

ORCHARD AVENUE RELIEF SEWER

HOWARD COUNTY, MARYLAND

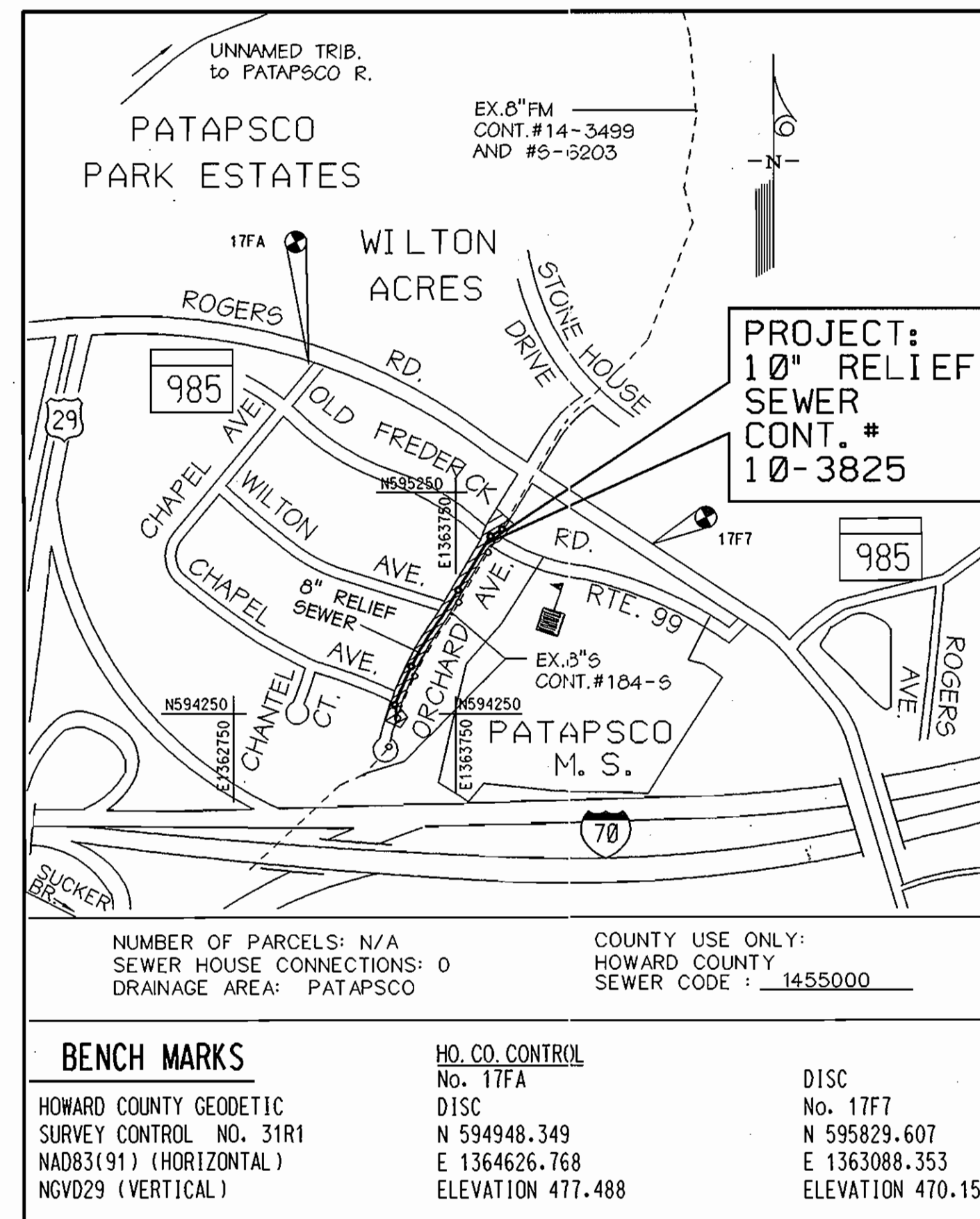
DEPARTMENT OF PUBLIC WORKS

CAPITAL PROJECT No. S-6225
CONTRACT No. 10-3825

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, NAD 83.
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 THE POLES.
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	1-800-526-2000
BGE (CONTRACTOR SERVICES)	410-850-4620
BGE - UNDERGROUND DAMAGE CONTROL	410-787-9068
BUREAU OF UTILITIES (DPW)	410-313-4900
BELL ATLANTIC MARYLAND, INC.	1-800-621-9900
COLONIAL PIPELINE CO.	410-795-1390
MES UTILITY	1-800-257-7777
STATE HIGHWAY ADMINISTRATION	410-531-5533
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) 313-7450 AT LEAST FIVE WORKING DAYS BEFORE ANY OPEN CUT OF ANY COUNTY ROAD OR BORING/JACKING OPERATION IN COUNTY ROADS FOR LAYING SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.1141(a) OF THE HOWARD COUNTY CODE.
12. ALL SEWER MAINS SHALL BE D.I.P. OR PVC UNLESS OTHERWISE NOTED.
13. ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
14. FORCE MAINS SHALL BE D.I.P. ONLY.
15. MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
16. MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVER. STANDARD DETAIL 05.52 WHERE WATERTIGHT MANHOLE FRAME AND COVER ARE USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
17. HOUSE(S) WITH THE SYMBOL "C.N.S" INDICATES THAT CELLAR CANNOT BE SERVED.



INDEX OF SHEETS

SHEET NO.	TITLE
1	TITLE SHEET
2	PLAN AND PROFILE
3	DETAILS AND NOTES

RESTORATION SCHEDULE		
LOCATION	DISTANCE	TYPE
MH D-1 TO D-4	1120'	MACADAM
FORCE MAIN RECONNECTION	25'	MACADAM

LOCATION MAP

SCALE: 1" = 600'

DEVELOPER'S CERTIFICATION

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

Paul J. Seaman 8/2/00
BUREAU OF ENGINEERING
DEPARTMENT OF PUBLIC WORKS

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.
Chris Simms / 8/23/00
U.S. NATURAL RESOURCES CONSERVATION SERVICE

ENGINEER'S CERTIFICATION

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

Timothy W. Wolfe 7/25/00
TIMOTHY W. WOLFE
10 TECHNOLOGIES
30 NORTH PARK DRIVE
HUNT VALLEY, MARYLAND 21030

THIS DEVELOPMENT PLAN IS APPROVED FOR THE SOIL EROSION & SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
Paul J. Seaman 8/23/00
HOWARD S.C.D.

QUANTITIES				
ITEM	UNIT	ESTIMATE	AS-BUILT	MATERIAL SUPPLIER
8" SEWER FORCE MAIN	L.F.	25	25	D.I.P. US PIPE
8" VALVE	E.A.	2	2	MULLER
10" S	L.F.	1,120	1131	PVC DIAMOND
4" DIA. STD. MH	E.A.	4	4	ATLANTIC PRE CAST
4" DIA. MH RISER	V.F.	15	13.5	ATLANTIC PRE CAST
NAME OF UTILITY CONTRACTOR: GENERAL PAVING				
CHECKBOX				
AS-BUILT DATE: 12/3/01				
SURVEY AND DRAFTING DIVISION				

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND



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



DES: PS				
DRN: PS				
CHK: <i>Jw</i>				
DATE: 01/00	BY: KJF	NO. AS BUILT	REVISION	DATE: 12/3/01

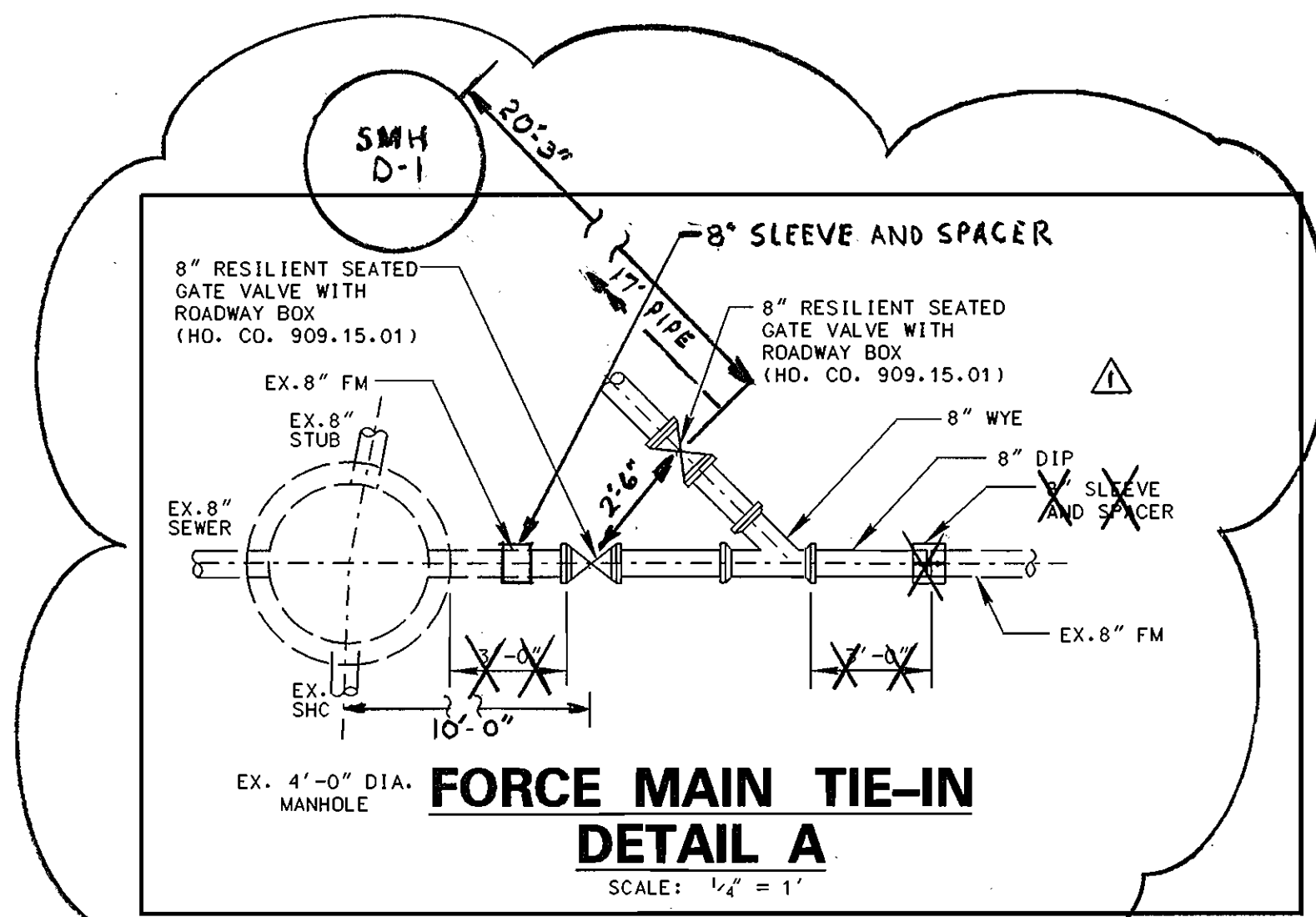
TITLE SHEET

ORCHARD AVENUE RELIEF SEWER
CAPITAL PROJECT No. S-6225
CONTRACT No. 10-3825
ELECTION DISTRICT NO. 2 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 1 OF 3

EP-00-19

FILE NAME: M/1999/0199180.C



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 ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT.) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS/1000 SQ FT.)
- 2) ACCEPTABLE - 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. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL.

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 1 THRU JULY 31, SEED WITH 60 LBS KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (0.5 LBS/1000 SQ 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.

MULCHING - APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT.) OF UNROTTED SMALL GRASS 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 (18 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 60 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ 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 (0.7 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 GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL PER ACRE (5 GAL/1000 SQ FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FT OR HIGHER, USE 348 GAL PER ACRE (18 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.

SEQUENCE OF CONSTRUCTION

1. OBTAIN GRADING PERMIT.
2. LAYOUT ALIGNMENT AT SITE. (3 DAY)
3. INSTALL SEDIMENT CONTROL DEVICES (INLET PROTECTION DEVICES) AS SHOWN ON PLAN.
4. EXCAVATE DITCH TO THE GRADE SPECIFIED ON THE PROFILE. INSTALL SEWER MAIN AND BACKFILL TRENCH AND RESURFACE WITH BITUMINOUS PAVING (30 DAYS) TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO 25' OF PIPE LENGTH OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
5. CLEAN UP CONSTRUCTION SITE. (1 DAY)
6. REMOVE SEDIMENT CONTROL DEVICES AFTER PERMISSION IS GRANTED BY THE SEDIMENT CONTROL INSPECTOR. (1 DAY)

STANDARD SEDIMENT CONTROL NOTES

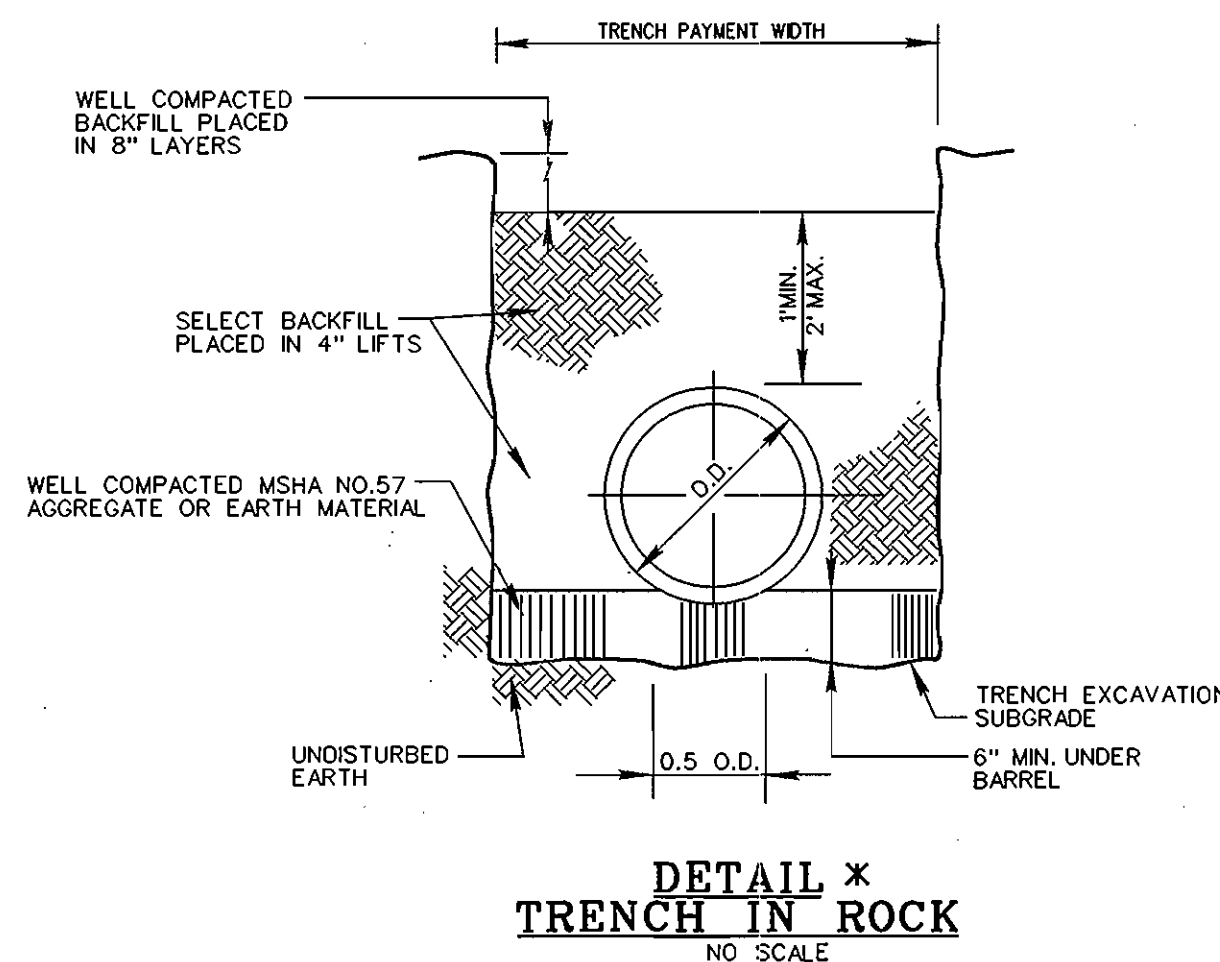
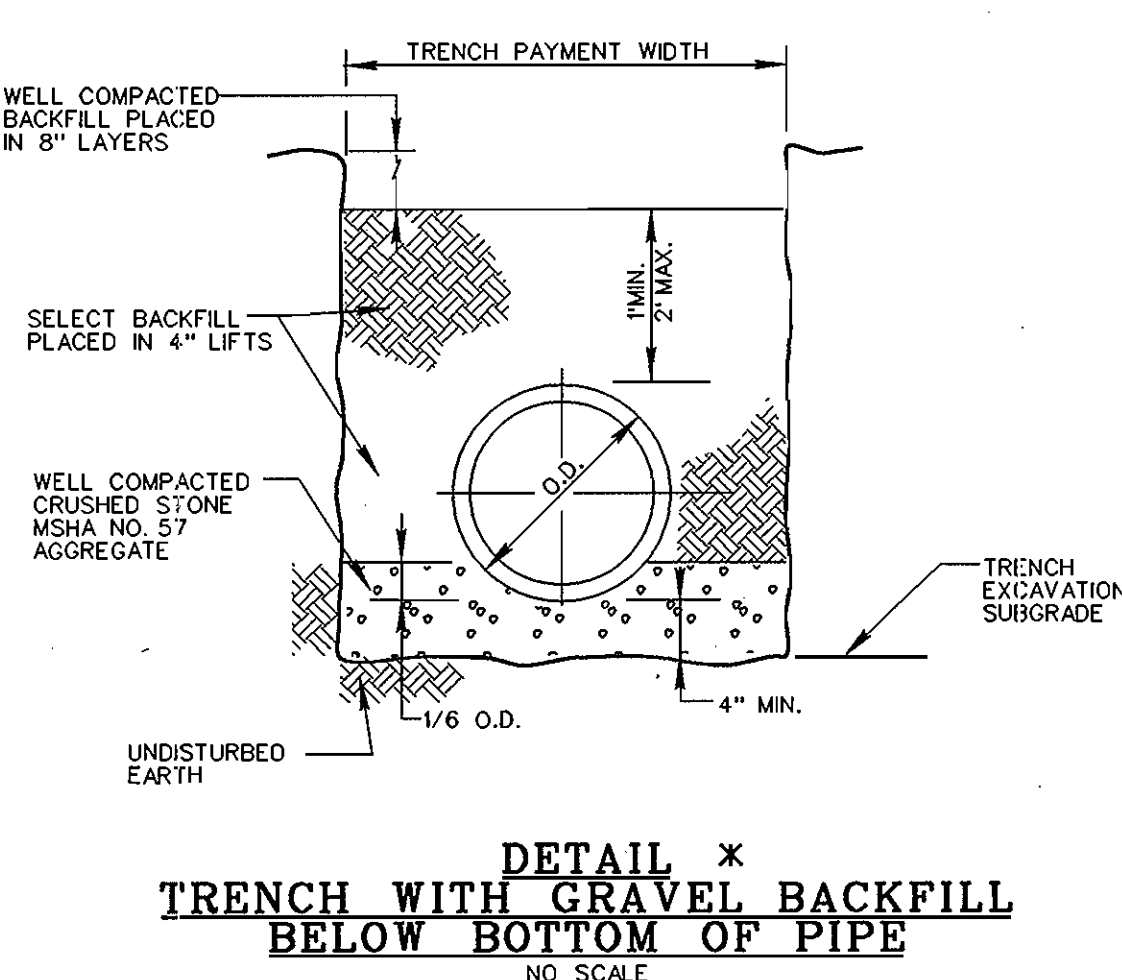
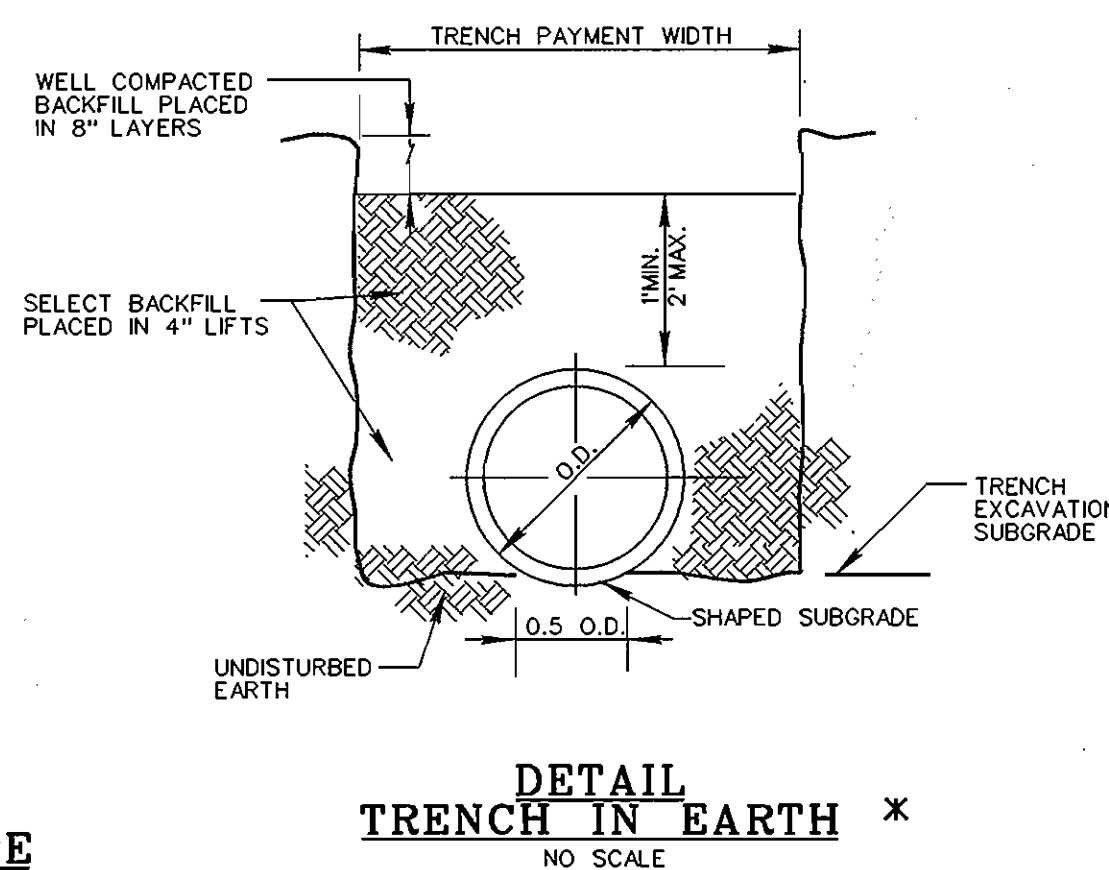
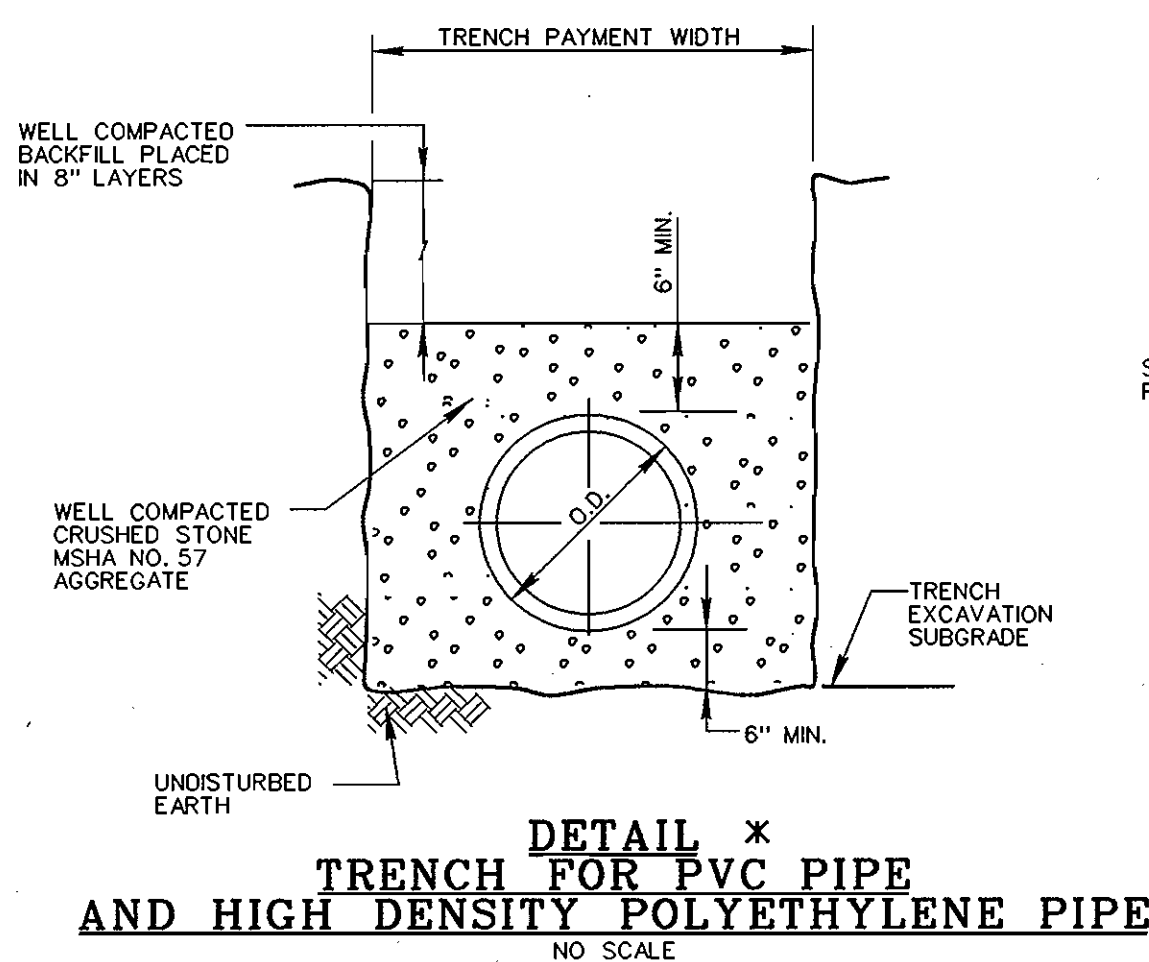
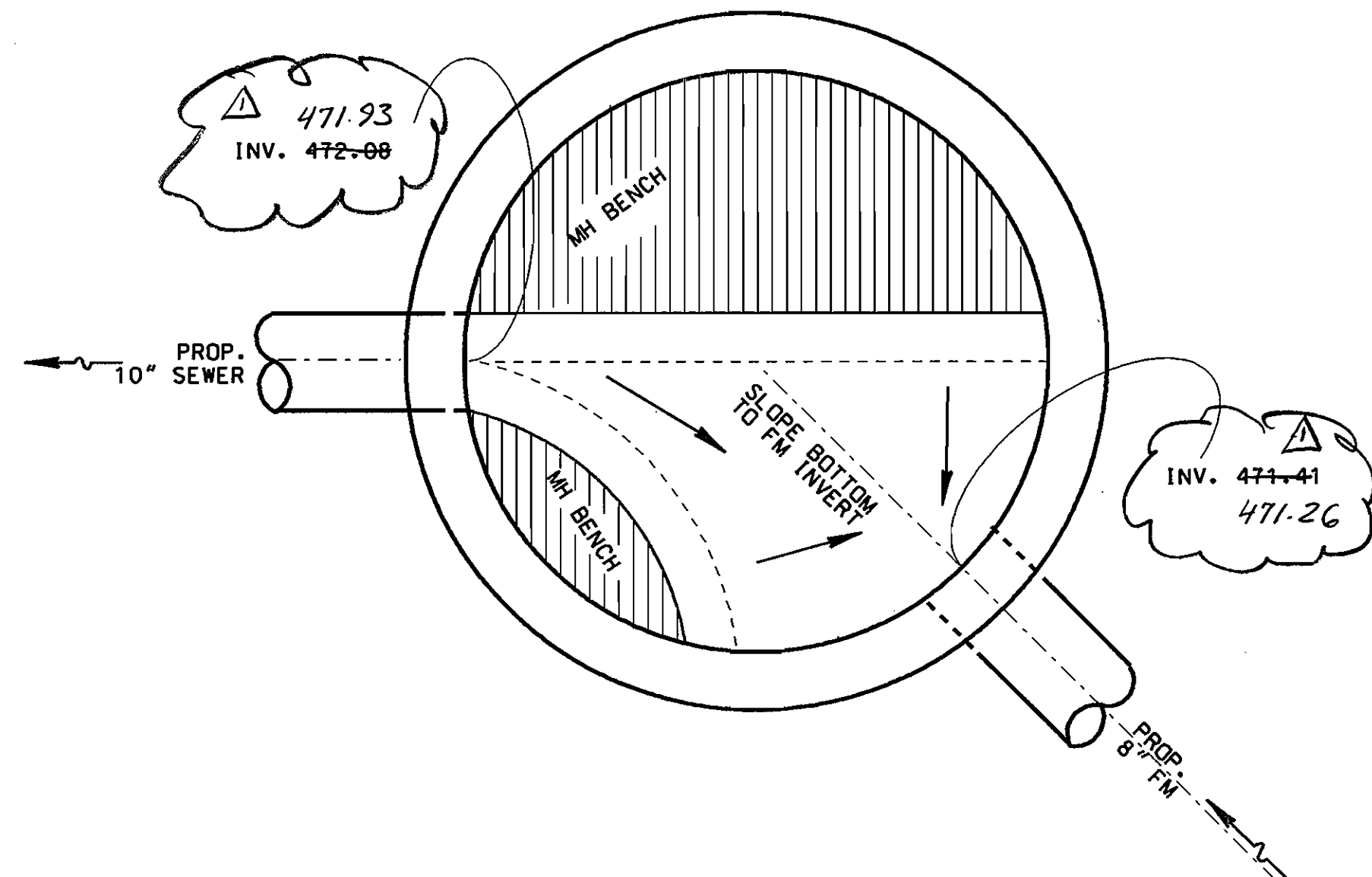
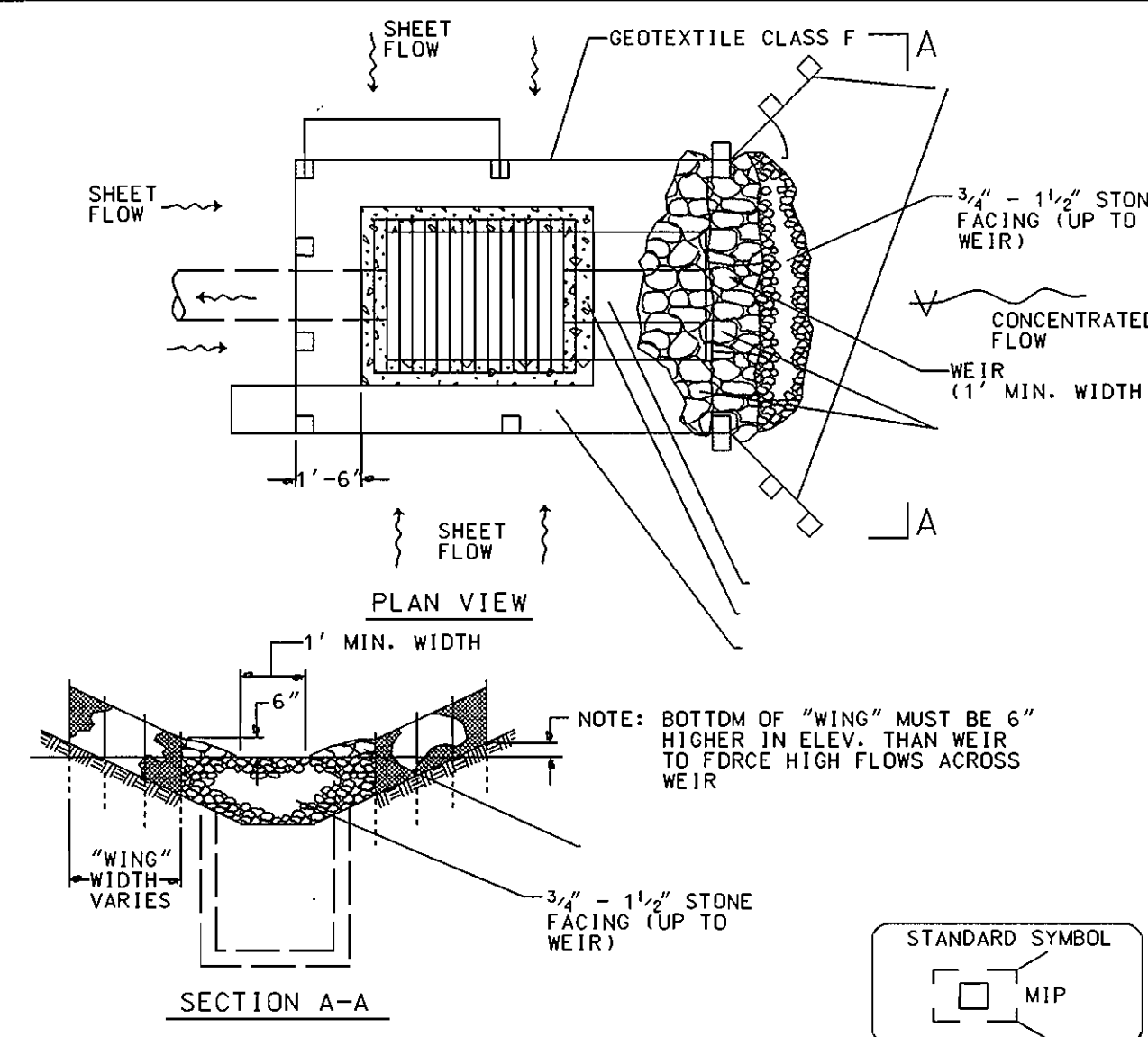
1. A MINIMUM OF 24 HOURS MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS, PRIOR TO THE START OF ANY CONSTRUCTION (410-313-1855).
 2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH SECTION 219 OF THE HOWARD COUNTY STANDARDS AND SPECIFICATIONS.
 3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
 - a) 7 CALENDER DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERMETER SLOPES AND ALL SLOPES GREATER THAN 3:1.
 - b) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
 4. 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.
 5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1991 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS (Sec. 51, SOD/Sec. 52), TEMPORARY SEEDING (Sec. 50) AND MULCHING (Sec. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
 6. 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.
 7. SITE ANALYSIS:

TOTAL AREA OF SITE	NA	ACRES
AREA DISTURBED	0.16	ACRES
AREA TO BE ROOFED OR PAVED	0.16	ACRES
AREA TO BE VEGETATIVELY STABILIZED	NA	ACRES
TOTAL CUT	NA	CU. YDS.
TOTAL FILL	NA	CU. YDS.
OFFSITE WASTE/BORROW AREA LOCATION	NA	
 8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF THE DISTURBANCE.
 9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
 10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERMETER 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.
 11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO 25' OF 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.
- NOTE: SEDIMENT CONTROL TO BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARDS AND SPECIFICATIONS (VOL. IV) OF THE HOWARD COUNTY DESIGN MANUAL AND THIS PLAN.

TRAFFIC MAINTENANCE

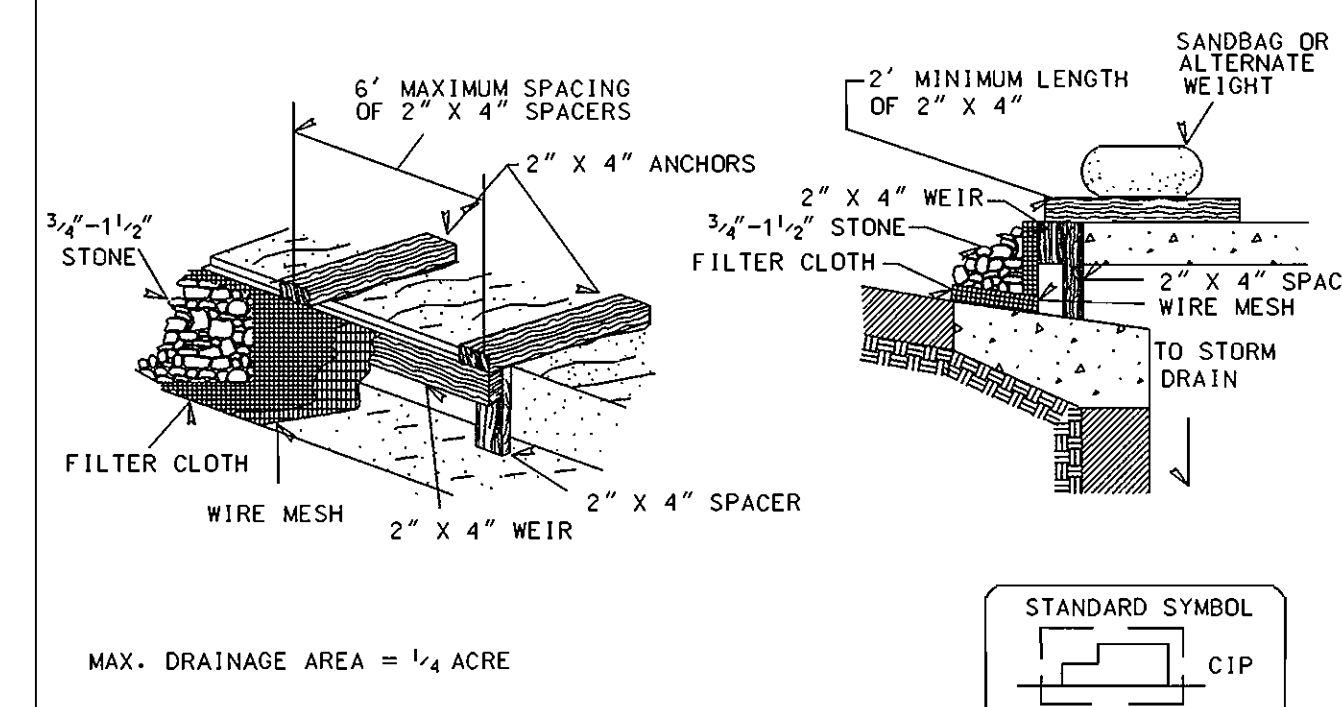
FOR TRAFFIC MAINTENANCE REQUIREMENTS SEE SPECIFICATION DOCUMENT D, PARAGRAPH 4.16.

DETAIL 23D - MEDIAN INLET PROTECTION

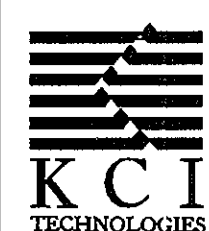


* BASED ON HOWARD COUNTY STANDARD DETAIL C2.01 EXCEPT TRENCH SUBGRADE SHALL BE AS SHOWN ON THESE DETAILS.

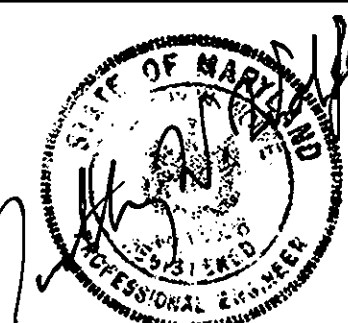
DETAIL 23C - CURB INLET PROTECTION (COG OR COS INLETS)



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND



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



DES:	PS				
DRN:	PS				
CHK:	MG				
DATE:	01/00				
BY:	KFJ	AS BUILT			
NO.					
REVISION					
DATE	12/19/01				

DETAILS AND NOTES

600' SCALE TAX MAP NO. 57 PARCEL 073

ORCHARD AVENUE RELIEF SEWER

CAPITAL PROJECT No. S-6225
CONTRACT No. 10-3825
ELECTION DISTRICT NO. 2 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 3 OF 3

FILE NAME - m7/1999/019180.C/C-2.DGN