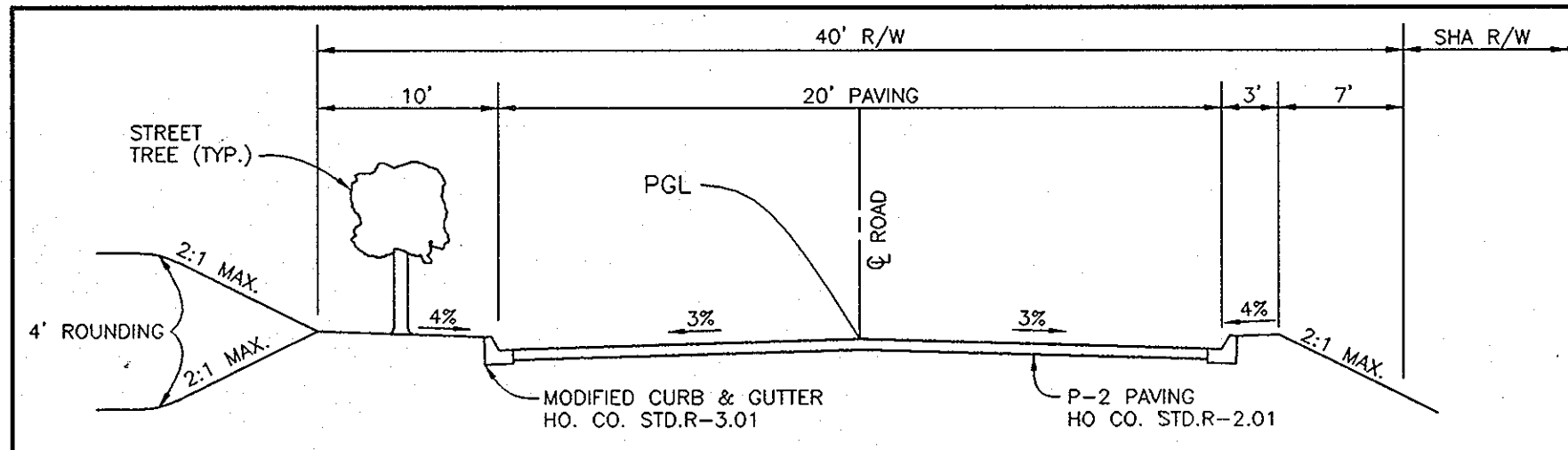
CENTERLINE CONTROL DATA - BEARINGS

DESCRIPTION	STATIONS	BEARING	DISTANCE
PT C4 - PC C51	4+82.58 - 6+93.60	N19°39'56" W	211.22
PT C5 - END PUBLIC R/W	7+32.77 - 7+82.51	N01°03'31" W	49.74

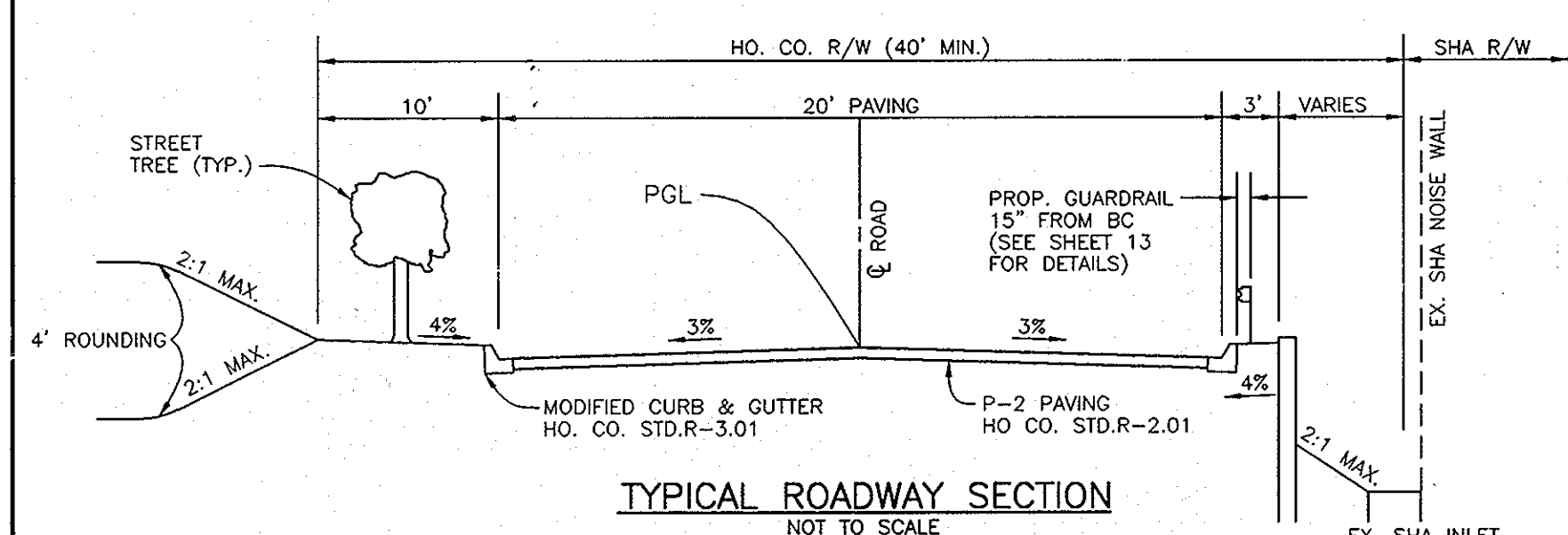
THE PURPOSE OF THESE PLANS IS TO PROVIDE A REVISED LOT LAYOUT AND TO REVISE THE STORMWATER MANAGEMENT DESIGN FOR THE HAWES PROPERTY PROJECT



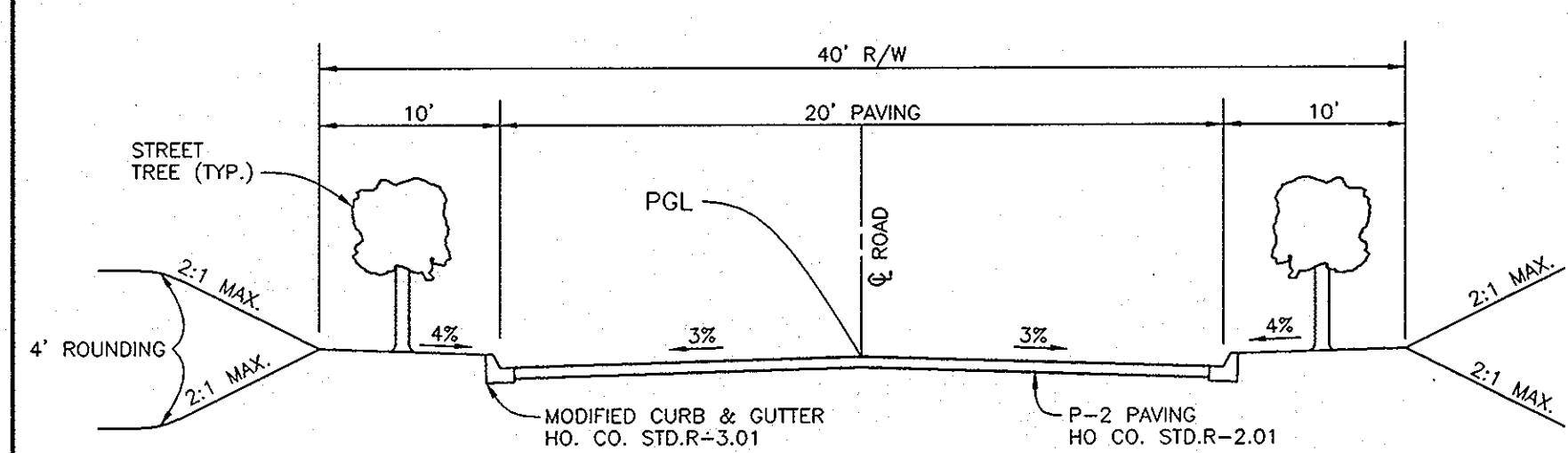
PROFESSIONAL CERTIFICATION
 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 40091 Expiration Date 2-13-2013



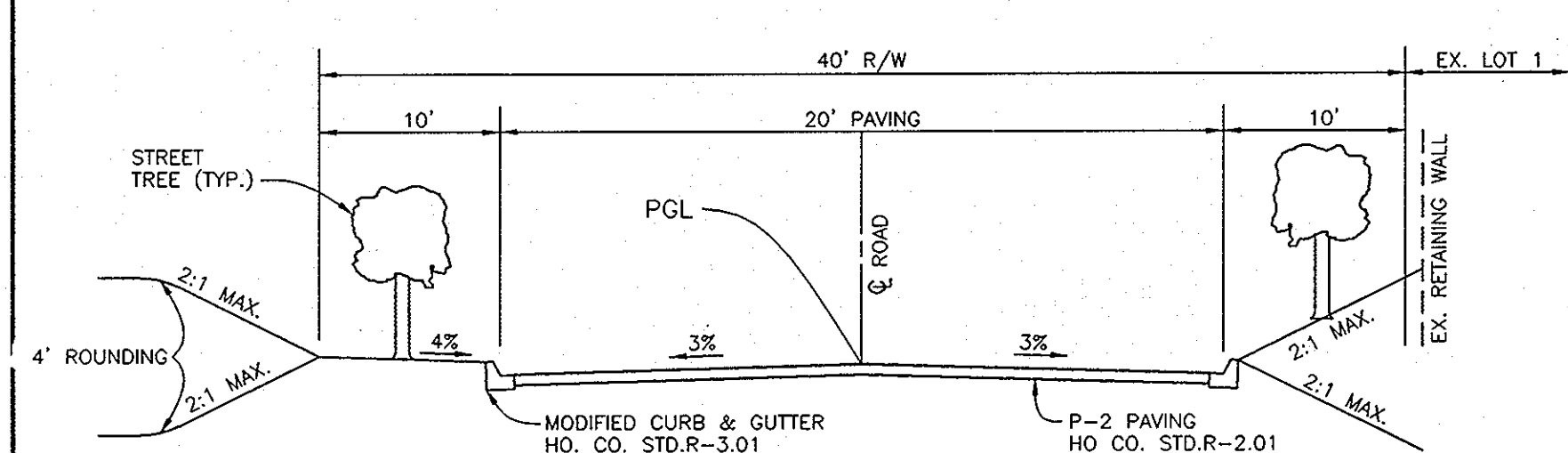
TYPICAL ROADWAY SECTION
NOT TO SCALE
VIEW TOP ROAD
PUBLIC ACCESS PLACE - LESS THAN 200 ADT
POSTED SPEED: 15 MPH (DESIGN SPEED: 25 MPH)
FROM STA. 0+00.00 (BEGIN ROADWAY IMPROVEMENTS)
TO STA. 0+49.60 (PROP. RETAINING WALL) AND



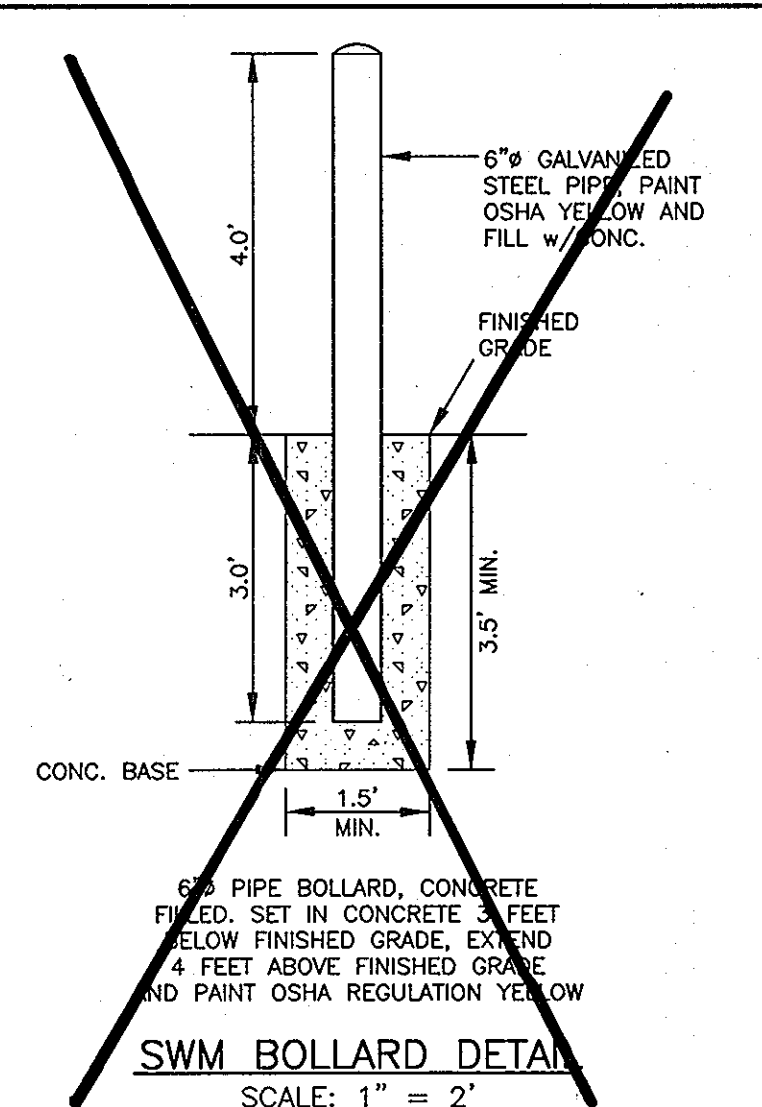
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NOT TO SCALE
VIEW TOP ROAD
PUBLIC ACCESS PLACE - LESS THAN 200 ADT
POSTED SPEED: 15 MPH (DESIGN SPEED: 25 MPH)
FROM STA. 0+49.60 (PROP. RETAINING WALL)
TO STA. 1+79.30 (END PROP. RETAINING WALL)



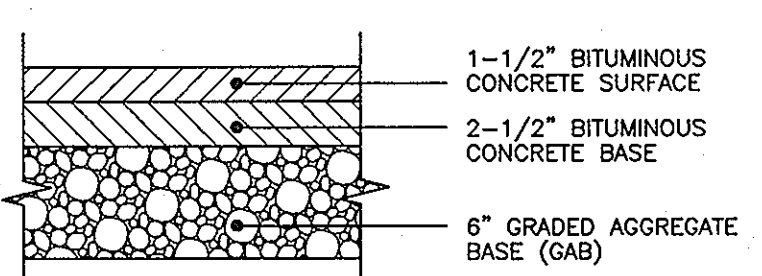
TYPICAL ROADWAY SECTION
NOT TO SCALE
VIEW TOP ROAD
PUBLIC ACCESS PLACE - LESS THAN 200 ADT
POSTED SPEED: 15 MPH (DESIGN SPEED: 25 MPH)
FROM STA. 1+79.30 (END PROP. RETAINING WALL)
TO STA. 5+65.98 (C/L NEW DRIVEWAY EX. LOT 1)



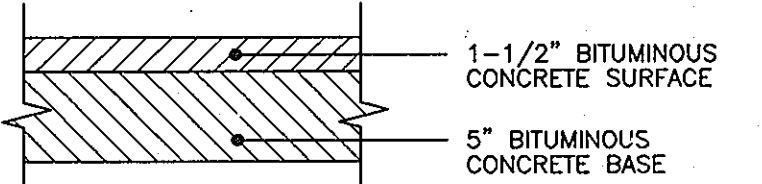
TYPICAL ROADWAY SECTION
NOT TO SCALE
VIEW TOP ROAD
PUBLIC ACCESS PLACE - LESS THAN 200 ADT
POSTED SPEED: 15 MPH (DESIGN SPEED: 25 MPH)
FROM STA. 5+65.98 (C/L NEW DRIVEWAY EX. LOT 1)
TO STA. 7+55.79 (END FILLETS @ TEE-TURNAROUND)



SWM BOLLARD DETAIL
SCALE: 1" = 2'

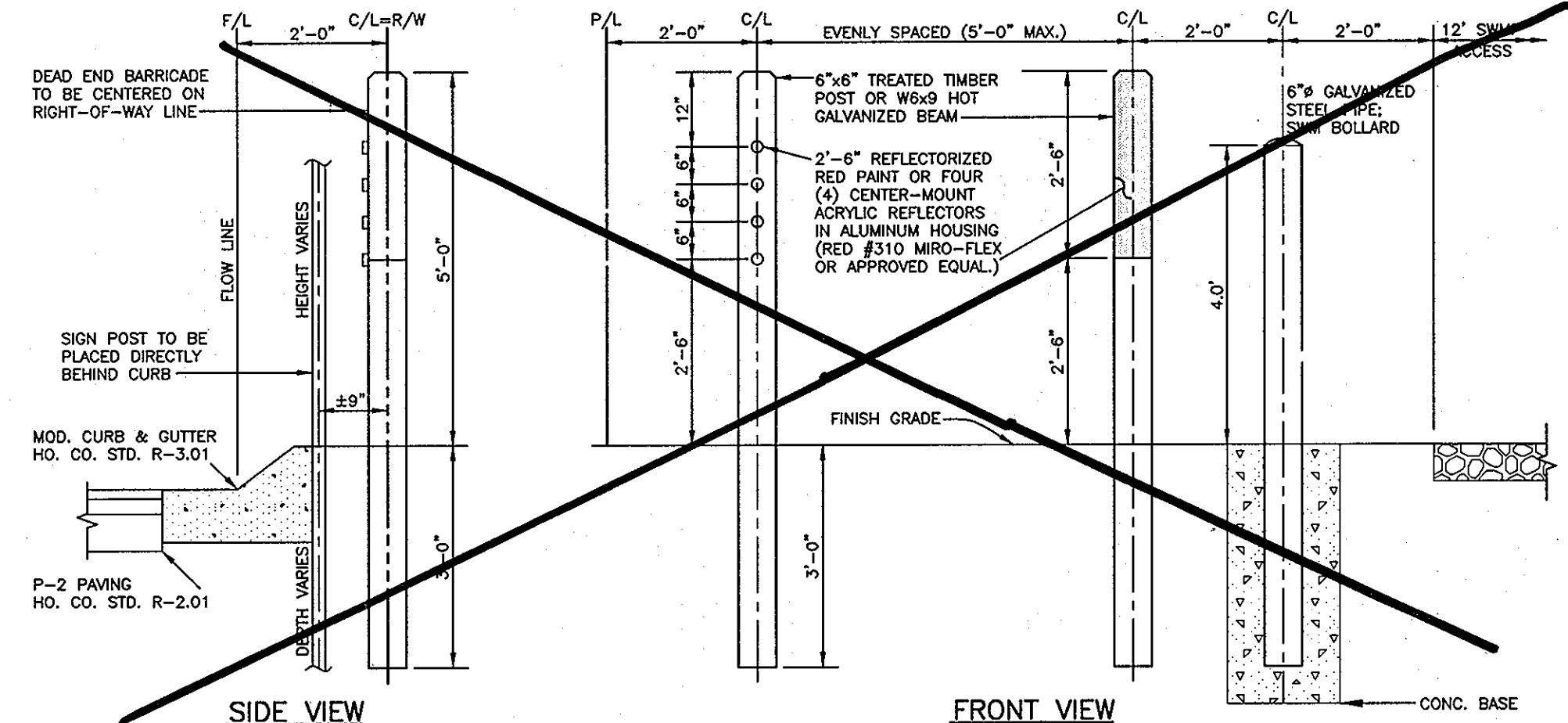


ALTERNATIVE SECTION

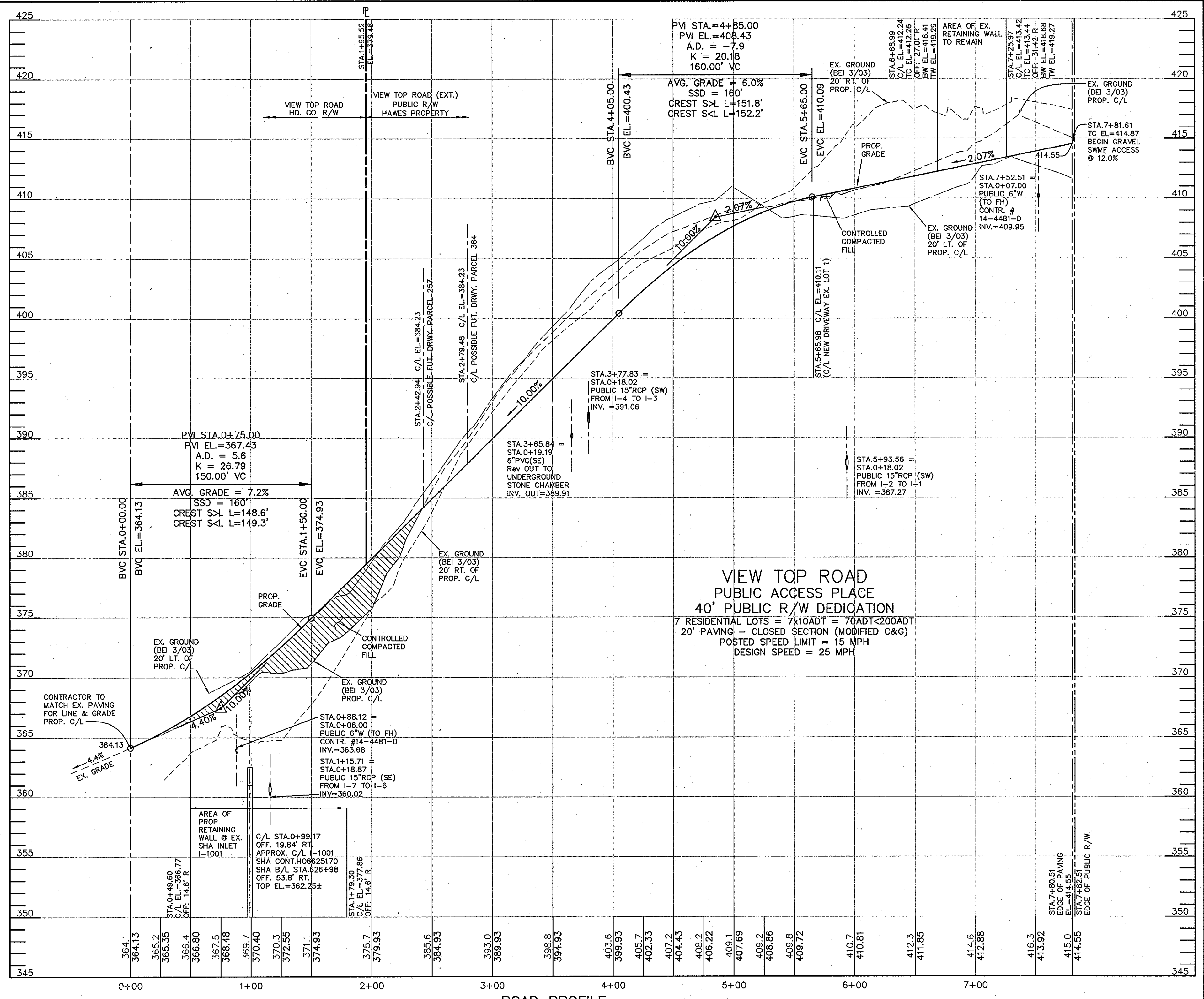


TYPICAL SECTION

P-2 PAVEMENT DETAIL
NOT TO SCALE

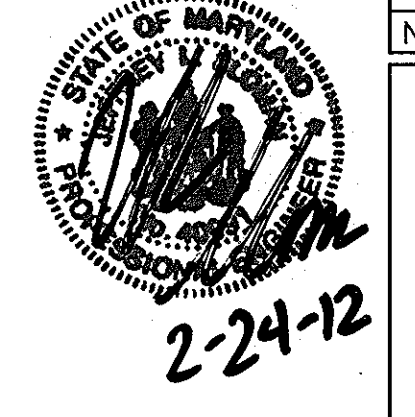


NOTE: THIS DETAIL CONFORMS TO HO.CO. STD.R-7.10
DEAD END BARRICADE DETAIL
SCALE: 1" = 2'



ROAD PROFILE
VERTICAL SCALE: 1" = 5'
HORIZONTAL SCALE: 1" = 50'

VIEW TOP ROAD
PUBLIC ACCESS PLACE
40' PUBLIC R/W DEDICATION
7 RESIDENTIAL LOTS = 7x10 ADT = 70 ADT < 200 ADT
20' PAVING - CLOSED SECTION (MODIFIED C&G)
POSTED SPEED LIMIT = 15 MPH
DESIGN SPEED = 25 MPH



NO.	DATE	REVISION
1	9/13/14	REVISED LAYOUT, STORMWATER MANAGEMENT AND LOT GRADING

BENCHMARK ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE & SUITE 418
ELLCOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 FAX: 410-465-6844
E-MAIL: bai@bel-civilengineering.com

PROFESSIONAL CERTIFICATION:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
License No. 21443, Date: 12-21-2008

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
With 2. WMAA 5-3-08
CHIEF, BUREAU OF HIGHWAYS DATE:

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Cindy K... 5/8/08
CHIEF, DIVISION OF LAND DEVELOPMENT DATE:

CHIEF DEVELOPMENT ENGINEERING DIVISION DATE: *Max*

DEVELOPER/CONTRACT PURCHASER:
SECURITY DEVELOPMENT, L.L.C.
P.O. BOX 417
ELLCOTT CITY, MARYLAND 21041
PHONE: (410) 465-4244

PROJECT: **HAWES PROPERTY**
SUBDIVISION (RE-SUBDIVISION OF LOT 2)
LOTS 1 & 5-10 AND O.S. LOTS 3 & 4

LOCATION: TAX MAP 24 - GRID 17
PARCEL 253 - ZONE: R-20
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: **FINAL/CONSTRUCTION PLAN**
ROAD PROFILE, NOTES AND DETAILS

DATE: DECEMBER 20, 2006
MARCH 14, 2008 PROJECT NO. 1574

Des: MCR/DAM Draft: MCR Check: DAM SCALE: AS SHOWN DRAWING 3 OF 16



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

HOWARD SOIL CONSERVATION DISTRICT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Walter Z. ... 4-16-12
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Jeffrey S. ... 4/27/12
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Kat ... 4/30/12
 CHIEF, DIV. OF LAND DEVELOPMENT DATE

OWNER/DEVELOPER

3804 VIEW TOP, LLC
 1055 WEST JOPPA ROAD
 APT. 330
 TOWSON, MARYLAND 21284
 ATTN: RUSSELL HAWES

BY THE OWNER / DEVELOPER:

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

OWNER / DEVELOPER - OWNER'S AGENT
 BY THE ENGINEER:

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

ENGINEER - JEFFREY SLOMAN, PE #40091

STORM LEGEND

EW 100 END WALL NUMBER
 ES 100 END SECTION NUMBER
 MH 100 STORM MANHOLE NUMBER
 I 100 STORM INLET NUMBER
 MB-Z MICRO-BIoretention FACILITY NUMBER

STORMWATER MANAGEMENT POND 'SWM POND 2' AND MICRO-BIoretention FACILITY PLANTINGS

SEE SHEET 16 OF 16 FOR MICROBIoretention FACILITY PLANTINGS

NOTE: SPOIL FROM TRACKING IS TO BE PLACED ON THE UPHILL SIDE OF THE TRENCH.

NOTE: THIS SHEET IS FOR FINAL GRADING PURPOSES ONLY.

NOTE: THIS SHEET REPLACES SHEET 4 OF 15 OF THE PREVIOUSLY APPROVED PLANS (F-07-110) BY BENCHMARK ENGINEERING

PROFESSIONAL CERTIFICATION

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 40091
 Expiration Date 2-13-2013



SEDIMENT CONTROL NOTES

- 1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS AND PERMITS SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION.
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN A 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS (SEC. 51) SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
7. SITE ANALYSIS:
TOTAL AREA OF SITE 5.61 ACRES
TOTAL AREA DISTURBED 5.00 ACRES
AREA TO BE ROOFED OR PAVED 1.44 ACRES
AREA TO BE VEGETATIVELY STABILIZED 3.56 ACRES
TOTAL CUT 500 CU. YDS.
TOTAL FILL 500 CU. YDS.
OFF-SITE HAUL
8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY MUST BE OBTAINED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES ARE LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
* IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO IDENTIFY AN OFF-SITE SPOIL AREA WITH AN APPROVED SEDIMENT & EROSION CONTROL PLAN AND PERMIT.

TEMPORARY SEEDBED PREPARATION

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.
SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT).
SEEDING: FOR PERIOD MARCH 1 THROUGH APRIL 30 AND FROM AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 2-1/2 BUSHELS PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ FT) FOR THE PERIOD AUGUST 1 THROUGH AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (.07 LBS/1000 SQ FT). FOR THE PERIOD NOVEMBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FT. OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.
REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

PERMANENT SEEDBED PREPARATION

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

- 1. PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS PER ACRE 30-0-0 UREA-FORM FERTILIZER (9 LBS/1000 SQ FT).
2. ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.

SEEDING: FOR THE PERIODS MARCH 1 THROUGH APRIL 30 AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 60 LBS PER ACRE (1.4 LBS/1000 SQ FT) OF KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (.05 LBS/1000 SQ FT) OF WEEPING LOVEGRASS DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY: OPTION (1) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOD. OPTION (3) SEED WITH 60 LBS PER ACRE OF KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS PER ACRE OF WELL ANCHORED STRAW.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.
MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

SEQUENCE OF CONSTRUCTION

Table with 2 columns: DATE and ACTIVITY. Rows include: DAY 1 OBTAIN GRADING PERMIT; DAY 2-5 INSTALL CONSTRUCTION ENTRANCE; DAY 6-15 PERFORM PERIMETER SEDIMENT CONTROL STRUCTURES; DAY 16-20 TEST PIT AREA OF EXISTING UTILITY CONNECTIONS; DAY 21-22 TIE INTO EX. WATER MAIN AND PROVIDE TEMPORARY WHCS; DAY 23-35 INSTALL STORM DRAIN PIPES AND STRUCTURES; DAY 36-50 UPON APPROVAL OF HOWARD COUNTY SEDIMENT CONTROL INSPECTOR; DAY 51-70 UPON APPROVAL OF HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

Definition: Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

Purpose: To provide a suitable medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

Conditions Where Practice Applies: This practice is limited to areas having 2:1 or flatter slopes where:
a. The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
b. The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
c. The original soil to be vegetated contains material toxic to plant growth.
d. The soil is so acidic that treatment with limestone is not feasible. II. For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

Construction and Material Specifications

- I. Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.
II. Topsoil Specifications - Soil to be used as topsoil must meet the following:
i. Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by an agronomist or soil scientist and approved by the appropriate approval authority.
ii. Topsoil must be free of plants or plant parts such as Bermuda grass, quack grass, Johnson grass, nutsedge, poison ivy, thistle, or others as specified.
iii. Where the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be applied at the rate of 4-8 tons per acre (400-800 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.
iii. For sites having disturbed areas under 5 acres:
i. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
ii. On soil meeting topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
b. Organic content of topsoil shall be not less than 1.5 percent by weight.
c. Topsoil having soluble salt content greater than 500 parts per million shall not be used.
d. No sod or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.
Note: Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.
ii. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
V. Topsoil Application
i. When topsoiling, maintain needed erosion and sediment control practices such as diversion, Grade Stabilization Structures, Earth Dikes, Slope Sit Fence and Sediment Traps and Basins.
ii. Grades on the areas to a topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.
iii. Topsoil shall be uniformly distributed in a 4" - 8" layer and lightly compacted to a minimum thickness of 4". Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
iv. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation. G-21-2
V. Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:
i. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribed amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:
a. Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
b. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a pH of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
c. Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
iv. Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.
References: Guideline Specifications, Soil Preparation and Sodding, MD-VA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes, Revised 1973.

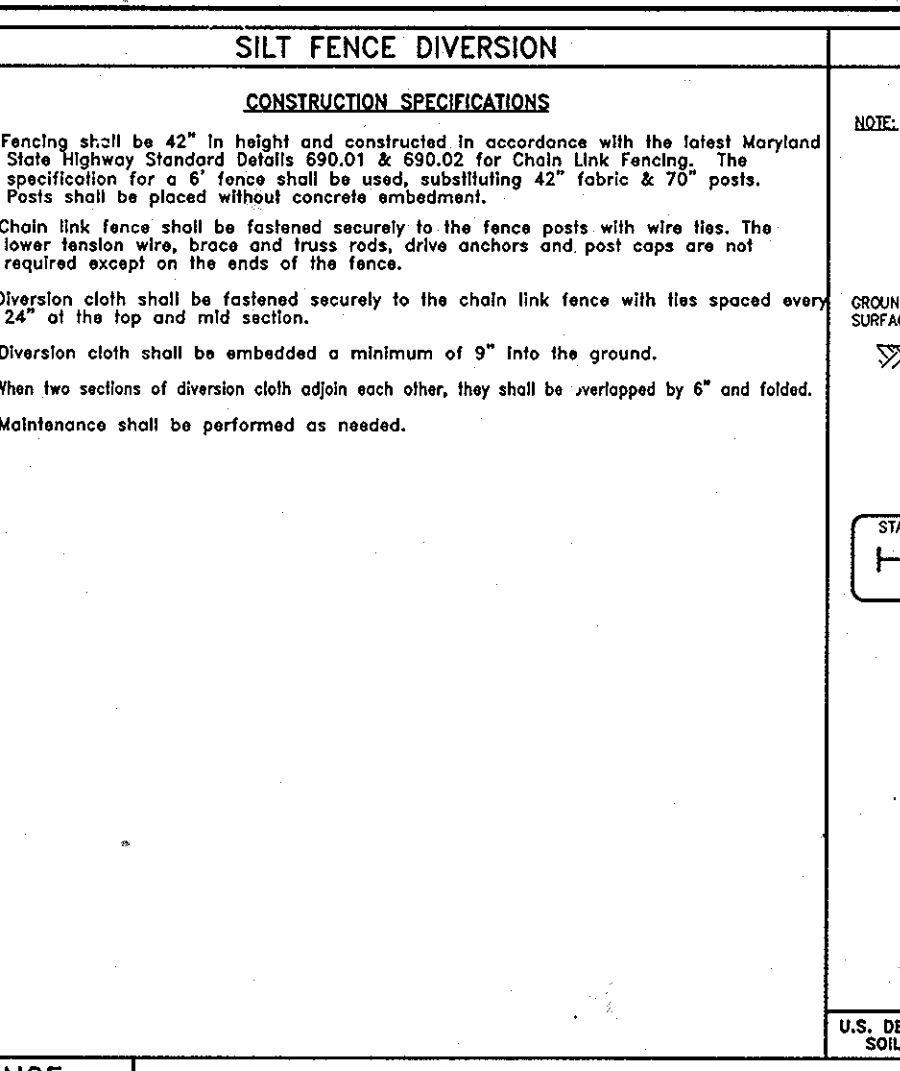
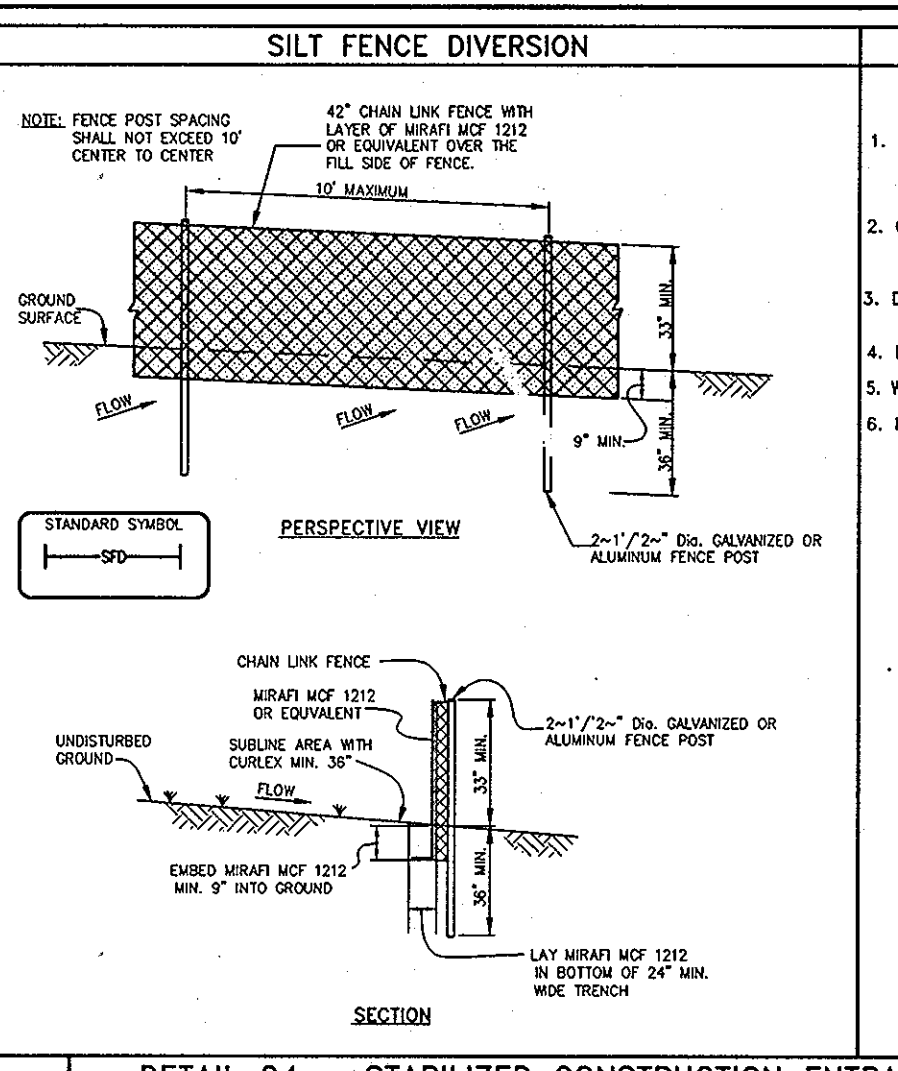
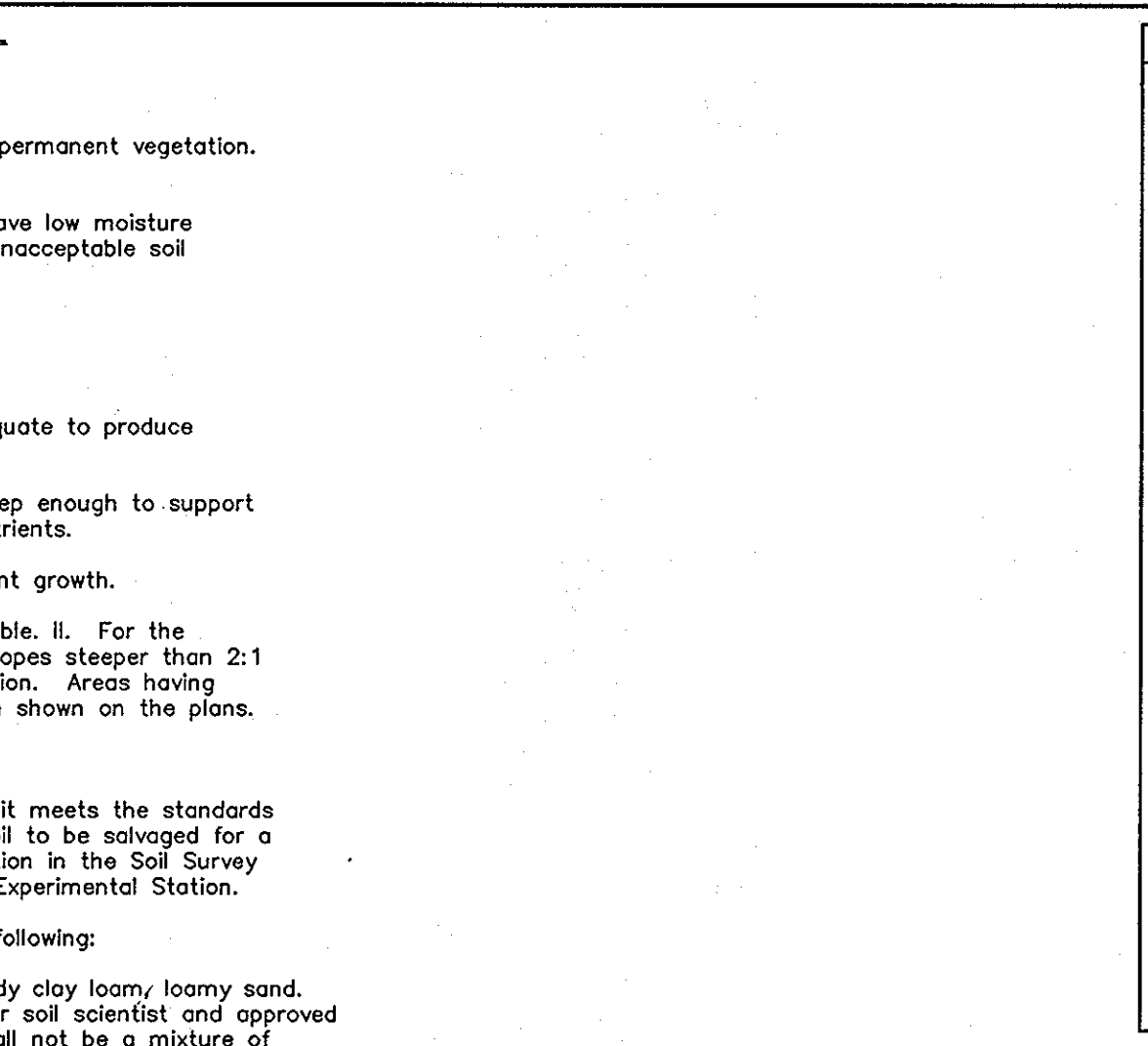


Table with 4 columns: Silt Fence Design Criteria. Rows include: Silt Fence Length (Maximum), Slope Steepness, Slope Length (Maximum), and Silt Fence Length (Minimum).

Table with 4 columns: SUPER SILT FENCE DESIGN CRITERIA. Rows include: Silt Fence Length (Maximum), Slope Steepness, Slope Length (Maximum), and Silt Fence Length (Minimum).

TEMPORARY SEEDBED PREPARATION

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.
SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT).
SEEDING: FOR PERIOD MARCH 1 THROUGH APRIL 30 AND FROM AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 2-1/2 BUSHELS PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ FT) FOR THE PERIOD AUGUST 1 THROUGH AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (.07 LBS/1000 SQ FT). FOR THE PERIOD NOVEMBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FT. OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.
REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

PERMANENT SEEDBED PREPARATION

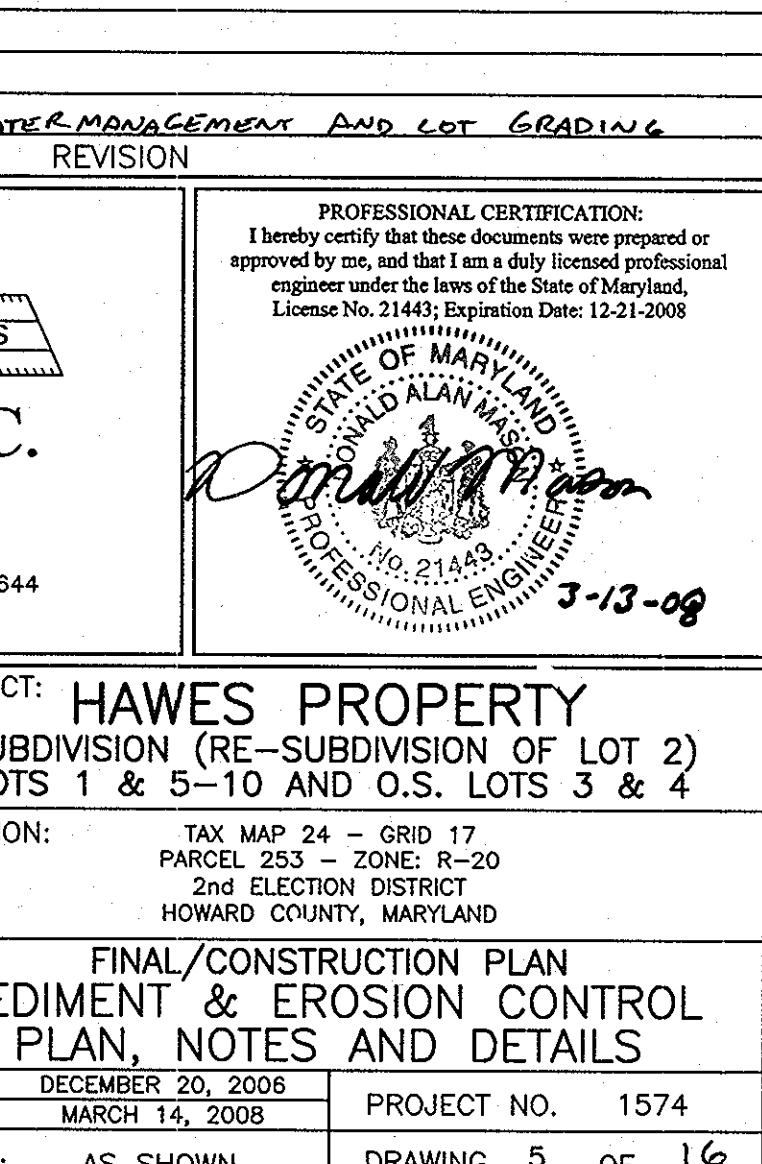
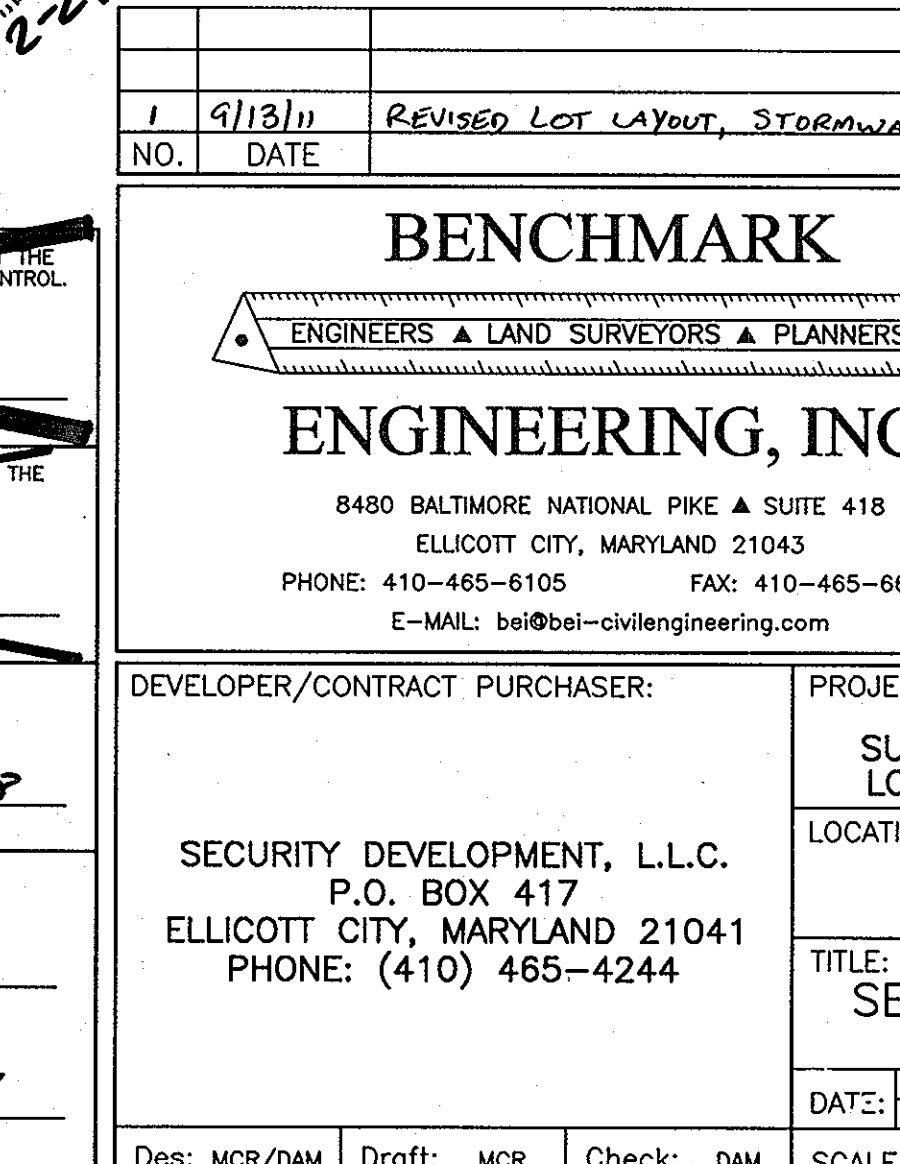
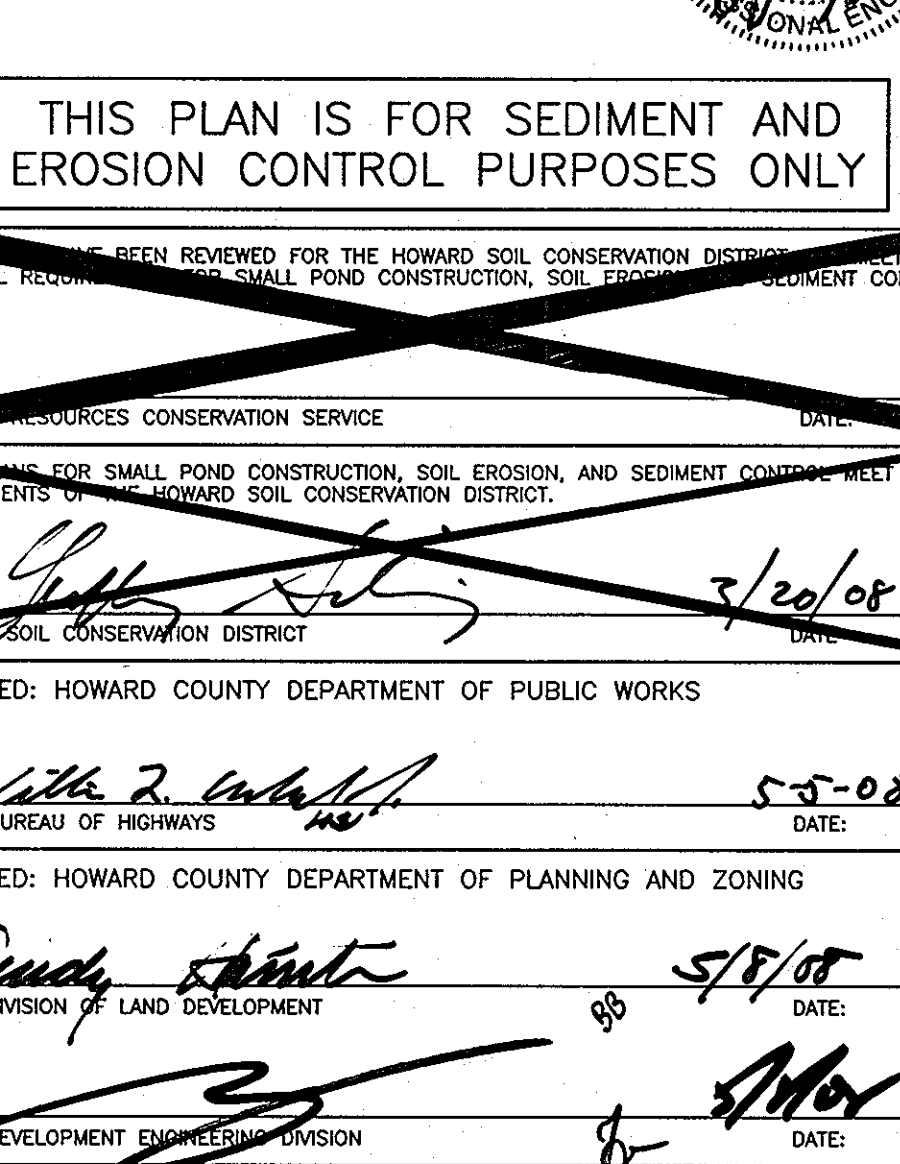
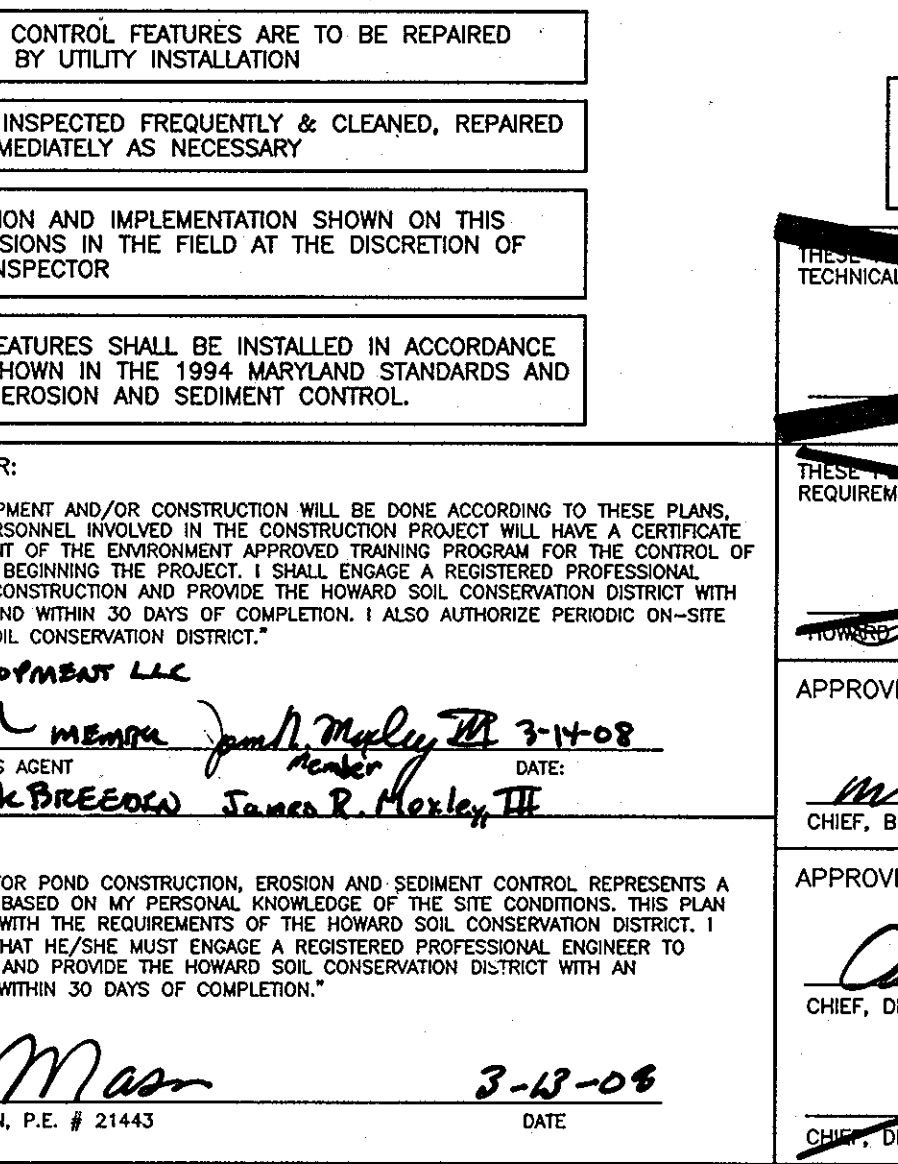
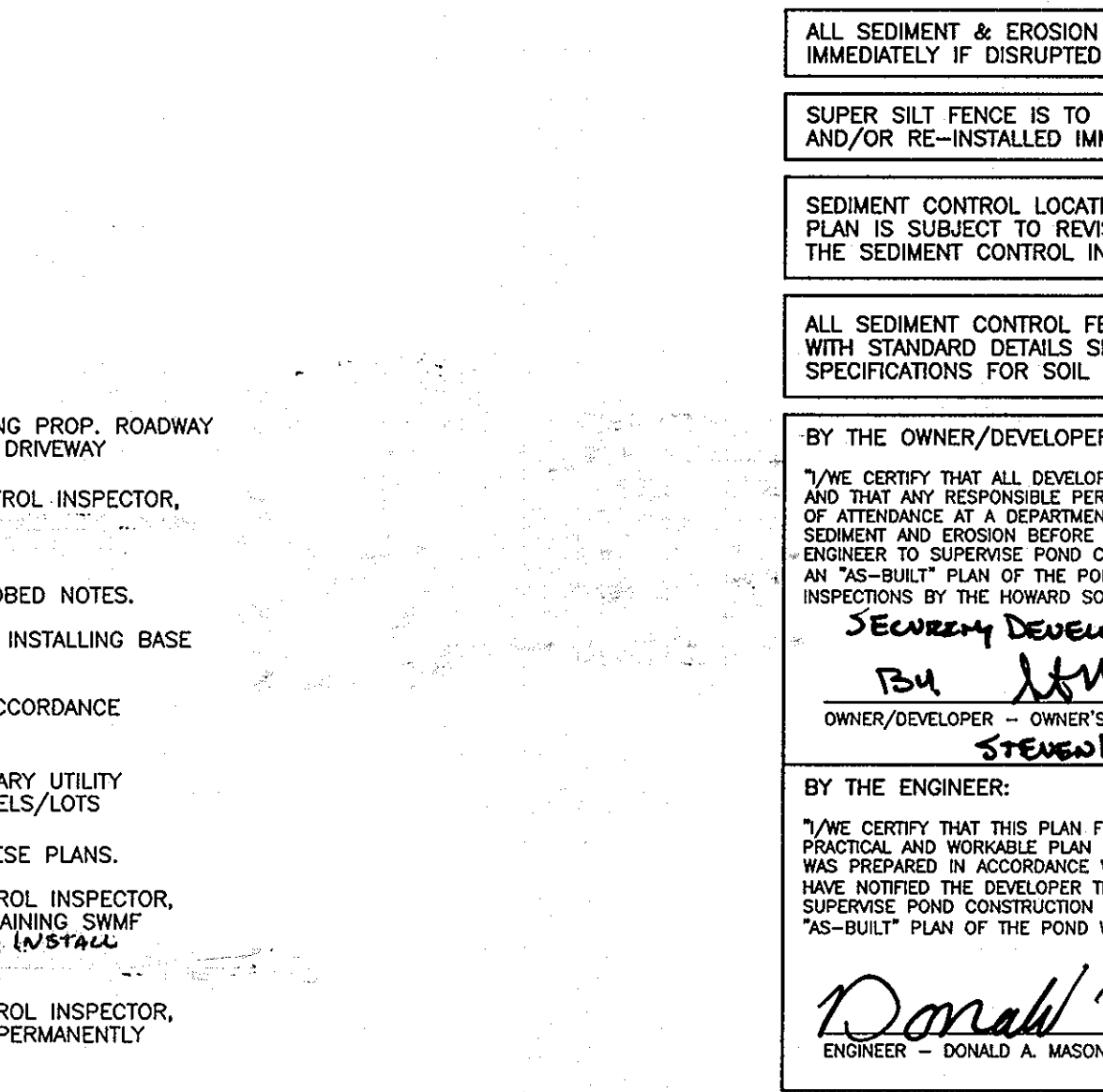
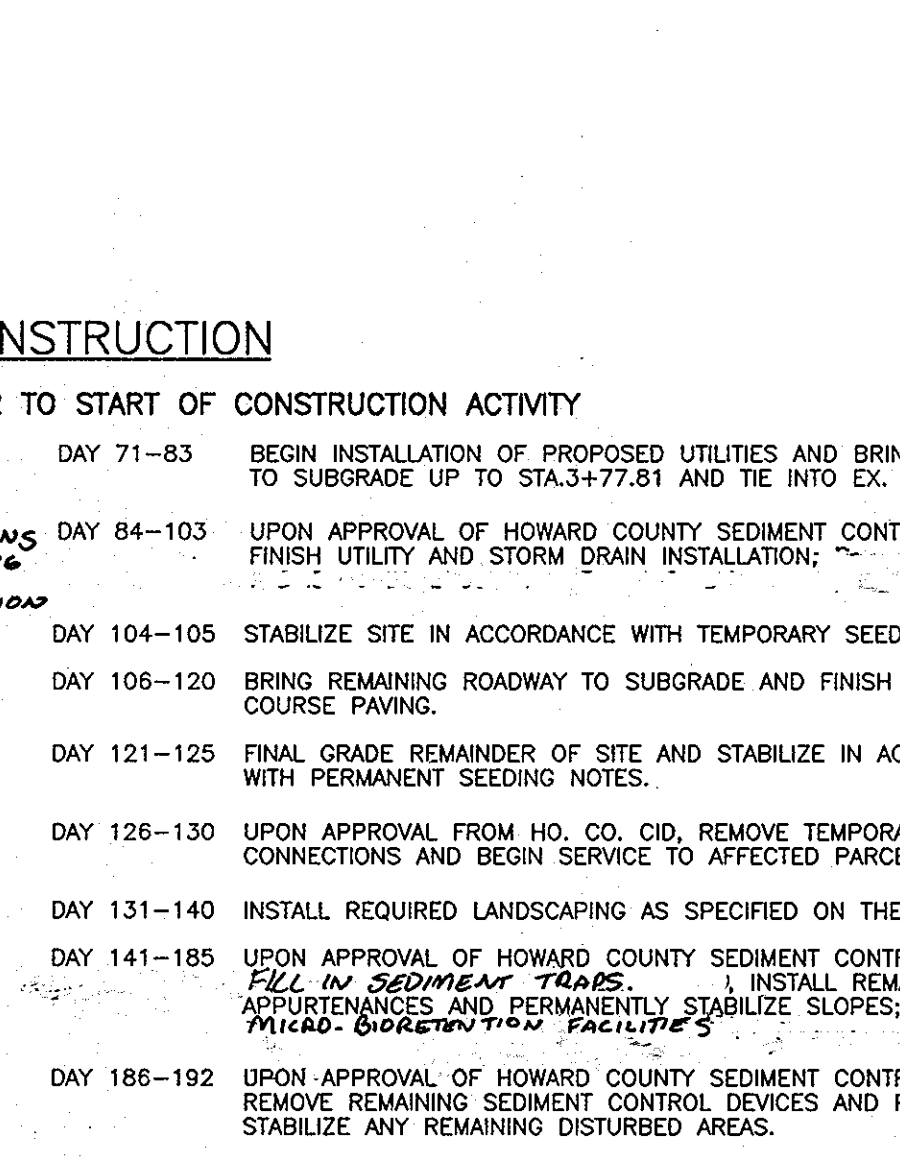
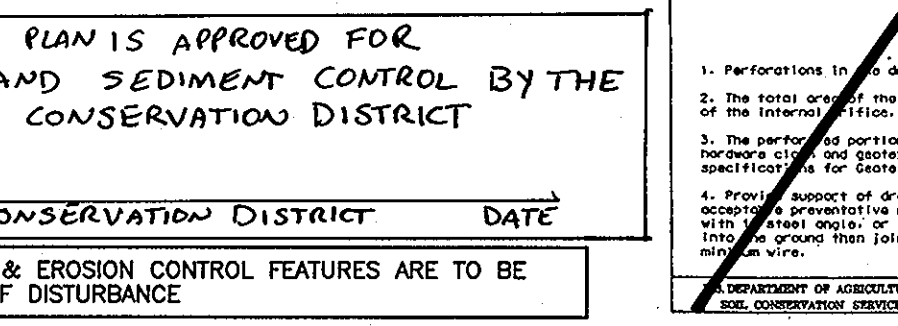
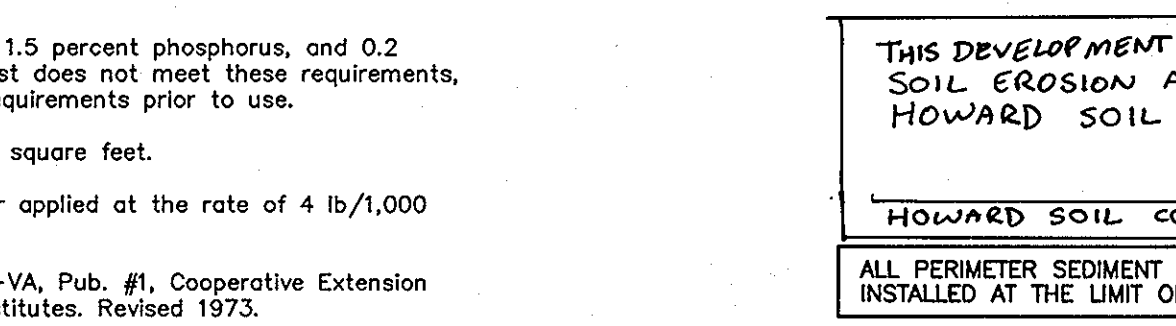
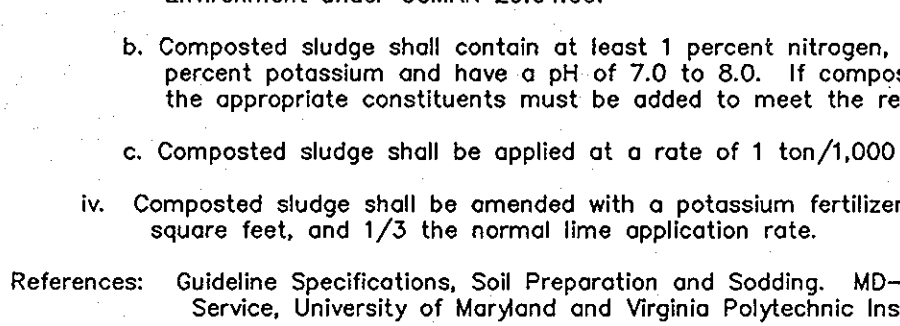
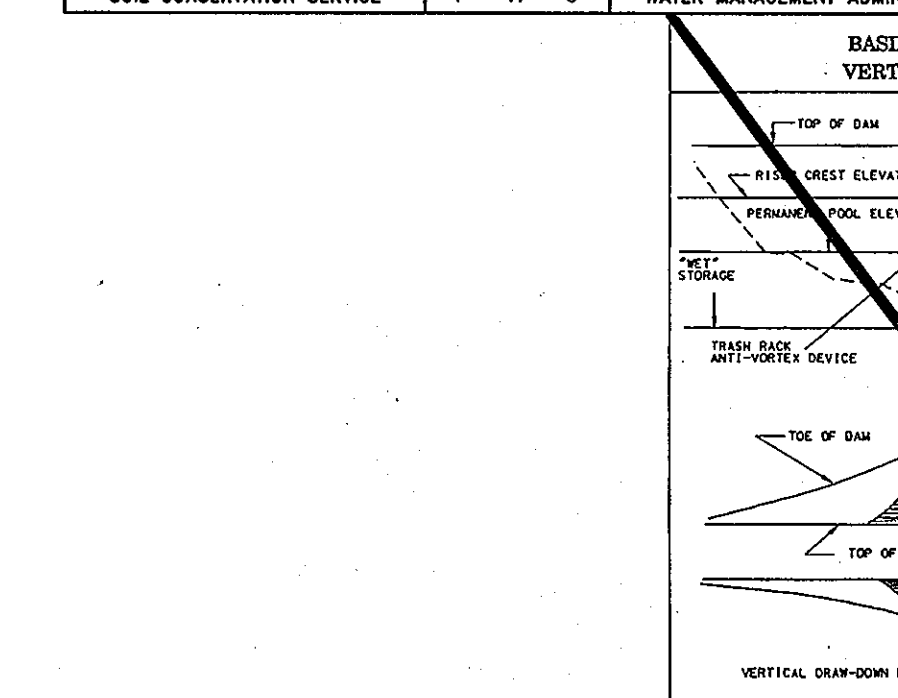
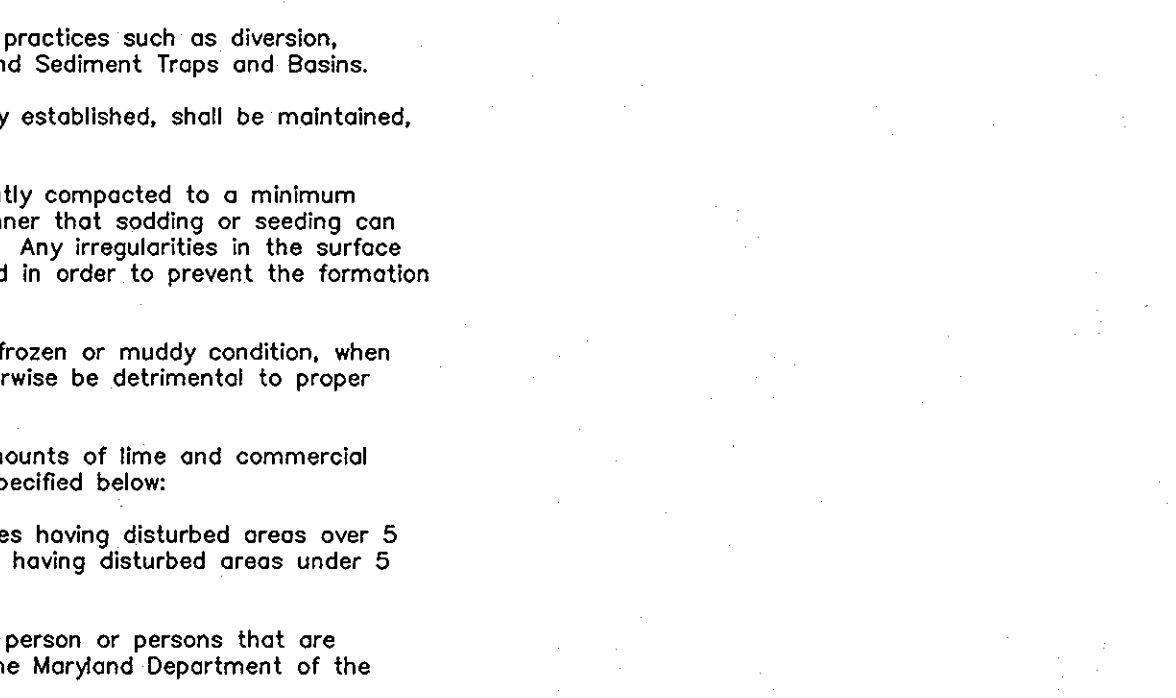
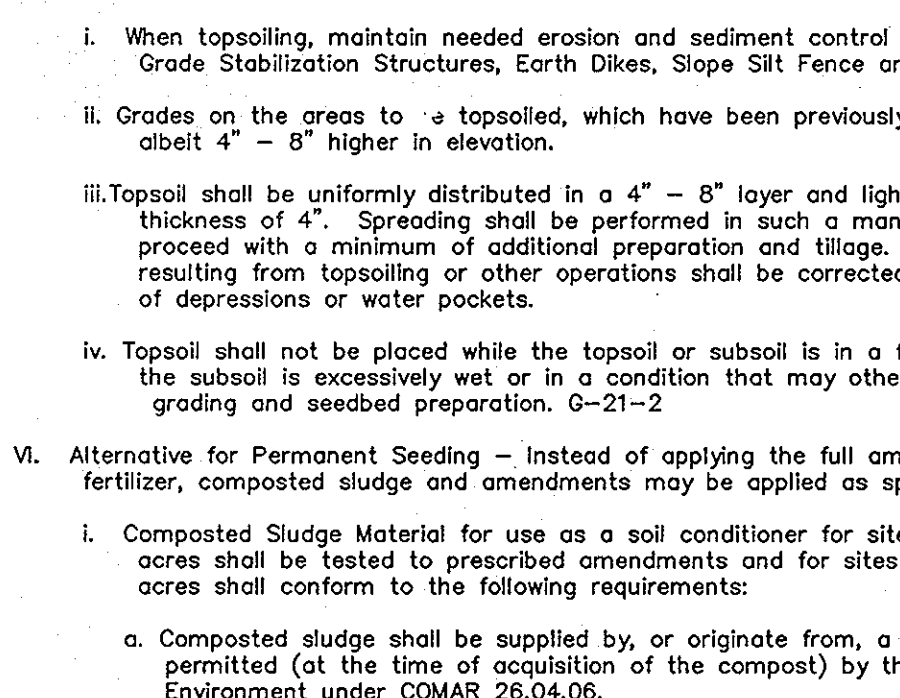
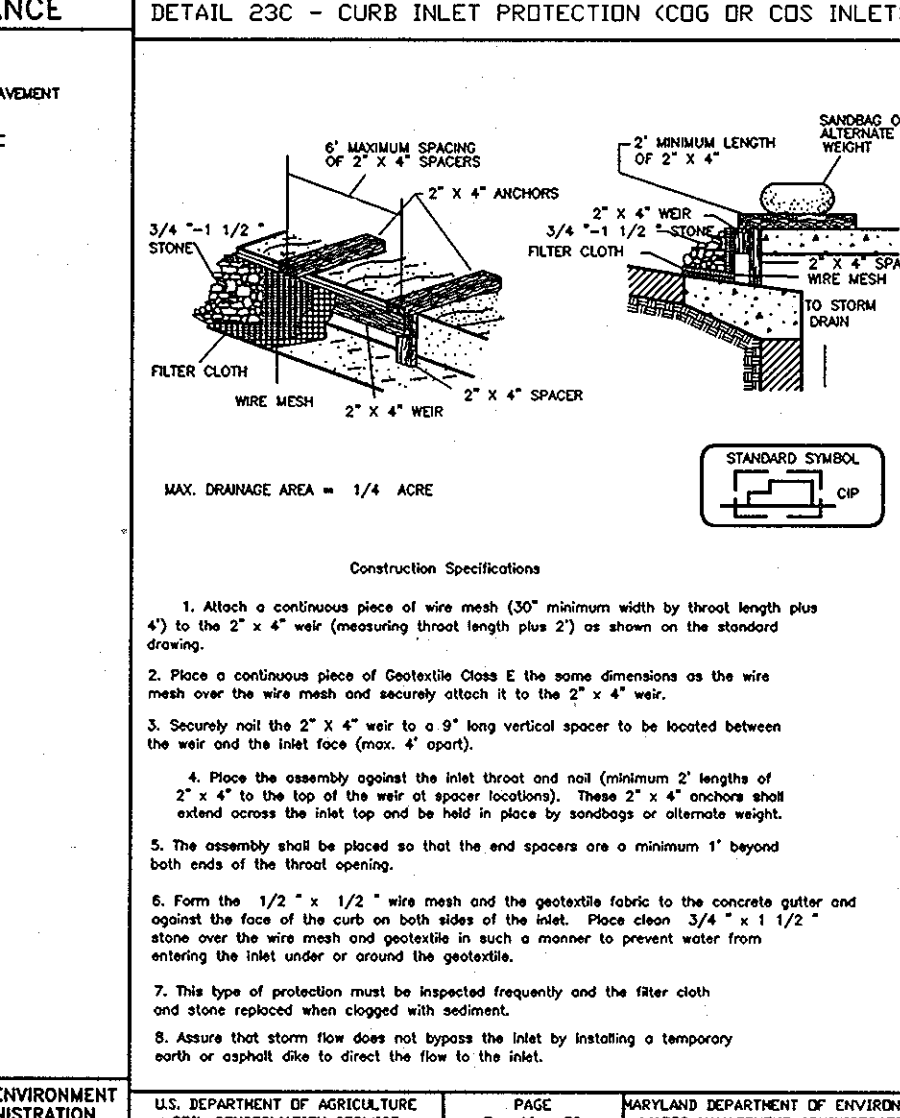
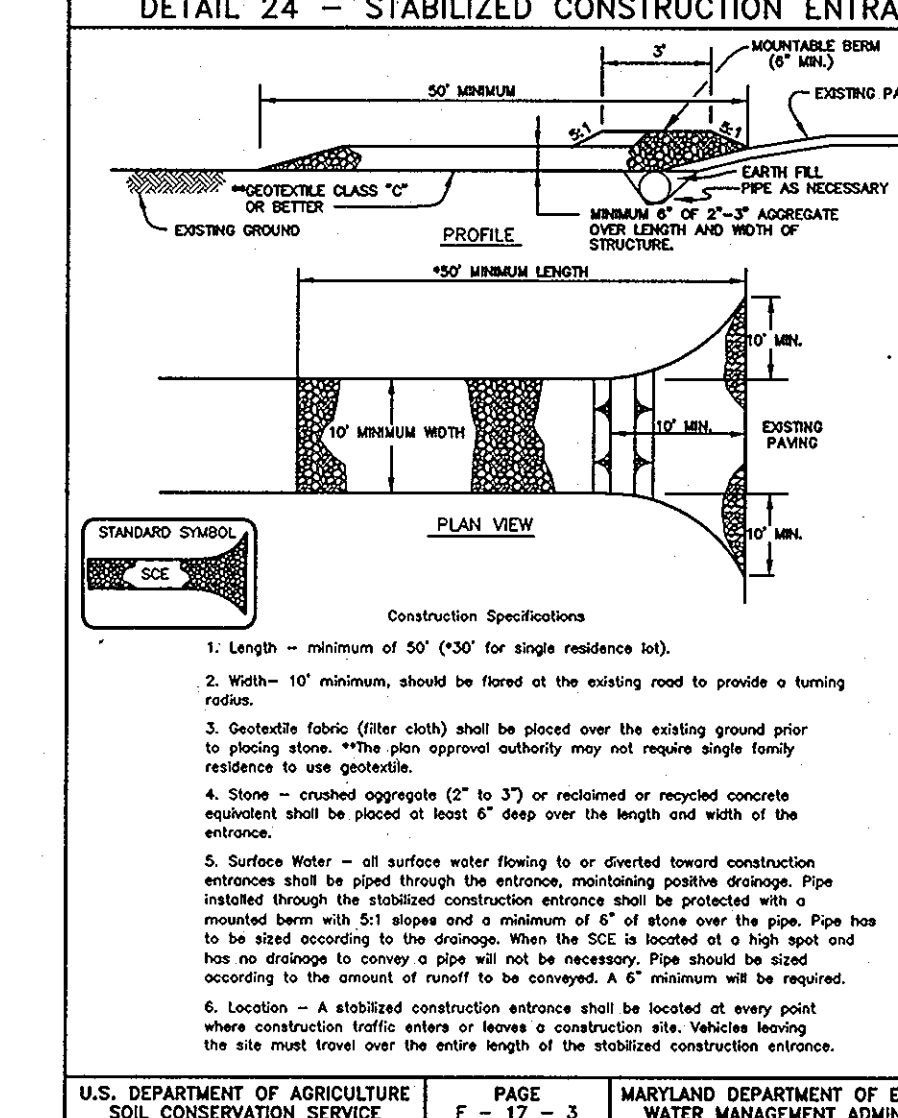
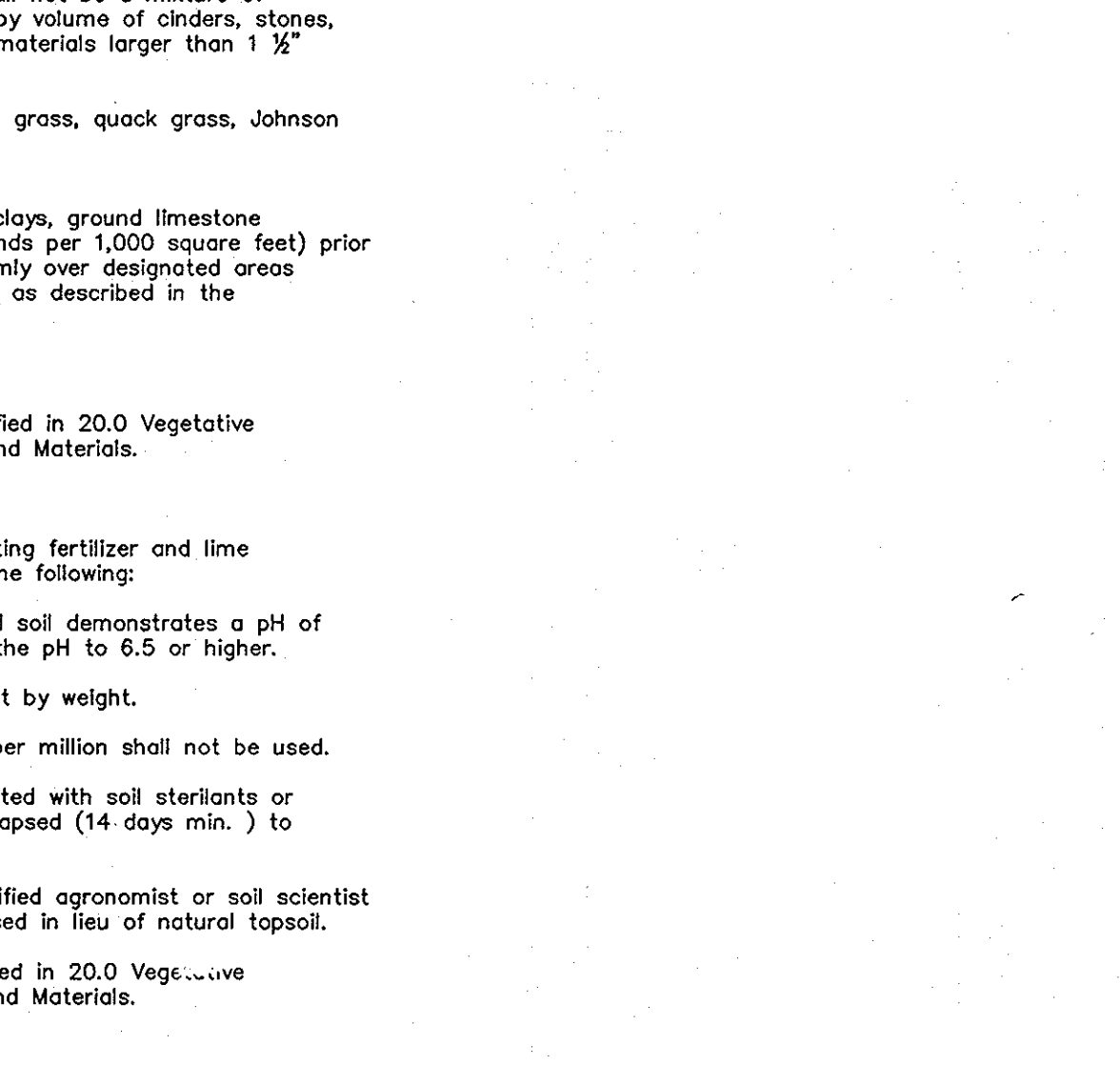
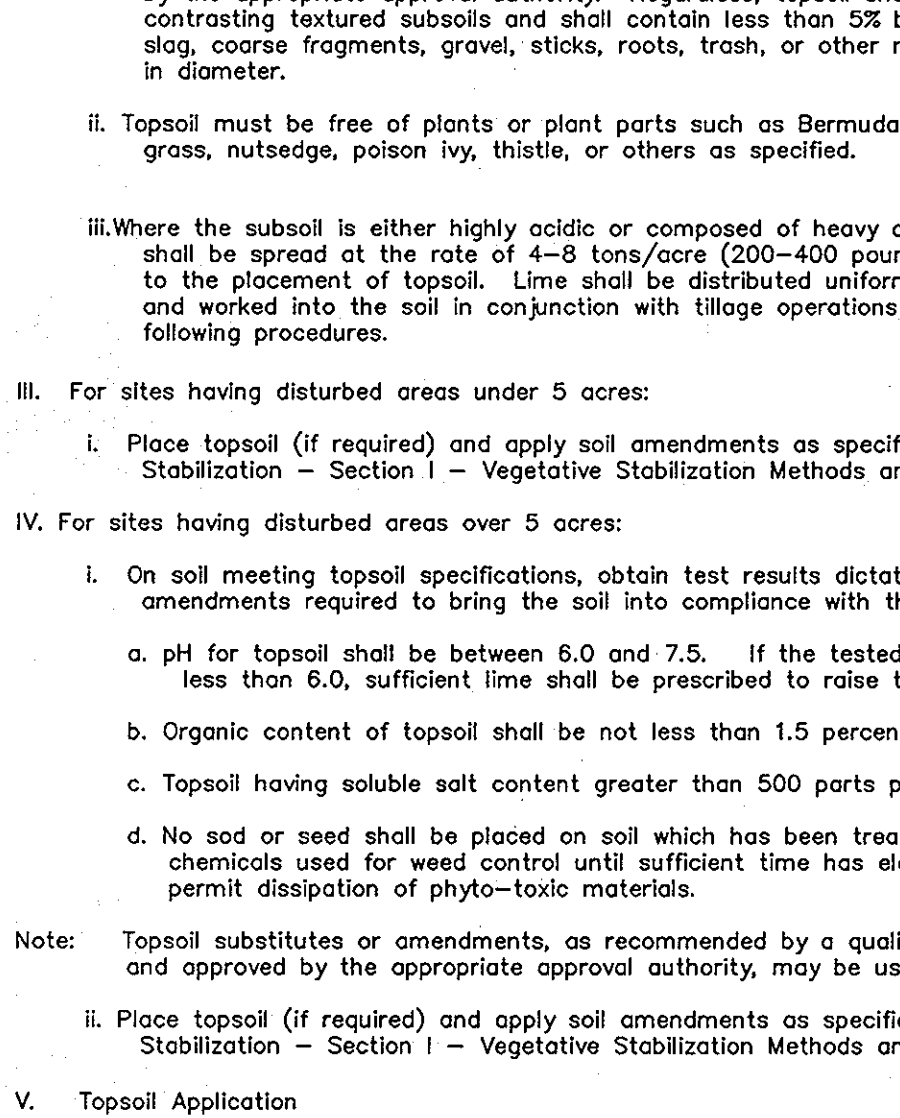
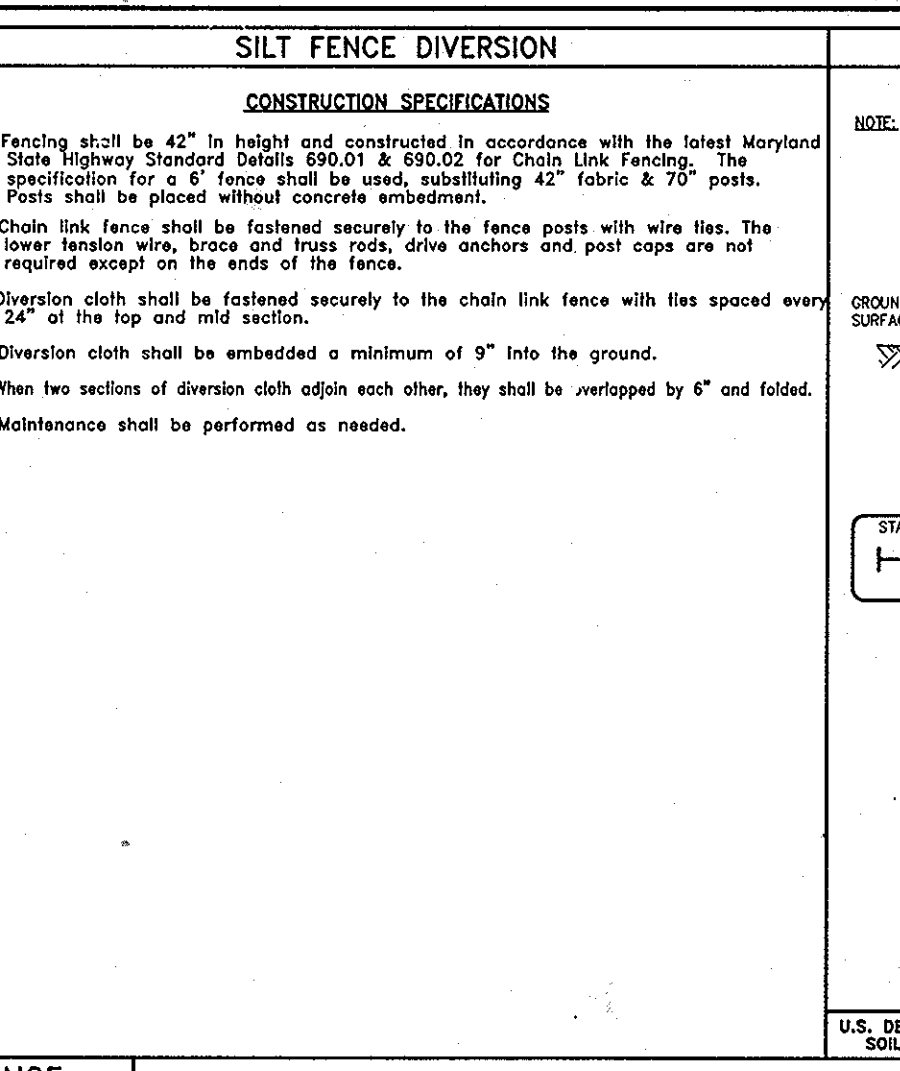
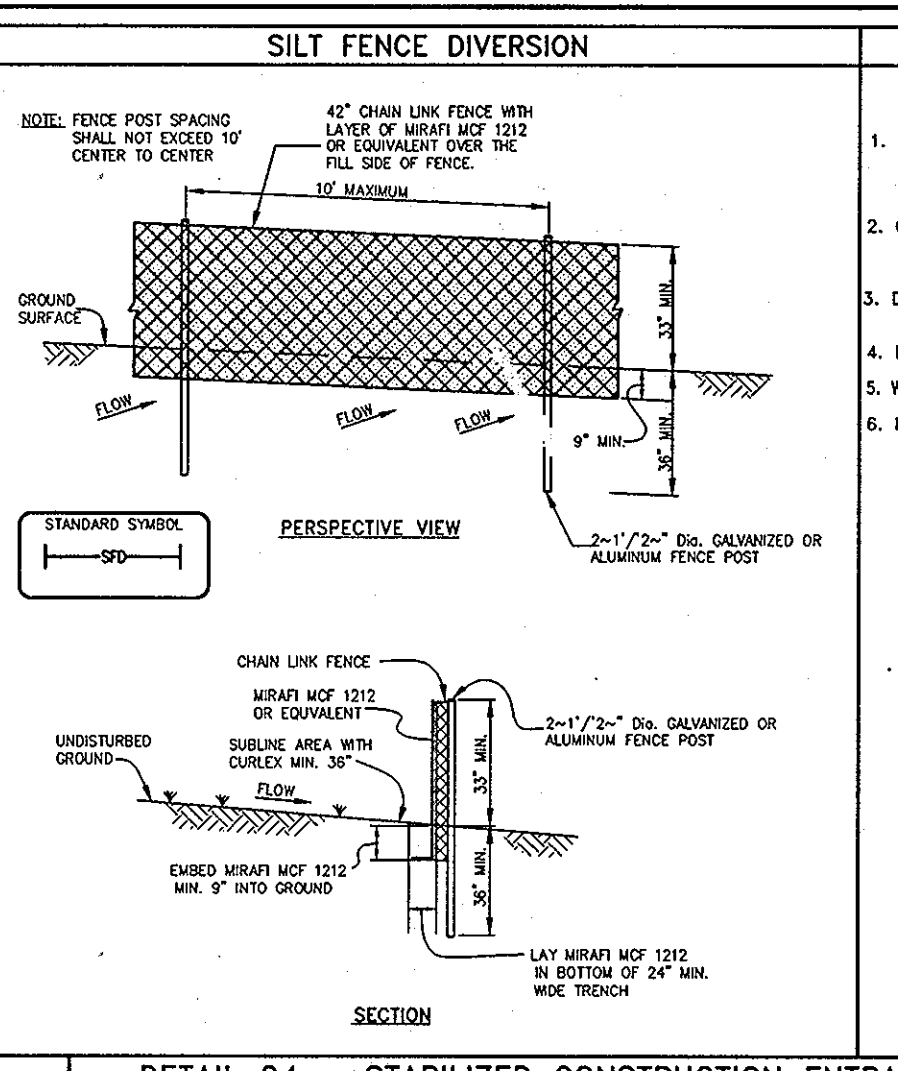
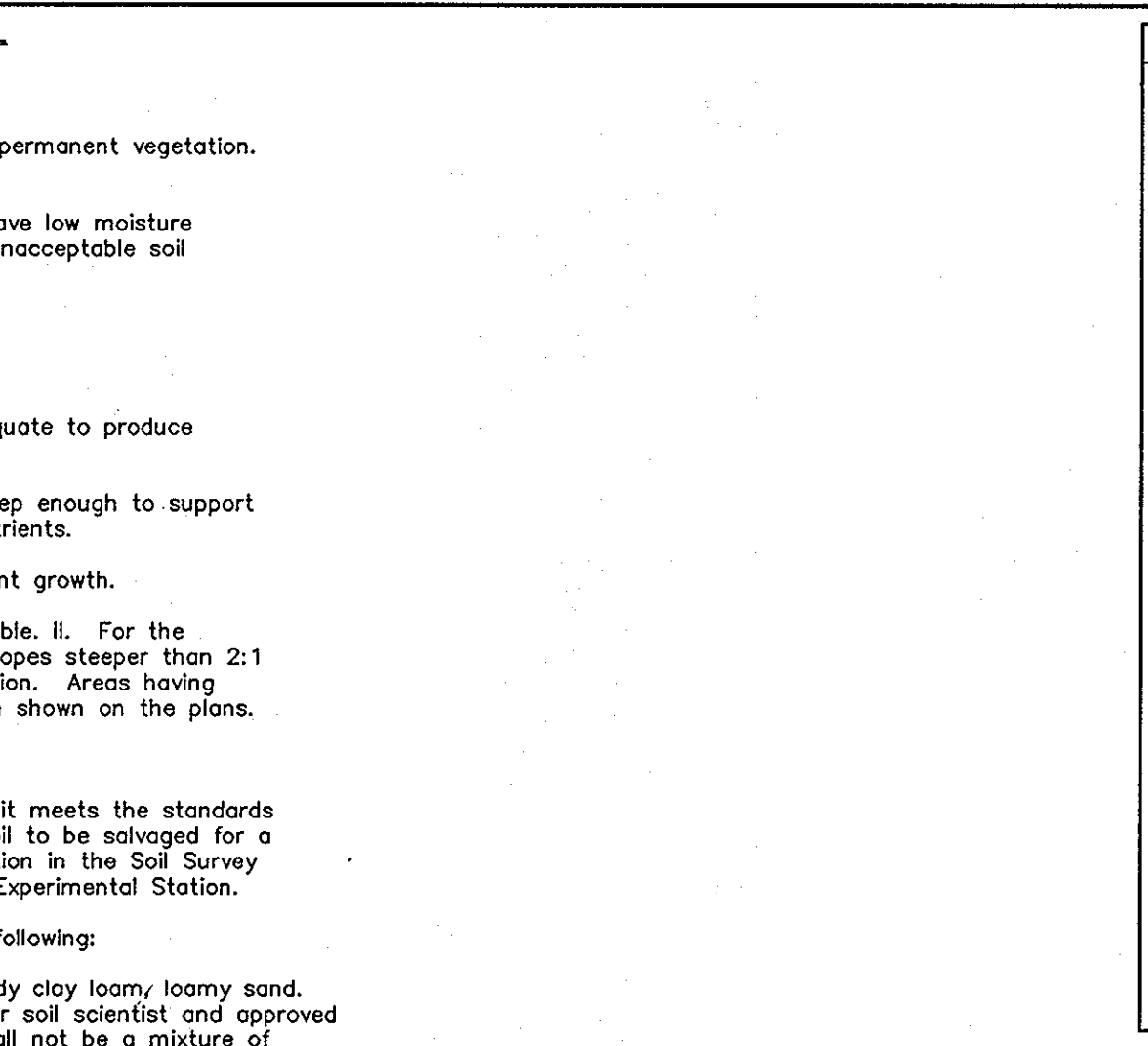
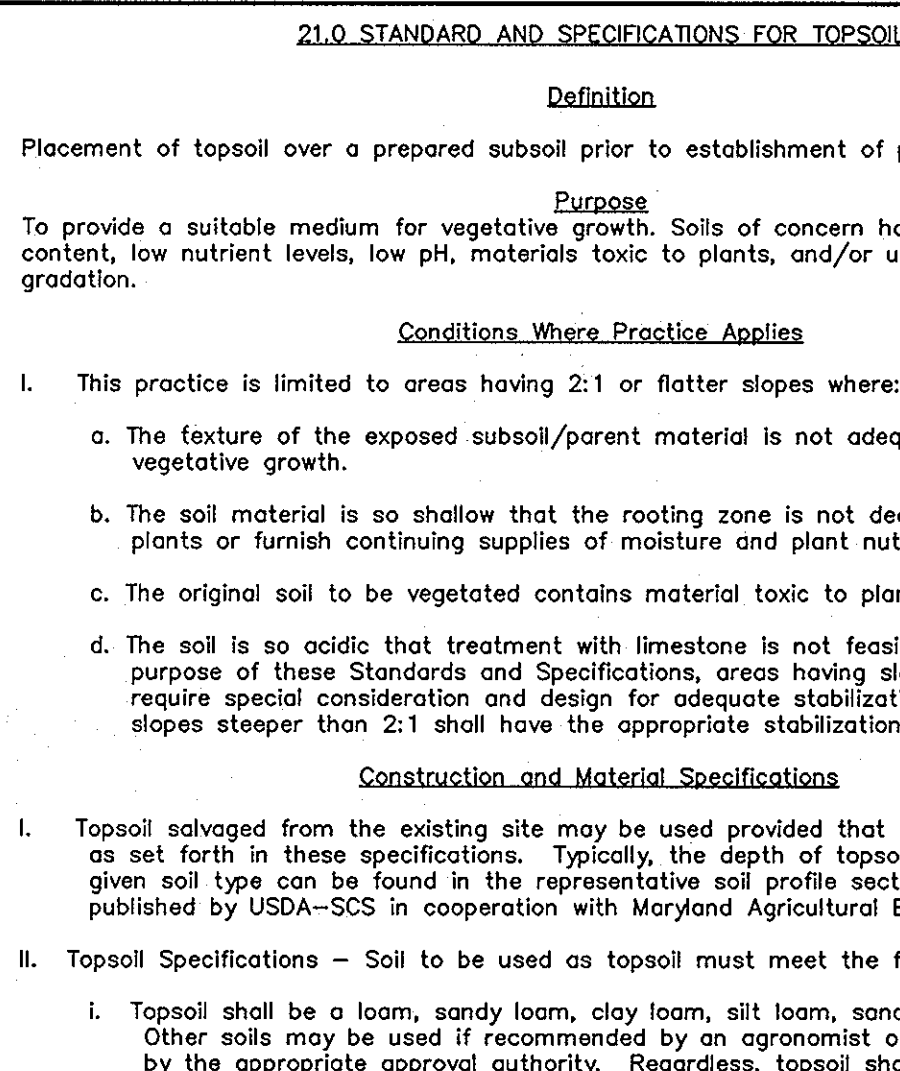
SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

- 1. PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS PER ACRE 30-0-0 UREA-FORM FERTILIZER (9 LBS/1000 SQ FT).
2. ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.

SEEDING: FOR THE PERIODS MARCH 1 THROUGH APRIL 30 AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 60 LBS PER ACRE (1.4 LBS/1000 SQ FT) OF KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (.05 LBS/1000 SQ FT) OF WEEPING LOVEGRASS DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY: OPTION (1) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOD. OPTION (3) SEED WITH 60 LBS PER ACRE OF KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS PER ACRE OF WELL ANCHORED STRAW.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.
MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

Table with 2 columns: DATE and ACTIVITY. Rows include: DAY 1 OBTAIN GRADING PERMIT; DAY 2-5 INSTALL CONSTRUCTION ENTRANCE; DAY 6-15 PERFORM PERIMETER SEDIMENT CONTROL STRUCTURES; DAY 16-20 TEST PIT AREA OF EXISTING UTILITY CONNECTIONS; DAY 21-22 TIE INTO EX. WATER MAIN AND PROVIDE TEMPORARY WHCS; DAY 23-35 INSTALL STORM DRAIN PIPES AND STRUCTURES; DAY 36-50 UPON APPROVAL OF HOWARD COUNTY SEDIMENT CONTROL INSPECTOR; DAY 51-70 UPON APPROVAL OF HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.



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

HOWARD SOIL CONSERVATION DISTRICT DATE

ALL PERIMETER SEDIMENT & EROSION CONTROL FEATURES ARE TO BE INSTALLED AT THE LIMIT OF DISTURBANCE

ALL SEDIMENT & EROSION CONTROL FEATURES ARE TO BE REPAIRED IMMEDIATELY IF DISRUPTED BY UTILITY INSTALLATION

SEDIMENT CONTROL LOCATION AND IMPLEMENTATION SHOWN ON THIS PLAN IS SUBJECT TO REVISIONS IN THE FIELD AT THE DISCRETION OF THE SEDIMENT CONTROL INSPECTOR

ALL SEDIMENT CONTROL FEATURES SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD DETAILS SHOWN IN THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

BY THE OWNER/DEVELOPER: I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS...

BY THE ENGINEER: I/WE CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS...

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

APPROVED: HOWARD COUNTY DEPARTMENT OF ENVIRONMENT AND WATER MANAGEMENT ADMINISTRATION

APPROVED: HOWARD COUNTY DEPARTMENT OF ENVIRONMENT AND WATER MANAGEMENT ADMINISTRATION

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APPROVED: HOWARD COUNTY DEPARTMENT OF ENVIRONMENT AND WATER MANAGEMENT ADMINISTRATION

1 9/13/11 REVISED LOT LAYOUT, STORMWATER MANAGEMENT AND LOT GRADING

NO. DATE REVISION

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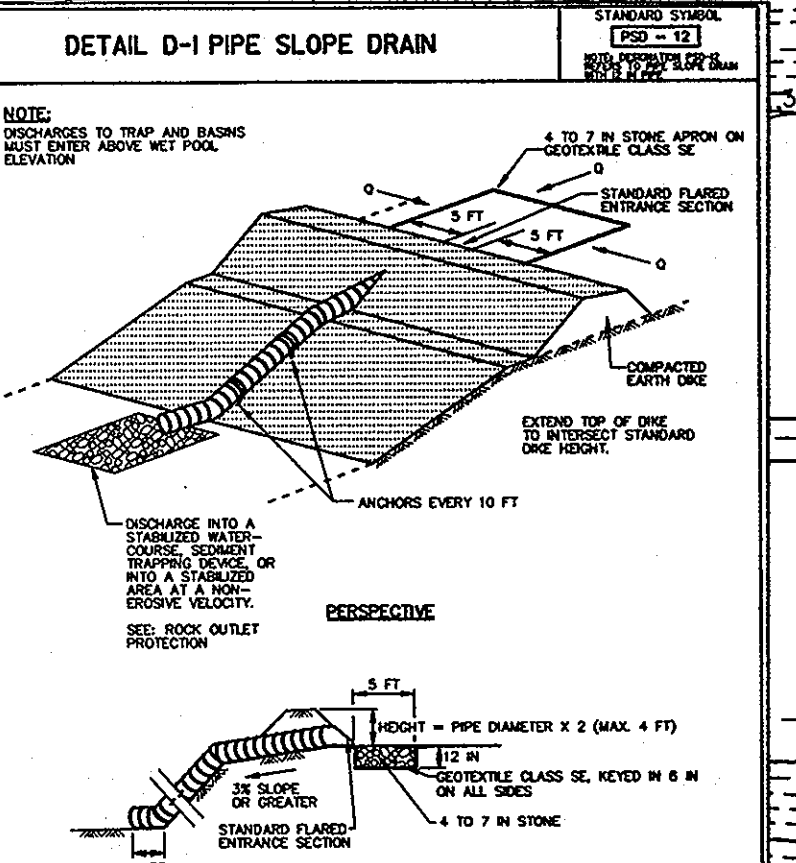
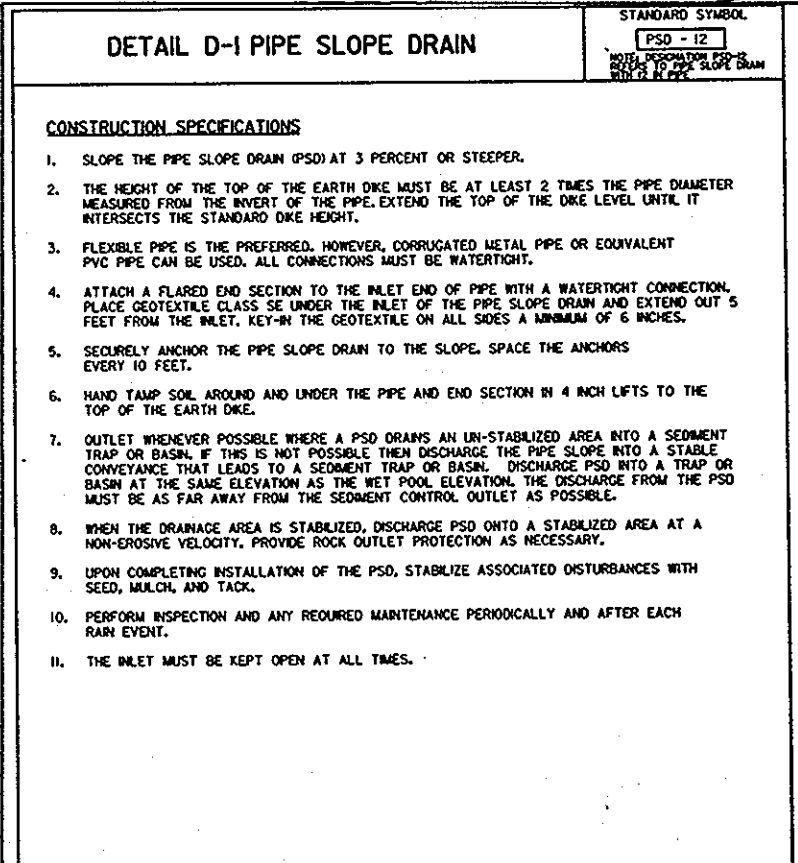
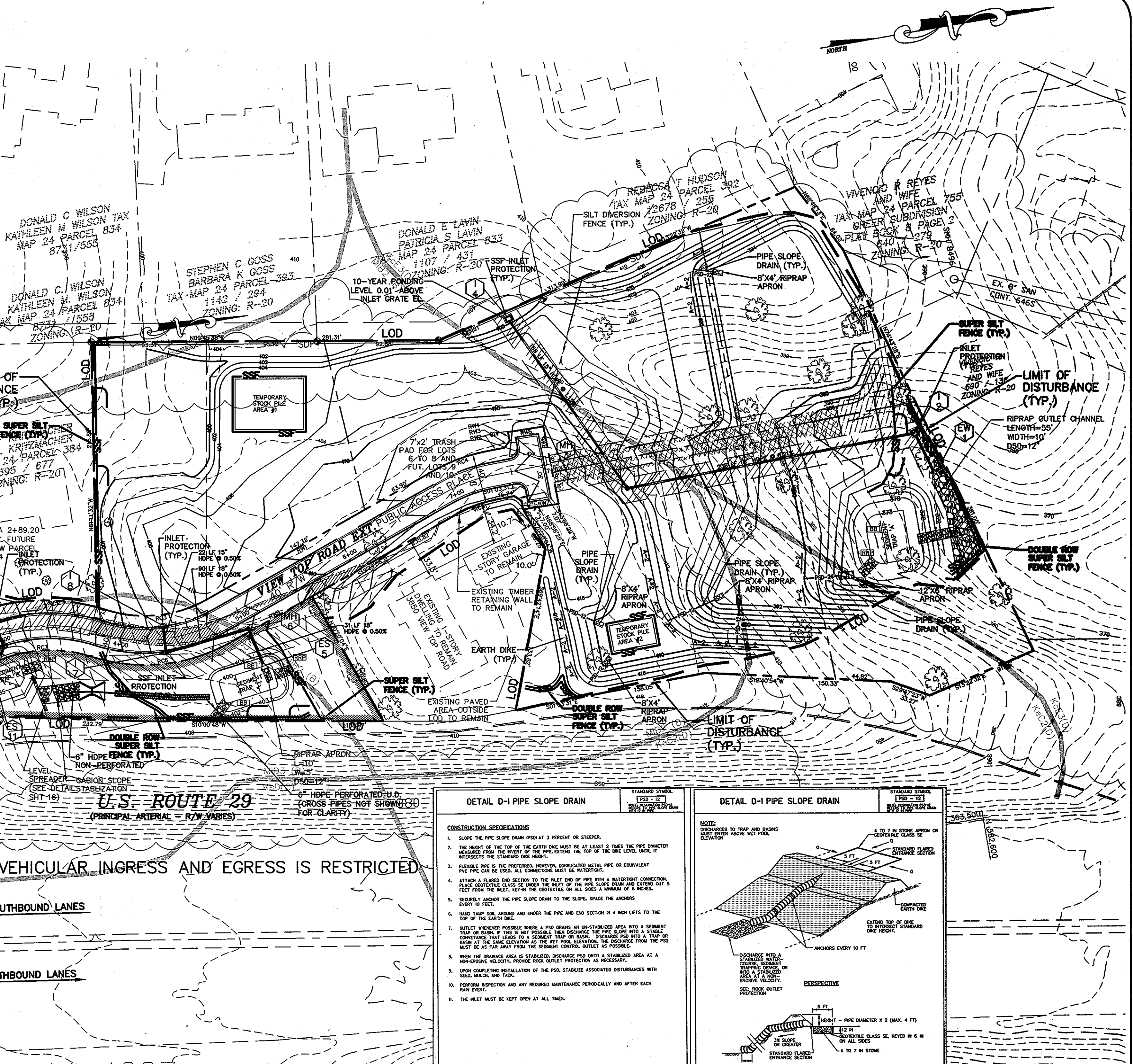
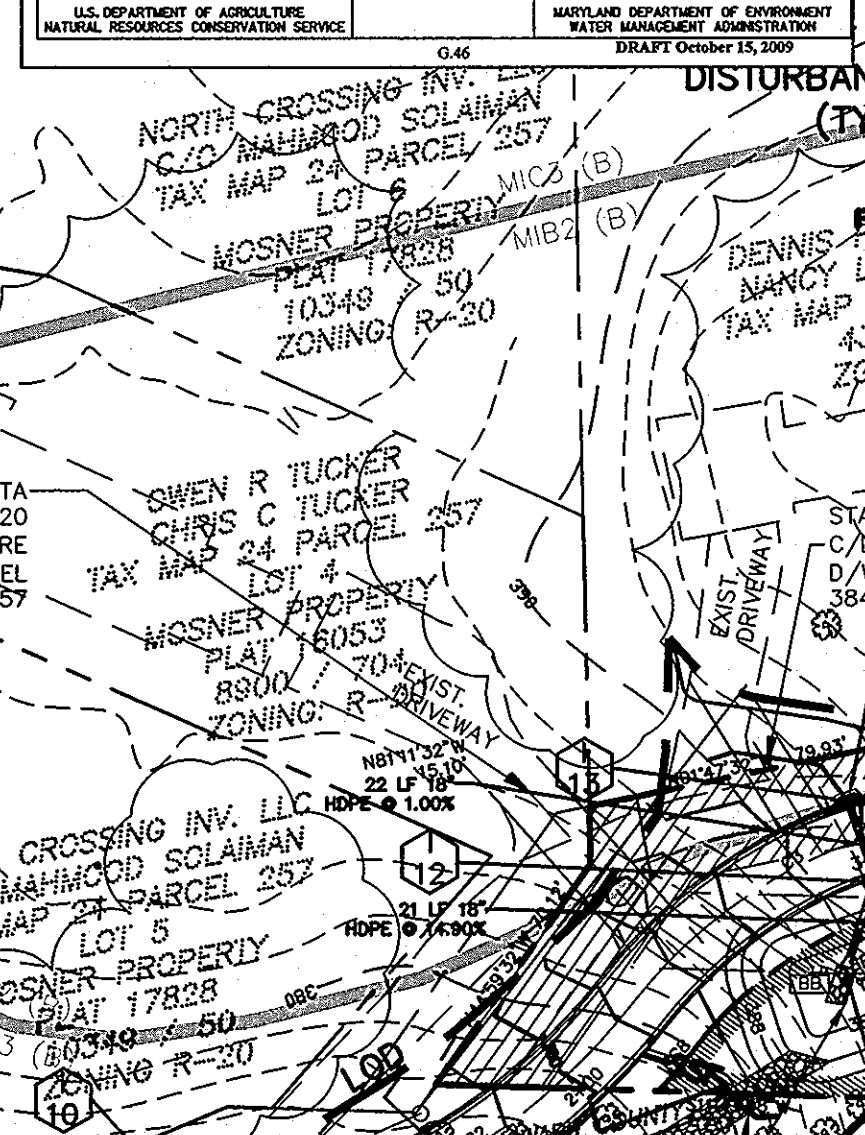
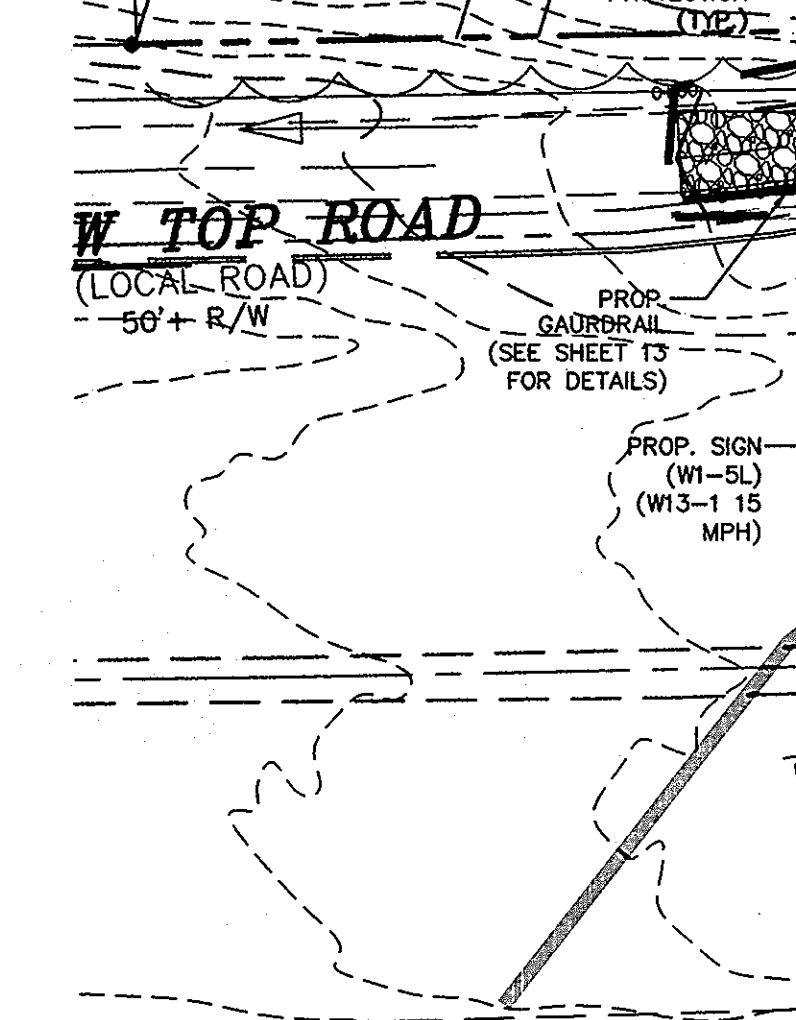
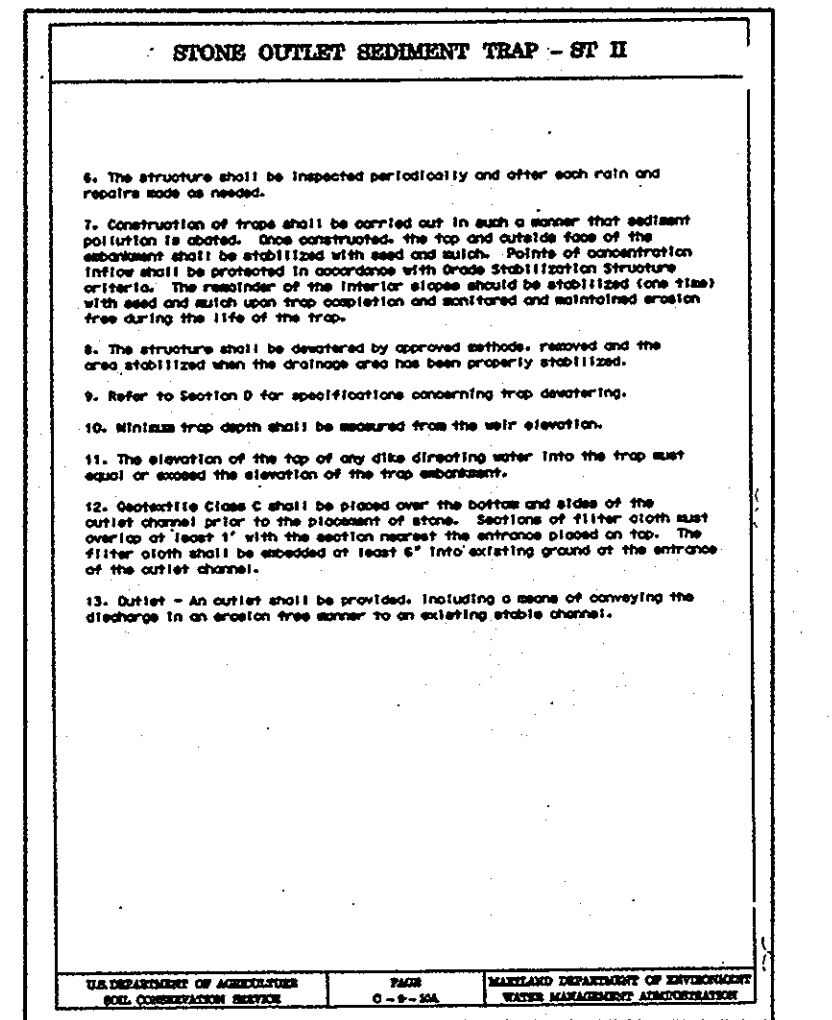
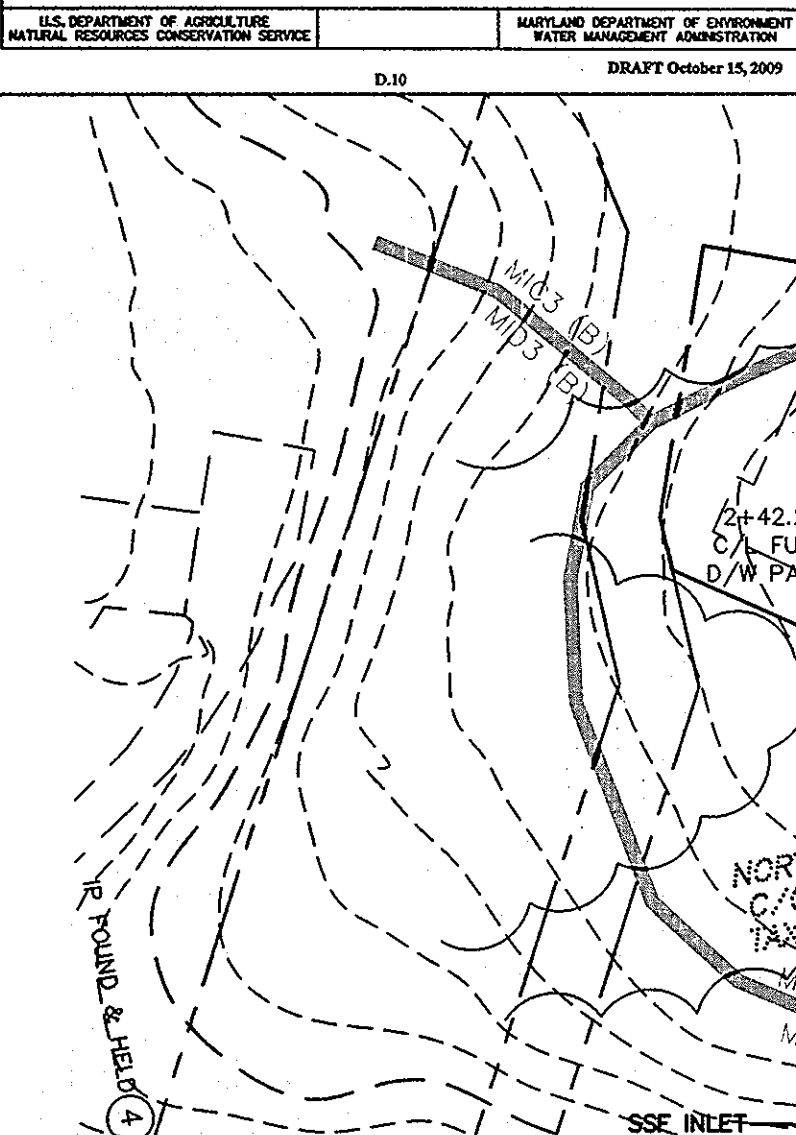
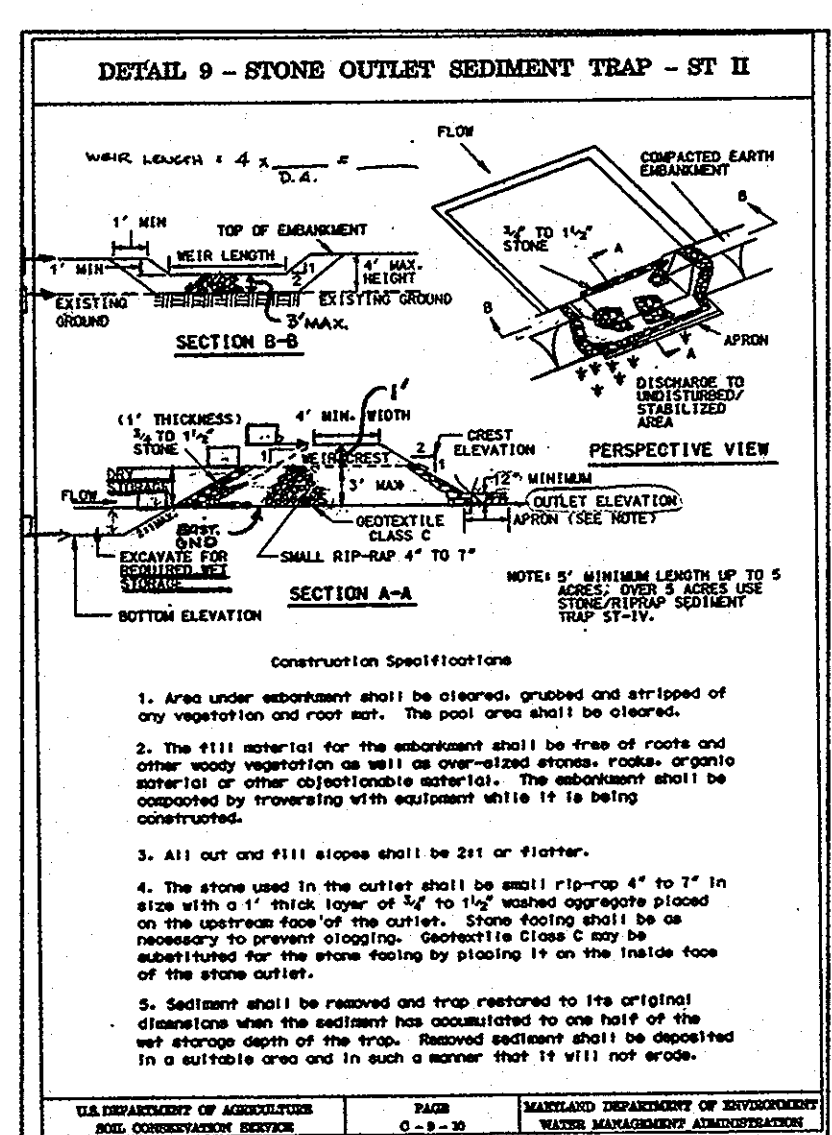
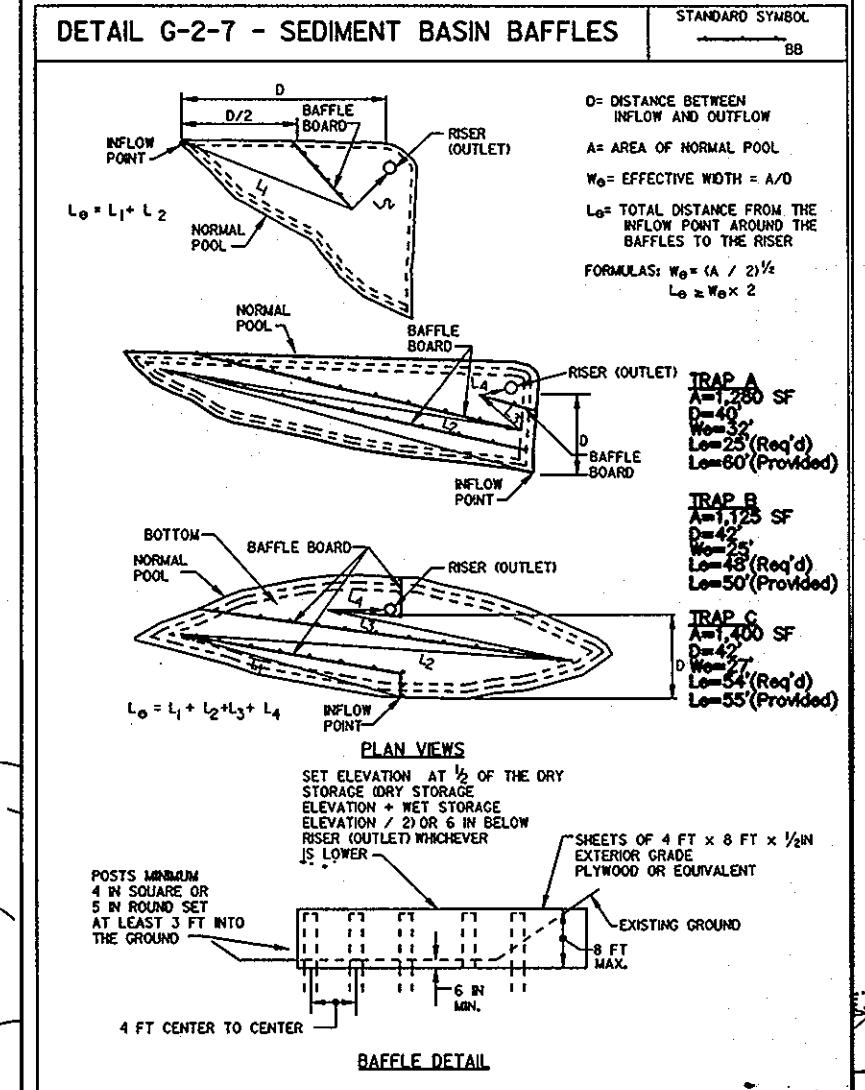
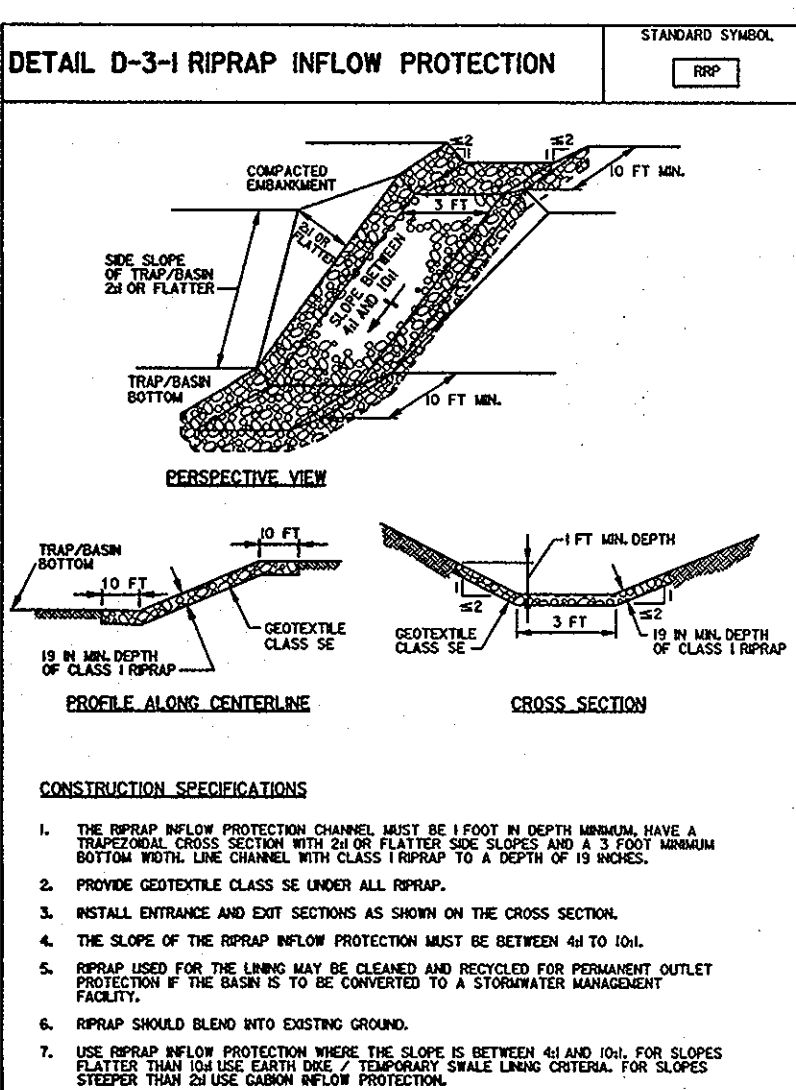
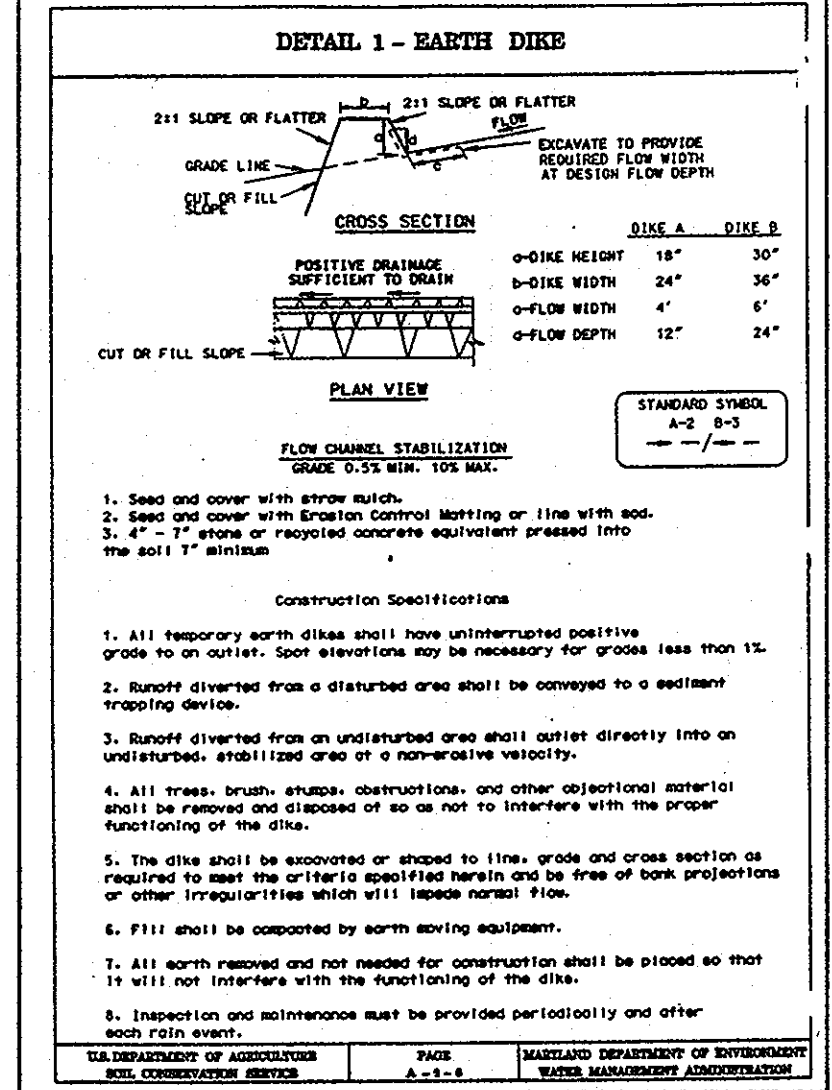
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THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 4/16/12
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

[Signature] 4-16-12
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 4/22/12
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 4/30/12
CHIEF, CIVIL ENGINEER DATE

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

OWNER / DEVELOPER - OWNER'S AGENT
BY THE ENGINEER:

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

[Signature] 3/30/12
ENGINEER - JEFFREY SLOMAN, PE #40091

OWNER/DEVELOPER

3804 WEN TOP, LLC
1055 WEST JOPPA ROAD
APT. 330
TOWSON, MARYLAND 21284
ATTN: RUSSELL HAWES

STONE/RIPRAP OUTLET SEDIMENT TRAP I-II (A)	STONE/RIPRAP OUTLET SEDIMENT TRAP I-II (B)	STONE/RIPRAP OUTLET SEDIMENT TRAP I-II (C)
PROPOSED DRAINAGE AREA	2.00 AC	0.72 AC
EXISTING DRAINAGE AREA	N/A	N/A
WET STORAGE REQUIRED	3600 CF	1296 CF
WET STORAGE PROVIDED	3774 CF	1310 CF
DRY STORAGE REQUIRED	3600 CF	1296 CF
DRY STORAGE PROVIDED	3631 CF	1400 CF
EXISTING GROUND ELEVATION AT OUTLET	371.00	372.00
TRAP BOTTOM ELEVATION	373.00	385.00
TRAP BOTTOM DIMENSIONS	40'x32'	45'x25'
WEIR CREST (DRY STORAGE ELEVATION)	377.00	387.50
OUTLET (WET STORAGE) ELEVATION	375.30	386.40
CLEANOUT ELEVATION	374.15	385.70
EMBANKMENT HEIGHT ELEV.	378.00	388.50
SIDE SLOPE	2:1 (H/V)	2:1 (H/V)
WEIR LENGTH	2'	2'
DRY STORAGE ZONE (ELEV.)	375.30 - 377.00	385.00 - 386.40
WET STORAGE ZONE (ELEV.)	373.00 - 375.30	386.40 - 387.50

OWNER/DEVELOPER

3804 WEN TOP, LLC
1055 WEST JOPPA ROAD
APT. 330
TOWSON, MARYLAND 21284
ATTN: RUSSELL HAWES

STONE/RIPRAP OUTLET SEDIMENT TRAP I-II (A)	STONE/RIPRAP OUTLET SEDIMENT TRAP I-II (B)	STONE/RIPRAP OUTLET SEDIMENT TRAP I-II (C)
PROPOSED DRAINAGE AREA	2.00 AC	0.72 AC
EXISTING DRAINAGE AREA	N/A	N/A
WET STORAGE REQUIRED	3600 CF	1296 CF
WET STORAGE PROVIDED	3774 CF	1310 CF
DRY STORAGE REQUIRED	3600 CF	1296 CF
DRY STORAGE PROVIDED	3631 CF	1400 CF
EXISTING GROUND ELEVATION AT OUTLET	371.00	372.00
TRAP BOTTOM ELEVATION	373.00	385.00
TRAP BOTTOM DIMENSIONS	40'x32'	45'x25'
WEIR CREST (DRY STORAGE ELEVATION)	377.00	387.50
OUTLET (WET STORAGE) ELEVATION	375.30	386.40
CLEANOUT ELEVATION	374.15	385.70
EMBANKMENT HEIGHT ELEV.	378.00	388.50
SIDE SLOPE	2:1 (H/V)	2:1 (H/V)
WEIR LENGTH	2'	2'
DRY STORAGE ZONE (ELEV.)	375.30 - 377.00	385.00 - 386.40
WET STORAGE ZONE (ELEV.)	373.00 - 375.30	386.40 - 387.50

OWNER/DEVELOPER

3804 WEN TOP, LLC
1055 WEST JOPPA ROAD
APT. 330
TOWSON, MARYLAND 21284
ATTN: RUSSELL HAWES

STONE/RIPRAP OUTLET SEDIMENT TRAP I-II (A)	STONE/RIPRAP OUTLET SEDIMENT TRAP I-II (B)	STONE/RIPRAP OUTLET SEDIMENT TRAP I-II (C)
PROPOSED DRAINAGE AREA	2.00 AC	0.83 AC
EXISTING DRAINAGE AREA	N/A	N/A
WET STORAGE REQUIRED	3600 CF	1494 CF
WET STORAGE PROVIDED	3774 CF	1537 CF
DRY STORAGE REQUIRED	3600 CF	1494 CF
DRY STORAGE PROVIDED	3631 CF	1620 CF
EXISTING GROUND ELEVATION AT OUTLET	371.00	401.00
TRAP BOTTOM ELEVATION	373.00	400.00
TRAP BOTTOM DIMENSIONS	40'x32'	56'x25'
WEIR CREST (DRY STORAGE ELEVATION)	377.00	402.50
OUTLET (WET STORAGE) ELEVATION	375.30	401.40
CLEANOUT ELEVATION	374.15	400.70
EMBANKMENT HEIGHT ELEV.	378.00	403.50
SIDE SLOPE	2:1 (H/V)	2:1 (H/V)
WEIR LENGTH	2'	2'
DRY STORAGE ZONE (ELEV.)	375.30 - 377.00	400.00 - 401.40
WET STORAGE ZONE (ELEV.)	373.00 - 375.30	401.40 - 402.50

NOTE: THIS SHEET IS FOR THE PURPOSES OF CONSTRUCTING EROSION AND SEDIMENT CONTROL ONLY.

NOTE: THIS SHEET REPLACES SHEET 4 OF 15 OF THE PREVIOUSLY APPROVED PLANS (F-07-110) BY BENCHMARK ENGINEERING

FOR AREAS OF INLET PROTECTION DENOTED WITH "SSF", SUPER SILT FENCE IS TO BE INSTALLED IMMEDIATELY

PROFESSIONAL CERTIFICATION

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 40091
Expiration Date 2-13-2013

[Signature] 3-30-12
PROFESSIONAL ENGINEER

Project: 10-024
date: 10-024
illustration: 10-024
scale: 1"=60'

2/2/2012
1/19/2012
12/15/2011
11/2/2011

CHANGED SWM POND TO PUBLIC (PER HOWARD CO) RESPOND TO HCS COMMENTS
RESPOND TO HCS COMMENTS
RESPOND TO HOWARD COUNTY COMMENTS

date: 2/2/2012
1/19/2012
12/15/2011
11/2/2011

description: REVISIONS

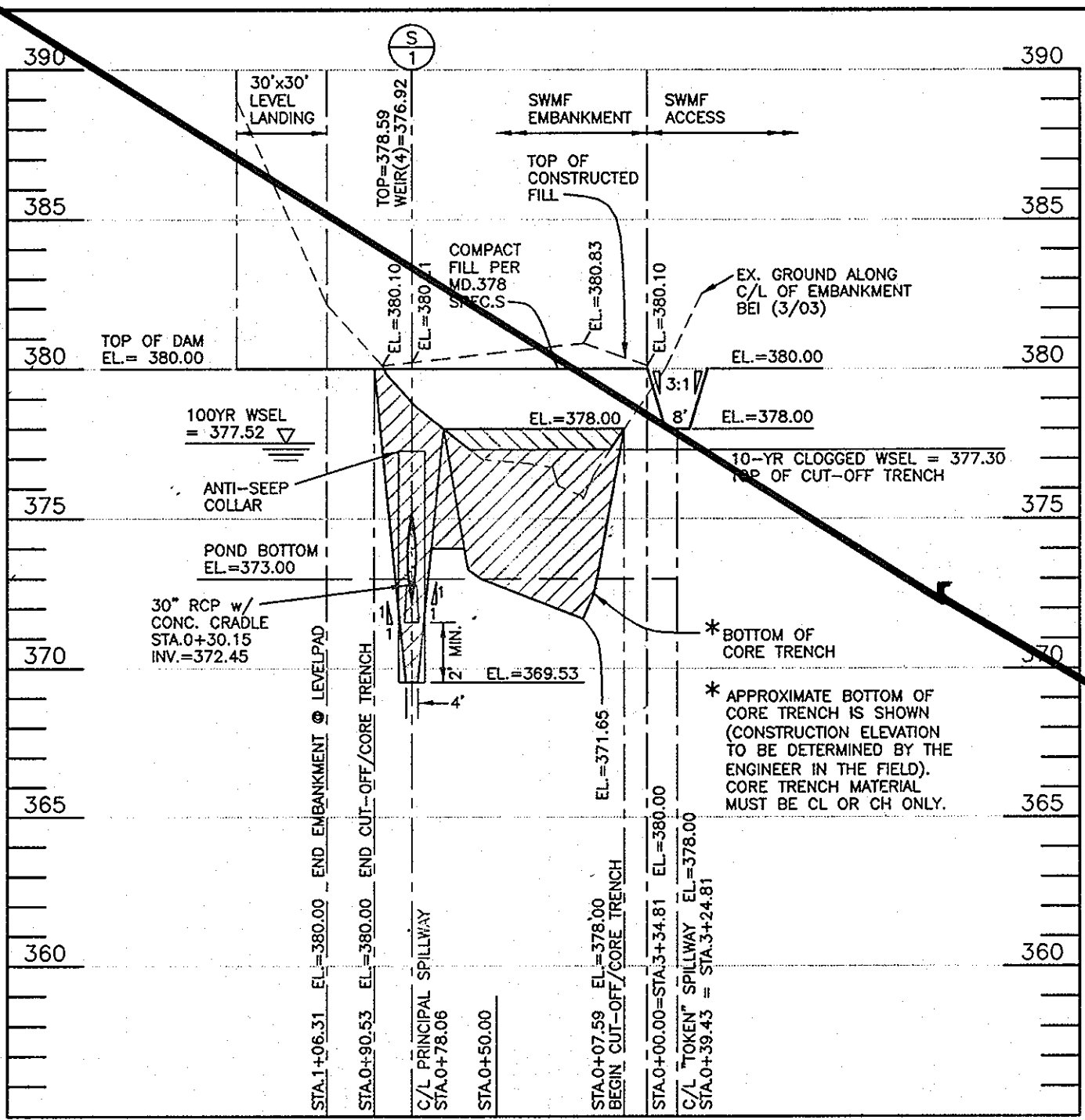
NO.

HAWES PROPERTY
LOTS 3 THRU 8, O.S. LOT 9, AND NON-BUILDABLE BULK PARCEL 'A'
TAX MAP 24 GRID 17 PARCEL 253
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
EROSION AND SEDIMENT CONTROL PLAN

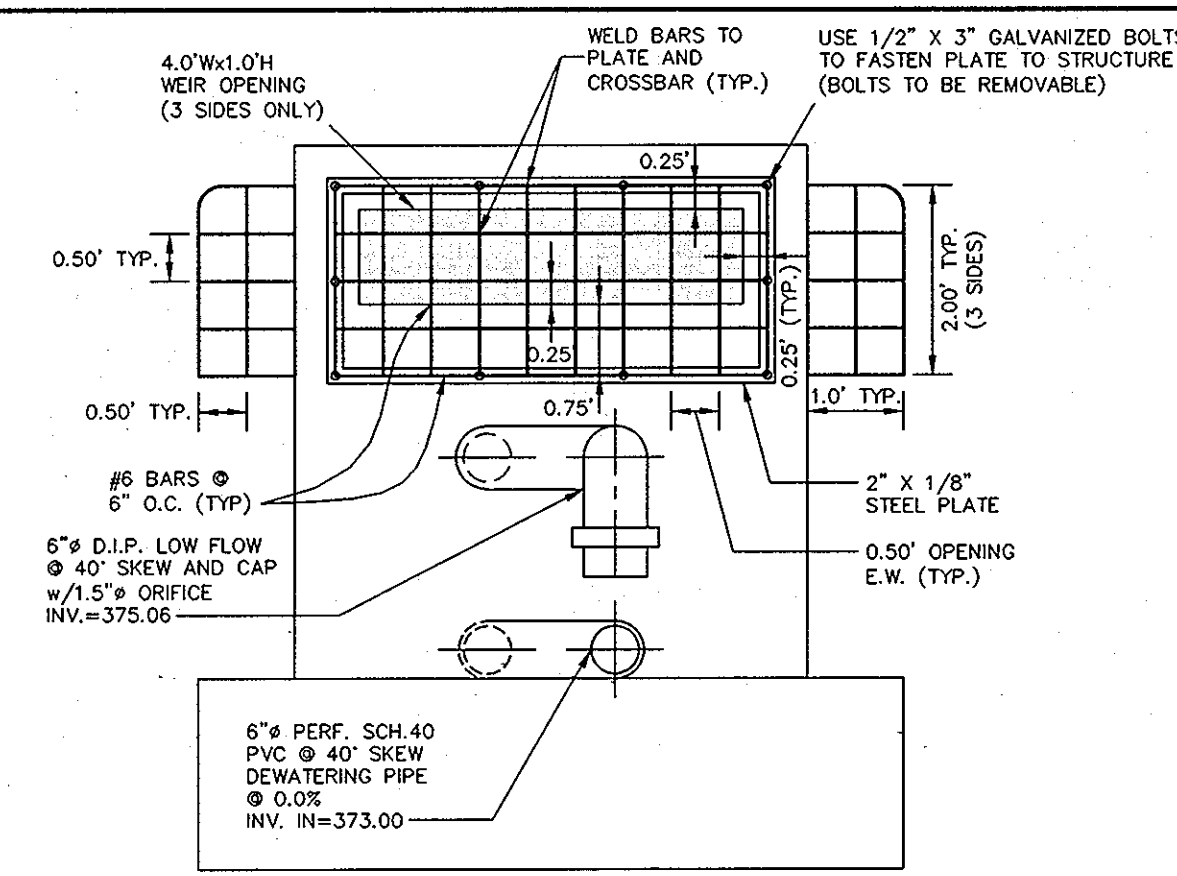
MILDENBERG, BOENDER & ASSOC., INC.
Engineers Planners Surveyors
6800 Deepwater Road, Suite 150, Ellicott City, Maryland 21075
(410) 997-0286 Fax

9-30-12

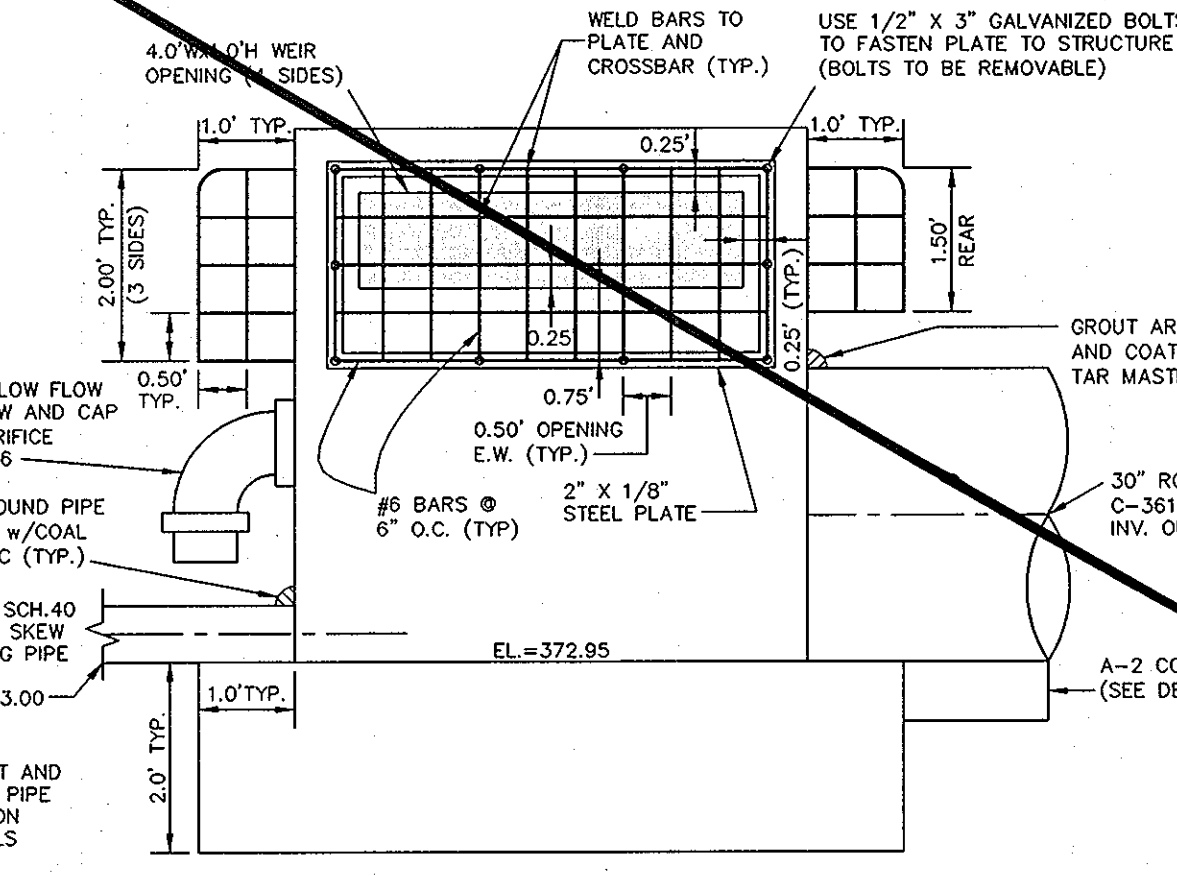
6 OF 16
F-07-110



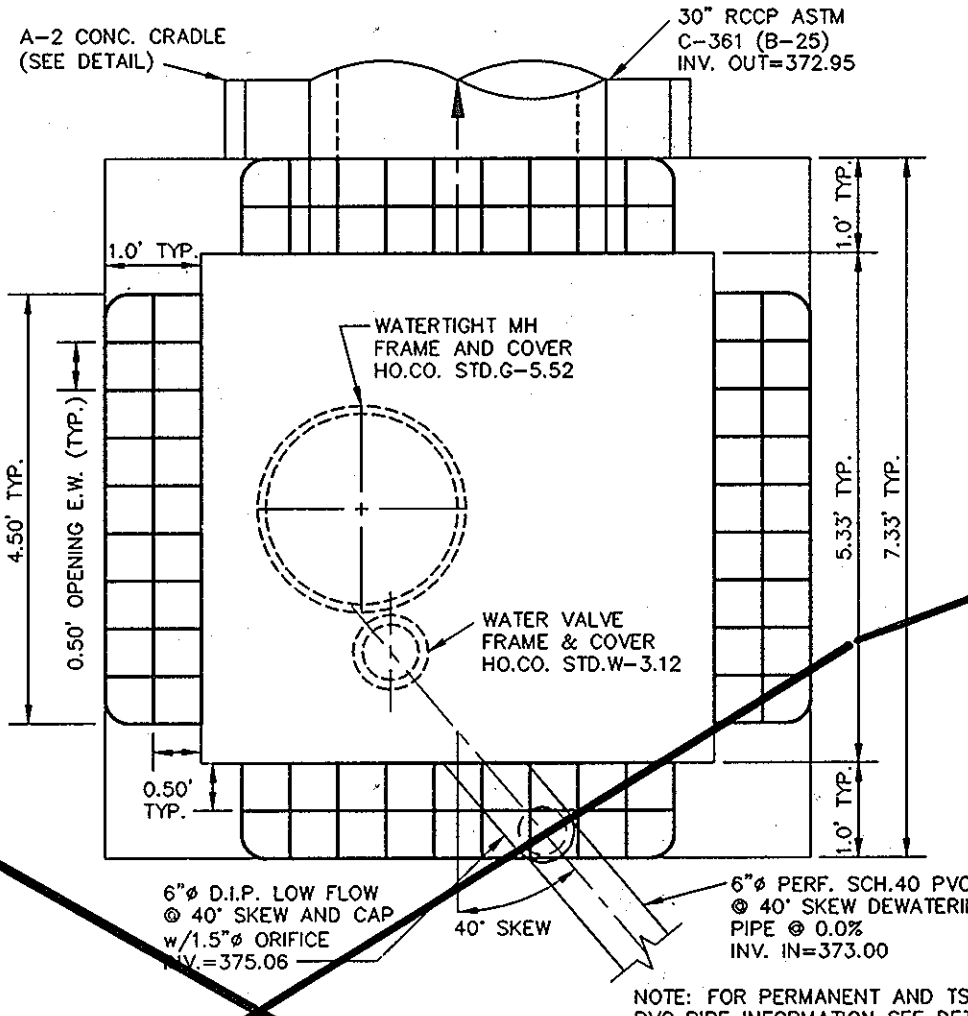
PROFILE ALONG C/L EMBANKMENT
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



FRONT VIEW



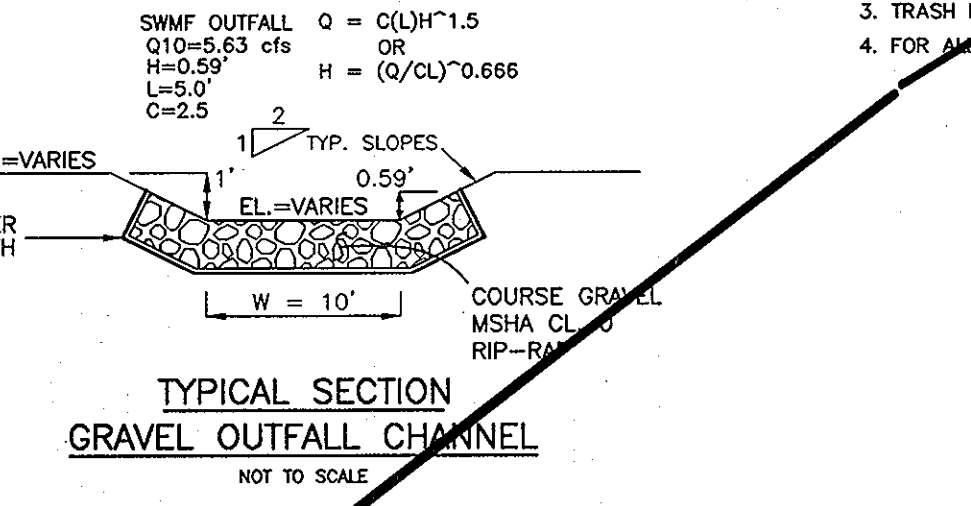
SIDE VIEW (TYP.)



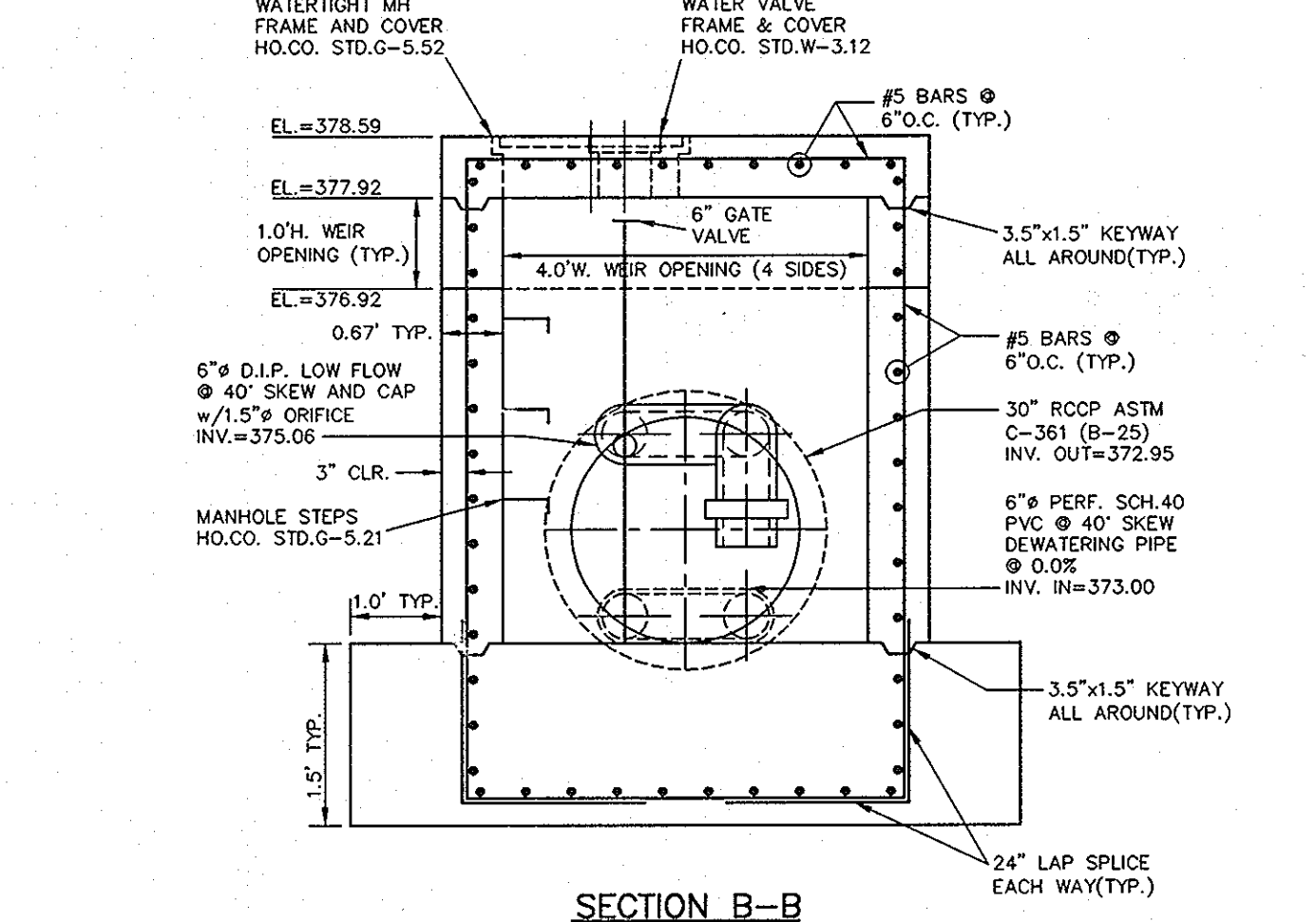
TOP VIEW

TRASH RACK DETAIL
 SCALE: 1"=2'

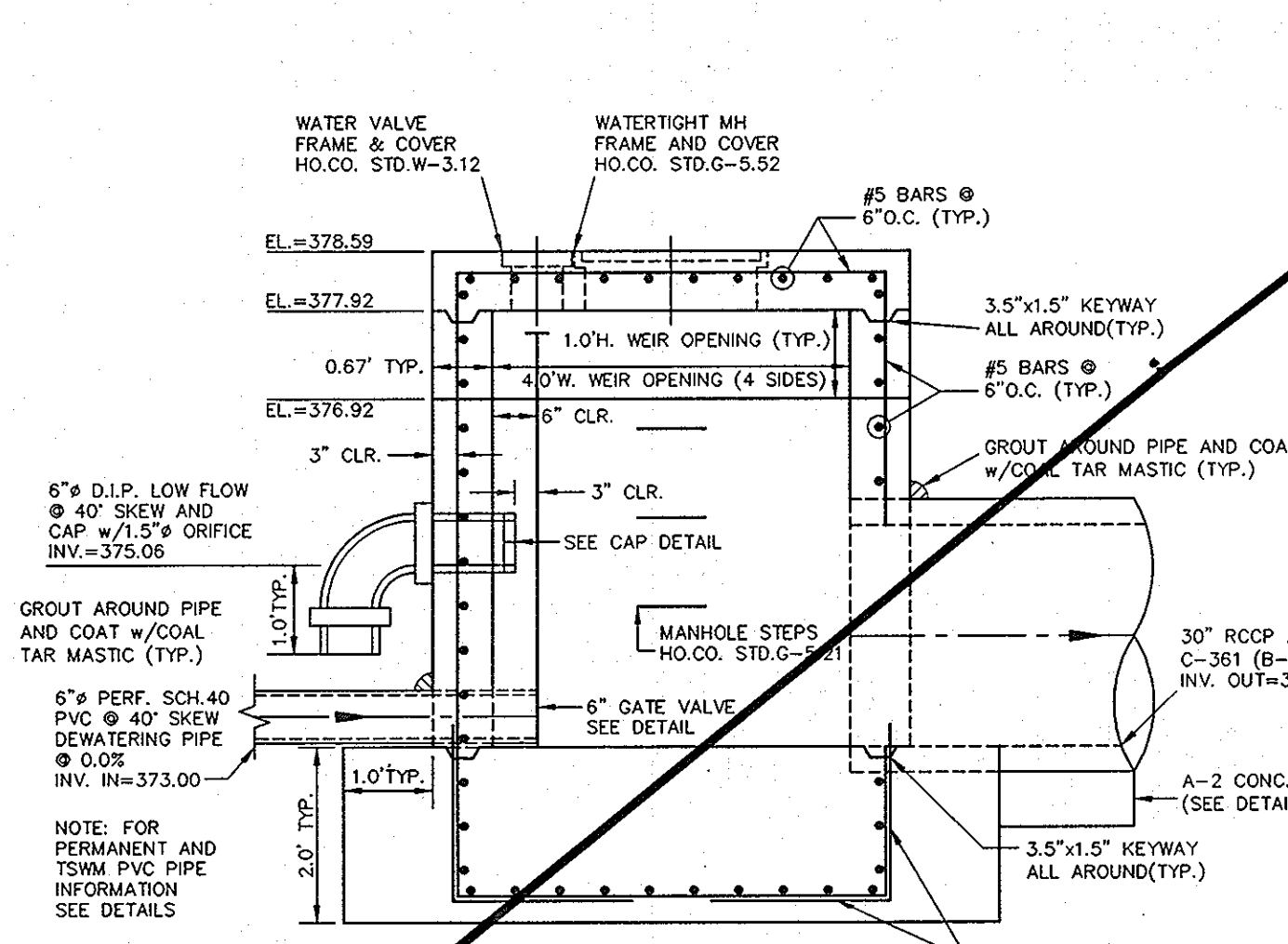
- NOTES:**
1. TRASH RACKS SHALL BE GALVANIZED AFTER FABRICATION
 2. TRASH RACKS SHALL BE PAINTED BATTLESHIP GRAY.
 3. TRASH RACKS SHALL BE PLACED ON ALL FOUR (4) SIDES OF RISER/OPENINGS
 4. FOR ALL INVERTS, ELEVATIONS, AND LOCATIONS, REFER TO STRUCTURE SCHEDULE.



TYPICAL SECTION GRAVEL OUTFALL CHANNEL
 NOT TO SCALE



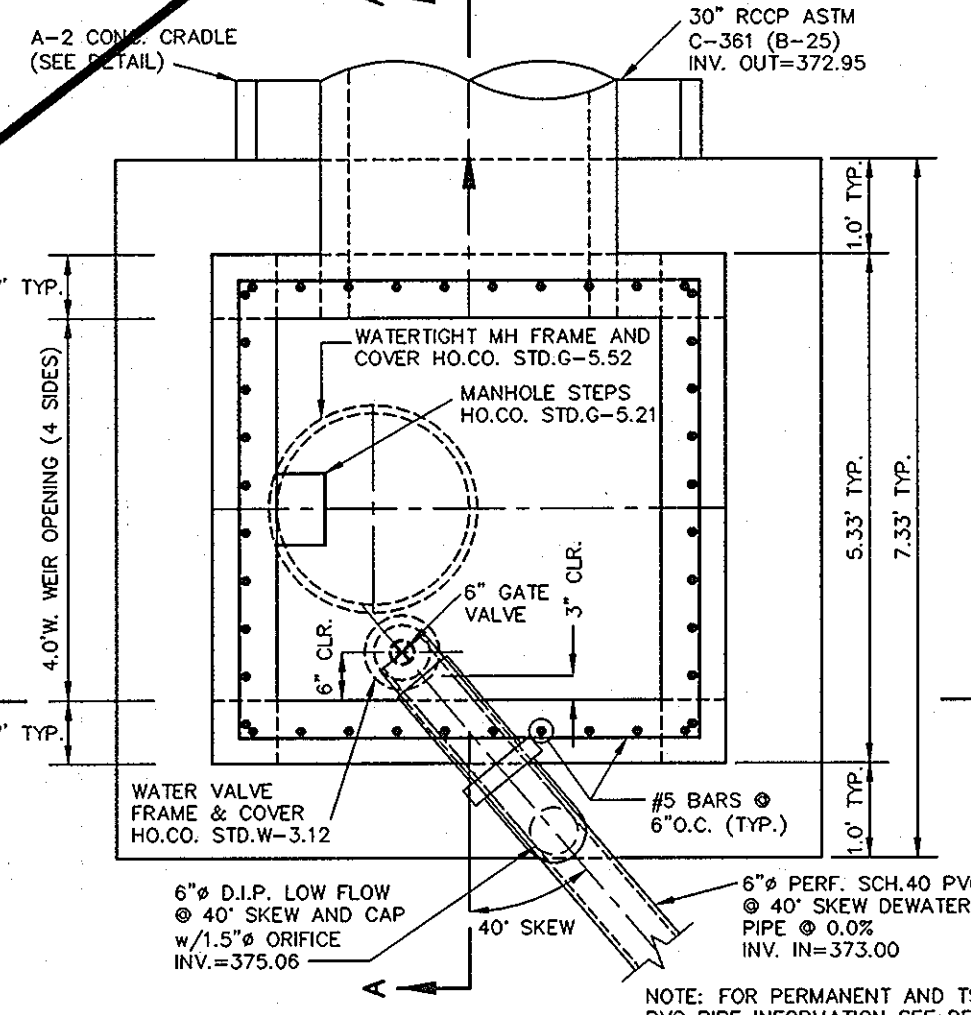
SECTION B-B



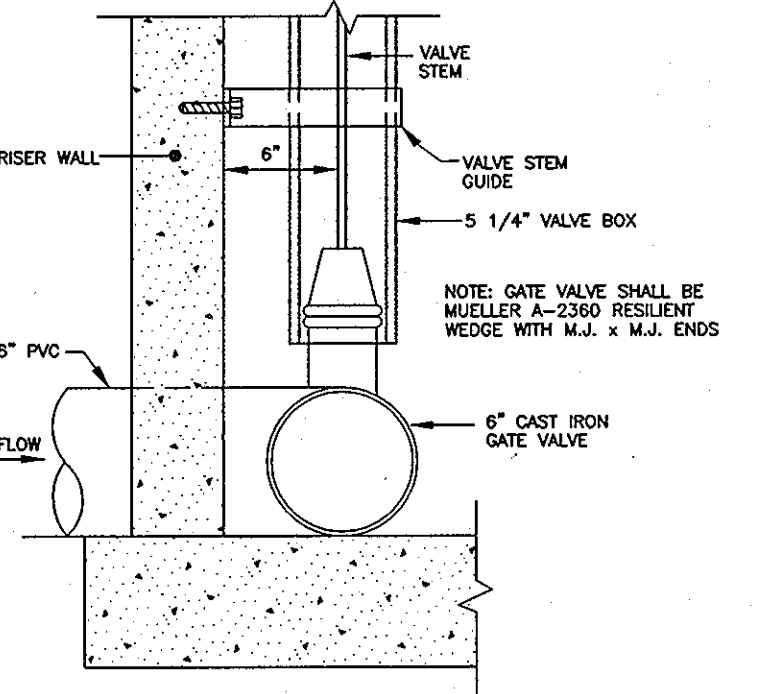
SECTION A-A

CONTROL/OUTLET STRUCTURE
 SCALE: 1"=2'

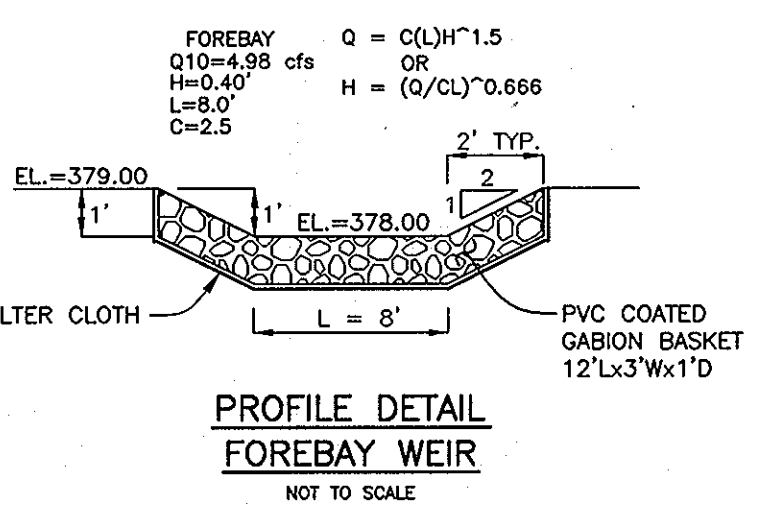
- NOTES:**
1. ENTIRE STRUCTURE TO BE MSHA MIX NO.3 CONCRETE.
 2. FOR ALL INVERTS, ELEVATIONS, AND LOCATIONS, REFER TO STRUCTURE SCHEDULE.



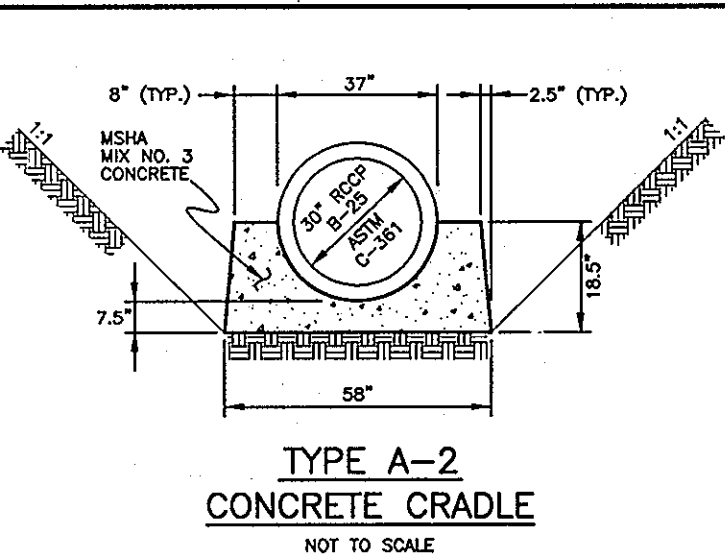
PLAN - BELOW SLAB



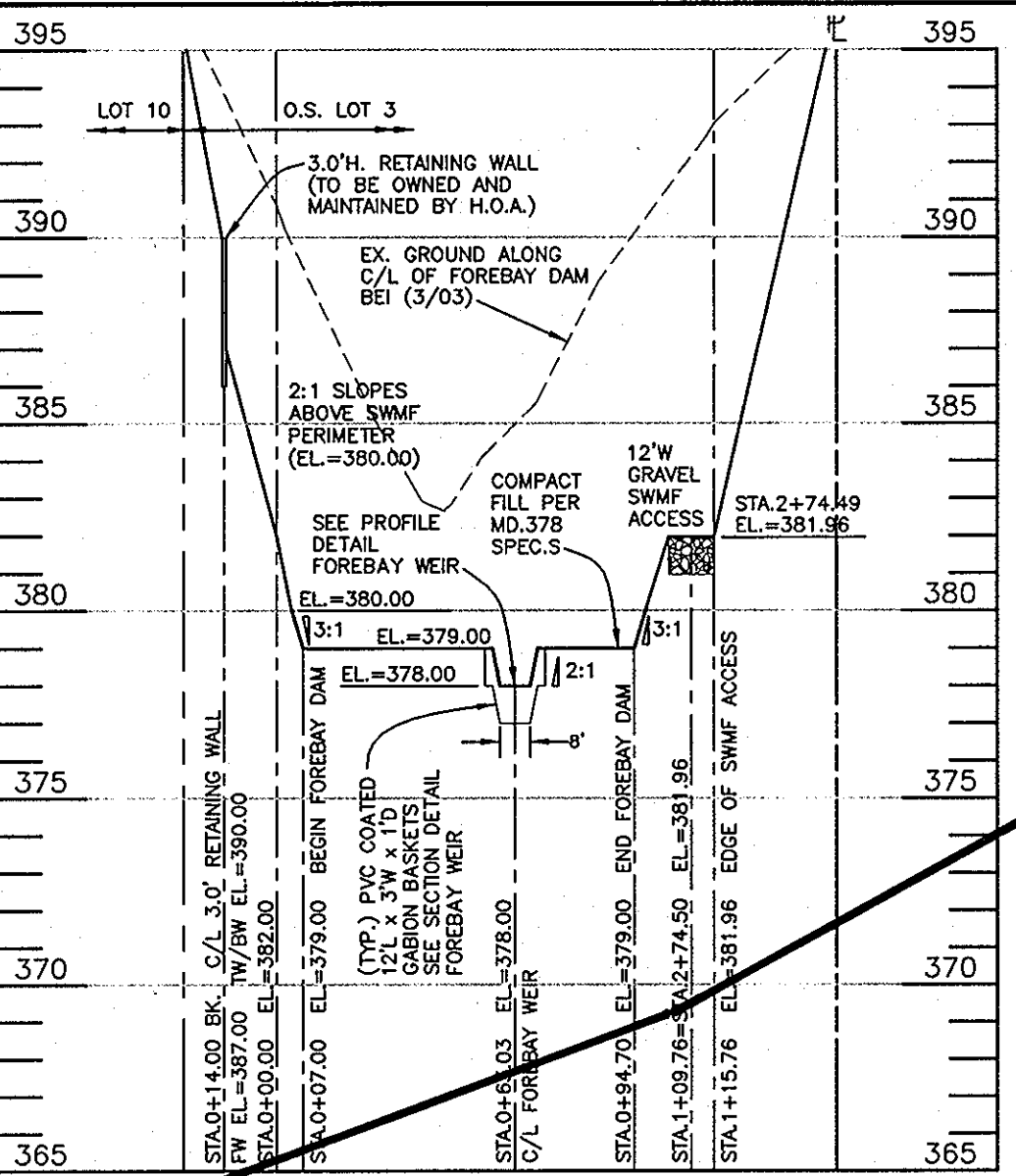
ANCHOR DETAIL FOR VALVE STEM
 NOT TO SCALE



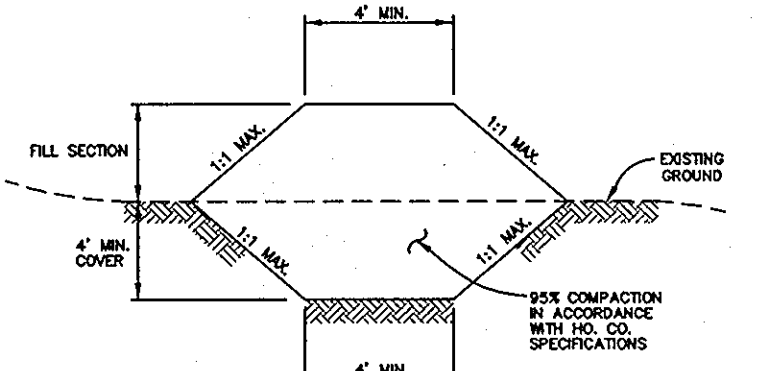
PROFILE DETAIL FOREBAY WEIR
 NOT TO SCALE



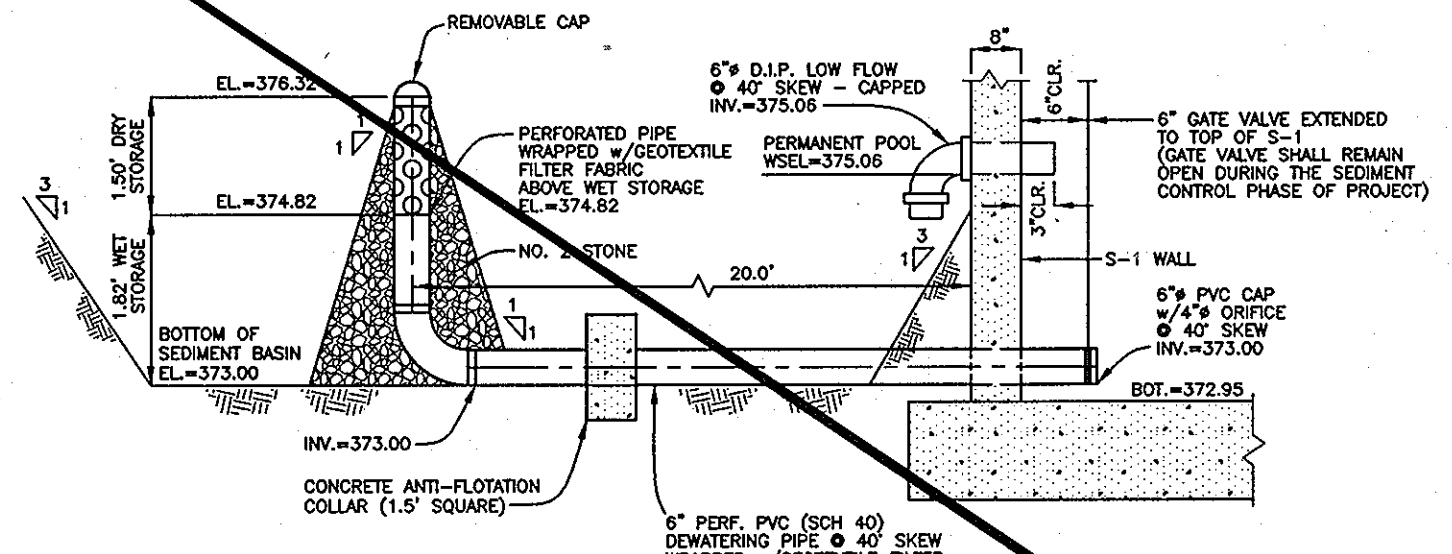
TYPE A-2 CONCRETE CRADLE
 NOT TO SCALE



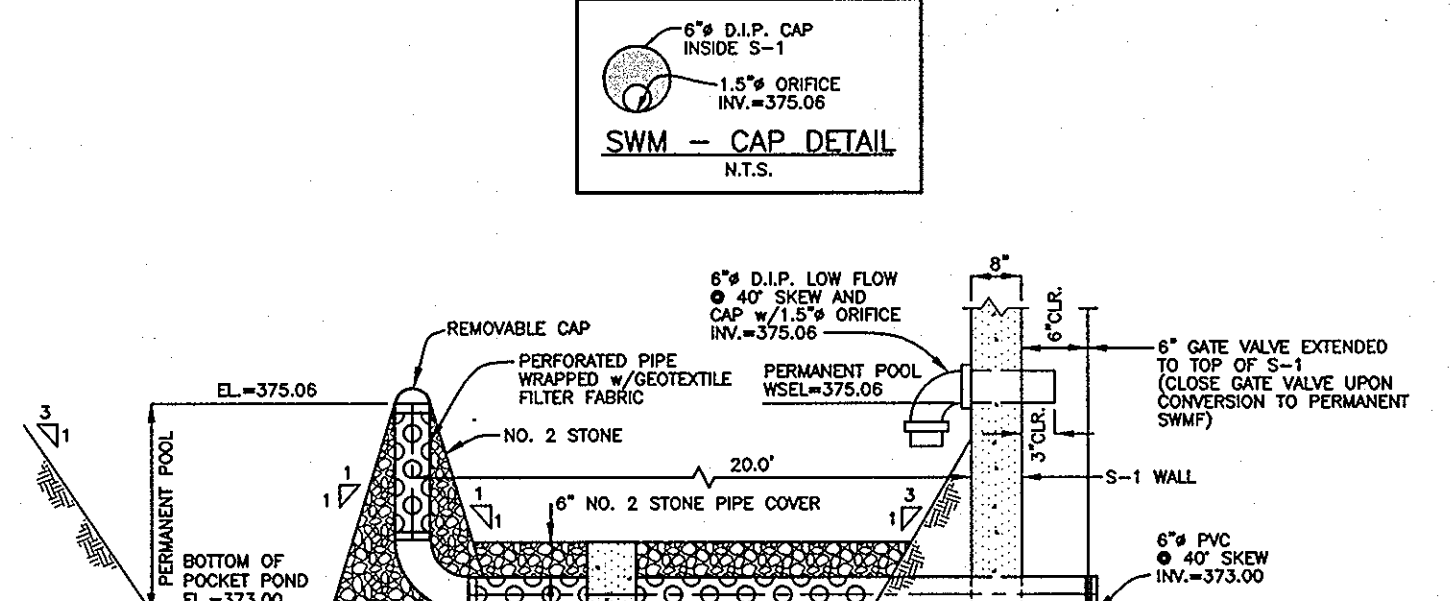
PROFILE ALONG C/L FOREBAY DAM
 HORIZONTAL SCALE: 1" = 50'
 VERTICAL SCALE: 1" = 5'



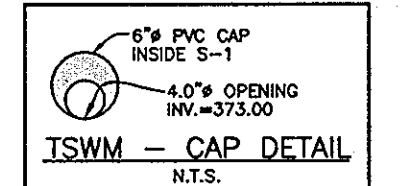
TYPICAL SECTION CUT-OFF/CORE TRENCH
 NOT TO SCALE



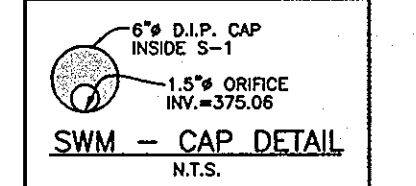
**6\"/>
 VERTICAL DRAW-DOWN DEVICE**
 NOT TO SCALE



**6\"/>
 PERMANENT EXTENDED DETENTION CONTROL ORIFICE**
 NOT TO SCALE



**6\"/>
 T.S.W.M. - CAP DETAIL**
 N.T.S.



**6\"/>
 SWM - CAP DETAIL**
 N.T.S.

- NOTES:**
1. IF WATER IS ENCOUNTERED DURING THE CONSTRUCTION OF THE CORE TRENCH, IT IS TO BE REMOVED BY PUMPING.
 2. CORE TRENCH SHALL CONSIST OF IMPERVIOUS MATERIAL (G.C. OR CL. OR CR.) AS DIRECTED BY A GEOTECHNICAL ENGINEER ON-SITE AND MAY REQUIRE TO BE HAULED FROM AN OFFSITE LOCATION.

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.

DATE: 3/13/08
 ENGINEER - DONALD A. MASON, P.E. # 21443

BY THE OWNER/DEVELOPER:

STEVEN DEVELOPMENT LLC
 OWNER/DEVELOPER: James R. Mealey, III
 DATE: 3-14-08

BY THE ENGINEER:

DONALD A. MASON
 ENGINEER - DONALD A. MASON, P.E. # 21443
 DATE: 3/13/08

APPROVED: DEPARTMENT OF PUBLIC WORKS

WALTER Z. WELLS
 CHIEF, BUREAU OF HIGHWAYS
 DATE: 5-5-08

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CINDY HANLON
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 5/8/08

ST/MOR
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

BENCHMARK ENGINEERING, INC.

8480 BALTIMORE NATIONAL PIKE & SUITE 418
 ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-8105 FAX: 410-465-6644
 E-MAIL: bei@bei-civilengineering.com

PROFESSIONAL CERTIFICATION:

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 11917, Expiration Date: 12-31-2008

3/13/08

DEVELOPER/CONTRACT PURCHASER:

SECURITY DEVELOPMENT, L.L.C.
 P.O. BOX 417
 ELLICOTT CITY, MARYLAND 21041
 PHONE: (410) 465-4244

PROJECT: HAWES PROPERTY
 SUBDIVISION (RE-SUBDIVISION OF LOT 2)
 LOTS 1 & 5-10 AND O.S. LOTS 3 & 4

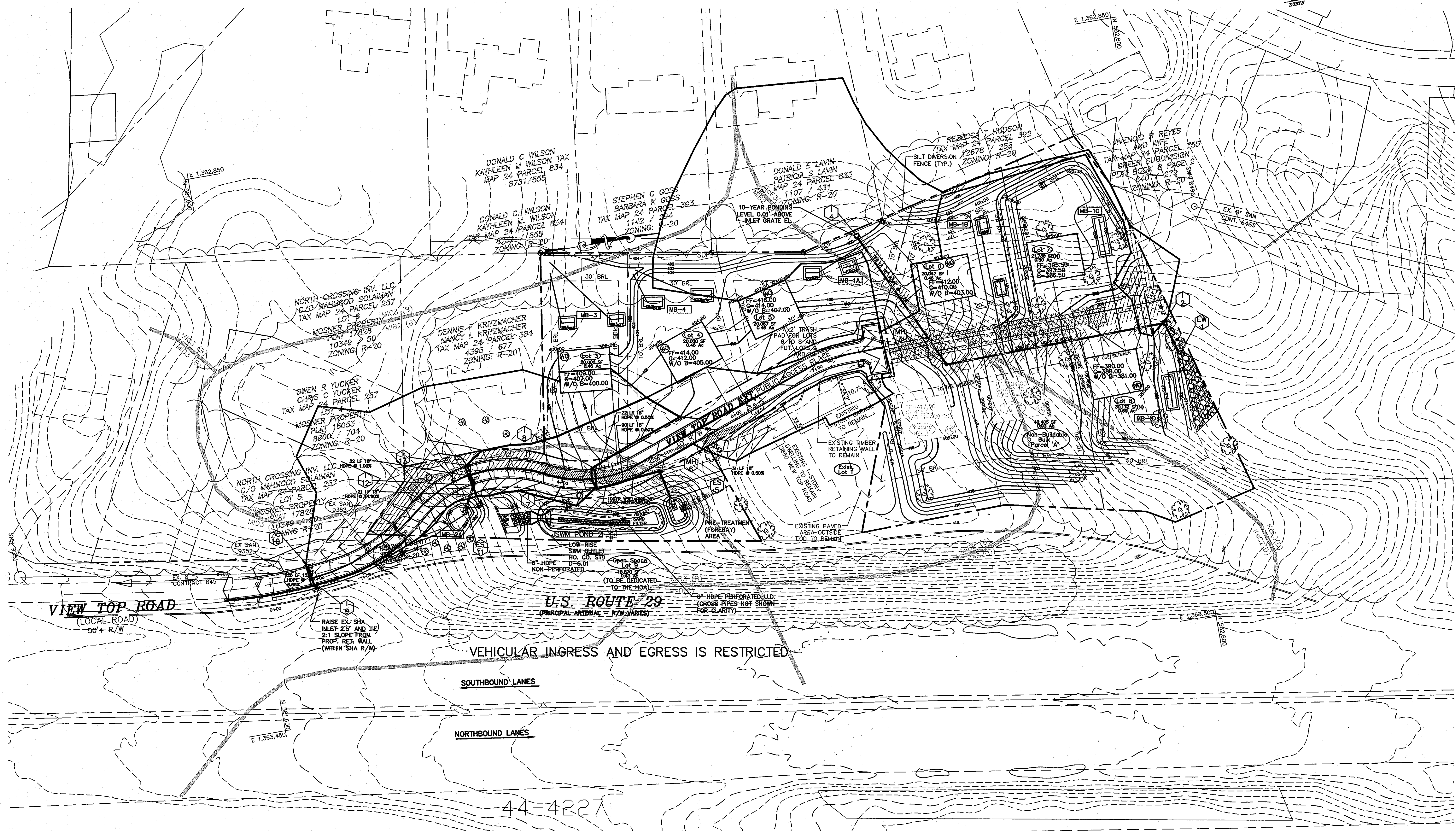
LOCATION: TAX MAP 24 - GRID 17
 PANEL 253 - ZONE: R-20
 2nd ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: FINAL CONSTRUCTION PLAN
 PROFILES, NOTES, AND DETAILS

DATE: DECEMBER 20, 2006
 MARCH 14, 2008

PROJECT NO. 1574

Des: MCR/DAM Draft: MCR Check: DAM SCALE: AS SHOWN DRAWING 7 OF 16



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Walter M. M. M. 4/16/12
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
John J. ... 4/16/12
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

Keith ... 4/30/12
 CHIEF, D.D.O.

OWNER/DEVELOPER
 3804 VIEW TOP, LLC
 1055 WEST JOPPA ROAD
 APT. 330
 TOWSON, MARYLAND 21284
 ATTN: RUSSELL HAWES

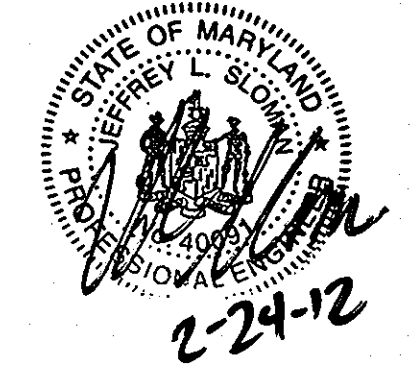
DRAINAGE AREA SUMMARY

STRUCTURE NUMBER	DRAINAGE AREA (AC)	C FACTOR (10 YEAR)	TIME OF CONC. (MIN)
ES-1	N/A	N/A	10
I-2	0.12	0.24	10
MH-3	1.92**	0.43	10
I-4	1.37	0.23	10
ES-5	N/A	N/A	10
MH-6	N/A	N/A	10
I-7	0.30	0.87	10
I-8	0.18	0.58	10
I-9	0.06	0.68	10
I-10	0.74	0.68	10
ES-11	N/A	0.31	10
I-12	0.07	0.51	10
I-13	0.18	0.33	10

**FLOW FROM LOTS 6 THRU 8, BULK PARCEL 'A', AND THE USE-IN-COMMON DRIVEWAY IS ASSUMED TO ENTER THE SYSTEM AT MH-3 FOR THE PURPOSE OF STORM DRAIN ANALYSIS

NOTE: THIS SHEET IS FOR DRAINAGE AREA DELINEATION ONLY

NOTE: THIS SHEET REPLACES SHEET 9 OF 15 OF THE PREVIOUSLY APPROVED PLANS (F-07-110) BY BENCHMARK ENGINEERING



PROFESSIONAL CERTIFICATION

I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 40091 Expiration Date 2-13-2013

Project	10-024	date	SEP 2011
Illustration	JLS	engineering	JLS
scale	1"=40'	approval	RJH

RESPOND TO HOWARD COUNTY COMMENTS	11/2/2011
description	revisions
no.	date

HAWES PROPERTY
 LOTS 3 THRU 8, O.S. LOT 9, AND NON-BUILDABLE BULK PARCEL 'A'
 TAX MAP 24 GRID 17 PARCEL 253
 2nd ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
PROPOSED DRAINAGE AREA MAP (STORM DRAIN)

MILDENBERG, BOENDER & ASSOC., INC.
 Surveyors
 Planners
 Engineers
 6800 Deerpath Road, Suite 150, Ellicott City, Maryland 21075
 (410) 997-0286 Fax

H:\10-024-HAWES\10-024-HAWES\DWG\24-EGP-AUGUST-2011.DWG

OWNER/DEVELOPER

3804 NEW TOP, LLC
 1055 WEST JOPPA ROAD
 APT. 330
 TOWSON, MARYLAND 21284
 ATTN: RUSSELL HAWES

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

CHIEF, BUREAU OF HIGHWAYS 4-16-12 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION 4/27/12 DATE

CHIEF, PLD 4/30/12 DATE

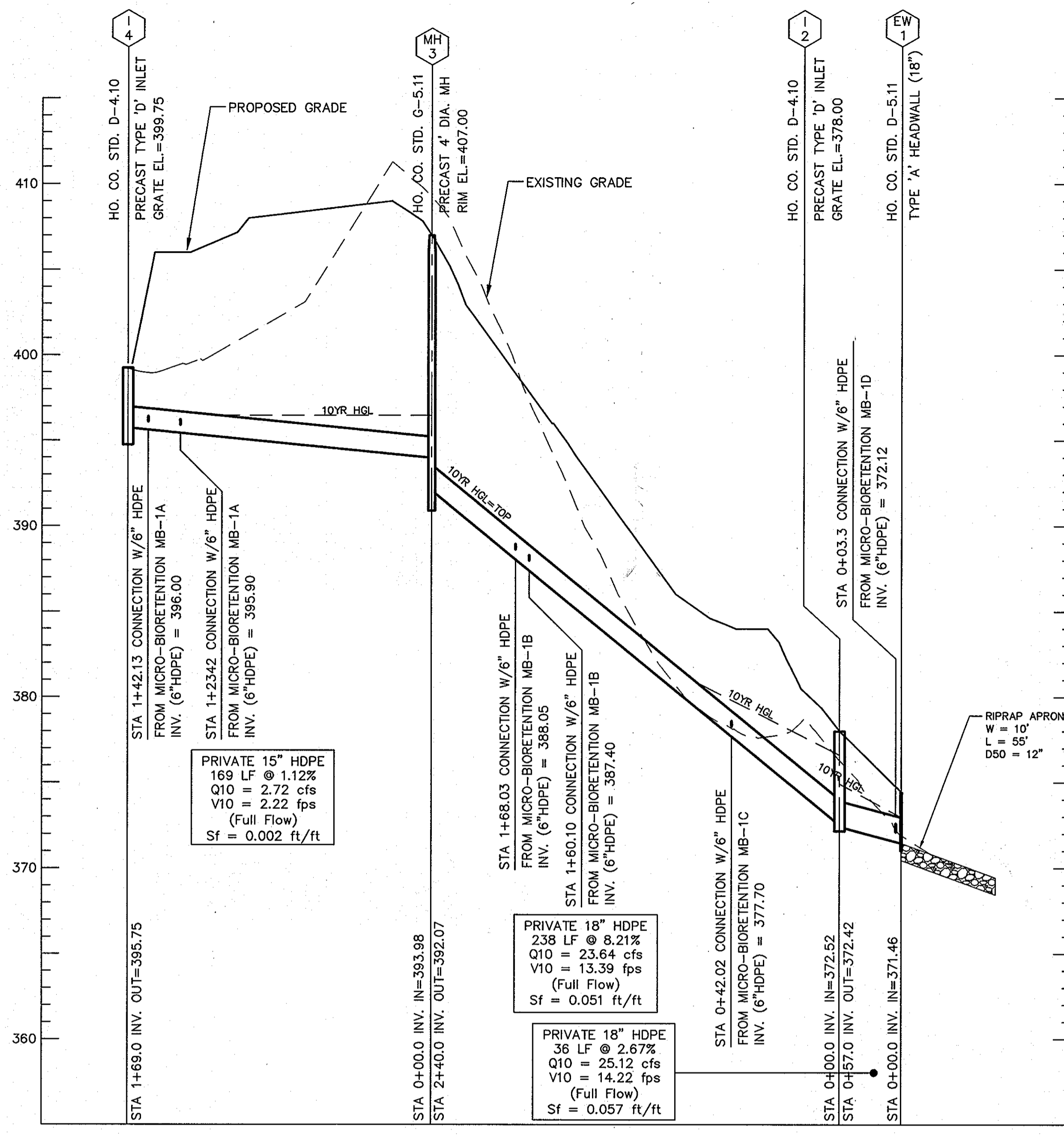
PIPE SCHEDULE

SIZE	LENGTH	TYPE / CLASS
6"	215 LF	HDPE (PERFORATED)
6"	643 LF	HDPE (NON-PERFORATED)
15"	216 LF	HDPE
18"	439 LF	HDPE

STRUCTURE SCHEDULE

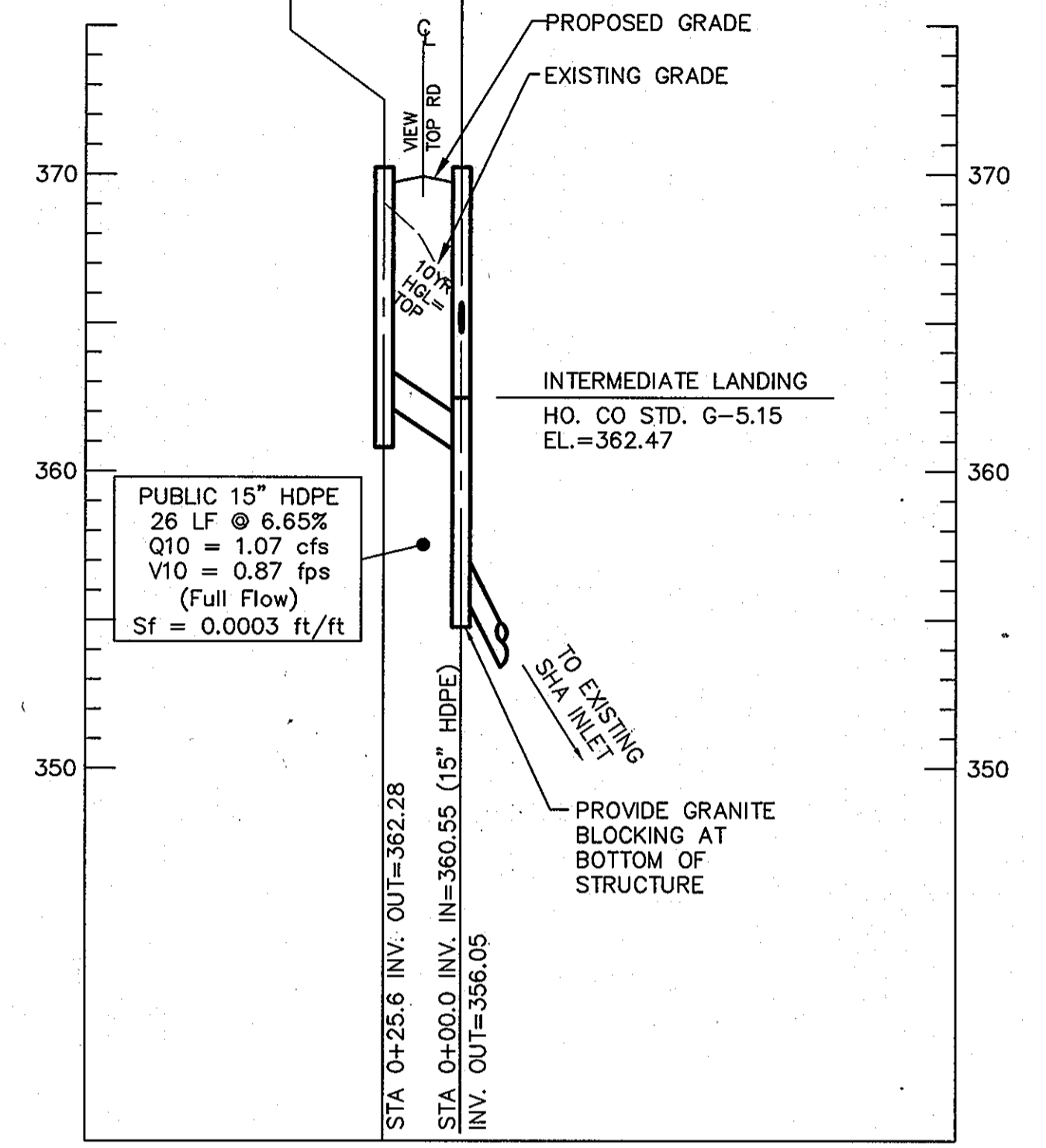
STRUCTURE	TYPE	LOCATION	COORDINATES	TOP/RIM/GRATE EL.	INV. IN	INV. OUT
EW-1	TYPE 'A' HEADWALL		N = 582,611.7856 E = 1,363,214.0246	N/A	371.46	N/A
I-2	PRECAST TYPE 'D' INLET		N = 582,594.2534 E = 1,363,162.2900	378.00 (GRATE)	374.25	374.15
MH-3	PRECAST 4" DIA. MANHOLE		N = 582,354.0465 E = 1,363,165.9681	409.00 (RIM)	394.11	393.96
I-4	PRECAST TYPE 'D' INLET		N = 582,292.7564 E = 1,363,033.3021	399.75 (GRATE)	N/A	395.75
ES-5	END SECTION	VIEW TOP ROAD EXT. STA. 4+98.4, 48.0' R		N/A	399.00	N/A
MH-6	PRECAST 4" DIA. MANHOLE	VIEW TOP ROAD EXT. STA. 5+00.1, 17.5' R		408.00 (RIM)	399.26	399.16
I-7	PRECAST TYPE 'A-5' INLET	VIEW TOP ROAD EXT. STA. 4+35.6, 11.0' R		403.00 (EP)	399.96	399.71
I-8	PRECAST TYPE 'A-5' INLET	VIEW TOP ROAD EXT. STA. 4+36.2, 11.0' L		403.00 (EP)	N/A	400.07
I-9	PRECAST TYPE 'A-5' INLET	VIEW TOP ROAD EXT. STA. 0+95.1, 11.0' R		369.85 (EP)	360.55	356.05
I-10	PRECAST TYPE 'A-5' INLET	VIEW TOP ROAD EXT. STA. 0+93.5, 11.0' L		369.85 (EP)	N/A	362.28
ES-11	END SECTION	VIEW TOP ROAD EXT. STA. 2+82.4, 11.0' R		N/A	383.00	N/A
I-12	PRECAST TYPE 'A-5' INLET	VIEW TOP ROAD EXT. STA. 3+00.0, 11.0' R		390.00 (EP)	386.53	386.28
I-13	PRECAST TYPE 'A-5' INLET	VIEW TOP ROAD EXT. STA. 3+00.0, 11.0' L		390.00 (EP)	N/A	387.85

NOTE: STRUCTURE 'I-9' IS REFERRED TO AS STRUCTURE 'I-6' IN THE PREVIOUSLY HOWARD COUNTY APPROVED PLAN SET (F-07-110). ALL STRUCTURES, STRUCTURE DATA, ETC. DOWNSTREAM FROM STRUCTURE I-9/I-6 TO THE EXISTING SHA INLET WILL NOT CHANGE FROM THE PREVIOUSLY APPROVED PLANS.



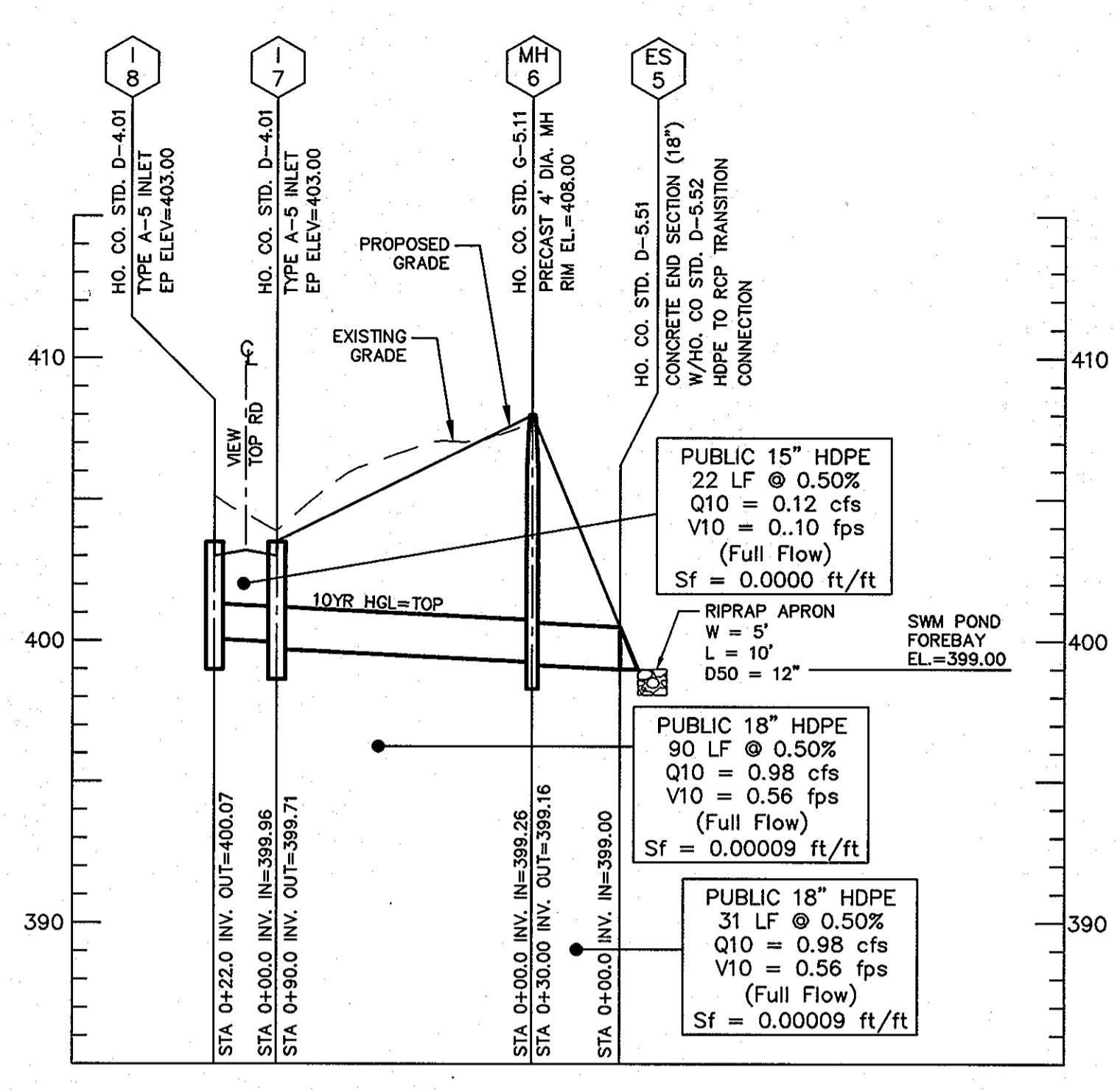
PROFILE - STRUCTURES I-4 TO ES-1

SCALE: 1"=50' HOR
1"=5' VER



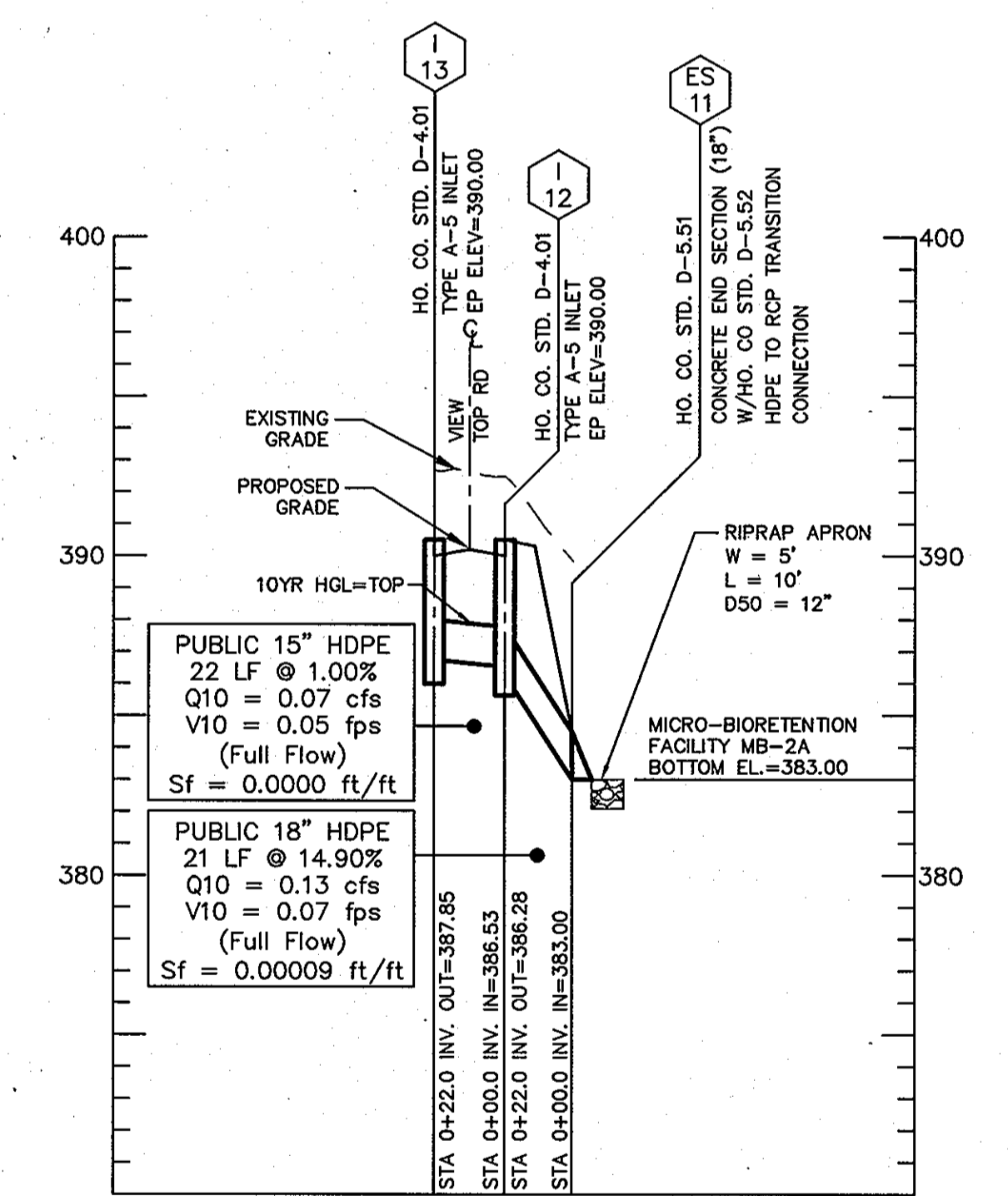
PROFILE - STRUCTURES I-10 TO I-9

SCALE: 1"=50' HOR
1"=5' VER



PROFILE - STRUCTURES I-8 TO ES-5

SCALE: 1"=50' HOR
1"=5' VER



PROFILE - STRUCTURES I-13 TO ES-11

SCALE: 1"=50' HOR
1"=5' VER

ALL MEASUREMENTS TO MANHOLES AND INLETS ARE TO THE CENTER OF STRUCTURE UNLESS OTHERWISE NOTED.

NOTE: THIS SHEET REPLACES SHEET 10 OF 15 OF THE PREVIOUSLY APPROVED PLANS (F-07-110) BY BENCHMARK ENGINEERING



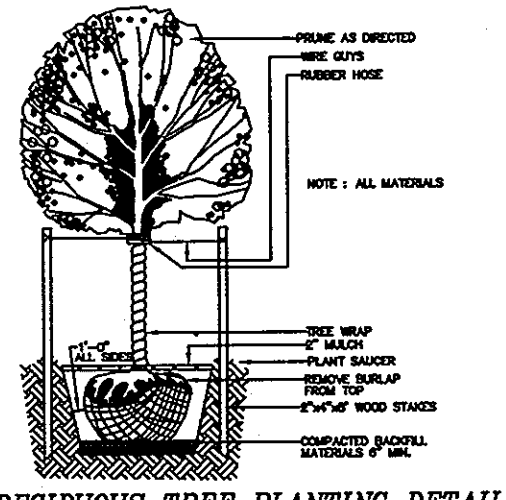
PROFESSIONAL CERTIFICATION
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 40091
Expiration Date 2-13-2013

Project	10-024	date	SEP 2011
Illustration	JLS	engineering	
Scale	AS SHOWN	approval	
Scale	1/19/2012	date	11/2/2011

RESPOND TO HOWARD COUNTY COMMENTS	
RESPOND TO HOWARD COUNTY COMMENTS	
description	revisions

HAWES PROPERTY
 LOTS 3 THRU 8, O.S. LOT 9, AND NON-BUILDABLE BULK PARCEL 'A'
 TAX MAP 24 GRID 17 PARCEL 253
 2nd ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
STORM DRAIN PROFILES

MILDENBERG, BOENDER & ASSOC., INC.
 Engineers Planners Surveyors
 6800 Deerpath Road, Suite 150, Elkridge, Maryland 21075
 (410) 997-0266 Fax: (410) 997-0268 Fax



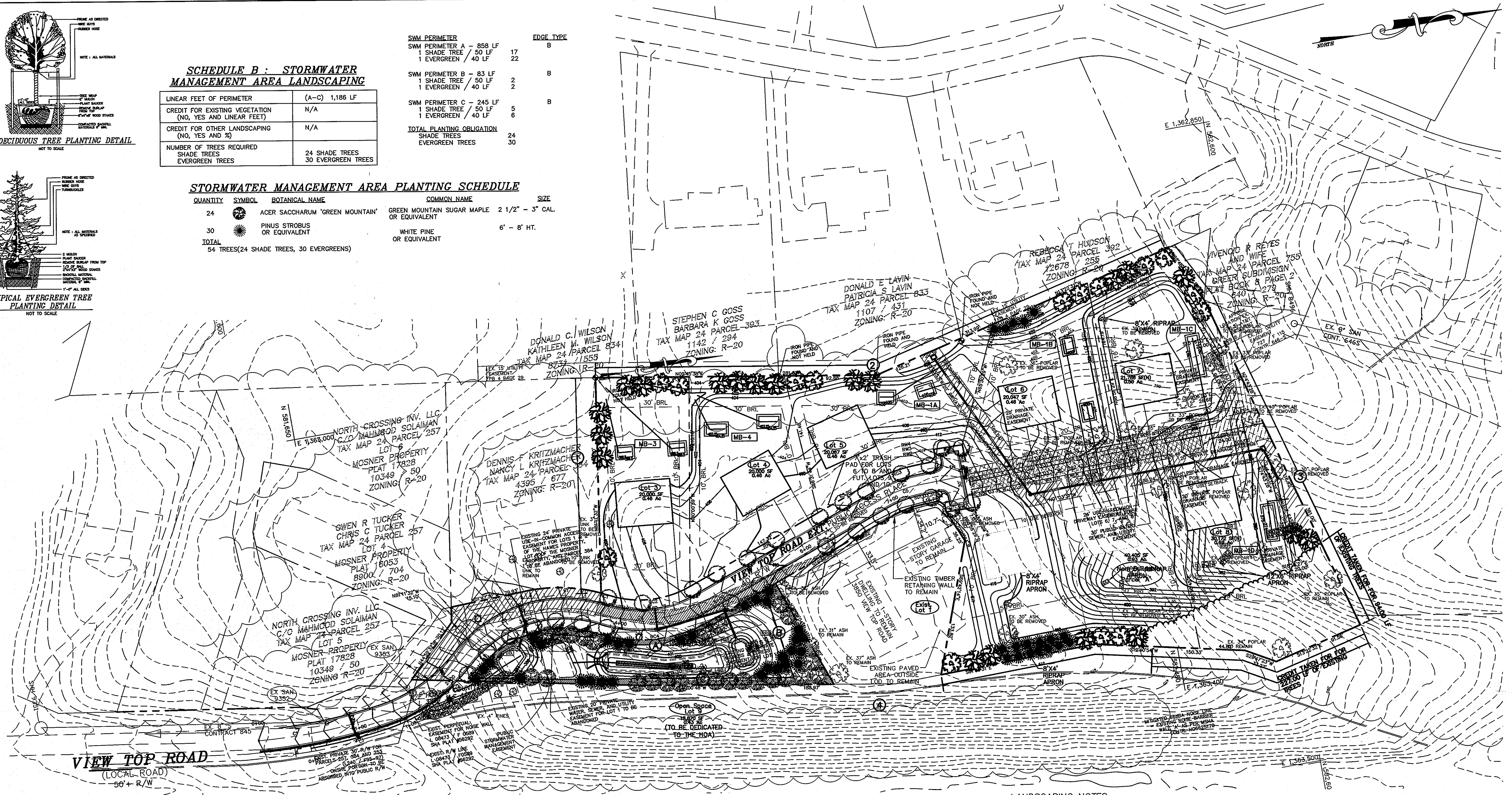
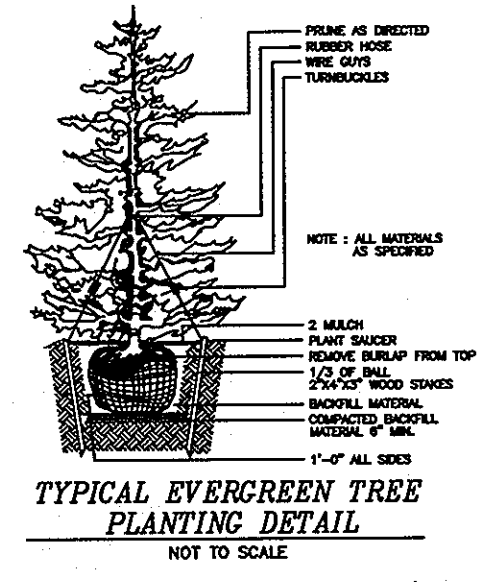
SCHEDULE B : STORMWATER MANAGEMENT AREA LANDSCAPING

LINEAR FEET OF PERIMETER	(A-C) 1,186 LF
CREDIT FOR EXISTING VEGETATION (NO, YES AND LINEAR FEET)	N/A
CREDIT FOR OTHER LANDSCAPING (NO, YES AND #)	N/A
NUMBER OF TREES REQUIRED	24 SHADE TREES 30 EVERGREEN TREES

SWM PERIMETER	EDGE TYPE
SWM PERIMETER A - 856 LF	B
1 SHADE TREE / 50 LF	17
1 EVERGREEN / 40 LF	22
SWM PERIMETER B - 83 LF	B
1 SHADE TREE / 50 LF	2
1 EVERGREEN / 40 LF	2
SWM PERIMETER C - 245 LF	B
1 SHADE TREE / 50 LF	5
1 EVERGREEN / 40 LF	6
TOTAL PLANTING OBLIGATION	
SHADE TREES	24
EVERGREEN TREES	30

STORMWATER MANAGEMENT AREA PLANTING SCHEDULE

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
24	(Symbol)	ACER SACCHARUM 'GREEN MOUNTAIN'	GREEN MOUNTAIN SUGAR MAPLE	2 1/2" - 3" CAL.
30	(Symbol)	PINUS STROBUS OR EQUIVALENT	WHITE PINE OR EQUIVALENT	6' - 8' HT.
TOTAL				54 TREES (24 SHADE TREES, 30 EVERGREENS)

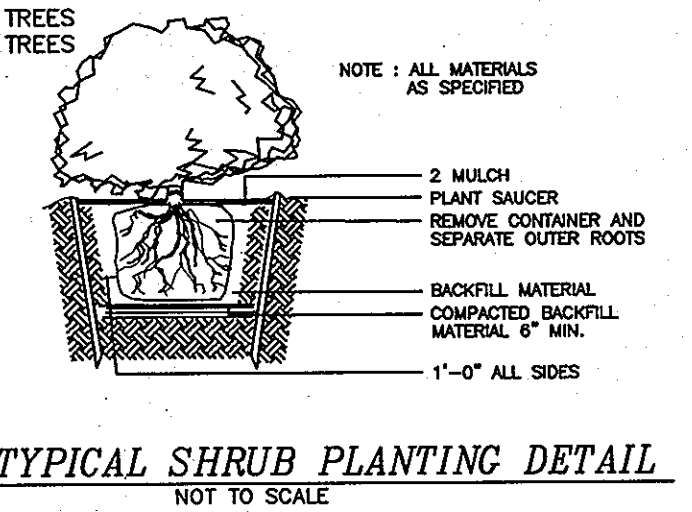


SCREEN CALCULATIONS
TRASH PAD - 11 LF - TYPE C BUFFER
1 EVERGREENS REQUIRED
10 SHRUBS PROVIDED.
NOTE - EVERGREEN SHRUBS HAVE BEEN PROPOSED TO BUFFER THE TRASH PAD AREA.

STREET TREE CALCULATIONS
VIEW TOP ROAD - 1170 / 40 = 29
TOTAL TREES REQUIRED = 29 TREES
TOTAL TREES PROVIDED = 29 TREES

STREET TREE PLANTING SCHEDULE

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
29	(Symbol)	PRUNUS ARGENTHI OR EQUIVALENT	SARGENT CHERRY OR EQUIVALENT	2-1/2" - 3" CAL.
TOTAL				29 TREES



LANDSCAPE REQUIREMENT PLANTING SCHEDULE

QUANTITY	SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE
15	(Symbol)	QUERCUS RUBRA OR EQUIVALENT	RED OAK OR EQUIVALENT	2 1/2" - 3" CAL.
20	(Symbol)	PRUNUS ARGENTHI OR EQUIVALENT	SARGENT CHERRY OR EQUIVALENT	2-1/2" - 3" CAL.
18	(Symbol)	PINUS STROBUS OR EQUIVALENT	WHITE PINE OR EQUIVALENT	6' - 8' HT.
10	(Symbol)	TAXUS MEDIA 'HICKSII'	HICKS YEW OR EQUIVALENT	2 1/2" - 3" HT.
TOTAL				53 TREES (35 SHADE TREES, 18 EVERGREENS, 10 SHRUBS)

SCHEDULE A : PERIMETER LANDSCAPED EDGE

CATEGORY	ADJACENT TO PERIMETER PROPERTIES				TRASH PAD	TOTAL
	A (PERIMETER 1)	A (PERIMETER 2)	A (PERIMETER 3)	B (PERIMETER 4)*		
LINEAR FEET OF PERIMETER	215.60' LF	595.30' LF	425.02' LF	961.04' LF	11 LF	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET)	NO	NO	YES, 94.00' LF.	YES, 227.00' LF		
CREDIT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET)	NO	NO	NO	NO		
NUMBER OF PLANTS REQUIRED	4 SHADE TREE 0 EVERGREEN TREES 0 SHRUBS	10 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	6 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	15 SHADE TREES 19 EVERGREEN TREES 0 SHRUBS	0 SHADE TREES 19 EVERGREEN TREES 0 SHRUBS	35 SHADE TREES 19 EVERGREEN TREES 0 SHRUBS
NUMBER OF PLANTS PROVIDED	4 SHADE TREE 0 EVERGREEN TREES 0 SHRUBS	10 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	6 SHADE TREES 0 EVERGREEN TREES 0 SHRUBS	15 SHADE TREES 18 EVERGREEN TREES 0 SHRUBS	0 SHADE TREES 19 EVERGREEN TREES 10 SHRUBS	35 SHADE TREES 18 EVERGREEN TREES 10 SHRUBS

- LANDSCAPING NOTES**
- THE PROPOSED LANDSCAPING SHALL BE PROVIDED BY THE PLANTINGS SHOWN ON THESE PLANS
 - THE DEVELOPER SHALL BE RESPONSIBLE FOR ALL INTERNAL PLANTINGS; THE PRESERVATION OF THE EXISTING PERIMETER VEGETATION; AND FOR THE PERIMETER PLANTINGS AS SHOWN ON THESE PLANS. BONDING FOR THE PROPOSED PLANTINGS IS THE OBLIGATION OF THE DEVELOPER AS PART OF THE DEVELOPER'S AGREEMENT.
 - TREES MUST BE A MINIMUM OF FOUR (4) FEET FROM THE CURB OR SIDEWALK AND MUST BE A MINIMUM OF FIVE (5) FEET FROM ANY STORM DRAIN.
 - A MINIMUM DISTANCE OF TWENTY (20) FEET MUST BE MAINTAINED BETWEEN ANY TREES LOCATED ALONG THE CURB LINE AND FROM STREET LIGHTS.
 - TREES MUST BE PLANTED A MINIMUM OF FIVE (5) FEET FROM AN OPEN SPACE ACCESS STRIP AND TEN (10) FEET FROM A DRIVEWAY.
 - THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SEC.-16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL.
 - STREET TREES SHALL BE PLANTED SIX (6) FEET BEHIND THE FACE OF CURB WHEN THERE ARE NO SIDEWALKS.
 - ALL LANDSCAPING PLANT TYPES SHOWN ON THESE PLANS ARE RECOMMENDATIONS AND MAY BE SUBSTITUTED WITH APPROVED EQUIVALENTS FROM THE HOWARD COUNTY LANDSCAPE MANUAL.
 - NO TREES SHALL BE PLACED WITHIN 10' BEHIND A RETAINING WALL OR WITHIN A RELATED MAINTENANCE EASEMENT, WHICHEVER IS GREATER.
 - PERIMETER LANDSCAPING AND TRASH PAD SCREENING SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE LANDSCAPE MANUAL AND AS SHOWN ON THIS LANDSCAPE PLAN SHEET OF THE ROAD CONSTRUCTION DRAWINGS FOR F-07-110. SURETY IN THE AMOUNT OF \$13,500 FOR THE REQUIRED 35 SHADE TREES, 18 EVERGREEN TREES, AND 10 SHRUBS SHALL BE POSTED WITH THE DEVELOPER'S AGREEMENT UNDER THIS FINAL PLAN, F-07-110.

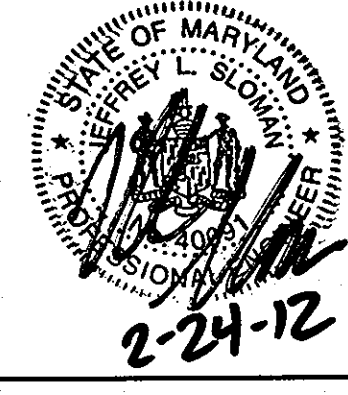
NOTE: THIS SHEET REPLACES SHEET 11 OF 15 OF THE PREVIOUSLY APPROVED PLANS (F-07-110) BY BENCHMARK ENGINEERING

APPROVED:
Walter J. ...
CHIEF, BUREAU OF HIGHWAYS
DATE: 4-16-12

AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS HEREWIT LISTED AND APPROVED FOR THIS SITE, SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATES.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Keith ...
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 4/30/12

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 LANDSCAPING MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A LETTER OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.
...
DEVELOPER/CONTRACT PURCHASER
DATE: 3/1/12



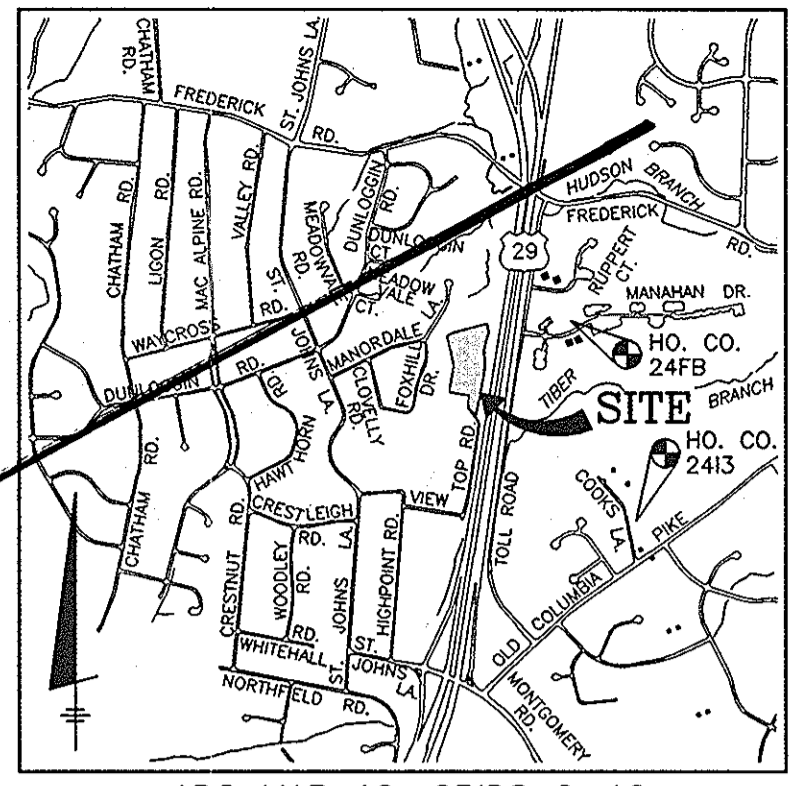
PROFESSIONAL CERTIFICATION
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 40091
Expiration Date 2-13-2013

Project	10-024
Date	SEP 2011
Illustration	JLS
Scale	1"=60'
Approval	JLS
Revisions	

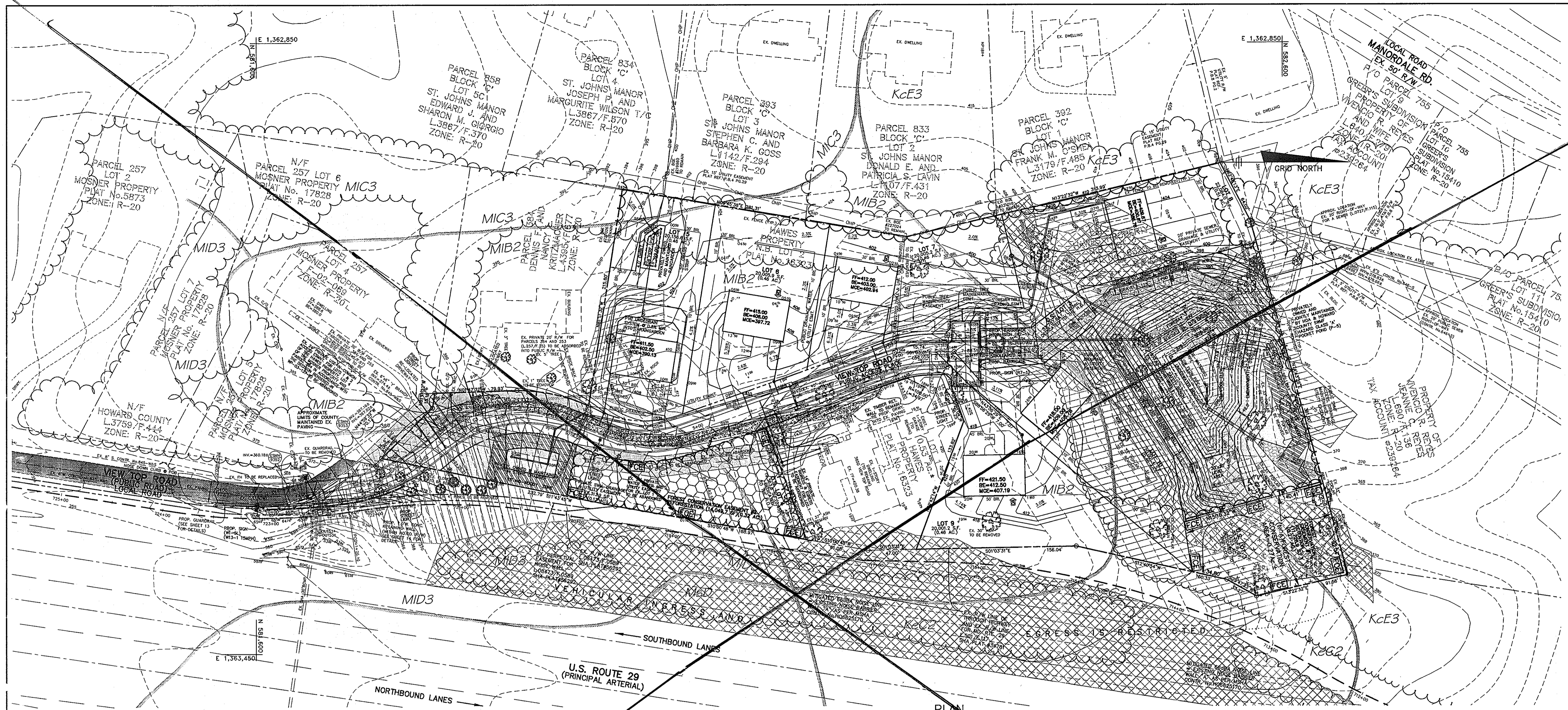
RESPOND TO HOWARD COUNTY COMMENTS	11/2/2011
Revisions	

HAWES PROPERTY
LOTS 3 THRU 8, O.S. LOT 9, AND NON-BUILDABLE BULK PARCEL 'A'
TAX MAP 24 GRID 17 PARCEL 253
2nd ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
LANDSCAPING PLAN, NOTES, AND DETAILS

MILDENBERG & ASSOC., INC.
Engineers Planners Surveyors
6800 Deerpath Road, Suite 150, Beltsville, Maryland 21015
(410) 997-0296 Fax: (410) 997-0298 Fax



ADC MAP 12, GRIDS C-10
VICINITY MAP
SCALE: 1"=2000'



FOREST DATA	
GROSS AREA (INCL. ALL PROP. LOTS)	5.61 AC±
100 YEAR FLOOD PLAIN	0.00 AC±
EX. APPLICABLE LOT AREA	0.00 AC±
NET TRACT AREA (NTA)	5.61 AC±
EXISTING FOREST (NTA)	2.2 AC±
AFFORESTATION THRESHOLD	0.84 AC±
CONSERVATION THRESHOLD	1.12 AC±
FOREST TO BE CLEARED (NTA)	0.83 AC±
FOREST TO BE RETAINED IN FCE	0.27 AC±

FOREST CONSERVATION TABULATION		
DESIGNATION	TYPE	ACREAGE
1	RETENTION	0.27 (5.61 NTA)
2	PLANTINGS	0.32 (5.61 NTA)
TOTALS:		0.59 AC±

LEGEND	
SOILS CLASSIFICATION	ABC1
SOILS DELINEATION	---
EXISTING CONTOURS	999
PROPOSED CONTOURS	999
EXISTING WOODS LINE	---
PROPOSED WOODS LINE	---
EXISTING STRUCTURE	□
PROPOSED STRUCTURE	□
STEEP SLOPES 15% TO 24.9%	▨
STEEP SLOPES 25% OR GREATER	▩
PROP. EASEMENTS	□
EX. EASEMENTS	□
SWM 15' NO-WOODY VEGETATION ZONE	▨
PROP. FOREST CONSERVATION ESMT.	▨
TREE PROTECTION FENCE	TF
FCE PERMANENT SIGNAGE	FCE

OWNER: 3804 View Top, LLC
1015 15th Street, NW
Suite 300
Washington, DC 20005
Att: William Gessner

Eco-Science Professionals, Inc.
CONSULTING ECOLOGISTS

MD DNR Qualified Professional
USACON Wetland Delineator
Certification # WD0303MD06109-44122
John P. Casales

P.O. Box 5006 Glen Arm, MD 21057 (410) 592-6752

FOREST CONSERVATION WORKSHEET
Version 1.0

Project: Hawes Property
Date: November 30, 2005

NET TRACT AREA	Acres
A. Total tract area	5.61
B. Area within 100 Year Floodplain	0
C. Area to remain in agricultural production	0
D. Net Tract Area	5.61

LAND USE CATEGORY: (from table 3.2.1, page 40, Manual)	ARA	MDR	IDA	HDR	MPD	CIA
E. Afforestation Threshold (percentage)	15%					0.84
F. Conservation Threshold (percentage)	20%					1.12

EXISTING FOREST COVER:	
G. Existing forest cover (excluding floodplain)	2.2
H. Area of forest above afforestation threshold	1.36
I. Area of forest above conservation threshold	1.08

BREAK EVEN POINT:	
J. Forest retention above threshold with no mitigation	0.21
K. Clearing permitted without mitigation	1.08
	Break-Even Point
	1.14

PROPOSED FOREST CLEARING	
L. Total area of forest to be Clearing units	1.93
M. Total area of forest to be Retained in FCE	0.27

PLANTING REQUIREMENTS	
N. Reforestation for clearing above Conservation Threshold	0.27
O. Reforestation for clearing below Conservation Threshold	1.7
P. Credit for retention above conservation threshold	0
Q. Total reforestation required	1.97
R. Total afforestation required	0
S. Total reforestation and afforestation required	1.97

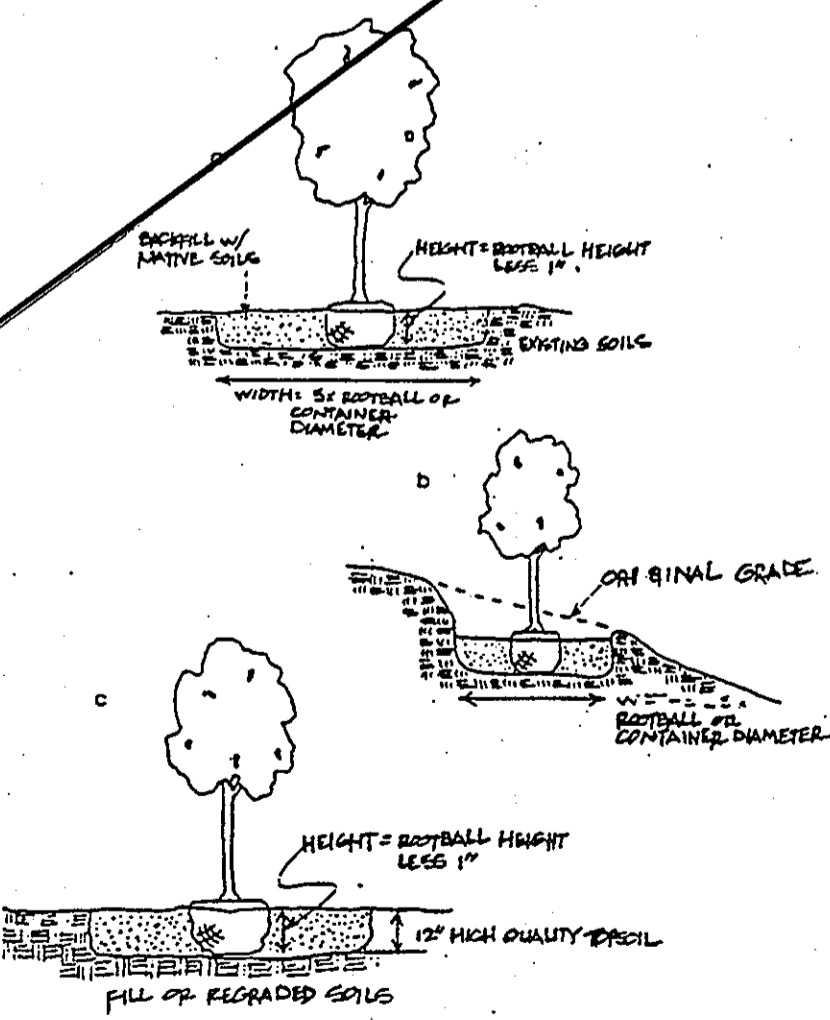
FCE NOTES

- Any Forest Conservation Easement (FCE) area shown hereon is subject to protective covenants which may be found in the Land Records of Howard County which restrict the disturbance and use of these areas.
- Forested areas occurring outside of the FCE shall not be considered part of the FCE and shall not be subject to protective covenants of these areas.
- Limits of disturbance shall be restricted to areas outside the limit of temporary fencing or the FCE boundary, whichever is greater.
- There shall be no clearing, grading, construction or disturbance of vegetation in the Forest Conservation Easement, except as permitted by Howard County DPZ.
- No stockpiles, parking areas, equipment cleaning areas, etc. shall occur within areas designated as Forest Conservation Easements.
- Temporary fencing shall be used to protect forest resources during construction. Fencing shall be installed along limits of disturbance occurring within 50 feet of the proposed FCE limits. Permanent signage will be posted at a 50-100 foot intervals along all FCE limits.
- THE FOREST CONSERVATION OBLIGATIONS FOR THIS PROJECT WILL BE MET THROUGH THE RETENTION OF 0.27 AC. OF FOREST AND 0.32 AC. OF ON-SITE REFORESTATION. THE BALANCE OF REQUIRED REFORESTATION IN THE AMOUNT OF 1.65 AC. SHALL BE PROVIDED OFF-SITE ON PARCEL 90, TAC MAP 21, BLOCK NO. 22, CROOKWOOD FARM, PHASE 1, SURVEY IN THE AMOUNT OF \$2,522.24 ((11,761.20 SF x \$0.20) FOR 0.27 AC. OF RETENTION AND \$42,906.60 ((26,818.20 SF x \$0.20) FOR 1.37 AC. OF REQUIRED REFORESTATION FOR A TOTAL OF \$45,258.84 SHALL BE POSTED WITH THE DEVELOPER'S AGREEMENT UNDER THIS FINAL PLAN, P-07-110

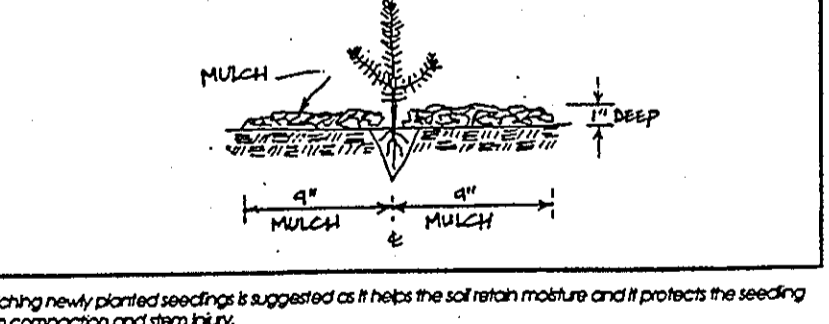
Planting Notes:

- Planting density based on 700 planting units per acre, 1" caliper trees = 3.5 planting units, whips with shelter = 2 planting units.
- 1" caliper trees should be staggered along the outer perimeter of the planting area to serve as demarcation of the boundary. The trees should be no closer than 15 foot spacing.
- Planting shall be made in a curvilinear fashion along contour. The planting should avoid a grid appearance but should be spaced to facilitate maintenance.
- Multiflora rose/heavy brush removal/control may be required prior to installation of planting.
- All whips are required to be installed with tree shelters per Howard County FCA requirements.

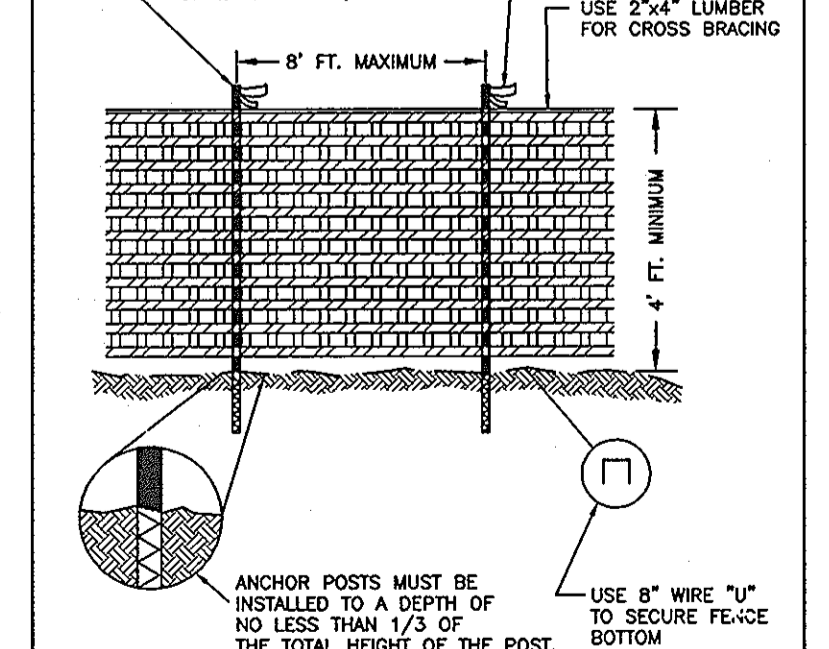
Planting Specifications:
Container Grown and Balled and Burlapped Stock



Seeding and Whip Planting Specification



ANCHOR POSTS SHOULD BE INSTALLED TO A DEPTH OF NO LESS THAN 1/3 OF THE TOTAL HEIGHT OF THE POST.



TEMPORARY TREE PROTECTION FENCE
SCALE: NTS

FOREST CONSERVATION AREA

REFORESTATION PROJECT

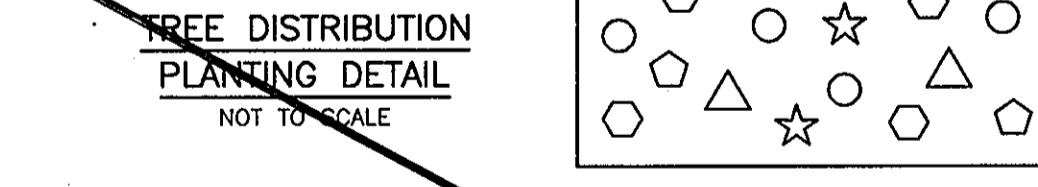
Trees for your Future

FOREST RETENTION AREA

MACHINERY, DUMPING OR STORAGE OF ANY MATERIALS IS **PROHIBITED**

PERMANENT SIGNAGE
SCALE: NTS

- MAPLE/POPLAR
- SYCAMORE/OAK
- PERSIMMON/GUM
- SYCAMORE/CHERRY
- BLACKHAW



SEQUENCE OF CONSTRUCTION

- SEDIMENT CONTROL AND TREE PROTECTION DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH GENERAL CONSTRUCTION PLAN FOR SITE. SITE SHALL BE PROTECTED IN ACCORDANCE WITH THE GENERAL CONSTRUCTION PLAN.
- REMOVE HAZARDOUS TREES (DEAD, DISEASED OR THOSE SUBJECT TO WIND THROWS) ALONG THE EDGE OF THE FOREST RETENTION AREAS AS WELL AS WITHIN OTHER TREE AREAS.
- SIGNAGE SHALL BE INSTALLED AS PER THE FOREST PROTECTION DEVICES SHOWN ON THE FOREST CONSERVATION PLAN.

MAP SYMBOL	SOIL TYPE	MAPPING UNIT
KCE3	D	KELLY CLAY LOAM - 15 TO 30 PERCENT SLOPES - SEVERELY ERODED
KAC2	D	KELLY SILT LOAM - 8 TO 15 PERCENT SLOPES - MODERATELY ERODED
MIB2	B	MANOR LOAM - 3 TO 8 PERCENT SLOPES - MODERATELY ERODED
MID3	B	MANOR LOAM - 8 TO 15 PERCENT SLOPES - SEVERELY ERODED
MIB3	B	MANOR LOAM - 15 TO 25 PERCENT SLOPES - SEVERELY ERODED
MID3	B	MANOR LOAM - 15 TO 25 PERCENT SLOPES - SEVERELY ERODED
MID3	C	MONTALTO & RELAY VERY STONY SILT LOAMS - 3 TO 25 PERCENT SLOPES

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
With 2 copies 5-5-08
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Sandy H... 5/5/08
CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature]
CHIEF, DEVELOPMENT ENGINEERING DIVISION

BENCHMARK ENGINEERING, INC.
8480 BISHOPMAN NATIONAL PIKE A SUITE 418
ELLCOTT CITY, MARYLAND 21043
PHONE: 410-465-8105 FAX: 410-465-8644
E-MAIL: be@be-civilengineering.com

PROFESSIONAL CERTIFICATION:
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
Licenses: CE 14867, Registration Date: 12-21-2008

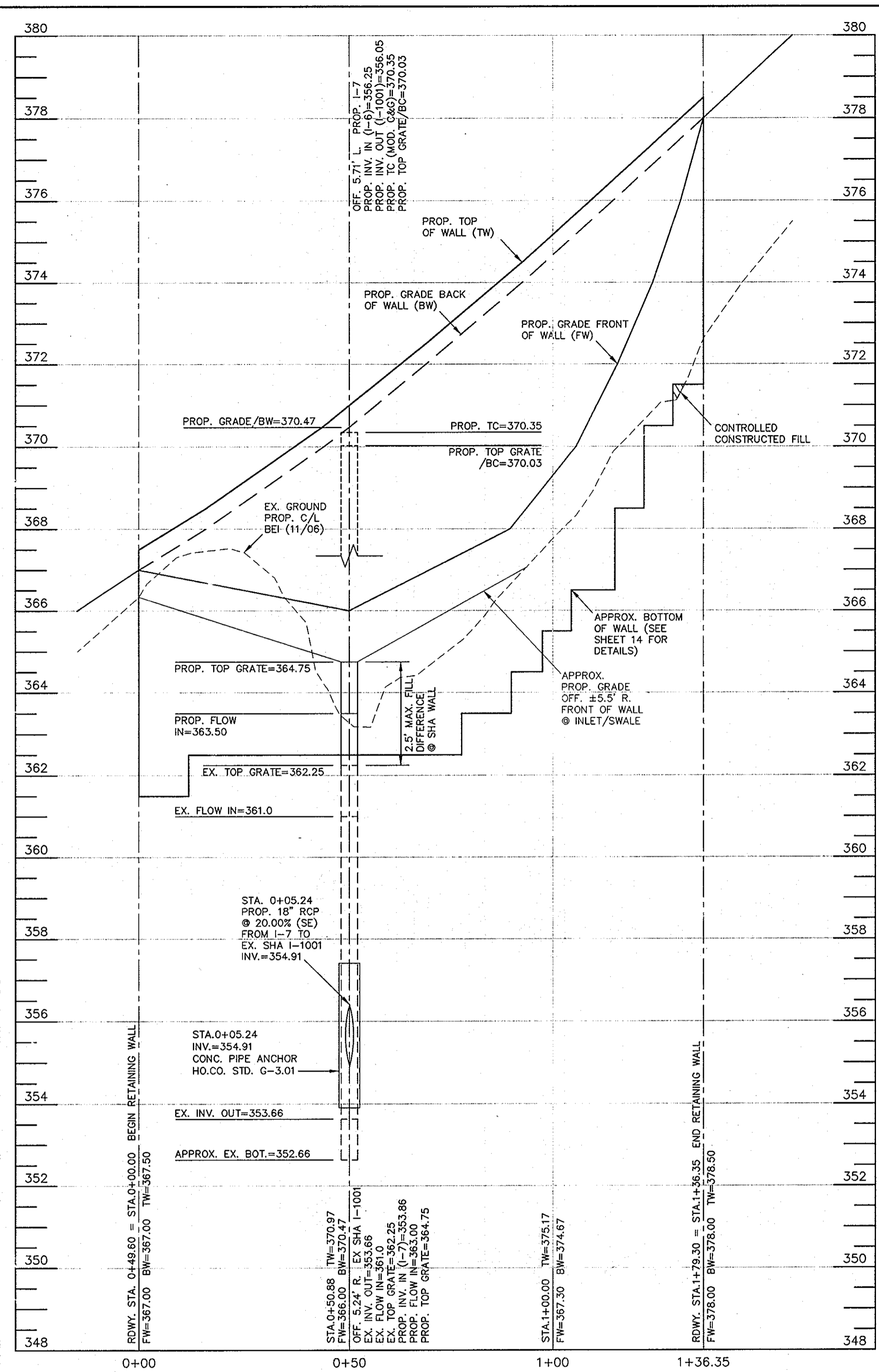
DEVELOPER/CONTRACT PURCHASER: SECURITY DEVELOPMENT, L.L.C.
P.O. BOX 417
ELLCOTT CITY, MARYLAND 21041
PHONE: (410) 465-4244

PROJECT: HAWES PROPERTY SUBDIVISION (RE-SUBDIVISION OF LOT 2) LOTS 1 & 5-10 AND O.S. LOTS 3 & 4

LOCATION: PARCEL 257 - ZONE: R-20
2ND ELLICOTT DISTRICT
HOWARD COUNTY, MARYLAND

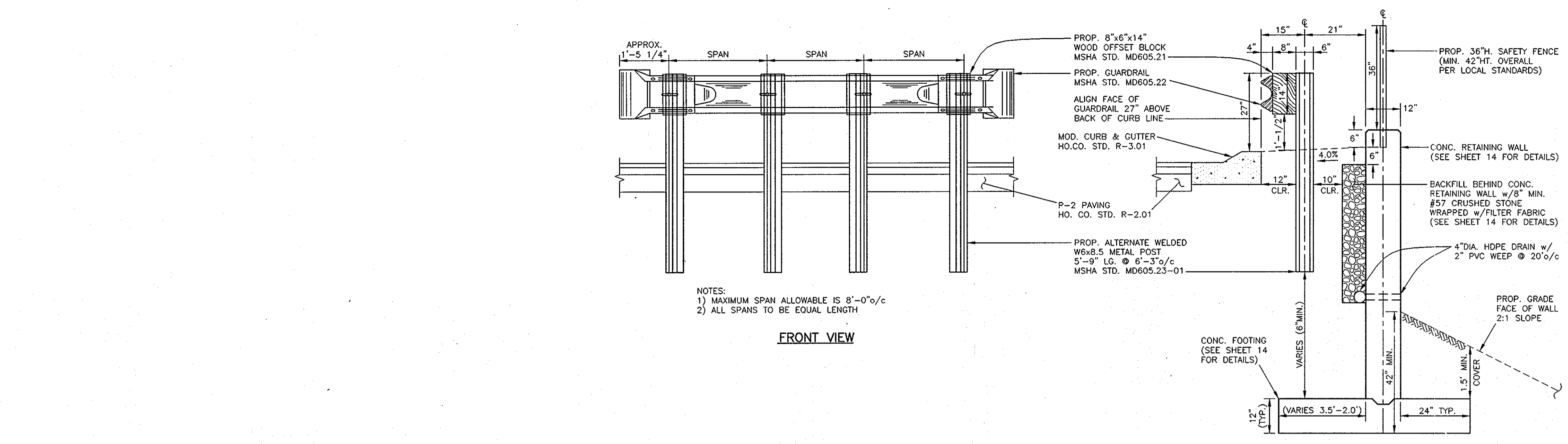
TITLE: FINAL CONSTRUCTION PLAN ON-SITE FOREST CONSERVATION PLAN, NOTES, AND DETAILS

DATE: DECEMBER 20, 2008 PROJECT NO. 1574
MARCH 14, 2008 DRAWING NO. 16



PROFILE - RETAINING WALL
 HORIZONTAL SCALE: 1" = 20'
 VERTICAL SCALE: 1" = 2'

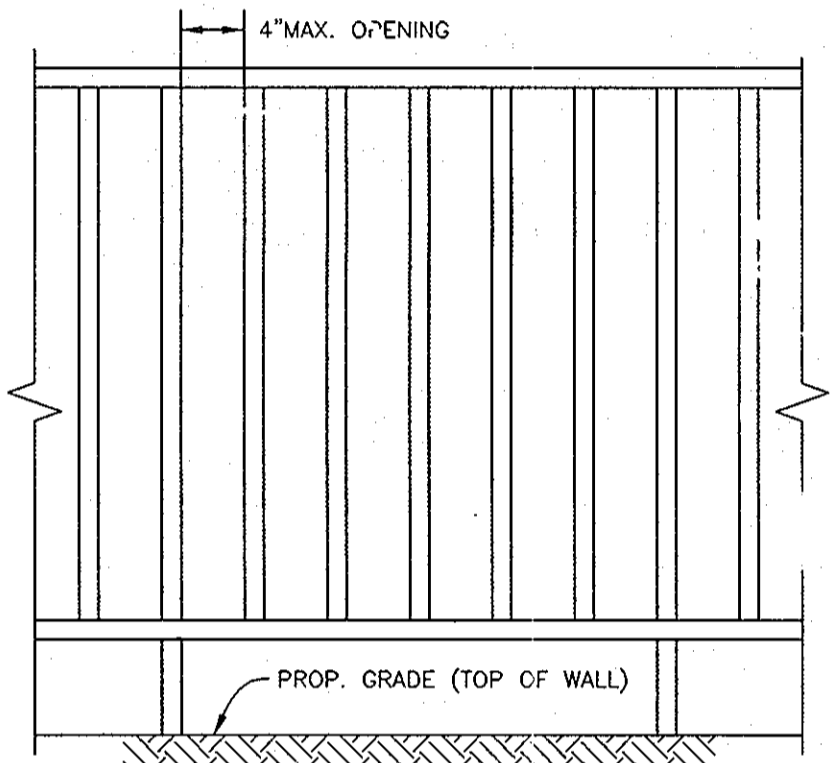
THE HOMEOWNER'S ASSOCIATION SHALL BE RESPONSIBLE FOR REMOVAL OF GRAFFITI FROM THE RETAINING WALLS



NOTES:
 1) MAXIMUM SPAN ALLOWABLE IS 8'-0" O/C
 2) ALL SPANS TO BE EQUAL LENGTH

GUARDRAIL DETAIL
 NOT TO SCALE

TYPICAL SECTION



TYPICAL SAFETY FENCE
 NOT TO SCALE

SECTION 1021.0 GUARDS

1021.1 General: Where required by the provisions of Sections 406.5, 408.3.2, 1005.5, 1014.7, 1016.5 and 1025.5, guards shall be designed and constructed in accordance with the requirements of this section and Section 1815.B. A guardrail system is a system of building components located near the open sides of elevated walking surfaces for the purpose of minimizing the possibility of an accidental fall from the walking surface to the lower level.

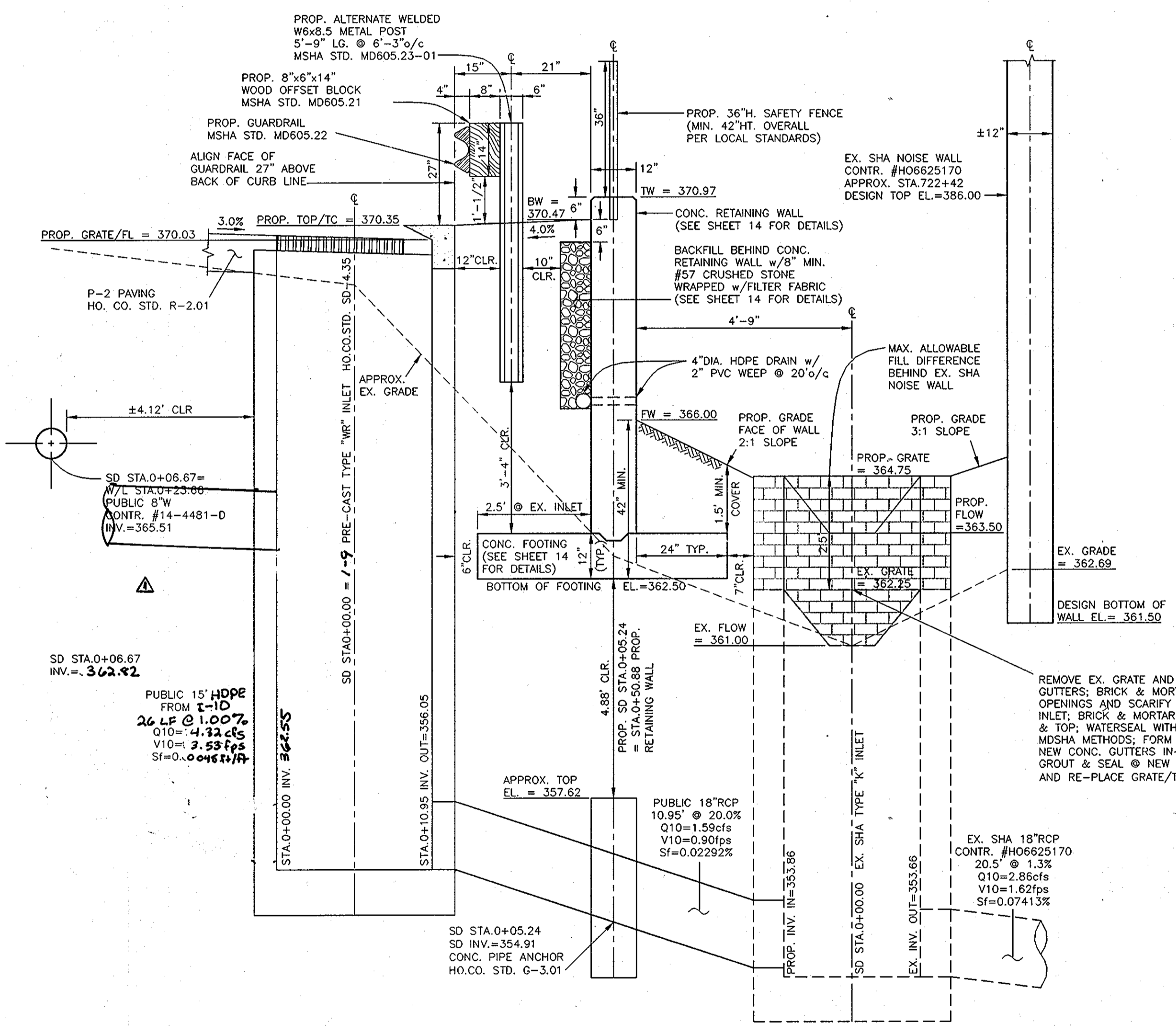
1021.2 Height: The guards shall be at least 42 inches (1067 mm) in height measured vertically above the leading edge of the tread or adjacent walking surface.

Exceptions

1. In other than occupancies in Use Group E, guards shall not be less than 34 inches (864 mm) in height above the leading edge of the tread along stairs which are not more than 20 feet (6096 mm) in height or which reverse direction at an intermediate landing with 12 inches (305 mm) or less measured horizontally between successive flights.

2. Guards along open-sided floor areas, mezzanines and landings in occupancies in Use Group R-3 shall not be less than 36 inches (914 mm) in height.

1021.3 Opening limitations: In occupancies in Use Groups A, B, E, M-4, I, 1-2, M and R, and in public garages and open material such that a sphere with a diameter of 4 inches (102 mm) cannot pass through any opening. Guards shall not have an ornamental pattern that would provide a ladder effect.



RDWY. C/L STA. 0+99.17 OFF. 19.84' R
 C/L WALL STA. 0+50.55
SECTION/DETAIL
IMPROVEMENTS @ EX. SHA INLET
 SCALE: 1" = 2'

NO.	DATE	REVISION
1	2-28-12	To revise storm drains and storm water management

BENCHMARK ENGINEERING, INC.
 8480 BALTIMORE NATIONAL PIKE SUITE 418
 ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-6105 FAX: 410-465-6844
 E-MAIL: bel@bel-civilengineering.com

PROFESSIONAL CERTIFICATION:
 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.
 License No. 21149 Registration Date: 12-21-2008

3-13-08

DEVELOPER/CONTRACT PURCHASER: SECURITY DEVELOPMENT, L.L.C.
 P.O. BOX 417
 ELLICOTT CITY, MARYLAND 21041
 PHONe. (410) 465-4244

PROJECT: HAWES PROPERTY SUBDIVISION (RE-SUBDIVISION OF LOT 2) LOTS 1 & 5-10 AND O.S. LOTS 3 & 4

LOCATION: TAX MAP 24 - GRID 17 PARCEL 253 - ZONE: R-20 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: FINAL/CONSTRUCTION SITE PLAN PROFILES, NOTES, AND DETAILS

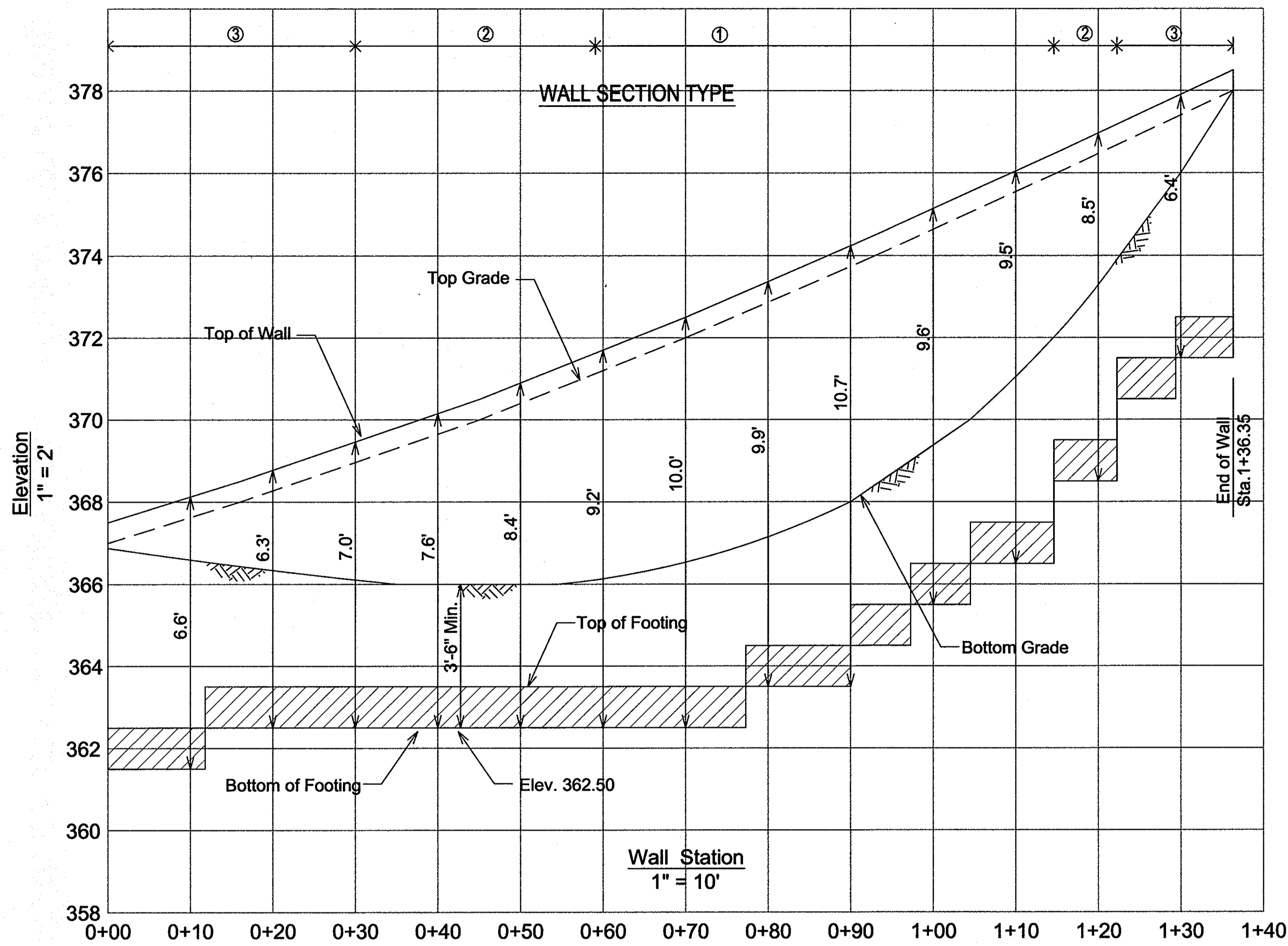
DATE: DECEMBER 20, 2008 PROJECT NO. 1574
 MARCH 14, 2008

Des: MCR/DAM Draft: MCR Check: DAM SCALE: AS SHOWN DRAWING 13 OF 16

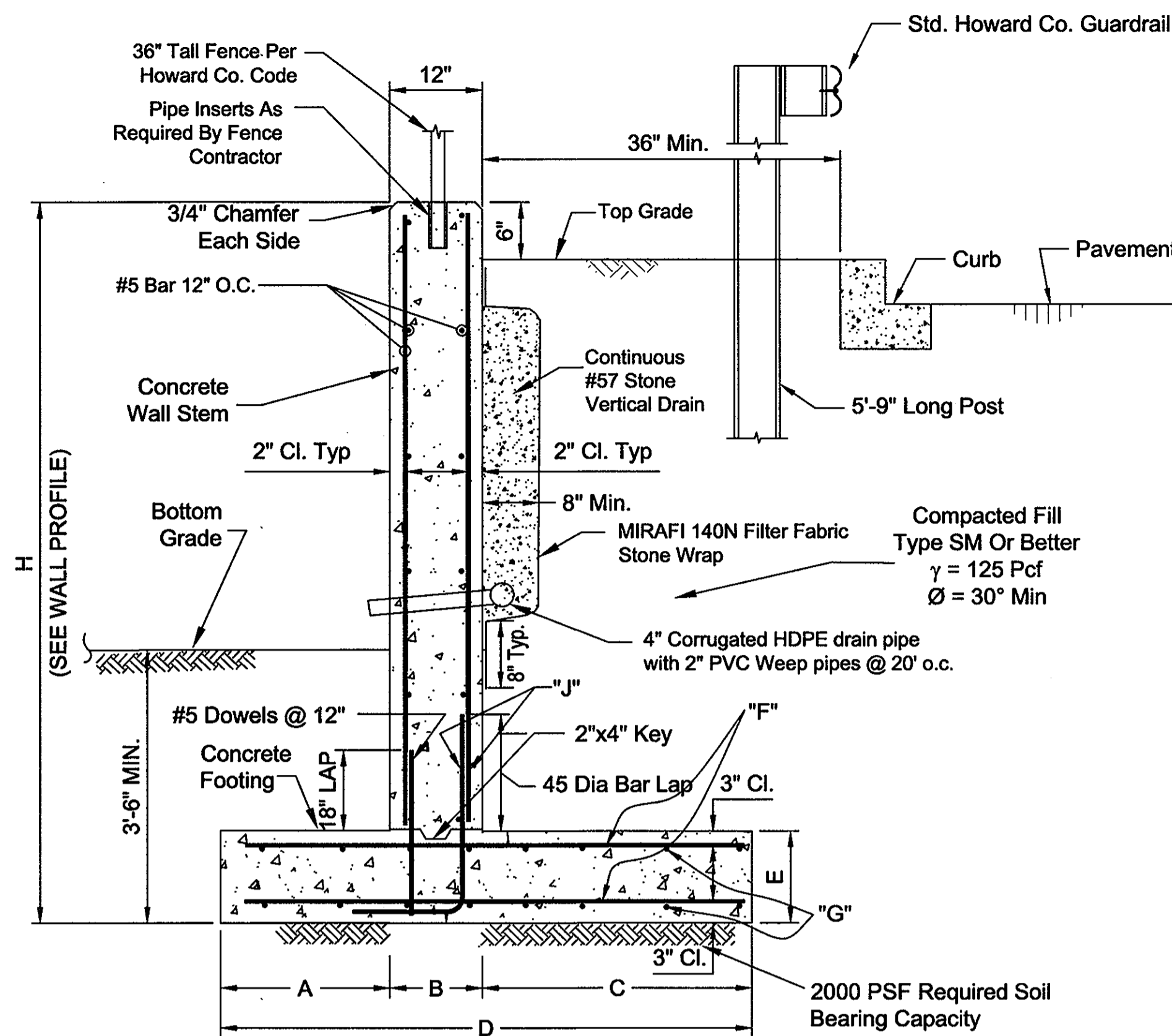
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 [Signature] 5-1-08
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 5/5/08
 CHIEF, DIVISION OF LAND DEVELOPMENT

CHIEF, DEVELOPMENT ENGINEERING DIVISION [Signature] DATE:



RETAINING WALL PROFILE



WALL SECTION NTS

WALL SCHEDULE									
Wall Type	Max. H	Toe "A"	B	Heel "C"	D	E	"F" Footing Reinf	"G" Footing Reinf	"J" Stem Reinf
1	10'-6"	2'-0"	12"	3'-6"	6'-6"	12"	#5 @ 12"	#5 @ 12"	#6 @ 12"
2	9'-0"	2'-0"	12"	2'-6"	5'-6"	12"	#5 @ 12"	#5 @ 12"	#5 @ 12"
3	7'-0"	2'-0"	12"	2'-0"	5'-0"	12"	#5 @ 12"	#5 @ 12"	#5 @ 12"

WALL CONSTRUCTION NOTES:

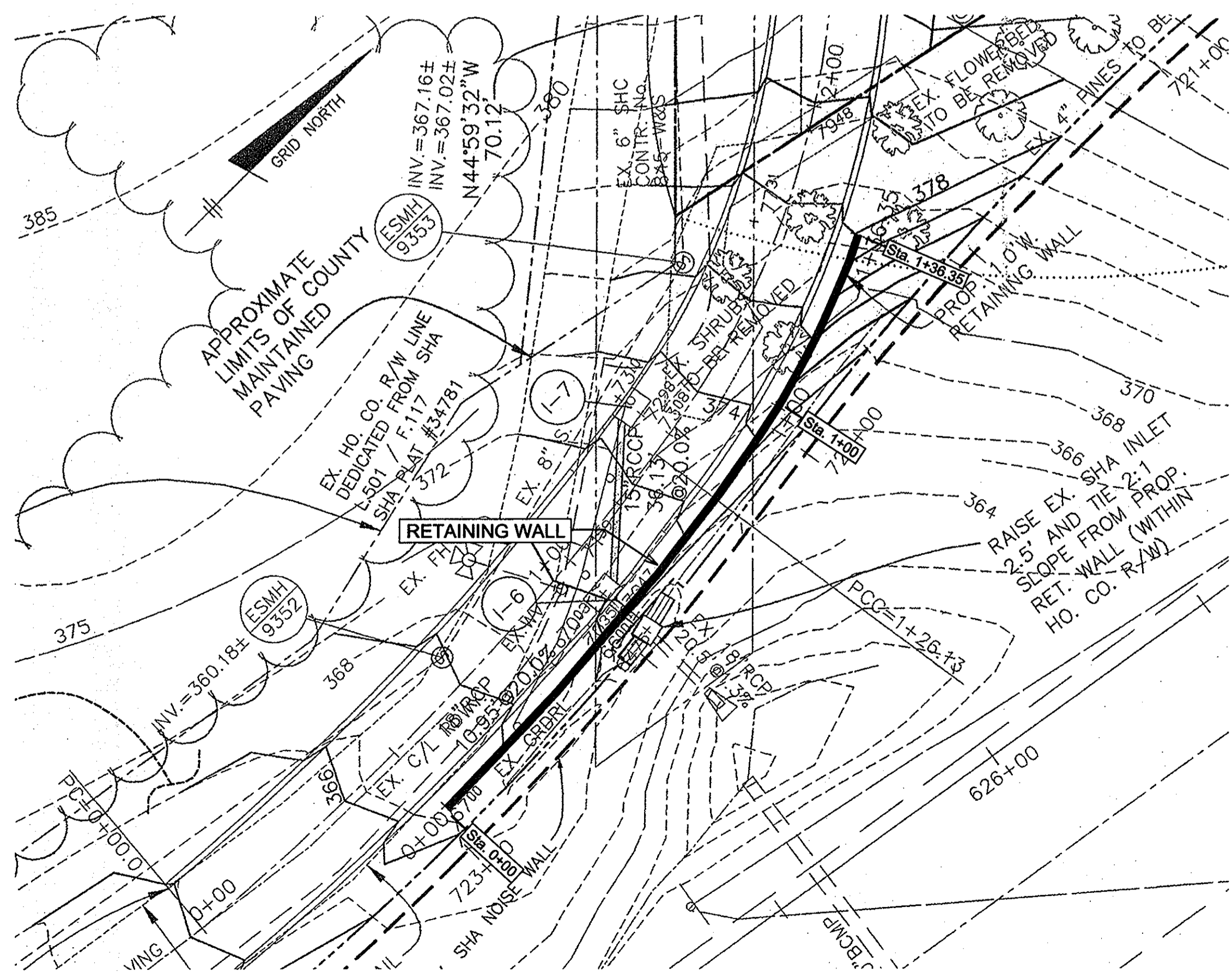
- All retaining wall concrete shall be 4000 psi at 28 days with air entrainment.
- Reinforcing steel shall conform to ASTM-615 Grade 60.
- Wall backfill shall be compacted to 95% of T-180.
- Concrete work shall comply with the latest ACI 318 Building code for concrete structures.
- All rebar splices not shown shall be a minimum 35 bar diam.
- All wall exposed surfaces shall be mortar patched and sack-rubbed finished with grout and burlap.

GENERAL NOTES:

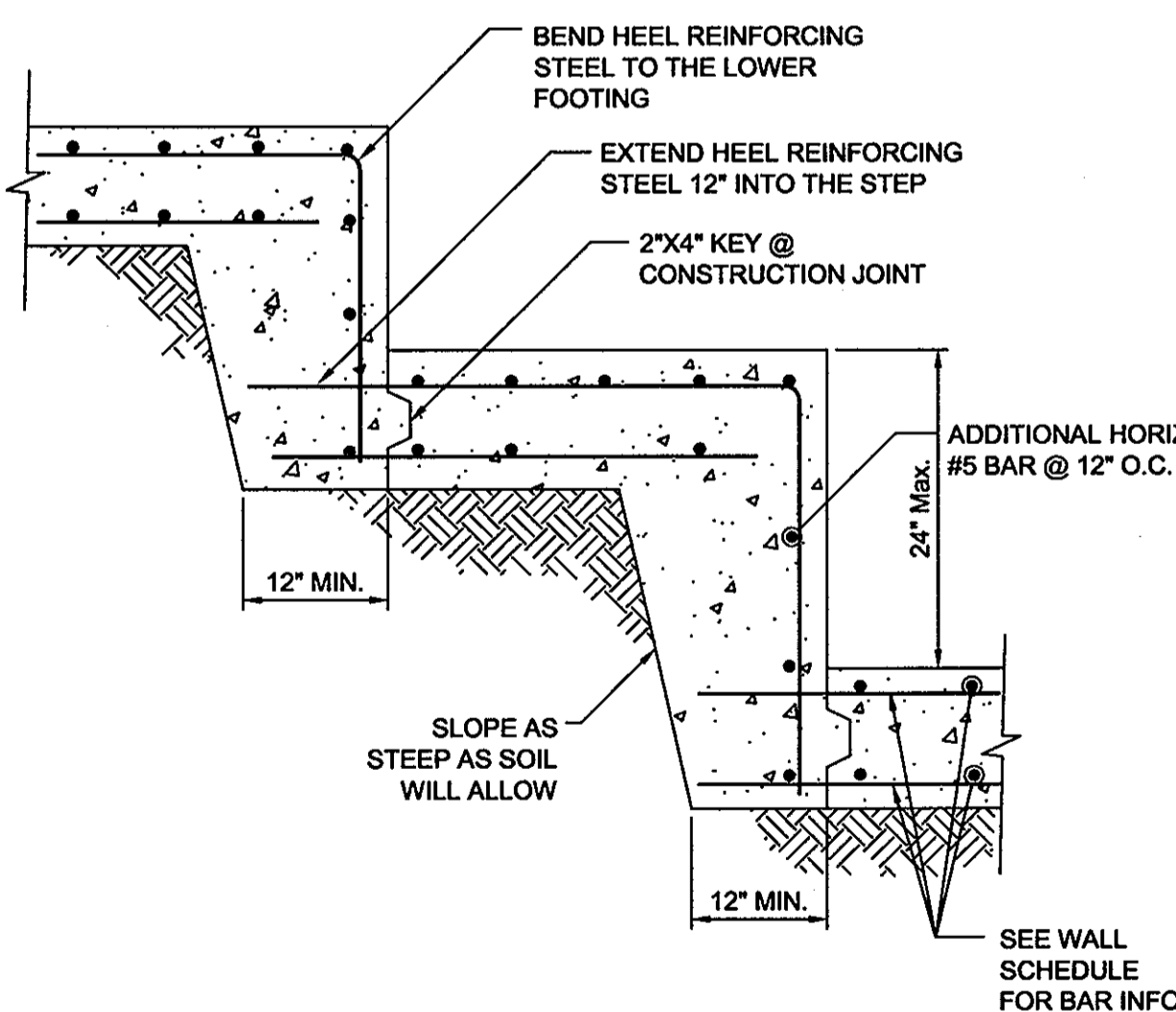
- Retaining walls shall only be constructed under the observation of a registered professional engineer and a (NICET, WACEL, or equiv.) certified soils technician.
- One soil boring shall be required every one hundred feet along the entire length of the wall. Copies of all boring reports shall be provided to the Howard County Inspector Prior to the start of construction.
- The required bearing pressure beneath the wall system shall be verified in the field by a certified soils technician. Testing documentation must be provided to the Howard County Inspector prior to start of construction. The required bearing test shall be the Dynamic Cone Penetrometer test ASTM STP-399.
- The suitability of fill material shall be confirmed by the on-site soils technician. Each 8" lift must be compacted to a minimum 95% modified proctor density and the testing report shall be made available to the Howard County Inspector upon completion of construction.

HOA NOTE:

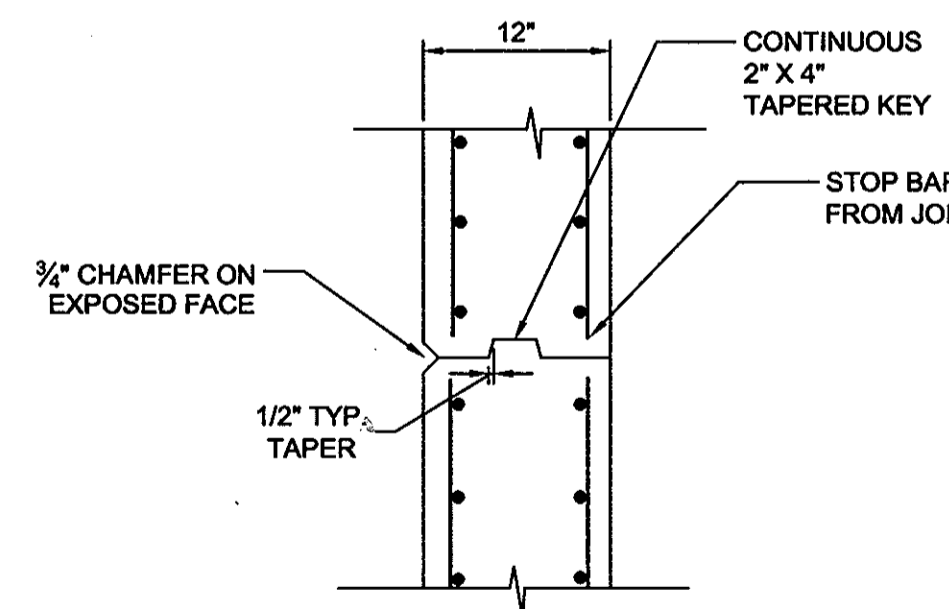
The Homeowner's Association shall be responsible for the removal of graffiti from the retaining wall.



WALL LOCATION PLAN 1" = 20'



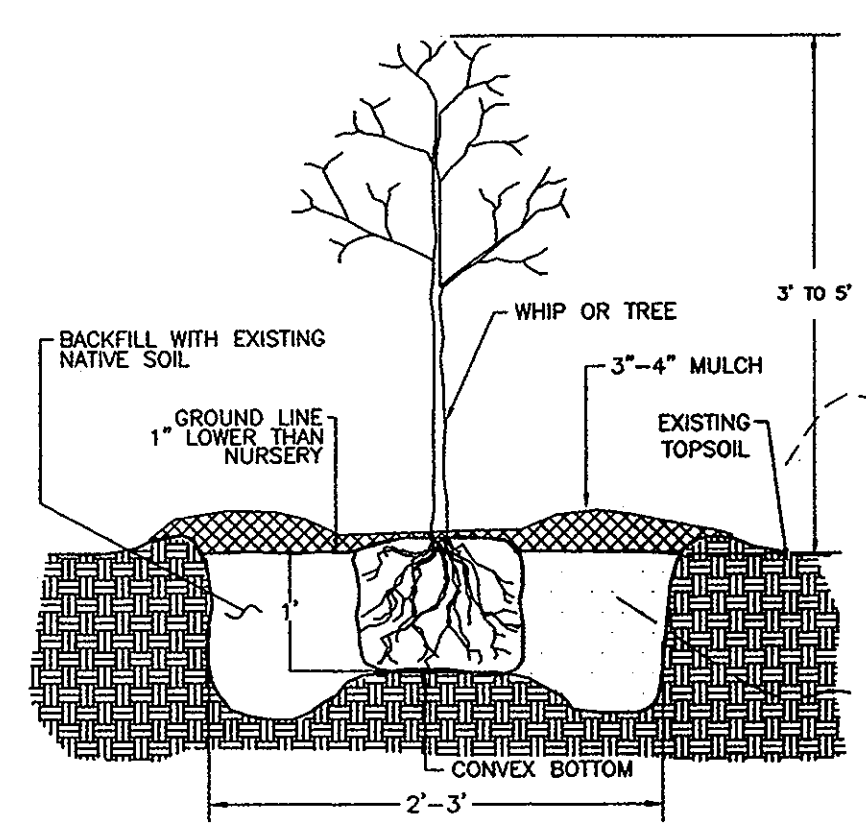
WALL STEP DETAIL NTS



WALL STEM VERTICAL CONTRACTION JOINT C.J. DETAIL NTS

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William R. ... 5-5-08
 CHIEF, BUREAU OF HIGHWAYS
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Judy ... 5/5/08
 CHIEF, DIVISION OF LAND DEVELOPMENT
 APPROVED: *[Signature]*
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

NO.	DATE	REVISION
HILLIS-CARNES ENGINEERING ASSOCIATES, INC. 10975 GUILFORD RD. - SUITE A ANNAPOLIS JUNCTION, MD 20701 PHONE: 410-465-4150 FAX: 410-465-4056		
BENCHMARK ENGINEERS • LAND SURVEYORS • PLANNERS ENGINEERING, INC. 8480 BALTIMORE NATIONAL PIKE • SUITE 418 ELLCOTT CITY, MARYLAND 21043 PHONE: 410-465-6105 FAX: 410-465-6644 E-MAIL: bei@bei-civilengineering.com		
DEVELOPER/CONTRACT PURCHASER: SECURITY DEVELOPMENT, L.L.C. P.O. BOX 417 ELLCOTT CITY, MARYLAND 21041 PHONE: (410) 465-4244		PROJECT: HAWES PROPERTY SUBDIVISION (RE-SUBDIVISION OF LOT 2) LOTS 1 & 5-10 AND O.S. LOTS 3 & 4 LOCATION: TAX MAP 24 - GRID 17 PARCEL 253 - ZONE: R-20 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND TITLE: RETAINING WALL CONSTRUCTION DETAILS DATE: MARCH 14, 2008 PROJECT NO. 05006-B SCALE: AS SHOWN DRAWING 14 OF 15
Des: RWS	Draft: AM	Check: JJC



TREE PLANTING DETAIL
CONTAINER GROWN

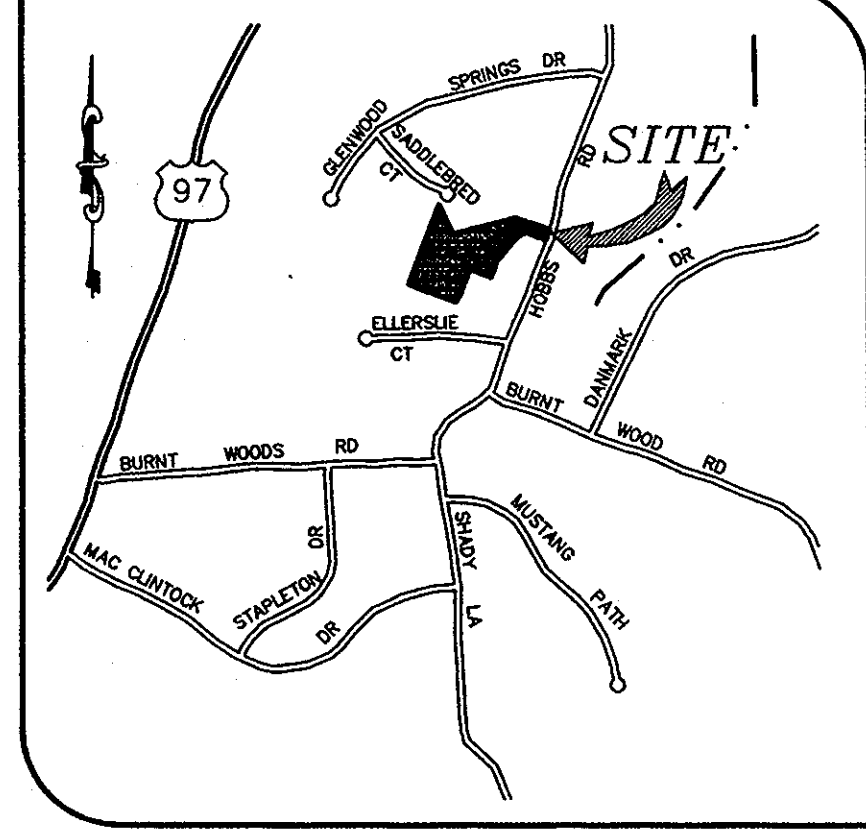
NOTE: THIS PLAN IS TO BE USED FOR FOREST CONSERVATION PURPOSES ONLY.

NOTE: - NO 15% TO 25% SLOPES OR SLOPES GREATER THAN 25% EXIST ON-SITE.
- THE EXISTING 1.98 ACRES AFFORESTATION IS TO SATISFY THE ON-SITE REQUIREMENTS FOR F-99-19, ROSEBAR PROPERTY.

AFFORESTATION PLANT LIST

QTY.	SPECIES	SHADE TOL.	MOIST. REGIME	WET. STATUS	MIN.O.C. SPACING	SIZE & REMARKS
	Acer rubrum Red Maple	VT	D-W	FAC	11'	CONT/BARE ROOT 3' - 5' HT. *
	Nyssa sylvatica Black Gum	T	M-W	FAC	11'	CONT/BARE ROOT 3' - 5' HT. *
	Prunus serotina Black Cherry	I	M-W	FAC+	11'	CONT/BARE ROOT 3' - 5' HT. *
	Quercus alba White Oak	I	M-W	FAC+	11'	CONT/BARE ROOT 3' - 5' HT. *
	Quercus rubra Red Oak	MT	D-M	UPL	11'	CONT/BARE ROOT 3' - 5' HT. *
	Quercus velutina Black Oak	MT	M	FAC+	11'	CONT/BARE ROOT 3' - 5' HT. *
	Sassafras albidum Common Sassafras	MT	D-M	FACU	11'	CONT/BARE ROOT 3' - 5' HT. *

NOTE: SEEDLINGS CAN BE USED IN PLACE OF THE 3' - 5' TREES, IN ORDER TO DETERMINE THE NUMBER OF SEEDLINGS REQUIRED, MULTIPLY THE QUANTITY LISTED BY 2. ALSO, MINIMUM ON-CENTER SPACING SHOULD BE REDUCED TO 8'.



VICINITY MAP
SCALE: 1" = 2000'

PLANTING SPECIFICATIONS AND NOTES

PLANT INSTALLATION

- THE PLANTING FIELD SHOULD BE PREPARED AS SPECIFIED (SEE DETAIL). NATIVE STOCKPILED SOILS SHOULD BE USED FOR SOIL MIX AND BACKFILL FOR PLANTING FIELD. AFTER PLANT INSTALLATION, MAKE SOILS EVENLY OVER THE PLANTING FIELD AND COVER WITH AT LEAST 4 INCHES OF MULCH. WATER, GENEROUSLY, TO SETTLE SOIL BACKFILLED AROUND TREES.
- PLANTING FIELD DIAMETERS SHOULD BE REDUCED OR PLANTING FIELD DISTURBANCE OF VEGETATION IN THE FOREST CONSERVATION EASEMENT EXCEPT AS PERMITTED BY THE HOWARD COUNTY FOREST CONSERVATION PROGRAM.
- CARE SHALL BE TAKEN WHEN DIGGING PLANTING FIELDS NOT TO CHOP THROUGH LARGER EXISTING ROOTS FROM EXISTING MATURE TREES. IF ROOTS GREATER THAN 1/2 INCH ARE ENCOUNTERED DIG AROUND THEM AS MUCH AS POSSIBLE TO MINIMIZE IMPACT TO EXISTING TREES. CONTAINER GROWN STOCK SHOULD BE REMOVED FROM THE CONTAINER AND ROOTS GENTLY LOOSENED FROM THE SOIL. IF THE ROOTS ENIRCLE THE ROOT BALL, SUBSTITUTION IS STRONGLY RECOMMENDED.
- SHAPED OR KINKED ROOT SYSTEMS SHOULD ALSO BE NOTED. ROOTS MAY NOT BE TRIMMED ON SITE, DUE TO THE INCREASED CHANCES OF SOIL BORNE DISEASES.
- FOR BALL AND BURLAP STOCK, PLACE TREE IN PREPARED PLANTING FIELD AND REMOVE WIRE AND/OR STRING FROM ROOT BALL, THEN PEEL BACK BURLAP TO BASE OF ROOT BALL AND COVER ENTIRE ROOT BALL WITH TOPSOIL MIXTURE INDICATED ABOVE AND WATER GENEROUSLY.
- THE CONTRACTOR SHALL EVENLY DISPERSE SPECIES IN GROUPS OF TWO (2) TO FIVE (5) PER SPECIES, OVER THE DESIGNATED AREA TO BE PLANTED WHILE MAINTAINING AN AVERAGE RANDOM SPACING OF INDIVIDUAL TREES AT PROPER SPACING INDICATED IN THE PLANT LIST.
- A STRAIGHT GRID PATTERN SPACING IS TO BE AVOIDED. TREES SHALL BE PLANTED ON AN AVERAGE SPACING AS INDICATED IN THE PLANT LIST TO OBTAIN A MORE NATURAL APPEARANCE.
- NEWLY PLANTED TREES MAY NEED WATERING AS MUCH AS ONE WEEK FOR THE ENTIRE GROWING SEASON, DUE TO THE VERY DEEP, WELL DRAINED NATURE OF THE NATIVE SOILS FOUND ON THIS SITE COMBINED WITH THE LOOSENESS OF THE BACKFILLED AREA WITHIN THE PLANTING FIELD. THE NEXT TWO YEARS MAY REQUIRE WATERING ONLY A FEW TIMES A YEAR DURING PERIODS OF DROUGHT. AFTER THAT PERIOD, TREES SHOULD ONLY NEED WATER IN SEVERE DROUGHTS. ANY WATERING PLAN SHOULD COMPENSATE FOR RECENT RAINFALL PATTERNS.

SITE PREPARATION AND SOILS

- IF NECESSARY, PROTECTIVE FENCING IS TO BE INSTALLED AS A FIRST ORDER OF BUSINESS PER PLAN LOCATIONS. PROTECTIVE FENCING WILL NOT BE NECESSARY ALONG THOSE PERIMETERS WHERE SILT FENCE HAS BEEN INSTALLED FOR SEDIMENT CONTROL.
- DISTURBANCE OF SOILS SHOULD BE LIMITED TO THE PLANTING FIELD FOR EACH PLANT.
- SOIL MIX FOR ALL PLANTS EXCEPT ERICACEOUS MATERIAL: SOIL MIX SHALL CONSIST OF EXISTING NATIVE TOPSOIL MIXTURE AT EACH PLANTING FIELD LOCATION INTO WHICH THE CONTRACTOR SHALL THOROUGHLY INCORPORATE 25% BY VOLUME OF COMPOSTED SLUDGE.
- SOIL MIX FOR ERICACEOUS MATERIAL: SOIL MIX SHALL CONSIST OF EXISTING NATIVE TOPSOIL MIXTURE AT EACH PLANTING FIELD LOCATION INTO WHICH THE CONTRACTOR SHALL THOROUGHLY INCORPORATE 25% BY VOLUME PEAT MOSS.
- ALL MIXING IN 3 AND 4 SHALL BE LIMITED TO CONTAINER GROWN OR BALL AND BURLAP STOCK ONLY AND CONFINED TO THE PLANTING FIELD AND IMMEDIATE ADJACENT SOIL SURFACE AREA AND SHALL BE DONE TO THE SATISFACTION OF THE DESIGN TEAM OR ENGINEER.

PLANT STORAGE AND INSPECTION

- FOR CONTAINER GROWN NURSERY STOCK, PLANTING SHOULD OCCUR WITHIN 2 WEEKS AFTER DELIVERY TO THE SITE.
- FOR BALL AND BURLAP NURSERY STOCK, PLANTING SHOULD OCCUR WITHIN THREE DAYS AFTER DELIVERY TO THE SITE.
- PLANTING STOCK SHOULD BE INSPECTED PRIOR TO PLANTING. PLANTS NOT CONFORMING TO STANDARD NURSERYMAN SPECIFICATIONS FOR SIZE, FORM, VIGOR, ROOTS, TRUNK WOUNDS, INSECTS AND DISEASE SHOULD BE REPLACED.
- UNTIL PLANTED, ALL PLANT STOCK SHALL BE KEPT IN A SHADED, COOL, AND MOISTENED ENVIRONMENT.

FERTILIZING

- DO NOT FERTILIZE NEWLY PLANTED TREES WITHIN THE FIRST GROWING SEASON AFTER PLANTING. DOING SO MAY CAUSE A SPURT OF CANOPY GROWTH WHICH THE ROOTS CANNOT SUPPORT AND ADDITIONAL SHOCK TO THE ALREADY DISTURBED PLANT.
- NOTHING SHOULD BE ADDED TO THE SOIL WITHOUT TESTING IT FIRST TO DETERMINE WHAT IS NEEDED.
- IF AND WHEN IT IS TIME TO FERTILIZE, ORGANIC FERTILIZERS ARE PREFERRED TO SYNTHETIC FERTILIZERS. BONE MEAL OR SEAWEED BASED PRODUCTS ARE AVAILABLE COMMERCIALY AND ARE RECOMMENDED. THEY HAVE THE ABILITY TO SUPPLY NUTRIENTS TO THE PLANT AS NEEDED WHILE MINIMIZING THE RISK OF EXCESS NUTRIENTS ENTERING THE FOREST SYSTEM AND WATER SUPPLY.

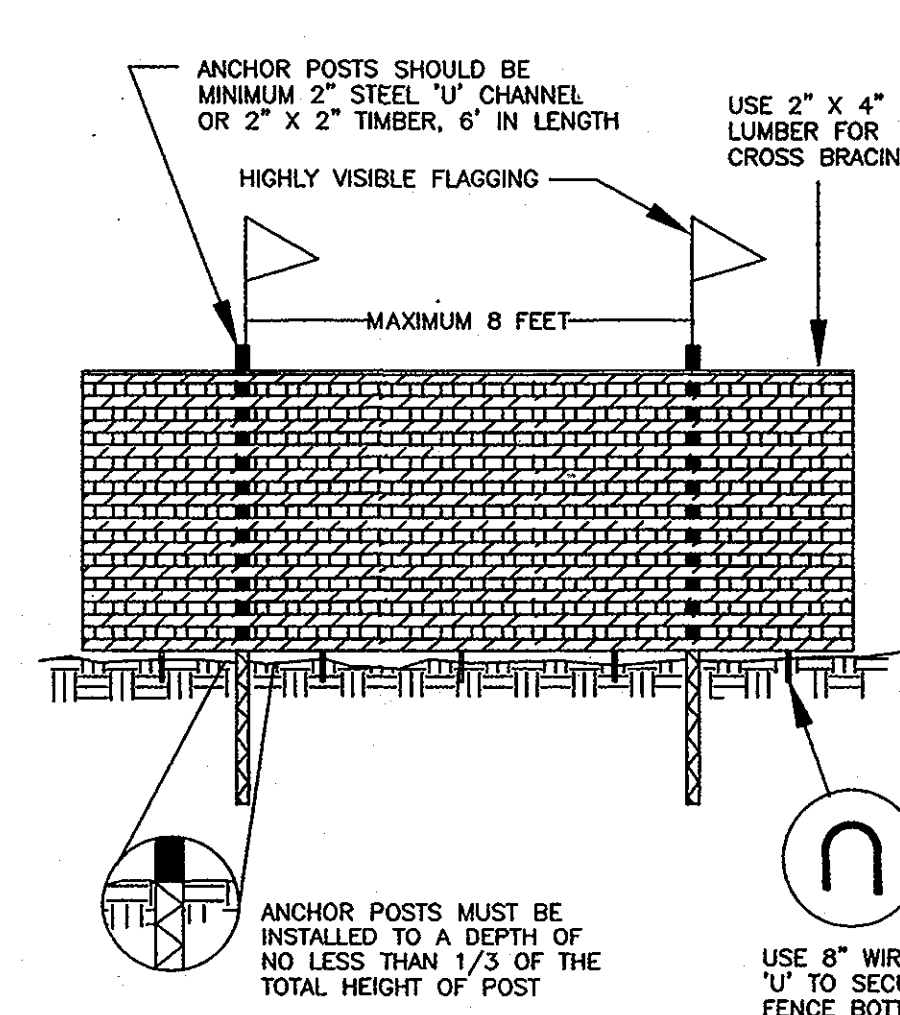
MAINTENANCE SCHEDULE

- ANNUAL MAINTENANCE DURING THE GROWING SEASON, FOR A MINIMUM OF TWO (2) YEAR PERIOD.
- INSPECT PLANTED STOCK FOR MORTALITY. REMOVE AND REPLACE ANY DEAD OR DISEASED PLANTINGS.
- EXPECT VOLUNTEER SEEDING OF NATIVE, LOCAL AND ENDEMIC VEGETATION TO OCCUR. DO NOT DISCOURAGE THIS GROWTH UNLESS IT NEGATIVELY EFFECTS THE PLANTED STOCK.
- MANUALLY REMOVE AGGRESSIVE, NOXIOUS, INVASIVE SPECIES AND ALL HERBACEOUS VEGETATION WITHIN A 3-FOOT RADIUS SURROUNDING THE PLANTED WOODY NURSERY STOCK.
- REMOVE AND DISPOSE OF ANY MAN-MADE TRASH, INCLUDING ITEMS CONTAINED WITHIN THE PLANTING AREA. DO NOT REMOVE DOWN AND DEAD MATERIAL NATURALLY OCCURRING UNLESS IT IS SMOTHERING PLANTING STOCK OR INTERFERES WITH THE REFORESTATION PLANTING.
- A 75 PERCENT SURVIVAL OF PLANTED STOCK MUST BE ACHIEVED AT THE END OF THE 24 MONTH MANAGEMENT PERIOD. IF NOT, ADDITIONAL PLANTINGS WILL BE REQUIRED TO BRING THE PLANTED STOCK SURVIVAL RATE UP TO 75%.

SUPERVISION

- ALL FOREST CONSERVATION ACTIVITIES SHALL BE DONE UNDER THE DIRECT SUPERVISION OF SOMEONE FROM THE DESIGN TEAM OR OTHER QUALIFIED PROFESSIONAL AS DETERMINED BY THE REQUIREMENTS OF COMAR 08.19.06.01 AND THE MARYLAND DEPARTMENT OF NATURAL RESOURCES, PUBLIC LANDS AND FORESTRY DIVISION.

PROTECTIVE FENCE DETAIL
BLAZE ORANGE PLASTIC MESH



NOTES:
1. FOREST PROTECTION DEVICE ONLY.
2. RETENTION AREA WILL BE SET AS PART OF THE REVIEW PROCESS.
3. BOUNDARIES OF RETENTION AREA SHOULD BE STAKED AND FLAGGED PRIOR TO INSTALLING DEVICE.
4. ROOT DAMAGE SHOULD BE AVOIDED.
5. PROTECTIVE SIGNAGE MAY ALSO BE USED.
6. DEVICE SHOULD BE MAINTAINED THROUGHOUT CONSTRUCTION.

FOREST CONSERVATION IN ACCORDANCE WITH SECTION 16.1202 OF THE FOREST CONSERVATION MANUAL SHALL BE PROVIDED BY PLACEMENT OF 2.51 ACRES OF REQUIRED AFFORESTATION INTO AN OFF-SITE EASEMENT ON PROPERTY IDENTIFIED AS THE ROSEBAR PROPERTY. PRESERVATION PARCEL A, LOCATED ON TAX MAP NO. 14 AND IDENTIFIED AS PARCEL 221, SITUATED ON THE WEST SIDE OF HOBBS ROAD, THE ROSEBAR FOREST CONSERVATION EASEMENT HAS BEEN SHOWN ON SHEET 18 OF SDP-97-115/NEW COLONY VILLAGE. DPZ HAS DETERMINED THAT A RED-LINE REVISION SHALL BE MADE TO SDP-97-115 TO SHOW 2.51 ACRES OF AFFORESTATION DEDUCTED FROM THE TOTAL FO EASEMENT LOCATED ON ROSEBAR. SURETY IN THE AMOUNT OF \$54,687.80 FOR 2.51 ACRES OF REQUIRED AFFORESTATION SHALL BE POSTED WITH THE DEVELOPERS AGREEMENT FOR THE FINAL PLAN, F-07-110/HAWES PROPERTY.

SOILS DESCRIPTIONS:

SYMBOL	DESCRIPTION
CgC2	CHESTER GRAVELLY SILT LOAM, 8% TO 15% SLOPES, MODERATELY ERODED --- TYPE B
ChA	CHESTER SILT LOAM, 0% TO 3% SLOPES --- TYPE B
ChB2	CHESTER SILT LOAM, 3% TO 8% SLOPES, MODERATELY ERODED --- TYPE B
GnA	GLENVILLE SILT LOAM, 0% TO 3% SLOPES --- TYPE C

MD DNR QUALIFIED PROFESSIONAL

Mohamed Tringa
MASHID TRINGA

OWNERS
ROSEBAR LIMITED PARTNERSHIP, LLLP (LOTS 10 THRU 12) & ROBERT WAYNE NEWSOME AND MELUSSA NEWSOME (LOT 13)
P.O. BOX 39
COLUMBIA, MARYLAND 21045
(410) 792-2100

OWNER/DEVELOPER

3804 NEW TOP LLL
1055 WEST JOPPA ROAD
APT. 330
TOWSON, MARYLAND 21204
ATTN: RUSSELL HAWES

NOTE: SIGNS ARE PERMANENT AND TO BE MOUNTED ON DURABLE POSTS OR POLES (4"x4" PRESSURE TREATED LUMBER OR 2 1/2" DIAMETER GALVANIZED OR ALUMINUM POST, OR EQUIVALENT).

APPROVED: DEPARTMENT OF PUBLIC WORKS
Walter R. Munn 4/16/12
CHIEF BUREAU OF HIGHWAYS
APPROVED: DEPARTMENT OF PLANNING AND ZONING
Kurt Schlabach 4/30/12
CHIEF DIVISION OF LAND DEVELOPMENT
John J. Williams 4/27/12
CHIEF, DEVELOPMENT ENGINEERING DIVISION

FOREST CONSERVATION AREA
REFORESTATION PROJECT
TREES FOR YOUR FUTURE

SIGNAGE DETAIL
NOT TO SCALE

FOREST CONSERVATION WORKSHEET

NET TRACT AREA:

A. Total tract area	=5.61
B. Area within 100 year floodplain	=0.00
C. Area to remain in agricultural production	=0.00
D. Net tract area	=5.61

LAND USE CATEGORY:
(From table 3.2.1, page 40, Manual)
Input the number "1" under the appropriate land use zoning, and limit to only one entry.

ARA	MOR	IDA	HR	MPD	CIA
0	0	0	1	0	0

E. Afforestation Threshold..... 15% x D = 0.84
F. Conservation Threshold..... 20% x D = 1.12

EXISTING FOREST COVER:

G. Existing forest cover (including floodplain)	=2.20
H. Area of forest above afforestation threshold	=1.36
I. Area of forest above conservation threshold	=1.08

BREAK EVEN POINT:

J. Forest retention above threshold with no mitigation	=1.34
K. Clearing permitted without mitigation	=0.86

PROPOSED FOREST CLEARINGS:

L. Total area of forest to be cleared	=5.20
M. Total area of forest to be retained	=0.00

PLANTING REQUIREMENTS:

N. Reforestation for clearing above conservation threshold	=0.27
O. Reforestation for clearing below conservation threshold	=2.24
P. Credit for retention above conservation threshold	=0.00
Q. Total reforestation required	=2.51
R. Total afforestation required	=0.00
T. Total reforestation and afforestation required	=2.51

LEGEND

- EXISTING SEPTIC EASEMENT
- PROPOSED 24' USE-IN-COMMON DRIVEWAY EASEMENT
- FOREST CONSERVATION EASEMENT
- FOREST CONSERVATION EASEMENT (REFORESTATION)
- EXISTING WELL (DUG PER PERG PLAT SIGNED BY HOWARD COUNTY HEALTH OFFICER ON 7/1/98)
- FOREST CONSERVATION SIGNAGE
- TREE PROTECTIVE FENCING

date	MAR 2000
project	98087
illustration	engineering
scale	SD
approval	SD
revision	RH

date	
description	
revisions	
no.	

HAWES PROPERTY
 FOREST CONSERVATION EASEMENT GRANTED FROM
 ROSEBAR PROPERTY, PRESERVATION PARCEL A
 TAX MAP 14 - PARCEL 221 - BLOCK 23
 HOWARD COUNTY, MARYLAND
 FOURTH ELECTION DISTRICT
OFF-SITE REFORESTATION PLAN

MILDENBERG & ASSOC., INC.
 Engineers Planners Surveyors
 5072 Dorsey Hall Drive, Suite 202, Blittsott City, Maryland 21042
 (410) 687-0846 ext. 7001/691-5551/691-5552

