

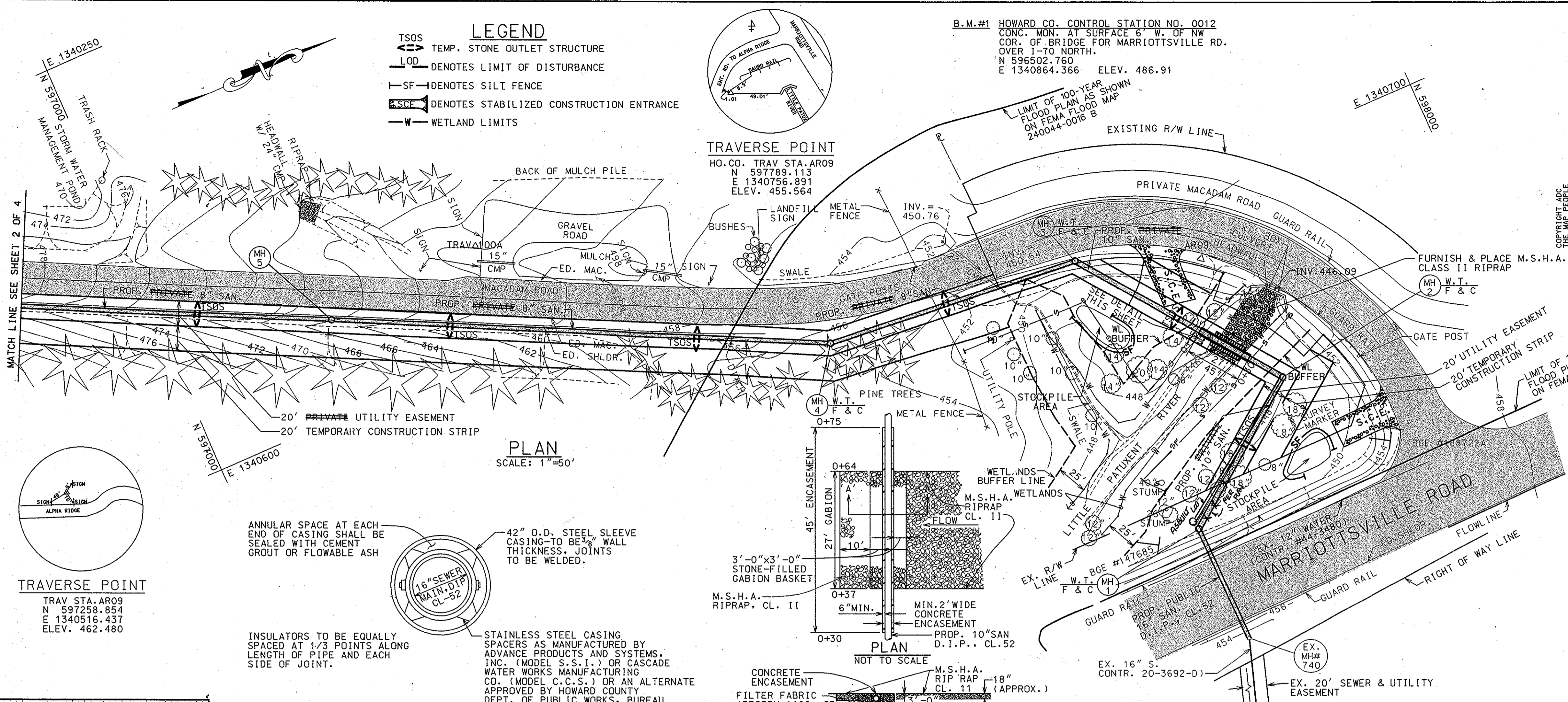
LEGEND

- TSOS TEMP. STONE OUTLET STRUCTURE
- LD DENOTES LIMIT OF DISTURBANCE
- SF DENOTES SILT FENCE
- SCSE DENOTES STABILIZED CONSTRUCTION ENTRANCE
- W WETLAND LIMITS

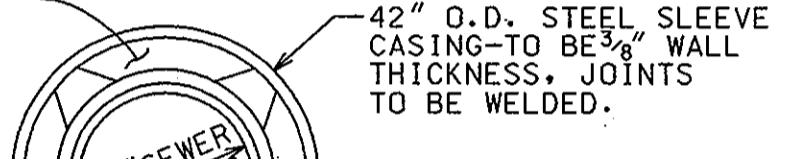
B.M.#1 HOWARD CO. CONTROL STATION NO. 0012
 CONC. MON. AT SURFACE 6' W. OF NW
 COR. OF BRIDGE FOR MARRIOTTVILLE RD.
 OVER I-70 NORTH.
 N 596502.760 ELEV. 486.91
 E 1340864.366

TRAVERSE POINT

HO. CO. TRAV STA. AR09
 N 597789.113 ELEV. 455.564
 E 1340756.891



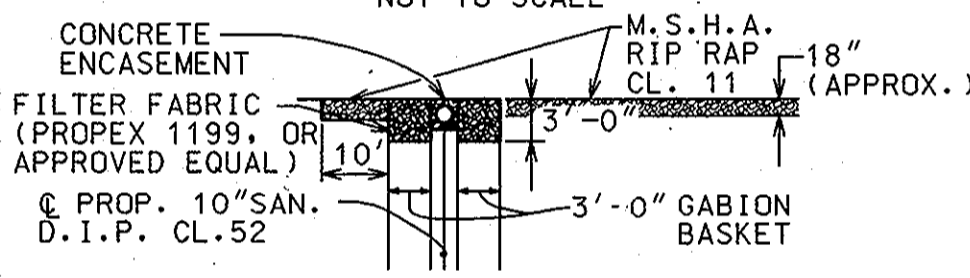
PLAN
 SCALE: 1"=50'



ANNULAR SPACE AT EACH
 END OF CASING SHALL BE
 SEALED WITH CEMENT
 GROUT OR FLOWABLE ASH

INSULATORS TO BE EQUALLY
 SPACED AT 1/3 POINTS ALONG
 LENGTH OF PIPE AND EACH
 SIDE OF JOINT.

STAINLESS STEEL CASING
 SPACERS AS MANUFACTURED BY
 ADVANCE PRODUCTS AND SYSTEMS,
 INC. (MODEL S.S.-1) OR CASCADE
 WATER WORKS MANUFACTURING
 CO. (MODEL C.C.S.) OR AN ALTERNATE
 APPROVED BY HOWARD COUNTY
 DEPT. OF PUBLIC WORKS, BUREAU
 OF UTILITIES. *Wood Backing*



SECTION A-A

STREAM CROSSING @ LITTLE PATUXENT RIVER

NOTE: SET MANHOLES # 1 THRU #4
 1'-6" ABOVE EXISTING GROUND

TRaverse POINT
 TRAV STA. AR09
 N 597258.854 ELEV. 462.480
 E 1340516.437

QUANTITIES

ITEMS	QUANTITIES ESTIMATED	QUANTITIES	AS BUILT	TYPE	MANUFACTURER/SUPPLIER
10" D.I.P. CL 52	315 L.F.	323	A-2	U.S. PIPE	FOUNDRY
8" SAN. SEWER MAIN 2000	1744 L.F.	2118	A-3	A-PIPE	OMI/BAF
6" P.V.C. FORCE MAIN	1,666 L.F.	1,545	A-4/A8	A-PIPE	DIAMOND PIPE
STD 4'-0" DIA. MH	10 EA	10	A-5	ATLANTIC	PRODUCT
4'-0" DIA. MH OVER 6' DEPTH	13 V.F.	10	A-0		
24" O.D. STEEL SLEEVE	140 L.F.	130	A-4/A8	BALTO. PIPE	IND.
42" O.D. STEEL SLEEVE	70 L.F.	90	A-1/A7	BALTO. PIPE	IND.
16" D.I.P. CL 52	93 L.F.	117	A-1/A7	U.S. PIPE	FOUNDRY
TRACER WIRE BOX	75 EA	7	A-9	A-10	CAPIVA
GABION BASKETS	18 C.Y.	12	A-12	ACE	ENVIRONMENTAL
M.S.H.A. CL. II RIPRAP	95 C.Y.	135	A-13	C.A.P.A.R.C.E.	
INLINE PRESS. C.O.	LUMP SUM	1	A-10	A-1	PIPE/VALVEMATIC
AIR/VACUUM REL. VLT.	LUMP SUM	1	A-11	A-1	PIPE
4'x6' VALVE VAULT	LUMP SUM	1	A-14	CHAVIS	CONCRETE

GENERAL NOTES

- Approximate location of existing mains are shown. The Contractor shall take all necessary precautions to protect existing mains and services and maintain uninterrupted service. Any damage incurred shall be repaired immediately to the satisfaction of the Engineer at the Contractor's expense.
- All horizontal controls are based on Maryland State Coordinates, NAD 82.
- All vertical controls are based on U.S.G.S. data.
- All pipe elevations shown are invert elevations unless otherwise noted on the plans.
- Clear all utilities by a minimum of 6". Clear all poles by 5'-0" minimum or tunnels as required. The owner has contacted the utility companies and has made arrangements for bracing of poles as shown on the drawings. In the event the Contractor's work requires the bracing of additional poles, any cost incurred by the owner for the bracing of additional poles or damages shall be deducted from money owed the Contractor. The Contractor shall coordinate with the utility companies to schedule the bracing of the poles.
- For details not shown on the drawings and for materials and construction methods, use Howard County Design Manual, Volume IV, Standard Specifications and Details for Construction (Latest Edition). The Contractor shall have a copy of Volume IV on the job.
- Where test pits have been made on existing utilities, they are noted by the symbol at the location of the test pit. A note or notes containing the results of the test pit or pits is included on the drawings. Existing utilities in the vicinity of the proposed work for which test pits have not been dug shall be located by the Contractor two weeks in advance of construction operations at his own expense.
- Contractor shall notify the following utility companies or agencies at least five working days before starting work shown on these plans:
 AT&T 1-800-526-2000
 BGE - Contractor Services 410-850-4620
 BGE - Underground Damage Control 410-787-9968
 Bureau of Utilities (DPW) 410-313-4900
 Bell Atlantic - MD, Inc. 1-800-621-9800
 Transcontinental Gas Corp. 410-465-0960
 State Highway Administration 410-531-5533
 Miss Utility 1-800-257-7777
- Trees and shrubs are to be protected from damage to the maximum extent. Trees and shrubs located within the construction strip are not to be removed or damaged by the Contractor.
- Contractor shall remove trees, stumps and roots along line of excavation. Payment for such removal shall be included in the unit price bid for construction of the main.
- The Contractor shall notify the Bureau of Highways, Howard County, at (410) 313-2450 at least five working days before any open cut of any County road or trenchless installation operation in county roads for laying water/sewer mains or house connections. The approval of these drawings will constitute compliance with DPW requirements per Section 18.114(a) of the Howard County Code.

FORCE MAIN NOTES

- Force mains shall be PVC unless otherwise noted.
- Tops of all force mains shall have a minimum of 3'-6" cover, unless otherwise noted.

SEWER NOTES

- All sewer mains shall be D.I.P. or P.V.C. unless otherwise noted.
- All manholes shall be 4'-0" inside diameter unless otherwise noted. Limit work in-stream to permission from the inspector, and a clear (no precipitation) weather forecast from the National Weather Service.
- Manholes designated W.T. in plan and profile shall have watertight frame and cover. Standard Detail G5.52. Where watertight manhole frames and covers are used, set top of frame 1'-6" above finished grade unless noted on the drawings.
- Inside walls of manholes shall be provided with a protective coating of F.V. 1140-150, epoxy paint for concrete as manufactured by Vimed Concrete Accessories, Inc.
- All disturbed paving shall be re-paved using Howard County Standard Paving Section P-4.

SANITARY MANHOLE STAKEOUT TABLE

ITEMS	COORDINATES
MH #1	597699.600 1340989.088
MH #2	597810.683 1340874.182
MH #3	597695.435 1340721.863
MH #4	597488.795 1340703.041
MH #5	597128.888 1340525.143
MH #6	596769.683 1340349.451
MH #7	596524.808 1340229.184
MH #8	596400.073 1339945.485
MH #9	596434.888 1339775.082
MH #10	596505.184 1339432.078
BLOW OFF VALVE	596814.615 1338651.130
45° BEND	596984.653 1338261.210
AIR RELEASE VALVE	597267.469 1338178.677
45° BEND	597326.521 1338161.143

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 CERTIFICATION OF ATTENDANCE AT A MARYLAND DEPARTMENT OF ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT."

John K. Robertson 8/23/00
 APPROVED, HOWARD COUNTY S.C.D. 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 COUNTY CONSERVATION DISTRICT."

Michael Sticope 8/14/00
 HICKS ENGINEERING COMPANY, INC.
 ENGINEERS, SURVEYORS & PLANNERS
 200 EAST JOPPA ROAD, SUITE 402
 TOWSON, MARYLAND 21286-3160 TEL (410) 494-0001

REVIEWED FOR HOWARD COUNTY S.C.D. AND MEETS TECHNICAL REQUIREMENTS
Chief Sumner 8/23/00
 U.S. NATURAL RESOURCES CONSERVATION SERVICE DATE

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

James M. deLac 8/23/00
 DIRECTOR OF PUBLIC WORKS DATE

Chief of Bureau of Engineering 8/23/00
 CHIEF, BUREAU OF ENGINEERING DATE

Chief of Utility Design Division 8/23/00
 CHIEF, UTILITY DESIGN DIVISION DATE

HICKS ENGINEERING CO., INC.
 ENGINEERS, SURVEYORS & PLANNERS
 200 EAST JOPPA ROAD - SUITE 402
 TOWSON, MARYLAND 21286-3160
 (410) 494-0001

DES: RAI/FW
 DRN: JAC
 CHK: DEH
 DATE: 6/30/00

BY NO. REVISION DATE

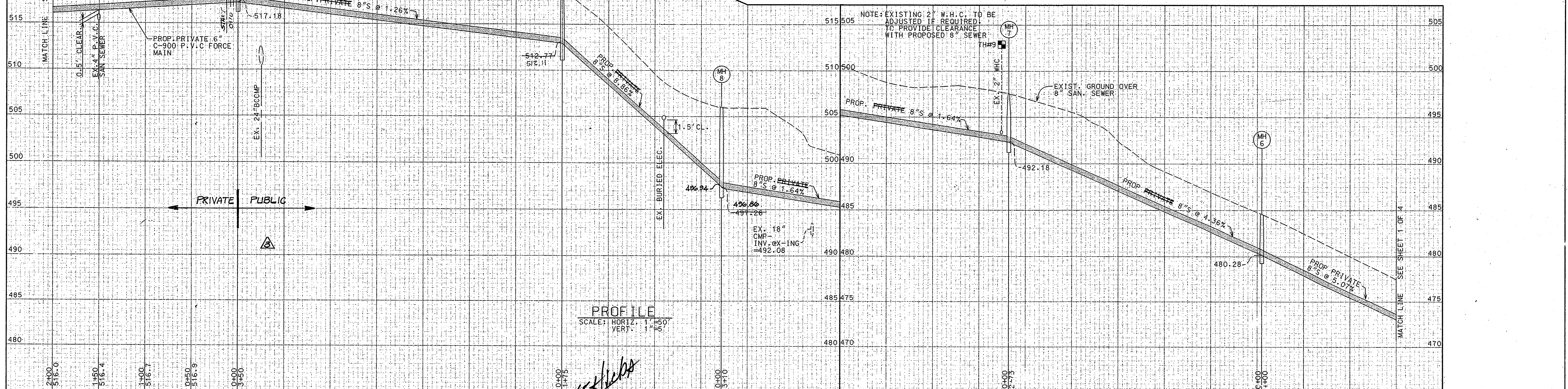
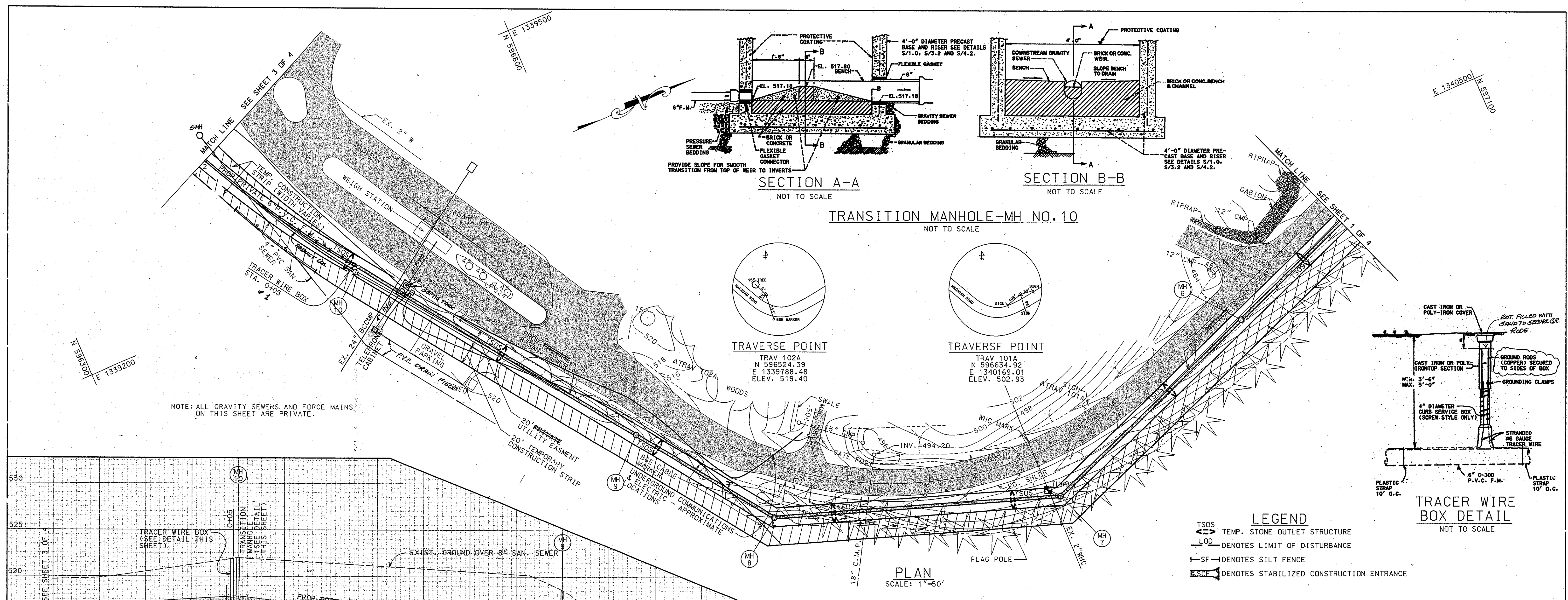
LD	PRIVATE SEWER ACCEPTED INTO PUBLIC SYS.	9/30/00
NI	ASBESTOS CONDITIONS ADDED TO PLAN	6/16/01
SH	Designate as Sheet S-1	8/16/00

PLAN & PROFILE
 8", 10" & 16"
 SAN. SEWER

TAX MAP 16 BLOCKS 9 & 10

**ALPHA RIDGE LANDFILL
 LEACHATE DISPOSAL SYSTEM
 ELECTION DISTRICT NO. 3
 HOWARD COUNTY, MARYLAND
 CAPITAL PROJECT NO. S-6215
 CONTRACT NO. 20-3776**

SCALE AS SHOWN
 SHEET 1 OF 4
 APPLICATION TRACKING NO. 99-NT-0452/199966478



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Jan 7, 2000
DIRECTOR OF PUBLIC WORKS DATE

8/23/00
CHIEF, BUREAU OF ENGINEERING DATE

8/24/00
CHIEF, BUREAU OF UTILITIES DATE

8/23/00
CHIEF, UTILITY DESIGN DIVISION DATE

HICKS ENGINEERING CO., INC.
ENGINEERS, SURVEYORS & PLANNERS
200 EAST JOPPA ROAD, SUITE 302
TOWSON, MARYLAND 21286-3160
(410) 494-0001

Hicks

DES:	RAI/FW	
DRN:	JAC	
CHK:	DEH	
DATE:	6/30/00	
BY:	NO.	REVISION
	UDD	PRIVATE SEWER ACCEPTED INTO PUBLIC SYS. 4/30/00
	KLI	AS-BUILT CONDITIONS ADDED TO PLAN 6/17/01
	SH	Designate as Sheet S-2 8-16-02

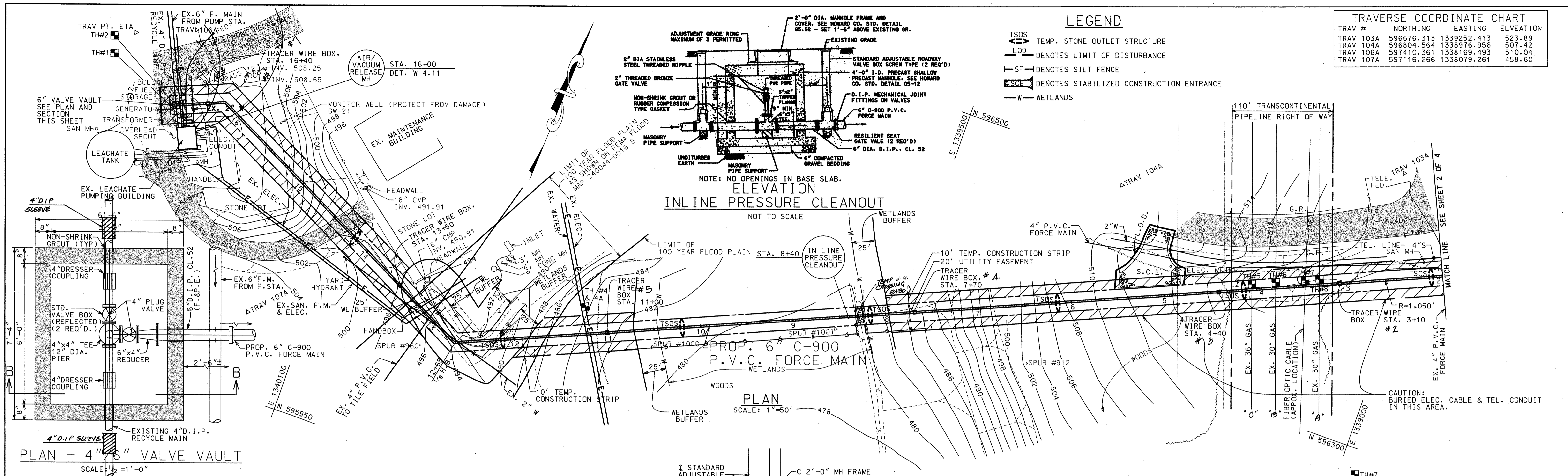
PLAN & PROFILE
**8" SANITARY SEWER/
6" FORCE MAIN**

TAX MAP 16 BLOCKS 9 & 10

**ALPHA RIDGE LANDFILL
LEACHATE DISPOSAL SYSTEM**
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND
CAPITAL PROJECT NO. S-6215
CONTRACT NO. 20-3776

SCALE AS SHOWN

SHEET 5 OF 4

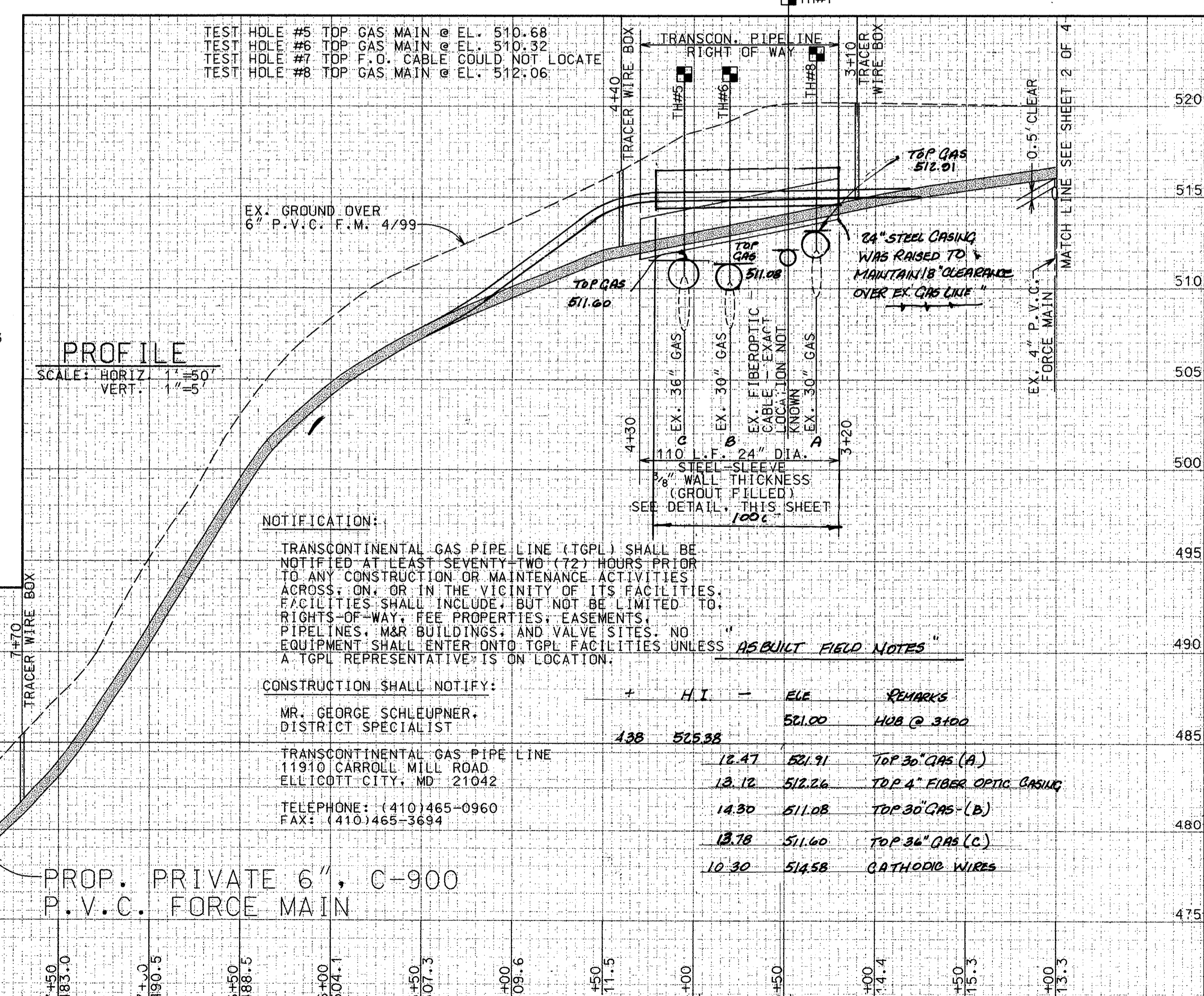
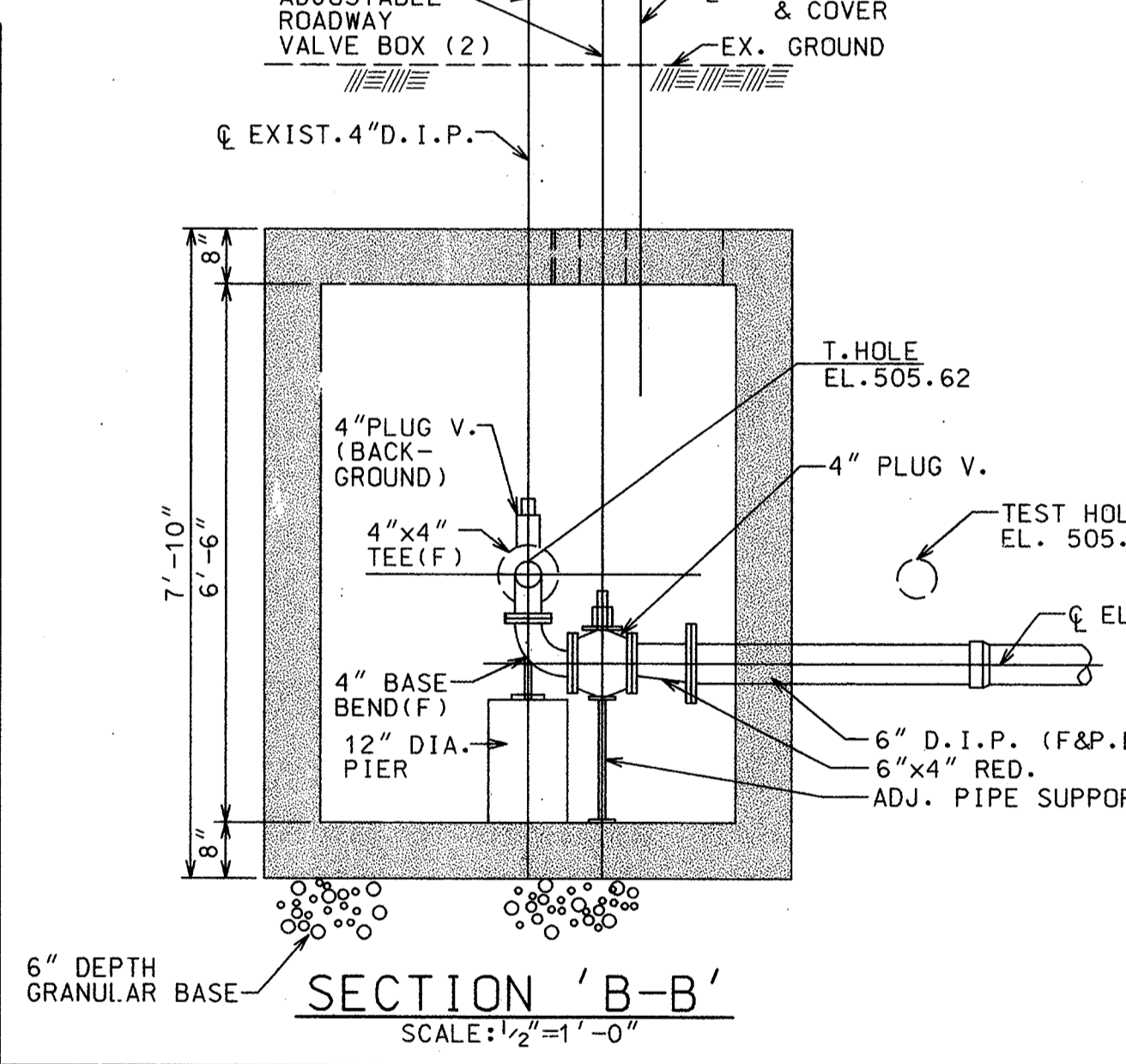
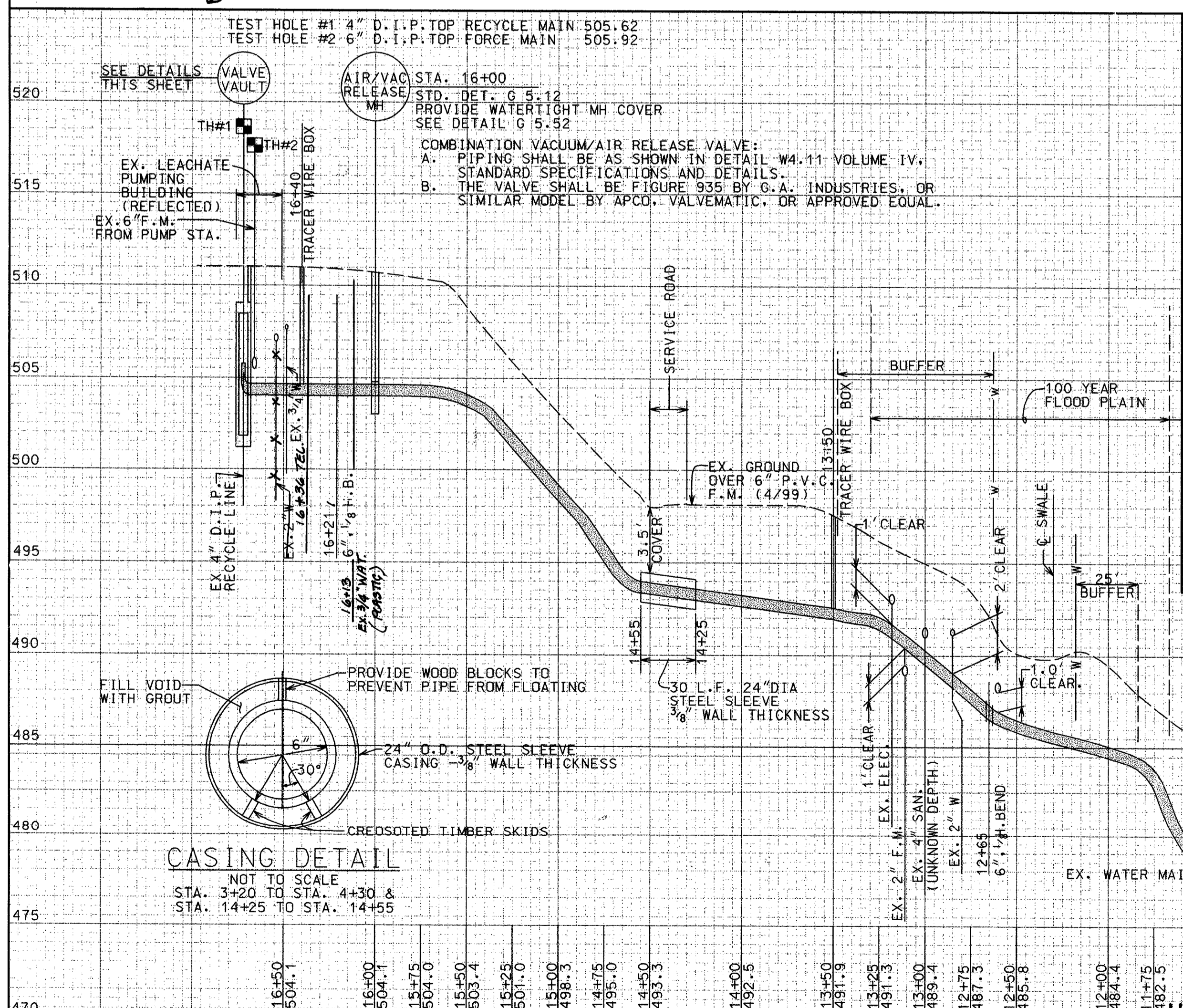


LEGEND

- TSOS TEMP. STONE OUTLET STRUCTURE
- LOD DENOTES LIMIT OF DISTURBANCE
- SF DENOTES SILT FENCE
- SCE DENOTES STABILIZED CONSTRUCTION ENTRANCE
- W WETLANDS

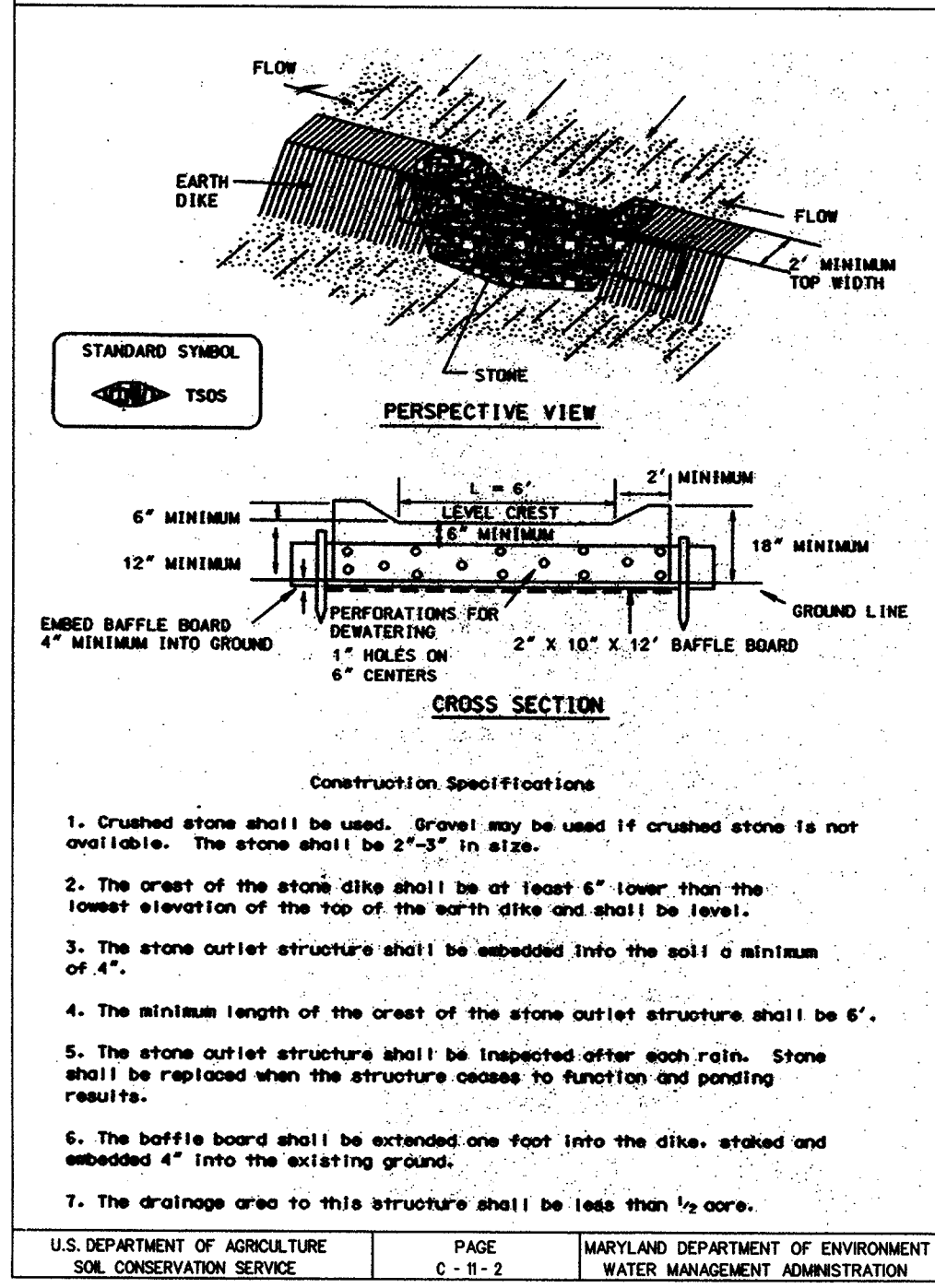
TRAVERSE COORDINATE CHART

TRAV #	NORTHING	EASTING	ELEVATION
TRAV 103A	59676.313	1339252.413	523.89
TRAV 104A	596804.564	1338976.956	507.42
TRAV 106A	597410.361	1338169.493	510.04
TRAV 107A	597116.266	1338079.261	458.60

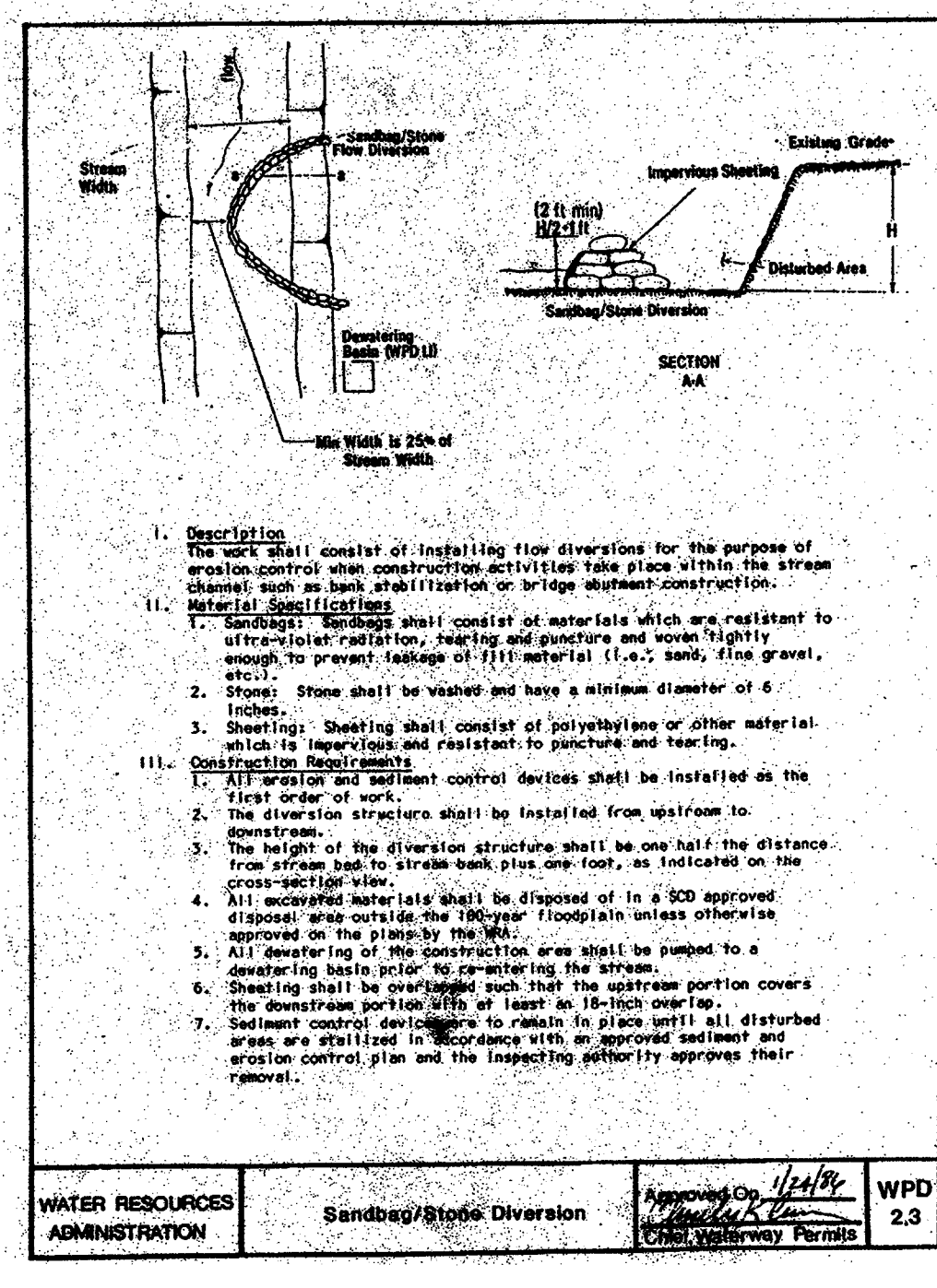
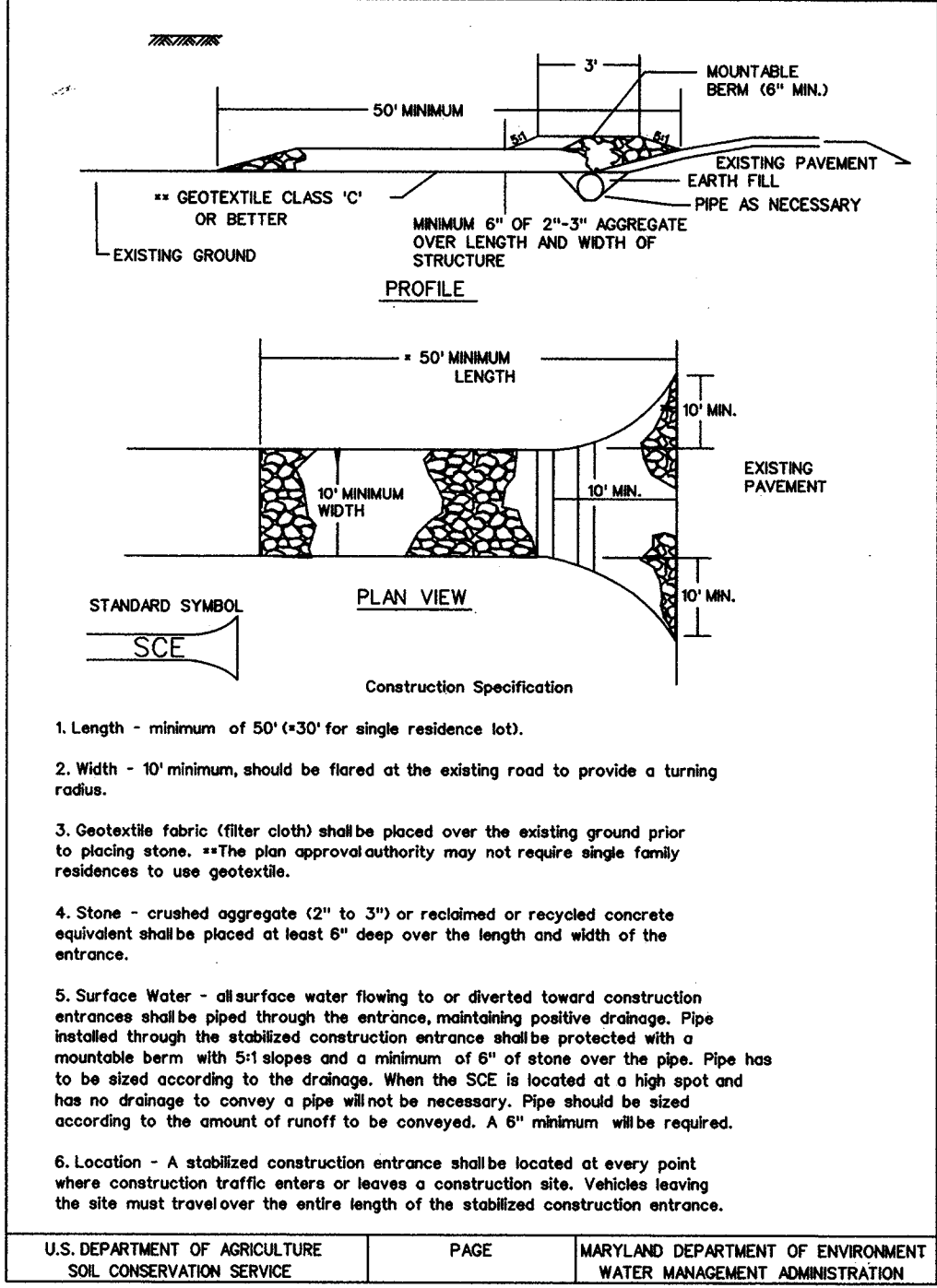


<p>DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND</p> <p><i>James J. Shaw</i> Director of Public Works <i>Robert J. Spang</i> Chief, Bureau of Engineering</p> <p>DATE: 8/23/00</p>	<p>HICKS ENGINEERING CO., INC. ENGINEERS, SURVEYORS & PLANNERS 200 EAST JOPPA ROAD - SUITE 102 TOWSON, MARYLAND 21286-3160 (410) 494-0001</p> <p><i>Robert J. Spang</i> Chief, Utility Design Division DATE: 8/23/00</p>	<p>DES: RAI/FW DRN: JAC CHK: DEH DATE: 6/30/00</p> <p>BY: <i>RAI</i> NO. <i>1</i> REVISION: <i>AS-BUILT CONDITIONS ADDED TO PLAN Designate as Sheet S-3</i></p>	<p style="text-align: center;">PLAN & PROFILE 6-INCH FORCE MAIN</p> <p>TAX MAP 16 BLOCKS 9 & 10</p>	<p style="text-align: center;">ALPHA RIDGE LANDFILL LEACHATE DISPOSAL SYSTEM</p> <p>ELECTION DISTRICT NO. 3 HOWARD COUNTY, MARYLAND CAPITAL PROJECT NO. S-6215 CONTRACT NO. 20-3776</p>	<p>SCALE AS SHOWN</p> <p>SHEET 3 OF 4</p>
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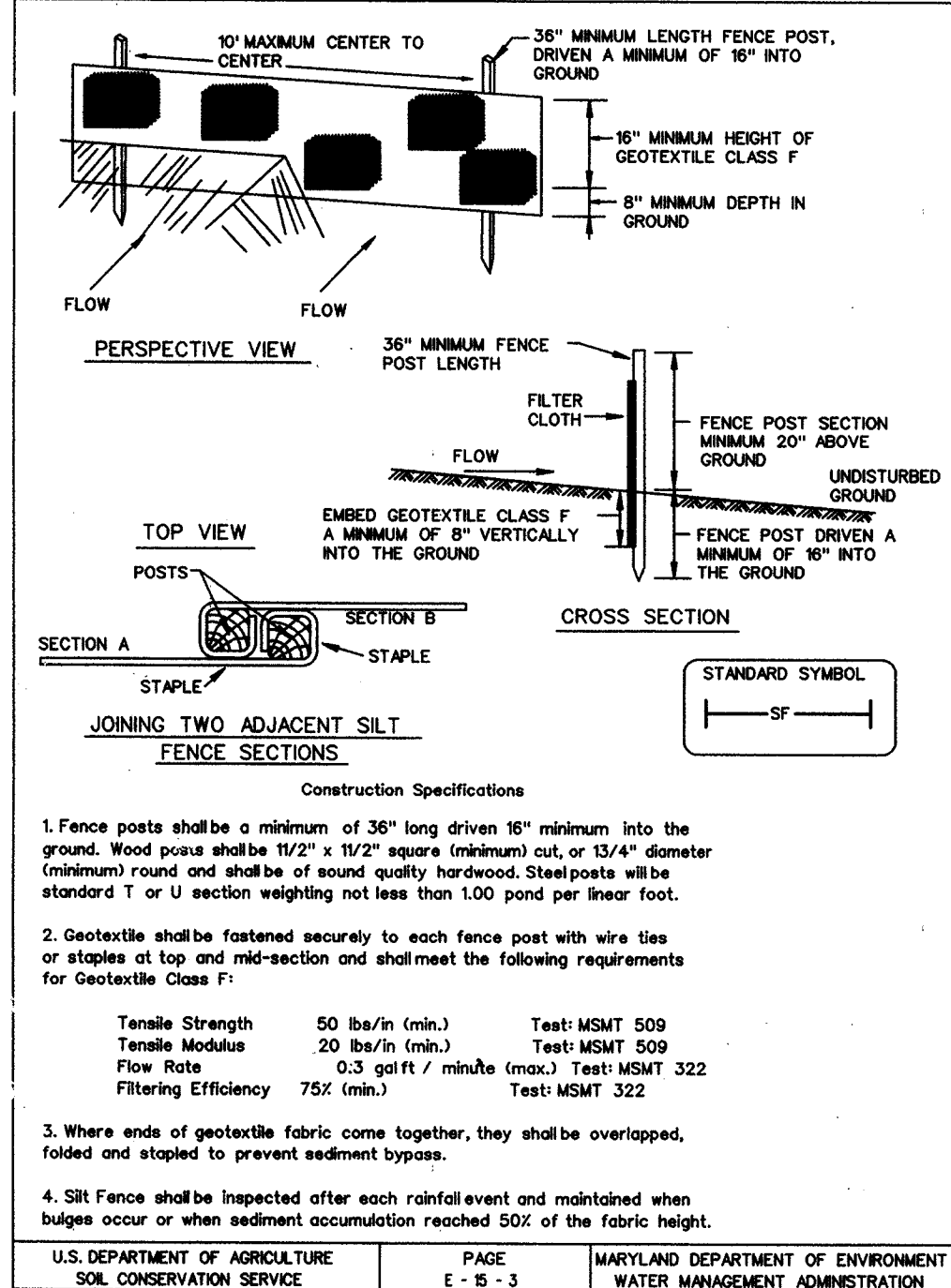
DETAIL 19 - STONE OUTLET STRUCTURE



DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



DETAIL 22 - SILT FENCE



Section II - Temporary Seeding

Vegetation - annual grass or grain used to provide cover on disturbed areas for up to 12 months. For longer duration of vegetative cover, Permanent Seeding is required.

A. Seed Mixtures - Temporary Seeding

- Select one or more of the species or mixtures listed in Table 26 for the appropriate Plant Hardiness Zone (from Figure 5) and enter them in the Temporary Seeding Summary below, along with application rates, seeding dates and seeding depths. If this Summary is not put on the plans and completed, then Table 26 must be put on the plans.
- For sites having soil tests performed, the rates shown on this table shall be deleted and the rates recommended by the testing agency shall be written in. Soil tests are not required for Temporary Seeding.

No.	Species	Application Rate (lb/ac)	Seeding Date	Seeding Depth	Fertilizer Rate (10-10-10)	Lime Rate
1	BARLEY OR RYE PLUS FOXTAIL MILLET	150 lb/ac	2/1 - 11/30	1/4 in.	600 lb/ac (15 lb/1000 sq ft)	2 tons/ac (100 lb/1000 sq ft)

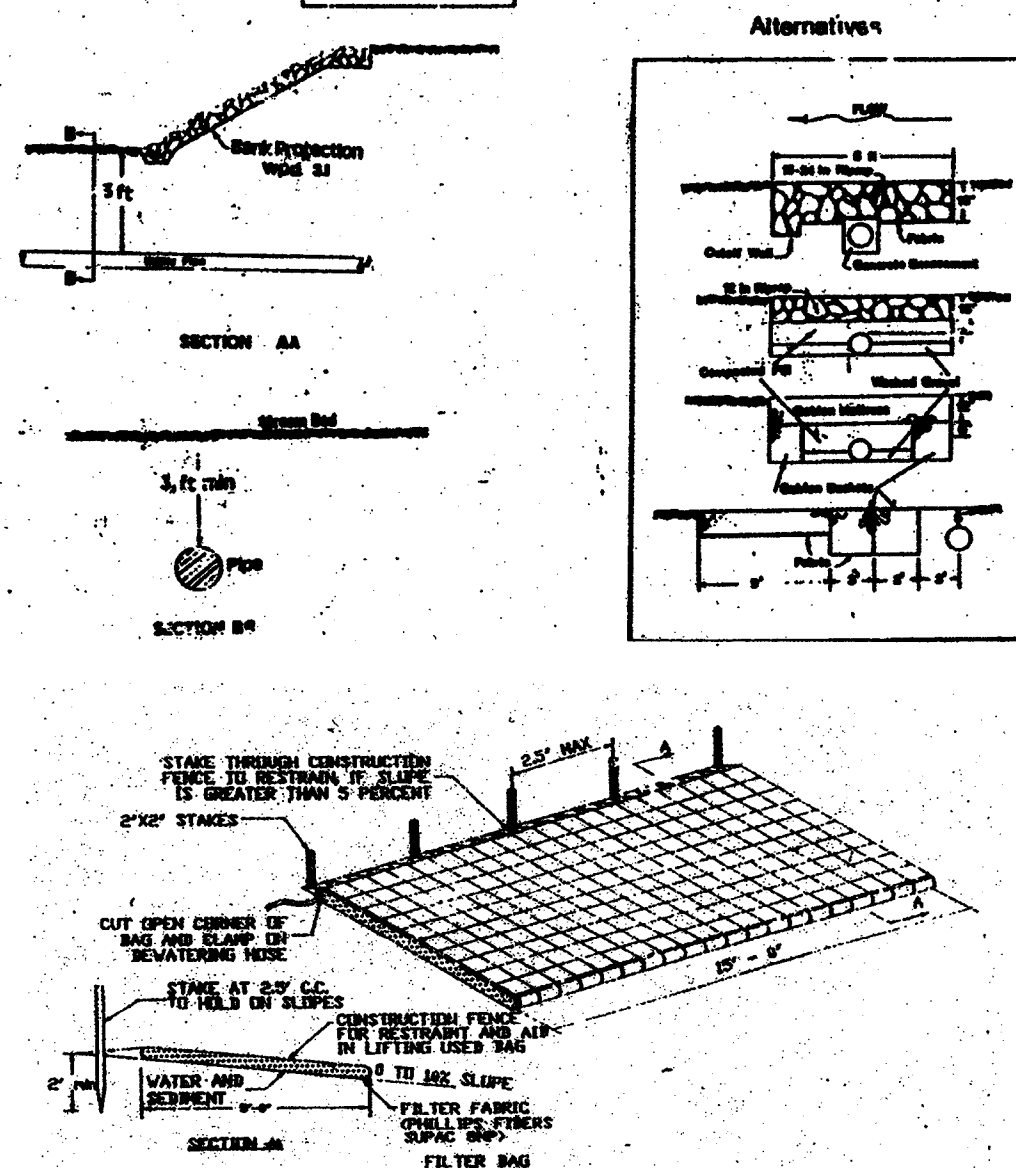
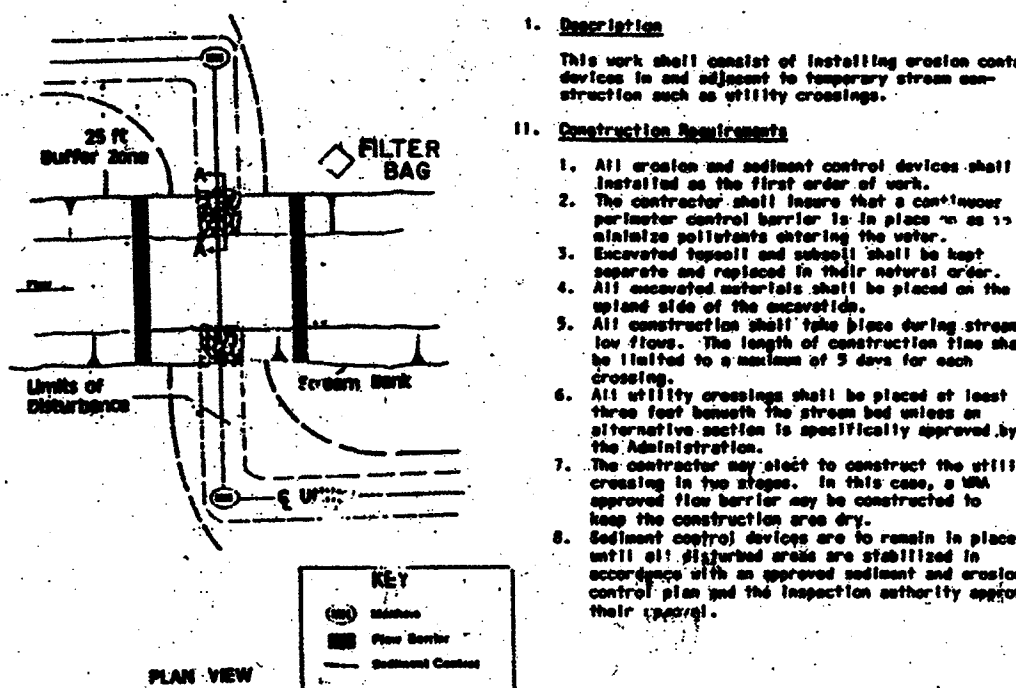
Section III: Permanent Seeding

Seeding grass and legumes to establish ground cover for a minimum period of one year on disturbed areas generally receiving low maintenance.

A. Seed Mixtures - Permanent Seeding

- Select one or more of the species or mixtures listed in Table 25 for the appropriate Plant Hardiness Zone (from Figure 5) and enter them in the Permanent Seeding Summary below, along with application rates and seeding dates. Seeding depths can be estimated using Table 26. If this Summary is not put on the construction plans and completed, then Table 25 must be put on the plans. Additional planting specifications for exceptional sites such as shorelines, streambanks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-SCS Technical Field Office Guide, Section 342 - Critical Area Planting. For special lawn maintenance areas, see Sections IV Sed and V Turfgrass.
- For sites having disturbed area over 5 acres, the rates shown on this table shall be deleted and the rates recommended by the soil testing agency shall be written in.
- For areas receiving low maintenance, apply uniform fertilizer (46-0-0) at 3 1/2 lb/1000 sq. ft. (150 lb/ac), in addition to the above soil amendments shown in the table below, to be performed at the time of seeding.

No.	Species	Application Rate (lb/ac)	Seeding Date	Seeding Depth	N	P2O5	K2O	Lime Rate
1	PERMANENT SEEDING MIXTURE	150 lb/ac	2/1 - 11/30	1/4 in.	90 lb/ac (2.0 lb/1000 sq ft)	175 lb/ac (4.4 lb/1000 sq ft)	175 lb/ac (4.4 lb/1000 sq ft)	2 tons/ac (100 lb/1000 sq ft)



TEMPORARY EROSION CONTROL MEASURE FILTER BAG DETAIL

NOTES:

- FILTER BAG SHALL BE PLACED IN A SLOPING OR LEVEL WELL-VEGETATED SITE SUCH THAT WATER WILL FLOW AWAY FROM STRUCTURES AND WORK AREA.
- THE FILTER BAG MUST BE STAKED IN PLACE AND SECURED TO THE PUMP RESURGENCE LINE.
- FILTER BAG SHALL NOT BE USED FOR DISTURBED AREAS GREATER THAN 200 SQ. FT.
- VALVE SHALL BE RECEIVED AND INSPECTED IF AFTER BAG IS FILLED WITH SEDIMENT. SEDIMENT FROM BAG SHALL BE SPREAD IN AN UPLAND AREA.

UTILITY NOTES

- OPEN DAILY THAT SECTION OF TRENCH THAT CAN BE BACKFILLED AND STABILIZED EACH DAY.
- PLACE ALL EXCAVATED MATERIAL ON UPHILL SIDE OF TRENCH.
- ANY SEDIMENT CONTROLS DISTURBED BY UTILITY CONSTRUCTION ARE TO BE REPAIRED IMMEDIATELY.

SEDIMENT CONTROL NOTES

- A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF CONSTRUCTION INSPECTION PRIOR TO THE START OF ANY CONSTRUCTION. (313-1855).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1; B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS, SOD, TEMPORARY SEEDING AND MULCHING. TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:**
TOTAL AREA OF SITE: N/A ACRES
AREA DISTURBED: 0.28 ACRES ±
AREA TO BE ROOFED OR PAVED: 0.01 ACRES ±
AREA TO BE VEGETATIVELY STABILIZED: 0.27 ACRES ±
TOTAL CUT: 1600 CU. YDS.
TOTAL FILL: N/A CU. YDS.
OFFSITE WASTE/BORROW AREA LOCATION-TO BE DETERMINED BY THE CONTRACTOR.
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED IF DEEMED NECESSARY BY THE HOWARD COUNTY DPW SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING, OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.

SEQUENCE OF CONSTRUCTION

NO.	DESCRIPTION	TIME OF COMPLETE
1.	OBTAIN A GRADING PERMIT FROM HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES, AND PERMITS.	0.5 WEEKS
2.	CONTACT HOWARD COUNTY, BUREAU OF CONSTRUCTION INSPECTION (313-1880) PRIOR TO STARTING DATE.	0.5 WEEKS
3.	INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS PER SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL, VOL. IV.	1.5 WEEKS
4.	EXCAVATE AND INSTALL PROPOSED 8"/10"/16" SEWER MAIN AND 6" P.V.C. FORCE MAIN. DETAILED SEQUENCE BELOW A.) THROUGH I.).	8.0 WEEKS
5.	RESTORE PAVING AND EARTH TRENCHES TO THEIR ORIGINAL CONDITION AS PER HOWARD COUNTY STANDARDS.	2.50 WEEKS
6.	UPON PERMISSION FROM HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES.	0.5 WEEKS
7.	FINE GRADE ALL DISTURBED AREAS AND STABILIZE WITH PERMANENT SEEDING.	1.0 WEEKS

DETAILED SEQUENCE

- INSTALL SANDBAG/STONE DIVERSION (W/FILTER BAG DEWATERING DEVICE) ON EAST SIDE OF RIVER, THE DIVERSION FOR THIS PHASE SHALL BE INSTALLED SO THAT 40% OF THE EXISTING RIVER BED WIDTH REMAINS UNDISTURBED.
- INSTALL PROPOSED 10" MAIN (INCLUDING STREAM EROSION PROTECTION, CONCRETE ENCASUREMENT AND GABION BASKETS EACH SIDE OF CONCRETE ENCASUREMENT, AS CLOSE TO LIMIT OF DIVERSION AS POSSIBLE WITHOUT COMPROMISING ITS STABILITY OR FUNCTION, TEMPORARILY CAP OR PLUG END OF MAIN, BACKFILL TRENCH, REMOVE TEMP. ACCESS RAMP AND REPAIR EAST RIVER BANK PER DETAILS & STABILIZE ALL DISTURBED AREAS.
- RE-ALIGN THE DIVERSION TO CREATE THE CONSTRUCTION AREA ON THE WEST SIDE OF THE RIVER (EXTEND LIMITS BEYOND TEMPORARY CAP/PLUG SUFFICIENTLY TO PERMIT REMOVAL AND CONTINUED CONSTRUCTION) AND INSTALL TEMPORARY ACCESS RAMP.
- REMOVE THE TEMPORARY CAP/PLUG AND CONTINUE INSTALLATION OF 10" MAIN (INCLUDING STREAM EROSION PROTECTION, CONCRETE ENCASUREMENT AND GABION BASKETS, AS REQUIRED)
- BACKFILL TRENCH, REPAIR WEST RIVER BANK PER DETAILS, AND STABILIZE ALL DISTURBED AREAS.
- REMOVE DIVERSION AND TEMPORARY ACCESS RAMP AND REPAIR AND/OR STABILIZE ALL RELATED DISTURBED AREAS.
- INSTALL REMAINDER OF PROPOSED MAIN.
- RESTORE EARTH TRENCHES TO THEIR ORIGINAL CONDITION AS PER HOWARD COUNTY STANDARDS.
- RESTORE AREAS DISTURBED BY CONSTRUCTION.

RESTORATION SCHEDULE - 16", 10", 8" & 6" SAN F.M.

LOCATION - 16" SAN	LENGTH	TYPE
EX MH 740 TO PROP. MH 1		
STA 0+00 TO STA 0+15	15'	SEED & MULCH
STA 0+15 TO STA 0+70	55'	PAVING
STA 0+70 TO 1+97	27'	SEED & MULCH
10"/8" SAN		
MH 1 TO MH 2		
STA 0+00 TO STA 1+37	137'	SEED & MULCH
MH 2 TO MH 3		
STA 0+00 TO STA 0+35	35'	SEED & MULCH
STA 0+60 TO STA 1+86	126'	SEED & MULCH
MH 3 TO MH 4		
STA 0+00 TO STA 2+10	210'	SEED & MULCH
MH 4 TO MH 5		
STA 0+00 TO STA 4+00	400'	SEED & MULCH
MH 5 TO MH 6		
STA 0+00 TO STA 4+00	400'	SEED & MULCH
MH 6 TO MH 7		
STA 0+00 TO STA 2+73	273'	SEED & MULCH
MH 7 TO MH 8		
STA 0+00 TO STA 3+10	310'	SEED & MULCH
MH 8 TO MH 9		
STA 0+00 TO STA 1+75	175'	SEED & MULCH
MH 9 TO MH 10		
STA 0+00 TO STA 3+50	350'	SEED & MULCH
6" SAN FORCE MAIN		
MH 10 TO EX. VALVE VAULT	1615'	SEED & MULCH

"CONDITIONS AND MANAGEMENT PRACTICES WORKING IN NON-TIDAL WETLANDS"

- NO MATERIALS OR EQUIPMENT MAY BE STORED OR STOCKPILED WITHIN NON-TIDAL WETLANDS. 25-FOOT WETLANDS BUFFER OR 100-YEAR FLOODPLAIN.
 - STOCKPILE AND MAINTAIN SEPARATELY THE TOP 6"-12" OF TOPSOIL MATERIAL EXCAVATED FROM NON-TIDAL WETLANDS. TO BE REPLACED AS THE TOP LAYER OF THE BACKFILLED MATERIAL.
 - REMOVE EXCESS FILL OR CONSTRUCTION MATERIAL OR DEBRIS TO AN UNPLANNED DISPOSAL AREA.
 - PLACED MATERIALS IN A LOCATION AND MANNER WHICH DOES NOT ADVERSELY IMPACT SURFACE OR SUBSURFACE WATER FLOW INTO OR OUT OF THE NON-TIDAL WETLAND.
 - PLACE HEAVY EQUIPMENT ON MATS OR SUITABLY OPERATE THE EQUIPMENT TO PREVENT DAMAGE TO THE NON-TIDAL WETLANDS.
 - USE PREVIOUSLY EXCAVATED MATERIALS AS BACKFILL, UNLESS IT CONTAINS WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL OR ANY OTHER DELETERIOUS SUBSTANCE. USE CLEAN BORROW MATERIAL WHEN EXCAVATED MATERIAL IS NOT SUITABLE FOR USE AS BACKFILL.
 - ALL STABILIZATION IN THE WETLAND AND BUFFER SHALL BE OF THE FOLLOWING SPECIES: ANNUAL RYEGRASS (LOLIUM MULTIFLORUM), MILLE (SETARIA ITALICA), BARELY (HORDEUM SP.), OATS (Avena SP.) AND/OR RYE (SECALE CEREALE). THESE SPECIES ALLOW FOR THE STABILIZATION OF THE SITE WHILE ALSO ALLOWING FOR THE VOLUNTARY REVEGETATION OF NATURAL WETLAND SPECIES. OTHER NONPERSISTENT VEGETATION MAY BE ACCEPTABLE, BUT MUST BE APPROVED BY THE DIVISION. KENTUCKY 31 FESCUE SHALL NOT BE UTILIZED IN THE 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 ELEVATION OF NON-TIDAL WETLANDS THE SAME AS THE ORIGINAL GRADES AND ELEVATION.
 - TO PROTECT IMPORTANT AQUATIC SPECIES, IN-STREAM WORK IS PROHIBITED AS DETERMINED BY THE CLASSIFICATION OF THE STREAM AS FOLLOWS:
USE 1 WATERS. IN-STREAM WORK MAY NOT BE CONDUCTED DURING THE PERIOD MARCH 1 THROUGH JUNE 15, INCLUSIVE, DURING ANY YEAR.
- *THESE CONDITIONS ALSO APPLY FOR WORK THAT WILL RESULT IN IMPACTS TO THE 25-FOOT WETLAND BUFFER, F.E.M.A. MAPPED 100 YEAR FLOOD PLAIN, AND REGULATED WATERWAYS.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James J. Blaska
DIRECTOR OF PUBLIC WORKS

Paul J. Seaman 8/23/00
CHIEF, BUREAU OF ENGINEERING

Robert J. Reimer 8-24-00
CHIEF, BUREAU OF UTILITIES

By: [Signature] 8-23-00
CHIEF, UTILITY DESIGN DIVISION

HICKS ENGINEERING CO., INC.
ENGINEERS, SURVEYORS & PLANNERS
200 EAST JOPPA ROAD SUITE 202
TOWSON, MARYLAND 21286-3160
(410) 494-0001

STATE OF MARYLAND
PROFESSIONAL ENGINEER

DES: RAI/FW
DRN: JAC
CHK: DEH
DATE: 6/30/00

S.H. Designate as Sheet S-4
BY NO. REVISION

TAX MAP 16 BLOCKS 9 & 10

ALPHA RIDGE LANDFILL LEACHATE DISPOSAL SYSTEM
ELECTION DISTRICT NO. 3
HOWARD COUNTY, MARYLAND
CAPITAL PROJECT NO. S-6215
CONTRACT NO. 20-3776

SCALE AS SHOWN
SHEET 5 OF 4