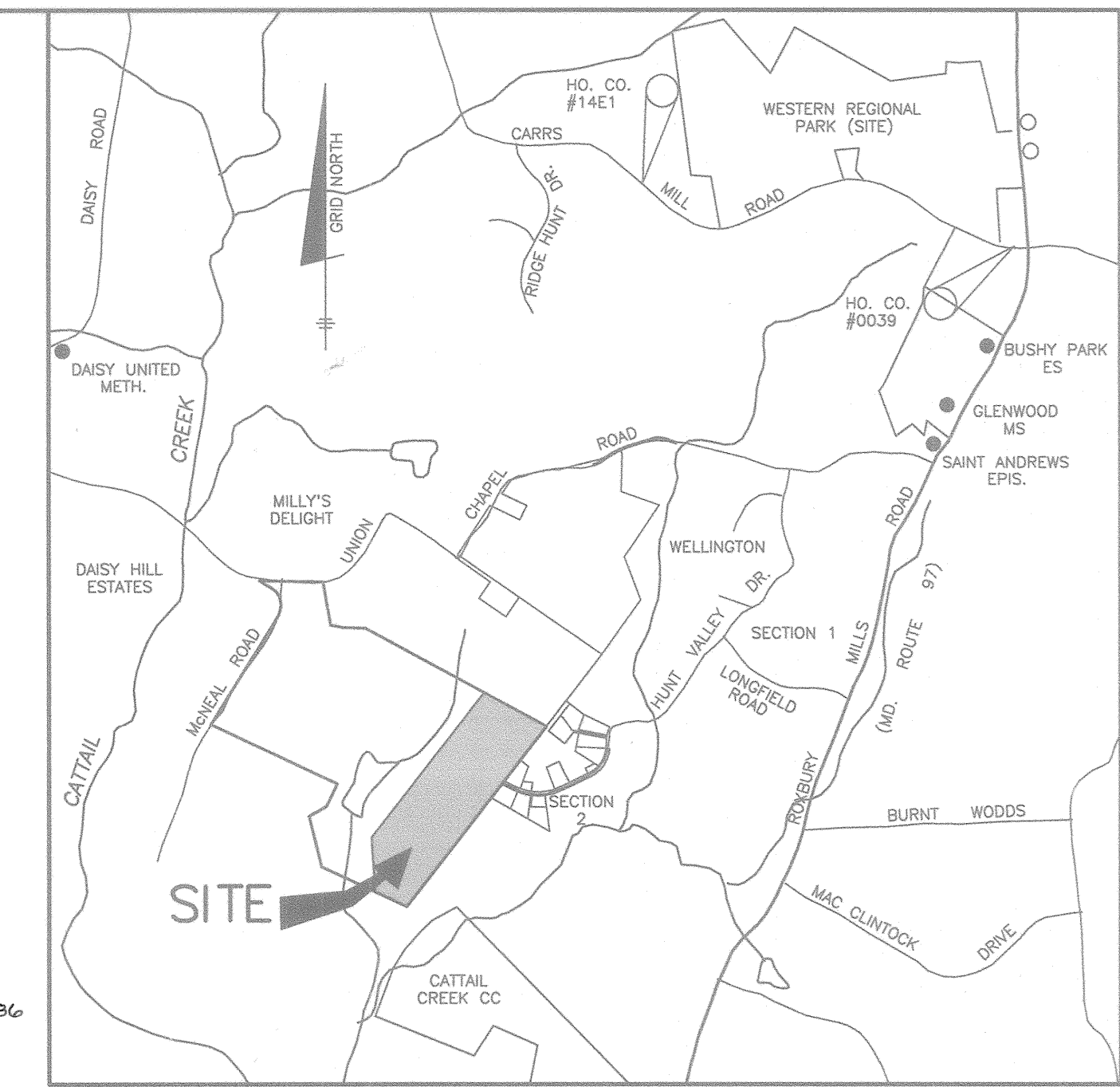


THE WOODS OF WELLINGTON

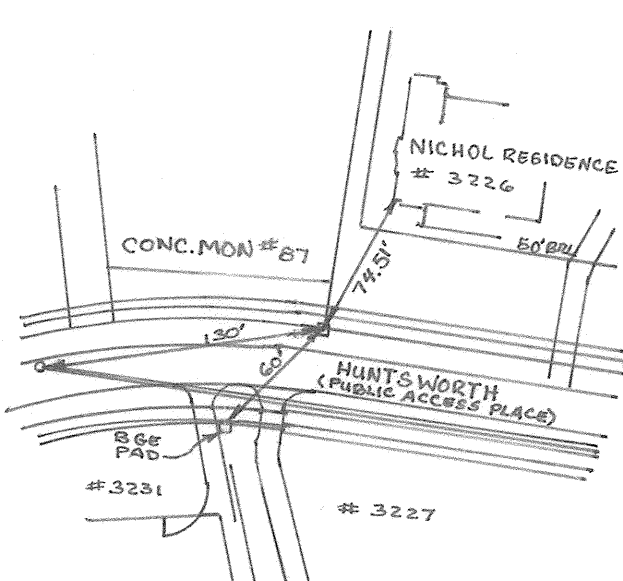
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

ROAD, STORMWATER MANAGEMENT AND STORM DRAIN CONSTRUCTION PLANS



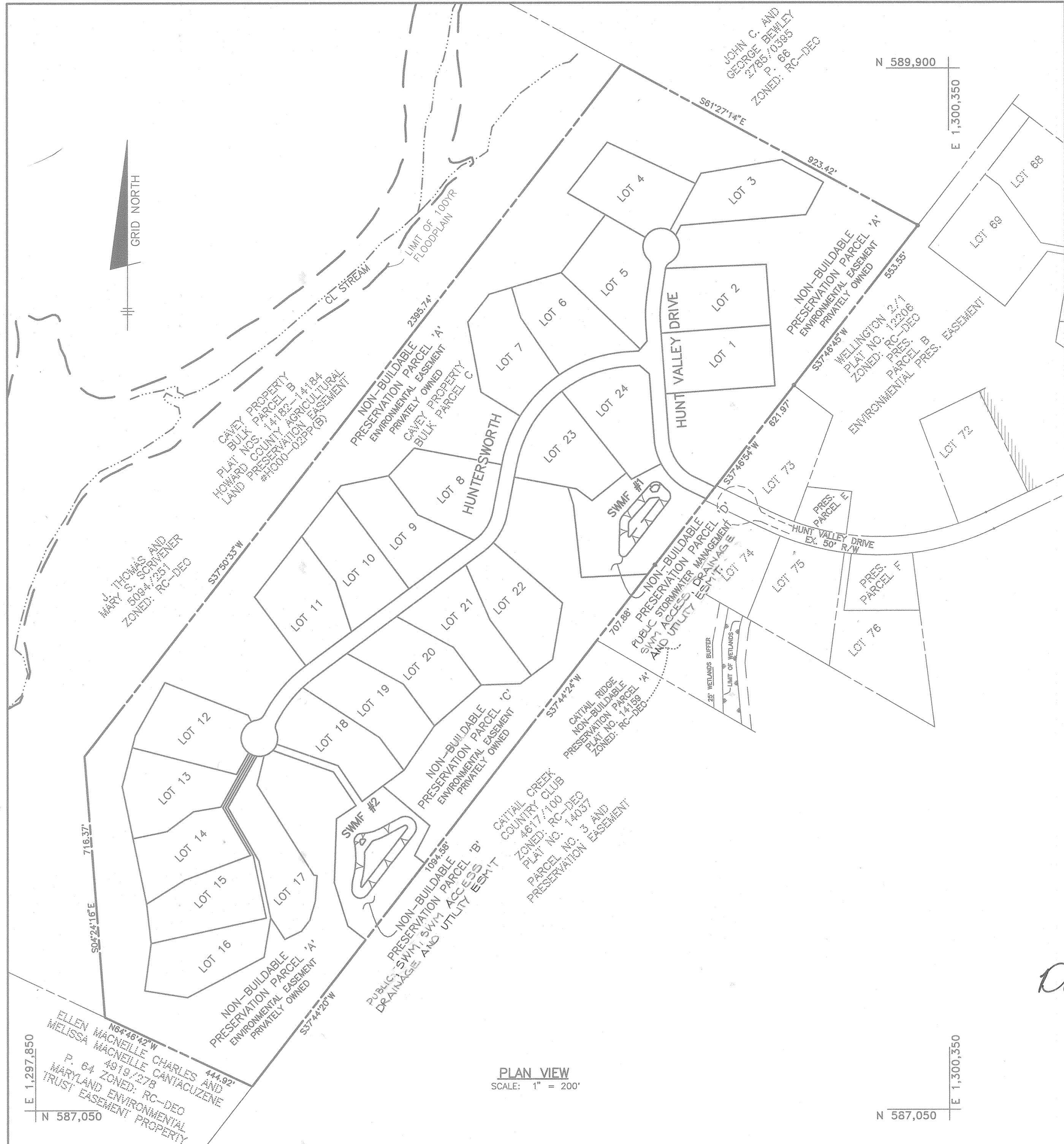
VICINITY MAP
SCALE: 1" = 200'

BENCHMARK NAD'83	
HO. CO. #14E1	
STAMPED BRASS DISK SET ON TOP OF CONC. BASE, 33' WEST OF CL OF DRIVE TO 15050 CARRS MILL ROAD; 19.8' NORTH OF EDGE OF PAVING OF CARRS MILL ROAD.	
N 59623.6182'	E 1301991.8973'
ELEV. 590.862'	
HO. CO. #0039	
STAMPED BRASS DISK SET ON TOP OF CONC. BASE @ SOUTHWEST CORNER OF CARRS MILL ROAD AND ROUTE 97; 33.4' SOUTH OF CL OF CARRS MILL ROAD AND 40.3' WEST OF CL OF ROUTE 97.	
N 595722.8341'	E 1306481.8720'
ELEV. 590.862'	

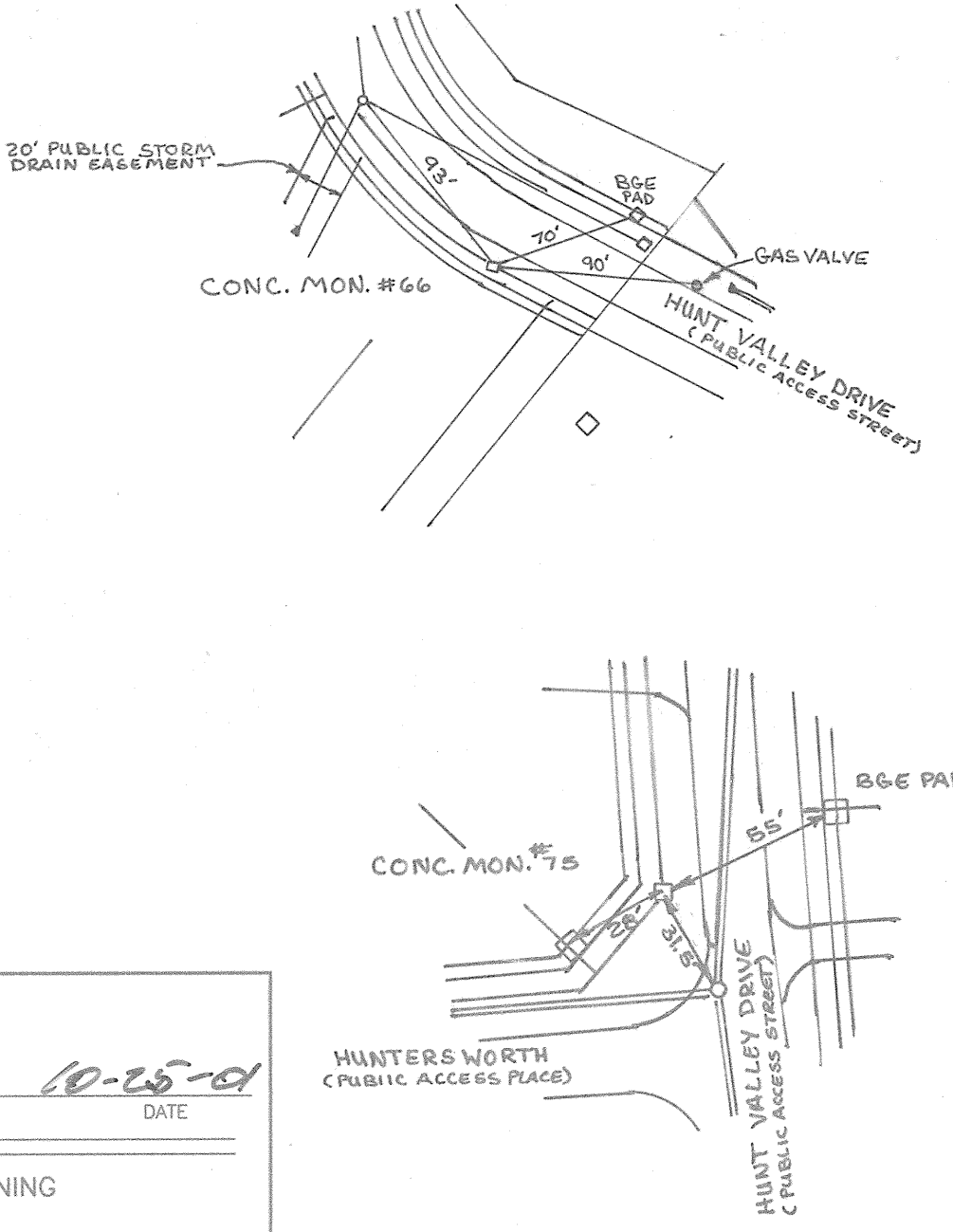


SHEET INDEX	
SHEET NO.	DESCRIPTION
1	COVER SHEET
2-3	ROAD AND STORM DRAIN PLAN
4	SPEED CONTROL DETAILS
5-7	ROAD PROFILES
8	STORM DRAIN PROFILES AND SCHEDULES
9-10	GRADING AND SEDIMENT & EROSION CONTROL PLAN
11	SEDIMENT AND EROSION CONTROL NOTES AND DETAILS
12	STORM DRAIN DRAINAGE AREA MAP
13-14	STORMWATER MANAGEMENT NOTES AND DETAILS
15	STORMWATER MANAGEMENT NOTES AND BORING LOGS
16	LANDSCAPE PLAN, NOTES AND DETAILS
17	FOREST CONSERVATION PLAN, NOTES AND DETAILS

- GENERAL NOTES**
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARD AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE. ALL LINES SHOWN IN STANDARD SYMBOLS AS PRESENTED IN THE DESIGN MANUAL, VOLUME IV, "STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION."
 - 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 NO. 14 - GRID NO. 20 AND TAX MAP NO. 21 - GRID NO. 2 - P/O PARCEL 246
ZONING: RC-DEO SERVING MORE THAN ONE RESIDENCE
ELECTION DISTRICT: 4th
TOTAL TRACT AREA: 59.54 AC.
NUMBER OF PROPOSED LOTS: 24
NUMBER OF PROPOSED OPEN SPACE LOTS: 0
NUMBER OF PROPOSED PRESERVATION PARCELS: 4
TWO TO BE PRIVATELY OWNED AND TWO TO BE OWNED BY THE WELLINGTON HOA
DPZ REFERENCE FILE: F-00-86, S-00-04, P-01-04
SKETCH PLAN APPROVED ON MARCH 21, 2000.
PRELIMINARY PLAN APPROVED ON NOVEMBER 29, 2000.
 - 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 BENCHMARK ENGINEERING, INC., DATED APRIL, 2000, AND SUPPLEMENTED WITH TOPOGRAPHIC FILE INFORMATION PURCHASED FROM HOWARD COUNTY GEOGRAPHICAL INFORMATION SERVICES. CONTOURS SHOWN ARE 2 FOOT INTERVALS.
 - BOUNDARY SURVEY WAS PERFORMED BY BENCHMARK ENGINEERING, INC. DATED SEPTEMBER, 1999. COORDINATES ARE BASED ON NAD 83, MARYLAND STATE PLAN GRID AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS Nos. 14E1 AND 0039. VERTICAL CONTROL IS NAD'27 BASED ON HOWARD COUNTY CONTROL STATION NO. 3432001.
 - THE PROJECT IS NOT WITHIN THE METROPOLITAN DISTRICT. WATER AND SEWER FOR THIS PROJECT SHALL BE PRIVATE AND WILL BE PROVIDED ON THE INDIVIDUAL LOT.
 - WATER QUALITY AND QUANTITY TREATMENT FOR THE PROPOSED ROADWAYS AND LOTS IS BEING PROVIDED BY EXTENDED DETENTION FACILITIES.
 - THERE IS NO FLOOD PLAIN LOCATED ON THIS SITE.
 - THERE ARE NO WETLANDS LOCATED ON THIS SITE.
 - ADEQUATE PUBLIC FACILITIES ORDINANCE TRAFFIC ANALYSIS WAS PREPARED BY THE LEE CUNNINGHAM & ASSOCIATES, DATED NOVEMBER, 1999 AND APPROVED IN NOVEMBER, 1999 (S-00-04).
 - MINIMUM BUILDABLE LOT SIZE SHALL BE 40,000 SQUARE FEET. MAXIMUM BUILDABLE LOT SIZE SHALL BE 50,000 SQUARE FEET.
 - THE GEOTECHNICAL REPORT FOR THIS PROJECT WAS PREPARED BY HILLIS-CARNES AND ASSOCIATES, DATED JULY 14, 2000.
 - 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 NOVEMBER, 1999 (S-00-04).
 - NO DISTURBANCE SHALL OCCUR IN THE FOREST CONSERVATION EASEMENT AREAS EXCEPT AS APPROVED AS A PART OF THESE PLANS.
 - EXISTING WELLS AND/OR SEWERAGE EASEMENTS WITHIN 100' OF THE PROPERTY HAVE BEEN SHOWN FROM THE BEST AVAILABLE INFORMATION.
 - TO THE BEST OF THE OWNERS KNOWLEDGE, THERE ARE NO CEMETERY LOCATIONS ONSITE.
 - DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLING TO INSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
1) WIDTH - 12' SERVING MORE THAN ONE RESIDENCE;
2) SURFACE - 6" OF COMPACT CRUSHER RUN BASE WITH TAR AND CHIP COATING (1-1/2" MIN.);
3) GEOMETRY - MAX. 15% GRADE, MAX. 10% GRADE CHANGE AND MIN. 45' TURNING RADIUS;
4) STRUCTURES/BRIDGES - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING);
5) DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100-YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE;
6) MAINTENANCE - SUFFICIENT TO INSURE ALL WEATHER USE.
 - ALL ROAD FILLS SHALL BE COMPACTED TO 95% DETERMINED BY AASHTO T-180.
 - PERIMETER AND SWM LANDSCAPE SURETY FOR 18 SHADE TREES AND 30 EVERGREEN TREES IN THE AMOUNT OF \$9,900.00 AND SURETY FOR 115 STREET TREES, SHALL BE PART OF THE D.P.W., DEVELOPERS AGREEMENT.
 - THIS PLAN COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION BY 241 ACRES OF RETENTION ON-SITE FINANCIAL SURETY FOR THE REQUIRED OBLIGATION MUST BE POSTED AS PART OF THE DEVELOPERS AGREEMENT IN THE AMOUNT OF \$209,951.20.
 - THE CONTRACTOR SHALL PROVIDE DRIVEWAY ACCESS TO EXISTING RESIDENCES ON LOTS 73 AND 74 IF CONSTRUCTION ACTIVITIES IMPACT THE DRIVEWAY. AFTER CONSTRUCTION IS COMPLETED DRIVEWAYS SHALL BE REPAIRED OR RECONSTRUCTED TO PROVIDE ACCESS ONTO HUNT VALLEY DRIVE IN ACCORDANCE WITH HOWARD COUNTY STANDARD R-6.06 AND THESE PLANS.
 - STREET LIGHTS ARE NOT REQUIRED FOR THIS PROJECT AS IT IS IN THE RC ZONING DISTRICT.
 - THIS AREA DESIGNATES A PRIVATE SEWERAGE EASEMENT OF AT LEAST 10,000 SQUARE FEET REQUIRED BY THE MARYLAND STATE DEPARTMENT OF THE ENVIRONMENT FOR INDIVIDUAL SEWAGE DISPOSAL (COMAR 26.0403). IMPROVEMENTS OF ANY NATURE IN THIS AREA ARE RESTRICTED UNTIL PUBLIC SEWAGE IS AVAILABLE. THESE EASEMENTS SHALL BECOME NULL AND VOID UPON CONNECTION TO A PUBLIC SEWAGE SYSTEM. THE COUNTY HEALTH OFFICER SHALL HAVE THE AUTHORITY TO GRANT VARIANCES FOR ENCROACHMENT INTO THE PRIVATE SEWERAGE EASEMENT. RECORDATION OF A MODIFIED SEWAGE EASEMENT PLAT SHALL NOT BE REQUIRED. THE PERCOLATION CERTIFICATION PLAN FOR THIS PROJECT WAS APPROVED ON FEBRUARY 29, 2000.
 - THERE ARE NO CONTIGUOUS AREAS OF STEEP SLOPES (25% OR GREATER) OF 20,000 S.F. OR GREATER ON THIS SITE. GRADING OF STEEP SLOPE AREAS LESS THAN 20,000 S.F. IS PERMITTED UNDER SECTION 16.116(B) OF THE SUBDIVISION REGULATIONS.
 - THERE IS AN EXISTING DWELLING LOCATED ON LOT 1 TO REMAIN. NO NEW BUILDINGS, EXTENSIONS OR ADDITIONS TO THE EXISTING DWELLING ARE TO BE CONSTRUCTED AT A DISTANCE LESS THAN THE ZONING REGULATIONS REQUIRE.
 - ALL LINES SHOWN IN STANDARD SYMBOLS AS PRESENTED IN THE DESIGN MANUAL, VOLUME IV, "STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION."



RIGHT OF WAY ELEVATION CHART NAD 83		
R/W FT. M.	DESCRIPTION	ELEVATION
6.3	REBAR # CAP	518.00'
6.4	REBAR # CAP	519.42'
6.5	REBAR # CAP	522.48'
6.6	CONC. MON. SET	522.41'
6.7	REBAR # CAP	524.35'
6.8	REBAR # CAP	532.11'
7.0	REBAR # CAP	530.63'
7.2	REBAR # CAP	529.04'
7.3	REBAR # CAP	527.43'
7.4	REBAR # CAP	527.28'
7.5	CONC. MON. SET	532.26'
7.6	REBAR # CAP	532.81'
7.7	REBAR # CAP	531.62'
7.8	REBAR # CAP	531.88'
7.9	REBAR # CAP	531.24'
8.0	REBAR # CAP	531.18'
8.5	REBAR # CAP	531.16'
8.6	CONC. MON. SET	529.61'
8.7	CONC. MON. SET	528.07'
8.8	REBAR # CAP	524.21'
8.9	REBAR # CAP	523.83'
9.0	REBAR # CAP	523.49'
9.1	REBAR # CAP	523.52'
9.2	REBAR # CAP	523.51'
9.3	REBAR # CAP	522.33'
9.4	REBAR # CAP	522.39'



APPROVED: DEPARTMENT OF PUBLIC WORKS
Andrew M. Quack 10-25-01
CHIEF, BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hancock 10/29/01
CHIEF, DIVISION OF LAND DEVELOPMENT

Mr. [Signature] 10/29/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION

Donald Mean
PROFESSIONAL ENGINEER
10/3/01

NO.	DATE	REVISION
3	9/16/05	REVISED PER AS-BUILT CONDITIONS
2	1/08/02	REVISE SWM EASEMENT DESIGNATIONS
1	7/09/01	REVISED PER HO. CO. COMMENTS OF 6/21/01

BENCHMARK ENGINEERING, INC.
ENGINEERS & LAND SURVEYORS & PLANNERS
8480 BALTIMORE NATIONAL PIKE A SUITE 418
ELLCOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 • FAX: 410-465-6644
EMAIL: benchmark@cois.com

Donald Mean
PROFESSIONAL ENGINEER

OWNER/DEVELOPER: SDC GROUP, INC. P.O. BOX 417 ELLCOTT CITY, MD 21041 410-465-4244	PROJECT: THE WOODS OF WELLINGTON LOTS 1-24 AND NON-BUILDABLE PRES. PARCELS 'A' THRU 'D'
LOCATION: TAX MAP NO. 14, GRID NO. 20 TAX MAP NO. 21, GRID NO. 2 P/O PARCEL 246 4th ELECTION DISTRICT HOWARD COUNTY, MARYLAND	TITLE: COVER SHEET
DATE: MARCH, 2001 MAY, 2001	PROJECT NO. 1251
DESIGN: GWF	DRAFT: JMC
SCALE: AS SHOWN	DRAWING 1 OF 17

CAVEY PROPERTY BULK PARCEL B PLAT No. 14184 HOWARD COUNTY AGRICULTURAL LAND PRESERVATION EASEMENT #HC00-02PP(B) ZONED: RC-DEC

J. THOMAS AND MARY S. SCRIVENER 5084/251 ZONED: RC-DEC

FOREST CONSERVATION EASEMENT 1 -RETENTION- TOTAL AREA 19.53 ACRES±

NON-BUILDABLE PRESERVATION PARCEL 'A' PRIVATELY OWNED WITH HOWARD COUNTY AND THE WELLINGTON HOMEOWNERS ASSOCIATION AS EASEMENT HOLDERS ENVIRONMENTAL EASEMENT

CAVEY PROPERTY BULK PARCEL C PLAT No. 14184

LOT 7 50,000 S.F.

LOT 6 49,905 S.F.

LOT 5 50,000 S.F.

LOT 4 50,000 S.F.

LOT 3 50,000 S.F.

LOT 23 49,270 S.F.

LOT 24 48,795 S.F.

LOT 2 50,000 S.F.

LOT 1 50,000 S.F.

NON-BUILDABLE PRESERVATION PARCEL 'A' PRIVATELY OWNED WITH HOWARD COUNTY AND THE WELLINGTON HOMEOWNERS ASSOCIATION AS EASEMENT HOLDERS ENVIRONMENTAL EASEMENT

FOREST CONSERVATION EASEMENT 2 -RETENTION- 4.61 ACRES±

PUBLIC SWM, SWM ACCESS, DRAINAGE AND UTILITY EASEMENT.

NON-BUILDABLE PRESERVATION PARCEL 'D' OWNED BY THE WELLINGTON HOA WITH HOWARD COUNTY AS EASEMENT HOLDER STORMWATER MANAGEMENT EASEMENT

HAZARD CLASSIFICATION 'A'

NON-BUILDABLE PRESERVATION PARCEL 'C' PRIVATELY OWNED WITH HOWARD COUNTY AND THE WELLINGTON HOA AS EASEMENT HOLDERS ENVIRONMENTAL EASEMENT

EXISTING FOREST CONSERVATION EASEMENT 3 -RETENTION- PLAT No. 14159

CAITAIL RIDGE NON-BUILDABLE PRESERVATION PARCEL 'A' PLAT No. 14159 ZONED: RC-DEC

CURVE TABLE				
CURVE	RADIUS	LENGTH	DELTA	CHORD
C1	150.00'	157.24'	60°03'38"	86.71'
C2	350.00'	74.64'	121°3'08"	37.46'
C3	350.00'	456.77'	75°06'07"	269.06'

Professional Engineer Seal for Donald Mason, State of Maryland, License No. 1078100

NO.	DATE	REVISION
4	9/27/05	REVISED PER AS-BUILT CONDITIONS
3	1/15/02	REMOVE SPEED CONTROL ISLANDS
2	1/08/02	REVISE SWM EASEMENT DESIGNATION
1	7/17/01	REV PER HO. CO. COMMENTS OF 6/21/01

BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS

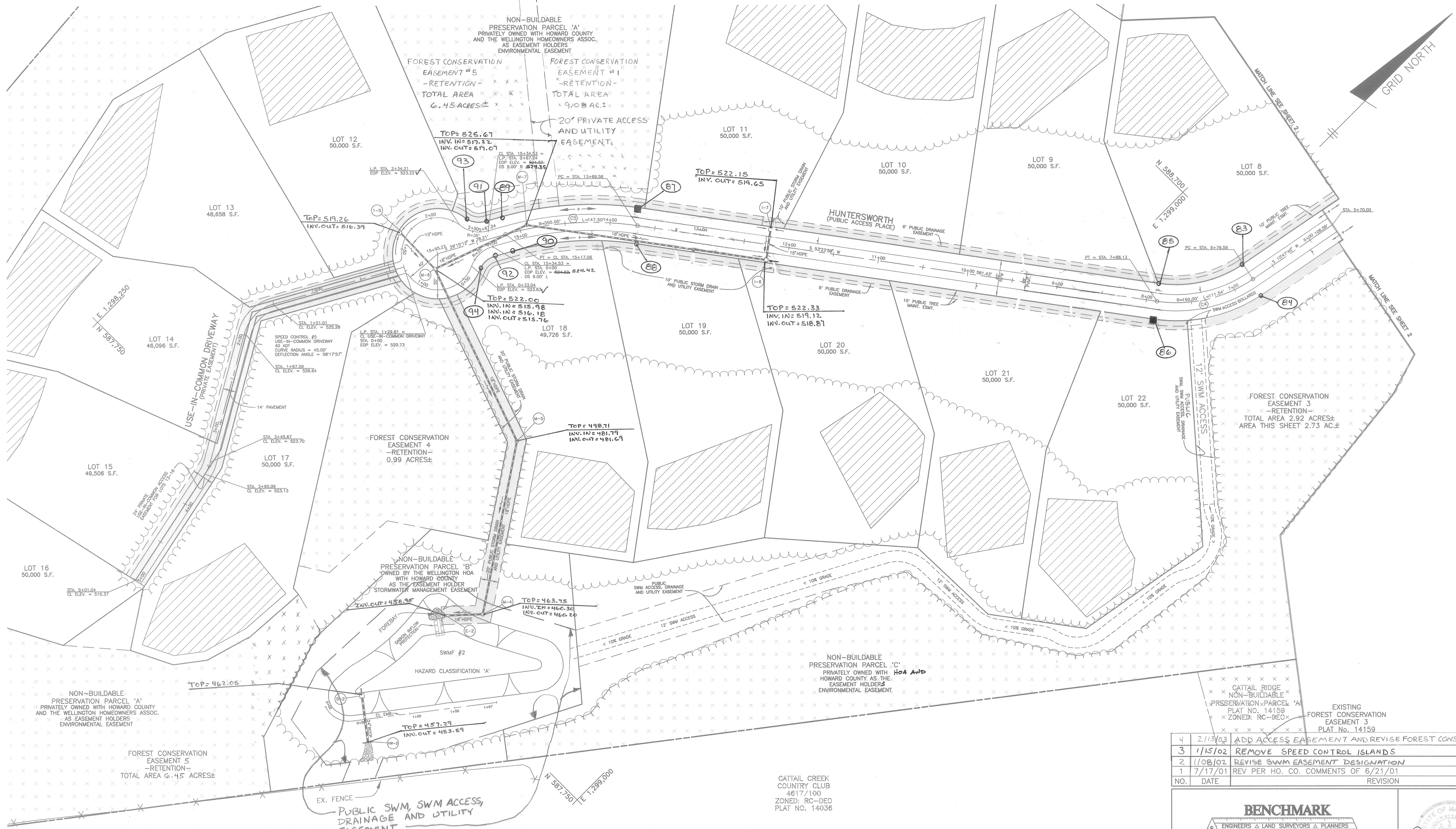
8480 BALTIMORE NATIONAL PIKE & SUITE 418 ELLICOTT CITY, MARYLAND 21043 PHONE: 410-465-6105 FAX: 410-465-6644 EMAIL: benchmark@cois.com

Professional Engineer Seal for Donald Mason, State of Maryland, License No. 1078100

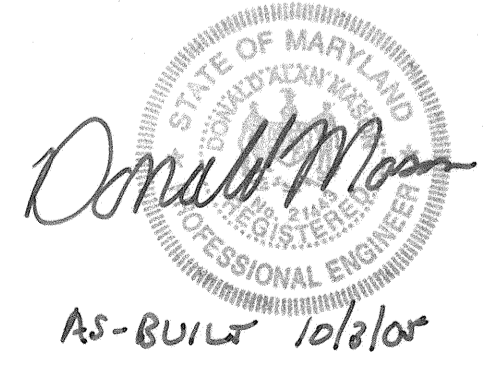
APPROVED: DEPARTMENT OF PUBLIC WORKS (Signature: Andrew M. Daniel, 10-25-01) APPROVED: DEPARTMENT OF PLANNING AND ZONING (Signature: Cindy Hamble, 10/29/11) APPROVED: DEPARTMENT OF PLANNING AND ZONING (Signature: [unclear], 10/29/11)

OWNER/DEVELOPER: SDC GROUP, INC. P.O. BOX 417 ELLICOTT CITY, MD 21041 410-465-4244

PROJECT: THE WOODS OF WELLINGTON LOTS 1-24 AND NON-BUILDABLE PRES. PARCELS 'A' THRU 'D' LOCATION: TAX MAP NO. 14, GRID NO. 20 TAX MAP NO. 21, GRID NO. 2 P/O PARCEL 248 4th ELECTION DISTRICT HOWARD COUNTY, MARYLAND TITLE: ROAD AND STORM DRAIN PLAN DATE: MARCH, 2001 / MAY, 2001 PROJECT NO. 1251 SCALE: 1" = 50' DRAWING 2 OF 17 DESIGN: GWF DRAFT: JMC



CURVE TABLE					
CURVE	RADIUS	LENGTH	DELTA	TANGENT	CHORD
C4	150.00'	111.54'	42°36'18"	58.49'	S32°05'49"W 108.99'
C5	350.00'	147.50'	24°08'46"	74.86'	S41°19'35"W 146.41'



NO.	DATE	REVISION
4	2/13/02	ADD ACCESS EASEMENT AND REVISE FOREST CONSERVATION ESMT.
3	1/15/02	REMOVE SPEED CONTROL ISLANDS
2	1/08/02	REVISE SWM EASEMENT DESIGNATION
1	7/17/01	REV PER HO. CO. COMMENTS OF 6/21/01

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
 EMAIL: benchmark@cois.com

APPROVED: DEPARTMENT OF PUBLIC WORKS
Andrew M. Daniels 10-25-01
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
David Horvath 10/23/01
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

William J. Dammann 10/29/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

OWNER/DEVELOPER:
 SDC GROUP, INC.
 P.O. BOX 417
 ELLICOTT CITY, MD 21041
 410-465-4244

PROJECT:
THE WOODS OF WELLINGTON
 LOTS 1-24 AND NON-BUILDABLE PRES. PARCELS 'A' THRU 'D'

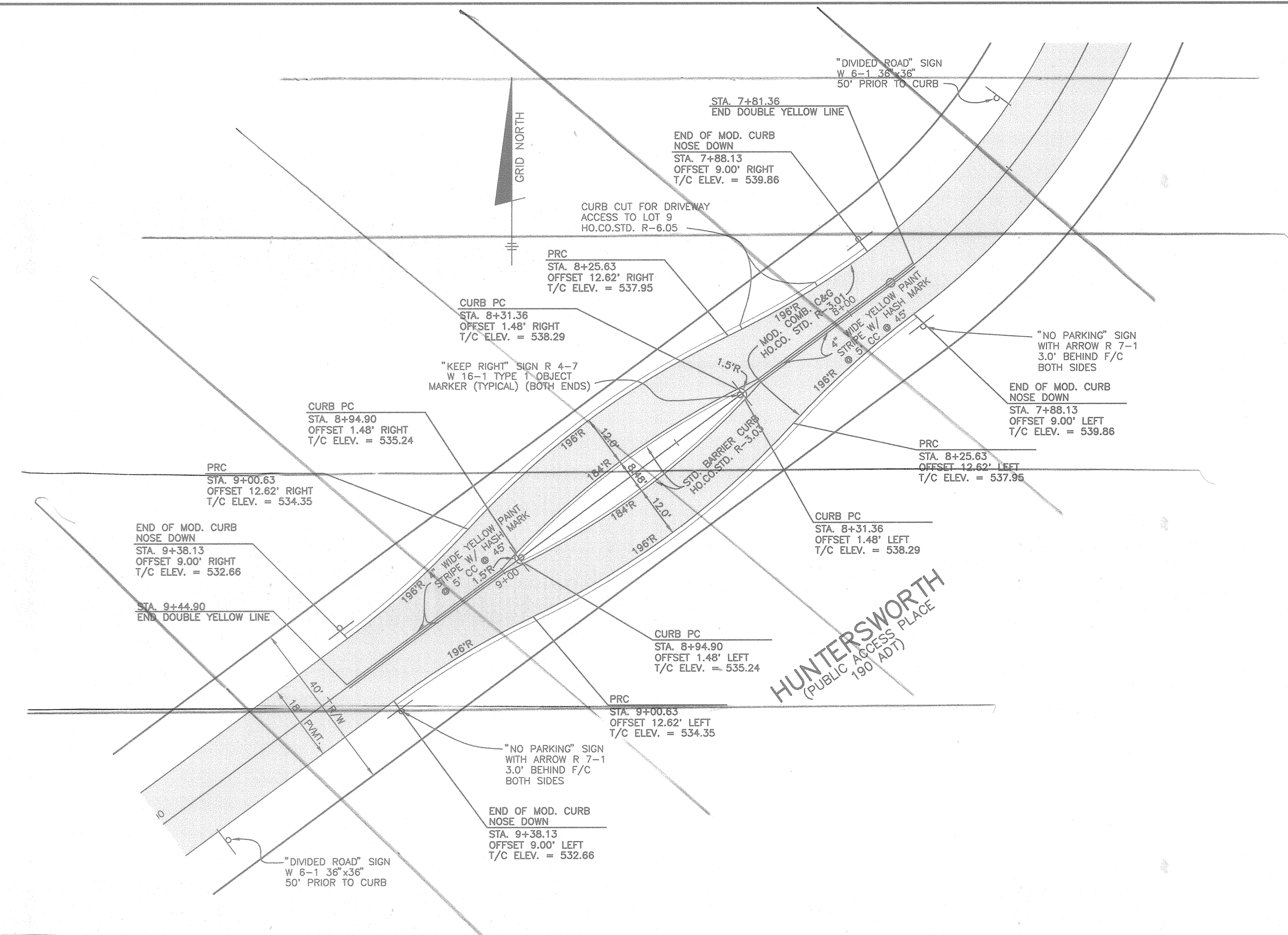
LOCATION:
 TAX MAP NO. 14, GRID NO. 20
 TAX MAP NO. 21, GRID NO. 2
 P/O PARCEL 248
 4TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE:
ROAD AND STORM DRAIN PLAN

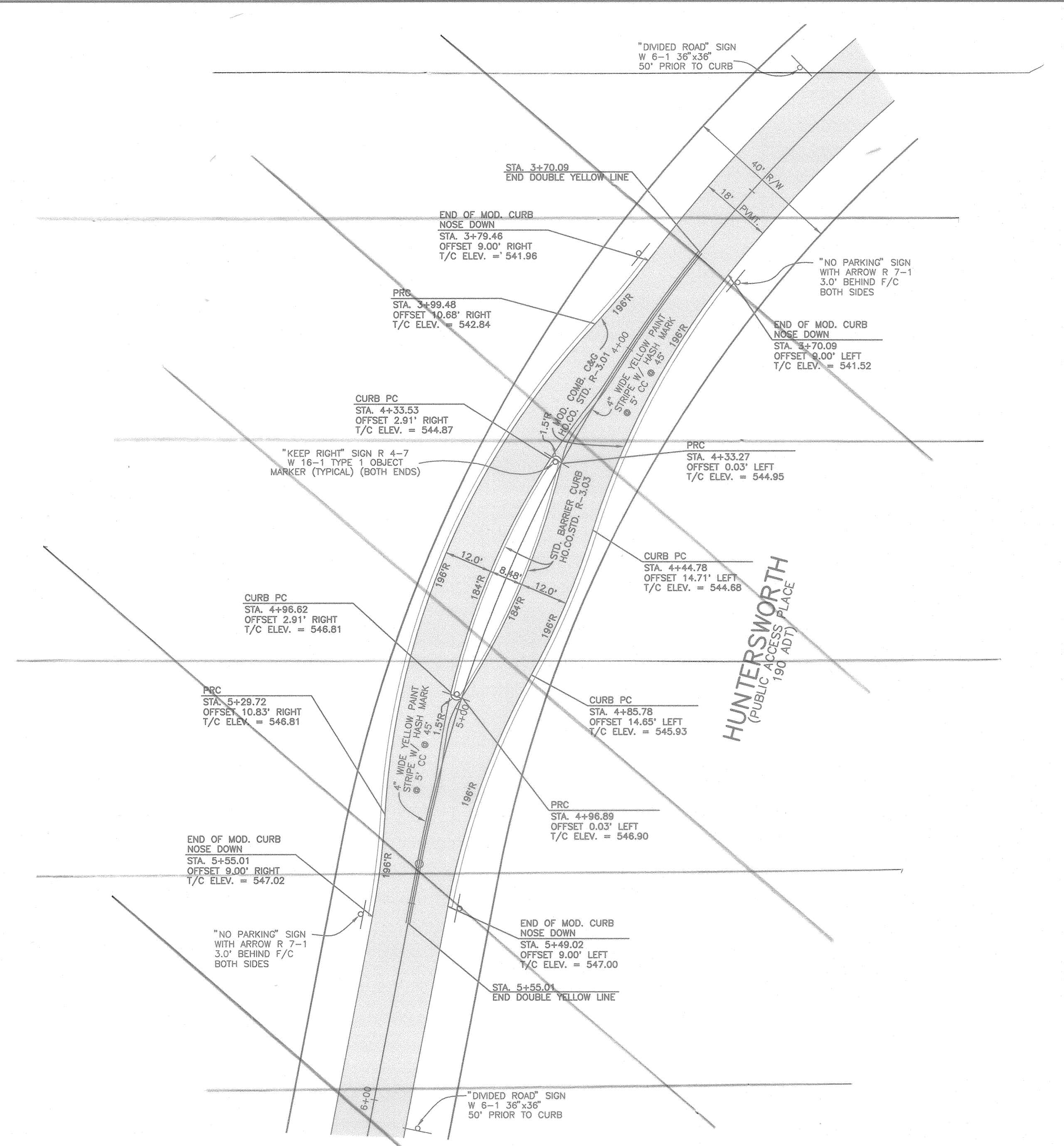
DATE: MARCH, 2001 PROJECT NO. 1251
 MAY, 2001

DESIGN: GWF DRAFT: JMC SCALE: 1" = 50' DRAWING 3 OF 17

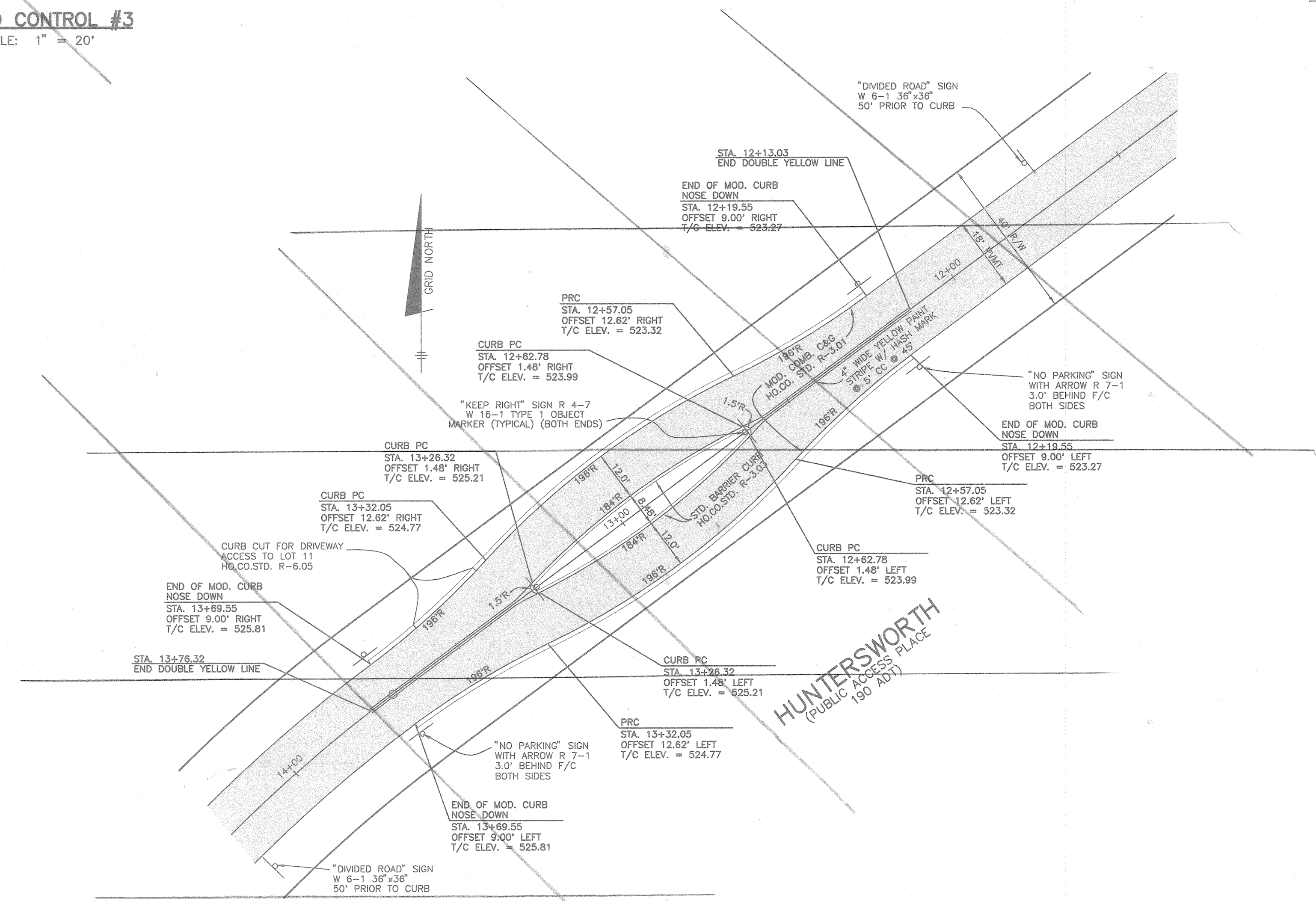
NO.	DATE	REVISION
5	9/27/05	REVISED PER AS-BUILT CONDITIONS



SPEED CONTROL #3
SCALE: 1" = 20'



SPEED CONTROL #2
SCALE: 1" = 20'



SPEED CONTROL #4
SCALE: 1" = 20'

APPROVED: DEPARTMENT OF PUBLIC WORKS
Richard M. Daniels 10-25-01
 CHIEF, BUREAU OF HIGHWAYS DATE
 APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hanawa 11/21/01
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
Chris D... .. 10/21/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

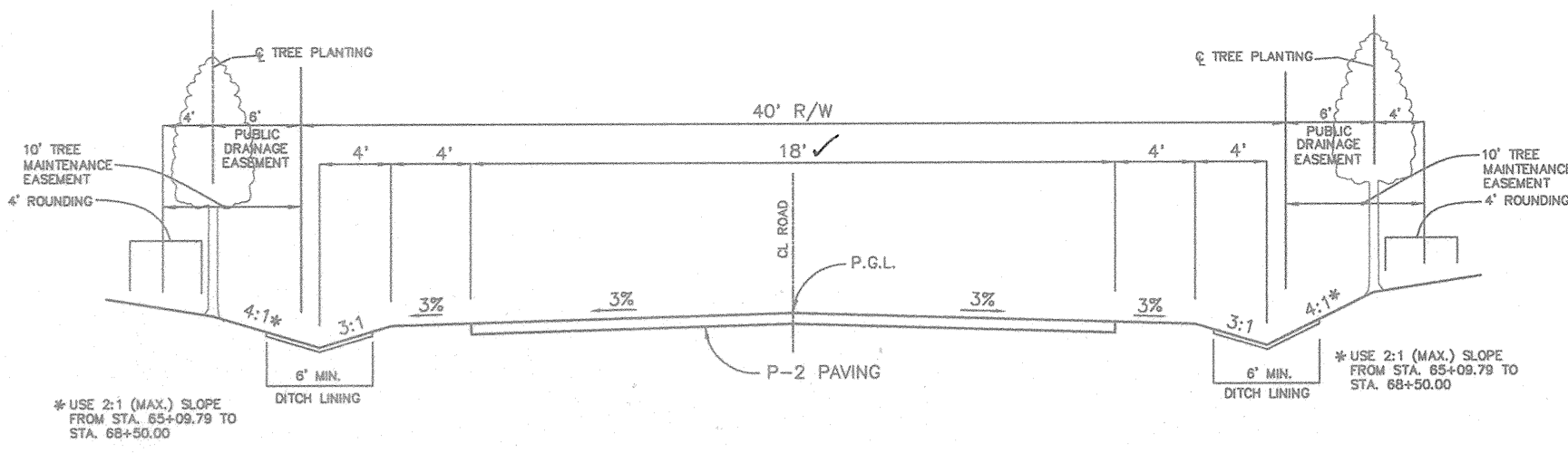
NO.	DATE	REVISION
1	11/15/02	REMOVE SPEED CONTROL ISLANDS

BENCHMARK
ENGINEERS • LAND SURVEYORS • PLANNERS
ENGINEERING, INC.

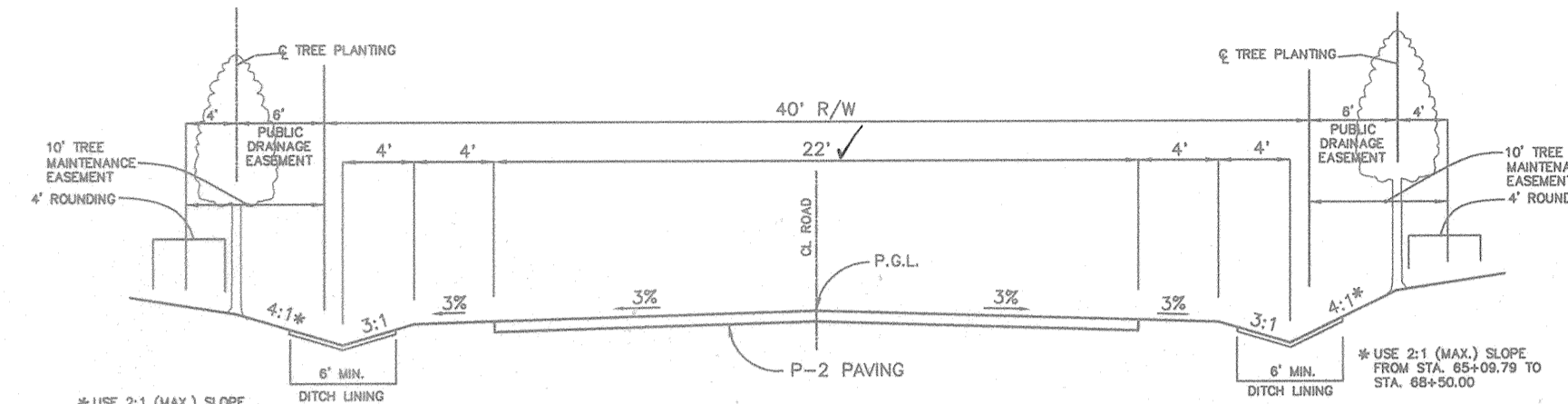
8480 BALTIMORE NATIONAL PIKE AND SUITE 418
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 PHONE: 410-465-6105 • FAX: 410-465-6644
 EMAIL: benchmark@cois.com

10/3/01

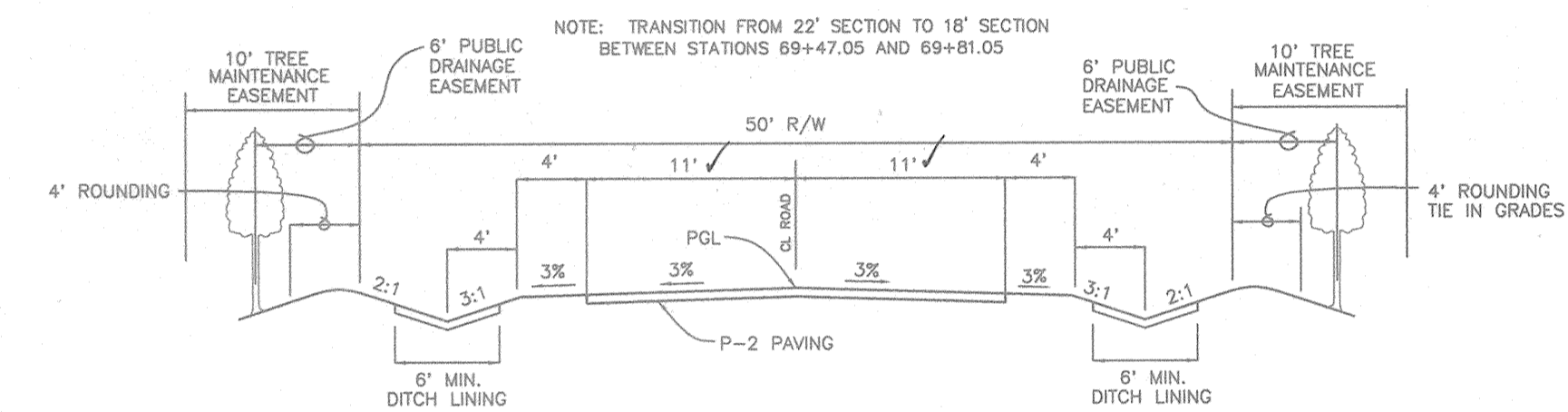
OWNER/DEVELOPER: SDC GROUP, INC. P.O. BOX 417 ELLICOTT CITY, MD 21041 410-465-4244	PROJECT: THE WOODS OF WELLINGTON LOTS 1-24 AND NON-BUILDABLE PRES. PARCELS 'A' THRU 'D'
LOCATION: TAX MAP NO. 14, GRID NO. 20 TAX MAP NO. 21, GRID NO. 2 P/O PARCEL 246 4TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	TITLE: SPEED CONTROL DETAILS
DATE: MARCH, 2001 MAY, 2001	PROJECT NO. 1251
DESIGN: GWF	DRAFT: JMC
SCALE: AS SHOWN	DRAWING 4 OF 17



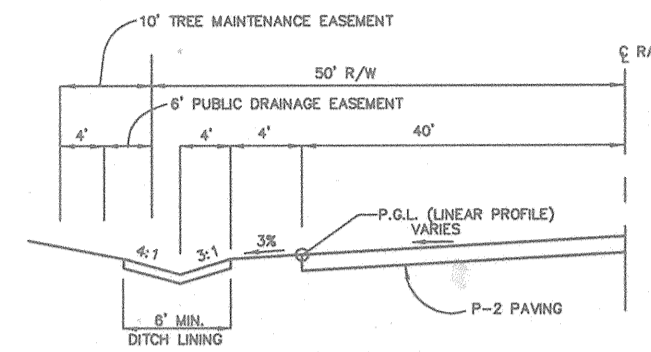
TYPICAL ROADWAY SECTION
HUNT VALLEY DRIVE
 (ACCESS PLACE - 200 ADT OR LESS)
 DESIGN SPEED: 25 MPH
 STA. 69+81.05 TO STA. 71+80.25 (CUL-DE-SAC)
 NOT TO SCALE
 NOTE: TRANSITION FROM 22' SECTION TO 18' SECTION
 BETWEEN STATIONS 69+47.05 AND 69+81.05



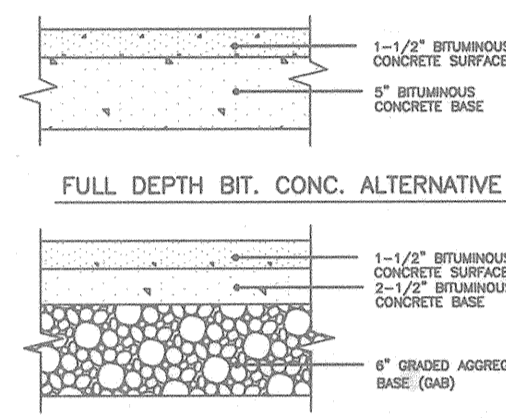
TYPICAL ROADWAY SECTION
HUNT VALLEY DRIVE
 (ACCESS STREET - 250 ADT OR LESS)
 DESIGN SPEED: 25 MPH
 STA. 65+09.79 TO STA. 69+47.05
 NOT TO SCALE



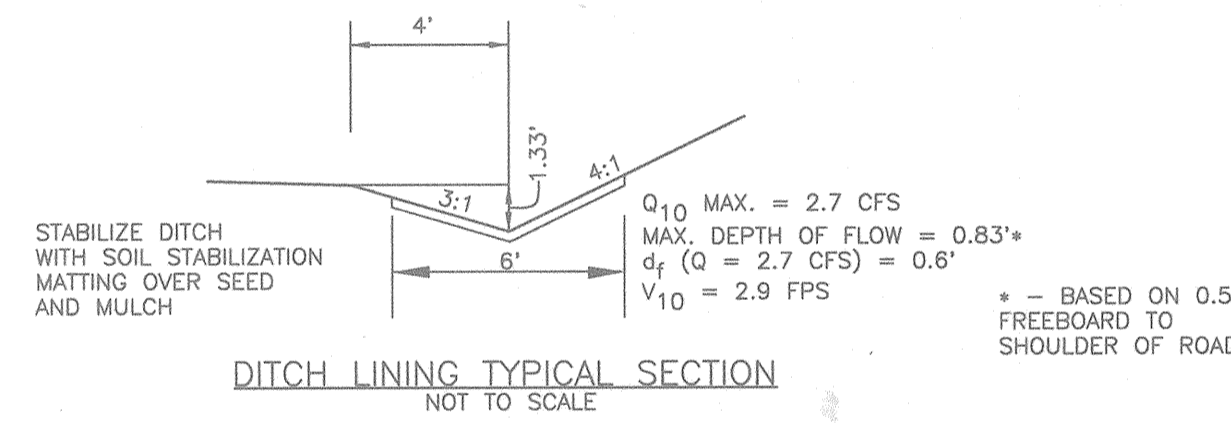
TYPICAL ROADWAY SECTION
HUNT VALLEY DRIVE
 DESIGN SPEED: 30 MPH (PER F-90-67)
 STA. 63+51.10 TO STA. 65+09.79
 NOT TO SCALE



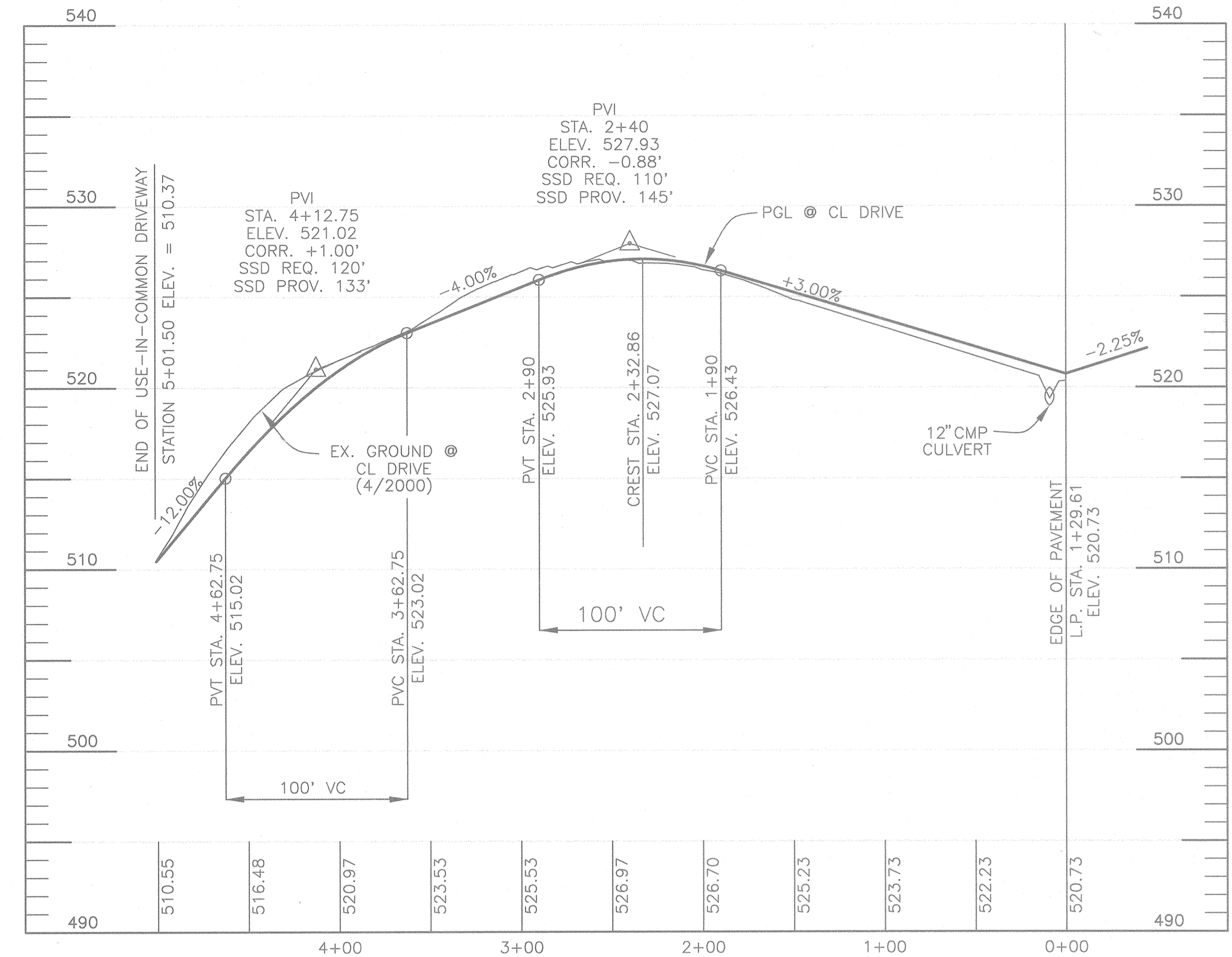
TYPICAL ROADWAY SECTION
AT CUL-DE-SAC
 LINEAR PROFILE
 NOT TO SCALE



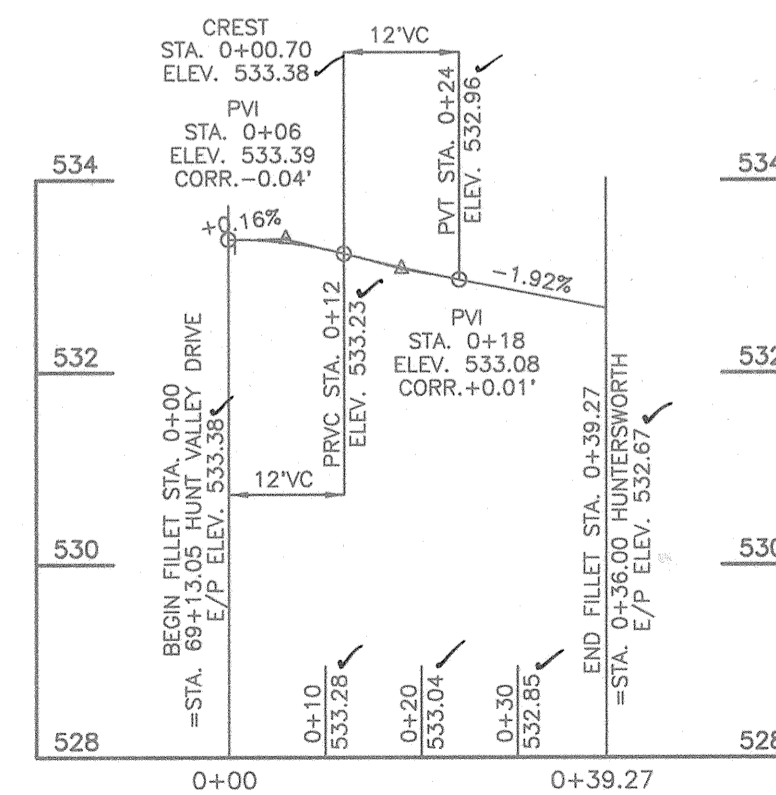
P-2 PAVING DETAIL
 NOT TO SCALE



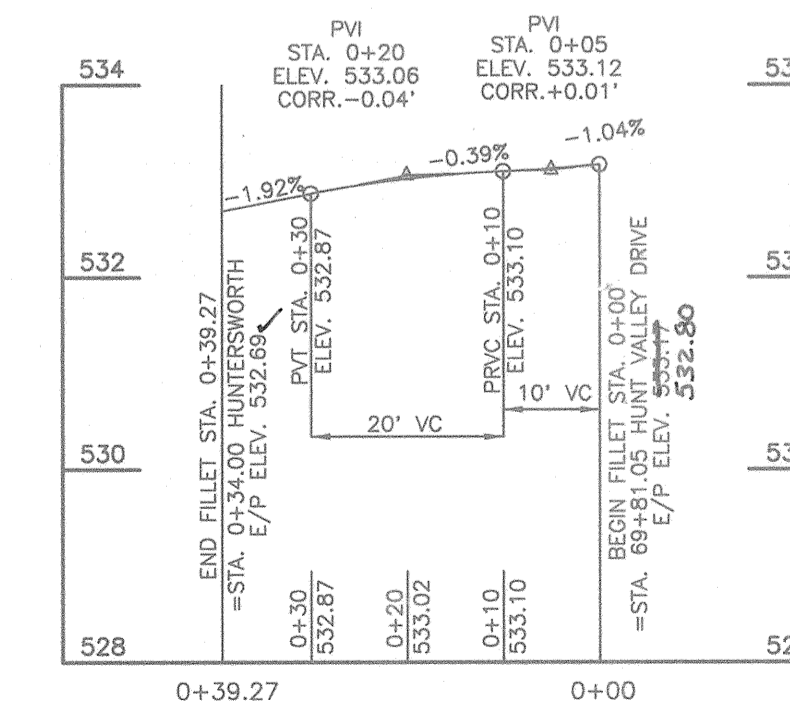
DITCH LINING TYPICAL SECTION
 NOT TO SCALE



DESIGN SPEED: 15 MPH
USE-IN-COMMON DRIVEWAY LOTS 13-16
 SCALE: 1"=50' HORIZ., 1"=5' VERT.



CURB RETURN PROFILE
 SOUTH WESTERN QUADRANT
 HUNT VALLEY DR. AND HUNTERS WORTH
 SCALE: 1"=20' HORIZ., 1"=2' VERT.



CURB RETURN PROFILE
 NORTH WESTERN QUADRANT
 HUNT VALLEY DR. AND HUNTERS WORTH
 SCALE: 1"=20' HORIZ., 1"=2' VERT.

Donald Moor
 AS-BUILT 10/3/05

3	9/27/05	REVISED PER AS-BUILT CONDITIONS
2	1/15/02	REMOVE SPEED ISLANDS
1	7/17/01	REV PER HO. CO. COMMENTS OF 6/21/01
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
 EMAIL: benchmark@cois.com

Donald Moor
 PROFESSIONAL ENGINEER

APPROVED: DEPARTMENT OF PUBLIC WORKS
Stephen M. Doncker 10-25-01
 CHIEF, BUREAU OF HIGHWAYS
 APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamer 10/29/01
 CHIEF, DIVISION OF LAND DEVELOPMENT
W.D. Dammann 10/29/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

OWNER/DEVELOPER:
 SDC GROUP, INC.
 P.O. BOX 417
 ELLICOTT CITY, MD 21041
 410-465-4244

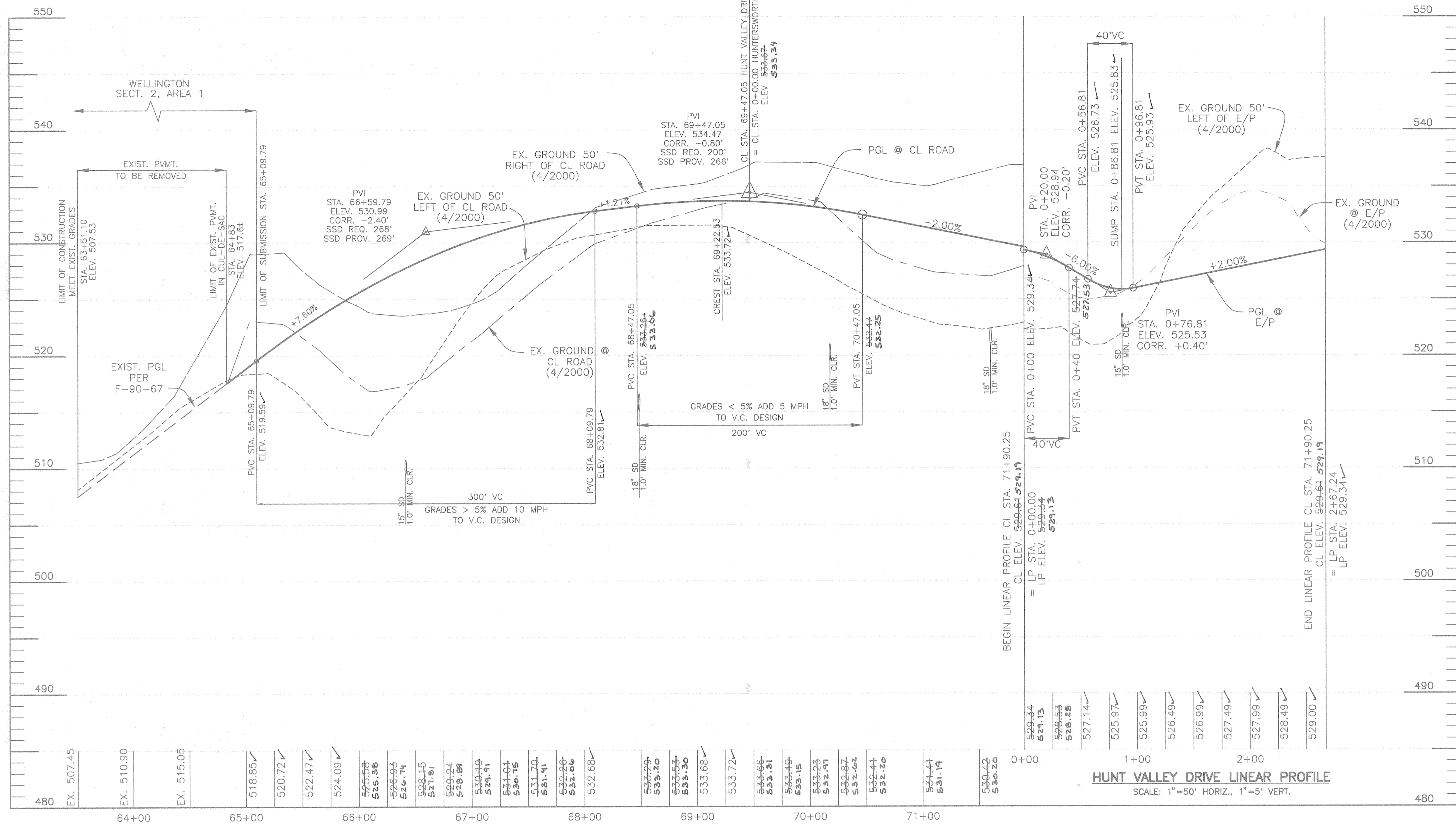
PROJECT:
THE WOODS OF WELLINGTON
 LOTS 1-24 AND NON-BUILDABLE PRES. PARCELS 'A' THRU 'D'

LOCATION:
 TAX MAP NO. 14, GRID NO. 20
 TAX MAP NO. 21, GRID NO. 2
 P/O PARCEL 248
 4th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE:
ROAD PROFILES AND DETAILS

DATE: MARCH, 2001 PROJECT NO. 1251
 MAY, 2001

DESIGN: GWF DRAFT: JMC SCALE: AS SHOWN DRAWING 5 OF 17



DESIGN SPEED: 25 MPH
HUNT VALLEY DRIVE
 SCALE: 1"=50' HORIZ., 1"=5' VERT.

APPROVED: DEPARTMENT OF PUBLIC WORKS
Andrew M. Penick 10-25-01
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamstra 10/29/01
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Chris Damman 10/29/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



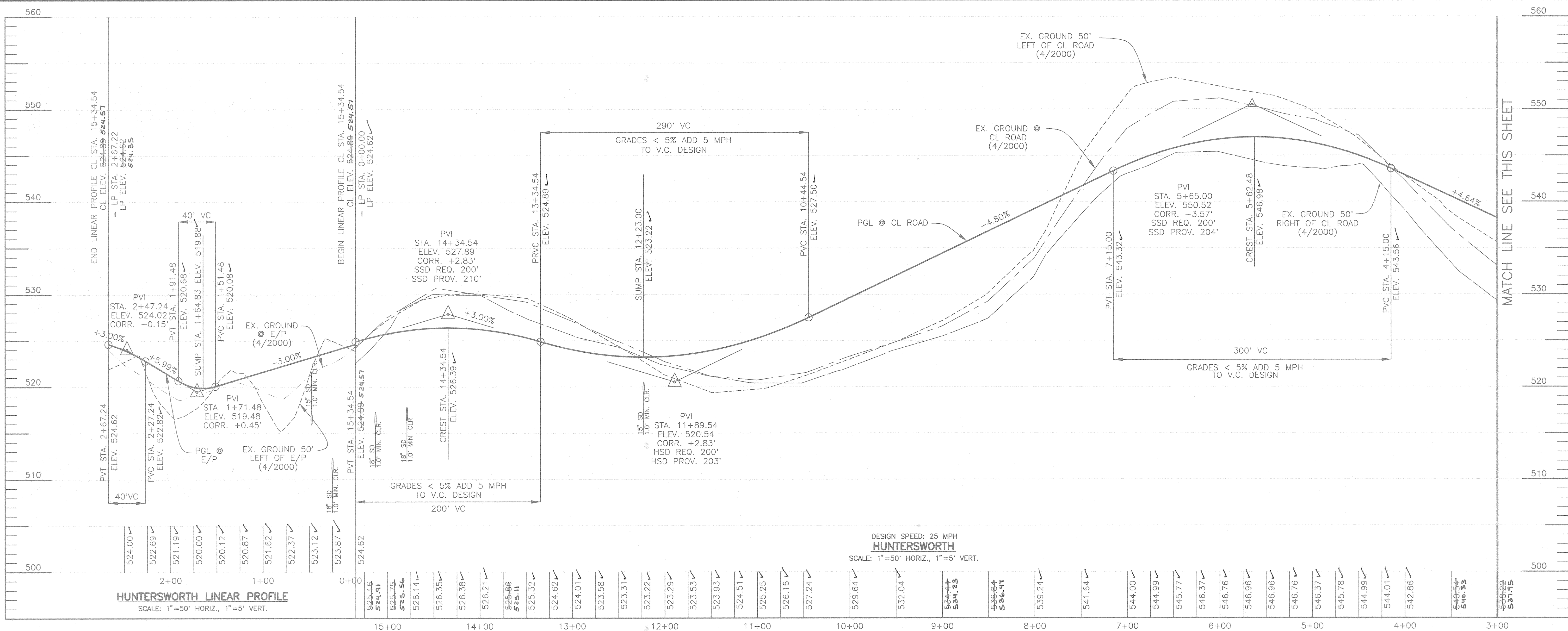
AS-BUILT 10/31/01

NO.	DATE	REVISION

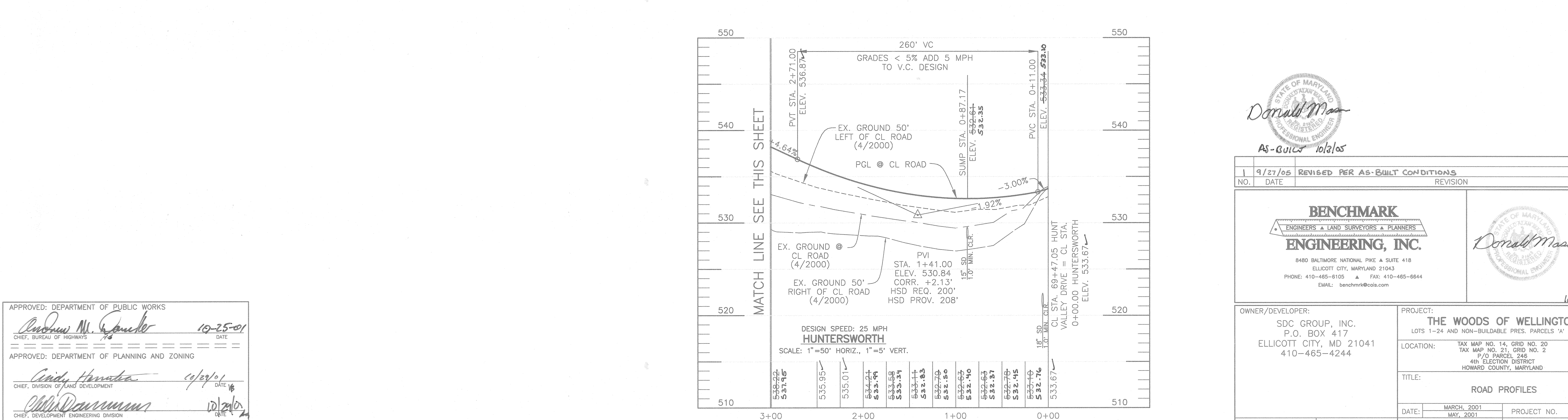
8480 BALTIMORE NATIONAL PIKE Δ SUITE 418
 ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-6105 Δ FAX: 410-465-6644
 EMAIL: benchmark@cois.com

10/31/01

OWNER/DEVELOPER: SDC GROUP, INC. P.O. BOX 417 ELLICOTT CITY, MD 21041 410-465-4244	PROJECT: THE WOODS OF WELLINGTON LOTS 1-24 AND NON-BUILDABLE PRES. PARCELS 'A' THRU 'D'
LOCATION: TAX MAP NO. 14, GRID NO. 20 TAX MAP NO. 21, GRID NO. 2 P/O PARCEL 248 4th ELECTION DISTRICT HOWARD COUNTY, MARYLAND	TITLE: ROAD PROFILES
DATE: MARCH, 2001 MAY 2001	PROJECT NO. 1251
DESIGN: GWF DRAFT: JMC	SCALE: AS SHOWN DRAWING 6 OF 17



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

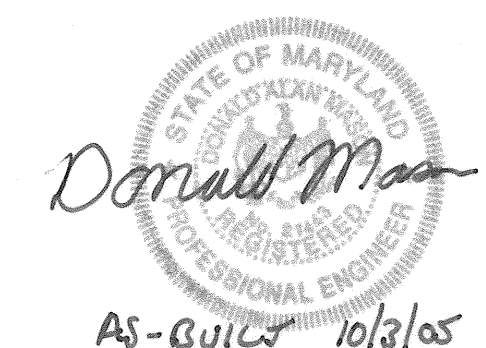


HUNTERSWORTH
SCALE: 1"=50' HORIZ., 1"=5' VERT.

APPROVED: DEPARTMENT OF PUBLIC WORKS
Andrew M. Gaudin 10-25-01
CHIEF, BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamata 10/27/01
CHIEF, DIVISION OF LAND DEVELOPMENT

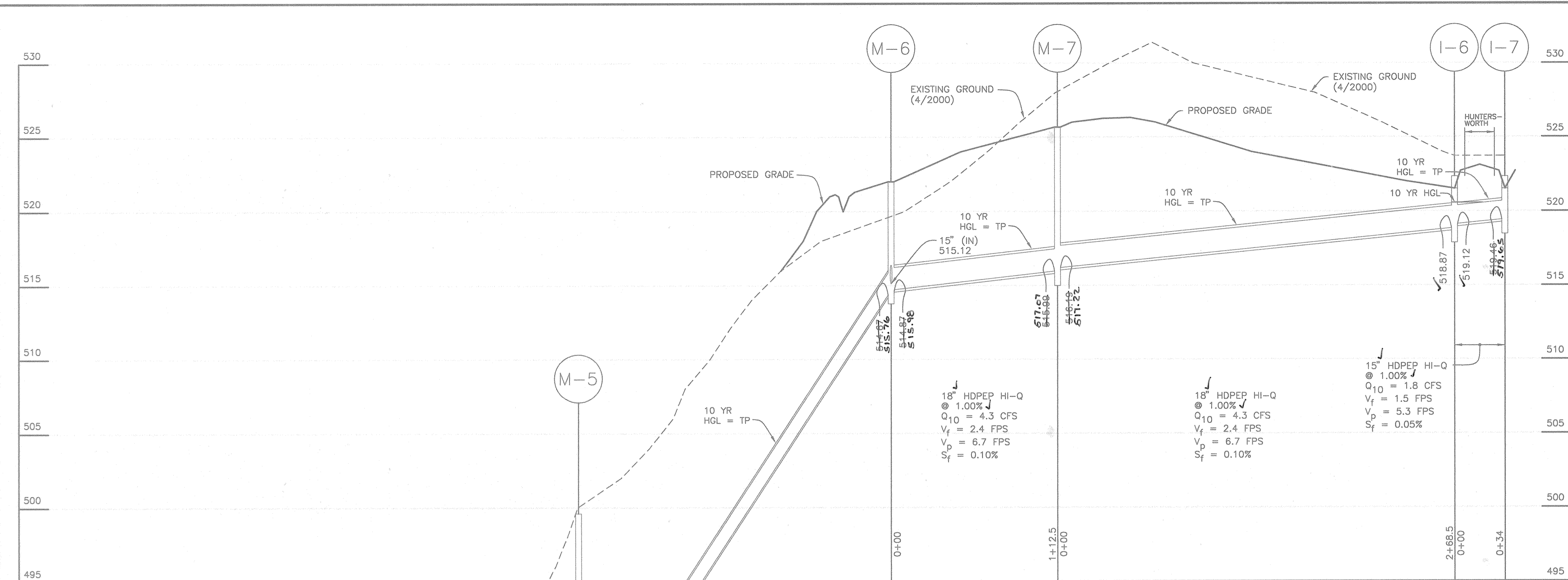
Chris Deussen 10/27/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION



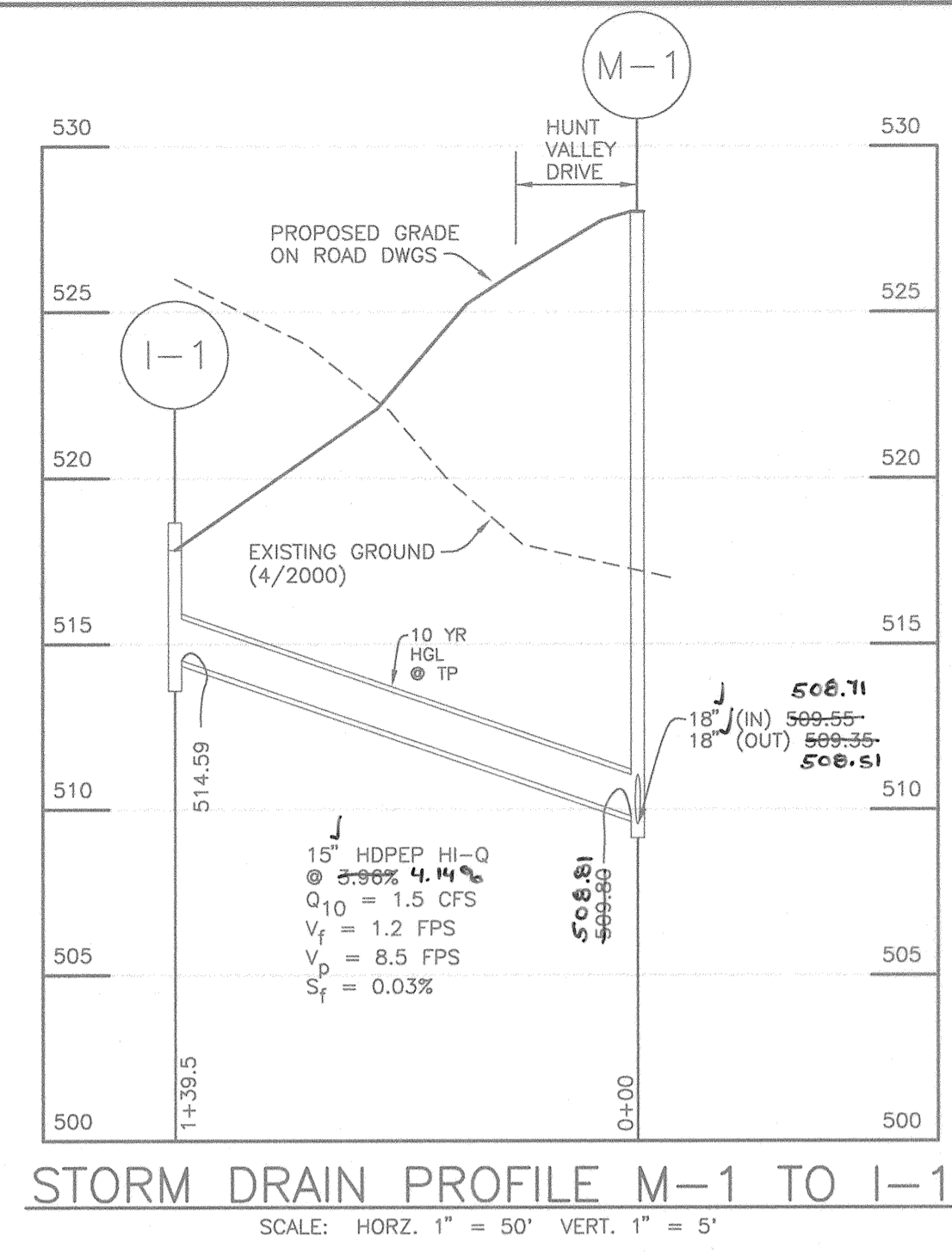
NO.	DATE	REVISION
1	9/27/05	REVISED PER AS-BUILT CONDITIONS

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 EMAIL: benchmark@cois.com		

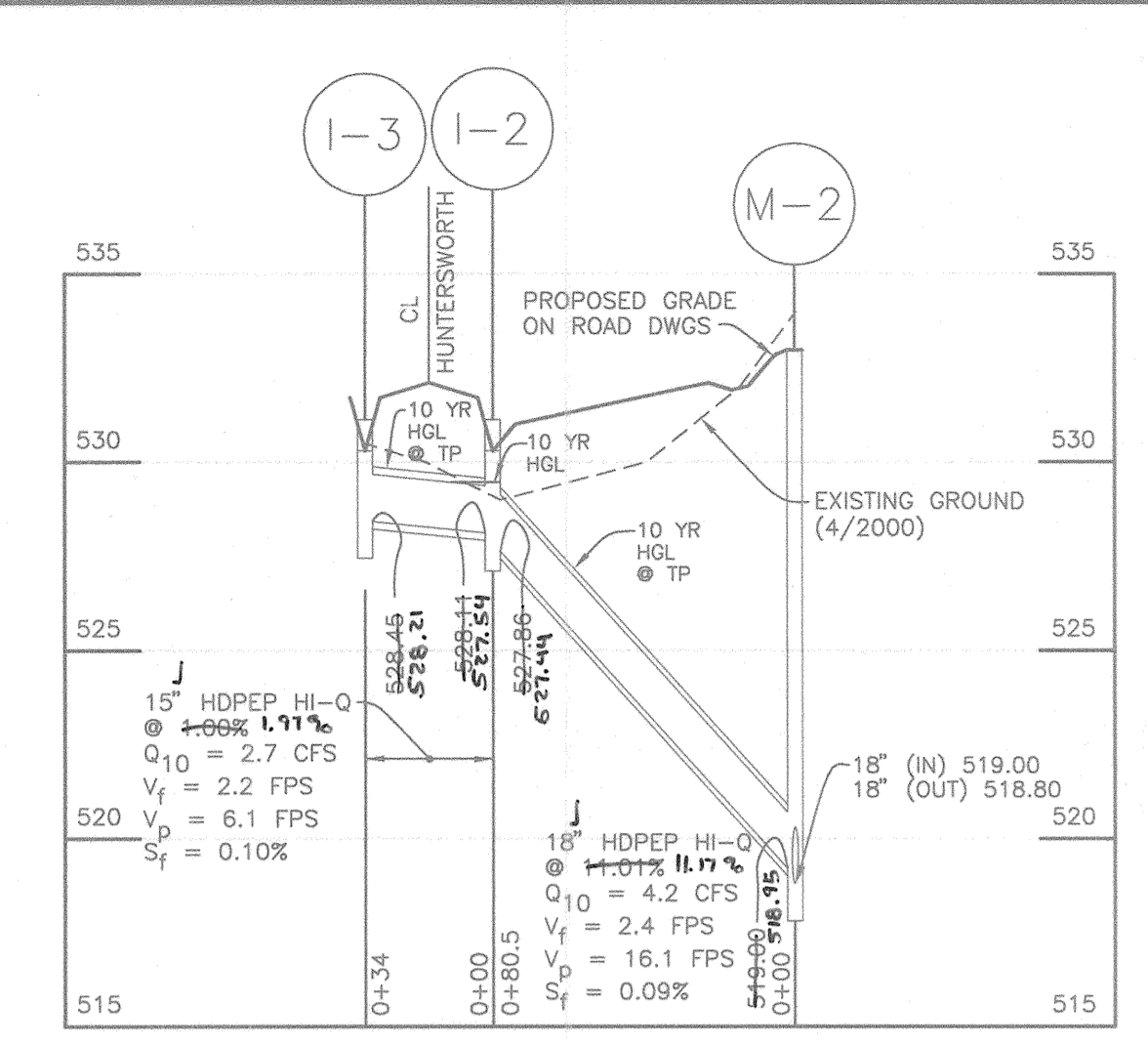
OWNER/DEVELOPER: SDC GROUP, INC. P.O. BOX 417 ELLICOTT CITY, MD 21041 410-465-4244	PROJECT: THE WOODS OF WELLINGTON LOTS 1-24 AND NON-BUILDABLE PRES. PARCELS 'A' THRU 'D'
TITLE: ROAD PROFILES	DATE: MARCH, 2001 MAY, 2001
DESIGN: GWF	DRAFT: JMC
SCALE: AS SHOWN	PROJECT NO. 1251 DRAWING 7 OF 17



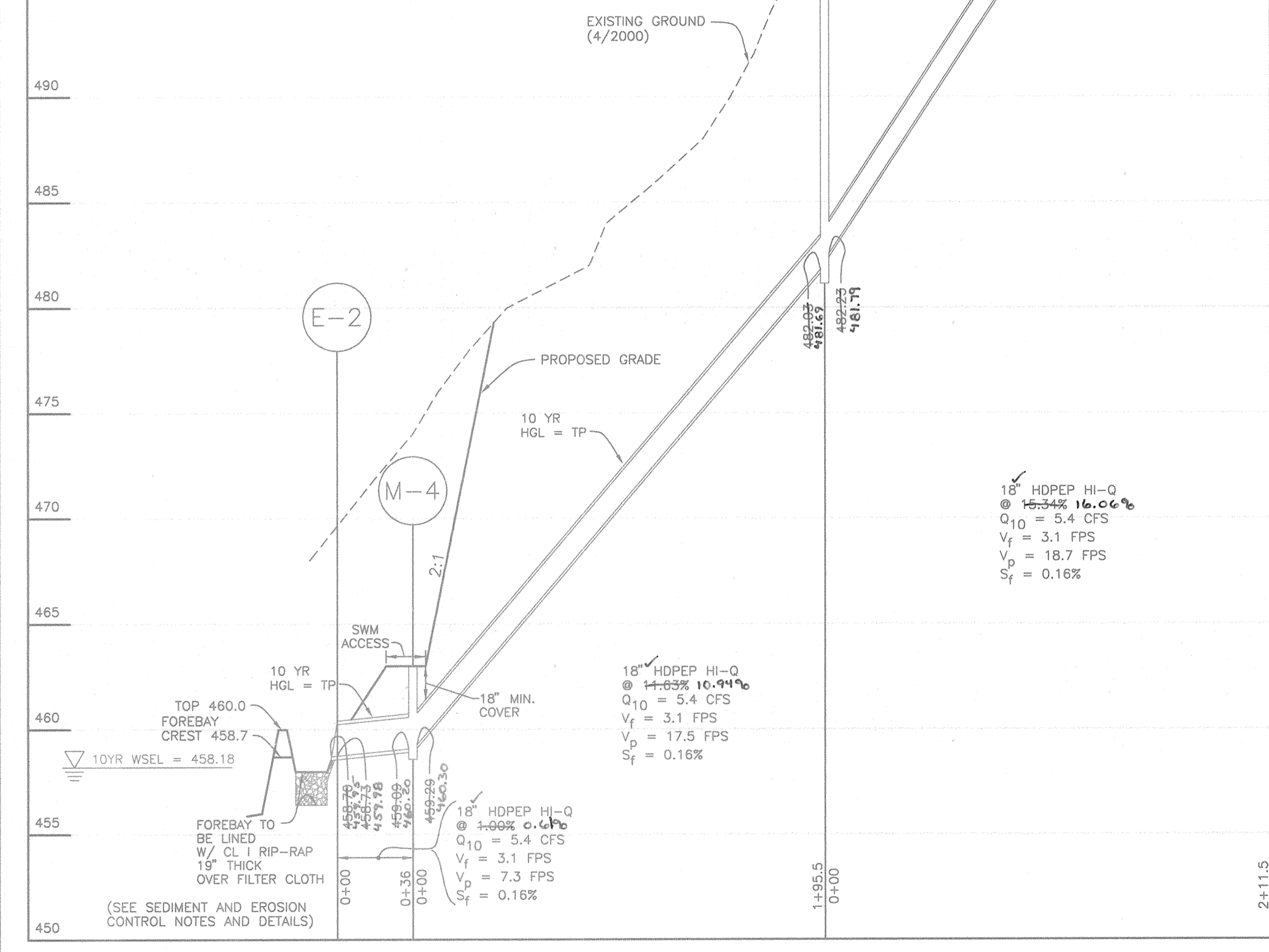
STORM DRAIN PROFILE E-2 TO I-7
SCALE: HORZ. 1" = 50' VERT. 1" = 5'



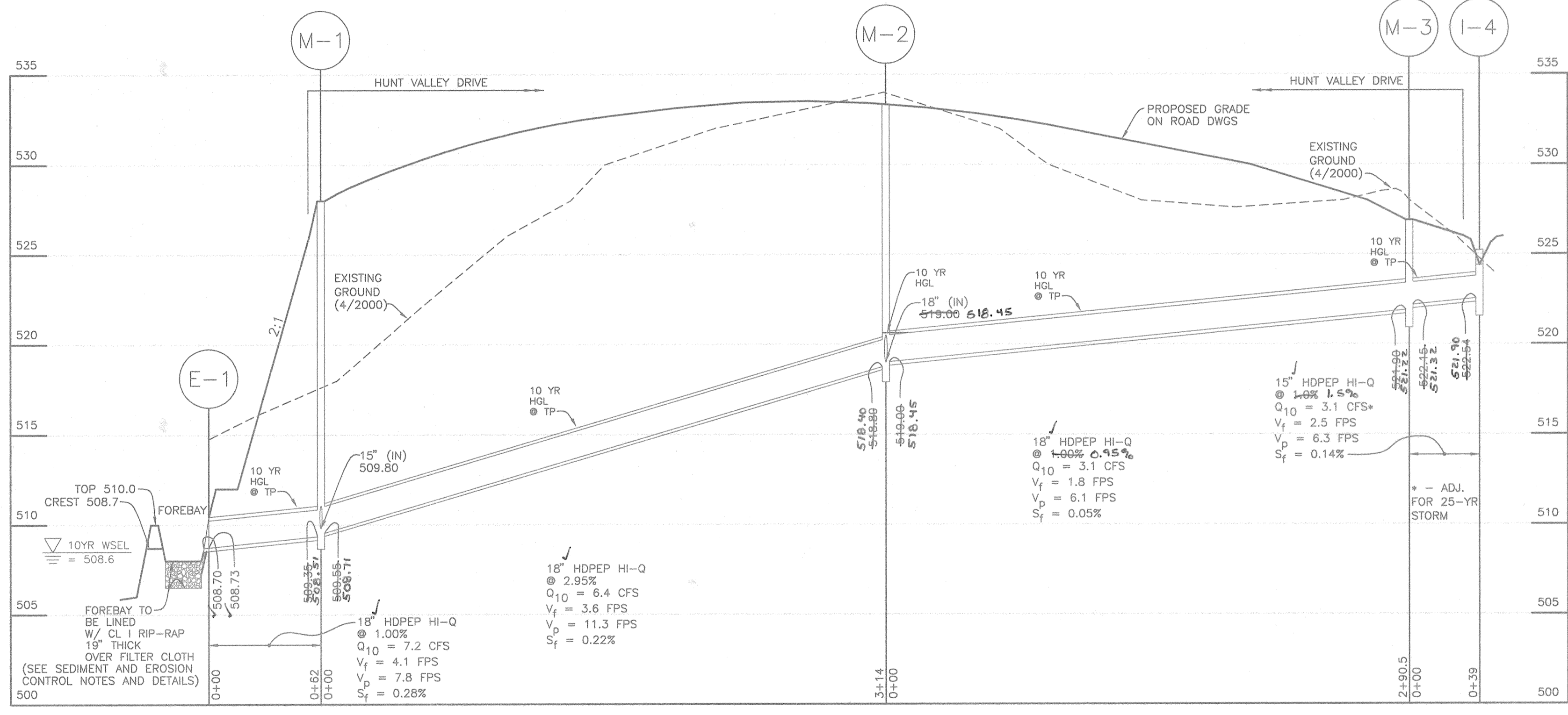
STORM DRAIN PROFILE M-1 TO I-1
SCALE: HORZ. 1" = 50' VERT. 1" = 5'



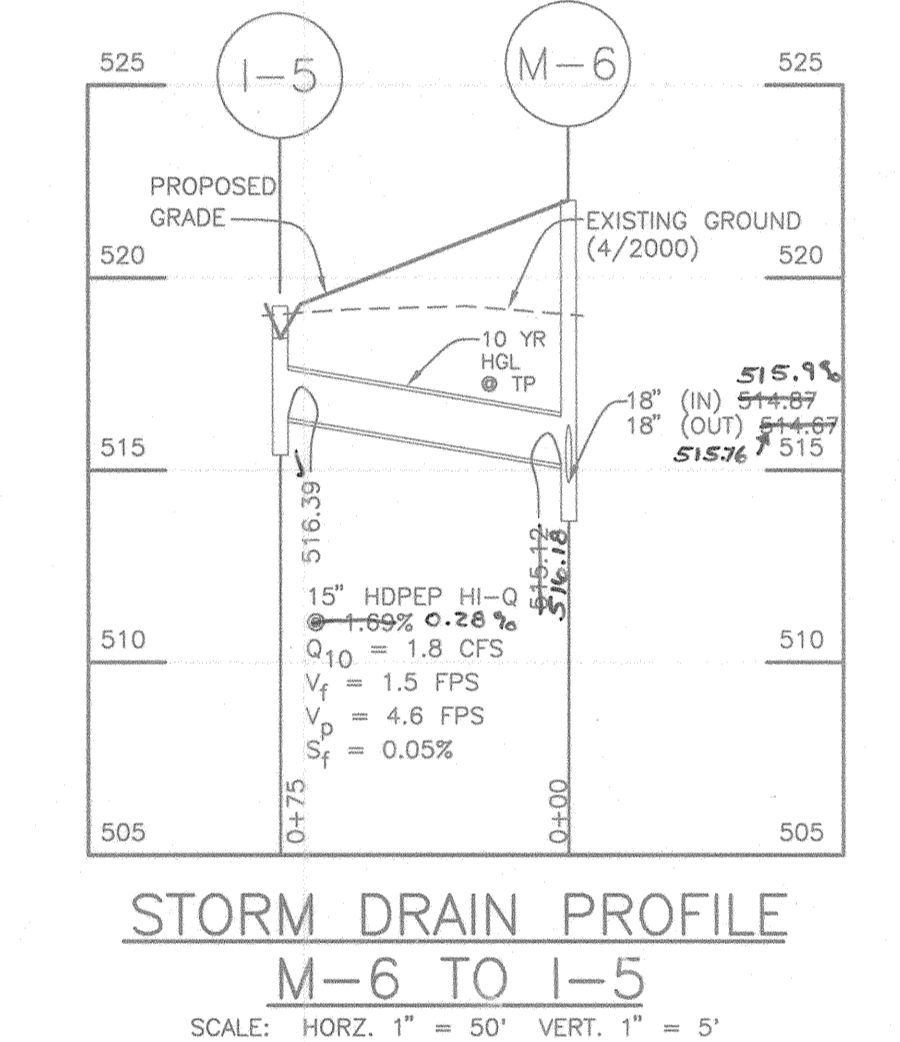
STORM DRAIN PROFILE M-2 TO I-3
SCALE: HORZ. 1" = 50' VERT. 1" = 5'



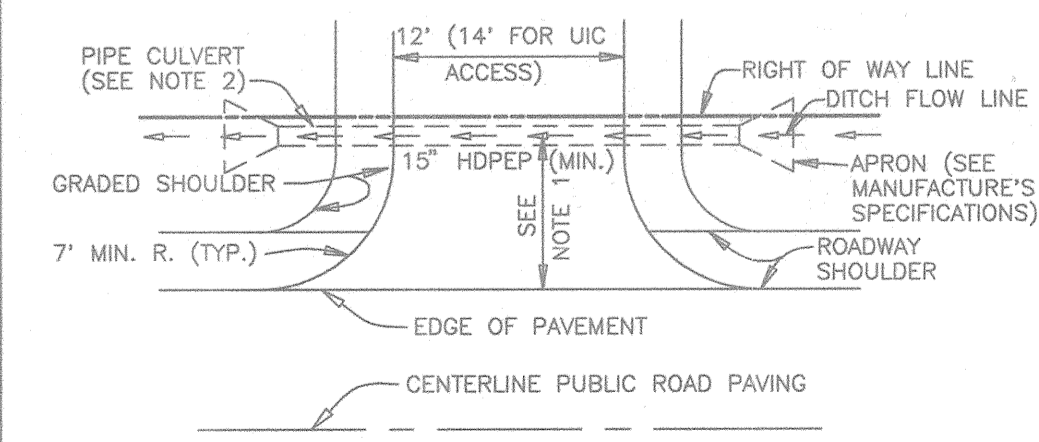
STORM DRAIN PROFILE E-2 TO I-7
SCALE: HORZ. 1" = 50' VERT. 1" = 5'



STORM DRAIN PROFILE E-1 TO I-4
SCALE: HORZ. 1" = 50' VERT. 1" = 5'



STORM DRAIN PROFILE M-6 TO I-5
SCALE: HORZ. 1" = 50' VERT. 1" = 5'



- NOTES:
- DRIVEWAY MUST BE PAVED FROM EDGE OF PUBLIC ROAD TO RIGHT-OF-WAY LINE USING STANDARD PAVING SECTION P-1 AS SHOWN ON STD NO. R-2.01 OR ALTERNATIVE SECTION EQUAL TO OR BETTER THAN P-1, AS APPROVED BY D.P.W.
 - DRAINAGE CULVERT SHALL BE SIZED FOR A 10 YEAR FREQUENCY STORM.
 - ALL DRIVEWAY CULVERT PIPES TO BE 15" HDPEP OR GREATER TO PREVENT BLOCKING. HDPE APRONS TO BE INSTALLED AT EACH END OF THE DRIVEWAY CULVERT AND SIZED PER MANUFACTURER'S SPECIFICATIONS. IF A LARGER PIPE IS REQUIRED, DITCH INVERT CAN BE LOWERED TO PROVIDE MIN. DITCH GRADIENT OF 0.5% AND CLEARANCE SHOWN.
 - SWALE FLOW MAY BE PROVIDED OVER DRIVEWAY IF LOCATED AT OR NEAR THE CREST OF A VERTICAL CURVE ON THE PUBLIC ROAD WHERE QUANTITY OF FLOW IS SMALL, AS APPROVED BY D.P.W.
 - THE IN GRADE OF PRIVATE DRIVEWAY SHALL NOT EXCEED 14%.
 - SEE HOWARD COUNTY STANDARD DETAIL R-6.06 FOR ADDITIONAL INFORMATION.
 - LOTS 1, 2, 8, 18 AND 19 MAY NOT REQUIRE DRIVEWAY CULVERTS DEPENDING ON THE FINAL DRIVEWAY LOCATION. ALL OTHER LOTS WILL REQUIRE A 15" HDPEP WITH END TREATMENT TO CROSS THE ROADSIDE SWALE. COMPUTATIONS JUSTIFYING THIS SIZING OF THE DRIVEWAY CULVERTS WAS REVIEWED AND APPROVED WITHIN THE FINAL STORM DRAIN REPORT ASSOCIATED WITH THESE ROAD CONSTRUCTION PLANS.
 - PRIVATE ACCESS AT HUNTERS WORTH STA. 14+70 WILL NOT REQUIRE A CULVERT.

STRUCTURE	LOCATION	TOP ELEV.	INVERT IN	INVERT OUT	TYPE	DETAIL REFERENCE	REMARKS
I-1	HUNT VALLEY DR. STA. 85+09.5, 19' RT.	518.64	514.53	514.53	18" HDPEP	SD-4.39	OPEN ON 2 SIDES
I-2	HUNTERS WORTH STA. 0+87.27, 17' RT.	517.22	520.54	527.85	18" HDPEP	SD-4.39	OPEN ON 2 SIDES
I-3	HUNTERS WORTH STA. 0+87.27, 17' LT.	517.22	520.54	527.85	18" HDPEP	SD-4.39	OPEN ON 2 SIDES
I-4	HUNT VALLEY DR. L.P. STA. 0+88.81, 8' LT.	525.21	522.18	521.32	18" HDPEP	SD-4.39	OPEN ON 2 SIDES
I-5	HUNTERS WORTH, L.P. STA. 1+64.83, 8' LT.	519.28	519.12	519.28	18" HDPEP	SD-4.39	OPEN ON 2 SIDES
I-6	HUNTERS WORTH, STA. 12+23, 17' RT.	522.83	519.12	519.12	18" HDPEP	SD-4.39	OPEN ON 2 SIDES
I-7	HUNTERS WORTH, STA. 12+23, 17' RT.	522.33	522.15	519.46	18" HDPEP	SD-4.39	OPEN ON 2 SIDES
M-1	HUNT VALLEY DR. STA. 86+30.5, 9' LT.	520.02	506.71	506.81	SID. MANHOLE	G-5.11	
M-2	HUNT VALLEY DR. STA. 89+54.05, 7' LT.	523.77	509.85	509.85 (15')	SID. MANHOLE	G-5.11	
M-3	HUNT VALLEY DR. STA. 72+50.8, 8' LT.	526.89	522.18	521.32	SID. MANHOLE	G-5.11	
M-4	N 587.822.0313 E 1.298.789.7281	483.00	483.00	483.00	SHALLOW MANHOLE	G-5.12	
M-5	N 587.824.4167 E 1.298.672.1992	489.80	489.80	489.80	SHALLOW MANHOLE	G-5.11	
M-6	HUNTERS WORTH, STA. 16+03, 15.5' LT.	522.00	514.67	516.38	SID. MANHOLE	G-5.11	
M-7	HUNTERS WORTH, STA. 14+97.2, 4.9' RT.	523.87	514.19	514.19	SID. MANHOLE	G-5.11	
E-1	N 588.784.1811 E 1.299.555.9274	508.73	508.73	508.73	HDPEP	MANUFACTURER	SEE MANUFACTURER'S SPECS
E-2	N 587.795.3939 E 1.298.735.8358	508.73	508.73	508.73	HDPEP	MANUFACTURER	SEE MANUFACTURER'S SPECS
S-1	N 588.617.1725 E 1.299.480.2854	510.77	505.00	504.80			SEE SWM DETAILS
S-2	N 587.683.5943 E 1.298.749.5584	460.67	462.06	460.69			SEE SWM DETAILS
HW-1	N 588.581.3321 E 1.299.528.5008	460.36	464.67	501.20	TYPE 'C'	SD-5.21	FOR A 24" PIPE
HW-2	N 587.631.3570 E 1.298.781.2103	460.36	462.29	452.70	TYPE 'C'	SD-5.21	FOR A 24" PIPE

NOTE: ELEVATIONS AND LOCATIONS ARE AT THE TOP CENTER OF THE STRUCTURE.

NO.	DATE	REVISION
3	9/27/05	REVISED PER AS-BUILT CONDITIONS

RUN	LENGTH (L)	DESCRIPTION
E-1 TO M-1	62.0	18" HDPEP
M-1 TO M-2	114	18" HDPEP
M-2 TO M-3	280.5	18" HDPEP
M-3 TO I-4	80.5	18" HDPEP
M-2 TO I-2	39	18" HDPEP
I-2 TO I-3	34	18" HDPEP
M-1 TO I-1	139.5	18" HDPEP
E-2 TO M-4	38	18" HDPEP
M-4 TO M-5	195.5	18" HDPEP
M-5 TO M-6	211.5	18" HDPEP
M-6 TO M-7	112.5	18" HDPEP
M-7 TO I-5	288.5	18" HDPEP
I-5 TO I-7	34	18" HDPEP
M-6 TO I-5	76	18" HDPEP
HW-1 TO S-1	58.3	24" RCP
HW-2 TO S-2	51	24" RCP

APPROVED: DEPARTMENT OF PUBLIC WORKS
Andrew M. Dangle 10-25-01
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamilton 10/27/01
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Donna M. Damm 10/27/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

NO.	DATE	REVISION
2	2/13/03	ADD NOTE 8 FOR PRIVATE ACCESS
1	7/18/01	REV PER HO. CO. COMMENTS OF 6/21/01

BENCHMARK ENGINEERS, INC.
 ENGINEERS & LAND SURVEYORS & PLANNERS
 8480 BALTIMORE NATIONAL PIKE A BOX 418
 ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-6105 FAX: 410-465-6644
 EMAIL: benchmrk@comcast.net

Donna M. Damm
 PROFESSIONAL ENGINEER
 No. 81112 10/3/01

OWNER/DEVELOPER:
 SDG GROUP, INC.
 P.O. BOX 417
 ELLICOTT CITY, MD 21041
 410-465-4244

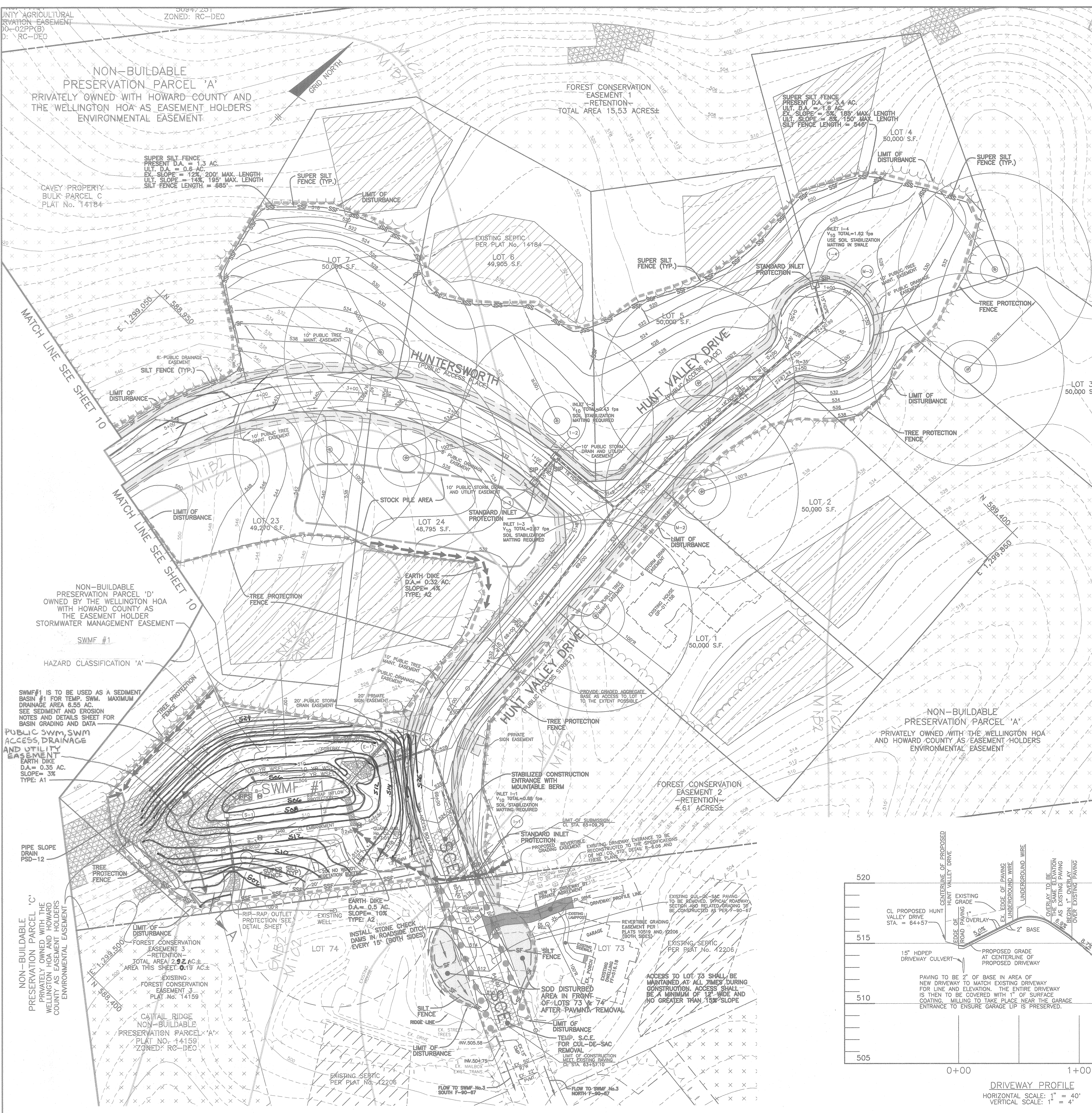
PROJECT:
THE WOODS OF WELLINGTON
 LOTS 1-24 AND NON-BUILDABLE PRES. PARCELS 'A' THRU 'D'

LOCATION: TAX MAP NO. 14, GRID NO. 20
 PARCEL NO. 21, GRID NO. 2
 P/O PARCEL 246
 4TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE:
STORM DRAIN PROFILES AND SCHEDULES

DATE: MARCH, 2001 PROJECT NO. 1251
 MAY, 2001

DESIGN: GWF DRAFT: JMC SCALE: AS SHOWN DRAWING 8 OF 17



SOILS LEGEND		
MAP SYMBOL	SOIL GROUP	SOIL TYPE
EIC3	B	ELIOAK SILTY CLAY LOAM, 8 TO 15% SLOPES, SEVERELY ERODED
GIB2	B	GLENELG LOAM, 3 TO 8% SLOPES, MODERATELY ERODED
GIC2	B	GLENELG LOAM, 8 TO 15% SLOPES, MODERATELY ERODED
GIC3	B	GLENELG LOAM, 8 TO 15% SLOPES, SEVERELY ERODED
GnB2	* C	GLENVILLE SILT LOAM, 3 TO 8% SLOPES, MODERATELY ERODED
MB2	B	MANOR LOAM, 3 TO 8% SLOPES, MODERATELY ERODED
MC2	B	MANOR LOAM, 8 TO 15% SLOPES, MODERATELY ERODED
MC3	B	MANOR LOAM, 8 TO 15% SLOPES, SEVERELY ERODED
ME	B	MANOR LOAM, 25 TO 45 % SLOPES

NOTE: CONTRACTOR TO MAINTAIN POSITIVE DRAINAGE AT ALL TIMES TO BASINS.

	STORMWATER MANAGEMENT SUMMARY TABLE					
	SWMF #1	D.A. = 6.60 AC.	SWMF #2	D.A. = 11.65 AC.		
STORM FREQUENCY	2	10	100	2	10	100
PRESENT CONDITION DISCHARGE AT STUDY POINT (cfs)	0.93	5.36	N/A	2.64	16.98	N/A
INFLOW INTO SWMF (cfs)	4.81	15.02	28.54	7.93	24.54	46.56
DISCHARGE FROM SWMF (cfs)	0.47	4.98	21.93	0.74	12.36	28.20
COMBINED DISCHARGE AT STUDY POINT (cfs)	0.50	5.15	22.69	0.98	17.06	39.04
WATER SURFACE ELEV. IN FACILITY (FEET)	507.22	508.62	509.62	457.08	458.18	459.30
STORAGE VOLUME (AC.-FT.)	0.153	0.337	0.510	0.296	0.534	0.867

LEGEND

- EXISTING CONTOURS
- EXISTING TREELINE
- PROPOSED TREELINE
- LIMIT OF SUBMISSION
- SOILS LINE
- PROPOSED SEPTIC FIELD
- PROPOSED WELL LOCATION
- FOREST CONSERVATION EASEMENT
- SLOPES 25% AND GREATER
- SUPER SILT FENCE
- SILT FENCE
- EARTH DIKE
- LIMIT OF DISTURBANCE
- STABILIZED CONSTRUCTION ENTRANCE
- STONE CHECK DAMS
- TREE PROTECTION FENCE
- STANDARD INLET PROTECTION

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 Moor ENGINEER FE NO. 21443 DATE 10/3/05

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 PRACTICES.

ENGINEER'S CERTIFICATE

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

Donald Moor ENGINEER - DONALD A. MOOR, P.E. # 21443 DATE 10/3/01

DEVELOPER'S CERTIFICATE

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

By: *Stefan K. Bredem* DEVELOPER DATE 10/3/01

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

Jim Ryan / G.S. DATE 10/18/01

USDA - NATURAL RESOURCES CONSERVATION SERVICE

APPROVED: DEPARTMENT OF PUBLIC WORKS

Richard M. Daniels DATE 10-25-01

APPROVED: DEPARTMENT OF PLANNING AND ZONING

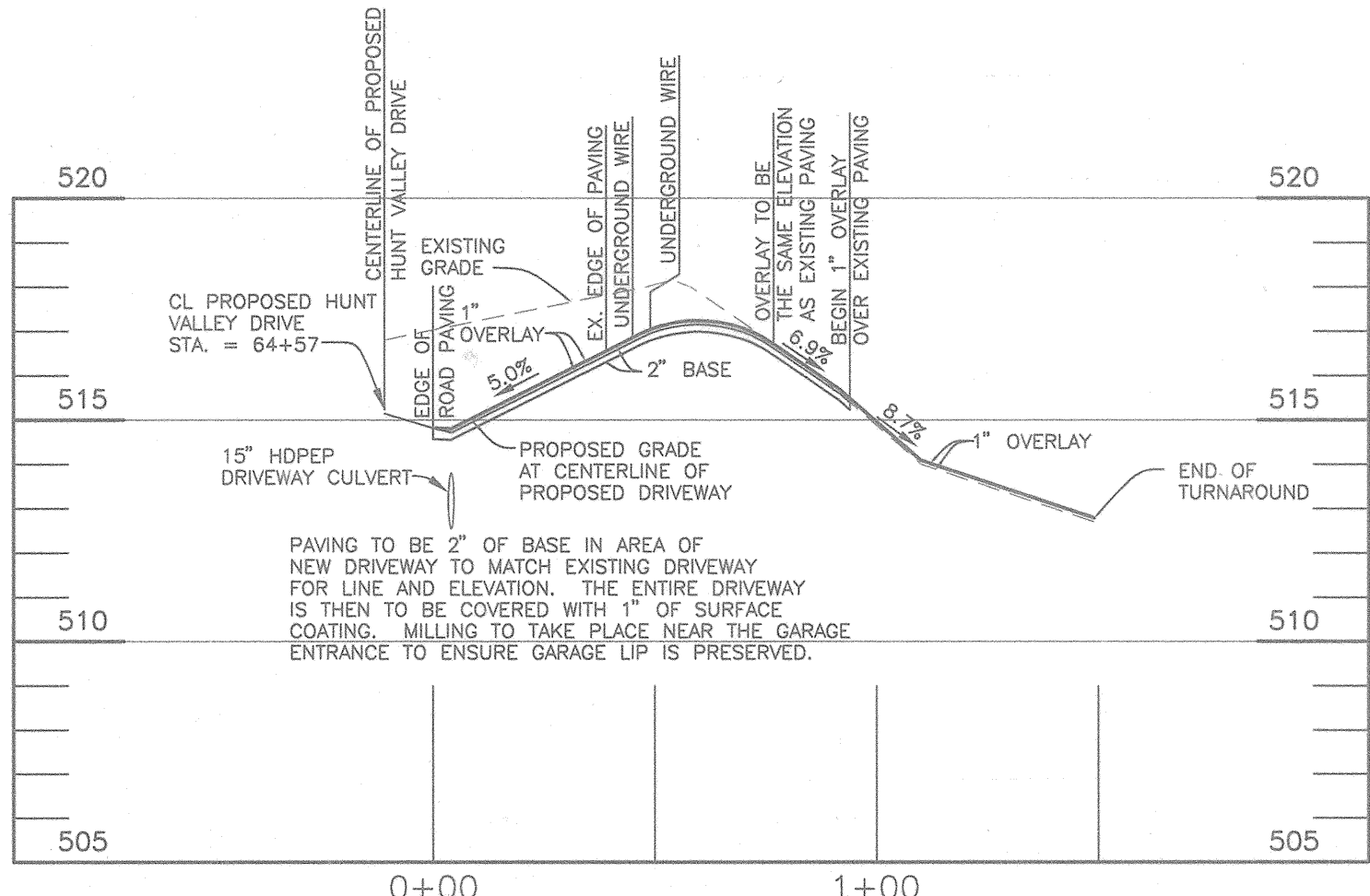
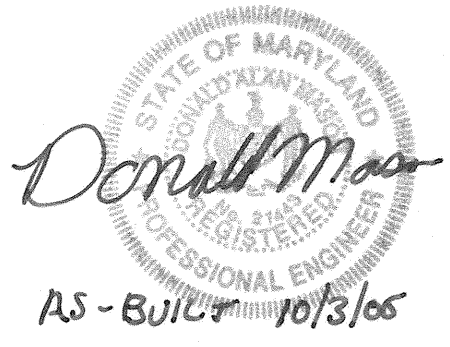
Chris Hamilton DATE 10/29/01

Chris Hamilton DATE 10/29/01

Chris Hamilton DATE 10/29/01

4/9/05 REVISED PER AS-BUILT CONDITIONS

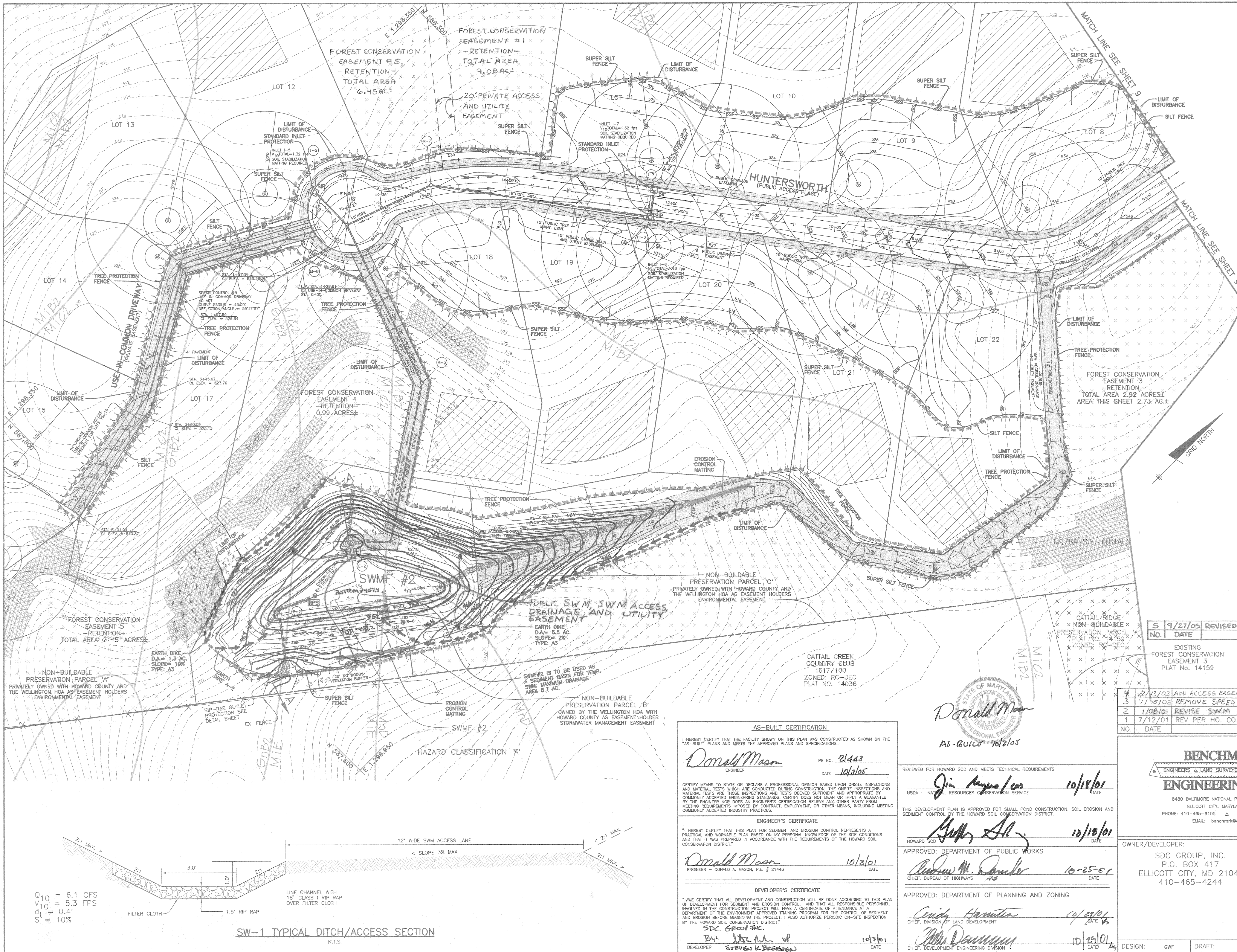
NO.	DATE	REV PER HO. CO. COMMENTS	REVISION
3	1/15/02	REMOVE SPEED CONTROL ISLANDS	
2	1/08/02	REVISE SWM EASEMENT DESIGNATION	
1	7/19/01	REV PER HO. CO. COMMENTS OF 8/21/01	



DRIVEWAY PROFILE
HORIZONTAL SCALE: 1" = 40'
VERTICAL SCALE: 1" = 4'

BENCHMARK ENGINEERING, INC.
ENGINEERS • LAND SURVEYORS • PLANNERS
8480 BALTIMORE NATIONAL PIKE & SUITE 418
ELLICOTT CITY, MARYLAND 21043
PHONE: 410-465-8105 FAX: 410-465-8844
EMAIL: benchmark@cois.com

OWNER/DEVELOPER: SDC GROUP, INC. P.O. BOX 417 ELLICOTT CITY, MD 21041 410-465-4244	PROJECT: THE WOODS OF WELLINGTON LOTS 1-24 AND NON-BUILDABLE PRES. PARCELS 'A' THRU 'D'
TITLE: GRADING, SEDIMENT AND EROSION CONTROL PLAN	DATE: MARCH, 2001 MAY, 2001
DESIGN: GWF DRAFT: JMC	PROJECT NO. 1251 DRAWING 9 OF 17



LEGEND

- EXISTING CONTOURS
- EXISTING TREELINE
- PROPOSED TREELINE
- LIMIT OF SUBMISSION
- SOILS LINE
- PROPOSED SEPTIC FIELD
- PROPOSED WELL LOCATION
- FOREST CONSERVATION EASEMENT
- SLOPES 25% AND GREATER
- SUPER SILT FENCE
- SILT FENCE
- EARTH DIKE
- LIMIT OF DISTURBANCE
- STABILIZED CONSTRUCTION ENTRANCE
- STONE CHECK DAMS
- TREE PROTECTION FENCE
- STANDARD INLET PROTECTION
- EROSION CONTROL MATTING

NOTE: CONTRACTOR TO MAINTAIN POSITIVE DRAINAGE AT ALL TIMES TO BASINS.

NO.	DATE	REVISION
5	9/27/05	REVISED PER AS-BUILT CONDITIONS
4	12/13/03	ADD ACCESS EASEMENT AND REVISE FOREST CONSERVATION EASEMENT
3	11/10/02	REMOVE SPEED CONTROL ISLANDS
2	1/08/01	REVISE SWM EASEMENT DESIGNATION
1	7/12/01	REV PER HO. CO. COMMENTS OF 6/21/01

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

OWNER/DEVELOPER:
 SDC GROUP, INC.
 P.O. BOX 417
 ELLICOTT CITY, MD 21041
 410-465-4244

PROJECT:
THE WOODS OF WELLINGTON
 LOTS 1-24 AND NON-BUILDABLE PRES. PARCELS 'A' THRU 'D'

LOCATION:
 TAX MAP NO. 14, GRID NO. 20
 TAX MAP NO. 21, GRID NO. 2
 P/O PARCEL 248
 4th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE:
GRADING AND SEDIMENT & EROSION CONTROL PLAN

DATE: MARCH, 2001
 MAY, 2001

PROJECT NO. 1251
 DRAWING 10 OF 17

DESIGN: GWF DRAFT: JMC SCALE: 1" = 50'

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
 ENGINEER PE NO. 21443 DATE 10/3/05

ENGINEER'S CERTIFICATE

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

Donald Mason
 ENGINEER - DONALD A. MASON, P.E. # 21443 DATE 10/3/01

DEVELOPER'S CERTIFICATE

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

SDC Group Inc.
By: [Signature]
 STEVEN K. BREWER DATE 10/3/01

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

Jin Myung Lee 10/18/01
 USA - NATURAL RESOURCES CONSERVATION SERVICE

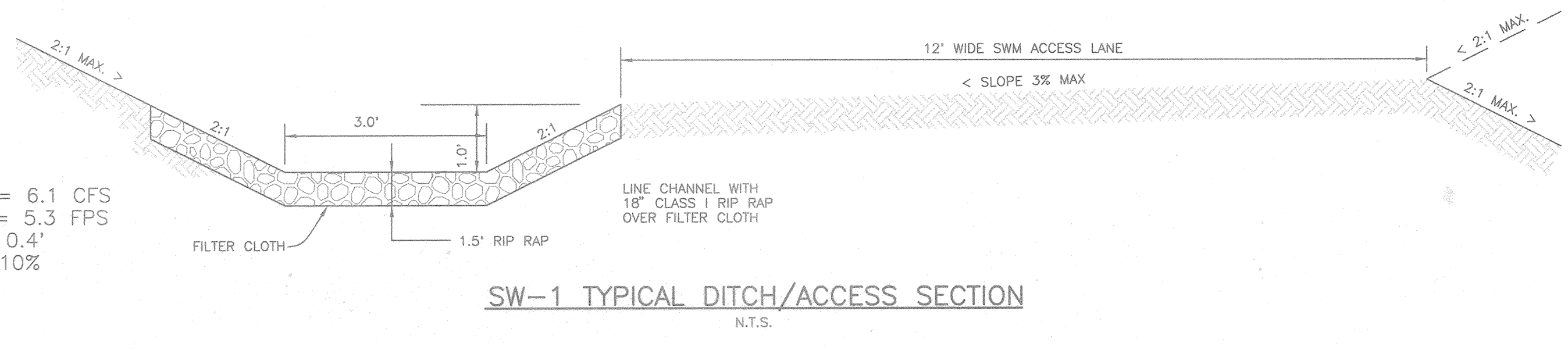
THIS DEVELOPMENT PLAN IS APPROVED FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

[Signature] 10/18/01
 HOWARD SCD

APPROVED: DEPARTMENT OF PUBLIC WORKS
[Signature] 10-25-01
 CHIEF, BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature] 10/29/01
 CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature] 10/29/01
 CHIEF, DEVELOPMENT ENGINEERING DIVISION



PERMANENT SEEDING NOTES

Apply to graded or cleared area not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

- Seeded Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding.
Soil Amendments: In lieu of soil test recommendations, use on the following schedules.
1) Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sf) and 800 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sf) before seeding.

- Mulching: Apply 1-1/2 to 2 tons per acre of unrotted small grain straw immediately after seeding.
Maintenance: Inspect all seeded areas and make needed repairs, replacements and reseedings.

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be restituted where a short-term vegetative cover is needed.

- Seeded Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding.
Soil Amendments: Apply 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sf).

- Mulching: Apply 1-1/2 to 2 tons per acre of unrotted small grain straw immediately after seeding.
Refer to the 1994 Maryland Standards and Specifications for Soil Erosion and Sediment Control for rate and methods not covered.

SEDIMENT CONTROL NOTES

- A minimum of 48 hours notice must be given to the Howard County Department of Inspections and Permits, Sediment Control Division prior to the start of any construction (410-313-1855).
All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current "Maryland Standards and Specifications for Soil Erosion and Sediment Control".
Following initial soil disturbances or redistribution, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, ditches, perimeter slopes and all slopes greater than 3:1; b) 14 calendar days to all other disturbed or graded areas on the project site.

SEQUENCE OF CONSTRUCTION

- DAY 1 OBTAIN GRADING PERMIT.
DAY 2 CONTRACTOR TO IDENTIFY AND MARK ANY ALL HAZARDOUS CONDITIONS ON SITE.
DAY 3-4 CLEAR AND GRUB FOR SEDIMENT CONTROL DEVICES. INSTALL THE STABILIZED CONSTRUCTION ENTRANCE LOCATED AT STATION 69+10, SILT FENCE, SUPER SILT FENCE AND EARTH DIKE.
DAY 5 INSTALL TREE PROTECTION FENCE, HAZARDOUS TREES (DEAD, DISCAGED OR THOSE SUBJECT TO WIND THROW) WILL BE ALLOWED ALONG THE EDGE OF THE FOREST RETENTION AREAS AS WELL AS WITHIN THE OTHER TREE SAVE AREAS.

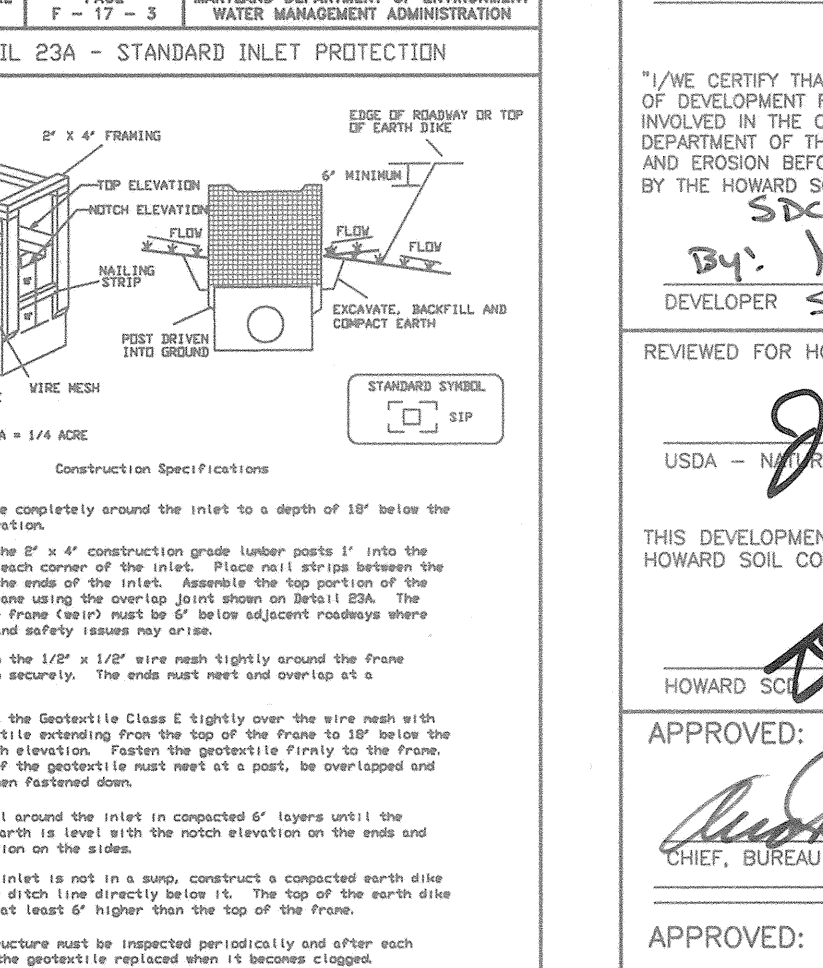
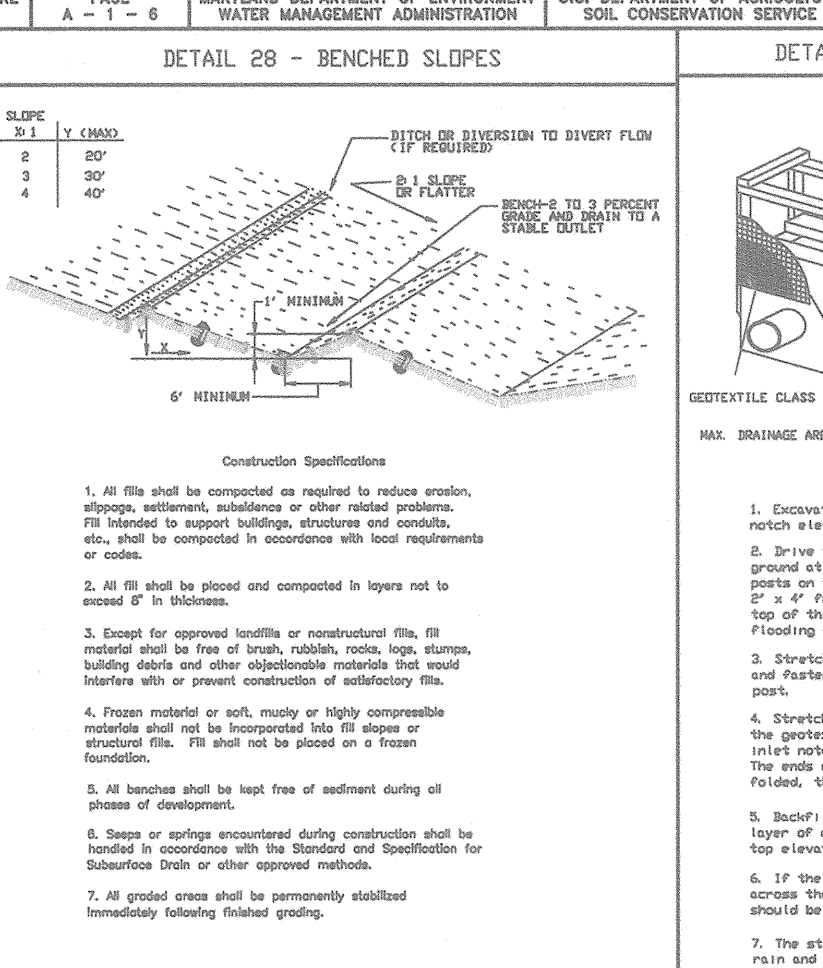
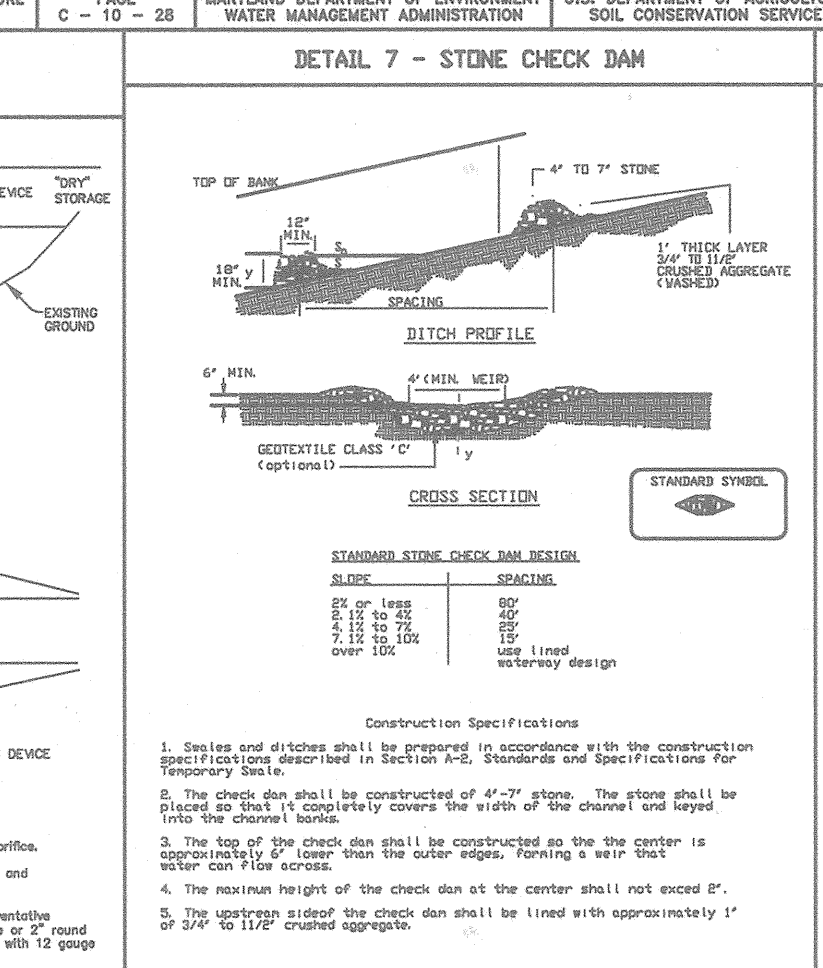
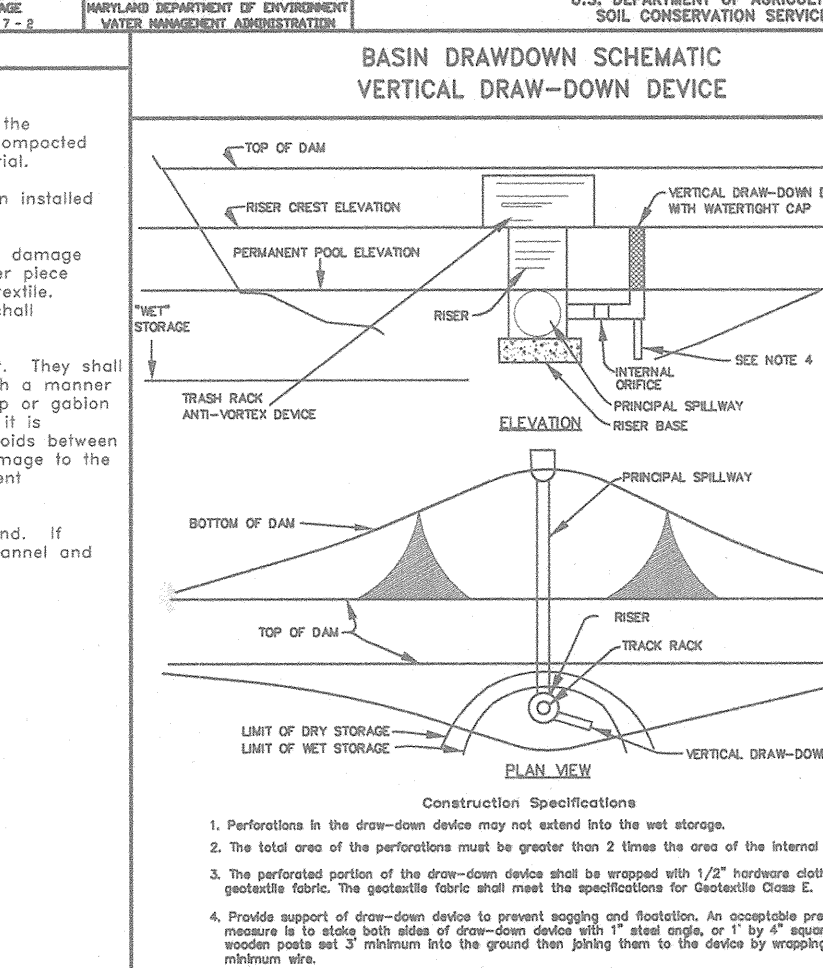
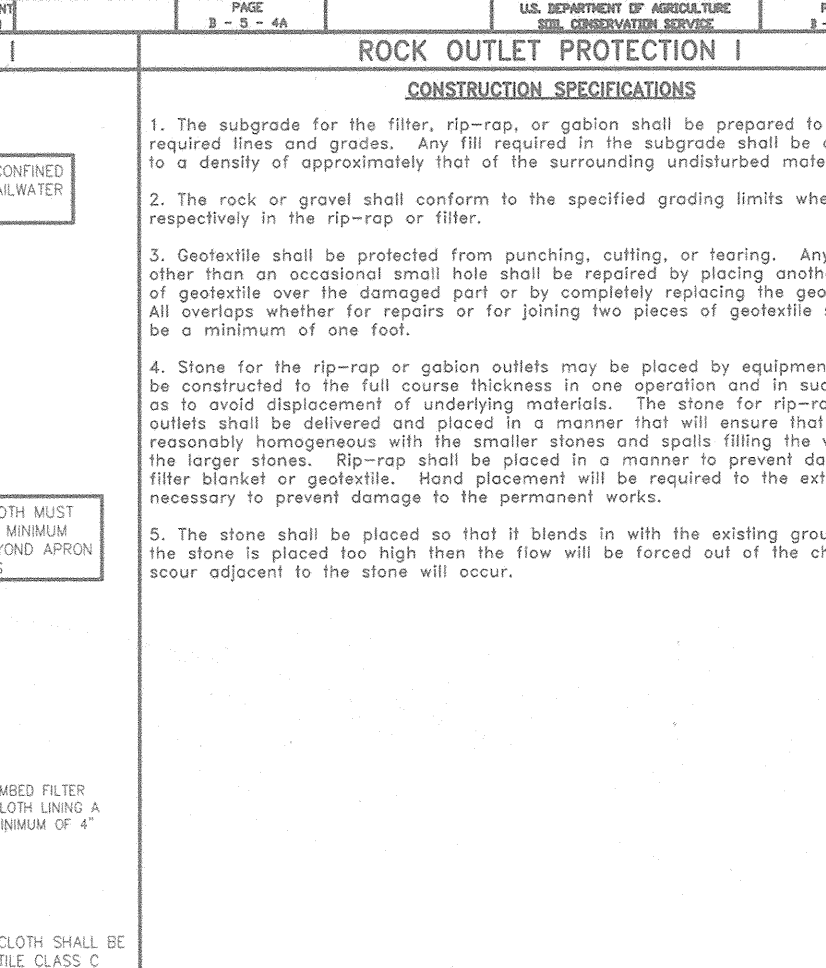
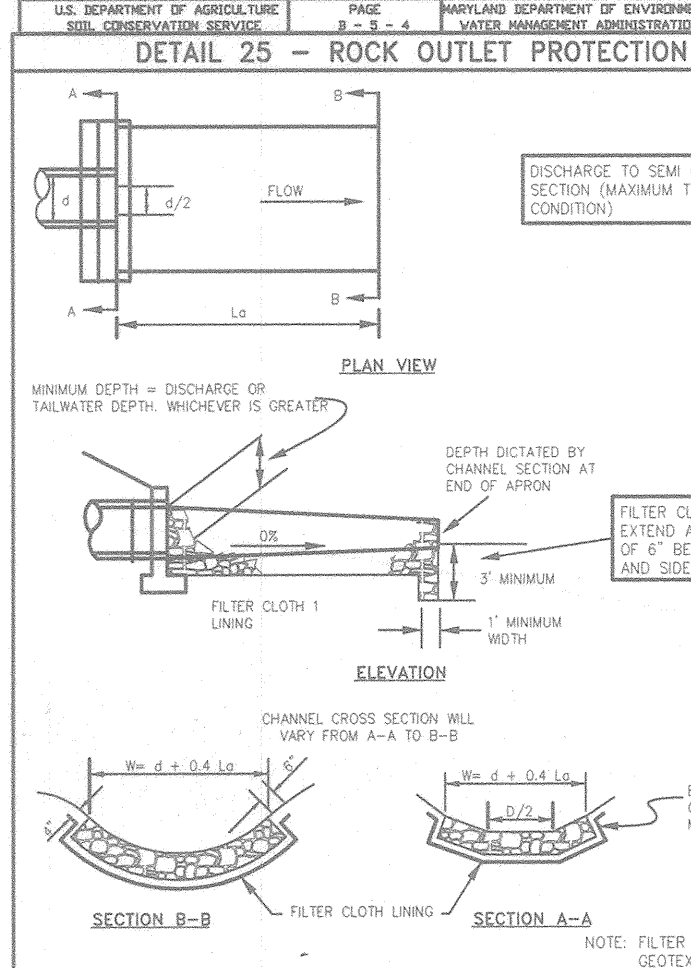
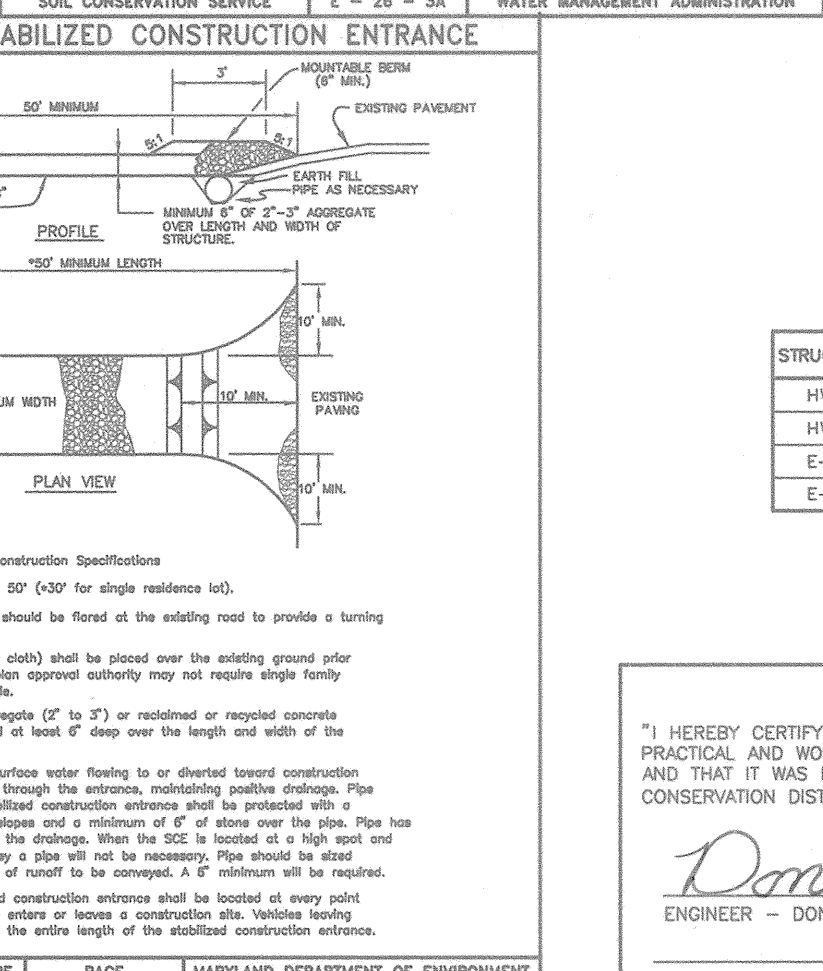
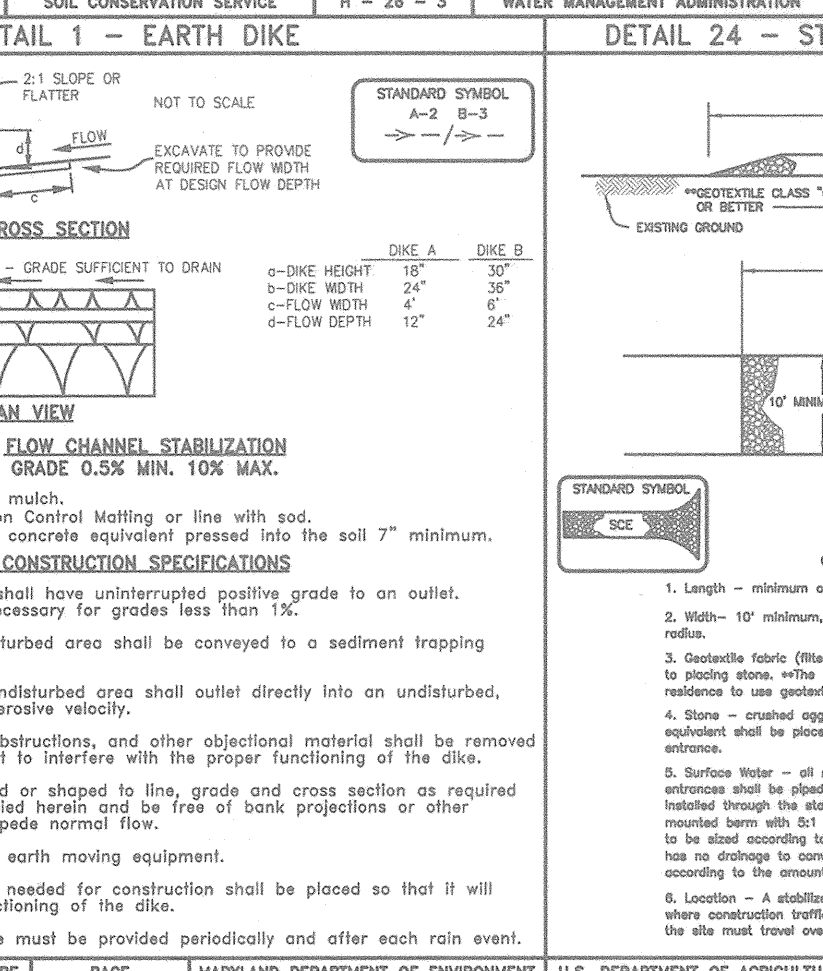
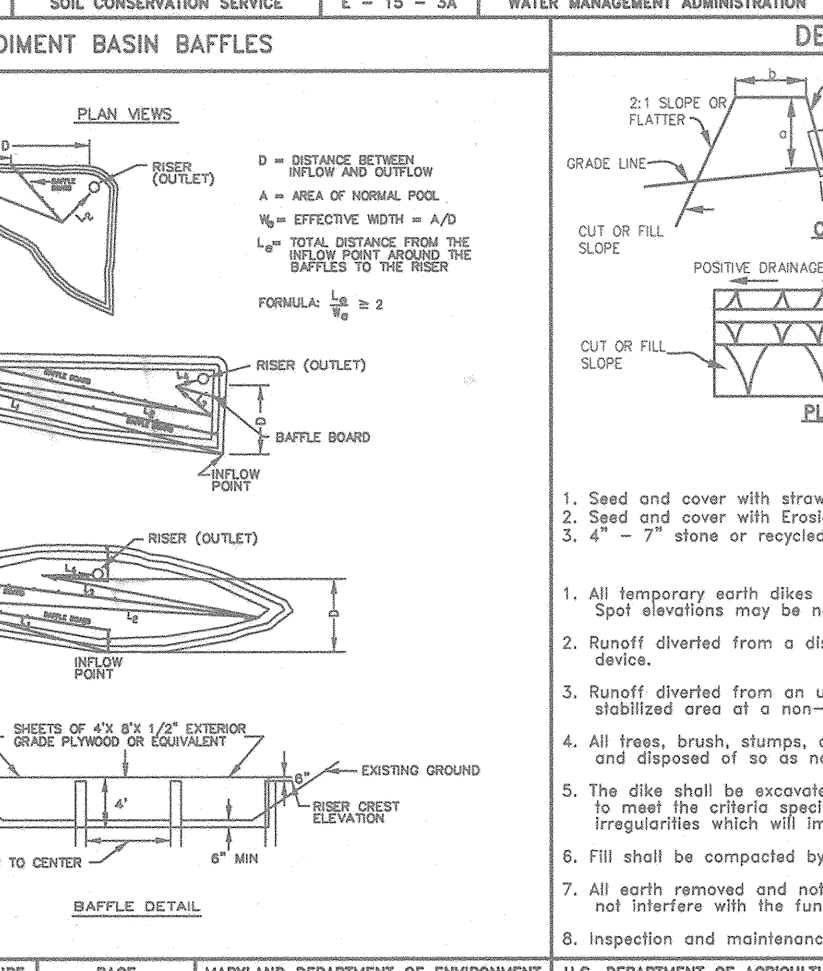
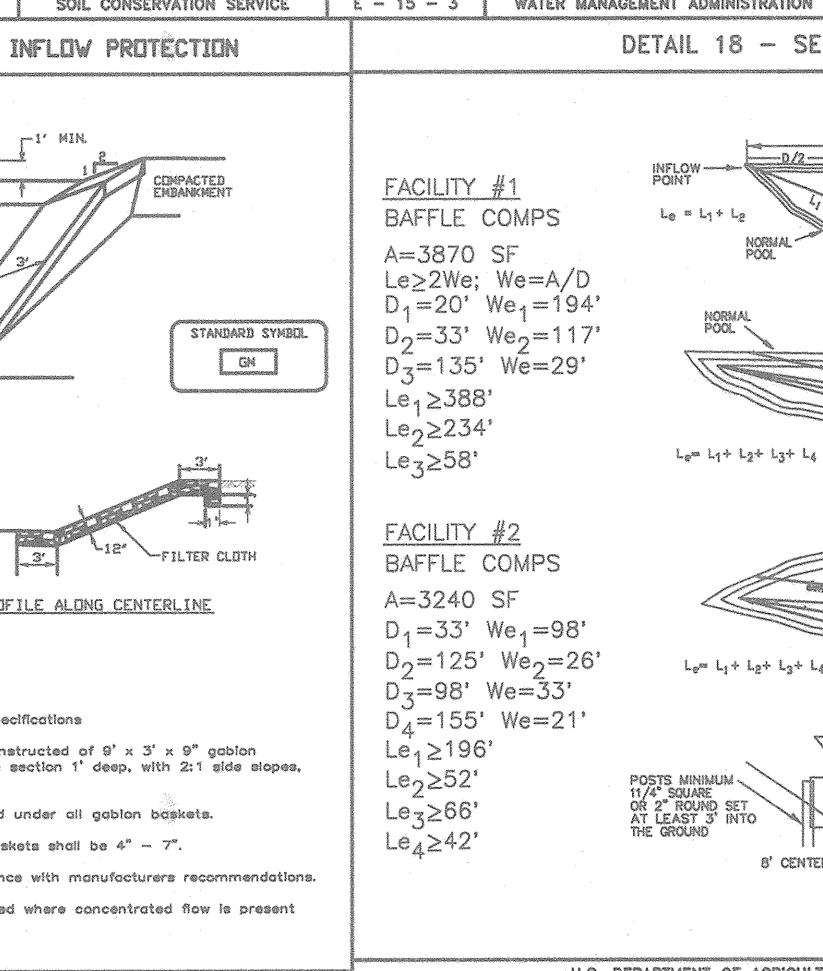
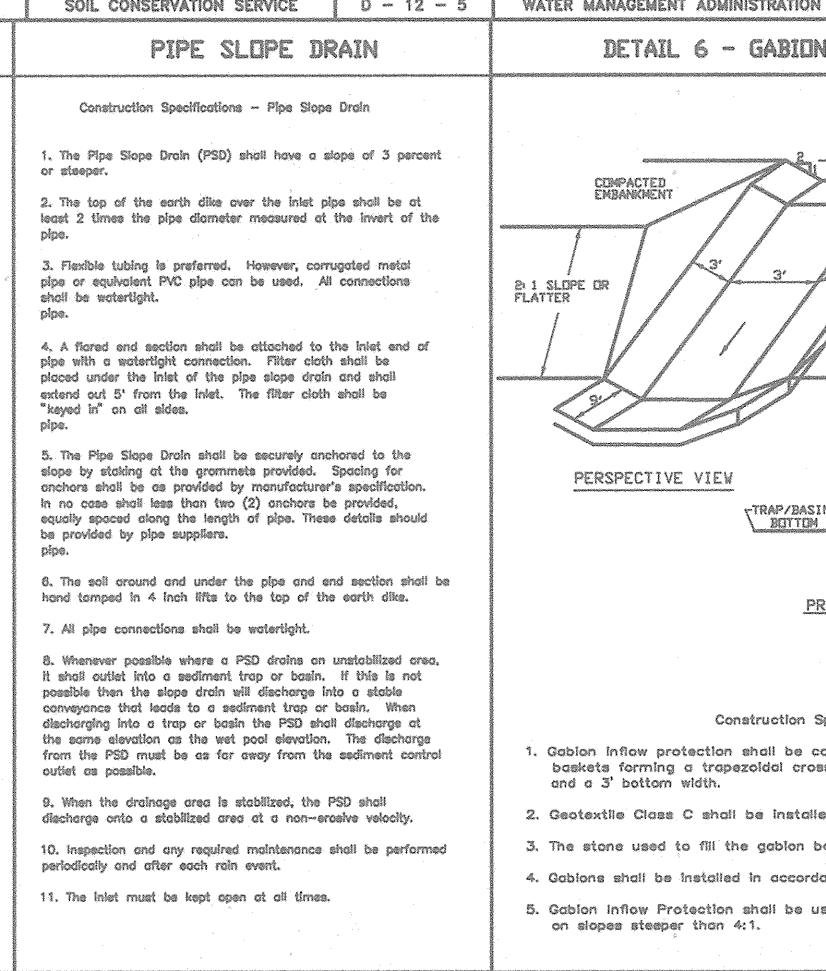
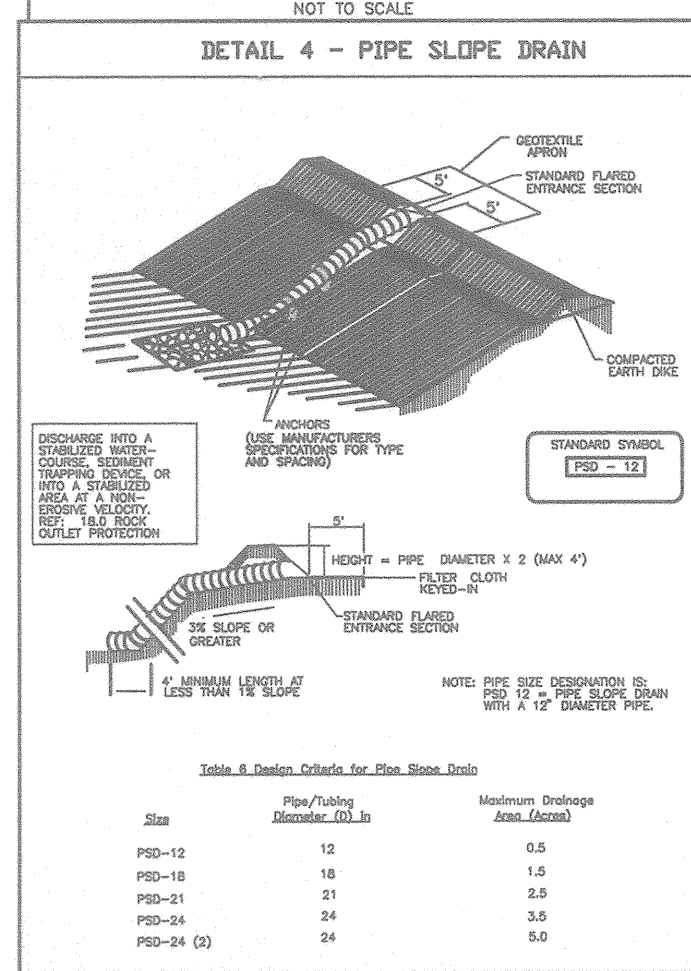
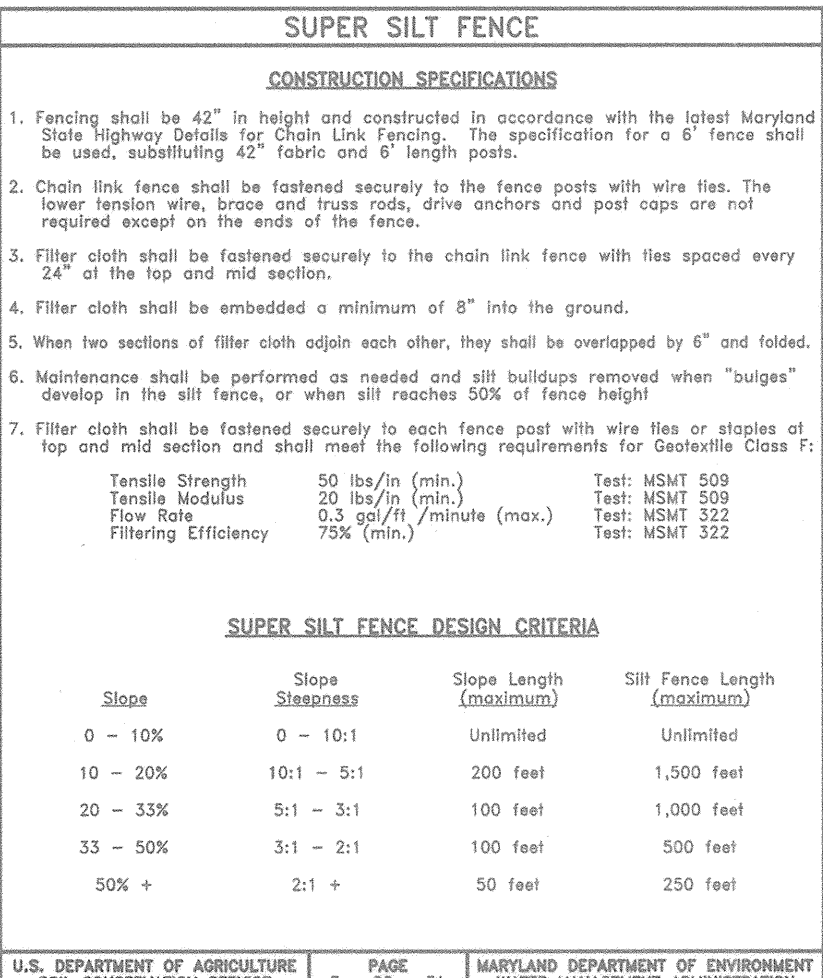
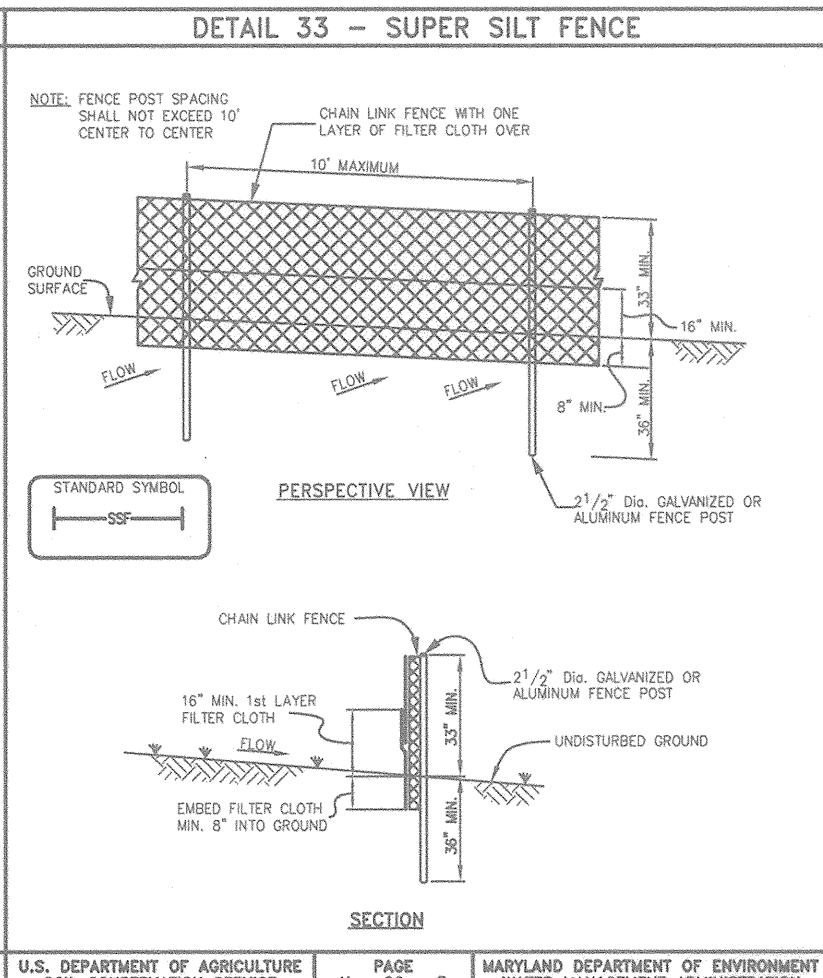
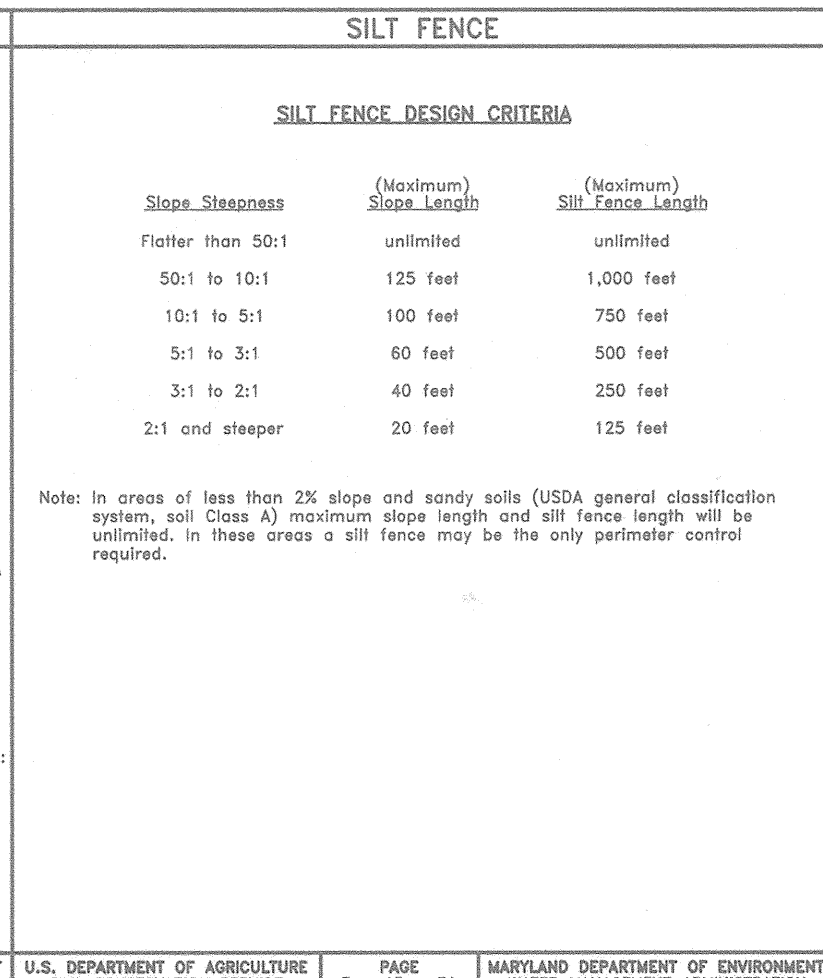
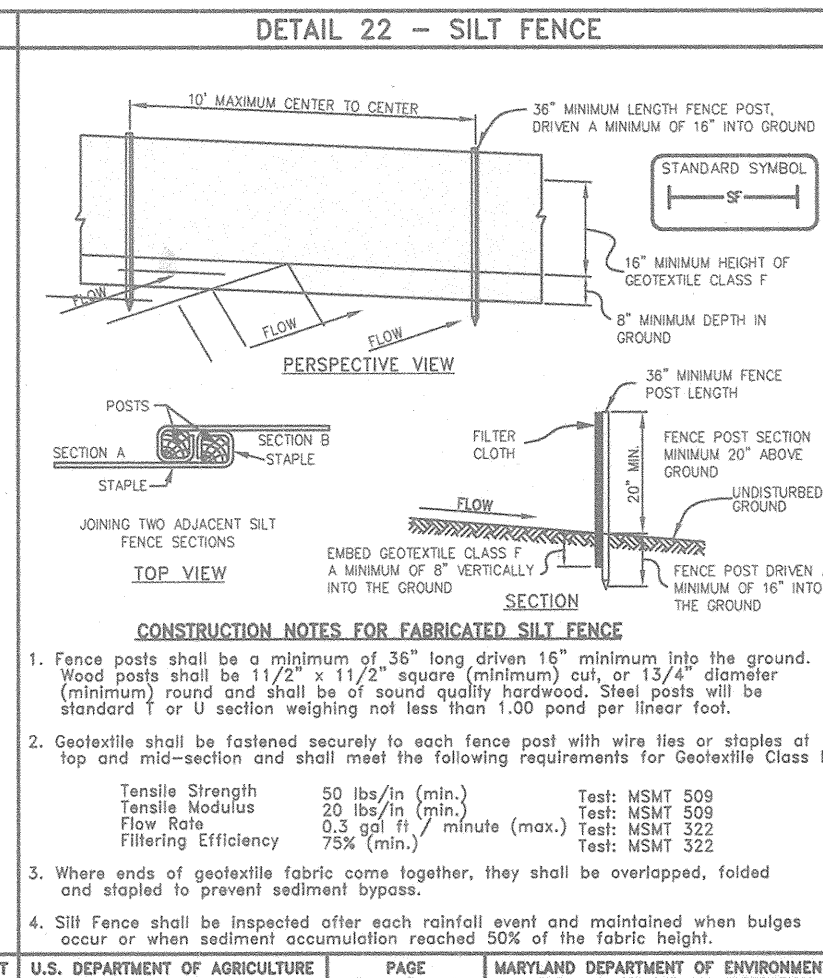
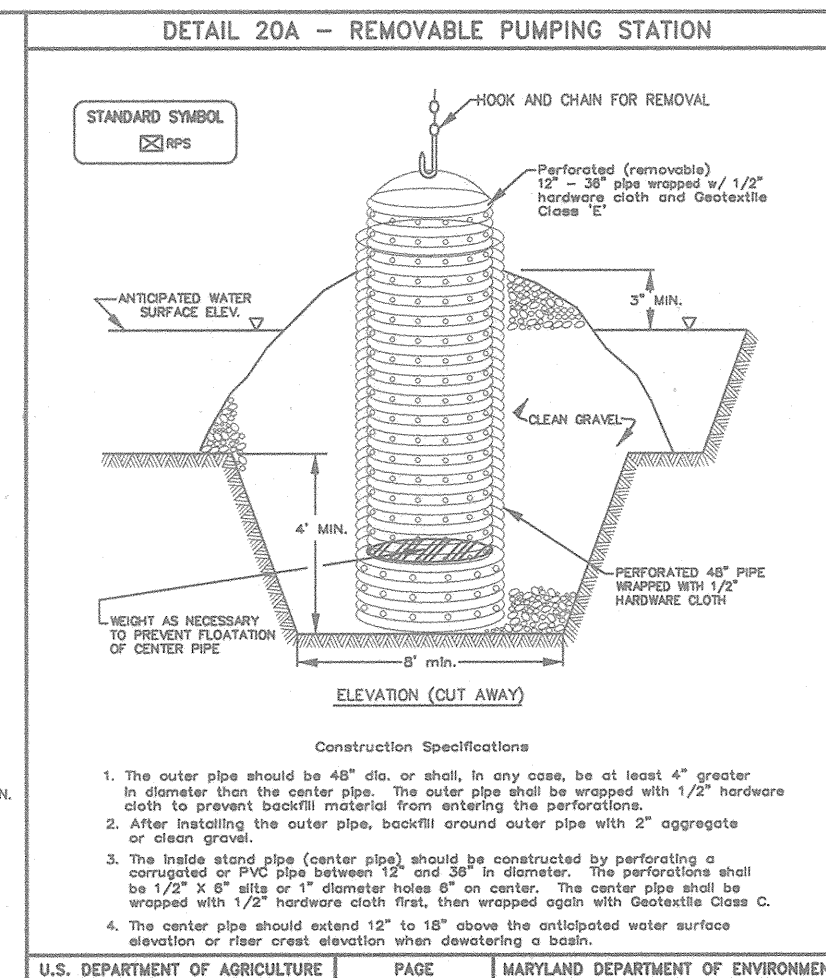
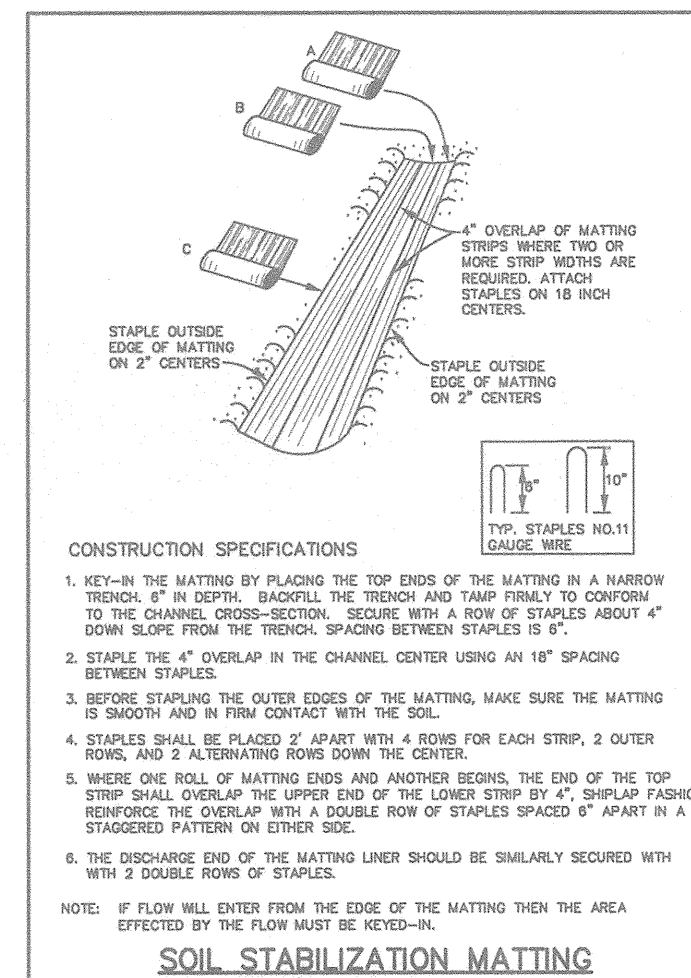


Table with 3 columns: Facility #, Drainage Area (AC), and Sediment Volume (CF). Includes data for Facility #1 and Facility #2.

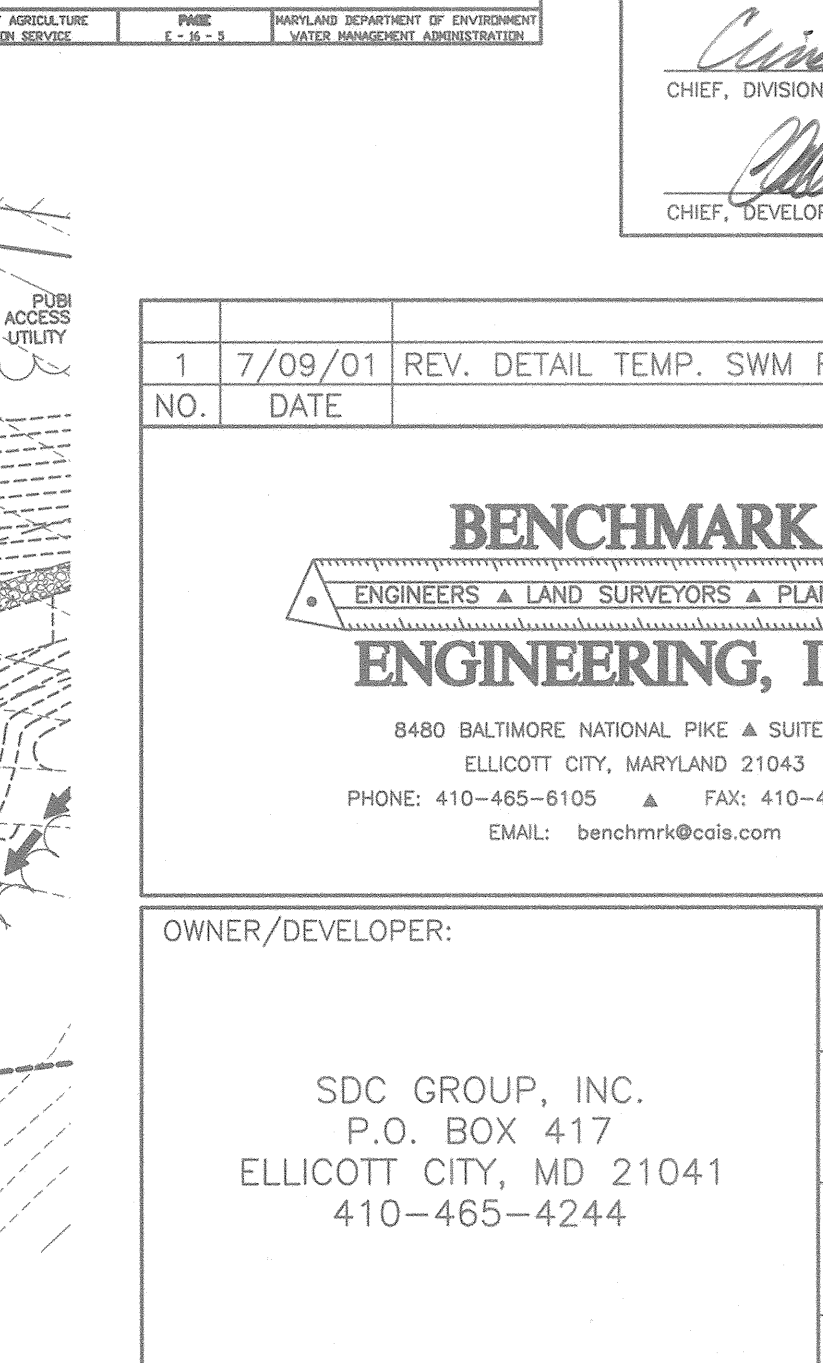
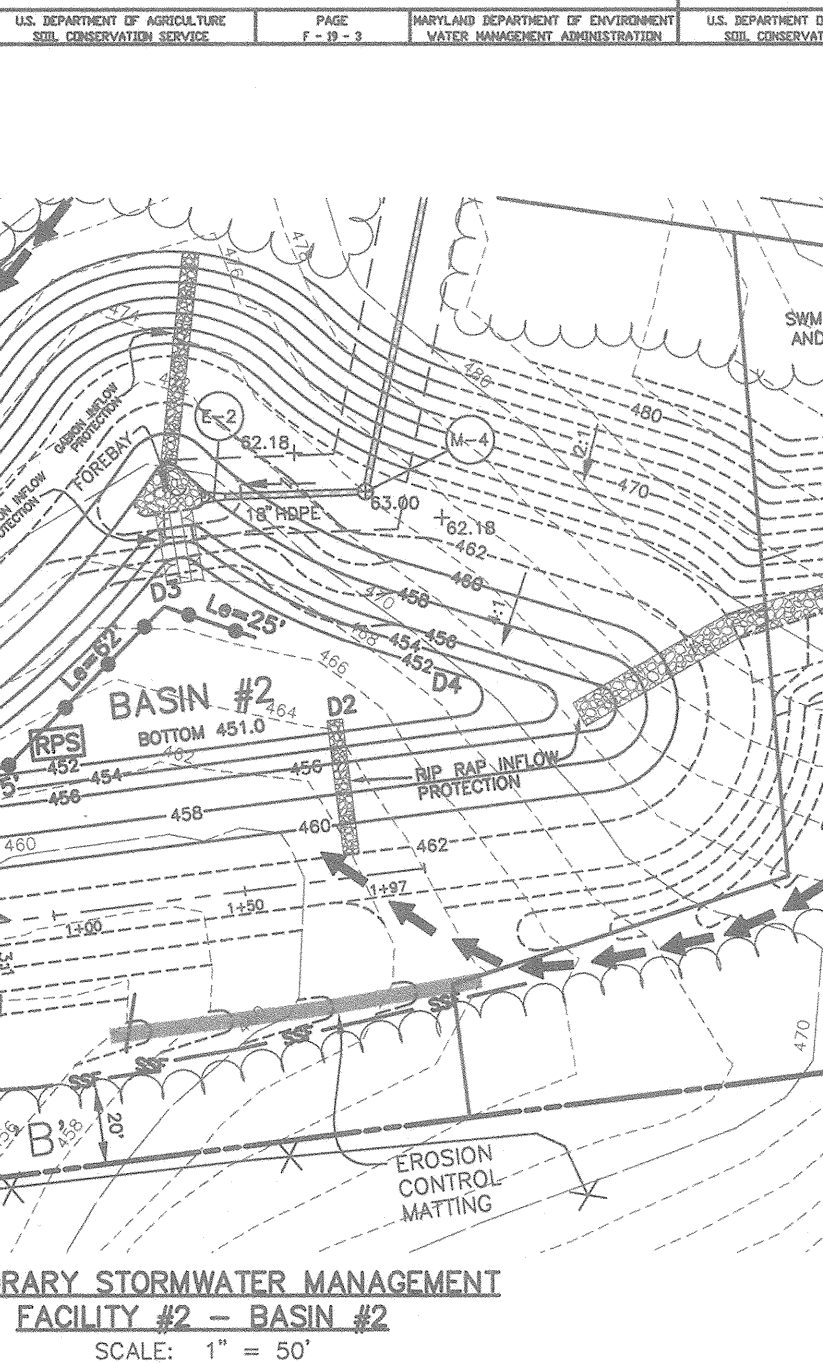
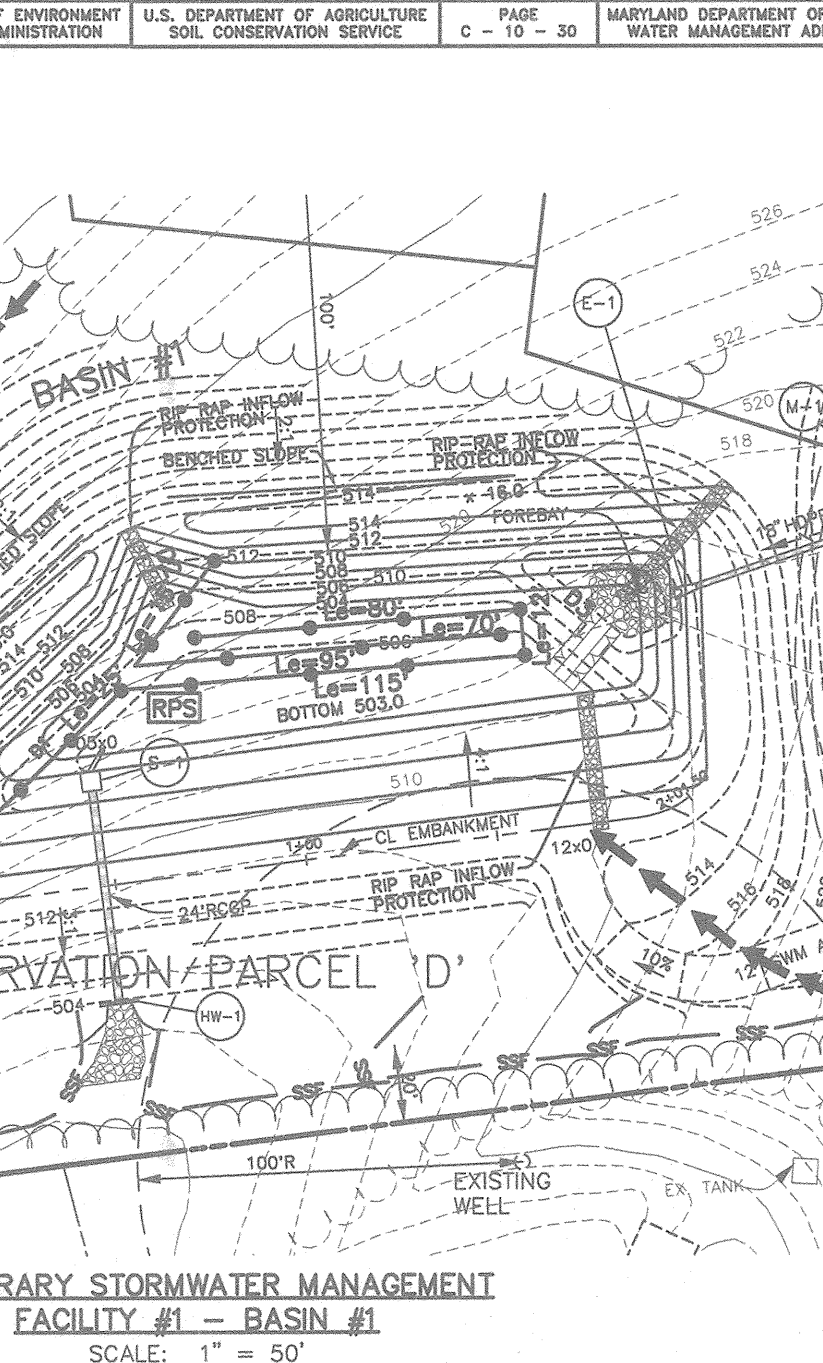
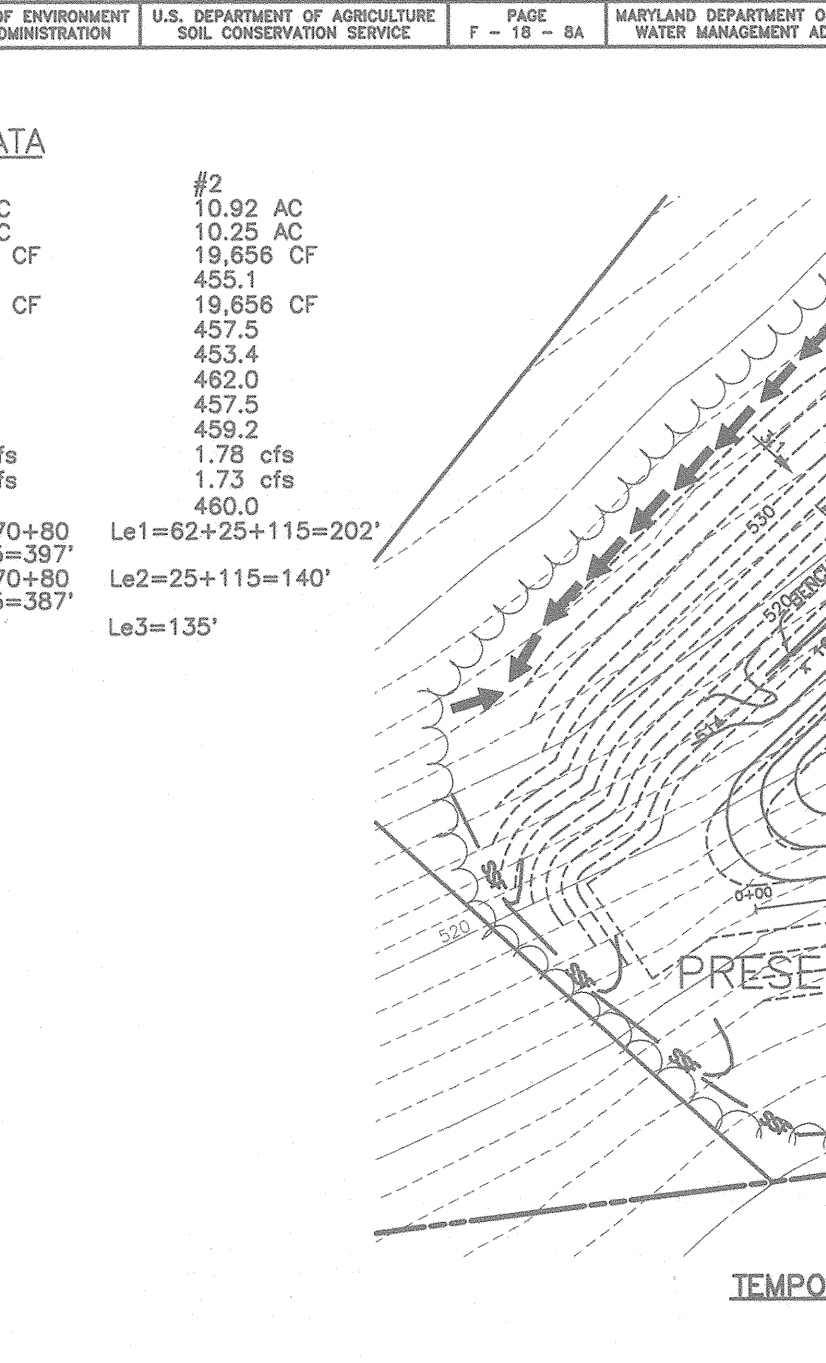


Table with 3 columns: Structure, Length (L), Width (W), Thickness (T), and Notes. Includes data for various structures.

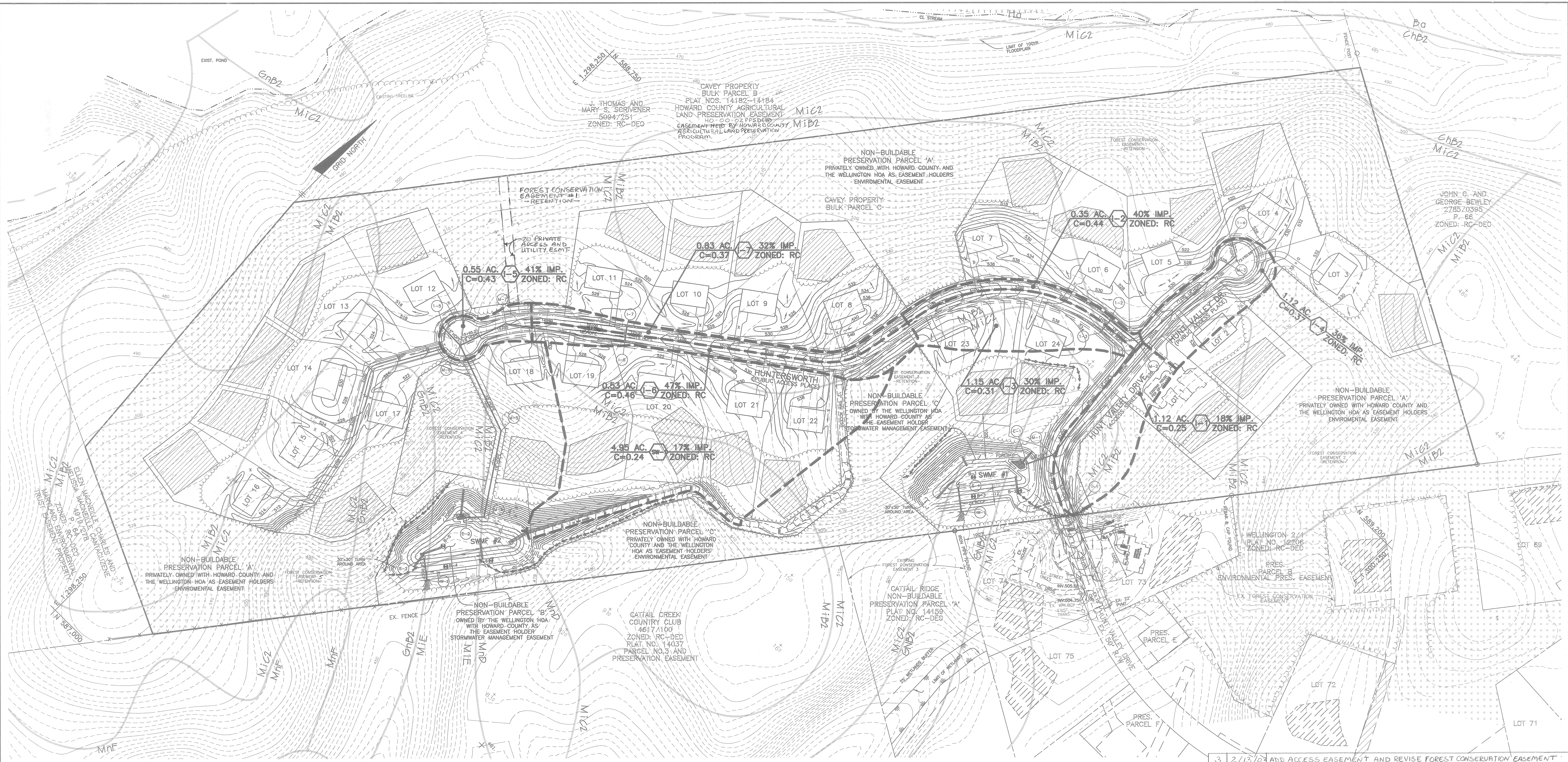
Table with 3 columns: Structure, Length (L), Width (W), Thickness (T), and Notes. Includes data for various structures.

ENGINEER'S CERTIFICATE, DEVELOPER'S CERTIFICATE, and APPROVED: DEPARTMENT OF PUBLIC WORKS and APPROVED: DEPARTMENT OF PLANNING AND ZONING.

OWNER/DEVELOPER: SDC GROUP, INC. PROJECT: THE WOODS OF WELLINGTON. LOCATION: TAX MAP NO. 14, GRID NO. 20. TITLE: SEDIMENT AND EROSION CONTROL NOTES AND DETAILS.

BENCHMARK ENGINEERING, INC. 8480 BALTIMORE NATIONAL PIKE & SUITE 418. ELLICOTT CITY, MARYLAND 21043. PHONE: 410-465-8105. FAX: 410-465-8644. EMAIL: benchmrk@cois.com

Donnell Mason, P.E. 10/29/01 DATE 10/29/01 DATE 10/29/01 DATE 10/29/01 DATE 10/29/01 DATE 10/29/01 DATE



PLAN VIEW
SCALE: 1" = 100'

3	2/13/03	ADD ACCESS EASEMENT AND REVISE FOREST CONSERVATION EASEMENT
2	1/15/02	REMOVE SPEED CONTROL ISLANDS
1	8/02/01	REV PER HO. CO. COMMENTS OF 6/21/01
NO.	DATE	REVISION

SOILS LEGEND		
MAP SYMBOL	SOIL GROUP	SOIL TYPE
EC3	B	ELIOAK SILTY CLAY LOAM, 8 TO 15% SLOPES, SEVERELY ERODED
GIB2	B	GLENELG LOAM, 3 TO 8% SLOPES, MODERATELY ERODED
GIC2	B	GLENELG LOAM, 8 TO 15% SLOPES, MODERATELY ERODED
GIC3	B	GLENELG LOAM, 8 TO 15% SLOPES, SEVERELY ERODED
GnB2	* C	GLENVILLE SILT LOAM, 3 TO 8% SLOPES, MODERATELY ERODED
MIB2	B	MANOR LOAM, 3 TO 8% SLOPES, MODERATELY ERODED
MIC2	B	MANOR LOAM, 8 TO 15% SLOPES, MODERATELY ERODED
MIC3	B	MANOR LOAM, 8 TO 15% SLOPES, SEVERELY ERODED
MIE	B	MANOR LOAM, 25 TO 45 % SLOPES

* INDICATES A HYDRIC SOIL

BENCHMARK
ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.

8480 BALTIMORE NATIONAL PIKE & SUITE 418
ELLCOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 Δ FAX: 410-465-6644
EMAIL: benchmark@cois.com

Donald Man
PROFESSIONAL ENGINEER

10/3/01

APPROVED: DEPARTMENT OF PUBLIC WORKS
Stephen M. Randle 10-25-01
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Stratton 10/29/01
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

John J. ... 10/29/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

OWNER/DEVELOPER: SDC GROUP, INC.
P.O. BOX 417
ELLCOTT CITY, MD 21041
410-465-4244

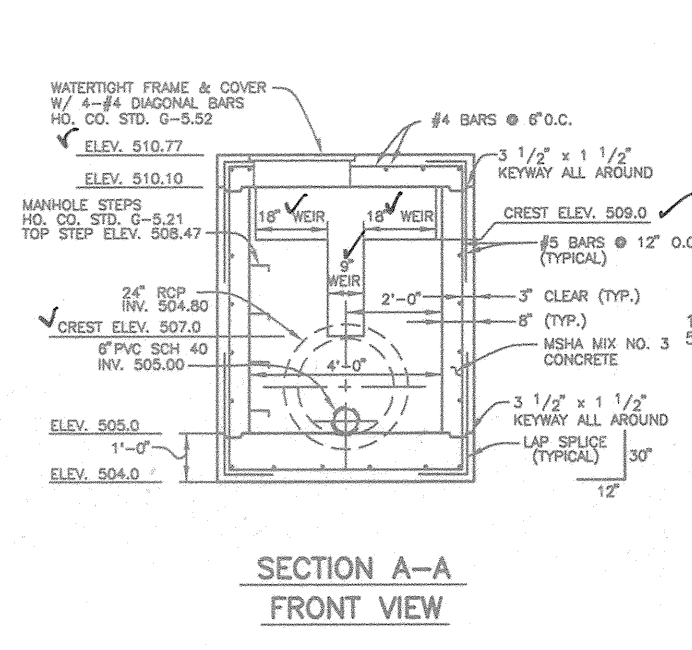
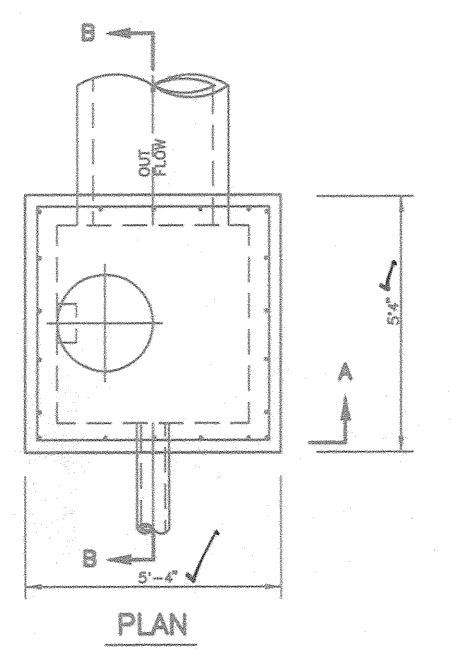
PROJECT: THE WOODS OF WELLINGTON
LOTS 1-24 AND NON-BUILDABLE PRES. PARCELS 'A' THRU 'D'

LOCATION: TAX MAP NO. 14, GRID NO. 20
TAX MAP NO. 21, GRID NO. 2
P/O PARCEL 248
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

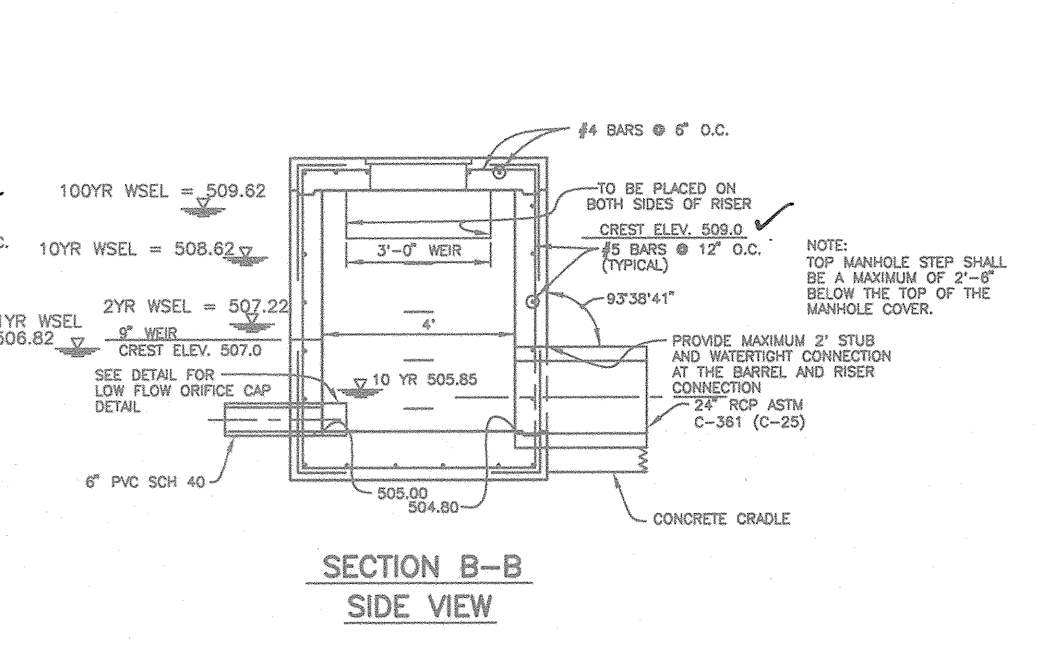
TITLE: STORM DRAIN DRAINAGE AREA MAP

DATE: MARCH, 2001 PROJECT NO. 1251
MAY 2001

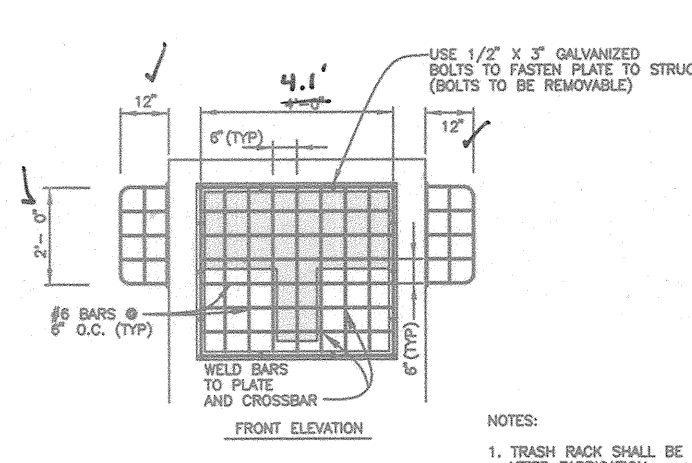
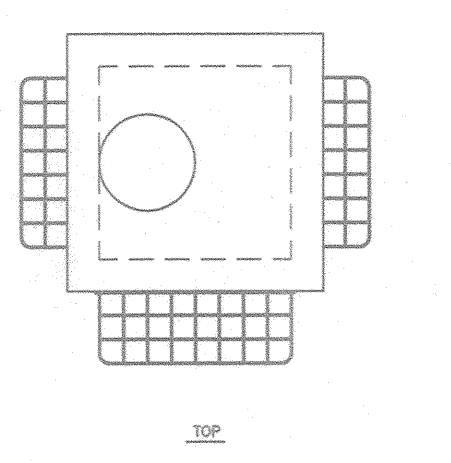
DESIGN: GWF DRAFT: JMC SCALE: 1" = 100' DRAWING 12 OF 17



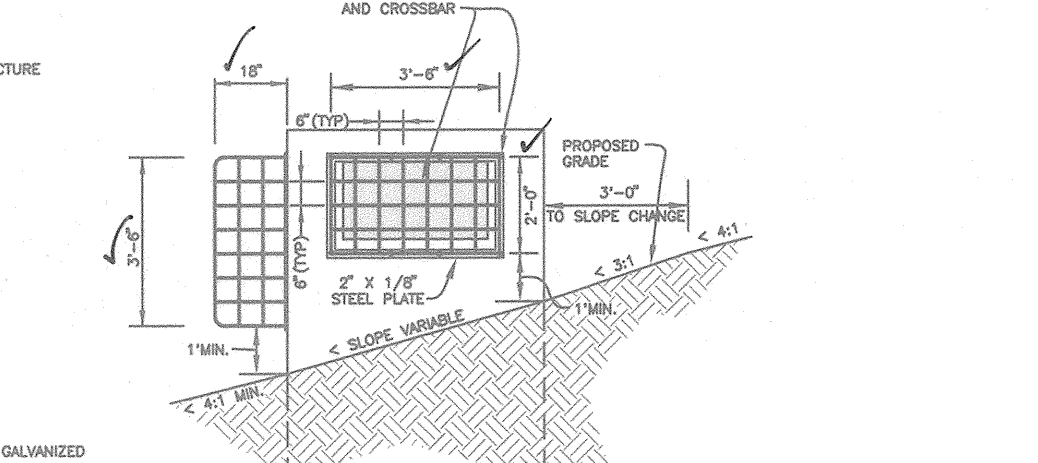
CONTROL STRUCTURE
SCALE: 1" = 4'



SECTION B-B
SIDE VIEW

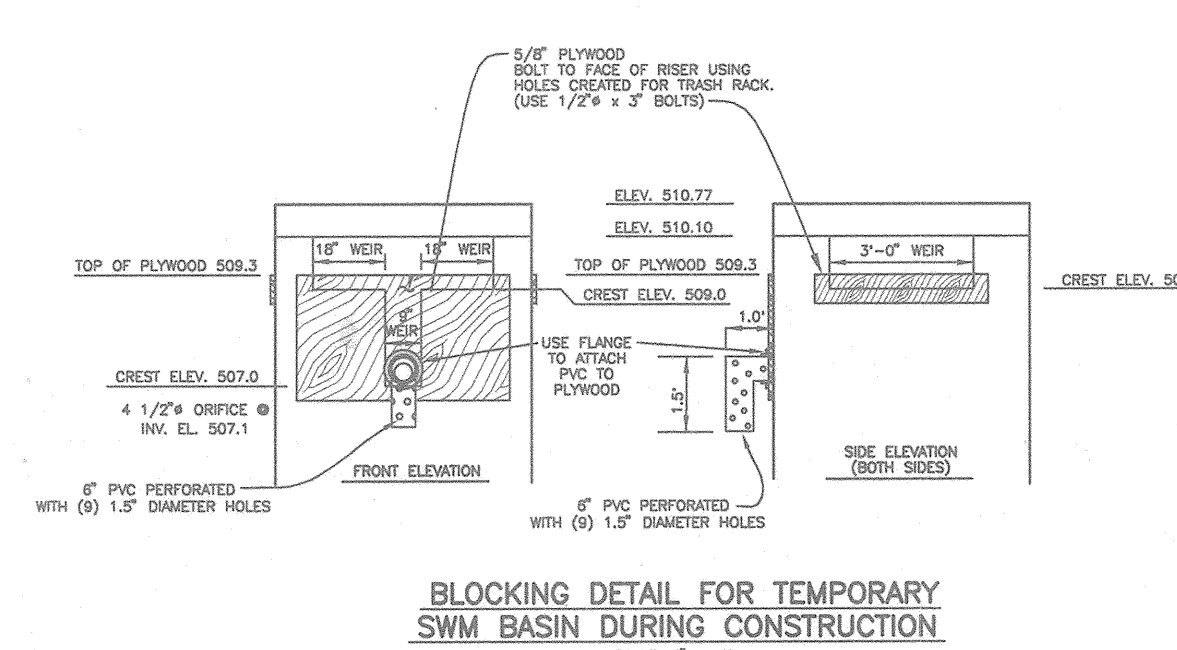


TRASH RACK DETAIL
SCALE: 1" = 4'

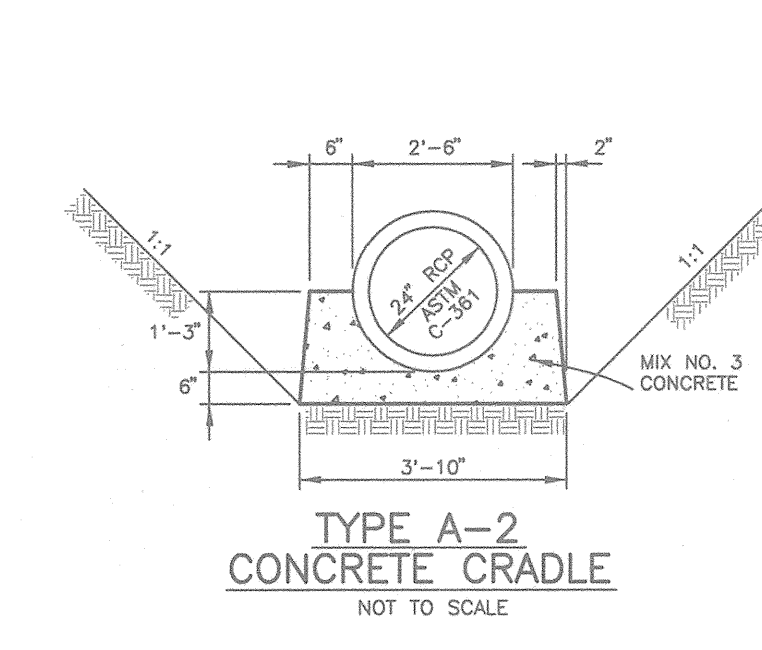


SIDE ELEVATION

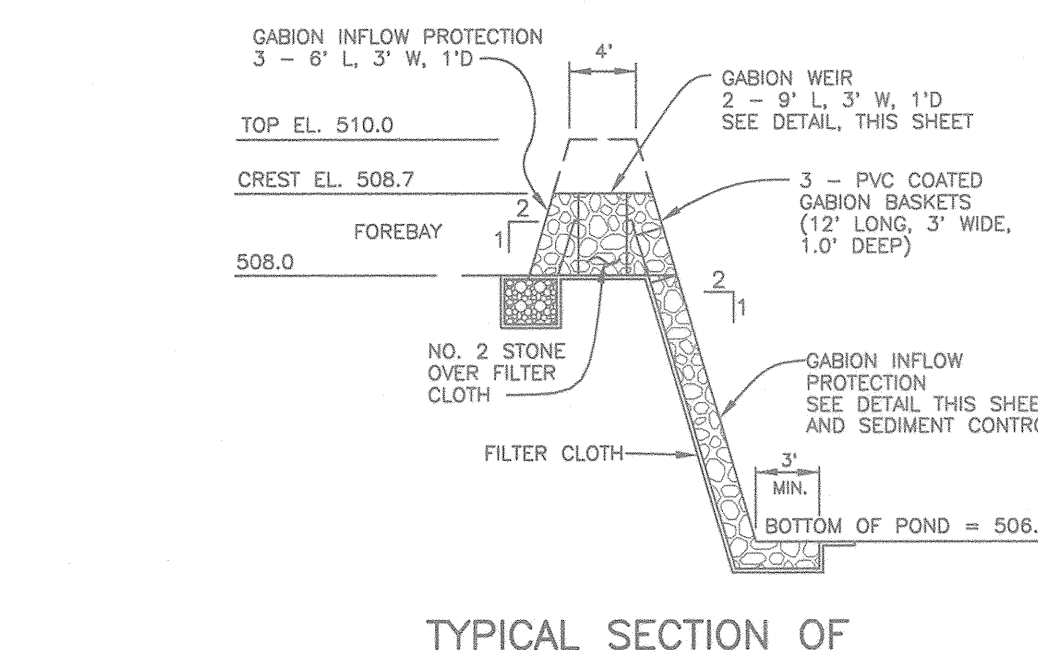
- NOTES:
- TRASH RACK SHALL BE GALVANNEZED AFTER FABRICATION.
 - TRASH RACK SHALL BE PAINTED BATTLESHIP GRAY.
 - TRASH RACK TO BE CENTERED ON WEIR OPENING.



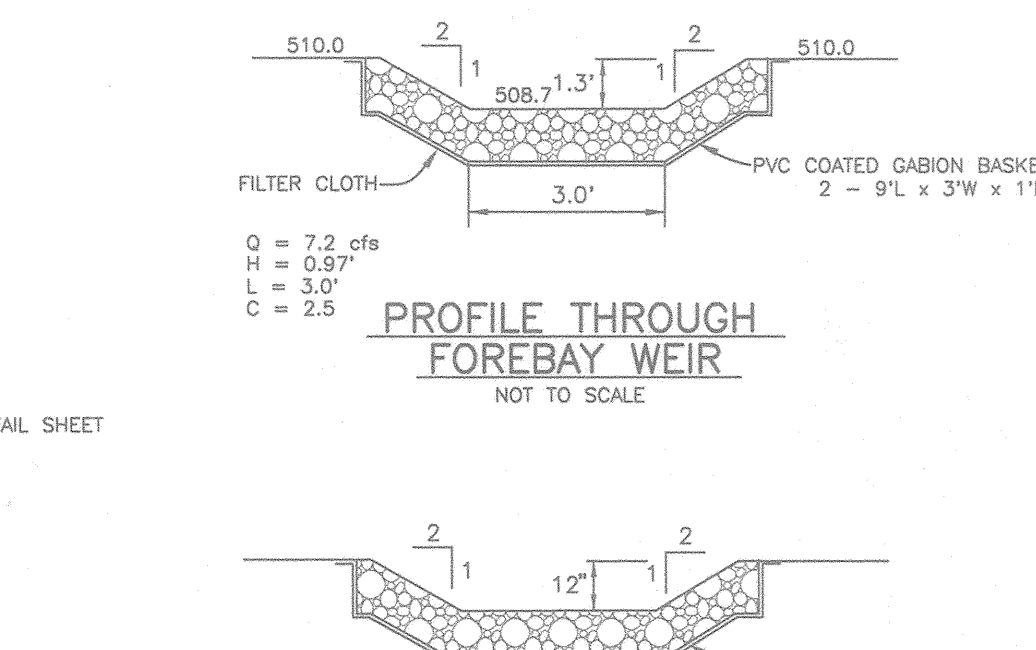
BLOCKING DETAIL FOR TEMPORARY SWM BASIN DURING CONSTRUCTION
SCALE: 1" = 4'



TYPE A-2
CONCRETE CRADLE
NOT TO SCALE



TYPICAL SECTION OF
GABION WEIR AT FOREBAY
NOT TO SCALE

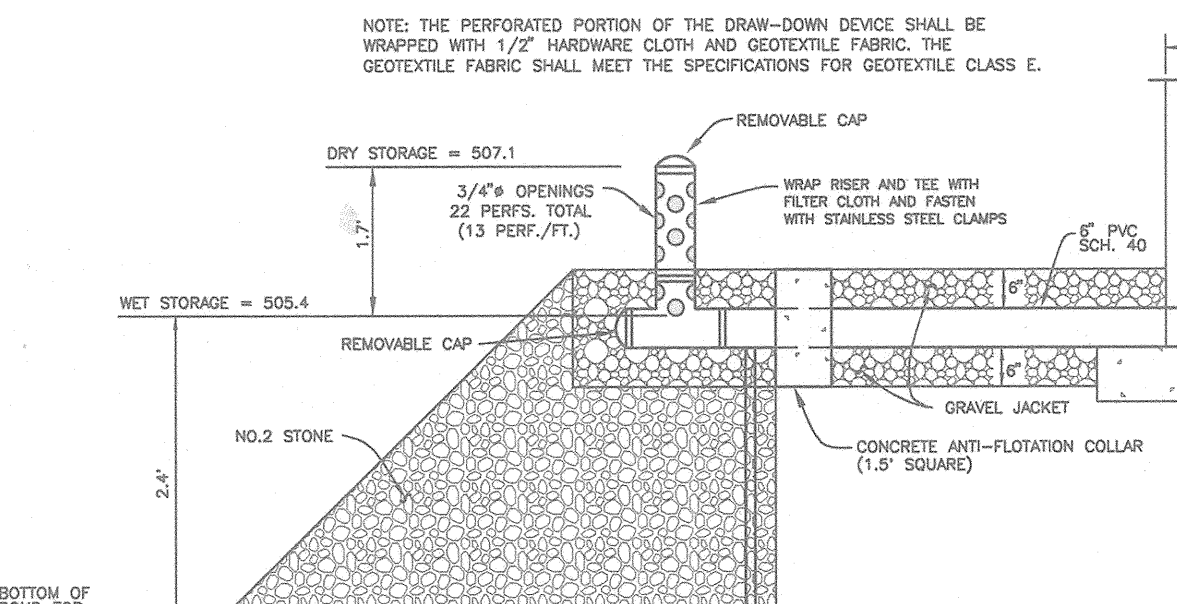


PROFILE THROUGH
FOREBAY WEIR
NOT TO SCALE

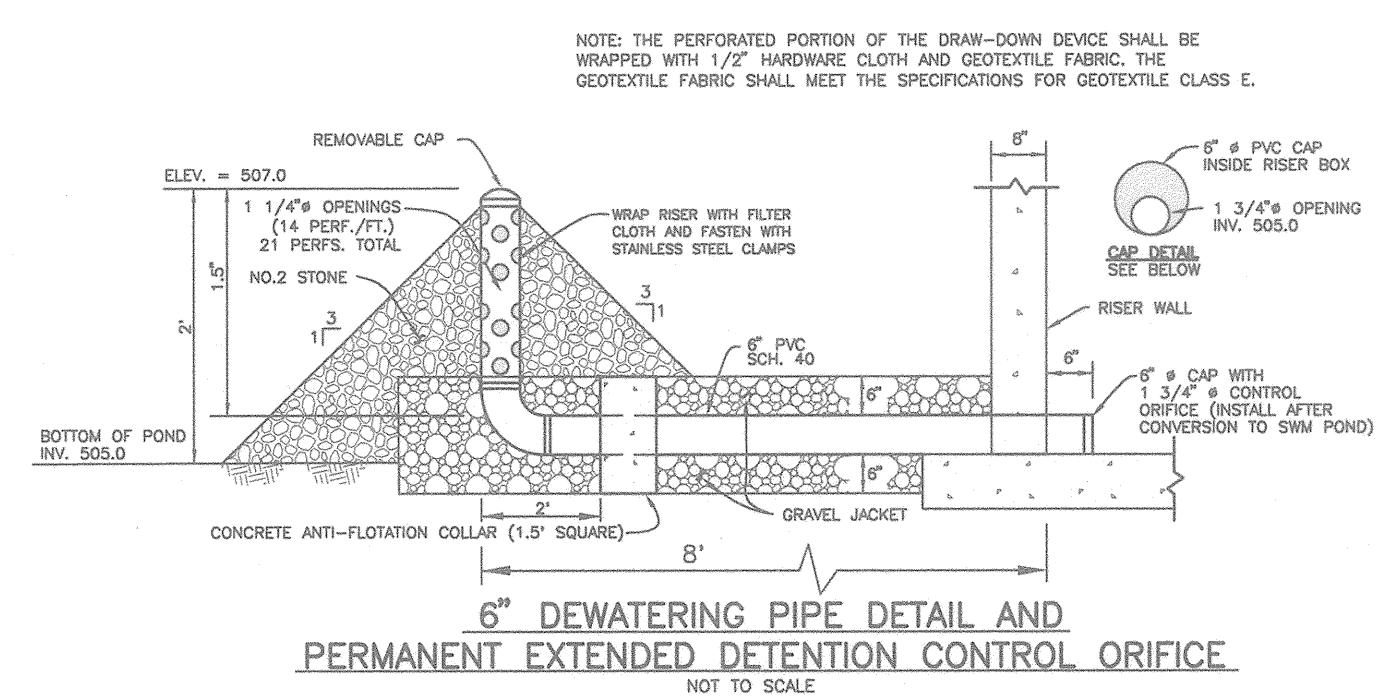


GABION INFLOW
PROTECTION CHANNEL
NOT TO SCALE

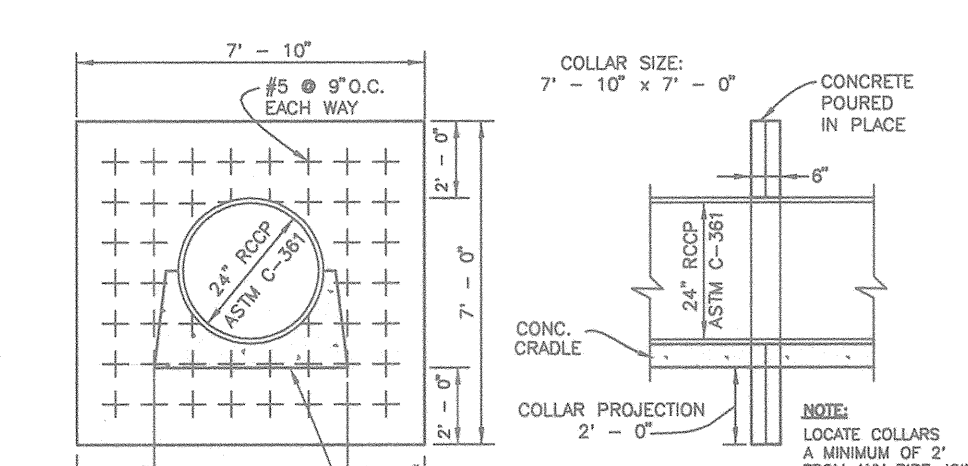
Q = 7.2 cfs
n = 0.04
b = 0.50
z = 2:1
H = 0.23'
V = 9.0 fps



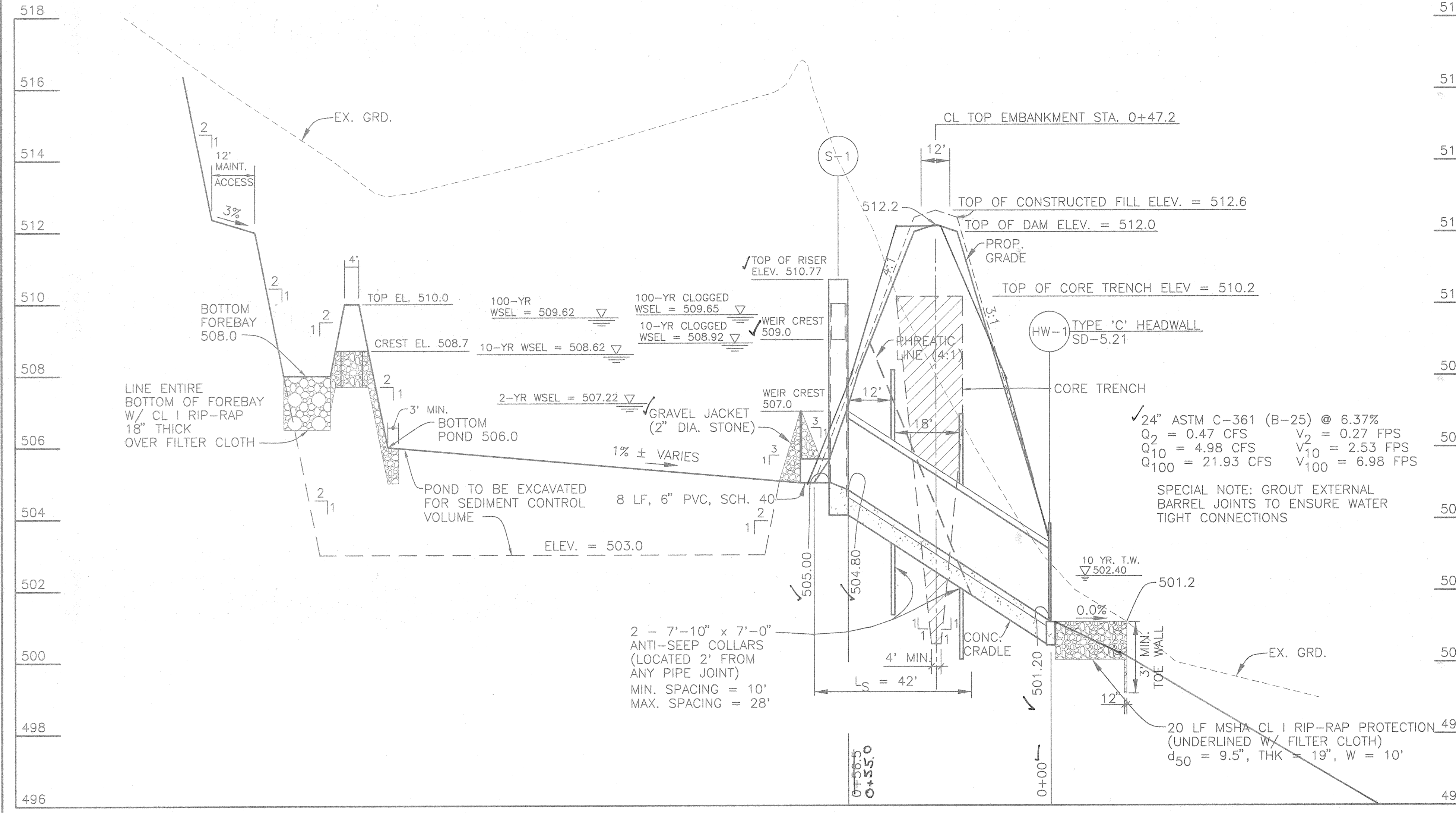
6" TEMPORARY SWM
VERTICAL DRAW-DOWN DEVICE
NOT TO SCALE



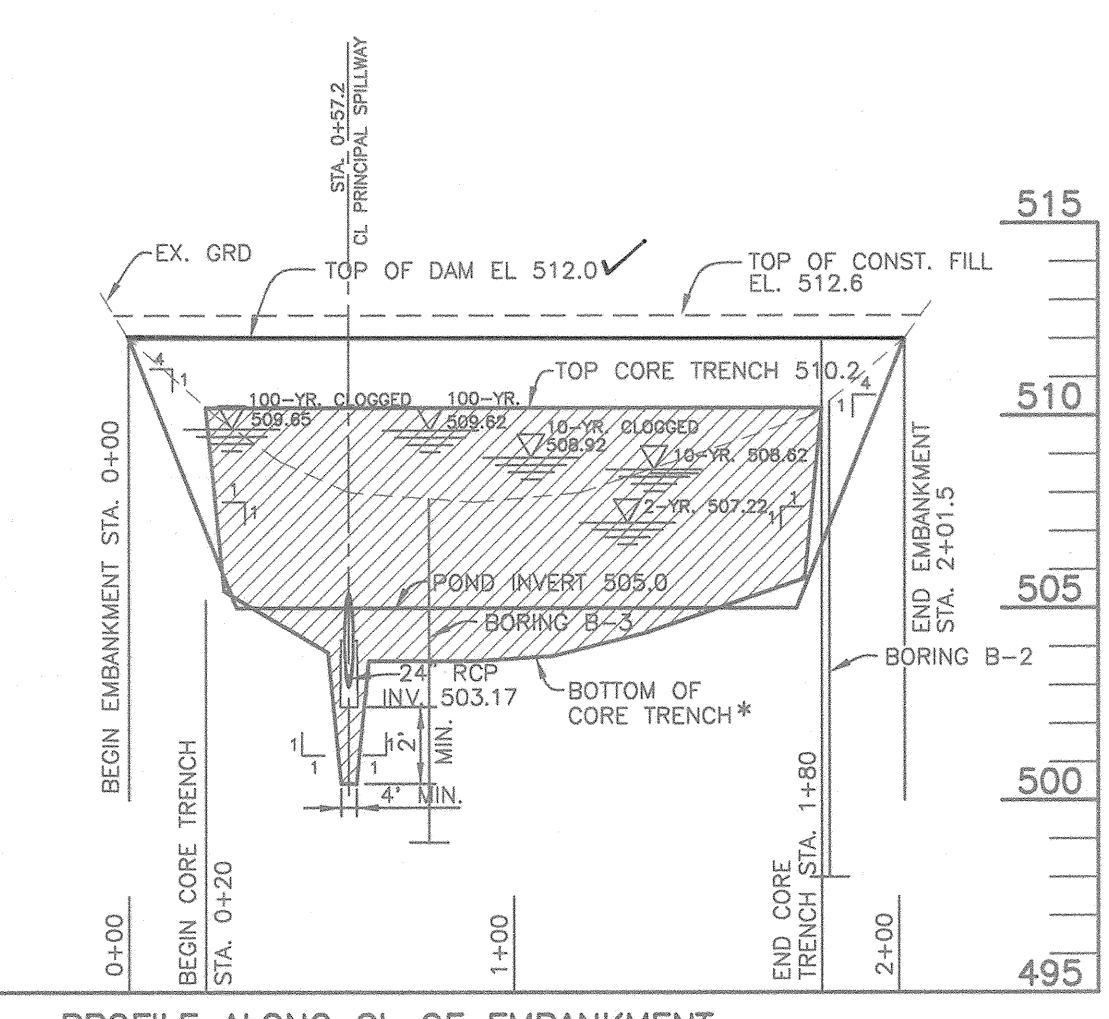
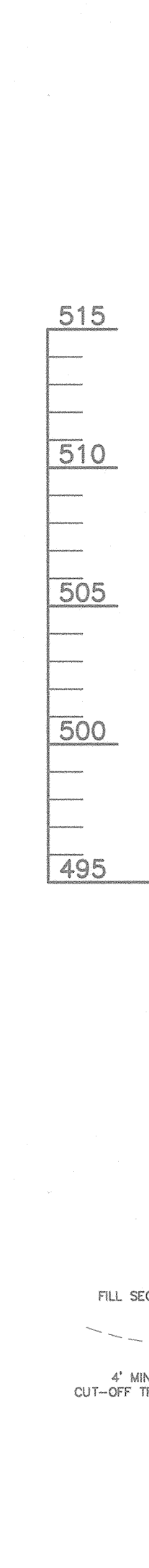
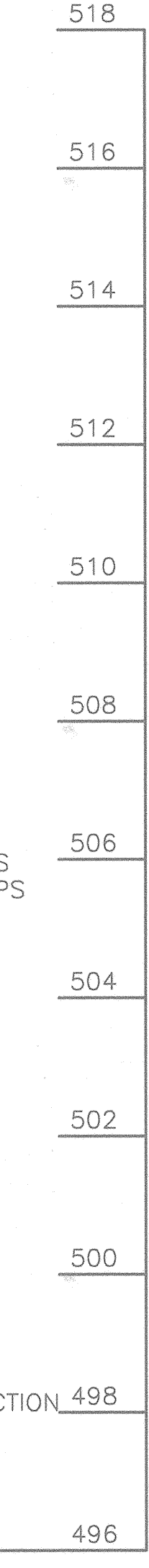
6" DEWATERING PIPE DETAIL AND
PERMANENT EXTENDED DETENTION ORIFICE
NOT TO SCALE



ANTI-SEEP COLLAR
NOT TO SCALE

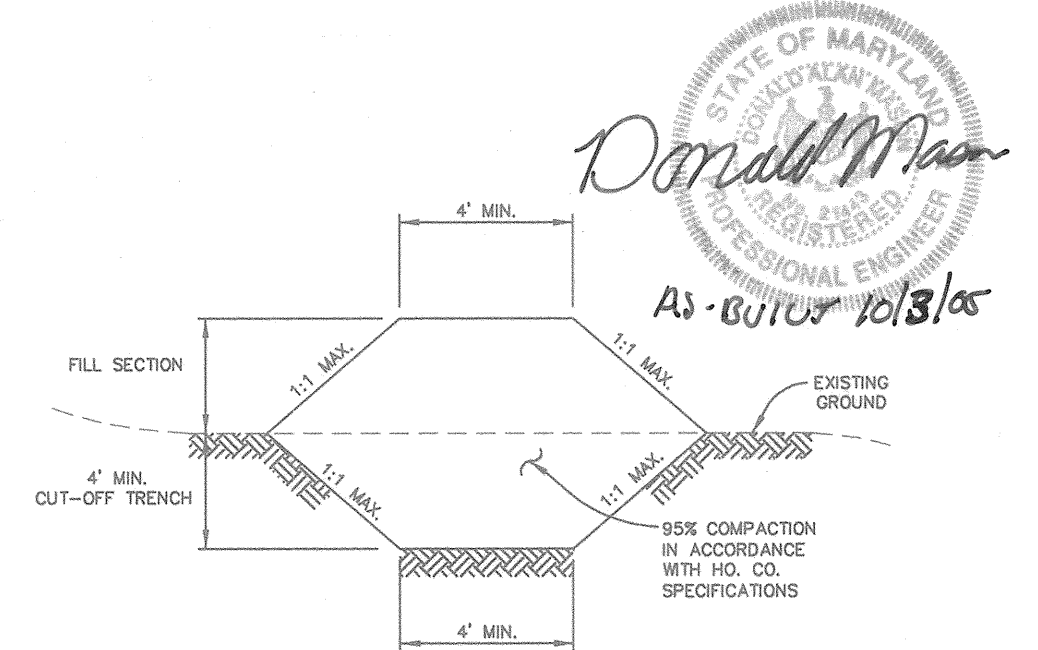


SECTION A-A THRU
FOREBAY, POND & PRINCIPAL SPILLWAY
SCALE: HOR: 1" = 20' VERT: 1" = 2'



PROFILE ALONG CL OF EMBANKMENT
SCALE: HORZ: 1" = 50' VERT: 1" = 5'

* APPROXIMATE BOTTOM OF CORE TRENCH IS SHOWN (CONSTRUCTION ELEVATION IS TO BE DETERMINED BY THE ENGINEER IN THE FIELD). CORE TRENCH MATERIAL MUST BE CC, SC, CH OR CL ONLY.



CORE TRENCH SECTION
NOT TO SCALE

NOTES:

- IF WATER IS ENCOUNTERED DURING THE CONSTRUCTION OF THE CORE TRENCH, IT IS TO BE REMOVED BY PUMPING.
- CORE TRENCH SHALL CONSIST OF IMPERVIOUS MATERIAL (CC, SC, CH OR CL) AS DIRECTED BY A GEOTECHNICAL ENGINEER ON-SITE AND MAY REQUIRE TO BE HAULED FROM AN OPPOSITE LOCATION.

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 505 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 ENGINEER
PE NO. 21443
DATE 10/3/01

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 DESIGNED, PERFORMED, SUPERVISED AND APPROVED 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.

ENGINEER'S CERTIFICATE

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

Donald Mason ENGINEER - DONALD A. MASON, P.E. # 21443
DATE 10/3/01

DEVELOPER'S CERTIFICATE

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

SDC Group, Inc. DEVELOPER
DATE 10/2/01

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS
USDA - NATURAL RESOURCES CONSERVATION SERVICE
DATE 10/18/01

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

APPROVED: DEPARTMENT OF PUBLIC WORKS
DATE 10/18/01

APPROVED: DEPARTMENT OF PLANNING AND ZONING
DATE 10-25-01

APPROVED: DEPARTMENT OF PLANNING AND ZONING
DATE 10/29/01

APPROVED: DEPARTMENT OF PLANNING AND ZONING
DATE 10/25/01

2	9/27/05	REVISED PER AS-BUILT CONDITIONS
1	7/17/01	REV PER HO. CO. COMMENTS OF 6/21/01
NO.	DATE	REVISION

BENCHMARK ENGINEERS, LAND SURVEYORS & PLANNERS

8480 BALTIMORE NATIONAL PIKE A SUITE 418
ELLICOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 FAX: 410-465-6644
EMAIL: benchmrk@comcast.com

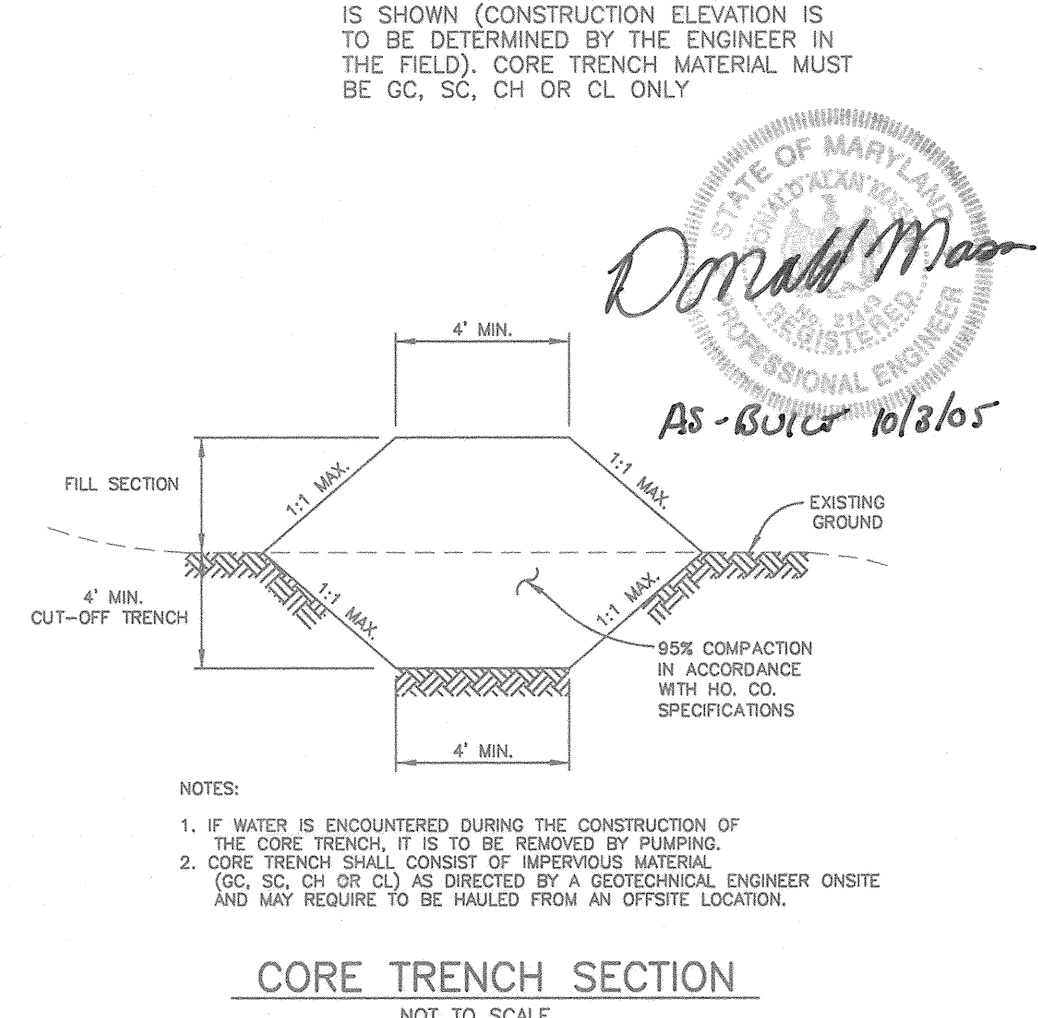
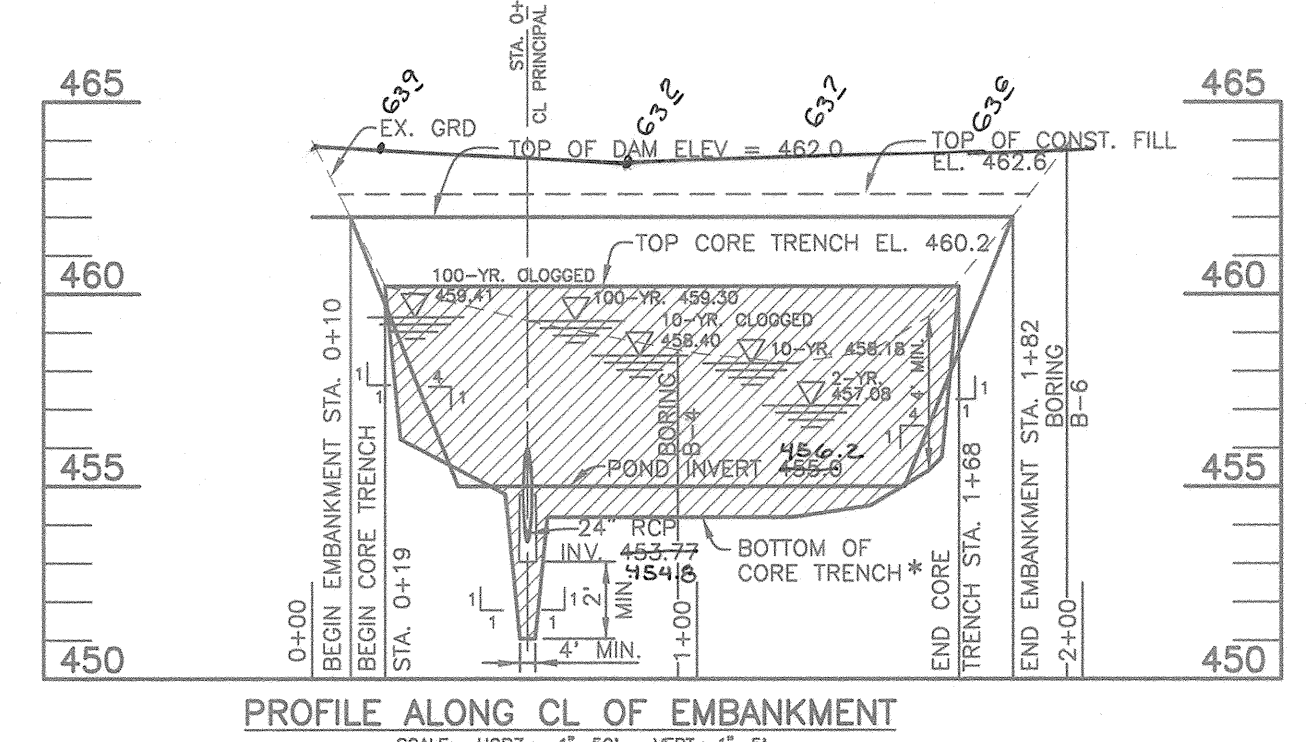
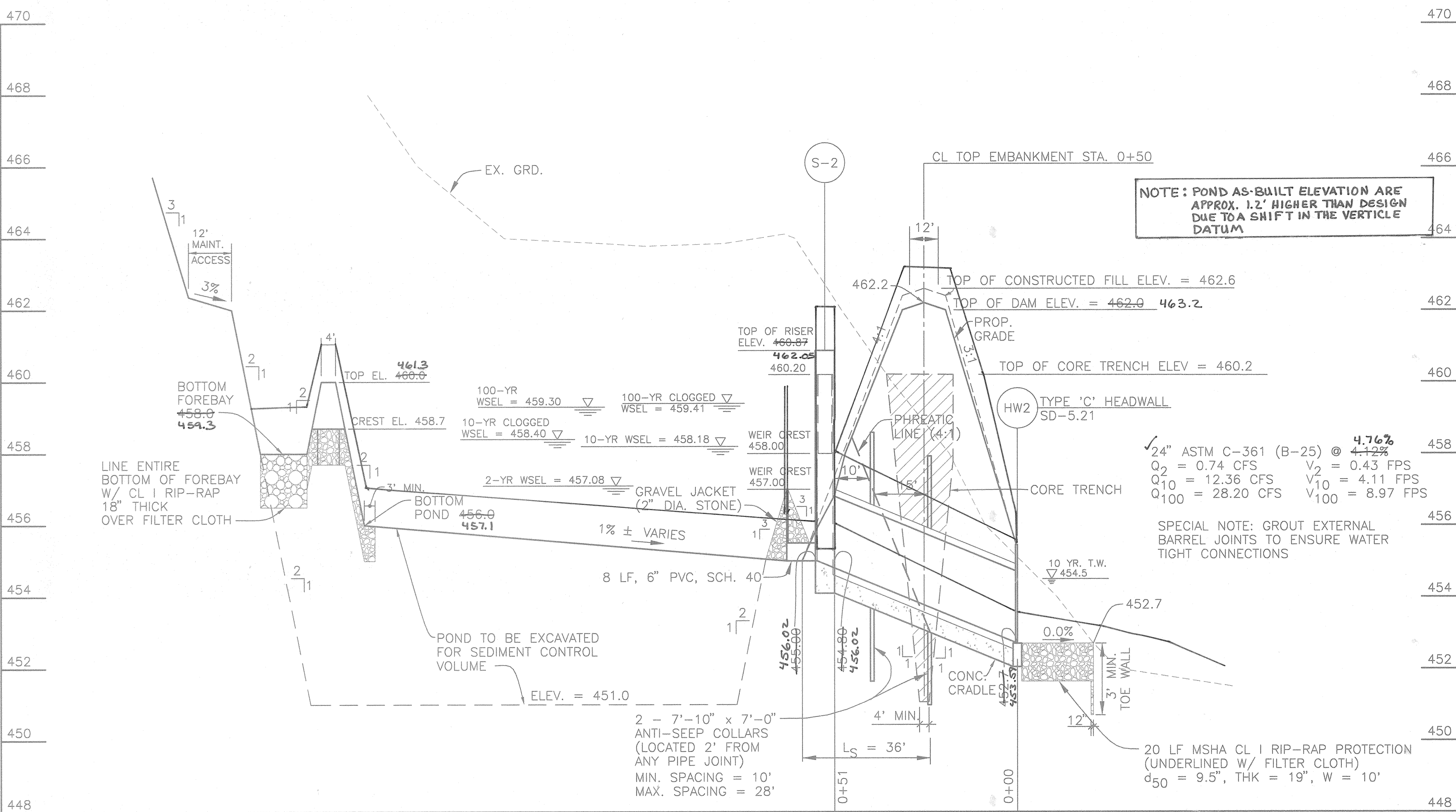
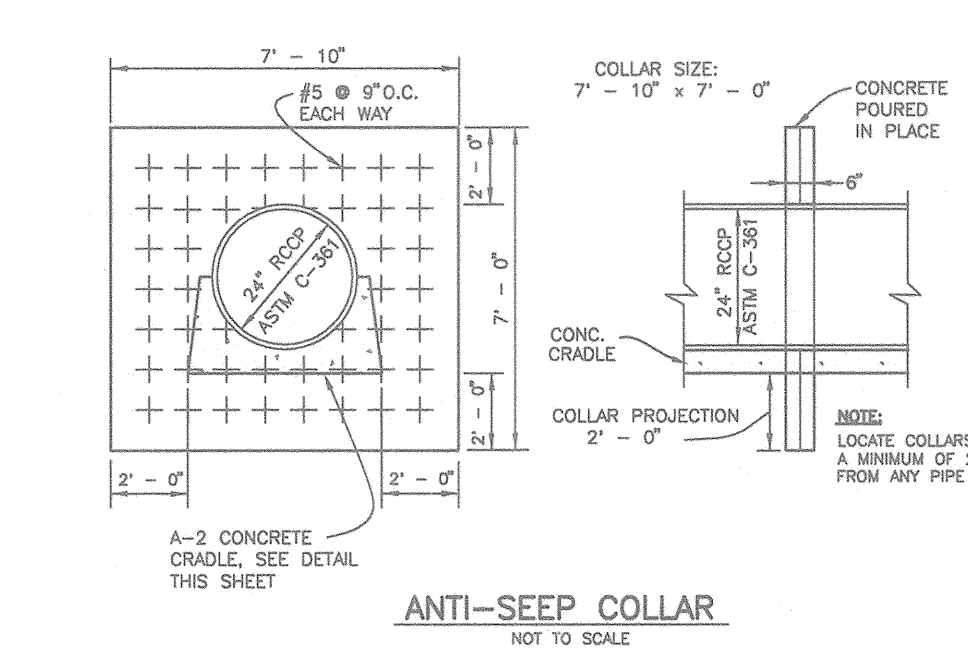
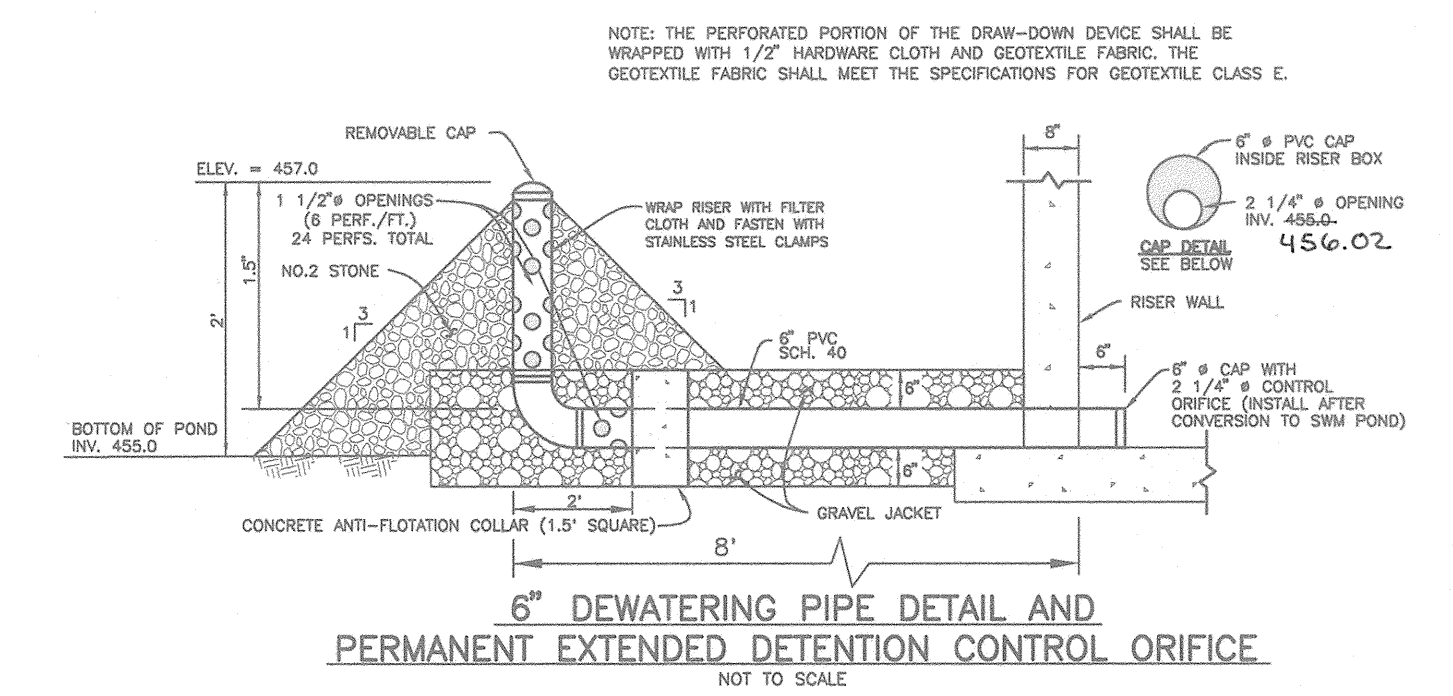
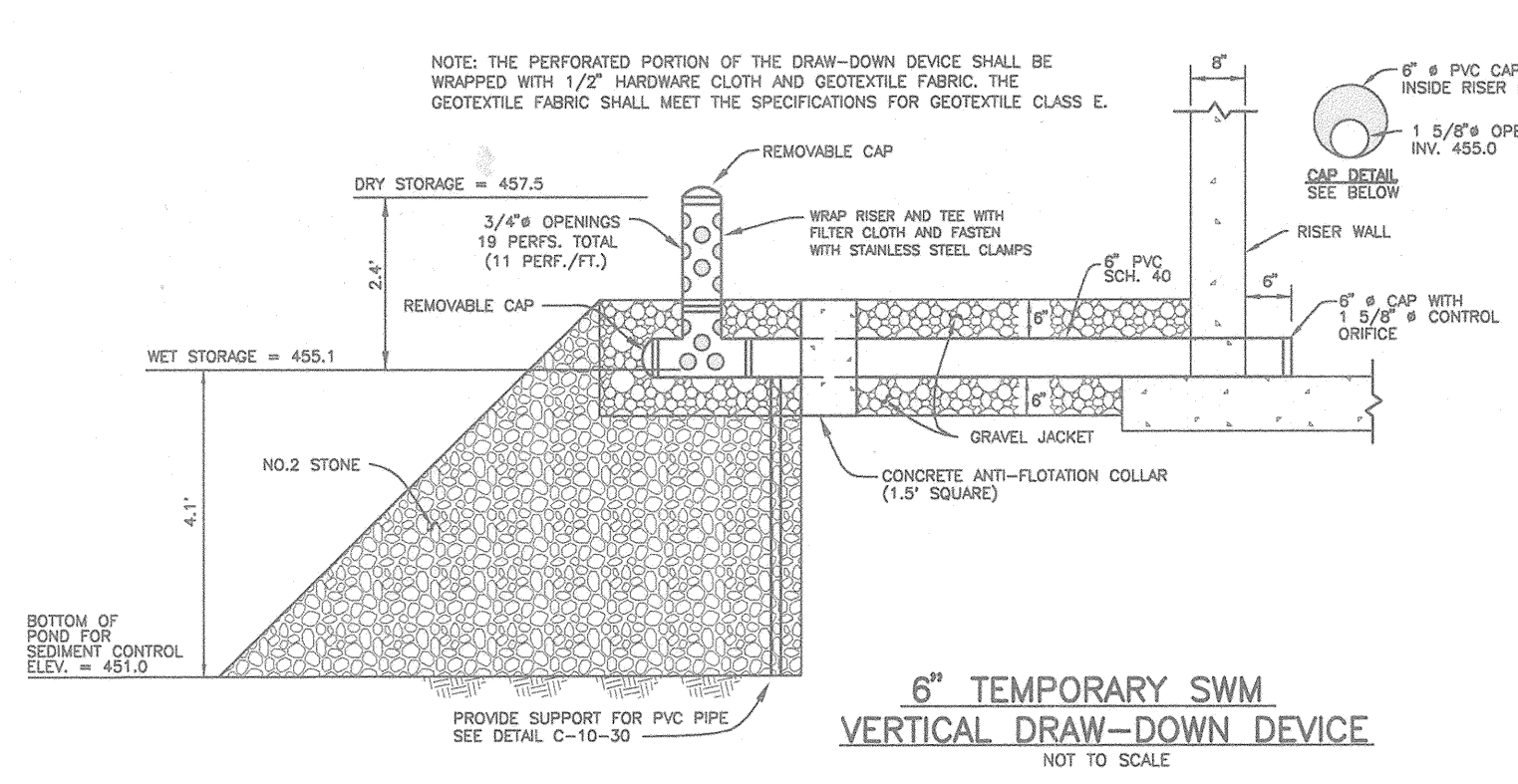
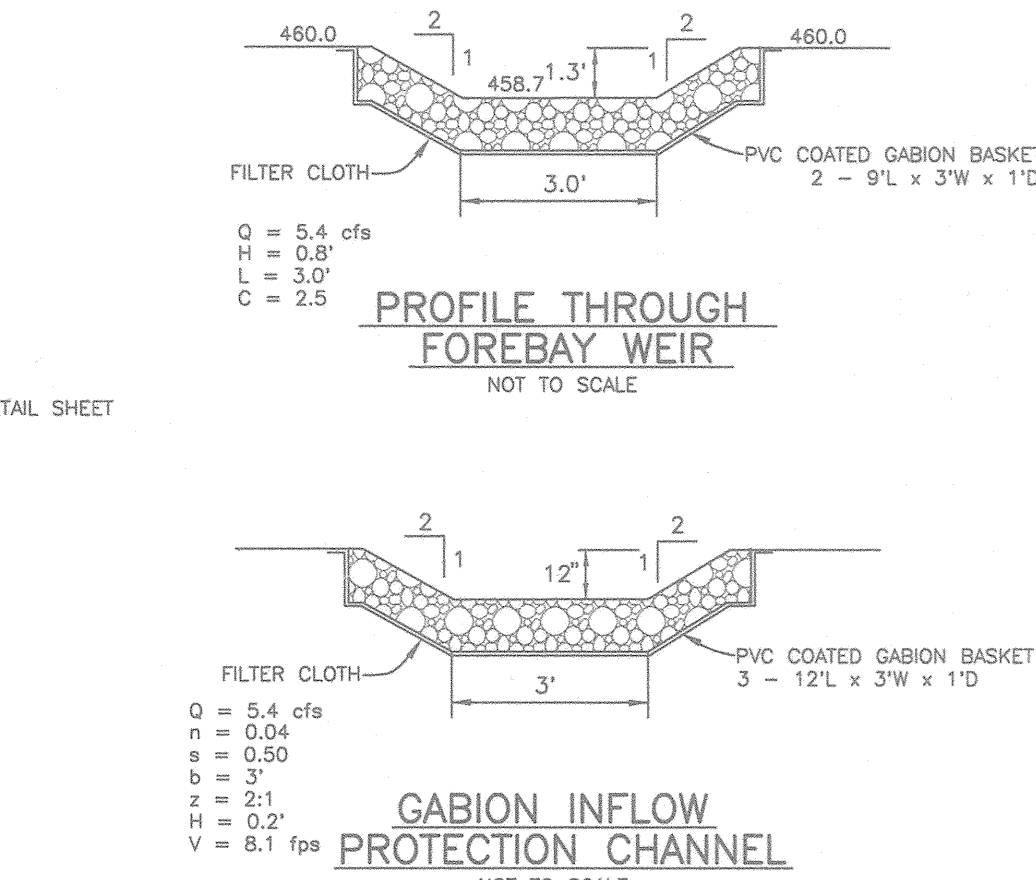
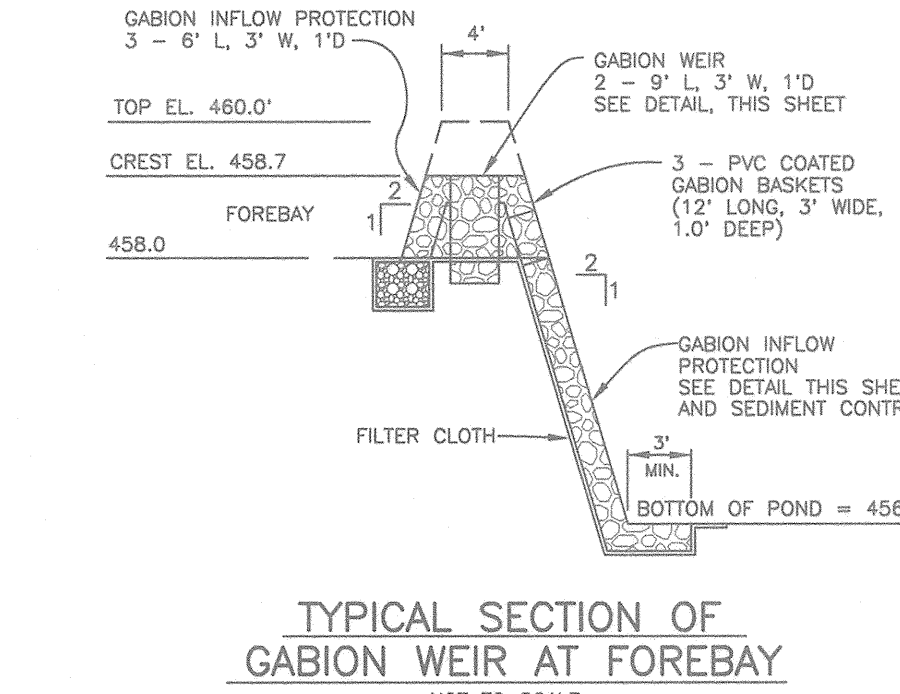
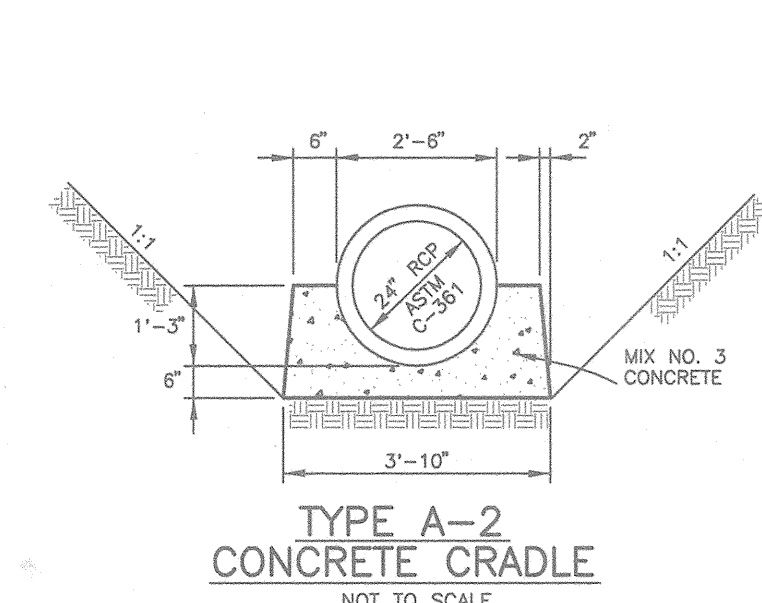
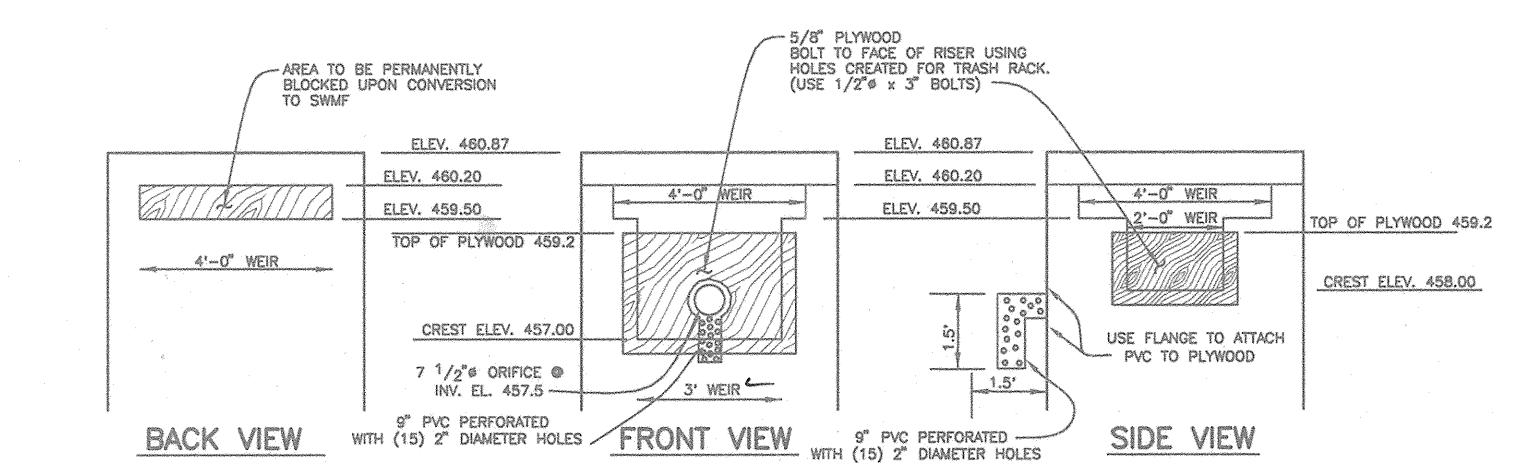
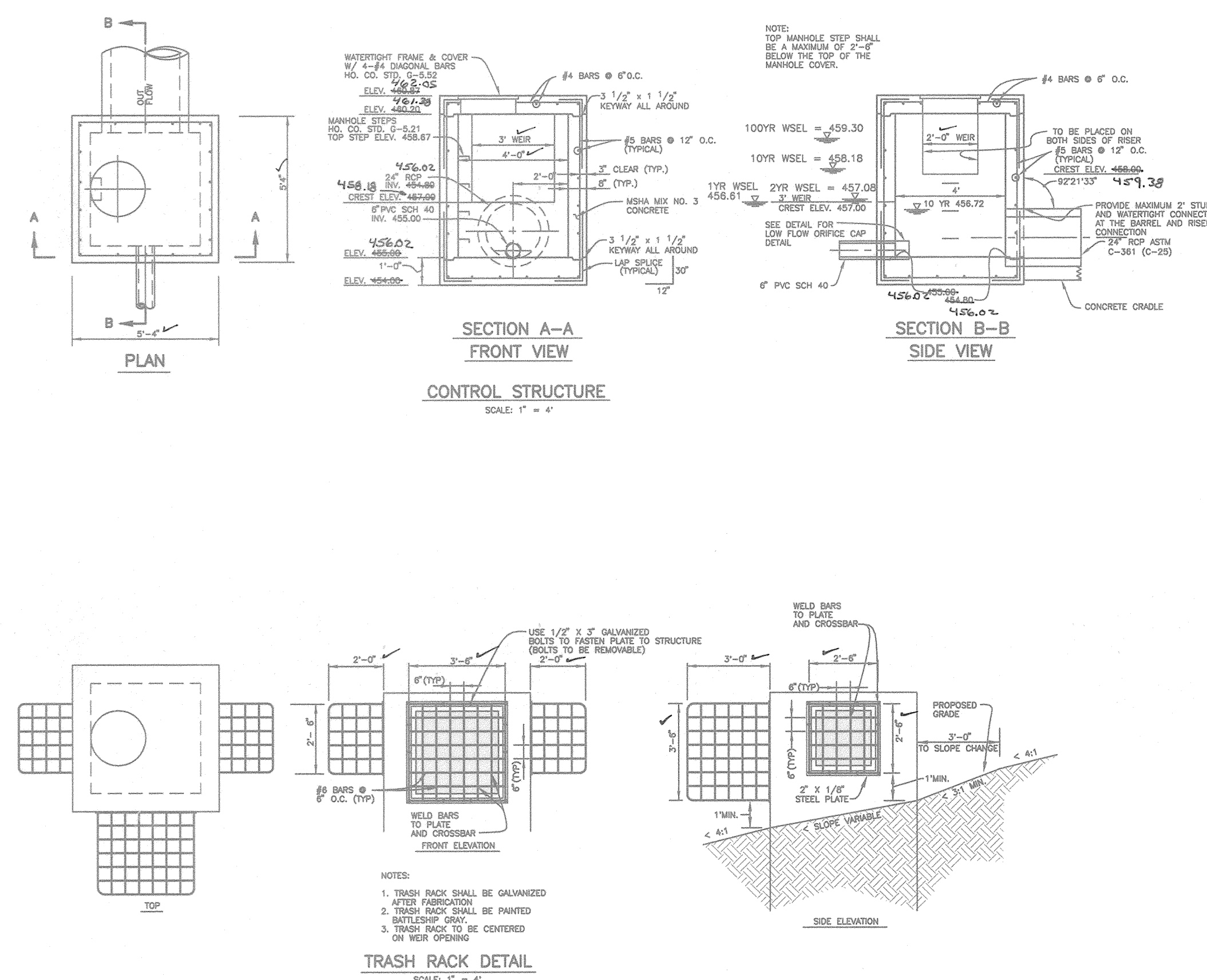
DATE: MARCH, 2001 PROJECT NO. 1251
SCALE: AS SHOWN DRAWING 13 OF 17

OWNER/DEVELOPER: SDC GROUP, INC. P.O. BOX 417 ELLICOTT CITY, MD 21041 410-465-4244

PROJECT: THE WOODS OF WELLINGTON
LOTS 1-24 AND NON-BUILDABLE PRES. PARCELS 'A' THRU 'D'

LOCATION: TAX MAP NO. 14, GRID NO. 20 TAX MAP NO. 21, GRID NO. 2 P/O PARCEL 248 4th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: STORMWATER MANAGEMENT DETAILS - FACILITY #1



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, SC'S "STANDARDS AND SPECIFICATIONS FOR PONDS (MD-378)". THE POND OWNER(S) AND ANY HEIRS, SUCCESSORS, ASSIGNS SHALL BE RESPONSIBLE FOR THE SAFETY OF THE POND AND THE CONTINUED OPERATION, SURVEILLANCE, INSPECTION, AND MAINTENANCE THEREOF. THE POND OWNER 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 ENGINEER PE NO. 21443 DATE 10/3/05

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.

ENGINEER'S CERTIFICATE

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

Donald Mason ENGINEER - DONALD A. MASON, P.E. # 21443 DATE 10/3/01

DEVELOPER'S CERTIFICATE

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

SDC Group Inc. DEVELOPER DATE 10/3/01

Jim Meyer DEVELOPER DATE 10/18/01

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

USDA - NATURAL RESOURCES CONSERVATION SERVICE DATE 10/18/01

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

John Kelly HOWARD SCD DATE 10/18/01

APPROVED: DEPARTMENT OF PUBLIC WORKS
Andrew M. Sander 10-25-01 DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cindy Hamilton 10/29/01 DATE

Don Damman CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 10/25/01

NO.	DATE	REVISION
1	9/27/05	REVISED PER AS-BUILT CONDITIONS

BENCHMARK ENGINEERING, INC.

8480 BALTIMORE NATIONAL PIKE & SUITE 418
ELLICOTT CITY, MARYLAND 21043
PHONE: 410-465-8105 FAX: 410-465-8644
EMAIL: benchmark@colls.com

Donald Mason
As-Built 10/3/05

OWNER/DEVELOPER: SDC GROUP, INC. P.O. BOX 417 ELLICOTT CITY, MD 21041 410-465-4244	PROJECT: THE WOODS OF WELLINGTON LOTS 1-24 AND NON-BUILDABLE PRES. PARCELS 'A' THRU 'D'
LOCATION: TAX MAP NO. 14, GRID NO. 20 TAX MAP NO. 21, GRID NO. 2 P/O PARCEL 248 4th ELECTION DISTRICT HOWARD COUNTY, MARYLAND	TITLE: STORMWATER MANAGEMENT DETAILS - FACILITY #2
DATE: MARCH, 2001 MAY, 2001	PROJECT NO. 1251
DESIGN: GWF/MLV DRAFT: JMC	SCALE: AS SHOWN DRAWING 14 OF 17

CONSTRUCTION SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard for practice MD-37B. All references to ASTM and AASHTO specifications apply to the most recent version.

Site Preparation

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped to 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.

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.

Earth Fill

Material - The fill material shall be taken from approved designated borrow areas. If soil is not available, fill shall be obtained from other sources.

Materials used in the outer shell of the embankment must have the capability to support vegetation of the quality required to prevent erosion of the embankment.

Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Materials shall be placed in minimum 9 inch thick (before compaction) layers which are to 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 track of heavy equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller.

When required by the reviewing agency the minimum required density shall not be less than 95% of maximum dry density with a moisture content within ± 2% of the optimum.

Cut-Off Trench - The cutoff trench shall be excavated into impervious material along or parallel to the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation...

Embankment Core - The core shall be parallel to the centerline of the embankment as shown on the plans. The top width of the cores shall be a minimum of four feet.

Structure Backfill

Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manual directed compaction equipment.

Structure backfill may be flowable fill meeting the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 313 as modified.

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 - (Polymer Coated steel pipe) - Steel pipes with polymeric coatings shall have minimum coating thickness of 0.01 inches on both sides of the pipe.

Materials - (Aluminum Coated Steel Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-274 with watertight coupling bands or flanges.

Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-198 or M-211 with watertight coupling bands or flanges.

Aluminum surfaces that are to be in contact with concrete shall be pointed with one coat of zinc chromate primer or two coats of asphalt.

Materials - (Aluminum Pipe) - This pipe and its appurtenances shall conform to the requirements of AASHTO Specification M-198 or M-211 with watertight coupling bands or flanges.

HILLIS-CARNES ENGINEERING ASSOCIATES, INC. RECOMMENDATIONS

Embankment and Cut-off trench Construction

The site should be stripped of topsoil and any other unsuitable materials from the embankment or structure area in accordance with Soil Conservation Guidelines. After stripping operations have been completed, the exposed subgrade materials should be profiled with a loaded dumptruck or similar equipment in the presence of a geotechnical engineer or his representative.

A representative of the geotechnical Engineer should be present to monitor placement and compaction of fill for each embankment and cut-off trench. In accordance with Maryland Soil Conservation Specification 37B, soils considered suitable for the center of embankment and cut-off trench shall conform to Unified Soil Classification CC, SC, CH, or CL.

It is our professional opinion that in addition to the soil materials described above a fine-grain soil, including silt (ML) with a plasticity index of 10 or more can be utilized for the center of the embankment and core trench.

OPERATION AND MAINTENANCE SCHEDULE

STORMWATER MANAGEMENT FACILITY

ROUTINE MAINTENANCE (BY HOMEOWNERS ASSOC.)

- 1. FACILITY SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHOULD BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE POND IS FUNCTIONING PROPERLY.
2. 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.
3. DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
4. 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 (BY HOWARD COUNTY)

- 1. 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.
2. 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.

Table with columns: ELEV., SOIL DESCRIPTION, STRA., DEPTH, SAMPLE NO., BORING & SAMPLING NOTES. Includes data for borings 1 through 7.

STANDARD PENETRATION TEST - DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30" COUNT MADE AT 6" INTERVALS

Table with columns: ELEV., SOIL DESCRIPTION, STRA., DEPTH, SAMPLE NO., BORING & SAMPLING NOTES. Includes data for borings 1 through 4.

STANDARD PENETRATION TEST - DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30" COUNT MADE AT 6" INTERVALS

Table with columns: ELEV., SOIL DESCRIPTION, STRA., DEPTH, SAMPLE NO., BORING & SAMPLING NOTES. Includes data for borings 1 through 5.

STANDARD PENETRATION TEST - DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30" COUNT MADE AT 6" INTERVALS

Table with columns: ELEV., SOIL DESCRIPTION, STRA., DEPTH, SAMPLE NO., BORING & SAMPLING NOTES. Includes data for borings 1 through 5.

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Table with columns: ELEV., SOIL DESCRIPTION, STRA., DEPTH, SAMPLE NO., BORING & SAMPLING NOTES. Includes data for borings 1 through 5.

STANDARD PENETRATION TEST - DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30" COUNT MADE AT 6" INTERVALS

STORMWATER MANAGEMENT FACILITY #1

Table with columns: ELEV., SOIL DESCRIPTION, STRA., DEPTH, SAMPLE NO., BORING & SAMPLING NOTES. Includes data for borings 1 through 5.

STANDARD PENETRATION TEST - DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30" COUNT MADE AT 6" INTERVALS

STORMWATER MANAGEMENT FACILITY #2

Table with columns: ELEV., SOIL DESCRIPTION, STRA., DEPTH, SAMPLE NO., BORING & SAMPLING NOTES. Includes data for borings 1 through 5.

STANDARD PENETRATION TEST - DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30" COUNT MADE AT 6" INTERVALS

Table with columns: ELEV., SOIL DESCRIPTION, STRA., DEPTH, SAMPLE NO., BORING & SAMPLING NOTES. Includes data for borings 1 through 5.

STANDARD PENETRATION TEST - DRIVING 2" OD SAMPLER 1' WITH 140# HAMMER FALLING 30" COUNT MADE AT 6" INTERVALS

21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL

DEFINITION

PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION.

PURPOSE

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 MATERIALS.

CONDITIONS WHERE PRACTICE APPLIES

- I. THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
A. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
B. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
C. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
D. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.

II. FOR THE PURPOSE OF THESE STANDARDS AND SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN FOR ADEQUATE STABILIZATION. AREAS HAVING SLOPES STEEPER THAN 2:1 SHALL HAVE THE APPROPRIATE STABILIZATION SHOWN ON THE PLANS.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

I. TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE DETERMINED BY THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-SCS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION.

II. TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:

- I. TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE AUTHORITY. REGARDS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN SIX (6) PERCENT VOL. OF COARSE STONES, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2" IN DIAMETER.
II. TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACK GRASS, JOHNSON GRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
III. WHERE THE SUBSOIL IS EITHER 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.
III. FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:
I. ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS INDICATING FERTILIZER AND LIME DEFICIENCIES REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:
A. PH FOR TOPSOIL SHALL BE BETWEEN 6.0 AND 7.5. IF THE TESTED SOIL DEMONSTRATES A PH OF LESS THAN 6.0, SUFFICIENT LIME SHALL BE APPLIED TO RAISE THE PH TO 6.5 OR HIGHER.
B. ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN 1.5 PERCENT BY WEIGHT.
C. TOPSOIL HAVING SOLUBLE SALT CONTENT GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.

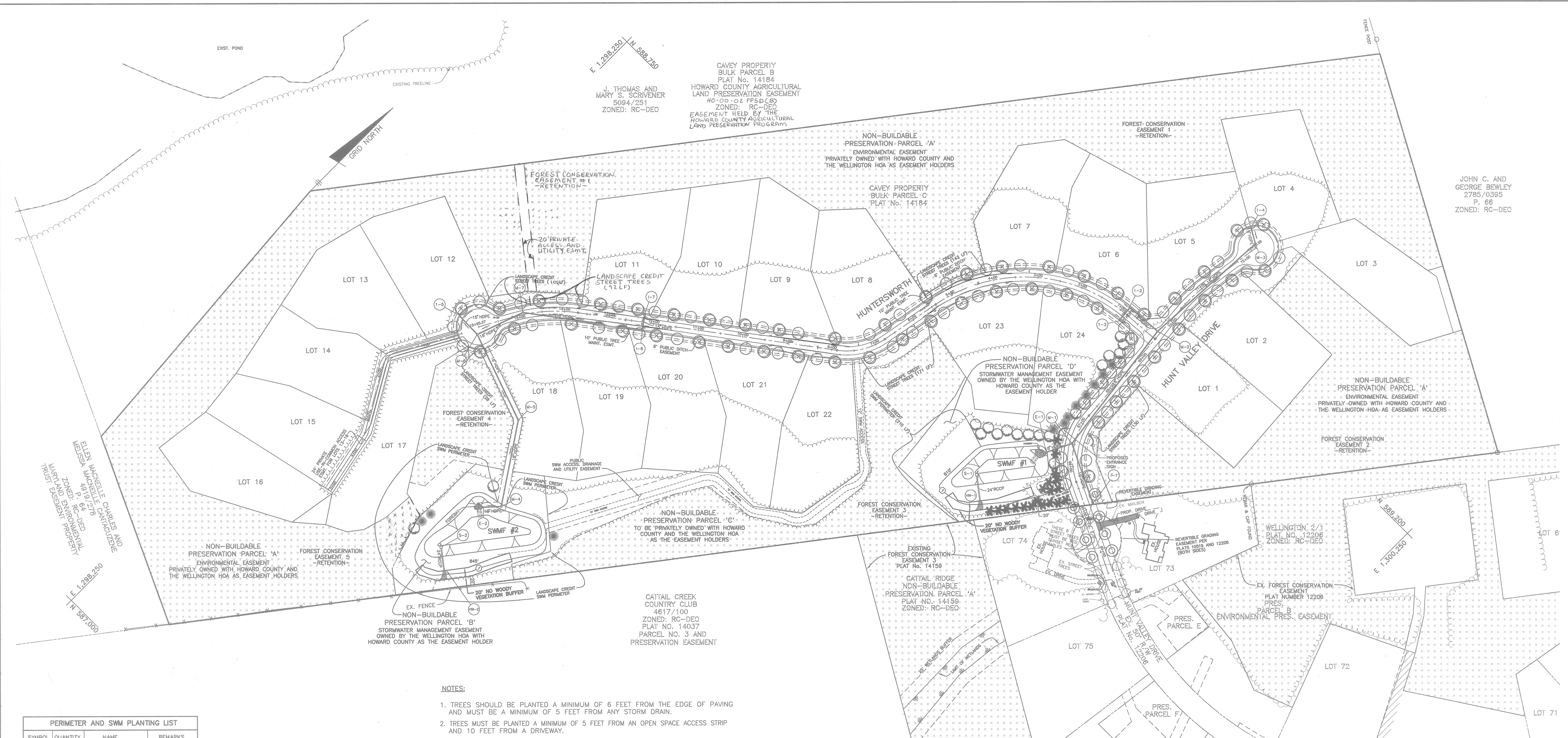
REFERENCES: GUIDELINE SPECIFICATIONS, SOIL PREPARATION AND SODDING. MD-VA, PUB. #1, COOPERATIVE EXTENSION SERVICE, UNIVERSITY OF MARYLAND AND VIRGINIA POLYTECHNIC INSTITUTES, REVISED 1973.

Approval stamps and signatures for Jim Myers, Howard SCD, and various departments including Department of Public Works, Department of Planning and Zoning, and Department of Land Development.

Table with columns: NO., DATE, REVISION. Entry 2: 1/28/02 REVISE SWM EASEMENT DESIGNATION

BENCHMARK ENGINEERS & LAND SURVEYORS & PLANNERS logo and contact information for Baltimore, Maryland.

Table with columns: OWNER/DEVELOPER, PROJECT, LOCATION, TITLE, DATE, PROJECT NO., DESIGN, DRAFT.



CAVEY PROPERTY
BULK PARCEL B
PLAT No. 14184
HOWARD COUNTY AGRICULTURAL
LAND PRESERVATION EASEMENT
40-00-02 PPSD (B)
ZONED: RC-DEC
EASEMENT HELD BY THE
HOWARD COUNTY AGRICULTURAL
LAND PRESERVATION PROGRAM

JOHN C. AND
GEORGE BEWLEY
2785/0395
P. 66
ZONED: RC-DEC

NOTES:

- TREES SHOULD BE PLANTED A MINIMUM OF 6 FEET FROM THE EDGE OF PAVING AND MUST BE A MINIMUM OF 5 FEET FROM ANY STORM DRAIN.
- TREES MUST BE PLANTED A MINIMUM OF 5 FEET FROM AN OPEN SPACE ACCESS STRIP AND 10 FEET FROM A DRIVEWAY.
- SEE TREE PLANTING DETAIL - THIS SHEET.
- THE DEVELOPER SHALL BE RESPONSIBLE FOR STREET TREES, STORM WATER MANAGEMENT FACILITY PERIMETER PLANTING AND PRESERVATION OF THE PERIMETER VEGETATION AS SHOWN ON THESE PLANS.
- PERIMETER AND SWM LANDSCAPE SURETY FOR 18 SHADE TREES AND 30 EVERGREEN TREES OF \$9,900.00 AND SURETY FOR 115 STREET TREES, SHALL BE PART OF THE D.P.W. DEVELOPERS AGREEMENT.

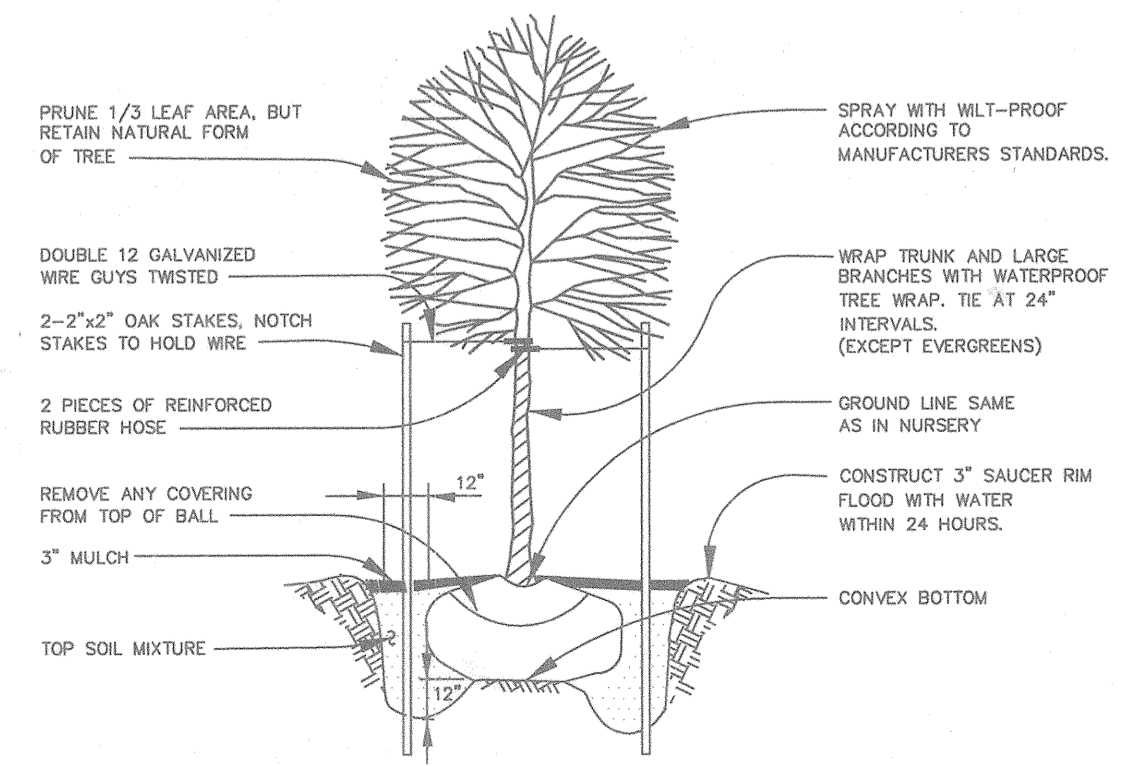
SYMBOL	QUANTITY	NAME	REMARKS
○	18	FRAXINUS PENNSYLVANICA "Patmore" (Patmore Green Ash)	2 1/2" MIN. CAL. B&B FULL HEAD
●	11	PINUS STROBUS (Eastern White Pine)	5'-6" HT. UNSHARED
✱	19	PINUS STROBUS (Eastern White Pine)	8'-10" HT. SHEARED

LINEAR FEET OF PERIMETER	FACILITY 1	FACILITY 2
810	B10	B45
28%	B	B
YES ①	YES ①	YES ②
NO	NO	NO
600	120	
12	2	
15	3	
10	2	
19 ③	3	

CATEGORY	ADJACENT TO ROADS	ADJACENT TO PERIMETER PROP.
LANDSCAPE TYPE	LOT 24 - TYPE B	TYPE A
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	285 (ALONG HUNT VALLEY DRIVE)	7458 ①
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	YES, 7458' ②
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO
NUMBER OF PLANTS REQUIRED	285 L.F.	
SHADE TREES	6	
EVERGREEN TREES	8	
OTHER TREES (2:1 SUBSTITUTE)		
SHRUBS		
NUMBER OF PLANTS PROVIDED	6	
SHADE TREES	8	
EVERGREEN TREES	8	
OTHER TREES (2:1 SUBSTITUTE)		
SHRUBS (10:1 SUBSTITUTE)		

LINEAR FRONTAGE OF ROADWAY:	5,282
FRONTAGE ADJACENT TO PRESERVED WOODS:	666
LINEAR FRONTAGE OF REQUIREMENT:	4,616
NUMBER OF STREET TREES REQUIRED:	115
NUMBER OF STREET TREES PROVIDED:	115

SYMBOL	QUANTITY	NAME	REMARKS
⊕	54	Prunus sargentii (Sargent Cherry)	2 1/2" MIN. CAL. B&B FULL HEAD
○	53	Platanus x acerifolia (Bloodgood London Plane)	2 1/2" MIN. CAL. B&B FULL HEAD
⊙	8	Acer Rubrum Red Sunset (RED SUNSET RED MAPLE)	3" MIN. CAL. B&B FULL HEAD



TREE PLANTING DETAIL
NOT TO SCALE

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

SDC GROUP, INC.
By: *[Signature]* 10/3/01
OWNER/DEVELOPER STEVEN K. BREEDEN DATE

APPROVED: DEPARTMENT OF PUBLIC WORKS
[Signature] 10-25-01
CHIEF, BUREAU OF HIGHWAYS DATE

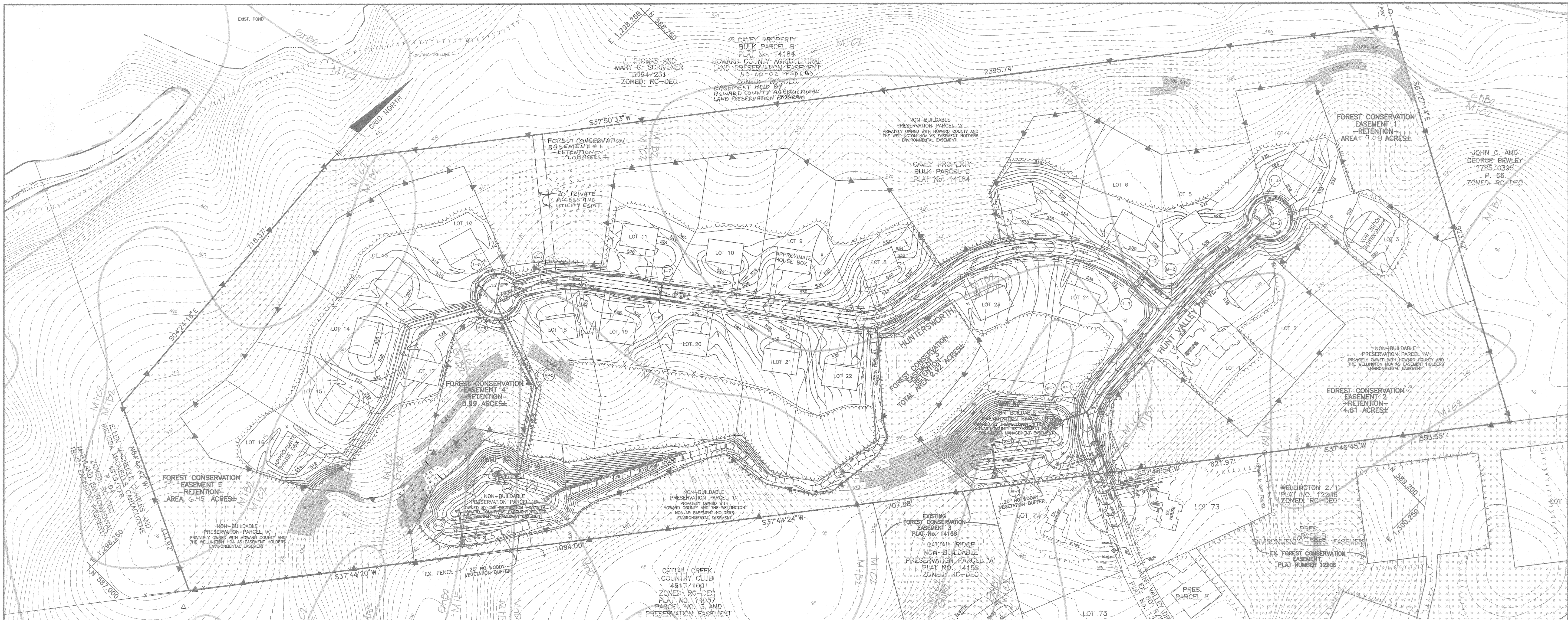
APPROVED: DEPARTMENT OF PLANNING AND ZONING
[Signature] 10/23/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

NO.	DATE	REVISION
3	2/13/03	ADD ACCESS EASEMENT AND REVISE FOREST CONSERVATION EASEMENT
2	1/15/02	REMOVE SPEED CONTROL ISLANDS
1	7/09/01	REV PER HO. CO. COMMENTS OF 6/21/01

BENCHMARK
ENGINEERS & LAND SURVEYORS & PLANNERS
ENGINEERING, INC.
8480 BALTIMORE NATIONAL PIKE & SUITE 418
ELLCOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 FAX: 410-465-6644
EMAIL: benchmark@cois.com

[Signature]
DONALD MASON
REGISTERED PROFESSIONAL ENGINEER

OWNER/DEVELOPER:	PROJECT:
SDC GROUP, INC. P.O. BOX 417 ELLCOTT CITY, MD 21041 410-465-4244	THE WOODS OF WELLINGTON LOTS 1-24 AND NON-BUILDABLE PRES. PARCELS 'A' THRU 'D'
TITLE:	LANDSCAPE PLAN, NOTES AND DETAILS
DATE:	MARCH, 2001 PROJECT NO. 1251 MAY, 2001
DESIGN:	GWF DRAFT: JMC SCALE: 1" = 100' DRAWING 16 OF 17



FOREST DATA	
	ACRES
GROSS AREA: FLOODPLAIN/UNFORESTED PRESERVATION	59.5
PARCEL:	0
NET TRACT AREA (NTA) :	59.5
EXISTING FOREST (NTA) :	59.5
AFFORESTATION THRESHOLD:	11.9
REFORESTATION THRESHOLD:	14.9
BREAK-EVEN POINT:	14.9
FOREST TO BE CLEARED (NTA) :	35.5
FOREST TO BE RETAINED (NTA) :	24.1
FOREST TO BE RETAINED IN FCE:	24.1

FOREST CONSERVATION TABULATION			
DESIGNATION	TYPE	ACREAGE	
1	RETENTION	4.08	
2	RETENTION	4.61	
3	RETENTION	2.92	
4	RETENTION	0.99	
	RETENTION	6.45	
TOTAL		ALL RETENTION	24.05

SEQUENCE OF CONSTRUCTION

- 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.
- REMOVE HAZARDOUS TREES (DEAD, DISEASED OR THOSE SUBJECT TO WIND THROWS) ALONG THE EDGE OF THE FOREST RETENTION AREAS AS WELL AS WITHIN OTHER TREE SAVE AREAS.
- SIGNAGE SHALL BE INSTALLED AS PER THE FOREST PROTECTION DEVICES SHOWN ON THE FOREST CONSERVATION PLAN.

FCP NOTES:

- ANY FOREST CONSERVATION EASEMENT (FCE) AREA SHOWN HEREON IS SUBJECT TO PROTECTIVE COVENANTS WHICH MAY BE FOUND IN THE LAND RECORDS OF HOWARD COUNTY WHICH RESTRICT THE DISTURBANCE AND USE OF THESE AREAS.
- FORESTED AREAS OCCURRING OUTSIDE OF THE FCE SHALL NOT BE CONSIDERED PART OF THE FCE AND SHALL NOT BE SUBJECT TO PROTECTIVE LAND COVENANTS.
- LIMITS OF DISTURBANCE SHALL BE RESTRICTED TO AREAS OUTSIDE THE LIMIT OF TEMPORARY FENCING OR THE FCE BOUNDARY, WHICHEVER IS GREATER.
- THERE SHALL BE NO CLEARING, GRADING, CONSTRUCTION OR DISTURBANCE OF VEGETATION IN THE FOREST CONSERVATION EASEMENT, EXCEPT AS PERMITTED BY HOWARD COUNTY DPZ.
- NO STOCKPILES, PARKING AREAS, EQUIPMENT CLEANING AREAS, ETC. SHALL OCCUR WITHIN AREAS DESIGNATED AS FOREST CONSERVATION EASEMENTS.
- TEMPORARY FENCING SHALL BE USED TO PROTECT FOREST RESOURCES DURING CONSTRUCTION. THE FENCING SHALL BE PLACED ALONG ALL FCE BOUNDARIES WHICH OCCUR WITHIN 25 FEET OF THE PROPOSED LIMITS.
- PERMANENT SIGNAGE SHALL BE PLACED 50'-100' APART ALONG THE BOUNDARIES OF ALL AREAS INCLUDED IN FOREST CONSERVATION EASEMENTS. SIGNS SHALL BE MOUNTED ON A PERMANENT WOOD POST OR METAL STAKE. FCE SIGNS SHALL NOT BE ATTACHED TO TREES.
- THE FOREST CONSERVATION OBLIGATION FOR THIS SUBDIVISION WILL BE FULFILLED BY RETENTION OF 24.05 ACRES OF EXISTING FOREST IN FOREST CONSERVATION EASEMENTS WHICH IS GREATER THAN THE REQUIRED BREAK-EVEN POINT FOR THIS PROJECT.

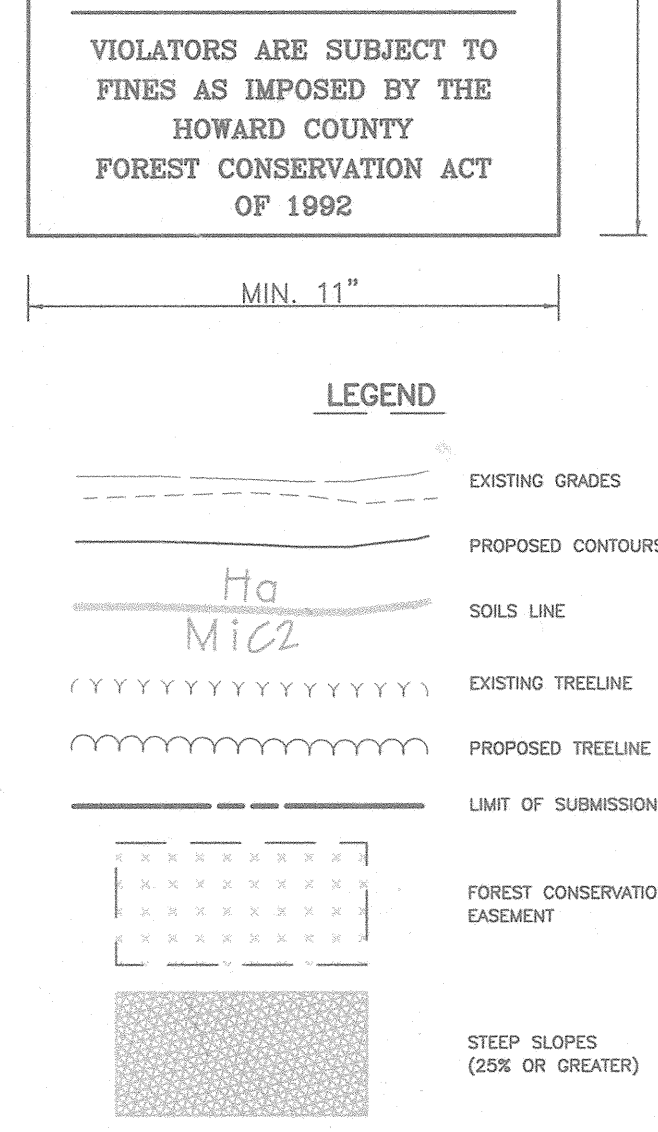
APPENDIX E FOREST CONSERVATION WORKSHEET

	ACRES (1/10 acre)		ACRES (1/10 acre)
I. BASIC SITE DATA			
GROSS SITE AREA	59.5	A. NET TRACT AREA	59.5
AREA WITHIN 100 YEAR FLOOD PLAIN	0	B. REFORESTATION THRESHOLD (25% x A)	14.9
AREA WITHIN AGRICULTURAL USE OR PRESERVATION PARCEL (IF APPLICABLE)		C. AFFORESTATION MINIMUM (20% x A)	11.9
NET TRACT AREA	59.5	D. EXISTING FOREST ON NET TRACT AREA	59.5
LAND USE CATEGORY (R-RLD, R-RMD, R-S, C, V/O, I)	R-RMD	E. FOREST AREAS TO BE CLEARED	35.4
		F. FOREST AREAS TO BE RETAINED (RETENTION)	24.1
II. INFORMATION FOR CALCULATIONS			
A. NET TRACT AREA	59.5	I. FOREST AREAS RETAINED ABOVE REFORESTATION THRESHOLD	9.2
B. REFORESTATION THRESHOLD (25% x A)	14.9	(F-B, Retention Credit, if applicable)	
C. AFFORESTATION MINIMUM (20% x A)	11.9		
D. EXISTING FOREST ON NET TRACT AREA	59.5	SELECT THE ALTERNATE THAT APPLIES:	
E. FOREST AREAS TO BE CLEARED	35.4	1. Clearing above the threshold only	
F. FOREST AREAS TO BE RETAINED (RETENTION)	24.1	If forest areas to be retained equal or are greater than the reforestation threshold (if F equals or is greater than B), the following calculations apply:	
III. DETERMINING REQUIREMENTS: AFFORESTATION OR REFORESTATION			
1. Reforestation		REFORESTATION FOR CLEARING ABOVE THRESHOLD	8.9
If existing forest areas equal or exceed the afforestation minimum (if D equals or is more than C), and clearing of forest areas is proposed, reforestation requirements may apply.		CREDIT FOR FOREST AREAS RETAINED ABOVE THRESHOLD	9.2
GO TO SECTION IV		TOTAL REFORESTATION REQUIRED	0
If existing forest areas equal or exceed the afforestation minimum (if D equals or is more than C), and no clearing of existing forest resources is proposed, no reforestation is required. No further calculations are needed.		If the total reforestation requirement is equal to or less than 0, no reforestation is required.	
2. Afforestation		2. Clearing below the threshold	
If existing forest areas are less than the afforestation minimum (if D is less than C), afforestation requirements apply.		If forest areas to be retained are less than the reforestation threshold (if F is less than B), the following calculations apply:	
GO TO SECTION V		REFORESTATION FOR CLEARING ABOVE THRESHOLD	G x 1/4
PROTECTIVE TECHNIQUE LEGEND			
X-X-X TEMPORARY FENCING (SEE DETAIL)		REFORESTATION FOR CLEARING BELOW THRESHOLD	H x 2
▲ PERMANENT SIGNAGE		TOTAL REFORESTATION REQUIRED	(G x 1/4) + (H x 2)
		Since clearing occurs below the threshold, no forest retention credit is possible	

FOREST RETENTION AREA

MACHINERY, DUMPING OR STORAGE OF ANY MATERIALS IS PROHIBITED

VIOLATORS ARE SUBJECT TO FINES AS IMPOSED BY THE HOWARD COUNTY FOREST CONSERVATION ACT OF 1992



SOILS LEGEND		SOIL SURVEY SHEET 12
MFP SYMBOL	SOIL GROUP	SOIL TYPE
EC3	B	ELIOAK SILTY CLAY LOAM, 8 TO 15% SLOPES, SEVERELY ERODED
GB2	B	GLENELG LOAM, 3 TO 8% SLOPES, MODERATELY ERODED
GC2	B	GLENELG LOAM, 8 TO 15% SLOPES, MODERATELY ERODED
GC3	B	GLENELG LOAM, 8 TO 15% SLOPES, SEVERELY ERODED
GhB2	* C	GLENVILLE SILT LOAM, 3 TO 8% SLOPES, MODERATELY ERODED
MB2	B	MANOR LOAM, 3 TO 8% SLOPES, MODERATELY ERODED
MIC2	B	MANOR LOAM, 8 TO 15% SLOPES, MODERATELY ERODED
MC3	B	MANOR LOAM, 8 TO 15% SLOPES, SEVERELY ERODED
ME	B	MANOR LOAM, 25 TO 45 % SLOPES

* INDICATES A HYDRIC SOIL

3	2/13/03	ADD ACCESS EASEMENT AND REVISE FOREST CONSERVATION EASEMENT
2	11/15/02	REMOVE SPEED CONTROL ISLANDS
1	7/10/01	REV PER HO. CO. COMMENTS OF 6/21/01
NO.	DATE	REVISION

BENCHMARK ENGINEERING, INC.

8480 BALTIMORE NATIONAL PIKE & SUITE 418
ELICOTT CITY, MARYLAND 21043
PHONE: 410-465-8105 FAX: 410-465-8644
EMAIL: benchmark@ceils.com

APPROVED: DEPARTMENT OF PUBLIC WORKS
Andrew M. Quake 10-25-01
CHIEF, BUREAU OF HIGHWAYS

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Cinda Hamrick 10/29/01
CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: DEPARTMENT OF PLANNING AND ZONING
John D. ... 10/29/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION

OWNER/DEVELOPER: SDC GROUP, INC.
P.O. BOX 417
ELICOTT CITY, MD 21041
410-465-4244

PROJECT: THE WOODS OF WELLINGTON
LOTS 1-24 AND NON-BUILDABLE PRES. PARCELS 'A' THRU 'D'

LOCATION: TAX MAP NO. 14, GRID NO. 20
TAX MAP NO. 21, GRID NO. 2
P/O PARCEL 246
4th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: FOREST CONSERVATION PLAN, NOTES AND DETAILS

DATE: MARCH, 2001 PROJECT NO. 1251
MAY, 2001

DESIGN: GWF DRAFT: JMC SCALE: 1" = 100' DRAWING 17 OF 17