

GENERAL NOTES

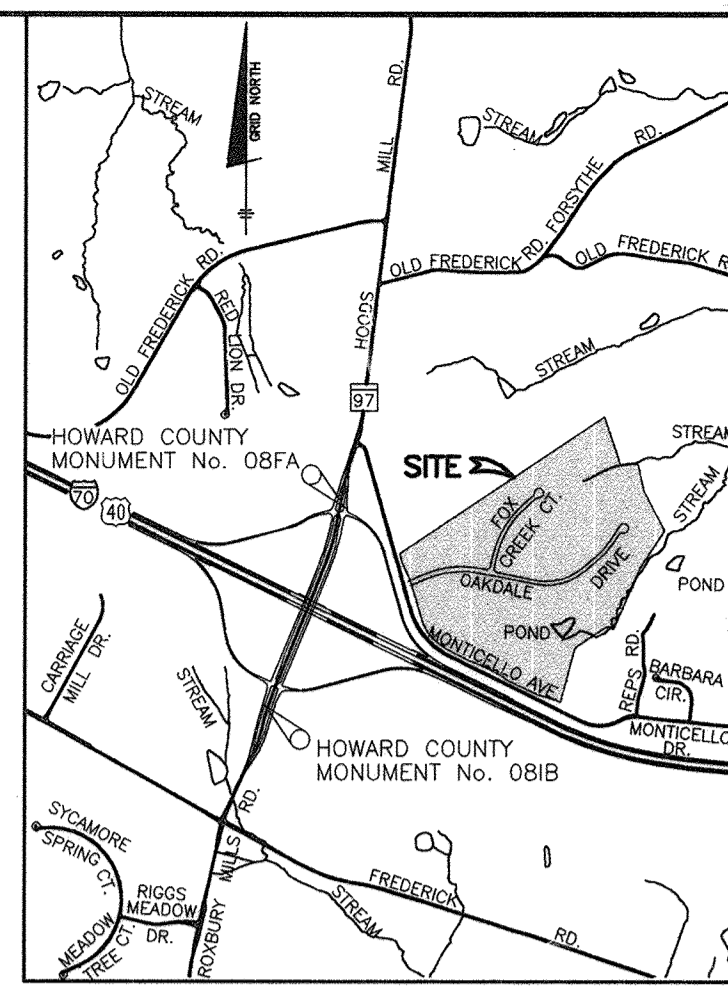
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARD AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK.
- PROJECT BACKGROUND:
 - LOCATION: TAX MAP: B, BLOCK 18, PARCEL 110
 - ZONING: RC-DEO
 - ELECTION DISTRICT: 4th
 - TOTAL TRACT AREA: 103.13± AC.
 - NUMBER OF PROPOSED LOTS: 49
 - NUMBER OF PROPOSED OPEN SPACE LOT: 1
 - NUMBER OF PROPOSED NON-BUILDABLE PRESERVATION PARCELS: 2
 - NUMBER OF PROPOSED NON-BUILDABLE PARCELS: 2
 - NUMBER OF PROPOSED BUILDABLE PRESERVATION PARCELS: 2
 - D.P.Z. REFERENCE FILE: WP-99-24 SP-99-01 RE-00-01
 - PRELIMINARY EQUIVALENT SKETCH PLAN APPROVED ON FEB. 1, 1999.
- TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST 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.
- TOPOGRAPHY SHOWN HEREON WAS TAKEN FROM FIELD RUN SURVEY DONE BY TSA GROUP, INC., DATED 6/97 AND SUPPLEMENTED WITH TOPOGRAPHIC FILE INFORMATION PURCHASED FROM HOWARD COUNTY GEOGRAPHICAL INFORMATION SERVICES. CONTOURS SHOWN ARE 2 FOOT INTERVALS.
- COORDINATES ARE BASED ON NAD 83, MARYLAND STATE PLAN GRID AS PROJECTED BY HOWARD CO. GEODETIC CONTROL STATIONS Nos. 08FA AND 08IB.
- THE PROJECT IS NOT WITHIN THE METROPOLITAN DISTRICT. WATER AND SEWER FOR THIS PROJECT SHALL BE PRIVATE AND WILL BE PROVIDED ON THE LOTS.
- WATER QUALITY AND QUANTITY TREATMENT FOR THE PROPOSED ROADWAY AND LOTS IS BEING PROVIDED BY EXTENDED DETENTION AND RETENTION FACILITIES. THESE FACILITIES WILL BE PRIVATELY OWNED AND JOINTLY MAINTAINED BY HOWARD COUNTY AND THE HOMEOWNERS ASSOCIATION.
- THE FLOODPLAIN LIMIT SHOWN HAS BEEN CALCULATED BY TSA GROUP, INC., DATED JUNE, 1998, AND APPROVED ON FEB. 1, 1999 (SP-99-01).
- WETLAND LIMITS SHOWN HEREON ARE BASED ON A DELINEATION BY ECO-SCIENCE PROFESSIONALS, INC., DATED JULY, 1998 AND WAS APPROVED ON FEB. 1, 1999.
- ADEQUATE PUBLIC FACILITIES ORDINANCE TRAFFIC ANALYSIS WAS PREPARED BY LEE CUNNINGHAM & ASSOCIATES, DATED JULY, 1998 AND APPROVED ON FEB. 1, 1999.
- NOISE STUDY WAS PREPARED BY BENCHMARK ENGINEERING, INC. AND DATED SEPT. 3, 1998 AND APPROVED FEB. 1, 1999 (SP-99-01).
- THE GEOTECHNICAL REPORT FOR THIS PROJECT WAS PREPARED BY HILLIS-CARNES AND ASSOCIATES, DATED JUNE, 1998.
- EXISTING UTILITIES SHOWN ARE TAKEN FROM RECORD INFORMATION AND FIELD LOCATIONS. CONTRACTOR TO VERIFY LOCATION PRIOR TO STARTING CONSTRUCTION.
- FOREST STAND DELINEATION WAS PREPARED BY ECO-SCIENCE PROFESSIONALS, INC., DATED JULY, 1998 AND APPROVED ON FEB. 1, 1999 (SP-99-01).
- NO DISTURBANCE SHALL OCCUR IN THE WETLANDS, 25' WETLAND BUFFER, 75' STREAM BUFFER OR 100-YEAR FLOODPLAIN LIMITS EXCEPT AS APPROVED AS A PART OF THESE PLANS.
- A SIGHT DISTANCE ANALYSIS FOR MONTICELLO AVENUE AND OAKDALE DRIVE WAS PROVIDED TO THE DEVELOPMENT ENGINEERING DIVISION AND APPROVED AS PART OF THE PRELIMINARY EQUIVALENT SKETCH PLAN (SP-99-01).
- TO THE BEST OF OWNERS KNOWLEDGE, THERE ARE NO CEMETERY LOCATIONS ONSITE.
- ALL SEWERAGE EASEMENTS LOCATED WITHIN 50 FEET OF THE PROPOSED ROADWAY MUST BE STAKED OUT PRIOR TO SITE GRADING. GRADING OPERATION MUST BE SUPERVISED BY THE APPLICANT TO INSURE NO GRADING TAKES PLACE WITHIN 20 FEET OF SEWERAGE EASEMENT WITHOUT PRIOR NOTIFICATION TO THE HOWARD COUNTY HEALTH DEPARTMENT.
- DRIVEWAYS THAT SERVE ONE RESIDENCE SHALL BE PROVIDED PRIOR TO RESIDENTIAL OCCUPANCY. DRIVEWAYS THAT SERVE MULTIPLE RESIDENCES SHALL BE PROVIDED PRIOR TO BUILDING PERMIT ISSUANCE IN ORDER TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
 - a) WIDTH - 12' (14' SERVING MORE THAN ONE RESIDENCE).
 - b) SURFACE - 6" OF COMPACT CRUSHER RUN BASE WITH TAR AND CHIP COATING.
 - c) GEOMETRY - MAX. 15% GRADE, MAX. 10% GRADE CHANGE AND MIN. 45° TURNING RADIUS.
 - d) STRUCTURES (CULVERTS/BRIDGES) CAPABLE OF SUPPORTING 25 GROSS TONS (125 LOADING).
 - e) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100-YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE.
 - f) STRUCTURE CLEARANCES - MINIMUM 12 FEET.
 - g) MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.
- ALL ROAD FILLS SHALL BE COMPACTED TO 95% AS DETERMINED BY AASHTO T-180.
- ON NOVEMBER 3, 1998, THE DIRECTOR OF PLANNING AND ZONING REVIEWED AND DENIED WAIVER PETITION (WP-99-24) A WAIVER TO SECTION 16.120(b)(5) TO ALLOW NOISE LEVELS ADJACENT TO A PROPOSED DWELLING TO EXCEED THE STANDARDS SET IN THE DESIGN MANUAL. AS A CONSEQUENCE OF WP-99-24, RESIDENTIAL DEVELOPMENT ON PRESERVATION PARCEL "D" IS PERMITTED ONLY IN THE VICINITY OF OAKDALE DRIVE AND NOT WITHIN THE NOISE ZONE ASSOCIATED WITH I-70 UNLESS ADEQUATE NOISE MITIGATION IS PROVIDED.
- THE MARYLAND DEPARTMENT OF THE ENVIRONMENT APPLICATION TRACKING No. IS 99-NT-0115/189962677.
- THE WMA No. IS 99-PO-2024.
- THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING IN THE AREA OF ANY OVERHEAD POWERLINES. FOREST CONSERVATION OBLIGATIONS ARE MET BY LOCAL RETENTION ON-SITE (\$49,000.00) PLUS 10.5 AC. RE-PLANTING ON-SITE (\$19,046.00) FOR A TOTAL DEVELOPER'S AGREEMENT SURETY FOR FOREST CONSERVATION OF \$68,046.00.
- LANDSCAPE SURETY WITH DEVELOPER'S AGREEMENT IS IN THE AMOUNT OF \$91,850.00.

MONTICELLO

4th ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

FINAL ROAD, STORMWATER MANAGEMENT AND STORM DRAINAGE CONSTRUCTION PLAN

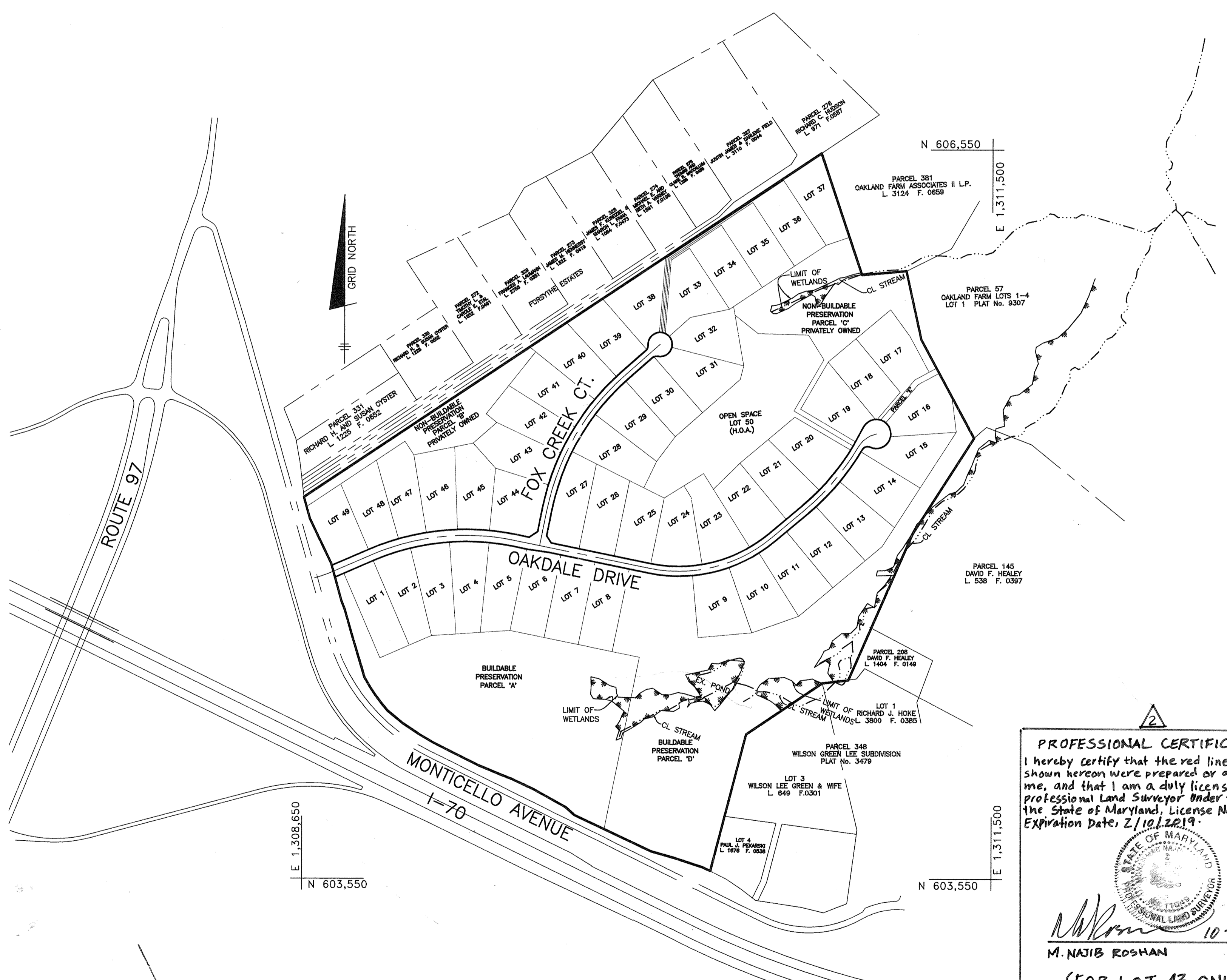


VICINITY MAP
SCALE: 1" = 2000'

BENCH MARKS (NAD83)

Ho Co. No. 08FA
STAMPED BRASS DISK SET ON TOP OF CONCRETE BASE IN THE MEDIAN OF ROUTE 97, NORTH OF THE ENTRANCE AND EXIT RAMP TO WESTBOUND INTERSTATE I-70 AND 50.4' NORTH OF AN I-70 SIGN, 10.8' WEST OF THE EDGE OF PAVING, 26.8' EAST OF THE "X" CUT IN CENTER OF GUARD RAIL POST AND 108' FROM THE NORTH END OF THE GUARD RAIL.
N 605,728.9924' E 1,308,071.0550' ELEV. 624.75'

Ho Co. No. 08IB
STAMPED BRASS DISK SET ON TOP OF CONCRETE BASE IN THE MEDIAN OF ROUTE 97, SOUTH OF THE ENTRANCE AND EXIT RAMP TO EASTBOUND INTERSTATE I-70 AND 78.8' NORTH OF THE SOUTH END OF THE GUARD RAIL, 15.4' EAST OF THE EDGE OF PAVING, 36.9' WEST OF THE GUARD RAIL AND 57.7' SOUTHWEST OF A GUARD RAIL POST.
N 603,342.5001' E 1,307,205.8326' ELEV. 596.55'



RIGHT OF WAY ELEVATION CHART NAD 83

R/WPT. NO.	DESCRIPTION	ELEVATION
200	CONC. MON. SET	637.21'
201	REBAR & CAP	640.58'
202	REBAR & CAP	638.54'
203	CONC. MON. SET	639.44'
204	REBAR & CAP	639.86'
205	REBAR & CAP	639.61'
206	REBAR & CAP	634.91'
207	REBAR & CAP	623.89'
208	P.K. NAIL SET	624.18'
209	P.K. NAIL SET	624.06'
210	REBAR & CAP	624.09'
211	REBAR & CAP	634.86'
212	REBAR & CAP	639.25'
213	REBAR & CAP	639.76'
214	REBAR & CAP	640.60'
215	REBAR & CAP	626.54'
216	REBAR & CAP	613.95'
217	REBAR & CAP	604.73'
218	REBAR & CAP	587.32'
219	REBAR & CAP	585.60'
220	REBAR & CAP	584.76'
221	REBAR & CAP	586.85'
222	REBAR & CAP	604.91'
223	REBAR & CAP	614.57'
224	REBAR & CAP	626.52'
225	REBAR & CAP	640.26'
226	REBAR & CAP	640.36'
227	REBAR & CAP	638.27'
228	REBAR & CAP	641.51'
229	REBAR & CAP	636.76'

SHEET INDEX

SHEET NO.	DESCRIPTION
1	COVER SHEET
2-4	ROAD AND STORM DRAIN PLAN
5-6	ROAD PROFILES
7-9	STORM DRAIN PROFILES
10-12	GRADING AND SEDIMENT & EROSION CONTROL PLAN
13	SEDIMENT AND EROSION CONTROL NOTES & DETAILS
14	STORM DRAIN DRAINAGE AREA MAP
15-16	STORM WATER MANAGEMENT NOTES AND DETAILS
17	SEDIMENT AND EROSION CONTROL & STORMWATER MANAGEMENT NOTES AND DETAILS
18	NOISE MITIGATION NOTES AND DETAILS
19	LANDSCAPE PLAN
20	FOREST CONSERVATION PLAN
21	FOREST CONSERVATION AND LANDSCAPE NOTES & DETAILS
22	LOT 43 SITE SWM, GRADING AND SEDIMENT CONTROL PLAN

PROFESSIONAL CERTIFICATION

I hereby certify that the red line markups shown hereon were prepared or approved by me, and that I am a duly licensed Professional Land Surveyor under the laws of the State of Maryland, License No. 11049, Expiration Date: 2/10/2019.

M. Najib Roshan 10-14/18
M. NAJIB ROSHAN DATE
(FOR LOT 43 ONLY)

DATE	REVISION	BY
9/15/18	ADDED SHEET 22 FOR NEW IMPROVEMENTS TO LOT 43	NJR & ASSOCIATES
2-19-03	REVISED PER AS-BUILT CONDITIONS	

BENCHMARK ENGINEERING, INC.
ENGINEERS • LAND SURVEYORS • PLANNERS

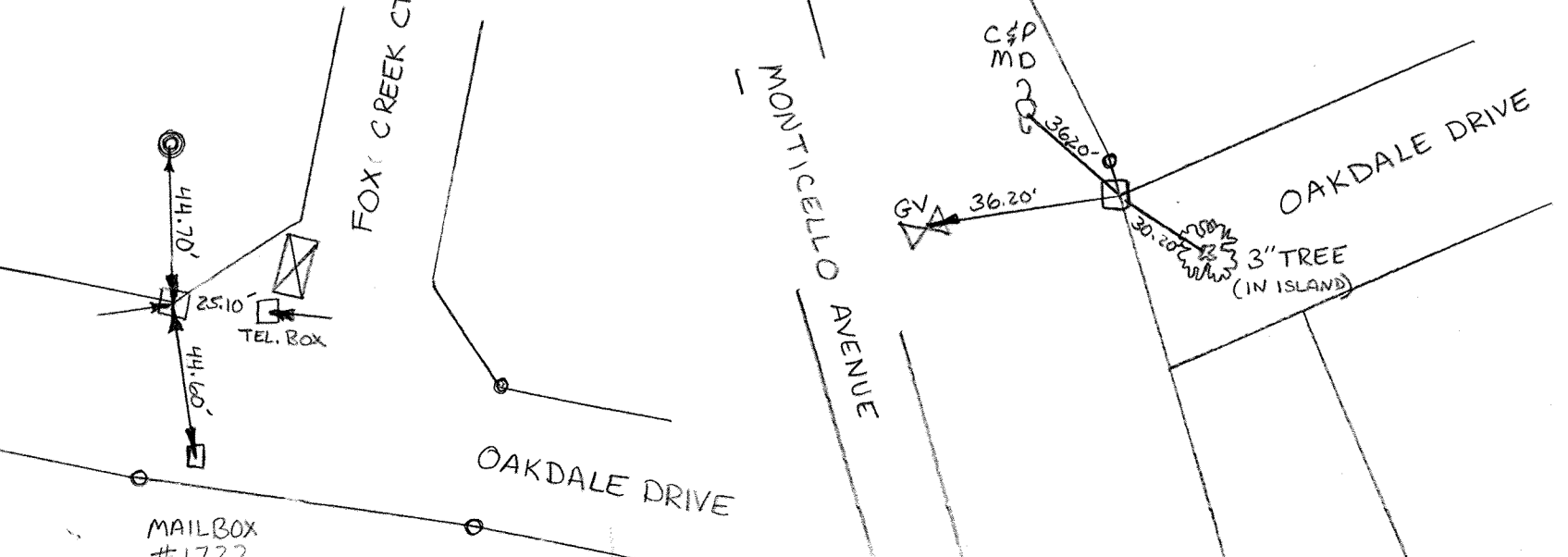
8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MARYLAND 21043
PHONE: 410-465-8105 FAX: 410-465-6644

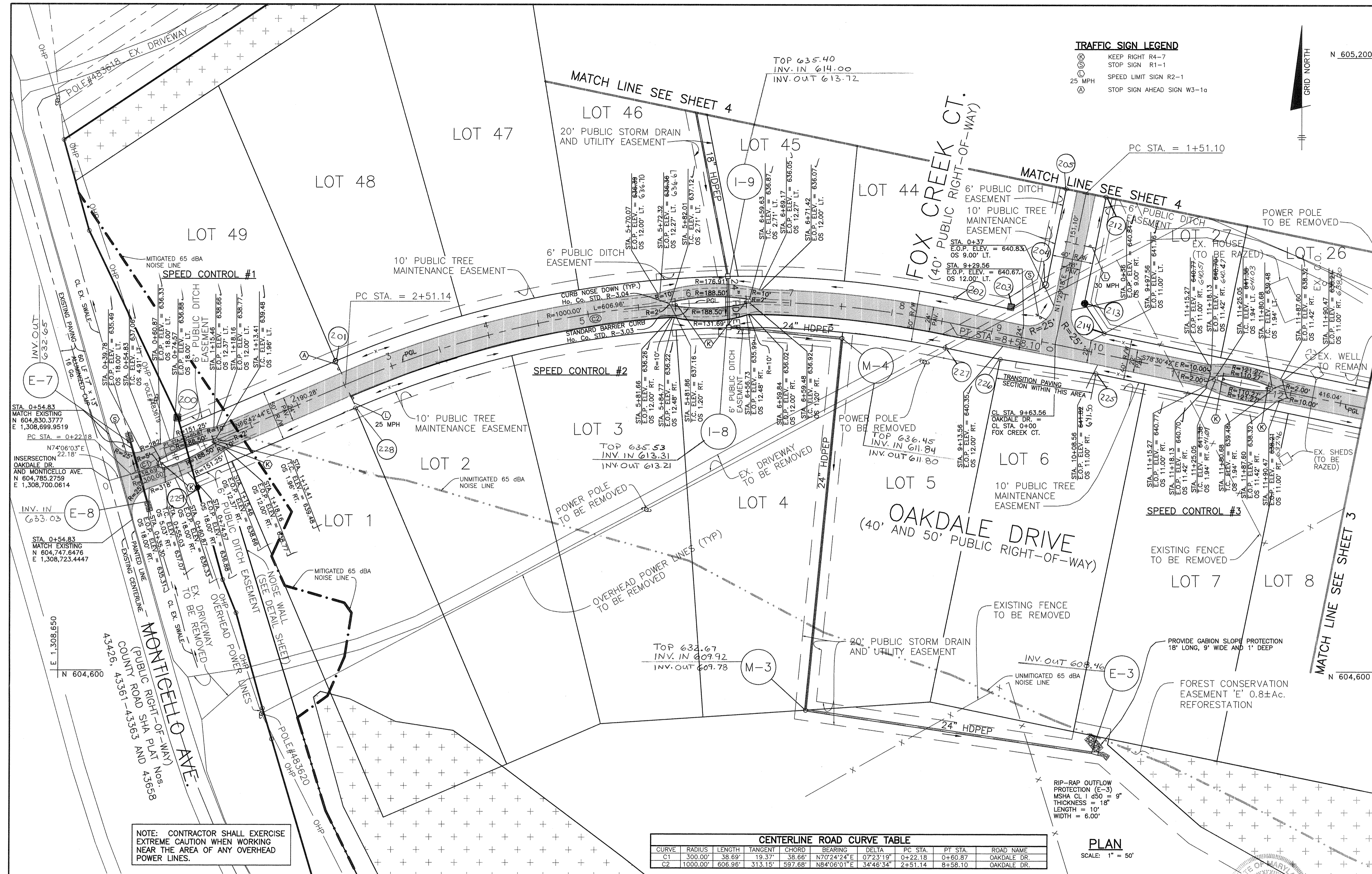
Donald Maas
DONALD MAAS
PROFESSIONAL ENGINEER

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Donato 9/14/99
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Cindy Hunter 7/27/99
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

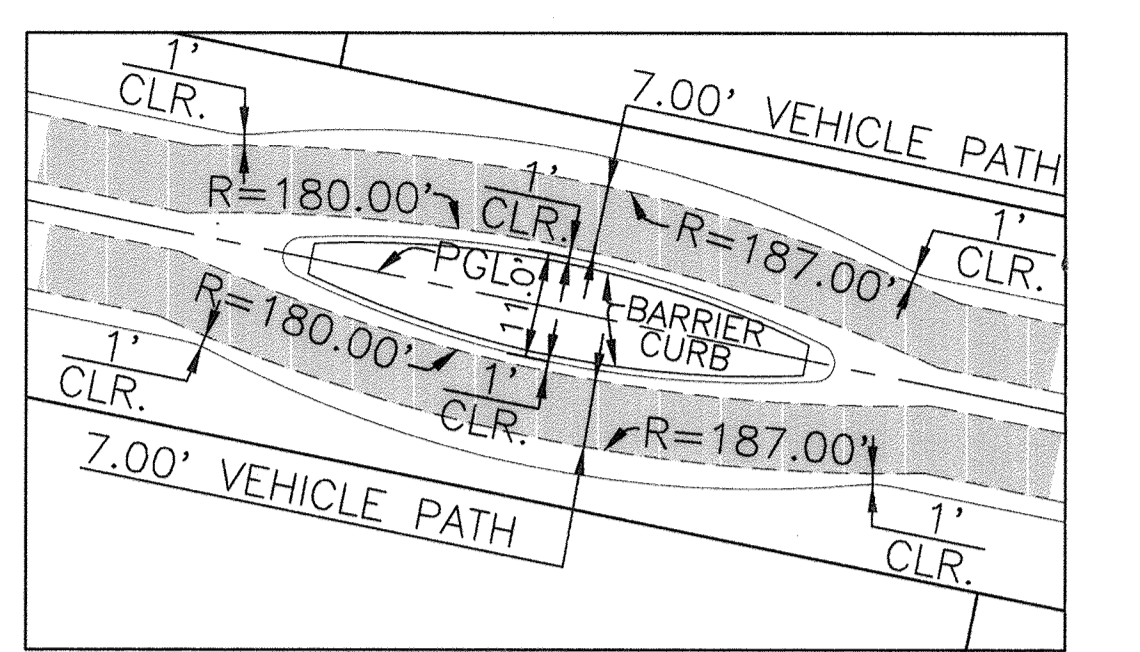
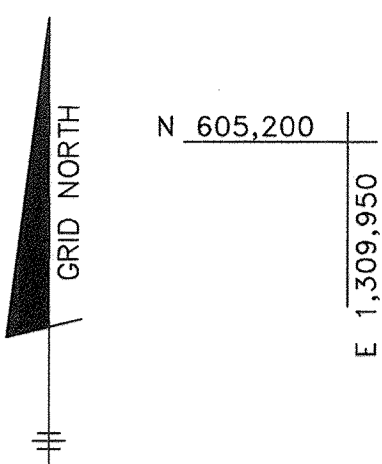
Mike Damman 9/22/99
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



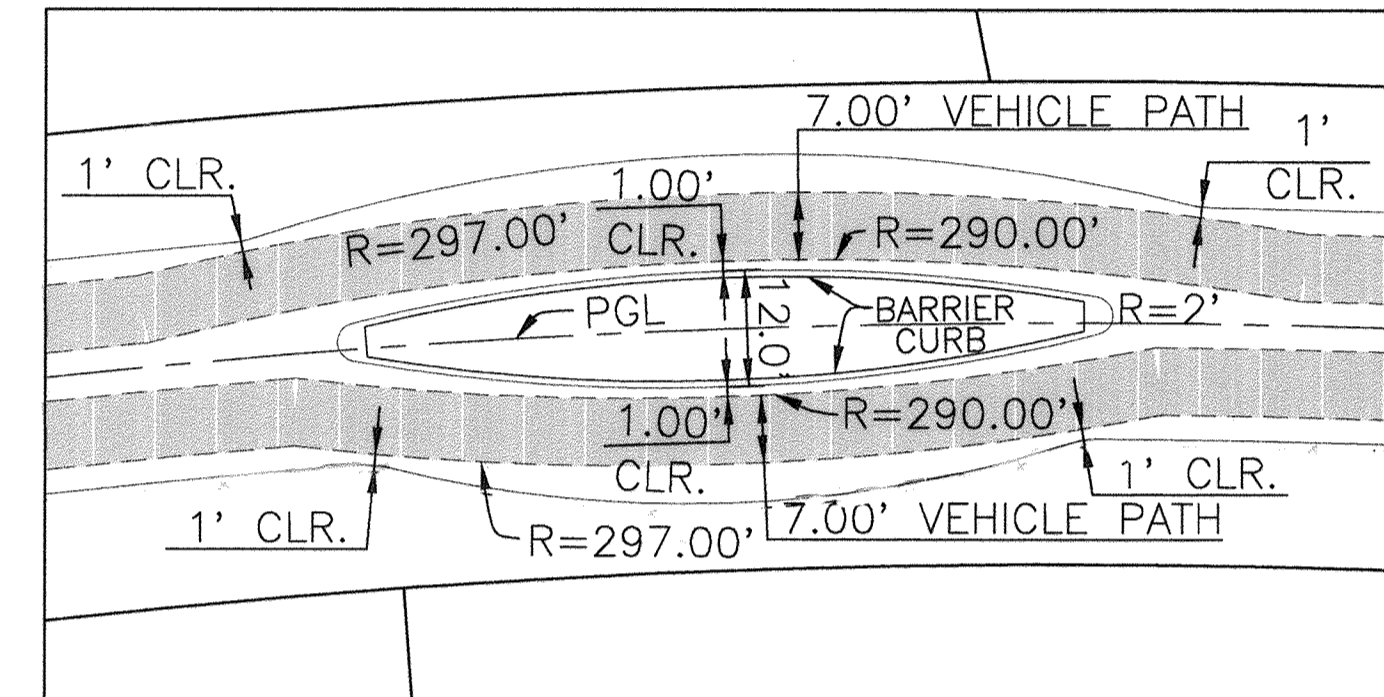


TRAFFIC SIGN LEGEND

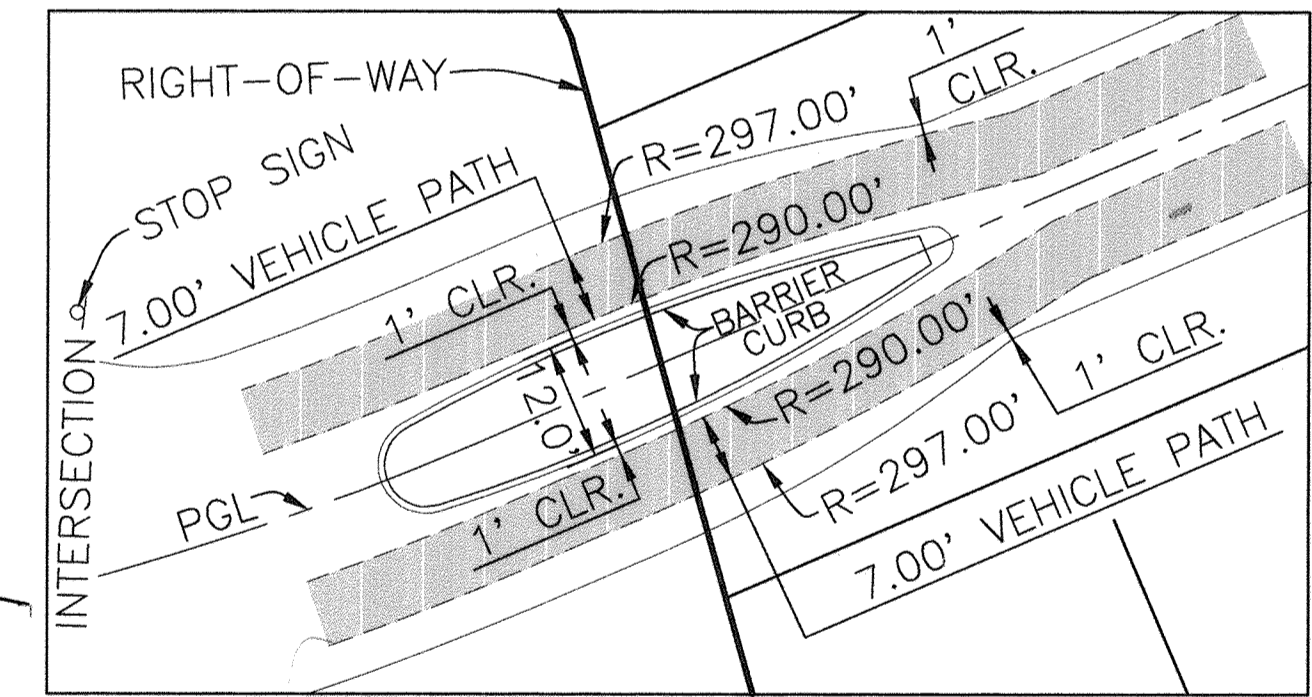
- KEEP RIGHT R4-7
- STOP SIGN R1-1
- SPEED LIMIT SIGN R2-1
- STOP SIGN AHEAD SIGN W3-1a



SPEED CONTROL #3
SCALE: 1" = 20'



SPEED CONTROL #2
SCALE: 1" = 20'



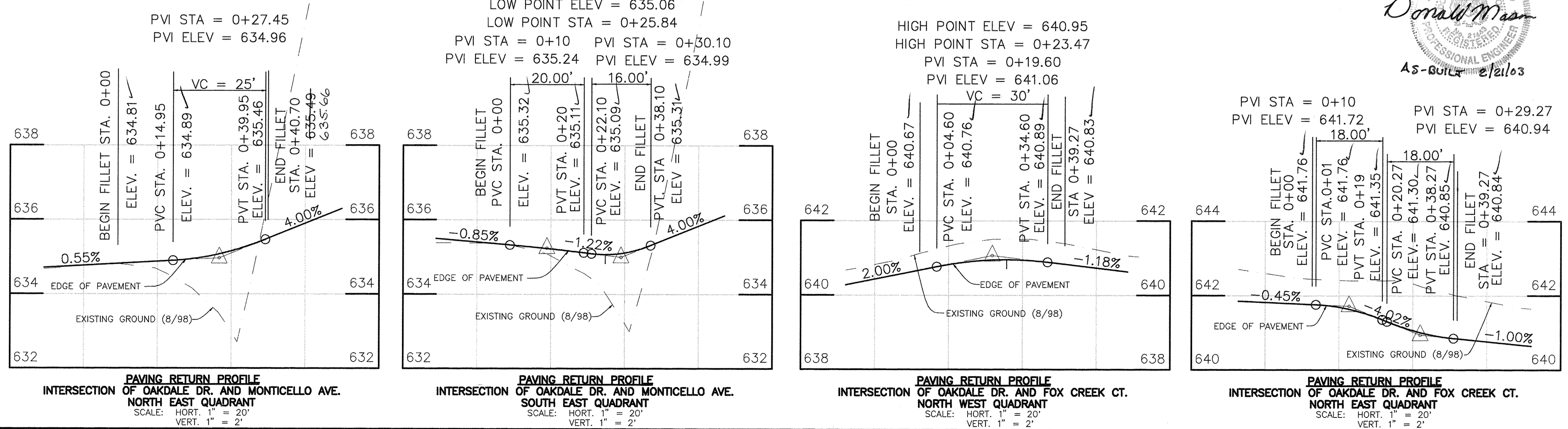
SPEED CONTROL #1
SCALE: 1" = 20'

CENTERLINE ROAD CURVE TABLE

CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA	PC STA.	PY STA.	ROAD NAME
C1	300.00'	38.69'	19.37'	38.66'	N70°24'24"E	07°23'19"	0+22.18	0+60.87	OAKDALE DR.
C2	1000.00'	606.96'	313.15'	597.68'	N84°06'01"E	34°46'34"	2+51.14	8+58.10	OAKDALE DR.

PLAN
SCALE: 1" = 50'

NOTE: CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING NEAR THE AREA OF ANY OVERHEAD POWER LINES.



6-3-03	REMOVED FLUSH CURB	
2-19-03	REVISED PER AS-BUILT CONDITIONS	
NO.	DATE	REVISION

BENCHMARK ENGINEERING, INC.
ENGINEERS • LAND SURVEYORS • PLANNERS
8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 FAX: 410-465-6644

OWNER/DEVELOPER:
HOODS MILL CORPORATION
C/O P.O. BOX 417
ELLICOTT CITY, MD 21041
410-465-4244

PROJECT:
MONTICELLO
LOTS 1-50, PRESERVATION PARCELS "A" THRU "D" AND NON-BUILDABLE PARCEL "E"

LOCATION:
TAX MAP 8 - BLOCK 18 - PARCEL 110
4TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

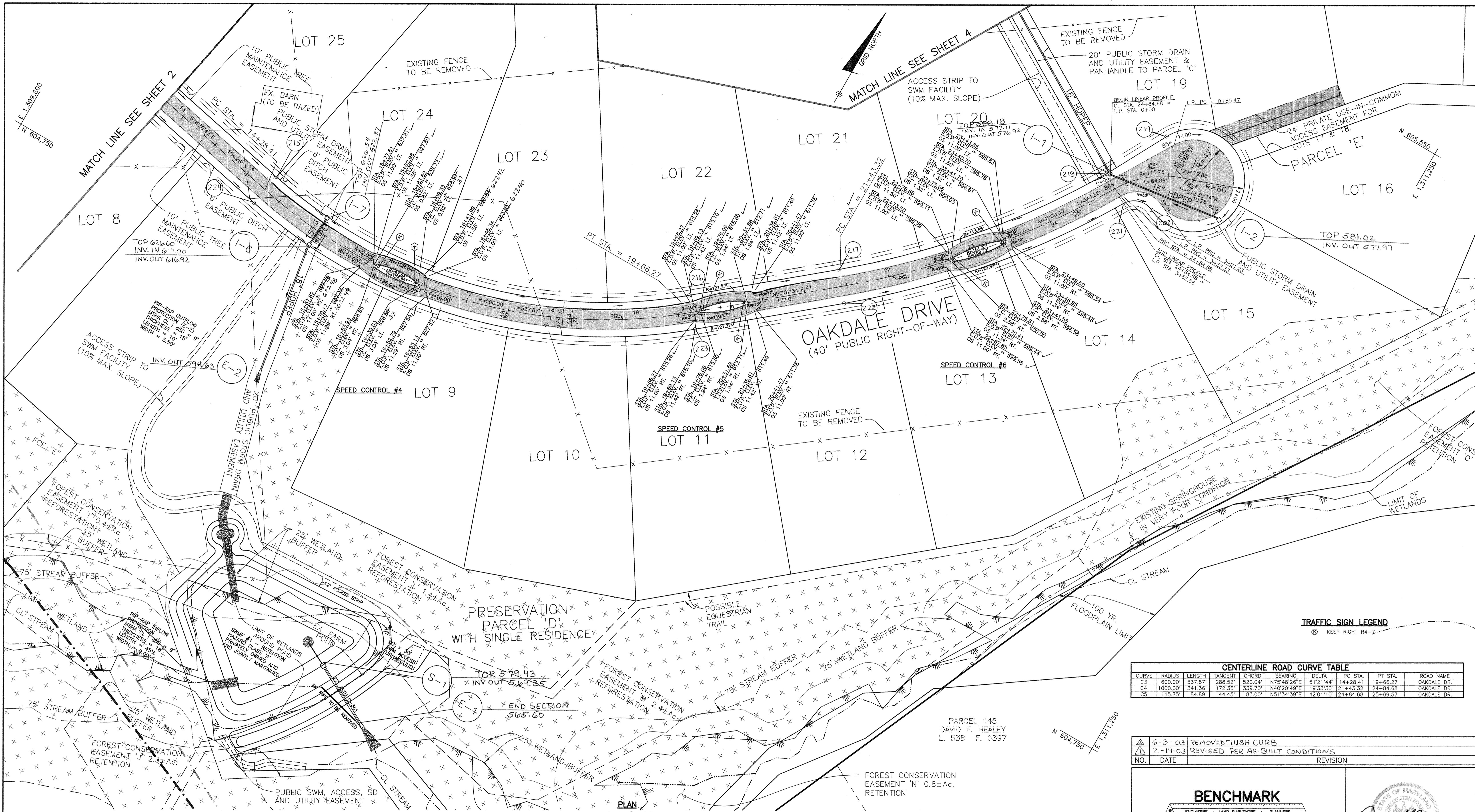
TITLE:
ROAD AND STORM DRAIN PLAN

DATE: MARCH, 1999 PROJECT NO. 1122
DESIGN: JMC DRAFT: JMC SCALE: AS SHOWN DRAWING 2 OF 22

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Quaker 9-14-99
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Cindy Harriott 9/27/99
CHIEF, DIVISION OF LAND DEVELOPMENT

Chris Zimmerman 9/27/99
CHIEF, DEVELOPMENT ENGINEERING DIVISION



CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA	PC STA.	PT STA.	ROAD NAME
C3	600.00'	537.87'	288.52'	520.04'	N75°48'26"E	51°21'44"	14+28.41	19+66.27	OAKDALE DR.
C4	1000.00'	341.36'	172.36'	339.70'	N40°20'49"E	19°33'30"	21+43.32	24+84.68	OAKDALE DR.
C5	115.75'	84.89'	44.45'	83.00'	N51°34'39"E	42°01'10"	24+84.68	25+69.57	OAKDALE DR.

NO.	DATE	REVISION
6-3-03		REMOVED FLUSH CURB
2-19-03		REVISED PER AS-BUILT CONDITIONS

BENCHMARK ENGINEERING, INC.

ENGINEERS • LAND SURVEYORS • PLANNERS

8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MARYLAND 21043
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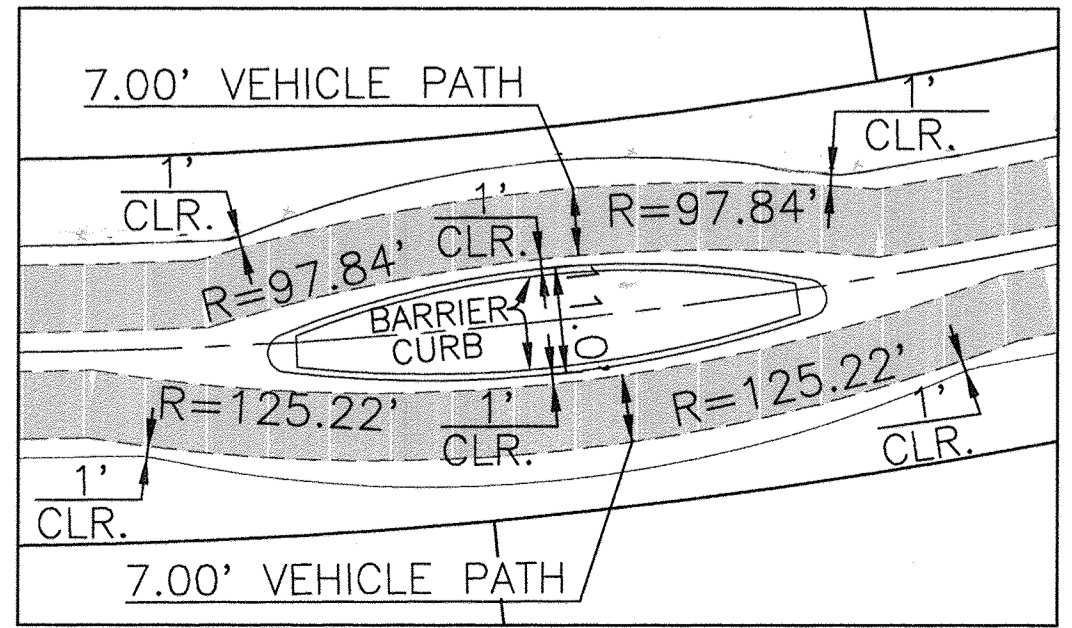
PROJECT:
MONTICELLO
LOTS 1-50, PRESERVATION PARCELS "A" THRU "D" AND NON-BUILDABLE PARCEL "E"

LOCATION:
TAX MAP 8 - BLOCK 18 - PARCEL 110
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HOWARD COUNTY, MARYLAND

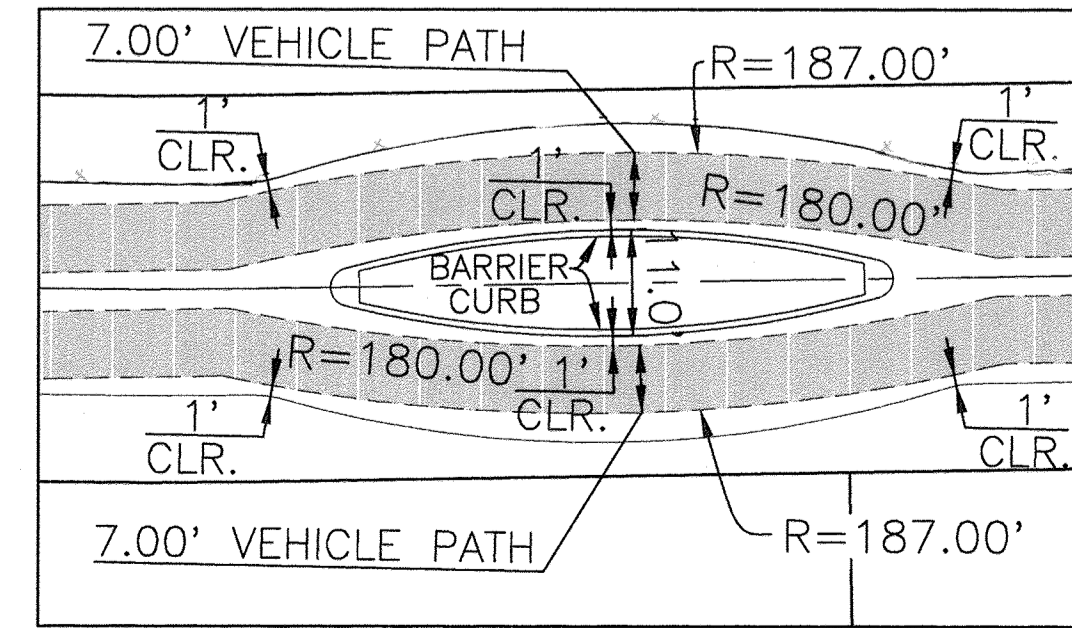
TITLE:
ROAD AND STORM DRAIN PLAN

DATE: MARCH, 1999
PROJECT NO.: 1122

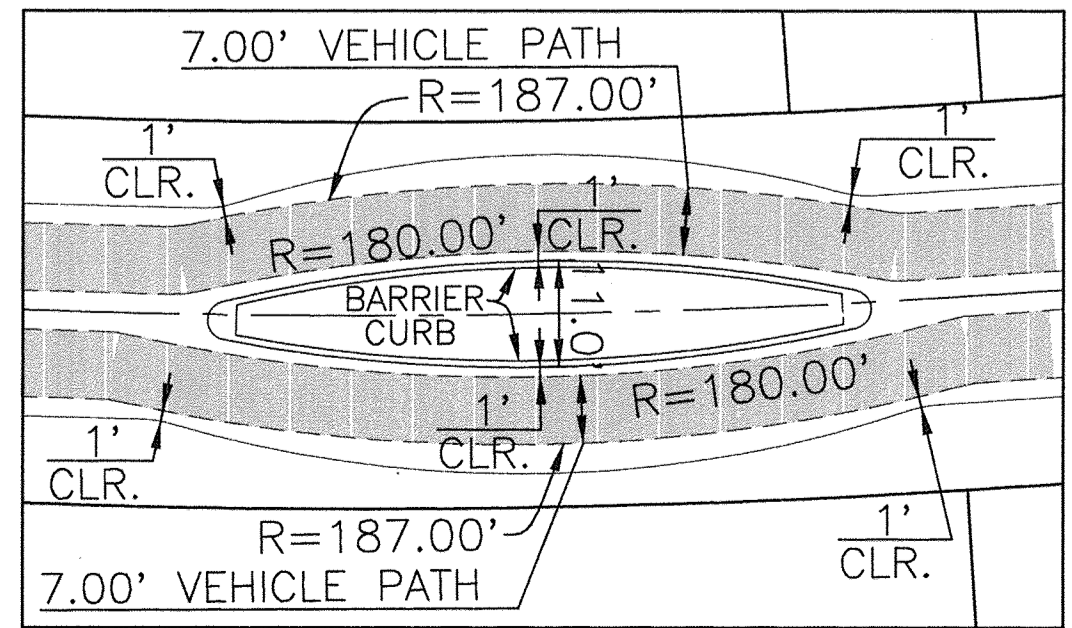
DESIGN: JMC **DRAFT:** JMC **SCALE:** AS SHOWN **DRAWING:** 3 OF 22



SPEED CONTROL #4
SCALE: 1" = 20'



SPEED CONTROL #5
SCALE: 1" = 20'

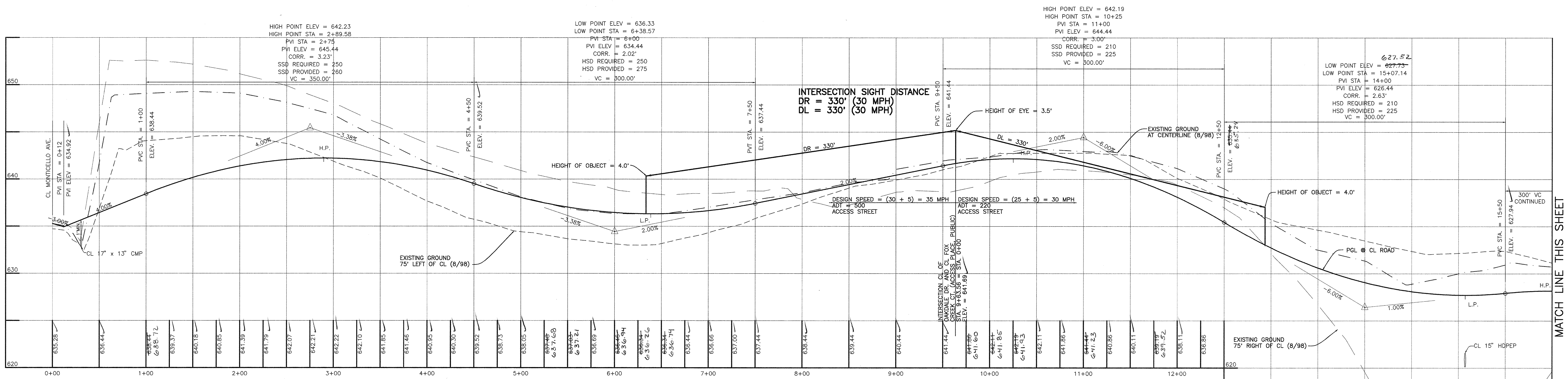


SPEED CONTROL #6
SCALE: 1" = 20'

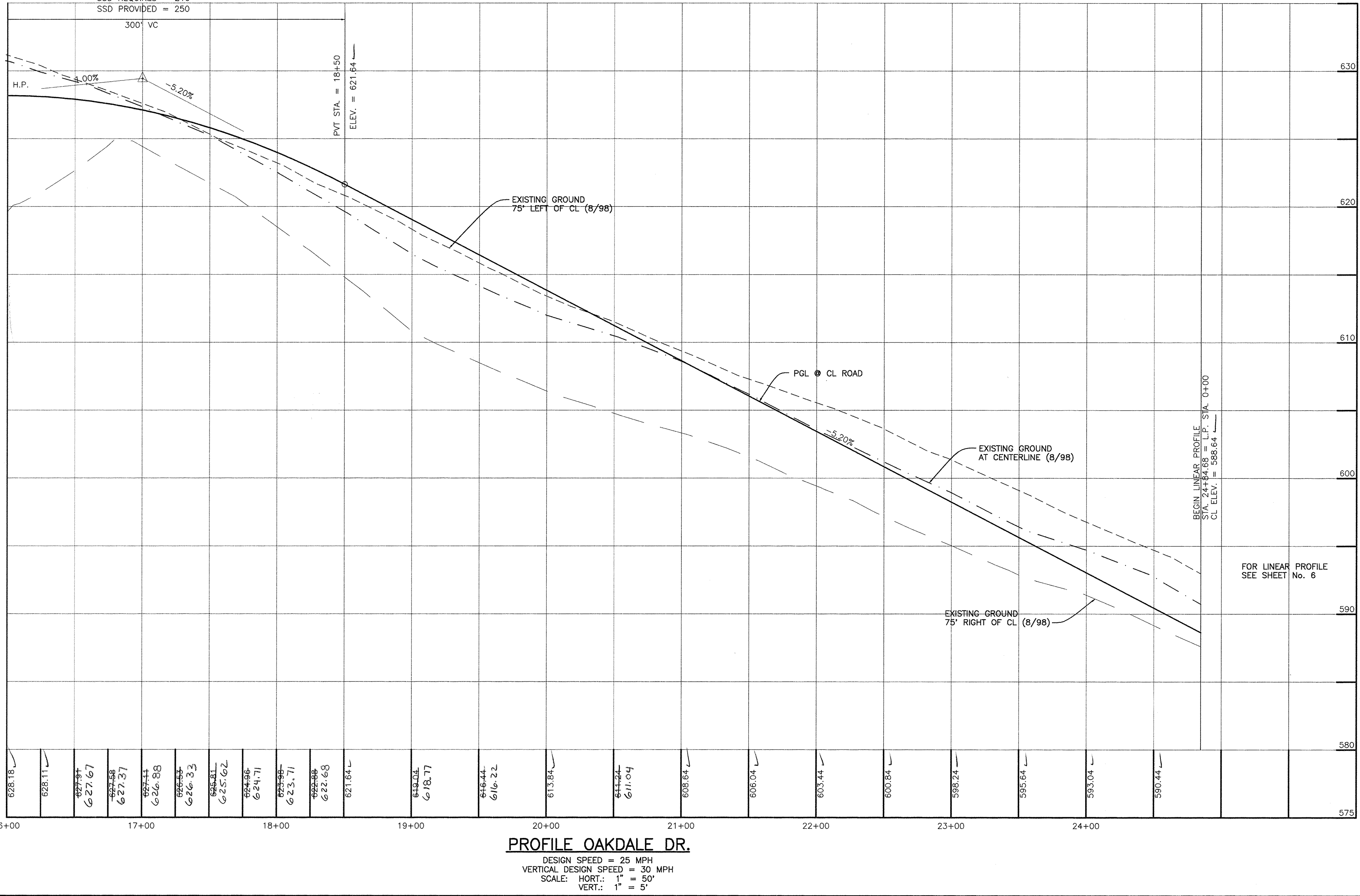
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Donahue 9/14/99
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Cindy Hamilton 9/21/99
CHIEF, DIVISION OF LAND DEVELOPMENT

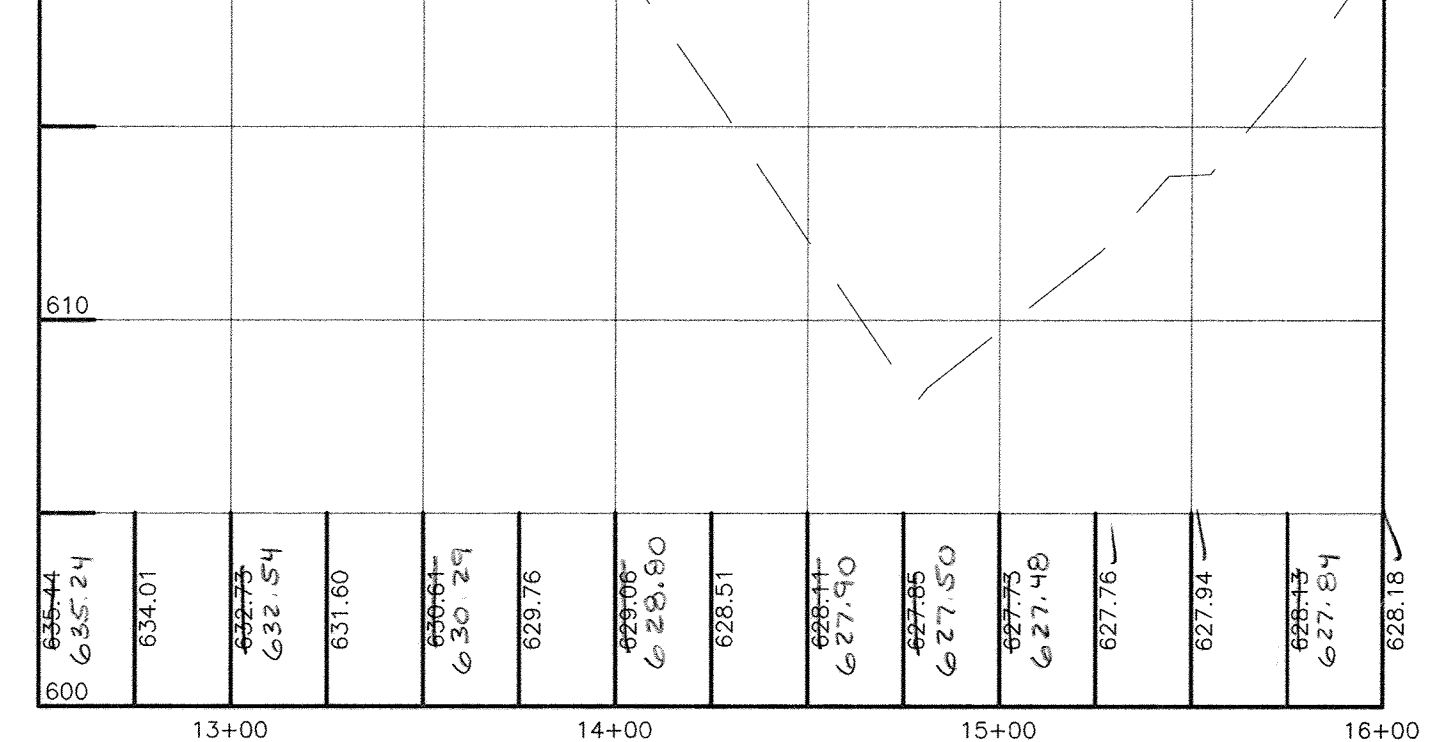
Chad Damman 9/21/99
CHIEF, DEVELOPMENT ENGINEERING DIVISION



PROFILE OAKDALE DR.
 DESIGN SPEED = 30 MPH (STA. 0+00 TO 9+63.56)
 AND 25 MPH (STA. 9+63.56 TO 25+70.38)
 VERTICAL DESIGN SPEED = 35 MPH (STA. 0+00 TO 9+63.56)
 AND 30 MPH (STA. 9+63.56 TO 25+70.38)
 SCALE: HORT.: 1" = 50'
 VERT.: 1" = 5'



PROFILE OAKDALE DR.
 DESIGN SPEED = 25 MPH
 VERTICAL DESIGN SPEED = 30 MPH
 SCALE: HORT.: 1" = 50'
 VERT.: 1" = 5'



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Richard M. Donato 9/14/99
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Cindy Harville 9/20/99
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Mike Dammann 9/22/99
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

NO.	DATE	REVISION
2-19-03		REVISED PER AS-BUILT CONDITIONS

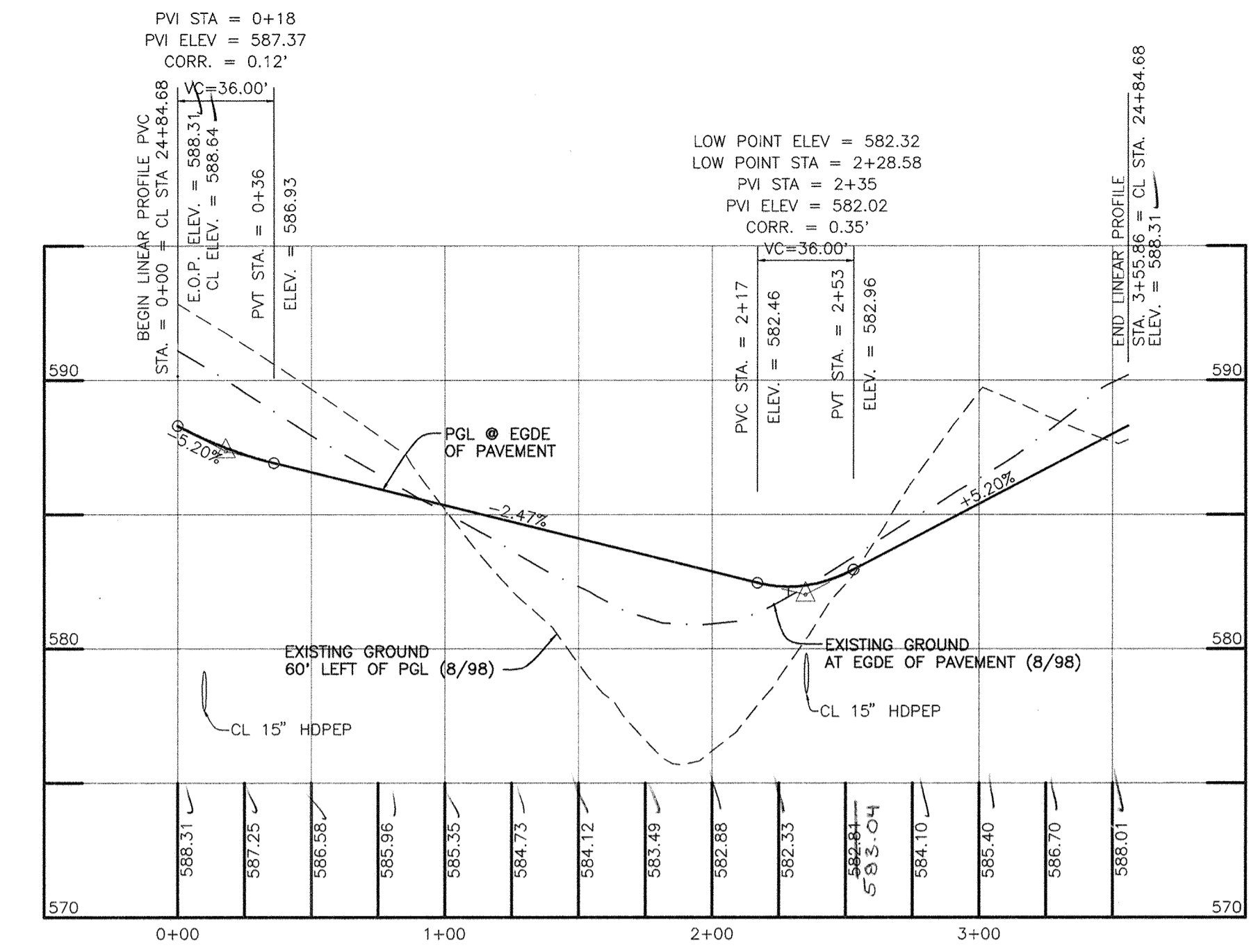
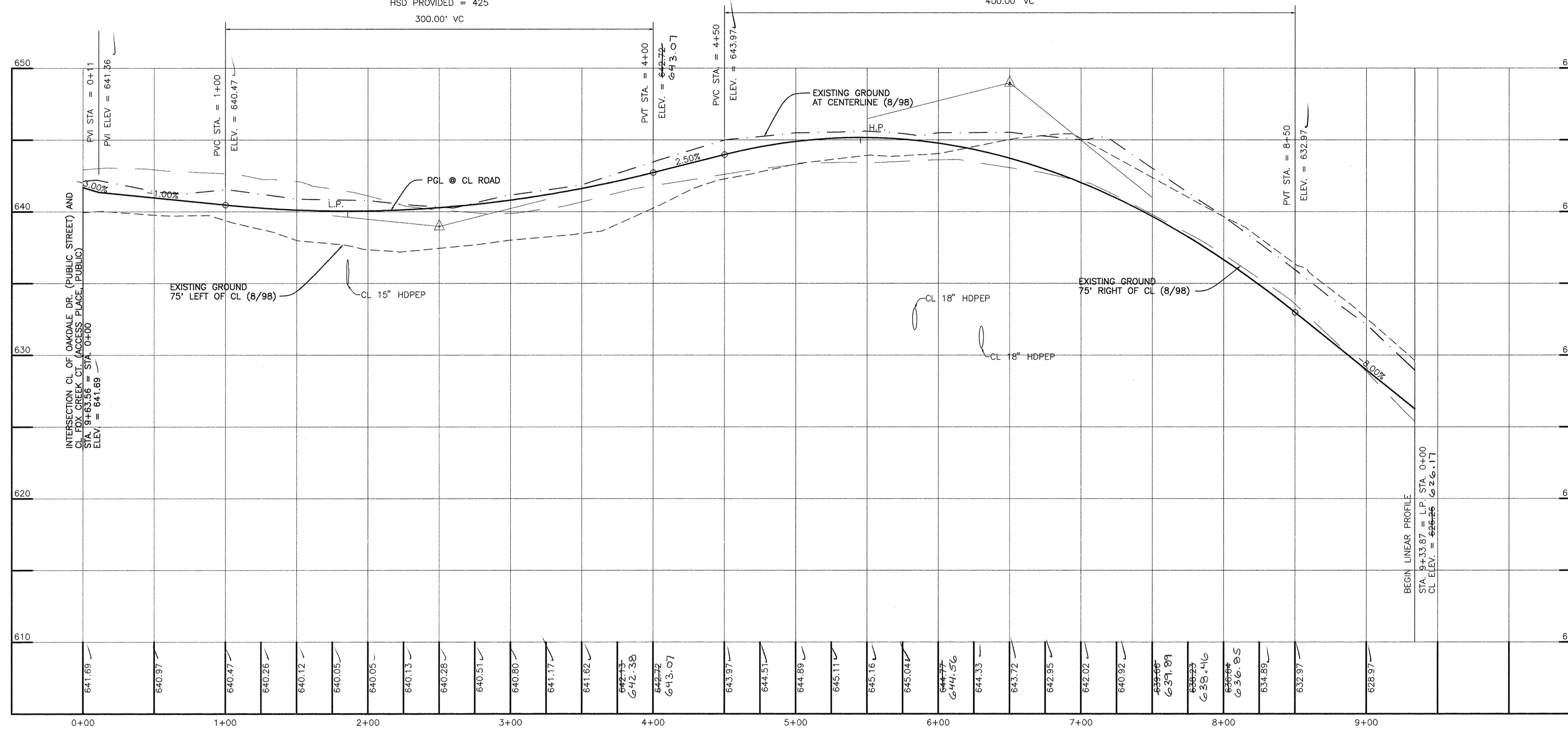
BENCHMARK ENGINEERING, INC.
 ENGINEERS & LAND SURVEYORS & PLANNERS
 8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-6105 FAX: 410-465-6644

Donald M. Mean
 PROFESSIONAL ENGINEER

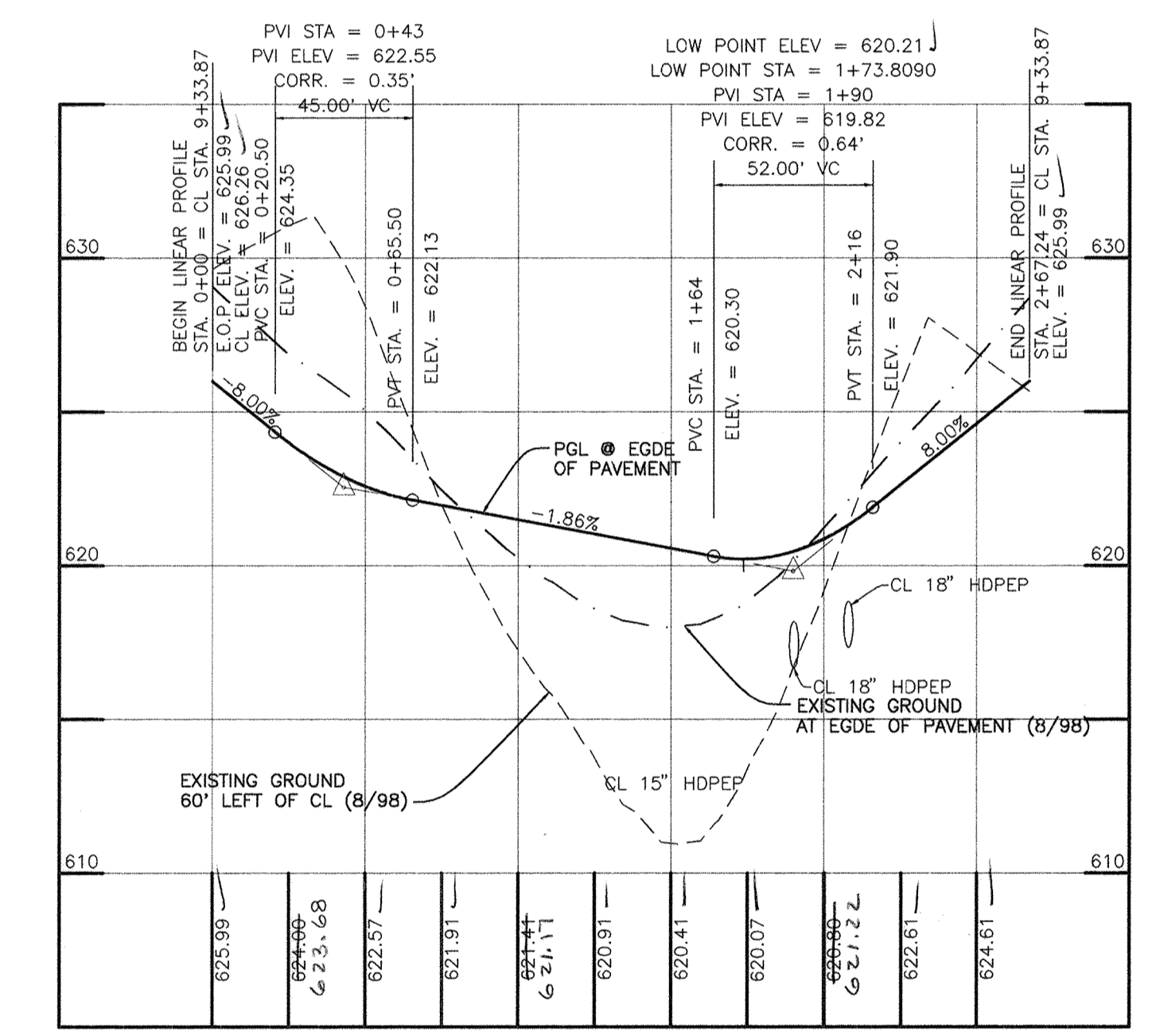
OWNER/DEVELOPER: HOODS MILL CORPORATION C/O P.O. BOX 417 ELLICOTT CITY, MD 21041 410-465-4244	PROJECT: MONTICELLO LOTS 1-50, PRESERVATION PARCELS "A" THRU "D" AND NON-BUILDABLE PARCEL "E"
LOCATION: TAX MAP 8 - BLOCK 18 - PARCEL 110 4TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	TITLE: ROAD PROFILES WP-99-24 SP-99-01
DATE: MARCH, 1999	PROJECT NO. 1122
DESIGN: JMC	DRAFT: JMC
SCALE: AS SHOWN	DRAWING 5 OF 22

LOW POINT ELEV = 640.04
 LOW POINT STA = 1+85.71
 PVI STA = 2+50
 PVI ELEV = 638.97
 CORR. = 1.31'
 HSD REQUIRED = 200
 HSD PROVIDED = 425
 300.00' VC

HIGH POINT ELEV = 645.16
 HIGH POINT STA = 5+45.24
 PVI STA = 6+50
 PVI ELEV = 648.97
 A.D. = -10.50
 SSD REQUIRED = 200
 MIN. LENGTH OF VC = 210'
 400.00' VC



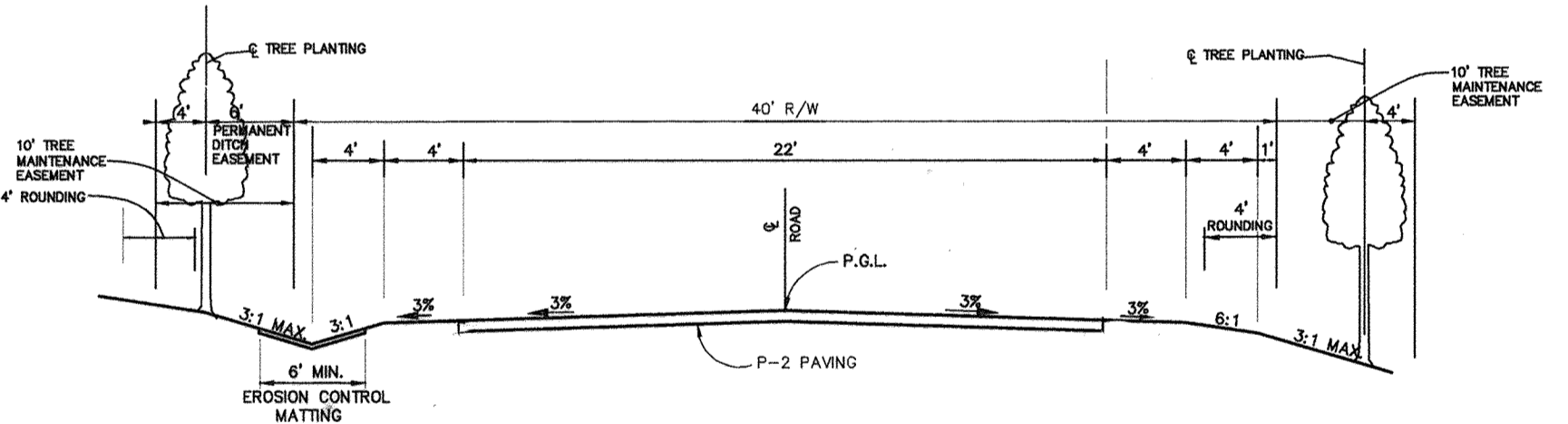
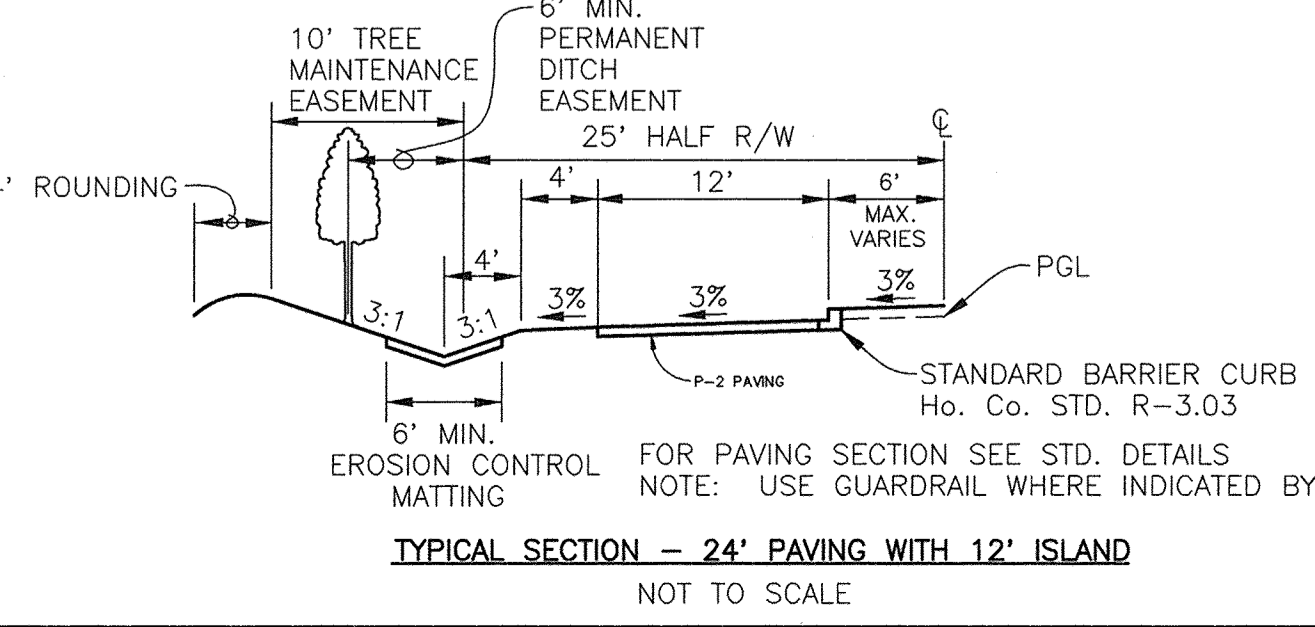
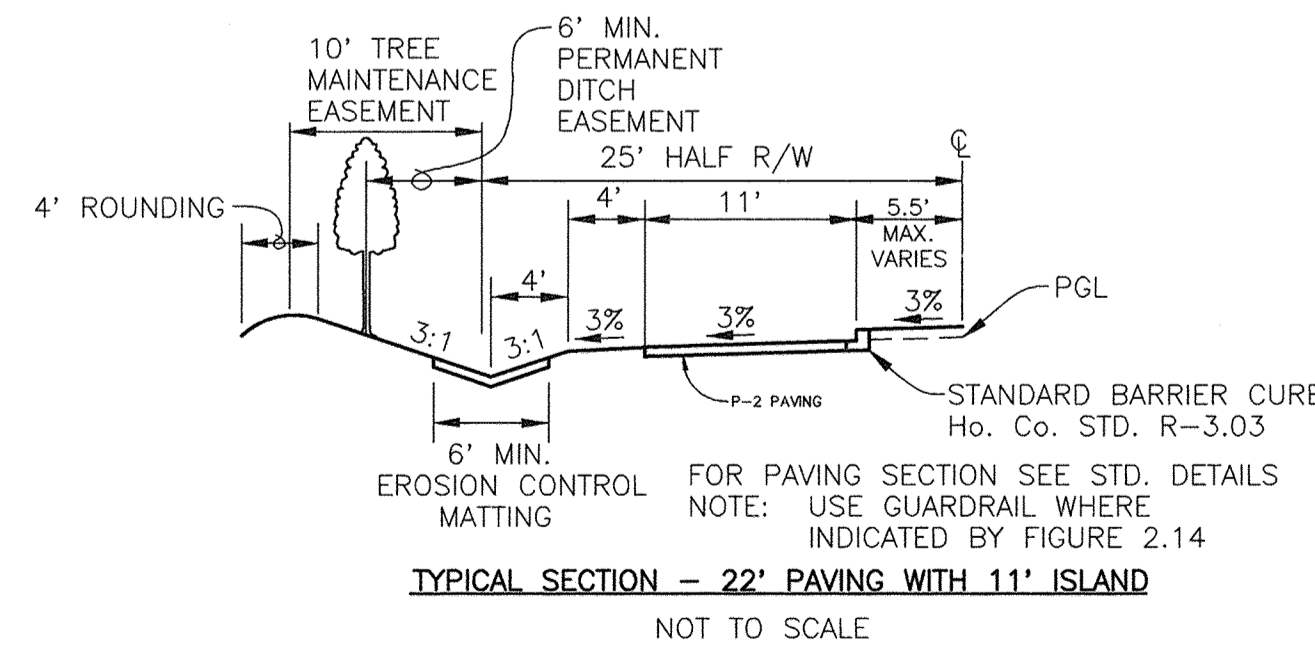
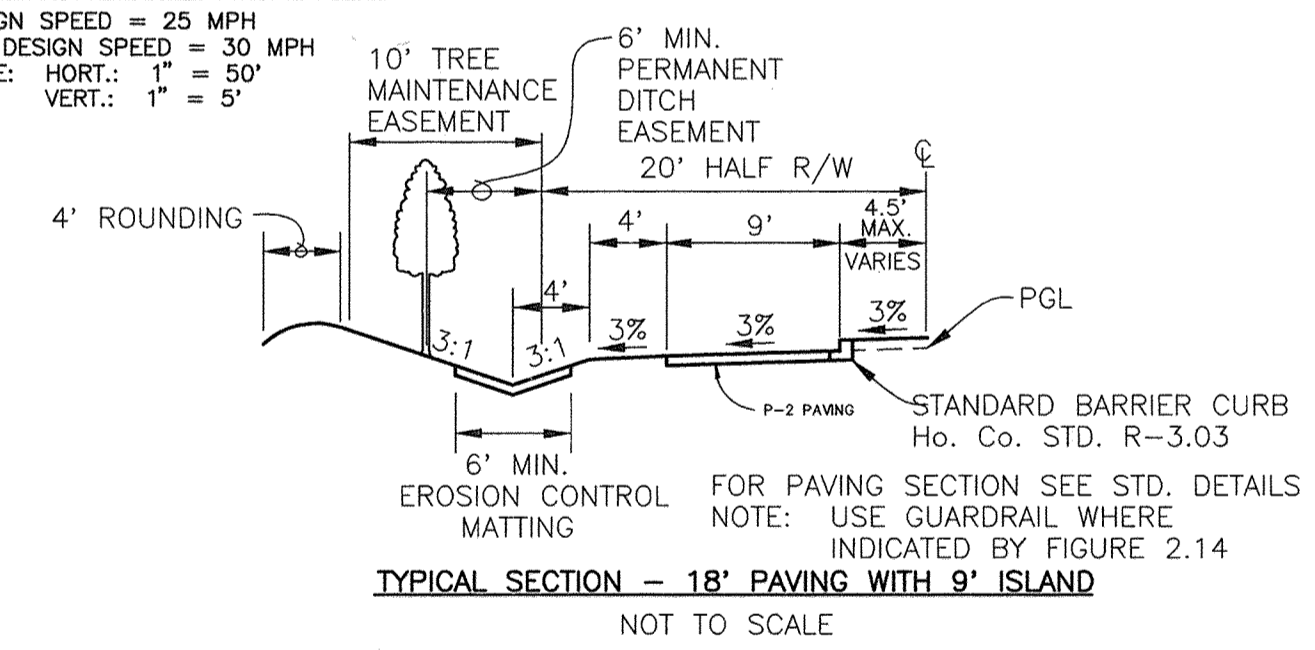
PROFILE OAKDALE DR. LINEAR PROFILE
 SCALE: HORT.: 1" = 50'
 VERT.: 1" = 5'



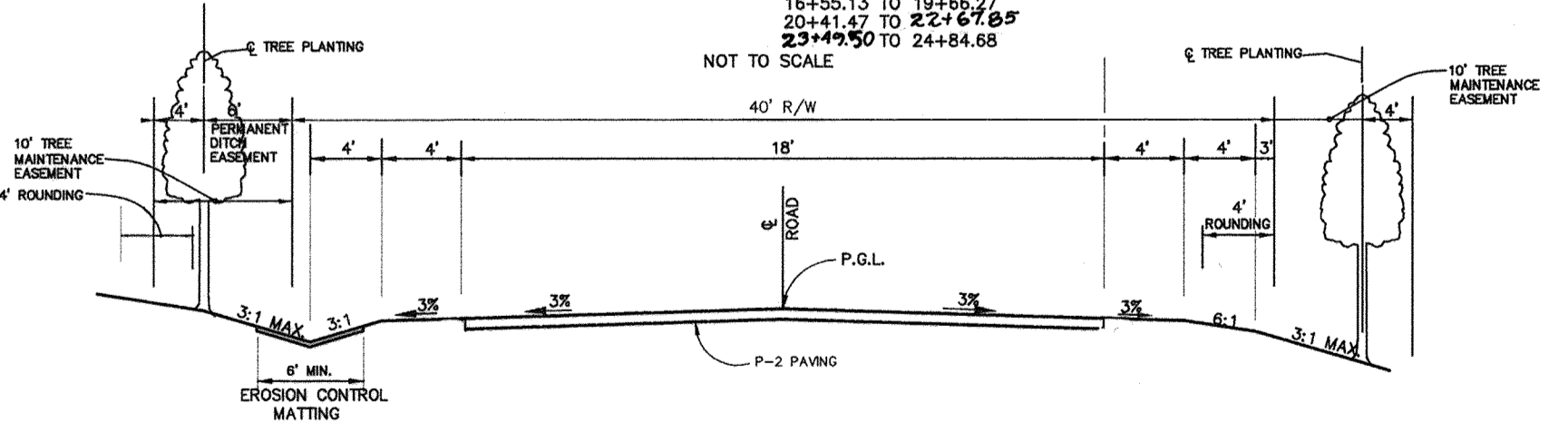
PROFILE FOX CREEK CT. LINEAR PROFILE
 SCALE: HORT.: 1" = 50'
 VERT.: 1" = 5'

PROFILE FOX CREEK CT.

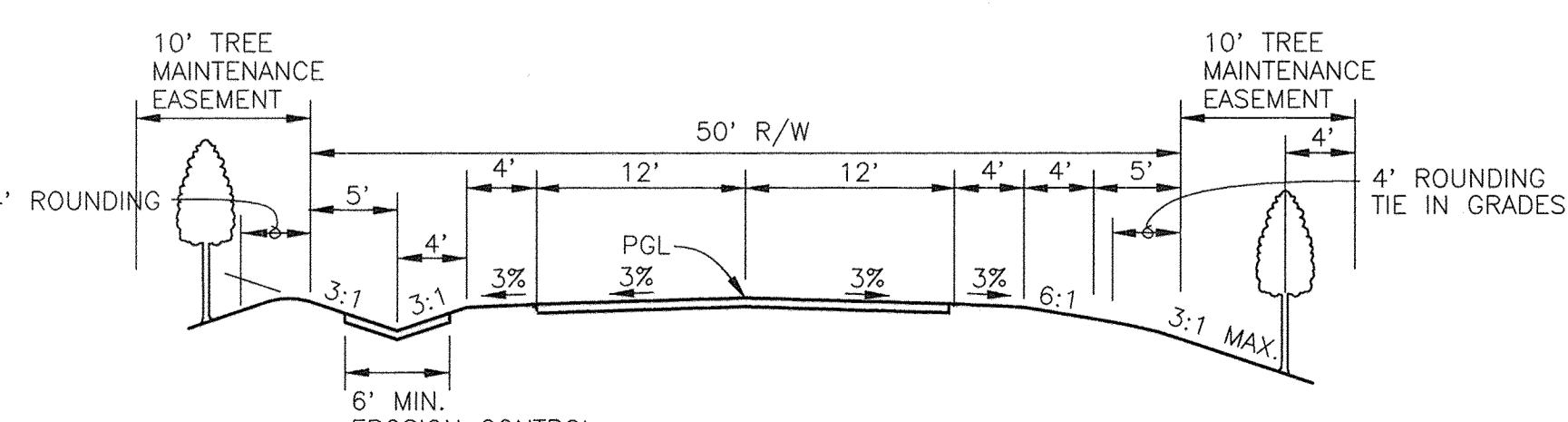
DESIGN SPEED = 25 MPH
 VERTICAL DESIGN SPEED = 30 MPH
 SCALE: HORT.: 1" = 50'
 VERT.: 1" = 5'



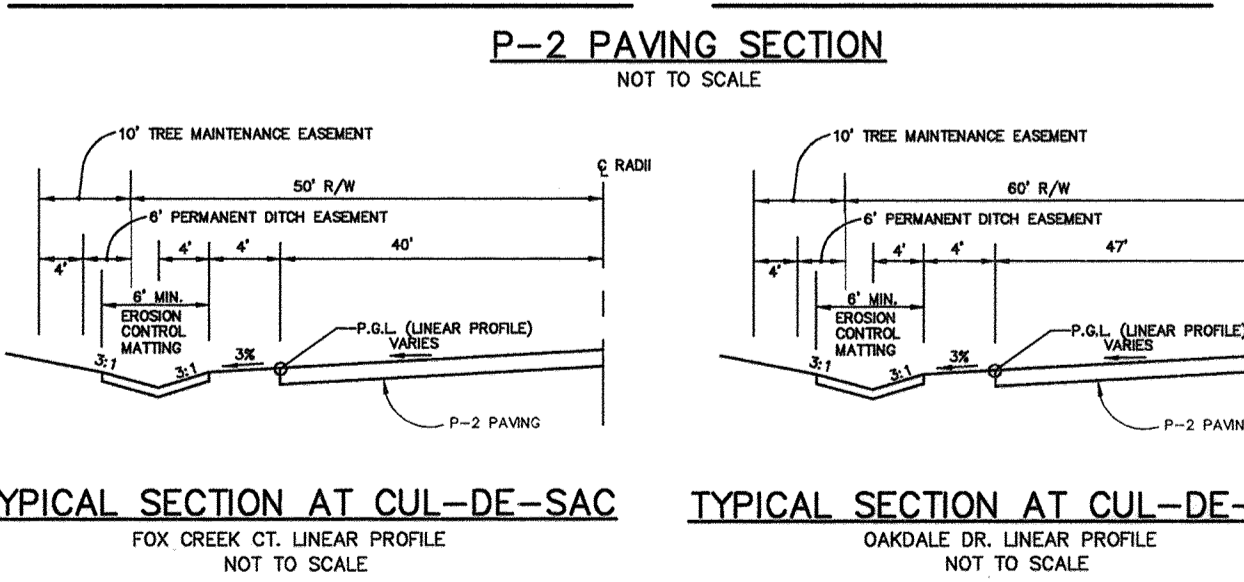
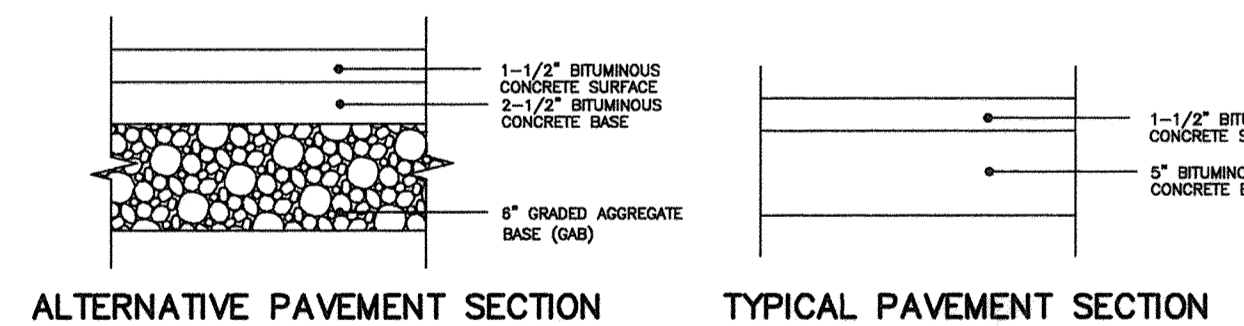
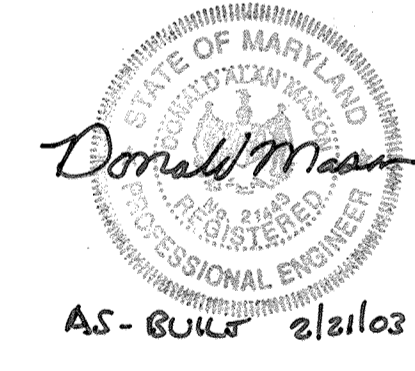
TYPICAL ROADWAY SECTION (DESIGN SPEED: 25 MPH)
 (ACCESS STREET - 250 ADT OR LESS)



TYPICAL ROADWAY SECTION (DESIGN SPEED: 25 MPH)
 (ACCESS PLACE - 200 ADT OR LESS)



TYPICAL ROADWAY SECTION (DESIGN SPEED: 30 MPH)
 (ACCESS STREET - 200 ADT OR LESS)



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 Andrew M. Quake 9/14/99
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Cindy Hamster 9/21/99
 CHIEF, DIVISION OF LAND DEVELOPMENT

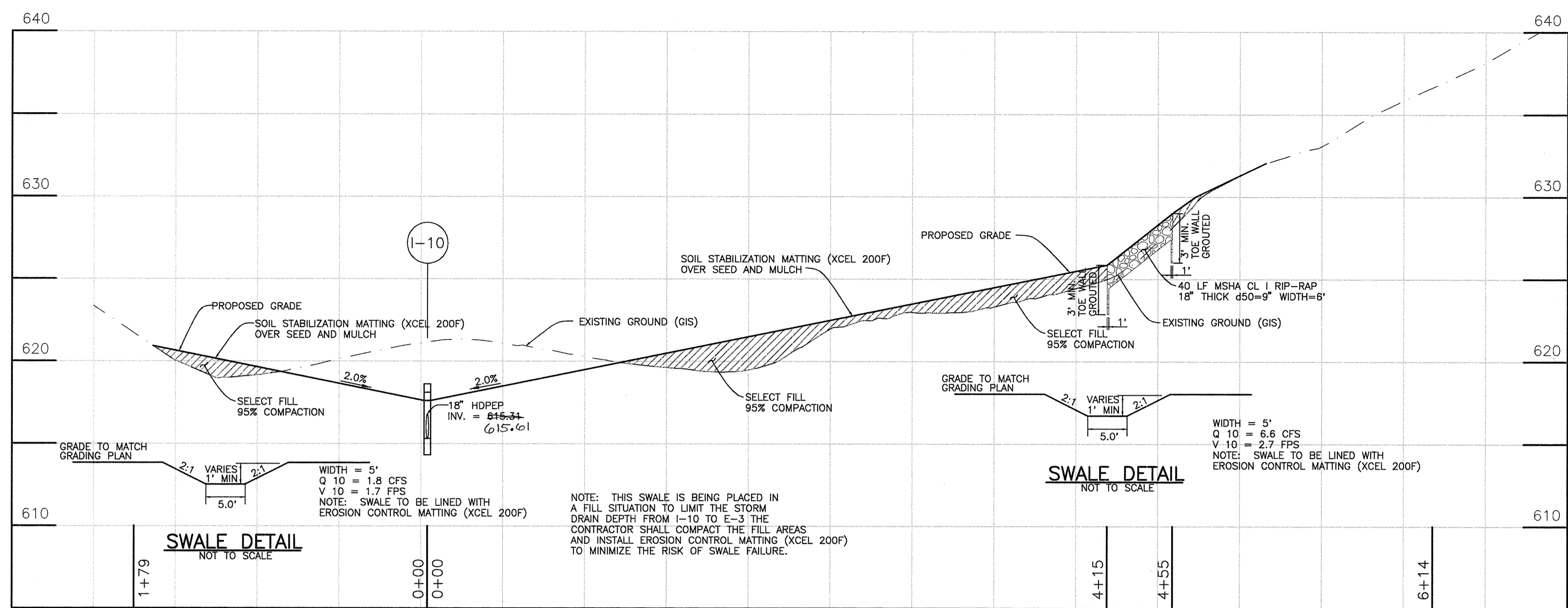
APPROVED: [Signature] 9/22/99
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

NO.	DATE	REVISION
6-3-03		REMOVED FLUSH CURB
2-19-03		REVISED PER AS-BUILT CONDITIONS

BENCHMARK ENGINEERING, INC.
 ENGINEERS • LAND SURVEYORS • PLANNERS

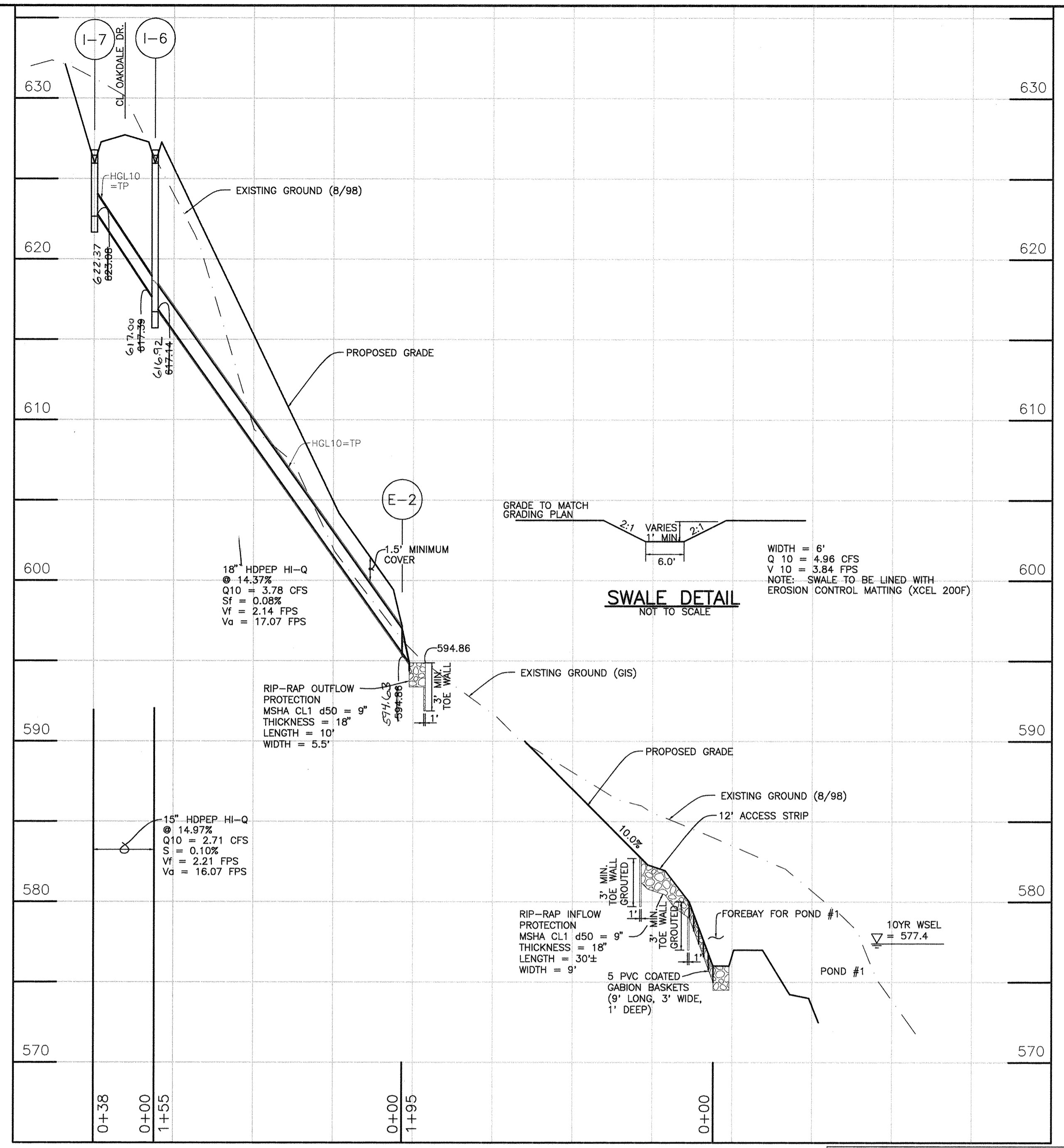
8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLCOTT CITY, MARYLAND 21043
 PHONE: 410-465-6105 FAX: 410-465-6644

OWNER/DEVELOPER: HOODS MILL CORPORATION C/O P.O. BOX 417 ELLCOTT CITY, MD 21041 410-465-4244	PROJECT: MONTICELLO LOTS 1-50, PRESERVATION PARCELS "A" THRU "D" AND NON-BUILDABLE PARCEL "E"
DATE: MARCH, 1999	PROJECT NO. 1122
DESIGN: JMC	DRAFT: JMC
SCALE: AS SHOWN	DRAWING 6 OF 22

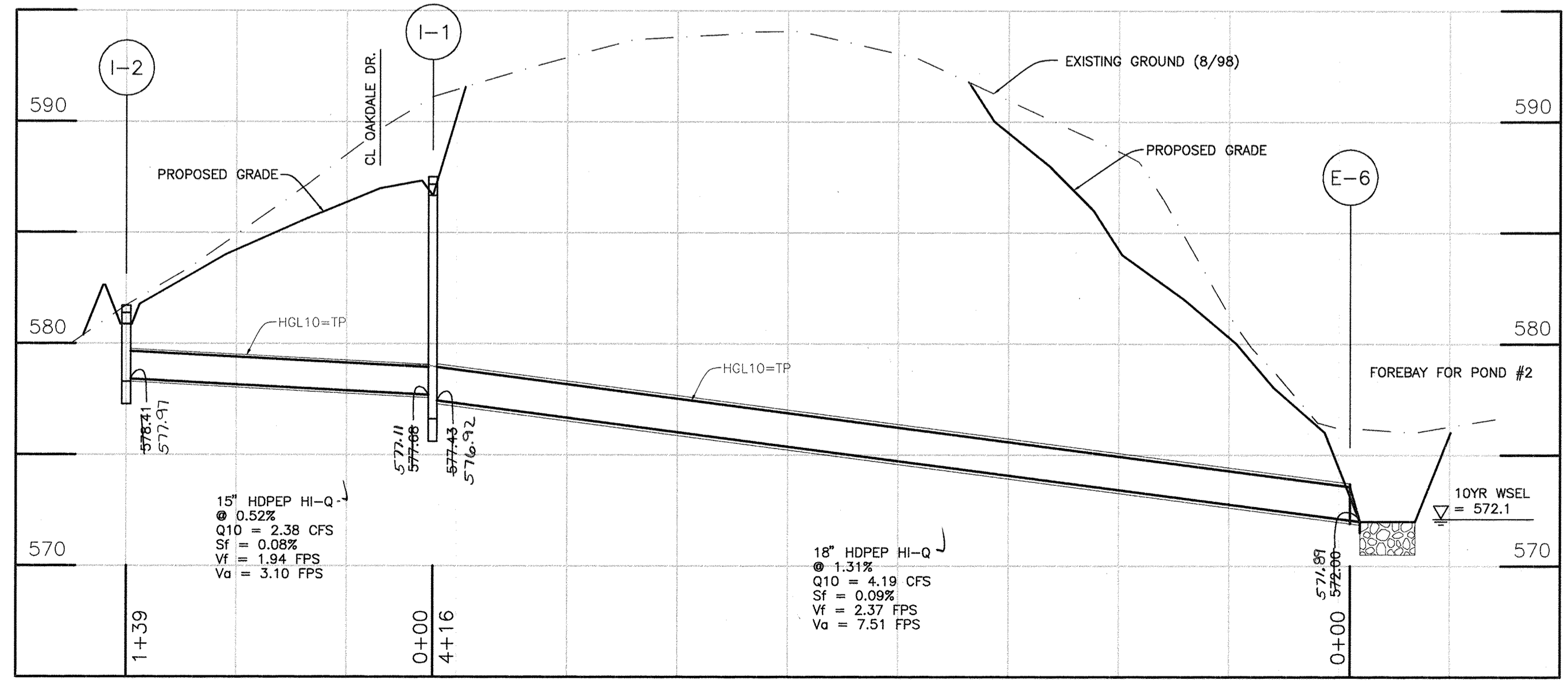


SWALE PROFILE TO I-10
 SCALE: VERT. 1" = 5'
 HORT. 1" = 50'

NOTES:
 1.) ALL RIP-RAP CHANNEL PROTECTION, OUTFLOW PROTECTION SHOWN SHALL HAVE 3' TOE WALL GROUTED WITH MKX No. 2 CONCRETE.
 2.) WHERE XCEL 200F MATTING IS BEING USED THE CONTRACTOR SHALL INSTALL IT IN ACCORDANCE WITH MANUFACTURERS SPECIFICATIONS.



STORM DRAIN PROFILE E-7 TO I-5
 SCALE: VERT. 1" = 5'
 HORT. 1" = 50'



STORM DRAIN PROFILE E-6 TO I-2
 SCALE: VERT. 1" = 5'
 HORT. 1" = 50'

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Richard M. ...
 CHIEF, BUREAU OF HIGHWAYS
 DATE: 9/18/99



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chris Hamstra
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 9/20/99
Donald Maer
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 9/20/99

NO.	DATE	REVISION
2-19-03		REVISED PER AS-BUILT CONDITIONS

BENCHMARK ENGINEERING, INC.
 ENGINEERS • LAND SURVEYORS • PLANNERS
 8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-8105 FAX: 410-465-6644

OWNER/DEVELOPER:
 HOODS MILL CORPORATION
 C/O P.O. BOX 417
 ELLICOTT CITY, MD 21041
 410-465-4244

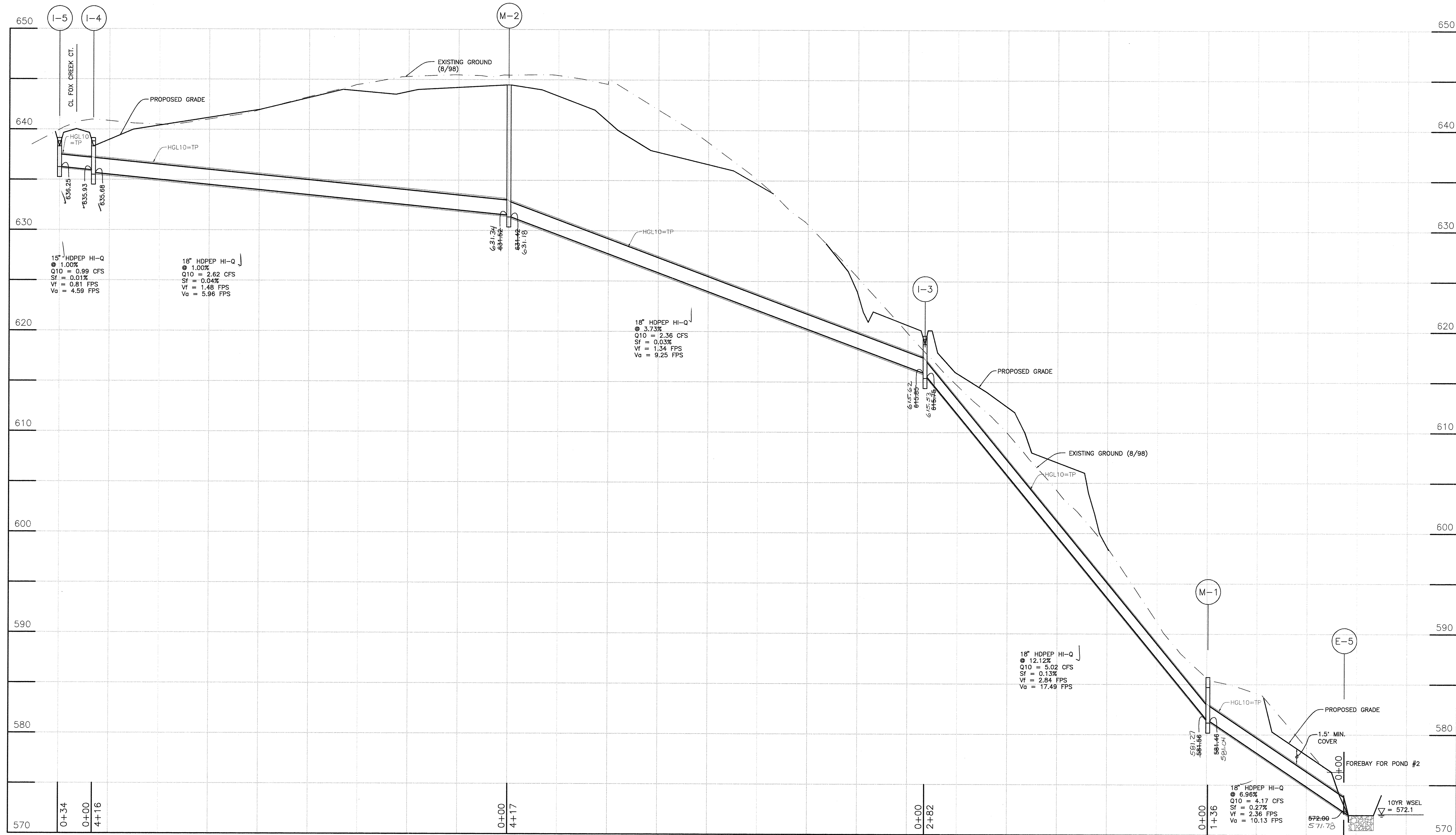
PROJECT:
MONTICELLO
 LOTS 1-50, PRESERVATION PARCELS "A" THRU "D" AND NON-BUILDABLE PARCEL "E"

LOCATION:
 TAX MAP 8 - BLOCK 18 - PARCEL 110
 4TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE:
STORM DRAIN PROFILES
 WP-99-24 SP-99-01

DATE: MARCH, 1999 PROJECT NO. 1122

DESIGN: JMC DRAFT: JMC SCALE: AS SHOWN DRAWING 7 OF 22

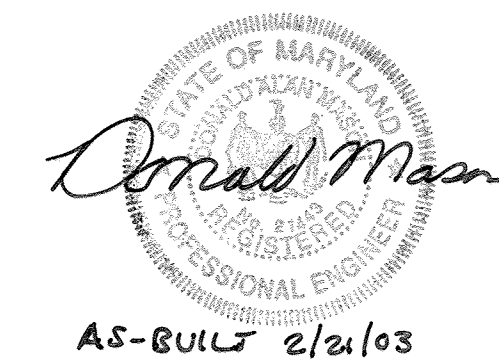


STORM DRAIN PROFILE E-5 TO I-5
SCALE: VERT. 1" = 5'
HORIZ. 1" = 50'

STR. NO.	LOCATION	TOP ELEV.	INV. IN	INV. OUT	TYPE	REMARKS
I-1	LP STA 0+03.71 OS 8.04' L OAKDALE DR. 586.18	627.60	577.68	577.68	D TYPE 57.97	SD-4.11 OPEN ON 2 SIDES
I-2	LP STA 2+29.76 OS 8.00' L OAKDALE DR. 581.02	617.70	617.70	617.70	D TYPE 57.97	SD-4.11 OPEN ON 2 SIDES
I-3	LP STA 1+72.36 OS 8.00' L FOX CREEK CT. 619.69	615.85	615.85	615.85	D TYPE 57.97	SD-4.11 OPEN ON 2 SIDES
I-4	SIA 1+85.71 OS 17.00' R FOX CREEK CT. 639.15	639.15	639.15	639.15	D TYPE 57.97	SD-4.11 OPEN ON 2 SIDES
I-5	SIA 1+85.71 OS 17.00' R FOX CREEK CT. 639.15	639.15	639.15	639.15	D TYPE 57.97	SD-4.11 OPEN ON 2 SIDES
I-6	SIA 15+07.14 OS 19.00' L OAKDALE DR. 626.78	617.38	617.38	617.38	D TYPE 61.92	SD-4.11 OPEN ON 2 SIDES
I-7	SIA 15+07.14 OS 19.00' L OAKDALE DR. 626.78	617.38	617.38	617.38	D TYPE 61.92	SD-4.11 OPEN ON 2 SIDES
I-8	SIA 6+38.57 OS 24.76' R OAKDALE DR. 635.35	612.28	612.28	612.28	D TYPE 61.92	SD-4.11 OPEN ON 2 SIDES
I-9	SIA 6+38.57 OS 24.76' R OAKDALE DR. 635.35	612.28	612.28	612.28	D TYPE 61.92	SD-4.11 OPEN ON 2 SIDES
I-10	SIA 6+38.57 OS 24.76' R OAKDALE DR. 635.35	612.28	612.28	612.28	D TYPE 61.92	SD-4.11 OPEN ON 2 SIDES
M-1	N 605.587 4.99 E 1.310 4.99 5.206	585.75	581.58	581.58	MANHOLE 60.12	G-5.12 SHALLOW MANHOLE
M-2	SIA 6+06.58 OS 6.00' L FOX CREEK CT. 644.49	631.52	631.52	631.52	MANHOLE 60.12	G-5.12 SHALLOW MANHOLE
M-3	N 604.561 1.9514 E 1.309 3.85 8.274	622.67	610.18	607.92	MANHOLE 60.12	G-5.12 SHALLOW MANHOLE
M-4	N 604.524 1.951 E 1.309 4.20 8.987	626.92	610.11	607.34	MANHOLE 60.12	G-5.12 SHALLOW MANHOLE
E-1	N 604.446 4.856 E 1.310 4.93 3.248	635.75	635.75	635.75	END SECTION	SD-5.51 SWM OUTFALL SHEET 15
E-2	N 604.844 3.902 E 1.310 1.86 5.227	635.75	635.75	635.75	END SECTION	HANGOR DESIGN MANUAL
E-3	N 604.520 3.649 E 1.309 6.67 5.420	635.75	635.75	635.75	END SECTION	HANGOR DESIGN MANUAL
E-4	N 605.792 5.036 E 1.310 6.29 8.779	635.75	635.75	635.75	END SECTION	SD-5.51 SWM OUTFALL SHEET 16
E-5	N 605.574 7.021 E 1.310 5.45 3.404	635.75	635.75	635.75	END SECTION	HANGOR DESIGN MANUAL
E-6	N 605.549 3.957 E 1.310 5.74 2.073	635.75	635.75	635.75	END SECTION	HANGOR DESIGN MANUAL
E-7	N 604.822 6.100 E 1.308 7.21 2.003	635.75	635.75	635.75	NO END SECTION	HANGOR DESIGN MANUAL
E-8	N 604.784 8.843 E 1.308 7.37 5.569	635.75	635.75	635.75	NO END SECTION	HANGOR DESIGN MANUAL
S-1	N 604.592 7.682 E 1.310 4.22 5.199	579.47	589.35	589.35	RISER	SEE SHEET 15
S-2	N 605.286 4.552 E 1.310 6.13 2.446	575.87	586.98	586.98	RISER	SEE SHEET 16

NOTE: ALL INLET TOP ELEVATIONS AND COORDINATES ARE AT THE TOP, MIDDLE OF INLET AND MANHOLES.

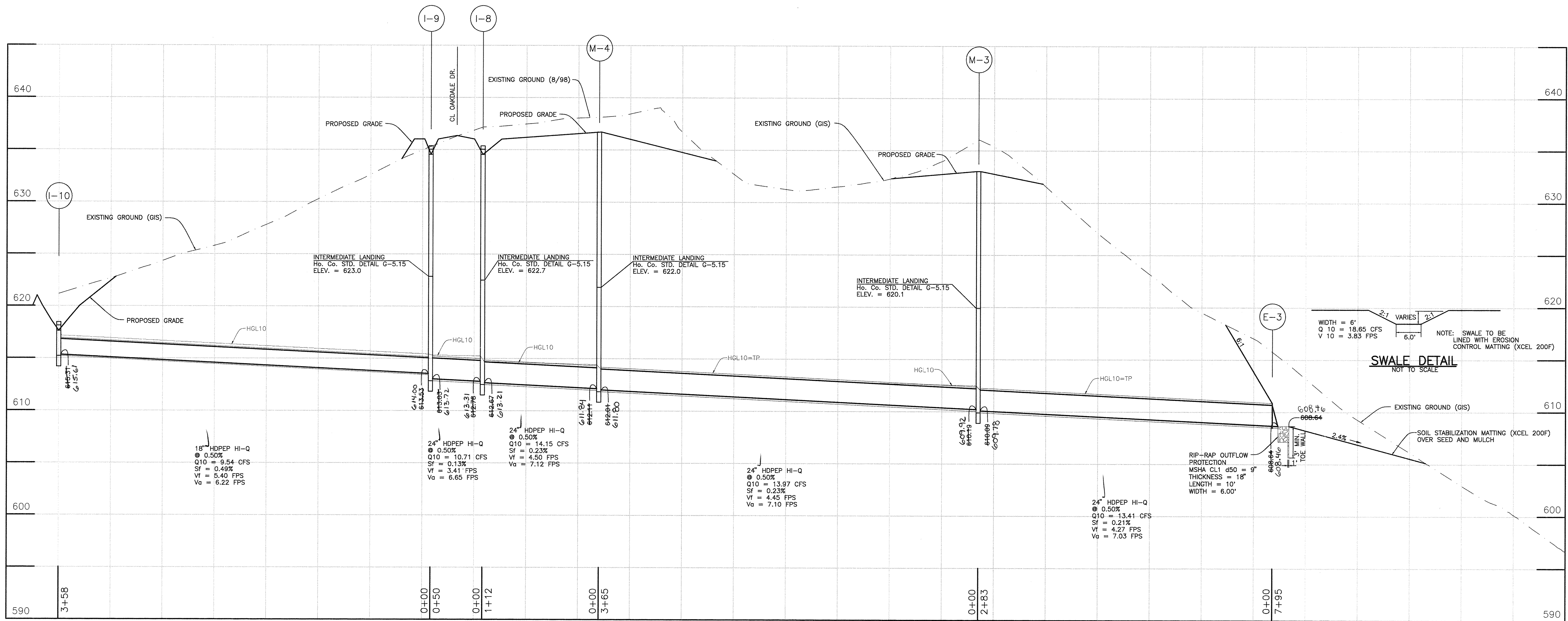
RUN	LENGTH	DIMENSION	MATERIAL
I-10 TO I-9	358 LF	18" DIA	HDPE
I-9 TO I-8	80 LF	24" DIA	HDPE
I-8 TO I-4	112 LF	24" DIA	HDPE
M-4 TO M-3	365 LF	24" DIA	HDPE
M-3 TO I-3	283 LF	24" DIA	HDPE
I-7 TO I-6	38 LF	18" DIA	HDPE
I-6 TO E-2	155 LF	18" DIA	HDPE
I-5 TO I-4	34 LF	18" DIA	HDPE
I-4 TO M-2	416 LF	18" DIA	HDPE
M-2 TO I-3	417 LF	18" DIA	HDPE
I-3 TO M-1	285 LF	18" DIA	HDPE
M-1 TO E-5	136 LF	18" DIA	HDPE
I-2 TO I-1	139 LF	15" DIA	HDPE
I-1 TO E-6	418 LF	18" DIA	HDPE
E-8 TO E-7	80 LF	17" x 13"	ALUM. CMP 16 Ga



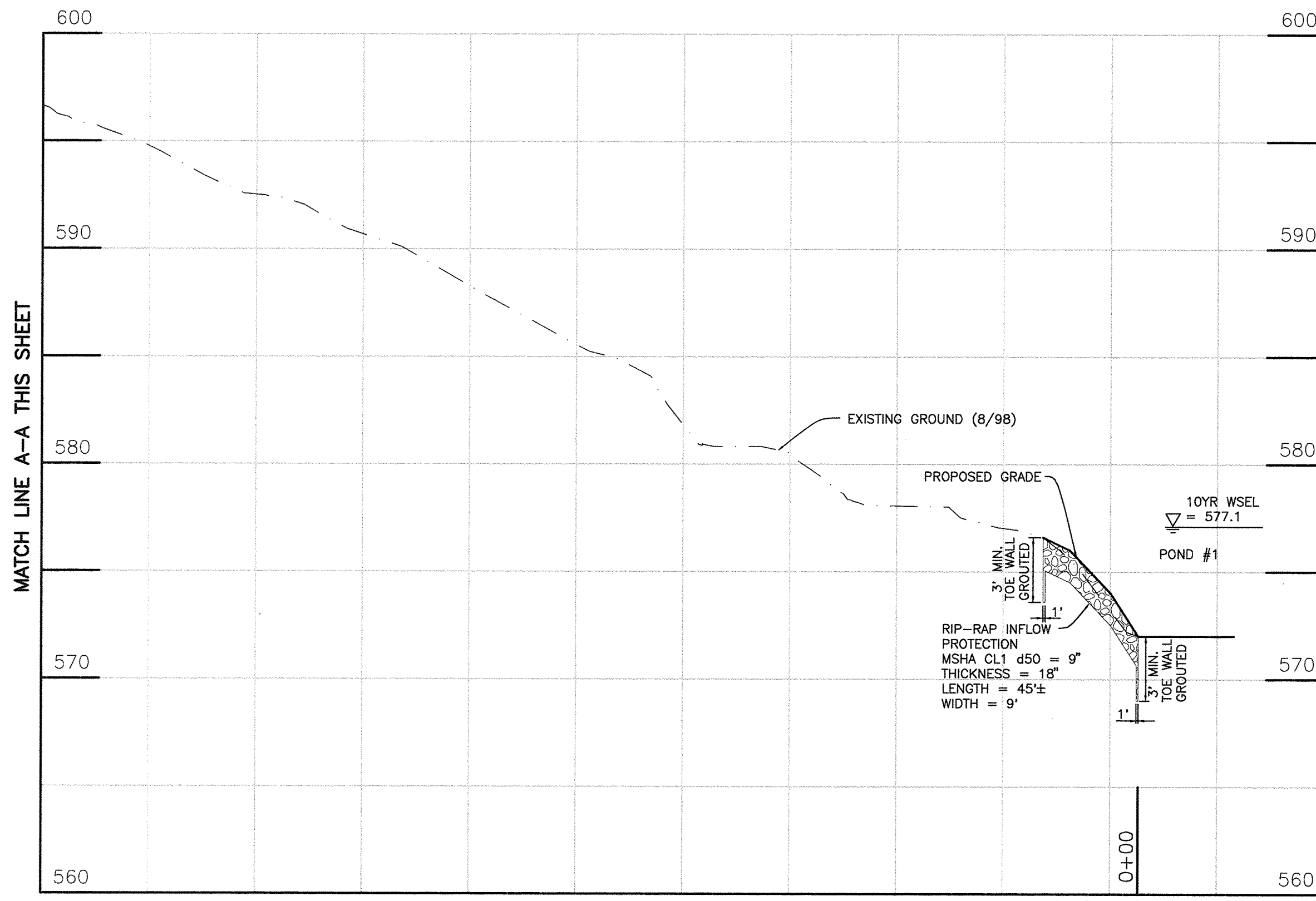
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Howard M. Daniels 9/14/99
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chris Haratta 9/23/99
CHIEF, DIVISION OF LAND DEVELOPMENT
Donald M. Mason 9/22/99
CHIEF, DEVELOPMENT ENGINEERING DIVISION

2-19-03 REVISED PER AS-BUILT CONDITIONS	
NO.	DATE
REVISION	
BENCHMARK ENGINEERING, INC.	
8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MARYLAND 21043 PHONE: 410-465-6105 FAX: 410-465-6644	
OWNER/DEVELOPER: HOODS MILL CORPORATION C/O P.O. BOX 417 ELICOTT CITY, MD 21041 410-465-4244	PROJECT: MONTICELLO LOTS 1-50, PRESERVATION PARCELS "A" THRU "D" AND NON-BUILDABLE PARCEL "E"
LOCATION: TAX MAP 8 - BLOCK 18 - PARCEL 110 4TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE: STORM DRAIN PROFILES	
WP-99-24 SP-99-01	
DATE: MARCH, 1999	PROJECT NO. 1122
DESIGN: JMC	DRAFT: JMC
SCALE: AS SHOWN	DRAWING 8 OF 22



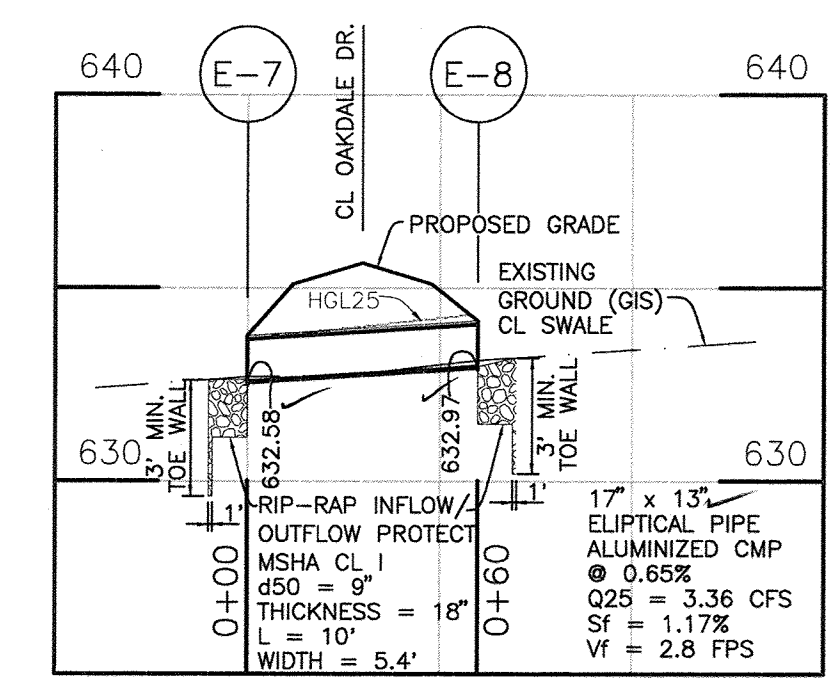
MATCH LINE A-A THIS SHEET



STORM DRAIN PROFILE E-3 TO I-10
 SCALE: VERT. 1" = 5'
 HORT. 1" = 50'

STORM DRAIN PROFILE E-3 TO I-10
 SCALE: VERT. 1" = 5'
 HORT. 1" = 50'

NOTE: ALL RIP-RAP INFLOW/OUTFLOW PROTECTION SHOWN SHALL HAVE 3' TOE WALL GROUTED WITH MIX No. 2 CONCRETE



STORM DRAIN PROFILE E-8 TO E-9
 SCALE: VERT. 1" = 5'
 HORT. 1" = 50'

Professional Engineer
Donald Mason
 AS-BUILT 2/21/03

NO.	DATE	REVISION
2-19-03		REVISED PER AS-BUILT CONDITIONS

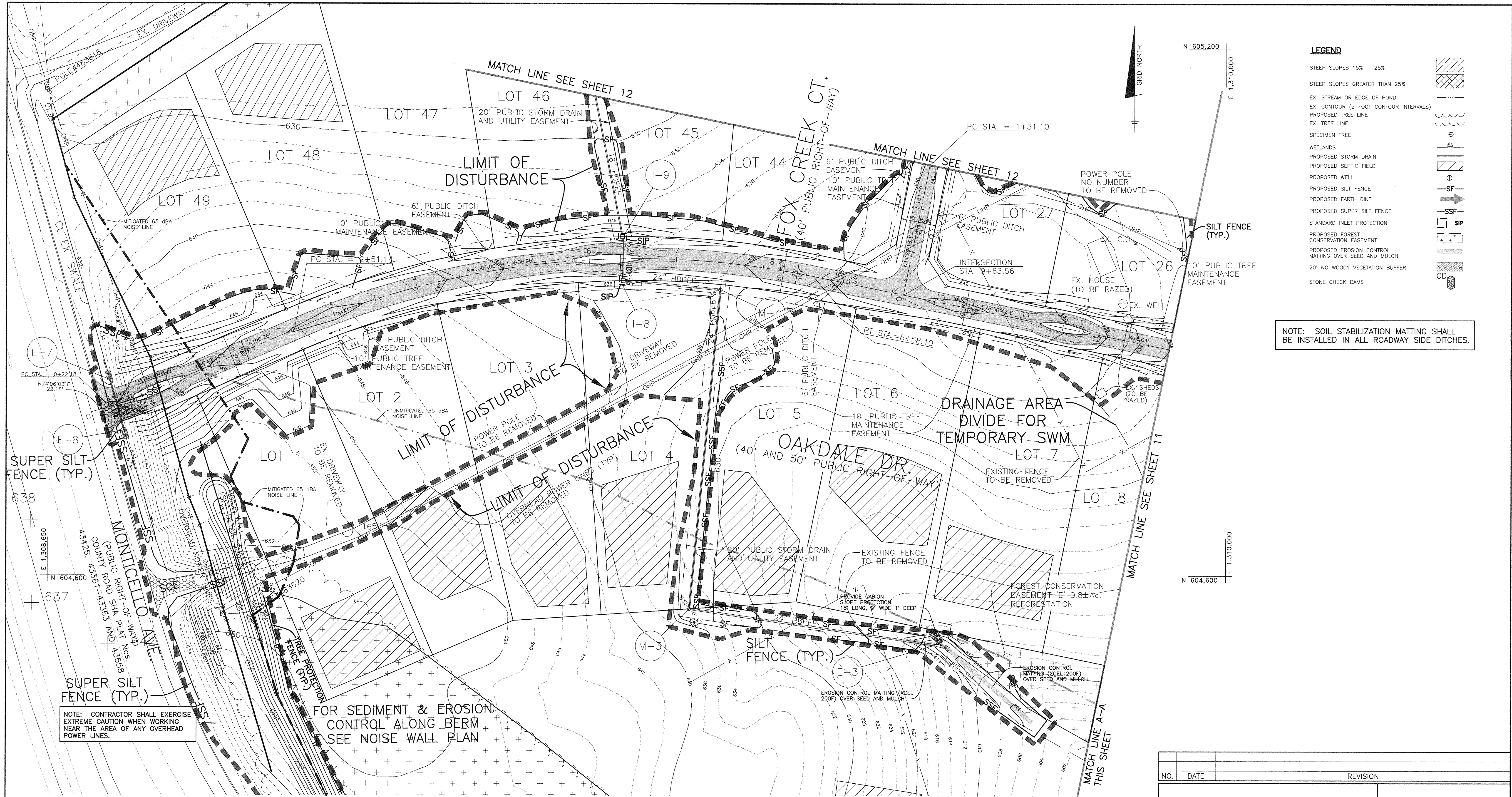
BENCHMARK ENGINEERING, INC.
 ENGINEERS • LAND SURVEYORS • PLANNERS
 8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-6105 FAX: 410-465-6644

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Robert M. Daniels 9/14/99
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Cindy Hamter 9/21/99
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Paul Damman 9/21/99
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

OWNER/DEVELOPER: HOODS MILL CORPORATION C/O P.O. BOX 417 ELLICOTT CITY, MD 21041 410-465-4244	PROJECT: MONTICELLO LOTS 1-50, PRESERVATION PARCELS "A" THRU "D" AND NON-BUILDABLE PARCEL "E"
LOCATION: TAX MAP 8 - BLOCK 18 - PARCEL 110 4TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	TITLE: STORM DRAIN PROFILES WP-99-24 SP-99-01
DATE: MARCH, 1999	PROJECT NO. 1122
DESIGN: JMC	DRAFT: JMC
SCALE: AS SHOWN	DRAWING 9 OF 22



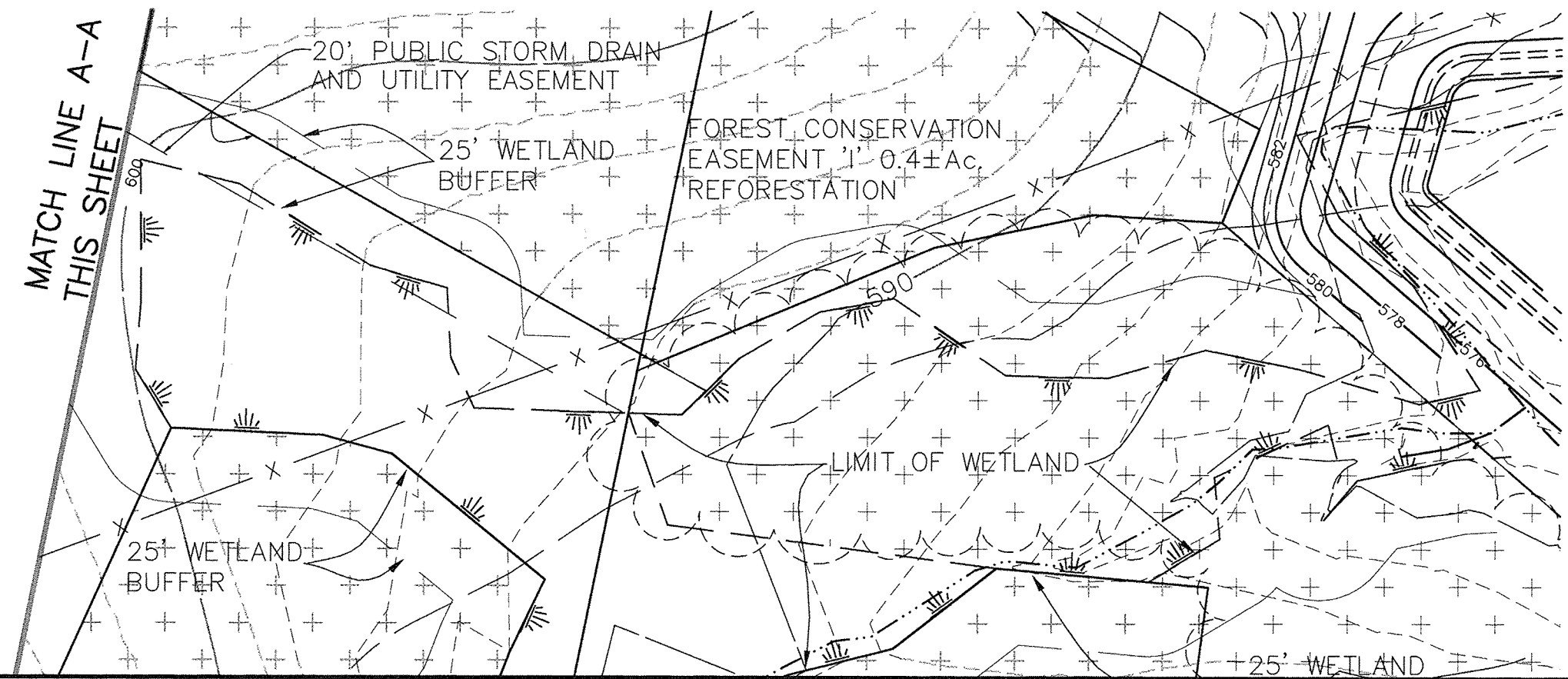
LEGEND

STEEP SLOPES 15% - 25%	
STEEP SLOPES GREATER THAN 25%	
EX. STREAM OR EDGE OF POND	
EX. CONTOUR (2 FOOT CONTOUR INTERVALS)	
PROPOSED TREE LINE	
EX. TREE LINE	
SPECIMEN TREE	
WETLANDS	
PROPOSED STORM DRAIN	
PROPOSED SEPTIC FIELD	
PROPOSED WELL	
PROPOSED SILT FENCE	
PROPOSED EARTH DIKE	
PROPOSED SUPER SILT FENCE	
STANDARD INLET PROTECTION	
PROPOSED FOREST CONSERVATION EASEMENT	
PROPOSED EROSION CONTROL MATTING OVER SEED AND MULCH	
20' NO WOODY VEGETATION BUFFER	
STONE CHECK DAMS	

NOTE: SOIL STABILIZATION MATTING SHALL BE INSTALLED IN ALL ROADWAY SIDE DITCHES.

NOTE: CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING NEAR THE AREA OF ANY OVERHEAD POWER LINES.

FOR SEDIMENT & EROSION CONTROL ALONG BERM SEE NOISE WALL PLAN



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Danks 9/14/99
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chris Hamilton 9/17/99
 CHIEF, DIVISION OF LAND DEVELOPMENT

John Dammus 9/22/99
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION, AND SEDIMENT CONTROL.

Cheryl Swain /cs 8/24/99
 NATURAL RESOURCES CONSERVATION SERVICE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION, AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Yvonne Stig 8/26/99
 HOWARD SOIL CONSERVATION DISTRICT

BY THE DEVELOPER:
 *I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Donald Mason 8-30-99
 DEVELOPER DATE

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. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Donald Mason 8/19/99
 ENGINEER - DONALD A. MASON, P.E. # 21443 DATE

NO.	DATE	REVISION

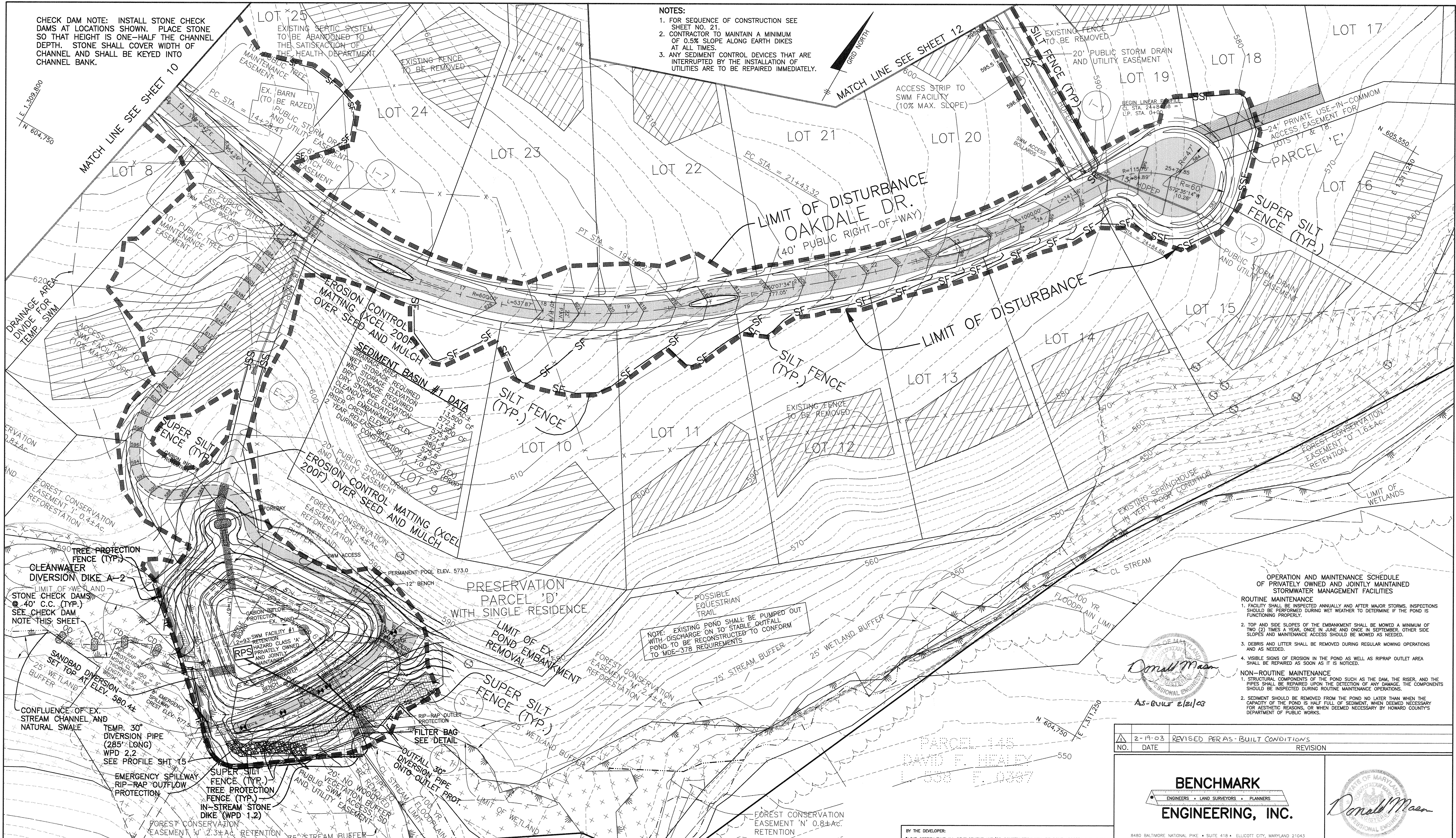
BENCHMARK
 ENGINEERS • LAND SURVEYORS • PLANNERS
ENGINEERING, INC.

8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-6105 FAX: 410-465-6644

OWNER/DEVELOPER: HOODS MILL CORPORATION C/O P.O. BOX 417 ELLICOTT CITY, MD 21041 410-465-4244	PROJECT: MONTICELLO LOTS 1-50, PRESERVATION PARCELS "A" THRU "D" AND NON-BUILDABLE PARCEL "E"
LOCATION: TAX MAP 8 - BLOCK 18 - PARCEL 110 4TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	TITLE: GRADING AND SEDIMENT & EROSION CONTROL PLAN WP-99-24 SP-99-01
DATE: MARCH, 1999	PROJECT NO. 1122
DESIGN: JMC DRAFT: JMC	SCALE: 1" = 50' DRAWING 10 OF 22

CHECK DAM NOTE: INSTALL STONE CHECK DAMS AT LOCATIONS SHOWN. PLACE STONE SO THAT HEIGHT IS ONE-HALF THE CHANNEL DEPTH. STONE SHALL COVER WIDTH OF CHANNEL AND SHALL BE KEYS INTO CHANNEL BANK.

- NOTES:
- FOR SEQUENCE OF CONSTRUCTION SEE SHEET NO. 21.
 - CONTRACTOR TO MAINTAIN A MINIMUM OF 0.5% SLOPE ALONG EARTH DIKES AT ALL TIMES.
 - ANY SEDIMENT CONTROL DEVICES THAT ARE INTERRUPTED BY THE INSTALLATION OF UTILITIES ARE TO BE REPAIRED IMMEDIATELY.



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Daniels 9/19/99
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Carole Hamilton 9/22/99
 CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: *William Vanman* 9/22/99
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

STORMWATER MANAGEMENT SUMMARY TABLE

STORM FREQUENCY	PRE-DEVELOPED COMBINED DISCHARGE (cfs) WITH SWM AT DESIGN POINT		POST-DEVELOPED CONDITION DISCHARGE (cfs) AT DESIGN POINT	
	DESIGN POINT #1	DESIGN POINT #2	DESIGN POINT #1	DESIGN POINT #2
2	2.4	6.9	2.4	6.9
10	23.7	35.2	23.6	31.0
100	-	-	76.8	75.0

YEARS	POND #1		POND #2	
	2	10	2	10
INFLOW Q (cfs)	19.4	65.5	12.1	41.0
DISCHARGE Q (cfs)	2.4	23.6	76.8	1.6
ELEVATION	575.3	577.4	579.0	572.1
STORAGE VOLUME PROVIDED (AC FT)	1.393	2.650	3.892	0.589

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION, AND SEDIMENT CONTROL.

Cheryl Simons / as 8/28/99
 NATURAL RESOURCES CONSERVATION SERVICE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION, AND SEDIMENT CONTROL MEET THE REQUIREMENTS FOR THE HOWARD SOIL CONSERVATION DISTRICT.

Jeffery S. [Signature] 9/24/99
 HOWARD SOIL CONSERVATION DISTRICT

OPERATION, MAINTENANCE AND INSPECTION NOTE

INSPECTION OF THE POND(S) SHOWN HEREON SHALL BE PERFORMED AT LEAST ANNUALLY, IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN USDA 305 STANDARDS AND SPECIFICATIONS FOR PONDS (MD-378). THE POND OWNER(S) AND ANY HEIRS, SUCCESSORS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE POND OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATORS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING, OR SLUMPING.

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.

Donald A. Mason PE NO. 21443 DATE 2/21/03
 DONALD A. MASON

BY THE DEVELOPER:

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN AS-BUILT PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."

DEVELOPER: *David W. [Signature]* 8-20-99 DATE

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. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN AS-BUILT PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."

Donald A. Mason 2/19/99 DATE
 ENGINEER - DONALD A. MASON, P.E. # 21443

NO.	DATE	REVISION
2-19-03	REVISED PER AS-BUILT CONDITIONS	

BENCHMARK ENGINEERING, INC.
 ENGINEERS • LAND SURVEYORS • PLANNERS

8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-6105 FAX: 410-465-6644

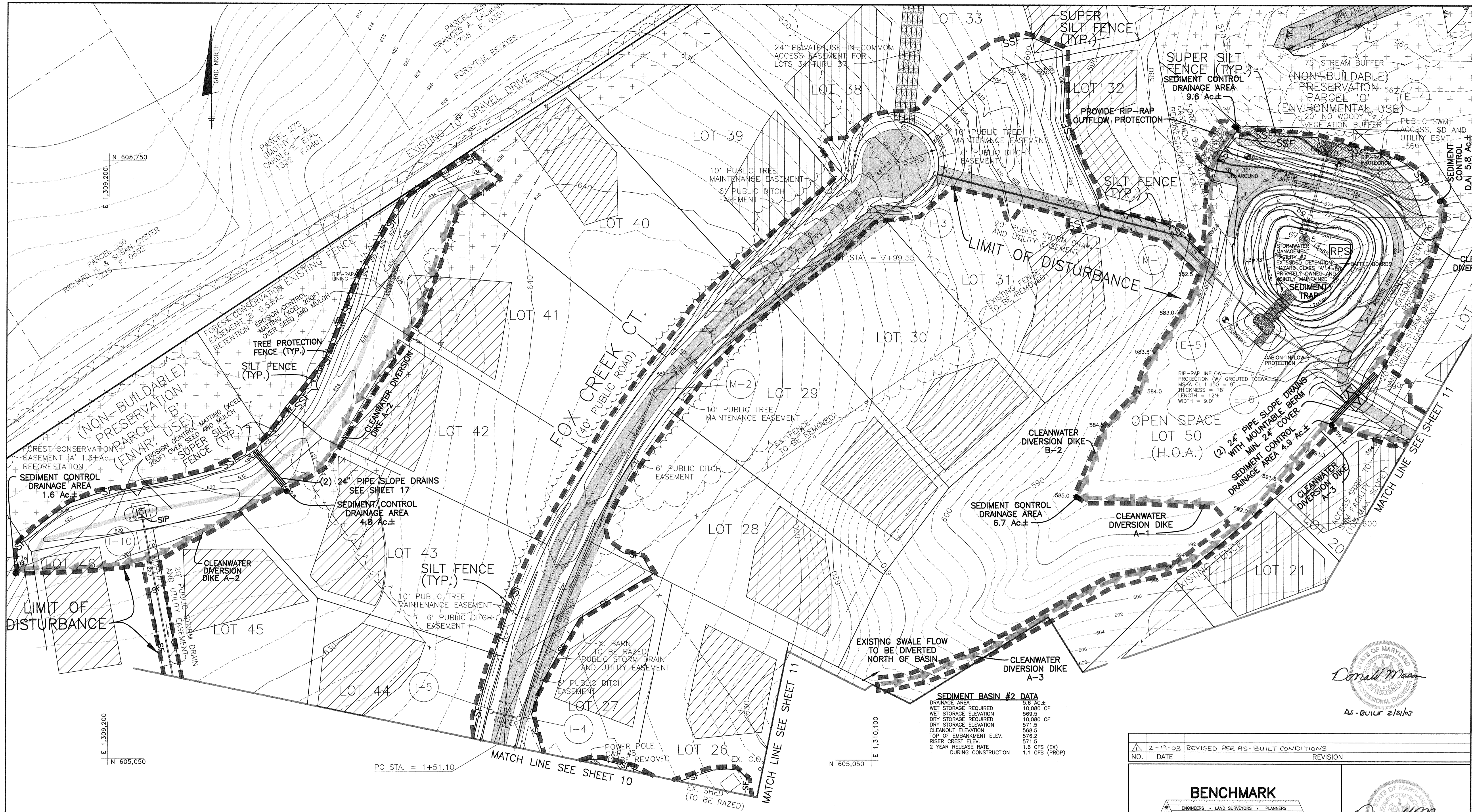
OWNER/DEVELOPER: HOODS MILL CORPORATION
 C/O P.O. BOX 417
 ELLICOTT CITY, MD 21041
 410-465-4244

PROJECT: MONTICELLO
 LOTS 1-50, PRESERVATION PARCELS "A" THRU "D" AND NON-BUILDABLE PARCEL "E"

LOCATION: TAX MAP 8 - BLOCK 18 - PARCEL 110
 4TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: GRADING AND SEDIMENT & EROSION CONTROL PLAN
 WP-99-24 SF-99-01

DATE: MARCH, 1999 PROJECT NO. 1122
 SCALE: 1" = 50' DRAWING 11 OF 22



SEDIMENT BASIN #2 DATA

DRAINAGE AREA	3.6 Ac±
WET STORAGE REQUIRED	10,080 CF
WET STORAGE ELEVATION	569.5
DRY STORAGE REQUIRED	10,080 CF
DRY STORAGE ELEVATION	571.5
CLEANOUT ELEVATION	568.5
TOP OF EMBANKMENT ELEV.	576.2
RISER CREST ELEV.	571.5
2 YEAR RELEASE RATE	1.6 CFS (EX)
DURING CONSTRUCTION	1.1 CFS (PROP)

STATE OF MARYLAND
 DONALD MASON
 REGISTERED PROFESSIONAL ENGINEER
 AS-BUILT 2/16/03

NO.	DATE	REVISION
2-19-03	REVISED PER AS-BUILT CONDITIONS	

BENCHMARK ENGINEERING, INC.
 ENGINEERS • LAND SURVEYORS • PLANNERS
 8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-6105 FAX: 410-465-6644

OWNER/DEVELOPER: HOODS MILL CORPORATION
 C/O P.O. BOX 417
 ELLICOTT CITY, MD 21041
 410-465-4244

PROJECT: MONTICELLO
 LOTS 1-50, PRESERVATION PARCELS "A" THRU "D" AND NON-BUILDABLE PARCEL "E"

LOCATION: TAX MAP 8 - BLOCK 18 - PARCEL 110
 HOWARD COUNTY, MARYLAND

TITLE: GRADING AND SEDIMENT & EROSION CONTROL PLAN
 WP-99-24 SP-99-03

DATE: MARCH, 1999 **PROJECT NO.:** 1122

DESIGN: JMC **DRAFT:** JMC **SCALE:** 1" = 50' **DRAWING 12 OF 22**

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Richard M. Quake 9/19/99
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Wanda Hamster 9/23/99
 CHIEF, DIVISION OF LAND DEVELOPMENT

Donald Mason 9/23/99
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

OPERATION AND MAINTENANCE SCHEDULE OF PRIVATELY OWNED AND JOINTLY MAINTAINED STORMWATER MANAGEMENT FACILITIES

ROUTINE MAINTENANCE

- FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHOULD BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE POND IS FUNCTIONING PROPERLY.
- TOP AND SIDE SLOPES OF THE EMBANKMENT SHALL BE MOWED A MINIMUM OF TWO (2) TIMES A YEAR, ONCE IN JUNE AND ONCE IN SEPTEMBER. OTHER SIDE SLOPES AND MAINTENANCE ACCESS SHOULD BE MOWED AS NEEDED.
- DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
- VISIBLE SIGNS OF EROSION IN THE POND AS WELL AS RIPRAP OUTLET AREA SHALL BE REPAIRED AS SOON AS IT IS NOTICED.

NON-ROUTINE MAINTENANCE

- STRUCTURAL COMPONENTS OF THE POND SUCH AS THE DAM, THE RISER, AND THE PIPES SHALL BE REPAIRED UPON THE DETECTION OF ANY DAMAGE. THE COMPONENTS SHOULD BE INSPECTED DURING ROUTINE MAINTENANCE OPERATIONS.
- SEDIMENT SHOULD BE REMOVED FROM THE POND NO LATER THAN WHEN THE CAPACITY OF THE POND IS HALF FULL OF SEDIMENT WHEN DEEMED NECESSARY FOR AESTHETIC REASONS, OR WHEN DEEMED NECESSARY BY HOWARD COUNTY'S DEPARTMENT OF PUBLIC WORKS.

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION, AND SEDIMENT CONTROL.

Cheryl Simmons/CS 8/26/99
 NATURAL RESOURCES CONSERVATION SERVICE

INSPECTION OF THE POND(S) SHOWN HEREON SHALL BE PERFORMED AT LEAST ANNUALLY, IN ACCORDANCE WITH THE CHECKLIST AND REQUIREMENTS CONTAINED WITHIN USGA 305 STANDARDS AND SPECIFICATIONS FOR PONDS (MD-378), THE POND OWNER(S) AND ANY HEIRS, SUCCESSORS, OR ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION. SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF, THE POND OWNER(S) SHALL PROMPTLY NOTIFY THE SOIL CONSERVATION DISTRICT OF ANY UNUSUAL OBSERVATIONS THAT MAY BE INDICATORS OF DISTRESS SUCH AS EXCESSIVE SEEPAGE, TURBID SEEPAGE, SLIDING OR SLUMPING.

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.

Donald Mason PE NO. 21443
 DONALD A. MASON DATE: 2/16/03

BY THE DEVELOPER:

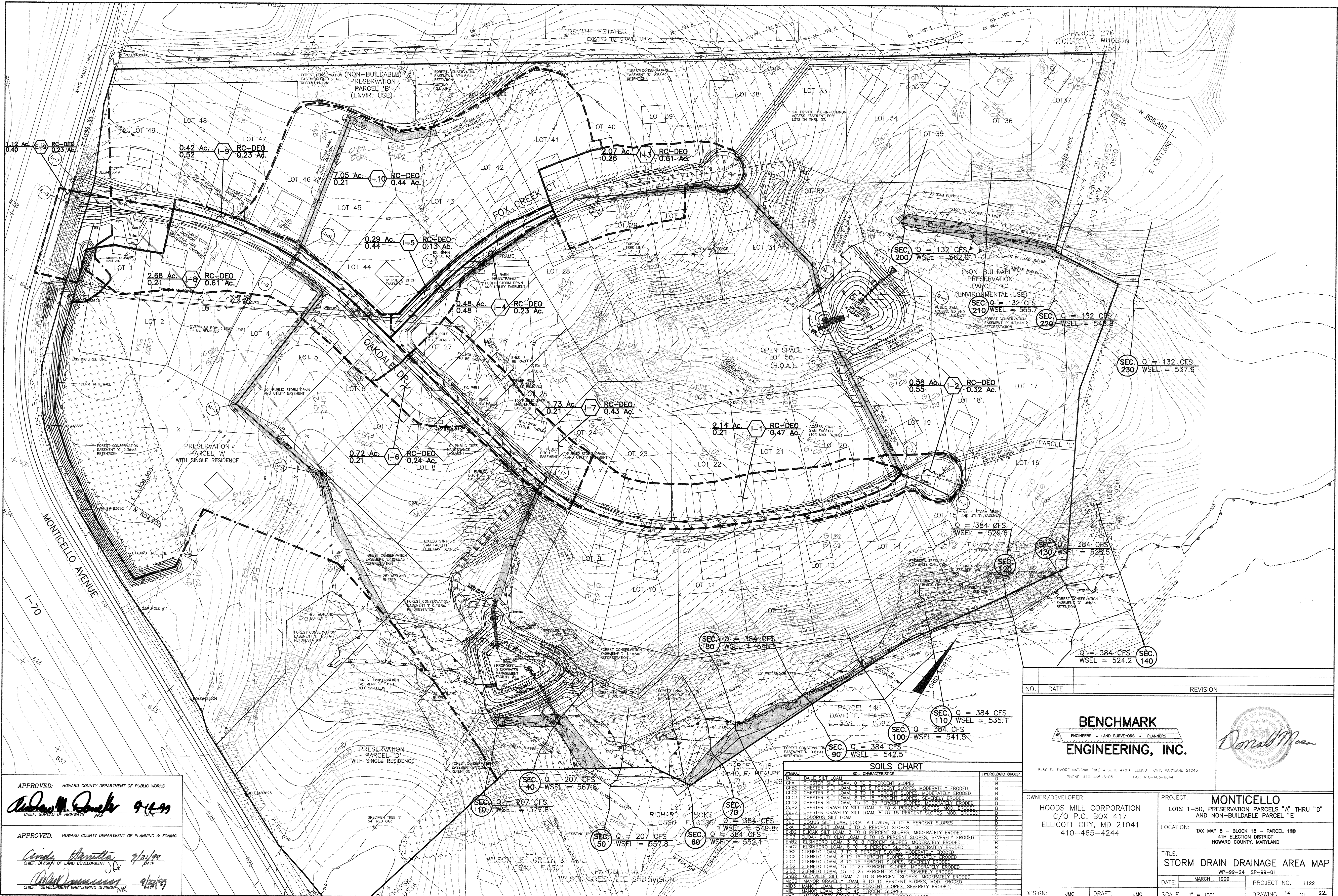
I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Richard M. Quake 8-20-99
 DEVELOPER DATE

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. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTICED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

Donald Mason 2/19/99
 ENGINEER - DONALD A. MASON, P.E. # 21443 DATE



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Richard M. Daniels 9/11/99
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Carol Hamilton 9/21/99
 CHIEF, DIVISION OF LAND DEVELOPMENT

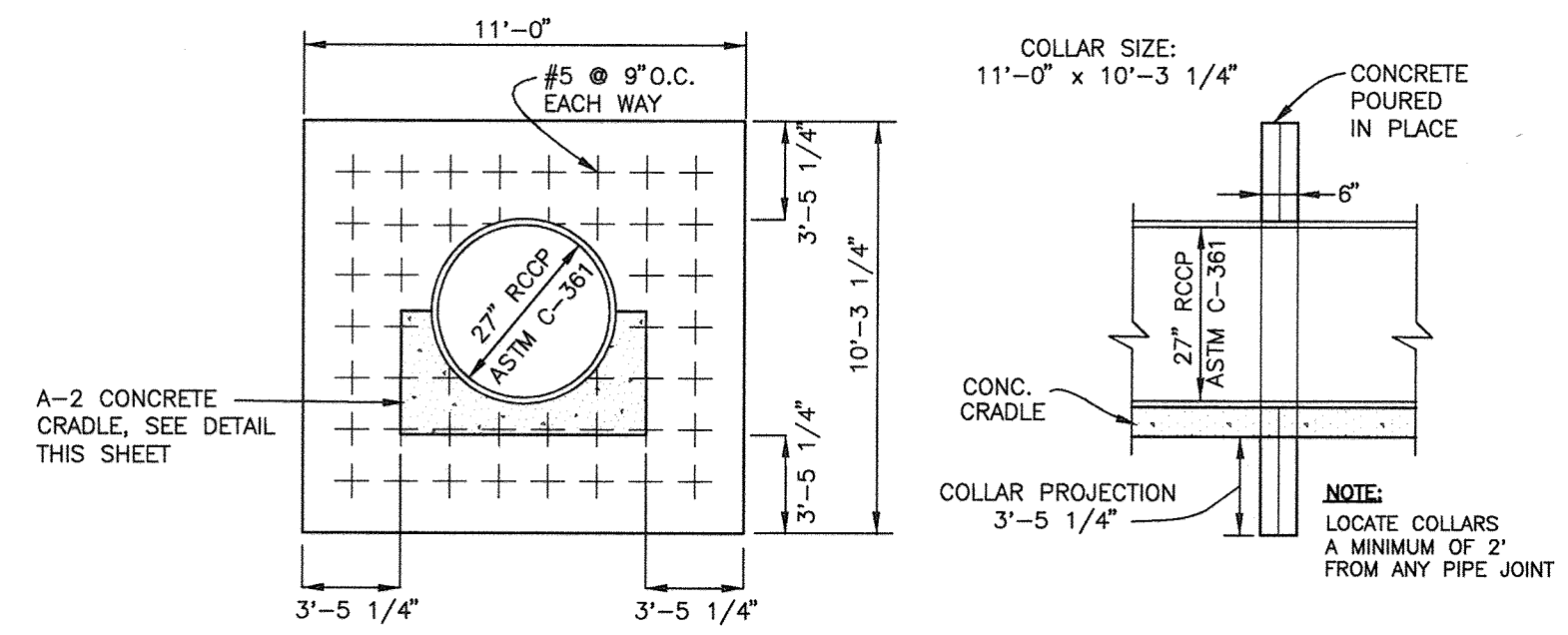
John Williams 9/21/99
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

Plotted: AUGUST 19, 1999
 Acad Dwg: 7025S14.DWG

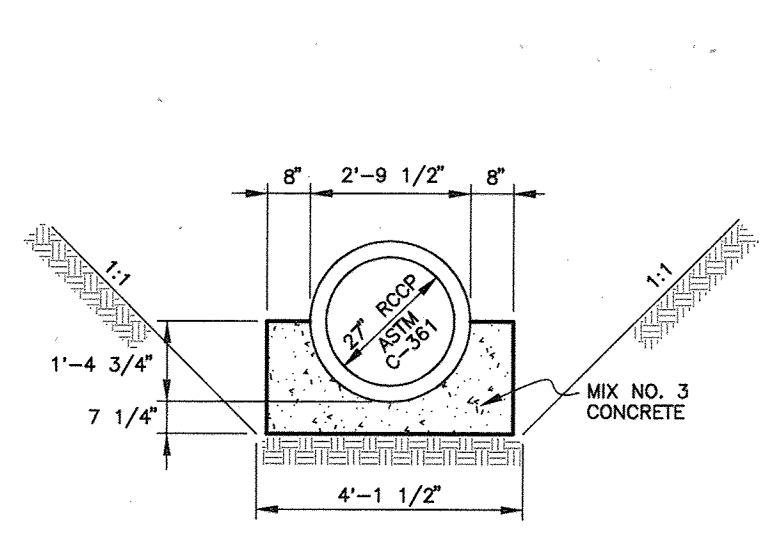
SOILS CHART

SYMBOL	SOIL CHARACTERISTICS	HYDROLOGIC GROUP
BA	BAILEY SILT LOAM	B
CB1	ELIORK SILT LOAM, 0 TO 3 PERCENT SLOPES	B
CB2	CHESTER SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
CB3	CHESTER SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
CB4	CHESTER SILT LOAM, 15 TO 25 PERCENT SLOPES, SEVERELY ERODED	B
CB5	CHESTER SILT LOAM, 15 TO 25 PERCENT SLOPES, MODERATELY ERODED	B
CB6	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MOD. ERODED	B
CB7	CHESTER GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, MOD. ERODED	B
CB8	CHESTER GRAVELLY SILT LOAM, 15 TO 25 PERCENT SLOPES, MOD. ERODED	B
CB9	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES	B
CB10	CHESTER GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES	B
CB11	CHESTER GRAVELLY SILT LOAM, 15 TO 25 PERCENT SLOPES	B
CB12	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, SEVERELY ERODED	B
CB13	CHESTER GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
CB14	CHESTER GRAVELLY SILT LOAM, 15 TO 25 PERCENT SLOPES, SEVERELY ERODED	B
CB15	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
CB16	CHESTER GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
CB17	CHESTER GRAVELLY SILT LOAM, 15 TO 25 PERCENT SLOPES, MODERATELY ERODED	B
CB18	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, SEVERELY ERODED	B
CB19	CHESTER GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
CB20	CHESTER GRAVELLY SILT LOAM, 15 TO 25 PERCENT SLOPES, SEVERELY ERODED	B
CB21	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
CB22	CHESTER GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
CB23	CHESTER GRAVELLY SILT LOAM, 15 TO 25 PERCENT SLOPES, MODERATELY ERODED	B
CB24	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, SEVERELY ERODED	B
CB25	CHESTER GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
CB26	CHESTER GRAVELLY SILT LOAM, 15 TO 25 PERCENT SLOPES, SEVERELY ERODED	B
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CB28	CHESTER GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
CB29	CHESTER GRAVELLY SILT LOAM, 15 TO 25 PERCENT SLOPES, MODERATELY ERODED	B
CB30	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, SEVERELY ERODED	B
CB31	CHESTER GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
CB32	CHESTER GRAVELLY SILT LOAM, 15 TO 25 PERCENT SLOPES, SEVERELY ERODED	B
CB33	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
CB34	CHESTER GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
CB35	CHESTER GRAVELLY SILT LOAM, 15 TO 25 PERCENT SLOPES, MODERATELY ERODED	B
CB36	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, SEVERELY ERODED	B
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CB38	CHESTER GRAVELLY SILT LOAM, 15 TO 25 PERCENT SLOPES, SEVERELY ERODED	B
CB39	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
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CB42	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, SEVERELY ERODED	B
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CB48	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, SEVERELY ERODED	B
CB49	CHESTER GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
CB50	CHESTER GRAVELLY SILT LOAM, 15 TO 25 PERCENT SLOPES, SEVERELY ERODED	B
CB51	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
CB52	CHESTER GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
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CB61	CHESTER GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
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CB69	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
CB70	CHESTER GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
CB71	CHESTER GRAVELLY SILT LOAM, 15 TO 25 PERCENT SLOPES, MODERATELY ERODED	B
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CB73	CHESTER GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
CB74	CHESTER GRAVELLY SILT LOAM, 15 TO 25 PERCENT SLOPES, SEVERELY ERODED	B
CB75	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
CB76	CHESTER GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
CB77	CHESTER GRAVELLY SILT LOAM, 15 TO 25 PERCENT SLOPES, MODERATELY ERODED	B
CB78	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, SEVERELY ERODED	B
CB79	CHESTER GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
CB80	CHESTER GRAVELLY SILT LOAM, 15 TO 25 PERCENT SLOPES, SEVERELY ERODED	B
CB81	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
CB82	CHESTER GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
CB83	CHESTER GRAVELLY SILT LOAM, 15 TO 25 PERCENT SLOPES, MODERATELY ERODED	B
CB84	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, SEVERELY ERODED	B
CB85	CHESTER GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
CB86	CHESTER GRAVELLY SILT LOAM, 15 TO 25 PERCENT SLOPES, SEVERELY ERODED	B
CB87	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
CB88	CHESTER GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
CB89	CHESTER GRAVELLY SILT LOAM, 15 TO 25 PERCENT SLOPES, MODERATELY ERODED	B
CB90	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, SEVERELY ERODED	B
CB91	CHESTER GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
CB92	CHESTER GRAVELLY SILT LOAM, 15 TO 25 PERCENT SLOPES, SEVERELY ERODED	B
CB93	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
CB94	CHESTER GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B
CB95	CHESTER GRAVELLY SILT LOAM, 15 TO 25 PERCENT SLOPES, MODERATELY ERODED	B
CB96	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, SEVERELY ERODED	B
CB97	CHESTER GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED	B
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CB99	CHESTER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED	B
CB100	CHESTER GRAVELLY SILT LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED	B

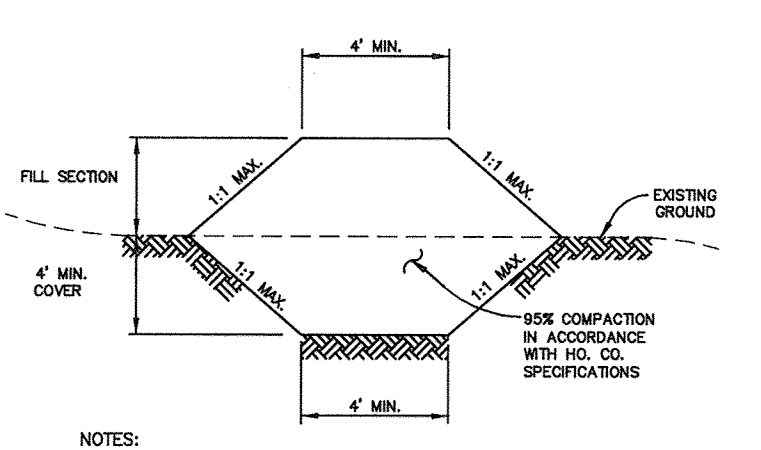
NO.	DATE	REVISION
BENCHMARK ENGINEERING, INC. ENGINEERS • LAND SURVEYORS • PLANNERS 8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MARYLAND 21043 PHONE: 410-465-6105 FAX: 410-465-6644		
OWNER/DEVELOPER: HOODS MILL CORPORATION C/O P.O. BOX 417 ELLICOTT CITY, MD 21041 410-465-4244		PROJECT: MONTICELLO LOTS 1-50, PRESERVATION PARCELS "A" THRU "D" AND NON-BUILDABLE PARCEL "E"
LOCATION: TAX MAP 8 - BLOCK 18 - PARCEL 110 4TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND		
TITLE: STORM DRAIN DRAINAGE AREA MAP WP-99-24 SP-99-01		
DATE: MARCH, 1999	PROJECT NO. 1122	
DESIGN: JMC	DRAFT: JMC	SCALE: 1" = 100'
		DRAWING 14 OF 22



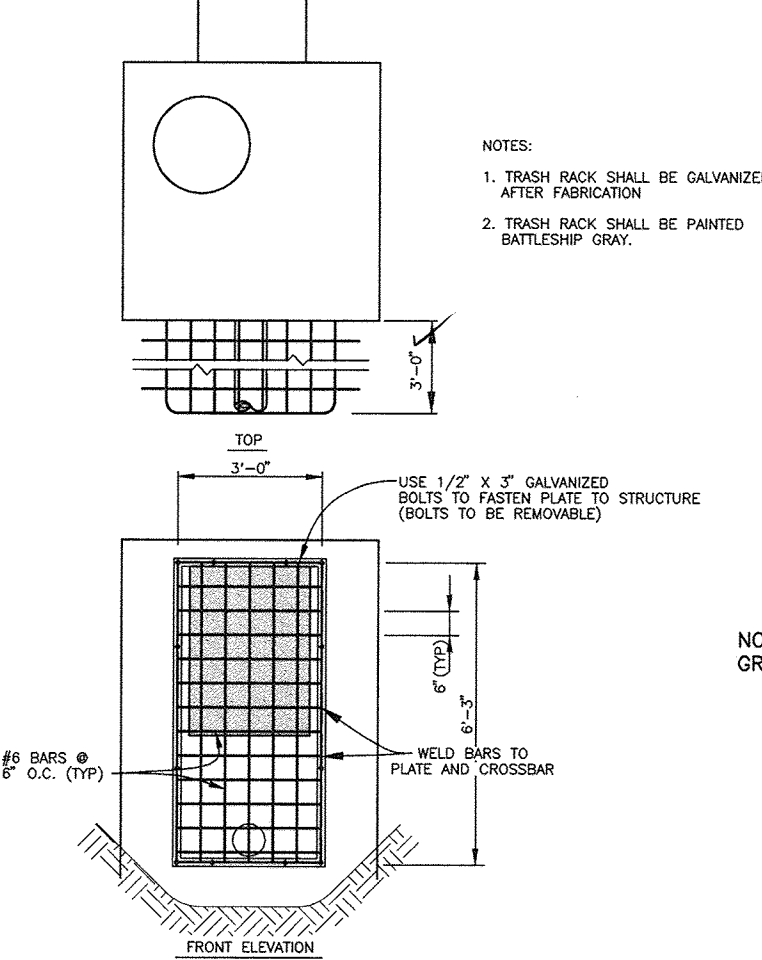
ANTI-SEEP COLLAR - POND #1
NOT TO SCALE



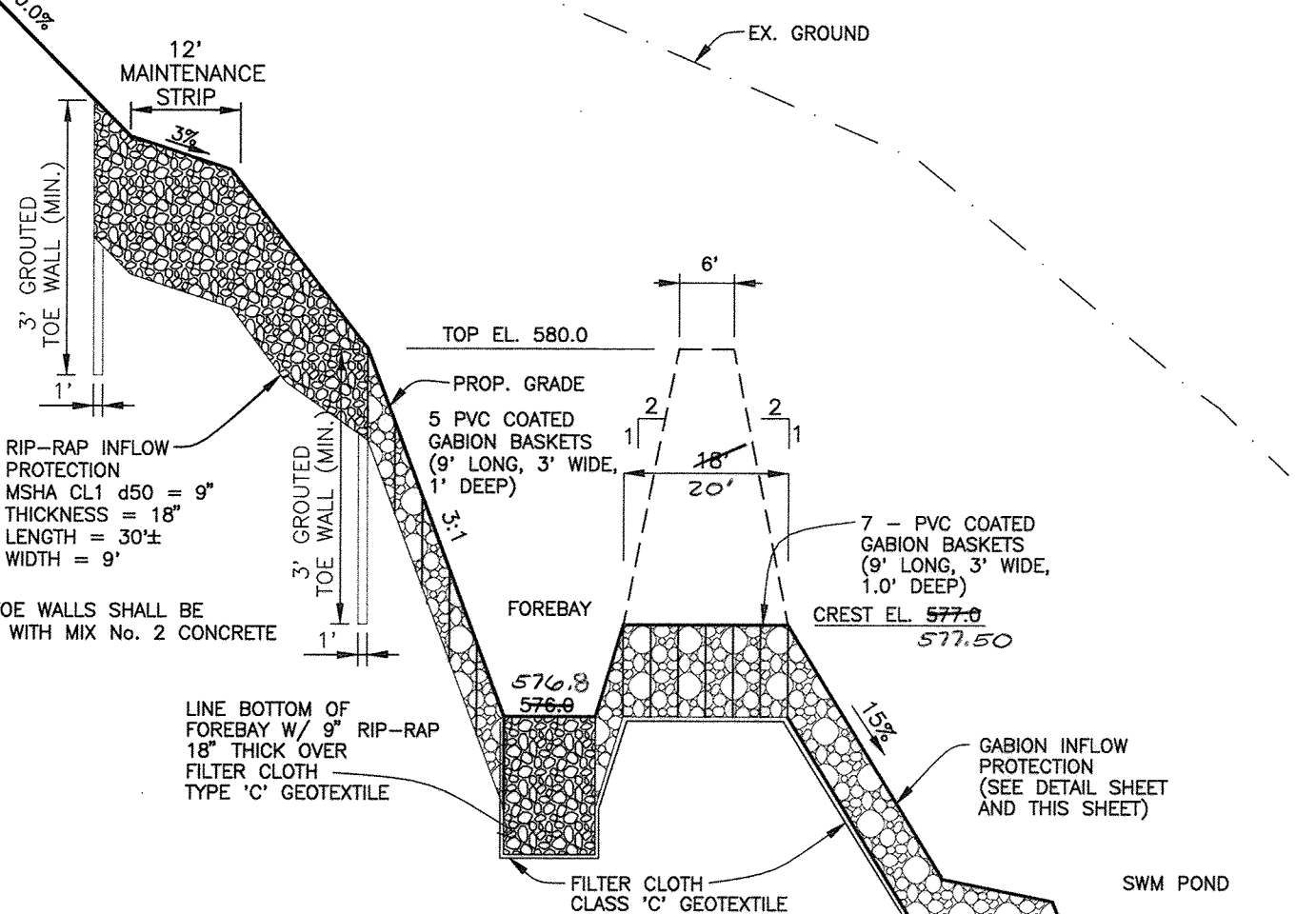
POND #1 TYPE A-2 CONCRETE CRADLE
NOT TO SCALE



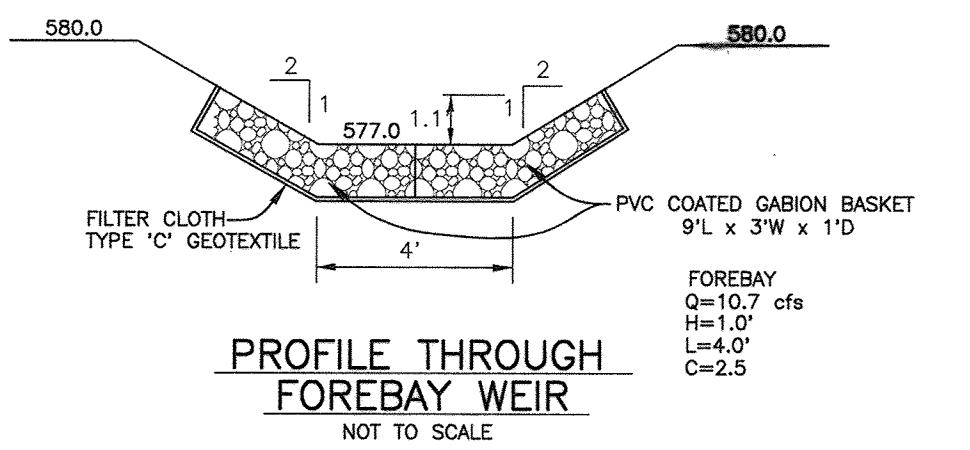
CORE TRENCH SECTION
NOT TO SCALE



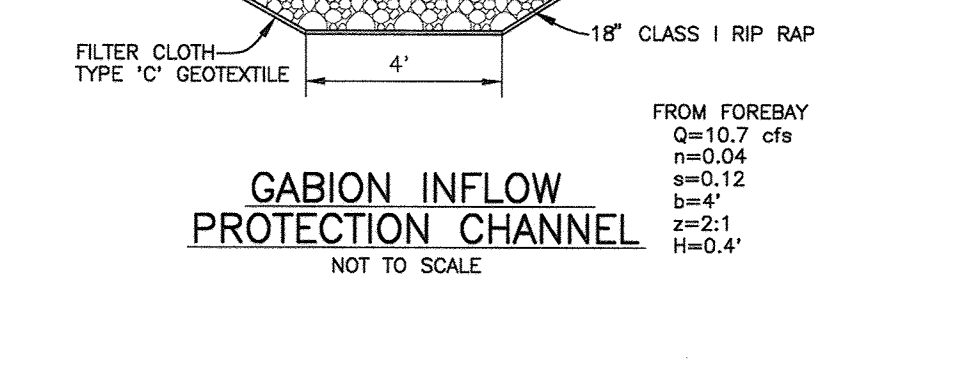
TRASH RACK DETAIL - POND #1
SCALE: 1" = 4"



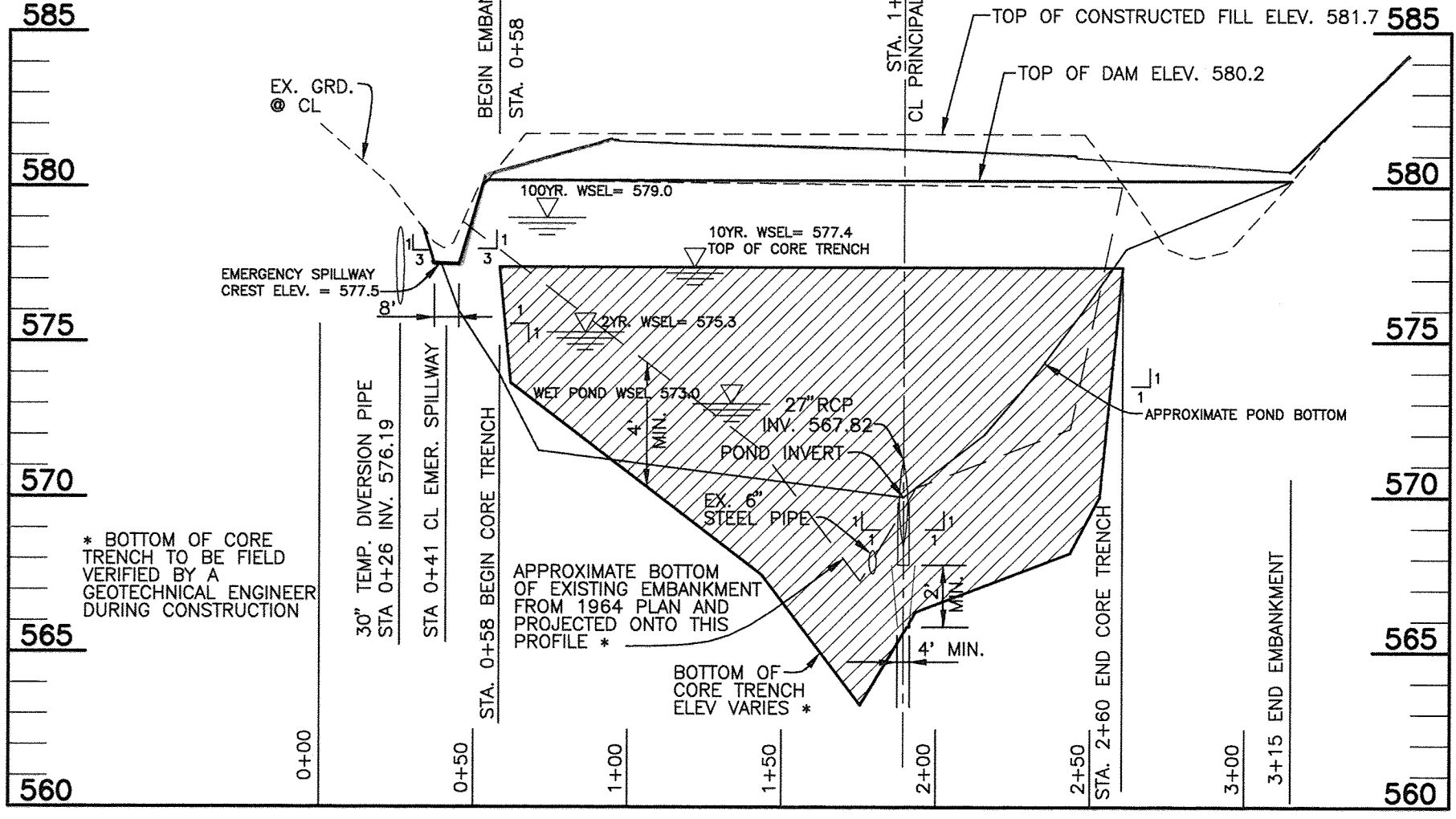
TYPICAL SECTION OF GABION WEIR AT FOREBAY
SCALE: 1" = 20' HORIZ., 1" = 2' VERT.



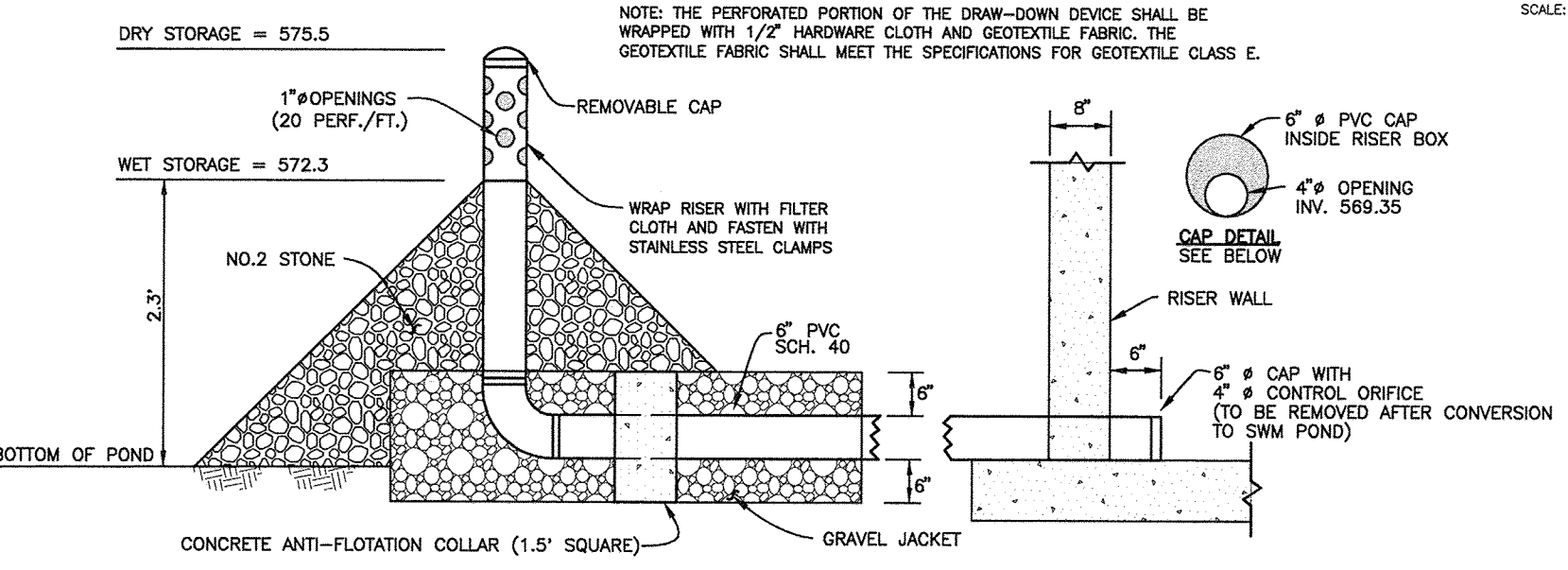
PROFILE THROUGH FOREBAY WEIR
NOT TO SCALE



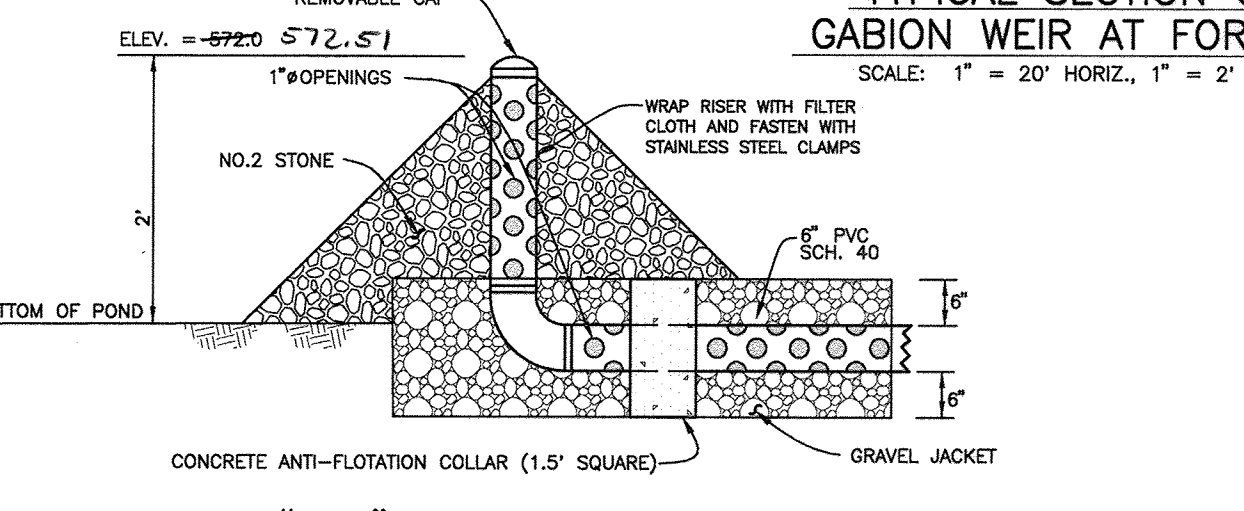
GABION INFLOW PROTECTION CHANNEL
NOT TO SCALE



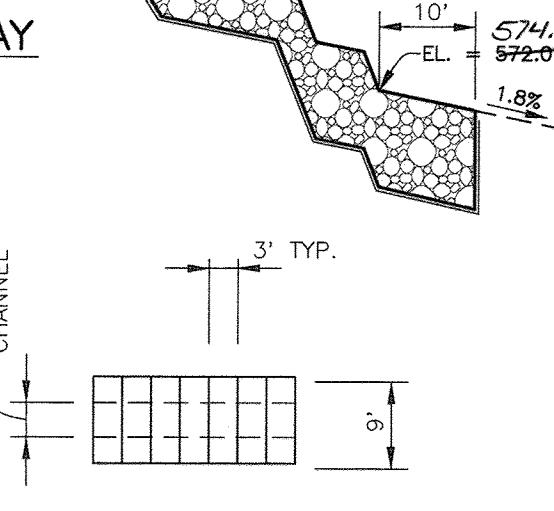
PROFILE ALONG CL OF EMBANKMENT SECTION A-A POND #1
SCALE: 1" = 50' HORIZ., 1" = 5' VERT.



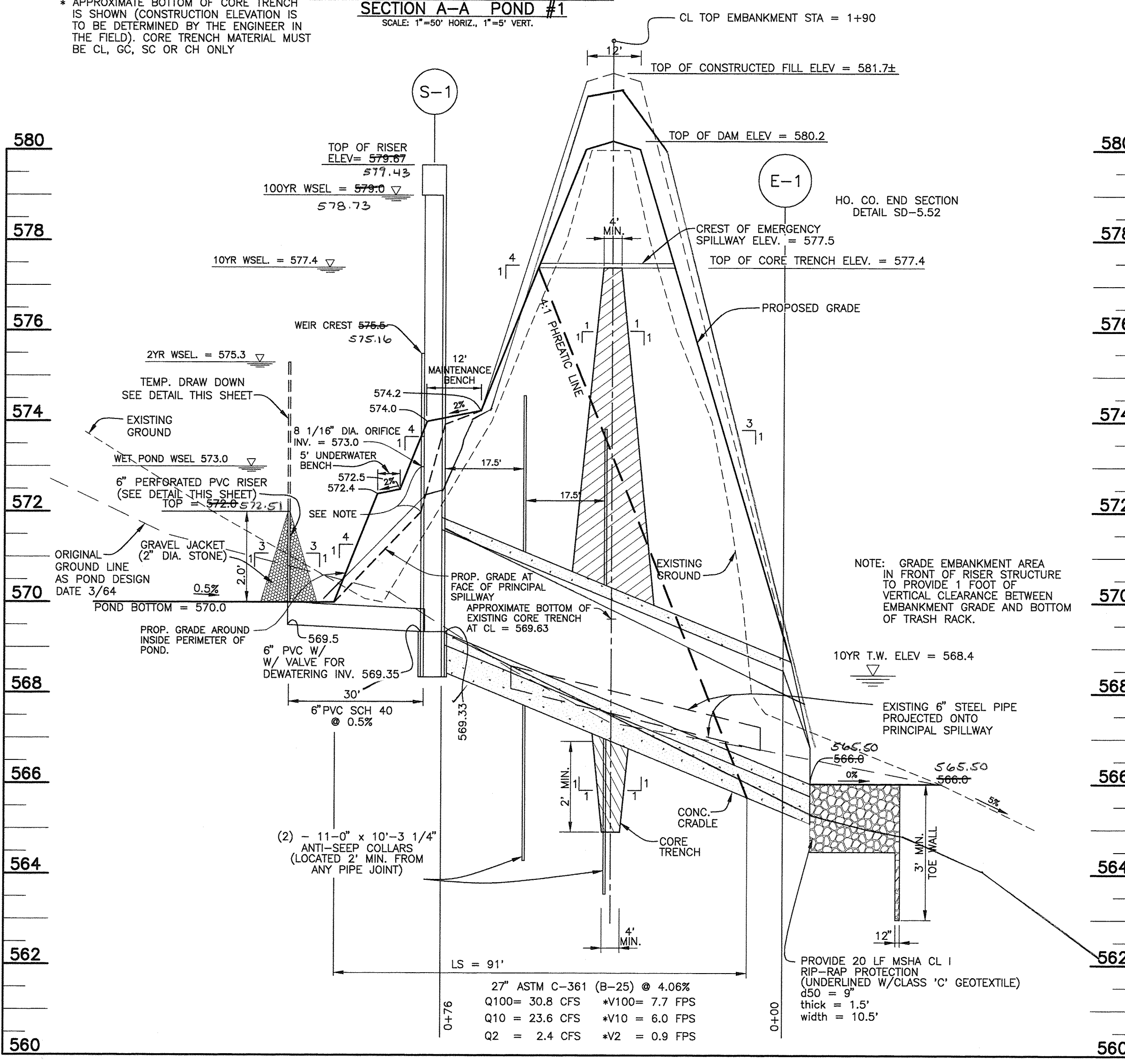
POND #1 6" TEMPORARY SWM VERTICAL DRAW-DOWN DEVICE
NOT TO SCALE



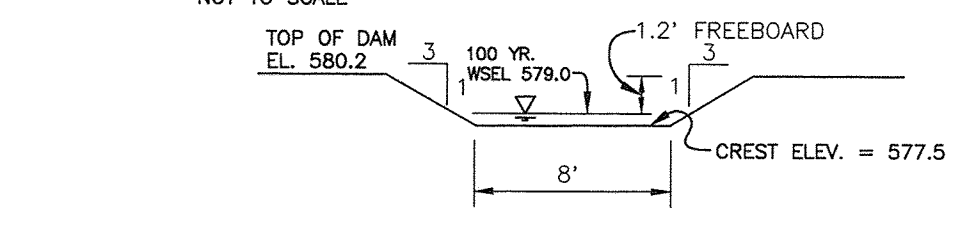
POND #1 6" DEWATERING PIPE DETAIL
NOT TO SCALE



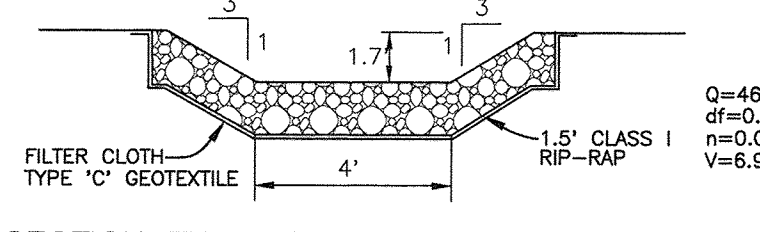
GABION BASKET LAYOUT
SCALE: 1" = 20'



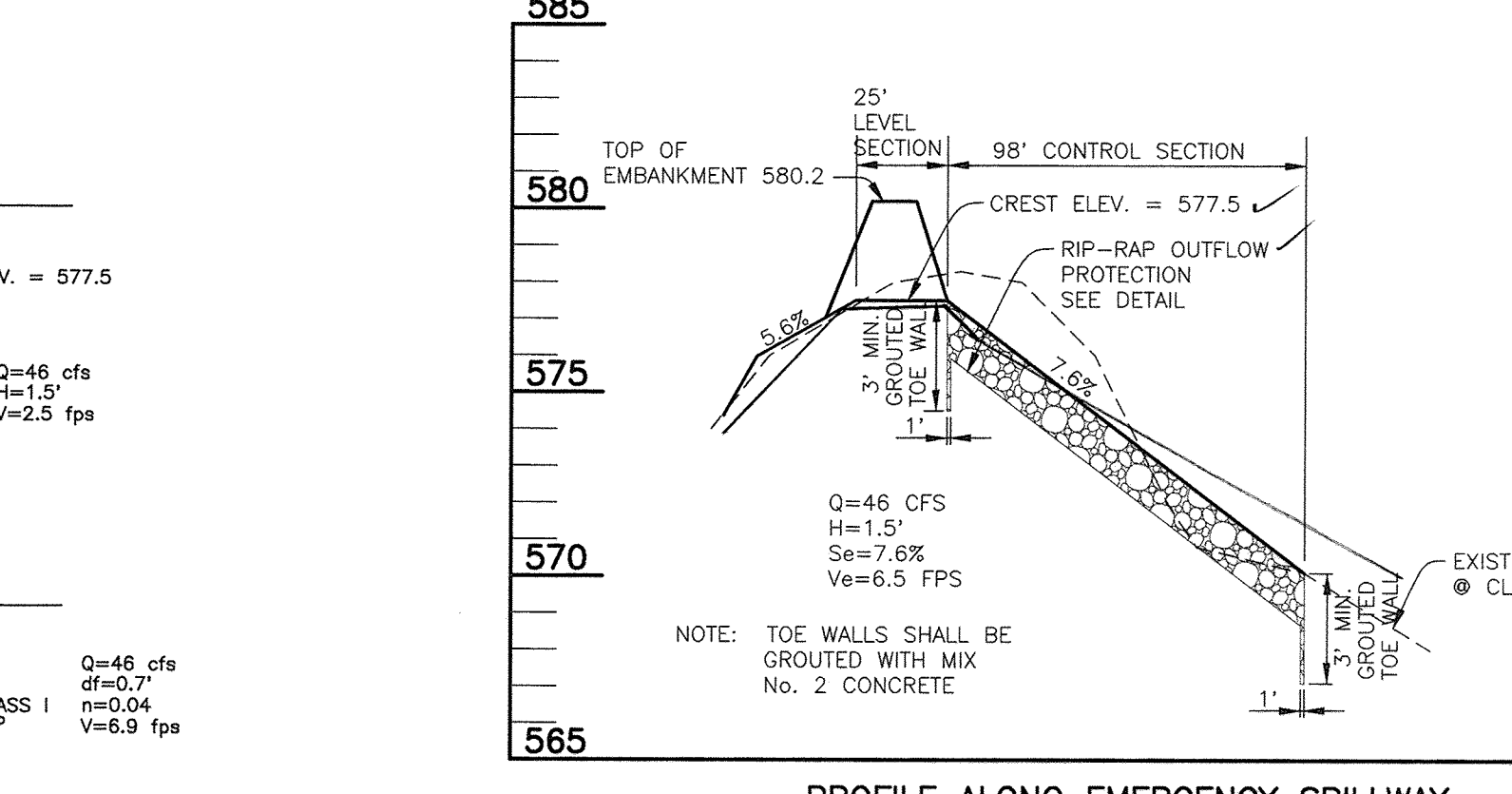
SECTION THRU PRINCIPAL SPILLWAY POND #1
SCALE: 1" = 20' HORIZ., 1" = 2' VERT.



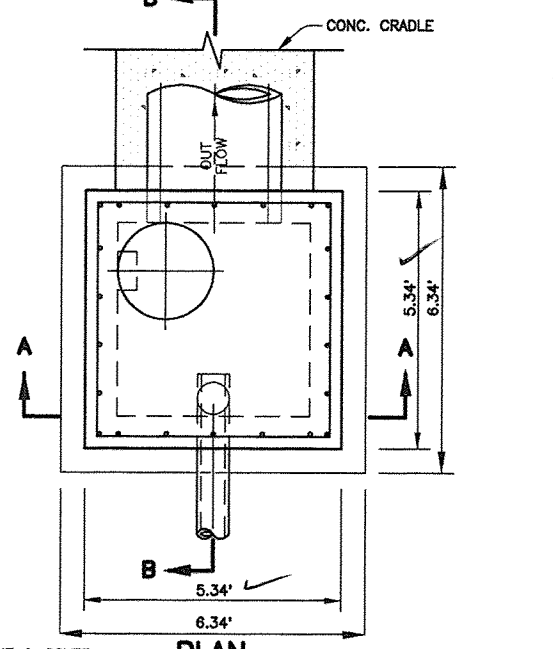
SECTION THROUGH EMERGENCY SPILLWAY
NOT TO SCALE



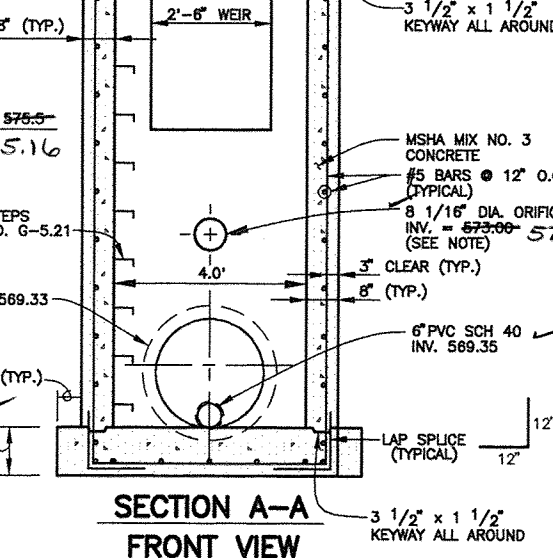
SECTION THROUGH EMERGENCY SPILLWAY OUTLET CHANNEL
NOT TO SCALE



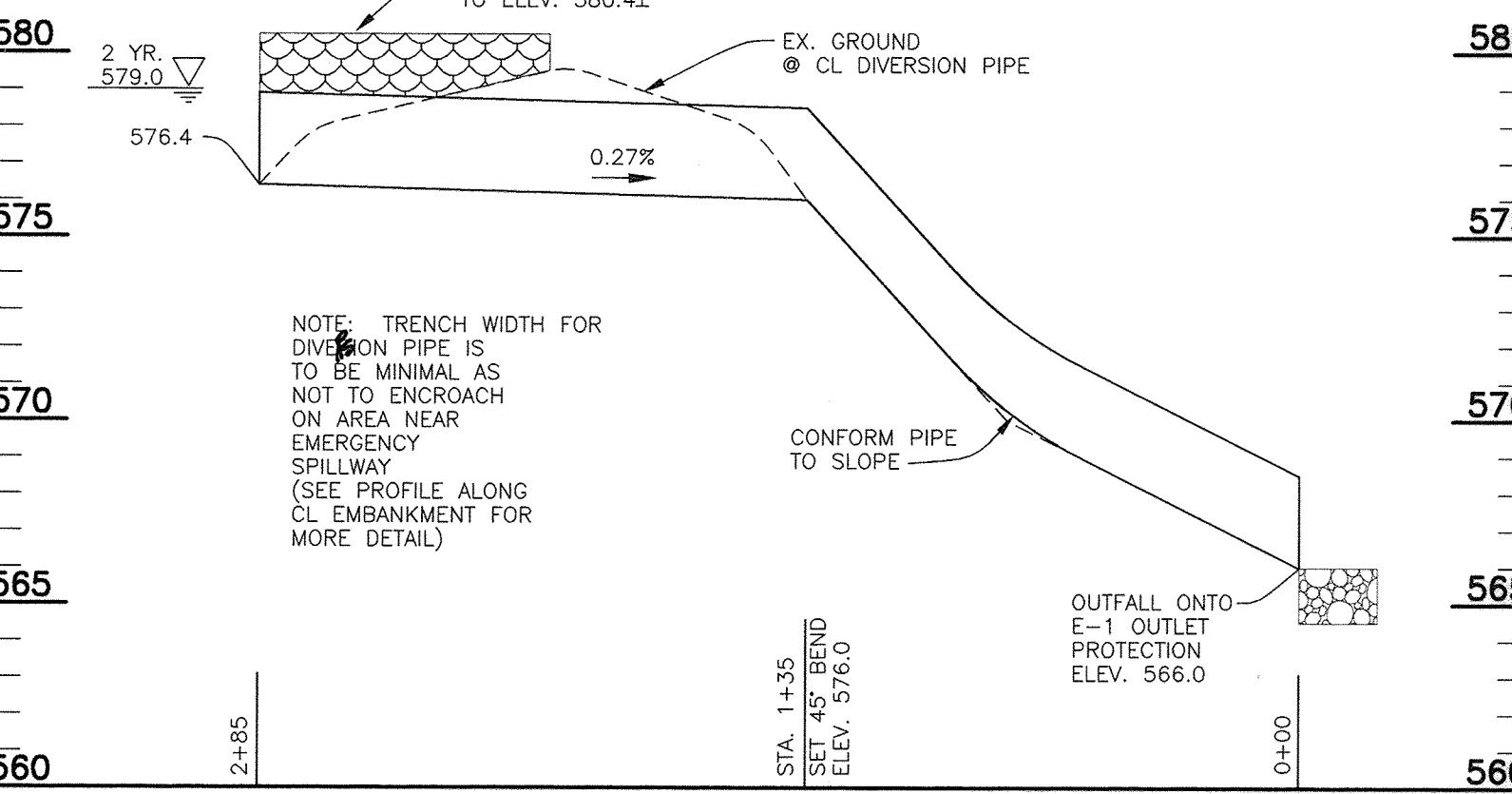
PROFILE ALONG EMERGENCY SPILLWAY
SCALE: 1" = 50' HORIZ., 1" = 5' VERT.



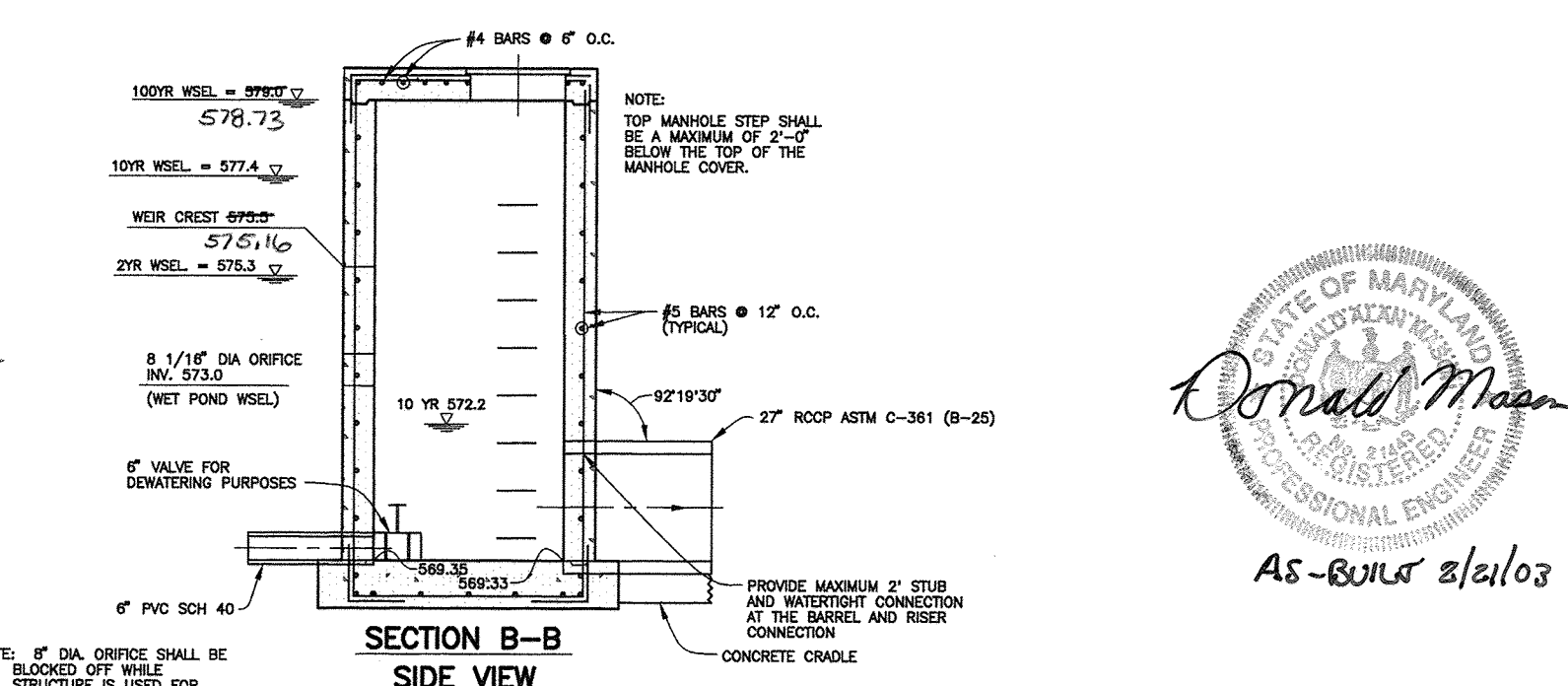
PLAN



SECTION A-A FRONT VIEW



30" TEMPORARY DIVERSION PIPE DETAIL
SCALE: 1" = 50' HORIZ., 1" = 5' VERT.



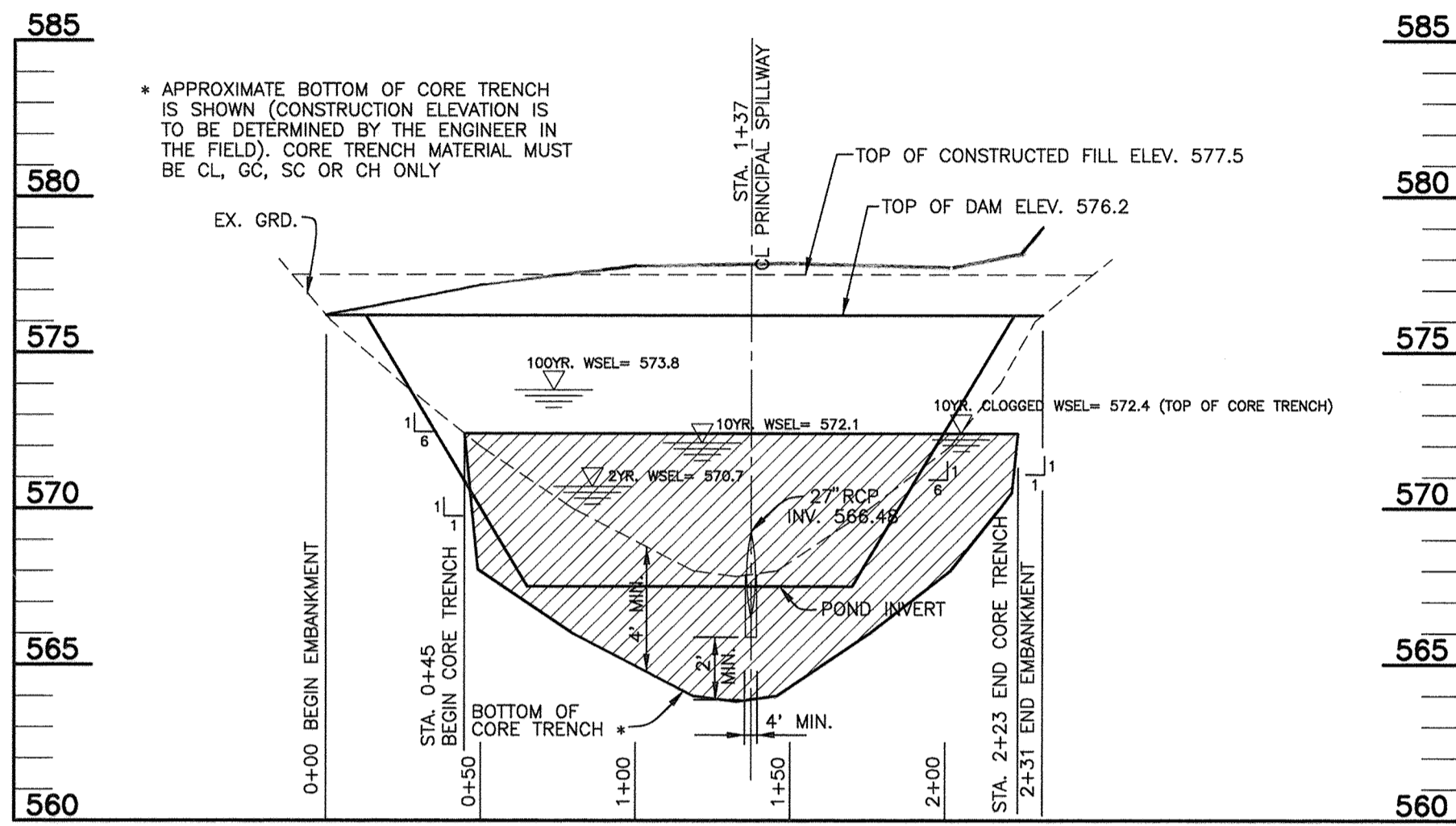
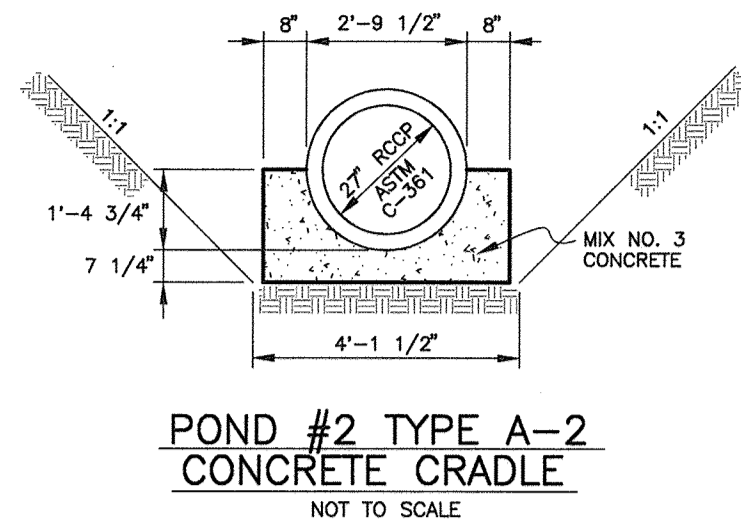
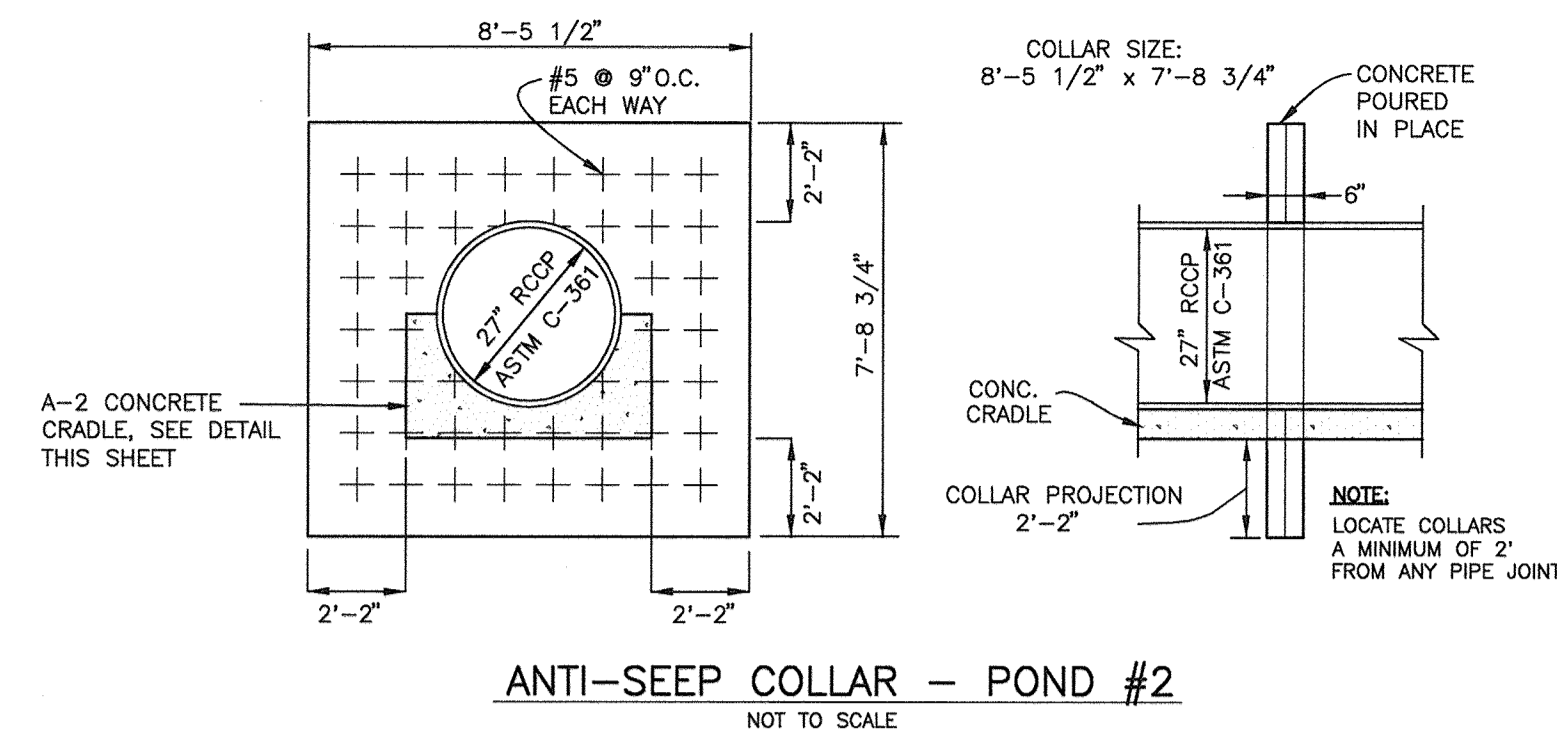
SECTION B-B SIDE VIEW

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.	
<i>Donald Mason</i> DONALD A. MASON	PE NO. 21443 DATE 2/10/03
CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION, THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.	
BY THE DEVELOPER: I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.	
<i>W. H. H. H.</i> DEVELOPER - HOODS MILL CORPORATION	DATE 5-20-99
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. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.	
<i>Donald Mason</i> ENGINEER - DONALD A. MASON, P.E. # 21443	DATE 2/19/99
THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION, AND SEDIMENT CONTROL.	
<i>Cheryl Semmon /cs</i> NATURAL RESOURCES CONSERVATION SERVICE	DATE 8/26/99
THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION, AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.	
<i>John J. Kelly</i> HOWARD SOIL CONSERVATION DISTRICT	DATE 8/24/99
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	
<i>Andrew M. Daniels</i> CHIEF, BUREAU OF HIGHWAYS	DATE 9-19-99
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING	
<i>Cindy Hamilton</i> CHIEF, DIVISION OF LAND DEVELOPMENT	DATE 7/27/99
<i>Paul D. Morrison</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE 9/22/99

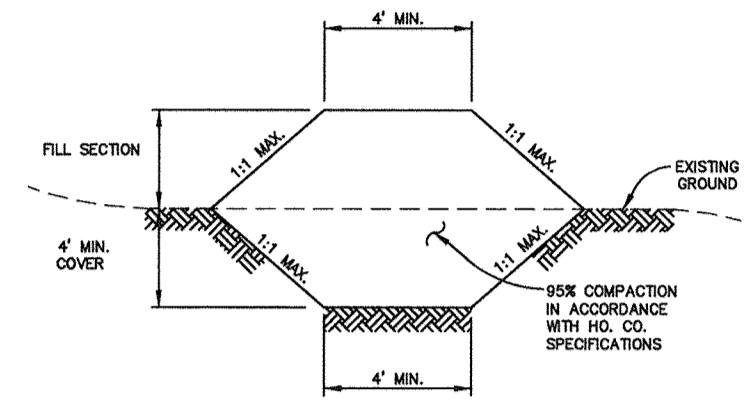
NO.	DATE	REVISION
2	2-19-03	REVISED PER AS-BUILT CONDITIONS

BENCHMARK ENGINEERING, INC.
ENGINEERS • LAND SURVEYORS • PLANNERS
8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MARYLAND 21043
PHONE: 410-465-8105 FAX: 410-465-8644

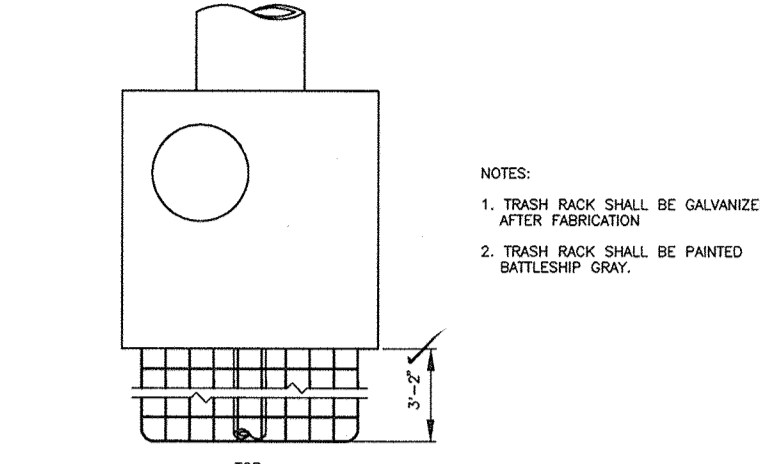
OWNER/DEVELOPER: HOODS MILL CORPORATION C/O P.O. BOX 417 ELLICOTT CITY, MD 21041 410-465-4244	PROJECT: MONTICELLO LOTS 1-50, PRESERVATION PARCELS "A" THRU "D" AND NON-BUILDABLE PARCEL "E"
TITLE: STORMWATER MANAGEMENT POND #1 NOTES, PROFILES AND DETAILS WP-99-24 SP-99-01	LOCATION: TAX MAP 8 - BLOCK 18 - PARCEL 110 4TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
DATE: MARCH, 1999	PROJECT NO. 1122
DESIGN: GWF	DRAFT: JMC
SCALE: AS SHOWN	DRAWING 15 OF 22



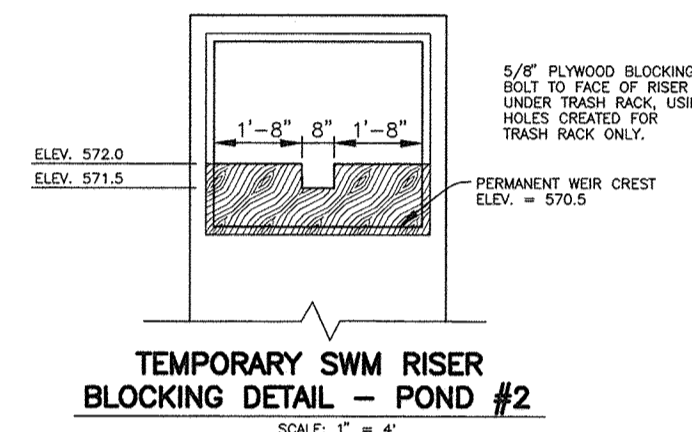
PROFILE ALONG CL OF EMBANKMENT SECTION A-A POND #2 SCALE: 1" = 50' HORIZ., 1" = 5' VERT.



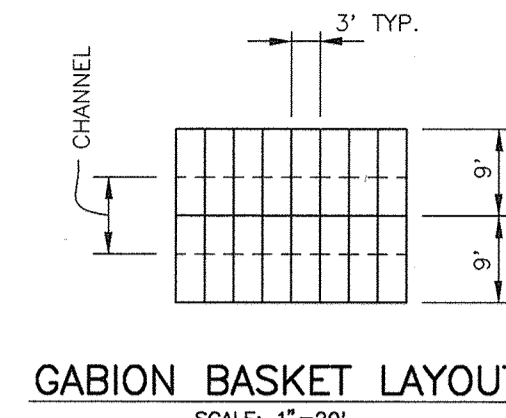
CORE TRENCH SECTION NOT TO SCALE



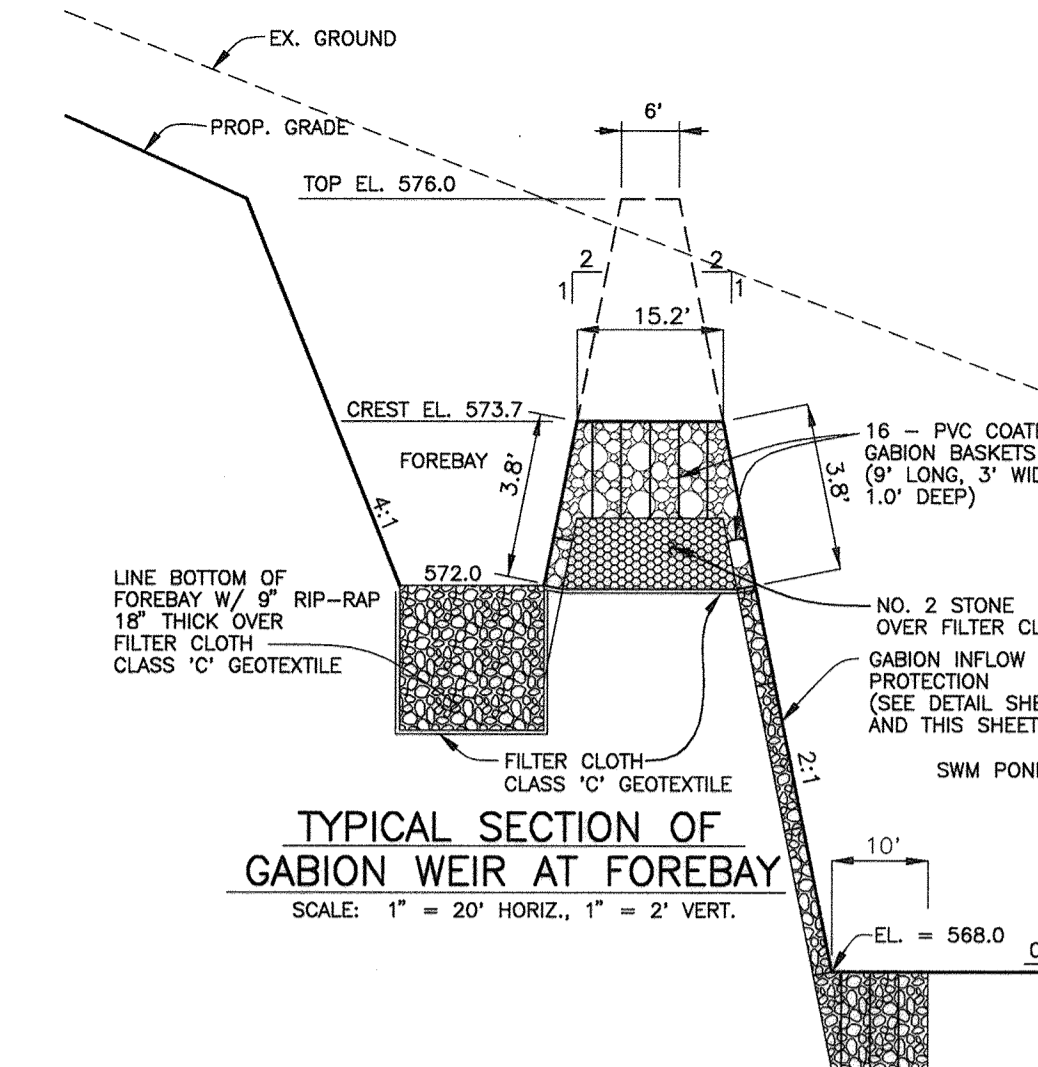
TRASH RACK DETAIL - POND #2 SCALE: 1" = 4"



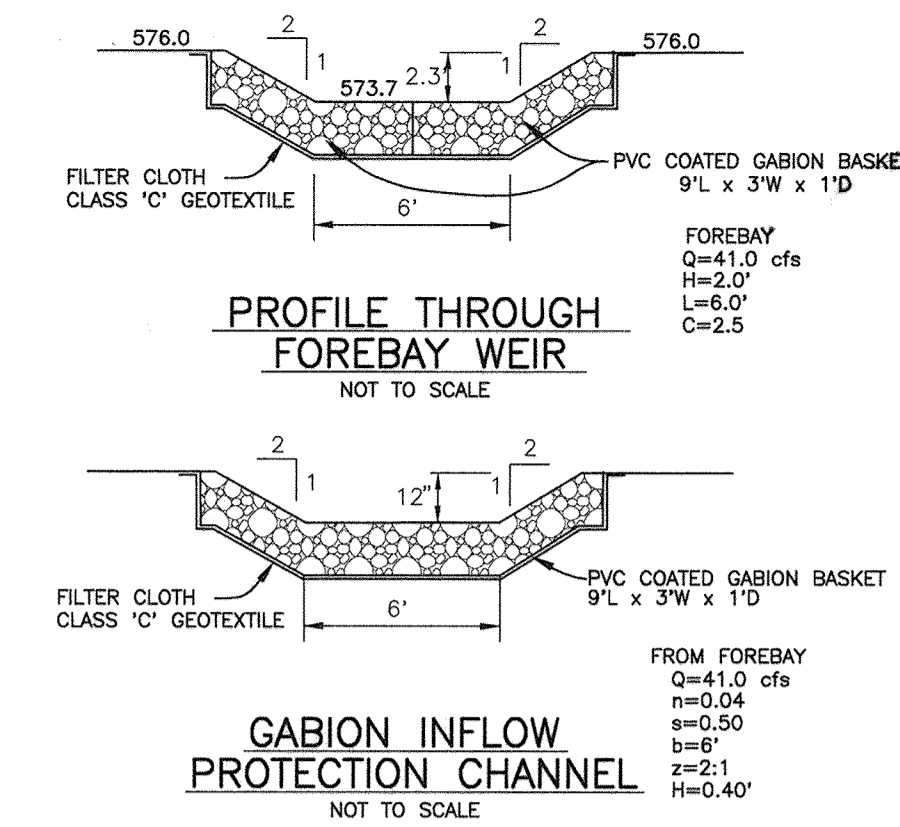
TEMPORARY SWM RISER BLOCKING DETAIL - POND #2 SCALE: 1" = 4"



GABION BASKET LAYOUT SCALE: 1" = 20"

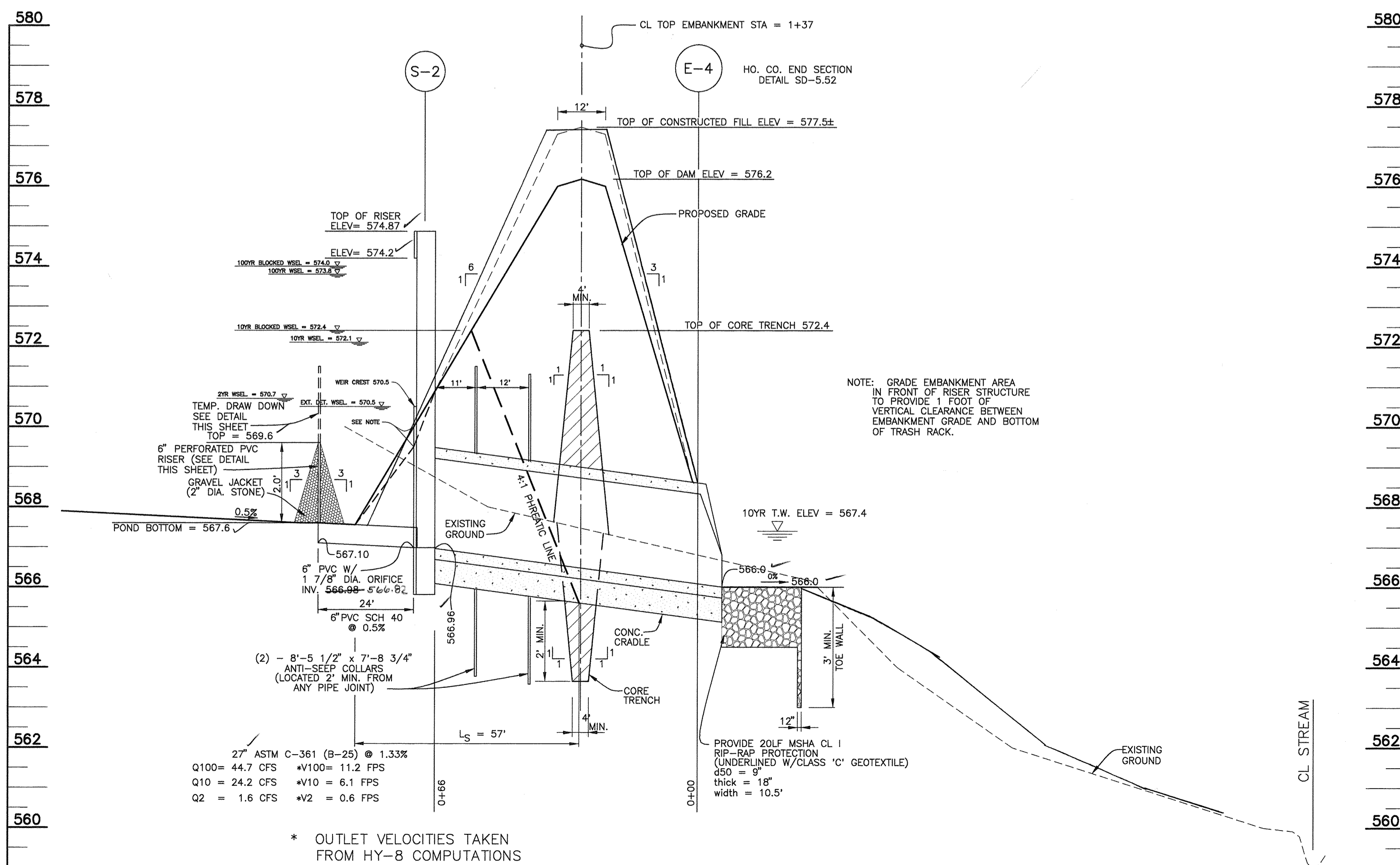


TYPICAL SECTION OF GABION WEIR AT FOREBAY SCALE: 1" = 20' HORIZ., 1" = 2' VERT.

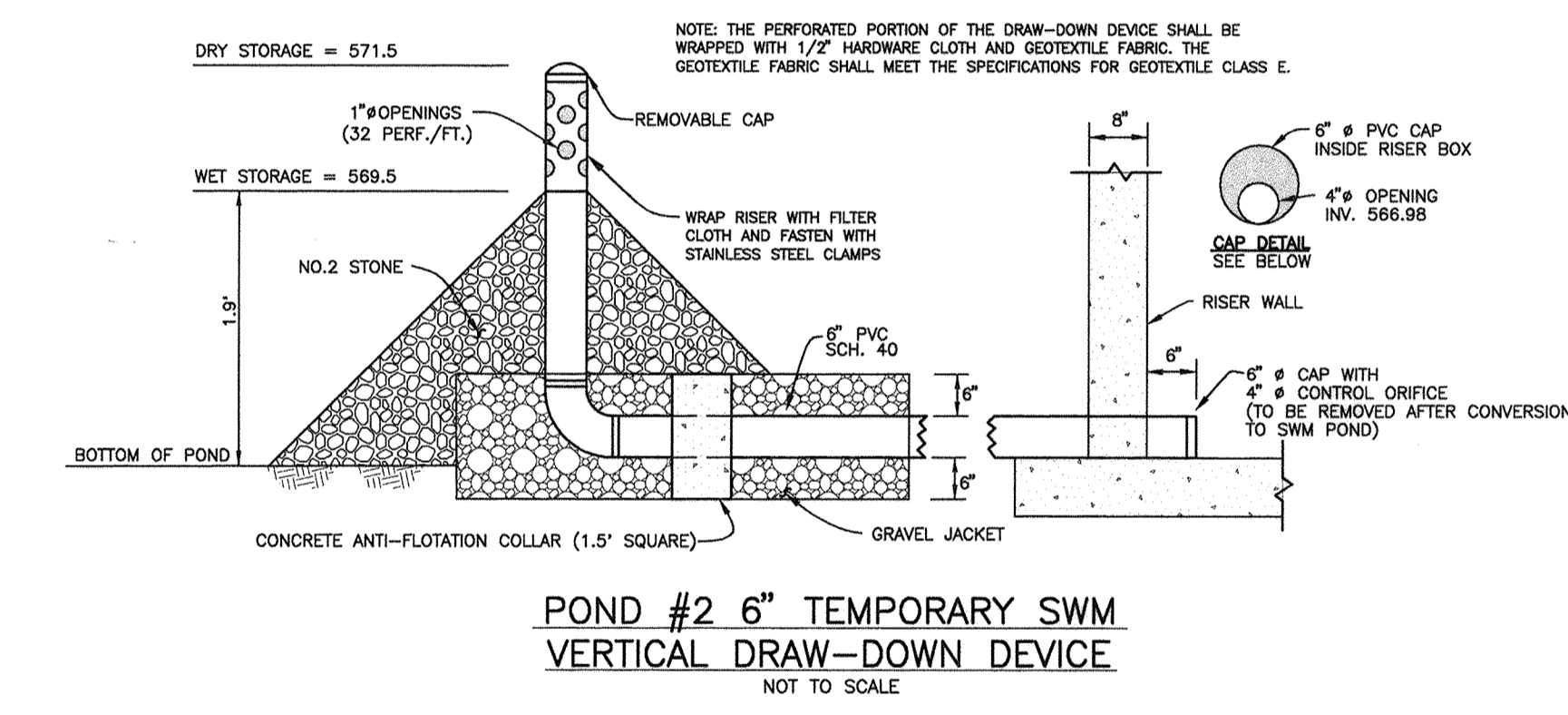


PROFILE THROUGH FOREBAY WEIR NOT TO SCALE

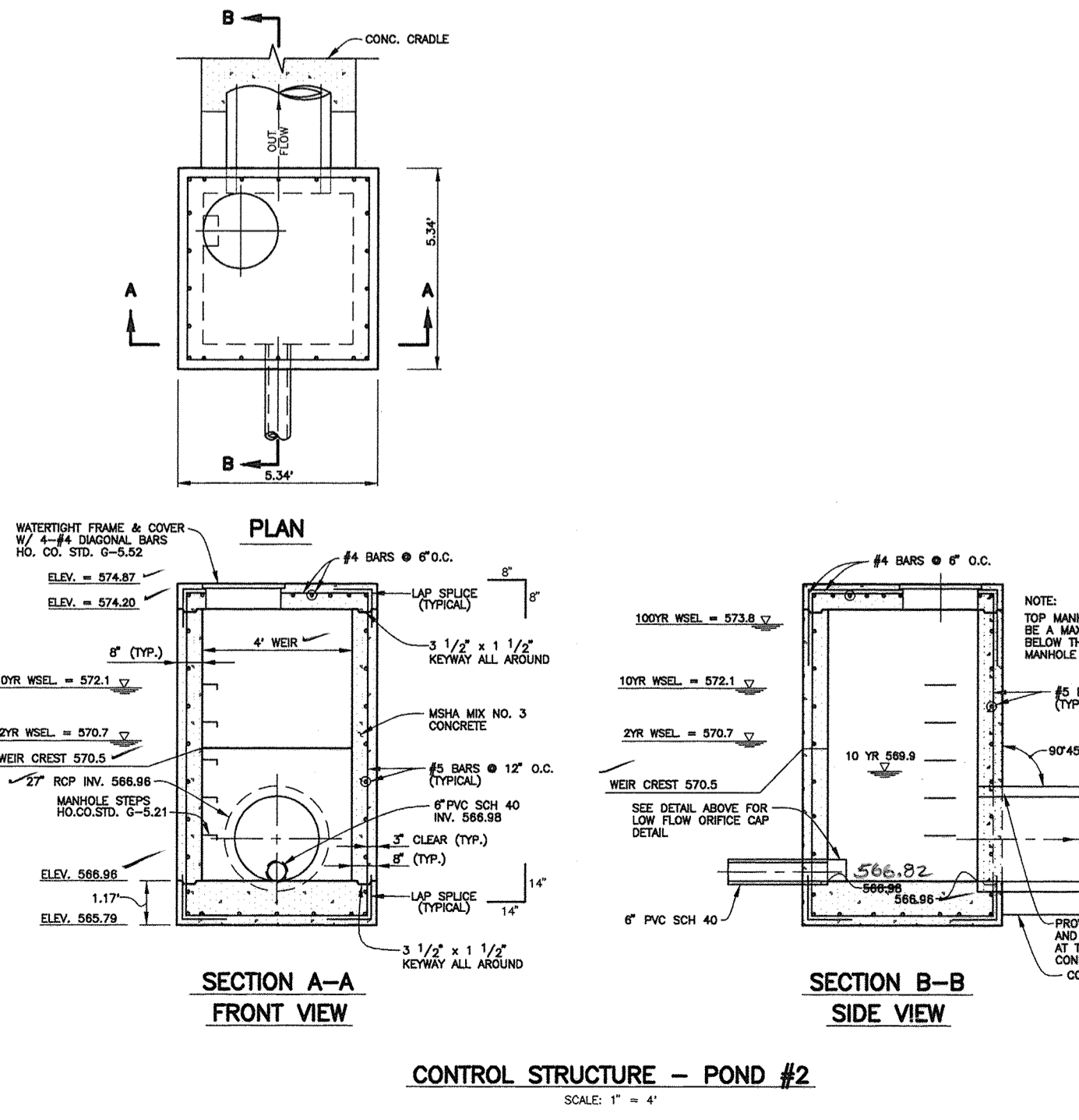
GABION INFLOW PROTECTION CHANNEL NOT TO SCALE



SECTION THRU PRINCIPAL SPILLWAY POND #2 SCALE: 1" = 20' HORIZ., 1" = 2' VERT.

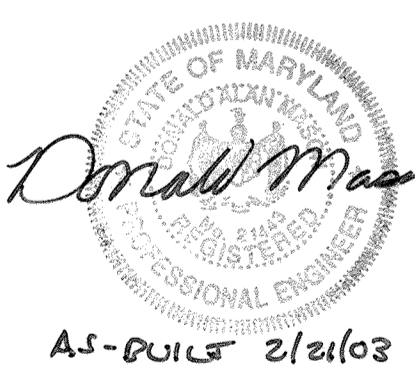


POND #2 6" TEMPORARY SWM VERTICAL DRAW-DOWN DEVICE NOT TO SCALE



CONTROL STRUCTURE - POND #2 SCALE: 1" = 4"

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.	
<i>Donald Mason</i> DONALD A. MASON	PE NO. 21443 DATE 2/21/03
CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.	
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<i>W. H. H. H.</i> DEVELOPER - HOODS MILL CORPORATION	8-20-99 DATE
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. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.	
<i>Donald Mason</i> ENGINEER - DONALD A. MASON, P.E. # 21443	2/21/03 DATE
THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION, AND SEDIMENT CONTROL.	
<i>Cheryl Simms</i> NATURAL RESOURCES CONSERVATION SERVICE	2/26/03 DATE
THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION, AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.	
<i>Gregg Selig</i> HOWARD SOIL CONSERVATION DISTRICT	2/26/03 DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	
<i>Andrew M. Devalle</i> CHIEF, BUREAU OF HIGHWAYS	2-2-99 DATE
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING	
<i>Conrad Hamstra</i> CHIEF, DIVISION OF LAND DEVELOPMENT	2/23/03 DATE
<i>W. H. H. H.</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	2/21/03 DATE



NO.	DATE	REVISION
2-19-03		REVISED PER AS-BUILT CONDITIONS

BENCHMARK ENGINEERING, INC. ENGINEERS • LAND SURVEYORS • PLANNERS 8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MARYLAND 21043 PHONE: 410-465-6105 FAX: 410-465-6644		
OWNER/DEVELOPER: HOODS MILL CORPORATION C/O P.O. BOX 417 ELLICOTT CITY, MD 21041 410-465-4244	PROJECT: MONTICELLO LOTS 1-50, PRESERVATION PARCELS "A" THRU "D" AND NON-BUILDABLE PARCEL "E" LOCATION: TAX MAP 8 - BLOCK 18 - PARCEL 110 4TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE: STORMWATER MANAGEMENT POND #2 NOTES, PROFILES AND DETAILS WF-99-24 SP-99-01		
DATE: MARCH, 1999	PROJECT NO. 1122	
DESIGN: GWF	DRAFT: JMC	SCALE: AS SHOWN
		DRAWING 16 OF 22

POND CONSTRUCTION SPECIFICATIONS

Site Preparation

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface.

All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

Earth Fill

Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials.

Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 6 inch thick (before compaction) layers which shall be continuous over the entire length of the fill.

Compaction - The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of the equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller.

Where a minimum required density is specified, it shall not be less than 95% of maximum dry density with a moisture content within +/- 2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction.

Cut Off Trench - The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans.

Structure Backfill - Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material.

Pipe Conduits - All pipes shall be circular in cross section. Corrugated Metal Pipe - All of the following criteria shall apply for corrugated metal pipe:

1. Materials - (Steel Pipe) - This pipe and its appurtenances shall be galvanized and fully bituminous coated and shall conform to the requirements of AASHTO Specification M-190 Type A with water tight coupling bands.

2. Coupling bands, anti-seep collars, end sections, etc., must be composed of the same material as the pipe. Metals must be insulated from dissimilar materials with use of rubber or plastic insulating materials at least 24 mils in thickness.

3. Connections - All connections with pipes must be completely watertight. The drain pipe or baffle connection to the pipe shall be welded all around when the pipe and riser are metal.

4. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

5. Backfilling shall conform to "Structure Backfill." 6. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Reinforced Concrete Pipe - All of the following criteria shall apply for reinforced concrete pipe:

1. Materials - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation C-361. An approved equivalent is AWWA Specification C-302.

2. Bedding - All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 10% of its outside diameter with a minimum thickness of 3 inches, or as shown on the drawings.

3. Laying pipe - Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled.

4. Backfilling shall conform to "Structure Backfill." 5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Polyvinyl Chloride (PVC) Pipe - All of the following criteria shall apply for polyvinyl chloride (PVC) pipe:

1. Materials - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241.

2. Joints and connections to anti-seep collars shall be completely watertight.

3. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.

4. Backfilling shall conform to "Structure Backfill." 5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Concrete - Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 608, Mix No. 3.

Rock Riprap - All rock shall be dense, sound, and free from cracks, seams, and other defects conducive to accelerated weathering.

The rock shall have the following properties: 1. Bulk specific gravity (saturated surface-dry basis) not less than 2.5.

2. Absorption not more than three percent. 3. Soundness: Weight loss in five cycles not more than 20 percent when sodium sulfate is used.

Bulk specific gravity and absorption shall be determined according to ASTM C 127. The test for soundness shall be performed according to ASTM C 88.

The riprap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks.

Core of Water during Construction - All work on permanent structures shall be carried out in areas free from water.

1. 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.

2. TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH, SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

3. 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.

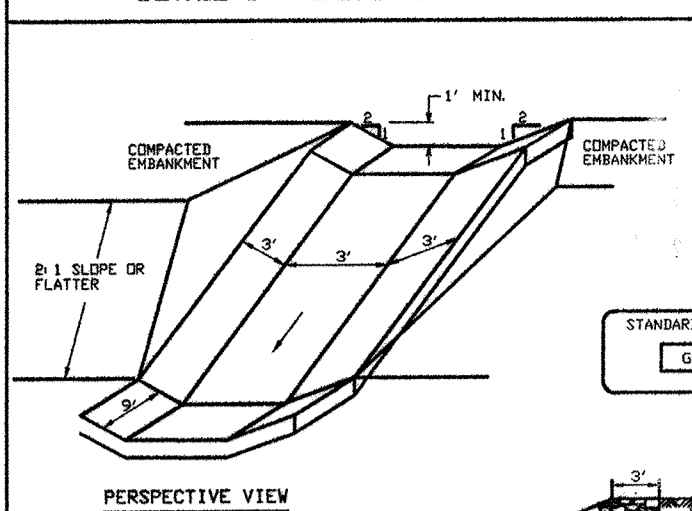
4. TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING: I. TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND, OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY.

5. WHERE THE SUBSOIL IS EITHER ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (200-400 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.

6. 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.

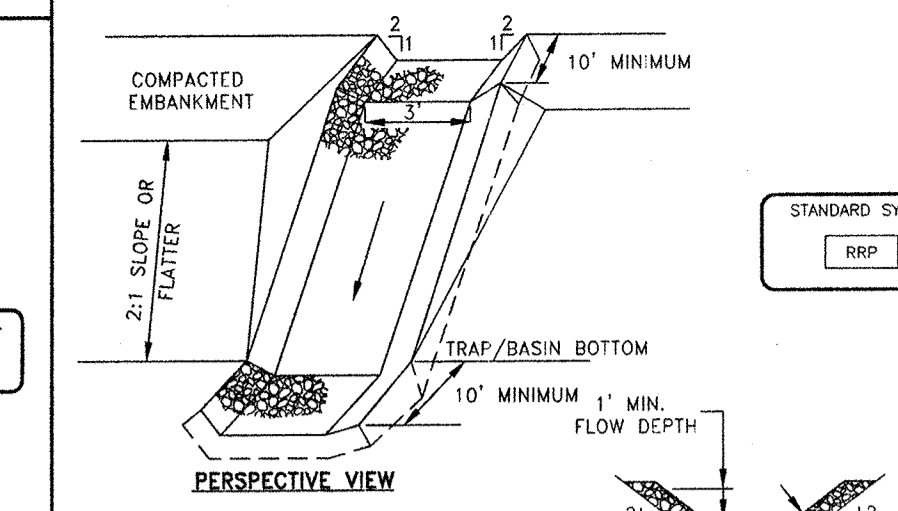
7. ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN 1.5 PERCENT BY WEIGHT. 8. TOPSOIL HAVING SOLUBLE SALT CONTENT GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.

DETAIL 6 - GABION INFLOW PROTECTION



- 1. All lined inflow channels shall be 1' in depth, have a trapezoidal cross section with 2:1 or flatter side slopes and 3 (min.) bottom width. The channel shall be lined with 4" to 12" rip-rap to a depth of 18".

DETAIL 5 - RIP-RAP INFLOW PROTECTION



- 1. All lined inflow channels shall be 1' in depth, have a trapezoidal cross section with 2:1 or flatter side slopes and 3 (min.) bottom width. The channel shall be lined with 4" to 12" rip-rap to a depth of 18".

Record of Soil Exploration Boring No. 1

Table with columns for SOIL DESCRIPTION, STRA. DEPTH, SAMPLE, BORING & SAMPLING NOTES. Includes soil types like silty sand and silty clay.

Record of Soil Exploration Boring No. 2

Table with columns for SOIL DESCRIPTION, STRA. DEPTH, SAMPLE, BORING & SAMPLING NOTES. Includes soil types like silty sand and silty clay.

Record of Soil Exploration Boring No. 3

Table with columns for SOIL DESCRIPTION, STRA. DEPTH, SAMPLE, BORING & SAMPLING NOTES. Includes soil types like silty sand and silty clay.

Record of Soil Exploration Boring No. 4

Table with columns for SOIL DESCRIPTION, STRA. DEPTH, SAMPLE, BORING & SAMPLING NOTES. Includes soil types like silty sand and silty clay.

Record of Soil Exploration Boring No. 4A

Table with columns for SOIL DESCRIPTION, STRA. DEPTH, SAMPLE, BORING & SAMPLING NOTES. Includes soil types like silty sand and silty clay.

Record of Soil Exploration Boring No. 5

Table with columns for SOIL DESCRIPTION, STRA. DEPTH, SAMPLE, BORING & SAMPLING NOTES. Includes soil types like silty sand and silty clay.

Record of Soil Exploration Boring No. 5A

Table with columns for SOIL DESCRIPTION, STRA. DEPTH, SAMPLE, BORING & SAMPLING NOTES. Includes soil types like silty sand and silty clay.

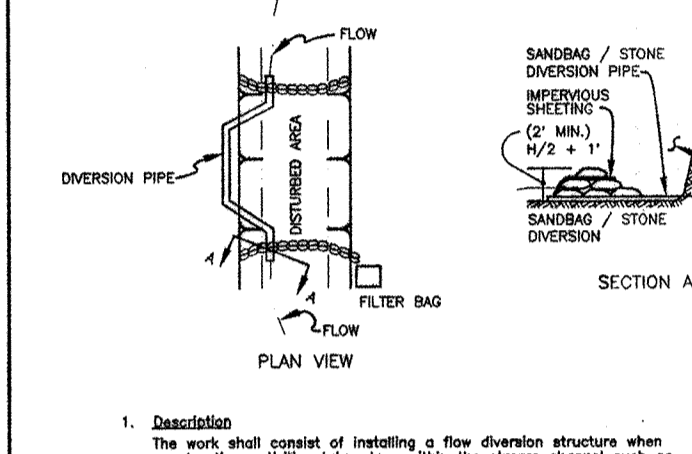
Record of Soil Exploration Boring No. 6

Table with columns for SOIL DESCRIPTION, STRA. DEPTH, SAMPLE, BORING & SAMPLING NOTES. Includes soil types like silty sand and silty clay.

Record of Soil Exploration Boring No. 6A

Table with columns for SOIL DESCRIPTION, STRA. DEPTH, SAMPLE, BORING & SAMPLING NOTES. Includes soil types like silty sand and silty clay.

U.S. DEPARTMENT OF AGRICULTURE



- 1. The work shall consist of installing a flow diversion structure when construction activities take place within the stream channel such as current construction or culvert replacement.

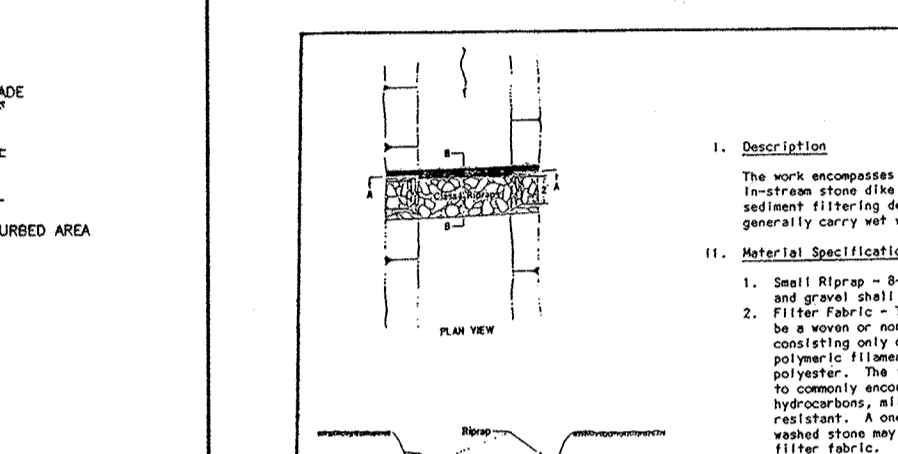
1. Bulk specific gravity (saturated surface-dry basis) not less than 2.5.

2. Absorption not more than three percent. 3. Soundness: Weight loss in five cycles not more than 20 percent when sodium sulfate is used.

Bulk specific gravity and absorption shall be determined according to ASTM C 127. The test for soundness shall be performed according to ASTM C 88.

The riprap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks.

U.S. DEPARTMENT OF AGRICULTURE



- 1. The work encompasses the installation of an in-stream stone check dam to be used as a sediment filtering device for streams that generate carry and water flow.

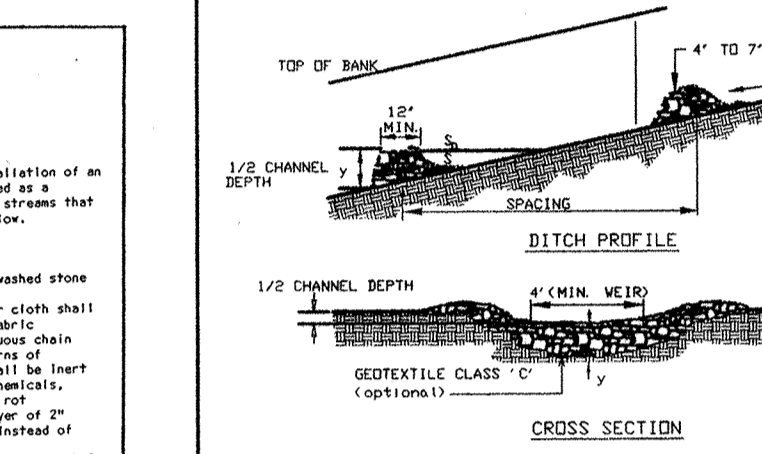
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The riprap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks.

DETAIL 7 - STONE CHECK DAM



- 1. The work encompasses the installation of an in-stream stone check dam to be used as a sediment filtering device for streams that generate carry and water flow.

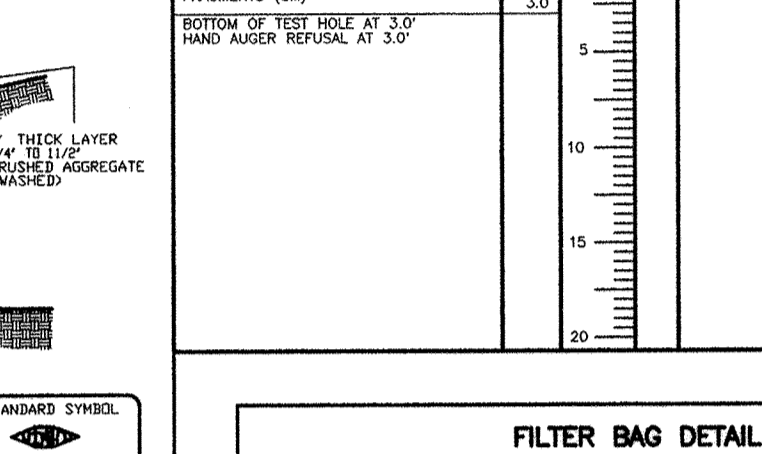
1. Bulk specific gravity (saturated surface-dry basis) not less than 2.5.

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The riprap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks.

DETAIL 8 - FILTER BAG DETAIL



- 1. The filter bag shall be placed on a sloping or level, well graded vegetated site.

1. Bulk specific gravity (saturated surface-dry basis) not less than 2.5.

2. Absorption not more than three percent. 3. Soundness: Weight loss in five cycles not more than 20 percent when sodium sulfate is used.

Bulk specific gravity and absorption shall be determined according to ASTM C 127. The test for soundness shall be performed according to ASTM C 88.

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BY THE DEVELOPER: I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

DEVELOPER - HOODS MILL CORPORATION DATE 8-20-99

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.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS DATE 9-18-99

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING DATE 9/27/99

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING DATE 9/27/99

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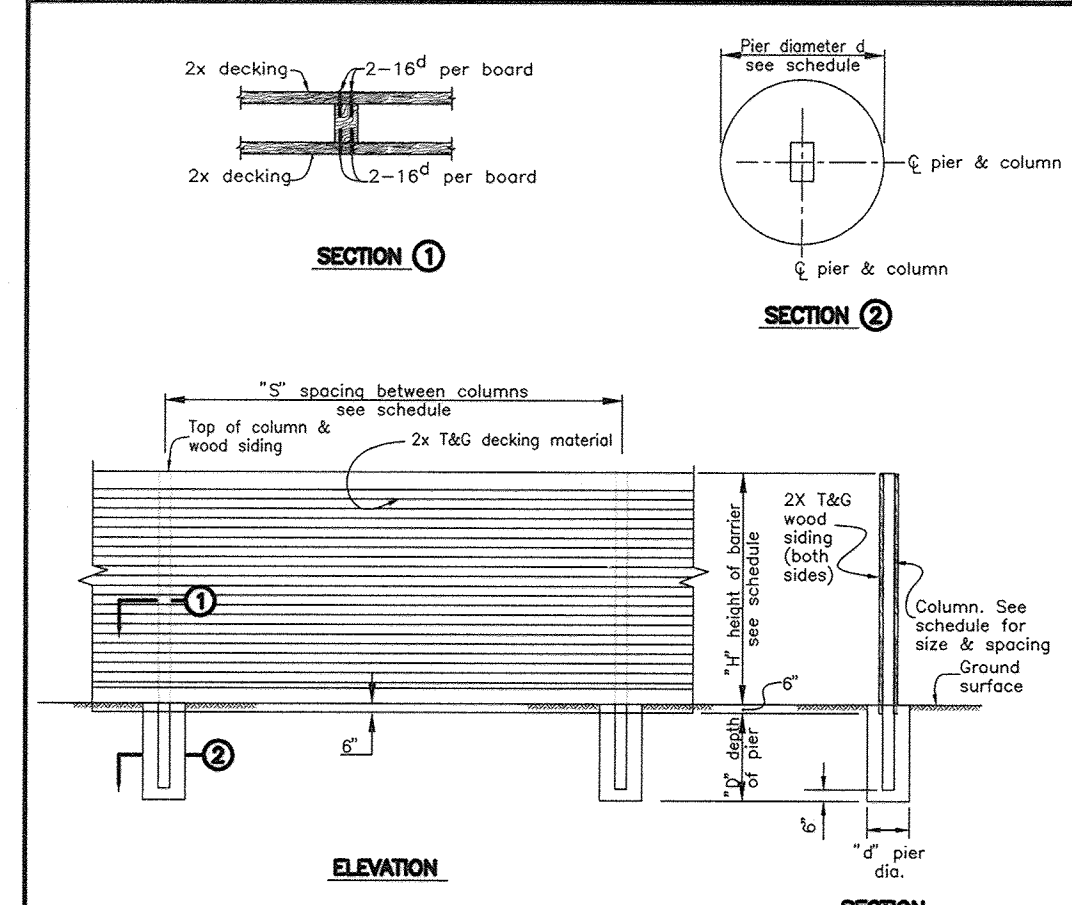
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APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING DATE 9/27/99

Project information block including OWNER/DEVELOPER (HOODS MILL CORPORATION), PROJECT (MONTICELLO), LOCATION (TAX MAP 8 - BLOCK 18 - PARCEL 110), TITLE (SEDIMENT AND EROSION CONTROL & STORMWATER MANAGEMENT NOTES & DETAILS), DATE (MARCH, 1999), PROJECT NO. (1122), DESIGN (JMC), DRAFT (JMC), SCALE (AS SHOWN), DRAWING (17 OF 22).



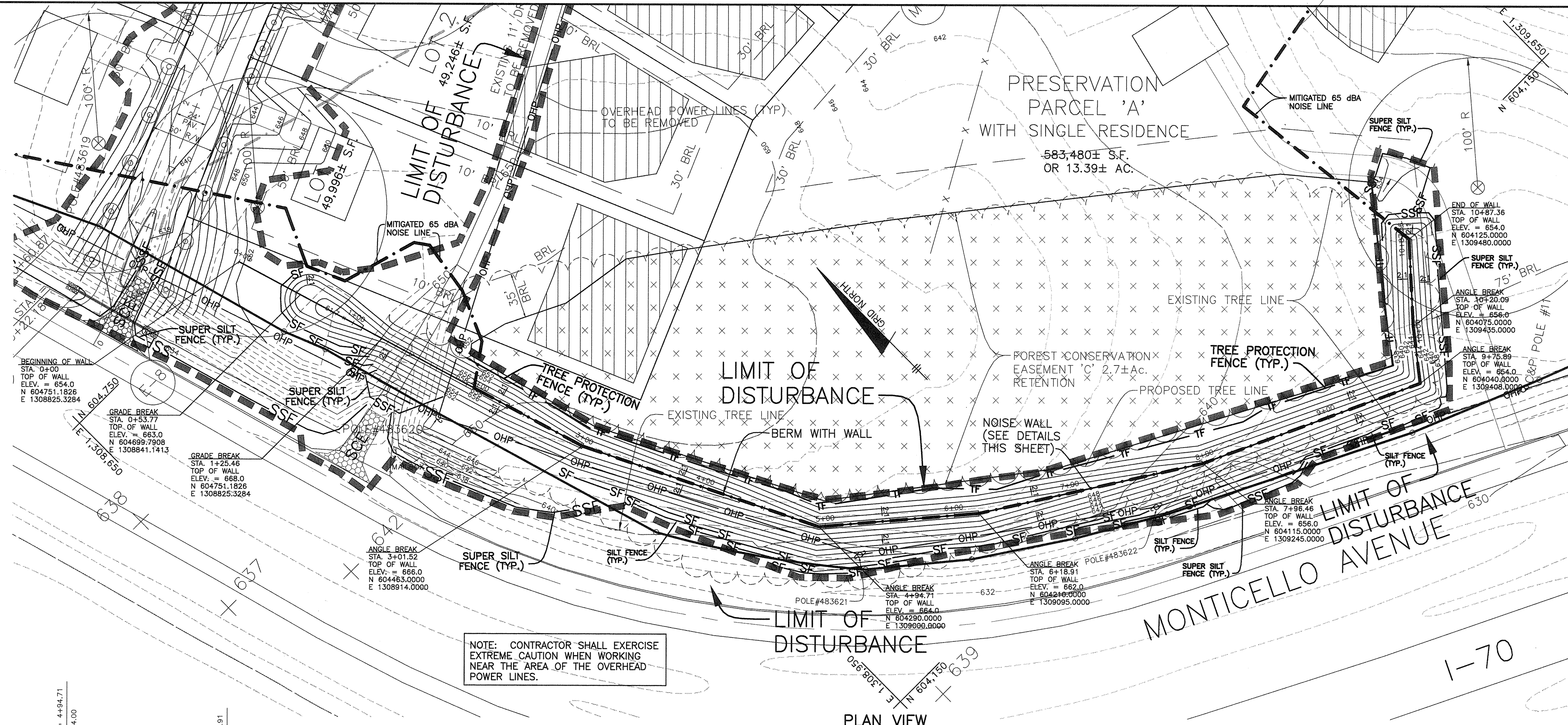
SCHEDULE			
H	S	D	Post size
40	#/ft	horizontal loading	
5'	8"	6"	12" x 4x8
10'	8"	8"	18" x 6x12
15'	8"	10"	24" x 8x16
20'	6"	10"	30" x 10x16

NOISE WALL DETAIL
NOT TO SCALE

NOTE: THE PROPOSED NOISE WALL IS PRIVATELY OWNED AND SHALL BE MAINTAINED BY THE HOMEOWNERS ASSOCIATION. THE NOISE WALL SHALL BE INSPECTED AND REPAIRED AS NECESSARY AT A MINIMUM OF ONCE A YEAR.

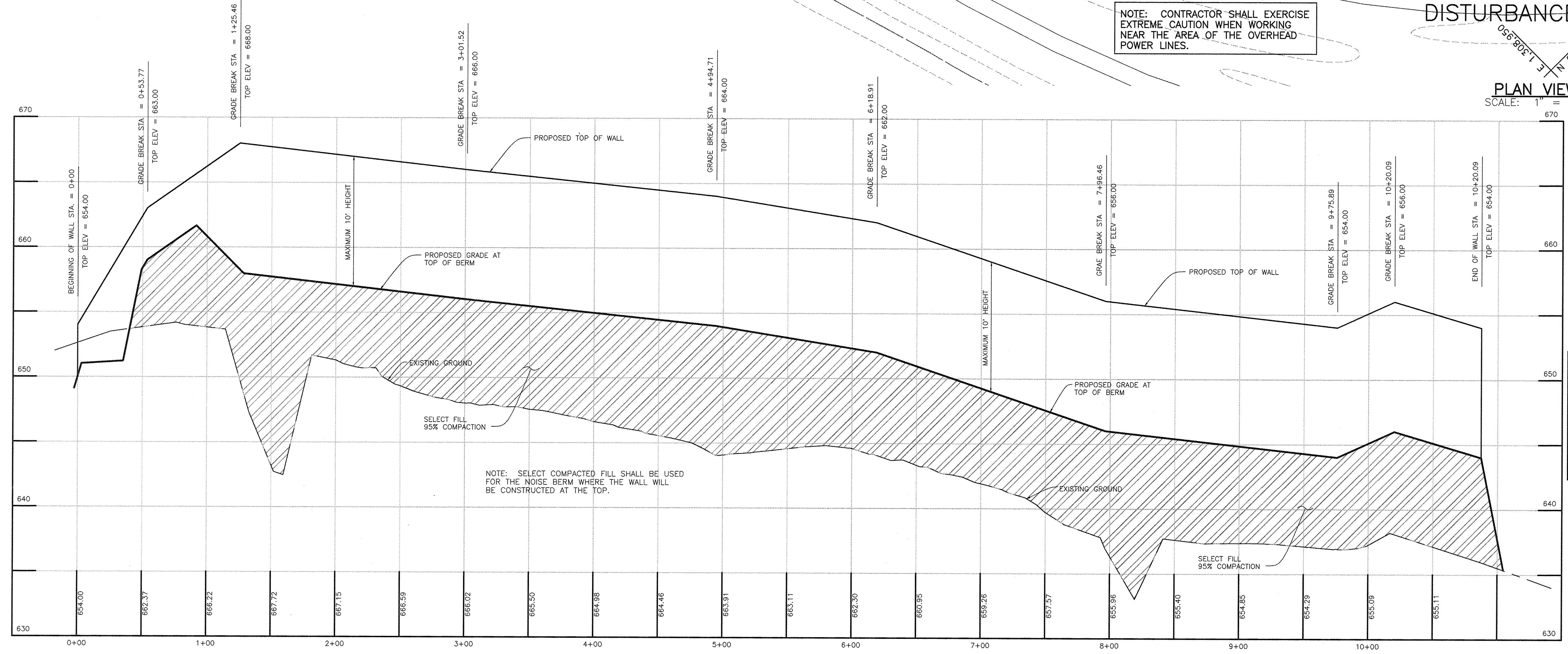
- NOTES:**
- GENERAL:
 - Height of barrier shall be based on acoustic requirements. Barrier walls having a height (H) not indicated in the tables shall be constructed as shown in the next higher height category.
 - SIDING:
 - 2x wood decking material shall be utilized to span horizontally between posts. Design criteria is based on an allowable bending stress of 1400 lbs. per sq. in. and a 33 1/3% increase in stress for wind loads as considered appropriate. Decking shall be MC15.
 - Siding is attached with the ground line for a distance of 6' above grade shall be treated with wood preservative.
 - POST:
 - Wood post shall be utilized of the spacing indicated on the schedule. Design criteria is based on an allowable bending stress of 1400 lbs. per sq. in. and a 33 1/3% increase for wind loadings.
 - Post embedded in concrete shall be treated with wood preservative in the area of embedment and 12" above grade.
 - CONCRETE:
 - Concrete in the piers shall have a 28 day compressive strength of 2500 lbs. per sq. in.
 - Concrete shall be placed in drilled piers utilizing the earth on the forms.
 - FOUNDATIONS:
 - The drilled piers have been designed utilizing an allowable passive pressure of 300 lbs. per sq. ft. and the following formula:

$$D = \frac{(1.42M)^{1/3}}{P}$$
 where:
 D = Depth of pier (ft.)
 M = Moment at top of drilled pier (ft./lb.)
 P = Allowable passive pressure (300 lbs. per sq. ft.)
 - ALTERNATE #1 (Preservative Treatment): Alternate #1 Represents the additional cost factor for treating the basic wood structure indicated on this reference plan. The necessity for treatment and the type of preservative will be subject to local conditions. All treatments shall conform to ARPA standard C-14.
 - ALTERNATE #2 (Painting): Alternate #2 represents the additional cost factor required to paint one side of the basic wood structure shown on this reference plan. Painting shall consist of 3 applications of paint. 2 coats of latex base paint conforming to Federal Specification TT-P-09966 shall be applied over a primer coat conforming to Federal Specification TT-P-02550.
 - ALTERNATE #3 (Staining): Alternate #3 represents the additional cost factor required to stain one side of the basic wood structure. Stain shall consist of 2 coats of semi-transparent water stain applied in accordance with manufacturer's written instructions.
 - ALTERNATE #1 (Preservative Treatment) shall be utilized for this project.



NOTE: CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WORKING NEAR THE AREA OF THE OVERHEAD POWER LINES.

PLAN VIEW
SCALE: 1" = 50'



PROFILE OF BERM AND NOISE WALL
PRESERVATION PARCEL "A"
SCALE: VERT. 1" = 5'
HORT. 1" = 50'

BY THE DEVELOPER:
 "I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT."
 DEVELOPER: *W. M. W. Jr.* DATE: 8/20/99

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. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION."
 ENGINEER - DONALD A. MASON, P.E. # 21443 DATE: 8/19/99

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION, AND SEDIMENT CONTROL.
 NATURAL RESOURCES CONSERVATION SERVICE DATE:
 THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION, AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

NO.	DATE	REVISION

BENCHMARK ENGINEERING, INC.
 ENGINEERS • LAND SURVEYORS • PLANNERS
 8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-8105 FAX: 410-465-8644

Donald Mason

OWNER/DEVELOPER:
 HOODS MILL CORPORATION
 C/O P.O. BOX 417
 ELLICOTT CITY, MD 21041
 410-465-4244

PROJECT:
MONTICELLO
 LOTS 1-50, PRESERVATION PARCELS "A" THRU "D" AND NON-BUILDABLE PARCEL "E"

LOCATION:
 TAX MAP 8 - BLOCK 18 - PARCEL 110
 4TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

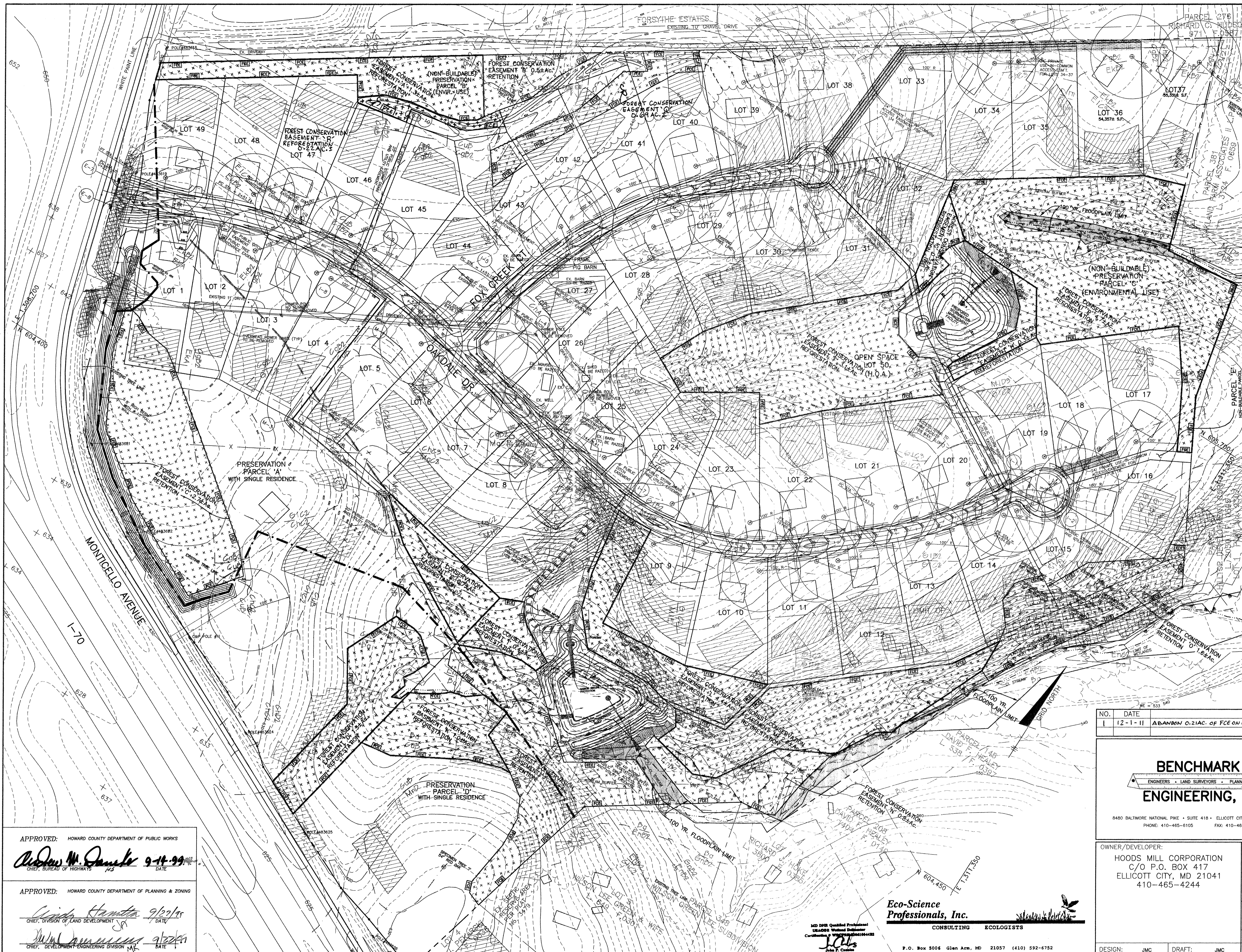
TITLE: NOISE MITIGATION NOTES, DETAILS & SEDIMENT AND EROSION CONTROL PLAN
 WP-99-24 SP-99-01

DATE: MARCH, 1999 PROJECT NO. 1122
 DESIGN: JMC DRAFT: JMC SCALE: AS SHOWN DRAWING 18 OF 22

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Daniels 9/14/99
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Cindy Hermette 9/27/99
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

William J. ... 9/28/99
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



PLANTING SCHEDULE FCE 'R'		
PLANTING AREA = 0.22AC, #WHIPS/AC = 350		
TOTAL WHIPS REQ = 77		
SPECIES	COMMON NAME	QUANTITY
ACER RUBRUM	RED MAPLE	11
LIRIODENDRON TULIPIFERA	TUPLIP POPLAR	11
FRAXINUS PENNSYLVANICA	GREEN ASH	11
PLATANUS OCCIDENTALIS	AMERICAN Sycamore	11
QUERCUS PALUSTRIS	PIN OAK	11
LIQUIDAMBAR STYRACIFLUA	SWEET GUM	11
VIBURNUM DENTATUM	ARROWWOOD	11
TOTAL PROVIDED		77

SOILS CHART	
SYMBOL	SOIL CHARACTERISTICS
100	CHESER SILT LOAM 0 TO 3 PERCENT SLOPES
101	CHESER SILT LOAM 3 TO 8 PERCENT SLOPES MODERATELY BROOD
102	CHESER SILT LOAM 8 TO 15 PERCENT SLOPES MODERATELY BROOD
103	CHESER SILT LOAM 15 TO 25 PERCENT SLOPES MODERATELY BROOD
104	CHESER SILT LOAM 25 TO 35 PERCENT SLOPES MODERATELY BROOD
105	CHESER SILT LOAM 35 TO 45 PERCENT SLOPES MODERATELY BROOD
106	CHESER SILT LOAM 45 TO 55 PERCENT SLOPES MODERATELY BROOD
107	CHESER SILT LOAM 55 TO 65 PERCENT SLOPES MODERATELY BROOD
108	CHESER SILT LOAM 65 TO 75 PERCENT SLOPES MODERATELY BROOD
109	CHESER SILT LOAM 75 TO 85 PERCENT SLOPES MODERATELY BROOD
110	CHESER SILT LOAM 85 TO 95 PERCENT SLOPES MODERATELY BROOD
111	CHESER SILT LOAM 95 TO 100 PERCENT SLOPES MODERATELY BROOD
112	CHESER SILT LOAM 0 TO 3 PERCENT SLOPES MODERATELY BROOD
113	CHESER SILT LOAM 3 TO 8 PERCENT SLOPES MODERATELY BROOD
114	CHESER SILT LOAM 8 TO 15 PERCENT SLOPES MODERATELY BROOD
115	CHESER SILT LOAM 15 TO 25 PERCENT SLOPES MODERATELY BROOD
116	CHESER SILT LOAM 25 TO 35 PERCENT SLOPES MODERATELY BROOD
117	CHESER SILT LOAM 35 TO 45 PERCENT SLOPES MODERATELY BROOD
118	CHESER SILT LOAM 45 TO 55 PERCENT SLOPES MODERATELY BROOD
119	CHESER SILT LOAM 55 TO 65 PERCENT SLOPES MODERATELY BROOD
120	CHESER SILT LOAM 65 TO 75 PERCENT SLOPES MODERATELY BROOD
121	CHESER SILT LOAM 75 TO 85 PERCENT SLOPES MODERATELY BROOD
122	CHESER SILT LOAM 85 TO 95 PERCENT SLOPES MODERATELY BROOD
123	CHESER SILT LOAM 95 TO 100 PERCENT SLOPES MODERATELY BROOD
124	CHESER SILT LOAM 0 TO 3 PERCENT SLOPES MODERATELY BROOD
125	CHESER SILT LOAM 3 TO 8 PERCENT SLOPES MODERATELY BROOD
126	CHESER SILT LOAM 8 TO 15 PERCENT SLOPES MODERATELY BROOD
127	CHESER SILT LOAM 15 TO 25 PERCENT SLOPES MODERATELY BROOD
128	CHESER SILT LOAM 25 TO 35 PERCENT SLOPES MODERATELY BROOD
129	CHESER SILT LOAM 35 TO 45 PERCENT SLOPES MODERATELY BROOD
130	CHESER SILT LOAM 45 TO 55 PERCENT SLOPES MODERATELY BROOD
131	CHESER SILT LOAM 55 TO 65 PERCENT SLOPES MODERATELY BROOD
132	CHESER SILT LOAM 65 TO 75 PERCENT SLOPES MODERATELY BROOD
133	CHESER SILT LOAM 75 TO 85 PERCENT SLOPES MODERATELY BROOD
134	CHESER SILT LOAM 85 TO 95 PERCENT SLOPES MODERATELY BROOD
135	CHESER SILT LOAM 95 TO 100 PERCENT SLOPES MODERATELY BROOD

- LEGEND**
- ⊙ PROPOSED WELL LOCATION
 - ▨ STEEP SLOPES 15% - 25%
 - ▩ STEEP SLOPES GREATER THAN 25%
 - PROPOSED HOUSE LOCATION
 - EX. STREAM OR EDGE OF POND
 - EX. CONTOUR (2 FOOT CONTOUR INTERVALS)
 - ① SOIL BOUNDARY AND TYPE
 - ~ EX. TREE LINE
 - ▨ PROPOSED SEPTIC RESERVE AREA
 - ⊙ SPECIMEN TREE
 - WETLANDS
 - 598 PROPOSED GRADING
 - ~ FOREST TO BE RETAINED
 - LIMIT OF FOREST CONSERVATION EASEMENT
 - PERMANENT PROTECTIVE SIGNAGE
 - REFORESTATION AREA
 - RETENTION AREA

NOTE: THE AREA OF HEAVY BRUSH WITHIN FOREST CONSERVATION AREAS 'G' AND 'P' (MULTIFLORAL ROSE) SHALL BE REMOVED OR CONTROLLED PRIOR TO REFORESTATION OF FOREST CONSERVATION AREAS.

SEE SHEET 21 FOR FCP NOTE, PLANTING SCHEDULE, SPECIFICATIONS AND DETAILS.

NO.	DATE	REVISION
1	12-1-11	ABANDON 0.21AC. OF FCE ON LOT 39 AND ADD FCE 'R' 0.22 AC. ON PARCEL B.

BENCHMARK
ENGINEERS • LAND SURVEYORS • PLANNERS
ENGINEERING, INC.

8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 FAX: 410-465-6644

Donald Mann

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Andrew M. Daniels 9/14/99
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Andy Hamstra 9/20/99
CHIEF, DIVISION OF LAND DEVELOPMENT

John F. Canale 9/20/99
CHIEF, DEVELOPMENT ENGINEERING DIVISION

Eco-Science Professionals, Inc.
CONSULTING ECOLOGISTS

MD 0208 Qualified Professional
13440466 Wetland Designer
Certification # 19920000000104483

John F. Canale
John F. Canale

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

OWNER/DEVELOPER:
HOODS MILL CORPORATION
C/O P.O. BOX 417
ELLICOTT CITY, MD 21041
410-465-4244

PROJECT: **MONTICELLO**
LOTS 1-50, PRESERVATION PARCELS "A" THRU "D" AND NON-BUILDABLE PARCEL "E"

LOCATION: TAX MAP 8 - BLOCK 18 - PARCEL 110
4TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: **FOREST CONSERVATION PLAN**
WP-99-24 SP-99-01

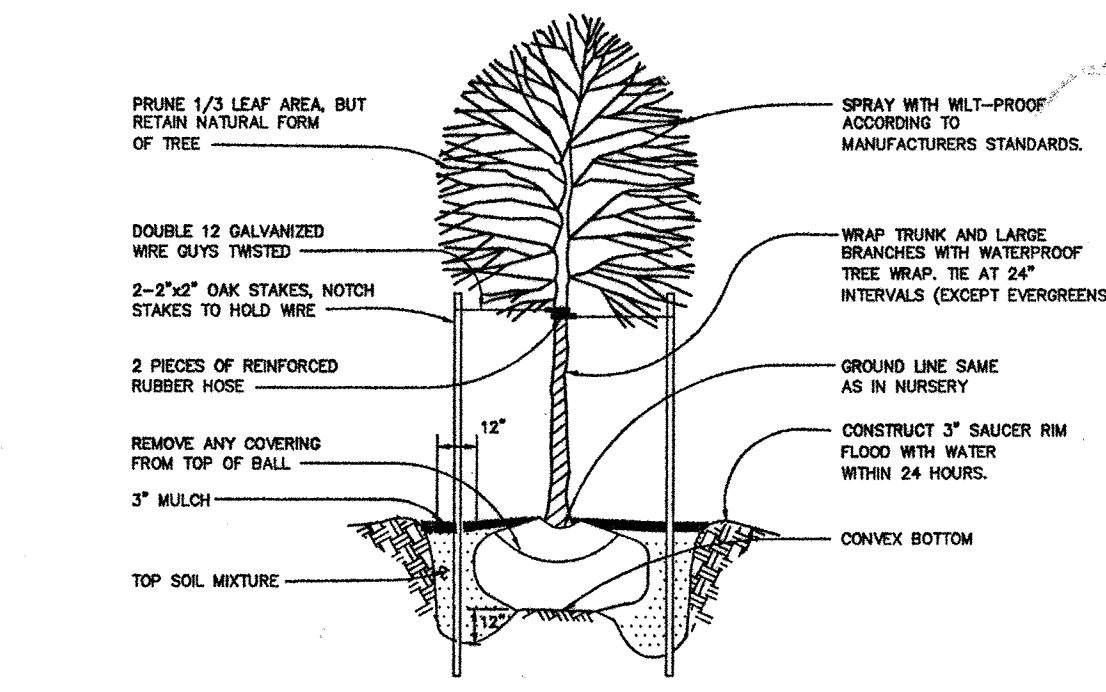
DATE: FEBRUARY, 1999 PROJECT NO. 1122

DESIGN: JMC DRAFT: JMC SCALE: 1" = 100' DRAWING 20 OF 22

CATEGORY	SCHEDULE A PERIMETER LANDSCAPE EDGE						
	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES	ADJACENT TO PERIMETER PROPERTIES
LANDSCAPE TYPE	Ⓚ B	Ⓚ A	Ⓚ A	Ⓚ A	Ⓚ A	Ⓚ A	Ⓚ A
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	264	1349	1811	3186	111	1840	1715
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	*YES 463	*YES 436	NO	NO	*YES 578	*YES 305
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED							
SHADE TREES	5	15	23	53	2	21	24
EVERGREEN TREES	7	-	-	-	-	-	-
OTHER TREES (2:1 SUBSTITUTE)	-	-	-	-	-	-	-
SHRUBS	-	-	-	-	-	-	-
NUMBER OF PLANTS PROVIDED							
SHADE TREES	5	15	23	53	2	21	24
EVERGREEN TREES	7	-	-	-	-	-	-
OTHER TREES (2:1 SUBSTITUTE)	-	-	-	-	-	-	-
SHRUBS (10:1 SUBSTITUTE)	-	-	-	-	-	-	-
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)							

CATEGORY	SCHEDULE D STORMWATER MANAGEMENT AREA LANDSCAPING		
	LINEAR FEET OF PERIMETER	Ⓚ B (105:47)	Ⓚ G (45:5)
NUMBER OF TREES REQUIRED		21	19
SHADE TREES		26	24
EVERGREEN TREES		-	-
CREDIT FOR EXISTING VEGETATION (NO, YES AND %) (YES(30%))		YES(30%)	YES(22%)
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)		NO	NO
NUMBER OF TREES PROVIDED			
SHADE TREES		13	15
EVERGREEN TREES		26	24
OTHER TREES (2:1 SUBSTITUTE)		-	-

* CREDIT FOR EXISTING VEGETATION IS APPLIED TO SHADE TREES ONLY.



STREET TREE REQUIREMENTS
 REQUIRED: 1 PER 40' O.C. AT 7460' = 187
 PROVIDED: 187

LANDSCAPING NOTES
 THE DEVELOPER SHALL BE RESPONSIBLE FOR THE STREET TREES, STORMWATER MANAGEMENT POND PLANTING, PERIMETER LANDSCAPE PLANTING AND THE PRESERVATION OF THE PERIMETER VEGETATION AS SHOWN ON THESE PLANS.
 PLANTING NOTES:
 1. TREES MUST BE PLANTED A MINIMUM OF 4 FEET FROM THE EDGE OF PAVING, 10' FROM A DRIVEWAY AND MUST BE A MINIMUM OF 5 FEET FROM ANY STORM DRAIN.
 2. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING MUST BE POSTED AS PART OF THE PERMIT APPLICATION IN THE AMOUNT OF \$50,000.00

LANDSCAPE PLANTING LIST				STREET TREE PLANTING LIST			
SYMBOL	QUANTITY	NAME	REMARKS	SYMBOL	QUANTITY	NAME	REMARKS
Ⓚ	45	PRUNUS SARGENTII (SARGENT CHERRY)	2 1/2" MIN. CAL. B & B FULL HEAD	Ⓚ	7	PRUNUS SARGENTII (SARGENT CHERRY)	2 1/2" MIN. CAL. B & B FULL HEAD
Ⓚ	46	TILIA CORDATA 'GREENSPIRE' (GREENSPIRE LITTLELEAF LINDEN)	2 1/2" MIN. CAL. B & B FULL HEAD	Ⓚ	52	TILIA CORDATA 'GREENSPIRE' (GREENSPIRE LITTLELEAF LINDEN)	2 1/2" MIN. CAL. B & B FULL HEAD
Ⓚ	32	ACER RUBRUM 'RED SUNSET' (RED SUNSET RED MAPLE)	2 1/2" MIN. CAL. B & B FULL HEAD	Ⓚ	88	ACER SACCHARUM 'GREEN MOUNTAIN' (GREEN MOUNTAIN SUGAR MAPLE)	2 1/2" MIN. CAL. B & B FULL HEAD
Ⓚ	52	ACER SACCHARUM 'GREEN MOUNTAIN' (GREEN MOUNTAIN SUGAR MAPLE)	2 1/2" MIN. CAL. B & B FULL HEAD	Ⓚ	42	ACER RUBRUM 'RED SUNSET' (RED SUNSET RED MAPLE)	2 1/2" MIN. CAL. B & B FULL HEAD
Ⓚ	57	CEDRUS DEODORA (DEODAR CEDAR)	6'-8' HT. B & B				
Ⓚ	31	PINUS STROBUS EASTERN WHITE PINE	6'-8' HT. B & B				

PLANTING/SOIL SPECIFICATIONS
 1. PLANTING OF NURSERY STOCK SHALL TAKE PLACE BETWEEN MARCH 15TH AND APRIL 30TH.
 2. A TWELVE (12) INCH LAYER OF TOPSOIL SHALL BE SPREAD OVER ALL FORESTATION AREAS IMPACTED BY SITE GRADING TO ASSURE A SUITABLE PLANTING AREA. DISTURBED AREAS SHALL BE SEDED AND STABILIZED AS PER GENERAL CONSTRUCTION PLAN. PLANTING AREAS NOT IMPACTED BY SITE GRADING SHALL HAVE NO ADDITIONAL TOPSOIL INSTALLED.
 3. ALL BAREROOT PLANTING STOCK SHALL HAVE THEIR ROOT SYSTEMS DIPPED INTO AN ANTI-DESICANT GEL PRIOR TO PLANTING.
 4. PLANTS SHALL BE INSTALLED SO THAT THE TOP OF ROOT MASS IS LEVEL WITH THE TOP OF EXISTING GRADE.
 5. FERTILIZER SHALL CONSIST OF AGRIFORM 22-8-2, OR EQUIVALENT, APPLIED AS PER MANUFACTURER'S SPECIFICATIONS.
 6. A TWO (2) INCH LAYER OF HARDWOOD MULCH SHALL BE PLACED OVER THE ROOT AREA OF ALL PLANTINGS.
 7. PLANT MATERIAL SHALL BE TRANSPORTED TO THE SITE IN A TARPED OR COVERED TRUCK. PLANTS SHALL BE KEPT MOIST PRIOR TO PLANTING.
 8. ALL NON-ORGANIC DEBRIS ASSOCIATED WITH THE PLANTING OPERATION SHALL BE REMOVED FROM THE SITE BY THE CONTRACTOR.

SEQUENCE OF CONSTRUCTION
 1. SEDIMENT CONTROL AND TREE PROTECTION DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH GENERAL CONSTRUCTION PLAN FOR SITE. SITE SHALL BE GRADED IN ACCORDANCE WITH THE GENERAL CONSTRUCTION PLANS.
 2. PROPOSED FORESTATION AREAS IMPACTED BY SITE GRADING SHALL BE TOPSOILED AND STABILIZED AS PER #2 OF PLANTING/SOIL SPECIFICATIONS FOR PROJECT.
 3. PLANTS SHALL BE INSTALLED AS PER PLANT SCHEDULE AND PLANTING/SOIL SPECIFICATIONS FOR THE PROJECT.
 4. UPON COMPLETION OF THE PLANTING, SIGNAGE SHALL BE INSTALLED AS PER THE FOREST PROTECTION DEVICES SHOWN ON THE FOREST CONSERVATION PLAN.
 5. PLANTINGS SHALL BE MAINTAINED AND GUARANTEED IN ACCORDANCE WITH THE MAINTENANCE AND GUARANTEE REQUIREMENTS FOR PROJECT.

MAINTENANCE OF PLANTINGS
 1. MAINTENANCE OF ALL PLANTINGS SHALL LAST FOR A PERIOD OF 24 MONTHS.
 2. ALL PLANT MATERIAL SHALL BE WATERED TWICE A MONTH DURING THE 1ST GROWING SEASON, ONCE A MONTH DURING MAY-SEPTEMBER, IF NEEDED.
 3. INVASIVE EXOTICS AND NOXIOUS WEEDS WILL BE REMOVED FROM FORESTATION AREAS. OLD FIELD SUCCESSIONAL SPECIES WILL BE RETAINED.
 4. PLANTS WILL BE EXAMINED A MINIMUM OF TWO TIMES DURING THE GROWING SEASON FOR SERIOUS PLANT PESTS AND DISEASES. SERIOUS PROBLEMS WILL BE TREATED WITH THE APPROPRIATE AGENT.
 5. DEAD BRANCHES WILL BE PRUNED FROM PLANTINGS.

GUARANTEE REQUIREMENTS
 1. A 75 PERCENT SURVIVAL RATE OF FORESTATION PLANTINGS WILL BE REQUIRED AT THE END OF THE 24 MONTH MAINTENANCE PERIOD. ALL PLANT MATERIAL BELOW THE 75 PERCENT THRESHOLD WILL BE REPLACED AT THE BEGINNING OF THE NEXT GROWING SEASON. AFTER ONE GROWING SEASON, PLANT MATERIAL SHALL BE MAINTAINED AT 90% SURVIVAL THRESHOLD.
 2. THE CONTRACTOR WILL NOT BE LIABLE FOR PLANT LOSS DUE TO VANDALISM.

SURETY FOR REFORESTATION
 1. THE DEVELOPER SHALL POST A SURETY (BOND, LETTER OF CREDIT) TO ENSURE THAT REFORESTATION PLANTINGS ARE COMPLETED. UPON ACCEPTANCE OF THE PLANTINGS BY THE COUNTY, THE BOND SHALL BE RELEASED.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Andrew M. Donale 9/22/99
 CHIEF, BUREAU OF HIGHWAYS
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Andy Hamilton 9/22/99
 CHIEF, DIVISION OF LAND DEVELOPMENT
Mike... 9/22/99
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

FCP NOTES:
 1. 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.
 2. FORESTED AREAS OCCURRING OUTSIDE OF THE FCE SHALL NOT BE CONSIDERED PART OF THE FCE AND SHALL NOT BE SUBJECT TO PROTECTIVE LAND COVENANTS.
 3. LIMITS OF DISTURBANCE SHALL BE RESTRICTED TO AREAS OUTSIDE THE LIMIT OF TEMPORARY FENCING OR THE FCE BOUNDARY, WHICHEVER IS GREATER.
 4. THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION OR DISTURBANCE OF VEGETATION IN THE FOREST CONSERVATION EASEMENT, EXCEPT AS PERMITTED BY HOWARD COUNTY DPZ.
 5. NO STOCKPILES, PARKING AREAS, EQUIPMENT CLEANING AREAS, ETC. SHALL OCCUR WITHIN AREAS DESIGNATED AS FOREST CONSERVATION EASEMENTS.
 6. TEMPORARY FENCING SHALL BE USED TO PROTECT FOREST RESOURCES DURING CONSTRUCTION. THE FENCING SHALL BE PLACED ALONG ALL FCE BOUNDARIES WHICH OCCUR WITHIN 15 FEET OF THE PROPOSED LIMITS.
 7. PERMANENT SIGNAGE SHALL BE PLACED 50-100' APART ALONG THE BOUNDARIES OF ALL AREAS INCLUDED IN FOREST CONSERVATION EASEMENTS.
 8. ACTIVITY WITHIN STORMWATER MANAGEMENT DRAINAGE EASEMENT OCCURRING WITHIN THE LIMITS OF THE FCE SHALL NOT BE RESTRICTED. THESE AREAS SHALL NOT BE PLANTED AND HAVE NOT BEEN CONSIDERED PART OF THE FCE ACREAGE REQUIREMENTS.
 9. HEAVY BRUSH (MULTIFLORA ROSE) SHALL BE REMOVED OR CONTROLLED PRIOR TO FORESTATION OF FCE "G" AND "P".
 10. FOREST CONSERVATION OBLIGATIONS ARE MET BY 10.0% RETENTION ON-SITE (\$45,500.00) PLUS 16.8 AC REPLANTING ON-SITE (\$24,542.00) FOR A TOTAL DEVELOPER AGREEMENT SURETY FOR FOREST CONSERVATION OF \$70,042.00.

FOREST DATA	
GROSS AREA:	103.1 ACRES
FLOODPLAIN/UNFORESTED PRESERVATION	
PARCEL:	21.8
NET TRACT AREA (NTA):	81.3
EXISTING FOREST (NTA):	17.8
AFFORESTATION THRESHOLD:	16.3
REFORESTATION THRESHOLD:	20.3
FOREST TO BE CLEARED (NTA):	7.8
REFORESTATION FOR FOREST CLEARING:	15.6
FOREST TO BE RETAINED (NTA):	10.0
FOREST TO BE RETAINED IN FCE:	8.9
FORESTATION FOR FOREST RETAINED ON PRIVATE LOTS:	1.2
TOTAL FORESTATION REQUIRED:	16.8

PLANTING SCHEDULE
 FOREST CONSERVATION EASEMENT 'A' (1.3 ACRES)
 QTY. SPECIES SIZE SPACING
 4 ACER RUBRUM - RED MAPLE 1" CAL. ##
 4 LIRIODENDRON TULIPIFERA - TULIP POPLAR 1" CAL. ##
 50 ACER RUBRUM - RED MAPLE 2-3" WHIP **
 30 CORNUS FLORIDA - FLOWERING DOGWOOD 2-3" WHIP **
 30 FRAXINUS PENNSYLVANICA - GREEN ASH 2-3" WHIP **
 80 LIRIODENDRON TULIPIFERA - TULIP POPLAR 2-3" WHIP **
 20 JUNIPERUS VIRGINIANA - RED CEDAR 2-3" WHIP **
 50 PRUNUS SEROTINA - BLACK CHERRY 2-3" WHIP **
 40 QUERCUS RUBRA - RED OAK 2-3" WHIP **
 80 ROBINIA PSUEDO-ACACIA - BLACK LOCUST 2-3" WHIP **
 30 SASSAFRAS ALBIDUM - SASSAFRAS 2-3" WHIP **
 30 VIBURNUM PLUNIFOLIUM - BLACKHAW 18-24" B.T. **

PLANTING SCHEDULE
 FOREST CONSERVATION EASEMENT 'D' (1.3 ACRES)
 QTY. SPECIES SIZE SPACING
 5 ACER RUBRUM - RED MAPLE 1" CAL. ##
 4 LIRIODENDRON TULIPIFERA - TULIP POPLAR 1" CAL. ##
 79 ACER RUBRUM - RED MAPLE 2-3" WHIP **
 26 FRAXINUS PENNSYLVANICA - GREEN ASH 2-3" WHIP **
 26 JUGLANS NIGRA - BLACK WALNUT 2-3" WHIP **
 53 LIRIODENDRON TULIPIFERA - TULIP POPLAR 2-3" WHIP **
 35 PLATANUS OCCIDENTALIS - SYCAMORE 2-3" WHIP **
 35 PRUNUS SEROTINA - BLACK CHERRY 2-3" WHIP **
 44 QUERCUS RUBRA - RED OAK 2-3" WHIP **
 26 SASSAFRAS ALBIDUM - SASSAFRAS 2-3" WHIP **
 26 SAMBUCUS CANADENSIS - ELDERBERRY 18-24" B.T. **
 44 VIBURNUM DENTATUM - ARROWWOOD 18-24" B.T. **

PLANTING SCHEDULE
 FOREST CONSERVATION EASEMENT 'E' (0.7 ACRES)
 QTY. SPECIES SIZE SPACING
 2 ACER RUBRUM - RED MAPLE 1" CAL. ##
 3 LIRIODENDRON TULIPIFERA - TULIP POPLAR 1" CAL. ##
 43 ACER RUBRUM - RED MAPLE 2-3" WHIP **
 38 FRAXINUS PENNSYLVANICA - GREEN ASH 2-3" WHIP **
 14 JUGLANS NIGRA - BLACK WALNUT 2-3" WHIP **
 28 LIRIODENDRON TULIPIFERA - TULIP POPLAR 2-3" WHIP **
 19 PLATANUS OCCIDENTALIS - SYCAMORE 2-3" WHIP **
 19 PRUNUS SEROTINA - BLACK CHERRY 2-3" WHIP **
 24 QUERCUS RUBRA - RED OAK 2-3" WHIP **
 14 SASSAFRAS ALBIDUM - SASSAFRAS 2-3" WHIP **
 14 SAMBUCUS CANADENSIS - ELDERBERRY 18-24" B.T. **
 24 VIBURNUM DENTATUM - ARROWWOOD 18-24" B.T. **

PLANTING SCHEDULE
 FOREST CONSERVATION EASEMENT 'I' (0.4 ACRES)
 QTY. SPECIES SIZE SPACING
 2 ACER RUBRUM - RED MAPLE 1" CAL. ##
 1 LIRIODENDRON TULIPIFERA - TULIP POPLAR 1" CAL. ##
 24 ACER RUBRUM - RED MAPLE 2-3" WHIP **
 22 FRAXINUS PENNSYLVANICA - GREEN ASH 2-3" WHIP **
 8 JUGLANS NIGRA - BLACK WALNUT 2-3" WHIP **
 16 LIRIODENDRON TULIPIFERA - TULIP POPLAR 2-3" WHIP **
 11 PLATANUS OCCIDENTALIS - SYCAMORE 2-3" WHIP **
 11 PRUNUS SEROTINA - BLACK CHERRY 2-3" WHIP **
 14 QUERCUS RUBRA - RED OAK 2-3" WHIP **
 8 SASSAFRAS ALBIDUM - SASSAFRAS 2-3" WHIP **
 8 SAMBUCUS CANADENSIS - ELDERBERRY 18-24" B.T. **
 14 VIBURNUM DENTATUM - ARROWWOOD 18-24" B.T. **

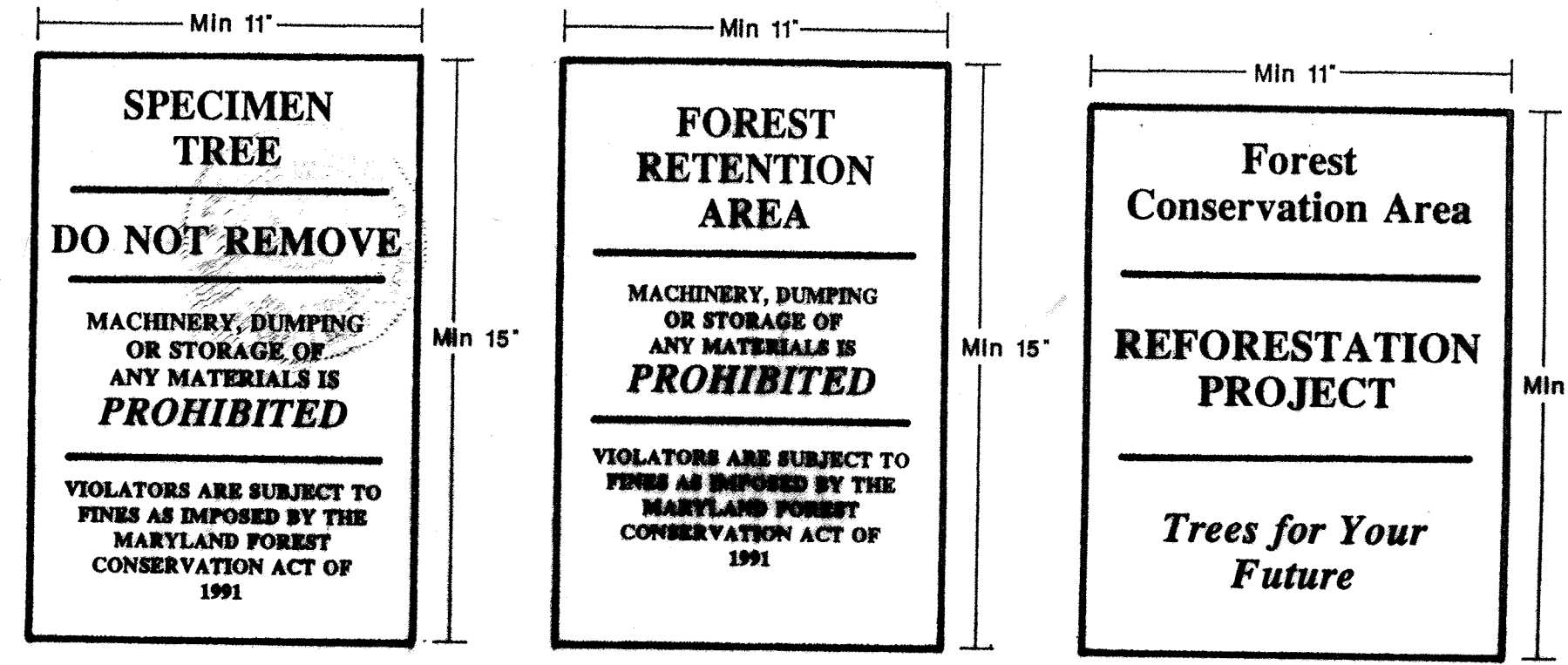
KEY:
 CAL - CALIPER WHIP - MAY BE CONTAINER GROWN OR BAREROOT B.T. BRANCHED TRANSPLANT
 ## - ONE INCH CALIPER TREES SHALL BE SPACED AROUND PERIMETER OF FCE EASEMENT IN RANDOM PATTERN.
 ** - WHIPS AND SHRUBS SHALL BE PLANTED, ON AVERAGE, AT A SPACING OF 11 FEET ON CENTER, NOT IN A GRID PATTERN, LIMITED CLUMPING OF SHRUBS IS PERMITTED.
 PLANTING NOTES:
 1. FCEs 'G' AND 'P' ARE HEAVILY INFLUENCED BY A MULTIFLORA ROSE. IT IS RECOMMENDED THAT THE MULTIFLORA ROSE BE REMOVED AND CONTROLLED PRIOR TO FORESTATION. IF THE ROSE IS NOT REMOVED IT WILL BE A CHRONIC MAINTENANCE PROBLEM FOR THE SITE. EXISTING NATIVE TREES MAY BE RETAINED.
 2. NO PLANTING SHALL OCCUR WITHIN THE EMERGENT WETLANDS. PLANTING WITHIN THE BUFFER IS PERMITTED BUT DISTURBANCE OF EXISTING VEGETATION WITHIN THE BUFFER SHALL BE MINIMIZED.
 3. THE POTENTIAL FOR DEER AND RODENT DAMAGE ON THIS FORESTATION PROJECT IS HIGH. THE PLANTING CONTRACTOR MAY UTILIZE PHYSICAL AND CHEMICAL TECHNIQUES TO IMPROVE THE SUCCESS OF THE PLANTINGS. THESE TECHNIQUES MUST BE APPROVED BY THE OWNER PRIOR TO INITIATION OF WORK.

PLANTING SCHEDULE
 FOREST CONSERVATION EASEMENT 'K' (1.0 ACRES)
 QTY. SPECIES SIZE SPACING
 10 ACER RUBRUM - RED MAPLE 1" CAL. ##
 9 LIRIODENDRON TULIPIFERA - TULIP POPLAR 1" CAL. ##
 61 ACER RUBRUM - RED MAPLE 2-3" WHIP **
 54 FRAXINUS PENNSYLVANICA - GREEN ASH 2-3" WHIP **
 20 JUGLANS NIGRA - BLACK WALNUT 2-3" WHIP **
 41 LIRIODENDRON TULIPIFERA - TULIP POPLAR 2-3" WHIP **
 27 PLATANUS OCCIDENTALIS - SYCAMORE 2-3" WHIP **
 27 PRUNUS SEROTINA - BLACK CHERRY 2-3" WHIP **
 34 QUERCUS RUBRA - RED OAK 2-3" WHIP **
 20 SASSAFRAS ALBIDUM - SASSAFRAS 2-3" WHIP **
 20 SAMBUCUS CANADENSIS - ELDERBERRY 18-24" B.T. **
 34 VIBURNUM DENTATUM - ARROWWOOD 18-24" B.T. **

PLANTING SCHEDULE
 FOREST CONSERVATION EASEMENT 'G' (0.3 ACRES)
 QTY. SPECIES SIZE SPACING
 1 ACER RUBRUM - RED MAPLE 1" CAL. ##
 1 LIRIODENDRON TULIPIFERA - TULIP POPLAR 1" CAL. ##
 20 ACER RUBRUM - RED MAPLE 2-3" WHIP **
 10 CORNUS FLORIDA - FLOWERING DOGWOOD 2-3" WHIP **
 7 JUGLANS NIGRA - BLACK WALNUT 2-3" WHIP **
 20 LIRIODENDRON TULIPIFERA - TULIP POPLAR 2-3" WHIP **
 11 PRUNUS SEROTINA - BLACK CHERRY 2-3" WHIP **
 13 QUERCUS RUBRA - RED OAK 2-3" WHIP **
 4 ROBINIA PSUEDO-ACACIA - BLACK LOCUST 2-3" WHIP **
 4 SASSAFRAS ALBIDUM - SASSAFRAS 2-3" WHIP **
 6 VIBURNUM PRUNIFOLIUM - BLACKHAW 18-24" B.T. **

PLANTING SCHEDULE
 FOREST CONSERVATION EASEMENT 'M' (2.3 ACRES)
 QTY. SPECIES SIZE SPACING
 6 ACER RUBRUM - RED MAPLE 1" CAL. ##
 3 LIRIODENDRON TULIPIFERA - TULIP POPLAR 1" CAL. ##
 133 ACER RUBRUM - RED MAPLE 2-3" WHIP **
 110 FRAXINUS PENNSYLVANICA - GREEN ASH 2-3" WHIP **
 55 JUGLANS NIGRA - BLACK WALNUT 2-3" WHIP **
 110 LIRIODENDRON TULIPIFERA - TULIP POPLAR 2-3" WHIP **
 102 PLATANUS OCCIDENTALIS - SYCAMORE 2-3" WHIP **
 55 PRUNUS SEROTINA - BLACK CHERRY 2-3" WHIP **
 71 QUERCUS RUBRA - RED OAK 2-3" WHIP **
 55 SASSAFRAS ALBIDUM - SASSAFRAS 2-3" WHIP **
 60 SAMBUCUS CANADENSIS - ELDERBERRY 18-24" B.T. **
 63 VIBURNUM DENTATUM - ARROWWOOD 18-24" B.T. **

PLANTING SCHEDULE
 FOREST CONSERVATION EASEMENT 'P' (4.7 ACRES)
 QTY. SPECIES SIZE SPACING
 9 ACER RUBRUM - RED MAPLE 1" CAL. ##
 10 LIRIODENDRON TULIPIFERA - TULIP POPLAR 1" CAL. ##
 306 ACER RUBRUM - RED MAPLE 2-3" WHIP **
 161 CORNUS FLORIDA - FLOWERING DOGWOOD 2-3" WHIP **
 113 JUGLANS NIGRA - BLACK WALNUT 2-3" WHIP **
 306 LIRIODENDRON TULIPIFERA - TULIP POPLAR 2-3" WHIP **
 177 PLATANUS OCCIDENTALIS - SYCAMORE 2-3" WHIP **
 113 QUERCUS RUBRA - RED OAK 2-3" WHIP **
 210 QUERCUS RUBRA - RED OAK 2-3" WHIP **
 64 SASSAFRAS ALBIDUM - SASSAFRAS 2-3" WHIP **
 97 VIBURNUM PRUNIFOLIUM - BLACKHAW 18-24" B.T. **



NO.	DATE	REVISION
1	5-31-01	REVISED LANDSCAPE & STREET TREE PLANTING LIST

BENCHMARK ENGINEERING, INC.
 ENGINEERS • LAND SURVEYORS • PLANNERS
 8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-6105 FAX: 410-465-6644

Donald Maer

OWNER/DEVELOPER:
 HOODS MILL CORPORATION
 C/O P.O. BOX 417
 ELLICOTT CITY, MD 21041
 410-465-4244

PROJECT: **MONTICELLO**
 LOTS 1-50, PRESERVATION PARCELS "A" THRU "D" AND NON-BUILDABLE PARCEL "E"

LOCATION: TAX MAP 8 - BLOCK 18 - PARCEL 110
 4TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: **FOREST CONSERVATION AND LANDSCAPE NOTES & DETAILS**
 WP-99-24 SP-99-01

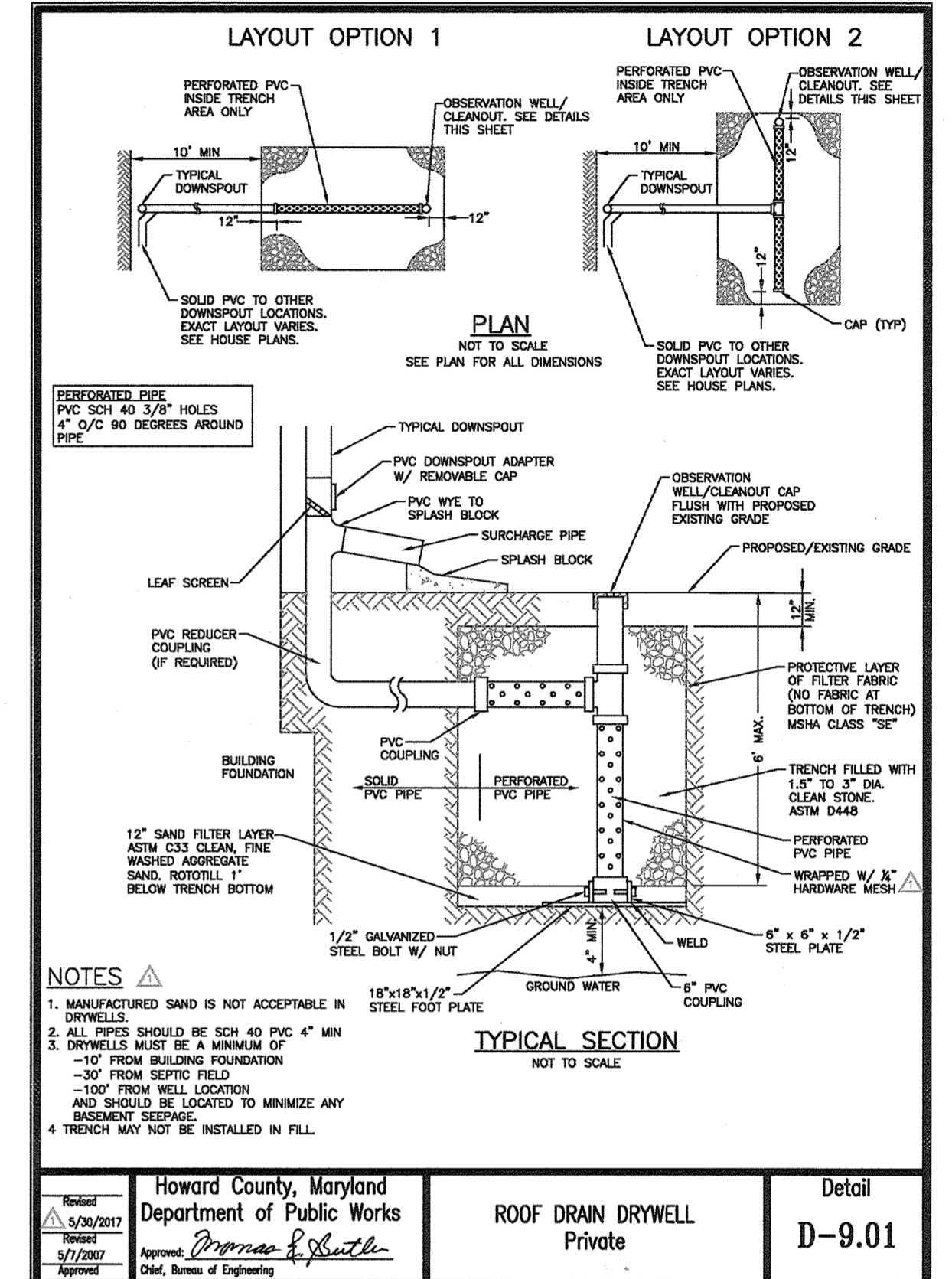
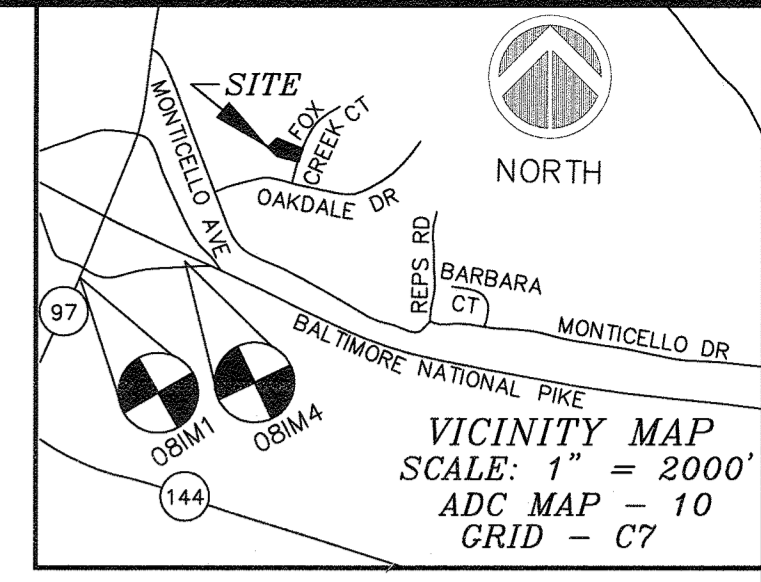
DATE: MARCH, 1999 PROJECT NO. 1122

DESIGN: JMC DRAFT: JMC SCALE: AS SHOWN DRAWING 21 OF 22



LEGEND

- EX. EVERGREEN TREE
- EX. DECIDUOUS TREE
- EX. DECORATIVE BUSH
- PROP. SPOT ELEVATION
- EX. CONTOUR
- PROP. CONTOUR
- EX. EDGE WOODED AREA
- PROP. EDGE WOODED AREA
- PROP. SUPER SILT FENCE
- PROP. SILT FENCE
- PROP. LIMIT OF DISTURBANCE
- EX. TREE TO BE REMOVED
- (TR) DENOTES (TO REMAIN)
- (TBR) DENOTES (TO BE REMOVED)
- EX. PUBLIC DRAINAGE AND UTILITY EASEMENT
- EX. FOREST CONSERVATION EASEMENT
- EX. SEPTIC RESERVE AREA
- PROP. WELL RESERVE BOX



DRYWELL	LENGTH	WIDTH	DEPTH	TOP ELEV.	BOTTOM ELEV.	GRAVEL DEPTH	SAND DEPTH
1	13.7'	6.0'	5.0'	630.2	625.2	4.0'	1.0'
2	13.7'	6.0'	5.0'	631.7	626.7	4.0'	1.0'
3	15.0'	6.0'	5.0'	633.8	628.8	4.0'	1.0'
4	10.0'	5.0'	5.0'	630.4	625.4	4.0'	1.0'

- OPERATION AND MAINTENANCE SCHEDULE FOR (M-5) DRYWELLS**
- The monitoring wells and structures shall be inspected on a quarterly basis and after every large storm event.
 - Water levels and sediment build up in the monitoring wells shall be recorded over a period of several days to insure trench drainage.
 - A log book shall be maintained to determine the rate at which the facility drains.
 - When the facility becomes clogged so that it does not drain down within the 72 hour time period, corrective action shall be taken.
 - The maintenance log book shall be available to Howard County for inspection to insure compliance with operation and maintenance criteria.
 - Once the performance characteristics of the infiltration facility have been verified, the monitoring schedule can be reduced to an annual basis unless the performance data indicates that a more frequent schedule is required.

SYMBOL	NAME/DESCRIPTION	TYPE	HYDRIC
GgB	Glenegl Loom, 3% to 8% Slopes	B	No

FACILITY	ESDv Credits	Pe
DRY WELL No. 1	161 CF	2.6"
DRY WELL No. 2	153 CF	2.6"
DRY WELL No. 3	168 CF	2.6"
DRY WELL No. 4	98 CF	2.6"
NON-ROOFTOP DISCONNECT	0 CF	1.0"
TOTAL	580 CF	

ESDv PROVIDED = 580 CF
ESDv REQUIRED = 463 CF
ESDv SURPLUS = +117 CF

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Veronica Lewis
CHIEF, DIVISION OF LAND DEVELOPMENT 10-18-18 DATE

Chad P. ...
CHIEF, DEVELOPMENT ENGINEERING DIVISION 10-18-18 DATE

DATE	REVISION	BY

PLAN PREPARED BY:
NJR & ASSOCIATES
Land Surveying and Planning
2770 STATE ROUTE 32
WEST FRIENDSHIP, MD 21794
TEL: (240) 508-3200

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE # 11049, EXPIRATION DATE: 2/10/2019.

JUNE 19, 2018

DEVELOPER
CARUSO HOMES
2120 BALDWIN AVENUE, SUITE-200
CROFTON, MD 21144
(301) 261-0277

OWNER
MARCO TORRES
3053 MULLINEAUX LANE
ELLCOTT CITY, MD 21042
(206) 902-7562

PURPOSE NOTE:
THE PURPOSE OF THIS SHEET IS TO SHOW THE NEW PROPOSED IMPROVEMENTS ON LOT 43.

REVISED FINAL CONSTRUCTION PLAN
NEW SHEET ADDED TO F-99-133
LOT 43 MONTICELLO
PLAT No. 14086
14305 FOX CREEK COURT, COOKSVILLE
TAX MAP 8, GRID 18, PARCEL 110
4TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND ZONING = RC-DEO
SITE, STORMWATER MANAGEMENT, GRADING AND SOIL EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1" = 20' JOB NO.: 3457 DATE: MAY 10, 2018 SHEET: 22 OF 22