

ITEMS	QUANTITIES ESTIMATED	AS BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
12" SAN. D.I.P. CL. 52 STD. 4'-0" DIA. MH	1,827 L.F.			
WATERTIGHT MANHOLE 4'-0" DIA.	4			
RIP-RAP CLASS III	489 C.Y.			
IMBRICATED RIP-RAP/BOULDERS	1047 L.F.			
LIVE STAKES	190 L.F.			
RE-LINE EX. 12" A.C.P.	684 L.F.			

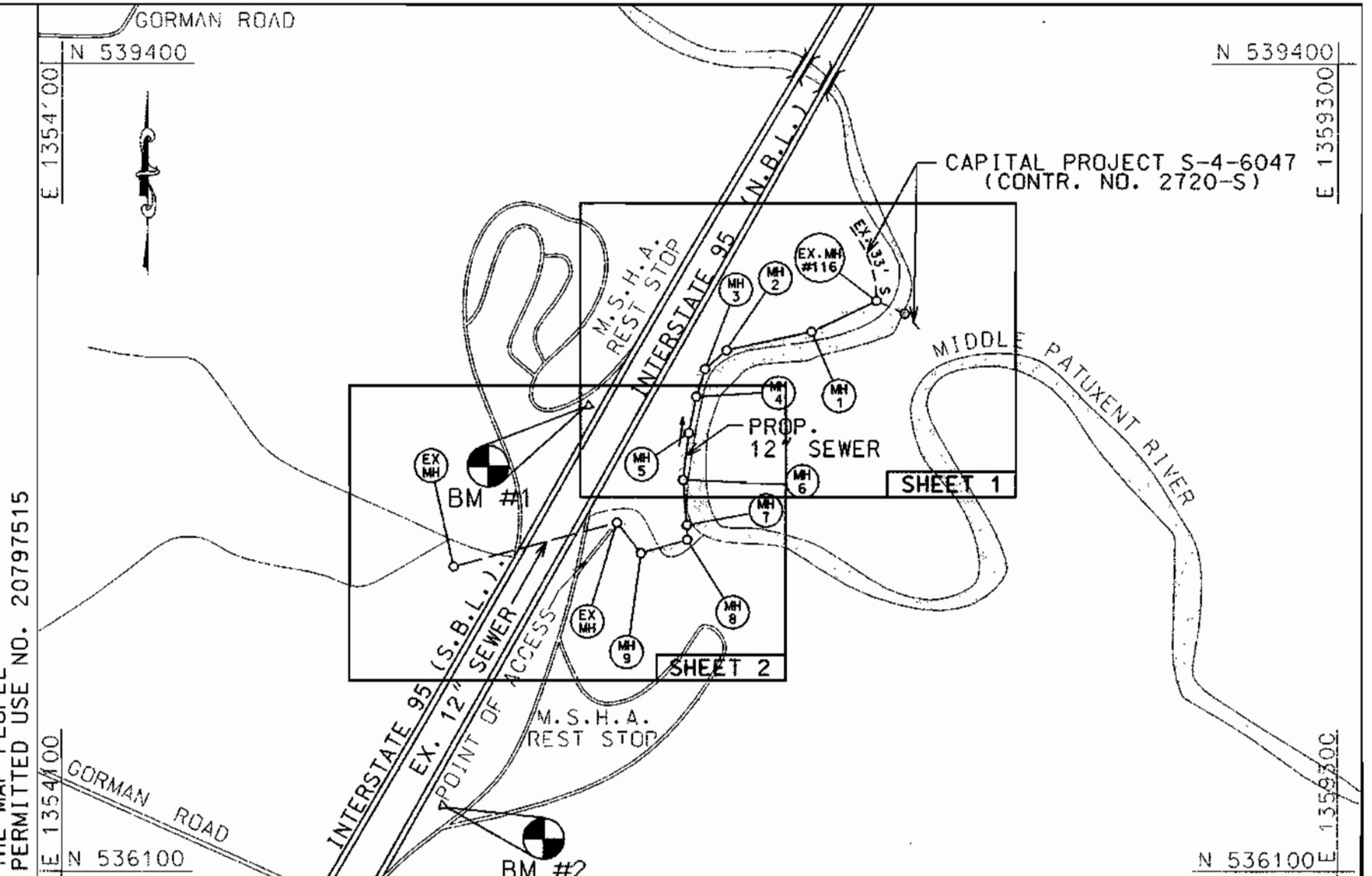
BENCH MARKS

B.M. #1 N 538058.635 ELEV. 283.12
E 1356174.197

HOWARD COUNTY CONTROL PT. "REST WEST" HUB & TACK 10.5' N.W. OF EDGE OF CONC. OF SOUTHBOUND I-95 OFF RAMP TO REST AREA.

B.M. #2 N 536655.576 ELEV. 312.65
E 1355927.184

HOWARD COUNTY CONTROL POINT "REST EAST" 3/4" REBAR IN GROUND 60' ± N.W. OF EDGE OF CONC. OF NORTHBOUND I-95 OFF RAMP TO REST AREA.



VICINITY MAP
SCALE: 1"=600'

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 83.
- 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 410 865 3803
BGE - Contractor Services 410-850-4620
BGE - Underground Damage Control 410-787-9068
Bureau of Utilities (DPW) 410-313-4900
Bell Atlantic - MD, Inc. 410-597-8585
Colonial Pipeline Co. 410-795-1390
Miss Utility 1-800-257-7777
State Highway Administration 410-531-5533
- 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.

SEWER NOTES

- All sewer mains shall be D.I.P. class 52.
- All manholes shall be 4'-0" inside diameter unless otherwise noted.
- Force mains shall be D.I.P. only.
- Manholes shown with 12" and 16" walls are for brick manholes only.
- 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 otherwise noted on the drawings.
- House(s) with the symbol "C.N.S." indicates cellar cannot be served.
- Wash out area is small area that is severely eroded due to concentrated storm drainage flow through this area. The rip-rap is essential in this area to help stabilize and protect the sewer main from possible future wash out.
- Limit work in stream to permission from the inspector, and a clear (no precipitation) weather forecast from the N.W.S.

TRAVERSE DATA (NOT REFERENCED)

PT. NO.	NORTH	EAST	ELEV.
H.E.C. #46	538078.76598	1356881.16617	214.15
H.E.C. #43	538217.73595	1356800.53069	214.06
H.E.C. #40	538259.64822	1356968.98110	215.40
H.E.C. #35	538334.50755	1357305.35504	215.21
H.E.C. #17	538528.40952	1357422.14568	215.51

TRAVERSE POINT
H.E.C. #29
ELEV. 215.50
N 538443.93736
E 1357422.5168

PLAN
SCALE: 1"=50'

IMBRICATED RIP-RAP INSTALLATION NOTES

- CONSTRUCT SANDBAG/STONE DIVERSION TO DIVERT THE STREAM AROUND THE PROPOSED IMBRICATED RIP-RAP/BOULDER PLACEMENT INSTALLATION AREAS.
- PUMP OUT EXCESS WATER AND INSTALL IMBRICATED RIP-RAP OR BOULDERS.
- REMOVE SANDBAG/STONE DIVERSION TO RESTORE AREA TO EXISTING CONDITION.
- INSTALL LIVE STAKES SPACED 4' APART AS SHOWN TO STABILIZE THE PROPOSED FILL AREA BEHIND THE IMBRICATED RIP-RAP.

LEGEND

- DENOTES IMBRICATED RIP-RAP OR BOULDER PLACEMENT TO 2' YEAR STORM ELEVATION - 3' X 3' MINIMUM IN SIZE
- DENOTES LIVE STAKES (SEE DETAIL SHEET 5)
- DENOTES WATER-TIGHT MANHOLE FRAME & COVER
- DENOTES WETLAND LIMIT AND FLAG
- DENOTES SOIL BORING LOCATION

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

John K. Robertson 8/3/99
APPROVED, HOWARD COUNTY S.C.D. DATE

REVIEWED FOR HOWARD COUNTY S.C.D. AND MEETS TECHNICAL REQUIREMENTS

Cheryl Sammons 8/3/99
U.S. NATURAL RESOURCES CONSERVATION SERVICE DATE

DEVELOPER'S CERTIFICATION:

"I 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."

Paul G. Sponner 6/22/99
BUREAU OF ENGINEERING
DEPARTMENT OF PUBLIC WORKS. 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."

Donald E. HICKS, P.E. June 18, 1999
HICKS ENGINEERING COMPANY, INC.
ENGINEERS, SURVEYORS & PLANNERS
200 EAST JOPPA ROAD, SUITE 402
TOWSON, MARYLAND 21286 TEl. (410) 494-0001 DATE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert M. Bannin 7/1/99
DIRECTOR OF PUBLIC WORKS DATE

Robert M. Bannin 7/1/99
CHIEF, BUREAU OF UTILITIES DATE

Robert M. Bannin 7/1/99
ACT. CHIEF, UTILITY DESIGN DIVISION DATE

HICKS ENGINEERING CO., INC.
ENGINEERS, SURVEYORS & PLANNERS
200 EAST JOPPA ROAD, SUITE 402
TOWSON, MARYLAND 21286-3150
(410) 494-0001

Paul G. Sponner 6/22/99
CHIEF, BUREAU OF ENGINEERING DATE

Robert M. Bannin 7/1/99
ACT. CHIEF, UTILITY DESIGN DIVISION DATE

DES: DEH
DRN: DAR
CHK: DEH
DATE: 6/22/99

BY NO. REVISION DATE

PLAN ALIGNMENT
12" SEWER MAIN

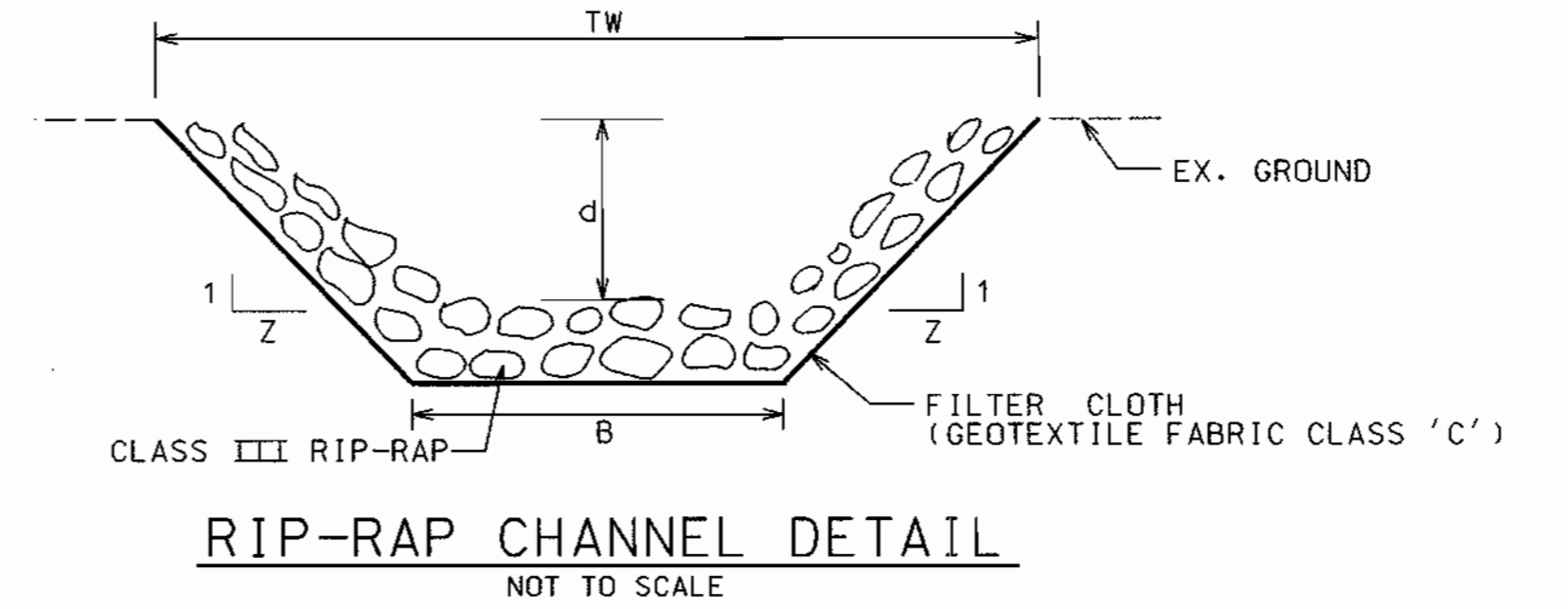
600' SCALE MAP NO. 47 BLOCK NO. 3,4 & 9

INTERSTATE ROUTE 95 - SEWER MAIN CROSSING & SUBINTERCEPTOR

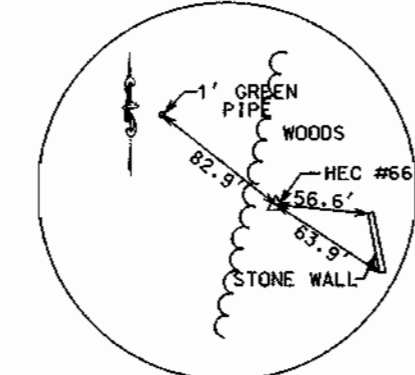
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CAPITAL PROJECT NO. S-6208
CONTRACT NO. 20-3733

SCALE AS SHOWN
SHEET 1 OF 5

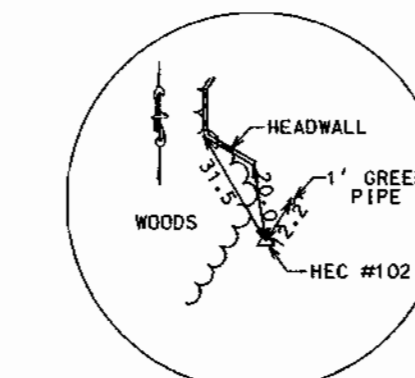
RIP-RAP CHANNEL DESIGN DATA													
CHANNEL NO.	AREA (A)	WETTED PERIMETER (P)	HYDRAULIC RADIUS (R)	TOP WIDTH (TW)	SLOPE	D ₅₀	D ₁₀₀	THICKNESS (+)	O _{CFs}	V _{FPs}	Z	B	d
1	67.50'	34.84'	1.937'	55'	1.81%	23"	34"	46"	10.00	1.16	2	25'	2.2'
2	20.68'	14.84'	1.394'	25'	4.00%	23"	34"	46"	790.00	0.78	2	5'	2.2'



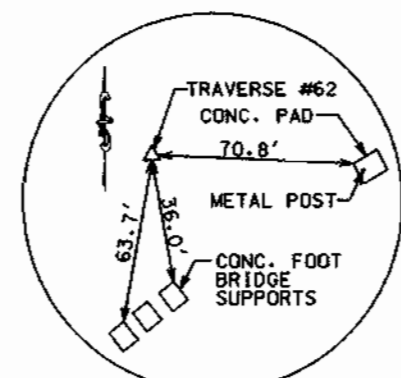
TRAVERSE DATA (NOT REFERENCED)			
PT. NO.	NORTH	EAST	ELEV.
H.E.C. #51	537873.20923	1356672.17078	212.28
H.E.C. #54	537661.47337	1356638.06933	212.45



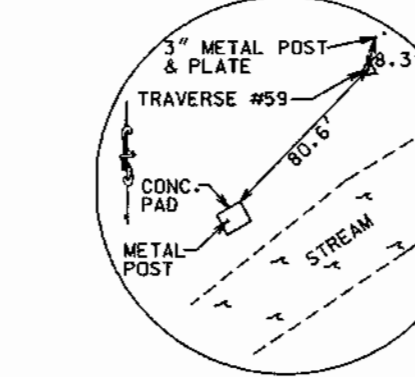
TRAVERSE POINT
H.E.C. #66
ELEV. 228.82
N 537479.29573
E 1356429.50191



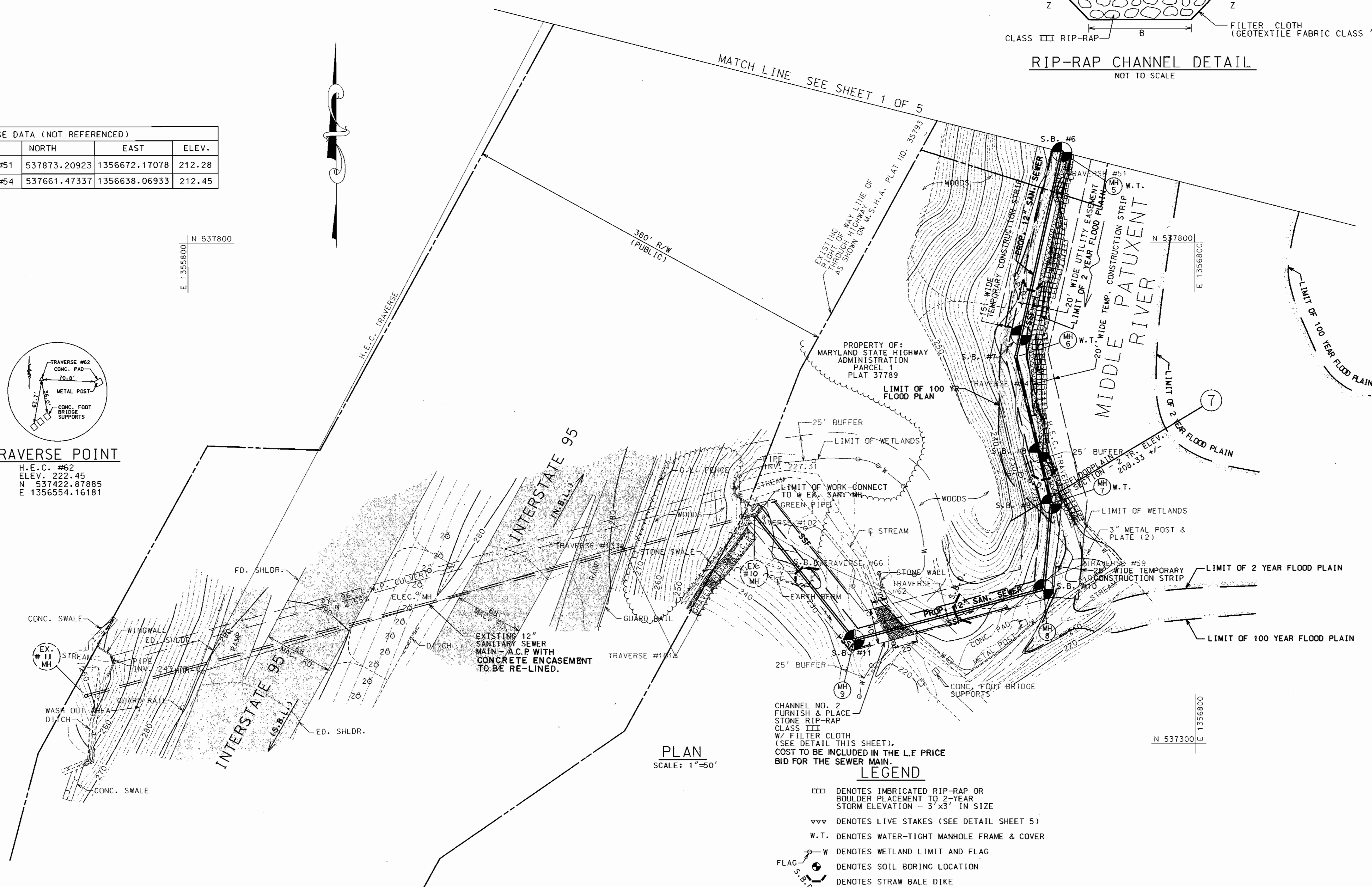
TRAVERSE POINT
H.E.C. #102
ELEV. 230.93
N 537520.57359
E 1356357.93517



TRAVERSE POINT
H.E.C. #62
ELEV. 222.45
N 537422.87885
E 1356554.16181



TRAVERSE POINT
H.E.C. #59
ELEV. 212.56
N 537478.87915
E 1356690.24278

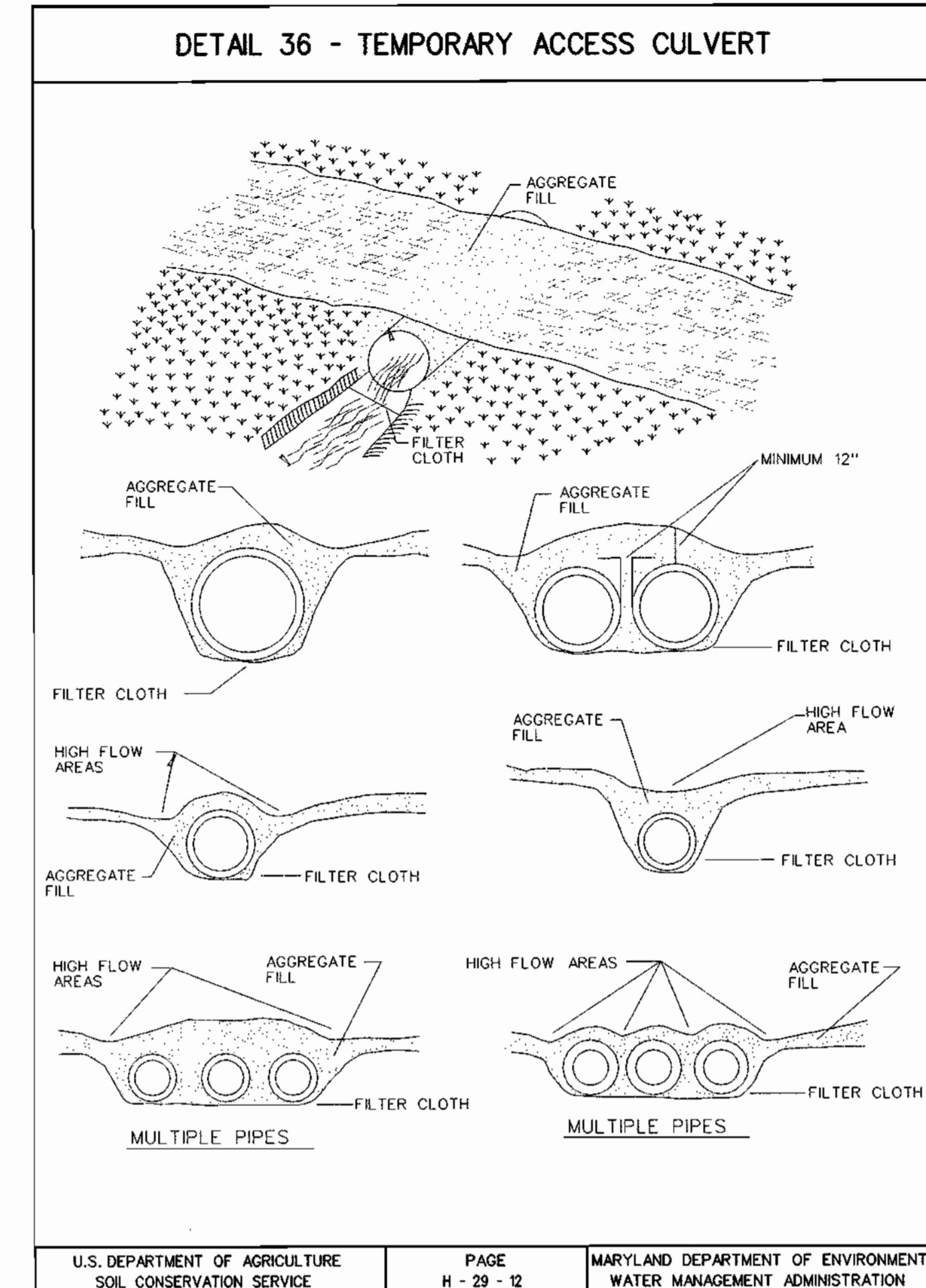
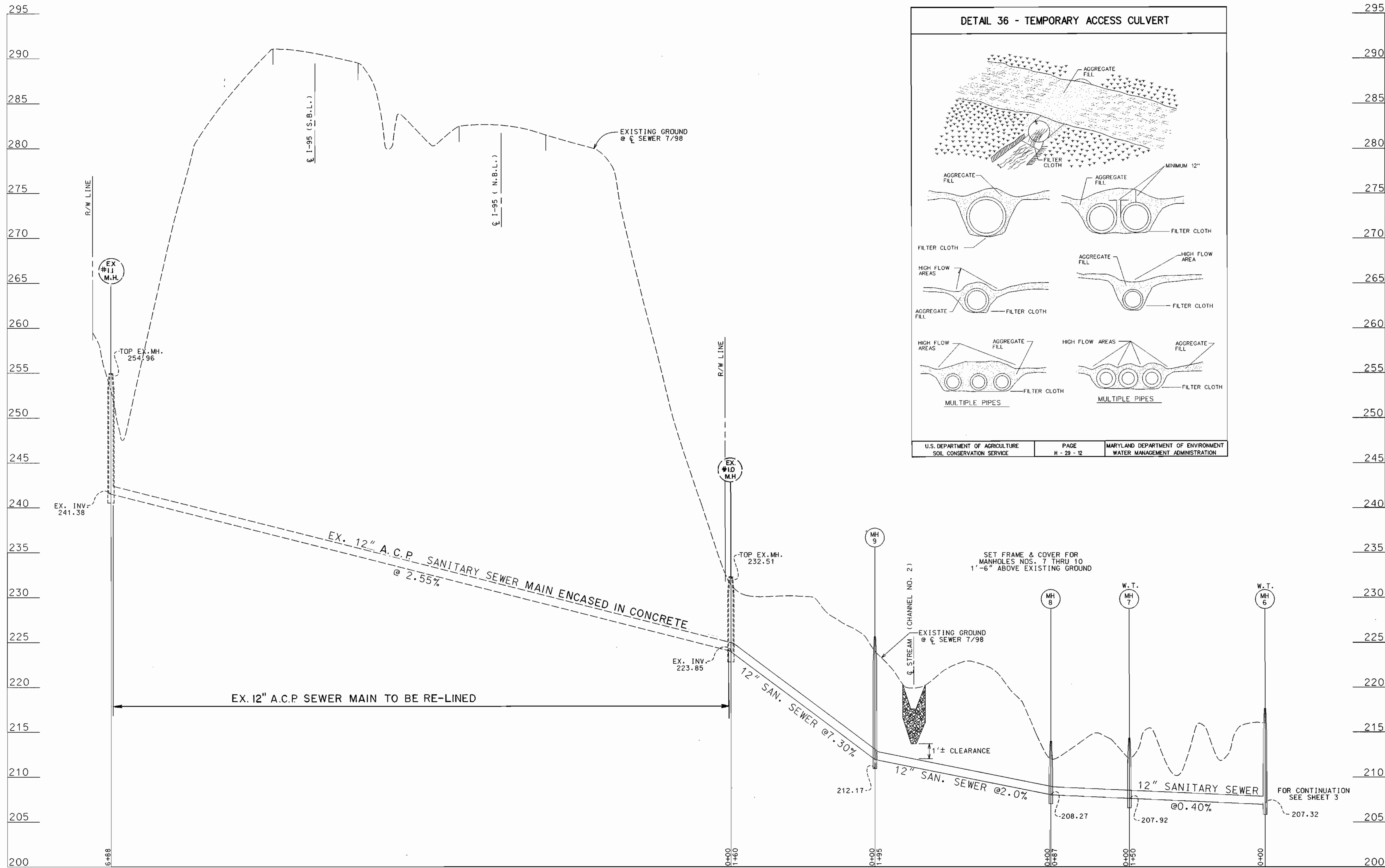


CHANNEL NO. 2
FURNISH & PLACE
STONE RIP-RAP
CLASS III
W/ FILTER CLOTH
(SEE DETAIL THIS SHEET).
COST TO BE INCLUDED IN THE LF PRICE
BID FOR THE SEWER MAIN.

LEGEND

- ▣ DENOTES IMBRICATED RIP-RAP OR BOULDER PLACEMENT TO 2-YEAR STORM ELEVATION - 3'x3' IN SIZE
- ▽▽ DENOTES LIVE STAKES (SEE DETAIL SHEET 5)
- W.T. DENOTES WATER-TIGHT MANHOLE FRAME & COVER
- W DENOTES WETLAND LIMIT AND FLAG
- FLAG DENOTES SOIL BORING LOCATION
- S-B— DENOTES STRAW BALE DIKE
- SSF— DENOTES SUPER SILT FENCE

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Director of Public Works: <i>James J. Quinn</i> 7-1-99 Chief, Bureau of Engineering: <i>Paul G. Eason</i> 6-29-99 Chief, Bureau of Utilities: <i>Robert M. Beatty</i> 7-1-99 Act. Chief, Utility Design Division: <i>Robert M. Beatty</i> 6-29-99		HICKS ENGINEERING CO., INC. ENGINEERS, SURVEYORS & PLANNERS 200 EAST JOPPA ROAD - SUITE 402 TOWSON, MARYLAND 21286-3160 (410) 494-0001		DES: DEH DRN: DAR CHK: DEH DATE: 6/22/99		PLAN ALIGNMENT 12" SEWER MAIN		INTERSTATE ROUTE 95 - SEWER MAIN CROSSING & SUBINTERCEPTOR 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND CAPITAL PROJECT NO. S-6208 CONTRACT NO. 20-3733		SCALE AS SHOWN SHEET 2 OF 5	
H.E.C. J.O. #97044		STATE OF MARYLAND PROFESSIONAL ENGINEER No. 887 EXPIRES 12/31/00		BY NO. REVISION DATE		600' SCALE MAP NO. 47 BLOCK NO. 3, 4 & 9					



PROFILE
SCALE: HOR. 1"=50'
VERT. 1"=5'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

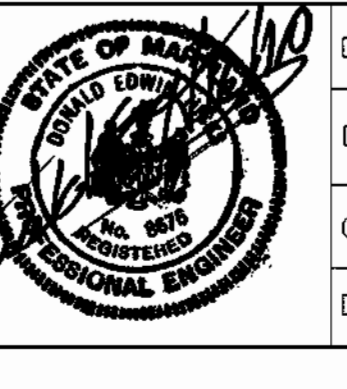
Robert M. Brown 7-1-99
DIRECTOR OF PUBLIC WORKS DATE

Robert M. Brown 7-1-99
CHIEF, BUREAU OF UTILITIES DATE

Robert M. Brown 7-1-99
CHIEF, BUREAU OF UTILITIES DATE

HICKS ENGINEERING CO., INC.
ENGINEERS, SURVEYORS & PLANNERS
200 EAST JOPPA ROAD - SUITE 402
TOWSON, MARYLAND 21286-3190
(410) 494-0001

Robert M. Brown
ACT. CHIEF, UTILITY DESIGN DIVISION DATE 6-22-99



DES:	DEH			
DRN:	DAR			
CHK:	DEH			
DATE:	6/22/99			
BY:	NO.	REVISION	DATE	

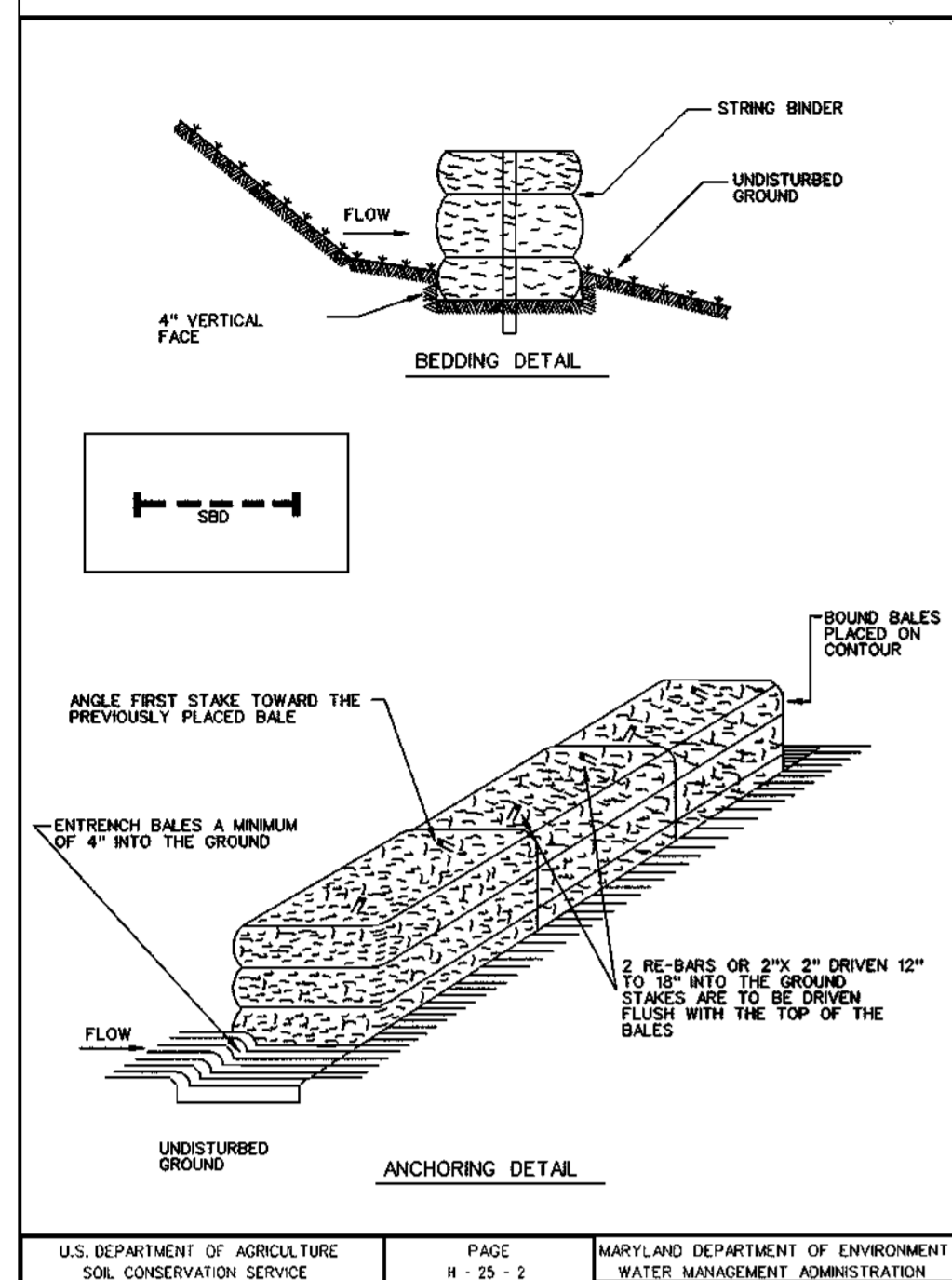
PROFILE
12" SEWER MAIN

600' SCALE MAP NO. 47 BLOCK NO. 3,4 & 9

INTERSTATE ROUTE 95 - SEWER MAIN
CROSSING & SUBINTERCEPTOR
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
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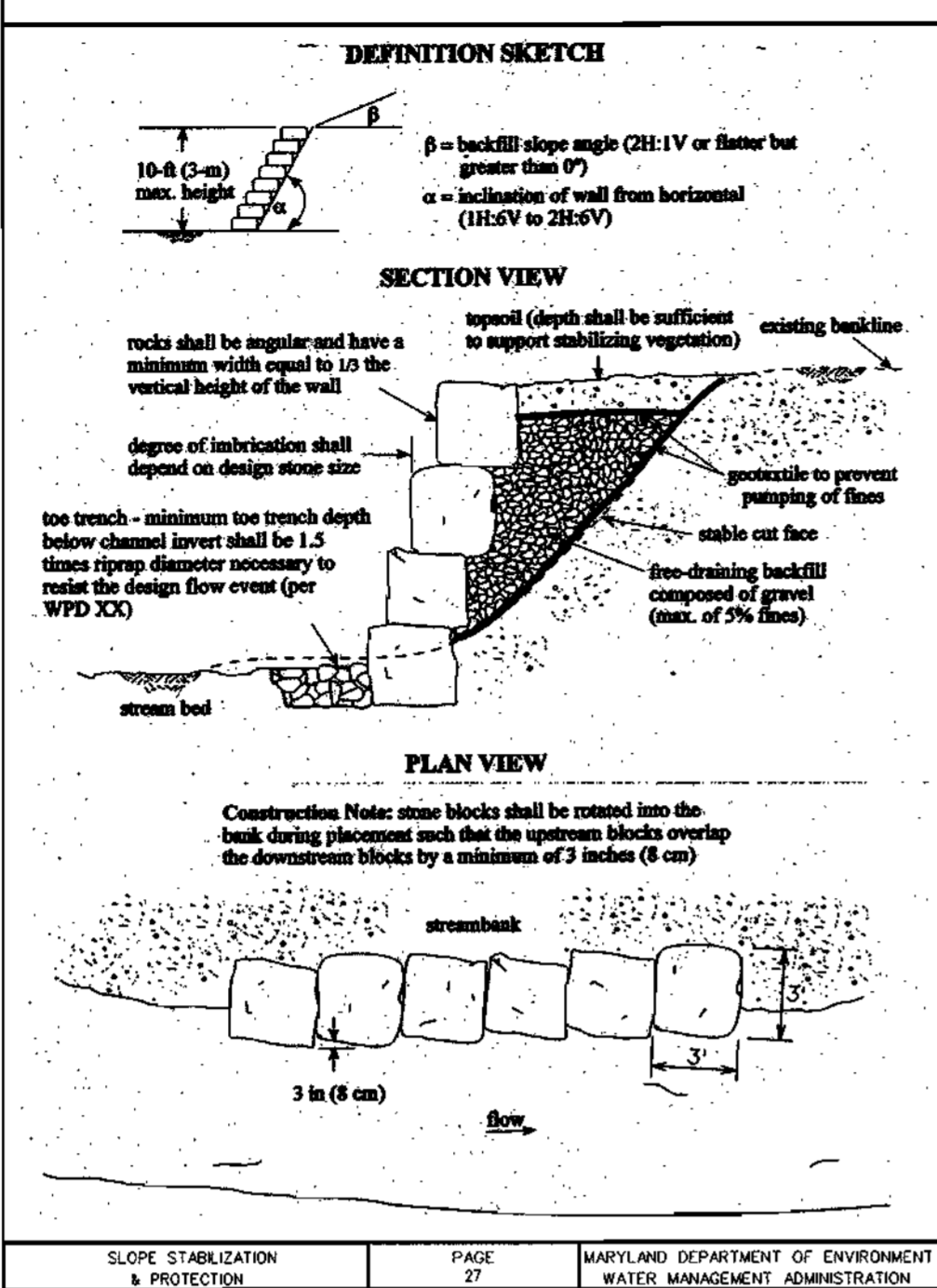
SCALE AS SHOWN
SHEET 4 OF 5

DETAIL 32 - STRAW BALE DIKE



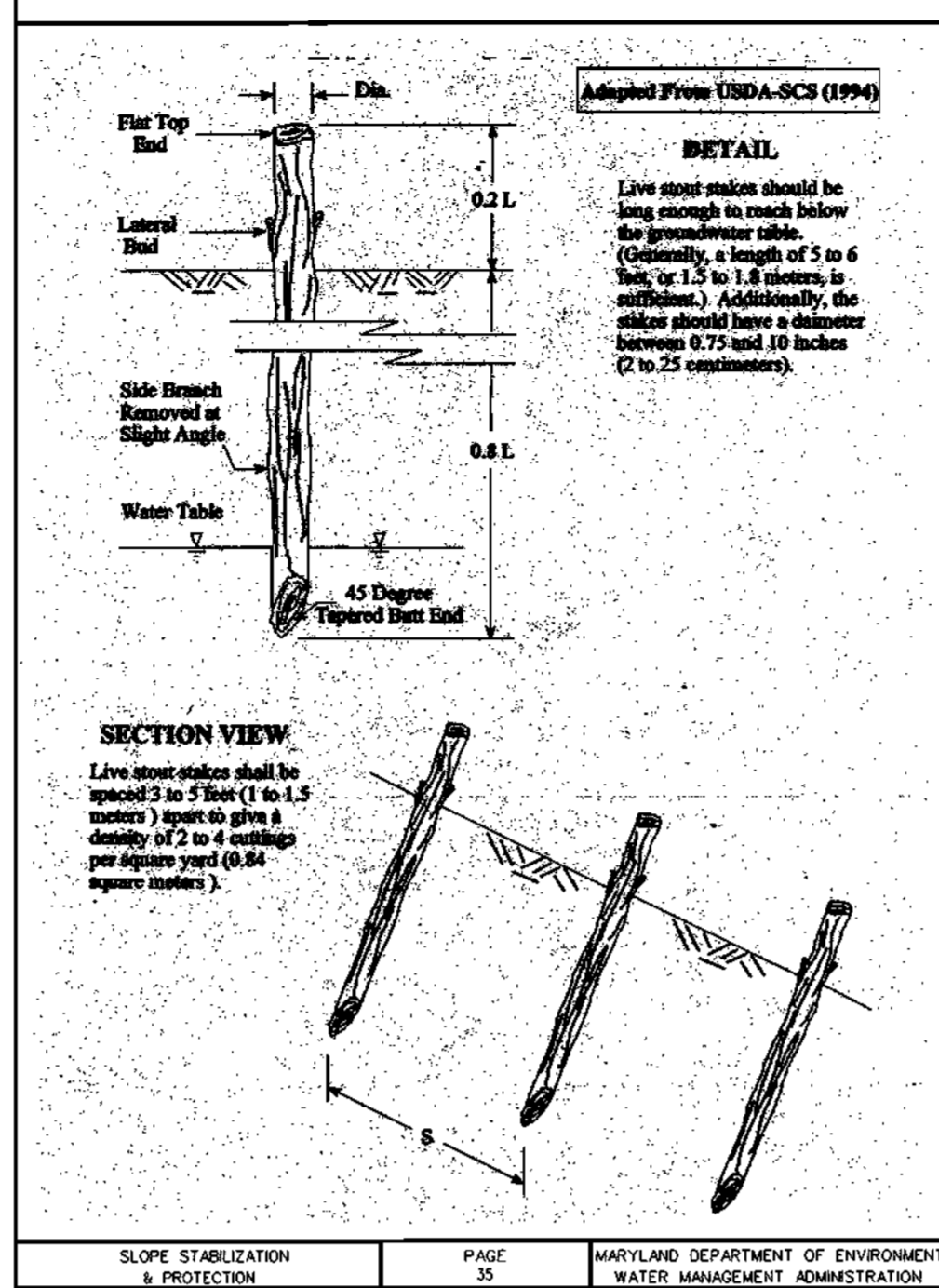
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 11-25-2 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 3.2: IMBRICATED RIPRAP



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 27 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 3.4: LIVE STAKES



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 35 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

RESTORATION SCHEDULE - 12" SANITARY

LOCATION	LENGTH	TYPE
EX. MH 116 TO MH 1 STA. 0+00 TO STA. 2+95	295'	SEED AND MULCH
MH 1 TO MH 2 STA. 0+00 TO STA. 1+45	145'	SEED AND MULCH
STA. 1+45 TO STA. 1+80	35'	RIP-RAP CLASS III
STA. 1+80 TO STA. 3+48	168'	SEED AND MULCH
MH 2 TO MH 3 STA. 0+00 TO STA. 1+68	168'	SEED AND MULCH
MH 3 TO MH 4 STA. 0+00 TO STA. 1+08	108'	SEED AND MULCH
MH 4 TO MH 5 STA. 0+00 TO STA. 1+47	147'	SEED AND MULCH
MH 5 TO MH 6 STA. 0+00 TO STA. 2+07	207'	SEED AND MULCH
MH 6 TO MH 7 STA. 0+00 TO STA. 1+50	150'	SEED AND MULCH
MH 7 TO MH 8 STA. 0+00 TO STA. 0+87	87'	SEED AND MULCH
MH 8 TO MH 9 STA. 0+00 TO STA. 1+30	130'	SEED AND MULCH
STA. 1+30 TO STA. 1+75	45'	RIP-RAP CLASS III
STA. 1+75 TO STA. 1+95	20'	SEED AND MULCH
MH 9 TO EX. MH AT 1+95 STA. 0+00 TO STA. 1+60	160'	SEED AND MULCH

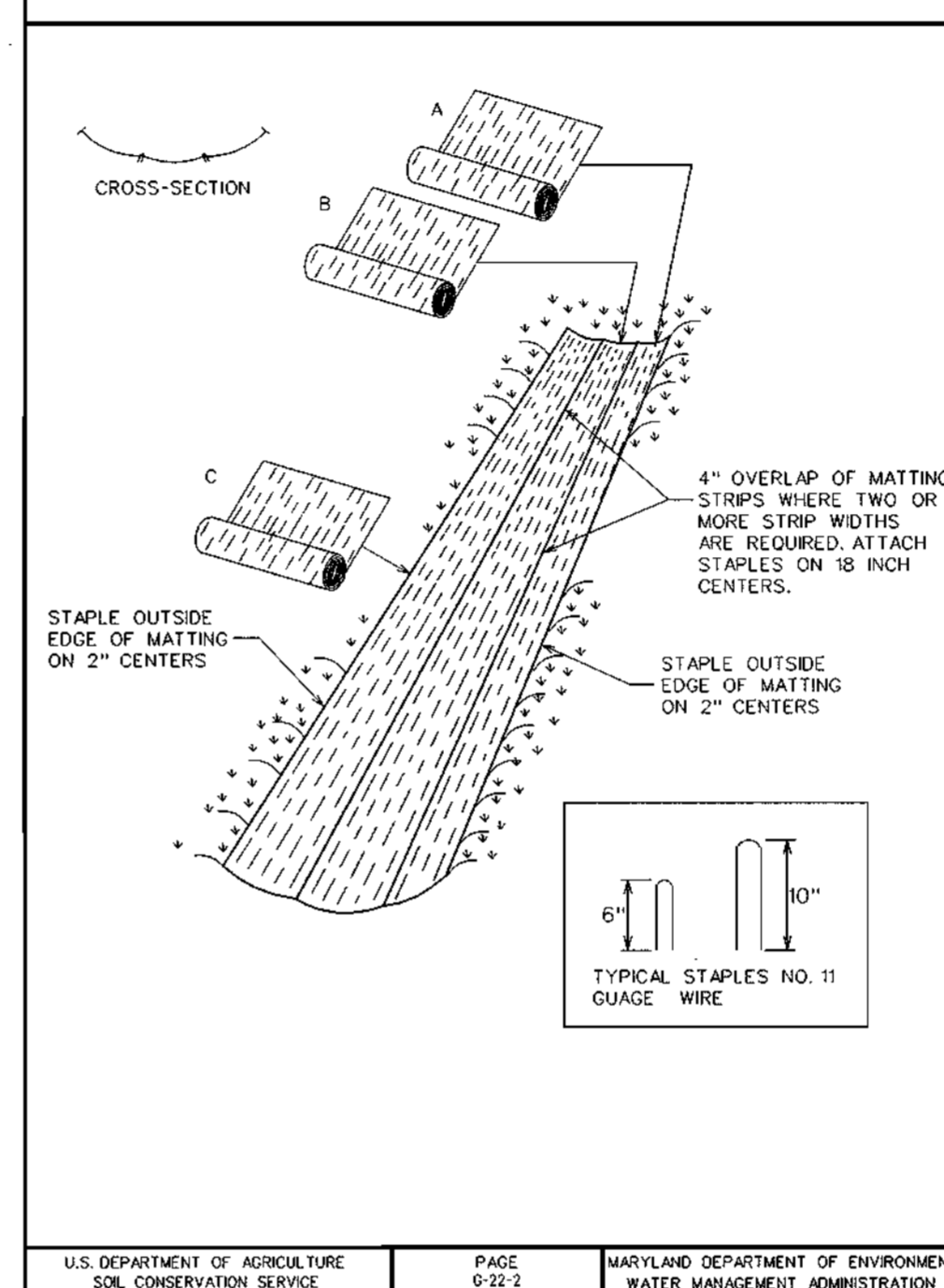
UTILITY NOTES

- 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.

STANDARD 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 VEGETATION 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: 1.47 ACRES
AREA TO BE ROOFED OR PAVED: 0 ACRES
AREA TO BE VEGETATIVELY STABILIZED: 1.47 ACRES
TOTAL CUT: 590 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 APPROVAL MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.

DETAIL 30 EROSION CONTROL MATTING



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE 6-22-2 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

EROSION CONTROL MATTING NOTES

- KEY-IN THE MATTING BY PLACING TOP ENDS OF THE MATTING IN A NARROW TRENCH, 6" IN DEPTH. BACKFILL THE TRENCH AND TAMP FIRMLY TO CONFORM TO THE CHANNEL CROSS-SECTION. SECURE WITH A ROW OF STAPLES ABOUT 4" DOWN SLOPE FROM THE TRENCH. SPACING BETWEEN STAPLES IS 6".
- STAPLES THE 4" OVERLAP IN THE CHANNEL CENTER USING ON 18" SPACING BETWEEN STAPLES.
- BEFORE STAPLING THE OUTER EDGES OF THE MATTING, MAKE SURE THE MATTING IS SMOOTH AND IN FIRM CONTACT WITH THE SOIL.
- STAPLES SHALL BE PLACED 2' APART WITH 4 ROWS FOR EACH STRIP. 2 OUTER ROWS, AND 2 ALTERNATING ROWS DOWN THE CENTER.
- WHERE ON ROLL OF MATTING ENDS AND ANOTHER BEGINS, THE END OF THE TOP STRIP SHALL OVERLAP THE UPPER END OF THE LOWER STRIP BY 4". SHIPPLER FASHION; REINFORCE THE OVERLAP WITH A DOUBLE ROW OF STAPLES SPACED 6" APART IN A STAGGERED PATTERN ON EITHER SIDE.
- THE DISCHARGE END OF THE MATTING LINER SHOULD BE SIMILARLY SECURED WITH 2 DOUBLE ROWS OF STAPLES.

NOTE: IF FLOW WILL ENTER FROM THE EDGE OF THE MATTING THEN THE AREA EFFECTED BY THE FLOW MUST BE KEYED-IN.

SEQUENCE OF CONSTRUCTION

- OBTAIN A GRADING PERMIT FROM HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES, AND PERMITS. 0.5 WEEKS
- CONTACT HOWARD COUNTY BUREAU OF CONSTRUCTION INSPECTION (313-1880) PRIOR TO STARTING DATE. 0.5 WEEKS
- INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS PER SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL VOL. IV. UTILIZE FILTER BAG SEDIMENT CONTROL MEASURE, WHERE DIRECTED BY THE ENGINEER IN THE FIELD. 1.0 WEEKS
- EXCAVATE AND INSTALL PROPOSED 12" SEWER MAIN. INSTALL IMBRICATED RIP-RAP (SEE INSTALLATION NOTES, SHEET 1) AND LIVE STAKES AS SHOWN, DURING CONSTRUCTION OF 12" SEWER MAIN. PROVIDE TEMPORARY SEEDING EXCLUSIVE OF AREAS INDICATED TO BE IMBRICATED RIP-RAP OR LIVE STAKES. 6.0 WEEKS
- RESTORE PAVING AND EARTH TRENCHES TO THEIR ORIGINAL CONDITION AS PER HOWARD COUNTY STANDARDS. 2.0 WEEKS
- UPON PERMISSION FROM HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT CONTROL DEVICES. 0.5 WEEKS
- FINE GRADE ALL DISTURBED AREAS AND STABILIZE WITH PERMANENT SEEDING IN CONJUNCTION WITH EROSION CONTROL MATTING. 0.5 WEEKS

TIME OF COMPLETE

Section III: Permanent Seeding

Seeding grass and legumes to establish ground cover for a minimum period of one year on disturbed areas generally requiring 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 part of 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 Soil and V Turfgrass.
- For sites having disturbed area over 3 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 ureaform fertilizer (46-0-0) at 3 1/2 lbs/1000 sq. ft. (150 lbs/ac), in addition to the above soil amendments shown in the table below, to be performed at the time of seeding.

Permanent Seeding Summary

No.	Species	Application Rate (lb/ac)	Seeding Date	Seeding Depth	Fertilizer Rate (lb/20-20)			Lime Rate
					N	P2O5	K2O	
1	PERMANENT SEEDING MIXTURE (SEE TABLE 25)	150	3/1-5/15	1-2 INCHES	90 lb/ac (2.0 lb/1000 sq ft)	175 lb/ac (4 lb/1000 sq ft)	175 lb/ac (4 lb/1000 sq ft)	2 tons/ac (100 lb/1000 sq ft)
2	PERMANENT SEEDING MIXTURE (SEE TABLE 25)	125	3/1-5/15	1-2 INCHES	90 lb/ac (2.0 lb/1000 sq ft)	175 lb/ac (4 lb/1000 sq ft)	175 lb/ac (4 lb/1000 sq ft)	2 tons/ac (100 lb/1000 sq ft)
3	PERMANENT SEEDING MIXTURE (SEE TABLE 25)	150	3/1-5/15	1-2 INCHES	90 lb/ac (2.0 lb/1000 sq ft)	175 lb/ac (4 lb/1000 sq ft)	175 lb/ac (4 lb/1000 sq ft)	2 tons/ac (100 lb/1000 sq ft)

Section II - Temporary Seeding

Vegetate - normal grass or grass seed to provide cover on disturbed areas for up to 12 months. For longer periods of temporary cover, Permanent Seeding is required.

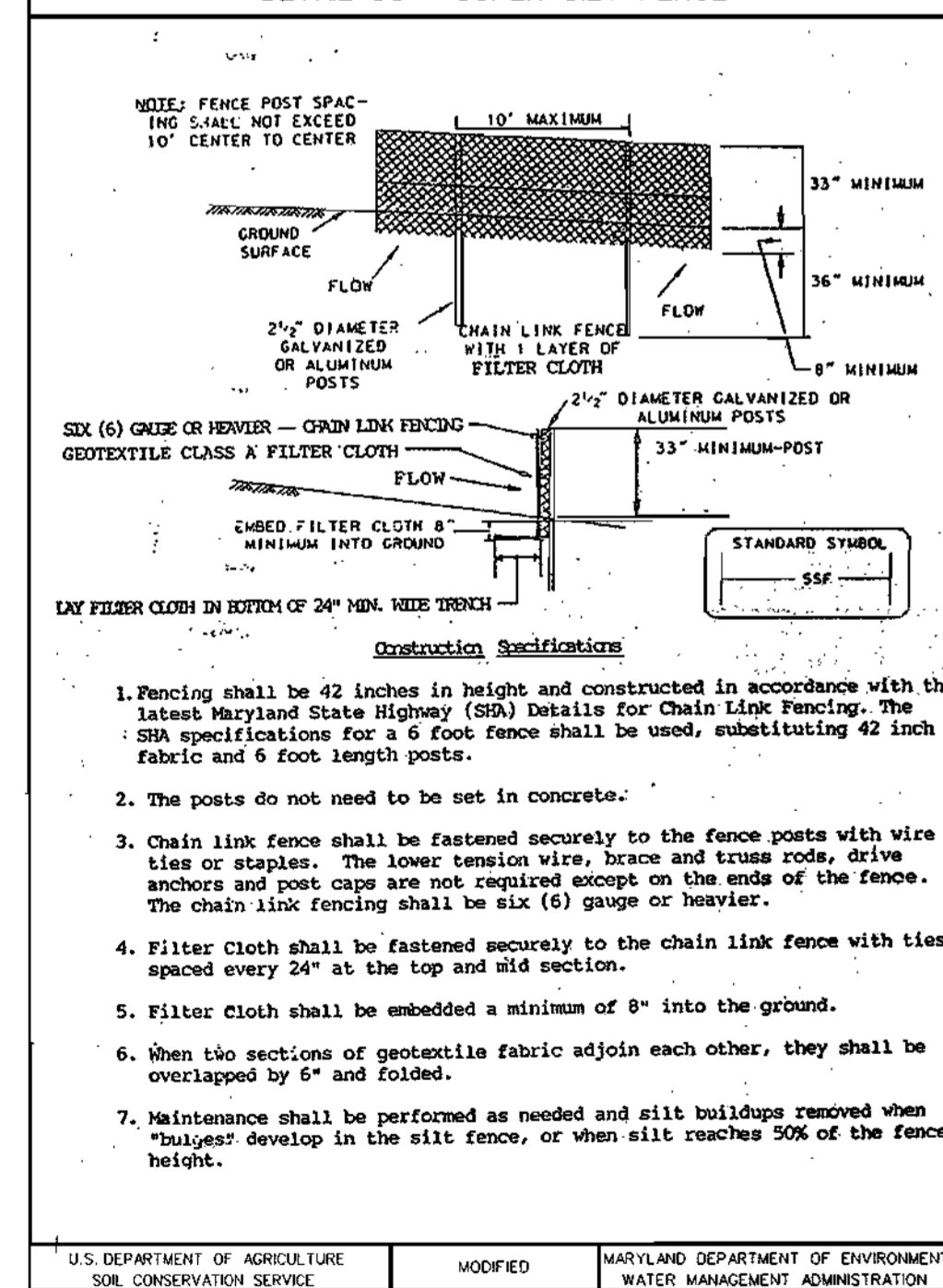
A. Seed Mixtures - Temporary Seeding

- 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 and seeding dates. If this summary is not part of the construction plans and completed, then Table 26 must be put on the plans.
- For sites having disturbed area over 3 acres, 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.

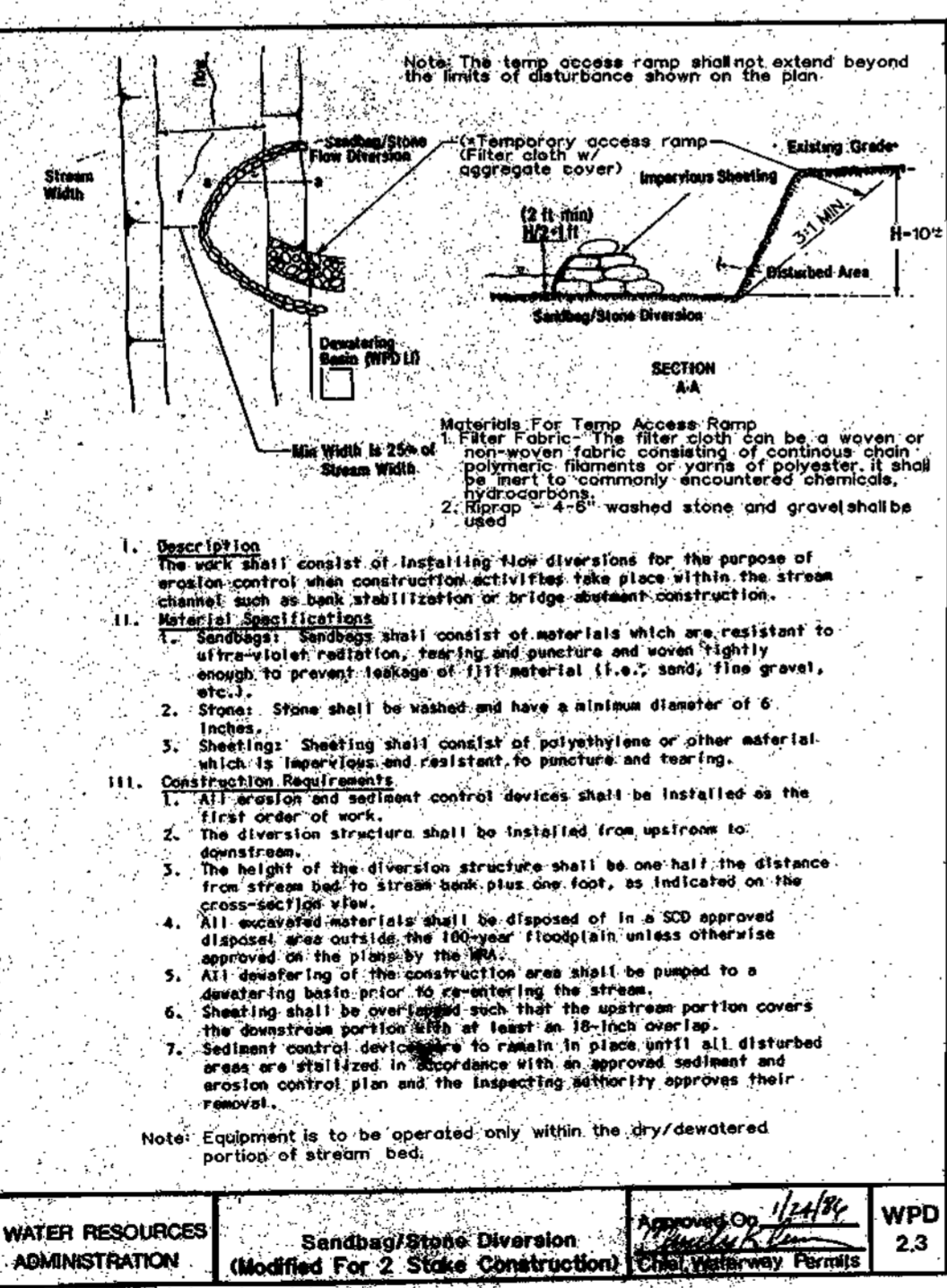
Temporary Seeding Summary

No.	Species	Application Rate (lb/ac)	Seeding Date	Seeding Depth	Fertilizer Rate (lb/20-20)			Lime Rate
					N	P2O5	K2O	
1	TEMPORARY SEEDING MIXTURE (SEE TABLE 26)	150	3/1-5/15	1-2 INCHES	90 lb/ac (2.0 lb/1000 sq ft)	175 lb/ac (4 lb/1000 sq ft)	175 lb/ac (4 lb/1000 sq ft)	2 tons/ac (100 lb/1000 sq ft)
2	TEMPORARY SEEDING MIXTURE (SEE TABLE 26)	150	3/1-5/15	1-2 INCHES	90 lb/ac (2.0 lb/1000 sq ft)	175 lb/ac (4 lb/1000 sq ft)	175 lb/ac (4 lb/1000 sq ft)	2 tons/ac (100 lb/1000 sq ft)

DETAIL 33 - SUPER SILT FENCE

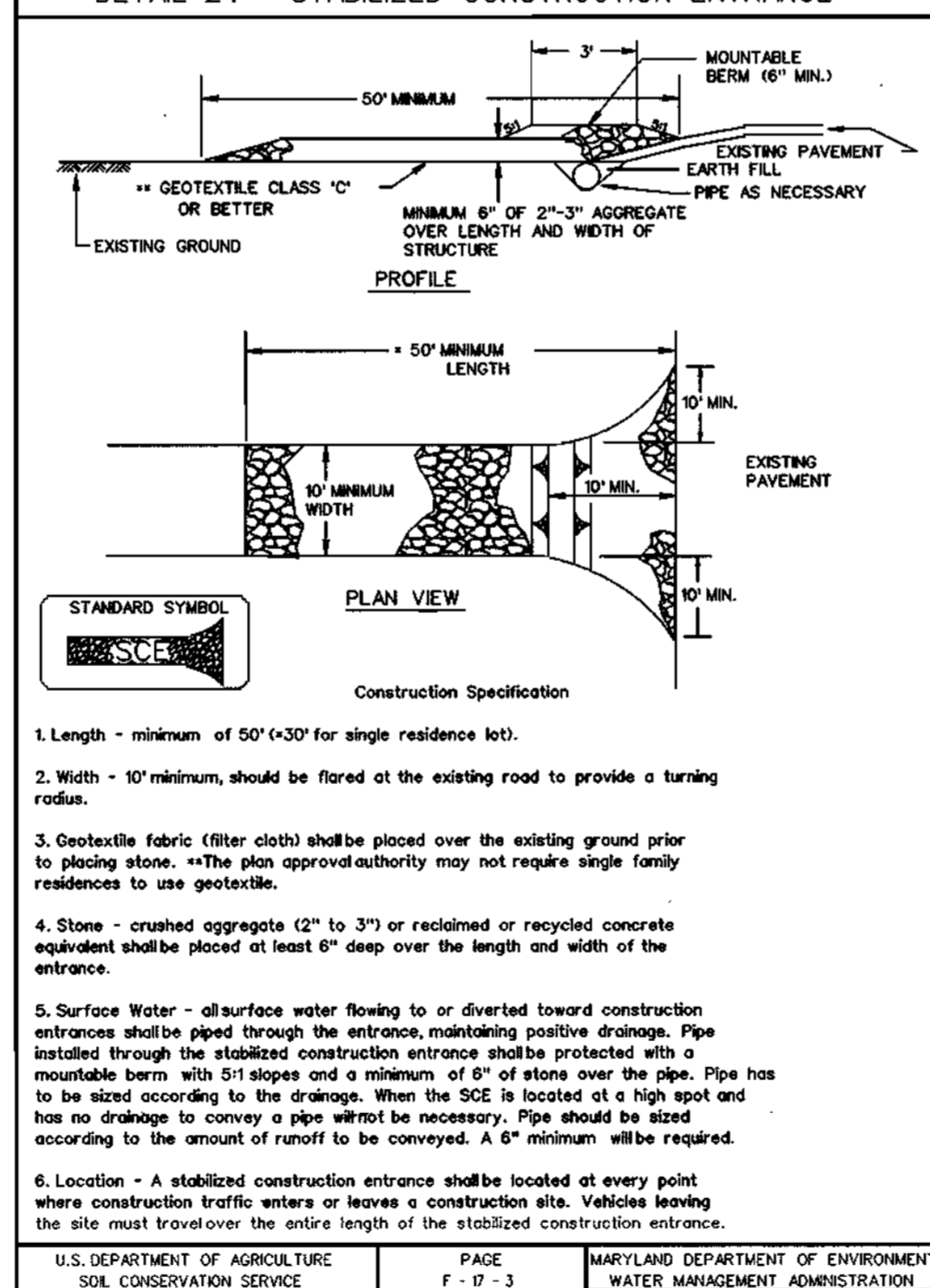


U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE MODIFIED MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE MODIFIED MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE F-17-3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James A. New 6/22/99 DIRECTOR OF PUBLIC WORKS
Robert J. Deary 7-1-99 CHIEF, BUREAU OF UTILITIES
Robert J. Deary 6/29/99 CHIEF, UTILITY DESIGN DIVISION

HICKS ENGINEERING CO., INC.
ENGINEERS, ARCHITECTS & PLANNERS
200 EAST JOPPA ROAD, SUITE 302
TOWSON, MARYLAND 21286-3100
(410) 494-0001



DES: DEH
DRN: DAR
CHK: DEH
DATE: 6/22/99

NOTES & DETAILS

REVISION DATE 600' SCALE MAP NO. 47 BLOCK NO. 3, 4 & 9

INTERSTATE ROUTE 95 - SEWER MAIN
CROSSING & SUBINTERCEPTOR
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CAPITAL PROJECT NO. S-6208
CONTRACT NO. 20-3733

SCALE AS SHOWN
SHEET 5 OF 5

ITEMS	QUANTITIES ESTIMATED	AS BUILT		MANUFACTURER/SUPPLIER
		QUANTITIES	TYPE	
12" SAN. D.I.P. CL. 52 STD. 4'-0" DIA. MH	1,827 L.F.	1060 L.F.		GRIFFIN PIPE PRODUCTS CO.
WATERTIGHT MANHOLE 4'-0" DIA.	4	4		HANSON CONCRETE PRODUCTS
RIP-RAP CLASS III	489 C.Y.	489 C.Y.		LAFARGE
IMBRICATED RIP-RAP/BOULDERS	1017 L.F.	754 L.F./265 SY.		LAFARGE
LIVE STAKES	190 L.F.			
RE-LINE EX. 12" A.C.P.	684 L.F.	680 L.F.		AM-LINER (PREMIER - PIPE USA)

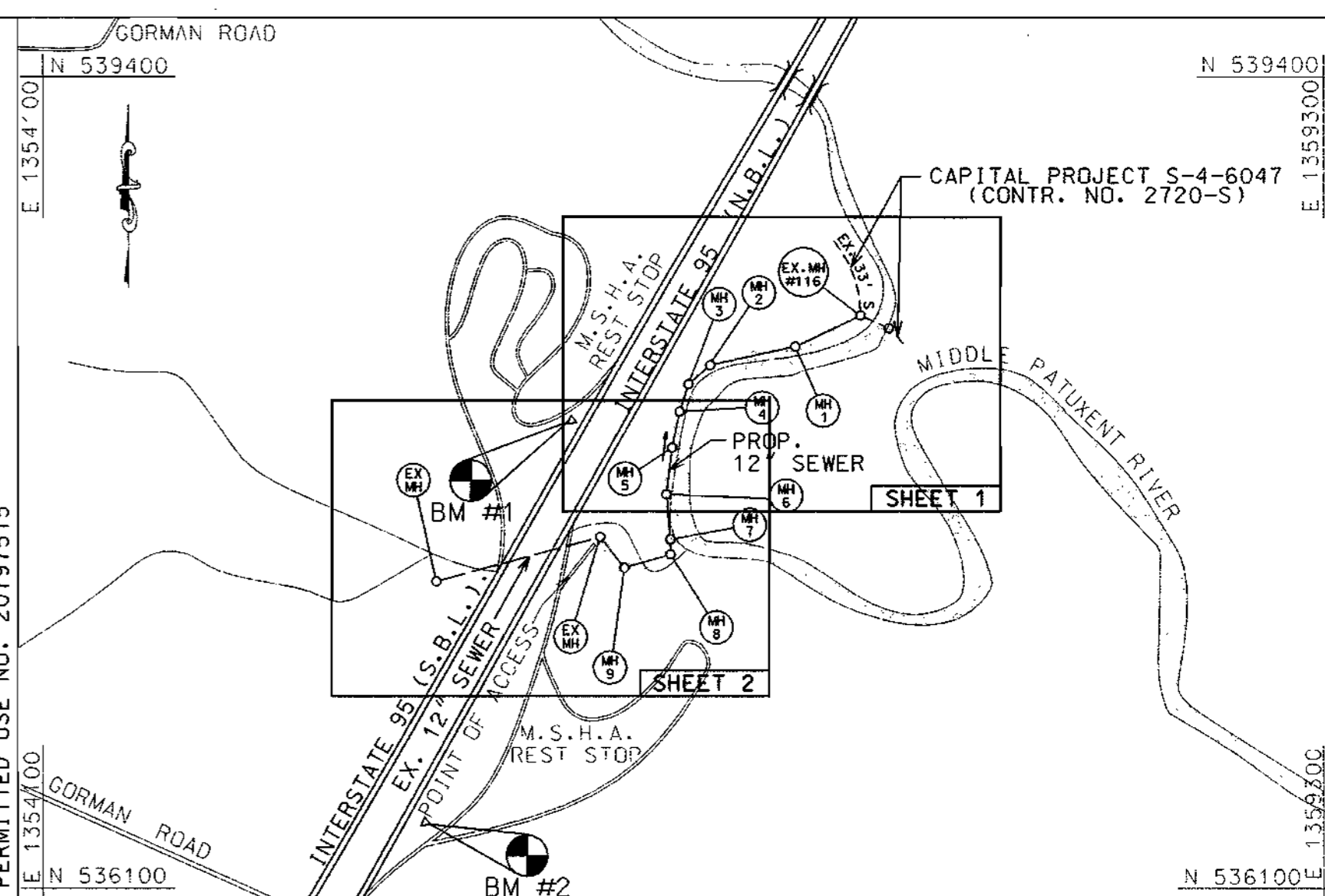
BENCH MARKS

B.M. #1 N 538058.635 ELEV. 283.12
E 1356174.197

HOWARD COUNTY CONTROL PT. "REST WEST" HUB & TACK 10.5' N.W. OF EDGE OF CONC. OF SOUTHBOUND I-95 OFF RAMP TO REST AREA.

B.M. #2 N 536655.576 ELEV. 312.65
E 1355927.184

HOWARD COUNTY CONTROL POINT "REST EAST" 3/8" REBAR IN GROUND 60' ± N.W. OF EDGE OF CONC. OF NORTHBOUND I-95 OFF RAMP TO REST AREA.



TYPE OF BUILDINGS: N/A
NO. OF SEWER HOUSE CONN.: 0
NO. OF WATER HOUSE CONN.: 0
SEWER CODE: 6100000
WATER CODE: N/A
DRAINAGE AREA: MIDDLE PATUXENT RIVER

VICINITY MAP
SCALE: 1"=600'

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 83.
- All vertical controls are based on U.S.C.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 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	410 865 3803
BGE - Contractor Services	410 850 4620
BGE - Underground Damage Control	410 787 9068
Bureau of Utilities (DPW)	410 313 4900
Bell Atlantic - MD, Inc.	410 597 8585
Colonial Pipeline Co.	410 795 1390
Miss Utility	1 800 257 7777
State Highway Administration	410 531 5533
- 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(c) of the Howard County Code.

SEWER NOTES

- All sewer mains shall be D.I.P. class 52.
- All manholes shall be 4'-0" inside diameter unless otherwise noted.
- Force mains shall be D.I.P. only.
- Manholes shown with 12" and 16" walls are for brick manholes only.
- 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 otherwise noted on the drawings.
- House(s) with the symbol "C.N.S." indicates cellar cannot be served.
- Wash out area is small swale that is severely eroded due to concentrated storm drainage flow through this area. The rip-rap is essential in this area to help stabilize and protect the sewer main from possible future wash out.
- Limit work in-stream to permission from the inspector, and a clear (no precipitation) weather forecast from the N.W.S.

TRAVERSE POINT
H.E.C. #29
ELEV. 215.50
N 538443.93736
E 1357422.5168

PT. NO.	NORTH	EAST	ELEV.
H.E.C. #46	538078.76598	1356681.16617	214.15
H.E.C. #43	538217.73595	1356800.53069	214.06
H.E.C. #40	538259.64822	1356968.98110	215.40
H.E.C. #35	538334.50755	1357305.35504	215.21
H.E.C. #17	538528.40952	1357422.14568	215.51

PLAN
SCALE: 1"=50'

IMBRICATED RIP-RAP INSTALLATION NOTES

- CONSTRUCT SANDBAG/STONE DIVERSION TO DIVERT THE STREAM AROUND THE PROPOSED IMBRICATED RIP-RAP/BOULDER PLACEMENT INSTALLATION AREAS.
- PUMP OUT EXCESS WATER AND INSTALL IMBRICATED RIP-RAP OR BOULDERS.
- REMOVE SANDBAG/STONE DIVERSION TO RESTORE AREA TO EXISTING CONDITION.
- INSTALL LIVE STAKES SPACED 4' APART AS SHOWN TO STABILIZE THE PROPOSED FILL AREA BEHIND THE IMBRICATED RIP-RAP.

LEGEND

- DENOTES IMBRICATED RIP-RAP OR BOULDER PLACEMENT TO 2 YEAR STORM ELEVATION - 3'x3' MINIMUM IN SIZE
- DENOTES LIVE STAKES (SEE DETAIL SHEET 5)
- DENOTES WATER-TIGHT MANHOLE FRAME & COVER
- DENOTES WETLAND LIMIT AND FLAG
- DENOTES SOIL BORING LOCATION

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

John P. Roberts 8/3/99
APPROVED, HOWARD COUNTY S.C.D. DATE

REVIEWED FOR HOWARD COUNTY S.C.D. AND MEETS TECHNICAL REQUIREMENTS

Cheryl Simmons 8/3/99
U.S. NATURAL RESOURCES CONSERVATION SERVICE DATE

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."

Ronald G. Saper 6/22/99
BUREAU OF ENGINEERING DEPARTMENT OF PUBLIC WORKS. 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."

Richard E. Hicks, P.E. 6/22/99
HICKS ENGINEERING COMPANY, INC. ENGINEERS SURVEYORS & PLANNERS 200 EAST JORRA ROAD, SUITE 402 TOWSON, MARYLAND 21286 TEL (410) 494-0001 DATE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

James A. Shaw 7-1-99
DIRECTOR OF PUBLIC WORKS DATE

Ronald G. Saper 6/22/99
CHIEF, BUREAU OF ENGINEERING DATE

Robert M. Benjamin 7-1-99
CHIEF, BUREAU OF UTILITIES DATE

Robert M. Benjamin 6-29-99
ACT. CHIEF, UTILITY DESIGN DIVISION DATE

HICKS ENGINEERING CO., INC.
ENGINEERS SURVEYORS & PLANNERS
200 EAST JORRA ROAD, SUITE 402
TOWSON, MARYLAND 21286-3150
(410) 494-0001

DES: DEH
DRN: DAR
CHK: DEH
DATE: 6/22/99

JMT 1 PER REDLINE 10-11-00
BY NO. REVISION DATE

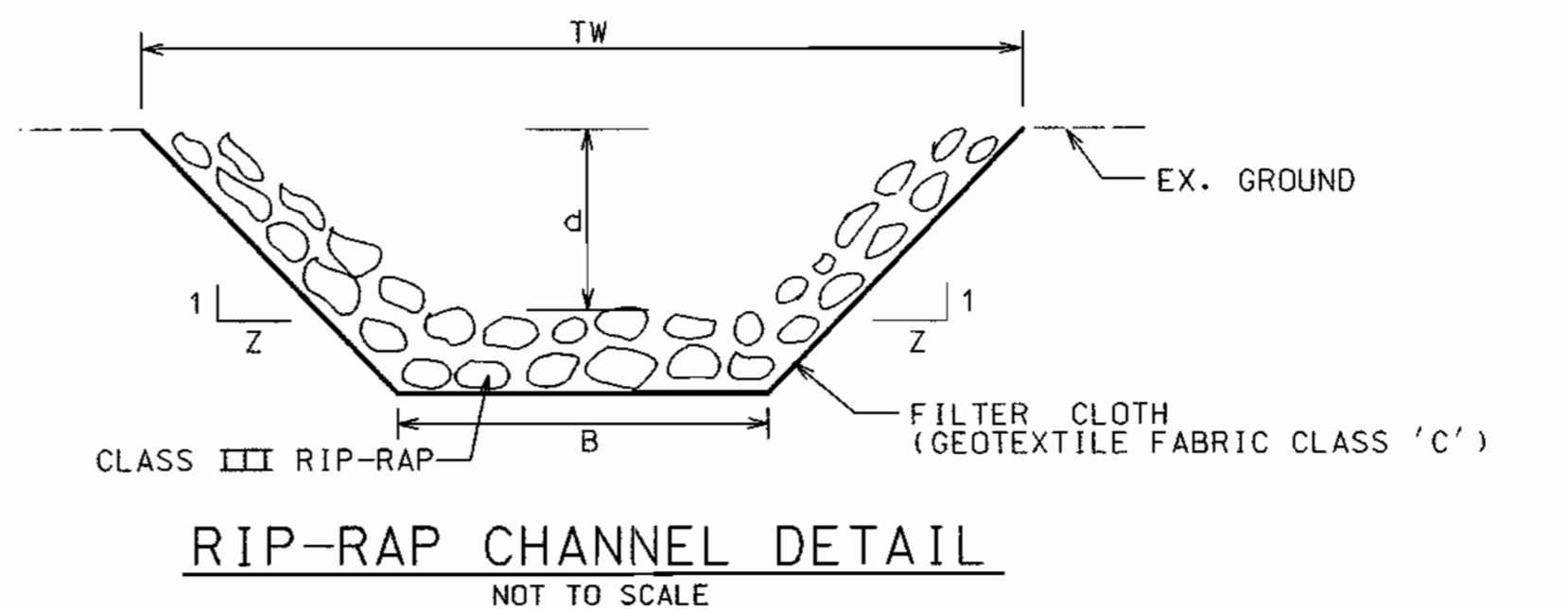
PLAN ALIGNMENT
12" SEWER MAIN

600' SCALE MAP NO. 47 BLOCK NO. 3, 4 & 9

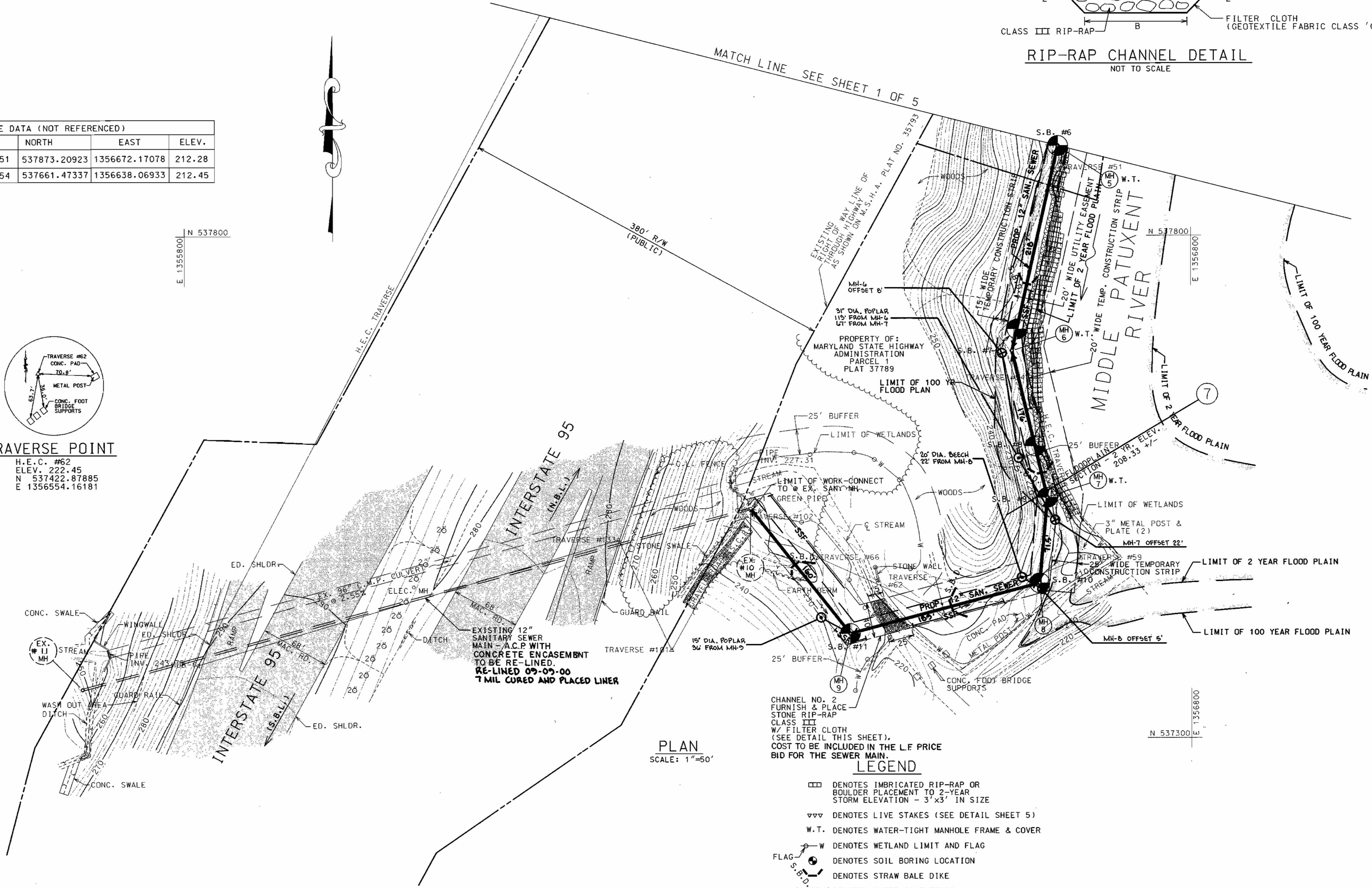
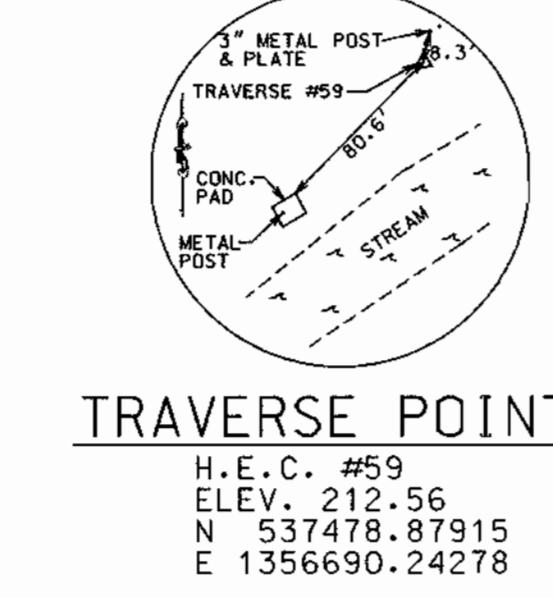
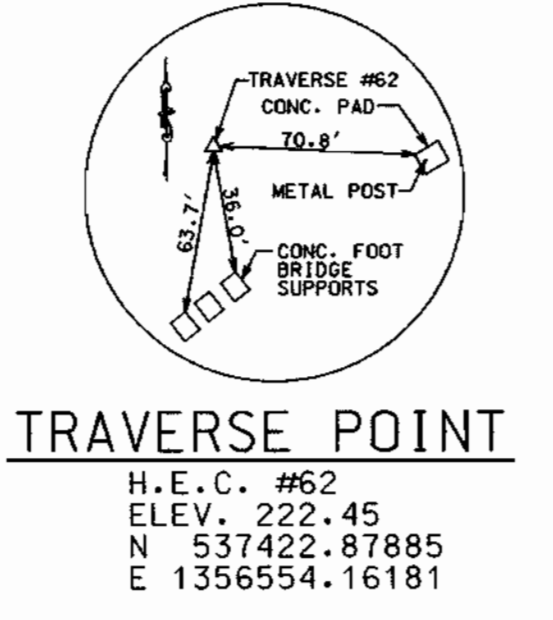
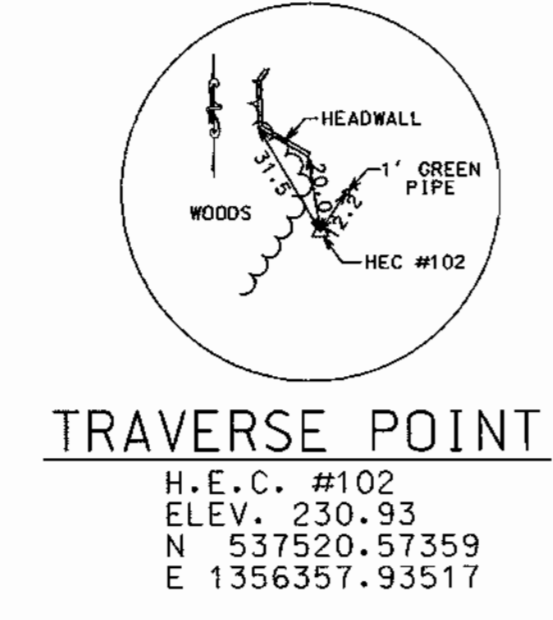
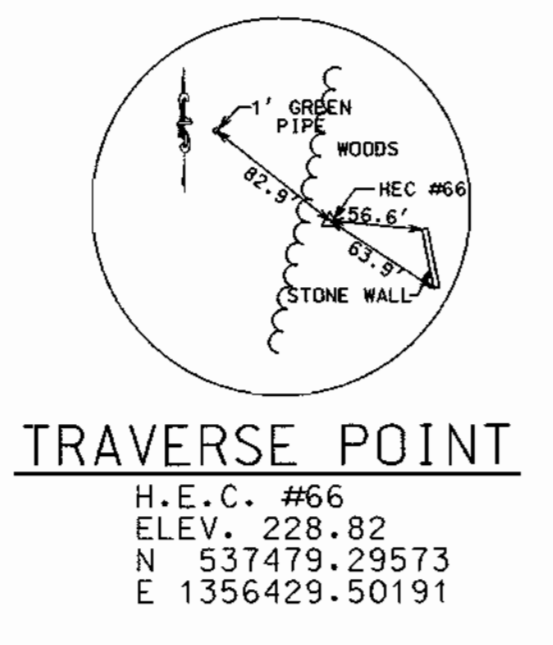
INTERSTATE ROUTE 95 - SEWER MAIN
CROSSING & SUBINTERCEPTOR
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CAPITAL PROJECT NO. S-6208
CONTRACT NO. 20-3733

SCALE AS SHOWN
SHEET 1 OF 5

RIP-RAP CHANNEL DESIGN DATA													
CHANNEL NO.	AREA (a)	WETTED PERIMETER (P)	HYDRAULIC RADIUS (R)	TOP WIDTH (TW)	SLOPE	D ₅₀	D ₁₀₀	THICKNESS (+)	Q _{CRS}	V _{FPS}	Z	B	d
1	67.50'	34.84'	1.937'	55'	1.81%	23"	34"	46"	10.00	1.16	2	25'	2.2'
2	20.68'	14.84'	1.394'	25'	4.00%	23"	34"	46"	790.00	0.78	2	5'	2.2'



TRAVERSE DATA (NOT REFERENCED)			
PT. NO.	NORTH	EAST	ELEV.
H.E.C. #51	537873.20923	1356672.17078	212.28
H.E.C. #54	537661.47337	1356638.06933	212.45



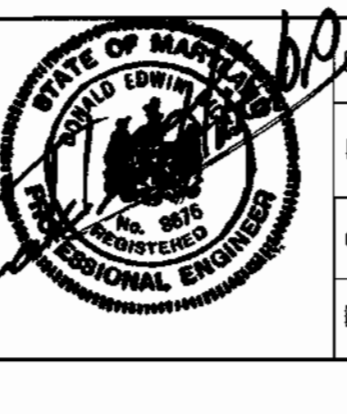
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Director of Public Works: *Robert M. Beaman* 7-199
Chief, Bureau of Utilities: *Robert M. Beaman* 6-29-99

Chief, Bureau of Engineering: *Paul G. Johnson* 6/29/99
Act. Chief, Utility Design Division: *Robert M. Beaman* 6-29-99

H.E.C. J.O. #97044

HICKS ENGINEERING CO., INC.
ENGINEERS, SURVEYORS & PLANNERS
200 EAST JOPPA ROAD - SUITE 400
TOWSON, MARYLAND 21286-3160
(410) 494-0001



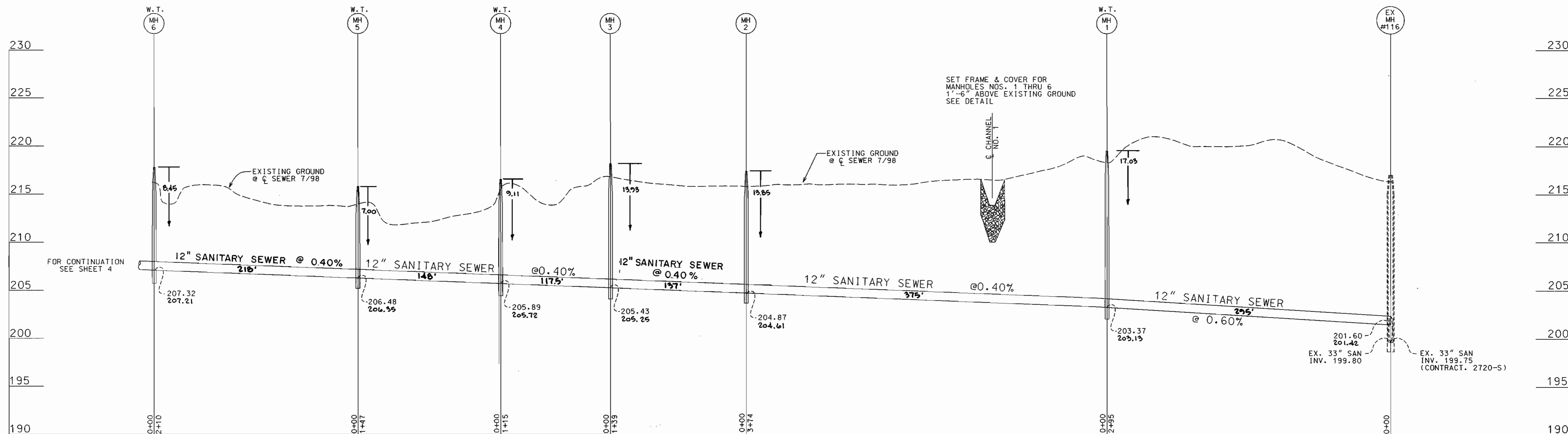
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CHK:	DEH				
DATE:	6/22/99	JMT	1	PER RED-LINE	10-11-00
		BY	NO.	REVISION	DATE

PLAN ALIGNMENT
12" SEWER MAIN

600' SCALE MAP NO. 47 BLOCK NO. 3, 4 & 9

INTERSTATE ROUTE 95 - SEWER MAIN CROSSING & SUBINTERCEPTOR
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CAPITAL PROJECT NO. S-6208
CONTRACT NO. 20-3733

SCALE AS SHOWN
SHEET 2 OF 5

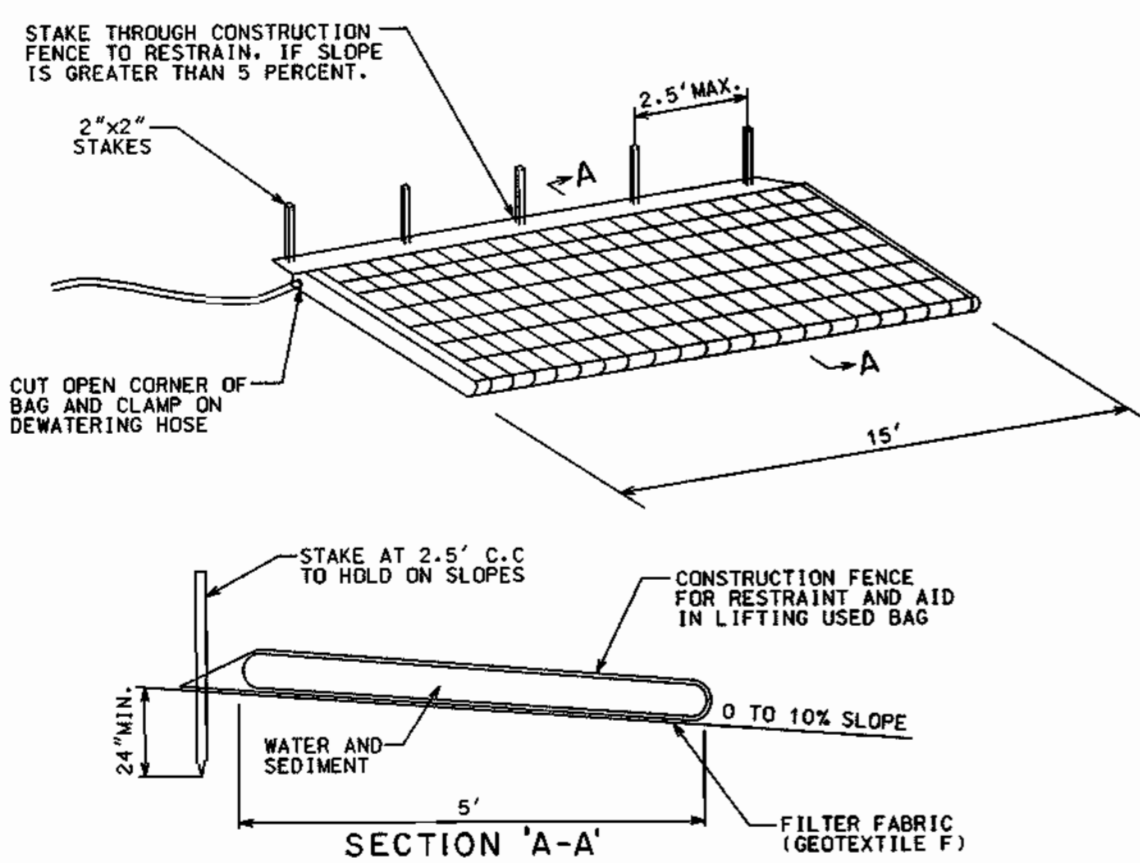


PROFILE
SCALE: HOR. 1"=50'
VERT. 1"=5'

"CONDITIONS AND MANAGEMENT PRACTICES FOR WORKING IN NONTIDAL WETLANDS"

1. NO MATERIALS OR EQUIPMENT MAY BE STORED OR STOCKPILED WITHIN NONTIDAL WETLAND, 25-FOOT WETLANDS BUFFER OR 100-YEAR FLOODPLAIN.
2. STOCKPILE AND MAINTAIN SEPARATELY THE TOP 6"-12" OF TOPSOIL MATERIAL EXCAVATED FROM NONTIDAL WETLANDS, TO BE REPLACED AS THE TOP LAYER OF THE BACKFILLED MATERIAL.
3. REMOVE EXCESS FILL OR CONSTRUCTION MATERIAL OR DEBRIS TO AN UNPLAND DISPOSAL AREA.
4. PLACE MATERIALS IN A LOCATION AND MANNER WHICH DOES NOT ADVERSELY IMPACT SURFACE OR SUBSURFACE WATER FLOW INTO OR CUT OF THE NONTIDAL WETLAND.
5. PLACE HEAVY EQUIPMENT ON MATS OR SUITABLY OPERATE THE EQUIPMENT TO PREVENT DAMAGE TO THE NONTIDAL WETLANDS.
6. USE PREVIOUSLY EVCAVATED 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.
7. ALL STABILIZATION IN THE WETLAND AND BUFFER SHALL BE OF THE FOLLOWING SPECIES: ANNUAL RYEGRASS (LOLIUM MULTIFLORUM), MILLET (SETARIA ITALICA), BARLEY (HOREDEM SP.), OATS (UNIOILA 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 PESCUE 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.
8. AFTER INSTALLATION HAS BEEN COMPLETED, MAKE POST CONSTRUCTION GRADES AND ELEVATION OF NONTIDAL WETLANDS THE SAME AS THE ORIGINAL GRADES AND ELEVATION.
9. TO PROTECT IMPORTANT AQUATIC SPECIES, IN-STREAM WORK IS PROHIBITED AS DETERMINED BY THE CLASSIFICATION OF THE STREAM AS FOLLOWS:

USE I WATERS. INSTREAM WORK MAY NOT BE CONDUCTED DURING THE PERIOD MARCH 1 THROUGH JUNE 15, INCLUSIVE, DURING ANY YEAR.



NOTES:

FILTER BAG SHALL BE PLACED ON A SLOPING OR LEVEL, WELL GRADED VEGETATED SITE SUCH THAT WATER WILL FLOW AWAY FROM DEVICE AND ANY WORK AREAS.

WIDTH AND LENGTH SHALL BE AS SHOWN.

THE FILTER BAG MUST BE STAKED IN PLACE AND SECURED TO THE PUMP DISCHARGE LINE.

FILTER BAG SHALL NOT BE USED FOR DISCHARGE FLOWS GREATER THAN 300 GPM.

DEVICE SHALL BE REMOVED AND DISPOSED OF AFTER BAG IS FILLED WITH SEDIMENT, SEDIMENT FROM BAG SHALL BE SPREAD IN AN UPLAND AREA.

FILTER FABRIC 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 ² /MINUTE (MAX.)	TEST: MSNT 322
FILTERING EFFICIENCY	75% (MIN.)	TEST: MSMT 322

FILTER BAG
TEMPORARY EROSION CONTROL MEASURE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Director of Public Works: Robert M. Slon 7-1-99
Chief, Bureau of Engineering: Robert J. Seaman 6/22/99
Chief, Bureau of Utilities: Robert A. Deane 7-1-99
ACF, Chief, Utility Design Division: Robert A. Deane 6-29-99

HICKS ENGINEERING CO., INC.
ENGINEERS, SURVEYORS & PLANNERS
208 EAST JOPPA ROAD - SUITE 402
TOWSON, MARYLAND 21286-3760
(410) 494-0001

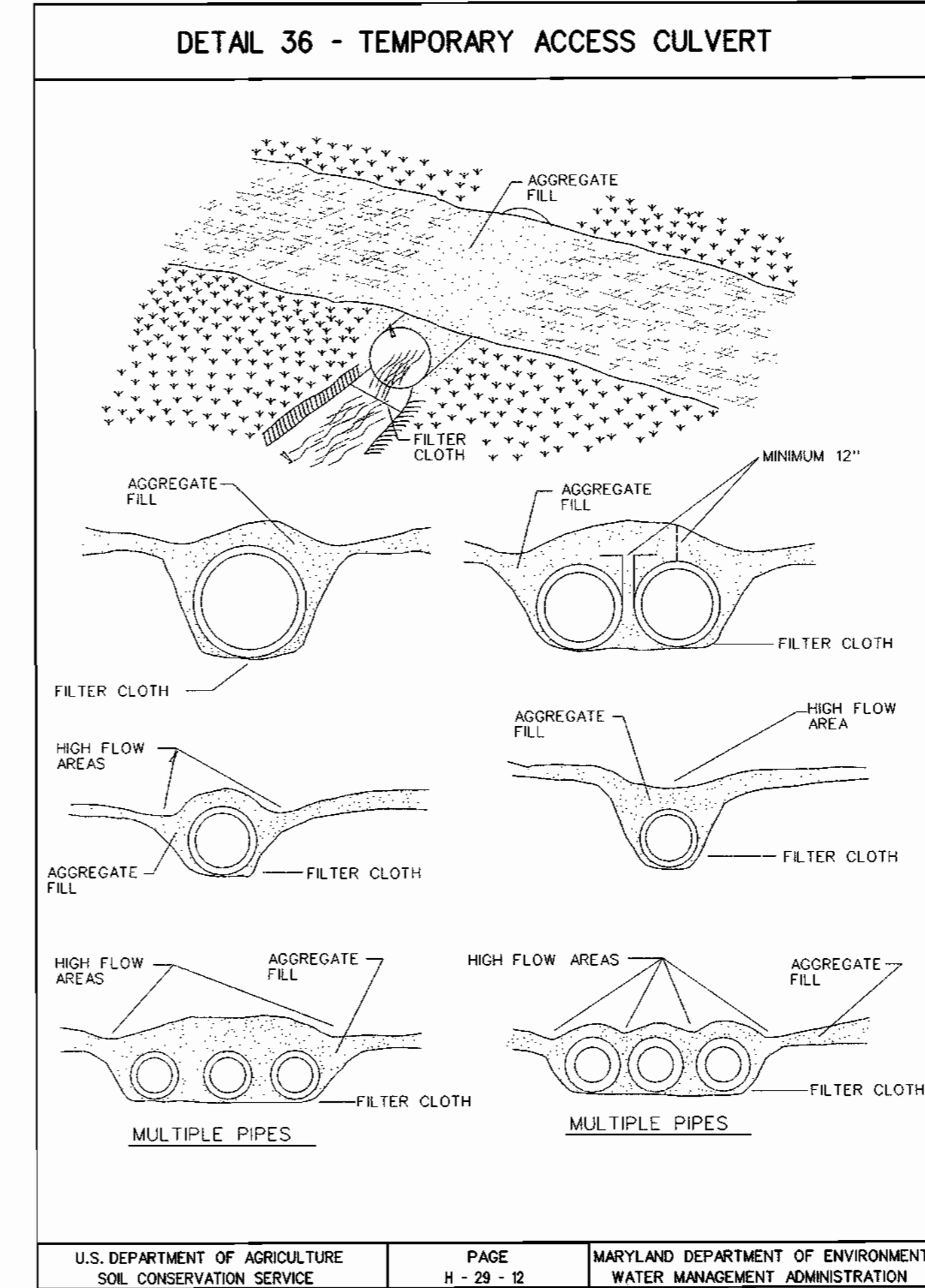
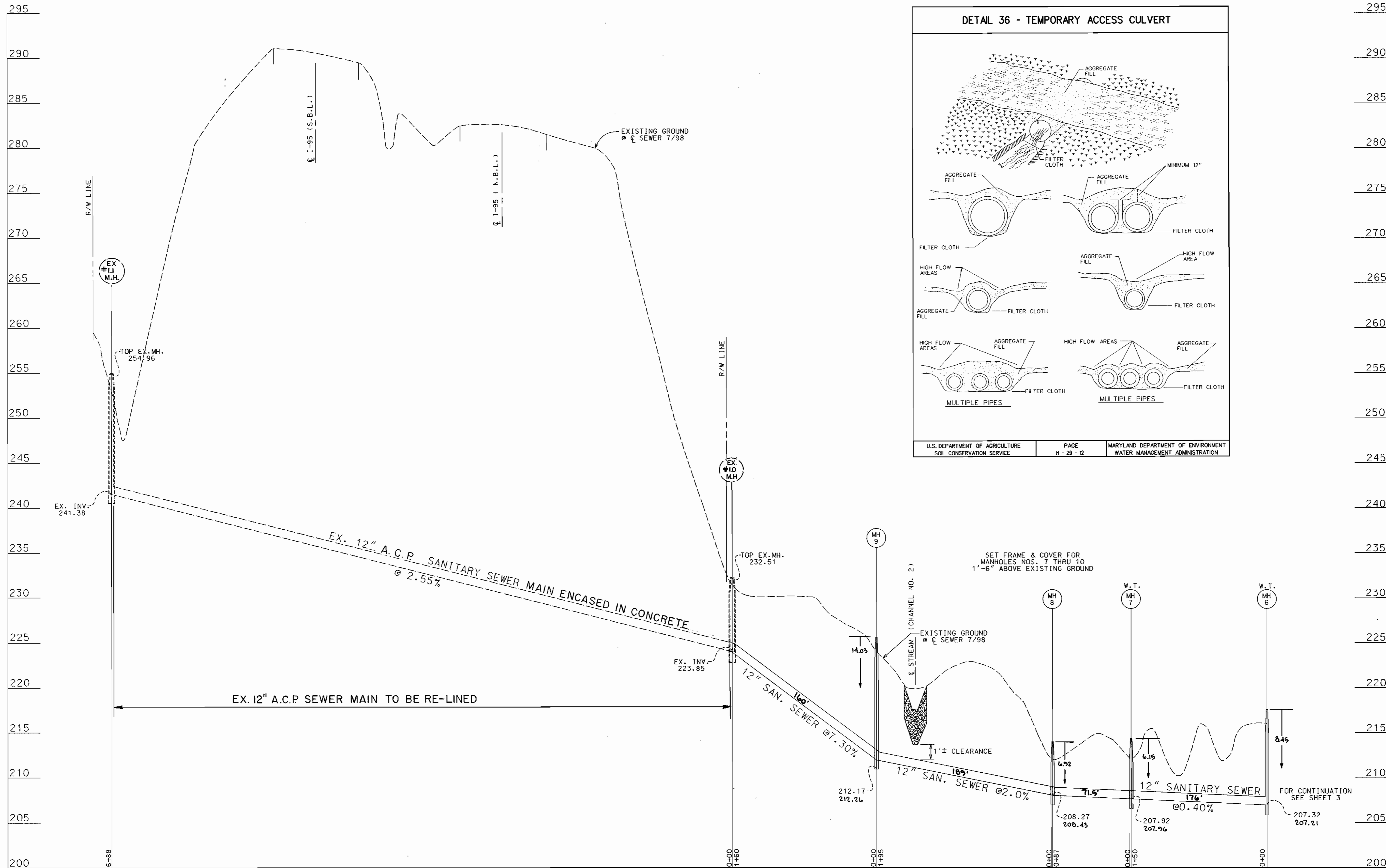


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CHK:	DEH			
DATE:	6/22/99	JMT	I	PER RED-LINE
BY:	NO.			
REVISION				
DATE	10-11-00			

PROFILE
12" SEWER MAIN

INTERSTATE ROUTE 95 - SEWER MAIN CROSSING & SUBINTERCEPTOR
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CAPITAL PROJECT NO. S-6208
CONTRACT NO. 20-3733

SCALE AS SHOWN
SHEET 3 OF 5



PROFILE
SCALE: HOR. 1"=50'
VERT. 1"=5'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert M. Brown 7/1/99
DIRECTOR OF PUBLIC WORKS DATE

Robert A. Day 6/22/99
ACT. CHIEF, UTILITY DESIGN DIVISION DATE

H HICKS ENGINEERING CO., INC.
ENGINEERS, SURVEYORS & PLANNERS
200 EAST JOPPA ROAD - SUITE 402
TOWSON, MARYLAND 21286-3100
(410) 494-0001



DES:	DEH			
DRN:	DAR			
CHK:	DEH			
DATE:	6/22/99	JMT	1	PER REDLINE
		BY	NO.	REVISION
				10-11-00

PROFILE
12" SEWER MAIN

600' SCALE MAP NO. 47 BLOCK NO. 3,4&9

INTERSTATE ROUTE 95 - SEWER MAIN
CROSSING & SUBINTERCEPTOR
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
CAPITAL PROJECT NO. S-6208
CONTRACT NO. 20-3733

SCALE AS SHOWN
SHEET 4 OF 5