

GENERAL NOTES

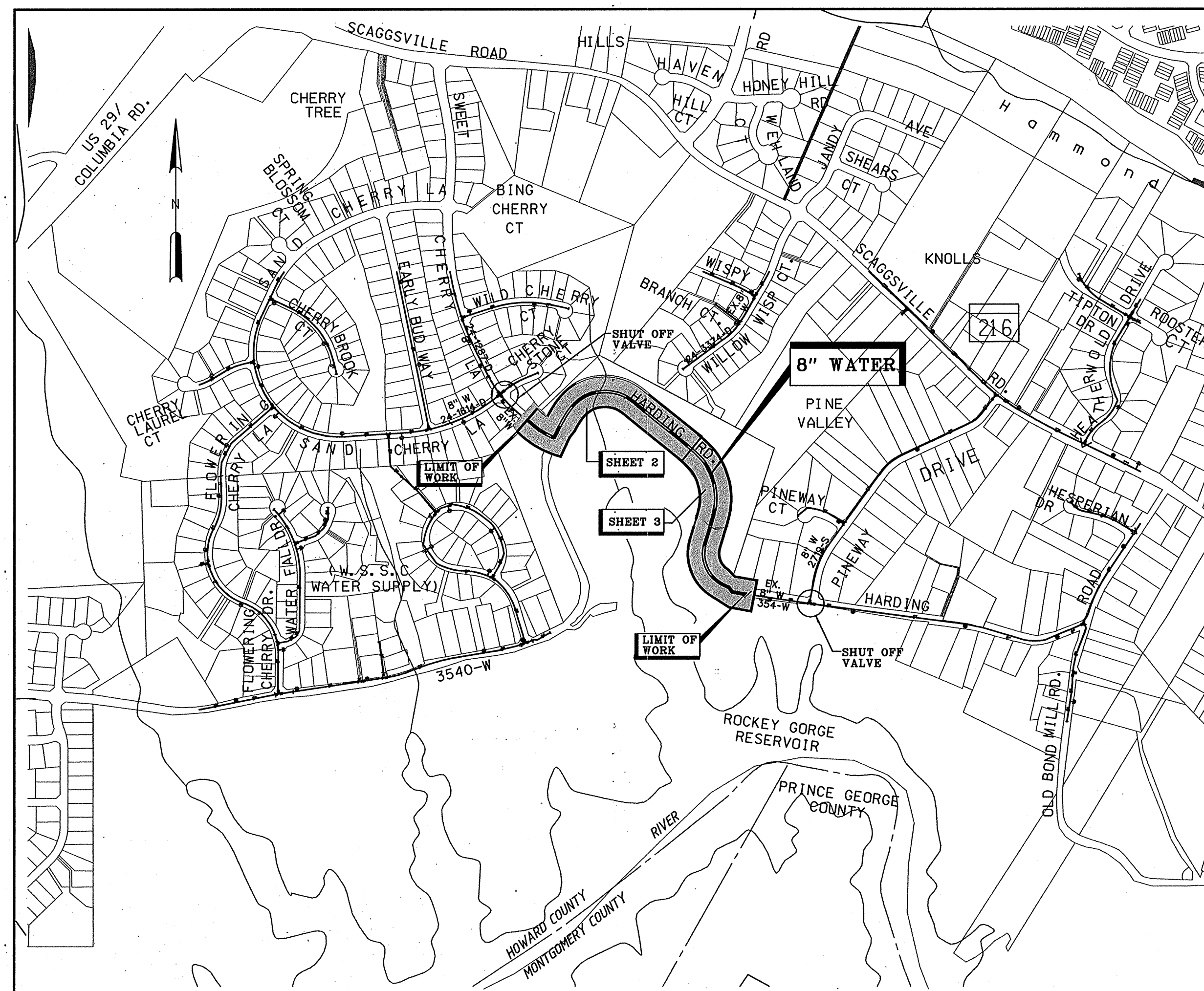
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR EXPENSE.
- ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
- ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATA NGVD29
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
- 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.
- 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
 BC&E (CONTRACTOR SERVICES).....410-850-4620
 BC&E - UNDERGROUND DAMAGE CONTROL.....410-787-9068
 BUREAU OF UTILITIES (DPW).....410-313-4900
 VERIZON.....1-800-743-0033 / 410-224-9210
 COLONIAL PIPELINE CO.410-795-1390
 MISS UTILITY1-800-257-7777
 STATE HIGHWAY ADMINISTRATION410-531-5533
- 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 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(G) OF THE HOWARD COUNTY CODE.
- ALL DUCTILE IRON PIPES TO BE USED ON THE PUBLIC WATER SYSTEM SHALL BE CLASS 54. DUCTILE IRON FITTINGS SHALL MEET THE REQUIREMENTS OF THE HOWARD COUNTY DESIGN MANUAL VOLUME IV-STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION AND SHALL BE EXTERIOR EPOXY COATED IN ACCORDANCE WITH AWWA C116.
- ALL WATER HOUSE CONNECTIONS SHALL BE COPPER MEETING THE REQUIREMENTS OF AND CONSTRUCTED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOLUME IV-STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
- ALL FIRE HYDRANT LEADS INCLUDING THE TEE SHALL BE DUCTILE IRON CLASS 54 MEETING THE REQUIREMENTS OF AND CONSTRUCTED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOLUME IV-STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
- ALL WATER MAINS CONSTRUCTED IN FILL AREAS SHALL BE RESTRAINED DUCTILE IRON PIPE CLASS 54 MEETING THE REQUIREMENTS OF AND CONSTRUCTED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOLUME IV-STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
- ALL WATER MAINS WITHIN CASING PIPES SHALL BE RESTRAINED DUCTILE IRON PIPE CLASS 54 MEETING THE REQUIREMENTS OF AND CONSTRUCTED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOLUME IV-STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
- THE FOLLOWING NOTE IS ADDED TO HOWARD COUNTY STANDARD DETAIL W2.22, BUTTRESSES AND ANCHORAGES FOR VERTICAL BENDS, WHEN ANCHORING PVC PIPE, THE STRAPPING IN CONTACT WITH THE PIPE SURFACE SHALL BE 1-INCH WIDE BY 1/2-INCH THICK STEEL. THE REMAINING ON OF THE STRAP SHALL BE REINFORCING BAR SIZED IN ACCORDANCE WITH THE PERTINENT CHART SHOWN ON THE DETAIL.
- EXCEPT AS INDICATED ON THE PLANS AND NOTED ABOVE, ALL PUBLIC WATER MAINS SHALL BE POLYVINYLCHLORIDE (PVC) PIPE MEETING THE REQUIREMENTS OF AWWA C900 DR18, PRESSURE CLASS 150 AND THE HOWARD COUNTY DESIGN MANUAL VOLUME IV-STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION AND ALL SUBSEQUENT AMENDMENTS THERETO.
- TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
- 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 1000 AND SECTION 1005 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE VARIOUS BUSINESSES AND COORDINATING HIS WORK ACTIVITIES SO AS NOT TO NEGATIVELY IMPACT CONNECTED CUSTOMERS. THE REHABILITATION OF WATER MAIN SHALL CAUSE A MINIMUM DISTURBANCE TO THE EXISTING BUSINESSES AND NOTIFICATION TO THE BUSINESS OF ANY "INTERRUPTION OF SERVICE" SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE COUNTY REQUIRES THAT THE CONTRACTOR NOTIFY EACH BUSINESS AFFECTED BY LETTER OR DOOR TAGS OF THE IMPENDING SERVICE INTERRUPTION AT LEAST 72 HOURS IN ADVANCE OF THE PLANNED INTERRUPTION.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF UTILITIES HOWARD COUNTY, 15 DAYS PRIOR TO WATER MAIN SHUT DOWNS.
- THE CONTRACTOR SHALL RETURN ALL SALVAGED FIRE HYDRANTS, FRAMES AND COVERS, VALVES, ROADWAY BOXES TO THE BUREAU OF UTILITIES AT 8250 MONTGOMERY RD., COLUMBIA, MD 21045.
- THE CONTRACTOR SHALL PROVIDE SURVEY CONSTRUCTION STAKEOUT FOR ALL NECESSARY LINES, GRADES AND ELEVATION OF THE PROPOSED FACILITIES.
- WATER MAINS SHALL BE FILLED WITH WATER AND BROUGHT TO 200psi FOR 2 HOURS, VARYING ± 5psi. SEE SPECIFICATIONS D-19.

HARDING ROAD WATER MAIN LOOP HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS

CAPITAL PROJECT No. W-8251

CONTRACT No. 44-4102



LOCATION MAP

SCALE: 1" = 600'

TYPE OF BUILDING: N/A
 NUMBER OF PARCELS: N/A
 NUMBER OF WATER HOUSE CONNECTIONS: N/A
 DRAINAGE AREA: MIDDLE PATUXENT
 PRESSURE ZONE: 550
 WATER TEST GRADIENT: 850

FOR COUNTY USE ONLY
 WATER CODE: E18

HOWARD COUNTY GEODETIC SURVEY CONTROL
 THE HORIZONTAL AND VERTICAL DATUM BASED ON
 NAD83(91) (HORIZONTAL)
 NGVD29 (VERTICAL)
 NO. BAS8
 N 538992.730
 E 1340077.863
 ELEV. 436.37
 NO. 46C3
 N 537405.865
 E 1347556.237
 ELEV. 334.57

INDEX OF SHEETS	
SHEET No.	DESCRIPTION
1	TITLE SHEET
2	8" WATER MAIN PLAN AND PROFILE STA. 0+00 TO STA. 13+50
3	8" WATER MAIN PLAN AND PROFILE STA. 13+50 TO STA. 24+54
4	EROSION & SEDIMENT CONTROL, NOTES & DETAILS

QUANTITIES				
ITEM	UNIT	ESTIMATE	AS-BUILT	MATERIAL SUPPLIER
8" PVC WATER	L.F.	2460'	2462'	BRISTOLPIPE C-900UM MFG
8" VALVE	EACH	4	4	MUELLER
6" VALVE	EACH	5	5	MUELLER
FH	EACH	5	5	MUELLER
1" AIR RELEASE & VAULT	EACH	1	1	MUELLER

NAME OF UTILITY CONTRACTOR: IACOBONI SITE SPECIALISTS
 CHECKBOX
 AS-BUILT DATE:
 SURVEY AND DRAFTING DIVISION

RESTORATION SCHEDULE		
LOCATION	DISTANCE	TYPE
STA. 0+00-2+00	200	SEED & MULCH
STA. 2+00-23+98	2198	ASPHALT
STA. 23+98 STA. 24+54	56	SEED & MULCH

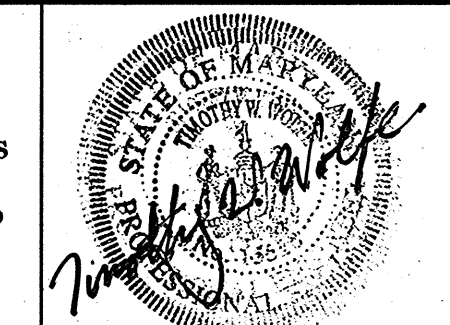
- LEGEND
- DECIDUOUS TREE
 - CONIFEROUS TREE
 - TRAVERSE POINT
 - WATER MAIN
 - FIRE HYDRANT
 - VALVE
 - WATER HOUSE CONNECTION
 - LOD - LIMIT OF DISTURBANCE
 - EXISTING FIRE HYDRANT
 - EXISTING VALVE
 - EXISTING WATER MAIN
 - EXISTING GAS MAIN
 - EXISTING BURIED SERVICE CABLE WIRE
 - EXISTING OVERHEAD SERVICE
 - EXISTING COLONIAL PIPELINE MARKER

- SUGGESTED VALVE SEQUENCE
- CONSTRUCT WATER MAIN.
 - TEST WATER MAIN.
 - CLOSE VALVE 'A' AND VALVE 'B' AT PINENEY DR. AND HARDING RD. (V_a & V_b).
 - MAKE CONNECTION AT STA. 24+54. CONFIRM VALVES '1' & '2' (V₁ & V₂) ARE CLOSED AND VALVES '3' & '4' (V₃ & V₄) ARE OPEN.
 - RE-OPEN VALVES 'A' AND 'B' (V_a & V_b).
 - CLOSE VALVE 'C' (V_c) AT SWEET CHERRY LA. SOUTH OF CHERRY STONE CT.
 - MAKE CONNECTION AT STA. 0+00.
 - RE-OPEN VALVE 'C' (V_c).
 - OPEN VALVE '1' (V₁).

AS BUILT 6/14/05

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

John A. Kelly 10/15/02
 DIRECTOR OF PUBLIC WORKS DATE
Michael J. Szymon 10/22/04
 CHIEF, BUREAU OF ENGINEERING DATE
John A. Kelly 10/22/04
 CHIEF, UTILITY DESIGN DIVISION DATE



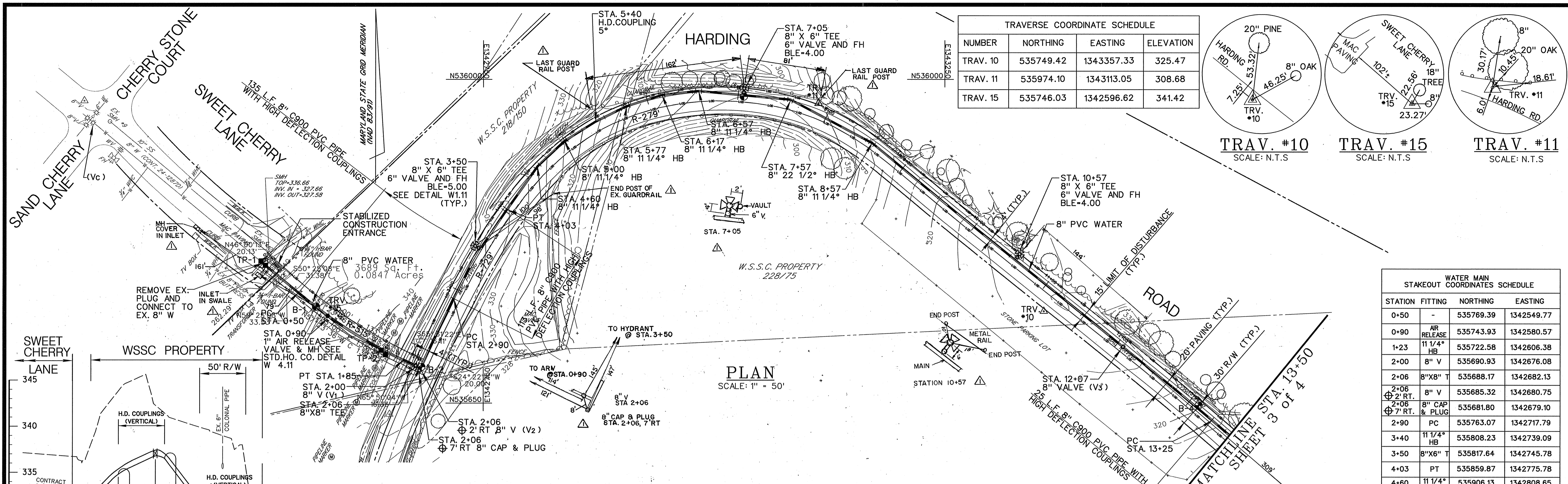
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DRN: CK			
CHK: TW			
DATE: OCTOBER, 04	LN	AS BUILT INFORMATION ADDED	6/05
	BY	NO.	REVISION

TITLE SHEET
 600' SCALE MAP NO. 46 BLOCK NO. 11

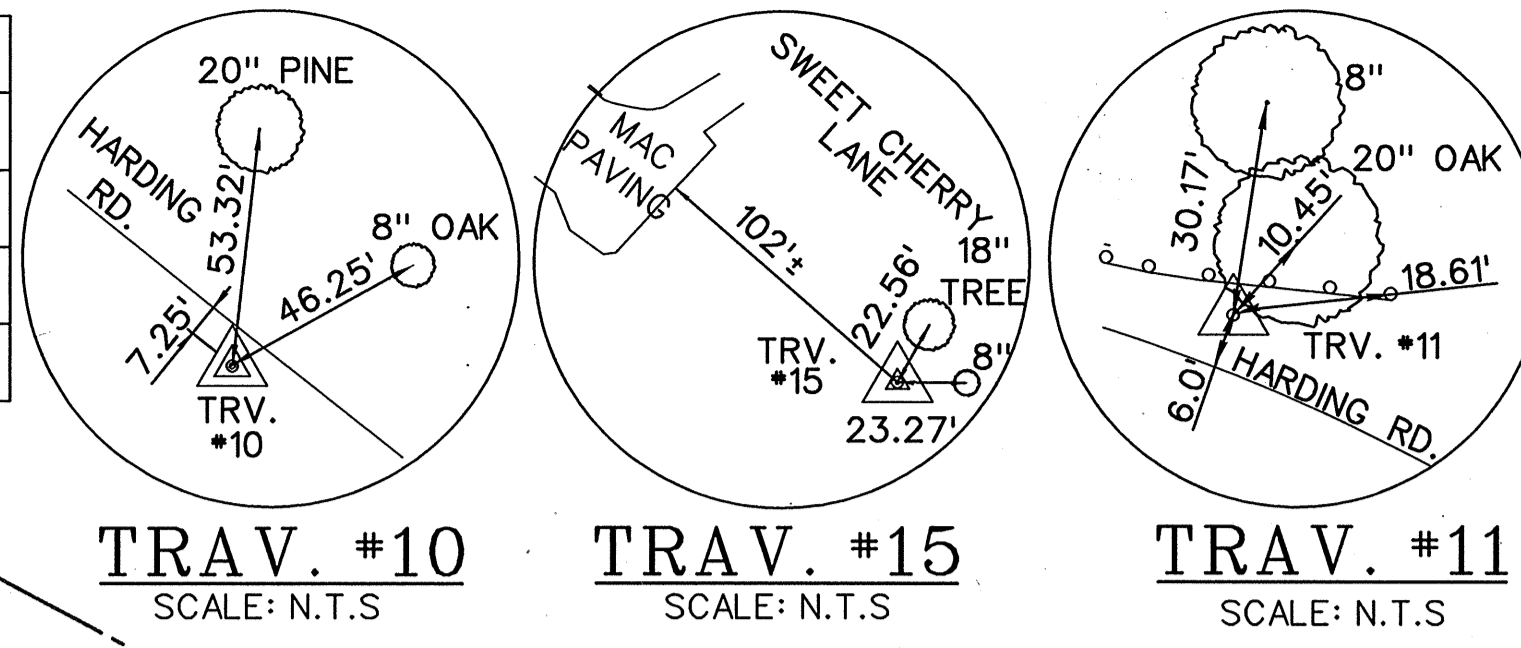
HARDING ROAD
 WATER MAIN LOOP
 CAPITAL PROJECT No. W-8251
 CONTRACT No. 44-4102
 ELECTION DISTRICT No. 6

SCALE AS SHOWN
 SHEET 1 OF 4

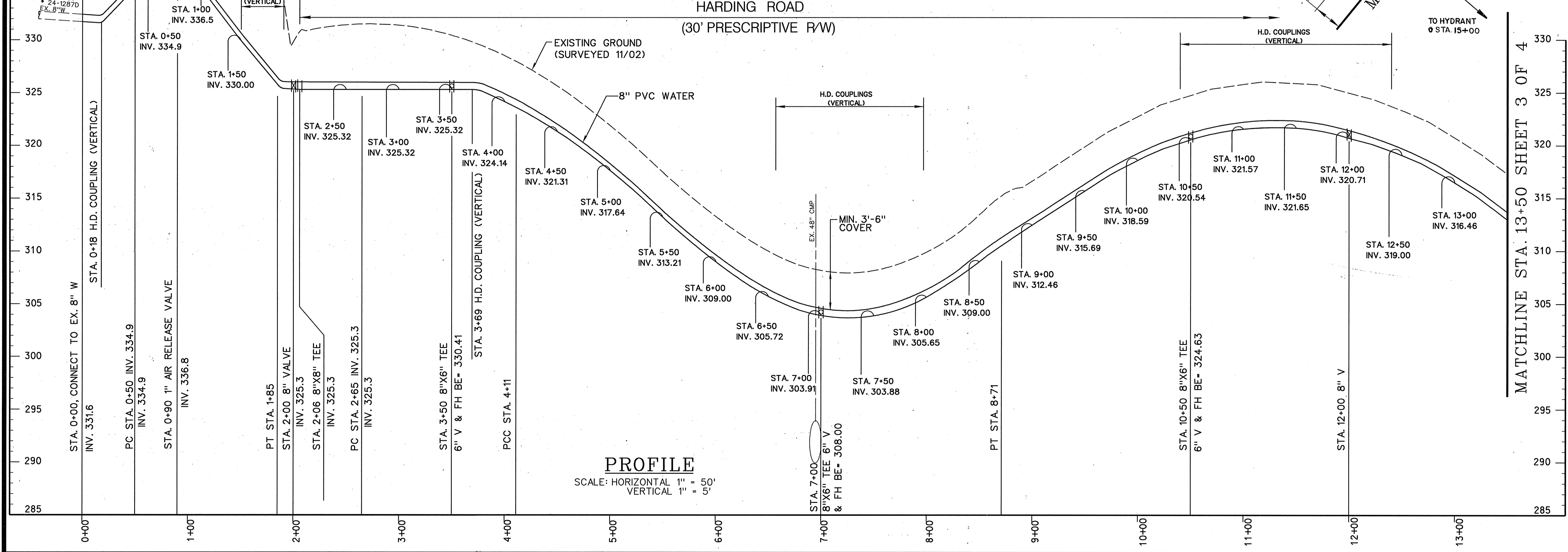
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TRAVERSE COORDINATE SCHEDULE			
NUMBER	NORTHING	EASTING	ELEVATION
TRAV. 10	535749.42	1343357.33	325.47
TRAV. 11	535974.10	1343113.05	308.68
TRAV. 15	535746.03	1342596.62	341.42



WATER MAIN STAKEOUT COORDINATES SCHEDULE			
STATION	FITTING	NORTHING	EASTING
0+50	-	535769.39	1342549.77
0+90	AIR RELEASE	535743.93	1342580.57
1+23	11 1/4" HB	535722.58	1342606.38
2+00	8" V	535690.93	1342676.08
2+06	8"X8" T	535688.17	1342682.13
2+06	8" V	535685.32	1342680.75
2+06	8" CAP & PLUG	535681.80	1342679.10
2+90	PC	535763.07	1342717.79
3+40	11 1/4" HB	535808.23	1342739.09
3+50	8"X6" T	535817.64	1342745.78
4+03	PT	535859.87	1342775.78
4+60	11 1/4" HB	535906.13	1342808.65
5+00	11 1/4" HB	535933.46	1342837.85
5+40	H.D. COUPLING	535954.57	1342871.83
5+77	11 1/4" HB	535971.10	1342905.31
6+17	11 1/4" HB	535983.20	1342943.43
6+57	11 1/4" HB	535987.47	1342983.21
7+05	8"X6" T	535982.86	1343032.04
7+57	22 1/2" HB	535987.08	1343082.76
8+57	11 1/4" HB	535931.31	1343171.15
10+57	8"X6" T	535805.07	1343326.31
12+07	8" V	535714.81	1343437.22
13+25	PC	535631.51	1343539.60



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

U.S. NATURAL RESOURCES CONSERVATION SERVICE DATE

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

APPROVED HOWARD S.C.D. DATE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

10/25/04
10/22/04
10/22/04

KCI TECHNOLOGIES INC.
ENGINEERS AND PLANNERS
10 NORTH PARK DRIVE
HUNT VALLEY, MARYLAND
21050-1888
(410) 216-7800

DES: CB	
DRN: CK	
CHK: TW	
DATE: OCTOBER, 04	
BY: LN	AS BUILT INFORMATION ADDED
NO.	REVISION

8" WATER MAIN
PLAN AND PROFILE
STA. 0+00 TO STA. 13+50

600' SCALE MAP NO. 46 BLOCK NO. 11

HARDING ROAD
WATER MAIN LOOP

CAPITAL PROJECT No. W-8251
CONTRACT No. 44-4102
ELECTION DISTRICT No. 6

SCALE AS SHOWN
SHEET 2 OF 4

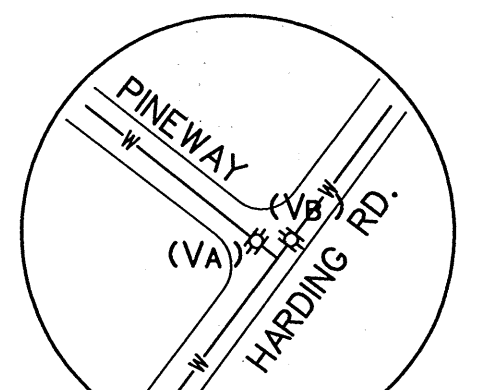
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REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.

U.S. NATURAL RESOURCES CONSERVATION SERVICE DATE

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

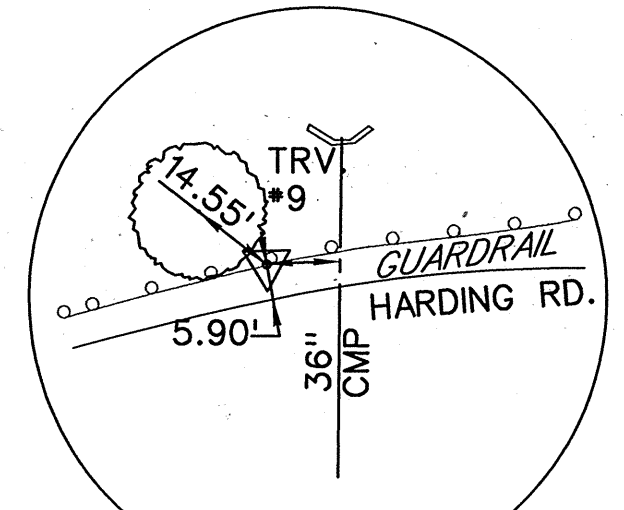
APPROVED HOWARD S.C.D. DATE



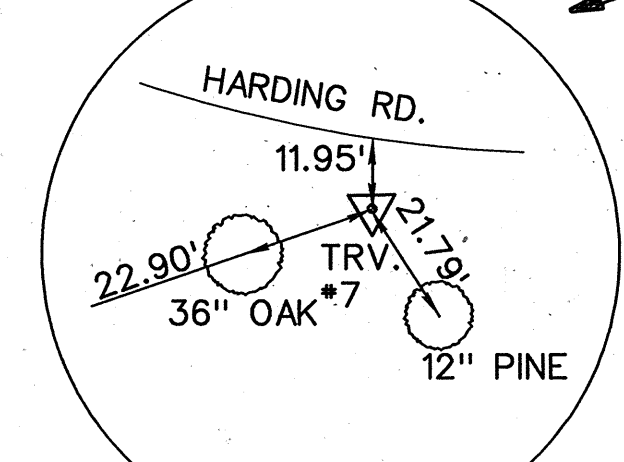
HARDING & PINEWAY VALVE SCHEMATIC

WATER MAIN STAKEOUT COORDINATES SCHEDULE			
STATION	FITTING	NORTHING	EASTING
13+75	-	535598.89	1343577.49
14+00	-	535581.58	1343595.52
14+25	-	535563.59	1343612.88
14+50	-	535545.00	1343629.63
14+64	PCC	535534.43	1343638.20
14+75	-	535525.33	1343645.00
15+00	8"X6" T	535504.13	1343658.24
15+25	-	535482.14	1343670.14
15+50	-	535459.46	1343680.65
15+75	-	535436.17	1343689.73
16+00	-	535412.22	1343696.84
16+25	-	535388.14	1343703.49
16+50	-	535363.57	1343708.11
16+75	-	535338.77	1343711.20
17+00	-	535313.82	1343712.75
17+25	-	535288.80	1343713.37
17+50	-	535263.82	1343711.82
17+75	-	535239.07	1343708.11
18+00	-	535214.51	1343703.48
18+25	-	535190.23	1343697.51
18+55	8"X6" T	535170.92	1343692.53
18+48	PT	535167.85	1343691.75
19+97	H.D. COUPLING	535026.05	1343647.77
20+52	11 1/4" HB	534971.30	1343636.89
21+02	11 1/4" HB	534921.36	1343636.89
21+42	11 1/4" HB	534882.73	1343644.57
21+82	11 1/4" HB	534845.78	1343659.89
22+42	22 1/2" HB	534795.89	1343693.22
23+41	22 1/2" HB	534740.34	1343776.37
23+62	45" HB	534736.39	1343796.24
23+98	45" HB	534705.20	1343817.53
24+54	8" V	534695.14	1343872.44

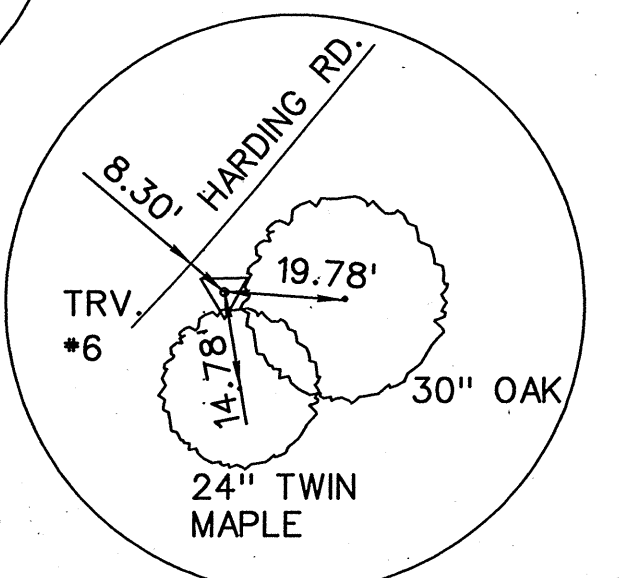
TRAVERSE COORDINATE SCHEDULE			
NUMBER	NORTHING	EASTING	ELEVATION
TRAV. #6	534694.16	1343848.94	320.59
TRAV. #7	534858.59	1343624.39	313.51
TRAV. #9	535551.39	1343637.72	309.35



TRAV. #9 SCALE: N.T.S.

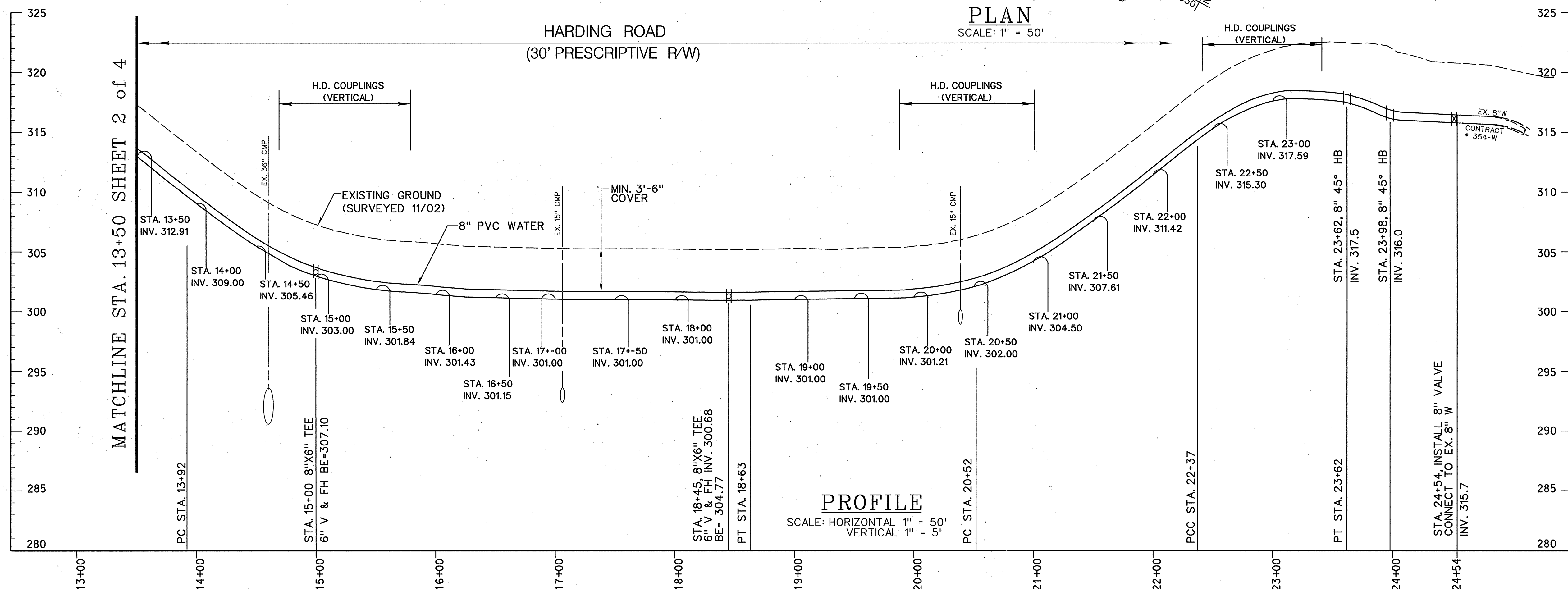


TRAV. #7 SCALE: N.T.S.



TRAV. #6 SCALE: N.T.S.

MATCHLINE STA. 13+50 SHEET 2 of 4



PROFILE SCALE: HORIZONTAL 1" = 50' VERTICAL 1" = 5'

PLAN SCALE: 1" = 50'

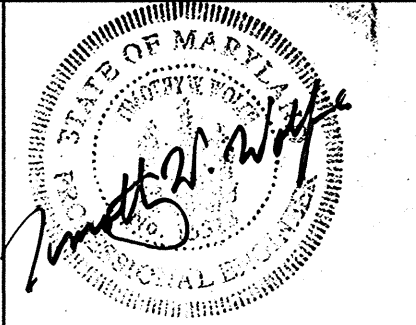
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

10/25/04
DIRECTOR OF PUBLIC WORKS DATE

10/22/04
CHIEF, BUREAU OF ENGINEERING DATE

10/22/04
CHIEF, UTILITY DESIGN DIVISION DATE

KCI
TECHNOLOGIES INC.
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DATE:	OCTOBER, 04		
BY:	LN	AS BUILT INFORMATION ADDED	
NO.:		REVISION	

8" WATER MAIN
PLAN AND PROFILE
STA. 13+50 TO STA. 24+54

600' SCALE MAP NO. 46 BLOCK NO. 11

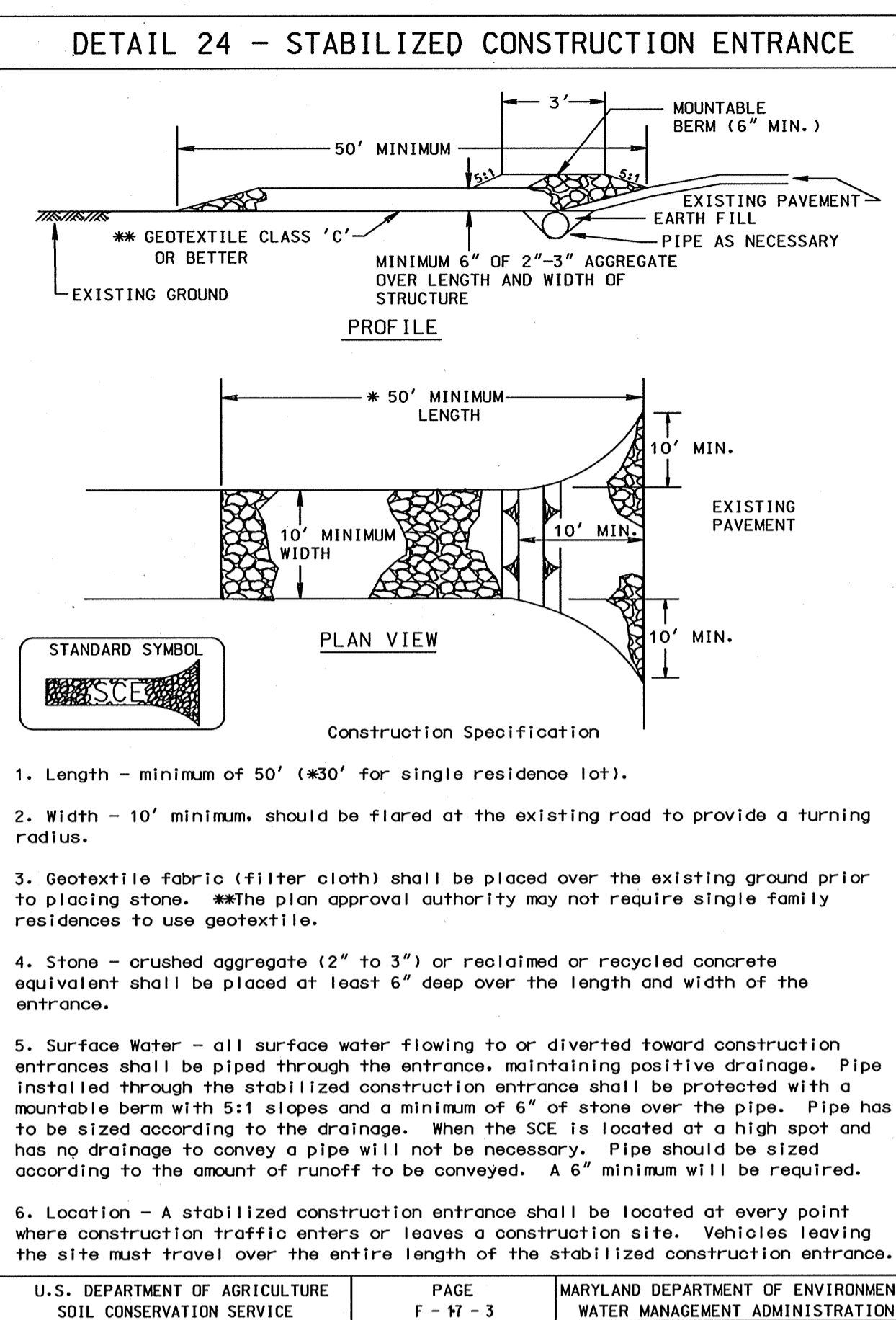
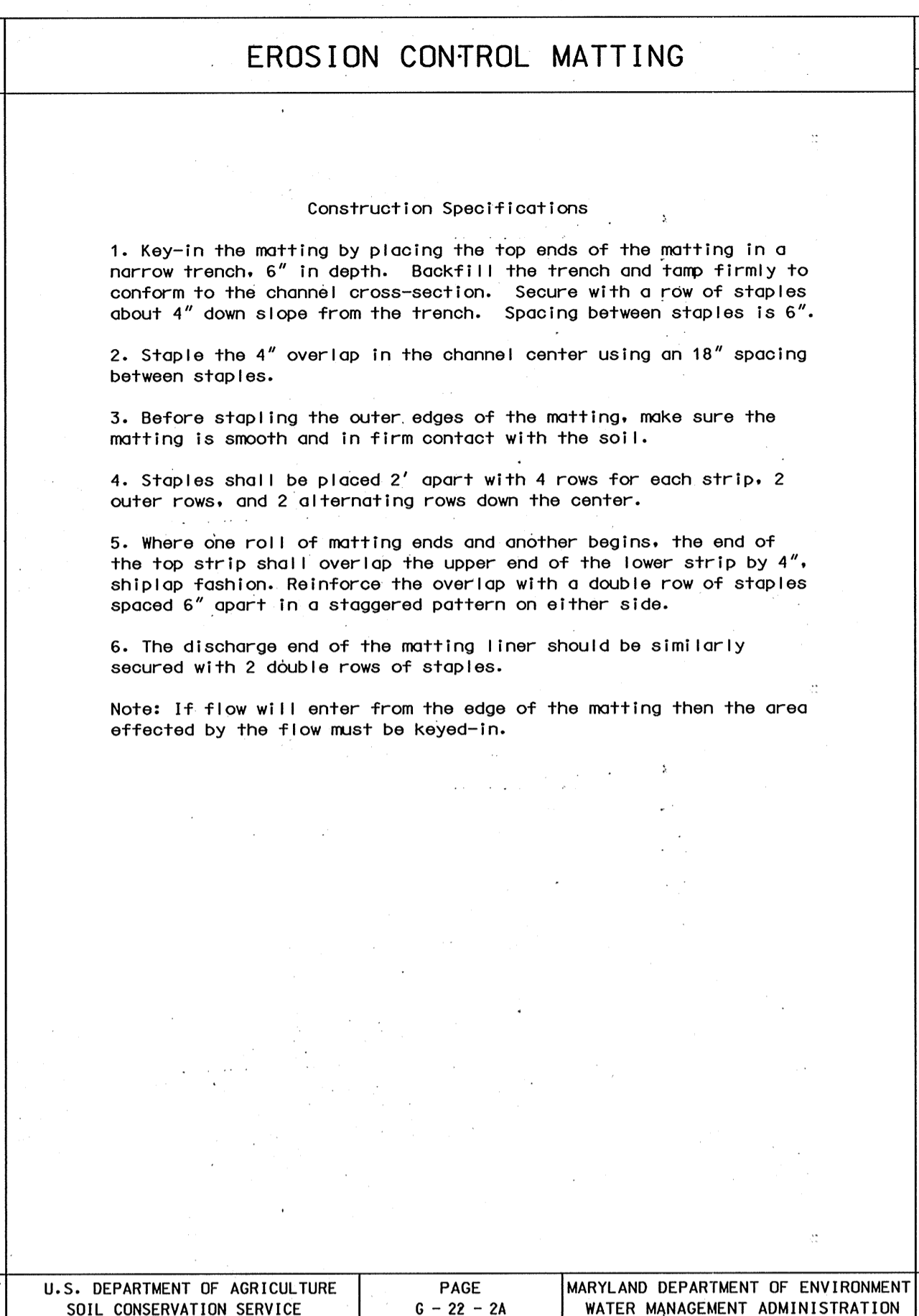
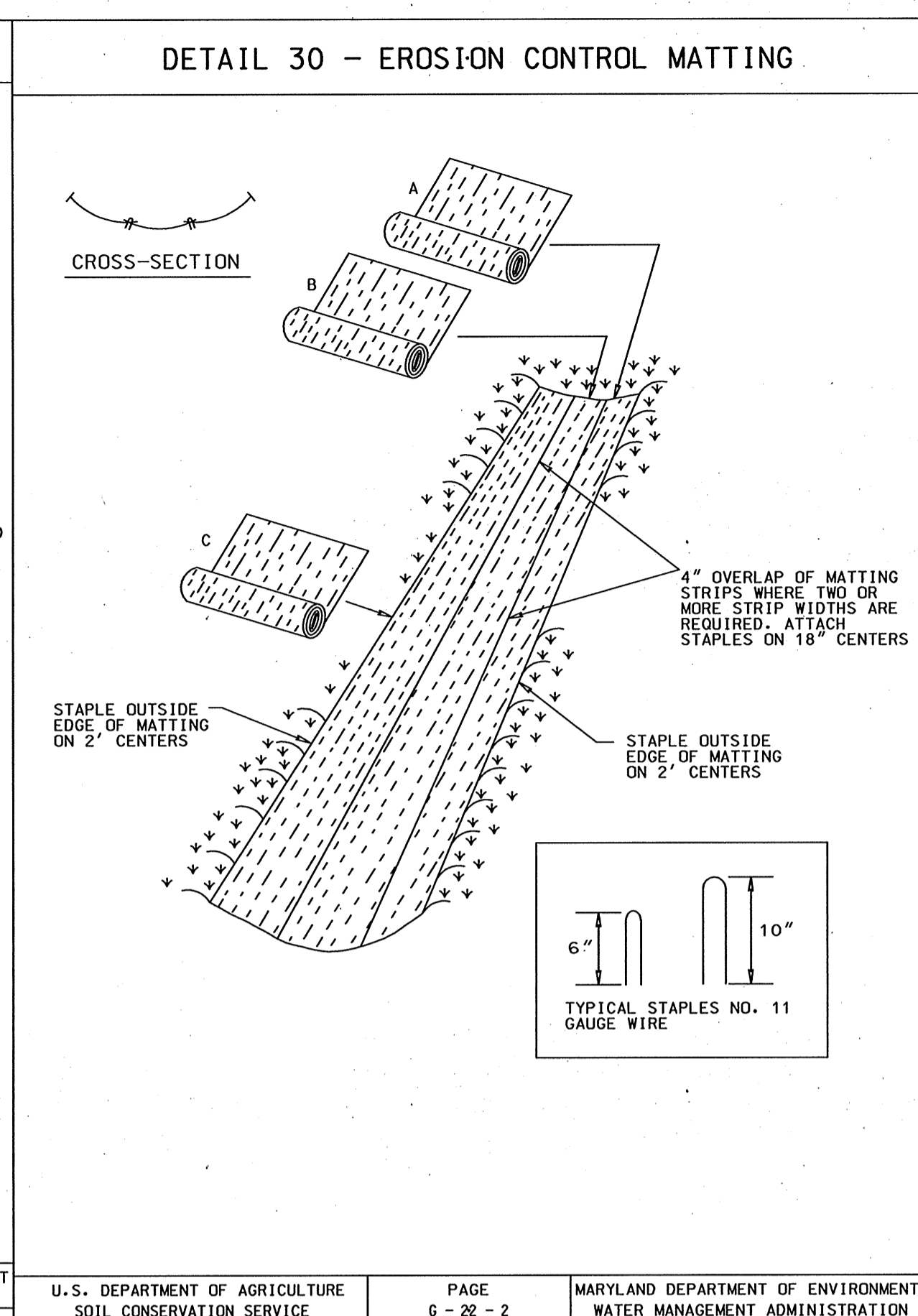
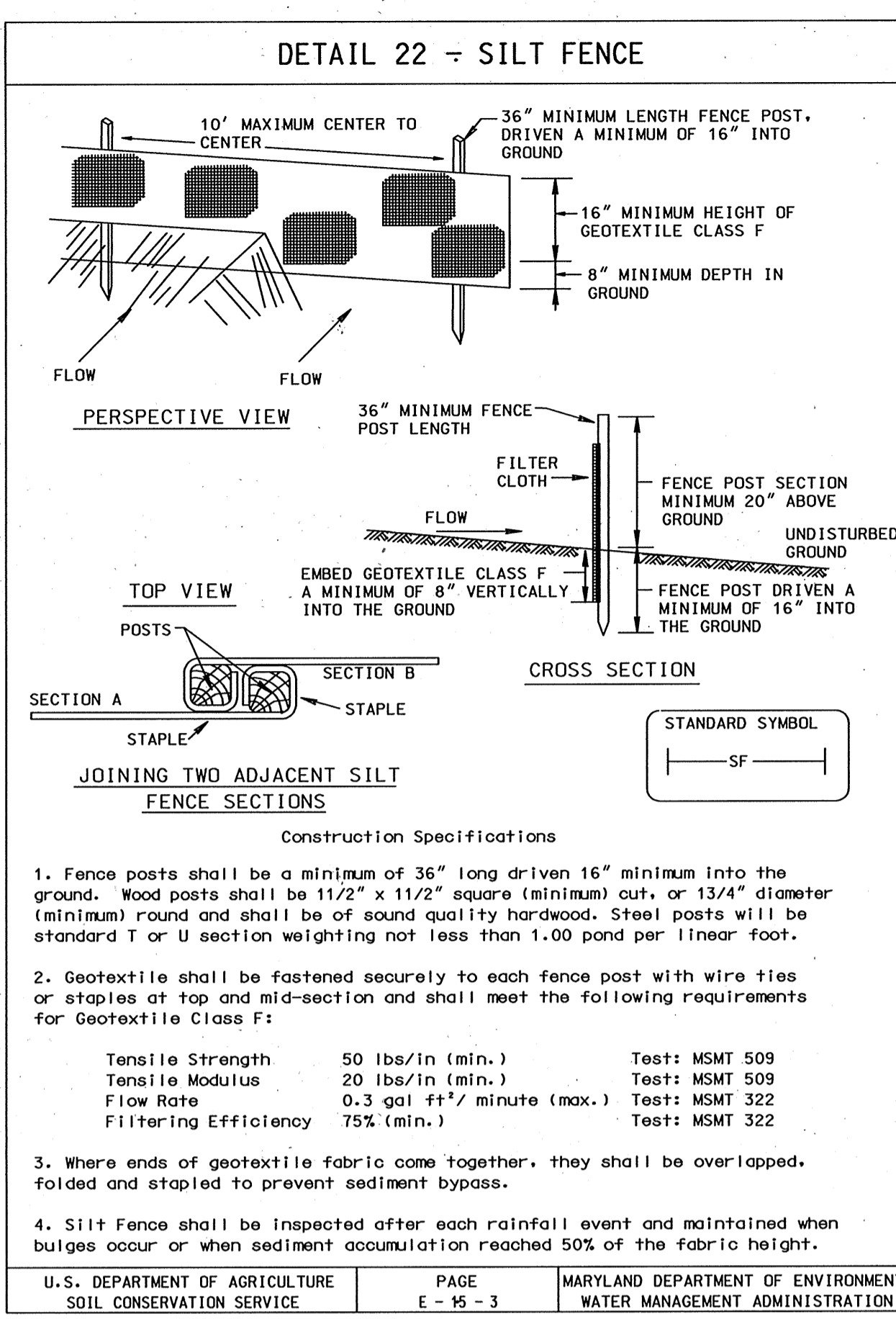
As-Built

HARDING ROAD
WATER MAIN LOOP

CAPITAL PROJECT No. W-8251
CONTRACT No. 44-4102
ELECTION DISTRICT No. 6

SCALE AS SHOWN
SHEET 3 of 4

FILE NAME: W:2001/01011054/DRAWINGS/002-6900.dgn



STANDARD SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION 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 MOST CURRENT "MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL", AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
 - 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1.
 - 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 (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.
- SITE ANALYSIS:

TOTAL AREA OF SITE	N/A	ACRES
AREA DISTURBED	0.85	ACRES
AREA TO BE ROOFED OR PAVED	0.84	ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.01	ACRES
TOTAL CUT	N/A	CU. YDS.
TOTAL FILL	N/A	CU. YDS.
OFFSITE WASTE/BORROW AREA LOCATION	N/A	
- 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.
- CONTRACTOR SHALL PLACE EXCAVATED MATERIALS ON UPHILL SIDE OF TRENCH AND PLACE SILT FENCE ON DOWNHILL SIDE OF TRENCH.

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.

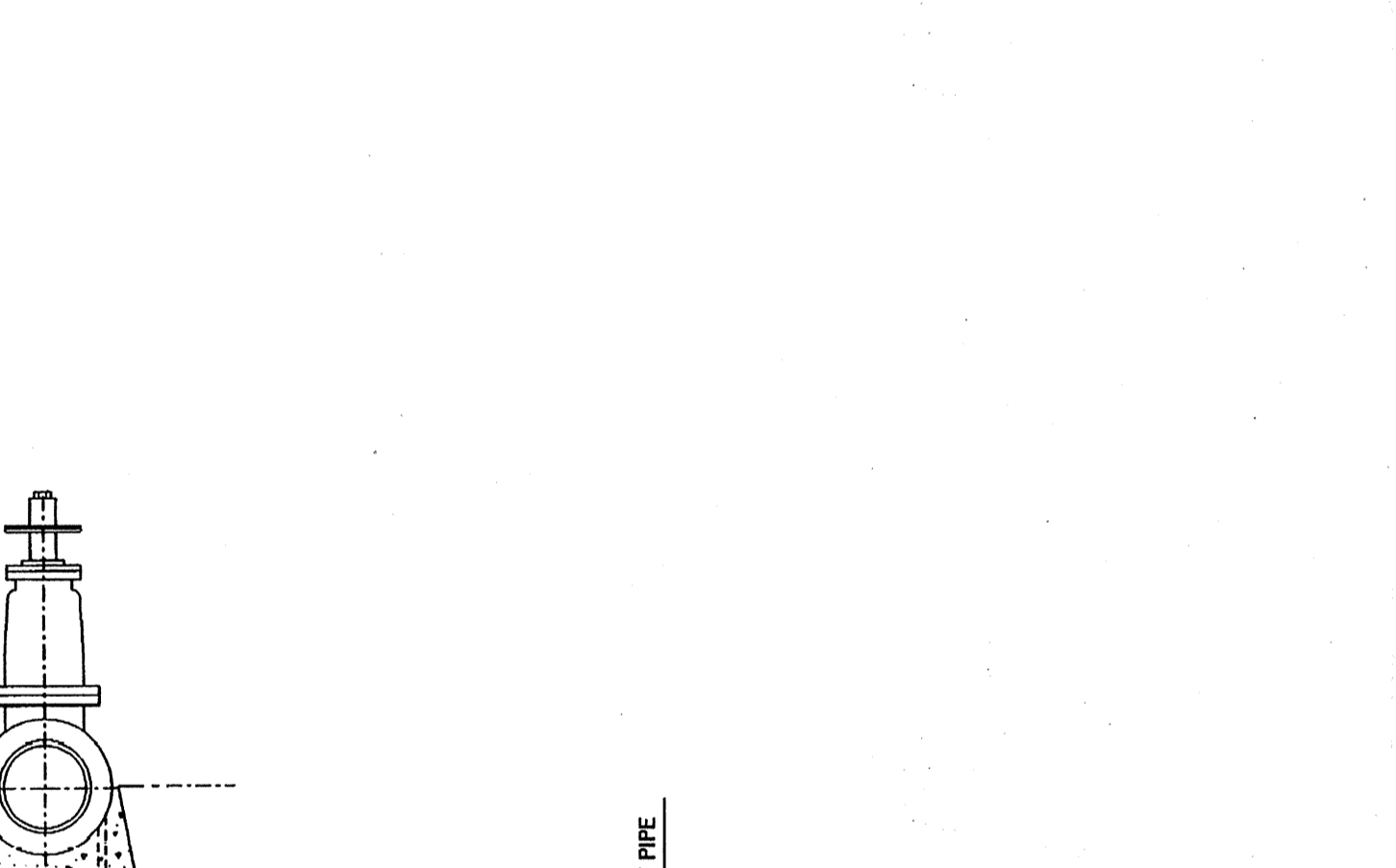
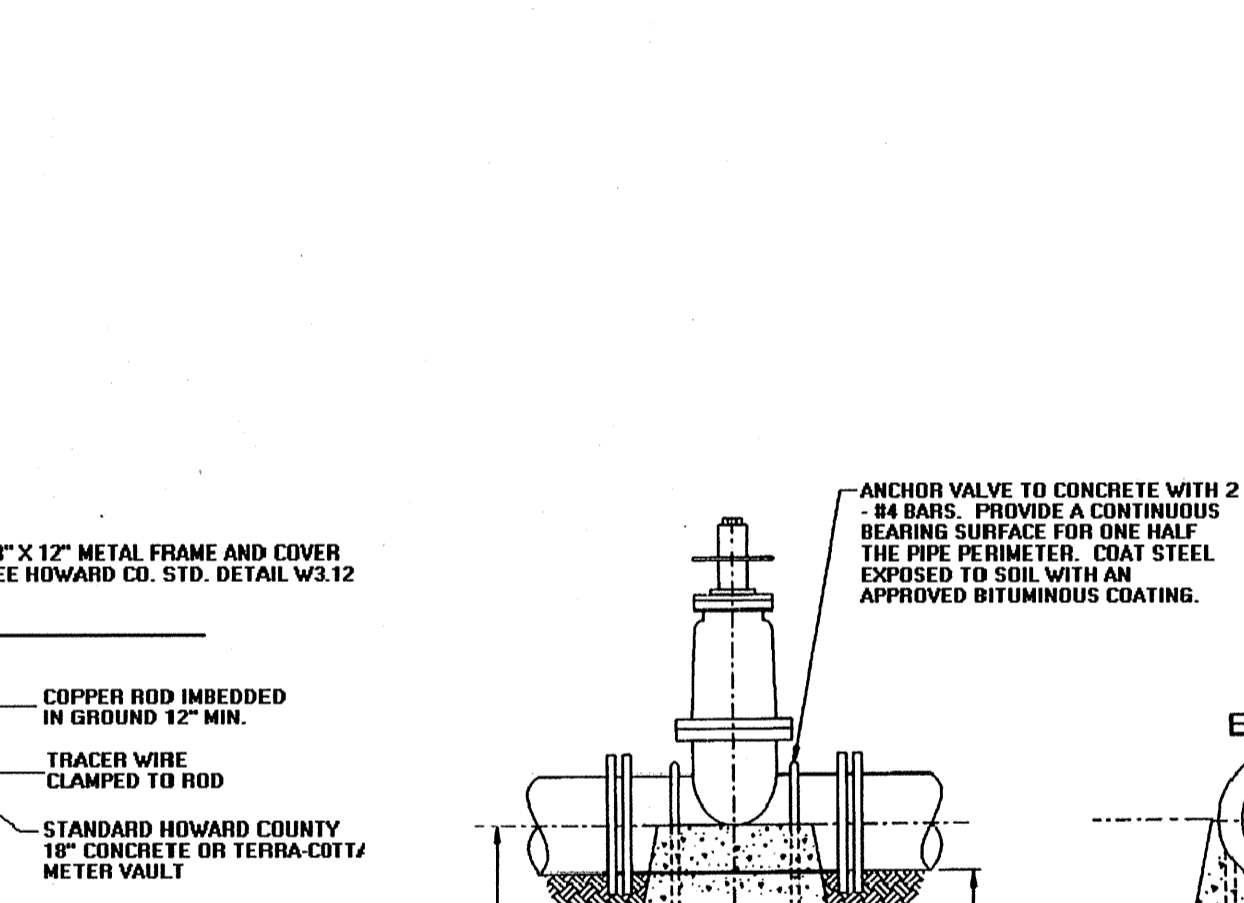
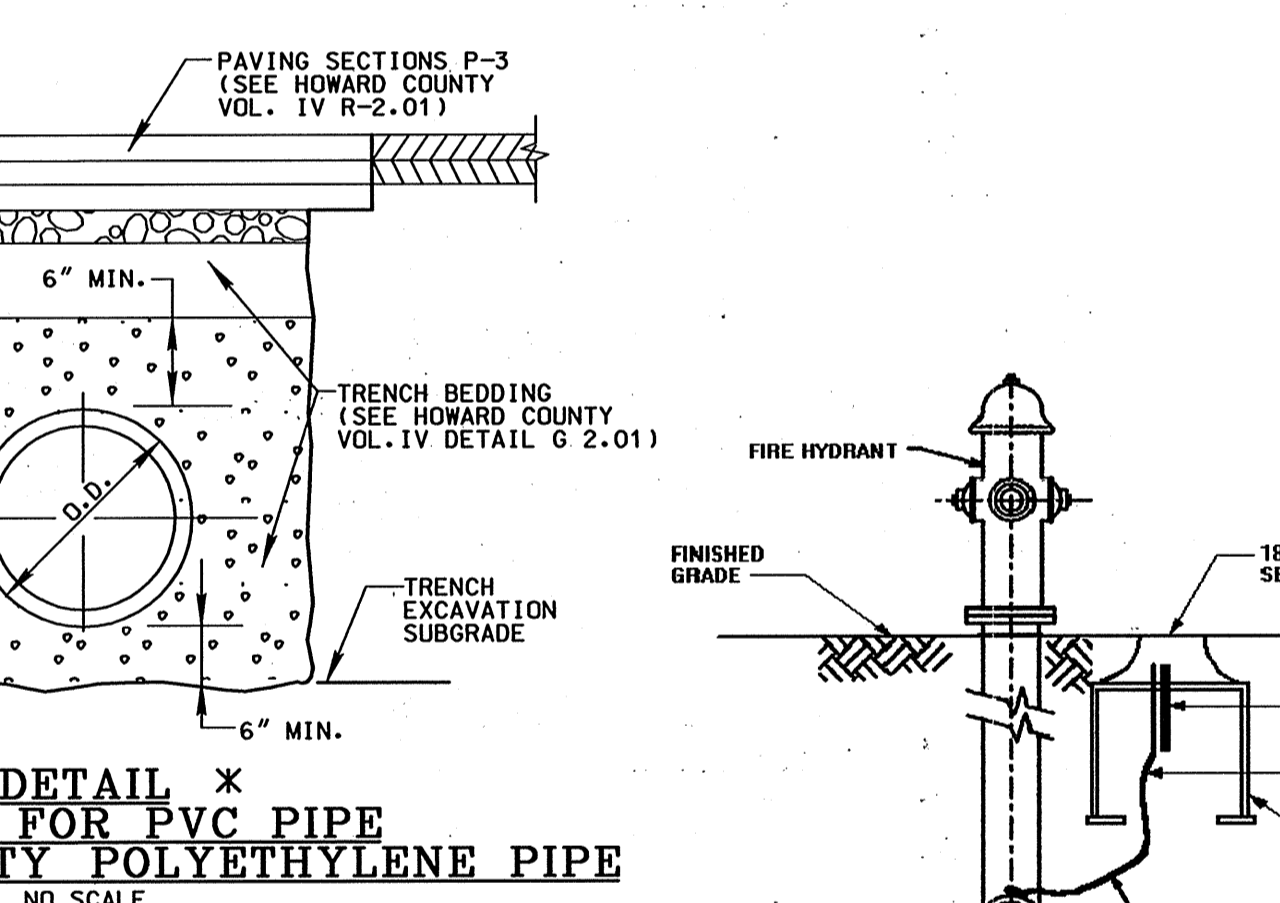
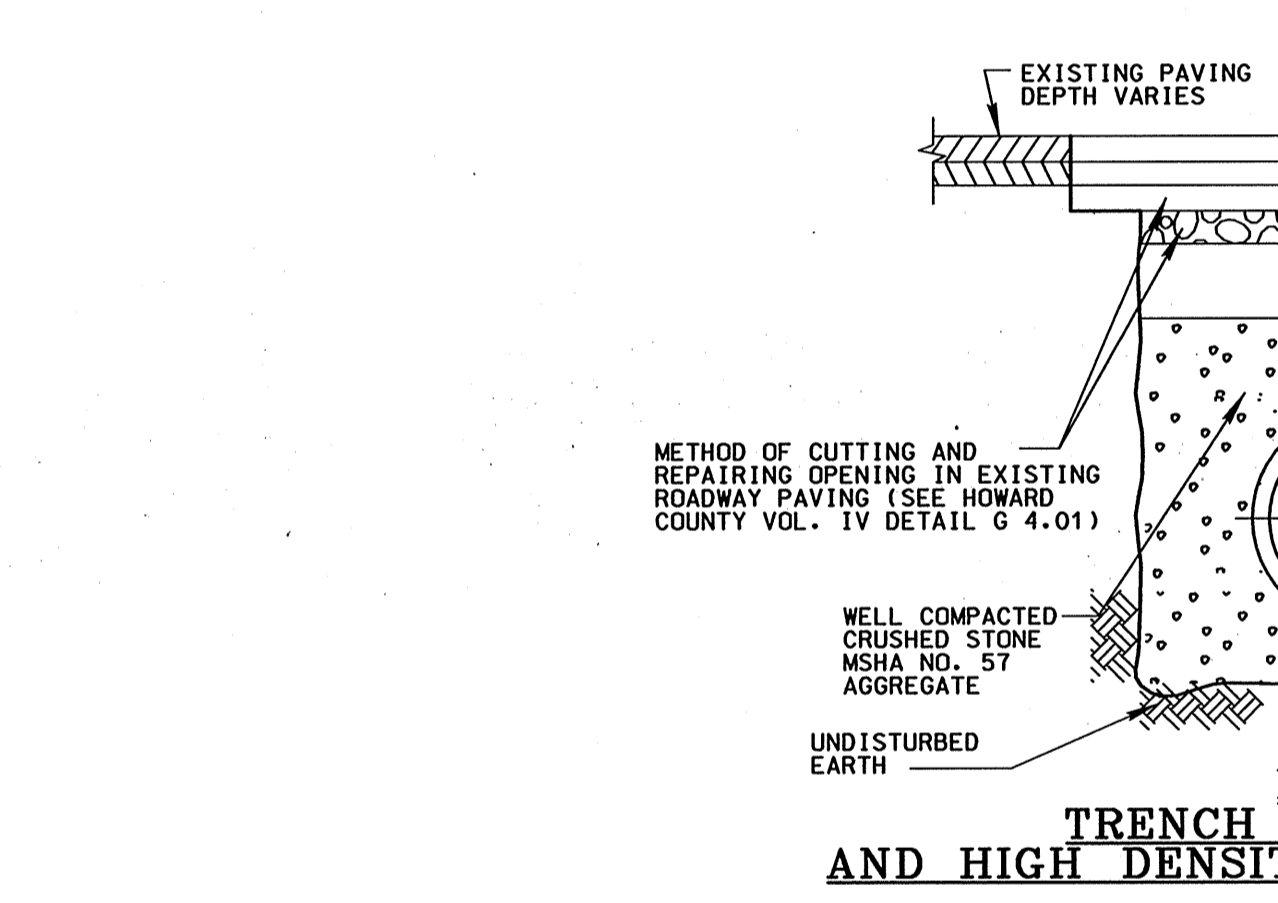
SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

- 1) PREFERRED -** APPLY 2 TONS PER ACRES DOLOMITIC LIMESTONE (92 LBS/1000 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 (.05 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 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 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 1, 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 GALLONS PER ACRE (5 GAL/1000 SQ 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.

DEVELOPER'S CERTIFICATION

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

John M. Wolfe 10/23/04
BUREAU OF ENGINEERING
DEPARTMENT OF PUBLIC WORKS

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.

John K. Roberts 10/25/04
U.S. NATURAL RESOURCES
OBSERVATION SERVICE

SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT.
- LAYOUT ALIGNMENT AT SITE. (1 DAY)
- INSTALL SEDIMENT CONTROL DEVICES. FOR GRASSED AREAS AS SHOWN ON PLAN.
- EXCAVATE DITCH TO THE GRADE SPECIFIED ON THE PROFILE.
- INSTALL WATER MAIN AND STABILIZE OR BACKFILL TRENCH AND RESURFACE WITH BITUMINOUS PAVING AS APPROPRIATE (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.
- CLEAN UP CONSTRUCTION SITE. (1 DAY)
- REMOVE SEDIMENT CONTROL DEVICES AFTER PERMISSION IS GRANTED BY THE SEDIMENT CONTROL INSPECTOR. (1 DAY)

TRAFFIC MAINTENANCE

FOR TRAFFIC MAINTENANCE REQUIREMENTS SEE SPECIFICATION DOCUMENT D, PARAGRAPH 15.

DEPARTMENT OF PUBLIC WORKS

HOWARD COUNTY, MARYLAND

John K. Roberts 10/23/04
DIRECTOR OF PUBLIC WORKS

John M. Wolfe 10/23/04
CHIEF, BUREAU OF ENGINEERING

John M. Wolfe 10-22-04
CHIEF, UTILITY DESIGN DIVISION

KCI TECHNOLOGIES
10 NORTH PARK DRIVE
HUNT VALLEY, MARYLAND 21030

DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE

DES: CB
DRN: CK
CHK: TW
DATE: OCTOBER, 04

EROSION AND SEDIMENT CONTROL NOTES AND DETAILS

600' SCALE MAP NO. 46 BLOCK NO. 11

HARDING ROAD WATER MAIN LOOP

CAPITAL PROJECT No. W-8251
CONTRACT No. 44-4102
ELECTION DISTRICT No. 6

SCALE AS SHOWN
SHEET 4 OF 4

<p>DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND</p> <p><i>John K. Roberts</i> 10/23/04 DIRECTOR OF PUBLIC WORKS</p> <p><i>John M. Wolfe</i> 10/23/04 CHIEF, BUREAU OF ENGINEERING</p> <p><i>John M. Wolfe</i> 10-22-04 CHIEF, UTILITY DESIGN DIVISION</p>	<p>KCI TECHNOLOGIES INC. ENGINEERS AND PLANNERS 10 NORTH PARK DRIVE HUNT VALLEY, MARYLAND 21030-1888 (410) 316-7800</p>	<p>STATE OF MARYLAND PROFESSIONAL ENGINEER</p>	<p>DES: CB DRN: CK CHK: TW DATE: OCTOBER, 04</p>	<p>EROSION AND SEDIMENT CONTROL NOTES AND DETAILS</p> <p>600' SCALE MAP NO. 46 BLOCK NO. 11</p>	<p>HARDING ROAD WATER MAIN LOOP CAPITAL PROJECT No. W-8251 CONTRACT No. 44-4102 ELECTION DISTRICT No. 6</p>	<p>SCALE AS SHOWN SHEET 4 OF 4</p>
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