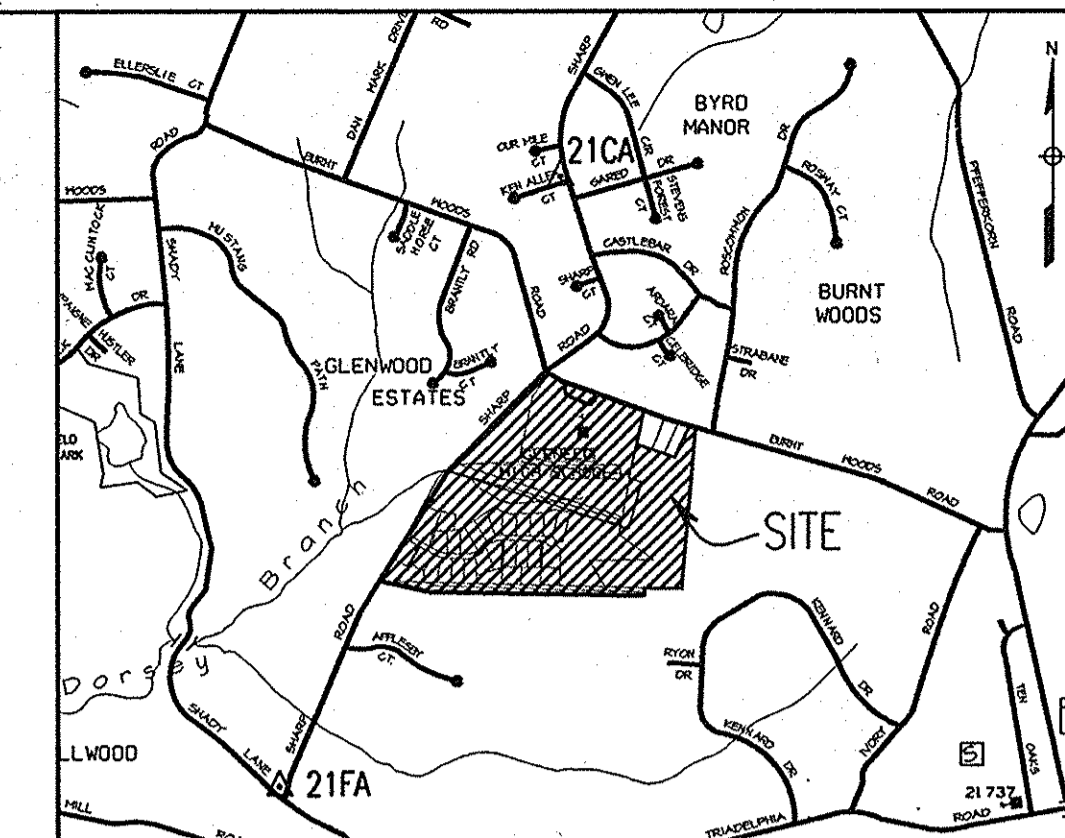
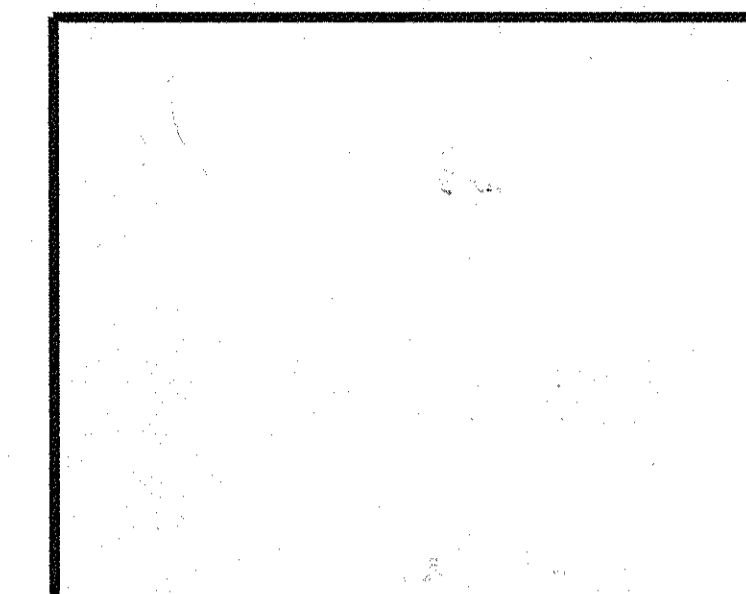


# GLENELG HIGH SCHOOL HOWARD COUNTY, MARYLAND TREATMENT SYSTEM DESIGN

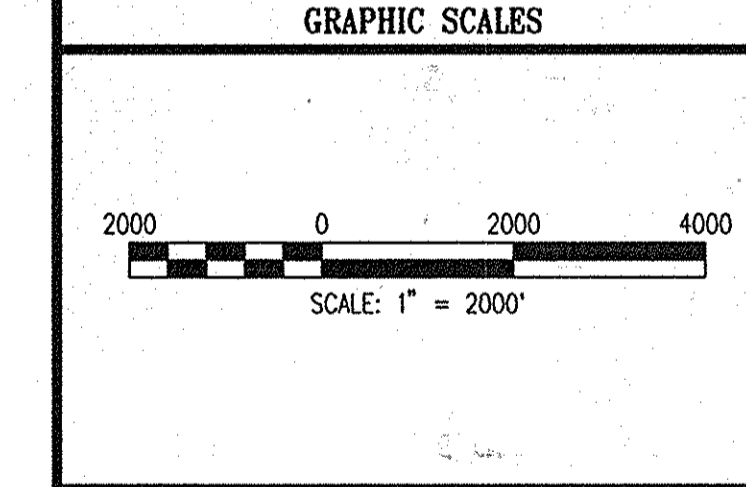
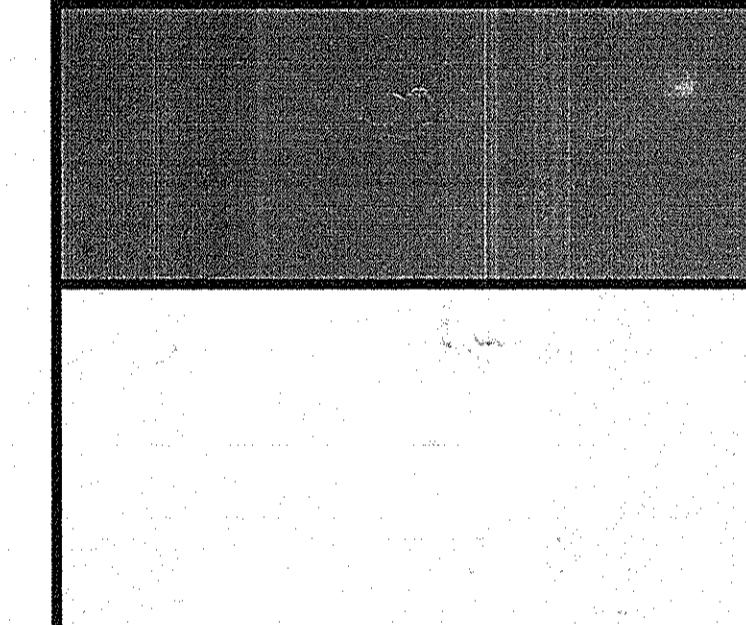


**VICINITY MAP**  
SCALE: 1" = 2000'

REVISIONS	
MDE W&SC PERMIT SET	4/05/06
SDP FINAL SUBMISSION	4/20/06
<b>Δ</b> INSERT NEW SHEETS, UPDATED INDEX	<b>6-16-14</b>



## GLENELG HIGH SCHOOL HOWARD COUNTY MD TREATMENT SYSTEM DESIGN



WHITMAN, REQUARDT AND ASSOCIATES, LLP  
801 SOUTH CAROLINE STREET  
BALTIMORE, MARYLAND 21231  
410 - 235 - 3450

**Δ REVISED SITE DEVELOPMENT PLAN**

### COVER SHEET, VICINITY MAP, AND LIST OF DRAWING

	DRAWING NO.  <h1 style="text-align: center;">G-1</h1>
SHEET 1 OF 24	
SCALE: AS NOTED	
DES: CMD    CHECK: AUO    DATE: 04/20/06	

LIST OF DRAWINGS		
DRAWING NO.	SHEET NO.	TITLE
<b>CIVIL</b>		
G-1	1 OF 24	COVER SHEET, VICINITY MAP AND LIST OF DRAWINGS
C-1	2 OF 24	GENERAL NOTES, LEGEND AND ABBREVIATIONS
C-2	3 OF 24	DEMOLITION PLAN
C-3	4 OF 24	TREATMENT SYSTEM SITE PLAN
C-4	5 OF 24	TREATMENT SYSTEM COLLECTION AND DISCHARGE PLAN OVERVIEW
C-5	6 OF 24	TREATMENT SYSTEM UTILITY PLAN
C-6	7 OF 24	TREATMENT SYSTEM UTILITY PLAN
C-7	8 OF 24	TREATMENT SYSTEM UTILITY PLAN
C-8	9 OF 24	TREATMENT SYSTEM STAKEOUT DATA TABLES
C-9	10 OF 24	ACCESS ROAD SEDIMENT AND EROSION CONTROL PLAN & ROAD PLAN OVERVIEW
C-10	11 OF 24	TEMPORARY ACCESS ROAD SEDIMENT & EROSION CONTROL PLAN
C-11	12 OF 24	TEMPORARY ACCESS ROAD SEDIMENT & EROSION CONTROL PLAN
C-12	13 OF 24	TREATMENT SYSTEM SEDIMENT & EROSION CONTROL PLAN
C-13	14 OF 24	TEMPORARY ACCESS ROAD PROFILE
C-14	15 OF 24	TEMPORARY ACCESS ROAD PROFILE
C-15	16 OF 24	SEDIMENT CONTROL DRAINAGE AREA MAP
C-16	17 OF 24	2" - 2 1/2" LOW PRESSURE SYSTEM PROFILE
C-17	18 OF 24	4" FORCE MAIN PROFILE
C-18	19 OF 24	DISPOSAL CELL PROFILES
C-19	20 OF 24	DETAILS
C-20	21 OF 24	DETAILS
C-21	22 OF 24	DETAILS
C-22	23 OF 24	SEDIMENT CONTROL DETAILS AND NOTES
C-23	24 OF 24	FOREST CONSERVATION AND WETLANDS RESTORATION PLAN
<b>SITE ANALYSIS DATA CHART</b>		
TOTAL PROJECT AREA:	112.52 AC	
AREA OF PLAN SUBMISSION:	112.52 AC	
LIMIT OF DISTURBED AREA:	11.10 AC	
PRESENT ZONING DESIGNATION:	RR-DEO	
PROPOSED USE FOR SITE AND STRUCTURES:	WASTEWATER TREATMENT FOR GLENELG HIGH SCHOOL AND MUSGROVE FARMS DEVELOPMENT. WATER SUPPLY (WELLS AND DISTRIBUTION) FOR GLENELG HIGH SCHOOL.	
FLOOR SPACE FOR TREATMENT SYSTEM BLDG:	4102.2 FT <sup>2</sup>	
APPLICABLE DPZ FILE REFERENCES:	SDP-00-69, SDP-70-46, SDP-81-184, SDP-85-105, SP-03-11, F-03-128, F-05-70, F-05-177	
	25 OF 36	<b>TITLE SHEET (FIELD IMPROVEMENTS)</b>
	26 OF 36	<b>EXISTING PLAN/DEMOLITION PLAN</b>
	27 OF 36	<b>STAKE-OUT PLAN</b>
	28 OF 36	<b>SITE PLAN AND EROSION &amp; SEDIMENT CONTROL PLAN</b>
	29 OF 36	<b>SEPTIC DRAIN FIELD IMPLEMENTATION PLAN</b>
	30-34 OF 36	<b>SITE DETAILS I, II, III, IV &amp; V</b>
	35 OF 36	<b>PIPE PROFILES</b>
	36 OF 36	<b>EROSION AND SEDIMENT CONTROL NOTES AND DETAILS</b>

### GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARD AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880.
3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
4. ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
5. WATER AND SEWER IS PRIVATE.
6. STORMWATER MANAGEMENT IS PROVIDED BY ON-SITE PRIVATE FACILITY AND IS TO BE MAINTAINED BY THE OWNER. A DETENTION FACILITY WITH UNDERGROUND INFILTRATION IS PROPOSED PER SDP-00-69.
7. EXISTING UTILITIES ARE BASED ON AVAILABLE HOWARD COUNTY RECORDS.
8. THE FLOOD PLAIN STUDY FOR THIS PROJECT WAS PREPARED BY GUTSCHICK LITTLE & WEBER, DATED MARCH 2003 AND WAS APPROVED ON 06/20/03.
9. THE WETLANDS DELINEATION STUDY FOR THIS PROJECT WAS PREPARED BY ECO-SCIENCE PROFESSIONALS DATED 07/25/2002. AND WAS APPROVED PER F-03-128.
10. NO TRAFFIC STUDY IS REQUIRED FOR THIS PROJECT.
11. ALL SUPPORT PIPES AND BRACKETS WITHIN THE SEPTIC SYSTEM STRUCTURES ARE TO BE STAINLESS STEEL SPARKLES, TYPE 304
12. PIPING  
LATERAL PIPING  
PVC, ASTM D1785, SCHEDULE 40 WITH SOLVENT WELD JOINTS.  
FORCE MAIN  
PVC, ASTM D1785, SCHEDULE 40 WITH SOLVENT WELD JOINTS.  
PERFORATED PIPING  
PVC, ASTM D1785, SCHEDULE 40 WITH SOLVENT WELD JOINTS.  
2" & 2 1/2" LPS  
PVC, ASTM 2239, SDR 21 WITH SOLVENT WELD JOINTS
13. WASHED GRAVEL: 1 1/2" - 2 1/2", FREE OF FINES, DUST, ASHES AND CLAY STONE BEDDING IN ACCORDANCE WITH AASHTO M43 NO. 2.
14. FILTER FABRIC: TC MIRAFI 1100 OR EQUAL.
15. PRESSURE TESTING FOR ALL PIPING SHALL BE IN ACCORDANCE WITH AWWA C600-93 SECTION 4 HYDROSTATIC TESTING. THERE WILL BE NO ALLOWABLE LEAKAGE DURING TESTING. TEST PRESSURE SHALL BE NO LESS THAN 35 PSI.
16. EXISTING TOPOGRAPHY AND PHYSICAL FEATURES SHOWN ARE BASED ON AERIAL TOPO SURVEYS PROVIDED BY GUTSCHICK LITTLE & WEBER, P.A. VERTICAL CONTROL IS BASED ON NGVD 29. HORIZONTAL CONTROL IS BASED ON NAD 83.
17. THE SCHOOL SYSTEM SHALL PROVIDE A FULL TIME ENGINEER AND/OR REPRESENTATIVE TO BE PRESENT DURING SYSTEM INSTALLATION AND TESTING. IF A REPRESENTATIVE IS TO PERFORM INSPECTION OF THE INSTALLATION, THAT PERSON SHOULD BE QUALIFIED TO DO SUCH WORK, AND MUST BE ACCEPTABLE TO MDE AND/OR THE HOWARD COUNTY HEALTH DEPARTMENT.
18. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE OWNER AT THE CONTRACTOR'S EXPENSE.
19. MONITORING WELLS MAY ONLY BE INSTALLED BY A DRILLER LICENSED IN MARYLAND.
20. MICAH DRIVE IS A PRIVATE ACCESS ROAD & MAY NOT BE USED AS A CONSTRUCTION ACCESS.
21. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE REQUIRED WETLANDS, STREAM(S) OR THEIR BUFFERS AND FOREST CONSERVATION EASEMENT AREAS EXCEPT AS AUTHORIZED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT WATER MANAGEMENT ADMINISTRATION WETLANDS AND WATERWAYS DIVISION AND HOWARD COUNTY DPZ.
22. COORDINATES BASED ON NAD '83 MARYLAND COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS No. 21CA AND No. 21FA.
23. THE FOREST CONSERVATION OBLIGATION FOR THE PROPOSED DISTURBANCES ASSOCIATED WITH THE CONSTRUCTION OF THE 'SBR BUILDING' AND SURROUNDING GRADING LOCATED WITHIN PARCEL NO. 11 WAS PREVIOUSLY ADDRESSED UNDER SDP-00-69. THE FOREST CONSERVATION OBLIGATION FOR THE INSTALLATION OF THE PROPOSED SEWER LINE WITHIN PARCEL NO. 169 WAS ADDRESSED UNDER THIS SDP AS AN EXEMPTION FOR A CAPITAL IMPROVEMENT PROJECT CLEARING LESS THAN 40,000 SF OF FOREST AS PER APPENDIX O OF THE HOWARD COUNTY FOREST CONSERVATION MANUAL. ALL THE DISTURBANCES ASSOCIATED WITH THE INSTALLATION OF THE PRIVATE SEWER LINE AND SHARED SEPTIC SYSTEM LOCATED WITHIN PARCELS 'A' AND 'B' OF THE MUSGROVE FARM SUBDIVISION WERE PREVIOUSLY ADDRESSED UNDER F-03-128. THIS PLAN ALSO ABANDONS 0.10 ACRE OF EXISTING FOREST CONSERVATION EASEMENT NO. 2 RECORDED PER PLAT NO. 16008 FOR MUSGROVE FARM FOR THE INSTALLATION OF ACCESS ROADS SERVING THE TWO EXISTING WELLS FOR THE GLENELG HIGH SCHOOL AND REPLACES THE ABANDONED FCE BY ADDING 0.33 ACRES OF REFORESTATION EASEMENT AREA ONTO FCE #2 ON THE MUSGROVE FARM, PRESERVATION PARCEL B.
24. PROPERTY IS ZONED RR-DEO PER THE 2/2/04 COMPREHENSIVE ZONING PLAN.
25. THIS SDP IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS PER COUNCIL BILL NO. 45-2003
26. THE CLEARING, GRADING AND CONSTRUCTION ACTIVITY REQUIRED TO INSTALL THE PROPOSED SANITARY SEWER LINE, THE 1 1/4" WATER LINES, THE ELECTRIC/CONTROL CONDUITS AND THE PERMANENT ACCESS ROADS FOR THE TWO EXISTING WELLS LOCATED ADJACENT TO BURNWOODS ROAD AND THE HIGH SCHOOL'S EAST PARKING LOT WHICH ARE LOCATED WITHIN THE 100 YEAR FLOOD PLAIN, STREAMS, WETLANDS AND THEIR REQUIRED BUFFERS HAVE BEEN DETERMINED AS NECESSARY OR ESSENTIAL DISTURBANCE IN ACCORDANCE WITH SECTIONS 16.115(c) AND 16.116(c) OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
27. REFER TO MDE PERMIT TRACKING # 03-NI-0458/200460159 FOR WORK AUTHORIZED WITHIN NON-TIDAL WETLANDS AND WATERWAYS ON THIS SITE.
28. SEE F-05-177 FOR THE FCE BOUNDARY BEARING AND DISTANCE INFORMATION.
29. THIS PROJECT IS COVERED BY MDE GROUNDWATER DISCHARGE PERMIT 02-DP-3412A.

**Δ 30. SEE SHEET 25 OF 36 FOR ADDITIONAL GENERAL NOTES.**

FOR REV. Δ ONLY

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
Licenses No. 16150    Expiration Date: 8-28-14

APPROVED: FOR PRIVATE WATER & SEWERAGE SYSTEMS,  
HOWARD COUNTY HEALTH DEPARTMENT

*Robert J. Weber*    12/5/06  
County Health Officer    Date  
Howard County Health Department    mgd

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*Chris Rasmussen*    5/2/06  
Chief, Development Engineering Division    Date

*Karl S. Brinkhoff*    12/28/06  
Chief, Division of Land Development    Date

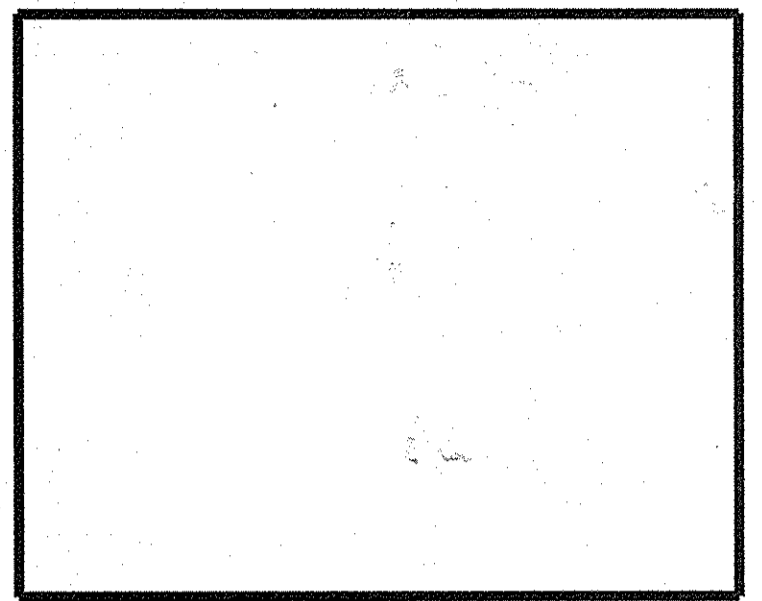
*Debra L. Caffery*    12/28/06  
Director    Date

OWNER: HOWARD COUNTY PUBLIC SCHOOL SYSTEM 10810 ROUTE 108 ELLCOTT CITY, MD 21042 410-313-6600	WATER CODE: PRIVATE - WELL	SEWER CODE: PRIVATE - TREATMENT SYSTEM	STREET ADDRESS: 14025 BURNT WOODS ROAD
PROJECT NAME: GLENELG HIGH SCHOOL TREATMENT FACILITIES (MUSGROVE FARM)	SECTION/AREA: N/A	LOT/PARCEL No.: PRESERVATION PARCEL B, 11, 12, 169	
PLAT # OR L/F: 16005 - 16008	FOREST CONS. PLAT: F-05-177	ZONING: RR-DEO	TAX MAP No.: 21.22
GRID #: 6, 7 AND 12	ELECT. DISTR.: 3&4	CENSUS TRACT: 6040.02	

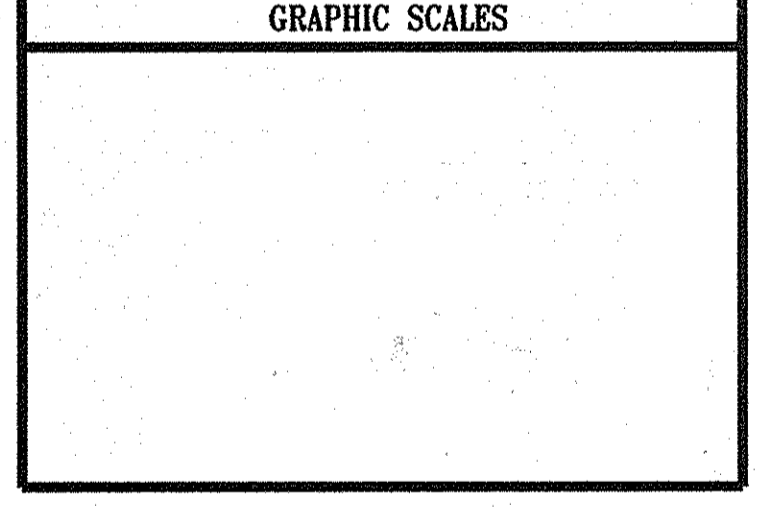
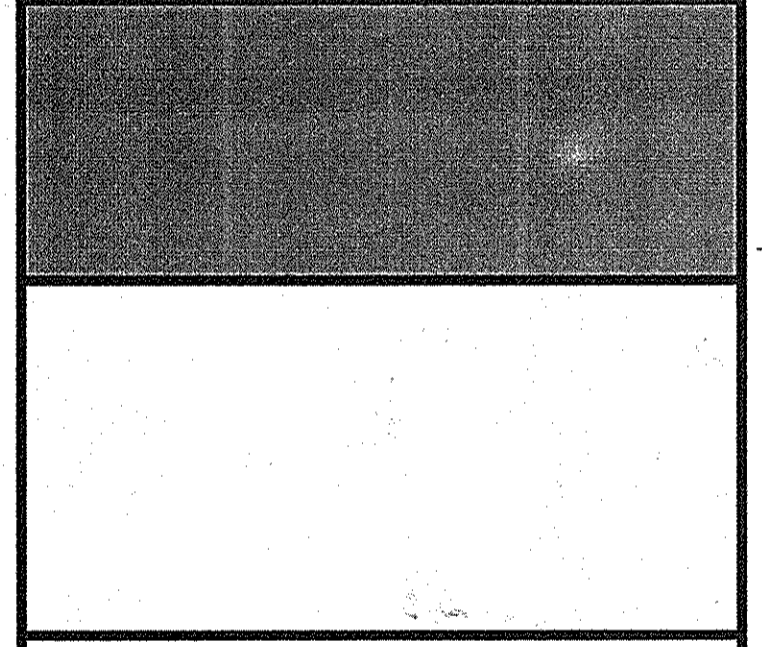
REVISIONS	
MDE W&SC PERMIT SET	4/05/06
SDP FINAL SUBMISSION	4/20/06
<b>INSERED NEW SHEETS</b>	<b>6.16-14</b>

**ON-SITE DISPOSAL SYSTEM GENERAL NOTES**

- MAXIMUM TOTAL DESIGN SEWAGE FLOW ALLOCATION:  
TOTAL SEPTIC SYSTEM:  
HIGH SCHOOL:  
1600 STUDENTS, TEACHERS AND STAFF @ 20 GPCD = 32,000 GPD TOTAL USAGE  
MUSGROVE PROPERTY:  
30 LOTS, 4 BEDROOMS / LOT x 150 GAL. / DAY BEDROOM = 18,000 GPD  
PROPOSED GLENELG HIGH SCHOOL SEPTIC SYSTEM ADDITION:  
CAPACITY = 25,000 GPD TOTAL USAGE  
PROPOSED MUSGROVE SEPTIC SYSTEM ADDITION:  
CAPACITY = 18,000 GPD TOTAL USAGE
- TRENCH DESIGN LOADING RATE = 1.2 GPD/FT-2
- THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY PUBLIC SCHOOL SYSTEM, THE MARYLAND DEPARTMENT OF THE ENVIRONMENT AND THE HOWARD COUNTY HEALTH DEPARTMENT A MINIMUM OF ONE WEEK PRIOR TO START OF CONSTRUCTION. ALL SUBSURFACE DISPOSAL SYSTEM COMPONENTS MUST BE STAKED OUT BY A SURVEY PARTY PRIOR TO NOTIFICATION.
- SEWAGE DISPOSAL SYSTEM CONTRACTOR SHALL PREPARE AN AS-BUILT DRAWING OF SYSTEM INSTALLATION AND SUBMIT IT TO HOWARD COUNTY HEALTH DEPARTMENT PRIOR TO FINAL SEPTIC SYSTEM INSPECTION AND APPROVAL.
- ALL WELLS AND SEPTIC SYSTEMS WITHIN 200 FEET OF THE WASTEWATER DISPOSAL AREA HAVE BEEN SHOWN.
- PROPOSED WASTEWATER MANAGEMENT PRETREATMENT AND DISPOSAL SYSTEM HAVE BEEN DESIGNED BY: WHITMAN, REQUARDT AND ASSOCIATES, LLP 801 SOUTH CAROLINE STREET BALTIMORE, MARYLAND 21231



**GLENELG HIGH SCHOOL  
HOWARD COUNTY MD  
TREATMENT SYSTEM DESIGN**



**WR&A**  
WHITMAN, REQUARDT AND ASSOCIATES, LLP  
801 SOUTH CAROLINE STREET  
BALTIMORE, MARYLAND 21231  
410 - 235 - 3450

**REVISSED SITE DEVELOPMENT PLAN**

**GENERAL NOTES, LEGEND AND ABBREVIATIONS**

DRAWING NO. **C-1**

SHEET 2 OF 2436

SCALE: NO SCALE  
DES: CMD CHECK: AUO DATE: 04/20/06

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 16156, Expiration Date: 8-28-14

**WASTEWATER SYSTEM SEQUENCE OF CONSTRUCTION**

- OBTAIN A GRADING PERMIT AND ANY OTHER PERMITS NECESSARY FOR THE CONSTRUCTION OF THE SBR BUILDING AND WASTEWATER TREATMENT SYSTEM PRESENTED IN THESE PLANS.
  - THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY PUBLIC SCHOOL SYSTEM, THE MARYLAND DEPARTMENT OF THE ENVIRONMENT AND THE HOWARD COUNTY HEALTH DEPARTMENT A MINIMUM OF ONE WEEK PRIOR TO START OF CONSTRUCTION.
  - THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO START OF WORK.
  - THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
  - INSTALL SEDIMENT AND EROSION CONTROL MEASURES, INCLUDING THE PIPE SLOPE DRAINS & 36" HDPE PIPE
  - CONSTRUCT THE TEMPORARY ACCESS ROAD TO THE GLENELG HIGH SCHOOL DRAIN FIELDS.
  - DEMOLISH EAST SAND FILTER AS OUTLINED ON SHEET C-2.
  - WASTEWATER DISPOSAL TRENCH CONSTRUCTION.
    - DISPOSAL TRENCHES ARE TO BE CONSTRUCTED A MINIMUM OF 11' APART CENTER TO CENTER SEE SHEET C-8 FOR STAKE OUT COORDINATE TABLE.
    - TRENCHES IN ALL SSD BEDS ARE TO BE PLACED LEVEL.
    - DISPOSAL TRENCHES BOTTOM AND SIDEWALLS SHALL BE SCARIFIED WHEN EXCAVATED, BUT SHALL OTHERWISE REMAIN UNDISTURBED DURING CONSTRUCTION. DO NOT COMPACT THESE SURFACES. OVEREXCAVATED MATERIAL MAY BE USED AS FILL MATERIAL AT THE SBR BUILDING SITE IF DEEMED ACCEPTABLE BY THE GEOTECHNICAL ENGINEER.
  - GRADE THE BUILDING PAD, INSTALL FOOTINGS AND SBR TANK FOR THE NEW SBR BUILDING AND INSTALL NEW 6" SAN., 4" FM AND 2" AIR CONNECTIONS FOR THE NEW SBR BUILDING.
  - CONSTRUCT SBR BUILDING AND INSTALL PROCESS EQUIPMENT.
  - INSTALL NEW VALVE VAULTS.
  - INSTALL PIPING FROM VALVE VAULTS TO SSD FIELDS
  - ALL PRESSURE PIPING INCLUDING THE HEADERS ARE TO BE TESTED PRIOR TO CONNECTION OF PERFORATED LATERALS. THIS TEST SHALL CONFORM TO THE SPECIFICATIONS SET FORTH IN AWWA C600-93 SECTION 4, "HYDROSTATIC TESTING". TEST PRESSURE SHALL BE NO LESS THAN 35 PSI.
  - INSTALL NEW PUMPS IN THE EXISTING DOSING PUMP STATION. THE INSTALLATION OF THE PUMPS SHALL BE PERFORMED IN SUCH A MANNER TO ENSURE SERVICE TO THE SCHOOL IS NOT DISRUPTED
  - MAKE THE FINAL PIPING CONNECTIONS FROM THE EXISTING DOSING PUMP STATION TO THE NEW VALVE PIT AND TEST ALL PIPING NOT PREVIOUSLY TESTED. INSTALL AIR DIFFUSERS & AIR LINES IN THE HIGH SCHOOL PUMPING STATION (DWG. M-3) AND CONNECT 6" SAN. FROM SBR BUILDING (DWG. M-3)
  - INSTALL 6" SAN. ASSOCIATED VALVES TO DIVERT FLOW AROUND EXISTING SEPTIC TANKS. THE INSTALLATION OF THE 6" SAN. SHALL BE PERFORMED IN SUCH A MANNER SO AS TO ENSURE THAT SERVICE TO THE SCHOOL IS NOT DISRUPTED.
  - ONCE INSTALLATION IS COMPLETE AND ALL NEW PUMPS ARE FUNCTIONING PROPERLY, DIVERT FLOW AROUND THE SEPTIC TANKS.
  - REMOVE ALL SEDIMENT CONTROL MEASURES AND THE TEMPORARY ACCESS ROAD WITH APPROVAL OF THE INSPECTOR.
- NOTE:**  
LIMIT DAILY TRENCH WORK TO AMOUNT WHICH CAN BE COMPLETED IN ONE DAY. CONTRACTOR IS TO MAINTAIN POSITIVE DRAINAGE AROUND WORK AREA AND STABILIZE DISTURBED AREAS AT THE END OF EACH WORK DAY

**WATER SYSTEM AND WETLAND RESTORATION SEQUENCE OF CONSTRUCTION**

- OBTAIN A GRADING PERMIT AND ANY OTHER PERMITS NECESSARY FOR THE CONSTRUCTION OF THE WATER SUPPLY SYSTEM AND WETLAND RESTORATION PRESENTED IN THESE PLANS.
- THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY PUBLIC SCHOOL SYSTEM, THE MARYLAND DEPARTMENT OF THE ENVIRONMENT AND THE HOWARD COUNTY HEALTH DEPARTMENT A MINIMUM OF ONE WEEK PRIOR TO START OF CONSTRUCTION.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- INSTALL SEDIMENT AND EROSION CONTROL MEASURES.
- INSTALL TURNING PITS FOR DIRECTIONAL DRILLING OF THE 4" ELECTRICAL CONDUIT AND TWO 1 1/4" POTABLE WATER.
- DIRECTIONALLY DRILL THE 4" ELECTRICAL CONDUIT AND TWO 1 1/4" POTABLE WATER AND INSTALL PULL BOXES WHERE REQUIRED. IF OPEN PIT EXCAVATION IS USED TO INSTALL THE CONDUIT AND POTABLE WATER UNDER THE EXISTING PARKING AREA, ENSURE THAT ALL EXCAVATED MATERIAL AND SPOILS ARE PLACED ON THE UPHILL SIDE OF THE EXCAVATION. OPEN ONLY THAT AMOUNT OF TRENCH THAT CAN BE COMPLETED IN ONE DAY. OPEN PIT EXCAVATION IS PROHIBITED WITHIN THE WETLAND AREA.
- INSTALL PERMANENT CULVERTS AS INDICATED ON THE PLANS.
- ONCE INSTALLATION OF THE ELECTRICAL CONDUIT AND POTABLE WATER IS COMPLETE REMOVE AND REGRADE THE PORTION OF THE TEMPORARY ACCESS ROAD AS INDICATED ON THE PLANS. REMOVE TEMPORARY CULVERT CROSSINGS AS INDICATED ON THE PLANS.
- ONCE REMOVAL OF THE ACCESS ROAD AND CULVERT CROSSINGS IS COMPLETE, IMMEDIATELY STABILIZE THE DISTURBED AREA WITH THE SEED MIX DESCRIBED ON SHEET C-23.
- ONCE SEEDING IS COMPLETE PLANT DISTURBED AREA AS DIRECTED ON SHEET C-23.
- ONCE SITE IS PERMANENTLY STABILIZED REMOVE ALL SEDIMENT CONTROL MEASURES WITH APPROVAL OF THE INSPECTOR.

**ABBREVIATIONS**

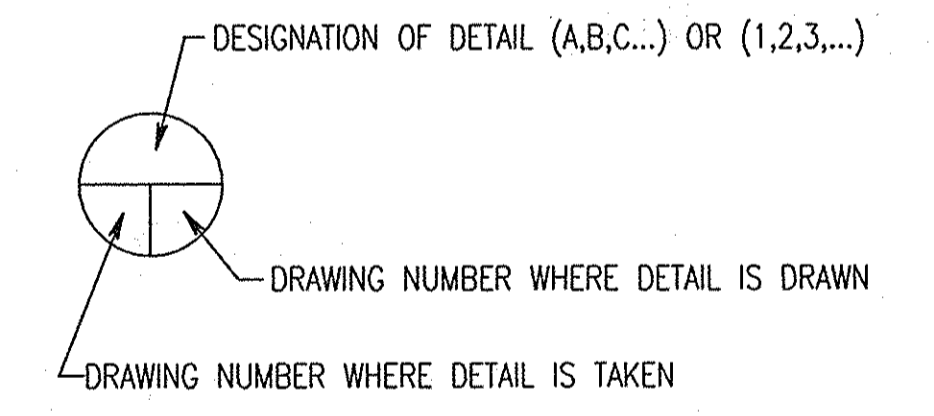
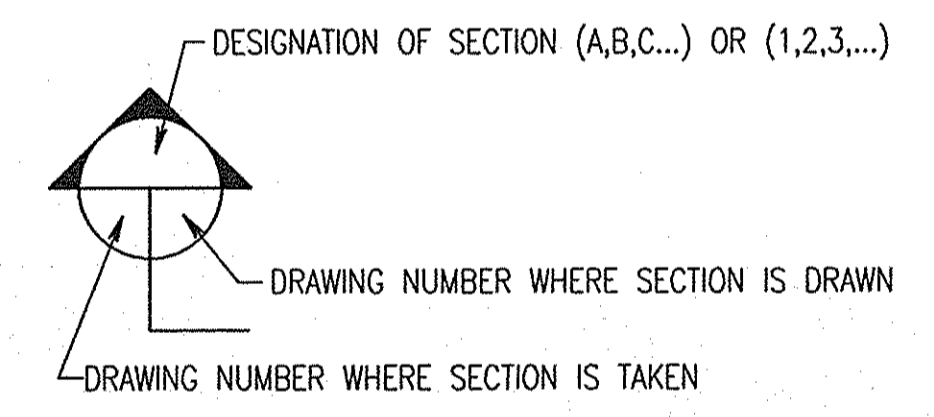
AASHTO.	AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS APPROXIMATELY
ASTM.	APPROXIMATELY
BLDG.	BUILDING
BIT.	BITUMINOUS
B.M.	BENCH MARK
CL TO CL	CENTERLINE TO CENTERLINE
C.F.S.	CUBIC FEET PER SECOND
COMP.	COMPACTED
CONN.	CONNECTION
CMP.	CORRUGATED METAL PIPE
DIA. . DIAM.	DIAMETER
DWG. . DRWG	DRAWING
ELEV.	ELEVATION
ELECT. . ELEC.	ELECTRICAL
ESAN.	EXISTING SANITARY
EUE.	EXISTING UNDERGROUND ELECTRIC
EUGT&E.	EXISTING UNDERGROUND TELEPHONE & ELECTRIC
EXST. . EX.	EXISTING
FM, F.M.	FORCE MAIN
FPS.	FEET PER SECOND
GPDP	GALLONS PER DAY PER CAPITA
INV.	INVERT
IP.	INLET PROTECTION
LPS	LOW PRESSURE
MECH.	MECHANICAL
MFR.	MANUFACTURER
M.H.	MANHOLE
MIN.	MINIMUM
MW	MONITORING WELL
OHE.	OVERHEAD ELECTRIC
OHT.	OVERHEAD TELEPHONE
P. I.	POINT OF INTERSECTION, POST INDICATOR
PC	POINT OF CURVATURE
P. T.	POINT OF TANGENCY
PT	PRESSURE TRANSDUCERS
PVC.	POLYVINYL CHLORIDE
PROP.	PROPOSED
SDR.	STANDARD DIMENSION RATIO
S.	SOUTH, SLOPE, SANITARY
SS	STAINLESS STEEL
SAN.	SANITARY
SSD	SUBSURFACE DISPOSAL
TEL.	TELEPHONE

**WETLAND AND WATERWAY BEST MANAGEMENT PRACTICES**

- BEST MANAGEMENT PRACTICES FOR WORKING IN NONTIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS, AND 100-YEAR FLOODPLAINS
- NO EXCESS FILL, CONSTRUCTION MATERIAL, OR DEBRIS SHALL BE STOCKPILED OR STORED IN NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR 100-YEAR FLOODPLAIN.
  - PLACE MATERIALS IN A LOCATION AND MANNER WHICH DOES NOT ADVERSELY IMPACT SURFACE OR SUBSURFACE WATER FLOW INTO OR OUT OF NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOODPLAIN.
  - DO NOT USE THE EXCAVATED MATERIAL AS BACKFILL IF IT CONTAINS WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL, OR ANY OTHER DELETERIOUS SUBSTANCE. IF ADDITIONAL BACKFILL IS REQUIRED, USE CLEAN MATERIAL FREE OF WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL, OR ANY OTHER DELETERIOUS SUBSTANCE.
  - PLACE HEAVY EQUIPMENT ON MATS OR SUITABLY OPERATE THE EQUIPMENT TO PREVENT DAMAGE TO NONTIDAL WETLANDS, NONTIDAL WETLAND BUFFERS, WATERWAYS, OR THE 100-YEAR FLOODPLAIN.
  - REPAIR AND MAINTAIN ANY SERVICEABLE STRUCTURE OR FILL SO THERE IS NOT PERMANENT MODIFICATION OF THE 100-YEAR FLOODPLAIN IN EXCESS OF THAT LOST UNDER THE ORIGINALLY AUTHORIZED STRUCTURE OR FILL.
  - RECTIFY ANY NONTIDAL WETLANDS, WETLAND BUFFERS, WATERWAYS, OR 100-YEAR FLOODPLAIN TEMPORARILY IMPACTED BY ANY CONSTRUCTION.
  - ALL STABILIZATION IN THE NONTIDAL WETLAND AND NONTIDAL WETLAND BUFFER SHALL CONSIST OF THE FOLLOWING SPECIES: ANNUAL RYEGRASS (LOLIUM MULTIFLORUM), MILLET (SETARIA ITALICA), BARLEY (HORDEUM SP.), OATS (UNIOLA SP.) AND/OR RYE (SECALE CEREALE). THESE SPECIES WILL ALLOW FOR THE STABILIZATION OF THE SITE WHILE ALSO ALLOWING FOR THE VOLUNTARY REVEGETATION OF NATURAL WETLAND SPECIES. OTHER NON-PERSISTENT VEGETATION MAY BE ACCEPTABLE, BUT MUST BE APPROVED BY THE NONTIDAL WETLANDS AND WATERWAYS DIVISION. KENTUCKY 31 FESCUE SHALL NOT BE UTILIZED IN WETLAND OR BUFFER AREAS. THE AREA SHOULD BE SEEDED AND MULCHED TO REDUCE EROSION AFTER CONSTRUCTION ACTIVITIES HAVE BEEN COMPLETED.
  - AFTER INSTALLATION HAS BEEN COMPLETED, MAKE POST-CONSTRUCTION GRADES AND ELEVATIONS THE SAME AS THE ORIGINAL GRADES AND ELEVATIONS IN TEMPORARILY IMPACTED AREAS.
  - TO PROTECT AQUATIC SPECIES, IN-STREAM WORK IS PROHIBITED AS DETERMINED BY THE CLASSIFICATION OF THE STREAM:  
USE III WATERS: IN-STREAM WORK SHALL NOT BE CONDUCTED DURING THE PERIOD OCTOBER 1 THROUGH APRIL 30, INCLUSIVE, DURING ANY YEAR.
  - STORMWATER RUNOFF FROM IMPERVIOUS SURFACES SHALL BE CONTROLLED TO PREVENT THE WASHING OF DEBRIS INTO THE WATERWAY.
  - CULVERTS SHALL BE CONSTRUCTED AND ANY RIPRAP PLACED SO AS NOT TO OBSTRUCT THE MOVEMENT OF AQUATIC SPECIES, UNLESS THE PURPOSE OF THE ACTIVITY IS TO IMPOUND WATER.

**LEGEND**

EXISTING	PROPOSED	DESCRIPTION
---235---	---260---	MAJOR CONTOUR
---258---	---	MINOR CONTOUR
12"SD	12"SD	STORM DRAIN
8"W	8"W	WATER
6"SAN	6"SAN	SANITARY SEWER
---	2" LPS	LOW PRESSURE SEWER
---	6" FM	FORCE MAIN
UE	UE	UNDERGROUND ELECTRIC
		VALVE
		FIRE HYDRANT
		MANHOLE/INLET
		STREET LIGHT
		FENCE
		TREES/WOODSLINE
		TEST PIT
		FAILED TEST PIT
		MONITORING WELL/PIEZOMETER
		SECTION SYMBOL
		DETAIL SYMBOL



- REVISION
- DRAINFIELD STAKEOUT POINT
- PIPELINE STAKEOUT POINT
- WETLAND BUFFER
- FLOOD PLAIN
- WETLAND BOUNDARY

APPROVED: FOR PRIVATE WATER & SEWERAGE SYSTEMS,  
HOWARD COUNTY HEALTH DEPARTMENT

*Richard J. Water*  
County Health Officer  
Howard County Health Department  
Date: 12/5/06

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

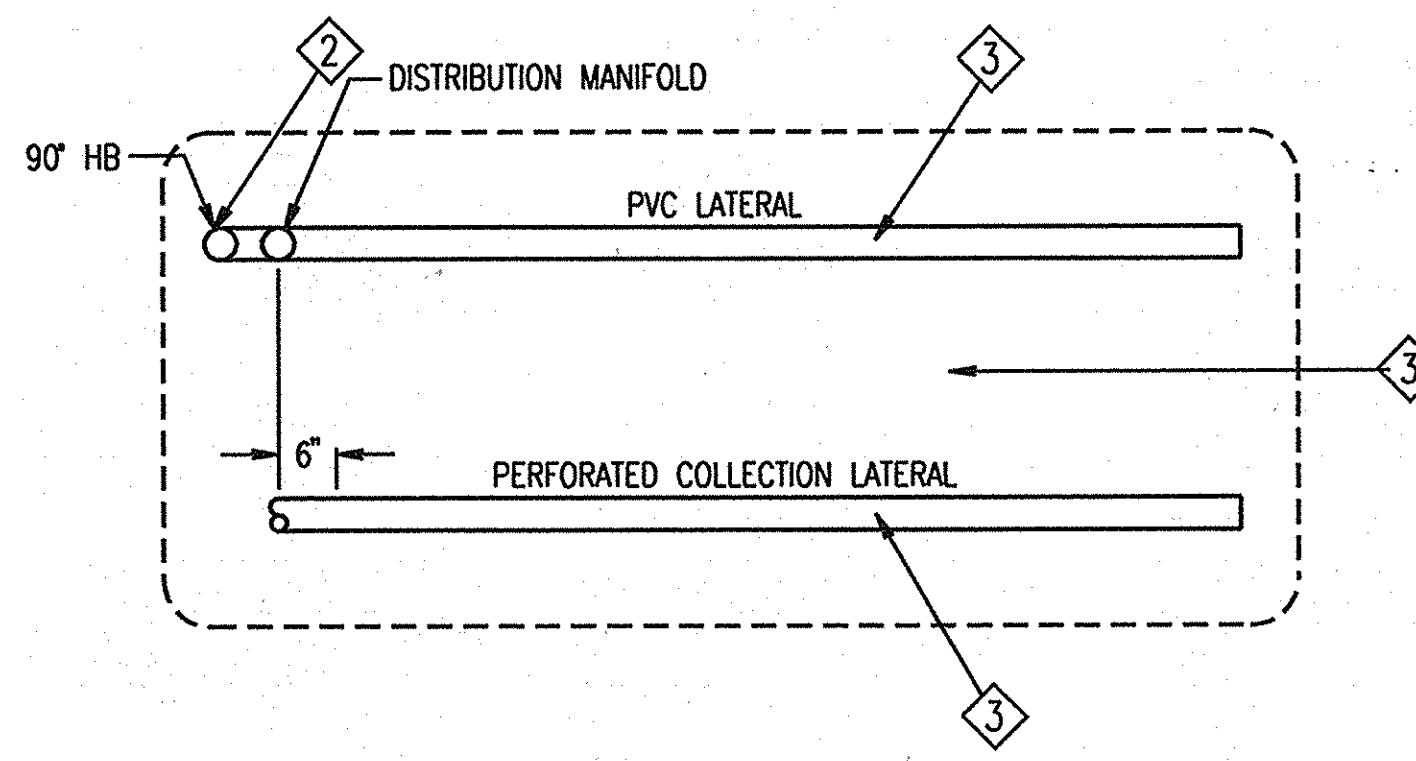
*Michael J. ...*  
Chief, Development Engineering Division  
Date: 5/8/06

*Kent ...*  
Chief, Division of Land Development  
Date: 12/28/06

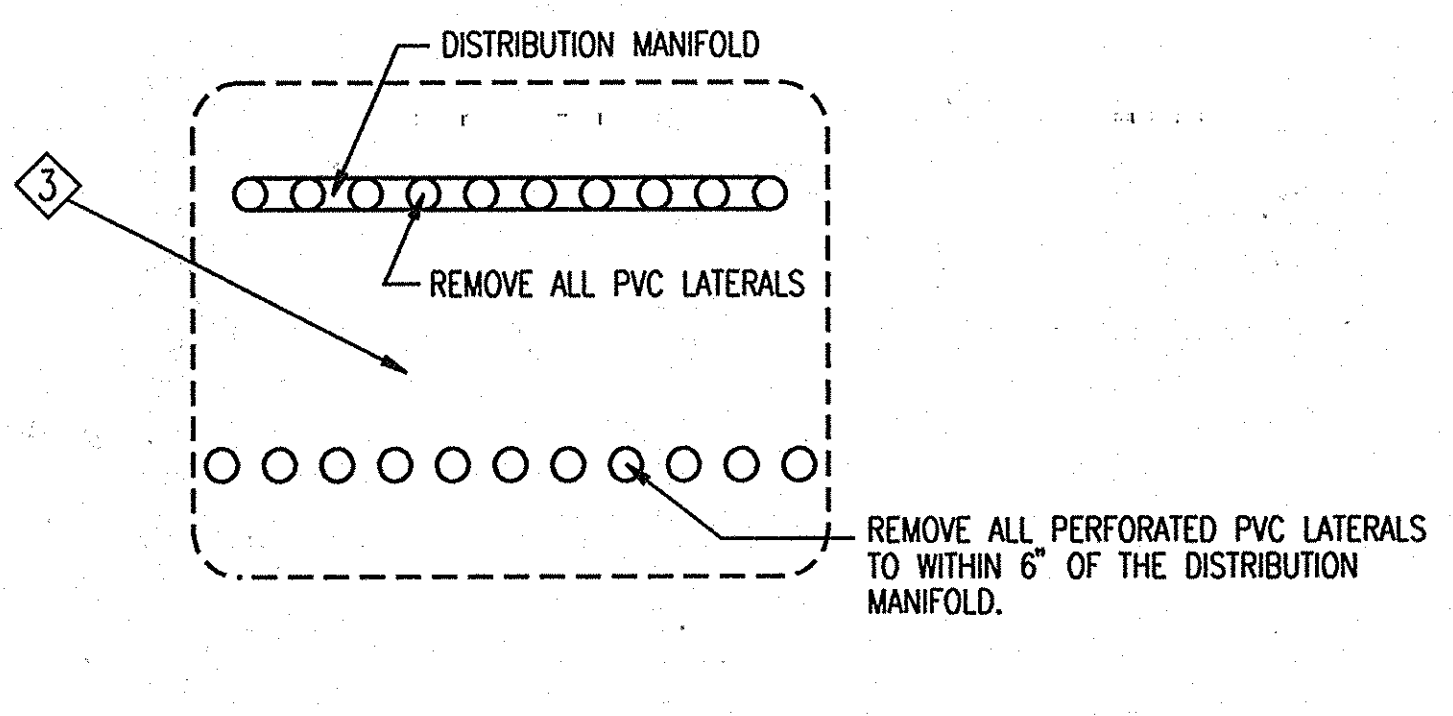
*...*  
Director  
Date: 12/28/06

M:\0106\SDP-PLAN SET\SDP-GHS-SBR-CD.dgn Mon Apr 17 14:24:32 2006

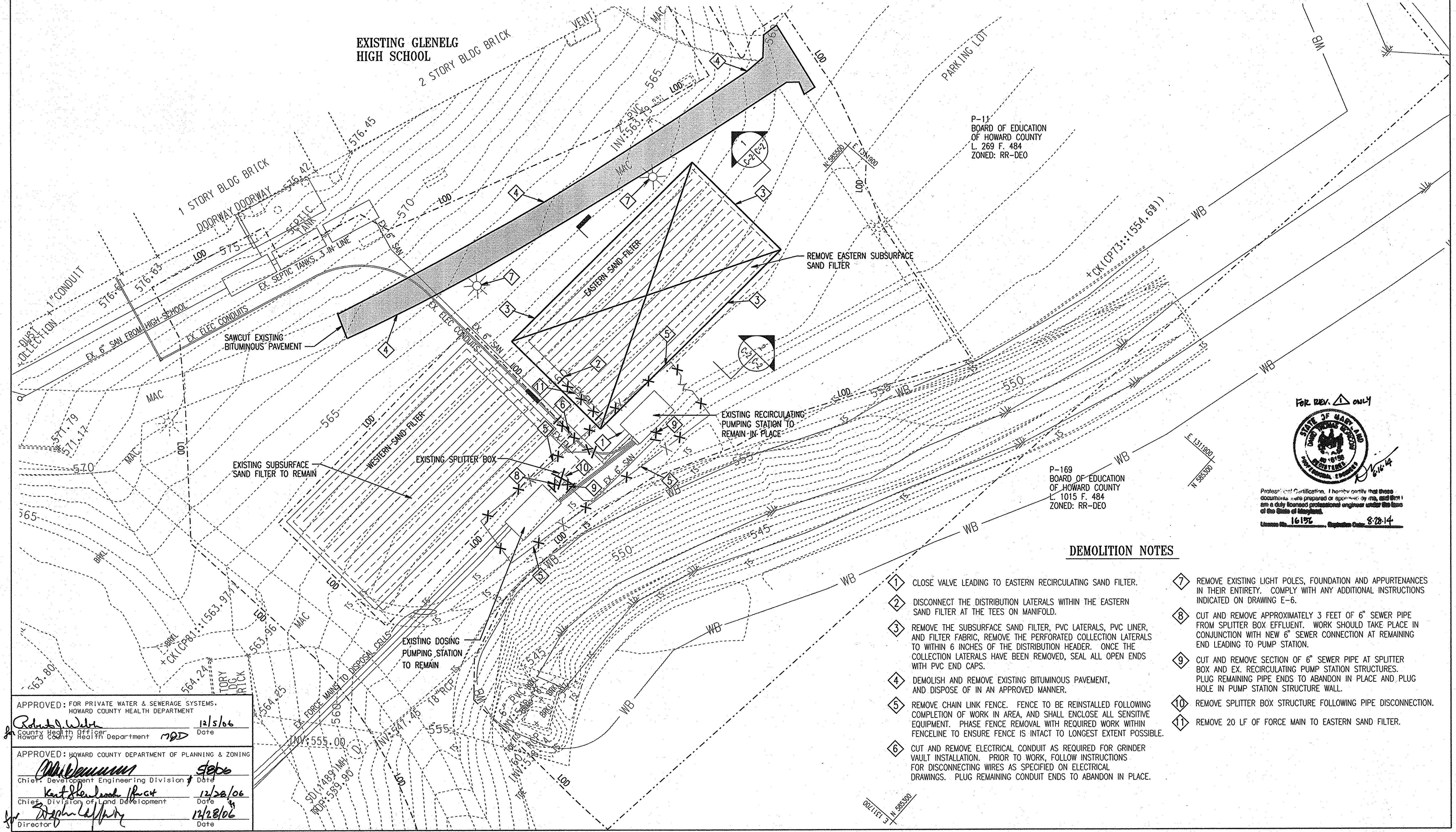
REVISIONS	
MDE W&SC PERMIT SET	4/05/06
SDP FINAL SUBMISSION	4/20/06
INSERTED NEW SHEETS	6/16/14



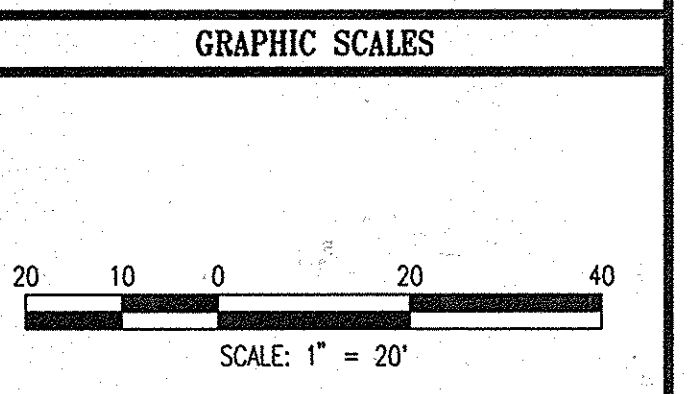
SECTION - EAST SAND FILTER 1  
SCALE: NOT TO SCALE  
C-2(C-2)



SECTION - EAST SAND FILTER 2  
SCALE: NOT TO SCALE  
C-2(C-2)



**GLENELG HIGH SCHOOL**  
**HOWARD COUNTY MD**  
**TREATMENT SYSTEM DESIGN**



FOR REV. ONLY

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 16192 Registration Date: 8/28/14

**DEMOLITION NOTES**

- 1 CLOSE VALVE LEADING TO EASTERN RECIRCULATING SAND FILTER.
- 2 DISCONNECT THE DISTRIBUTION LATERALS WITHIN THE EASTERN SAND FILTER AT THE TEES ON MANIFOLD.
- 3 REMOVE THE SUBSURFACE SAND FILTER, PVC LATERALS, PVC LINER, AND FILTER FABRIC, REMOVE THE PERFORATED COLLECTION LATERALS TO WITHIN 6 INCHES OF THE DISTRIBUTION HEADER. ONCE THE COLLECTION LATERALS HAVE BEEN REMOVED, SEAL ALL OPEN ENDS WITH PVC END CAPS.
- 4 DEMOLISH AND REMOVE EXISTING BITUMINOUS PAVEMENT, AND DISPOSE OF IN AN APPROVED MANNER.
- 5 REMOVE CHAIN LINK FENCE. FENCE TO BE REINSTALLED FOLLOWING COMPLETION OF WORK IN AREA, AND SHALL ENCLOSE ALL SENSITIVE EQUIPMENT. PHASE FENCE REMOVAL WITH REQUIRED WORK WITHIN FENCELINE TO ENSURE FENCE IS INTACT TO LONGEST EXTENT POSSIBLE.
- 6 CUT AND REMOVE ELECTRICAL CONDUIT AS REQUIRED FOR GRINDER VAULT INSTALLATION. PRIOR TO WORK, FOLLOW INSTRUCTIONS FOR DISCONNECTING WIRES AS SPECIFIED ON ELECTRICAL DRAWINGS. PLUG REMAINING CONDUIT ENDS TO ABANDON IN PLACE.
- 7 REMOVE EXISTING LIGHT POLES, FOUNDATION AND APPURTENANCES IN THEIR ENTIRETY. COMPLY WITH ANY ADDITIONAL INSTRUCTIONS INDICATED ON DRAWING E-6.
- 8 CUT AND REMOVE APPROXIMATELY 3 FEET OF 6" SEWER PIPE FROM SPLITTER BOX EFFLUENT. WORK SHOULD TAKE PLACE IN CONJUNCTION WITH NEW 6" SEWER CONNECTION AT REMAINING END LEADING TO PUMP STATION.
- 9 CUT AND REMOVE SECTION OF 6" SEWER PIPE AT SPLITTER BOX AND EX. RECIRCULATING PUMP STATION STRUCTURES. PLUG REMAINING PIPE ENDS TO ABANDON IN PLACE AND PLUG HOLE IN PUMP STATION STRUCTURE WALL.
- 10 REMOVE SPLITTER BOX STRUCTURE FOLLOWING PIPE DISCONNECTION.
- 11 REMOVE 20 LF OF FORCE MAIN TO EASTERN SAND FILTER.

APPROVED: FOR PRIVATE WATER & SEWERAGE SYSTEMS,  
HOWARD COUNTY HEALTH DEPARTMENT

*Robert W. Whitman* 12/5/06  
County Health Officer, Howard County Health Department, MDD Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*Robert W. Whitman* 5/26/06  
Chief, Development Engineering Division, Date

*Kent Stenhouse* 12/20/06  
Chief, Division of Land Development, Date

*Stephen L. Murphy* 12/28/06  
Director, Date

**WR&A**  
WHITMAN, REQUARDT AND ASSOCIATES, LLP  
801 SOUTH CAROLINE STREET  
BALTIMORE, MARYLAND 21231  
410 - 235 - 3450

REVISIONED SITE DEVELOPMENT PLAN

**DEMOLITION PLAN**

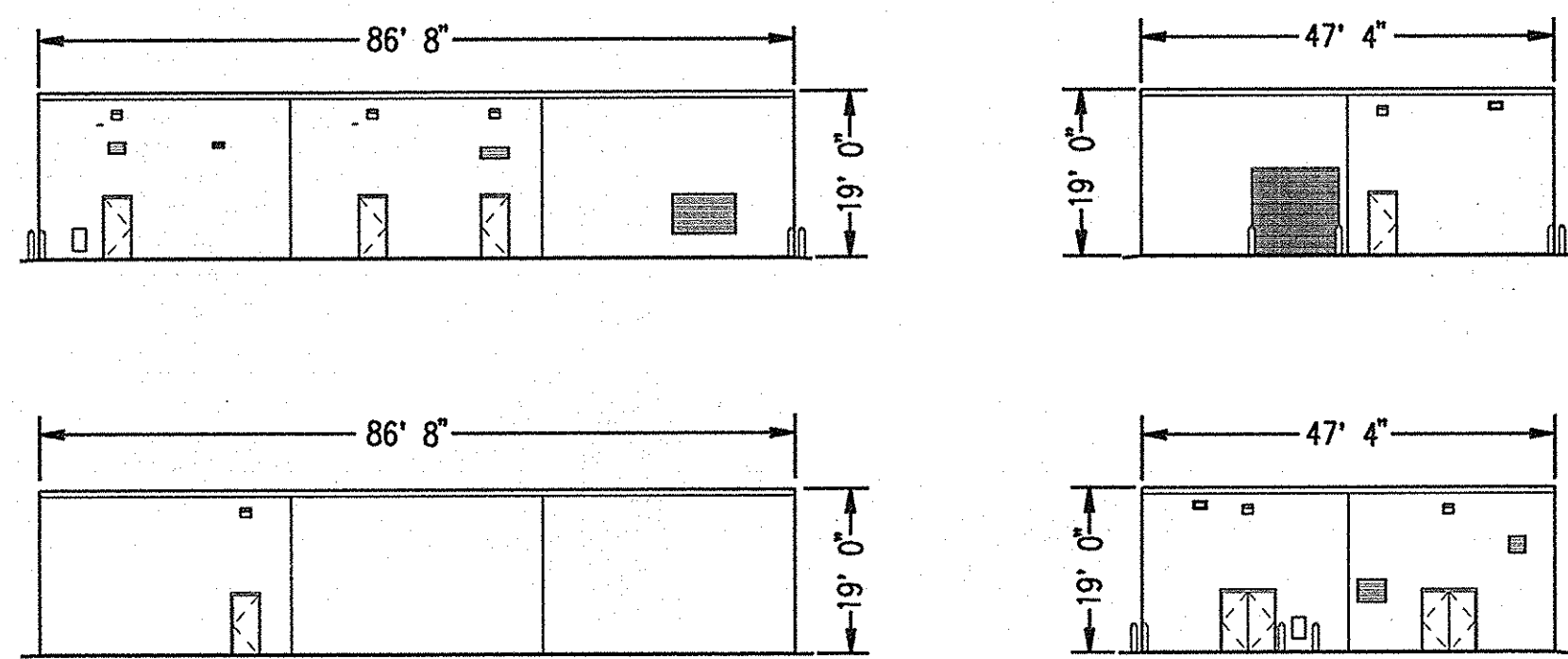
DRAWING NO. C-2

SHEET 3 OF 2436

SCALE: 1" = 20'

DES: CMD CHECK: AUO DATE: 04/20/06

SDP-04-136



SBR BUILDING ELEVATIONS  
N.T.S.

EXISTING GLENELG  
HIGH SCHOOL

APPROX. LOCATION  
OF THE FUTURE  
ADDITION TO  
GLENELG  
HIGH SCHOOL  
SDP-00-69

INSTALL A 4" SLEEVE BENEATH THE CHILLER  
PAD THAT WILL BE CONSTRUCTED AS PART OF  
THE HIGH SCHOOL ADDITION.

EXISTING SUBSURFACE SAND FILTER  
(SEE SHEET C-2 FOR DEMOLITION)

FOR EROSION AND SEDIMENT  
CONTROL REFER TO SDP-00-69  
(SEE SHEET C-12 FOR APPROXIMATE  
LOCATION)

STORM DRAIN BY OTHERS  
REFER TO SDP-00-69

NEW SBR BUILDING  
F.F.E. 563.25  
19' 0" HIGH

SBR BUILDING ELEVATIONS  
N.T.S.

SEWAGE GRINDER VAULT  
N 585503.47  
E 1311735.40

HIGH SCHOOL PUMPING STATION  
(FORMERLY RECIRCULATING  
PUMPING STATION)

DOSING PUMPING  
STATION

SUBSURFACE DRAIN PIT

MUSGROVE METER VAULT DETAIL

NEW CONDUIT TO PRESSURE  
TRANSDUCERS AT EX SSD FIELDS  
(SEE DWG 1-12)

PROVIDE 7'x7' TRANSFORMER PAD.  
COORDINATE WITH BGE AS REQUIRED.  
REFER TO DRAWING E-6 FOR  
ADDITIONAL INFO.

EXISTING SUBSURFACE SANDFILTER

EXISTING SEPTIC TANK (TYP. OF 3)

LOCATION TO BE  
FIELD VERIFIED

PLAN NOTES

- 1 TEST PIT TO LOCATE EX. 4" FORCE MAIN PIPE. CUT AND REMOVE PIPE PER DRAWING C-2. CONNECT TO EXISTING PIPE WITH 45-DEGREE HB.
- 2 TEST PIT TO LOCATE EX. 6" SANITARY PIPE. CUT PIPE AND CONNECT TO REMAINING END WITH 45-DEGREE HB.
- 3 TEST PIT TO LOCATE EX. 6" SANITARY PIPE FROM SCHOOL. CUT AND REMOVE AS REQUIRED TO INSTALL SEWAGE GRINDER PUMP VAULT.
4. REFER TO DRAWING C-8 FOR STAKEOUT DATA.



Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 16152 Registration Date: 8-28-14

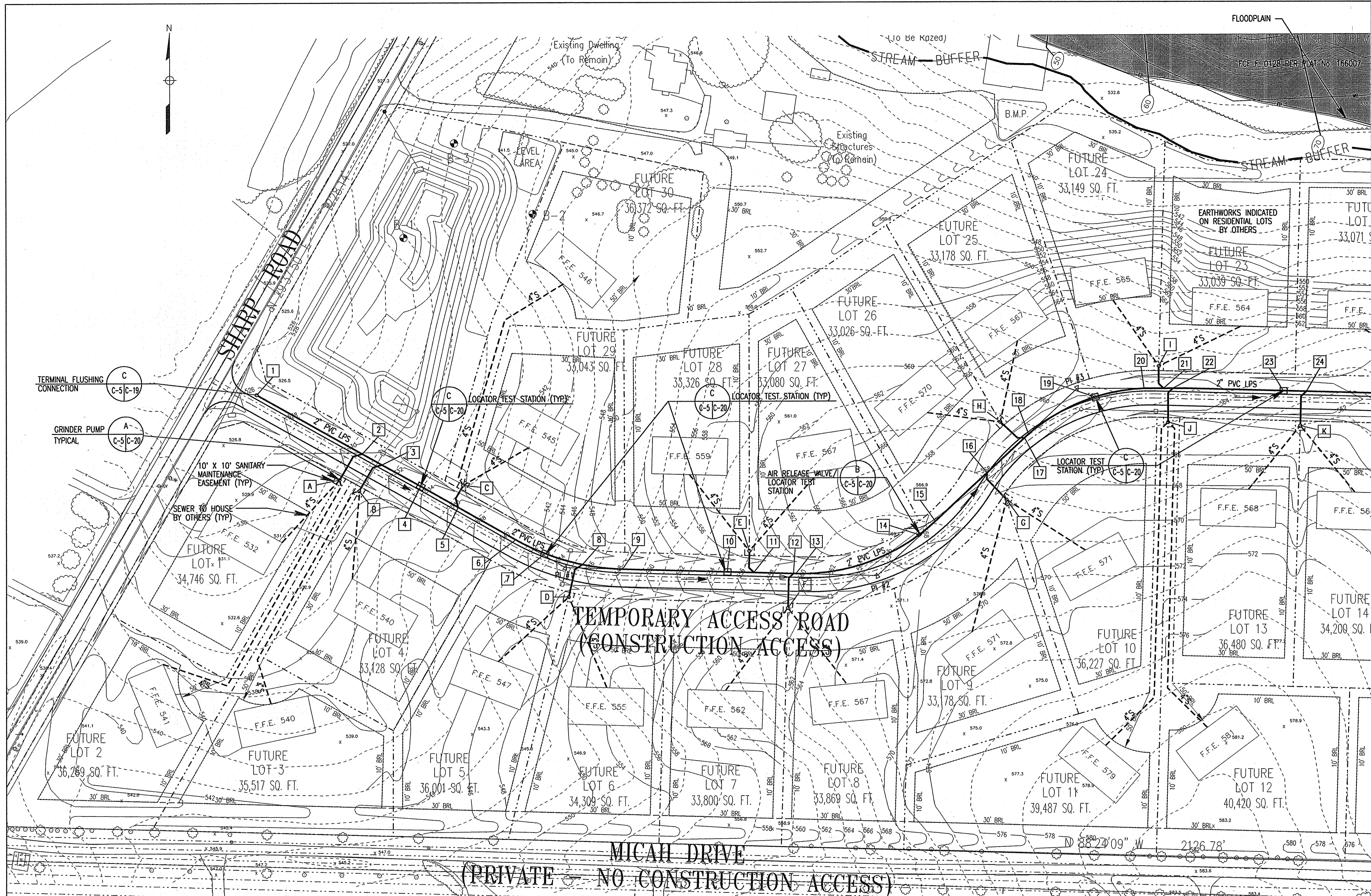
SOIL BORING LOG

DEPTH (FEET)	SOIL TYPE	REMARKS
0.00 - 0.50	ST. FILL	
0.50 - 1.00	ST. FILL	
1.00 - 1.50	ST. FILL	
1.50 - 2.00	ST. FILL	
2.00 - 2.50	ST. FILL	
2.50 - 3.00	ST. FILL	
3.00 - 3.50	ST. FILL	
3.50 - 4.00	ST. FILL	
4.00 - 4.50	ST. FILL	
4.50 - 5.00	ST. FILL	
5.00 - 5.50	ST. FILL	
5.50 - 6.00	ST. FILL	
6.00 - 6.50	ST. FILL	
6.50 - 7.00	ST. FILL	
7.00 - 7.50	ST. FILL	
7.50 - 8.00	ST. FILL	
8.00 - 8.50	ST. FILL	
8.50 - 9.00	ST. FILL	
9.00 - 9.50	ST. FILL	
9.50 - 10.00	ST. FILL	
10.00 - 10.50	ST. FILL	
10.50 - 11.00	ST. FILL	
11.00 - 11.50	ST. FILL	
11.50 - 12.00	ST. FILL	
12.00 - 12.50	ST. FILL	
12.50 - 13.00	ST. FILL	
13.00 - 13.50	ST. FILL	
13.50 - 14.00	ST. FILL	
14.00 - 14.50	ST. FILL	
14.50 - 15.00	ST. FILL	
15.00 - 15.50	ST. FILL	
15.50 - 16.00	ST. FILL	
16.00 - 16.50	ST. FILL	
16.50 - 17.00	ST. FILL	
17.00 - 17.50	ST. FILL	
17.50 - 18.00	ST. FILL	
18.00 - 18.50	ST. FILL	
18.50 - 19.00	ST. FILL	
19.00 - 19.50	ST. FILL	
19.50 - 20.00	ST. FILL	
20.00 - 20.50	ST. FILL	
20.50 - 21.00	ST. FILL	
21.00 - 21.50	ST. FILL	
21.50 - 22.00	ST. FILL	
22.00 - 22.50	ST. FILL	
22.50 - 23.00	ST. FILL	
23.00 - 23.50	ST. FILL	
23.50 - 24.00	ST. FILL	
24.00 - 24.50	ST. FILL	
24.50 - 25.00	ST. FILL	
25.00 - 25.50	ST. FILL	
25.50 - 26.00	ST. FILL	
26.00 - 26.50	ST. FILL	
26.50 - 27.00	ST. FILL	
27.00 - 27.50	ST. FILL	
27.50 - 28.00	ST. FILL	
28.00 - 28.50	ST. FILL	
28.50 - 29.00	ST. FILL	
29.00 - 29.50	ST. FILL	
29.50 - 30.00	ST. FILL	
30.00 - 30.50	ST. FILL	
30.50 - 31.00	ST. FILL	
31.00 - 31.50	ST. FILL	
31.50 - 32.00	ST. FILL	
32.00 - 32.50	ST. FILL	
32.50 - 33.00	ST. FILL	
33.00 - 33.50	ST. FILL	
33.50 - 34.00	ST. FILL	
34.00 - 34.50	ST. FILL	
34.50 - 35.00	ST. FILL	
35.00 - 35.50	ST. FILL	
35.50 - 36.00	ST. FILL	
36.00 - 36.50	ST. FILL	
36.50 - 37.00	ST. FILL	
37.00 - 37.50	ST. FILL	
37.50 - 38.00	ST. FILL	
38.00 - 38.50	ST. FILL	
38.50 - 39.00	ST. FILL	
39.00 - 39.50	ST. FILL	
39.50 - 40.00	ST. FILL	
40.00 - 40.50	ST. FILL	
40.50 - 41.00	ST. FILL	
41.00 - 41.50	ST. FILL	
41.50 - 42.00	ST. FILL	
42.00 - 42.50	ST. FILL	
42.50 - 43.00	ST. FILL	
43.00 - 43.50	ST. FILL	
43.50 - 44.00	ST. FILL	
44.00 - 44.50	ST. FILL	
44.50 - 45.00	ST. FILL	
45.00 - 45.50	ST. FILL	
45.50 - 46.00	ST. FILL	
46.00 - 46.50	ST. FILL	
46.50 - 47.00	ST. FILL	
47.00 - 47.50	ST. FILL	
47.50 - 48.00	ST. FILL	
48.00 - 48.50	ST. FILL	
48.50 - 49.00	ST. FILL	
49.00 - 49.50	ST. FILL	
49.50 - 50.00	ST. FILL	
50.00 - 50.50	ST. FILL	
50.50 - 51.00	ST. FILL	
51.00 - 51.50	ST. FILL	
51.50 - 52.00	ST. FILL	
52.00 - 52.50	ST. FILL	
52.50 - 53.00	ST. FILL	
53.00 - 53.50	ST. FILL	
53.50 - 54.00	ST. FILL	
54.00 - 54.50	ST. FILL	
54.50 - 55.00	ST. FILL	
55.00 - 55.50	ST. FILL	
55.50 - 56.00	ST. FILL	
56.00 - 56.50	ST. FILL	
56.50 - 57.00	ST. FILL	
57.00 - 57.50	ST. FILL	
57.50 - 58.00	ST. FILL	
58.00 - 58.50	ST. FILL	
58.50 - 59.00	ST. FILL	
59.00 - 59.50	ST. FILL	
59.50 - 60.00	ST. FILL	
60.00 - 60.50	ST. FILL	
60.50 - 61.00	ST. FILL	
61.00 - 61.50	ST. FILL	
61.50 - 62.00	ST. FILL	
62.00 - 62.50	ST. FILL	
62.50 - 63.00	ST. FILL	
63.00 - 63.50	ST. FILL	
63.50 - 64.00	ST. FILL	
64.00 - 64.50	ST. FILL	
64.50 - 65.00	ST. FILL	
65.00 - 65.50	ST. FILL	
65.50 - 66.00	ST. FILL	
66.00 - 66.50	ST. FILL	
66.50 - 67.00	ST. FILL	
67.00 - 67.50	ST. FILL	
67.50 - 68.00	ST. FILL	
68.00 - 68.50	ST. FILL	
68.50 - 69.00	ST. FILL	
69.00 - 69.50	ST. FILL	
69.50 - 70.00	ST. FILL	
70.00 - 70.50	ST. FILL	
70.50 - 71.00	ST. FILL	
71.00 - 71.50	ST. FILL	
71.50 - 72.00	ST. FILL	
72.00 - 72.50	ST. FILL	
72.50 - 73.00	ST. FILL	
73.00 - 73.50	ST. FILL	
73.50 - 74.00	ST. FILL	
74.00 - 74.50	ST. FILL	
74.50 - 75.00	ST. FILL	
75.00 - 75.50	ST. FILL	
75.50 - 76.00	ST. FILL	
76.00 - 76.50	ST. FILL	
76.50 - 77.00	ST. FILL	
77.00 - 77.50	ST. FILL	
77.50 - 78.00	ST. FILL	
78.00 - 78.50	ST. FILL	
78.50 - 79.00	ST. FILL	
79.00 - 79.50	ST. FILL	
79.50 - 80.00	ST. FILL	
80.00 - 80.50	ST. FILL	
80.50 - 81.00	ST. FILL	
81.00 - 81.50	ST. FILL	
81.50 - 82.00	ST. FILL	
82.00 - 82.50	ST. FILL	
82.50 - 83.00	ST. FILL	
83.00 - 83.50	ST. FILL	
83.50 - 84.00	ST. FILL	
84.00 - 84.50	ST. FILL	
84.50 - 85.00	ST. FILL	
85.00 - 85.50	ST. FILL	
85.50 - 86.00	ST. FILL	
86.00 - 86.50	ST. FILL	
86.50 - 87.00	ST. FILL	
87.00 - 87.50	ST. FILL	
87.50 - 88.00	ST. FILL	
88.00 - 88.50	ST. FILL	
88.50 - 89.00	ST. FILL	
89.00 - 89.50	ST. FILL	
89.50 - 90.00	ST. FILL	
90.00 - 90.50	ST. FILL	
90.50 - 91.00	ST. FILL	
91.00 - 91.50	ST. FILL	
91.50 - 92.00	ST. FILL	
92.00 - 92.50	ST. FILL	
92.50 - 93.00	ST. FILL	
93.00 - 93.50	ST. FILL	
93.50 - 94.00	ST. FILL	
94.00 - 94.50	ST. FILL	
94.50 - 95.00	ST. FILL	
95.00 - 95.50	ST. FILL	
95.50 - 96.00	ST. FILL	
96.00 - 96.50	ST. FILL	
96.50 - 97.00	ST. FILL	
97.00 - 97.50	ST. FILL	
97.50 - 98.00	ST. FILL	
98.00 - 98.50	ST. FILL	
98.50 - 99.00	ST. FILL	
99.00 - 99.50	ST. FILL	
99.50 - 100.00	ST. FILL	

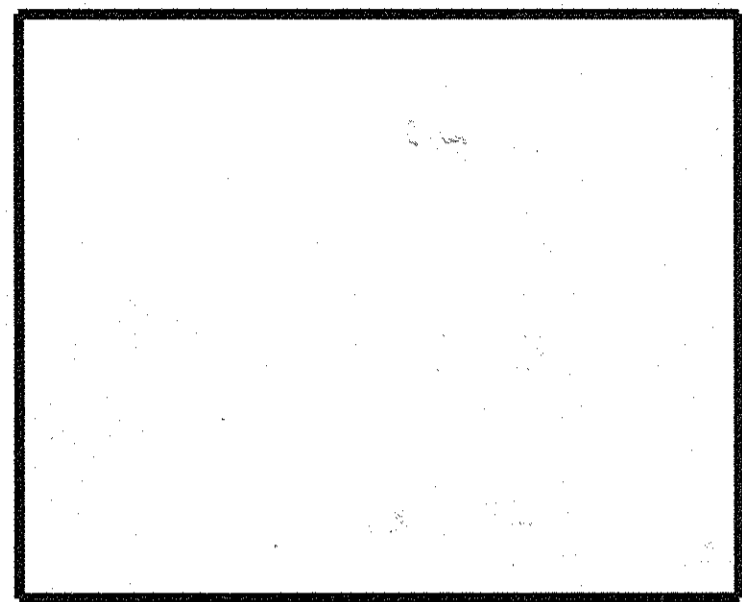
SOIL BORING LOG

DEPTH (FEET)	SOIL TYPE	REMARKS
0.00 - 0.50	ST. FILL	
0.50 - 1.00	ST. FILL	
1.00 - 1.50	ST. FILL	
1.50 - 2.00	ST. FILL	
2.00 - 2.50	ST. FILL	
2.50 - 3.00	ST. FILL	
3.00 - 3.50	ST. FILL	
3.50 - 4.00	ST. FILL	
4.00 - 4.50	ST. FILL	
4.50 - 5.00	ST. FILL	
5.00 - 5.50	ST. FILL	
5.50 - 6.00	ST. FILL	
6.00 - 6.50	ST. FILL	
6.50 - 7.00	ST. FILL	
7.00 - 7.50	ST. FILL	
7.50 - 8.00	ST. FILL	
8.00 - 8.50	ST. FILL	
8.50 - 9.00	ST. FILL	
9.00 - 9.50	ST. FILL	
9.50 - 10.00	ST. FILL	
10.00 - 10.50	ST. FILL	
10.50 - 11.00	ST. FILL	
11.00 - 11.50	ST. FILL	
11.50 - 12.00	ST. FILL	
12.00 - 12.50	ST. FILL	
12.50 - 13.00	ST. FILL	
13.00 - 13.50	ST. FILL	
13.50 - 14.00	ST. FILL	
14.00 - 14.50	ST. FILL	
14.50 - 15.00	ST. FILL	
15.00 - 15.50	ST. FILL	
15.50 - 16.00	ST. FILL	
16.00 - 16.50	ST. FILL	
16.50 - 17.00	ST. FILL	
17.00 - 17.50	ST. FILL	
17.50 - 18.00	ST. FILL	
18.00 - 18.50	ST. FILL	
18.50 - 19.00	ST. FILL	
19.00 - 19.50	ST. FILL	
19.50 - 20.00	ST. FILL	
20.00 - 20.50	ST. FILL	
20.50 - 21.00	ST. FILL	
21.00 - 21.50	ST. FILL	
21.50 - 22.00	ST. FILL	
22.00 - 22.50	ST. FILL	
22.50 - 23.00	ST. FILL	
23.00 - 23.50	ST. FILL	
23.50 - 24.00	ST. FILL	
24.00 - 24.50	ST. FILL	
24.50 - 25.00	ST. FILL	
25.00 - 25.50	ST. FILL	
25.50 - 26.00	ST. FILL	
26.00 - 26.50	ST. FILL	
26.50 - 27.00	ST. FILL	
27.00 - 27.50	ST. FILL	
27.50 - 28.00	ST. FILL	
28.00 - 28.50	ST. FILL	
28.50 - 29.00	ST. FILL	
29.00 - 29.50	ST. FILL	
29.50 - 30.00	ST. FILL	
30.00 - 30.50	ST. FILL	
30.50 - 31.00	ST. FILL	
31.00 - 31.50	ST. FILL	
31.50 - 32.00	ST. FILL	
32.00 - 32.50	ST. FILL	
32.50 - 33.00	ST. FILL	
33.00 - 33.50	ST. FILL	
33.50 - 34.00	ST. FILL	
34.00 - 34.50	ST. FILL	
34.50 - 35.00	ST. FILL	
35.00 - 35.50	ST. FILL	
35.50 - 36.00	ST. FILL	
36.00 - 36.50	ST. FILL	
36.50 - 37.00	ST. FILL	
37.00 - 37.50	ST. FILL	
37.50 - 38.00	ST. FILL	
38.00 - 38.50	ST. FILL	
38.50 - 39.00	ST. FILL	
39.00 - 39.50	ST. FILL	
39.50 - 40.00	ST. FILL	
40.00 - 40.50	ST. FILL	
40.50 - 41.00	ST. FILL	
41.00 - 41.50	ST. FILL	
41.50 - 42.00	ST. FILL	
42.00 - 42.50	ST. FILL	
42.50 - 43.00	ST. FILL	
43.00 - 43.50	ST. FILL	
43.50 - 44.00	ST. FILL	
44.00 - 44.50	ST. FILL	
44.50 - 45.00	ST. FILL	
45.00 - 45.50	ST. FILL	
45.50 - 46.00	ST. FILL	
46.00 - 46.50	ST. FILL	
46.50 - 47.00	ST. FILL	
47.00 - 47.50	ST. FILL	
47.50 - 48.00	ST. FILL	
48.00 - 48.50	ST. FILL	
48.50 - 49.00	ST. FILL	
49.00 - 49.50	ST. FILL	
49.50 - 50.00	ST. FILL	
50.00 - 50.50	ST. FILL	
50.50 - 51.00	ST. FILL	
51.00 - 51.50	ST. FILL	
51.50 - 52.00	ST. FILL	
52.00 - 52.50	ST. FILL	
52.50 - 53.00	ST. FILL	

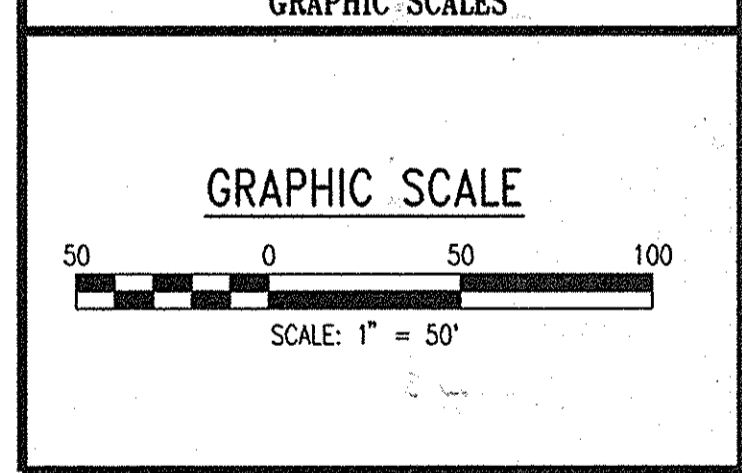
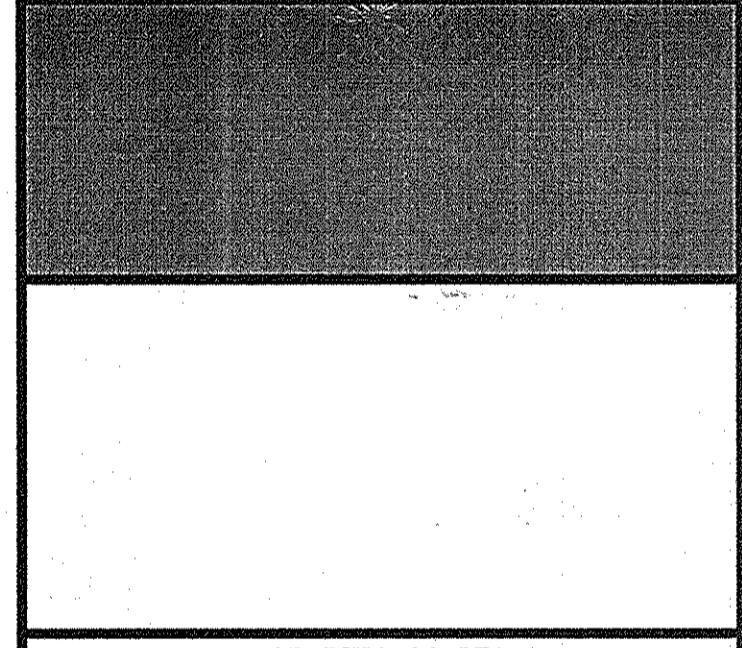




REVISIONS	
MDE W&SC PERMIT SET	4/05/06
SDP FINAL SUBMISSION	4/20/06
INSERATED NEW SHEETS	6-16-14



GLENELG HIGH SCHOOL  
 HOWARD COUNTY MD  
 TREATMENT SYSTEM DESIGN



REVISID SITE DEVELOPMENT PLAN  
 TREATMENT SYSTEM UTILITY PLAN

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
 License No. 16172      Expiration Date: 8-28-14

DRAWING NO. C-5  
 SHEET 6 OF 2436

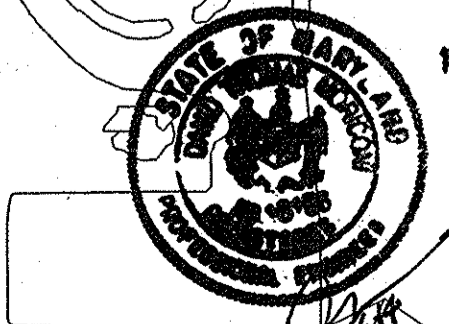
SCALE: 1" = 50'  
 DES: CMD    CHECK: AUO    DATE: 04/20/06

**GENERAL NOTES**

- SUBSURFACE SEPTIC DISPOSAL (SSD) AREAS ARE APPROVED BY HOWARD COUNTY HEALTH DEPARTMENT. SEE MUSGROVE PROPERTY PERCOLATION CERTIFICATION PLAN, DATED OCTOBER 31, 2002.
- MAXIMUM FLOW BASED ON 31 LOTS, WITH 4-BEDROOMS EACH. 150 GPD PER ROOM. TOTAL FLOW = 30 X 4 X 150 GPD = 18,000 GPD.
- GRAVITY AND LOW PRESSURE SEWER (LPS) SHALL BE BURIED MINIMUM 4' BELOW PROPOSED GRADE.
- GRAVITY SEWER MAIN SHALL BE AT MINIMUM 0.50% SLOPE.
- SEWER HOUSE CONNECTIONS AND GRINDER PUMPS TO BE INSTALLED BY OTHERS.
- BASEMENT ASSUMED 10' BELOW FINISHED FLOOR ELEVATIONS.
- GRAVITY PIPING  
 PVC, SDR 35, ASTM D-3034, WITH ELASTOMERIC GASKET JOINTS  
 DUCTILE IRON PIPE (DIP), THICKNESS CLASS 52  
 LPS PIPING  
 PVC, SDR 21 PVC PIPE, ASTM D-2241, WITH SOLVENT WELD JOINTS  
 FORCE MAIN (FM)  
 PVC, SCHEDULE 40, ASTM D-1785, WITH SOLVENT WELD JOINTS
- AERIAL TOPOGRAPHY, FLOODPLAIN AND WETLANDS DELINEATION OBTAINED FROM GUTSCHICK, LITTLE & WEBER.

**STAKEOUT**

- 1 LPS STAKEOUT POINT
  - A GRINDER PUMP STAKEOUT POINT
- REFER TO DRAWING C-8 FOR STAKEOUT DATA.



APPROVED: FOR PRIVATE WATER & SEWERAGE SYSTEMS.  
 HOWARD COUNTY HEALTH DEPARTMENT  
 County Health Officer  
 Date: 12/5/06

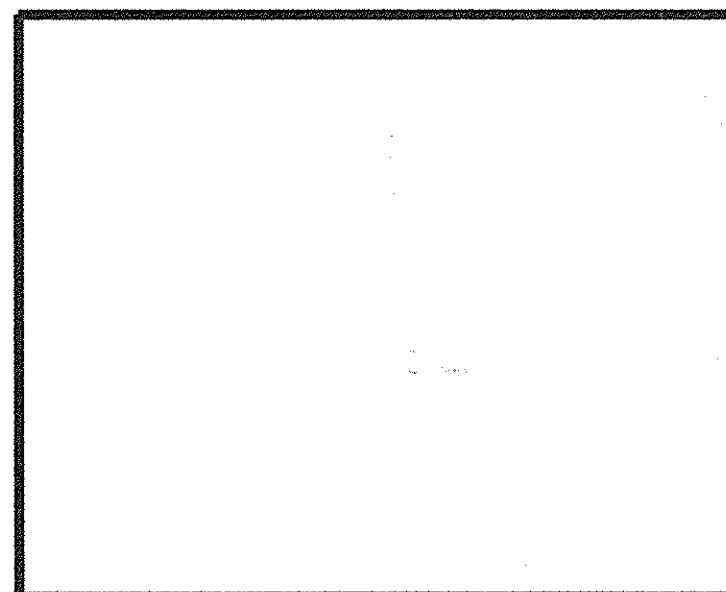
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
 Chief, Development Engineering Division  
 Date: 5/8/06

Chief, Division of Land Development  
 Date: 12/28/06

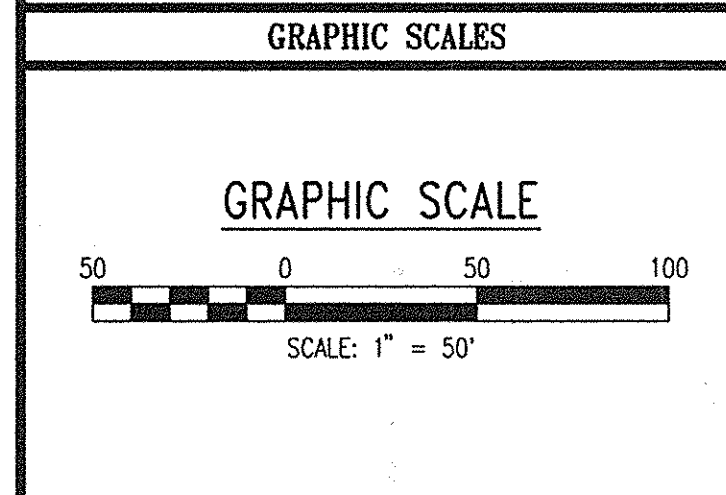
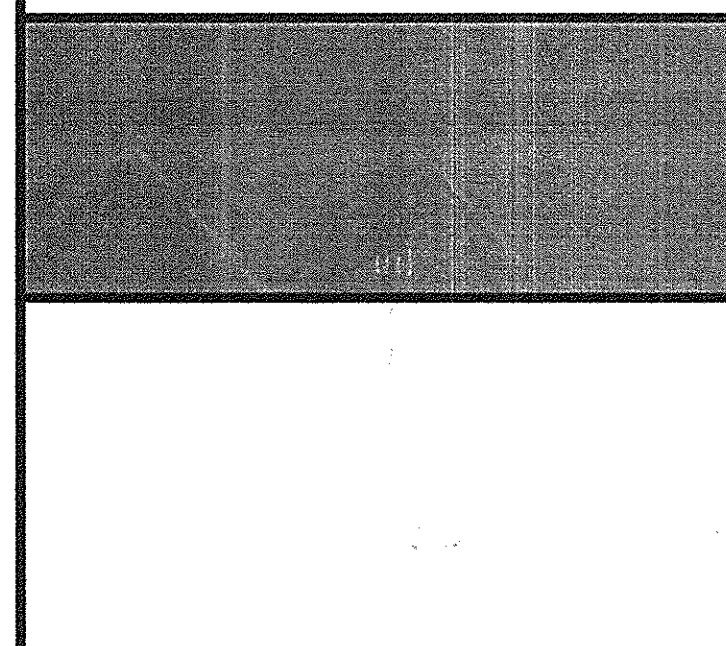
Director  
 Date: 12/28/06

MATCHLINE SEE SHEET C-7

REVISIONS	
MDE W&SC PERMIT SET	4/05/06
SDP FINAL SUBMISSION	4/20/06
UNSATURATED NEW SHEETS	6-16-14



**GLENELG HIGH SCHOOL**  
**HOWARD COUNTY MD**  
**TREATMENT SYSTEM DESIGN**



**WR&A**  
 WHITMAN, REARDT AND ASSOCIATES, LLP  
 801 SOUTH CAROLINE STREET  
 BALTIMORE, MARYLAND 21231  
 410 - 295 - 3450

REVISED SITE DEVELOPMENT PLAN

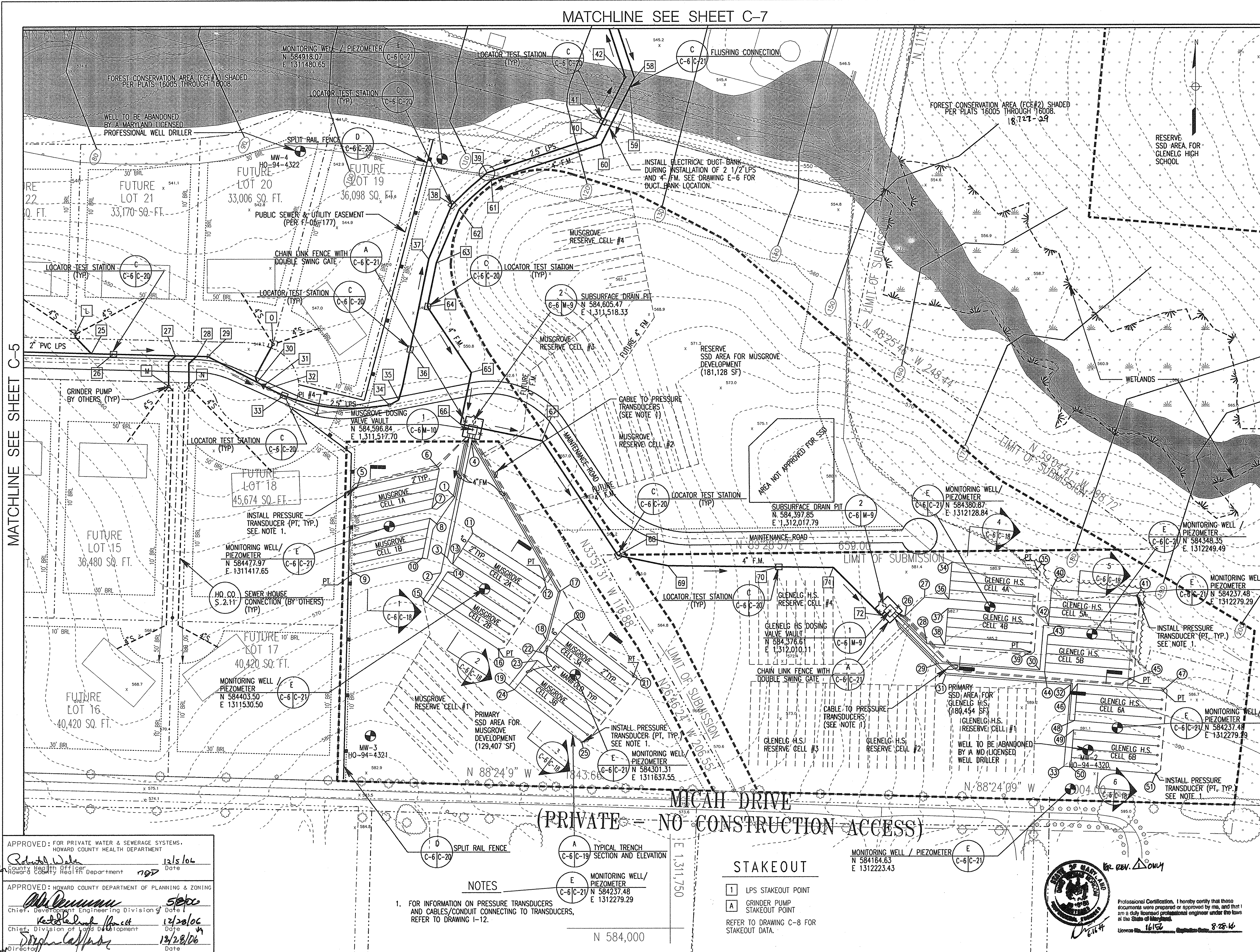
**TREATMENT SYSTEM UTILITY PLAN**

DRAWING NO. **C-6**

SHEET 7 OF 43

SCALE: 1" = 50'

DES: CMD CHECK: AUO DATE: 04/20/06



APPROVED: FOR PRIVATE WATER & SEWERAGE SYSTEMS,  
 HOWARD COUNTY HEALTH DEPARTMENT

*Robert W. Walker* 12/5/04  
 County Health Officer Date  
 Howard County Health Department 1997

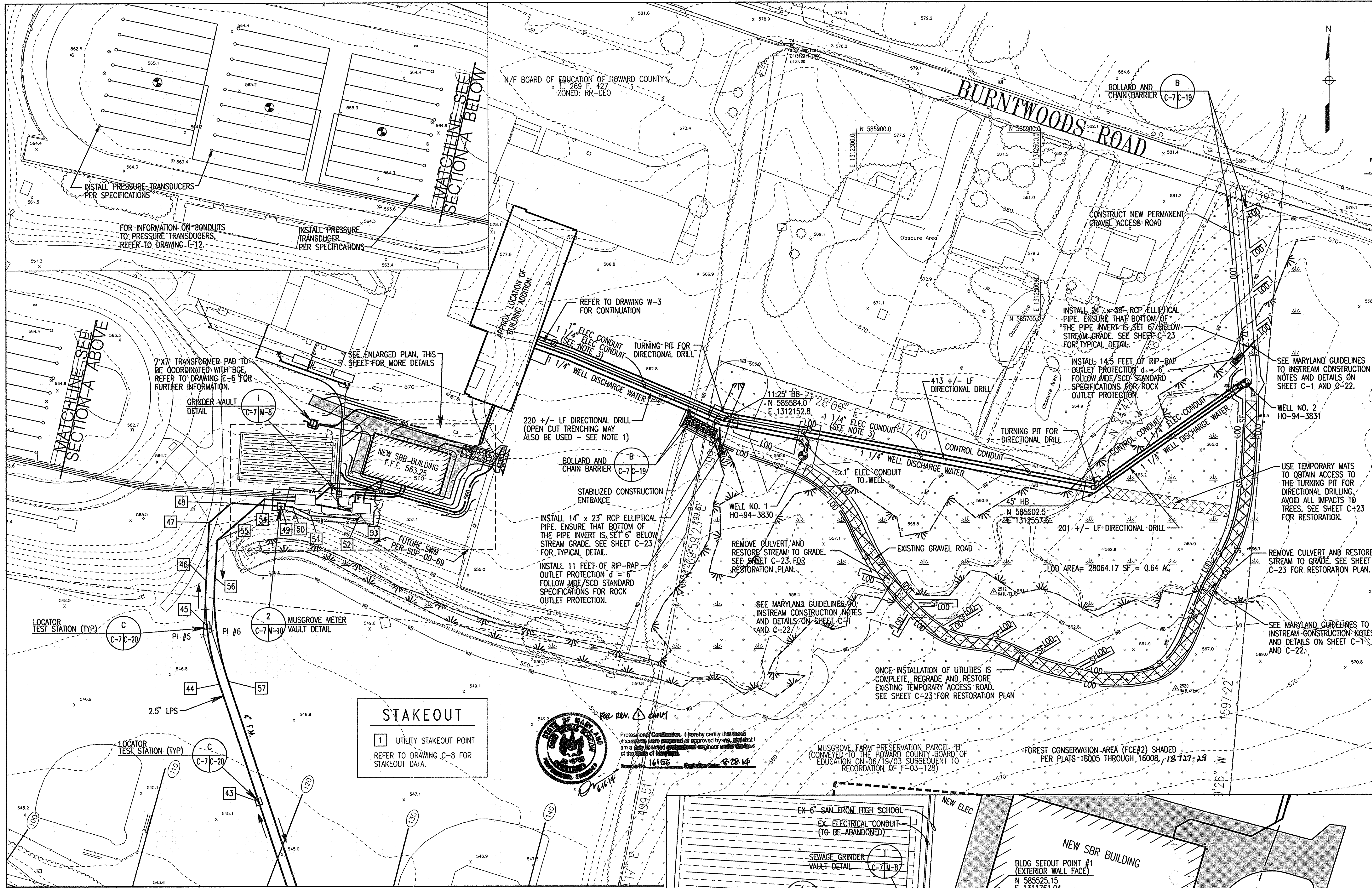
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*Ally Deussen* 5/20/06  
 Chief, Development Engineering Division Date  
*Kedra L. Smith* 12/28/06  
 Chief, Division of Land Development Date  
*Doreen Caffery* 12/28/06  
 Director Date

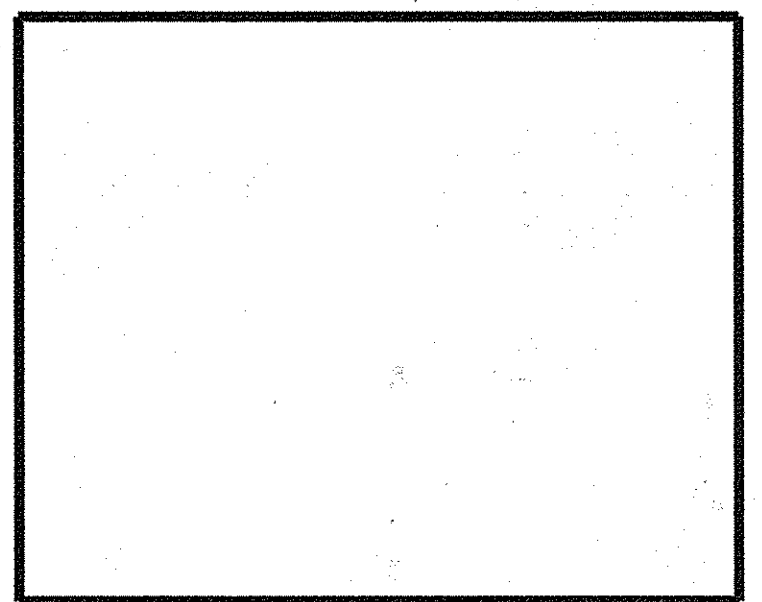
- NOTES**
- 1. FOR INFORMATION ON PRESSURE TRANSDUCERS AND CABLES/CONDUIT CONNECTING TO TRANSDUCERS, REFER TO DRAWING I-12.
- STAKEOUT**
- 1 LPS STAKEOUT POINT
  - A GRINDER PUMP STAKEOUT POINT
- REFER TO DRAWING C-8 FOR STAKEOUT DATA.



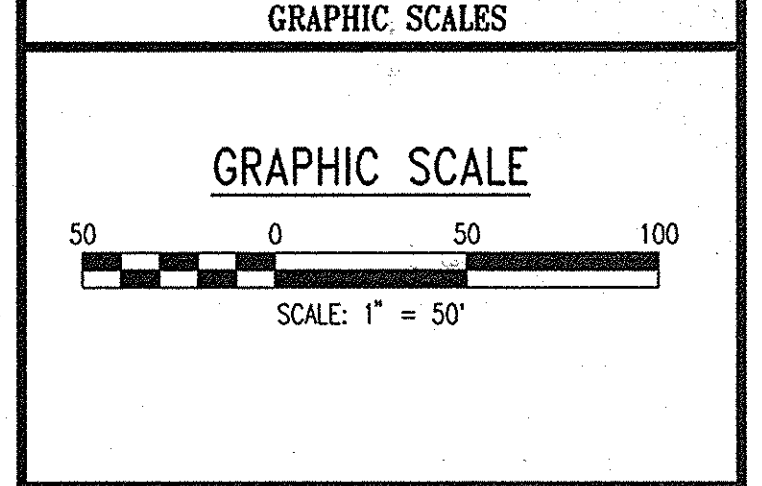
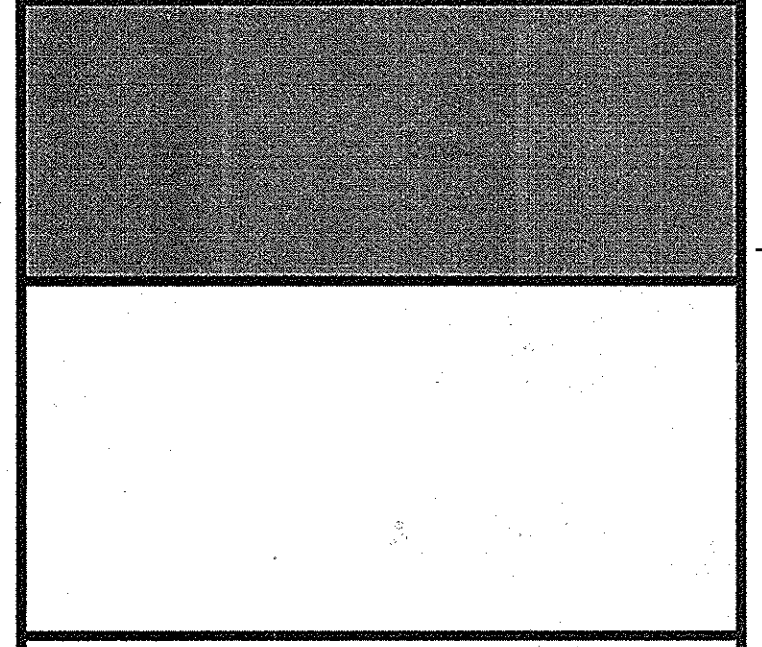
MA: B0178V-SDP-PLAN SET, SDP-HSSBRC06.dgn  
 Mon, Apr 17, 14:24:45 2006



REVISIONS	
MDE W&SC PERMIT SET	4/05/06
SDP FINAL SUBMISSION	4/20/06
INSERTE NEW SHEETS	6-16-14



**GLENELG HIGH SCHOOL**  
**HOWARD COUNTY MD**  
**TREATMENT SYSTEM DESIGN**



**WR&A**

WHITMAN, REQUARDT AND ASSOCIATES, LLP  
801 SOUTH CAROLINE STREET  
BALTIMORE, MARYLAND 21231  
410 - 235 - 3450

REVISED SITE DEVELOPMENT PLAN

**TREATMENT SYSTEM UTILITY PLAN**

DRAWING NO. **C-7**

SHEET 8 OF 24

SCALE: 1" = 50'

DES: CMD CHECK: AUO DATE: 04/20/06

APPROVED: FOR PRIVATE WATER & SEWERAGE SYSTEMS.  
HOWARD COUNTY HEALTH DEPARTMENT

*Robert J. Weller* 12/5/06  
County Health Officer  
Howard County Health Department

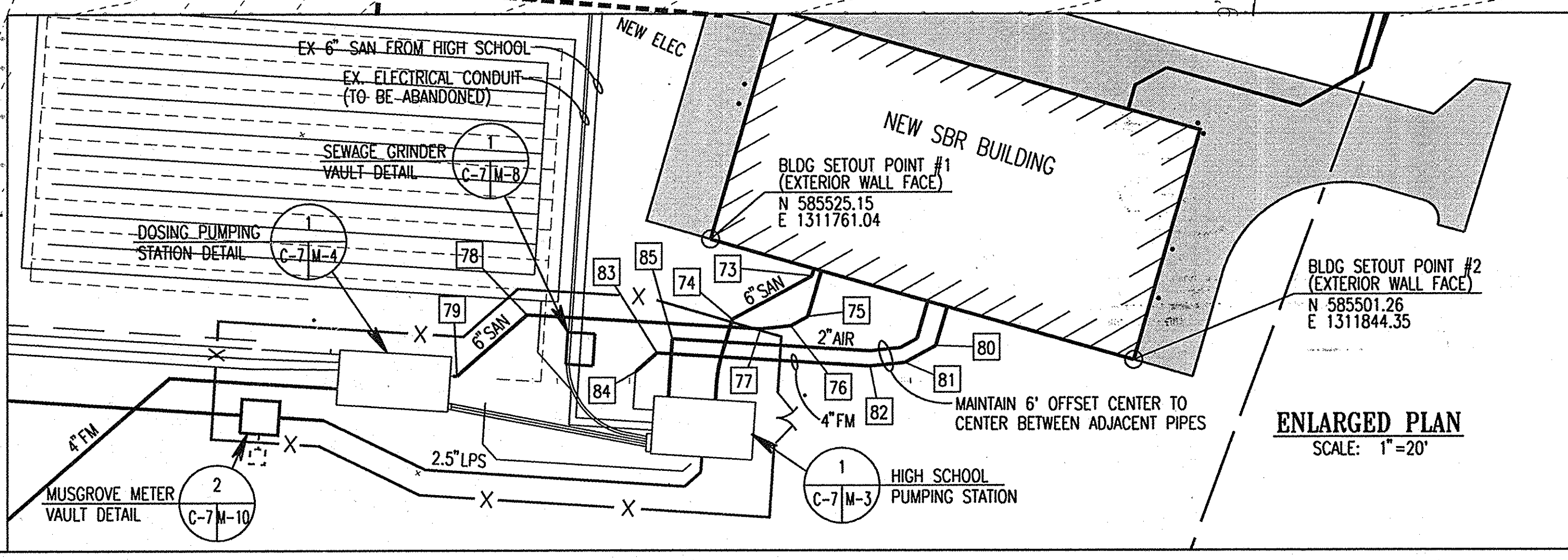
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*John P. ...* 5/10/06  
Chief, Development Engineering Division

*Kat ...* 12/28/06  
Chief, Division of Land Development

*Stephen ...* 12/28/06  
Director

- NOTES**
- IF OPEN CUT TRENCHING IS USED THEN THE PAVEMENT REPAIR SHALL MATCH THE EXISTING PAVING SECTION. BACKFILL OF TRENCH AND PIPE BEDDING SHALL ADHERE TO HOWARD COUNTY STANDARD DETAILS. DURING CONSTRUCTION ALL SPOILS SHALL BE PLACED ON THE UPHILL SIDE OF THE TRENCH.
  - FOR STAKEOUT POINT DATA, REFER TO DRAWING C-8.
  - ALL ELECTRICAL AND CONTROL CONDUITS SHALL BE SCHEDULE 40 PVC AND INSTALLED WITH 36" MINIMUM COVER. REFER TO DRAWINGS E-2, I-12, AND I-14 FOR WIRING INFORMATION.



**STAKEOUT**

1 UTILITY STAKEOUT POINT  
REFER TO DRAWING C-8 FOR STAKEOUT DATA.

MATCHLINE SEE SHEET C-6

MATCHLINE SEE SECTION A ABOVE

MATCHLINE SEE SECTION A BELOW



2" & 2 1/2" LPS STAKEOUT DATA			
POINTS	NORTHING	EASTING	DESCRIPTION
1	584,687.75	1,309,802.14	TERMINAL FLUSHING CONN.
2	584,624.13	1,309,914.00	2" x 2" WYE
3	584,612.26	1,309,934.85	2" x 2" WYE
4	584,588.79	1,309,975.87	LOCATOR TEST STATION
5	584,566.32	1,310,015.58	2" x 2" WYE
6	584,531.64	1,310,176.60	POINT OF CURVE
7	584,516.38	1,310,107.34	LOCATOR TEST STATION
8	584,505.12	1,310,147.66	2" x 2" WYE
9	584,499.95	1,310,189.97	POINT OF TANGENT
10	584,496.76	1,310,301.22	LOCATOR TEST STATION
11	584,496.16	1,310,329.25	2" x 2" WYE
12	584,494.90	1,310,371.49	2" x 2" WYE
13	584,494.82	1,310,373.98	POINT OF CURVE
14	584,536.21	1,310,504.81	AIR RELEASE VAVLE
15	584,550.71	1,310,522.00	POINT OF TANGENT
16	584,602.74	1,310,576.99	2" x 2" WYE
17	584,640.43	1,310,616.82	2" x 2" WYE
18	584,644.42	1,310,621.10	POINT OF CURVE
19	584,684.09	1,310,691.81	LOCATOR TEST STATION
20	584,693.30	1,310,743.72	POINT OF TANGENT
21	584,693.30	1,310,764.24	2" x 2" WYE
22	584,693.30	1,310,774.14	2" x 2" WYE
23	584,690.36	1,310,891.49	LOCATOR TEST STATION
24	584,689.80	1,310,915.62	2" x 2" WYE
25	584,685.61	1,311,065.67	2" x 2" WYE
26	584,685.10	1,311,091.77	LOCATOR TEST STATION
27	584,682.84	1,311,165.45	2" x 2" WYE
28	584,682.15	1,311,190.01	2" x 2" WYE
29	584,681.80	1,311,203.43	22 1/2" BEND
30	584,650.71	1,311,261.53	2" x 2" WYE
31	584,646.70	1,311,268.96	2" x 2 1/2" REDUCER
32	584,643.48	1,311,275.03	POINT OF CURVE
33	584,634.75	1,311,293.49	LOCATOR TEST STATION
34	584,623.03	1,311,417.75	POINT OF TANGENT/22 1/2" HB
35	584,629.20	1,311,428.78	45" HB
36	584,690.09	1,311,442.43	LOCATOR TEST STATION
37	584,797.76	1,311,464.50	45" HB
38	584,863.25	1,311,492.26	22.5" HB, LOCATOR TEST STATION
39	584,901.27	1,311,533.71	22.5" HB
40	584,943.59	1,311,661.83	22.5" HB
41	585,962.29	1,311,671.17	LOCATOR TEST STATION
42	585,014.84	1,311,697.70	45" HB
43	585,165.72	1,311,647.87	LOCATOR TEST STATION
44	585,294.70	1,311,605.26	POINT OF CURVE
45	585,359.13	1,311,591.62	LOCATOR TEST STATION
46	585,408.27	1,311,590.75	POINT OF TANGENT
47	585,472.30	1,311,594.14	45" HB
48	584,493.61	1,311,618.42	45" HB
49	585,490.12	1,311,672.26	MUSGROVE FLOW METER
50	585,489.30	1,311,684.85	22 1/2" HB
51	585,479.41	1,311,704.93	22 1/2" HB
52	585,476.09	1,311,755.91	45" HB
53	585,478.89	1,311,759.10	45" HB

4" FM STAKEOUT DATA			
POINTS	NORTHING	EASTING	DESCRIPTION
54	585,497.78	1,311,654.49	45" HB
55	585,452.51	1,311,602.93	45" HB
56	585,411.40	1,311,600.25	POINT OF CURVE
57	585,297.84	1,311,614.75	POINT OF TANGENT
58	585,014.04	1,311,708.49	45" HB
59	585,002.72	1,311,702.79	FLUSHING CONNECTION
60	584,935.39	1,311,668.90	45" HB
61	584,892.40	1,311,538.73	22.5" HB
62	584,857.51	1,311,500.69	22.5" HB
63	584,793.47	1,311,473.54	22.5" HB
64	584,741.47	1,311,462.75	45" HB/LOCATOR TEST STATION
65	584,662.24	1,311,514.76	45" HB
66	584,599.97	1,311,501.84	90" HB
67	584,579.91	1,311,598.52	45" HB
68	584,443.09	1,311,688.32	45" HB
69	584,430.83	1,311,747.37	11.25" HB
70	584,429.23	1,311,878.71	LOCATOR TEST STATION
71	584,428.37	1,311,942.98	45" HB
72	584,371.28	1,311,999.63	90" HB

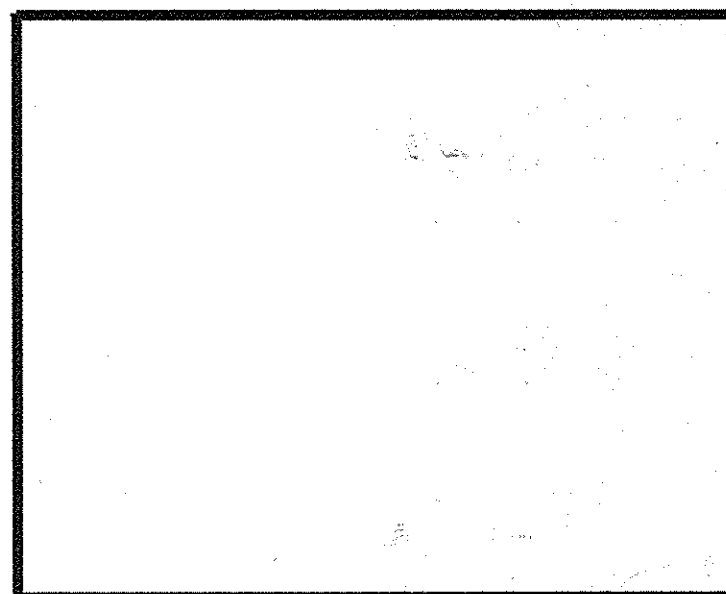
UTILITY STAKEOUT AT SBR BUILDING			
POINTS	NORTHING	EASTING	DESCRIPTION
73	585,517.88	1,311,780.99	45" HB, 6" SAN
74	585,509.35	1,311,765.30	45" HB, 6" SAN
75	585,509.86	1,311,780.19	45" HB, 6" SAN
76	585,508.05	1,311,776.85	22.5" HB, 6" SAN
77	585,507.42	1,311,999.63	11.25" HB, 6" SAN
78	585,510.24	1,311,724.90	45" HB, 6" SAN
79	585,498.11	1,311,711.08	45" HB, 6" SAN, CONNECT TO EX.
80	585,504.11	1,311,805.39	45" HB, 4" FM
81	585,500.80	1,311,799.31	22.5" HB, 4" FM
82	585,500.08	1,311,792.49	11.25" HB, 4" FM
83	585,502.66	1,311,750.51	45" HB, 4" FM
84	585,498.91	1,311,746.25	45" HB, 4" FM, CONNECT TO EX.
85	585,505.48	1,311,753.48	90" HB, 2" AIR

SEPTIC DRAIN STAKEOUT DATA			
POINTS	NORTHING	EASTING	DESCRIPTION
1	584,512.54	1,311,495.19	22.5" HB, 4" FM TO CELL 1B
2	584,422.60	1,311,478.57	22.5" HB, 4" FM TO CELL 2B
3	584,440.47	1,311,486.36	45" HB, 4" FM TO CELL 2A
4	584,578.07	1,311,514.91	45" HB, 4" FM TO CELL 3A
5	584,524.37	1,311,379.27	END OF LATERAL, CELL 1A
6	584,546.43	1,311,476.80	6" x 4" 90° REDUCING BEND, 1A
7	584,499.29	1,311,467.86	6" x 4" 90° REDUCING BEND, 1A
8	584,487.51	1,311,465.63	6" x 4" 90° REDUCING BEND, 1B
9	584,422.29	1,311,376.71	END OF LATERAL, CELL 1B
10	584,440.38	1,311,456.69	6" x 4" 90° REDUCING BEND, 1B
11	584,469.72	1,311,516.55	6" x 4" 90° REDUCING BEND, 2A
12	584,415.00	1,311,600.24	END OF LATERAL, CELL 2A
13	584,432.98	1,311,492.52	6" x 4" 90° REDUCING BEND, 2A
14	584,423.77	1,311,486.50	6" x 4" 90° REDUCING BEND, 2B
15	584,386.94	1,311,462.42	6" x 4" 90° REDUCING BEND, 2B
16	584,331.53	1,311,547.00	END OF LATERAL, CELL 2B
17	584,399.48	1,311,617.68	45" HB, 4" FM TO CELL 3B
18	584,343.69	1,311,602.64	22.5" HB, 4" FM TO CELL 3B
19	584,288.52	1,311,559.41	90" HB, 4" FM TO CELL 3B
20	584,361.51	1,311,626.77	6" x 4" 90° REDUCING BEND, 2B
21	584,299.14	1,311,706.36	END OF LATERAL, CELL 3A
22	584,326.87	1,311,599.63	6" x 4" 90° REDUCING BEND, 3A
23	584,318.21	1,311,592.85	6" x 4" 90° REDUCING BEND, 3B
24	584,283.58	1,311,565.71	6" x 4" 90° REDUCING BEND, 3B
25	584,221.21	1,311,645.30	END OF LATERAL, CELL 3A
26	584,370.19	1,312,027.67	45" HB, 4" FM TO CELL 4A
27	584,392.86	1,312,050.92	45" HB, 4" FM TO CELL 4A
28	584,337.43	1,312,053.90	45" HB, 4" FM TO CELL 4B
29	584,314.18	1,312,068.20	45" HB, 4" FM TO CELL 5B
30	584,306.38	1,312,187.13	90" HB, 4" FM TO CELL 5A
31	584,300.49	1,312,075.95	45" HB, 4" FM TO CELL 6B
32	584,288.32	1,312,223.59	90" HB, 4" FM TO CELL 6B
33	584,191.65	1,312,215.62	90" HB, 4" FM TO CELL 6B
34	584,434.34	1,312,083.29	6" x 4" 90° REDUCING BEND, 4A
35	584,426.15	1,312,184.09	END OF LATERAL, CELL 4A
36	584,390.49	1,312,079.68	6" x 4" 90° REDUCING BEND, 4A
37	584,379.53	1,312,078.77	6" x 4" 90° REDUCING BEND, 4B
38	584,335.68	1,312,075.16	6" x 4" 90° REDUCING BEND, 4B
39	584,327.46	1,312,175.93	END OF LATERAL, CELL 4B
40	584,402.55	1,312,201.08	6" x 4" 90° REDUCING BEND, 5A
41	584,394.36	1,312,302.06	END OF LATERAL, CELL 5A
42	584,358.70	1,312,197.46	6" x 4" 90° REDUCING BEND, 5A
43	584,347.74	1,312,196.56	6" x 4" 90° REDUCING BEND, 5B
44	584,303.89	1,312,192.94	6" x 4" 90° REDUCING BEND, 5B
45	584,295.56	1,312,293.88	END OF LATERAL, CELL 5B
46	584,289.65	1,312,231.73	6" x 4" 90° REDUCING BEND, 6A
47	584,281.40	1,312,332.59	END OF LATERAL, CELL 6A
48	584,245.80	1,312,228.11	6" x 4" 90° REDUCING BEND, 6A
49	584,234.84	1,312,227.21	6" x 4" 90° REDUCING BEND, 6B
50	584,190.99	1,312,223.59	6" x 4" 90° REDUCING BEND, 6B
51	584,182.65	1,312,324.31	END OF LATERAL, CELL 6B

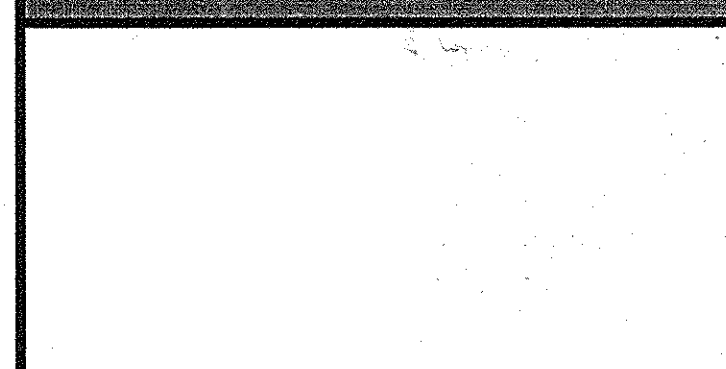
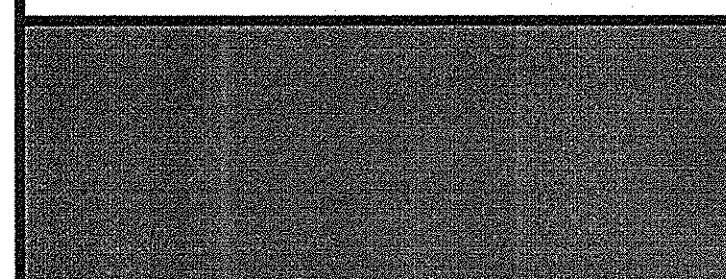
PIPE INVERT AT GRINDER PUMP STAKEOUT DATA			
POINTS	NORTHING	EASTING	1 1/4" INVERT ELEV.
A	584,595.79	1,309,889.74	527.10
B	584,583.87	1,309,910.57	527.30
C	584,589.82	1,310,020.85	532.00
D	584,470.25	1,310,132.86	540.80
E	584,519.21	1,310,324.53	553.30
F	584,458.05	1,310,365.46	555.10
G	584,573.55	1,310,597.72	561.35
H	584,657.38	1,310,591.16	560.55
I	584,717.17	1,310,759.24	557.85
J	584,656.87	1,310,769.15	557.55
K	584,652.97	1,310,909.09	556.20
L	584,709.20	1,311,046.67	551.45
M	584,646.06	1,311,156.99	551.45
N	584,645.39	1,311,180.99	551.25
O	584,696.46	1,311,280.35	551.85

NOTE: ALL E-ONE PUMP UNITS SHALL BE SUBJECT TO FIELD ADJUSTMENTS.

REVISIONS	
MDE W&SC PERMIT SET	4/05/06
SDP FINAL SUBMISSION	4/20/06
INSERTEED NEW SHEETS	6-16-14



GLENELG HIGH SCHOOL  
HOWARD COUNTY MD  
TREATMENT SYSTEM DESIGN



GRAPHIC SCALES

**WR&A**  
WHITMAN, REQUARDT AND ASSOCIATES, LLP  
801 SOUTH CAROLINE STREET  
BALTIMORE, MARYLAND 21231  
410 - 235 - 3450

REVISED SITE DEVELOPMENT PLAN

TREATMENT SYSTEM STAKEOUT DATA TABLES

	DRAWING NO.
	C-8
SHEET 9 OF 2436	
SCALE: NO SCALE	
DES: CMD CHECK: AUO DATE: 04/20/06	

2" & 2" LOW PRESSURE SEWER (LPS) STAKEOUT DATA								
CURVE DATA TABLE								
PI	DELTA Δ	D	R	L	T	E	NORTH	EAST
PI #1	28°01'59.62" (LT)	23'34"42.64"	243	118.89	60.66	7.45	584,501.64	1,310,129.33
PI #2	45°09'58.28" (LT)	27'48"48.55"	206	162.38	85.67	17.10	584,492.42	1,310,460.40
PI #3	38°32'03.04" (RT)	28'38"52.40"	200	134.50	69.91	11.86	584,693.30	1,310,672.70
PI #4	34°52'22.37" (LT)	27'48"46.14"	206	125.38	64.70	2.46	584,612.95	1,311,332.07
PI #5	22°00'00.74" (RT)	19'05"54.94"	300	115.19	58.31	5.61	585,348.23	1,311,587.58

6" FM STAKEOUT DATA								
CURVE DATA TABLE								
PI	DELTA Δ	D	R	L	T	E	NORTH	EAST
PI #6	28°01'59.62" (LT)	23'34"42.64"	243	118.89	60.66	7.45	585,353.22	1,311,596.47

APPROVED: FOR PRIVATE WATER & SEWERAGE SYSTEMS,  
HOWARD COUNTY HEALTH DEPARTMENT

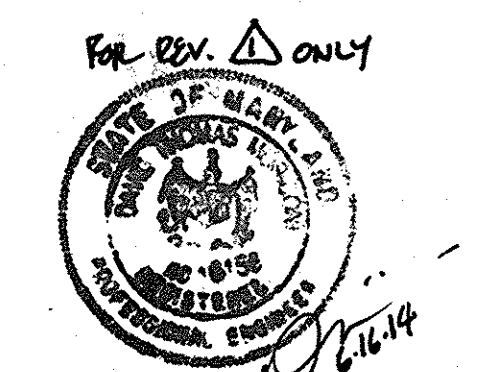
*Robert J. Wala*  
County Health Officer  
Howard County Health Department  
Date: 12/5/04

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*John P. ...*  
Chief, Development Engineering Division  
Date: 5/6/06

*...*  
Chief, Division of Land Development  
Date: 12/20/06

*...*  
Director  
Date: 12/28/06



Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

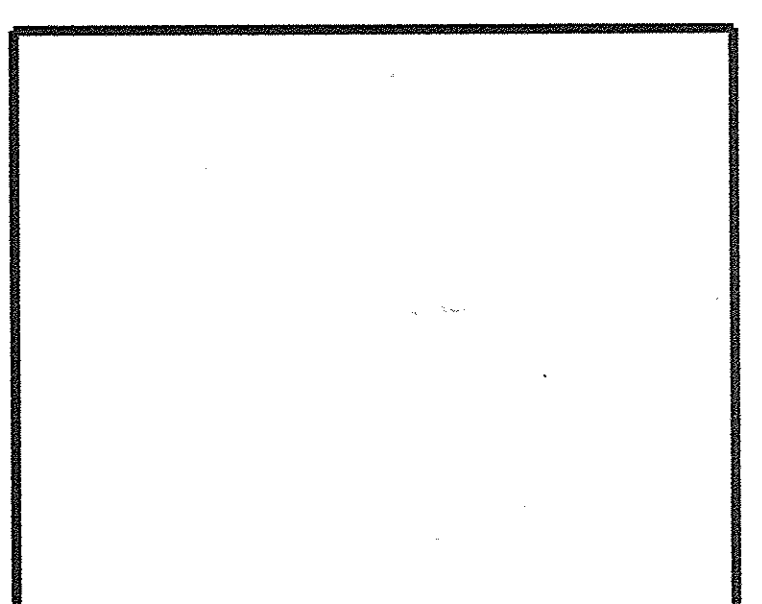
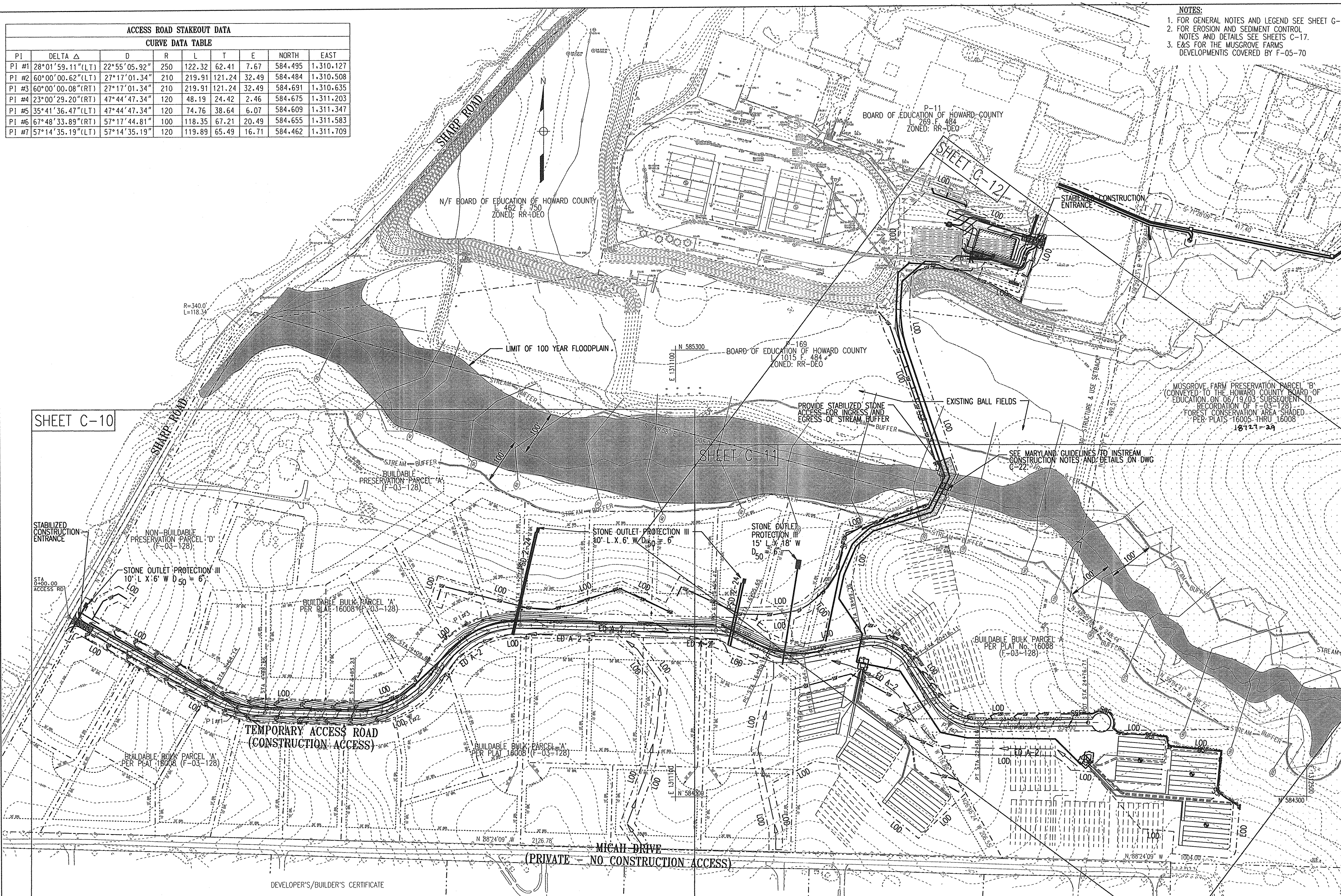
Lic. No. 16156, Expiration Date: 8-28-14

M:\9078\SDP-PLAN.SET\SDP\HSSBRC08.dgn Mon, Apr 17, 14:24:09 2006

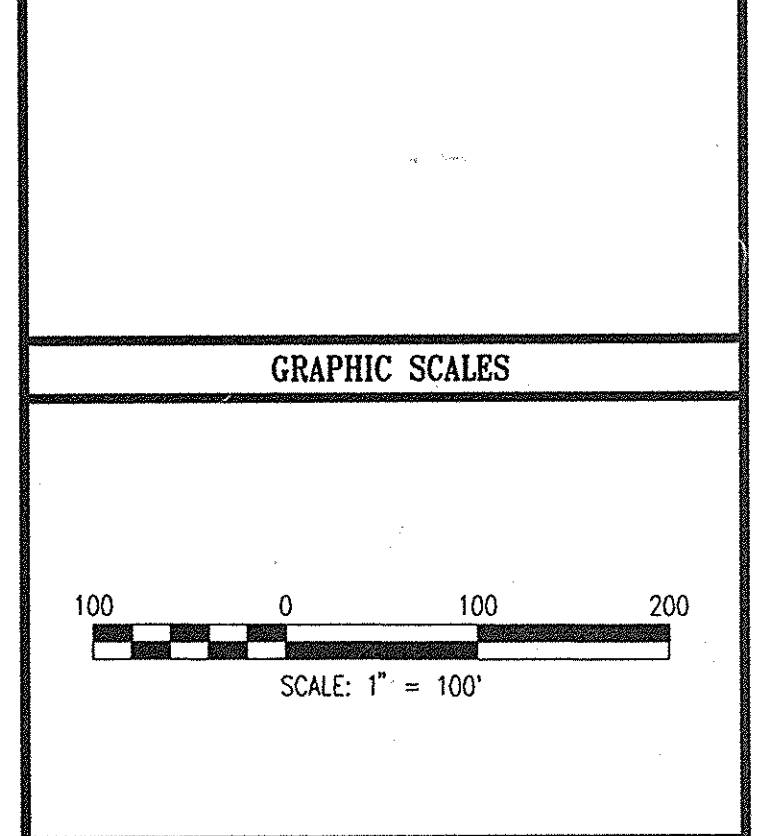
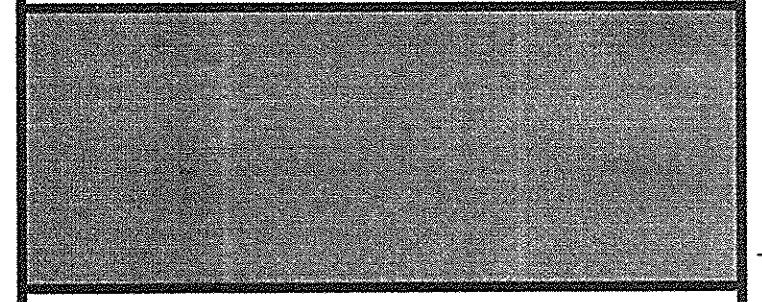
ACCESS ROAD STAKEOUT DATA								
CURVE DATA TABLE								
PI	DELTA Δ	D	R	L	T	E	NORTH	EAST
PI #1	28°01'59.11"(LT)	22°55'05.92"	250	122.32	62.41	7.67	584.495	1,310.127
PI #2	60°00'00.62"(LT)	27°17'01.34"	210	219.91	121.24	32.49	584.484	1,310.508
PI #3	60°00'00.08"(RT)	27°17'01.34"	210	219.91	121.24	32.49	584.691	1,310.635
PI #4	23°00'29.20"(RT)	47°44'47.34"	120	48.19	24.42	2.46	584.675	1,311.203
PI #5	35°41'36.47"(LT)	47°44'47.34"	120	74.76	38.64	6.07	584.609	1,311.347
PI #6	67°48'33.89"(RT)	57°17'44.81"	100	118.35	67.21	20.49	584.655	1,311.583
PI #7	57°14'35.19"(LT)	57°14'35.19"	120	119.89	65.49	16.71	584.462	1,311.709

- NOTES:
- FOR GENERAL NOTES AND LEGEND SEE SHEET G-
  - FOR EROSION AND SEDIMENT CONTROL NOTES AND DETAILS SEE SHEETS C-17.
  - E&S FOR THE MUSGROVE FARMS DEVELOPMENTS COVERED BY F-05-70

REVISIONS	
MDE W&SC PERMIT SET	4/05/06
SDP FINAL SUBMISSION	4/20/06
UNRECORDED NEW SHEETS	6-16-14



**GLENELG HIGH SCHOOL**  
**HOWARD COUNTY MD**  
**TREATMENT SYSTEM DESIGN**



This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

*John L. Robertson* 5/14/06  
 Date

Reviewed for the Howard SCD and meets technical requirements.

*Jim Meyer* 5/14/06  
 Date

"I/we certify that all development and/or construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Maryland 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 HSCD."

*Wm. B.* 4-19-06  
 Signature of Developer/Builder Date

ENGINEER'S CERTIFICATE

"I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

*Anthony Wilson* 4/19/06  
 Signature of Engineer (print name below signature) Date

P-154  
 N/F CHARLES R. AND REGINA C. SOMMERLOCK  
 L 2293 F. 500  
 ZONED: RR-DEO

P-155  
 N/F E.C. AND V.E. LEVY  
 L 4394 F. 549  
 ZONED: RR-DEO

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 16156 Expiration Date: 8-28-14

APPROVED: FOR PRIVATE WATER & SEWERAGE SYSTEMS - HOWARD COUNTY HEALTH DEPARTMENT

*Robert J. Wala* 12/5/06  
 County Health Officer Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*Stephen J. Leary* 12-12-06  
 Director Date

*William J. Hance* 12/28/06  
 Chief, Division of Land Development Date

*William J. Hance* 5/16/06  
 Chief, Development Engineering Division Date

REVISOR SITE DEVELOPMENT PLAN

**ACCESS ROAD  
 SEDIMENT AND EROSION  
 CONTROL & ROAD PLAN  
 OVERVIEW**

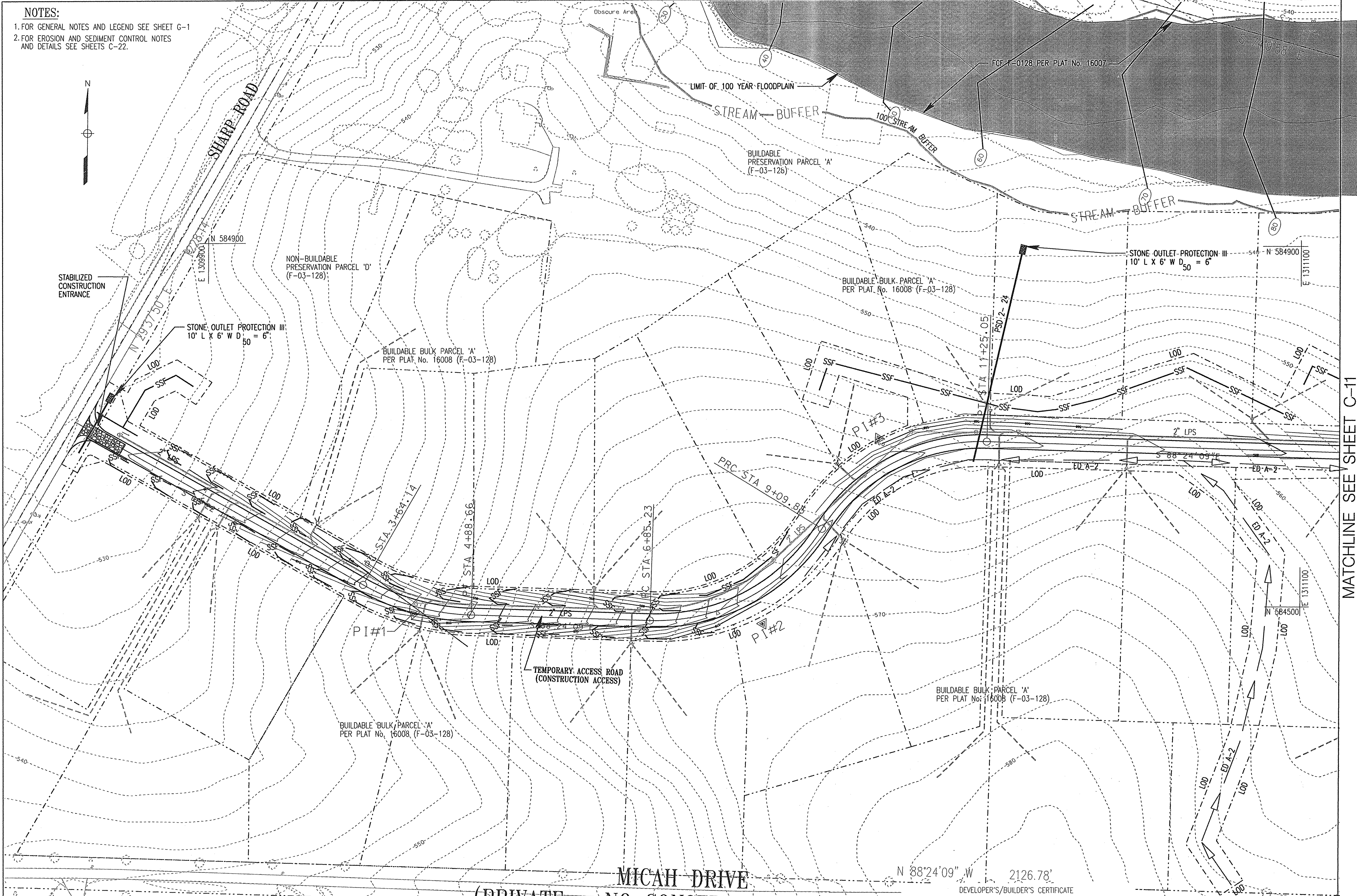
DRAWING NO. **C-9**

SHEET 10 OF 2436

SCALE: 1" = 100'

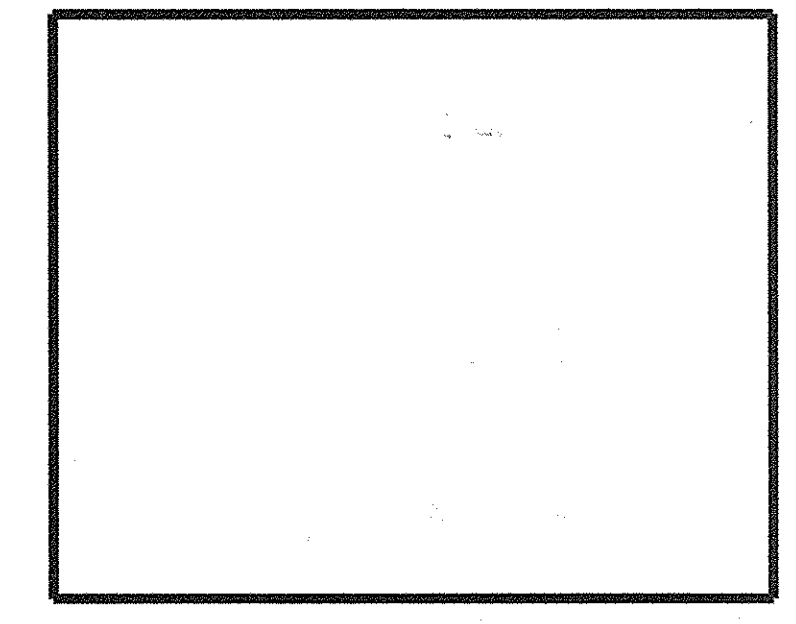
DES: CMD CHECK: AUO DATE: 04/20/06

M:\A01078\SDP-PLAN-SET\SDP05\SDP05.CAD Mon Apr 17 14:23:59 2006

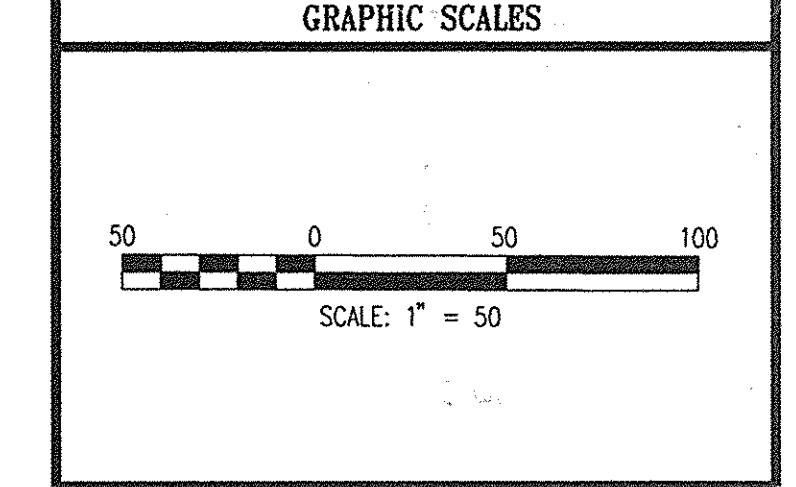
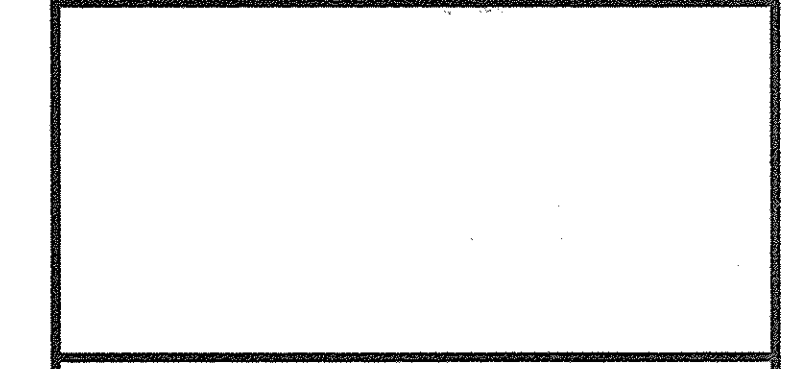
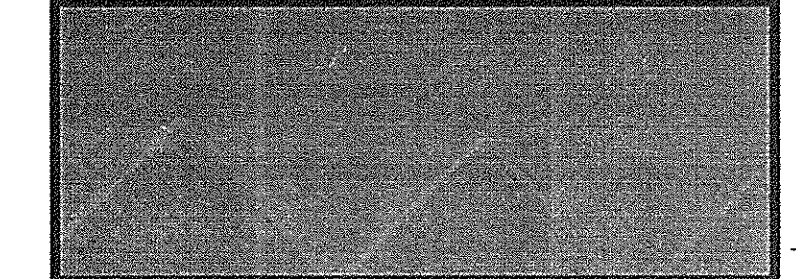


**NOTES:**  
 1. FOR GENERAL NOTES AND LEGEND SEE SHEET G-1  
 2. FOR EROSION AND SEDIMENT CONTROL NOTES AND DETAILS SEE SHEETS C-22.

REVISIONS	
MDE W&SC PERMIT SET	4/05/06
SDP FINAL SUBMISSION	4/20/06
INSERED NEW SHEETS	6-16-14



**GLENELG HIGH SCHOOL**  
**HOWARD COUNTY MD**  
**TREATMENT SYSTEM DESIGN**



**WR&A**  
 WHITMAN, REQUARDT AND ASSOCIATES, LLP  
 801 SOUTH CAROLINE STREET  
 BALTIMORE, MARYLAND 21231  
 410 - 235 - 3450

REVISSED SITE DEVELOPMENT PLAN

**TEMPORARY ACCESS ROAD  
 SEDIMENT & EROSION  
 CONTROL PLAN**

	DRAWING NO.
	<b>C-10</b>
	SHEET 11 OF 2436
	SCALE: 1" = 50'
DES: CMD CHECK: AUO DATE: 04/20/06	

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.  
*John R. Hester* 5/1/06  
 Date

Reviewed for the Howard SCD and meets technical requirements.  
*Jim Meyer* 5/1/06  
 Date  
 USD Natural Resources Conservation Service

**ENGINEER'S CERTIFICATE**

"I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

*Anthony Olsen* 4/19/06  
 Signature of Engineer (print name below signature) Date

**MICAH DRIVE  
 (PRIVATE - NO CONSTRUCTION ACCESS)**

DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and/or construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Maryland 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 HSCD."

*Wm B* 4.19.06  
 Signature of Developer/Builder Date

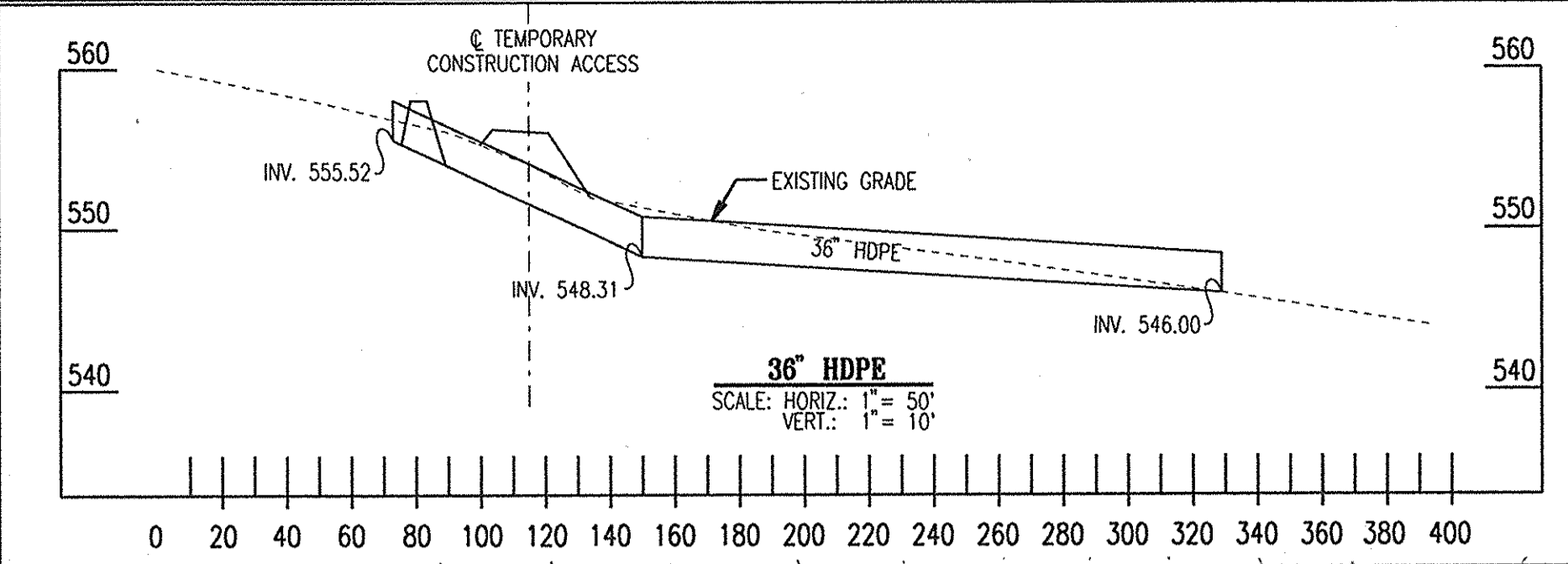
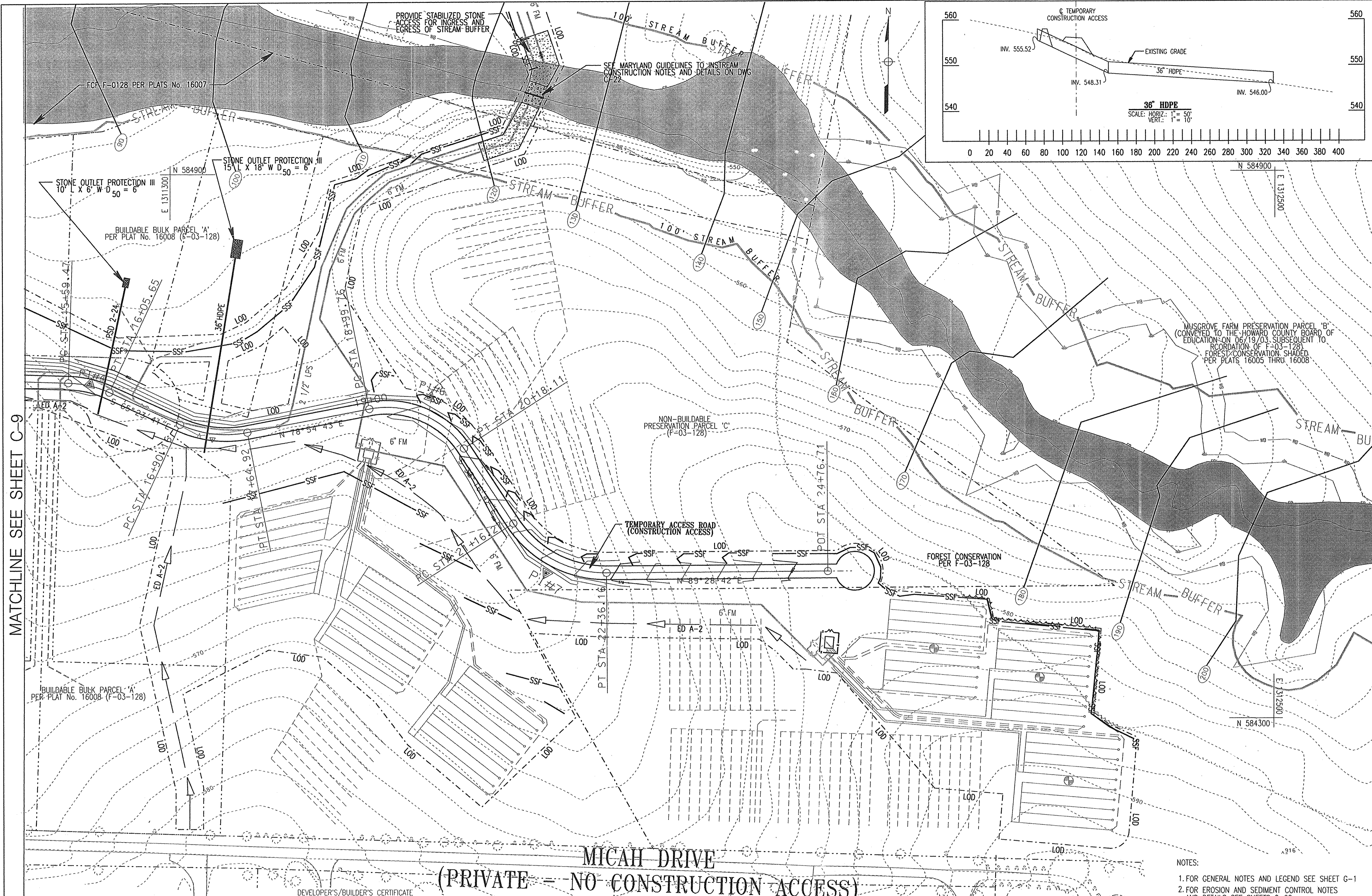
APPROVED: FOR PRIVATE WATER & SEWERAGE SYSTEMS,  
 HOWARD COUNTY HEALTH DEPARTMENT  
*Robert A. Wale* 12/05/06  
 County Health Officer Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Steph Lafferty* 12/29/06  
 Director Date

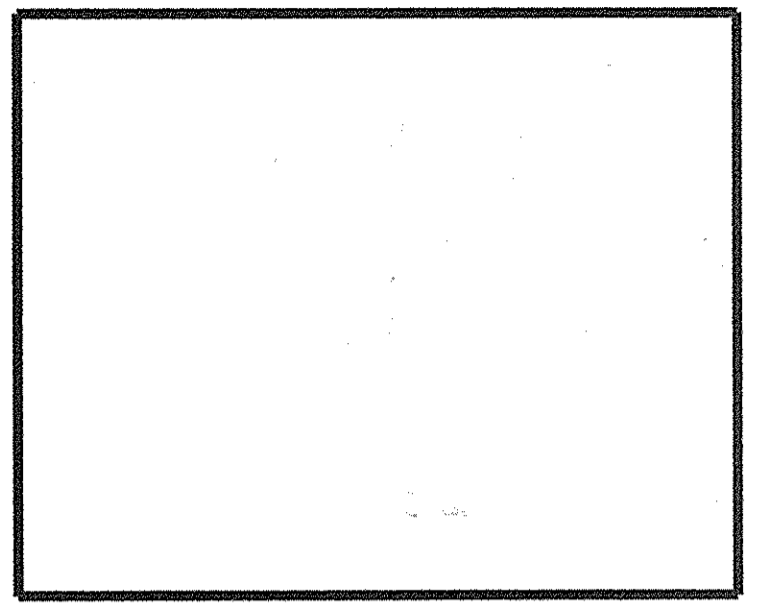
*Kat Sheehy* 12/29/06  
 Chief, Division of Land Development Date

*Matthew* 5/2/06  
 Chief, Development Engineering Division Date

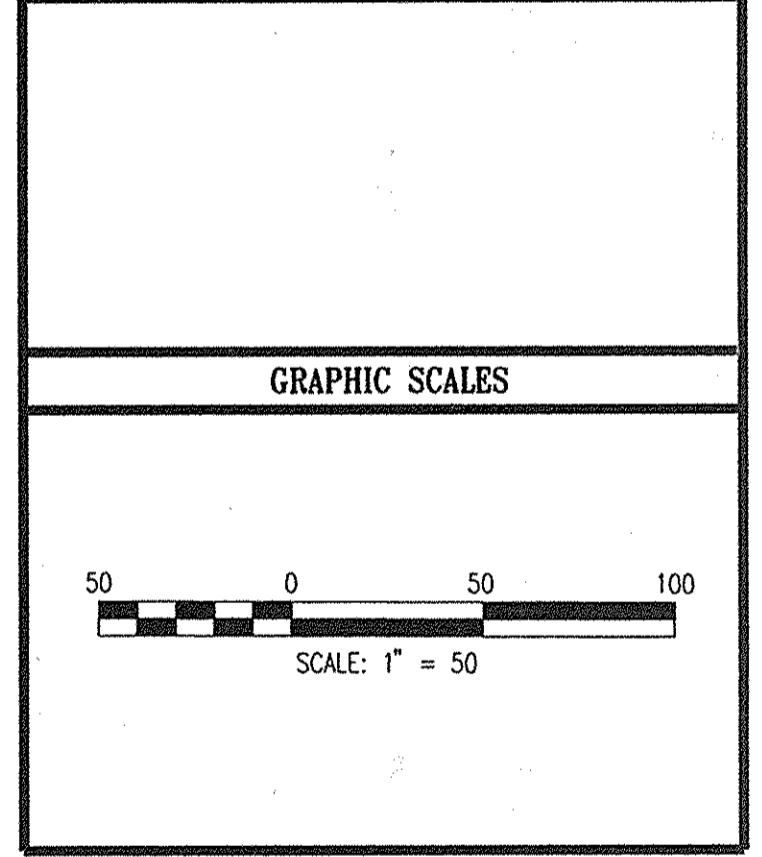
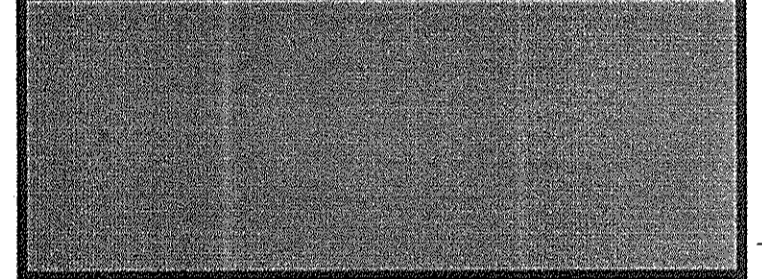
M:\BIO\SDP-PLAN SET\SDPCHSSBRC00.dgn Mon, Apr 17, 14:23:56 2006



REVISIONS	
MDE W&SC PERMIT SET	4/05/06
SDP FINAL SUBMISSION	4/20/06
INSPECTOR DRAW SHEETS	6-16-14



**GLENELG HIGH SCHOOL**  
**HOWARD COUNTY MD**  
**TREATMENT SYSTEM DESIGN**



MATCHLINE SEE SHEET C-9

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.  
*John L. Roberts* 4/14/06  
 District Engineer  
 Howard S.C.D. Date

"I/We certify that all development and/or construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Maryland 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 HSCD."  
*Wm. B.*  
 Signature of Developer/Builder Date 4/19/06

Reviewed for the Howard SCD and meets technical requirements.  
*Jim Meyer* 5/14/06  
 UpDA-Natural Resources Information Service Date

**MICAH DRIVE**  
 (PRIVATE - NO CONSTRUCTION ACCESS)

**ENGINEER'S CERTIFICATE**  
 I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.  
*Anthony U. Olsen* 4/19/06  
 Signature of Engineer  
**ANTHONY U. OLSEN**



- NOTES:  
 1. FOR GENERAL NOTES AND LEGEND SEE SHEET G-1  
 2. FOR EROSION AND SEDIMENT CONTROL NOTES AND DETAILS SEE SHEETS C-22.

APPROVED: FOR PRIVATE WATER & SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT  
*Robert W. ...* 12/5/06  
 County Health Officer Date  
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Joseph ...* 12/28/06  
 Chief, Division of Land Development Date  
*...* 5/8/06  
 Chief, Development Engineering Division Date

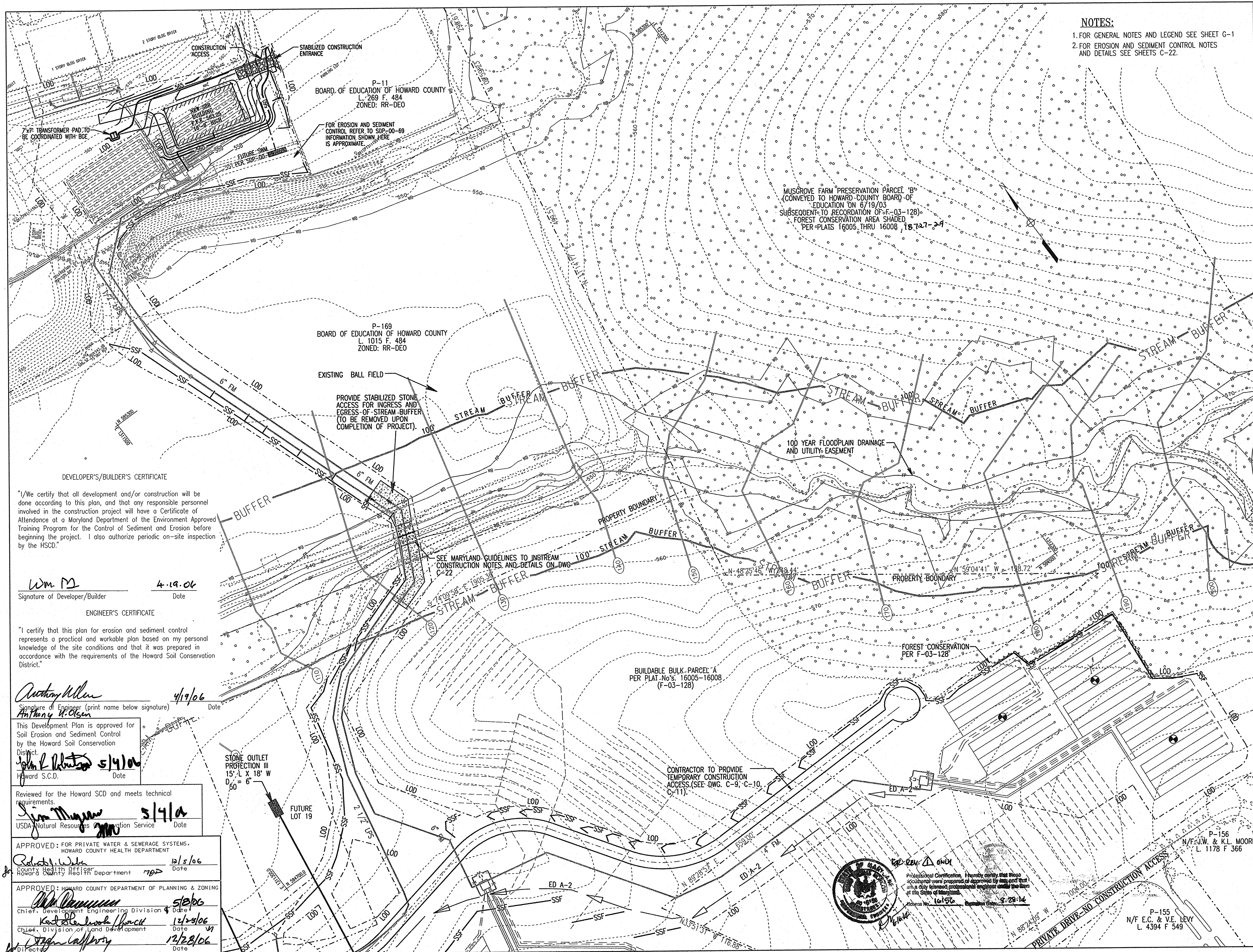
**REVISED SITE DEVELOPMENT PLAN**

**TEMPORARY ACCESS ROAD SEDIMENT & EROSION CONTROL PLAN**

DRAWING NO. **C-11**  
 SHEET 12 OF 436

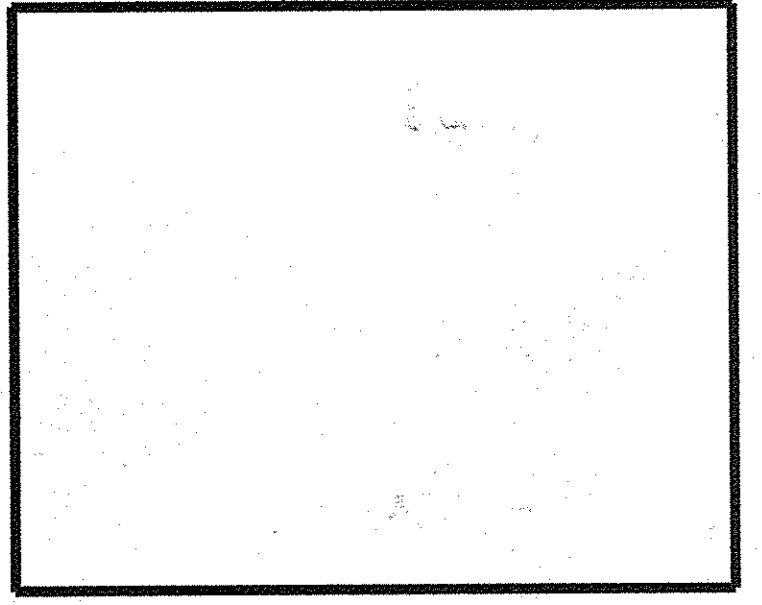
SCALE: 1" = 50'  
 DES: CMD CHECK: AUO DATE: 04/20/06

M:\98078\SDP\PLAN.SET\SDP\GIS\SDP\GIS\SDP.dwg  
 Mon Apr 17 14:23:52 2006

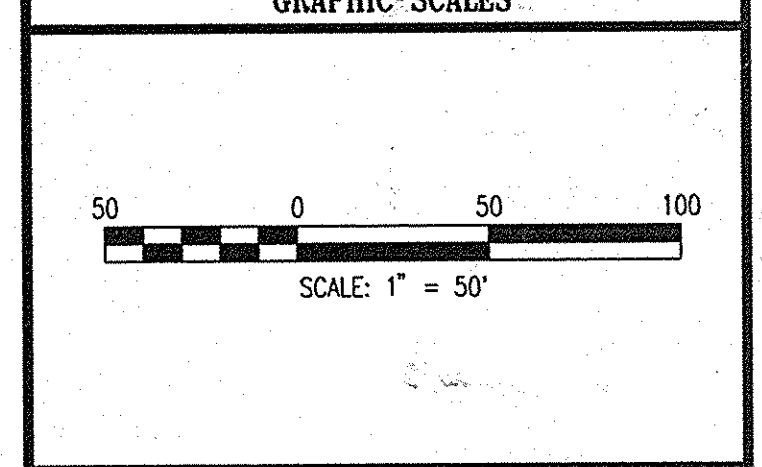
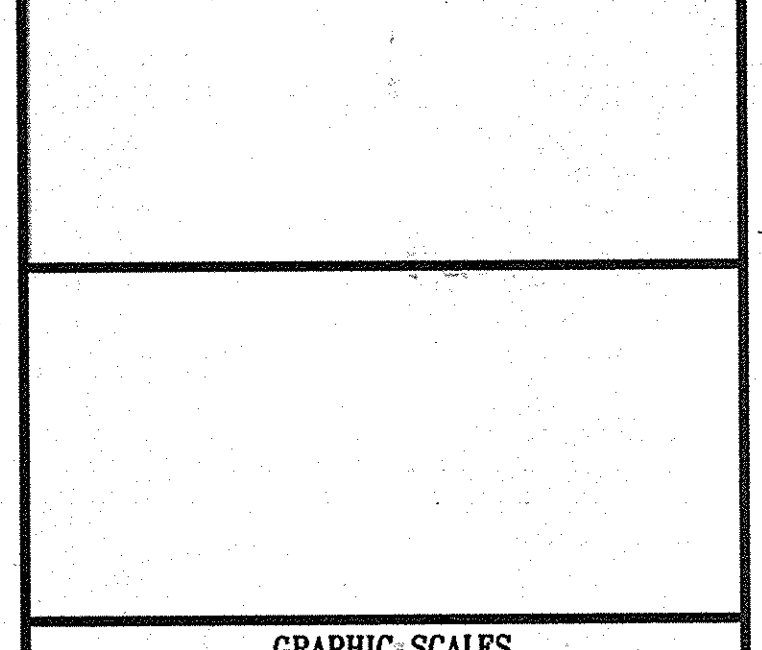


**NOTES:**  
 1. FOR GENERAL NOTES AND LEGEND SEE SHEET G-1  
 2. FOR EROSION AND SEDIMENT CONTROL NOTES AND DETAILS SEE SHEETS C-22.

REVISIONS	
MDE W&SC PERMIT SET	4/05/06
SDP FINAL SUBMISSION	4/20/06
<b>REMOVED NEW SUBJECTS</b>	<b>6-16-14</b>



**GLENELG HIGH SCHOOL**  
**HOWARD COUNTY MD**  
**TREATMENT SYSTEM DESIGN**



**WR&A**  
 WHITMAN, REQUARDT AND ASSOCIATES, LLP  
 801 SOUTH CAROLINE STREET  
 BALTIMORE, MARYLAND 21231  
 410 - 235 - 3450

**REVISOR SITE DEVELOPMENT PLAN**

**TREATMENT SYSTEM  
 SEDIMENT & EROSION  
 CONTROL PLAN**

	DRAWING NO.
	<b>C-12</b>
SHEET 13 OF 24	
SCALE: 1" = 50'	
DES: CMD	CHECK: AVO
DATE: 04/20/06	

**DEVELOPER'S/BUILDER'S CERTIFICATE**  
 "I/We certify that all development and/or construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Maryland 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 HSCD."

*Wm. M.*      4-19-06  
 Signature of Developer/Builder      Date

**ENGINEER'S CERTIFICATE**  
 "I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

*Anthony Hillen*      4/19/06  
 Signature of Engineer (print name below signature)      Date

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.  
*John L. Hinton*      5/14/06  
 Howard S.C.D.      Date

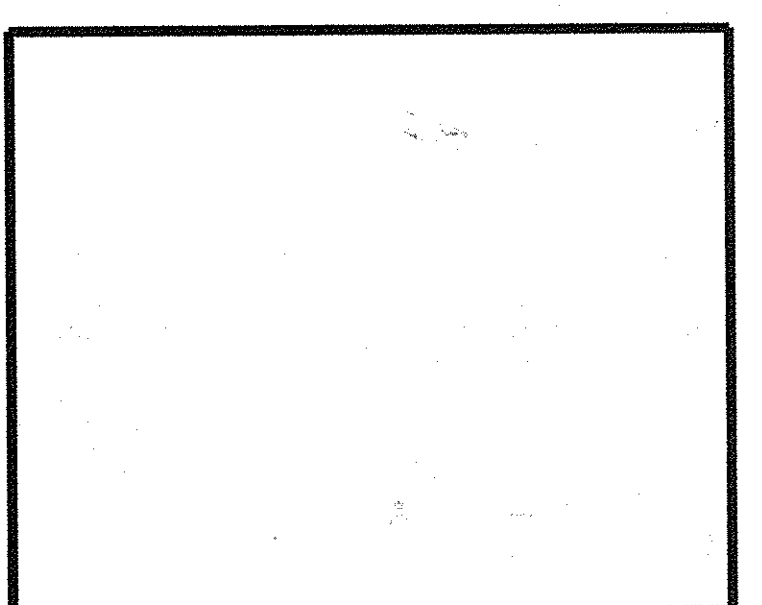
Reviewed for the Howard SCD and meets technical requirements.  
*Jim Maynard*      5/14/06  
 USDA Natural Resources Conservation Service      Date

APPROVED: FOR PRIVATE WATER & SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT  
*Robert W. Hillen*      10/5/06  
 County Health Officer      Date

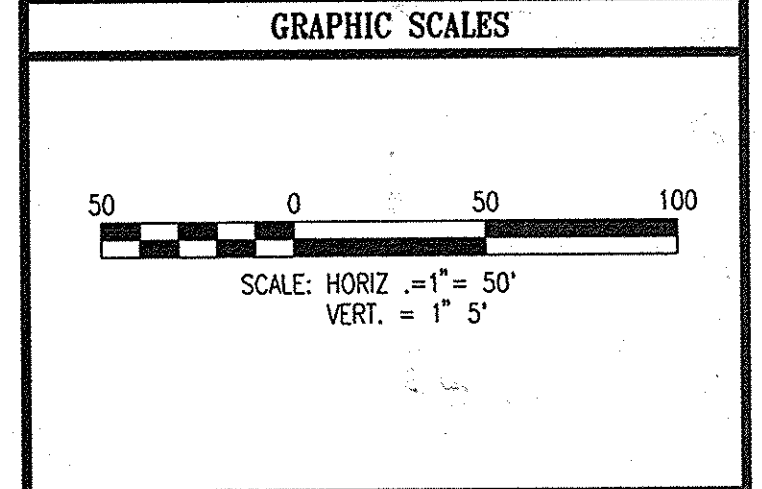
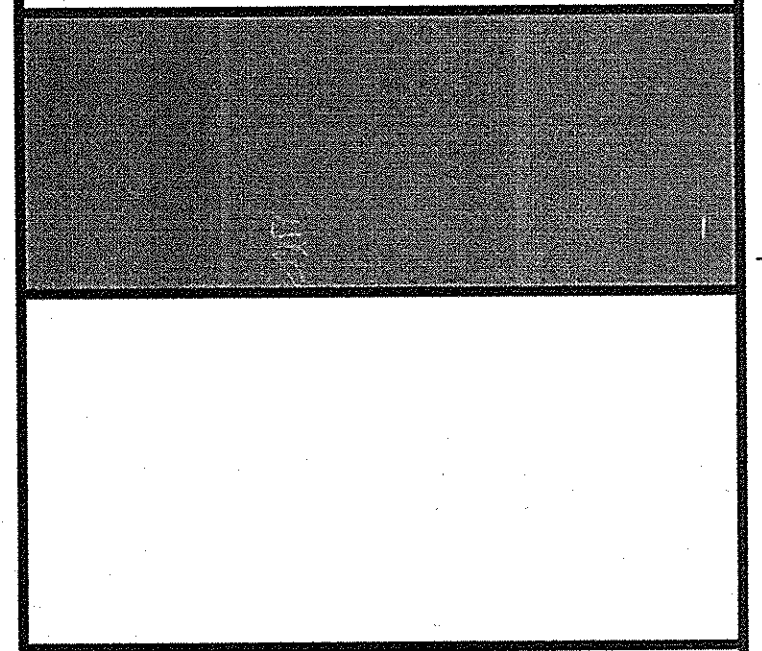
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*John P. ...*      5/23/06  
 Chief, Development Engineering Division      Date  
*Karl ...*      12/23/06  
 Chief, Division of Land Development      Date  
*...*      12/23/06  
 Director      Date

MA81078 SDP-PLAN-SET-SDP05HSC02.dgn  
 Mon Apr 17 14:25:19 2006

REVISIONS	
MDE W&SC PERMIT SET	4/05/06
SDP FINAL SUBMISSION	4/20/06
▲ INSERTED NEW SHEETS	6-16-14



**GLENELG HIGH SCHOOL**  
**HOWARD COUNTY MD**  
**TREATMENT SYSTEM DESIGN**

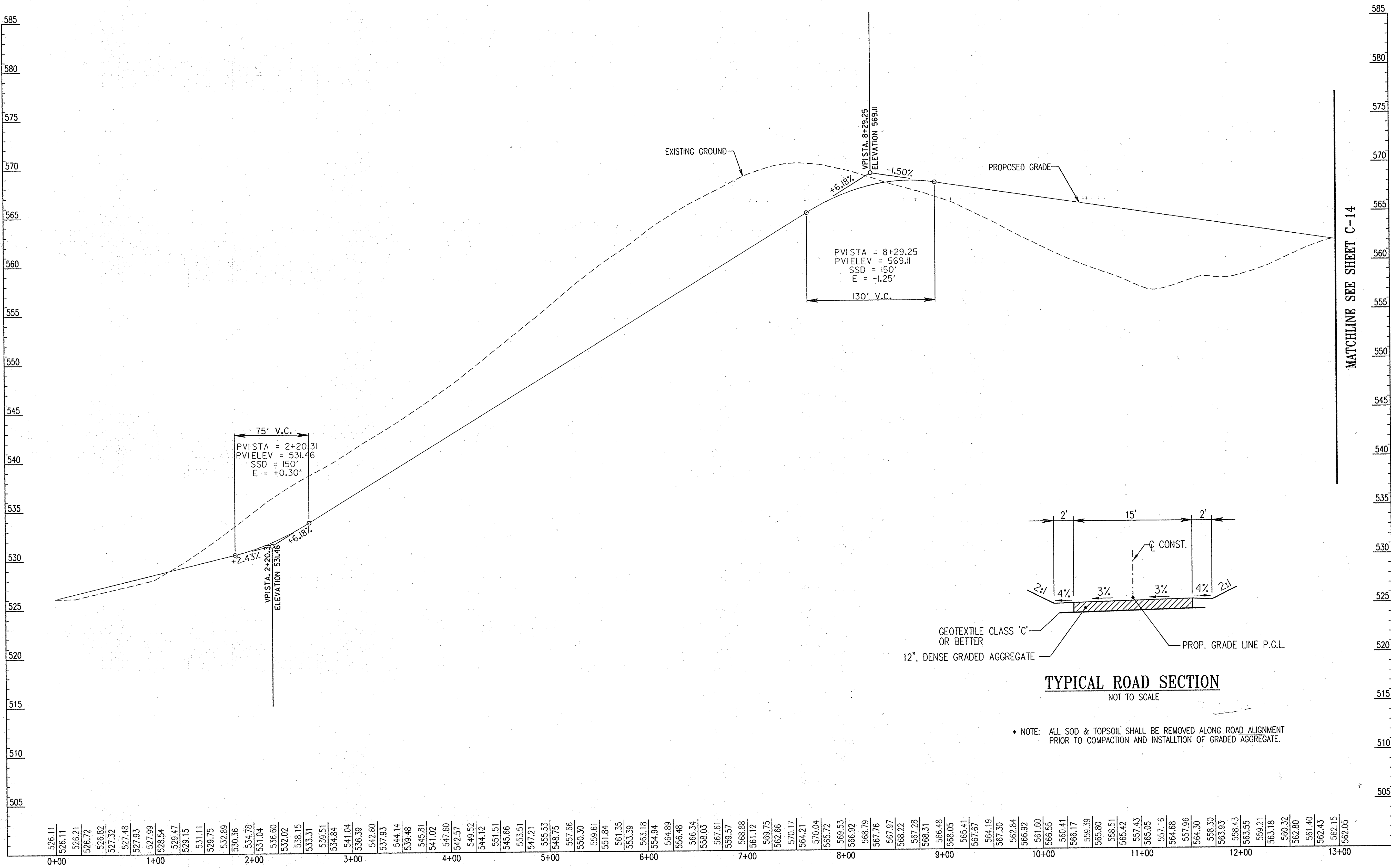


**WHITMAN, REQUARDT AND ASSOCIATES, LLP**  
 801 SOUTH CAROLINE STREET  
 BALTIMORE, MARYLAND 21231  
 410 - 235 - 3450

▲ REVISED SITE DEVELOPMENT PLAN

**TEMPORARY ACCESS ROAD PROFILE**

	DRAWING NO.
	<b>C-13</b>
SHEET 14 OF 2436	
SCALE: AS NOTED	
DES: MEW	CHECK: CMD DATE: 04/20/06



526.11	526.21	526.82	527.32	527.48	527.93	528.54	529.47	529.15	531.11	532.89	530.36	534.78	531.04	532.02	538.15	533.31	539.51	534.84	536.39	542.80	537.93	544.14	539.48	541.02	547.80	542.57	549.52	544.12	551.51	545.66	553.51	547.21	555.53	548.75	557.66	550.30	559.61	551.84	561.35	553.39	563.18	554.94	564.89	556.48	566.34	558.03	567.61	559.57	568.88	561.12	569.75	562.66	570.17	564.21	570.04	565.72	569.53	566.92	568.79	567.76	567.97	568.22	567.28	568.31	566.48	568.05	565.41	567.87	564.19	567.30	562.84	566.92	561.60	566.55	566.17	569.39	565.80	568.51	565.42	567.43	565.05	567.16	564.68	557.96	564.30	568.30	563.93	568.43	563.55	569.21	563.18	560.32	562.80	561.40	562.43	562.15	562.05
0+00	1+00	2+00	3+00	4+00	5+00	6+00	7+00	8+00	9+00	10+00	11+00	12+00	13+00																																																																																				

**TEMPORARY ACCESS ROAD PROFILE**

SCALES: 1" = 50' HORIZ  
 1" = 5' VERT

APPROVED: FOR PRIVATE WATER & SEWERAGE SYSTEMS,  
 HOWARD COUNTY HEALTH DEPARTMENT

*Robert W. White* 12/5/06  
 County Health Officer Date  
 Howard County Health Department

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*John J. ...* 5/8/06  
 Chief, Development Engineering Division Date

*Kent ...* 12/28/06  
 Chief, Division of Land Development Date

*...* 12/28/06  
 Director Date

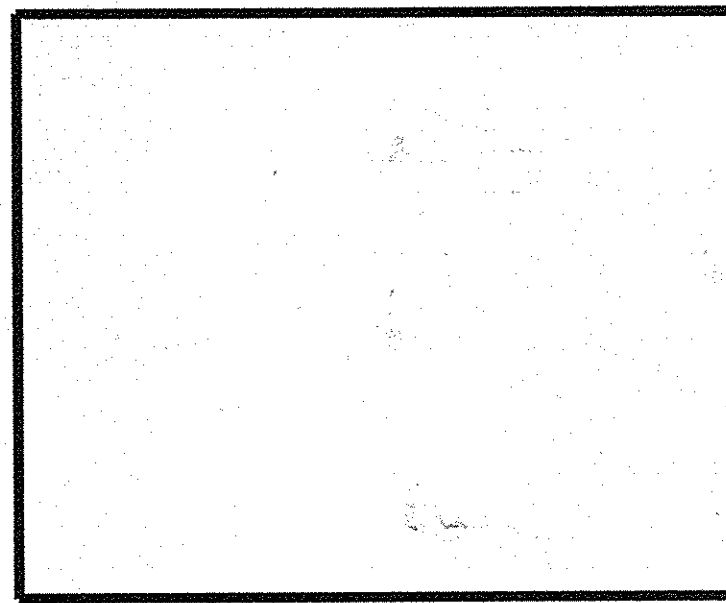
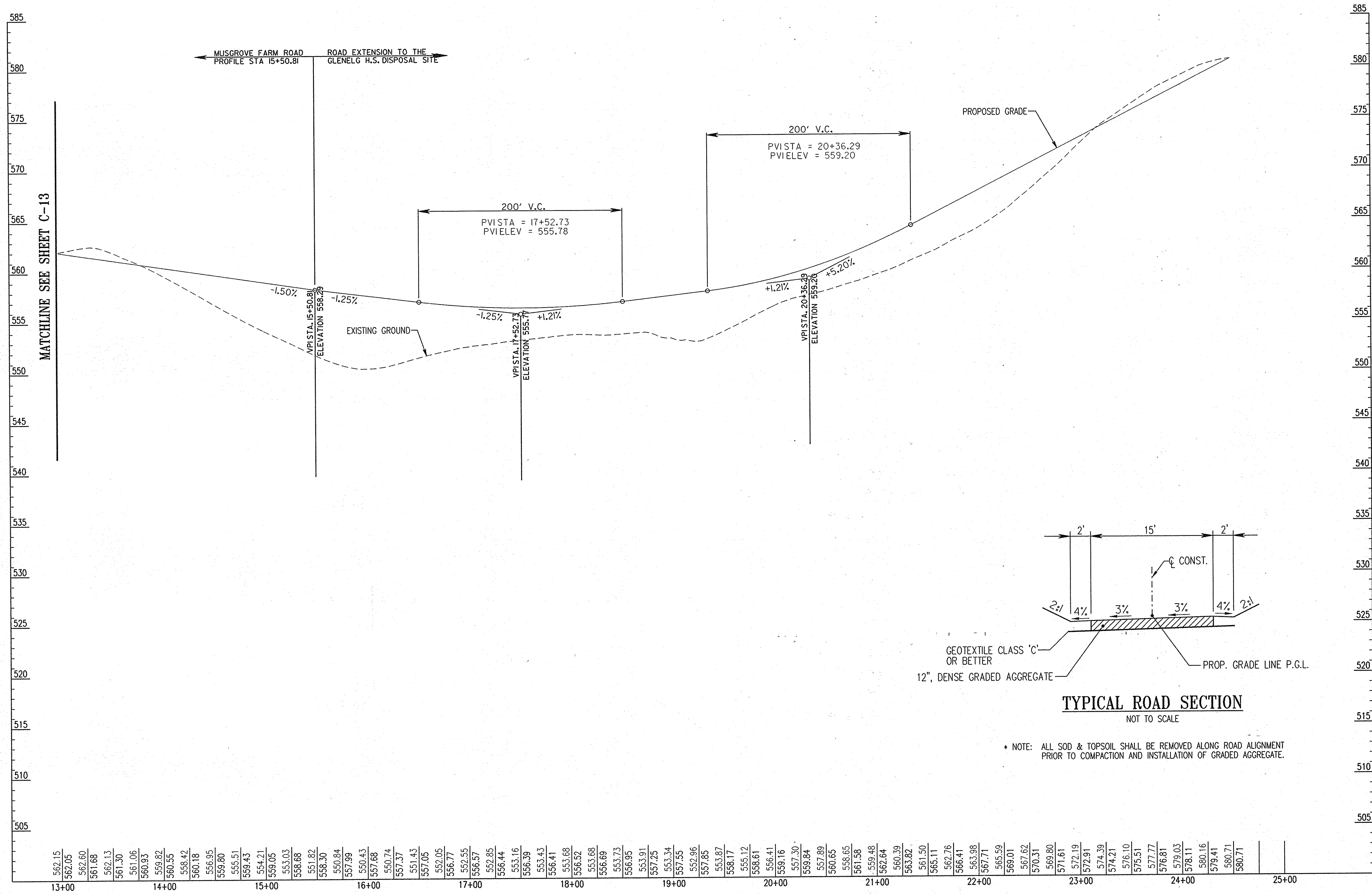
FOR REV. ONLY

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

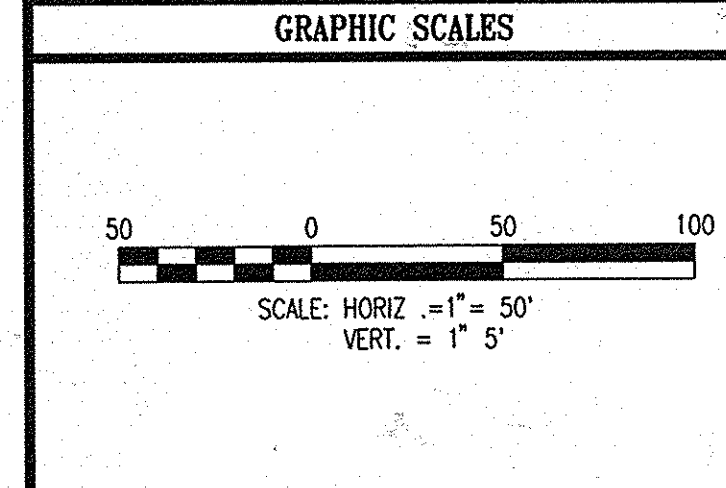
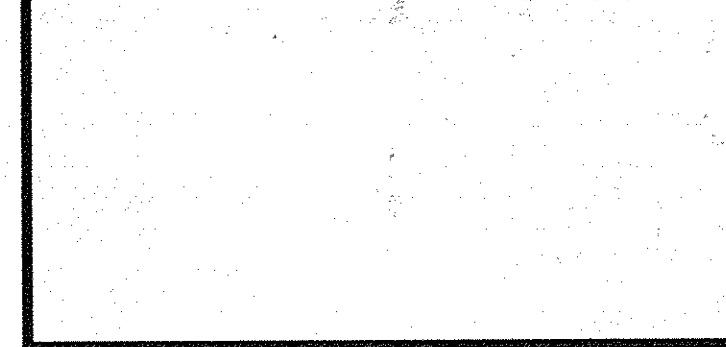
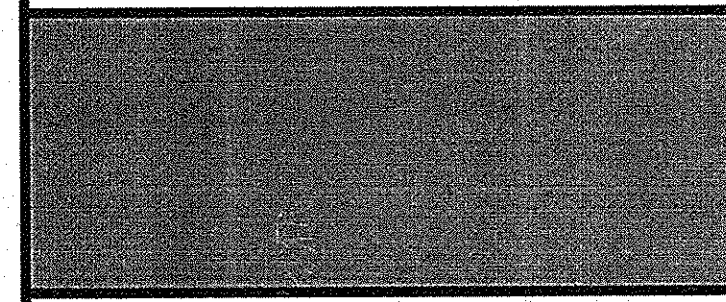
*Robert W. White* License No. 16150 Expiration Date 8-28-14

M:\B018\SDP-PLAN-SET\SDP-HSSR013.dgn Mon Apr 17 14:23:46 2006

REVISIONS	
MDE W&SC PERMIT SET	4/05/06
SDP FINAL SUBMISSION	4/20/06
INSERTEO NEW SHEETS	6-16-14



**GLENELG HIGH SCHOOL**  
**HOWARD COUNTY MD**  
**TREATMENT SYSTEM DESIGN**



**WR&A**  
WHITMAN, REQUARDT AND ASSOCIATES, LLP  
801 SOUTH CAROLINE STREET  
BALTIMORE, MARYLAND 21231  
410 - 235 - 3450

REVISED SITE DEVELOPMENT PLAN

**TEMPORARY ACCESS ROAD PROFILE**

DRAWING NO. **C-14**

SHEET 15 OF 24

SCALE: AS NOTED  
DES: MEW CHECK: CMD DATE: 04/20/06

APPROVED: FOR PRIVATE WATER & SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

*Robert Wilson* 12/5/06  
County Health Officer Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

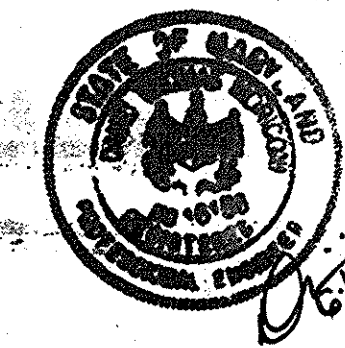
*John DeWitt* 5/8/06  
Chief, Development Engineering Division Date

*Robert DeWitt* 12/28/06  
Chief, Division of Land Development Date

*John DeWitt* 12/28/06  
Director Date

**TEMPORARY ACCESS ROAD PROFILE**

SCALES: 1" = 50' HORIZ  
1" = 5' VERT

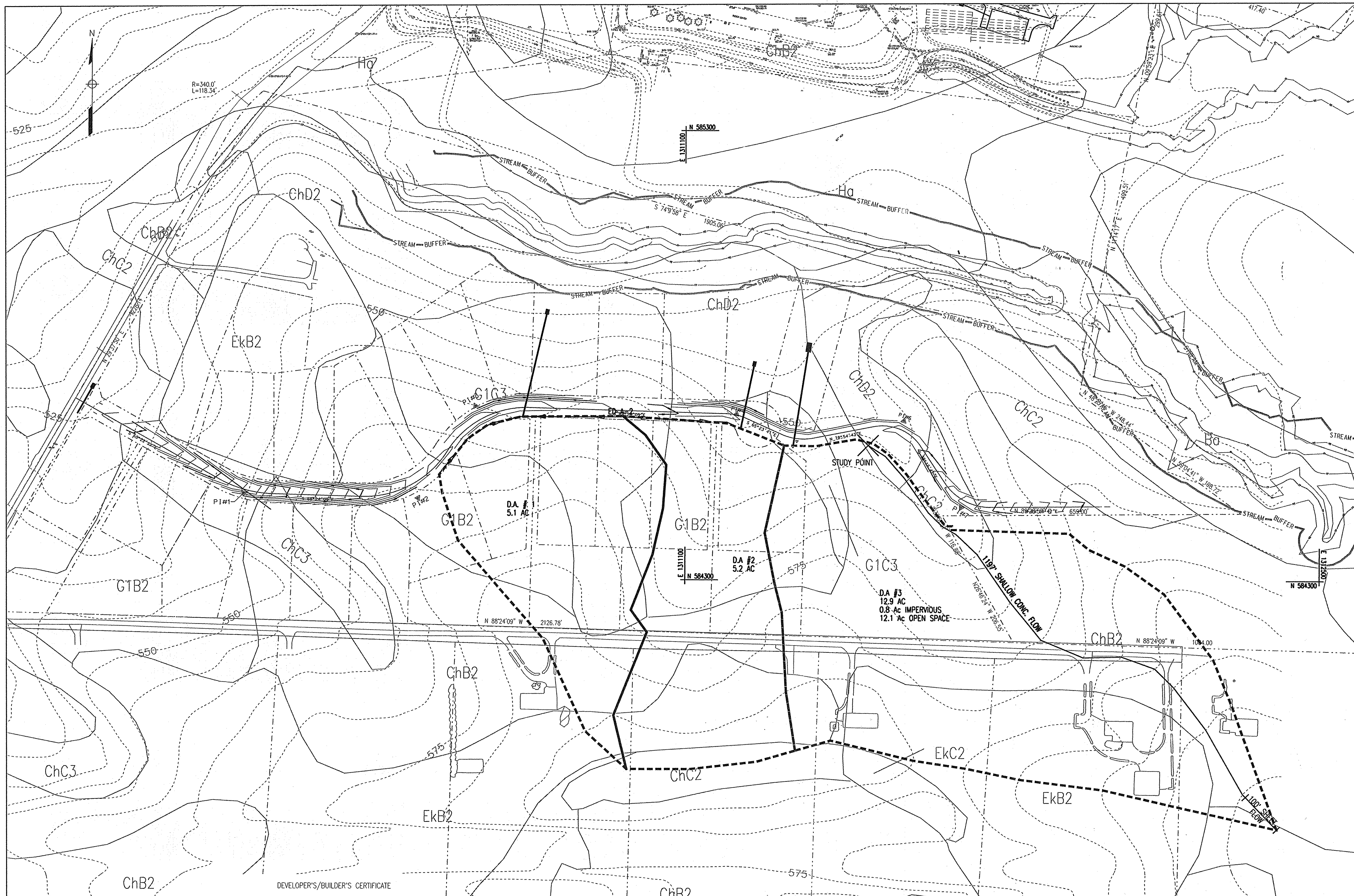


FOR REV. ONLY

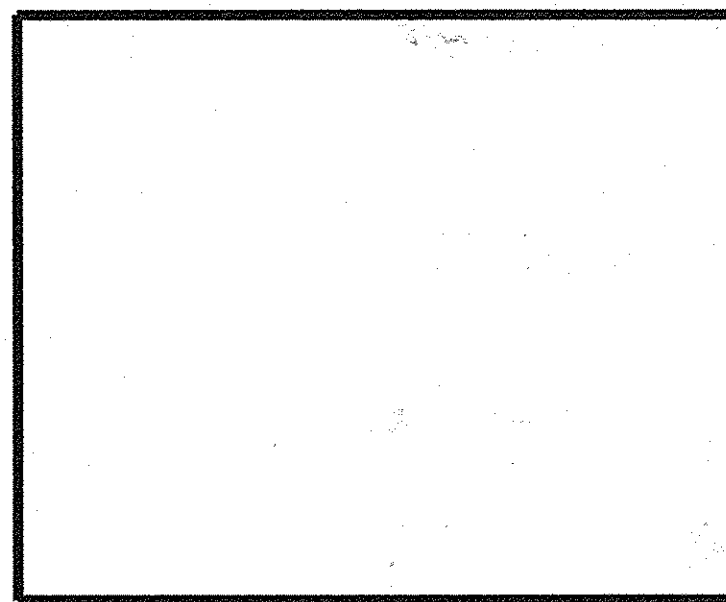
Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

License No. 16156, Expiration Date: 8-28-16

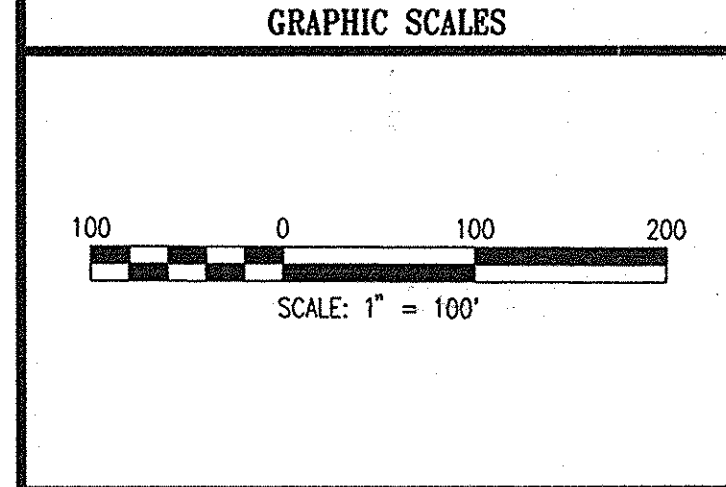
M:\81078\SDP-PLAN-SET\SDPHSSBR04.dgn Mon Apr 17 14:23:46 2006




REVISIONS	
MDE W&SC PERMIT SET	4/05/06
SDP FINAL SUBMISSION	4/20/06
INSERED NEW SHEETS	6-16-14



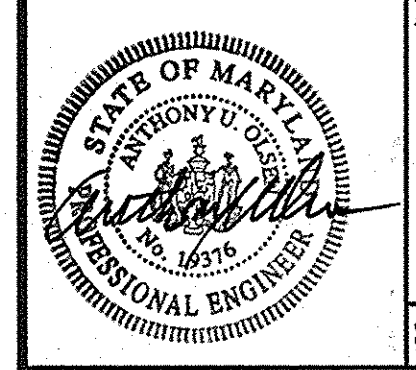
**GLENELG HIGH SCHOOL**  
**HOWARD COUNTY MD**  
**TREATMENT SYSTEM DESIGN**



  
**WR&A**  
 WHITMAN, REQUARDT AND ASSOCIATES, LLP  
 801 SOUTH CAROLINE STREET  
 BALTIMORE, MARYLAND 21231  
 410 - 235 - 3450

REVISIONED SITE DEVELOPMENT PLAN

**SEDIMENT CONTROL DRAINAGE AREA MAP**

	DRAWING NO.
	<b>C-15</b>
SHEET 16 OF 436	SCALE: 1" = 100' DES: CMD CHECK: AUO DATE: 04/20/06

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.  
*John R. Johnson* 5/14/06  
 Date

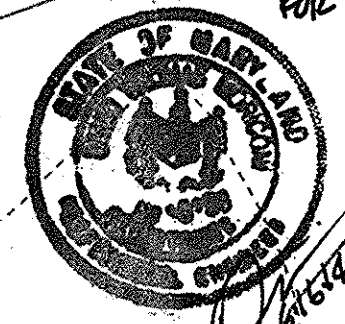
Reviewed for the Howard SCD and meets technical requirements.  
*Jim Meyer* 5/14/06  
 Date

"I/We certify that all development and/or construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Maryland 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 HSCD."

DEVELOPER'S/BUILDER'S CERTIFICATE  
*John Meyer* 5/14/06  
 Signature of Developer/Builder Date

"I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

ENGINEER'S CERTIFICATE  
*Anthony A. Olsen* 4/19/06  
 Signature of Engineer (print name below signature) Date

FOR REVIEW ONLY  
  
 Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
 License No. 16452 Registration Code: 8-28-14

APPROVED: FOR PRIVATE WATER & SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT  
*Robert J. White* 12/5/06  
 County Health Officer Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*David Lafferty* 12/28/06  
 Director Date

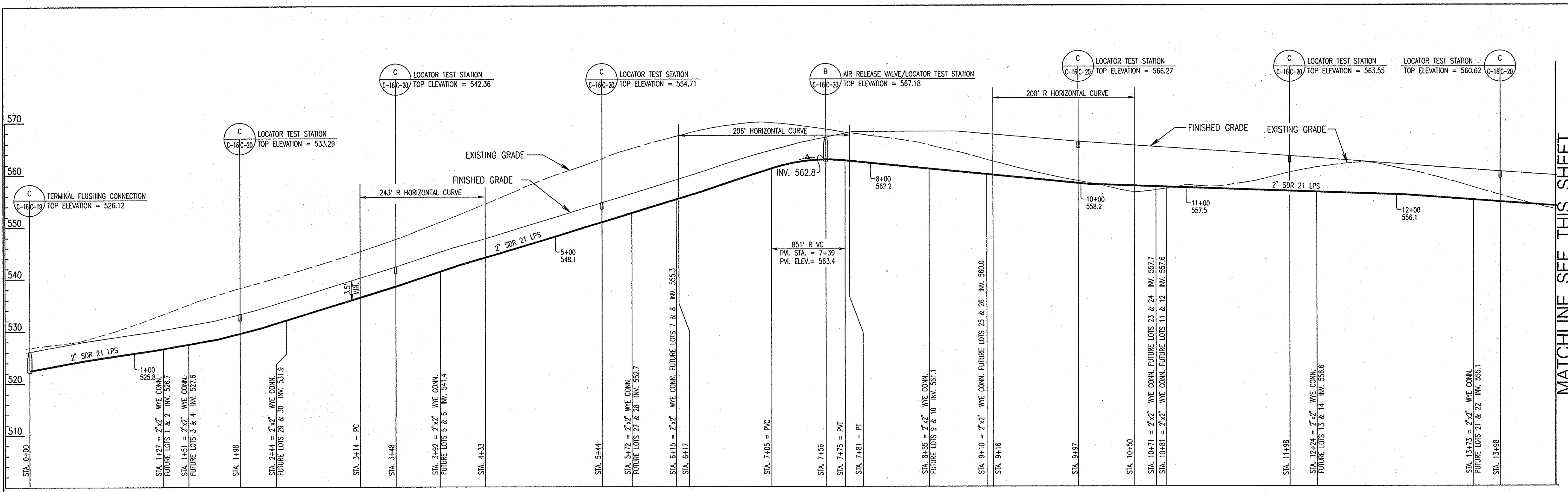
*Kat Stentz* 12/20/06  
 Chief, Division of Land Development Date

*Michael...* 5/10/06  
 Chief, Development Engineering Division Date

HA:80785.SDP-PLAN.SET,SDP-GHS-BCR15.dgn  
 Mon, Apr 17, 14:23:43, 2006

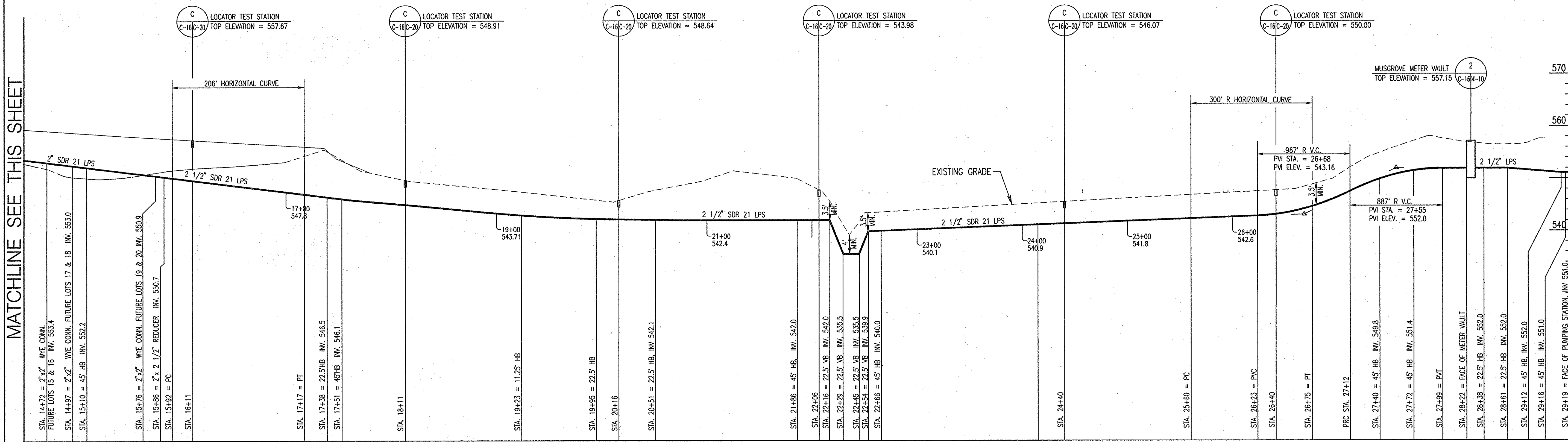


REVISIONS	
MDE W&SC PERMIT SET	4/05/06
SDP FINAL SUBMISSION	4/20/06
<b>INSERTEO NEW SHEETS</b>	<b>6-16-14</b>



PROFILE - 2" - 2 1/2" LOW PRESSURE SEWER

SCALE: 1" = 50' HORIZ  
1" = 10' VERT

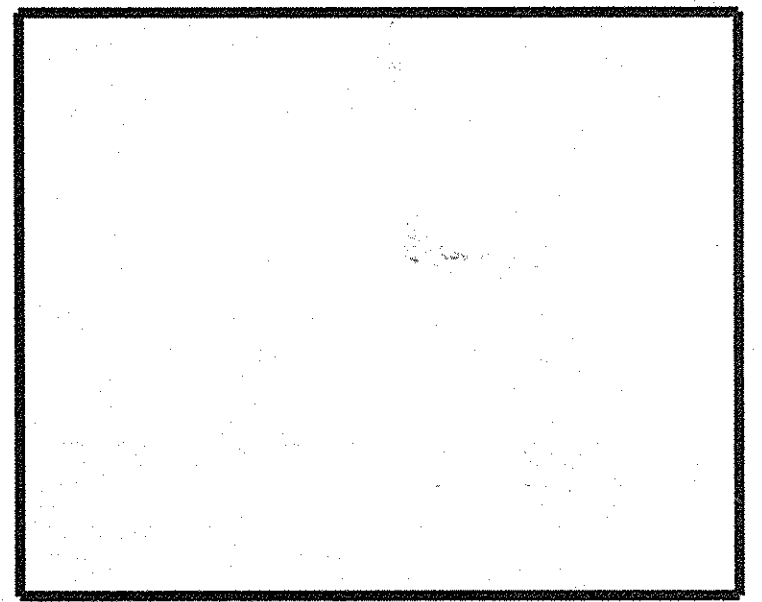


PROFILE 2" - 2 1/2" LOW PRESSURE SEWER

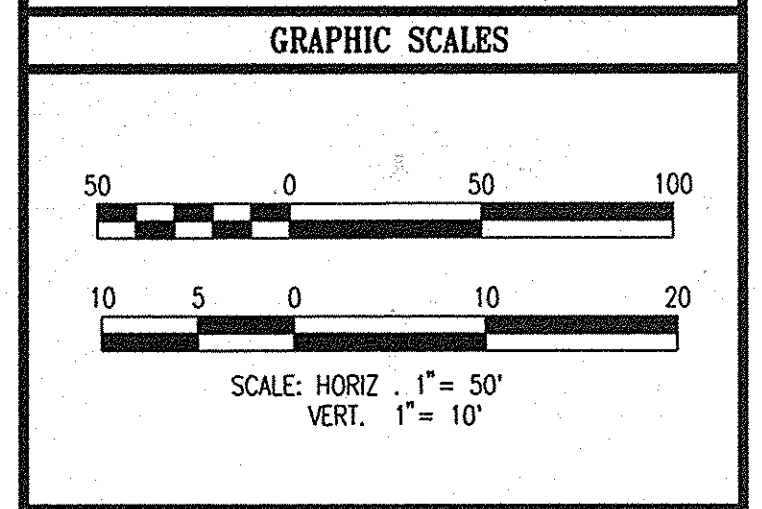
SCALE: 1" = 50' HORIZ  
1" = 10' VERT

MATCHLINE SEE THIS SHEET

MATCHLINE SEE THIS SHEET



GLENELG HIGH SCHOOL  
HOWARD COUNTY MD  
TREATMENT SYSTEM DESIGN



**WR&A**  
WHITMAN, REQUARDT AND ASSOCIATES, LLP  
801 SOUTH CAROLINE STREET  
BALTIMORE, MARYLAND 21231  
410 - 235 - 3450

REVISO SITE DEVELOPMENT PLAN

2" - 2 1/2" LOW PRESSURE SEWER PROFILE

DRAWING NO. C-16

SHEET 17 OF 24

SCALE: AS NOTED  
DES: CMD CHECK: AUO DATE: 04/20/06

APPROVED: FOR PRIVATE WATER & SEWERAGE SYSTEMS.  
HOWARD COUNTY HEALTH DEPARTMENT

*Robert J. White*  
County Health Officer  
Howard County Health Department  
Date: 12/5/06

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*John J. ...*  
Chief, Development Engineering Division  
Date: 5/20/06

*Keith ...*  
Chief, Division of Land Development  
Date: 12/20/06

*...*  
Director  
Date: 12/28/06

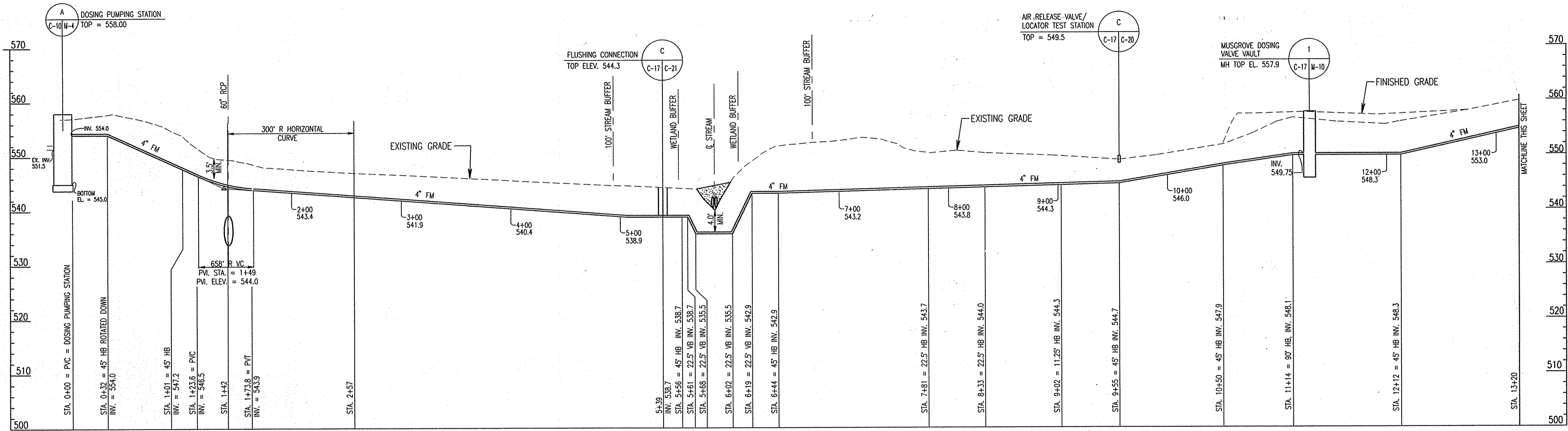


FOR REV. ONLY

Professional Certification, I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

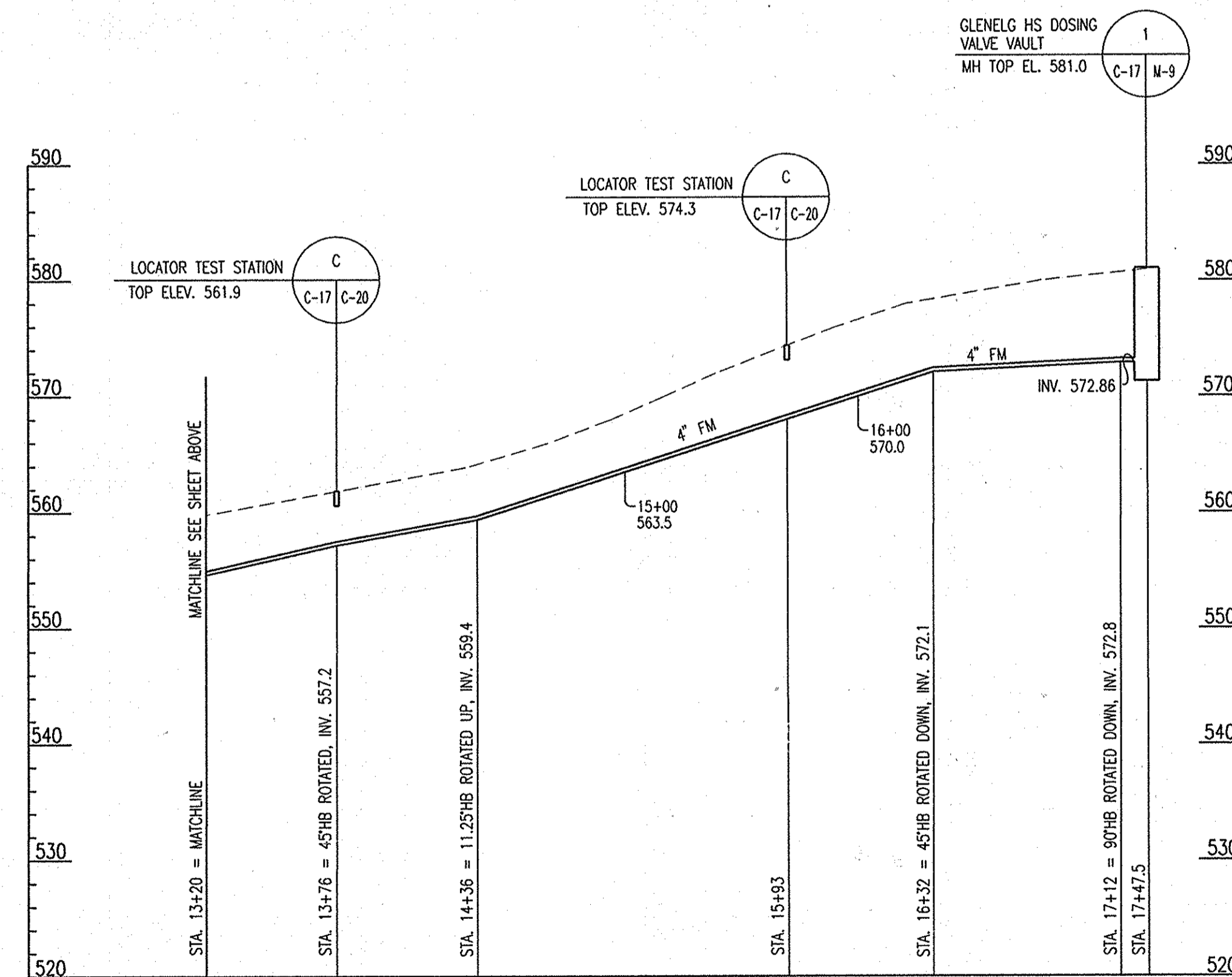
License No. 6156 Expiration Date: 8-28-14

M:\01078\SDP\PLAN SET\SDP\GHS\BRC16.dgn  
Mon Apr 17 14:23:41 2006



PROFILE - 4" FM

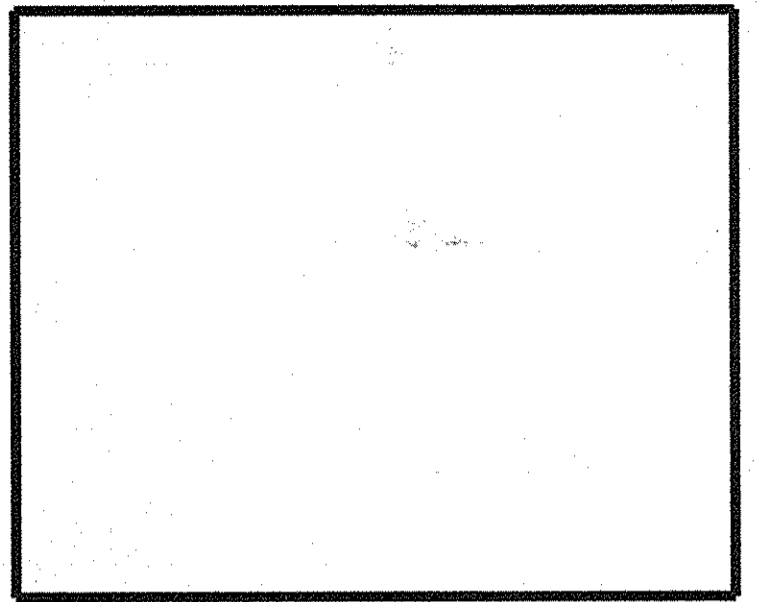
SCALE: 1" = 50' HORIZ  
1" = 10' VERT



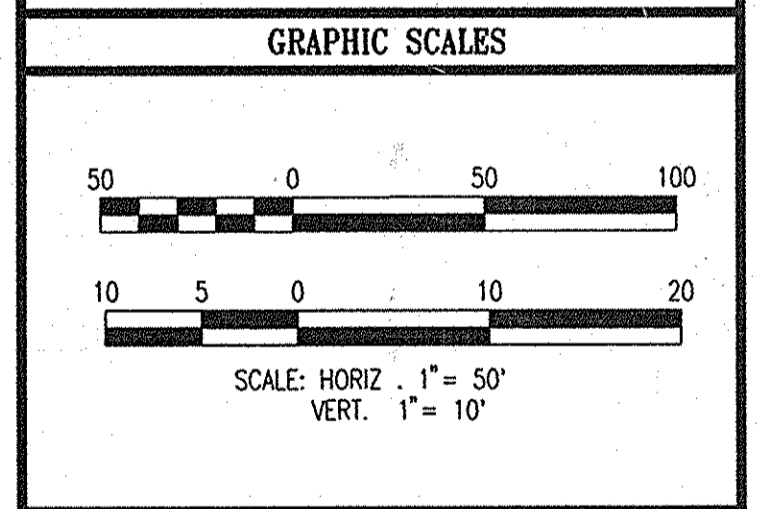
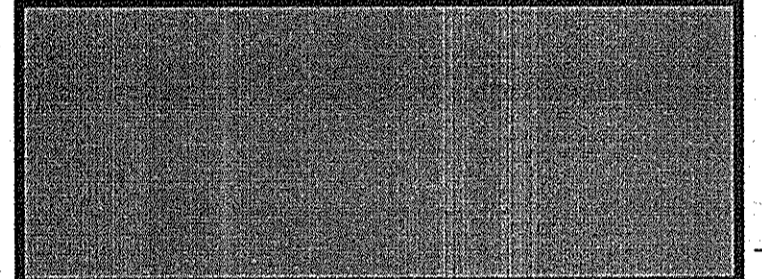
PROFILE - 4" FM (CONTINUED)

SCALE: 1" = 50' HORIZ  
1" = 10' VERT

REVISIONS	
MDE W&SC PERMIT SET	4/05/06
SDP FINAL SUBMISSION	4/20/06
INSERED NEW SHEETS	6-16-14



GLENELG HIGH SCHOOL  
HOWARD COUNTY MD  
TREATMENT SYSTEM DESIGN



**WR&A**  
WHITMAN, REQUARDT AND ASSOCIATES, LLP  
801 SOUTH CAROLINE STREET  
BALTIMORE, MARYLAND 21231  
410 - 235 - 3450

REVISED SITE DEVELOPMENT PLAN

4" FORCE MAIN PROFILE

DRAWING NO. C-17

SHEET 18 OF 2436

SCALE: AS NOTED

DES: CMD CHECK: AUO DATE: 04/20/06

APPROVED: FOR PRIVATE WATER & SEWERAGE SYSTEMS.  
HOWARD COUNTY HEALTH DEPARTMENT

*Robert W. Waters* 12/15/06  
County Health Officer Date  
Howard County Health Department ngp

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*Michael J. ...* 5/8/06  
Chief, Development Engineering Division Date

*Kathleen ...* 12/20/06  
Chief, Division of Land Development Date

*Stephen ...* 12/20/06  
Director Date

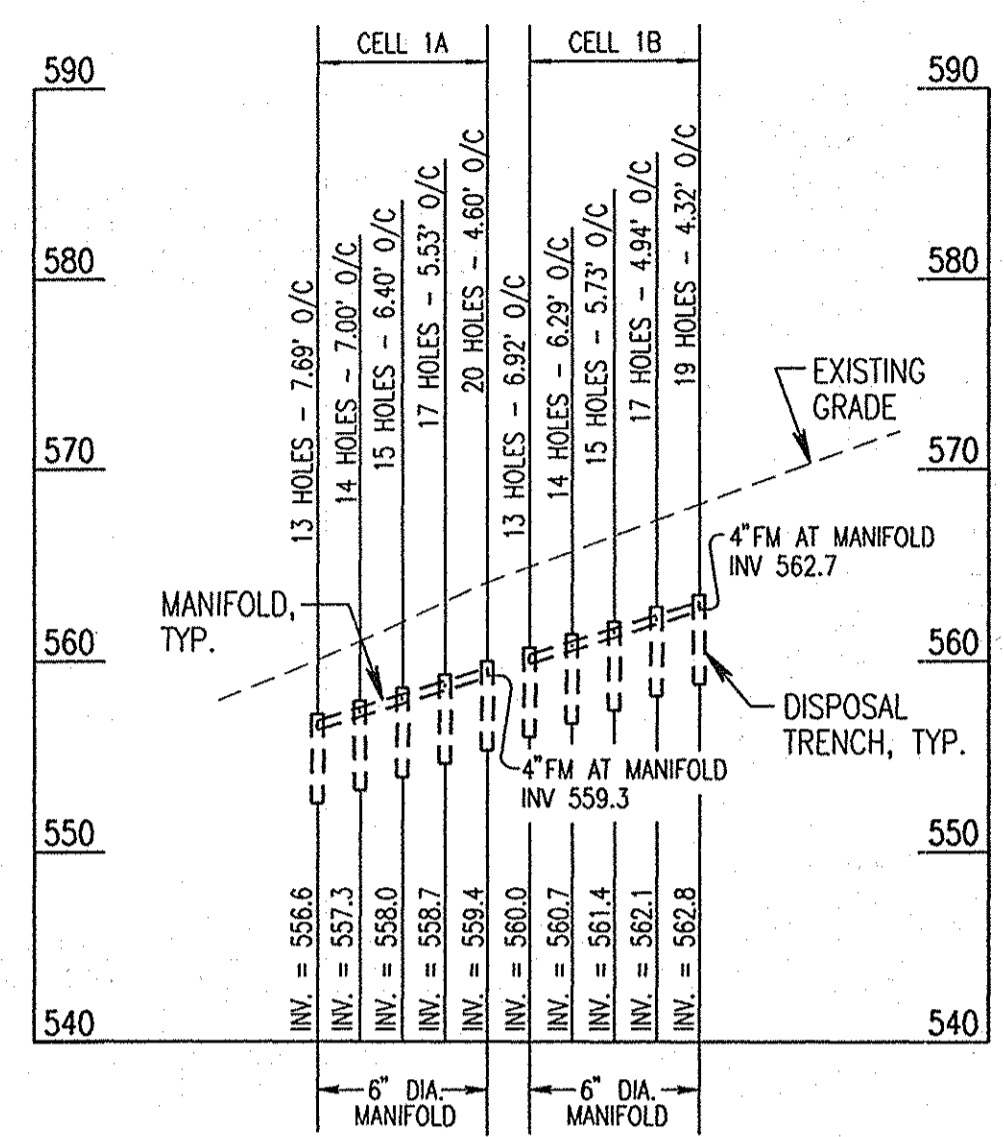
FOR REV. ONLY

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

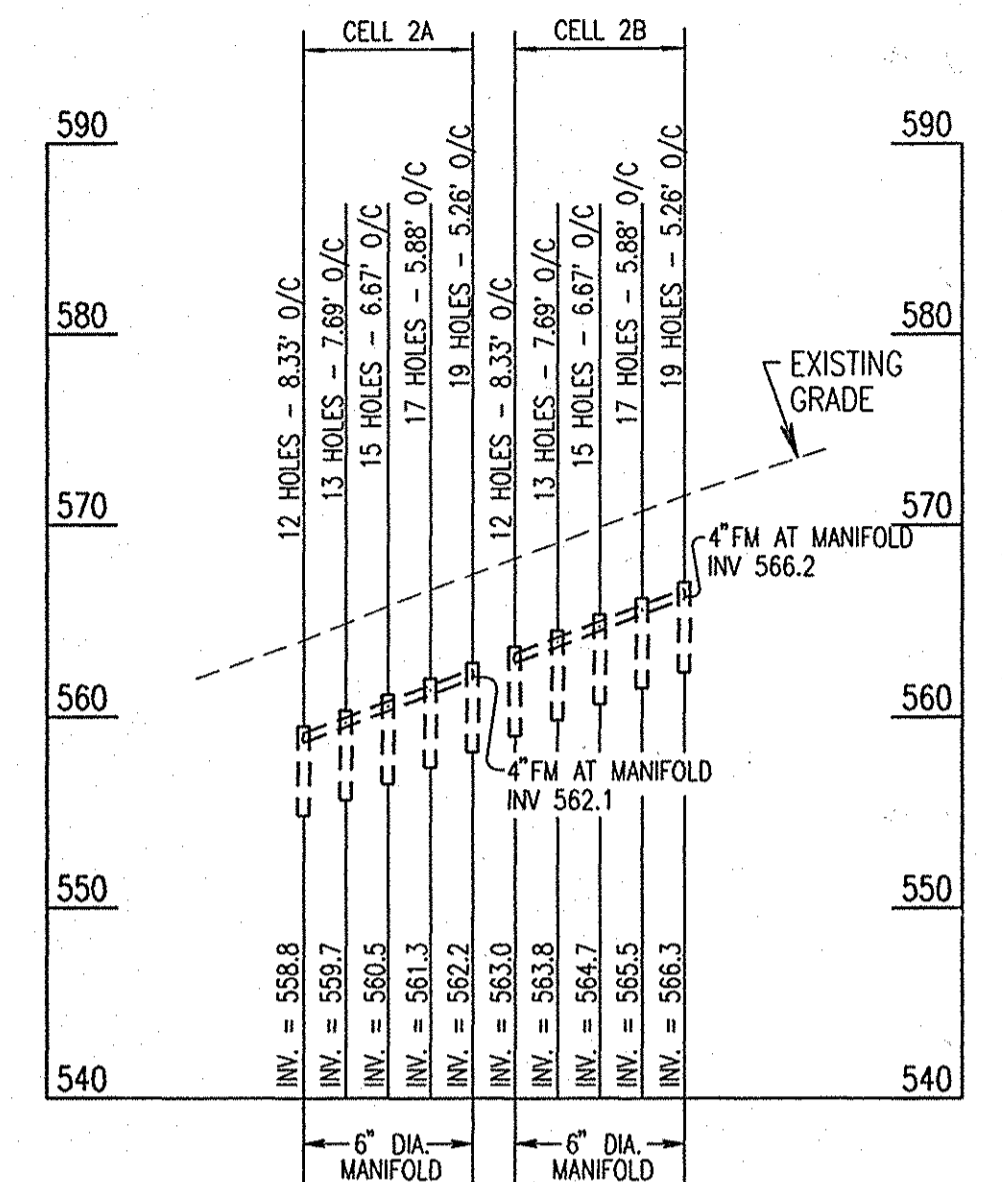
License No. 16122, Expiration Date: 8-28-14

MA:81078.SDP.PLAN.SETA.SDPGHSSBRC17.dgn  
Mon Apr 17 14:23:39 2006

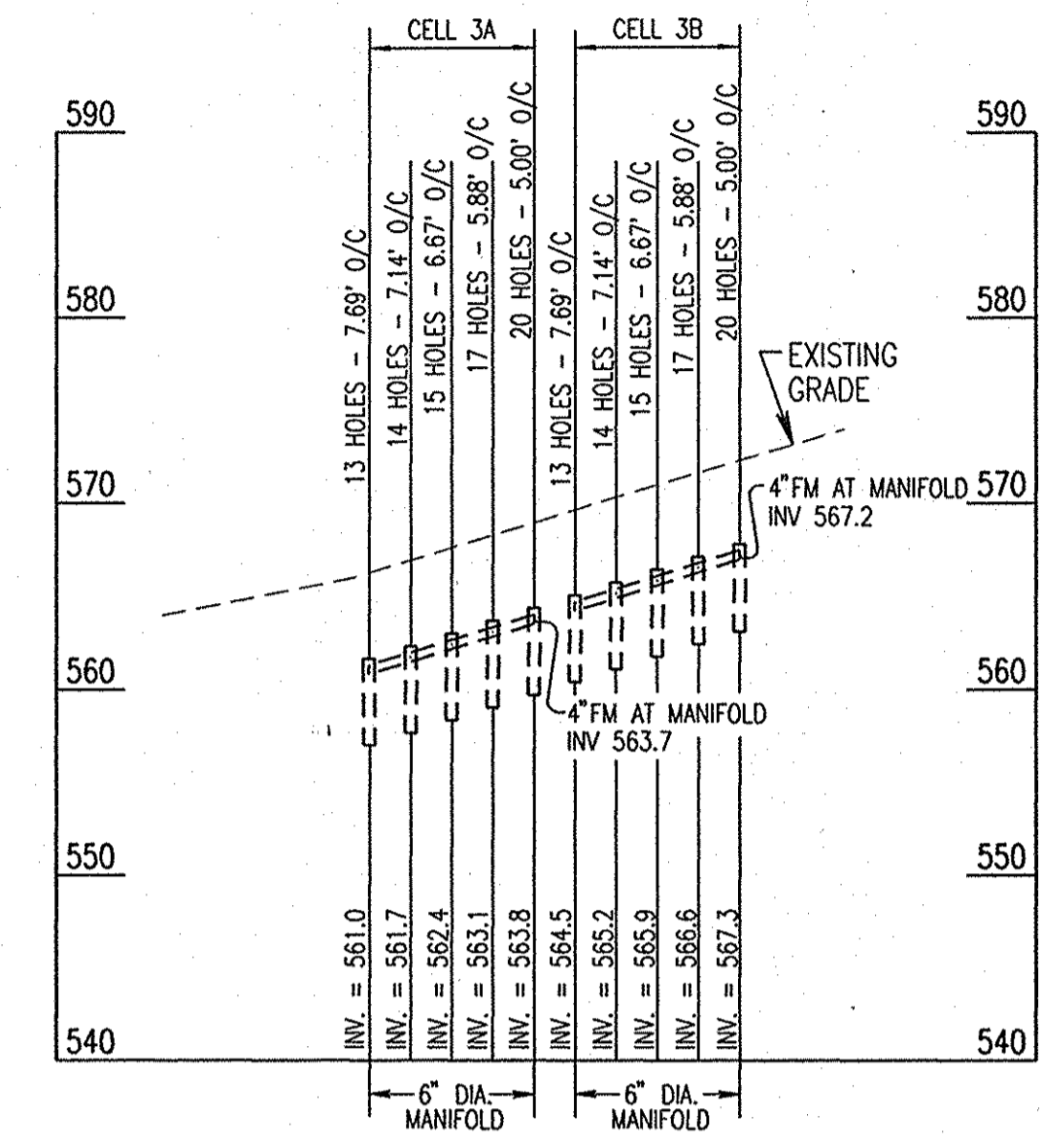
REVISIONS	
MDE W&SC PERMIT SET	4/05/06
SDP FINAL SUBMISSION	4/20/06
▲ INSERTED NEW SHEETS	6-16-14



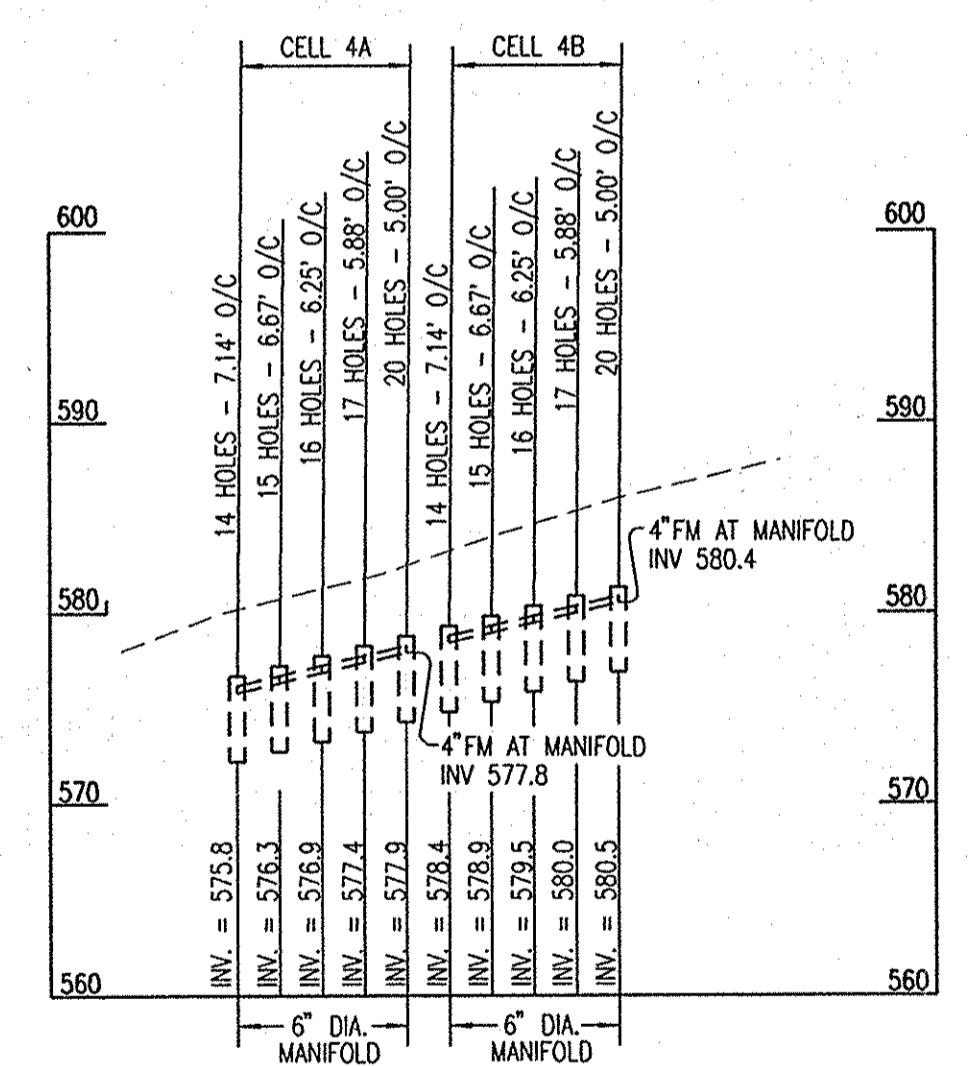
SECTION - MUSGROVE DISPOSAL CELLS 1A, 1B  
 SCALE: 1" = 50' HORIZ  
 1" = 10' VERT



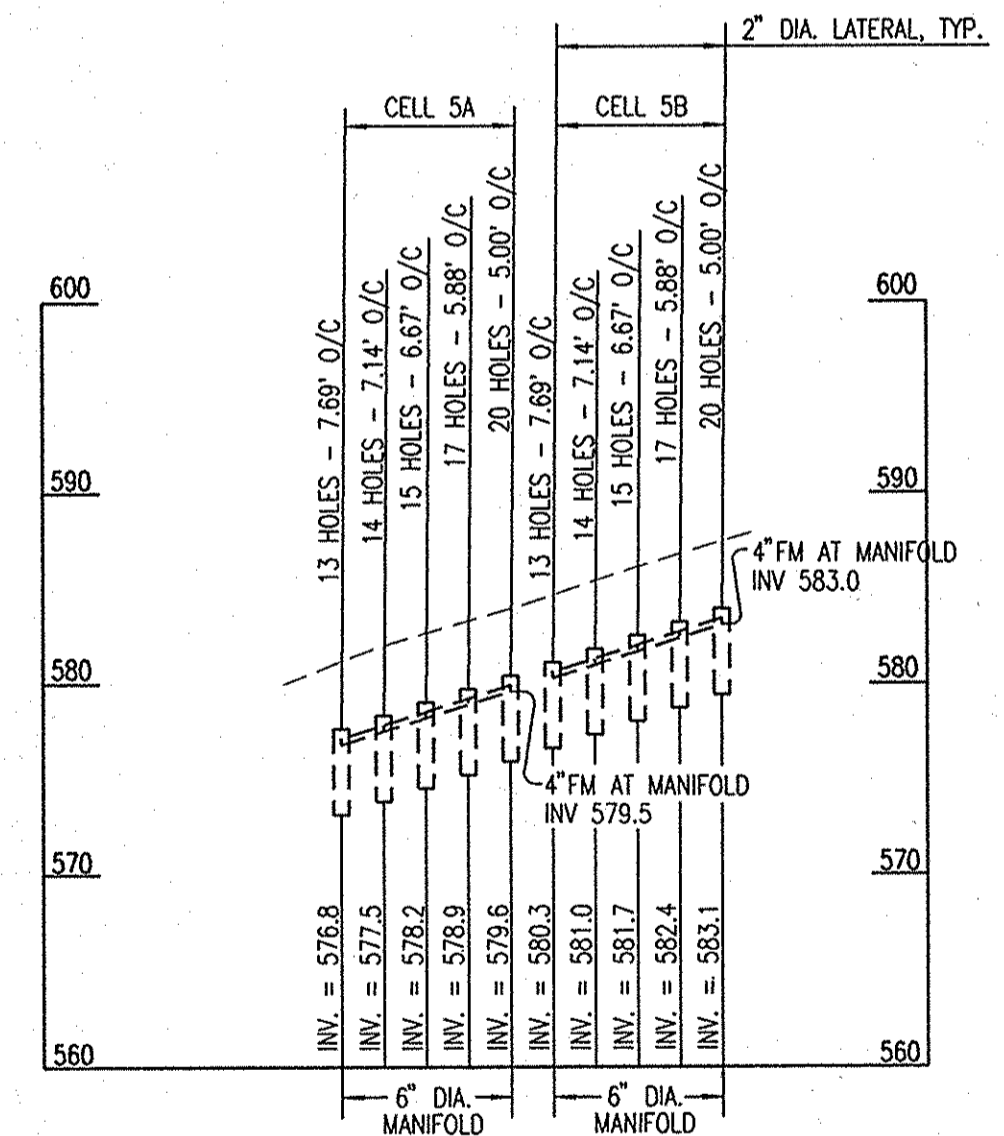
SECTION - MUSGROVE DISPOSAL CELLS 2A, 2B  
 SCALE: 1" = 50' HORIZ  
 1" = 10' VERT



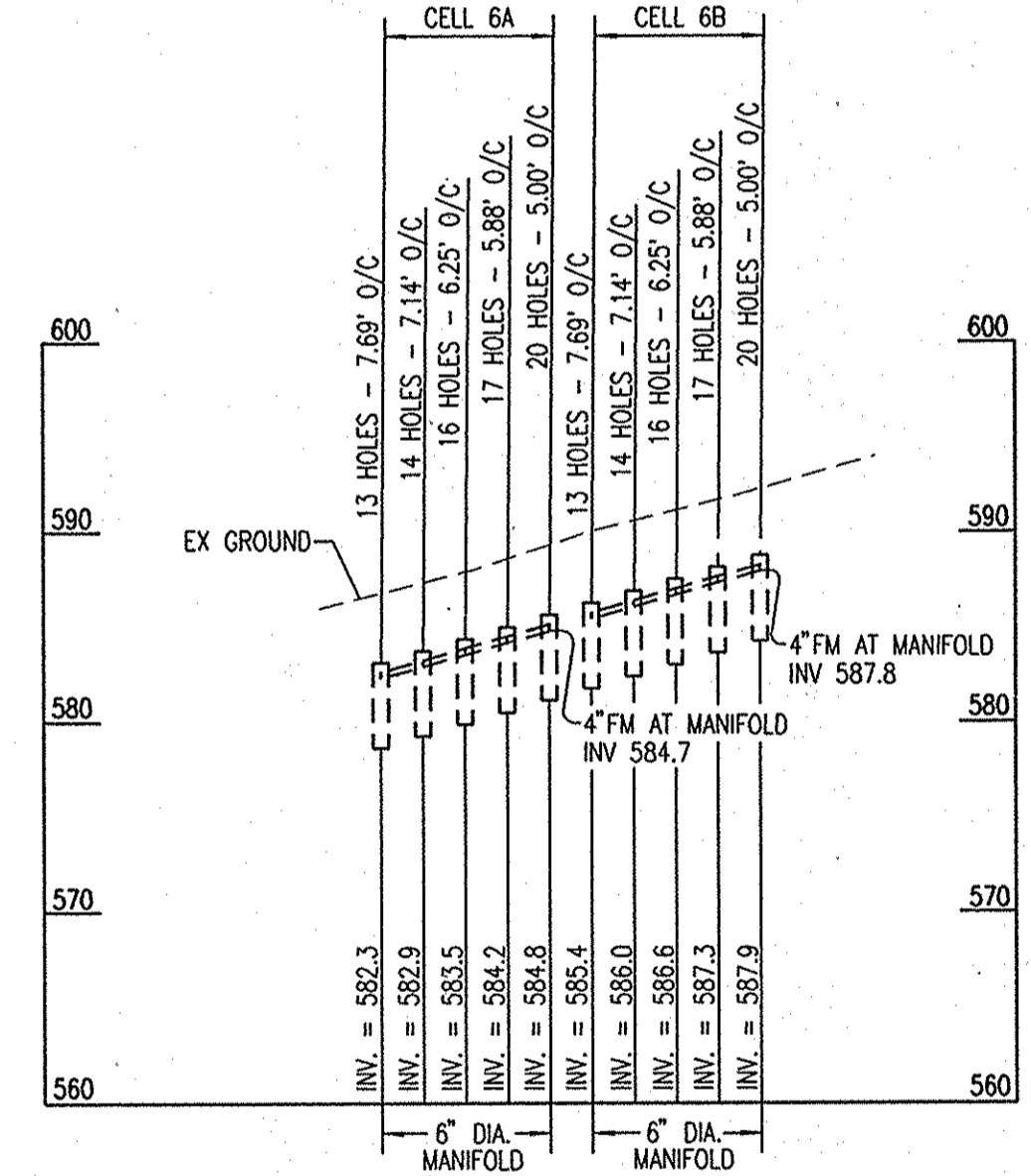
SECTION - MUSGROVE DISPOSAL CELLS 3A, 3B  
 SCALE: 1" = 50' HORIZ  
 1" = 10' VERT



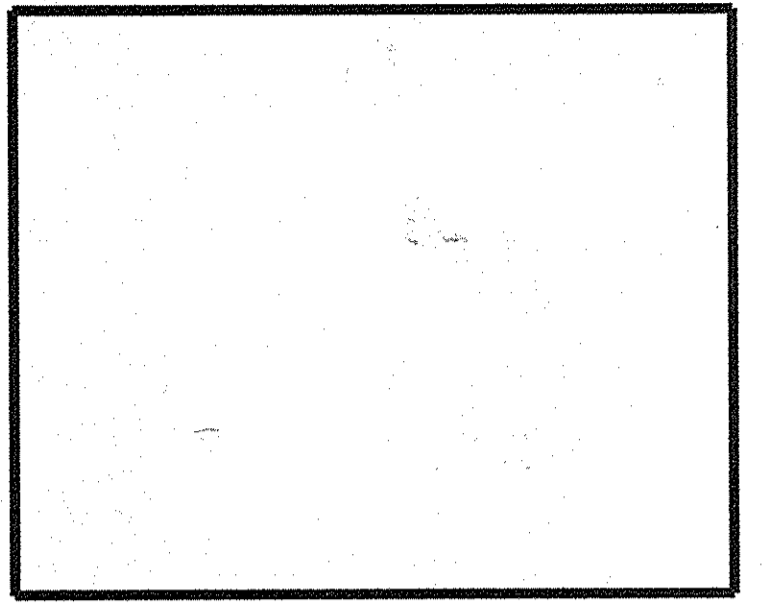
SECTION - GHS DISPOSAL CELLS 4A, 4B  
 SCALE: HORIZ. : 1" = 50'  
 VERT. : 1" = 10'



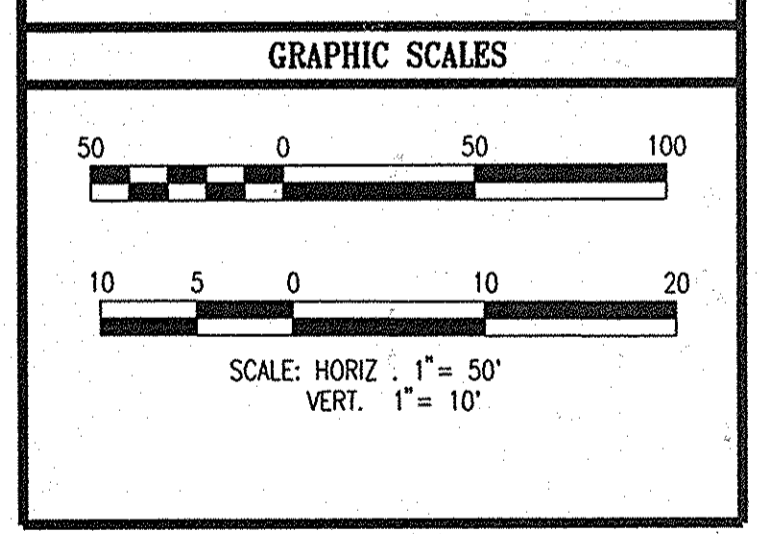
SECTION - GHS DISPOSAL CELLS 5A, 5B  
 SCALE: HORIZ. : 1" = 50'  
 VERT. : 1" = 10'



SECTION - GHS DISPOSAL CELLS 6A, 6B  
 SCALE: HORIZ. : 1" = 50'  
 VERT. : 1" = 10'



GLENELG HIGH SCHOOL  
 HOWARD COUNTY MD  
 TREATMENT SYSTEM DESIGN



WHITMAN, REQUARDT AND ASSOCIATES, LLP  
 801 SOUTH CAROLINE STREET  
 BALTIMORE, MARYLAND 21231  
 410 - 235 - 3450

▲ REVISED SITE DEVELOPMENT PLAN

<b>DISPOSAL CELL PROFILES</b>	
	DRAWING NO. <h1 style="font-size: 2em;">C-18</h1>
SHEET 19 OF 2436	
SCALE: AS NOTED	
DES: CMD	CHECK: AUO
DATE: 04/20/06	

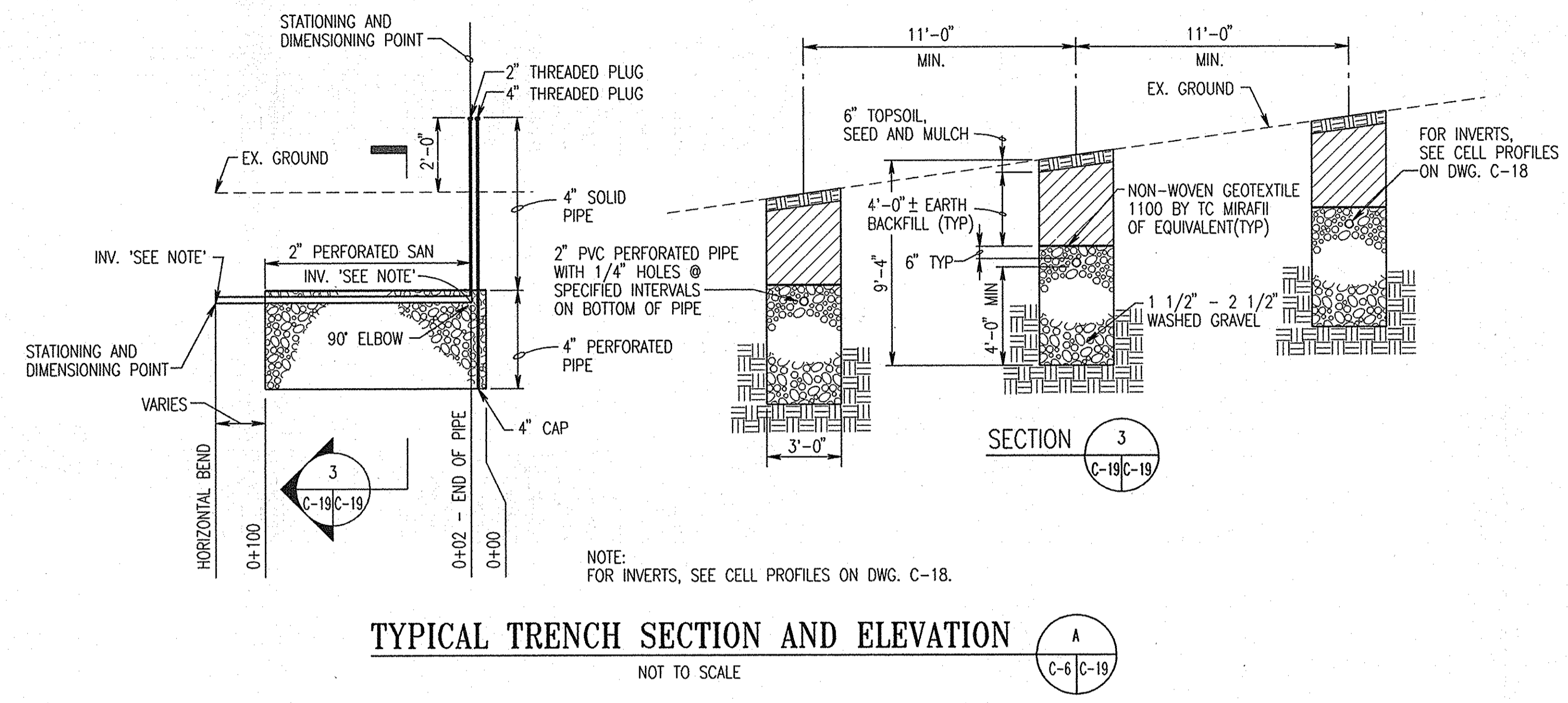
APPROVED: FOR PRIVATE WATER & SEWERAGE SYSTEMS.  
 HOWARD COUNTY HEALTH DEPARTMENT  
*Robert J. Wala* 12/15/06  
 County Health Officer Date  
 Howard County Health Department 1197

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Michael J. ...* 5/8/06  
 Chief, Development Engineering Division Date  
*Kate ...* 12/20/06  
 Chief, Division of Land Development Date  
*Sean ...* 12/28/06  
 Director Date

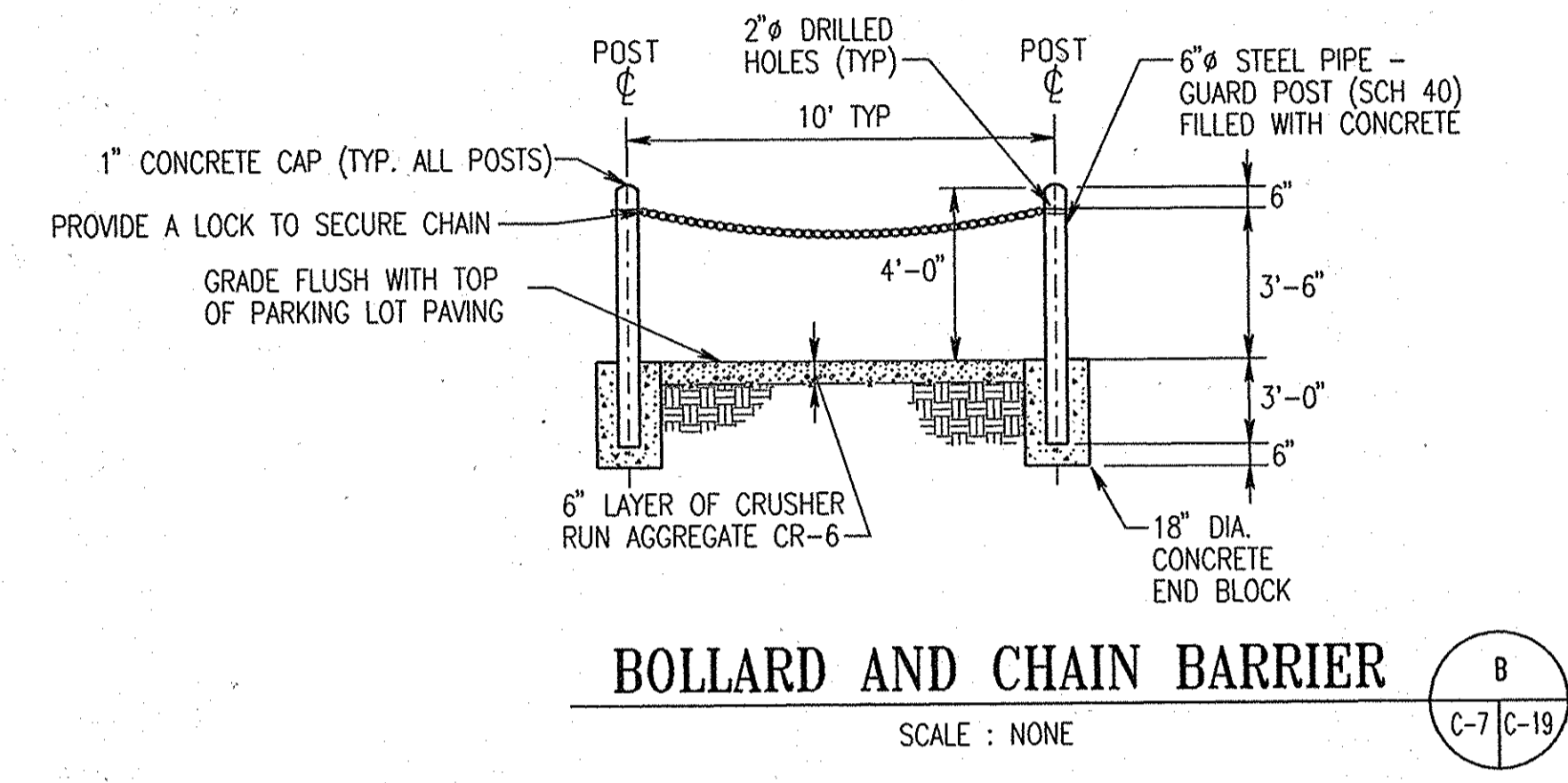
Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
 License No. 16176 Expiration Date: 8-28-14  
 8/16/14

M:\81078 SDP-FI-AN-SET\SDPHSS\BROB.06g Mon Apr 17 14:23:36 2006

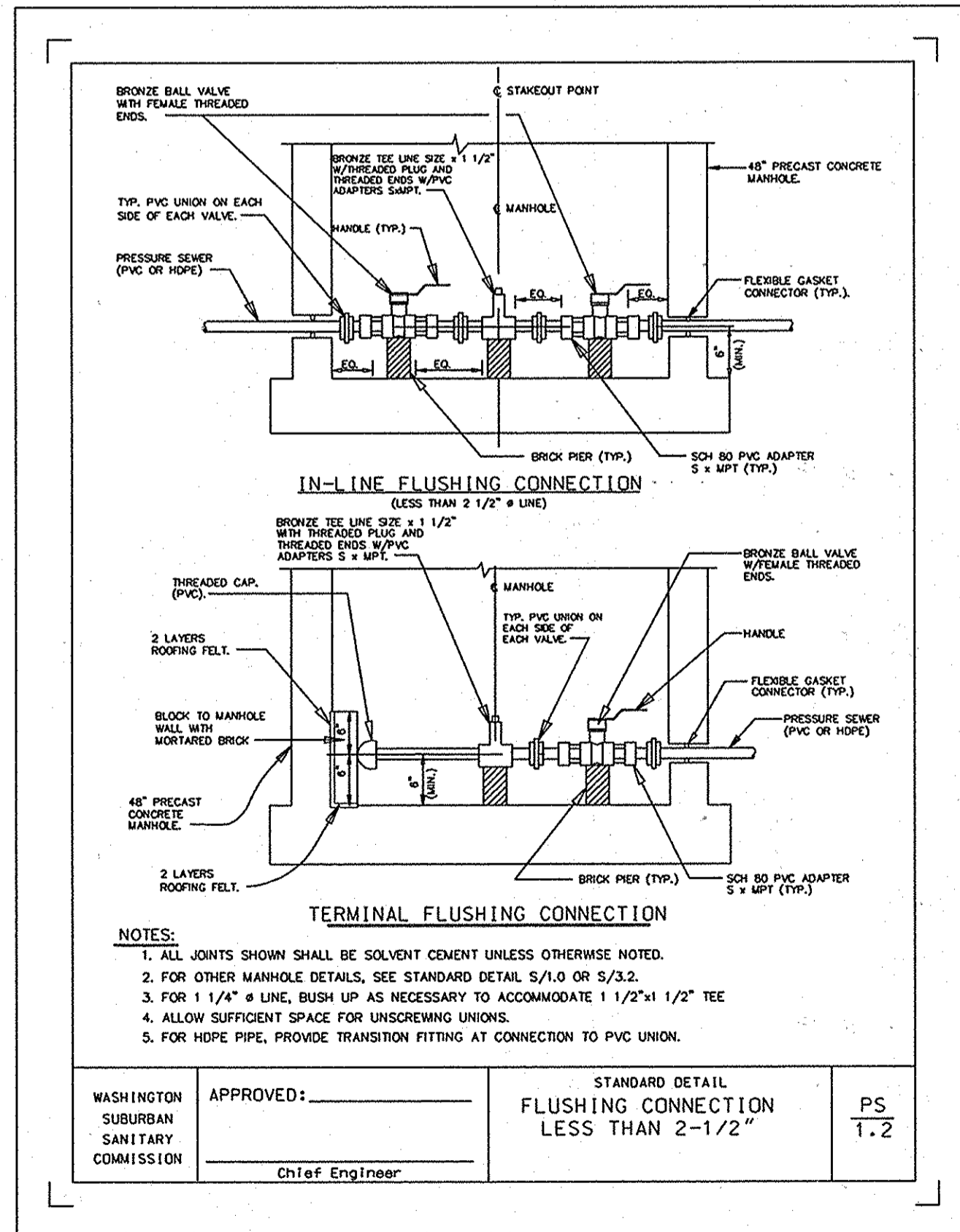
REVISIONS	
MDE W&SC PERMIT SET	4/05/06
SDP FINAL SUBMISSION	4/20/06
△ INSERTED NEW SHEETS	6-16-14



TYPICAL TRENCH SECTION AND ELEVATION  
NOT TO SCALE



BOLLARD AND CHAIN BARRIER  
SCALE: NONE



TERMINAL FLUSHING CONNECTION  
NOT TO SCALE

APPROVED: FOR PRIVATE WATER & SEWERAGE SYSTEMS.  
HOWARD COUNTY HEALTH DEPARTMENT

*Robert W. Weber* 12/5/06  
County Health Officer Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*John J. ...* 5/10/06  
Chief, Development Engineering Division Date

*Kevin ...* 12/28/06  
Chief, Division of Land Development Date

*...* 12/28/06  
Director Date

STATE OF MARYLAND  
PROFESSIONAL ENGINEER  
No. 16156  
Expiration Date: 8-28-14

FOR REV. △ ONLY

Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.

GLENELG HIGH SCHOOL  
HOWARD COUNTY MD  
TREATMENT SYSTEM DESIGN

GRAPHIC SCALES

**WR&A**  
WHITMAN, REQUARDT AND ASSOCIATES, L.L.P.  
801 SOUTH CAROLINE STREET  
BALTIMORE, MARYLAND 21231  
410 - 295 - 3450

REVISOR: REVISED SITE DEVELOPMENT PLAN

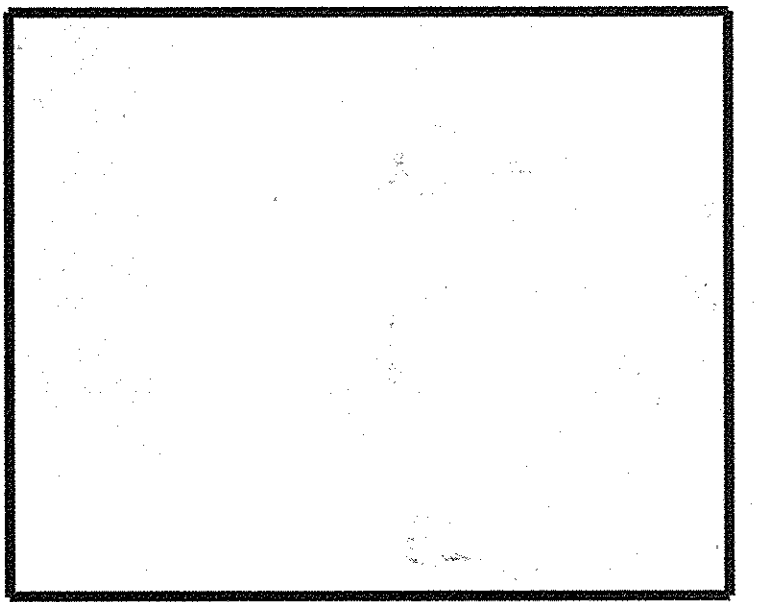
DETAILS

DRAWING NO. C-19  
SHEET 20 OF 236

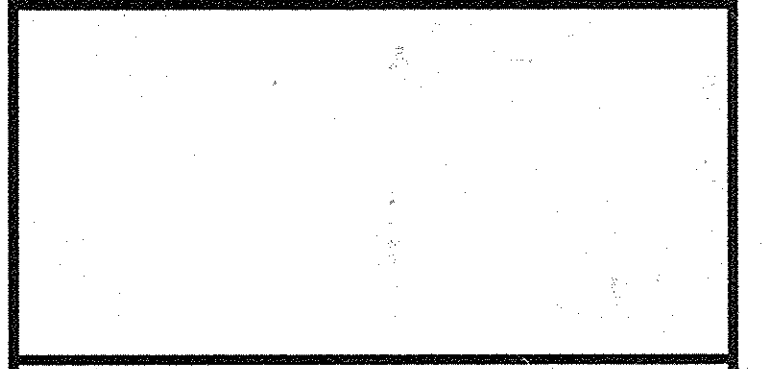
SCALE: NO SCALE  
DES: CMD CHECK: AUO DATE: 04/20/06



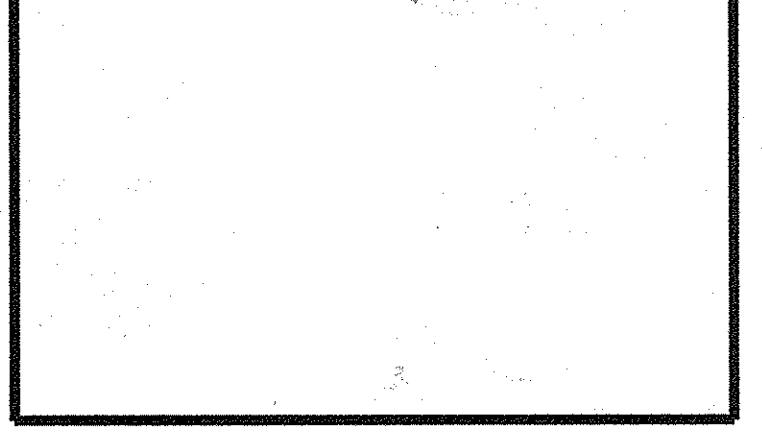
REVISIONS	
MDE W&SC PERMIT SET	4/05/06
SDP FINAL SUBMISSION	4/20/06
INSERED NEW SHEETS	6-16-14



**GLENELG HIGH SCHOOL  
HOWARD COUNTY MD  
TREATMENT SYSTEM DESIGN**



GRAPHIC SCALES



WHITMAN, REQUARDT AND ASSOCIATES, LLP  
801 SOUTH CAROLINE STREET  
BALTIMORE, MARYLAND 21231  
410 - 235 - 3450

REVISED SITE DEVELOPMENT PLAN

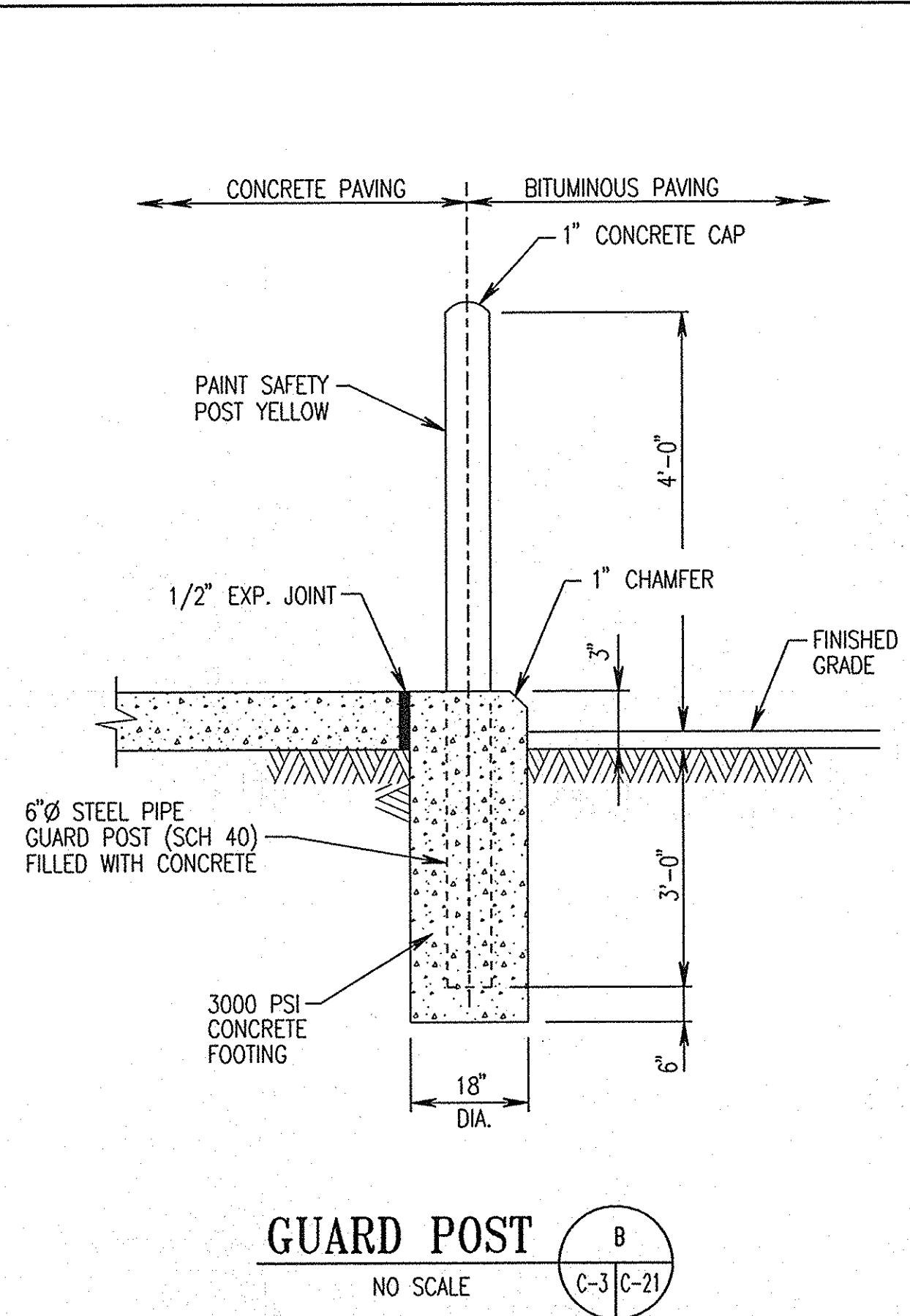
**DETAILS**

DRAWING NO. **C-21**

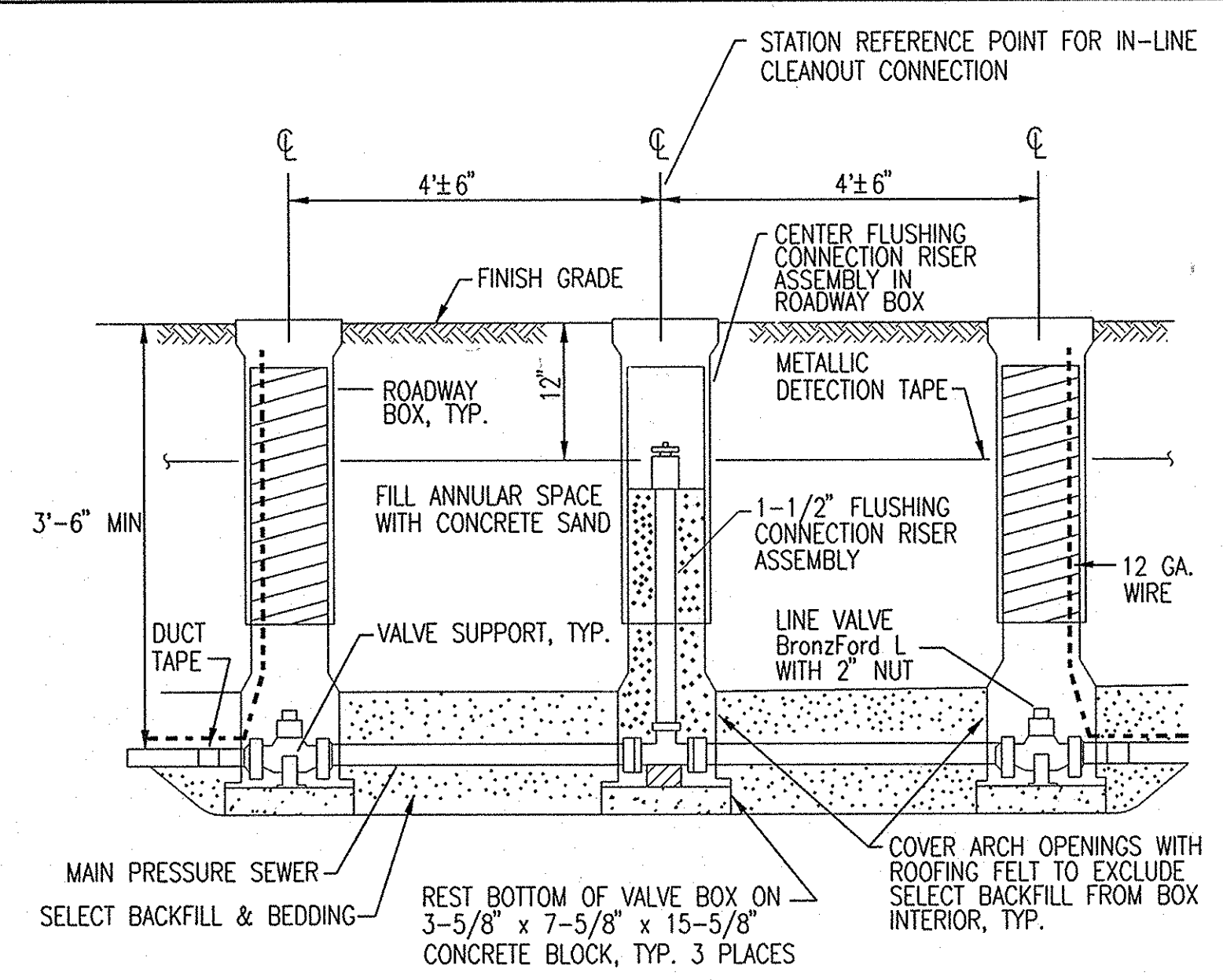
SHEET 22 OF 2436

SCALE: AS SHOWN

DES: CMD CHECK: AUO DATE: 04/20/06

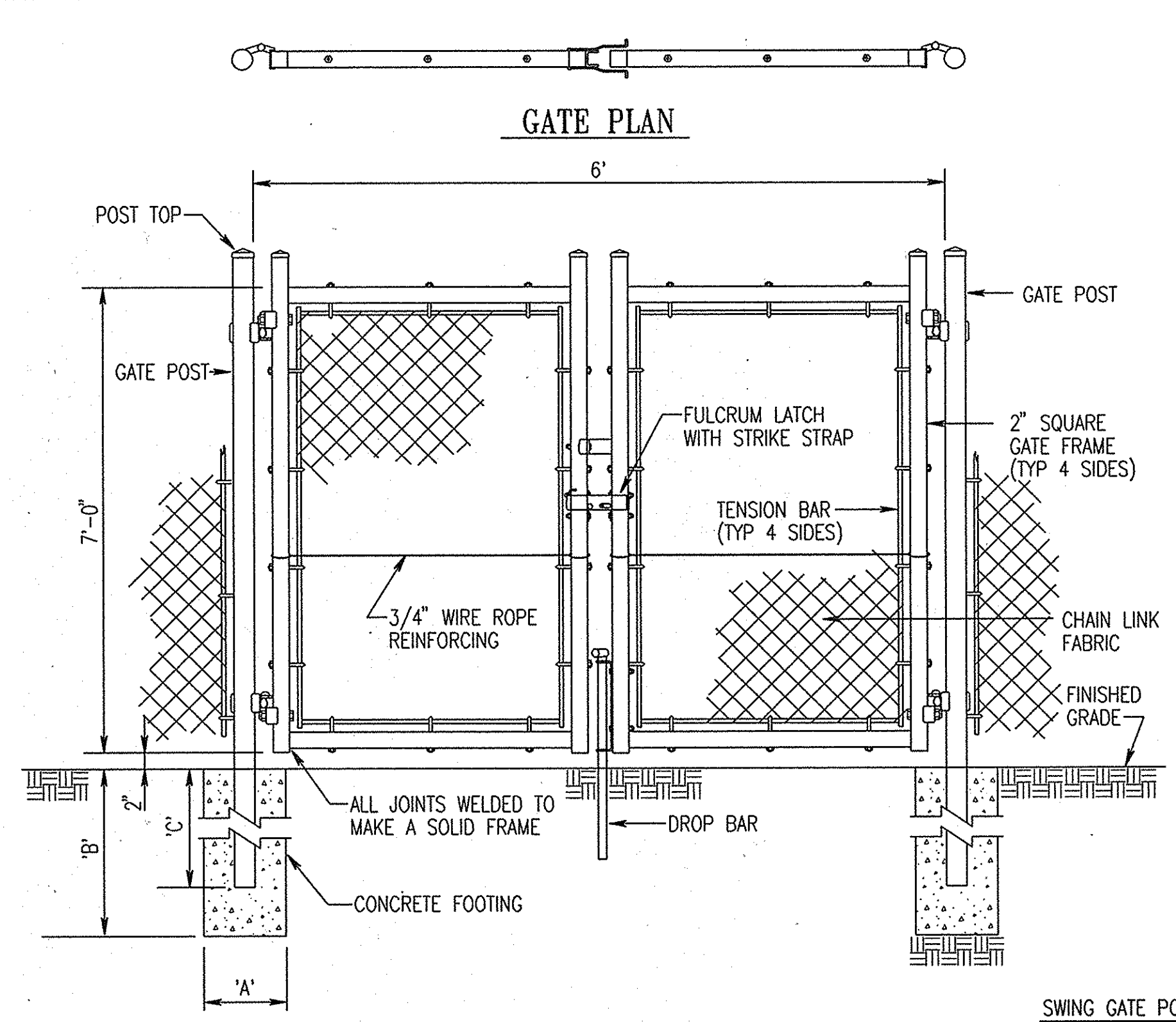


**GUARD POST**  
NO SCALE



- NOTES:**
- CONCRETE BLOCK TO REST ON UNDISTURBED, FIRM GROUND.
  - TWELVE (12) GAUGE INSULATED COPPER WIRE TAPED TO LPS PIPE AND RUN UP THROUGH DUCTILE IRON VALVE BOX
  - LINE VALVES:
    - A. BRONZE BAIL VALVE IN LINES 2" AND SMALLER
    - B. DUCTILE IRON GATE VALVES IN SIZES 3" AND LARGER.
    - C. VALVE OPERATING NUTS TO BE 2"x2", SQUARE TYPE ONLY.

**FLUSHING CONNECTION**  
NO SCALE



**SWING GATE**  
NOT TO SCALE

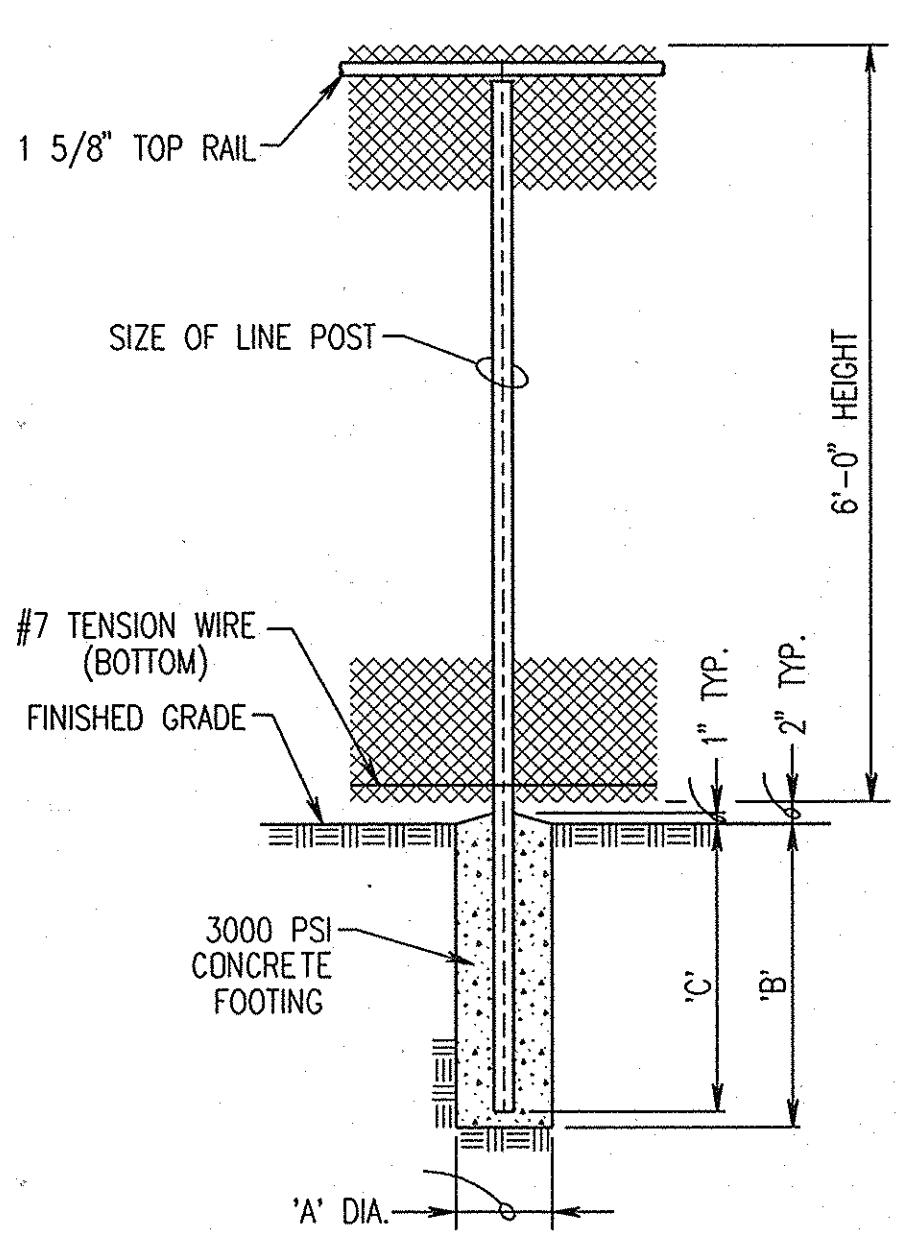
SWING GATE POST					
GATE CLEAR WIDTH	GATE POST (OD)	FABRIC HEIGHT	"A" DIA	"B" DEPTH	"C" POST EMBEDMENT
8'	2.875"	6'-0"	18"	42"	40"

LINE AND TERMINAL POSTS				
FABRIC HEIGHT	TYPE POST	"A" DIA	"B" DEPTH	"C" POST EMBEDMENT
7'-0"	LINE	12"	40"	36"
	TERMINAL	12"	40"	36"

NOTE: TERMINAL POSTS INCLUDE END, CORNER, AND PULL POSTS

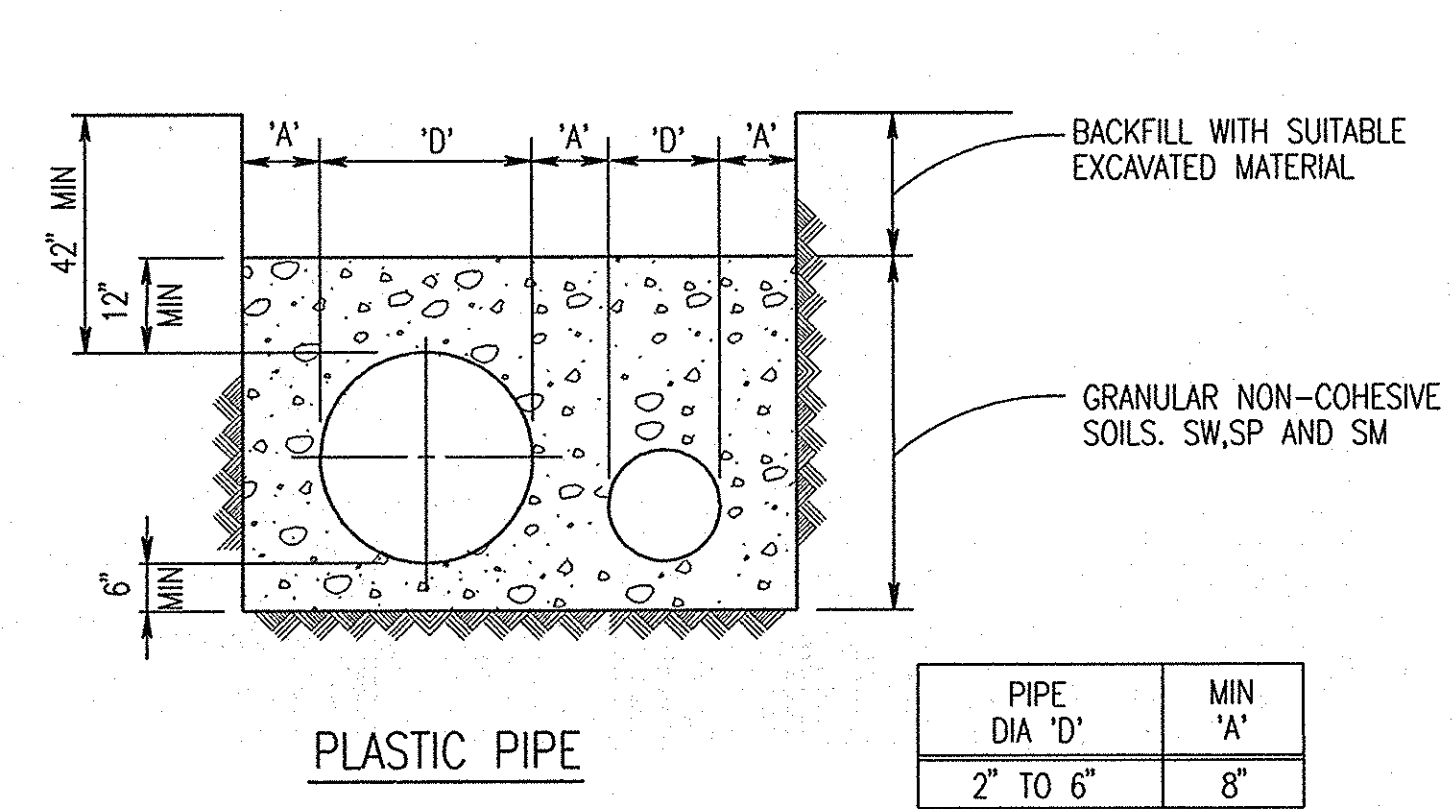
**NOTES:**

- TERMINAL POST INCLUDE END, CORNER AND PULL POST.
- CHAIN LINK FENCE SHALL HAVE ZINC COATED WIRE ASTM F1083 SCHEDULE 40 FRAMING. SWING GATES SHALL BE IN ACCORDANCE WITH ASTM F900 WITH LOCKING DEVICE, PADLOCK EYES, DROP ROD, GATE STOP PIPE, AND APPROPRIATE ACCESSORIES.
- PROVIDE LINE POSTS SPACED EQUIDISTANTLY APART, NOT EXCEEDING 10 FEET ON CENTER.
- SET POSTS PLUMB. ALLOW CONCRETE TO CURE A MINIMUM OF 72 HOURS BEFORE PERFORMING OTHER WORK ON POSTS
- PULL WIRE TAUT AND SECURE WIRE TO BOTTOM WIRE, CLOSE TO BOTH SIDES OF EACH POST AND AT MAXIMUM INTERVALS OF 24 INCHES ON CENTER. SECURE WIRE TO POSTS USING STRETCHER BARS, TIES OR CLIPS SPACED 15 INCHES ON CENTER, OR BY INTEGRALLY WEAVING TO TO FASTENING LOOPS OF END, CORNER, PULL, AND GATE POSTS FOR FULL LENGTH OF EACH POST. INSTALL FABRIC ON OPPOSITE SIDE OF POSTS FROM VALVE VAULT. INSTALL CHAIN LINK SO THAT BOTTOM IS 2 INCHES ABOVE GROUND LEVEL.



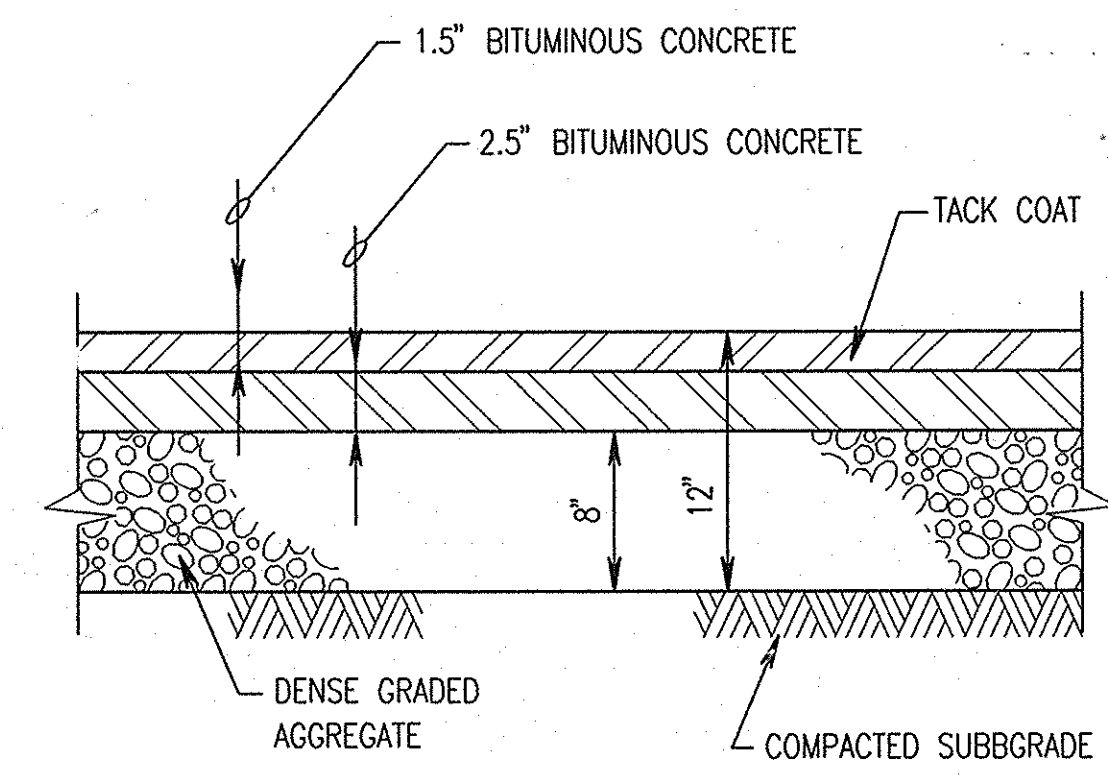
**CHAIN LINK FENCE WITH DOUBLE SWING GATE**  
NO SCALE

SIZE	POST	'A'	'B'	'C'
3"	GATE	16"	42"	40"
2 1/2"	LINE	12"	38"	36"
3"	TERMINAL	12"	38"	36"



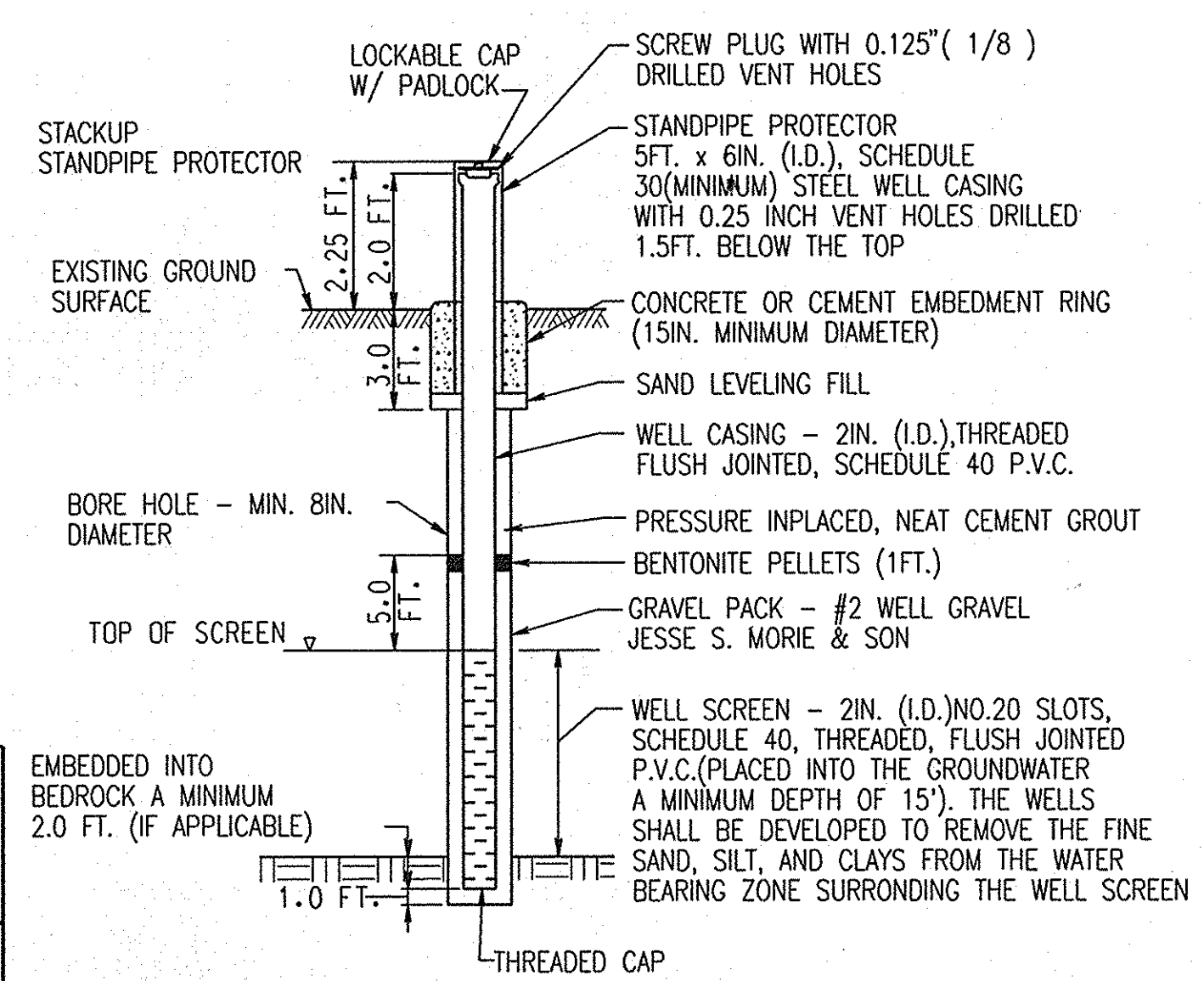
**TYPICAL NON-SSD TRENCH NON-PERFORATED**  
NOT TO SCALE

PIPE DIA 'D'	MIN 'A'
2" TO 6"	8"



**BITUMINOUS PAVING**  
NO SCALE

\* SECTION IS PER HOWARD COUNTY STANDARD SPECIFICATIONS PAVEMENT SECTION TABLE P-2



**MONITORING WELL/PIEZOMETER**  
NOT TO SCALE

APPROVED: FOR PRIVATE WATER & SEWERAGE SYSTEMS.  
HOWARD COUNTY HEALTH DEPARTMENT

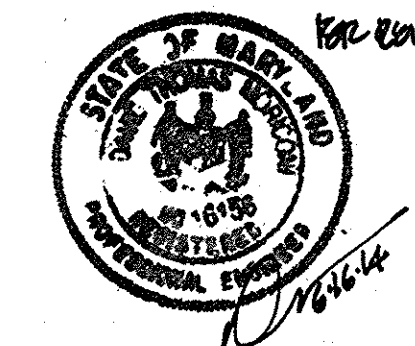
*Robert J. Wale* County Health Officer Date: 11/15/06

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

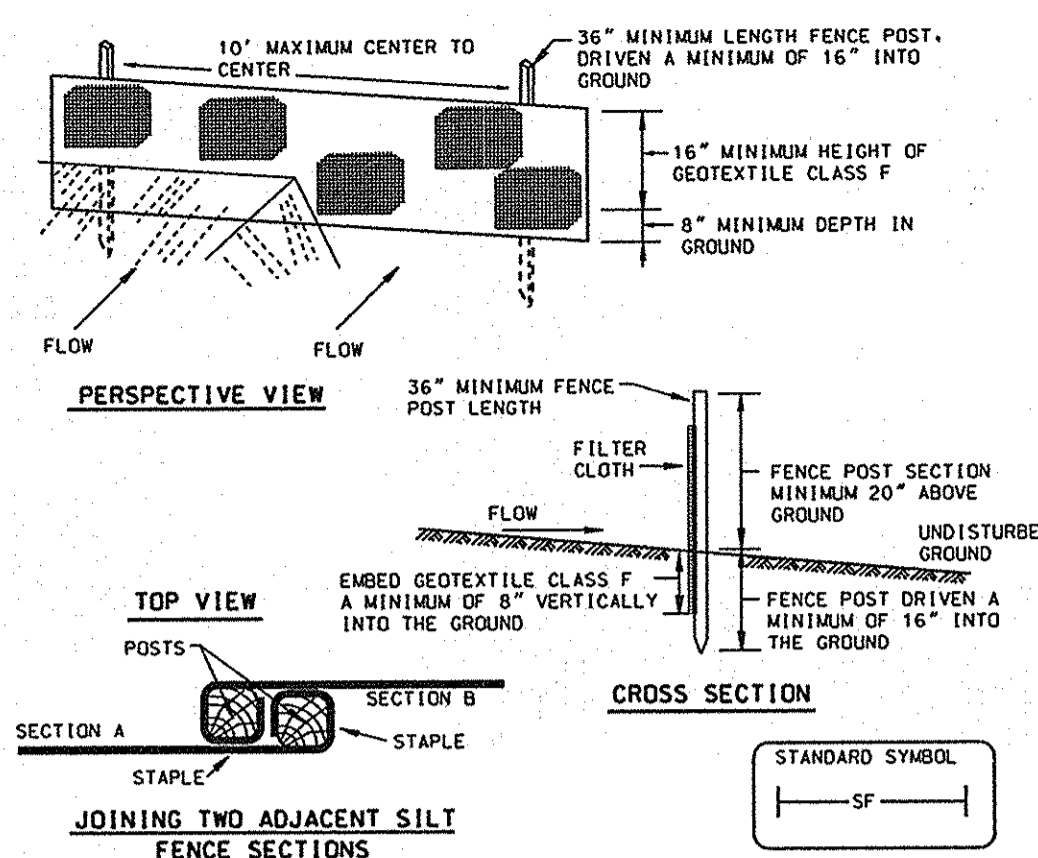
*John D. Williams* Chief, Development Engineering Division Date: 5/10/06

*Walt Sheenrock* Chief, Division of Land Development Date: 12/20/06

*Stephen Saffitz* Director Date: 12/23/06

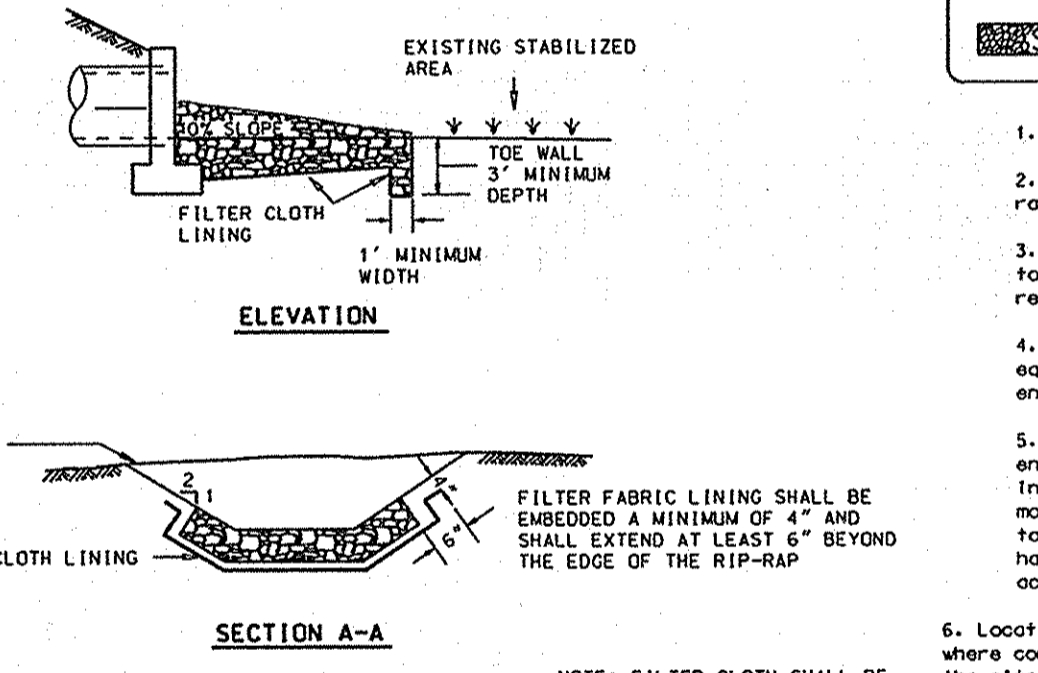
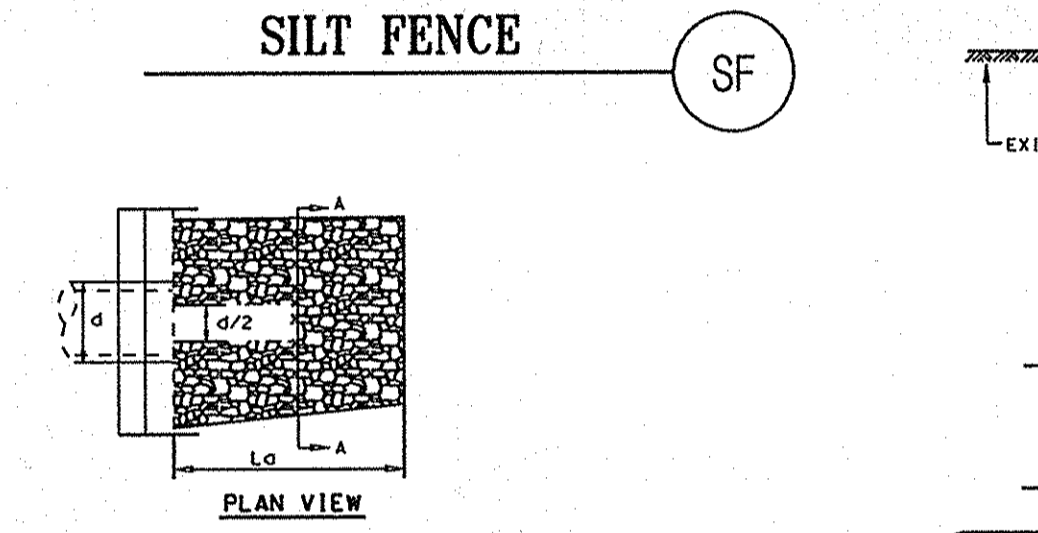


Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 16156, Expiration Date: 8-28-14

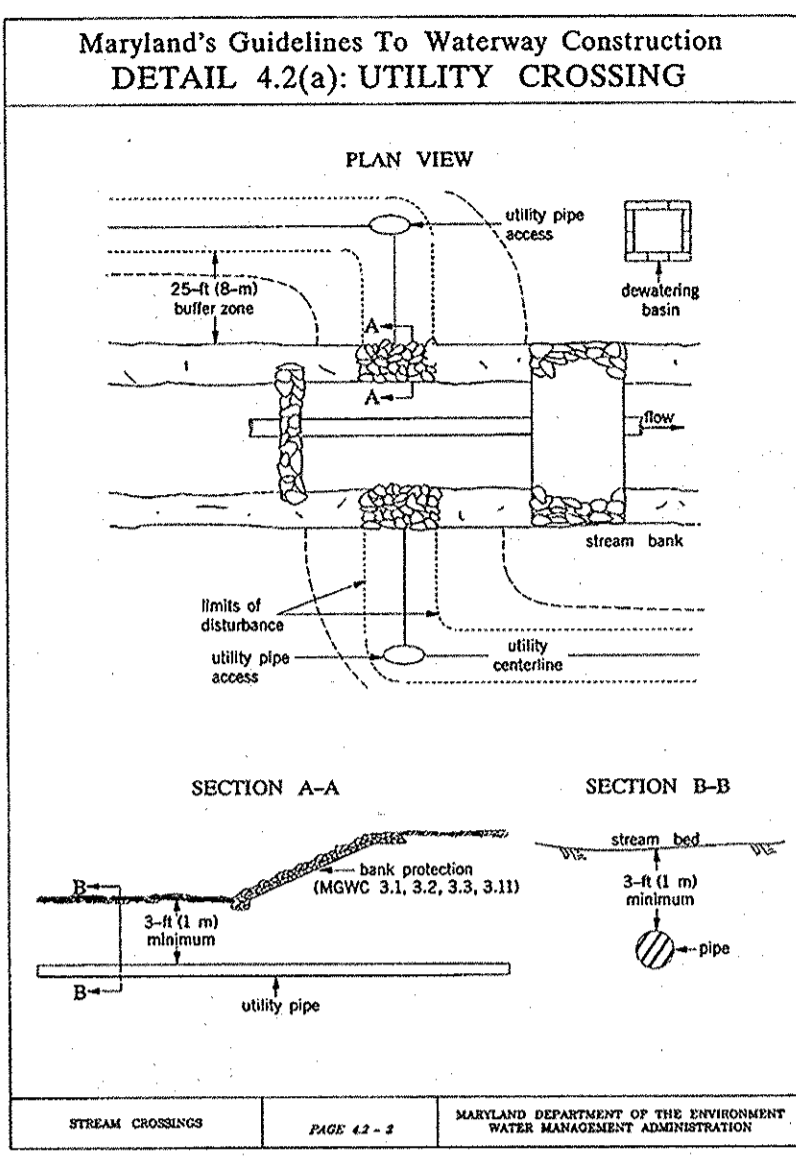


- Construction Specifications**
- Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 1 1/2" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard I or U section weighing not less than 1.00 pound per linear foot.
  - Geotextile shall be fastened securely to each fence post with wire ties or staples of top and mid-section and shall meet the following requirements for Geotextile Class F:
 

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft <sup>2</sup> /minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322
  - Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
  - Silt fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reaches 50% of the fabric height.



**ROCK OUTLET PROTECTION TYPE III (ROP)**



**MGWC 4.2: DIVERSION PIPE**

**DESCRIPTION**  
The work shall consist of installing flow diversion pipes in combination with sanding or stone diversion when construction activities occur within the stream channel.

**EFFECTIVE DATES & LIMITATIONS**  
Diversion pipes with an upstream flow capacity can cause the channel diversion to full thereby resulting in severe erosion of the disturbed channel section under construction. Therefore, in-channel diversions activities should occur only during periods of low flow.

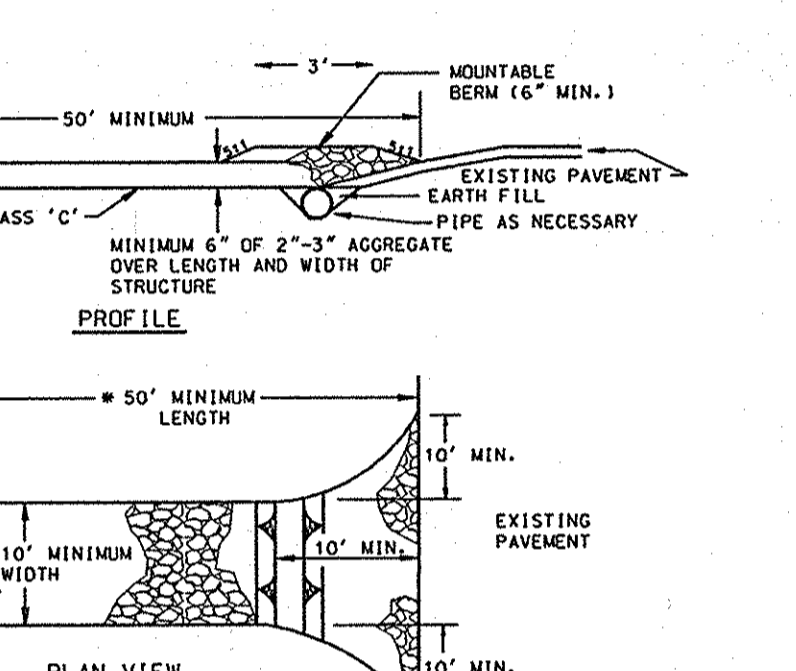
**MATERIAL SPECIFICATIONS**  
Materials for stream diversions should meet the following requirements:  
 • Aggregate Stone should be washed and have a minimum diameter of 4 inches (10 centimeters).  
 • Sandbags should consist of material which is resistant to stone-rot, rot, leaching, and erosion and should be woven tightly enough to prevent leaking of fill material (i.e., sand, fine gravel, etc.).  
 • Shoring: Shoring should consist of polyethylene or other material which is impervious and resistant to puncture and decay.

**INSTALLATION GUIDELINES**  
All erosion and sediment control devices including temporary diversion berms should be installed at the first end of business according to a plan approved by the WQA or local authority. Installation should proceed from upstream to downstream during low flow conditions. Temporary, in-stream stone berms should be installed around the perimeter of the work area.

Diversion pipes with sanding or stone berms should be completed as follows (refer to Detail 4.1):

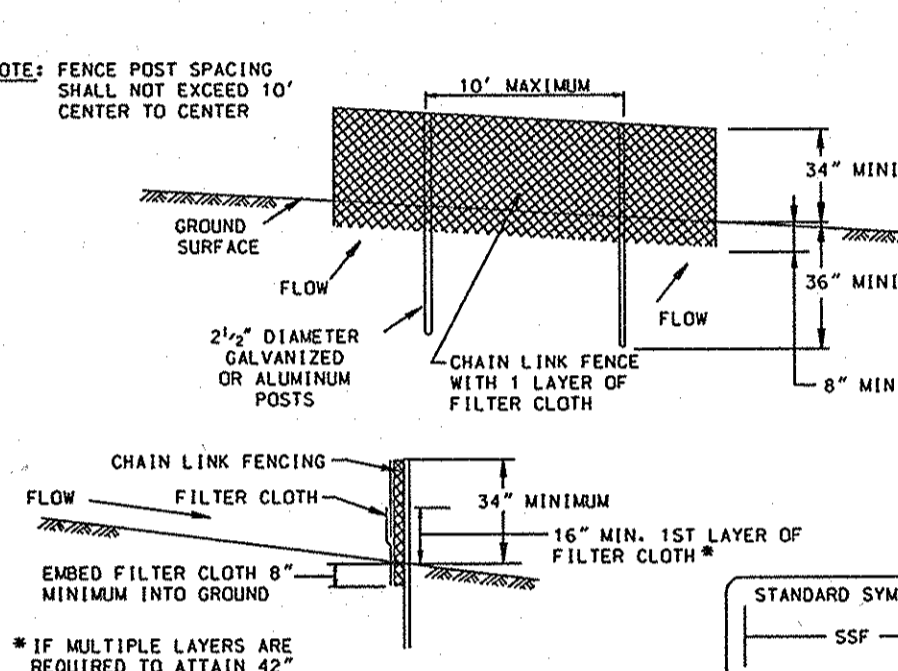
- Stone/berm berms should be staked and installed as detailed in MGWC 4.2: Sanding/Stone Diversion. The berms should be staked to prevent backflow.
- All exposed material should be deposited and stabilized in an approved area outside the 100-year floodplain unless otherwise authorized by the WQA.
- Sanding/stone berms should be installed in an approved area outside the 100-year floodplain.
- The diversion pipe should have a minimum capacity sufficient to convey 2-year flow for projects with a duration of less than 60 days. For projects of longer duration, the capacity of the pipe can be reduced accordingly.
- If necessary, stone or stone berms should be installed around the perimeter of the work area.
- Sediment control devices are to remain in place until all disturbed areas are stabilized and the installing authority approves their removal.

**TEMPORARY DIVERSION CONSTRUCTION MEASURES** MARYLAND DEPARTMENT OF THE ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



- Construction Specifications**
- Length - minimum of 50' (#30' for single residence lots).
  - Width - 10' minimum, should be flared at the existing road to provide a turning radius.
  - Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. The plan approval authority may not require single family residences to use geotextile.
  - Stone - crushed aggregate (2" to 3" or reclaimed or recycled concrete equivalent) shall be placed at least 6" deep over the length and width of the entrance.
  - Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
  - Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

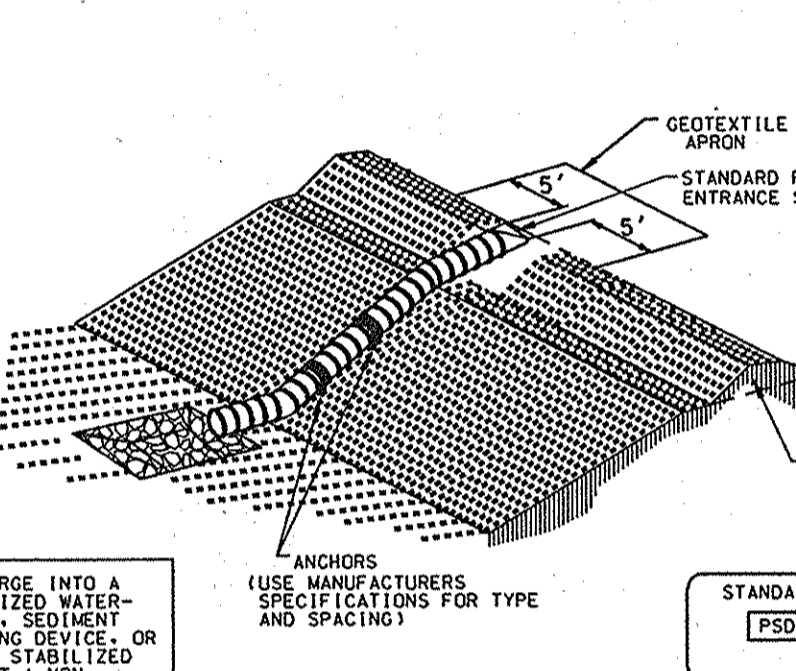
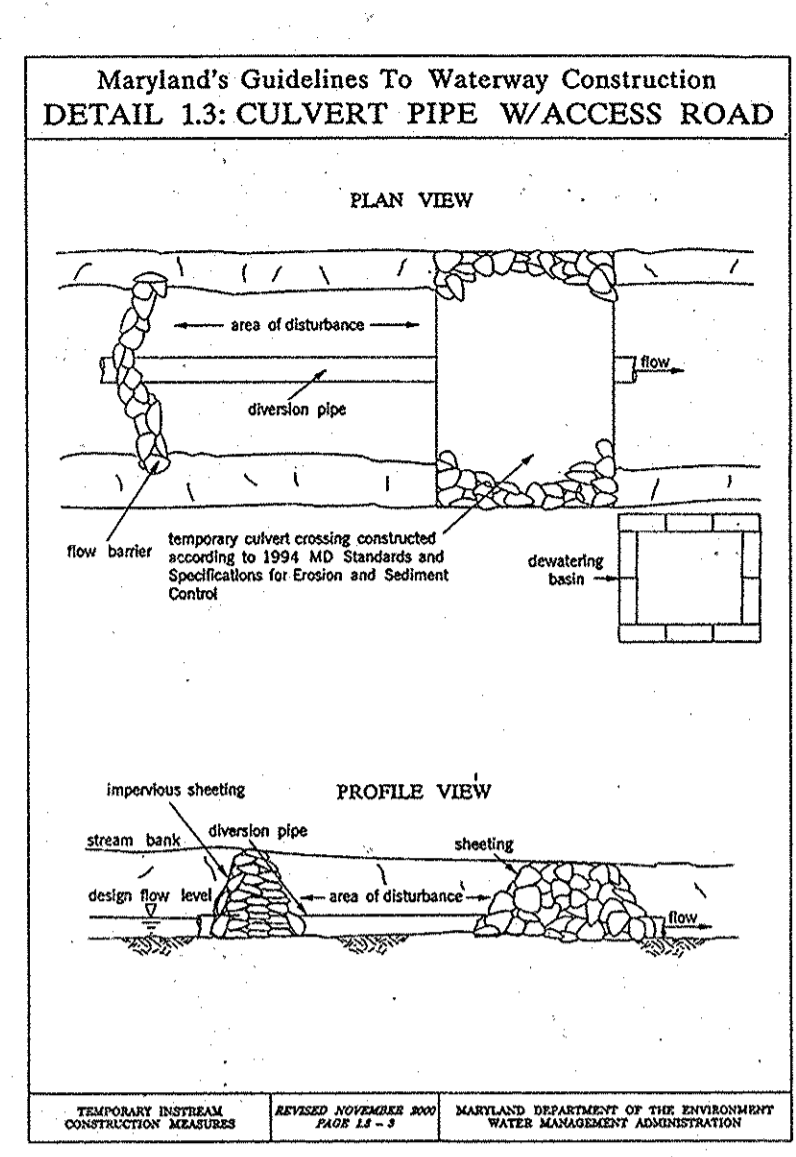
**STABILIZED CONSTRUCTION ENTRANCE (SCE)**



- CONSTRUCTION SPECIFICATIONS**
- Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.
  - Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wires, bracing and truss rods, drive anchors and post caps are not required except on the ends of the fence.
  - Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
  - Filter cloth shall be embedded a minimum of 8" into the ground.
  - When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.
  - Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.
  - Filter cloth shall be fastened securely to each fence post with wire ties or staples of top and mid section and shall meet the following requirements for Geotextile Class F:
 

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal/ft <sup>2</sup> /minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

**SUPER SILT FENCE (SSF)**



- CONSTRUCTION SPECIFICATIONS - Pipe Slope Drain**
- The Pipe Slope Drain (PSD) shall have a slope of 3 percent or steeper.
  - The top of the earth dike over the inlet pipe shall be at least 2 times the pipe diameter measured on the invert of the pipe.
  - Flexible tubing is preferred. However, corrugated metal pipe or equivalent PVC pipe can be used. All connections shall be watertight.
  - A flared end section shall be attached to the inlet end of pipe with a watertight connection. Filter cloth shall be placed under the inlet of the pipe slope drain and shall extend out 5' from the inlet. The filter cloth shall be "keyed in" on all sides.
  - The Pipe Slope Drain shall be securely anchored to the slope by staking at the grommets provided. Spacing for anchors shall be as provided by manufacturer's specification. In no case shall less than two (2) anchors be provided, equally spaced along the length of pipe. These details should be provided by pipe suppliers.
  - The soil ground under the pipe and end section shall be hand tamped in 4 inch lifts to the top of the earth dike.
  - All pipe connections shall be watertight.
  - Whenever possible where a PSD drains on unstabilized area, it shall outlet into a sediment trap or basin. If this is not possible then the slope drain will discharge into a stable conveyance that leads to a sediment trap or basin. When discharging into a trap or basin the PSD shall discharge at the same elevation as the wet pool elevation. The discharge from the PSD must be as far away from the sediment control outlet as possible.
  - When the drainage area is stabilized, the PSD shall discharge onto a stabilized area of a non-erosive velocity.
  - Inspection and any required maintenance shall be performed periodically and after each rain event.
  - The inlet must be kept open at all times.

**PIPE SLOPE DRAIN (PSD)**

**Table 6 Design Criteria for Pipe Slope Drain**

Size	Pipe/Tubing Diameter (DI) in	Maximum Drainage Area (Acres)
PSD-12	12	0.5
PSD-18	18	1.5
PSD-21	21	2.5
PSD-24	24	3.5
PSD-24 (2)	24	5.0

**SECTION II - TEMPORARY SEEDING**

**TEMPORARY SEEDING SUMMARY**

MIX NO.	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-10-10)	LIME RATE
1	RYE 39	2.5 BU. (140 LBS)	2/1 - 4/30 8/15 - 11/30	1-2	600 LB/AC (15 LB/1000 SF)	2 TONS/AC (100 LB/1000 SF)
2	RYE PLUS FOXTAIL MILLET	150 LBS	5/1 - 8/14	1		

**SECTION III - PERMANENT SEEDING**

**PERMANENT SEEDING SUMMARY**

MIX NO.	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS	N	P205	K20	LIME RATE
3	TALL FESCUE (85%), PERENNIAL RYEGRASS (10%), KENTUCKY BLUEGRASS (5%)	125 15 10	3/1 - 5/15 8/15 - 11/15	1-2	90 LB/AC (2.0 LB/1000 SF)	175 LB/AC (4 LB/1000 SF)	175 LB/AC (4 LB/1000 SF)	2 TONS/AC (100 LB/1000 SF)

**ENGINEER'S CERTIFICATE**

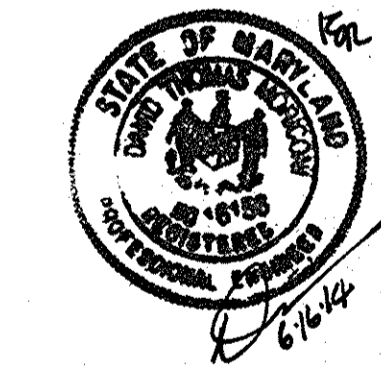
"I certify that this plan for erosion and sediment control represents a practical and workable plan, based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

*Anthony W. W...* 4/19/06  
Signature of Engineer (print name below signature) Date

**DEVELOPER'S/BUILDER'S CERTIFICATE**

"I/we certify that all development and/or construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Maryland 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 HSCD."

*Wm. P...* 4-19-06  
Signature of Developer/Builder Date



Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland.  
License No. 16156, Expiration Date: 8-28-14

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.  
*J.R. P...* 5/19/06  
Howard S.C.D. Date

Reviewed for the Howard SCD and meets technical requirements.  
*Jim M. Myers* 5/19/06  
PSDA-Natural Resources Conservation Service Date

APPROVED: FOR PRIVATE WATER & SEWERAGE SYSTEMS. HOWARD COUNTY HEALTH DEPARTMENT  
*Robert J. Weber* 5/19/06  
County Health Officer Date

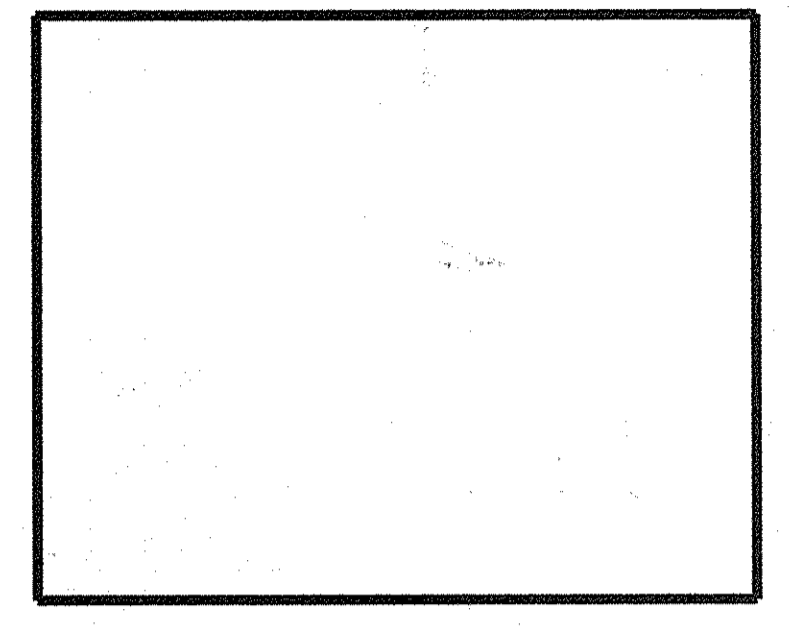
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Stephen J. ...* 12/28/06  
Director Date

*Kevin ...* 12/28/06  
Chief, Division of Land Development Date

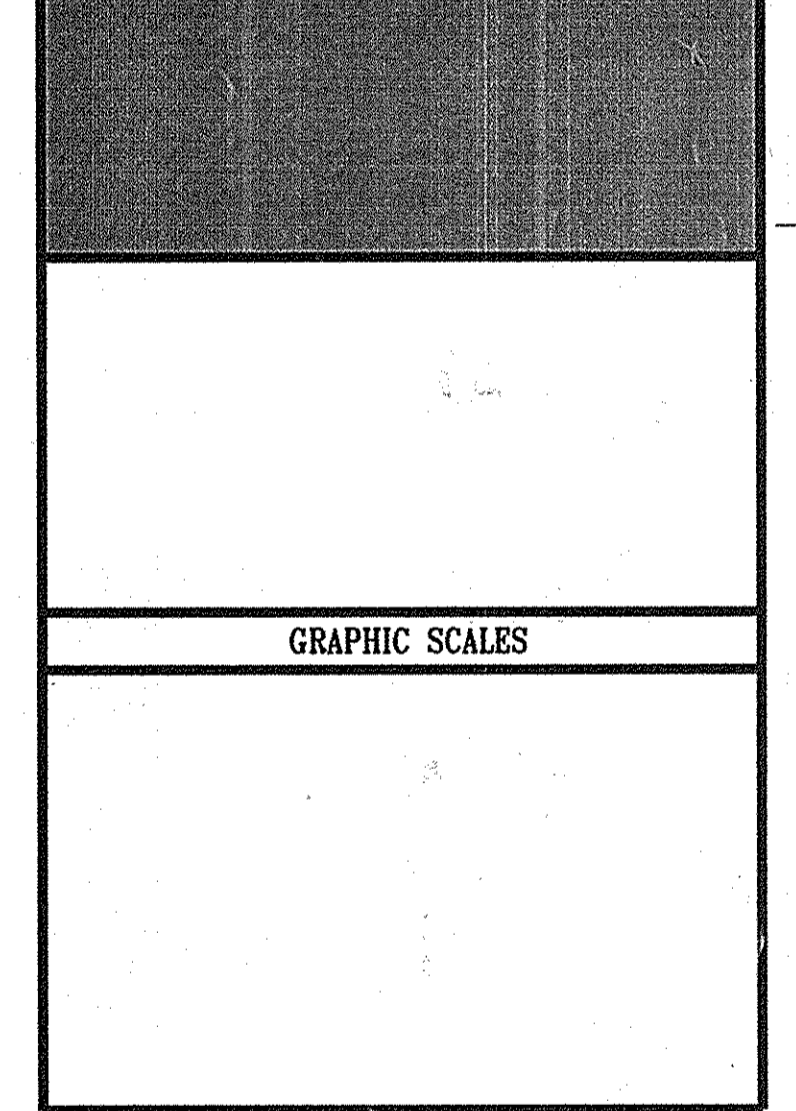
*...* 5/19/06  
Chief, Development Engineering Division Date

**REVISIONS**

MDE W&SC PERMIT SET	4/05/06
SDP FINAL SUBMISSION	4/20/06
INSPECTED NEW SHEETS	6-16-14



**GLENELG HIGH SCHOOL  
HOWARD COUNTY MD  
TREATMENT SYSTEM DESIGN**



**WR&A**  
WHITMAN, REQUARDT AND ASSOCIATES, LLP  
801 SOUTH CAROLINE STREET  
BALTIMORE, MARYLAND 21231  
410 - 235 - 3450

**REVISED SITE DEVELOPMENT PLAN**

**SEDIMENT CONTROL DETAILS AND NOTES**

DRAWING NO. C-22  
SHEET 23 OF 23

SCALE: AS NOTED  
DES: CMD CHECK: AUO DATE: 04/20/06

MA-91078-SDP-PLAN-SET-SDP-HSSBRC22-090  
Mon. Apr. 17 14:23:29 2006

### PLANTING SCHEDULE

ZONE - 1      AREA = 9687 s.f. (0.22 ACRES)

COMMON NAME	LATIN NAME	SIZE	STOCK	SPACING	QUANTITY
RED MAPLE	<i>Acer rubrum</i>	1/2"-5/8" Cal.	CONTAINER	16' O.C.	15
SWEETGUM	<i>Liquidambar styraciflua</i>	1/2"-5/8" Cal.	CONTAINER	16' O.C.	15
SYCAMORE	<i>Platanus occidentalis</i>	1/2"-5/8" Cal.	CONTAINER	16' O.C.	15
<b>TOTAL</b>					<b>45</b>

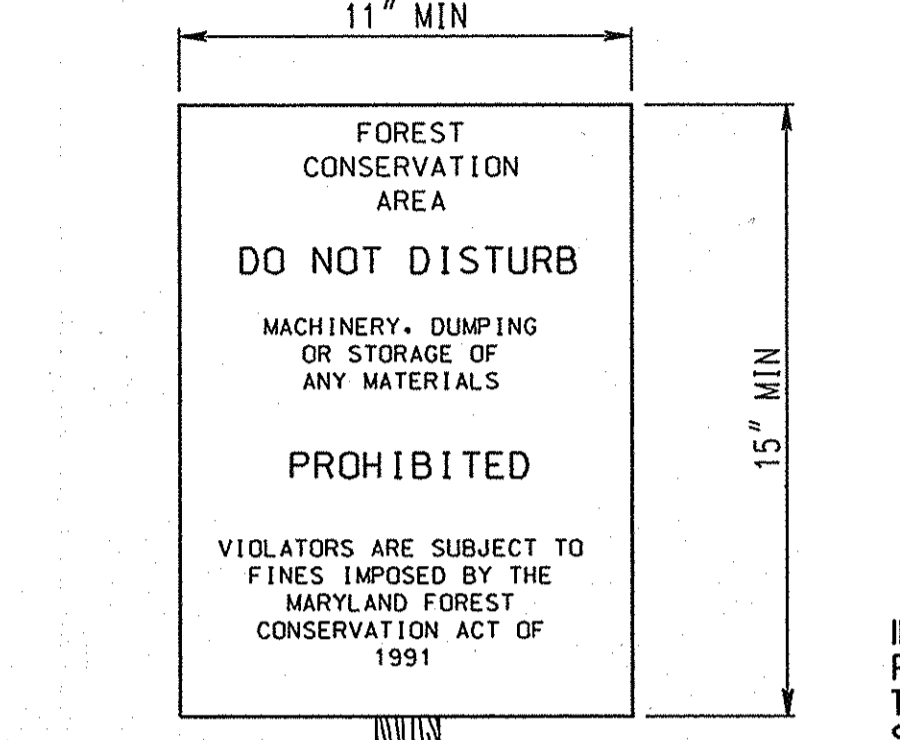
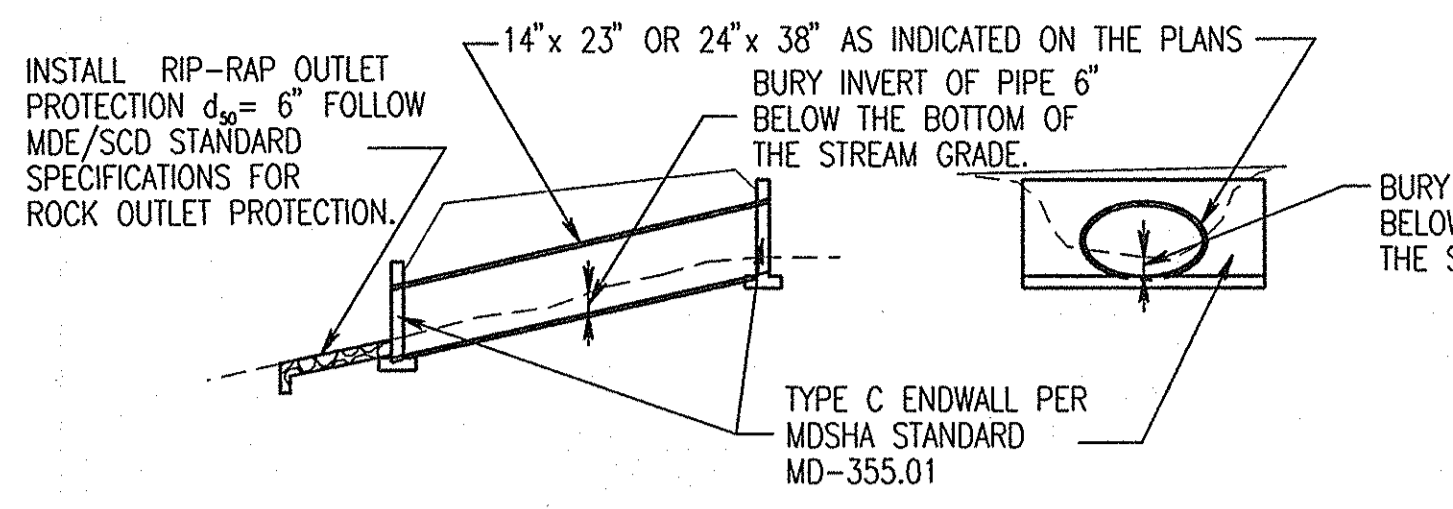
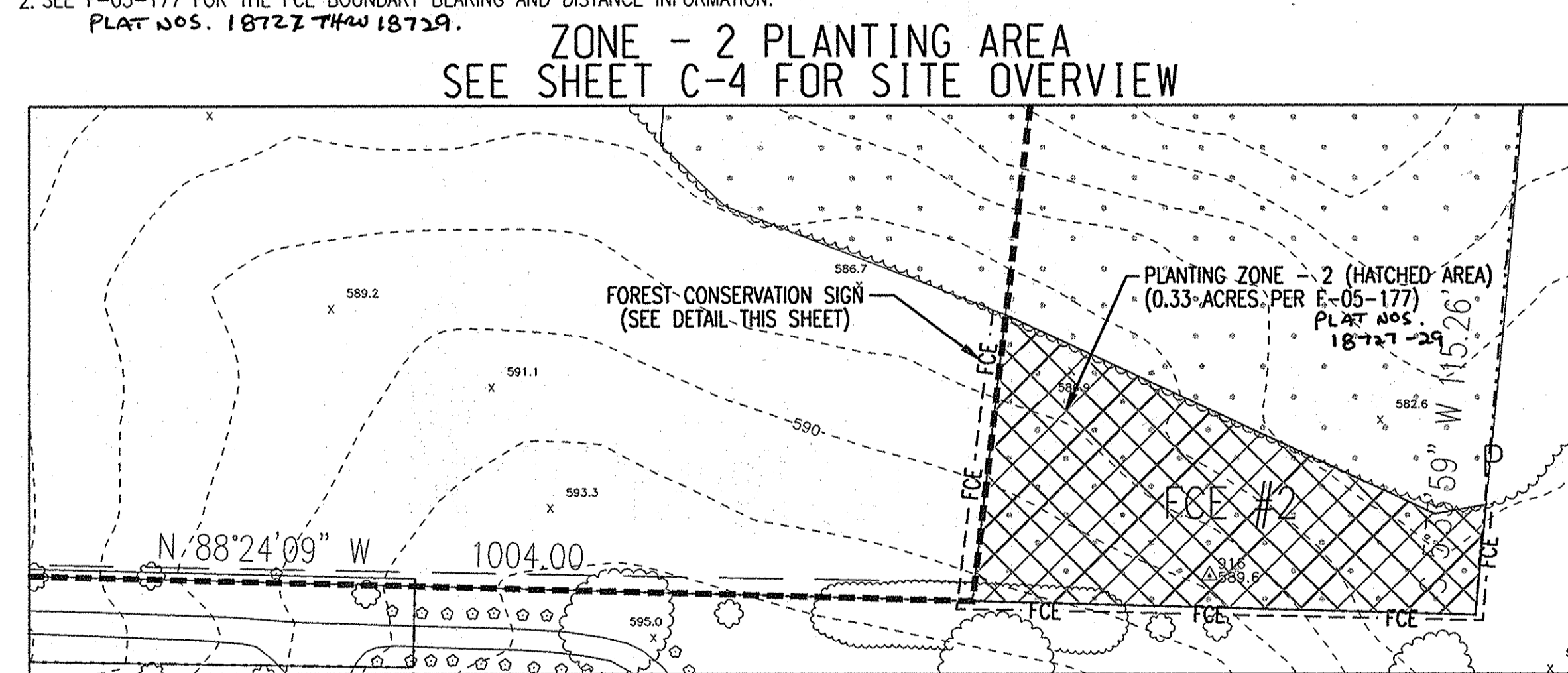
### PLANTING SCHEDULE

ZONE - 2      AREA = 14,348 s.f. (0.33 ACRES)

COMMON NAME	LATIN NAME	SIZE	STOCK	SPACING	QUANTITY
RED MAPLE	<i>Acer rubrum</i>	1" Cal.	CONTAINER	15' O.C.	22
SWEETGUM	<i>Liquidambar styraciflua</i>	1" Cal.	CONTAINER	15' O.C.	22
SYCAMORE	<i>Platanus occidentalis</i>	1" Cal.	CONTAINER	15' O.C.	22
<b>TOTAL</b>					<b>66</b>

- #### PLANTING NOTES
- PLANTING IS TO BE CARRIED OUT BY A LICENSED LANDSCAPER
  - WOODY PLANT STOCK SHALL BE INSPECTED AND APPROVED BY A LICENSED LANDSCAPER PRIOR TO INSTALLATION.
  - PLANTS SHALL BE INSTALLED IN GROUPS OF 3-5 INDIVIDUALS PER SPECIES IN A RANDOM NATURALIZED CLUSTER PATTERN.
  - ANY DAMAGE TO TREES OUTSIDE THE LOD WILL REQUIRE SERVICES OF A LICENSED ARBORIST TO BE PAID FOR BY THE CONTRACTOR RESPONSIBLE FOR THE DAMAGE. HEAVY EQUIPMENT SHALL NOT BE OPERATED OUTSIDE OF THE LOD.
  - THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE A 1-YEAR MINIMUM WARRANTY ON ALL WOODY PLANT STOCK.
  - PLANTS ARE TO BE WATERED AFTER INSTALLATION.
  - TEMPORARY ROAD REMOVAL AND WETLAND SEED MIX APPLICATION SHOULD BE SIGNIFICANTLY COMPLETE PRIOR TO PLANT INSTALLATION.
  - THE OPTIMAL SEASON FOR PLANT INSTALLATION WORK IS IN THE SPRING. PLANT INSTALLATION IS PROHIBITED DURING THE PERIOD OF NOVEMBER 1 THROUGH MARCH 15.

- #### FOREST CONSERVATION NOTES
- THE FOREST CONSERVATION OBLIGATION FOR THE PROPOSED DISTURBANCES ASSOCIATED WITH THE CONSTRUCTION OF THE 'SBR BUILDING' AND SURROUNDING GRADING LOCATED WITHIN PARCEL NO. 11 WAS PREVIOUSLY ADDRESSED UNDER SDP-00-69. THE FOREST CONSERVATION OBLIGATION FOR THE INSTALLATION OF THE PROPOSED SEWER LINE WITHIN PARCEL NO. 169 WAS ADDRESSED UNDER THIS SDP AS AN EXEMPTION FOR A CAPITAL IMPROVEMENT PROJECT CLEARING LESS THAN 40,000 SF OF FOREST AS PER APPENDIX O OF THE HOWARD COUNTY FOREST CONSERVATION MANUAL. ALL THE DISTURBANCES ASSOCIATED WITH THE INSTALLATION OF THE PRIVATE SEWER LINE AND SHARED SEPTIC SYSTEM LOCATED WITHIN PARCELS 'A' AND 'B' OF THE MUSGROVE FARM SUBDIVISION WERE PREVIOUSLY ADDRESSED UNDER F-03-128. THIS PLAN ALSO ABANDONS 0.10 ACRE OF EXISTING FOREST CONSERVATION EASEMENT NO. 2 RECORDED PER PLAT NO. 16008 FOR MUSGROVE FARM FOR THE INSTALLATION OF ACCESS ROADS SERVING THE TWO EXISTING WELLS FOR THE GLENELG HIGH SCHOOL AND REPLACES THE ABANDONED FCE BY ADDING 0.33 ACRES OF REFORESTATION EASEMENT AREA ONTO FCE #2 ON THE MUSGROVE FARM, PRESERVATION PARCEL B.
  - SEE F-05-177 FOR THE FCE BOUNDARY BEARING AND DISTANCE INFORMATION.  
PLAT NOS. 18727 THRU 18729.



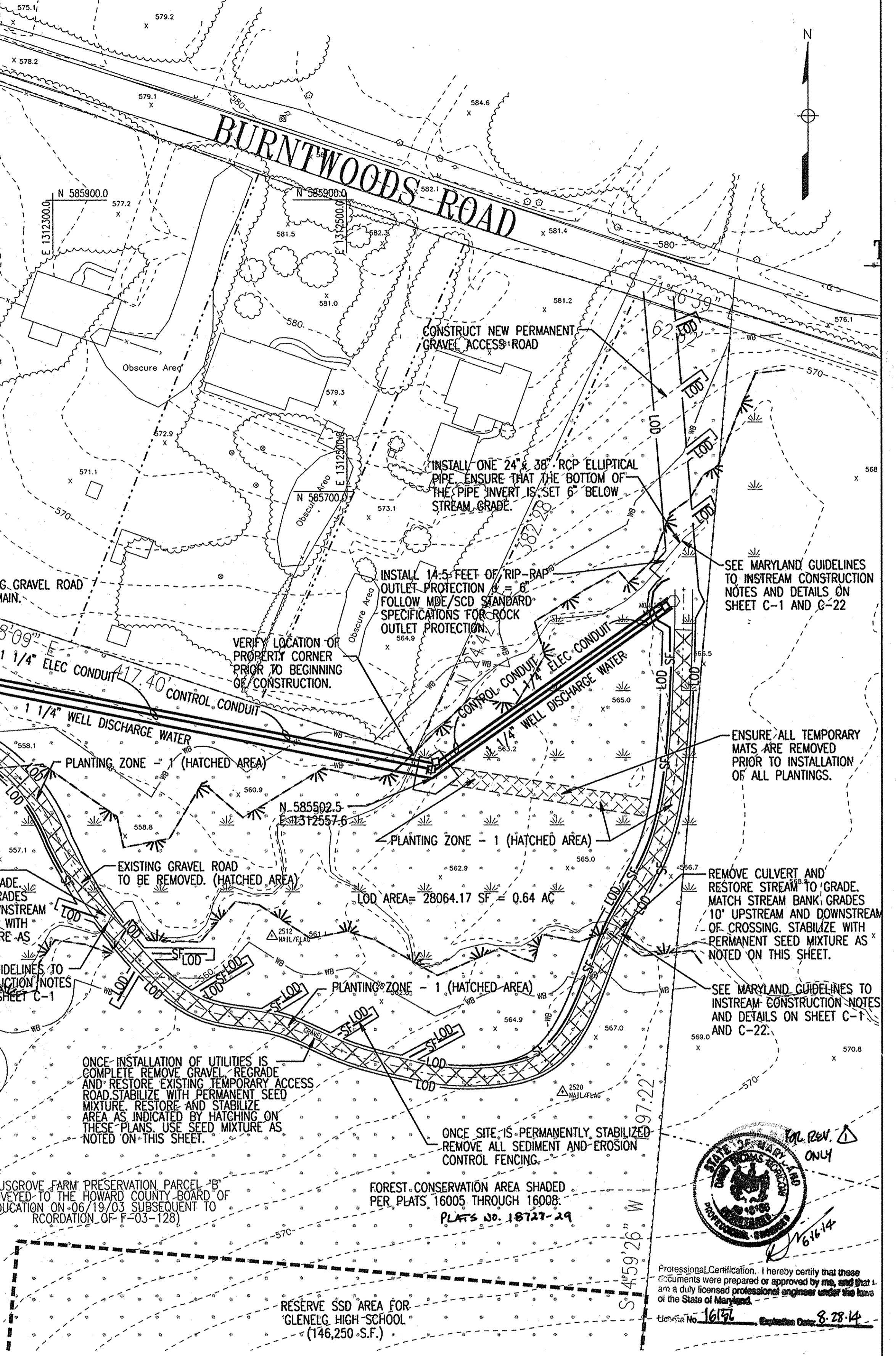
- #### NOTES:
- BOTTOM OF SIGN TO BE HIGHER THAN TOP OF TREE PROTECTION FENCE.
  - SIGNS TO BE PLACED 150' APART, ON AVERAGE.
  - ATTACHMENT OF SIGNS TO TREES IS PROHIBITED.



#### Forest Conservation Worksheet

Net Tract Area	A = 32.15
Total Tract Area	B = 32.15
Disturbance (flooding and previously disturbed area per SDP 70-46, SDP 81-194, SDP 85-105, SDP 00-69)	C = 0.00
Land Use Category	D = 0.00
Existing Forest Cover	E = 0.00
Area of Forest Above Conservation Threshold	F = 0.00
Break Even Point	G = 0.00
Proposed Forest Clearing	H = 0.00
Total Area of Forest to be Cleared	I = 0.00
Total Area of Forest to be Retained	J = 0.00
Planting Requirements	K = 0.00
Reforestation for Clearing Above the Conservation Threshold	L = 0.00
Reforestation for Clearing Below the Conservation Threshold	M = 0.00
Credit for Reforestation above the Conservation Threshold	N = 0.00
Total Reforestation Required	O = 0.00
Total Reforestation Provided	P = 0.00
Total Planting Requirement	Q = 0.00
Total Planting Provided	R = 0.00

Signature: *Kelly Moore*  
MDNR Certified Professional



### PERMANENT SEEDING SUMMARY

MIX	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATES	SEEDING DEPTHS	FERTILIZER RATE (10-20-20)			LIME RATE
					N	P205	K20	
	ANNUAL RYEGRASS (LOLIUM MULTIFLORUM) 33%	50	2/1-4/30 8/15-11/15	1/4"-1/2"	90 LB/AC (2.0 LB/1000 SF)	175 LB/AC (4 LB/1000 SF)	175 LB/AC (4 LB/1000 SF)	2 TONS/AC (100 LB/1000 SF)
WET MIX	MILLET (SETARIA ITALICA) BARLEY (HORDEUM SP.) OATS (UNIOIA SP.) RYE (SECALE CEREALE)	34% 33%	2/1-4/30 8/15-10/15	1" 1/2"-1"				

APPROVED: FOR PRIVATE WATER & SEWERAGE SYSTEMS,  
HOWARD COUNTY HEALTH DEPARTMENT

*Robert W. Wain*  
County Health Officer  
Date: 12/15/06

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*John P. ...*  
Chief, Development Engineering Division  
Date: 12/28/06

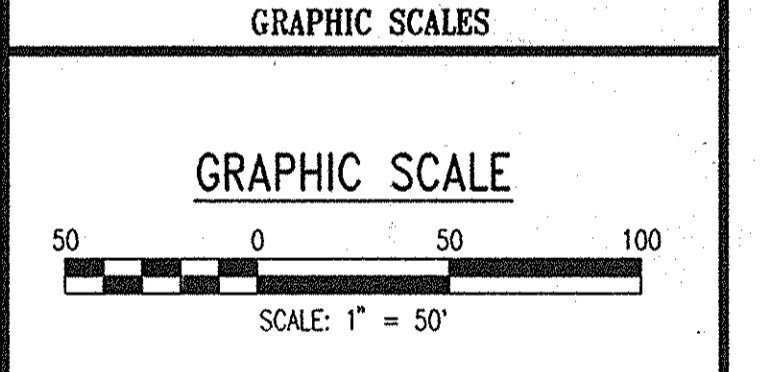
*Kate ...*  
Chief, Division of Land Development  
Date: 12/28/06

*...*  
Director  
Date: 12/28/06

#### REVISIONS

MDE W&S PERMIT SET	4/05/06
SDP FINAL SUBMISSION	4/20/06
REVISIONED NEW SHEETS	6-16-14

## GLENELG HIGH SCHOOL HOWARD COUNTY MD TREATMENT SYSTEM DESIGN



## WRA

WHITMAN, REQUARDT AND ASSOCIATES, LLP  
801 SOUTH CAROLINE STREET  
BALTIMORE, MARYLAND 21231  
410 - 235 - 3450

### REVISIONED SITE DEVELOPMENT PLAN

## FOREST CONSERVATION AND WETLANDS RESTORATION PLAN

DRAWING NO. **C-23**  
SHEET 24 OF 24

SCALE: AS NOTED  
DES: CMD    CHECK: AUO    DATE: 04/20/06



# GLENELG HIGH SCHOOL FIELD IMPROVEMENTS

## INDEX OF DRAWINGS

- 25 (1) TITLE SHEET
- 26 (2) EXISTING PLAN/DEMOLITION PLAN
- 27 (3) STAKE-OUT PLAN
- 28 (4) SITE PLAN AND EROSION & SEDIMENT CONTROL PLAN
- 29 (5) SEPTIC DRAIN FIELD IMPLEMENTATION PLAN
- 30-34 (6-10) SITE DETAILS I, II, III, IV & V
- 35 (11) PIPE PROFILES
- 36 (12) EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

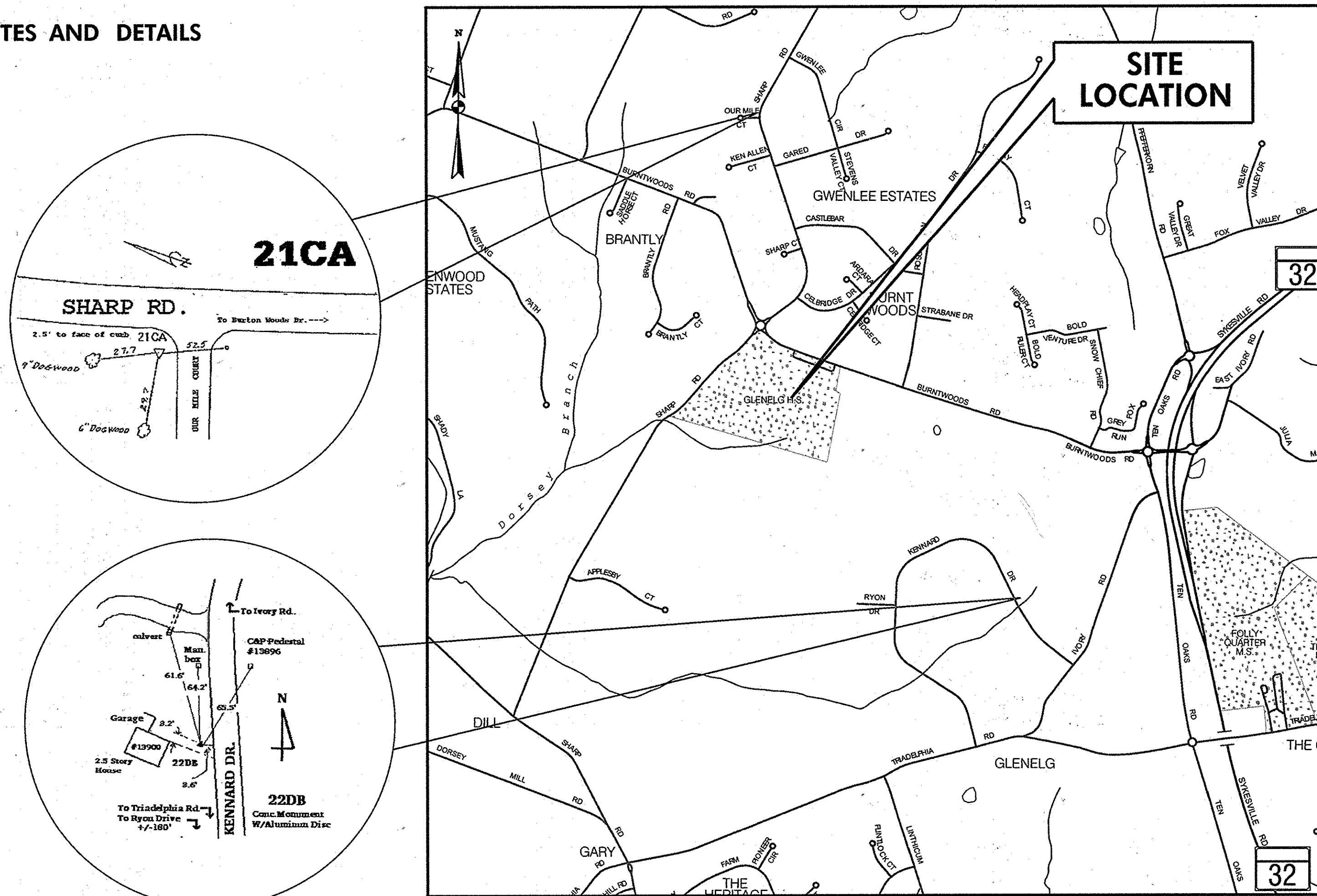
## 4th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

## GENERAL NOTES

1. THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 HOWARD COUNTY PUBLIC SCHOOLS AT 410-313-6600 AND MISS UTILITY AT 1-800-251-7777 AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK
2. THE HORIZONTAL AND VERTICAL CONTROL FOR THESE PLANS ARE BASED ON THE MARYLAND STATE SYSTEM OF PLANE COORDINATES AS ESTABLISHED FROM THE FOLLOWING HOWARD COUNTY CONTROL POINTS:  
21CA & 22DB  
THE SYSTEM OF COORDINATES USED IS BASED ON THE FOLLOWING DATUMS AND PROJECTIONS:  
HORIZONTAL: NAD83/07  
VERTICAL: NAVD88
3. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY.
4. ALL WORK SHALL COMPLY WITH ALL APPLICABLE PROVISIONS OF THE 2011 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, ISSUED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT AND THE NATURAL RESOURCES CONSERVATION SERVICE.
5. TOPOGRAPHIC SURVEYS WERE PERFORMED BY URS CORPORATION IN MARCH 2012.
6. THE PROPERTY LINES AND EASEMENT LINES ARE APPROXIMATE.
7. SHOULD THE CONTRACTOR DISCOVER DISCREPANCIES BETWEEN THE PLANS AND THE FIELD CONDITIONS, THE CONTRACTOR IS TO BE NOTIFIED IMMEDIATELY TO RESOLVE THE SITUATION. SHOULD THE CONTRACTOR MAKE FIELD CORRECTIONS OR ADJUSTMENTS WITHOUT NOTIFYING THE ENGINEER, THEN THE CONTRACTOR ASSUMES ALL RESPONSIBILITY FOR THOSE CHANGES.
8. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHOD, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
9. APPROXIMATE UTILITIES ARE SHOWN FROM AVAILABLE RECORDS AND/OR FIELD RECONNAISSANCE. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.

**UTILITY CONTACTS:**

BGE (ELECTRIC): (410)-597-7920  
 BGE (GAS): (410)-291-4844  
 VERIZON: (410)-224-9235  
 COMCAST: (301)-630-7094



**LOCATION MAP  
HOWARD COUNTY**

1000 0 1000 2000  
SCALE: 1" = 1000'

TRAVERSE POINTS AND BENCHMARK INFORMATION			
POINT NO.	NORTHING	EASTING	ELEVATION
URS1	585,818.4528	1,311,077.6613	564.50
URS2	585,458.3594	1,311,464.0812	561.99

**DEVELOPER'S CERTIFICATION**

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

*A. P. Deluca*      5-30-14  
SIGNATURE OF DEVELOPER      DATE

---

**ENGINEER'S CERTIFICATION**

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

*David T. Moricani*      5-30-14  
URS CORPORATION      DATE  
4 NORTH PARK DRIVE  
HUNT VALLEY, MD 21030

---

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

*John R. Robertson* / *AS*      5/30/14  
HOWARD SOIL CONSERVATION DISTRICT      DATE

**PROFESSIONAL CERTIFICATION**

"I HEREBY CERTIFY THAT DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16156, EXPIRATION DATE: 8/28/2014."

**APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING**

*Frank A. Caylor*      2/2/14  
DIRECTOR      DATE

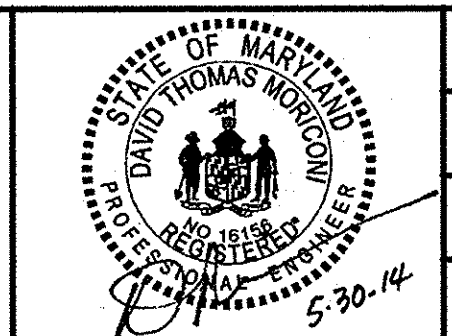
*Keith Schell*      7-10-14  
CHIEF, DIVISION OF LAND DEVELOPMENT      DATE

*David Schell*      6-20-14  
CHIEF, DEVELOPMENT ENGINEERING DIVISION      DATE

**HOWARD COUNTY PUBLIC SCHOOL SYSTEM**  
HOWARD COUNTY, MARYLAND

*John R. Robertson*      5/30/14      *Gregory Connor*      6-20-14  
DIRECTOR, HOWARD COUNTY RECREATION AND PARKS      DATE      ASSISTANT MANAGER, GROUNDS SERVICES, HOWARD COUNTY PUBLIC SCHOOL SYSTEM      DATE

PREPARED BY  
**URS**  
4 NORTH PARK DRIVE  
HUNT VALLEY, MARYLAND  
TEL: (410) 785-7220



DES: RLL					
DRN: CDF					
CHK: DTM					
DATE: 05/14	DTM	NEW SHEET		6-16-14	
BY NO.		REVISION		DATE	

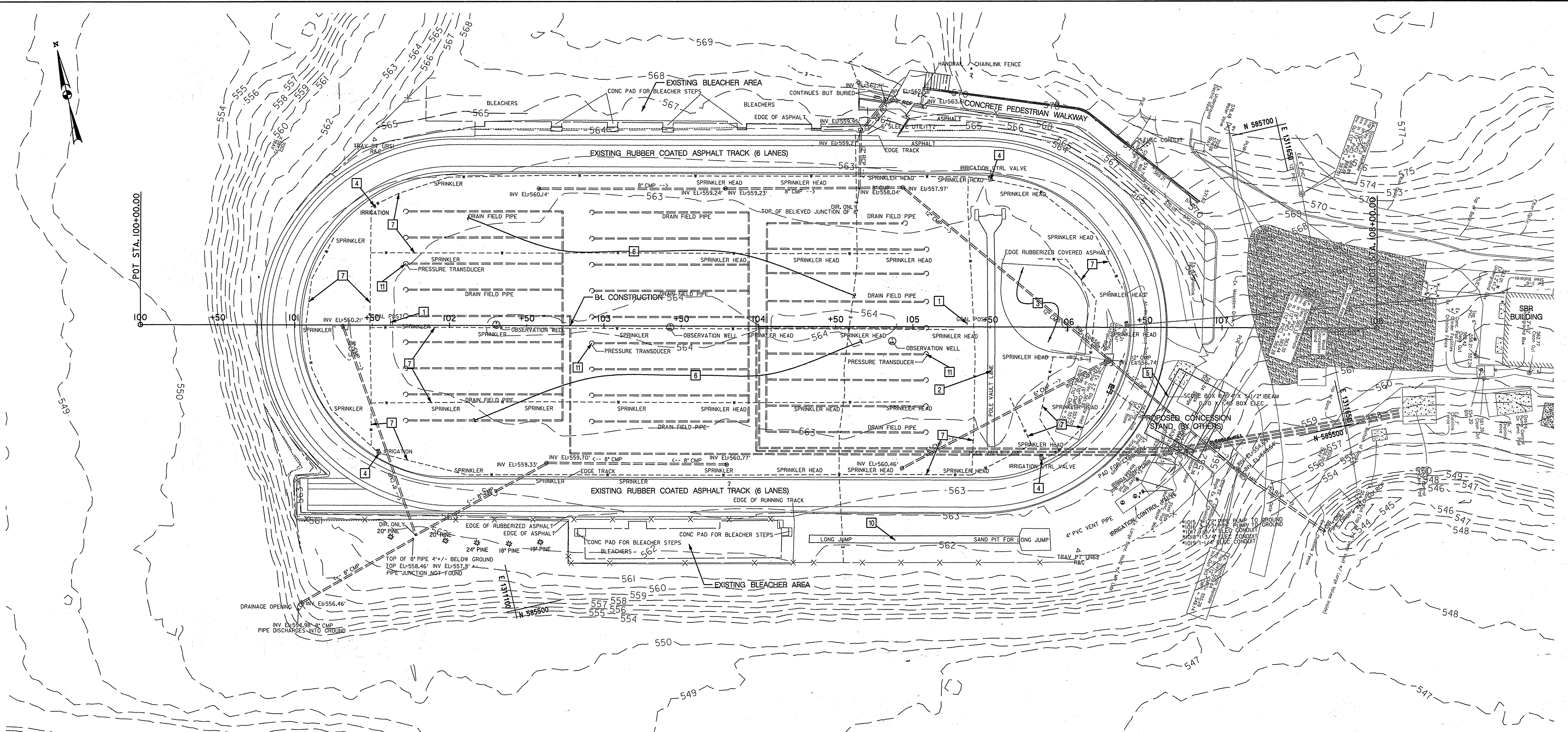
REVISED SITE DEVELOPMENT PLAN  
**TITLE SHEET**

SCALE MAP NO. N/A      BLOCK NO. \_\_\_\_\_

**GLENELG HIGH SCHOOL  
FIELD IMPROVEMENTS**

4TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

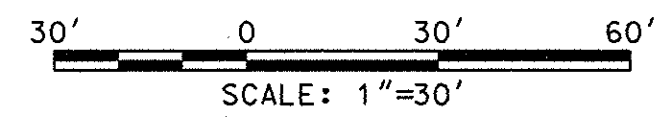
SCALE  
N.T.S.  
SHEET  
29 OF 36



- DEMOLITION NOTES:**
- 1 REMOVE AND SALVAGE EXISTING GOAL POST TO HOWARD COUNTY PUBLIC SCHOOLS (HCPSS)
  - 2 REMOVE EXISTING RUBBER COVERED ASPHALT TRACK, SAND JUMP PIT AND UNDERDRAIN
  - 3 REMOVE EXISTING RUBBER COATED ASPHALT HIGH JUMP AREA
  - 4 REMOVE AND SALVAGE EXISTING IRRIGATION CONTROL VALVE EQUIPMENT TO HCPSS, IF REMAINING
  - 5 EXISTING SCOREBOARD TO REMAIN
  - 6 THERE WILL BE NO STOCKPILING OF EXISTING TOPSOIL OR OTHER EXCAVATED MATERIAL ONSITE. THE CONTRACTOR SHALL REMOVE ALL TOPSOIL TO A SUITABLE LOCATION DETERMINED BY HOWARD COUNTY
  - 7 REMOVE EXISTING IRRIGATION LINES AND SPRINKLER HEADS, COORDINATE WITH 4
  - 8 EXISTING PVC MAIN WATER LINE TO REMAIN. THE LIMITS OF WHERE THE WATER LINE WILL REMAIN SHALL BE COORDINATED WITH HCPSS.
  - 9 REMOVE EXISTING DRAINAGE STRUCTURE, BULKHEAD AND ABANDON PIPE USING FLOWABLE FILL
  - 10 EXISTING RUBBER COATED ASPHALT TRACK, SAND JUMP PIT, AND UNDERDRAIN TO REMAIN.
  - 11 EXISTING PRESSURE TRANSDUCERS THAT MAY BE PRESENT SHALL BE REMOVED AND SALVAGED TO HCPSS.

**GENERAL NOTE:**  
REFER TO SHEET 4 FOR ANY DRAINAGE DEMOLITION REQUIREMENTS.

- LEGEND**
- 400 --- EXISTING CONTOUR
  - X X X EXISTING CHAIN LINK FENCE
  - - - - - EXISTING UNDERGROUND ELECTRIC
  - - - - - EXISTING WATER FOR IRRIGATION
  - ===== EXISTING RCP



**APPROVED:** HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*Mark A. Gorkin* 2/10/14  
DIRECTOR DATE

*Victor C. ...* 7-10-14  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Chad ...* 6-20-14  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

**PROFESSIONAL CERTIFICATION**

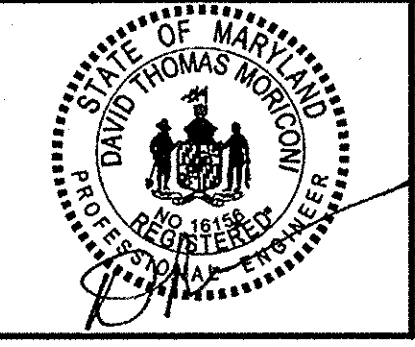
"I HEREBY CERTIFY THAT DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 16156. EXPIRATION DATE: 8/28/2014."

**HOWARD COUNTY PUBLIC SCHOOL SYSTEM**  
HOWARD COUNTY, MARYLAND

*John R. ...* 6-18-14  
DIRECTOR, HOWARD COUNTY RECREATION AND PARKS DATE

*Angela ...* 6-18-14  
ASSISTANT MANAGER, GROUNDS SERVICES, HOWARD COUNTY PUBLIC SCHOOL SYSTEM DATE

PREPARED BY  
**URS**  
4 NORTH PARK DRIVE  
HUNT VALLEY, MARYLAND  
TEL: (410) 785-7220



DES:	RLI				
DRN:	CDF				
CHK:	DTM				
DATE:	05/14	DTM	1	NEW SHEET	6/14
		BY	NO.	REVISION	DATE

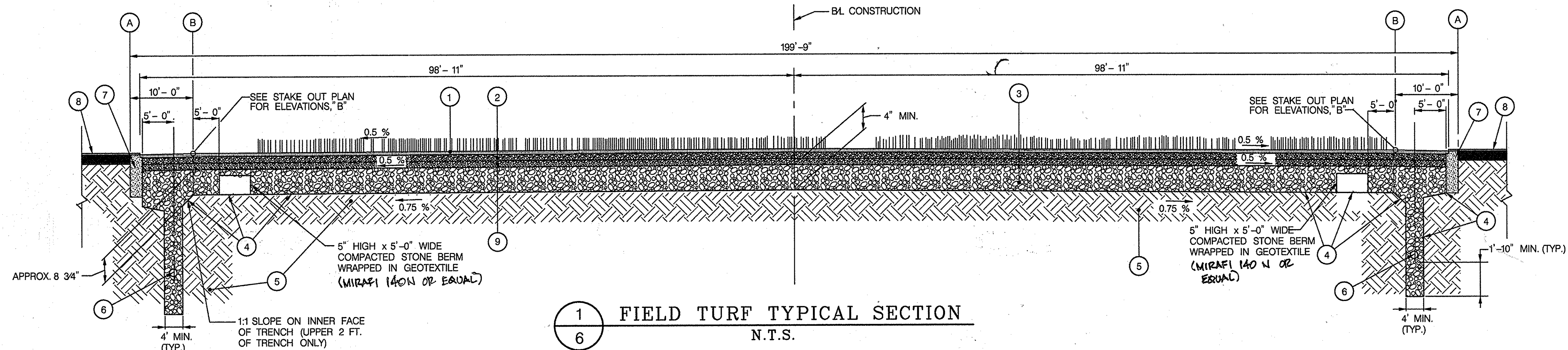
REVISED SITE DEVELOPMENT PLAN  
**EXISTING PLAN / DEMOLITION PLAN**

SCALE MAP NO. N/A BLOCK NO.

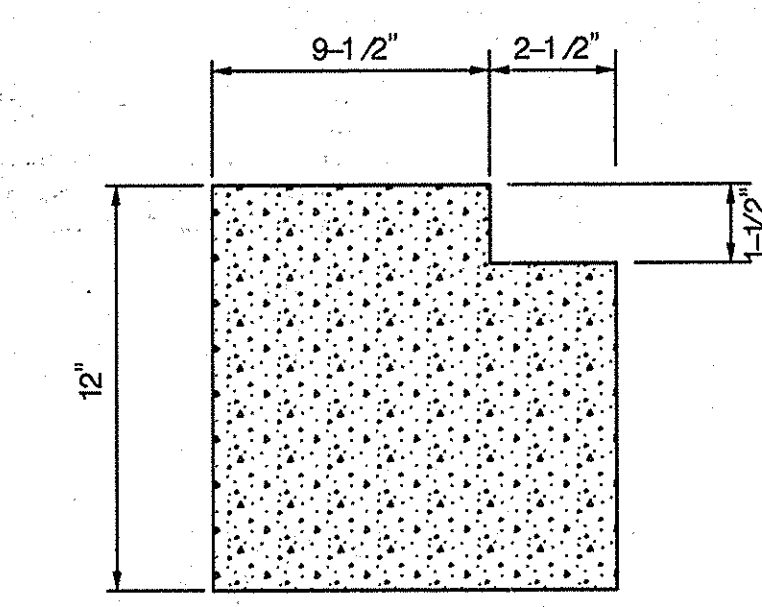
REVISED SITE DEVELOPMENT PLAN  
**GLENELG HIGH SCHOOL FIELD IMPROVEMENTS**  
4TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE  
1" = 30'

SHEET  
26 OF 36

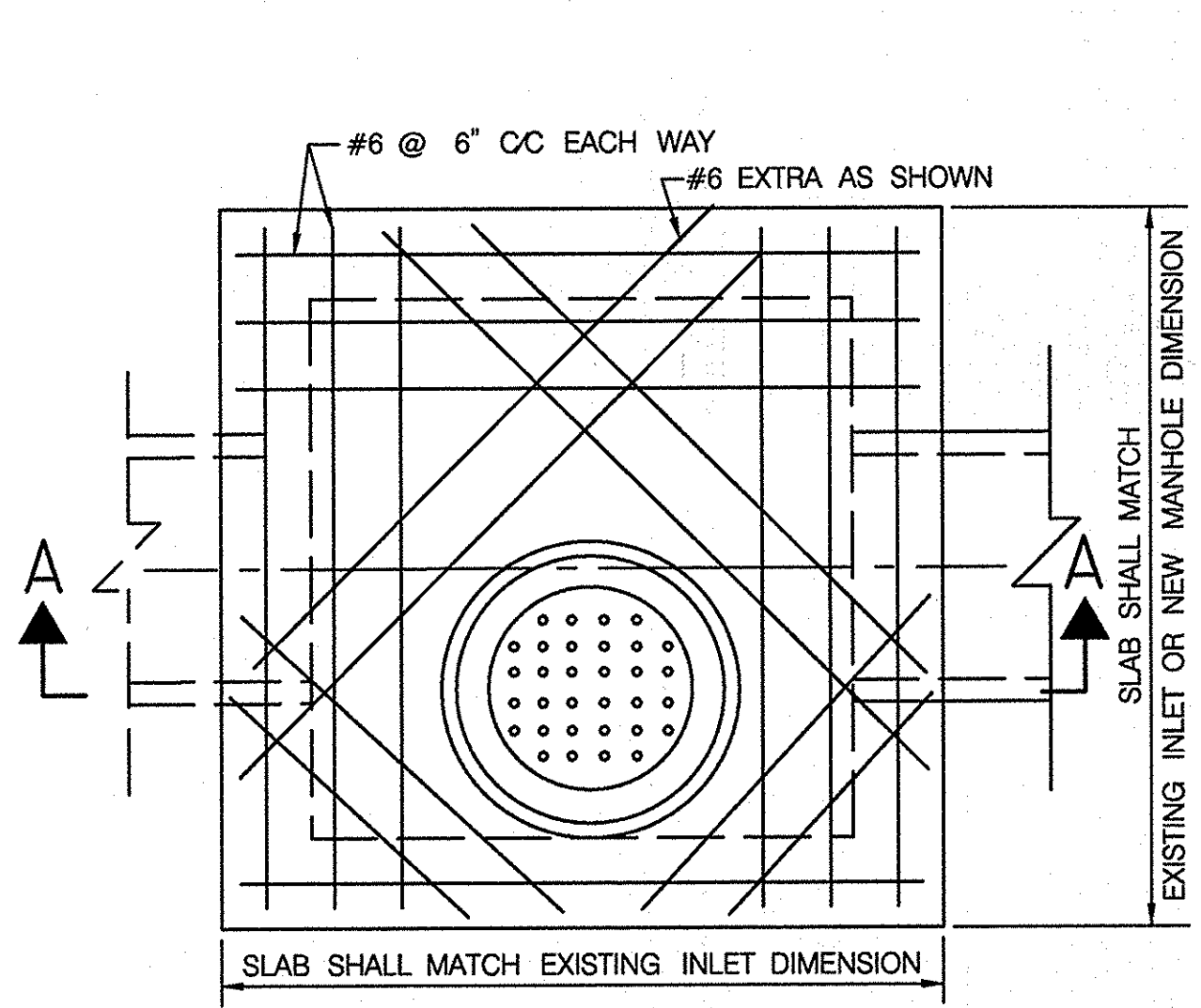


- LEGEND**
- 1 2 - 12" PILE FIELD TURF WITH 1 - 3/4" OF INFILL
  - 2 1" OF FINISHING STONE AS PER SPECIFICATIONS, COMPACTED AND GRADED TO WITHIN 0 - 1/2" OF DESIGN GRADE AND WITHIN 0 - 1/4" IN 10 FEET (USE LASER GUIDED GRADER)
  - 3 VARIABLE DEPTH (MIN. 4" @ CENTER) #2 BASE STONE
  - 4 GEOTEXTILE (MIRAFI 140N OR EQUAL) LINING THE TRENCH AND UNDER THE BASE
  - 5 NATURAL SOIL COMPACTED TO 95% PROCTOR
  - 6 10" DIAMETER PERFORATED COLLECTOR PIPE SLOPE AT 0.5 %
  - 7 CONCRETE CURB (SEE DETAILS THIS SHEET)
  - 8 EXISTING RUBBER COATED TRACK
  - 9 1" OF #8 STONE
  - 10 RUBBER COATING ON TRACK
  - 11 FULL DEPTH SAWCUT AT CENTER OF PAINT LINE
  - 12 CENTER OF WHITE PAINT LINE - MATCH EXISTING

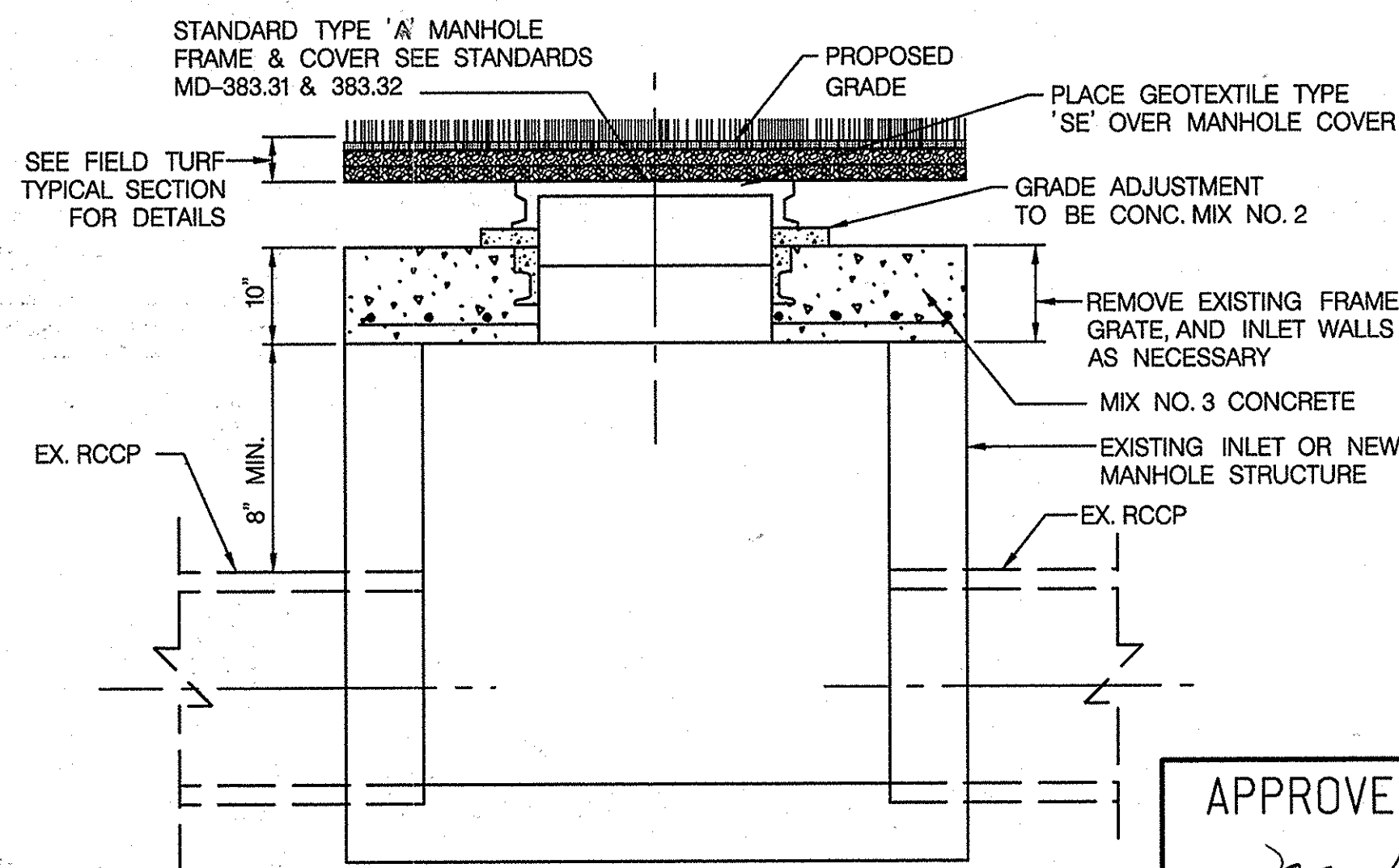


2 NAILER NOTCH  
6 N.T.S.

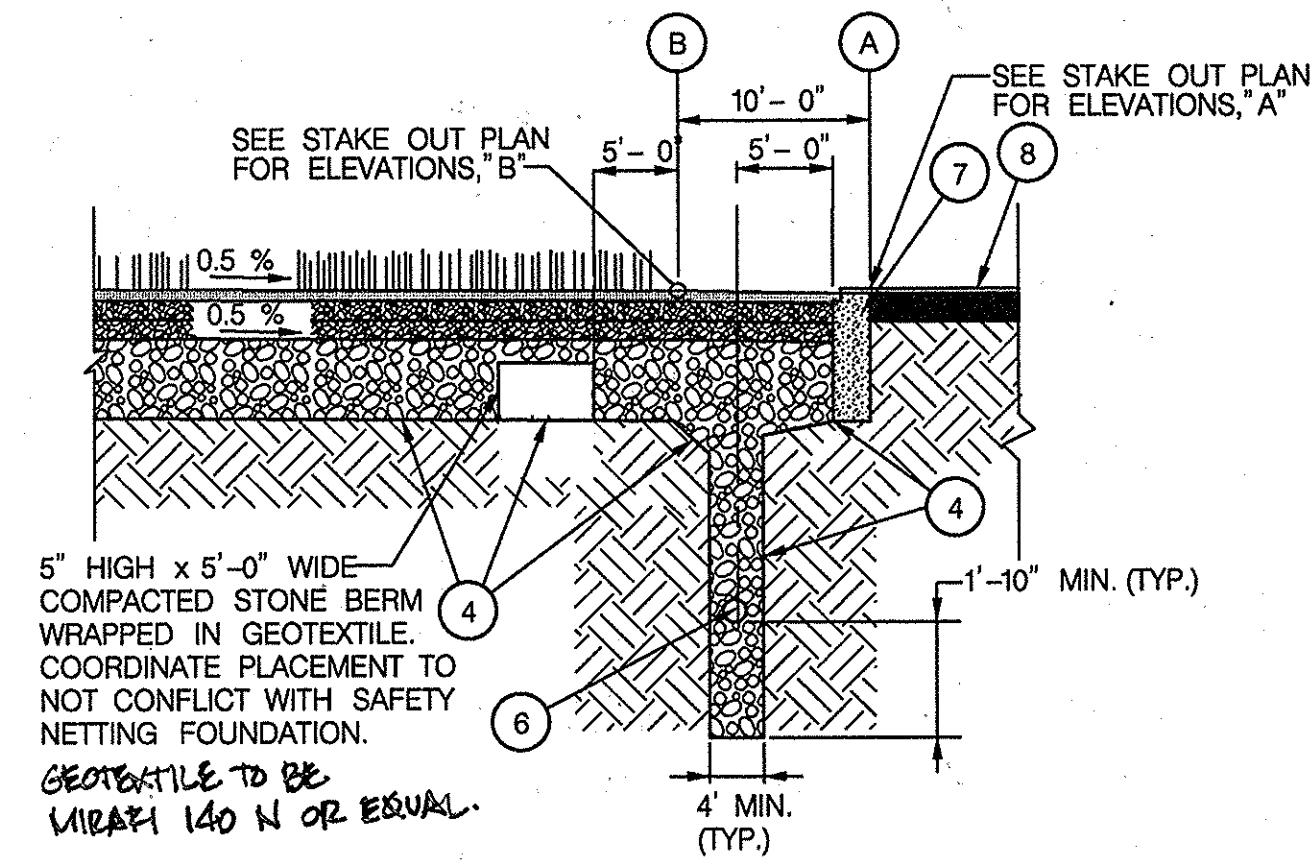
- NOTES**
1. CUT AN OPENING IN THE EXISTING CONVERTED MANHOLE TO ACCOMMODATE THE NEW PIPE. BRICK AND GROUT (NON-SHRINK) EXISTING OPENINGS AND GROUT NEW PIPE.
  2. SET FRAME AND COVER TO MEET PROPOSED FINISHED GRADE.
  3. SEE MARYLAND STANDARD MD-383.31 & 383.32 FOR THE STANDARD TYPE 'A' MANHOLE FRAME AND COVER.
  4. MANHOLE FRAME AND COVER TO BE PLACED AS SHOWN.



GRATE INLET TO MANHOLE CONVERSION  
NOT TO SCALE



SECTION A-A



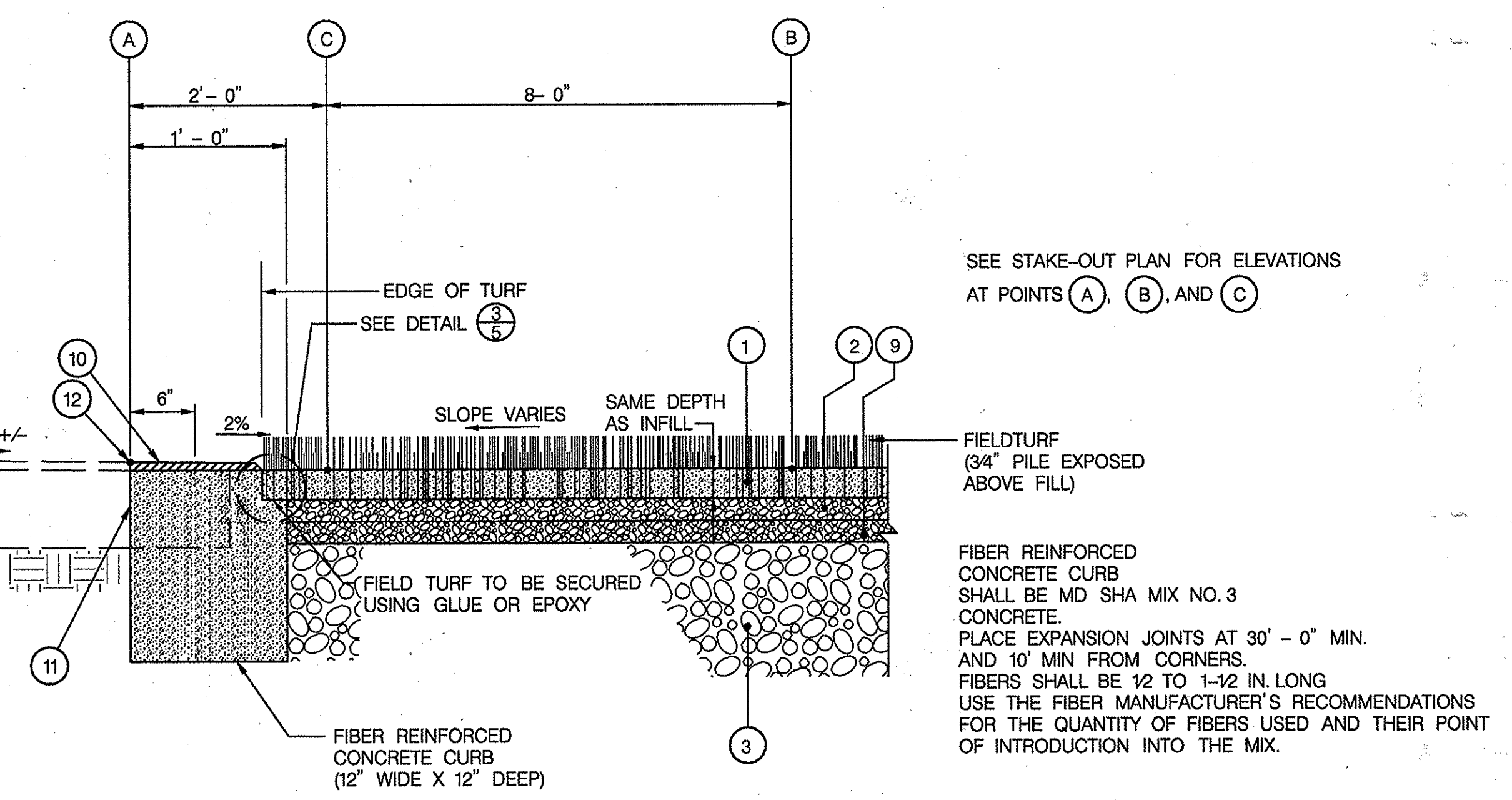
3 "D" SEMI-CIRCLE  
6 FIELD TURF TYPICAL SECTION  
N.T.S.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*Mark McLaughlin* 7/10/14  
DIRECTOR DATE

*Verd Steinhilber* 7-10-14  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*David Black* 6-20-14  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



4 CONCRETE CURB EDGE  
6 N.T.S.

PROFESSIONAL CERTIFICATION

"I HEREBY CERTIFY THAT DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 16156 EXPIRATION DATE: 8/28/2014."

HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
HOWARD COUNTY, MARYLAND

*John R. Bynel* 6-18-14  
DIRECTOR, HOWARD COUNTY RECREATION AND PARKS DATE

*James C. ...*  
ASSISTANT MANAGER, GROUNDS SERVICES, HOWARD COUNTY PUBLIC SCHOOL SYSTEM DATE

PREPARED BY  
**URS**  
4 NORTH PARK DRIVE  
HUNT VALLEY, MARYLAND  
TEL: (410) 785-7220

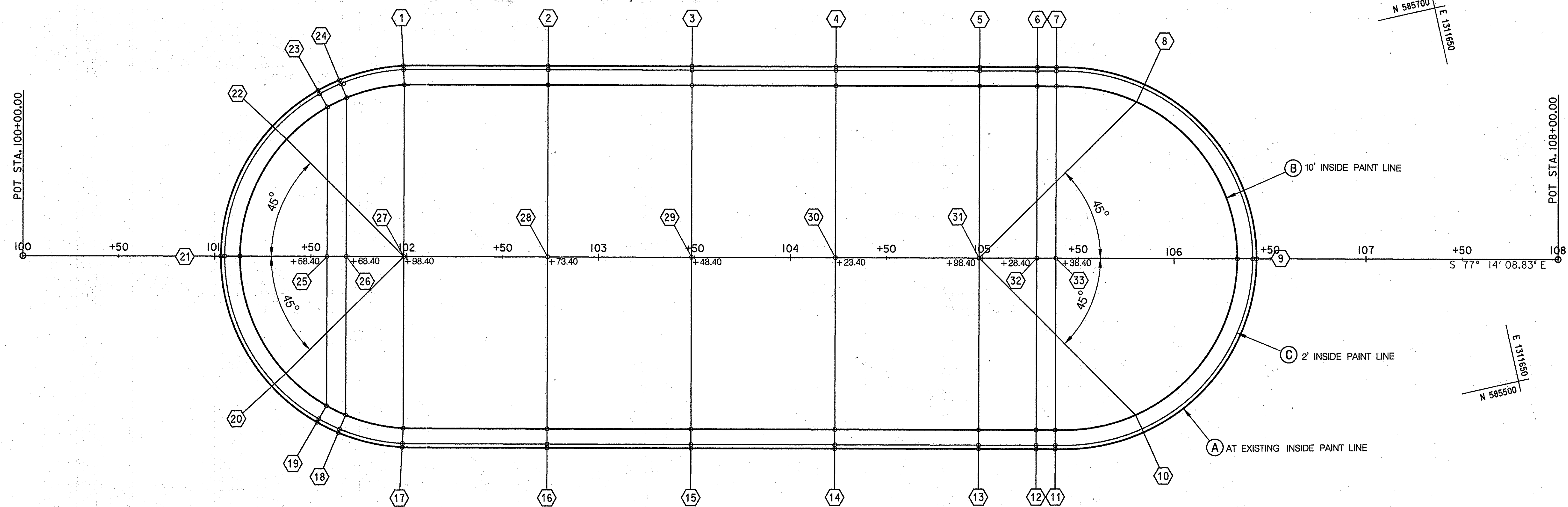
DES: RLL  
DRN: CDF  
CHK: DTM  
DATE: 05/14

DTM	1	NEW SHEET	6/14
BY	NO.	REVISION	DATE

REVISED SITE DEVELOPMENT PLAN  
SITE DETAILS I  
SCALE MAP NO. N/A BLOCK NO.

REVISED SITE DEVELOPMENT PLAN  
GLENELG HIGH SCHOOL  
FIELD IMPROVEMENTS  
4TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 30 OF 36



POINT	NORTHING	EASTING	ELEVATION
(1A)	585,787.8475	1,311,118.7769	563.10
(1B)	585,777.9935	1,311,117.0746	563.33
(1C)	585,785.8767	1,311,118.4365	563.06
(2A)	585,771.2931	1,311,192.4571	562.80
(2B)	585,761.5402	1,311,190.2477	563.33
(2C)	585,769.3425	1,311,192.0153	562.76
(3A)	585,754.7226	1,311,265.6037	562.76
(3B)	585,744.9697	1,311,263.3943	563.33
(3C)	585,752.7720	1,311,265.1618	562.72
(4A)	585,738.1522	1,311,338.7503	562.80
(4B)	585,728.3993	1,311,336.5409	563.33
(4C)	585,736.2016	1,311,338.3084	562.76
(5A)	585,721.5817	1,311,411.8968	562.98
(5B)	585,711.8288	1,311,409.6874	563.33
(5C)	585,719.6311	1,311,411.4550	562.94
(6A)	585,714.9535	1,311,441.1555	562.97
(6B)	585,705.2007	1,311,438.9461	563.33
(6C)	585,713.0030	1,311,440.7136	562.93
(7A)	585,712.7441	1,311,450.9083	562.97
(7B)	585,702.9913	1,311,448.6989	563.33
(7C)	585,710.7936	1,311,450.4665	562.93
(8A)	585,693.8640	1,311,493.7768	562.90
(8B)	585,685.8979	1,311,487.7318	563.10
(8C)	585,692.2708	1,311,492.5678	562.86
(9A)	585,592.2189	1,311,530.8162	562.80
(9B)	585,594.3921	1,311,521.2232	562.98
(9C)	585,592.6608	1,311,528.8656	562.76
(10A)	585,516.4598	1,311,453.5880	562.87
(10B)	585,526.2533	1,311,451.5663	563.10
(10C)	585,518.4185	1,311,453.1837	562.83
(11A)	585,517.8974	1,311,406.7682	562.89
(11B)	585,527.6503	1,311,408.9776	563.33
(11C)	585,519.8480	1,311,407.2101	562.85
(12A)	585,520.1068	1,311,397.0153	562.89
(12B)	585,529.8597	1,311,399.2247	563.33
(12C)	585,522.0574	1,311,397.4572	562.85
(13A)	585,526.7350	1,311,367.7567	562.90
(13B)	585,536.4879	1,311,369.9661	563.33
(13C)	585,528.6856	1,311,368.1986	562.86

POINT	NORTHING	EASTING	ELEVATION
(14)	585,543.3054	1,311,294.6101	562.74
(14B)	585,553.0583	1,311,296.8195	563.33
(14C)	585,545.2560	1,311,295.0520	562.70
(15A)	585,559.8759	1,311,221.4636	562.66
(15B)	585,569.6288	1,311,223.6730	563.33
(15C)	585,561.8265	1,311,221.9055	562.62
(16A)	585,576.4464	1,311,148.3170	562.76
(16B)	585,586.1992	1,311,150.5264	563.33
(16C)	585,578.3969	1,311,148.7589	562.72
(17A)	585,593.2612	1,311,074.6958	562.85
(17B)	585,602.8869	1,311,077.4064	563.33
(17C)	585,595.1864	1,311,075.2379	562.81
(18A)	585,608.0235	1,311,043.8580	562.85
(18B)	585,616.1713	1,311,049.6557	563.12
(18C)	585,609.6531	1,311,045.0175	562.81
(19A)	585,615.8175	1,311,034.2296	562.86
(19B)	585,623.1850	1,311,040.9911	563.04
(19C)	585,617.2910	1,311,035.5819	562.82
(20A)	585,639.2547	1,311,015.3866	562.89
(20B)	585,644.2760	1,311,024.0345	562.92
(20C)	585,640.2589	1,311,017.1162	562.85
(21A)	585,711.4836	1,311,004.3489	562.90
(21B)	585,709.2742	1,311,014.1018	562.98
(21C)	585,711.0417	1,311,006.2955	562.86
(22A)	585,771.9042	1,311,045.4367	562.84
(22B)	585,763.6462	1,311,051.0763	562.91
(22C)	585,770.2526	1,311,046.5646	562.80
(23A)	585,784.9327	1,311,072.5405	562.93
(23B)	585,775.3705	1,311,075.4669	563.04
(23C)	585,783.0202	1,311,073.1258	562.89
(24A)	585,787.8163	1,311,084.5878	562.97
(24B)	585,777.9654	1,311,086.3081	563.12
(24C)	585,785.8461	1,311,084.9319	562.93
(25)	585,699.2777	1,311,058.2290	563.78
(26)	585,697.0683	1,311,067.9819	563.78
(27)	585,690.4402	1,311,097.2405	563.78
(28)	585,673.8697	1,311,170.3871	563.78
(29)	585,657.2993	1,311,243.5336	563.78
(30)	585,640.7288	1,311,316.6802	563.78
(31)	585,624.1584	1,311,389.8268	563.78
(32)	585,617.5305	1,311,419.0855	563.78
(33)	585,615.3208	1,311,428.8383	563.78

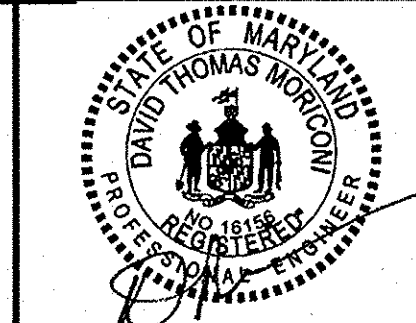
NOTES:  
 -FOR POLE VAULT STAKE OUT SEE SHEET 6  
 -FOR HIGH JUMP STAKE OUT SEE SHEET 8

PROFESSIONAL CERTIFICATION  
 "I HEREBY CERTIFY THAT DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 16156. EXPIRATION DATE: 8/28/2014."

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
 Director: *Mark D. Lough* DATE: 7/10/14  
 Chief, Division of Land Development: *Kurt Schumacher* DATE: 7-10-14  
 Chief, Development Engineering Division: *Chad Anderson* DATE: 6-20-14

HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
 HOWARD COUNTY, MARYLAND  
 Director: *John B. Spill* DATE: 6-19-14  
 Assistant Manager, Grounds Services: *James Conner* DATE: 6-19-14  
 HOWARD COUNTY PUBLIC SCHOOL SYSTEM

PREPARED BY  
**URS**  
 4 NORTH PARK DRIVE  
 HUNT VALLEY, MARYLAND  
 TEL: (410) 785-7229

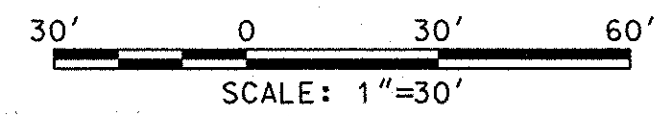


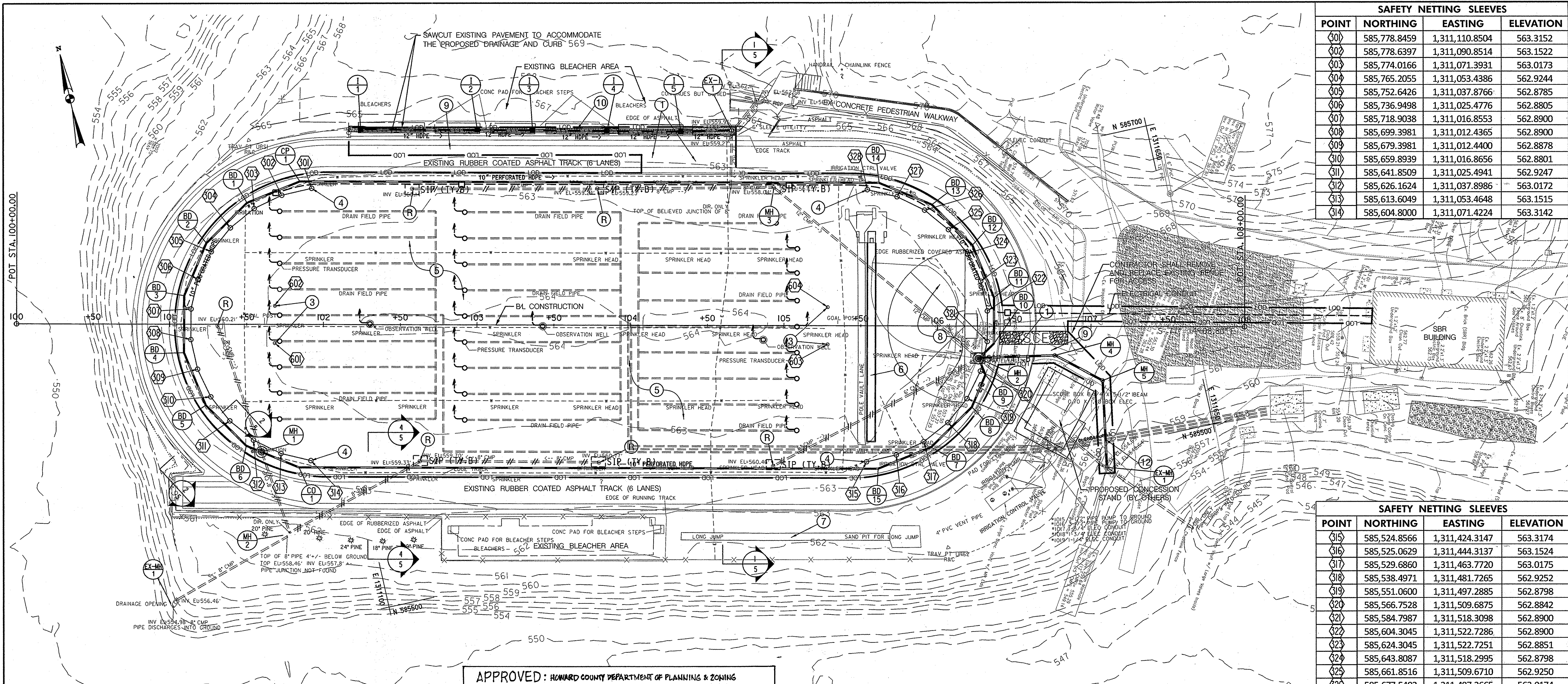
DES: RLL			
DRN: CDF			
CHK: DTM			
DATE: 05/14	DTM	1	NEW SHEET
	BY	NO.	REVISION
			6/14

REVISED SITE DEVELOPMENT PLAN  
**STAKE-OUT PLAN**  
 SCALE MAP NO. N/A BLOCK NO.

REVISED SITE DEVELOPMENT PLAN  
**GLENELG HIGH SCHOOL  
 FIELD IMPROVEMENTS**  
 4TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE  
 1" = 30'  
 SHEET  
 27 OF 36





SAFETY NETTING SLEEVES			
POINT	NORTHING	EASTING	ELEVATION
300	585,778.8459	1,311,110.8504	563.3152
302	585,778.6397	1,311,090.8514	563.1522
303	585,774.0166	1,311,071.3931	563.0173
304	585,765.2055	1,311,053.4386	562.9244
305	585,752.6426	1,311,037.8766	562.8785
306	585,736.9498	1,311,025.4776	562.8805
307	585,718.9038	1,311,016.8553	562.8900
308	585,699.3981	1,311,012.4365	562.8900
309	585,679.3981	1,311,012.4400	562.8878
310	585,659.8939	1,311,016.8656	562.8801
311	585,641.8509	1,311,025.4941	562.9247
312	585,626.1624	1,311,037.8986	563.0172
313	585,613.6049	1,311,053.4648	563.1515
314	585,604.8000	1,311,071.4224	563.3142

SAFETY NETTING SLEEVES			
POINT	NORTHING	EASTING	ELEVATION
315	585,524.8566	1,311,424.3147	563.3174
316	585,525.0629	1,311,444.3137	563.1524
317	585,529.6860	1,311,463.7720	563.0175
318	585,538.4971	1,311,481.7265	562.9252
319	585,551.0600	1,311,497.2885	562.8798
320	585,566.7528	1,311,509.6875	562.8842
321	585,584.7987	1,311,518.3098	562.8900
322	585,604.3045	1,311,522.7286	562.8900
323	585,624.3045	1,311,522.7251	562.8851
324	585,643.8087	1,311,518.2995	562.8798
325	585,661.8516	1,311,509.6710	562.9250
326	585,677.5402	1,311,497.2665	563.0174
327	585,690.0977	1,311,481.7003	563.1527
328	585,698.9025	1,311,463.7427	563.3177

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*Mark A. Coughlin* 7/2/14  
DIRECTOR DATE

*Verde Leavel* 7-10-14  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Chad Edmondson* 6-20-14  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Standard Stabilization Note

Following initial soil disturbance or re-disturbance, permanent or temporary stabilization must be completed within:

a.) Three (3) calendar days as to the surface of all perimeter dikes, swales, ditches, perimeter slopes, and all slopes steeper than 3 horizontal to 1 vertical (3:1); and

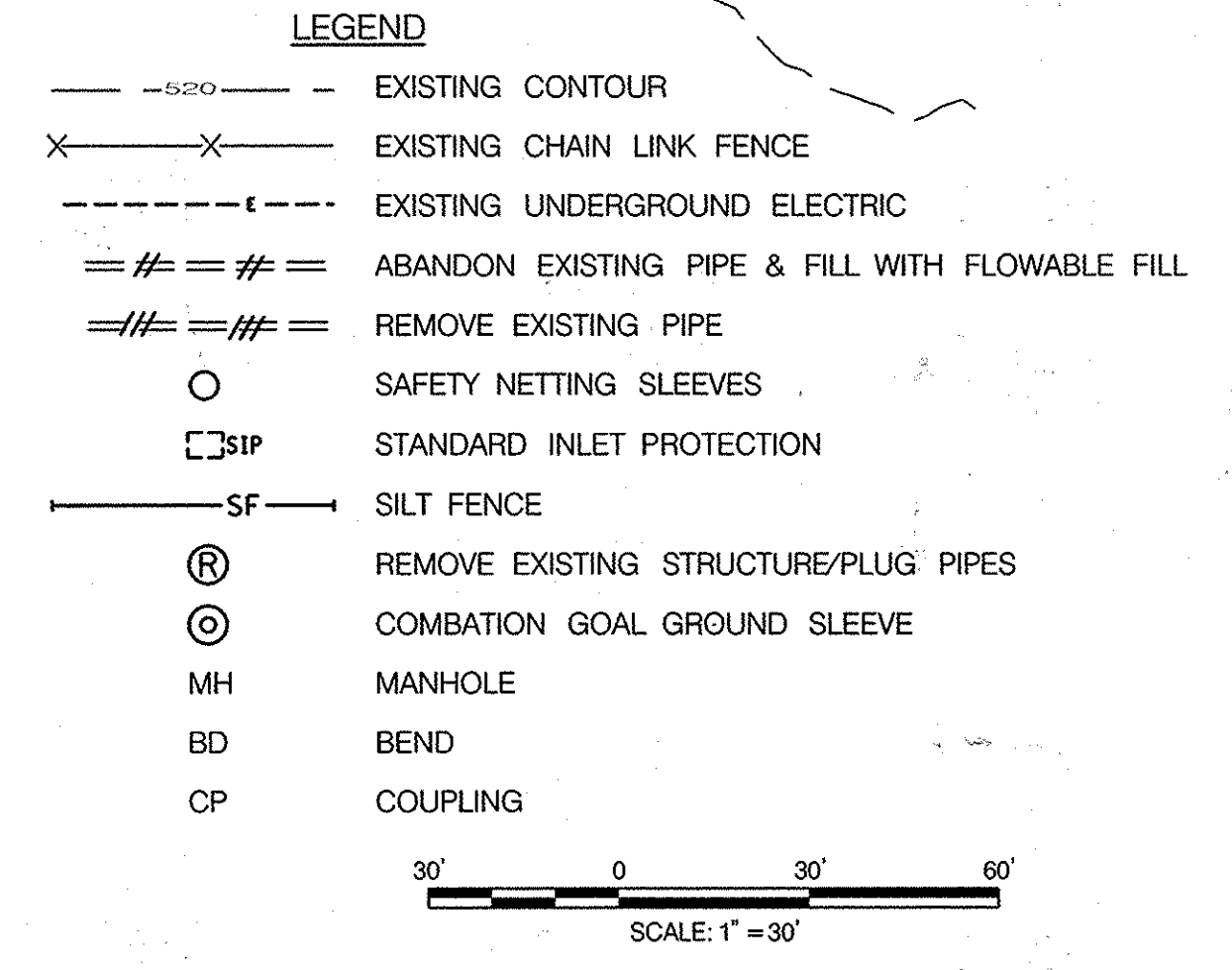
b.) Seven (7) calendar days as to all other disturbed or graded areas on the project site not under active grading.

PROFESSIONAL CERTIFICATION

"I HEREBY CERTIFY THAT DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16156, EXPIRATION DATE: 8/28/2014."

GOAL POSTS			
POINT	NORTHING	EASTING	ELEVATION
601	561,468.3349	1,356,917.8603	407.21
602	561,490.4327	1,356,907.6721	407.21
603	561,619.0651	1,357,244.7860	407.21
604	561,641.1629	1,357,234.5978	407.21

- NOTES:
- PLACE STEEL PLATES OR OTHER ACCEPTABLE MEASURES OVER EXISTING TRACK PRIOR TO CONSTRUCTION TO PREVENT DAMAGE TO THE EXISTING TRACK. ANY DAMAGES TO EXISTING TRACK SHALL BE REPAIRED AT NO COST TO HOWARD COUNTY.
  - INSTALL WATER REEL CONNECTION BOX (SEE DETAIL SHEET), CONNECT TO EXISTING 3" WATER LINE. FINAL PLACEMENT AS DIRECTED BY THE COUNTY.
  - HOWARD COUNTY TO FURNISH SOCCER/FOOTBALL GOAL POSTS. CONTRACTOR SHALL INSTALL THE GOAL POST FOUNDATIONS WITH SLEEVES.
  - SAFETY NETTING SLEEVES.
  - FIELD TURF, SEE DETAIL (1/5)
  - POLE VAULT (SEE DETAIL SHEET FOR STAKEOUT).
  - EXISTING LONG JUMP/TRIPLE EVENT TO REMAIN.
  - HIGH JUMP (SEE DETAIL SHEET FOR STAKEOUT).
  - THE CONTRACTOR SHALL REPAIR ANY DAMAGED ASPHALT OR CONCRETE AREAS AS A RESULT OF THE PROPOSED USE DURING CONSTRUCTION.
  - SEE SHEET 8 FOR DRAINAGE DETAILS FOR BLEACHER AREA.
  - EXISTING TO REMAIN.
  - CONTRACTOR SHALL FIELD VERIFY LOCATION OF SEPTIC SYSTEM PIPING PRIOR TO INSTALLATION. IF A CONFLICT EXISTS, THE CONTRACTOR SHALL NOTIFY THE COUNTY IMMEDIATELY FOR RESOLUTION.
  - SEE SHEET 5 FOR INSTRUCTIONS FOR REPLACEMENT OF THE CONDUIT FOR THE WIRING FOR THE PRESSURE TRANSDUCERS



DEVELOPER'S CERTIFICATION

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

*A. R. Robinson* 6/18/14  
SIGNATURE OF DEVELOPER DATE

ENGINEER'S CERTIFICATION

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

*David T. Moriconi* 5-30-14  
DAVID T. MORICONI DATE

URS CORPORATION  
4 NORTH PARK DRIVE  
HUNT VALLEY, MD 21030

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

*John R. Robinson* 5/20/14  
HOWARD SOIL CONSERVATION DISTRICT DATE

TYPE B HYDROLOGIC SOIL GROUP WITHIN LOD

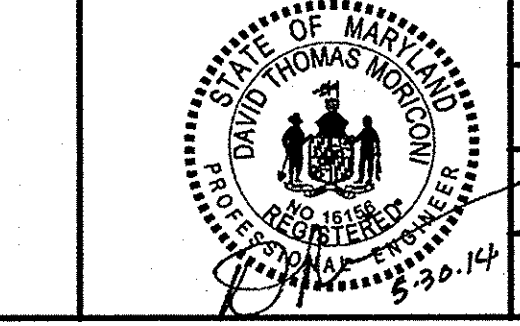
CONTRACTOR SHALL LOCATE THE STAGING AND STOCKPILE AREA AND IS RESPONSIBLE FOR PROVIDING ANY ADDITIONAL EROSION CONTROLS AS REQUIRED BY THE INSPECTOR WITHIN THE APPROVED LIMIT OF DISTURBANCE OFFSITE STAGING, STOCKPILE, OR WASTE SITE THE CONTRACTOR UTILIZES. MUST HAVE AN ACTIVE APPROVED GRADING PERMIT.

HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
HOWARD COUNTY, MARYLAND

*John R. Robinson* 5/30/14  
DIRECTOR, HOWARD COUNTY RECREATION AND PARKS DATE

*James G. Gorman* 6-2-14  
ASSISTANT MANAGER, GROUNDS SERVICES, HOWARD COUNTY PUBLIC SCHOOL SYSTEM DATE

PREPARED BY  
**URS**  
4 NORTH PARK DRIVE  
HUNT VALLEY, MARYLAND  
TEL: (410) 785-7220



DES:	DRN:	CHK:	DATE:	BY:	NO.:	REVISION:	DATE:
RLI	CDF	DTM	05/14				

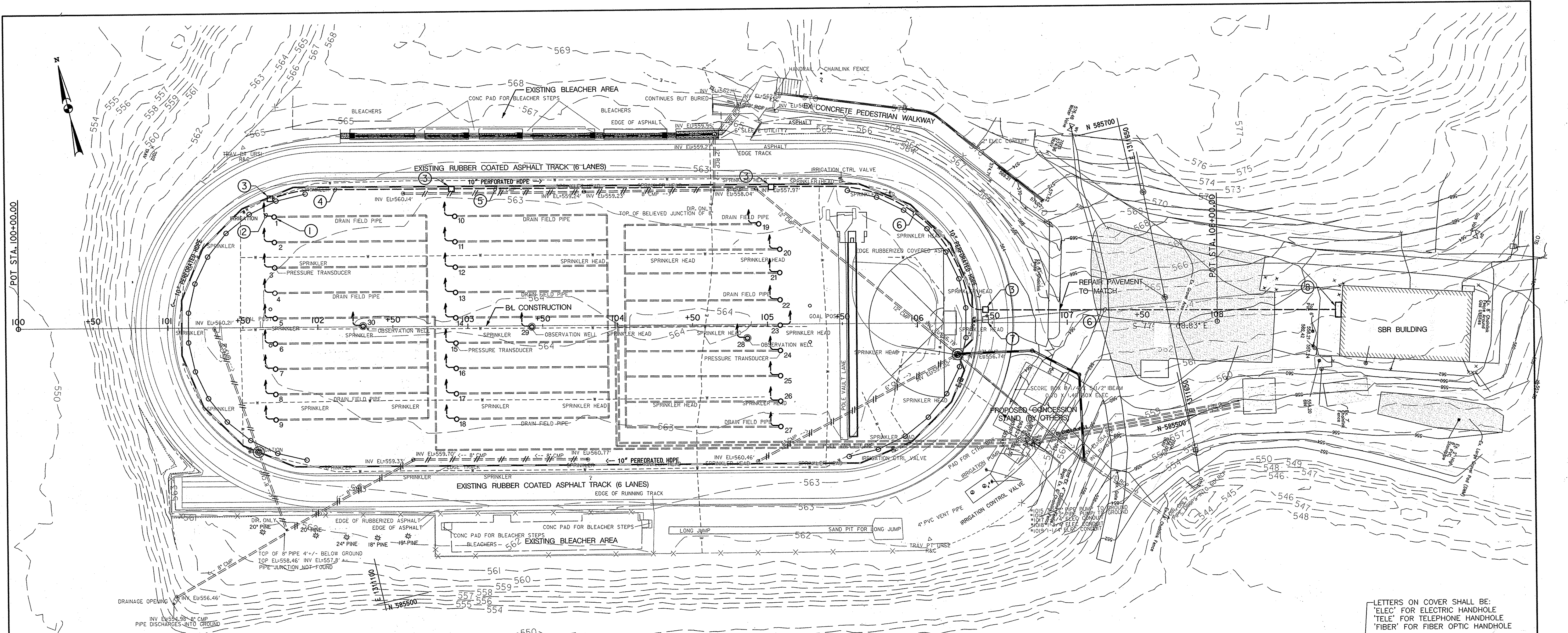
REVISED SITE DEVELOPMENT PLAN  
SITE PLAN AND EROSION & SEDIMENT CONTROL PLAN

SCALE MAP NO. N/A BLOCK NO.

SCALE 1" = 30'

SHEET 28 OF 36

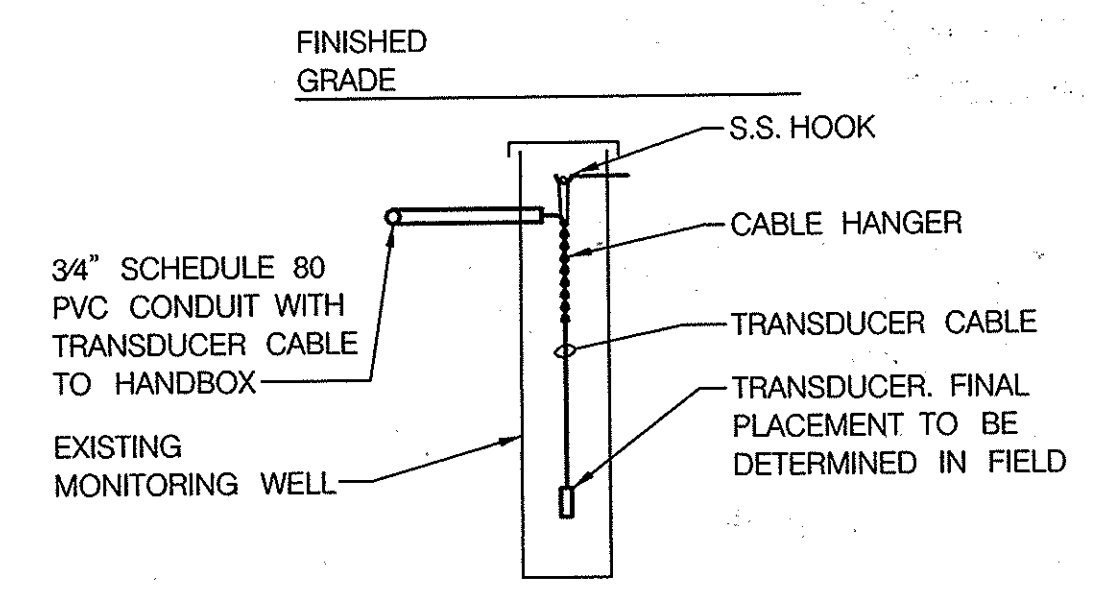
GLENELG HIGH SCHOOL FIELD IMPROVEMENTS  
4TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND



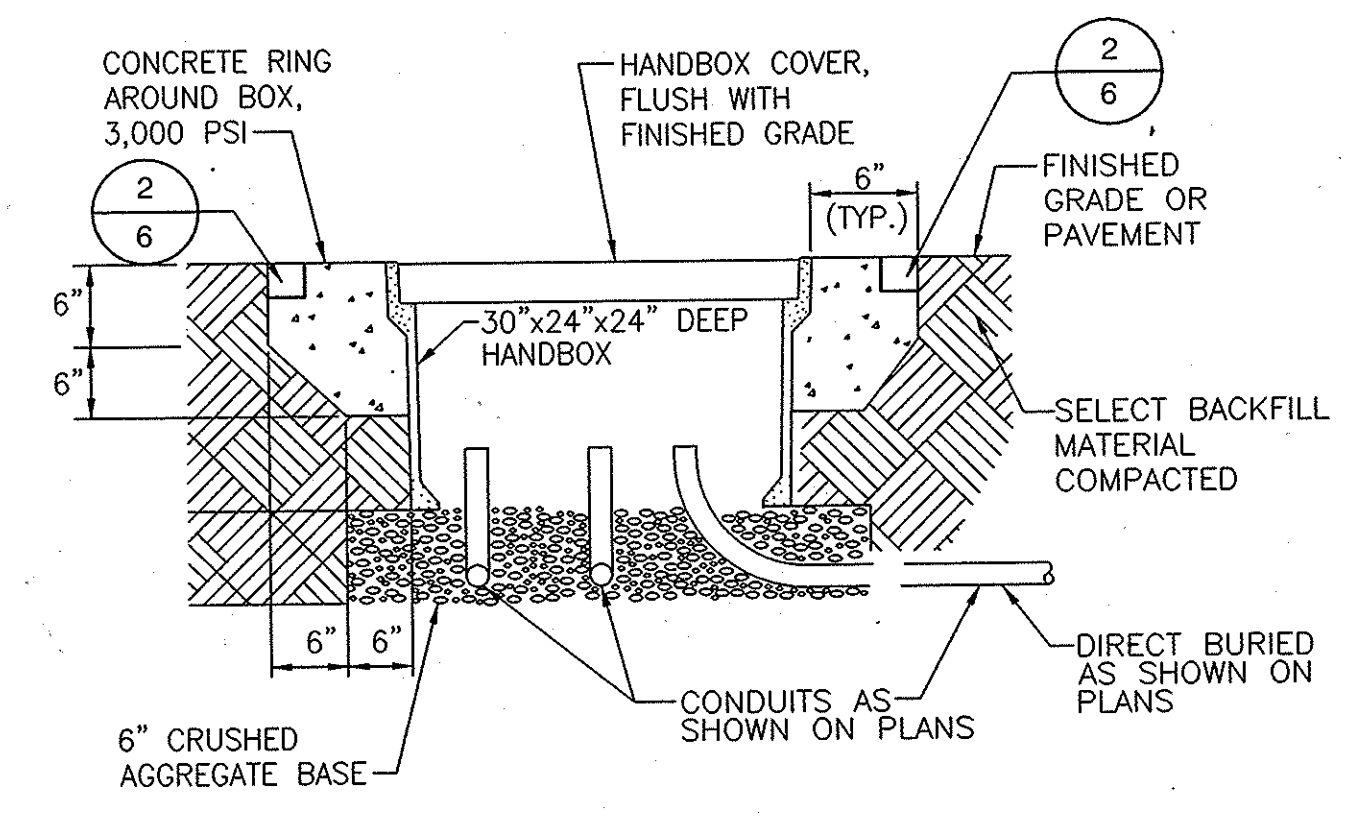
- DRAWING NOTES:**
- PREVIOUSLY - CONSTRUCTED MONITORING WELL (TYP.). INSTALL NEW PRESSURE TRANSDUCER. SEE DETAIL.
  - INSTALL NEW 3/4" SCHEDULE 80 PVC WITH TRANSDUCER CABLE FROM WELL TO NEW HANDBOX, TYP.
  - NEW HANDBOX, SEE DETAIL. COORDINATE LOCATION WITH HOWARD COUNTY.
  - ONE 2" SCHEDULE 80 PVC CONDUIT WITH TRANSDUCER CABLES 1-9, 30.
  - TWO 2" SCHEDULE 80 PVC CONDUITS WITH TRANSDUCER CABLES 1-9, 30 AND 10-18, 29.
  - THREE 2" SCHEDULE 80 PVC CONDUITS WITH TRANSDUCER CABLES 1-9, 30 AND 10-18, 29 AND 19-27, 28.
  - REMOVE EXISTING HANDBOX. REMOVE CONDUIT AND WIRES TO LIMIT OF WORK.
  - PROVIDE A CONTROL CABINET TO HOUSE THE BELLOWES AND LIGHTNING PROTECTION DEVICES. CABINET SHALL BE PAINTED STEEL WEATHER-TIGHT (NEMA 124) WITH STAINLESS STEEL HARDWARE. PROVIDE MOUNTING BACK PANEL AND TERMINAL STRIPS AS REQUIRED. MOUNT CABINET ON CONCRETE PAD OR DIRECTLY TO BUILDING WALL.

**ELECTRICAL PLAN**  
SCALE: 1" = 30'

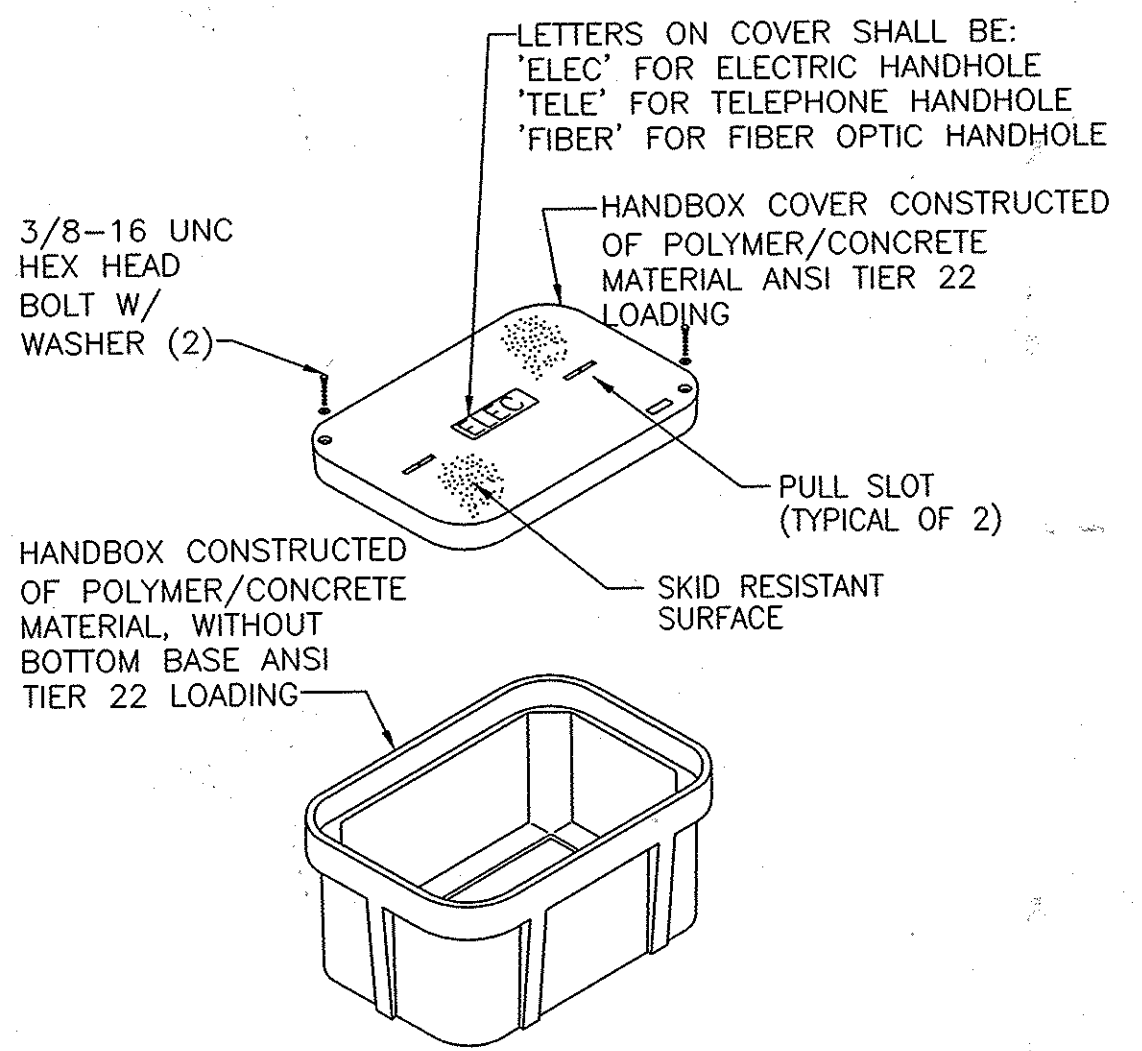
**1**  
**5** **TRANSUCER IN WELL DETAIL**  
SCALE: NONE



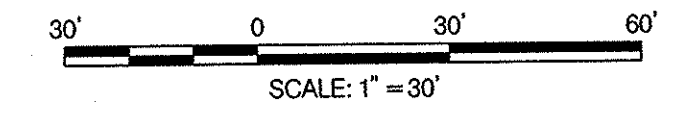
**2**  
**5** **TYPICAL HANDBOX DETAIL- INSTALLATION**  
SCALE: NONE



**3**  
**5** **TYPICAL HANDHOLE DETAIL- ISOMETRIC VIEW**  
SCALE: NONE



**NOTES:**  
1. AFTER WIRING INSTALLATION HAS BEEN COMPLETED, SEAL TOP OF CONDUITS TO PREVENT WATER PENETRATION



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*Mark A. Ugo* 7/10/14  
DIRECTOR DATE

*West Sh... ..* 7-10-14  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Paul ... ..* 6-20-14  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

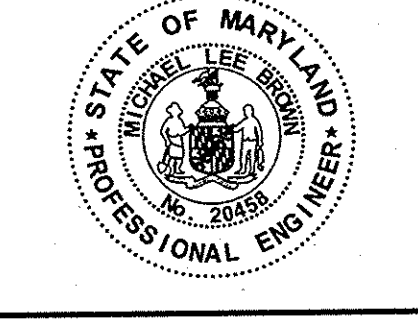
**PROFESSIONAL CERTIFICATION**  
"I HEREBY CERTIFY THAT DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 20458, EXPIRATION DATE: 5/23/2016."

**HOWARD COUNTY PUBLIC SCHOOL SYSTEM**  
HOWARD COUNTY, MARYLAND

*John ... ..* DATE  
DIRECTOR, HOWARD COUNTY RECREATION AND PARKS

*... ..* 6-18-14  
ASSISTANT MANAGER, GROUNDS SERVICES, HOWARD COUNTY PUBLIC SCHOOL SYSTEM

PREPARED BY  
**URS**  
4 NORTH PARK DRIVE  
HUNT VALLEY, MARYLAND  
TEL: (410) 785-7220



DES: SLW					
DRN: LEF					
CHK: MLB					
DATE: 05/14	DTM	1	NEW SHEET	6/14	
	BY	NO.	REVISION	DATE	

REVISED SITE DEVELOPMENT PLAN  
**SEPTIC DRAIN FIELD IMPLEMENTATION PLAN - ELECTRICAL**

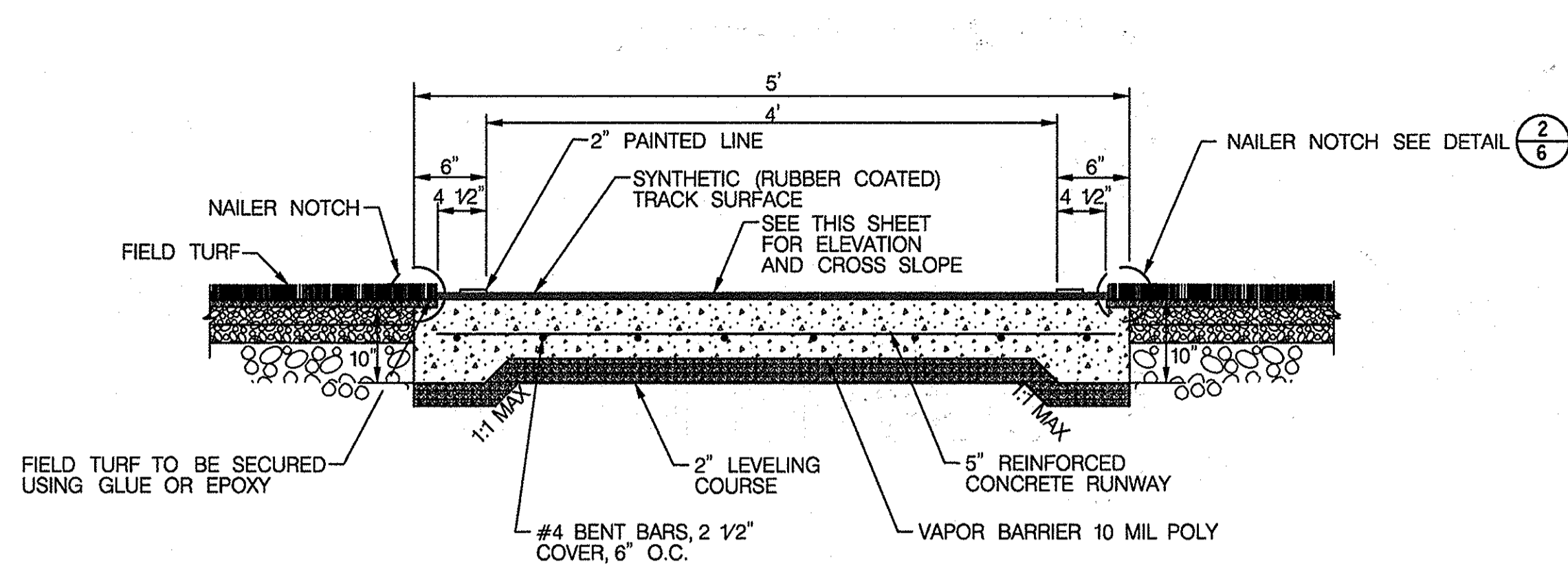
SCALE MAP NO. N/A BLOCK NO.

REVISED SITE DEVELOPMENT PLAN  
**GLENELG HIGH SCHOOL FIELD IMPROVEMENTS**  
4TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

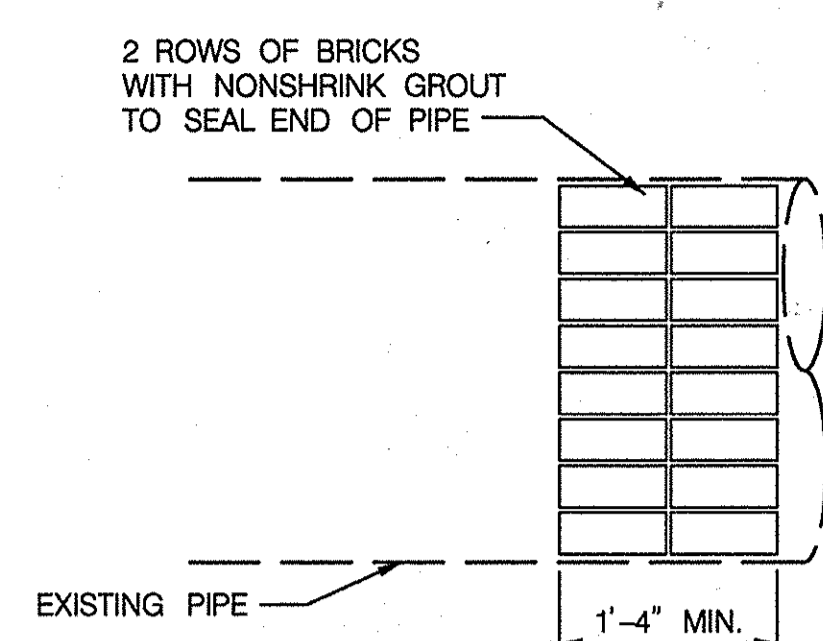
SCALE  
1" = 30'  
SHEET  
29 OF 36

Thursday, June 12, 2014 AT 09:23 AM ronald.laird@unh.com

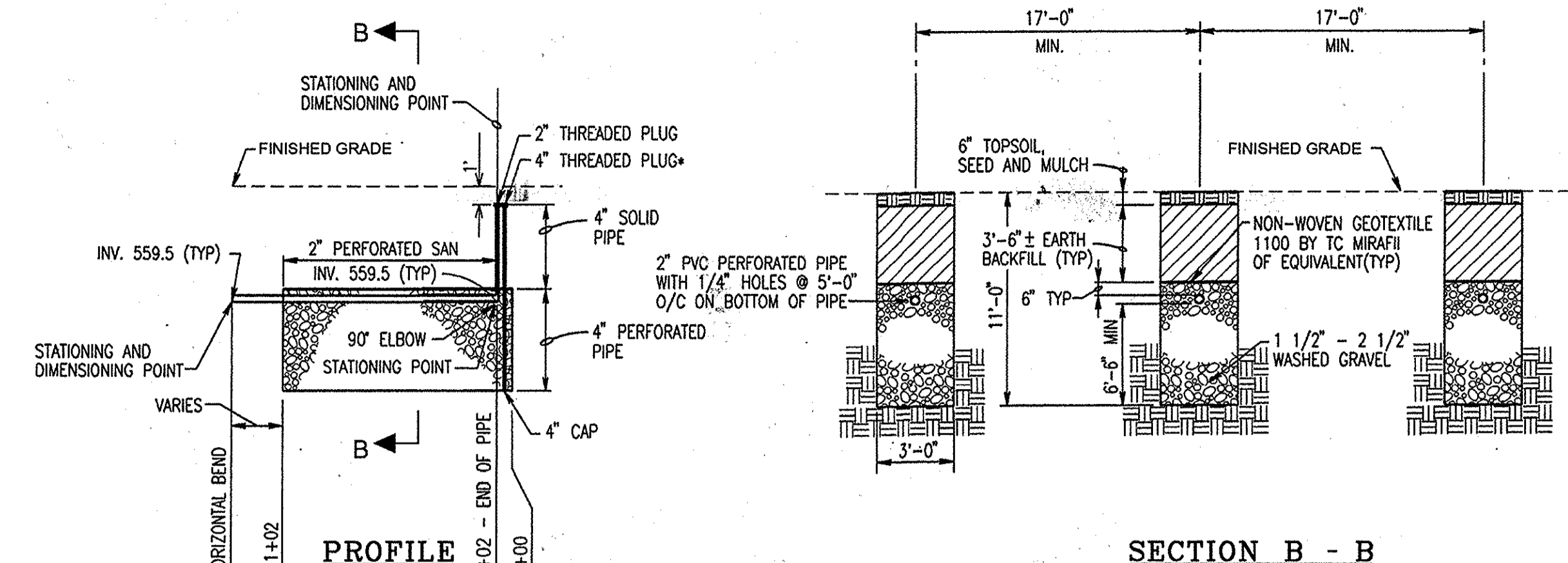
I:\Projects\444\20836593\CAD\Plan\Gen\PEL-POOL\PEL-045.dgn



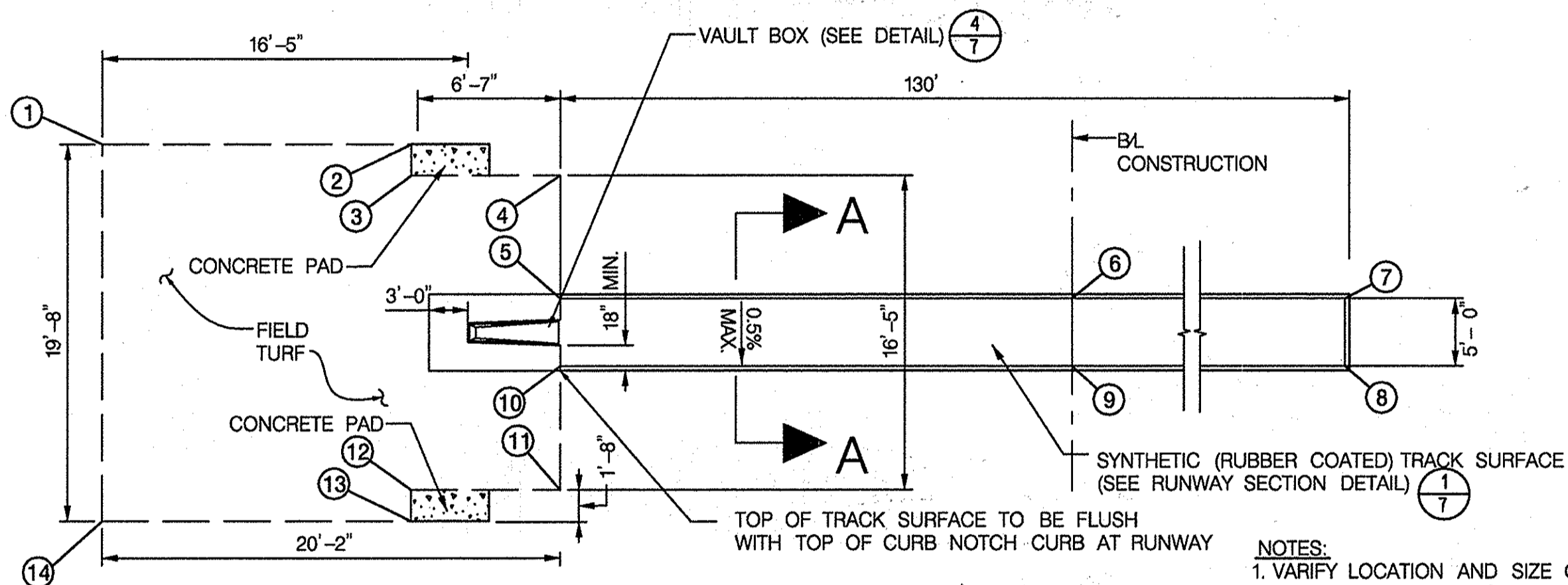
1 SECTION A-A THRU POLE VAULT RUNWAY  
7 N.T.S.



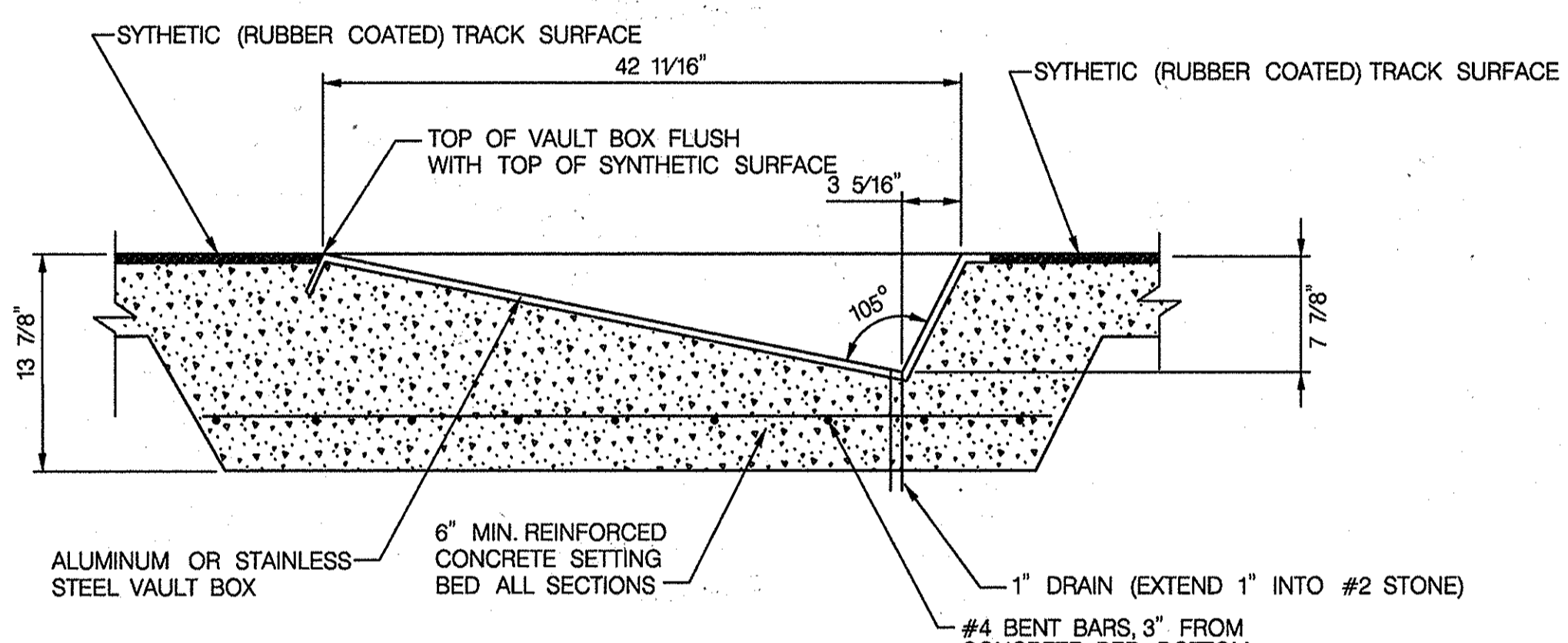
2 PERMANENT BULKHEAD EXISTING PIPE  
7 N.T.S.



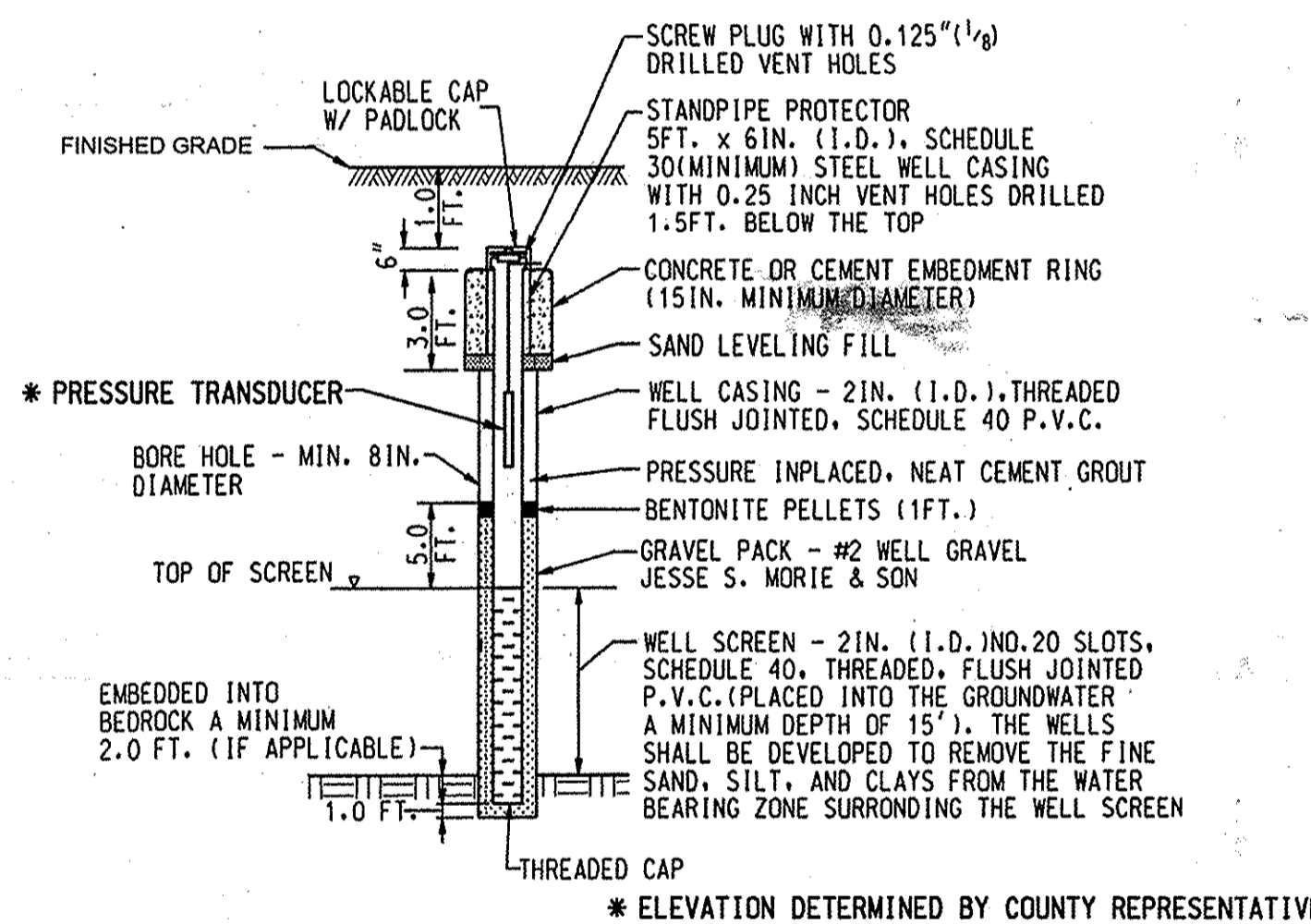
5 TYPICAL TRENCH SECTION DETAIL (EXISTING)  
7 N.T.S.



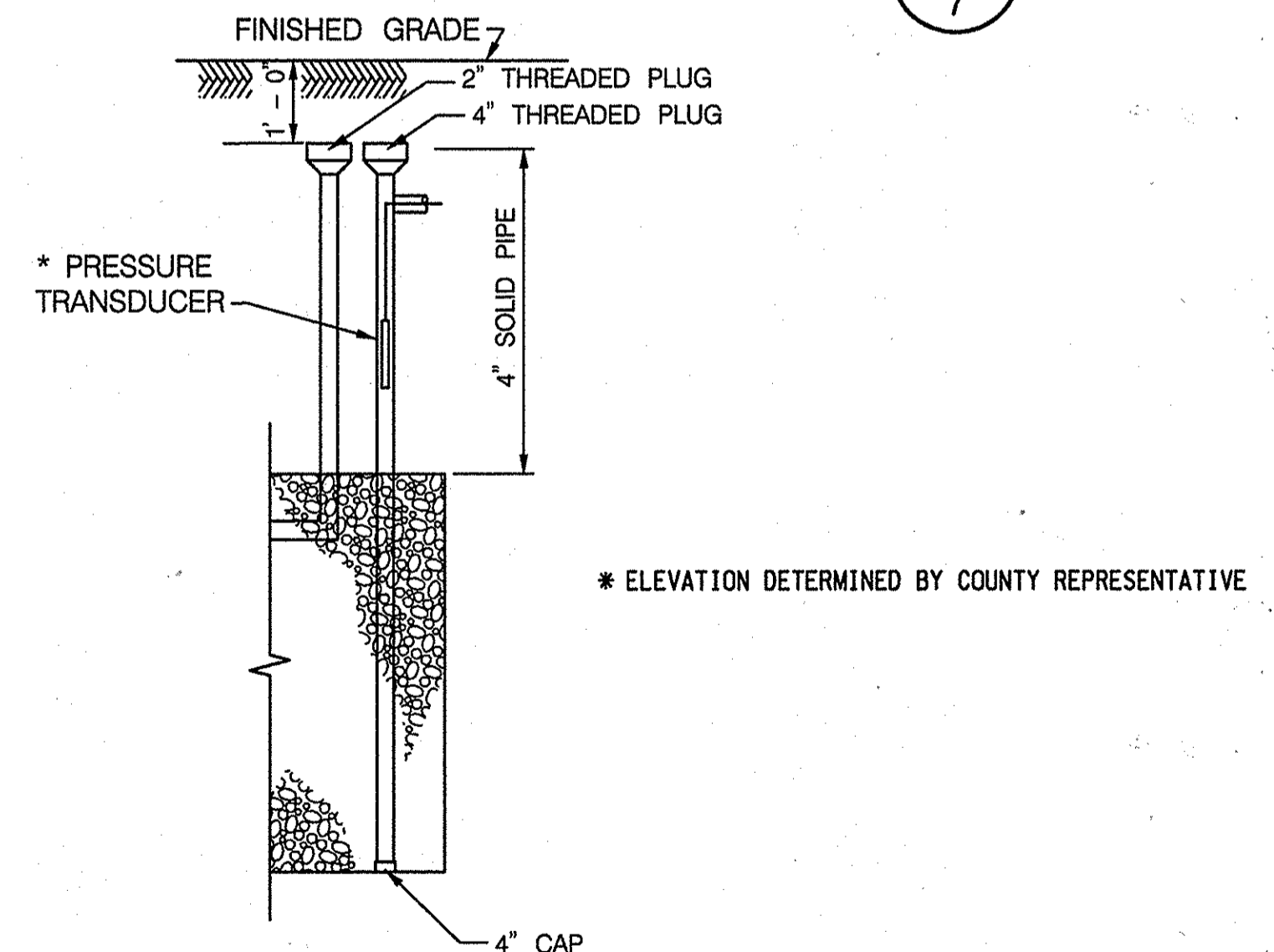
3 POLE VAULT DETAIL  
7 N.T.S.



4 SECTION THROUGH VAULT BOX  
7 N.T.S.



6 EXISTING PIEZOMETER  
7 N.T.S.



7 OBSERVATION WELL  
7 N.T.S.

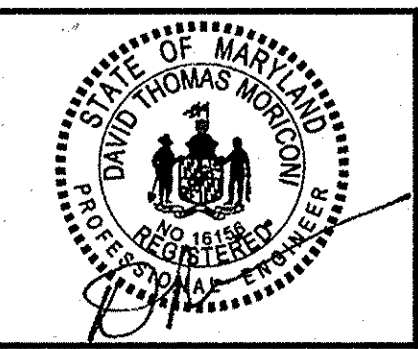
POLE VAULT			
POINT	NORTHING	EASTING	ELEVATION
1	585,681.8046	1,311,472.9258	563.27
2	585,669.3697	1,311,470.1088	563.33
3	585,669.7379	1,311,468.4833	563.35
4	585,662.4953	1,311,466.8853	563.39
5	585,663.7565	1,311,461.3181	563.45
6	585,610.6864	1,311,449.2957	563.72
7	585,536.9691	1,311,432.5959	563.34
8	585,538.0738	1,311,427.7195	563.38
9	585,611.7911	1,311,444.4193	563.76
10	585,664.8612	1,311,456.4416	563.48
11	585,666.1224	1,311,450.8744	563.51
12	585,673.3558	1,311,452.5130	563.47
13	585,673.7148	1,311,450.9282	563.47
14	585,686.1497	1,311,453.7452	563.41

PROFESSIONAL CERTIFICATION  
I HEREBY CERTIFY THAT DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 16156 EXPIRATION DATE: 8/28/2014.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
 Director: *M. A. Lyle* DATE: 2/10/14  
 Chief, Division of Land Development: *V. S. Lyle* DATE: 7-10-14  
 Chief, Development Engineering Division: *Chad Edwards* DATE: 6-20-14

HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
 HOWARD COUNTY, MARYLAND  
 Director: *John R. Syle* DATE: 6-19-14  
 Assistant Manager, Grounds Services: *Chad Edwards* DATE: 6-19-14

PREPARED BY  
**URS**  
 4 NORTH PARK DRIVE  
 HUNT VALLEY, MARYLAND  
 TEL: (410) 185-1229

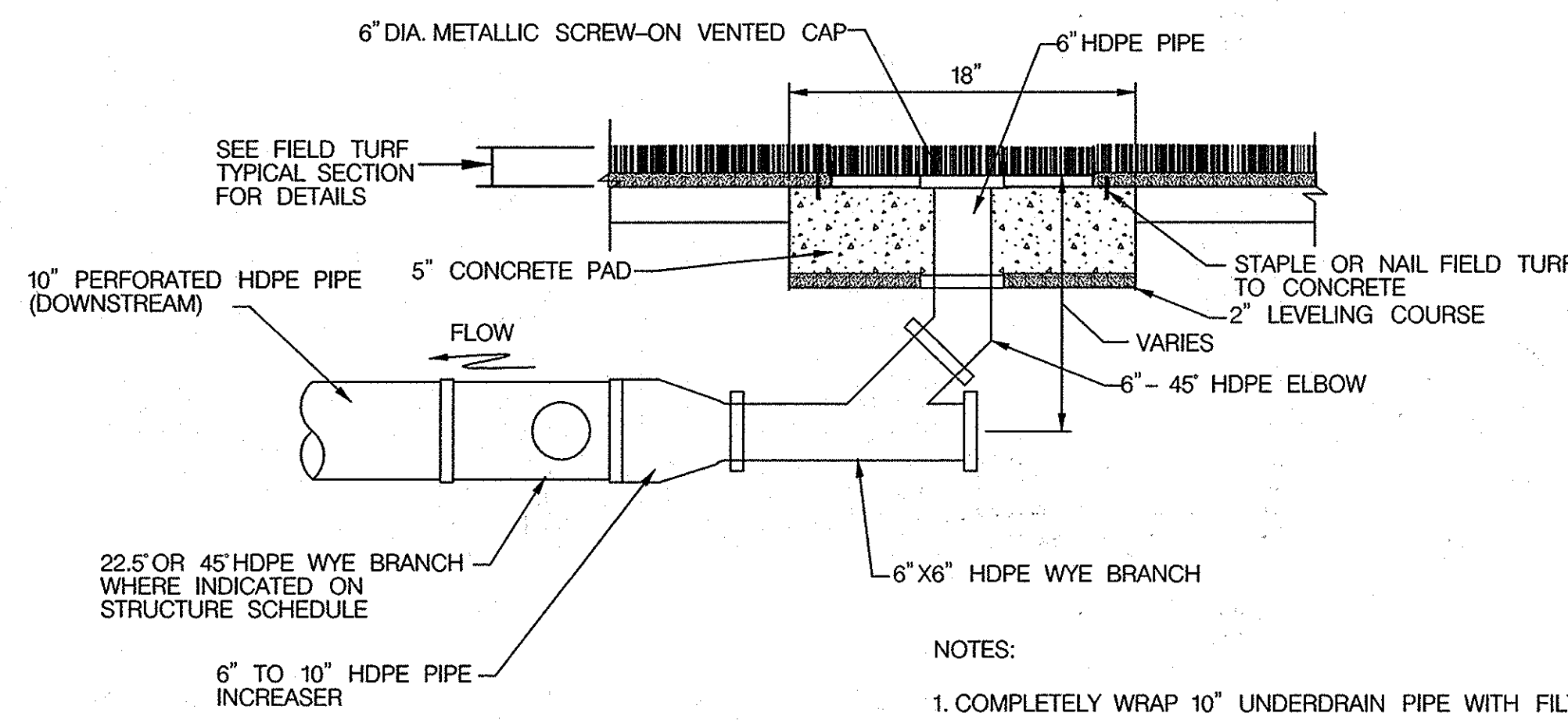


DES:	RLI				
DRN:	CDP				
CHK:	DTM				
DATE:	05/14	DTM	1	NEW SHEET	6/14
		BY	NO.	REVISION	DATE

REVISED SITE DEVELOPMENT PLAN  
**SITE DETAILS II**  
 SCALE MAP NO. N/A BLOCK NO.

REVISED SITE DEVELOPMENT PLAN  
**GLENELG HIGH SCHOOL  
 FIELD IMPROVEMENTS**  
 4TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 SHEET 31 OF 36

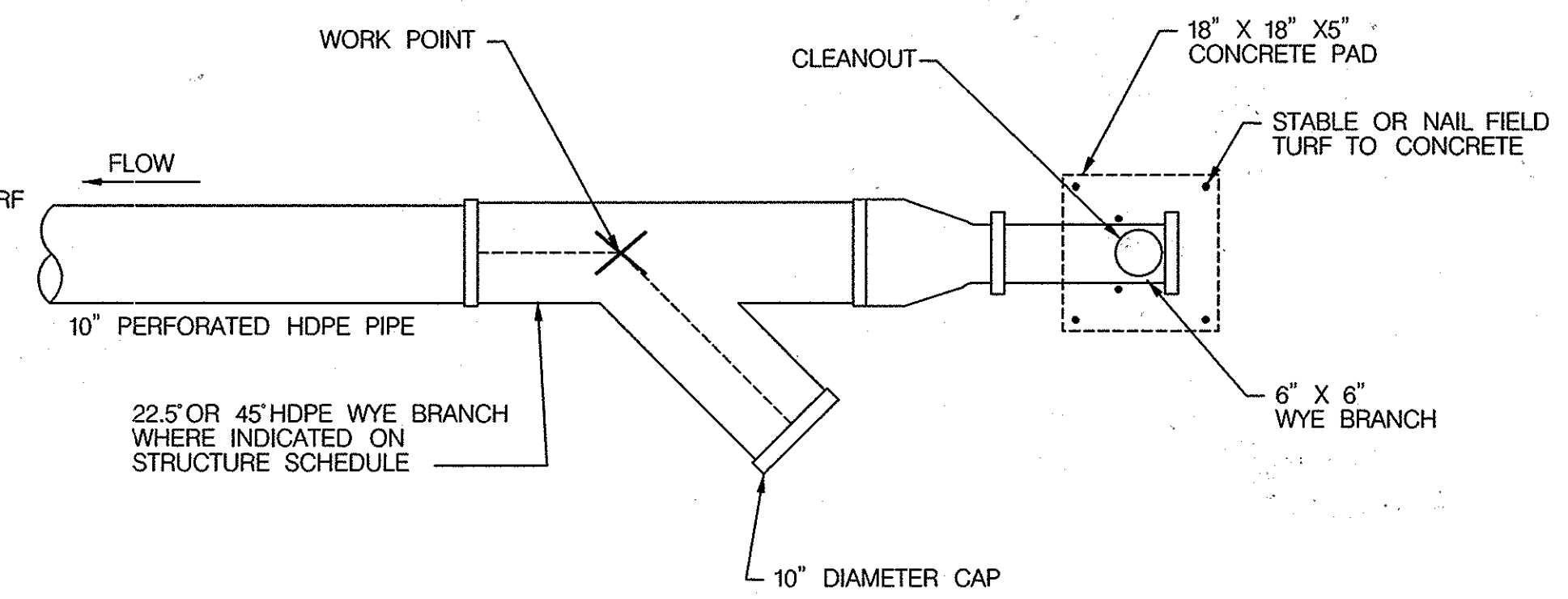


NOTES:  
 1. COMPLETELY WRAP 10" UNDERDRAIN PIPE WITH FILTER FABRIC DURING INSTALLATION.  
 2. WORK POINT IS GIVEN AT THE CENTER OF THE 22.5" OR 45" HDPE WYE BRANCH.

**CLEANOUT / WYE BRANCH DETAIL (C.O.) (ONE DIRECTION)**

1A  
8

N.T.S.

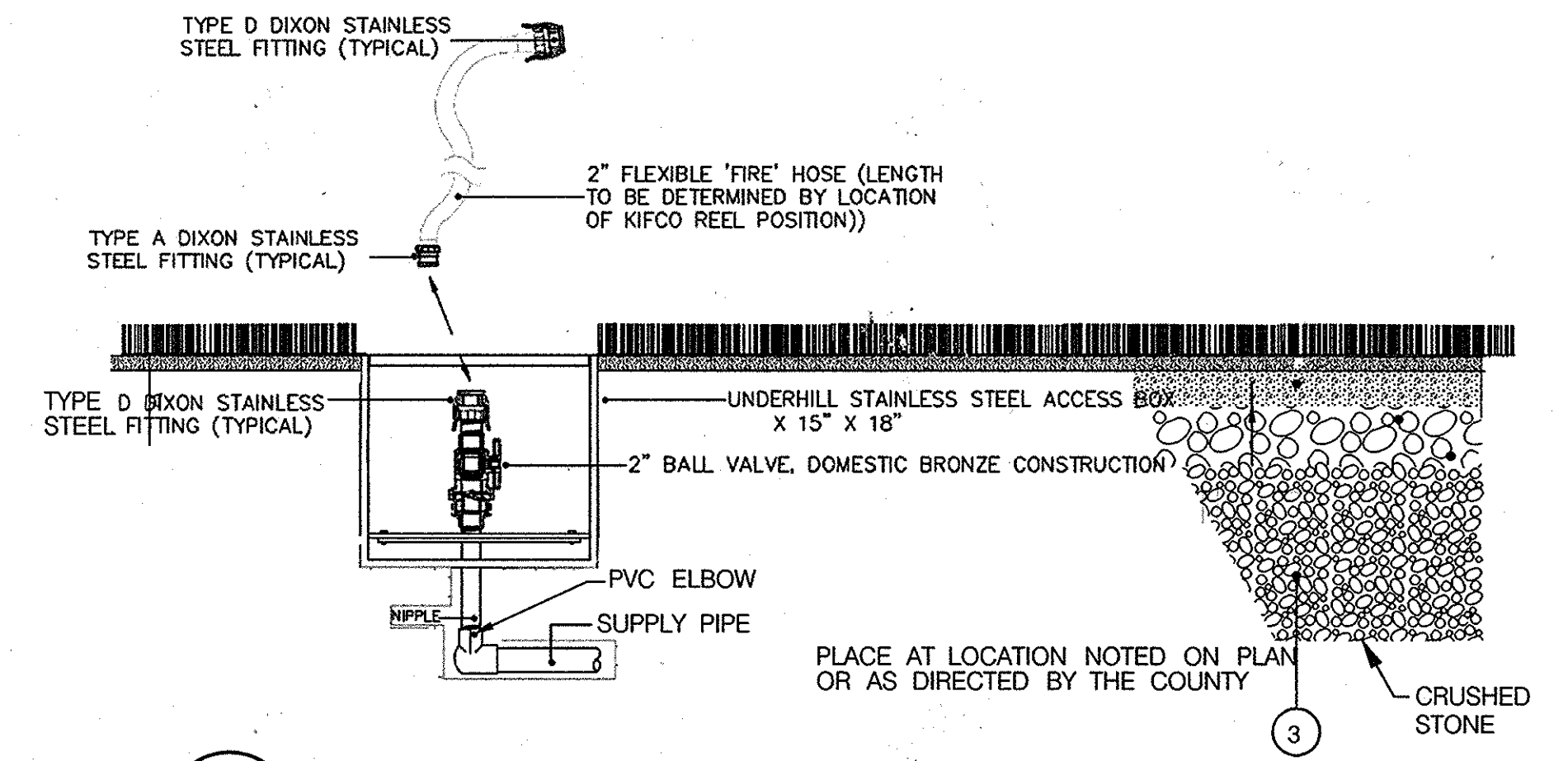


NOTES:  
 1. COMPLETELY WRAP 10" UNDERDRAIN PIPE WITH FILTER FABRIC DURING INSTALLATION.  
 2. WORK POINT IS GIVEN AT THE CENTER OF THE 22.5" OR 45" HDPE WYE BRANCH.

**CLEANOUT / WYE BRANCH DETAIL (C.O.) (BI DIRECTIONAL)**

1B  
8

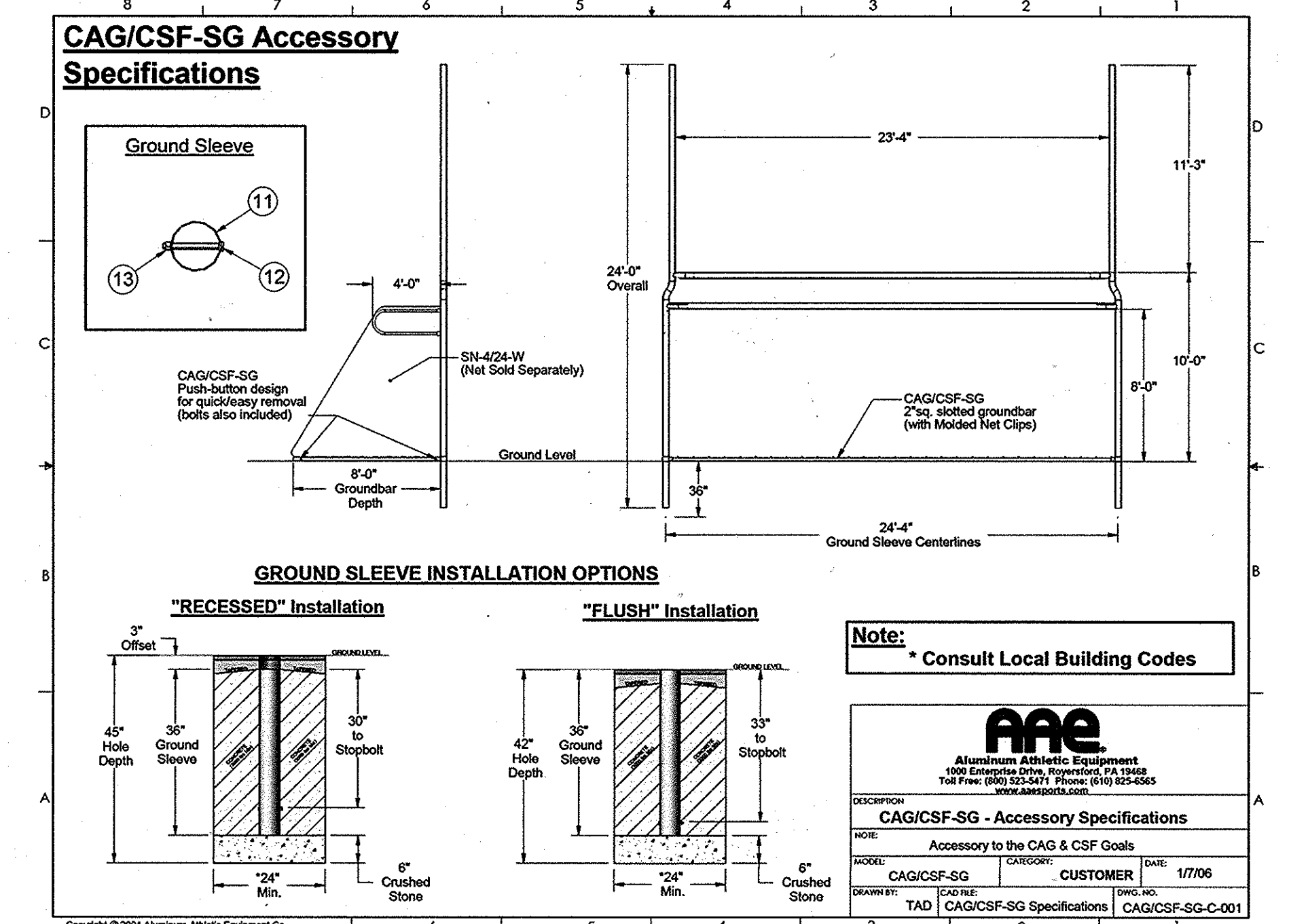
N.T.S.



2  
8

**WATER REEL CONNECTION DETAIL**

N.T.S.



3  
8

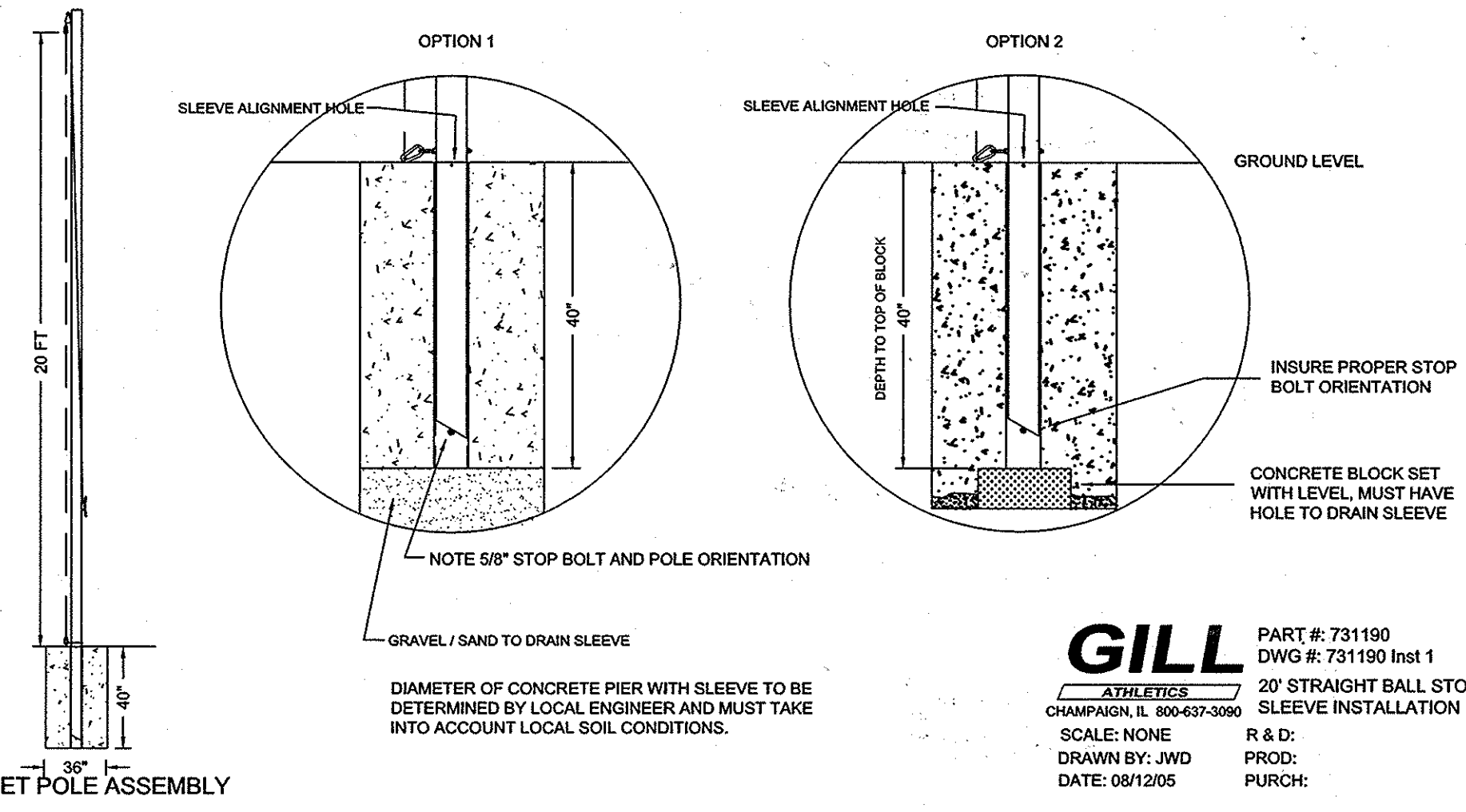
**GROUND BAR ATTACHMENT SPECIFICATION**

N.T.S.

**GROUND SLEEVE INSTALLATION**

NOTE: The proper orientation of the 5/8" sleeve stop bolt determines the proper orientation of the net pole. Each sleeve has a 1/4" through hole at the top edge through which string could be tied as a visible reference to help insure proper alignment.

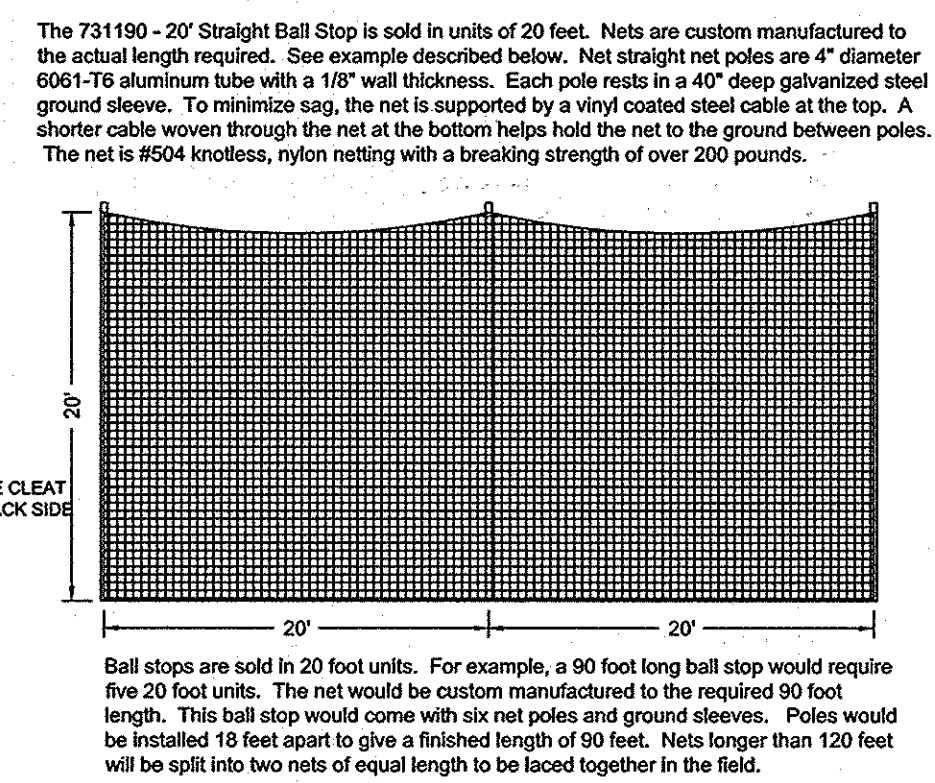
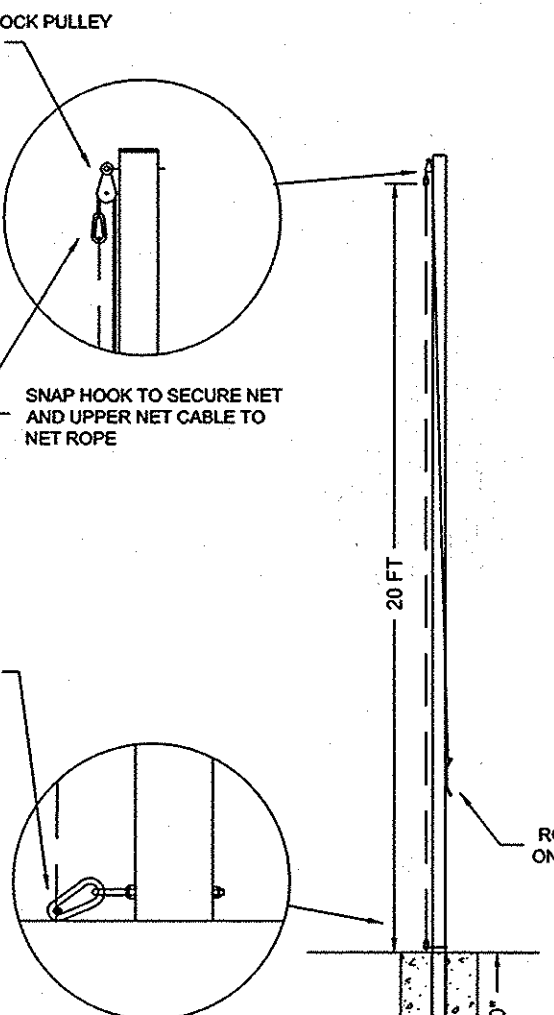
1. Dig holes for sleeves at staked locations. Size of holes are dependent on equipment used and must take into account soil conditions to support the poles.
2. Position and level gravel or a concrete block at the bottom of the hole so that the sleeve opening rests at the proper height at the surface.
3. Fix and support the sleeve in position with wire and/or sections of rebar to prevent sleeve movement during the concrete pour.
4. During the concrete pour, insure the alignment holes at the top opening of the sleeve remain properly aligned. These holes help orient the pole alignment pins at the bottom of the sleeves.



3  
8

**SAFETY NETTING DETAILS**

N.T.S.



Ball stops are sold in 20 foot units. For example, a 90 foot long ball stop would require five 20 foot units. The net would be custom manufactured to the required 90 foot length. This ball stop would come with six net poles and ground sleeves. Poles would be installed 15 feet apart to give a finished length of 90 feet. Nets longer than 120 feet will be split into two nets of equal length to be laced together in the field.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
 Director: *Mark P. Ugly* 7/10/14  
 Chief, Division of Land Development: *Kevin A. Dovel* 7-10-14  
 Chief, Development Engineering Division: *Chad G. Smith* 6-20-14

**GILL** PART #: 731190  
 DWG #: 731190  
 20' STRAIGHT BALL STOP  
 SCALE: NONE R & D:  
 DRAWN BY: JWD PROD:  
 DATE: 08/12/05 PURCH:

**GILL** PART #: 731190  
 DWG #: 731190 Inst 1  
 20' STRAIGHT BALL STOP  
 SLEEVE INSTALLATION  
 SCALE: NONE R & D:  
 DRAWN BY: JWD PROD:  
 DATE: 08/12/05 PURCH:

**GILL** PART #: 731190  
 DWG #: 731190 Inst 2  
 20' STRAIGHT BALL STOP  
 NET POLE ASSEMBLY  
 SCALE: NONE R & D:  
 DRAWN BY: JWD PROD:  
 DATE: 08/12/05 PURCH:

PROFESSIONAL CERTIFICATION  
 "I HEREBY CERTIFY THAT DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 16156 EXPIRATION DATE: 8/28/2014"

HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
 HOWARD COUNTY, MARYLAND  
 Director: *John A. Sybil* DATE: 6-18-14  
 Assistant Manager, Grounds Services: *Chris C. ...* DATE: 6-18-14

PREPARED BY  
**URS**  
 4 NORTH PARK DRIVE  
 HUNT VALLEY, MARYLAND  
 TEL: (410) 785-7220

DES: RLL  
 DRN: CDF  
 CHK: DTM  
 DATE: 05/14

DTM	1	NEW SHEET	6/14
BY	NO.	REVISION	DATE

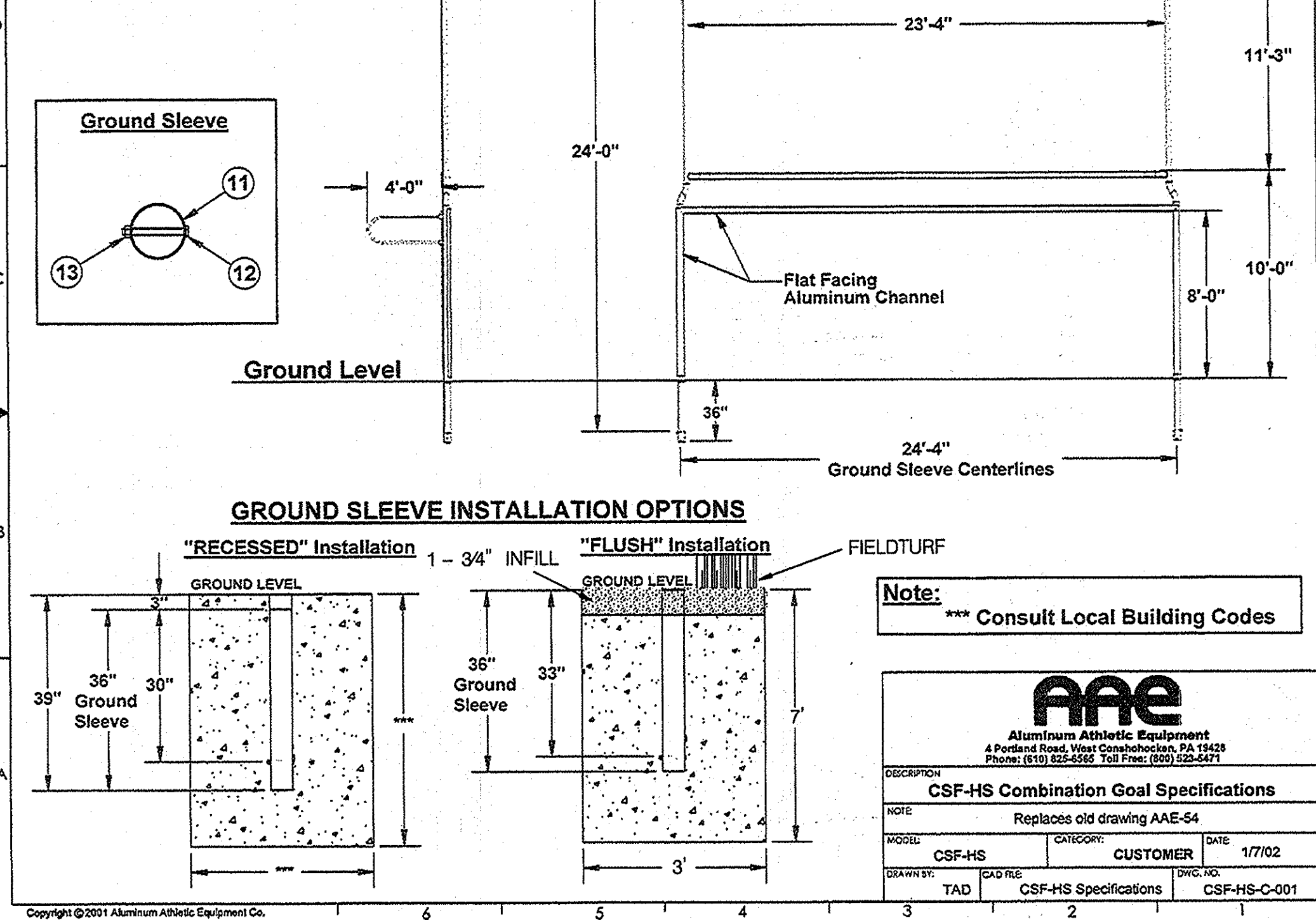
REVISED SITE DEVELOPMENT PLAN  
 SITE DETAIL III  
 SCALE MAP NO. N/A BLOCK NO.

REVISED SITE DEVELOPMENT PLAN  
 GLENELG HIGH SCHOOL  
 FIELD IMPROVEMENTS  
 4TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

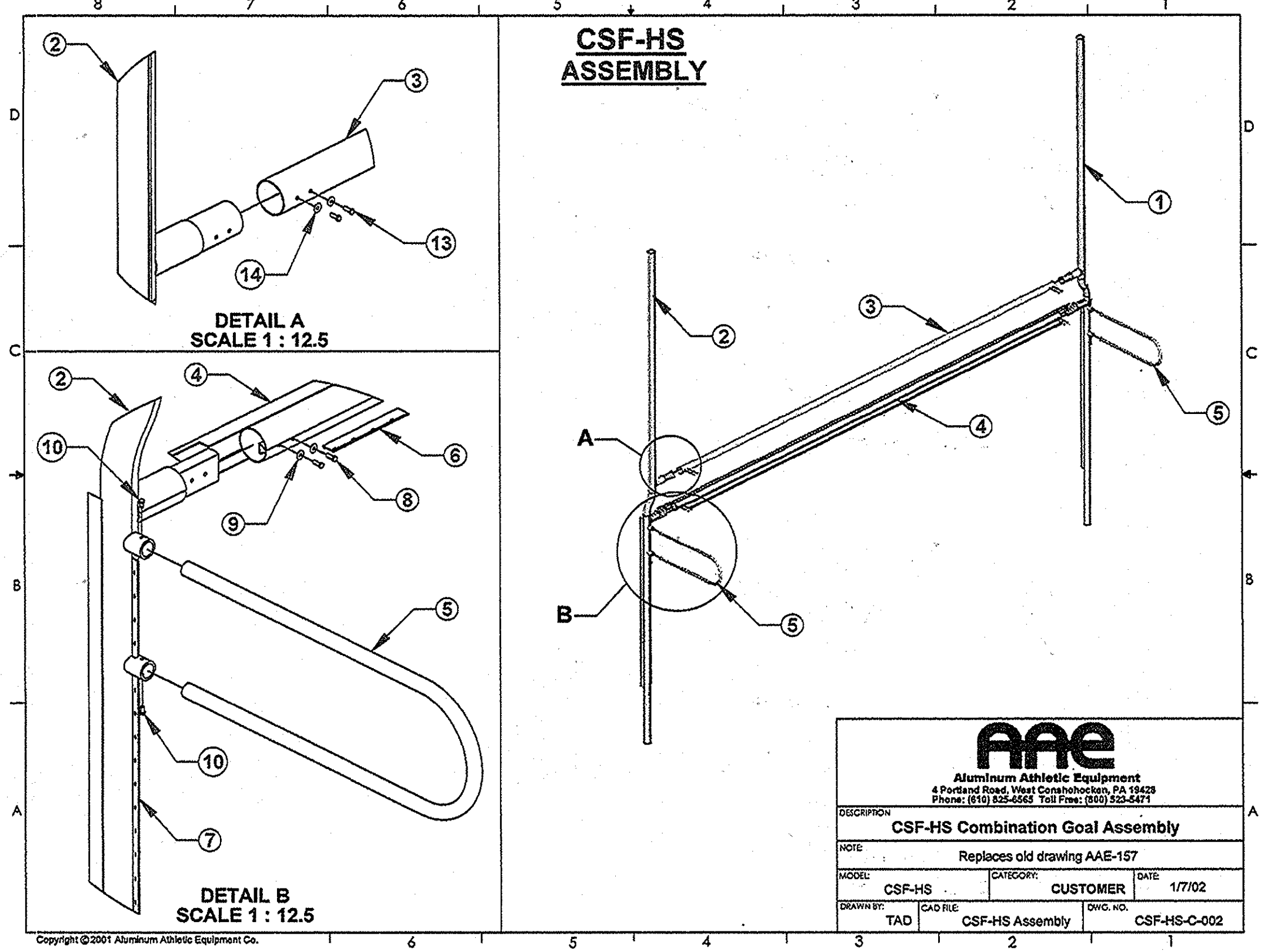
SCALE AS SHOWN  
 SHEET 32 OF 36



**CSF-HS Specifications**



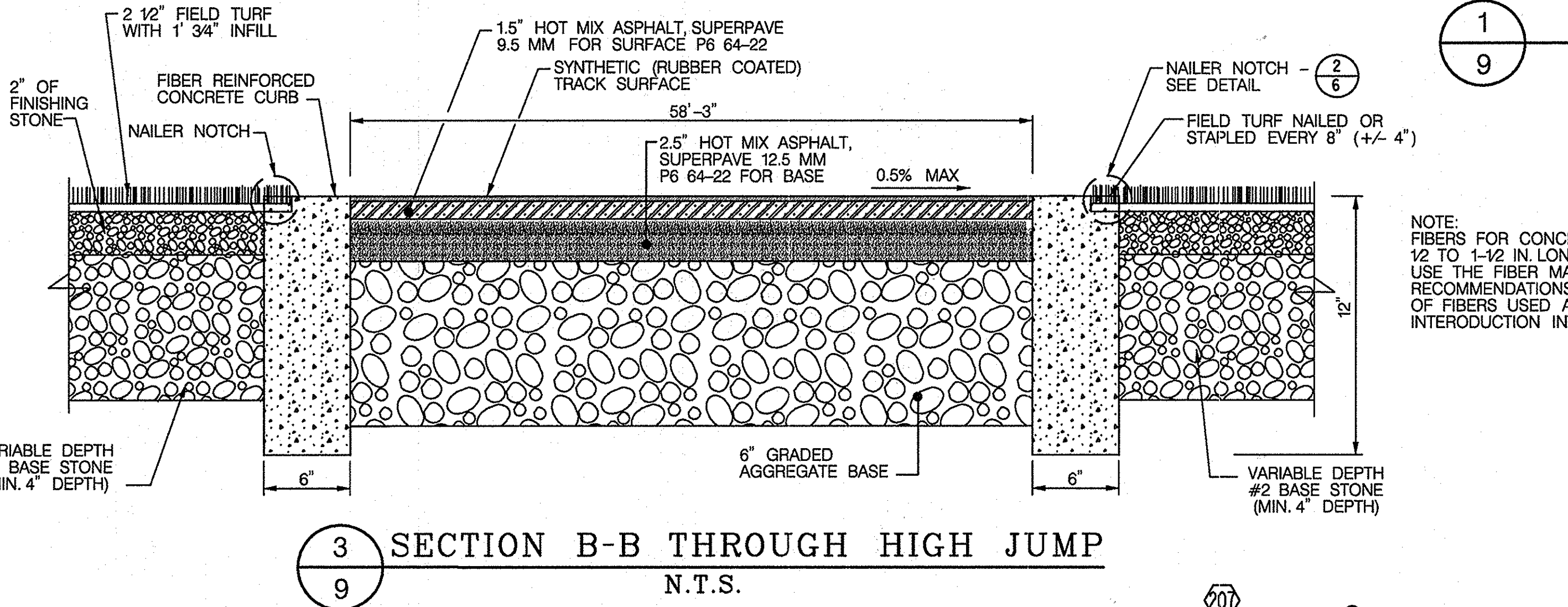
**CSF-HS ASSEMBLY**



**CAG-HS/CSF-HS HIGH SCHOOL COMBINATION GOALS PARTS LIST**

Part#	Item	Description	Qty.
1	Upright,LH	4.00 o.d. x .226 x 24' - aluminum extrusion.	2
*1A			
2	Upright,RH	4.00 o.d. x .226 x 24' - aluminum extrusion.	2
3	Crossbar (Football)	4.00" o.d. x .125 x 22'- 4" 6061T6 - aluminum tube.	2
4	Crossbar (Soccer)	4.00" o.d. x .125 x 23'-0" - aluminum extrusion.	2
5	ISA Stay	International Net Stay, 1.688" o.d. x .125 x 43", 17" arc, 6061T6 aluminum.	4
6	PVC	PVC Net attachment extrusion, 22'-2" lg.	2
7	PVC	PVC Net attachment extrusion, 7'-6" lg.	4
8	Bolt	3/8"-16 x 1" stainless steel hex bolt	16
9	Washer	3/8 washer, SS	16
10	Bolt	3/8"-16 x 5/8" stainless steel hex bolt	8
11	Ground Sleeve	4.35" o.d. x .100 x 30" 6061T6 aluminum tube.	4
12	Stopbolt	1/2"-13 x 5" steel hex bolt, plated	4
13	Stopbolt Nut	1/2"-13 steel hex nut, plated	4

**COMBINATION GOAL DETAILS**



**HIGH JUMP**

POINT	NORTHING	EASTING	ELEVATION
201	585,597.7841	1,311,506.2499	563.13
202	585,595.9614	1,311,514.2960	563.05
203	585,588.1591	1,311,512.5285	563.01
204	585,589.9818	1,311,504.4824	563.09
205	585,588.0313	1,311,504.0405	563.08
206	585,549.0198	1,311,495.2029	562.88
207	585,571.1139	1,311,463.9569	563.31
208	585,603.7637	1,311,516.0635	563.01
209	585,605.5864	1,311,508.0174	563.09
210	585,607.5370	1,311,508.4593	563.08
211	585,646.5485	1,311,517.2969	562.88
212	585,773.4100	1,311,306.5800	563.31
213	585,608.8311	1,311,457.4855	563.63

**STRUCTURE SCHEDULE**

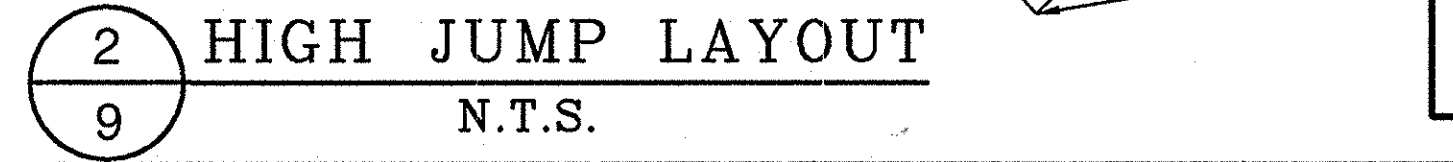
NO.	NORTHING	EASTING	TYPE	Inv. In	Inv. Out	Top Elev.
MH-1	585,617.3100	1,311,041.4000	STANDARD 4 FT.CIRCULAR MANHOLE (STD. MD-383.21)	559.70	559.68	562.69
MH-2	585,575.0600	1,311,510.4600	STANDARD 4 FT.CIRCULAR MANHOLE (STD. MD-383.21)	556.78 / 558.46	556.74	562.64
MH-3	585,713.5000	1,311,404.7400	CONVERT EX. INLET TO MANHOLE	558.04	557.97	563.01
MH-4	585,566.2200	1,311,559.3000	STANDARD 4 FT.CIRCULAR MANHOLE (STD. MD-383.21)	556.51	556.39	563.80
MH-5	585,543.3800	1,311,586.1100	STANDARD 4 FT.CIRCULAR MANHOLE (STD. MD-383.21)	556.06	555.86	562.40
EX MH-1	585,487.1600	1,311,576.3400	EXISTING CUSTOM MANHOLE	555.29 / 554.69	554.14	559.17
CP-1	585,784.9400	1,311,104.3000	10" X 10" FLEX-SEAL RUBBER COUPLING	--	--	--
CP-2	585,602.1200	1,311,062.8800	10" X 10" FLEX-SEAL RUBBER COUPLING	--	--	--
CO-1	585,602.1200	1,311,062.8800	22.5 DEG. WYE / CLEANOUT	--	--	--
BD-1	585,778.6400	1,311,067.5500	22.5 DEG. BEND	--	--	--
BD-2	585,758.7500	1,311,036.0100	22.5 DEG. BEND	--	--	--
BD-3	585,728.3000	1,311,014.4800	22.5 DEG. BEND	--	--	--
BD-4	585,691.9400	1,311,006.2400	22.5 DEG. BEND	--	--	--
BD-5	585,655.1900	1,311,012.5500	22.5 DEG. BEND	--	--	--
BD-6	585,623.6500	1,311,032.4400	22.5 DEG. BEND	--	--	--
BD-7	585,525.0900	1,311,467.6500	22.5 DEG. BEND	--	--	--
BD-8	585,544.9500	1,311,499.1600	22.5 DEG. BEND	--	--	--
BD-9	585,563.7000	1,311,512.4100	22.5 DEG. BEND	--	--	--
BD-10	585,582.5300	1,311,522.3000	22.5 DEG. BEND	--	--	--
BD-11	585,611.7600	1,311,528.9200	22.5 DEG. BEND	--	--	--
BD-12	585,648.5100	1,311,522.6200	22.5 DEG. BEND	--	--	--
BD-13	585,680.0500	1,311,502.7300	22.5 DEG. BEND	--	--	--
BD-14	585,701.5800	1,311,472.2800	22.5 DEG. BEND	--	--	--
BD-15	585,518.7700	1,311,430.8300	22.5 DEG. BEND	--	--	--
I-1	585,809.5200	1,311,150.1600	HOWARD COUNTY STD. YARD INLET (HOCO D4.14)	--	561.25	564.11
I-2	585,792.4600	1,311,224.3700	HOWARD COUNTY STD. YARD INLET (HOCO D4.14)	560.89	560.79	564.13
I-3	585,784.3800	1,311,259.3200	HOWARD COUNTY STD. YARD INLET (HOCO D4.14)	560.62	560.52	564.01
I-4	585,773.4100	1,311,306.5800	HOWARD COUNTY STD. YARD INLET (HOCO D4.14)	560.30	560.20	563.82
I-5	585,762.5400	1,311,353.3900	HOWARD COUNTY STD. YARD INLET (HOCO D4.14)	559.97	559.87	563.79
EX I-1	585,756.0300	1,311,386.0000	EXISTING HOWARD COUNTY STD. YARD INLET (HOCO D4.14)	559.95 / 559.72	559.27	563.30

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*Matthew J. Coyle* 7/10/14  
DIRECTOR DATE

*Keith S. Edwards* 7-10-14  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Chad Edwards* 6-20-14  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



PROFESSIONAL CERTIFICATION

"I HEREBY CERTIFY THAT DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 18156, EXPIRATION DATE: 8/28/2014"

**HOWARD COUNTY PUBLIC SCHOOL SYSTEM**  
HOWARD COUNTY, MARYLAND

*John R. Byrd* DATE  
DIRECTOR, HOWARD COUNTY RECREATION AND PARKS

*Ryan Conn* 6-18-14 DATE  
ASSISTANT MANAGER, GROUNDS SERVICES, HOWARD COUNTY PUBLIC SCHOOL SYSTEM

PREPARED BY

**URS**  
4 NORTH PARK DRIVE  
HUNT VALLEY, MARYLAND  
TEL: (410) 785-7220

STATE OF MARYLAND  
DAVID THOMAS WARDEN  
REGISTRATION BOARD

DES: RLL			
DRN: CDF			
CHK: DTM			
DATE: 05/14	DTM	1	NEW SHEET
	BY	NO.	REVISION
			06/14

REVISED SITE DEVELOPMENT PLAN

**SITE DETAILS IV**

SCALE MAP NO. N/A BLOCK NO.

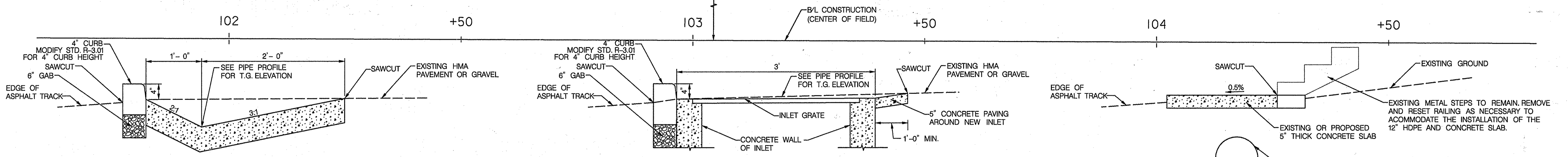
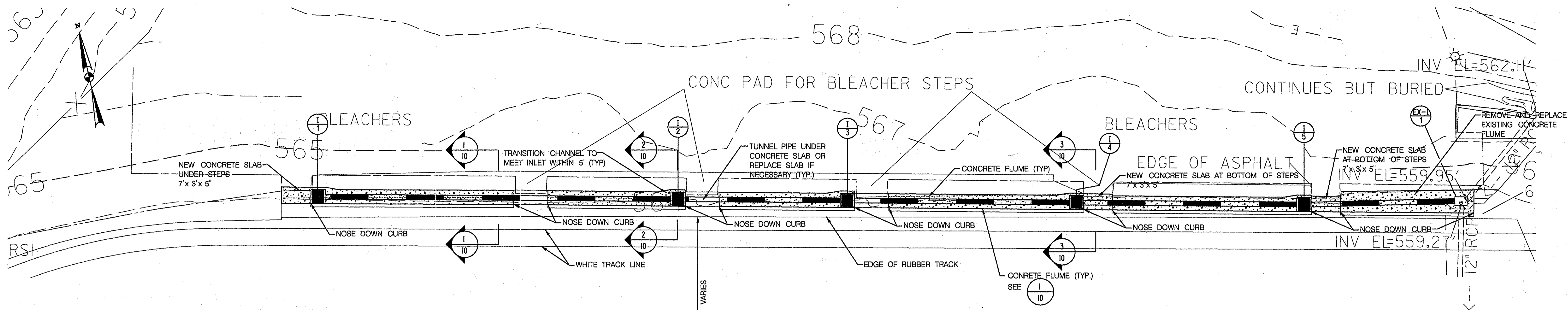
REVISED SITE DEVELOPMENT PLAN

**GLENELG HIGH SCHOOL FIELD IMPROVEMENTS**

4TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

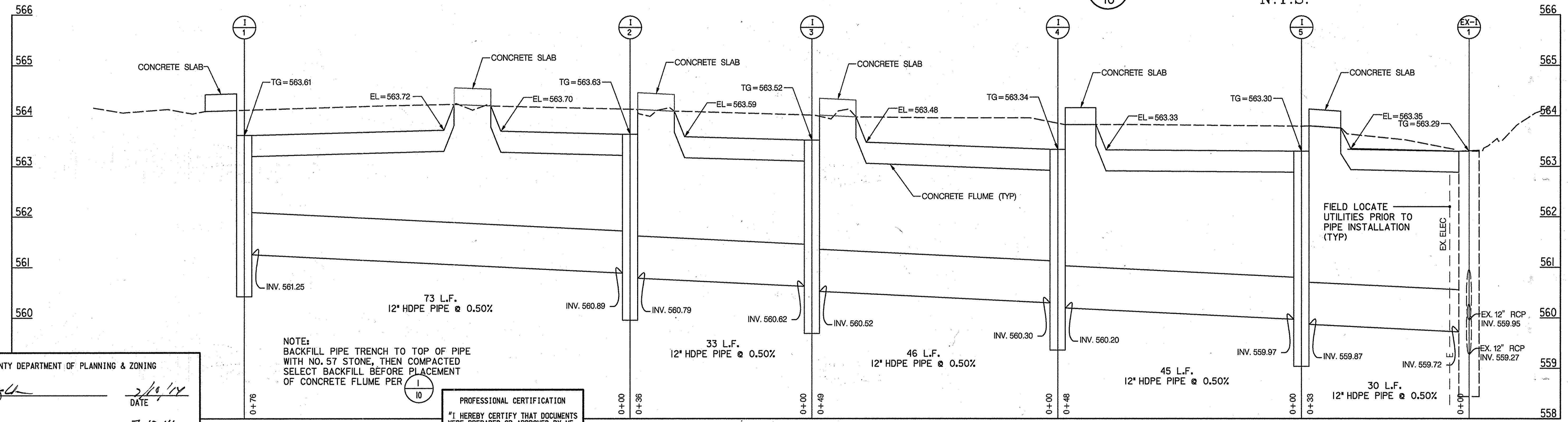
SHEET 33 OF 36



1  
10  
**CONCRETE FLUME DETAIL**  
N.T.S.

2  
10  
**INLET DETAIL**  
N.T.S.

3  
10  
**CONCRETE SLAB DETAIL**  
N.T.S.



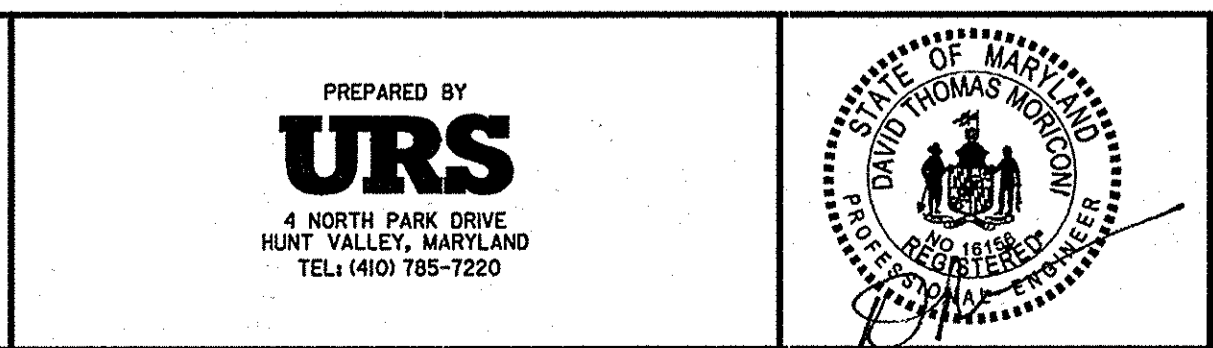
NOTE:  
BACKFILL PIPE TRENCH TO TOP OF PIPE  
WITH NO. 57 STONE, THEN COMPACTED  
SELECT BACKFILL BEFORE PLACEMENT  
OF CONCRETE FLUME PER 10

PROFESSIONAL CERTIFICATION  
I HEREBY CERTIFY THAT DOCUMENTS  
WERE PREPARED OR APPROVED BY ME,  
AND THAT I AM A DULY LICENSED  
PROFESSIONAL ENGINEER UNDER THE  
LAWS OF THE STATE OF MARYLAND,  
LICENSE NO. 16156  
EXPIRATION DATE: 8/28/2014

**PIPE PROFILE (STA. 102+06, LT. TO STA. 104+74, LT.)**  
SCALE: HORZ. 1"=10'  
VERT. 1"=1'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
*Frank A. Wynn* 2/10/14  
DIRECTOR DATE  
*Valerie Quisenberry* 7-10-14  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE  
*Chad Edwards* 6-20-14  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
HOWARD COUNTY, MARYLAND  
*Robert Byrd* DATE  
DIRECTOR, HOWARD COUNTY RECREATION AND PARKS DATE  
PREPARED BY  
**URS**  
4 NORTH PARK DRIVE  
HUNT VALLEY, MARYLAND  
TEL (410) 785-7220  
*James C. ...* 6-18-14  
ASSISTANT MANAGER, GROUNDS SERVICES, DATE  
HOWARD COUNTY PUBLIC SCHOOL SYSTEM

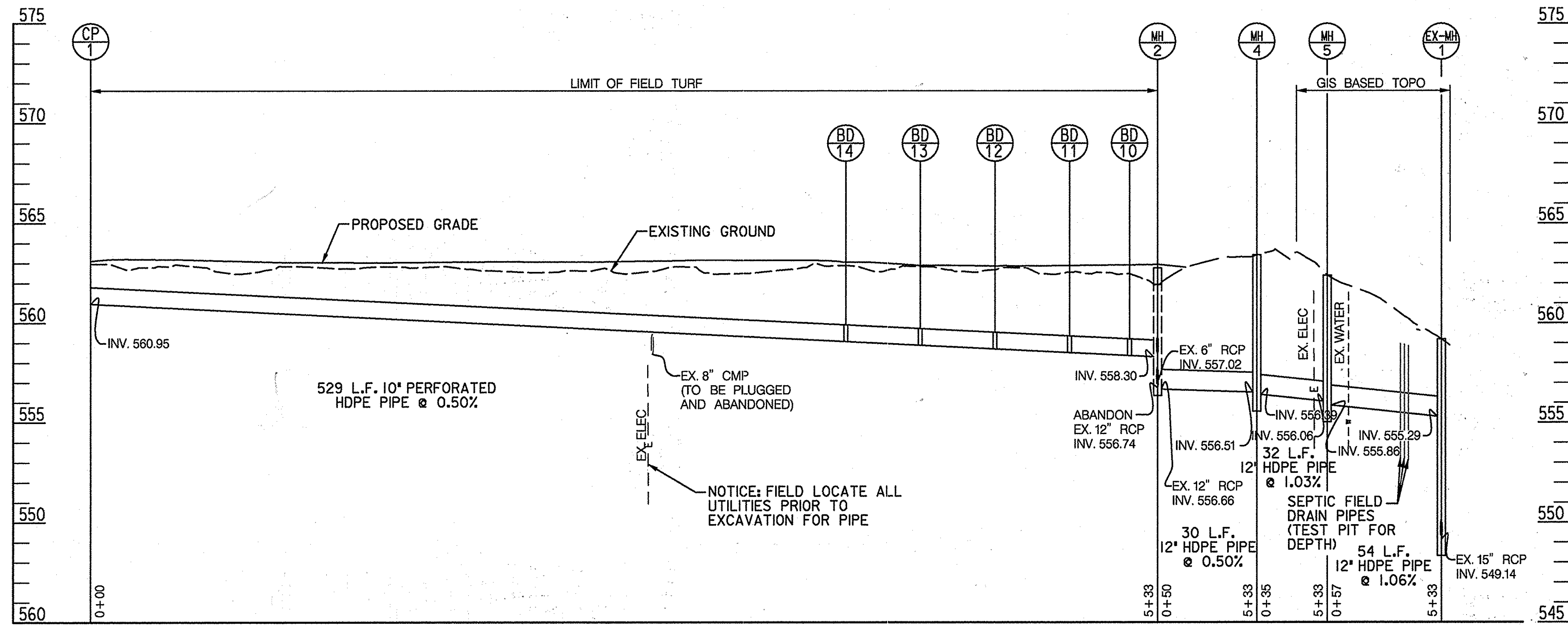


DES: RLL					
DRN: CDF					
GHK: DTM					
DATE: 05/14	DTM	1	NEW SHEET	06/14	
	BY	NO.	REVISION	DATE	

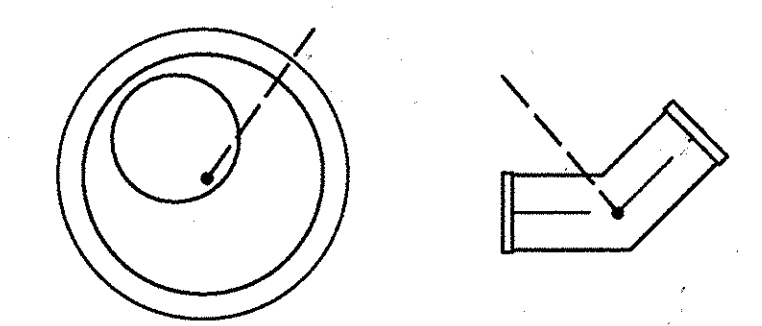
REVISED SITE DEVELOPMENT PLAN  
**SITE DETAILS V**  
SCALE MAP NO. N/A BLOCK NO.

REVISED SITE DEVELOPMENT PLAN  
**GLENELG HIGH SCHOOL  
FIELD IMPROVEMENTS**  
4TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE  
AS SHOWN  
SHEET  
34 OF 36



LOCATION POINT



MANHOLE BEND

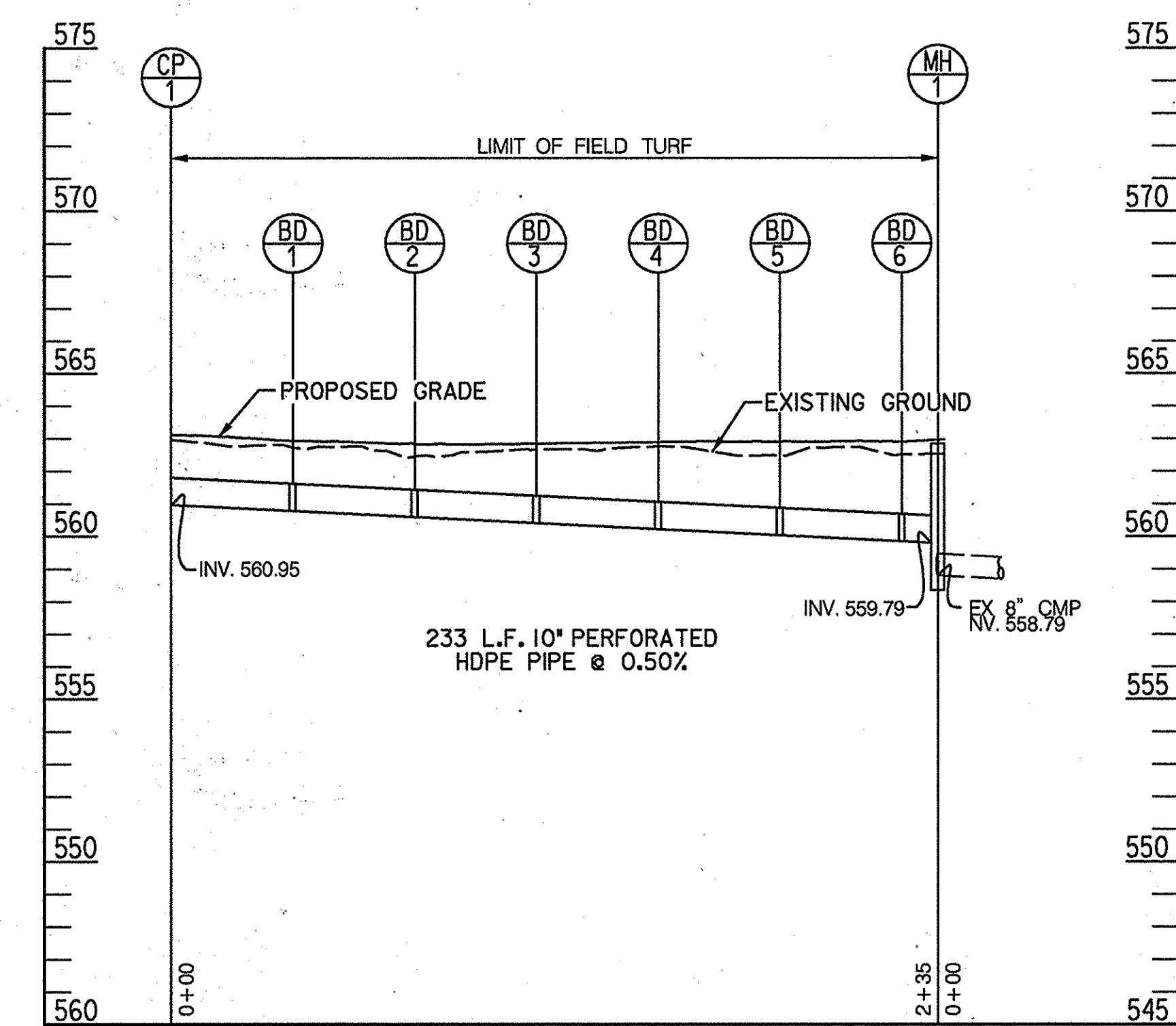
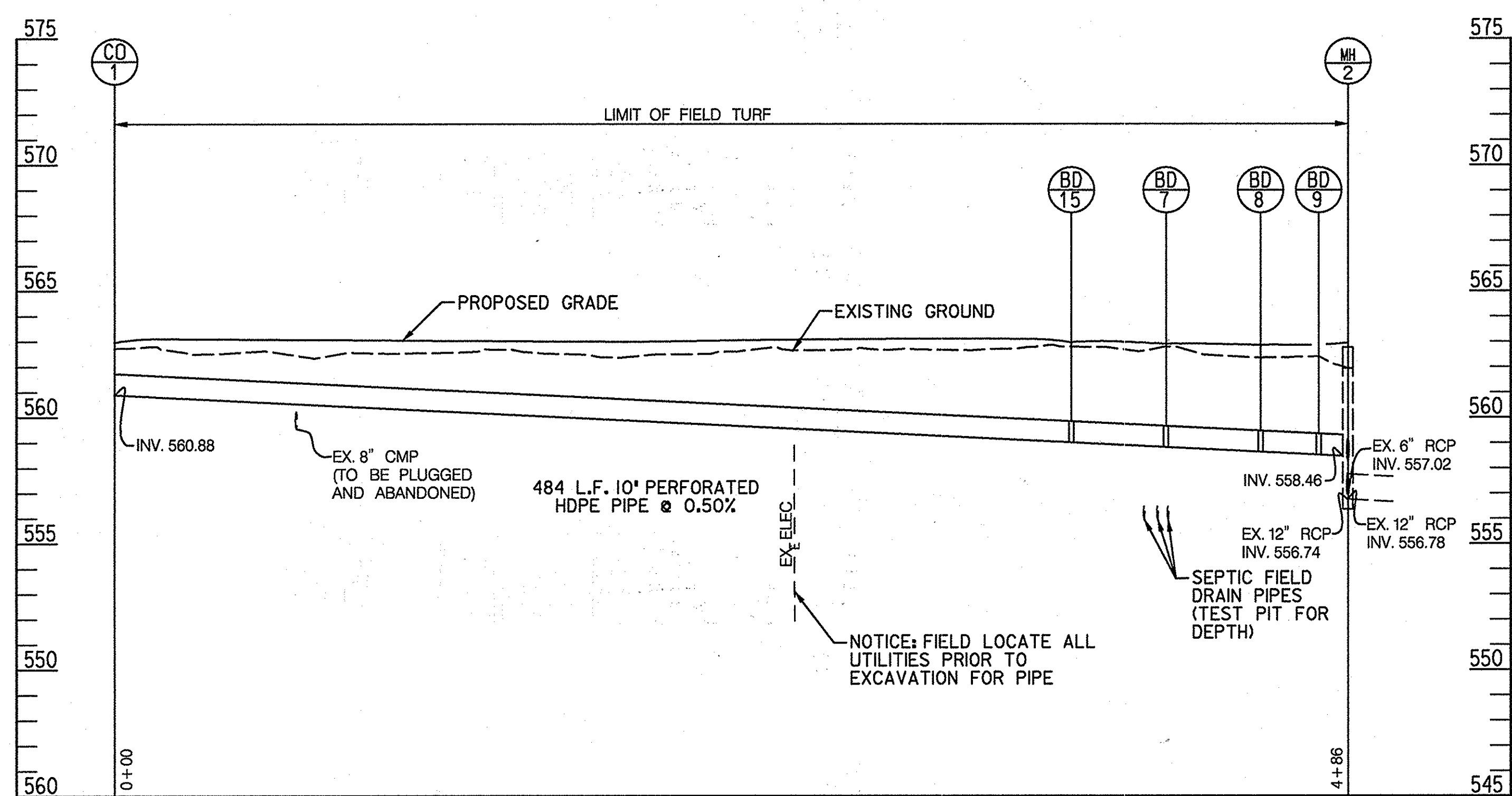


END SECTION

NOTE:  
SEE SHEET NO. 8 FOR STRUCTURE SCHEDULE.

PIPE PROFILE (STA. 101+84, LT. TO STA. 106+27, RT.)

SCALE: HORZ. 1"=40'  
VERT. 1"=4'



PIPE PROFILE (STA. 101+84, RT. TO STA. 106+27, RT.)

SCALE: HORZ. 1"=40'  
VERT. 1"=4'

PIPE PROFILE (STA. 101+84, LT. TO STA. 101+05, RT.)

SCALE: HORZ. 1"=40'  
VERT. 1"=4'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*Wash. A. Cagle* 2/10/14  
DIRECTOR DATE

*Karl Steinhilber* 7-10-14  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Chad Edwards* 6-20-14  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

PROFESSIONAL CERTIFICATION

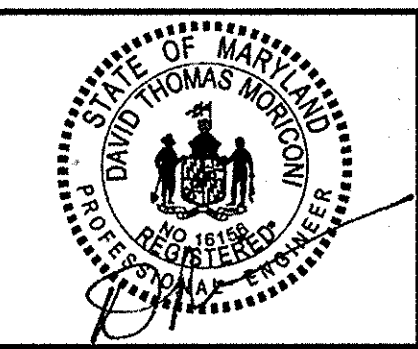
"I HEREBY CERTIFY THAT DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 16156. EXPIRATION DATE: 8/28/2014"

HOWARD COUNTY PUBLIC SCHOOL SYSTEM  
HOWARD COUNTY, MARYLAND

*John R. Byrd* DATE  
DIRECTOR, HOWARD COUNTY RECREATION AND PARKS

*James Cannon* 6-18-14 DATE  
ASSISTANT MANAGER, GROUNDS SERVICES, HOWARD COUNTY PUBLIC SCHOOL SYSTEM

PREPARED BY  
**URS**  
4 NORTH PARK DRIVE  
HUNT VALLEY, MARYLAND  
TEL: 410-785-7220



DES:	RLI				
DRN:	CDP				
CHK:	DTM				
DATE:	05/14	DTM	11	NEW SHEET	6/14
		BY	NO.	REVISION	DATE

REVISED SITE DEVELOPMENT PLAN

PIPE PROFILES

SCALE MAP NO. N/A BLOCK NO.

REVISED SITE DEVELOPMENT PLAN

GLENELG HIGH SCHOOL  
FIELD IMPROVEMENTS

4TH ELECTION DISTRICT - HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 35 OF 36

