SYLVAN LANE WATER AND SEWER EXTENSIONS

HOWARD COUNTY, MARYLAND

GENERAL NOTES

- 1. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR EXPENSE.
- 2. ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
- 3. ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATA NGVD88
- 4. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
- 5. CLEAR ALL UTILITIES BY A MINIMUM OF 12". CLEAR ALL POLES BY 2'-0" MINIMUM OR TUNNEL 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
- 6. 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.
- 7. 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.
- 8. 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 BG&E (CONTRACTOR SERVICES)......410-850-4620 BG&E - UNDERGROUND DAMAGE CONTROL.....410-787-9068 CHESAPEAKE & POTOMAC TELEPHONE CO.410-597-8585 COLONIAL PIPELINE CO.410-795-1390 MISS UTILITY1-800-257-7777 STATE HIGHWAY ADMINISTRATION410-531-5533

- 9. 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.
- 10. 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 .
- 11. 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 BORING/JACKING OPERATION IN COUNTY ROADS FOR LAYING WATER MAINS, 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.
- 12.ALL SEWERMAINS SHALL BE P.V.C. UNLESS OTHERWISE NOTED.
- 13.ALL MANHOLES SHALL, BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- 14. WATERMAINS SHALL BE D.I.P. ONLY.
- 15. MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVER, STANDARD DETAIL 65.52. WHERE WATERTIGHT MANHOLE FRAME AND COVER ARE USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- 16. HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.
- 17.ALL O.I.P TO HAVE POLYETHYLENE PIPE ENCASEMENT.
- 18.ALL WATER MAINS SHALL BE D.I.P CLASS 52 UNLESS OTHERWISE NOTED.

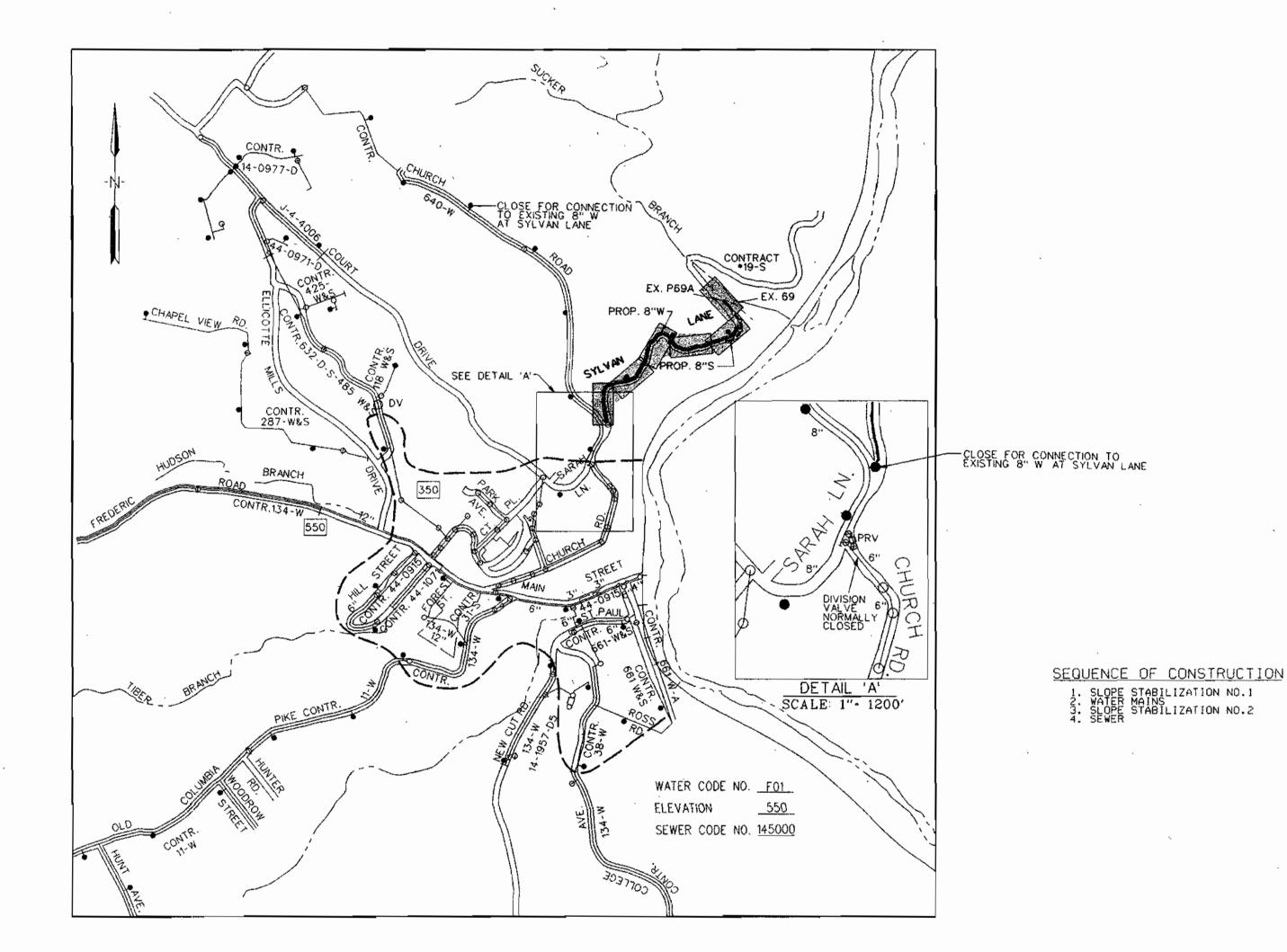
1000 AND SECTION 1005 OF THE STANDARD SPECIFICATIONS.

- 19. TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.
- 20. VALVES ADJACENT TO TEES SHALL BE STRAPED TO TEES.
- 21.ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
- 22. FIRE HYDRANTS SHALL BE SET TO BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD DETAILS. THE SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION
- 23. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.

DEPARTMENT OF PUBLIC WORKS

CAPITAL PROJECT No. W-8230

CONTRACT No. 14-3820



INDEX OF SHEETS

___DESCRIPTION SHEET No.

1 TITLE SHEET

2 8-INCH WATERMAIN & 8" SANITARY SEWER PLAN

3 8 INCH SANITARY SEWER EXTENSION PROFILE

..... 8 INCH WATERMAIN PROFILE STA. 0.00 TO 9.00 5 8 INCH WATERMAIN PROFILE STA. 9.00 TO 16.10

6 SLOPE STABILIZATION PLAN & DETAILS SLOPE NO. 1

7 SLOPE STABILIZATION PLAN & DETAILS SLOPE NO. 2

..... EROSION & SEDIMENT CONTROL, NOTES & DETAILS

	<u>Q</u> l	<u>ITITNAL</u>	ES		
ITEM	TINU	ESTIMATE	AS-BUILT	MATERIAL	SUPPLIER
SEWER 8' S DIP	L.F.	460′			
STD. MANHOLE	EA.	4			
STD. TYPE 'B'	EA.	1			
SPECIAL INSIDE PROP CONNECTION	EA.	1 '			
'4" SHC	L.F.	60			
6° TSHC	L.F.	8		-	
8"X4" WYE	EA.	3			
8.XQ. MAE	EA.	1			
WATER 6. W DIP	L.F.	40′			
WATER 8' W DIP	L.F.	1600′		100	
B" VALVE	ĔА.	1			
6" VALVE	EA.	4			
6° F.H.	EA.	3			
1" WHC W/MV	L.F.	215			
NAME OF UTILITY	CONTRA	CTOR:			
		CHEC	KBOX		
		AS-8	UILT DATE:		

SURVEY AND DRAFTING DIVISION

RESTORATION SCHEDULE								
LOCATION	DISTANCE	TYPE						
STA.0.00 TO STA.16.10 WATER MAIN. F.H. AND WHC'S	1735'	BITUMINOUS PAVING TRENCH REPAIR. SEE STD. DETAIL 64.01						
EX. SEWER MH P69A TO SEWER C.O., AND SHC'S	495'	BITUMINOUS PAVING TRENCH REPAIR. SEE STD. DETAIL G4.01						
SHC'S, F.H. AND WHC'S	115'	TOPSOIL, SEEDING & MULCHING						
SLOPE STABILIZATION	1225 SF	BITUMINOUS CONCRETE PAVING						
NO. 1	2100 SF	TOPSOIL. TRM, SEEDING & MULCHING						
SLOPE	SF	BITUMINOUS CONCRETE PAVING						
STABILIZATION NO. 2	SF	TOPSOIL. TRM. SEEDING & MULCHING						

LOCATION MAP SCALE: 1"= 600'

TYPE OF BUILDING: RESIDENTIAL NUMBER OF PARCELS: N/A NUMBER OF SEWER HOUSE CONNECTIONS: 5 NUMBER OF WATER HOUSE CONNECTIONS: 9 DRAINAGE AREA: PATAPSCO

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 DEPART MENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODING ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

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

ENGINEER'S CERTIFICATION

'I/WE 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.

KCI TECHNOLOGIES 10 NORTH PARK DRIVE HUNT VALLEY. MARYLAND 21030

THIS DEVELOPMENT PLAN IS APPROVED FOR

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND

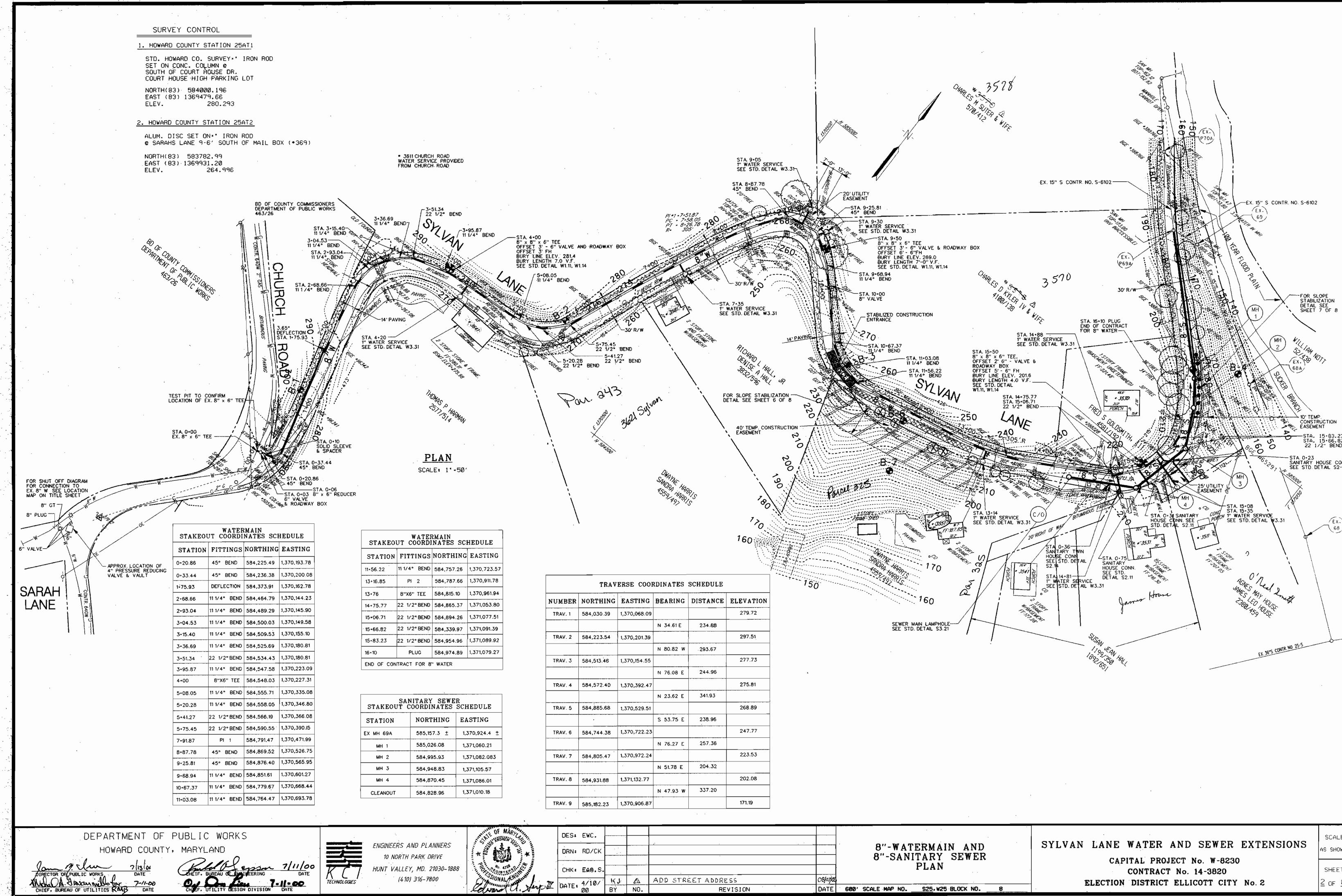
ENGINEERS AND PLANNERS 10 NORTH PARK DRIVE HUNT VALLEY, MD. 21030-1888 . (410) 316-7800

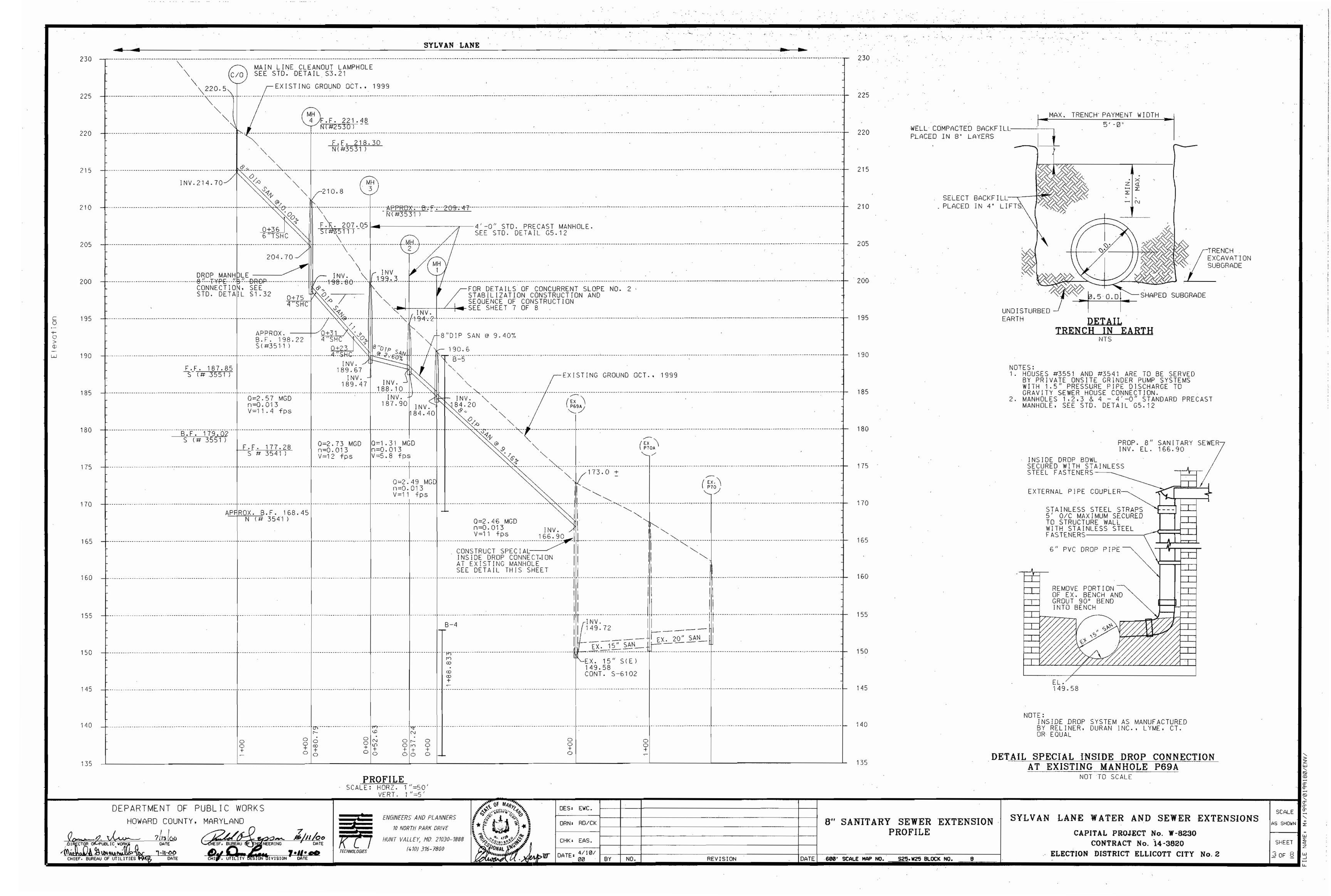


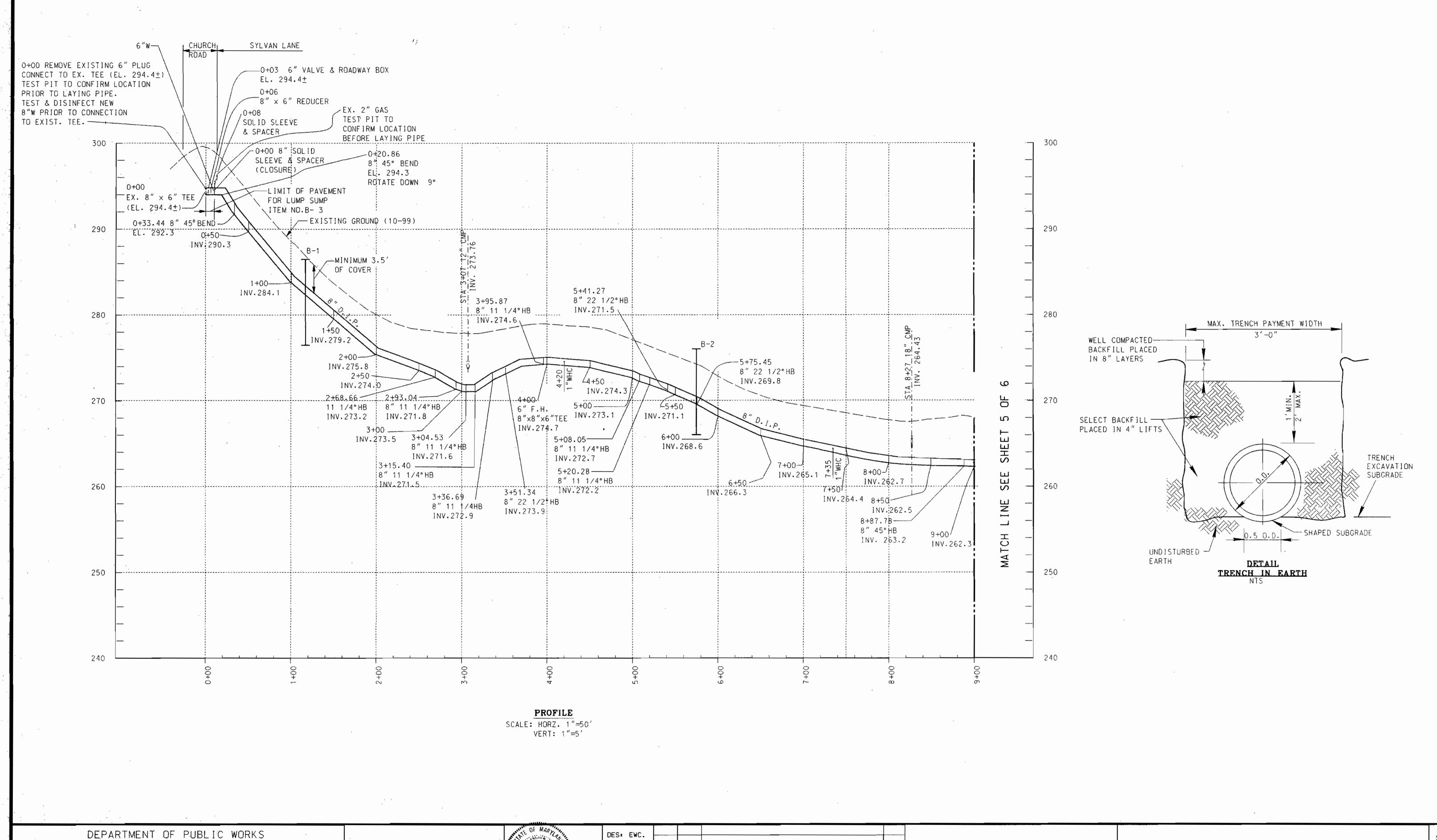
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SYLVAN LANE WATER AND SEWER EXTENSIONS

CAPITAL PROJECT No. W-8230 CONTRACT No. 14-3820 ELECTION DISTRICT ELLICOTT CITY No. 2







8 INCH WATERMAIN PROFILE

DATE 600' SCALE MAP NO. S25.W25 BLOCK NO.

STA 0+00 TO 9+00

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REVISION

ENGINEERS AND PLANNERS

10 NORTH PARK DRIVE

HUNT VALLEY, MD. 21030-1888

(410) 316-7800

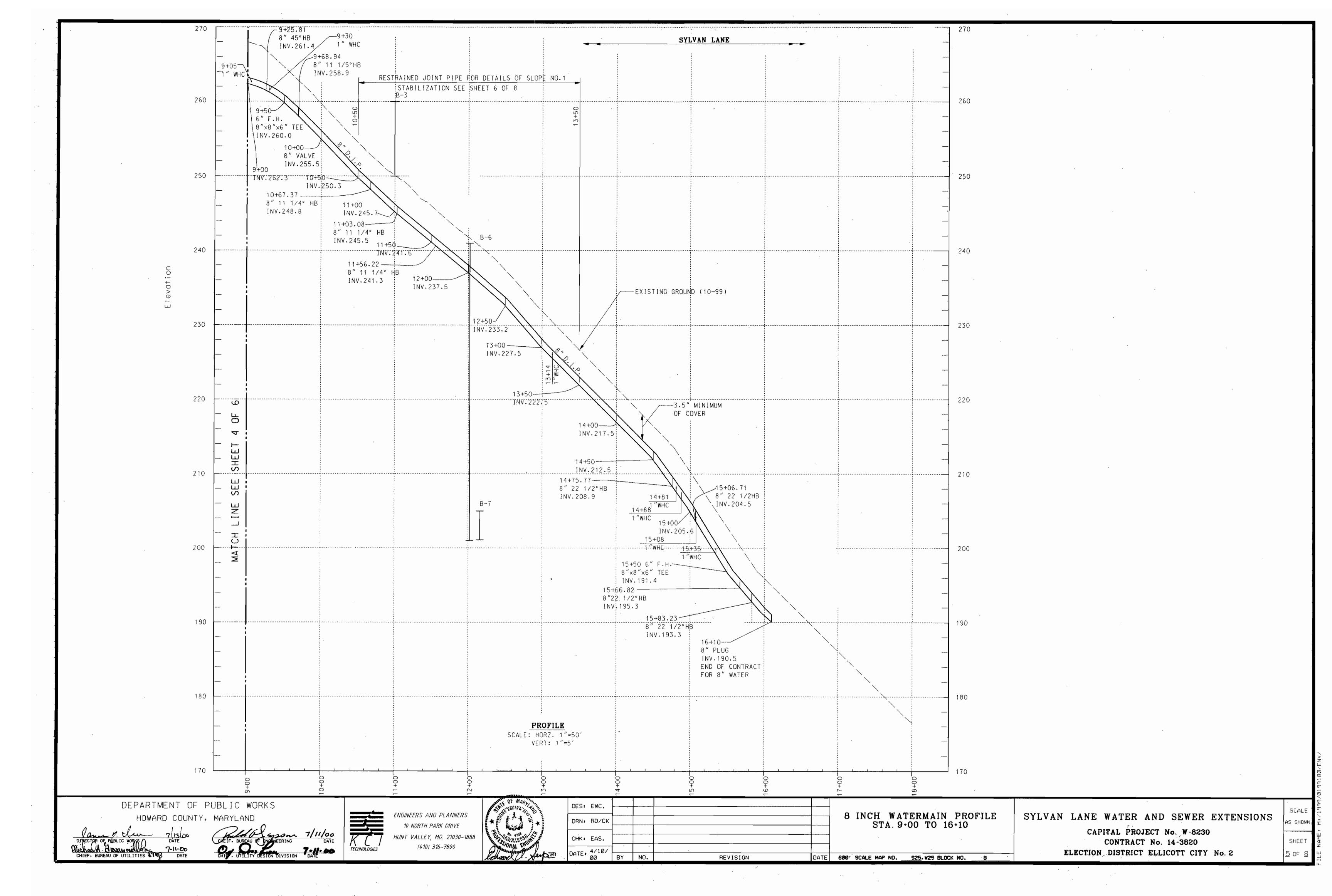
HOWARD COUNTY, MARYLAND

SYLVAN LANE WATER AND SEWER EXTENSIONS

CAPITAL PROJECT No. W-8230

CONTRACT No. 14-3820

ELECTION DISTRICT ELLICOTT CITY No. 2



Subgrade Preparation

- 1. Install temporary sediment erosion control measures.
- 2. Install temporary concrete traffic barrier

SEQUENCE OF CONSTRUCTION

- 3. Clear and grub side slope.
- 4. Saw cut roadway, excavate and waste existing pavement.
- 5. Install stabilized construction entrance.
- 6. Excavate and waste existing fill and insitu materials to depths shown on plans. including stabilized construction entrance.
- 7. Bench cut slope as shown on cross section.
- 8. Excavate and install subdrain.
- 9. Install geonet drainage composite fabric.
- 10. Backfill with CR-6 material in 8-inch loose lifts and compact area to pavement subgrade.
- 11. Remove temporary traffic barriers, remove remaining pavement and excavate to grades shown on plans. Then backfill to pavement subgrade.
- 12. Repaye to match current payement elevation.
- 13. Topsoil, install erosion control matting (TRM), seed and mulch side slope.
- 14. Install weathering steel guardrail.
- 15. With inspector's approval, remove temporary sediment control measures. Stabilize any resulting disturbances.

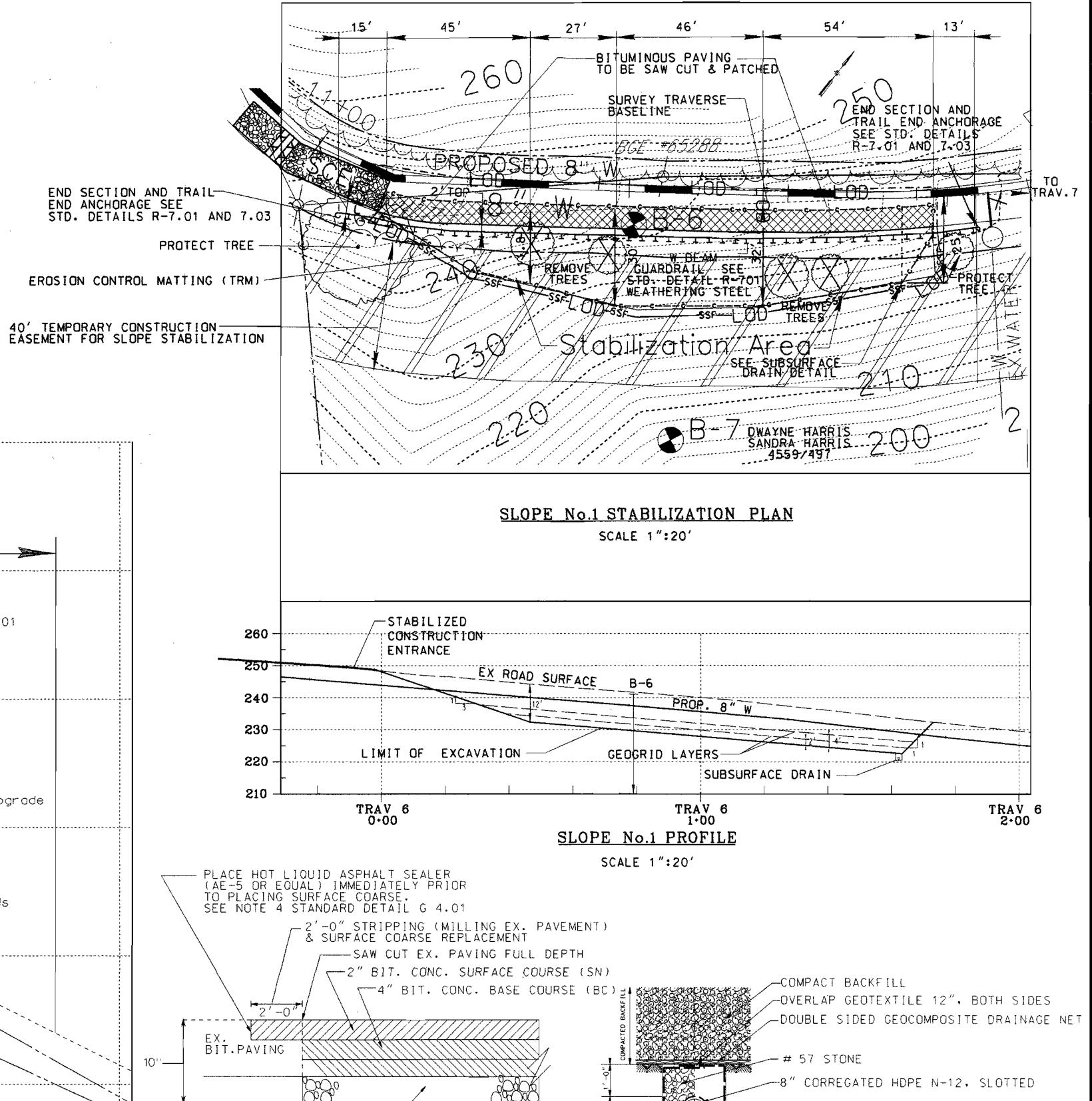
- 1. Proofroll excavated subgrade for weak zones.
- 1. Place fill in maximum 8-inch loose lifts.
- 2. Compact each lift to 95% of maximum dry density in accordance with ASTM 1557-90 and /or AASHTO T-180 at a moisture content of +/- 2 percent optimum.

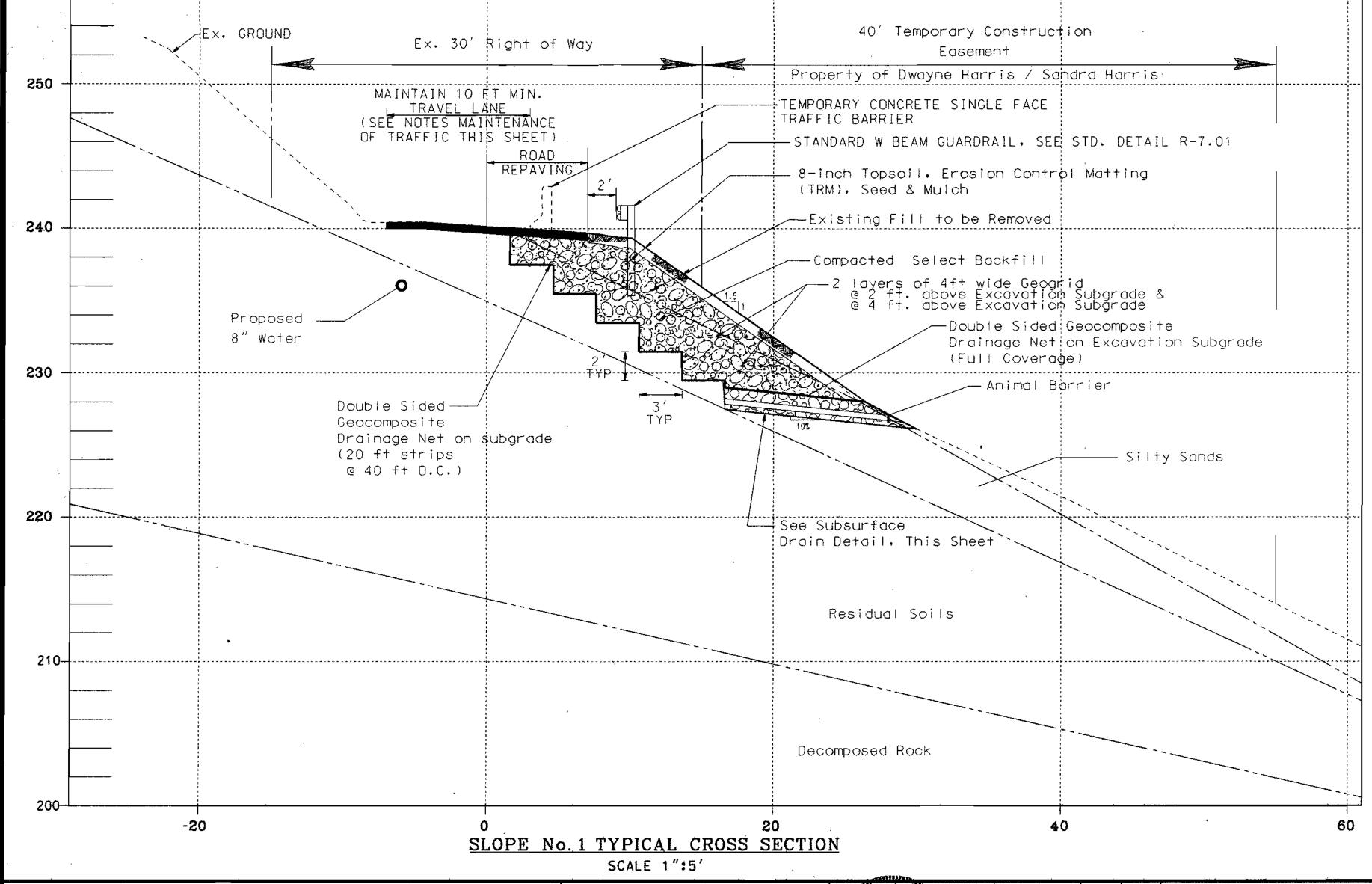
Animal Barrier

- 1. DRILL AND PLACE 4 No. 4 REBARS IN THE END OF HPDE UNDERDRAIN PIPING.
- 2. PLACE REBAR IN A EVENLY SPACED CROSSING PATTERN TO COVER THE OPENING TO THE UNDERDRAIN

MAINTENANCE OF TRAFFIC NOTES

- 1. A 10 FOOT MINIMUM TRAVEL LANE SHALL BE MAINTAINED THROUGHT OUT CONSTURCTION AT ALL TIMES.
- 2. EXCAVATION FOR THE TOP BENCH SHALL NOT BE UNDER TAKEN UNTIL BACKFILLING OPERATIONS HAVE REACHED 2 FEET FROM FINAL GRADE. ONLY THEN CAN THE REMAINING PAVEMENT AND TRAFFIC BARRIERS BE REMOVED.
- 3. ONCE THE TRAFFIC BARRIERS HAVE BEEN REMOVE. A 8 FOOT MINIMUM TRAVEL LANE MUST BE MAINTAINED DURING WORKING HOURS AND AT THE END OF EACH WORKING DAY A 10 FOOT MINIMUM TRAVEL LANE MUST BE SAFELY PROVIDED.





COMPACTED BACKFILL 4" GRADED AGGREGATE BASE (GAB)

-MSHA GEOTEXTILE CLASS "B"

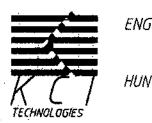
AS SHOWN

SHEET

DETAIL OF ROAD REPAVING SUBSURFACE DRAIN DETAIL SCALE 1":2' NOT TO SCALE

DEPARTMENT OF PUBLIC WORKS

HOWARD COUNTY, MARYLAND



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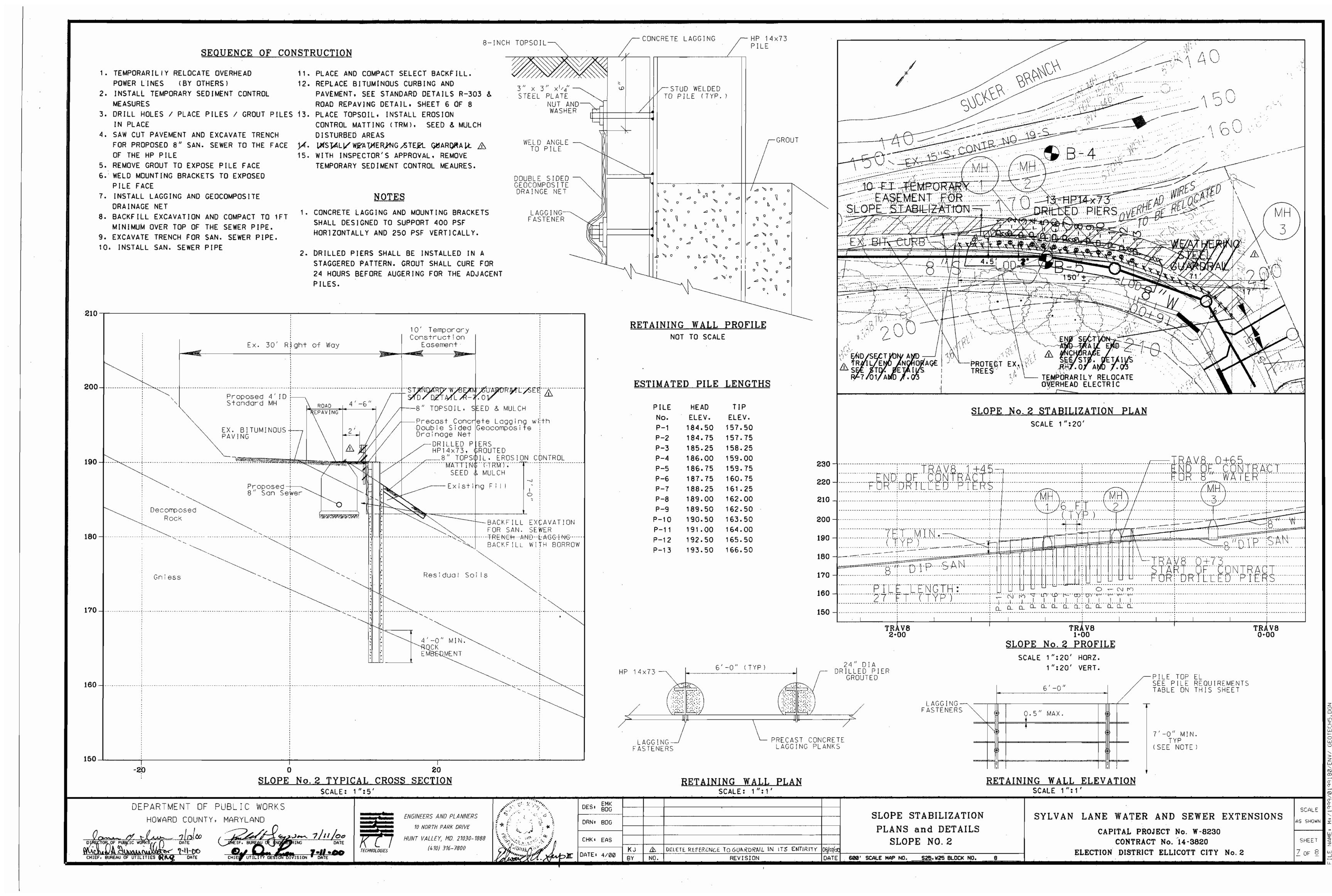
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SLOPE STABILIZATION PLANS AND DETALS SLOPE NO. 1

80' SCALE MAP NO. S25.W25 BLOCK NO. 8

SYLVAN LANE WATER AND SEWER EXTENSIONS CAPITAL PROJECT No. W-8230

CONTRACT No. 14-3820 ELECTION DISTRICT ELLICOTT CITY No. 2



ANY CONSTRUCTION, (313-1855) ALL VEGETIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONSOF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT "MARYLAND STANDARDS" AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL".

AND REVISIONS THERETO. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATIONSHALL BE COPLETED WITHIN:

A) 7 CALENDER 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. I, 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 (SEC. G20.0) 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.

0.25 ACRES

0.64 ACRES

SITE ANALYSIS:

TOTAL AREA OF SITE ACRES AREA DISTURBED ACRES

AREA TO BE ROOFED OR PAVED

AREA TO BE VEGATATIVELY STABILIZED 17,000 cu. YDS. TOTAL CUT

TOTAL FILL <u>17,000</u> cu. yos. OFFSITE WASTE/BORROW AREA LOCATION NA

ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF THE DISTURBANCE.

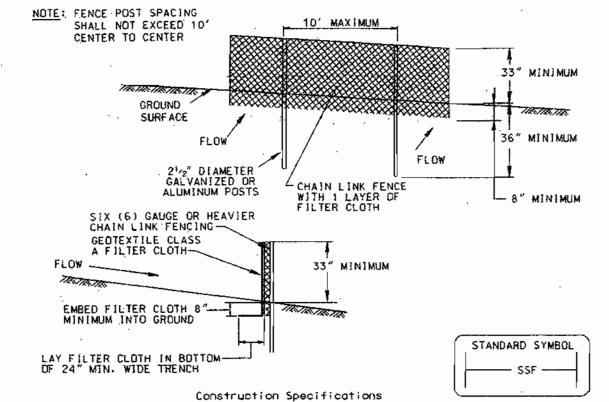
. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

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.

TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE (3) PIPE LENGTHS OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY. WHICHEVER IS SHORTER.

12. CONTRACTOR SHALL PLACE EXCAVATED MATERIALS ON UPHILL SIDE OF TRENCH AND PLACE SILT FENCE ON DOWNHILL SIDE OF TRENCH.

DETAIL 33 - SUPER SILT FENCE



1. Fencing shall be 42 inches in height and constructed in accordance with the latest Maryland State Righway (SHA) Details for Chain Link Fencing. The (\$HA) specification for a 6 foot fence shall be used, substituting 42 inch fabric and 6 foot length posts.

2. The posts do not need to be set in concrete.

SDIL CONSERVATION SERVICE

3. Chain link fence shall be fastened securely to the fence posts with wire ties or staples. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence. The chain link fencing shall be six (6) guage or heavier.

4. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.

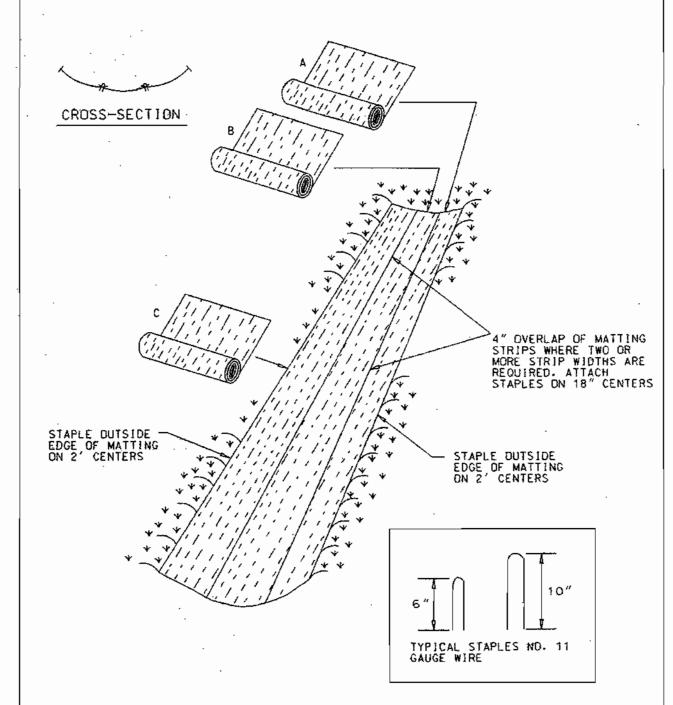
5. Filter cloth shall be embedded a minimum of 8" into the ground.

6. When two sections of geotextile fabric adjoin each other, they shall be overlapped by 6" and folded.

7. Maintenance shall be performed as needed and slit buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height

MARYLAND DEPARTMENT OF ENVIRONMENT U. S. DEPARTMENT OF AGRICULTURE

EROSION CONTROL MATTING DETAIL 30 - EROSION CONTROL MATTING



Construction Specifications

1. Key-in the matting by placing the 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".

2. Staple the 4" overlap in the channel center using an 18" spacing between stoples

3. Before stopling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.

4. Staples shall be placed 2' apart with 4 rows for each strip, 2 outer rows, and 2 afternating rows down the center.

5. Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4". shiplap fashion. Reinforce the overlap with a double row of stables spaced 6" apart in a staggered pattern on either side.

6. 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.

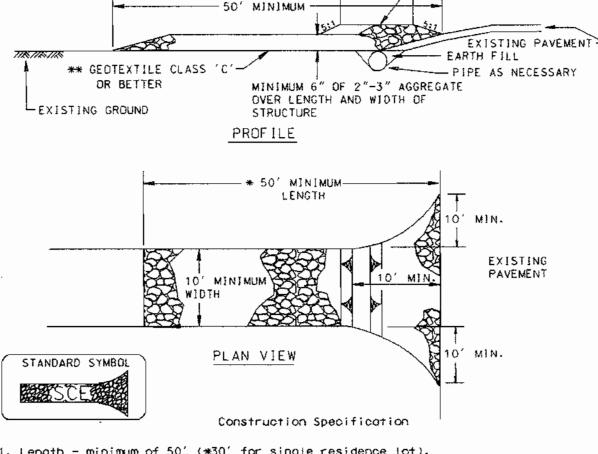
Note: Install erosion controll matting (TRM) on entire vegetated slope within limit of disturbance (L.D.D.) area designated on sheet 6 &7.

PAGE

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE

--- MOUNTABLE

BERM (6" MIN.)



. Length - minimum of 50' (*30' for single residence lot).

2. Width - 10' minimum, should be flored at the existing road to provide a turning radius

3. 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.

4. 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.

5. 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.

6. 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-

MARYLAND DEPARTMENT OF ENVIRONMENT B.S. DEPARTMENT OF AGRICULTURE MARYLAND DEPARTMENT OF ENVIRONMENT SDIL CONSERVATION SERVICE WATER MANAGEMENT ADMINISTRATION F - 17 - 3 WATER MANAGEMENT ADMINISTRATION

PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING. DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED. SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

1) PREFERRED - APPLY 2 TONS PER ACRES DOLOMITIC LIMESTONE (92 LBS/1000 SO FT.)
AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14LBS/1000 SO FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SDIL. AT TIME OF SEEDING, APPLY 400 LBS PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS/1000 SO FT.). 2)ACCEPTALBE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT.)
AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ FT.) BEFORE

SEEDING - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS PER ACRE (1.4 LBS/1000 SQ FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY I THRU JULY 31, SEED WITH 60 LBS KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (.05 LBS/1000 SO FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28. PROTECT SITE BY: OPTION (1) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOD. OPTION (3) SEED WITH 60 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

SEEDING. HARROW OF DISK INTO UPPER THREE INCHES OF SOIL.

MULCHING - APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT.) FOR ANCHORING.

MAINTENANCE - INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT-TERM VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING. IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: - APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SO FT.).

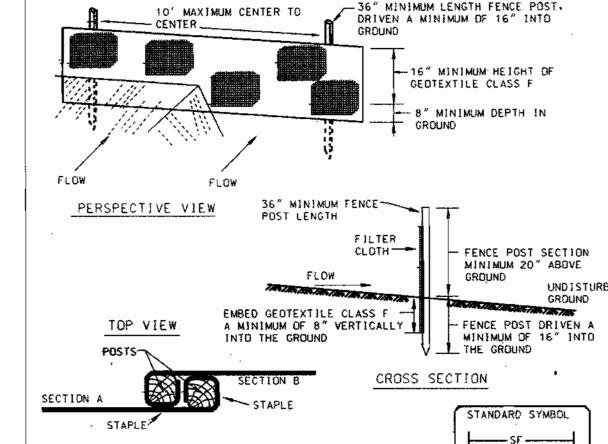
SEEDING: - FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU OCTOBER 15. SEED WITH 2-1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ FT.). FOR THE PERIOD MAY 1 THRU AUGUST 14. SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (.07 LBS/1000 SQ FT.). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING: - APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL PER ACRE (5 GAL/1000 SD FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FT OR HIGHER, USE 348 GAL PER ACRE (8 GAL/1000 SQ FT.) FOR ANCHORING.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

DETAIL 22 - SILT FENCE

WATER MANAGEMENT ADMINISTRATION



JOINING TWO ADJACENT SIL' FENCE SECTIONS

Construction Specifications 1. 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^{3} /4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pond per linear foot.

2. Sectextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

Test: MSMT 509 Tensile Strength 50 ibs/in (min.) 20 (bs/in (min.) Test: MSMT 509 Tensite Modulus 0.3 gal ft*/ minute (max.) Test: MSMT 322 Flow Rate 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.

4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

MARYLAND DEPARTMENT OF ENVIRONMENT E - 15 - 3 WATER MANAGEMENT ADMINISTRATION SOIL CONSERVATION SERVICE

SEQUENCE OF CONSTRUCTION

U.S. DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE

. CONTACT HOWARD COUNTY BUREAU OF CONSTRUCTION INSPECTION DIVISION (313-1870) PRIOR TO STARTING DATE.

2. INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS PER SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL VOL. IV. (2 DAYS)

3. EXCAVATE AND INSTALL PROPOSED 8" WATER MAIN. RESTORE EARTH TRENCHES TO THEIR ORIGINAL CONDITION PER HOWARD COUNTY STANDARDS. (TRENCH TO BE BACKFILLED AND STABILIZED ON SAME DAY) (TOTAL DURATION 45 DAYS)

4. EXCAVATE AND REFILL FOR SLOPE NO.1 STABILIZATION IN ACCORDANCE WITH SEQUENCE OF CONSTRUCTION SHEET 6 AND REPAVE IN CONJUNCTION WITH WATER TRENCH RESTORATION (TOTAL DURATION (7 DAYS)

5. EXCAVATE AND INSTALL PROPOSED 8' SEWER MAIN IN CONJUNCTION WITH SLOPE NO.2 STABILIZATION IN ACCORDANCE WITH SEQUENCE OF CONSTRUCTION SHEET 7. RESTORE EARTH TRENCHES TO THEIR ORIGINAL CONDITION PER HOWARD COUNTY STANDARD. (TRENCH TO BE BACKFILLED AND STABILIZED ON SAME DAY) (TOTAL DURATION 28 DAYS)

. RESTORE ALL DISTURBED AREAS AND STABILIZE WITH PERMANENT SEEDING. (7 DAYS)

. UPON PERMISSION FROM HOWARD COUNTY SEDIMENT CONTROL INSPECTOR. REMOVE SEDIMENT CONTROL DEVICES. (2 DAYS)

STANDARD AND SPECIFICATION FOR TOPSOIL

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

U.S. DEPARTMENT OF AGRICULTURE

SDIL CONSERVATION SERVICE

MARYLAND DEPARTMENT OF ENVIRONMENT

WATER MANAGEMENT ADMINISTRATION

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

CONIDITIONS WHERE PRACTICE APPLIES

I. THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES

A THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.

B. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.

C. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.

D. THE SOILS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE

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

CONSTRUCTION AND MATERIAL SPECIFICATIONS

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

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

> I TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND, OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPIATE APPROVAL AUTHORITY REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THATN 11/2" IN DIAMETER.

II. TOPSIOL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSONGRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.

III. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTURBED UNIFORMLY OVER DESIGNATE AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.

III. FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES-

I(TYP), FOR SITE HAVING DISTURBED AREAS OVER 5 ACRES:

I. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION 1-VEGETATIVE STABILIZATION METHODS AND MATERIALS.

I. ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS DICTATING FERTILIZER AND LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING: A. PH FOR TOPSOIL SHALL BE BETWEEN 6.0 AND 75 IF THE TESTED SOIL DEMONSTRATES A PH OF LESS THAN 6.0, SUFFICIENT LIME SHALL BE PERSCRIBED TO RAISE THE PH TO 6.5 OR HIGHER.

B. ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN 1.5 PERCENT BY WEIGHT

C. TOPSOIL HAVING SOLUBLE SALT CONTENT GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.

D. NO SOD OR SEED SHALL BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STRERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS

NOTE: TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.

II. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS

SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION 1-VEGETATIVE STABILIZATION METHODS AND MATERIALS.

(TYP), TOPSOIL APPLICATION

I WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, EARTH DIKES, SLOPE SILT FENCE AND SEDIMENT

TRAPS AND BASINS II GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBEIT 4" - 8"

HIGHER IN ELEVATION. III. TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4" - 8" LAYER

AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE, ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.

IV. TOPSOIL SHALL NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MIGHT OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

(TYP) I. ALTERNATIVE FOR PERMANENT SEEDING - INSTEAD OF APPLYING THE FULL AMOUNTS OF LIME AND COMMERCIAL FERTILIZER, COMPOSTED SLUDGE AND AMENDMENTS MAY BE APPLIED AS SPECIFIED BELOW:

I. COMPOSTED SLUDGE MATERIAL FOR USE AS A SOIL CONDITIONER FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES SHALL BE TESTED TO PERSCRIBE AMENDMENTS AND FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS.

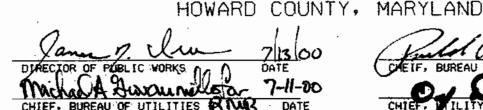
A. COMPOSTED SLUDGE SHALL BE SUPPLIED BY, OR ORIGINATE FROM, A PERSON OR PERSONS THAT ARE PERMITTED (AT THE TIME OF ACQUISITION OF THE COMPOST) BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT UNDER COMAR 26.04.06.

B. COMPOSTED SLUDGE SHALL CONTAIN AT LEAST 1 PERCENT NITROGEN, 1.5 PERCENT PHOSPHORUS, AND 0.2 PERCENT POTASSIUM AND HAVE A PH OF 7.0 TO 8.0. IF COMPOST DOES NOT MEET THESE REQUIREMENTS, THE APPROPRIATE CONSTITUENTS MUST BE ADDED TO MEET THE REQUIREMENTS

C. COMPOSTED SLUDGE SHALL BE APPLIED AT A RATE OF 1 TON/1,000 SQUARE FEET.

IL COMPOSTED SLUDGE SHALL BE AMENDED WITH A POTASSIUM FERTILIZER APPLIED AT THE RATE OF 4 LB/1,000 SQUARE FEET, AND 1/3 THE NORMAL LIME APPLICATION

DEPARTMENT OF PUBLIC WORKS





ENGINEERS AND PLANNERS 10 NORTH PARK DRIVE HUNT VALLEY, MD. 21030-1888 (410) 316-7800



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EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

600' SCALE MAP NO. S25.W25 BLOCK NO. 8

SYLVAN LANE WATER AND SEWER EXTENSIONS

CAPITAL PROJECT No. W-8230 CONTRACT No. 14-3820 ELECTION DISTRICT ELLICOTT CITY No. 2 SHEET