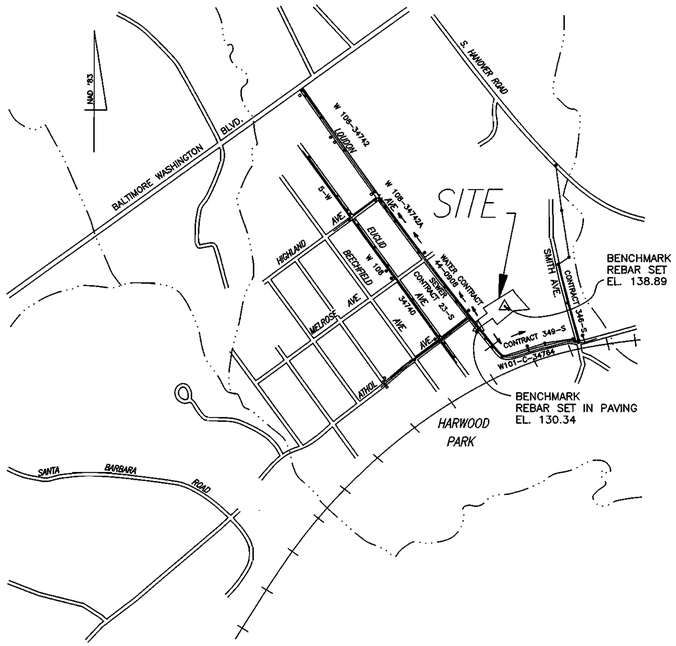
QUANTITIES

ITEMS	QUANTITIES ESTIMATED	AS-BUILT QUANTITIES	AS-BUILT TYPE	AS-BUILT MANUFACTURER/ SUPPLIER
8" SEWER PVC	283 L.F.			
SEWER MANHOLES	2, 15.7 L.F.			
4" SEWER P.V.C.	30 L.F.			
6" SEWER P.V.C.	25 L.F.			
6" SEWER TEE (P.V.C.)	2			
6" SEWER CAP / PLUG (P.V.C.)	3			
6" x 1¼"	2			
6"X4" REDUCER	1			
4" WATERMAIN D.I.P.	293 L.F.			
1 " W.H.C.	70 L.F.			
1 " PRESSURE REDUCING VALVE	4			
10"x 6" TAPPING SLEEVE & VALVE	1			
WATER MAIN DRAIN	1			
4" P.I.P. NIPPLE	2			

NAME OF UTILITY CONTRACTOR:

SURVEY AND DRAFTING DIVISION	CHECKBOX AS-BUILT DATE	



VICINITY MAP
SCALE: 1" = 600'

WATER & SEWER CODE:
COUNTY USE
WATER NO. A01
SEWER NO. 2150510
TEST GRADIENT: 550

TYPE OF BUILDING	S.F.D.
NUMBER OF LOTS	4
NUMBER OF W.H.C.'S	4
NUMBER OF S.H.C.'S	4
DRAINAGE AREA	PATAPSCO
TREATMENT PLANT	PATAPSCO

GENERAL NOTES

PART I

1. Approximate location of existing mains are shown. The contractor shall take all necessary precautions to protect existing mains and services and maintain uninterrupted supply. Any damage incurred shall be repaired imediately to the satisfaction of the Engineer at the Contractor's expense.
2. All horizontal controls are based on Maryland State Coordinates [North American Datum of 1983 (NAD '83)].
3. All vertical controls are based on U.S.G.S. data.
4. All pipe elevations shown are invert elevations.
5. Clear all utilities by a minimum of 6'. 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 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 Specificatons and Detail 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 utilites, 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 utilites 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 (5) working days before starting the work shown on these plans:

AT&T	865-3803
BGE (Contractor Services)	850-4620
BGE Under Ground Damage Control	787-9068
Bureau of Utilities (DPW)	313-4900
Chesapeake & Potomac Telephone Co.	597-8585
Colonial Pipeline Co.	795-1390
Miss Utility	1-800-257-7777
State Highway Administration	531-5533

9. Trees and shrubs are to be protected from damage to maximum extent. Trees and shrubs located within the construction strip are not to be or damaged by the contractor.
10. Contractor shall remove trees, stumps and roots along the 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 (5) working days before any open cut of any County road or boring/jacking 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.

PART II - WATER

1. All water mains to be D.I.P. Class 52 unless otherwise noted.
2. Tops of all water mains to have a minimum of 3-1/2' cover unless otherwise noted.
3. Valves adjacent to tees shall be strapped to tees.
4. All fittings shall be buttressed or anchored with concrete in accordance with the Standard Details unless otherwise provided for on the drawings.
5. Fire hydrants shall be set to the bury line elevations shown on the drawings. All fire hydrants shall be restrained and buttressed with concrete in accordance with the Standard Details. Soil around the fire hydrant shall be compacted in accordance with Section 1000 and 1005 of the Standard Specifications.
6. The contractor shall not operate any water main valves on the existing water system.
7. All water house connections shall be for inside meter setting unless otherwise noted on plans or in specifications.
8. For sprinkler system for all townhomes or multi-family dwelling units should have a minimum of 1' connection with a 3/4" meter.

PART III - SEWER

1. All sewer mains shall be P.V.C. or D.I.P. class 52 unless otherwise noted.
2. All manholes shall be 4'-0" inside diameter unless otherwise noted.
3. Force mains shall be D.I.P. only.
4. Manholes designated W.T. in plan and profile shall have watertight frame and covers, Standard Detail G5.52. Where watertight frame and cover is used, set top of frame 1"-6" above finished grade unless otherwise noted on drawings.
5. House(s) with the symbol "C.N.S." indicates that cellar cannot be served.
6. REFER TO STANDARD DETAIL G.4.01 FOR METHOD OF CUTING & REPAIRING OPENINGS IN EXISTING ROADWAY PAVING.

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE SPECIFICATIONS, (F-99-85)

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

Cheryl Simmons 6/3/99
SIGNATURE DATE

U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICES

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

John C. Robertson 6/3/99
HOWARD S.C.D. DATE

CONTRACT NO. 14-3747-D
PROFFEN PROPERTY
LOTS 1 - 4

HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS

OWNER/DEVELOPER:
KIETH PROFFEN
6451 LOUDEN AVE.
ELKRIDGE, MD 21227

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MD
Robert J. Bonsack 5-4-99
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MD
Hamid Mossamaparast 6/4/99
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

SHANABERGER & LANE
SURVEYING • LAND PLANNING • CONSTRUCTION STAKEOUT
8726 TOWN & COUNTRY BLVD.
SUITE 201
ELLICOTT CITY, MD 21043
PHONE: (410)-461-9563
FAX: (410)-461-9693

STATE OF MARYLAND — SIDNEY A. SAYLOR — NO. 16459 — REGISTERED PROFESSIONAL ENGINEER

DESIGN: SAS
DRAWN JAI
CHECK: SS
DATE: 11-16-98

BY	NO.	REVISION	DATE
JAI	2	ADD WATER & SEWER CODES, REVISED QUANTITIES	4/26/99
JAI	1	REVISE QUANTITIES	3/09/99

TITLE SHEET

CONTRACT NO. 14-3747-D

600' SCALE MAP NO. 38 BLOCK NO. 14

PROFFEN PROPERTY
LOTS 1 - 4
TAX MAP 38, GRID 14, PARCEL 213
1st ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
CONTRACT NO. 14-3747-D

SCALE: AS SHOWN

SHEET 1 OF 2

FILE: 9809WS1.DWG

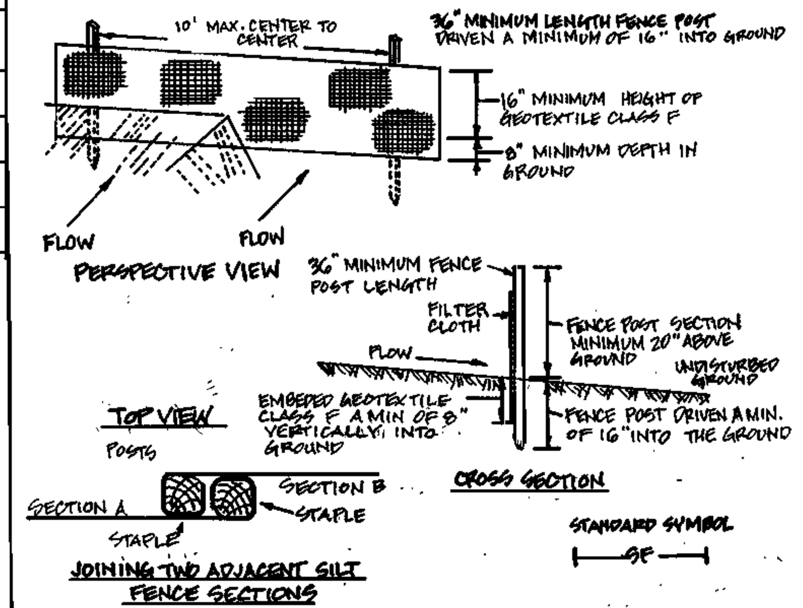
STAKEOUT INFORMATION

TRAVERSE POINT	N	E	ELEV.	DESCRIPTION
#1 (BENCHMARK)	556,047.3166	1,387,822.3254	130.34	REBAR SET
#2 (BENCHMARK)	555,870.9362	1,387,620.9884	138.89	REBAR SET IN PAVING
#11	556,022.8008	1,387,666.6454	N/A	REBAR SET
#13	555,944.2622	1,387,565.7299	N/A	P.K. NAIL SET

SEWER MANHOLE	N	E
#1 Ho. Co. STD. G5.12	555,884.713	1,387,621.850
#2 Ho. Co. STD. S.1.3.1	556,002.325	1,387,777.013

WATER MAIN	N	E
0+00 10"x6" TS&V	555,885.9	1,387,606.9
2+94 4" CAP	556,063.5	1,387,841.2

SILT FENCE DETAIL



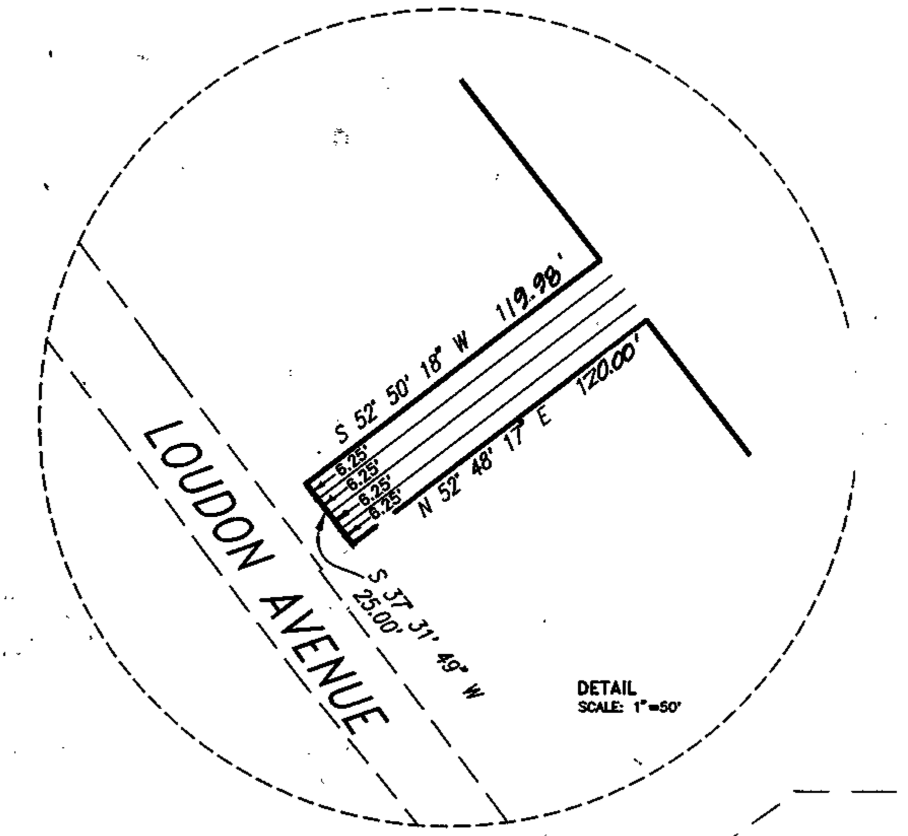
1. FENCE POSTS SHALL BE A MINIMUM OF 36" LONG DRIVEN 16" MINIMUM INTO THE GROUND. WOOD POSTS SHALL BE 1½" x 1½" SQUARE MIN. CUT, OR 1¾" DIAM. (MIN.) ROUND AND SHALL BE OF SOUND QUALITY HARDWOOD. STEEL POSTS WILL BE STANDARD T OR U SECTION WEIGHTING NOT LESS THAN 1.00 POND PER LINEAR FOOT.

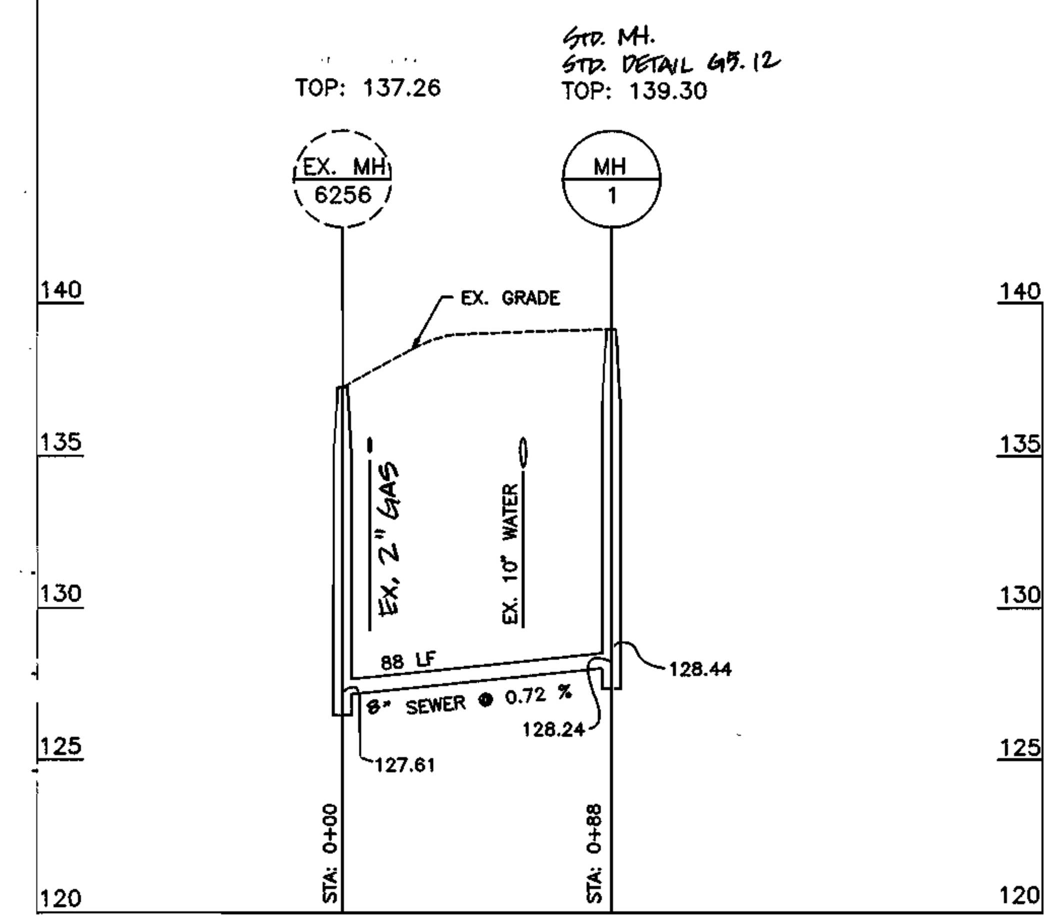
2. GEOTEXTILE SHALL BE FASTENED SECURELY TO EACH FENCE POST WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION AND SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILES CLASS F:

TENSILE STRENGTH	50 lbs/in (min)	TEST: MSMT 509
TENSILE MODULUS	20 lbs/in (min)	TEST: MSMT 509
FLOW RATE	0.3 gal ft²/min (max)	TEST: MSMT 322
FILTERING EFFICIENCY	75% (min)	TEST: MSMT 322

3. WHERE END 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.



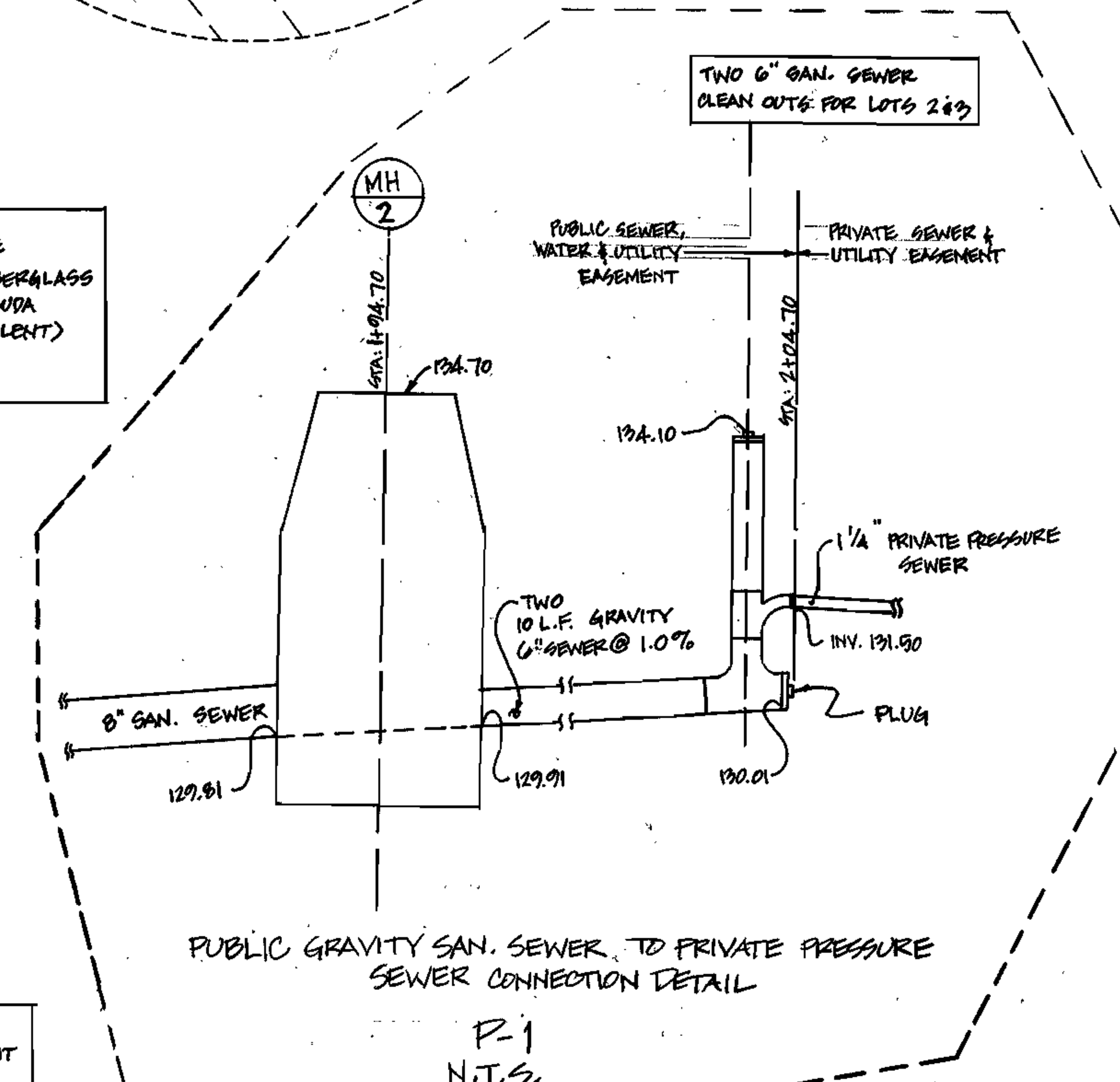


PROFILE

PROPOSED 8" SEWER ACROSS LOUDON AVE.

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

FUTURE
PRIVATE SANITARY SEWER SUBMERSIBLE GRINDER PUMP. DUPLEX SYSTEM WITH FIBERGLASS BASIN (TYP. FOR EACH LOT) (HOMA BARRACUDA GRINDER PUMPS MODEL GRP 15/1 OR EQUIVALENT)
BASIN INVERT ELEV. 114.00 (LOT 2)
BASIN INVERT ELEV. 114.50 (LOT 3)

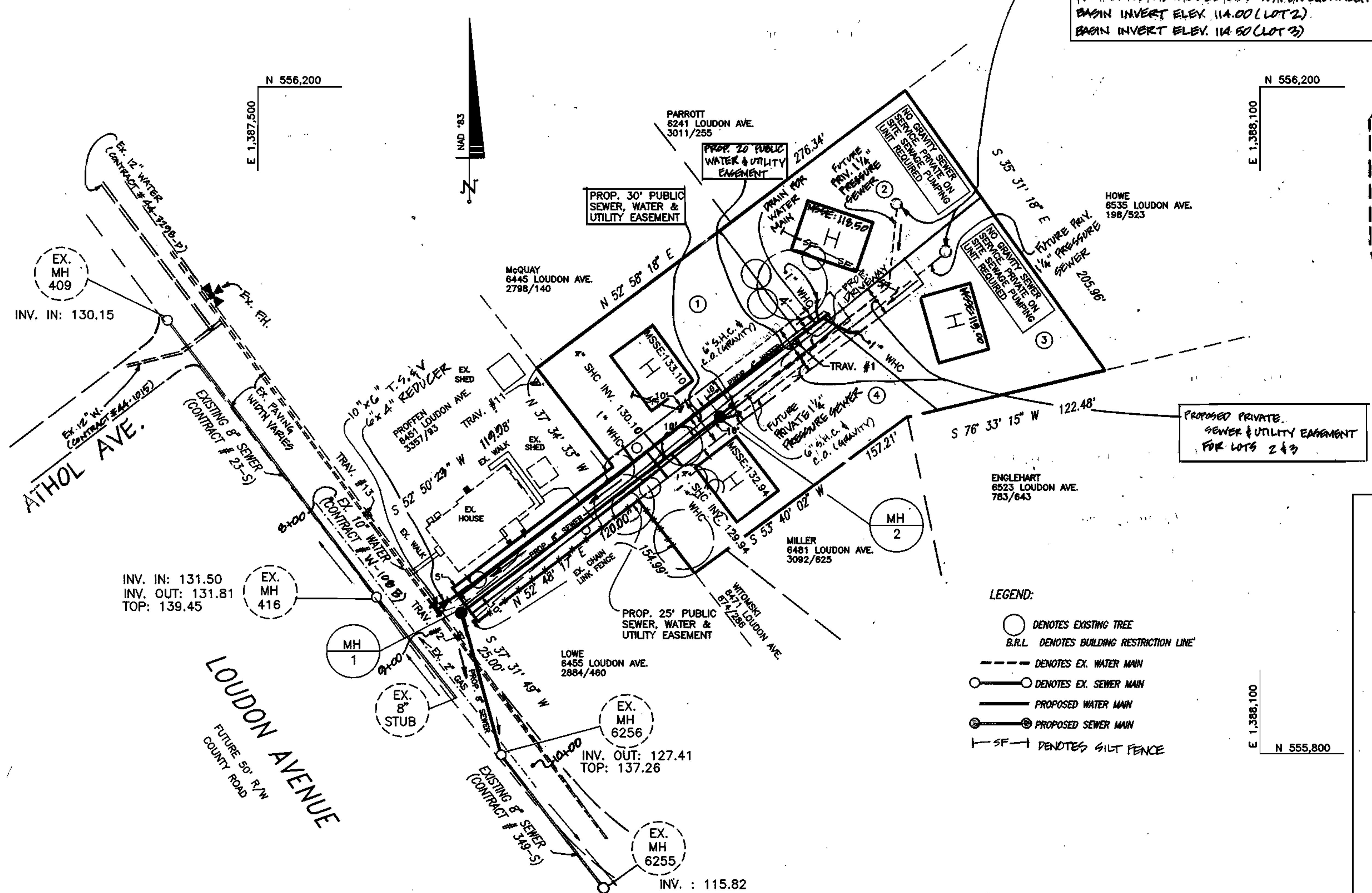


PUBLIC GRAVITY SAN. SEWER TO PRIVATE PRESSURE SEWER CONNECTION DETAIL

P-1
N.T.S.

NOTES:

1. A MINIMUM OF 3.5' COVER TO BE MAINTAINED FROM PROPOSED ℄ DRIVEWAY OR GRADE OVER LINES, WHICHEVER IS LOWER.
2. PROFILES SHOWN HEREON ARE BASED ON FIELD RUN TOPOGRAPHY PERFORMED BY SHANABERGER & LANE IN APRIL OF 1998.

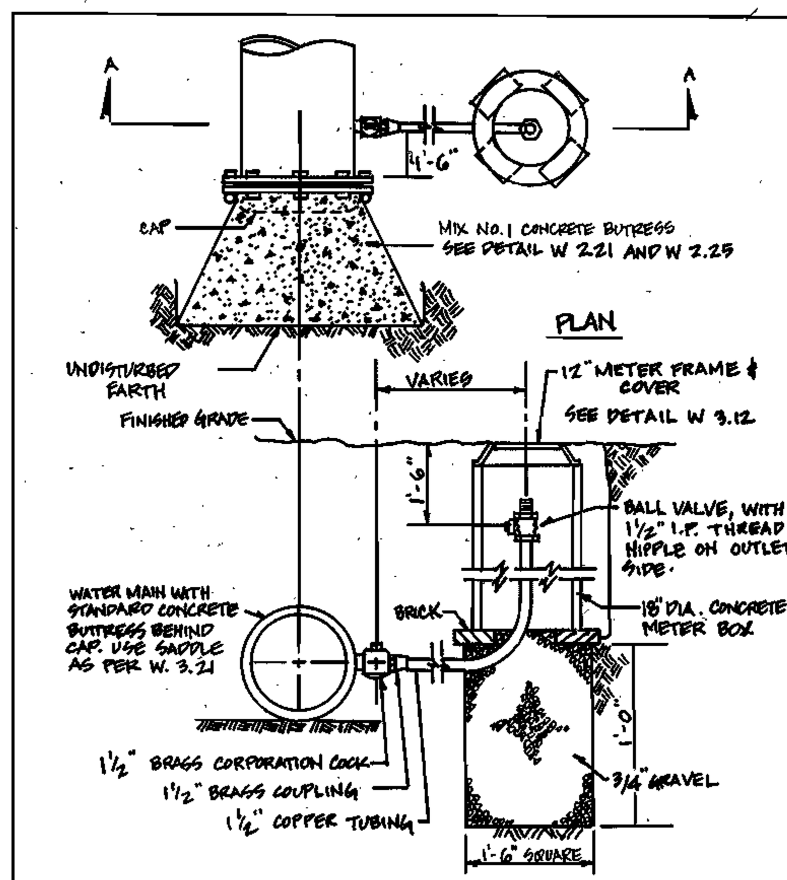


PROPOSED PRIVATE SEWER & UTILITY EASEMENT FOR LOTS 2 & 3

LEGEND:

- DENOTES EXISTING TREE
- B.R.L. DENOTES BUILDING RESTRICTION LINE
- DENOTES EX. WATER MAIN
- DENOTES EX. SEWER MAIN
- PROPOSED WATER MAIN
- PROPOSED SEWER MAIN
- SF DENOTES SILT FENCE

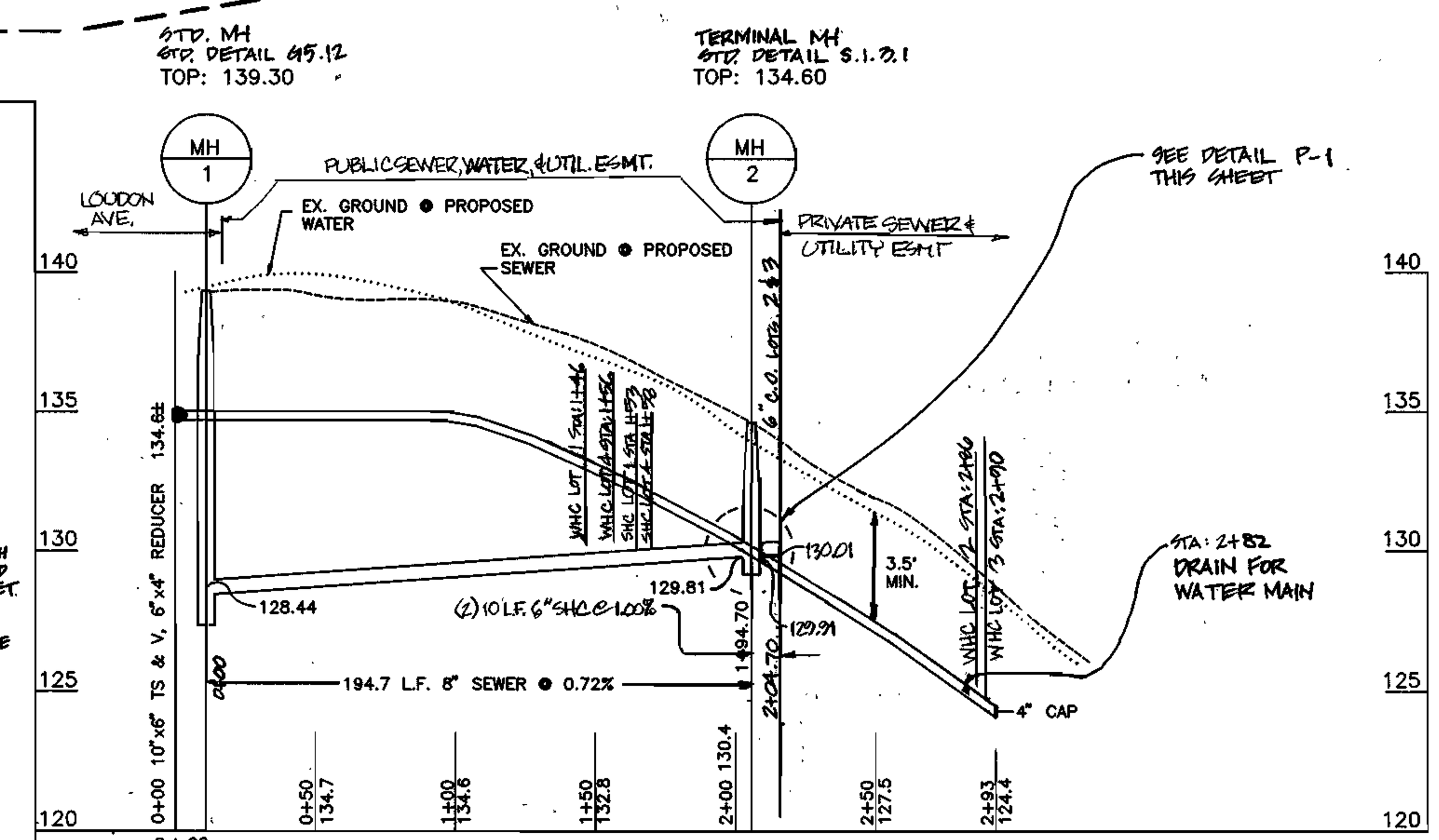
PLAN
SCALE: 1"=50'



SECTION A-A

LOCATE DRAIN VAULT BEHIND CURB OUTSIDE OF TRAVELLED WAY AND BEYOND LIMITS OF FUTURE ROADWAYS

DRAIN FOR WATER MAINS



PROFILE

PROPOSED 4" WATER & PROPOSED 8" SEWER THROUGH PIPESTEMS

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

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MD	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MD
Robert M. Beumer 5-4-99 CHIEF, BUREAU OF UTILITIES — DATE	[signature] 6/4/99 CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

SHANABERGER & LANE
SURVEYING • LAND PLANNING • CONSTRUCTION STAKEOUT
8726 TOWN & COUNTRY BLVD.
SUITE 201
ELLICOTT CITY, MD 21043
PHONE: (410)-461-9563
FAX: (410)-461-9693

STATE OF MARYLAND — SEYED A. SAADAT — NO. 15 — REGISTERED PROFESSIONAL ENGINEER [seal and signature]

DESIGN: SAS
DRAWN: JAI
CHECK: SAS
DATE: 11-16-98

BY	NO.	REVISION	DATE
JAI	3	ADD SILT FENCE & DETAIL	6/3/99
JAI	2	ELIMINATE PRIVATE SAN. PRESSURE SEWER FROM PROFILE, ETC.	4/26/99
JAI	1	ADD PRESSURE SEWER DETAILS, ELIM. 4" DIP (PRESSURE) CHANGE QUANTITIES ADD BLOW-OFF	3/29/99

PLAN & PROFILE OF
WATER & SEWER MAINS

CONTRACT NO. 14-3747-D

600' SCALE MAP NO. 38 BLOCK NO. 14

PROFFEN PROPERTY

LOTS 1 – 4

TAX MAP 38, GRID 14, PARCEL 213
1st ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

SCALE: AS SHOWN

SHEET 2 OF 2

FILE: 9809WS2.DWG

COLUMBIA GATEWAY PARCELS T-7-10
8-INCH WATER AND 8-INCH SEWER EXTENSIONS
COLUMBIA GATEWAY DRIVE
F-99-91
CONTRACT NO. 24-3748-D

WATER QUANTITIES				
ITEM	QUANTITIES ESTIMATED	QUANTITIES AS BUILT	TYPE MATERIAL	SUPPLIER
8" WATER	802 LF		DIP	
8" WATER W/ 6" INSULATION	70 LF		DIP	
6" WATER	144 LF		DIP	
12"x8" TAPPING SLEEVE AND VALVE ASSEMBLY	1 EACH		AWWA C-509	
8" VALVE	1 EACH		RESILIENT SEAT GATE VALVE	
6" VALVE	4 EACH		RESILIENT SEAT GATE VALVE	
FIRE HYDRANTS	2 EACH		AWWA C-502	

SEWER QUANTITIES				
ITEM	QUANTITIES ESTIMATED	QUANTITIES AS BUILT	TYPE MATERIAL	SUPPLIER
8" SEWER	218 LF			
8" SEWER	290 LF		DIP	
MANHOLES	2 EACH			
MANHOLES – DEPTH > 6'	14 VF			

NAME OF UTILITY CONTRACTOR:

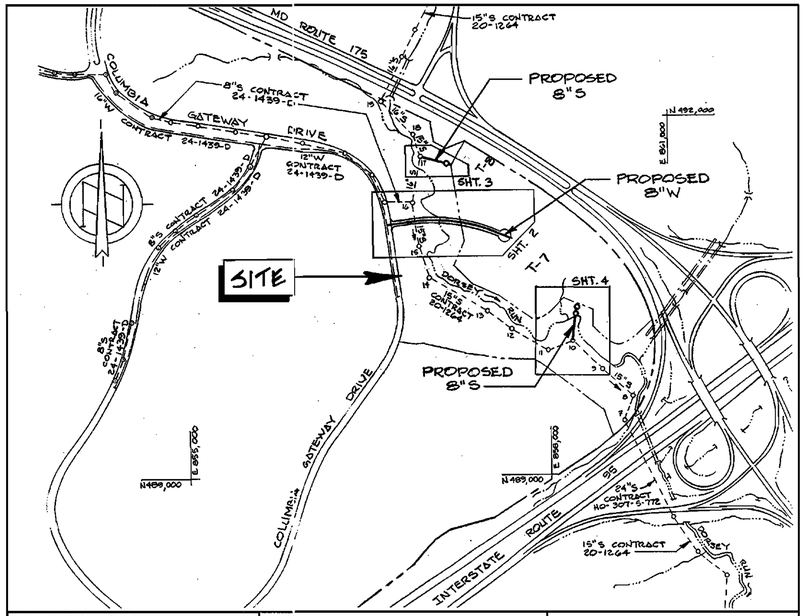
SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE SPECIFICATIONS AND AS SHOWN ON F-99-52.

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

Cheryl Simmons 4/16/99
NATURAL RESOURCES CONSERVATION SERVICE DATE

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

John R Robertson 4/16/99
HOWARD SOIL CONSERVATION DISTRICT DATE



VICINITY MAP
SCALE: 1" = 600'

TYPE OF BUILDING:
NUMBER OF BUILDABLE LOTS: 3
NO. OF NONBUILDABLE LOTS: 2
WATER HOUSE CONNECTIONS: 2
SEWER HOUSE CONNECTIONS: 2
DRAINAGE AREA: DORSEY RUN
TREATMENT PLANT:
LITTLE PATUXENT WWTP

WATER AND SEWER CODES FOR COUNTY USE ONLY:
WATER NO.: E-06
SEWER NO. 3390000/3380000
TEST GRADIENT: 700
ZONE: 550

INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	PLAN AND PROFILE – WATER
3	PLAN AND PROFILE – SEWER
4	PLAN AND PROFILE – SEWER
5	STREAM CROSSING DETAILS
6	SEDIMENT CONTROL NOTES & DETAILS

GENERAL NOTES:

PART I

1. APPROXIMATE LOCATIONS 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.
2. ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES, NAD 83.
3. ALL VERTICAL CONTROLS ARE BASED ON NAVD 29.
4. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
5. CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES BY 5'–0" MINIMUM OR TUNNEL AS REQUIRED UNLESS OTHERWISE NOTED. 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 MONIES 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 LOCATIONS OF THE TEST PITS. 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. THE 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	410-313-4900
BELL ATLANTIC MARYLAND, INC.	1-800-621-9900
COLONIAL PIPELINE CO.	410-795-1390
MISS 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 THE 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 OPEN CUTTING OR BORING/JACKING OF ANY COUNTY ROAD 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.
12. ALL TRENCH BEDDING SHALL BE IN ACCORDANCE WITH STANDARD DETAIL G2.01: "TRENCH IN EARTH" FOR DIP AND "TRENCH FOR PVC PIPE AND HDPE PIPE".

PART II WATER

1. ALL WATER MAINS SHALL BE D.I.P. CLASS 52 WITH RESTRAINED JOINTS UNLESS OTHERWISE NOTED.
2. TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 4'–0" OF COVER UNLESS OTHERWISE NOTED.
3. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
4. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
5. FIRE HYDRANTS SHALL BE SET TO THE 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.
6. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.

PART III SEWER

1. ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C. UNLESS OTHERWISE NOTED.
2. ALL MANHOLES SHALL BE 4'–0" INSIDE DIAMETER, UNLESS OTHERWISE NOTED.
3. FORCE MAINS SHALL BE D.I.P. ONLY. (N.A.)
4. MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
5. 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.
6. HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT THE CELLAR CANNOT BE SERVED. (N.A.)

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Robert M Berning 4-9.99
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
CHIEF, DEVELOPMENT ENGINEERING DATE 4/19/99

WALLACE, MONTGOMERY & ASSOCIATES
CIVIL AND STRUCTURAL ENGINEERS
110 WEST ROAD
TOWSON, MARYLAND 21204

STATE OF MARYLAND — JOSEPH V. SIMMONS — PROFESSIONAL ENGINEER — 3.24.99

DES: LAF
DRN: MEK
CHK: JJS
DATE: 2/99

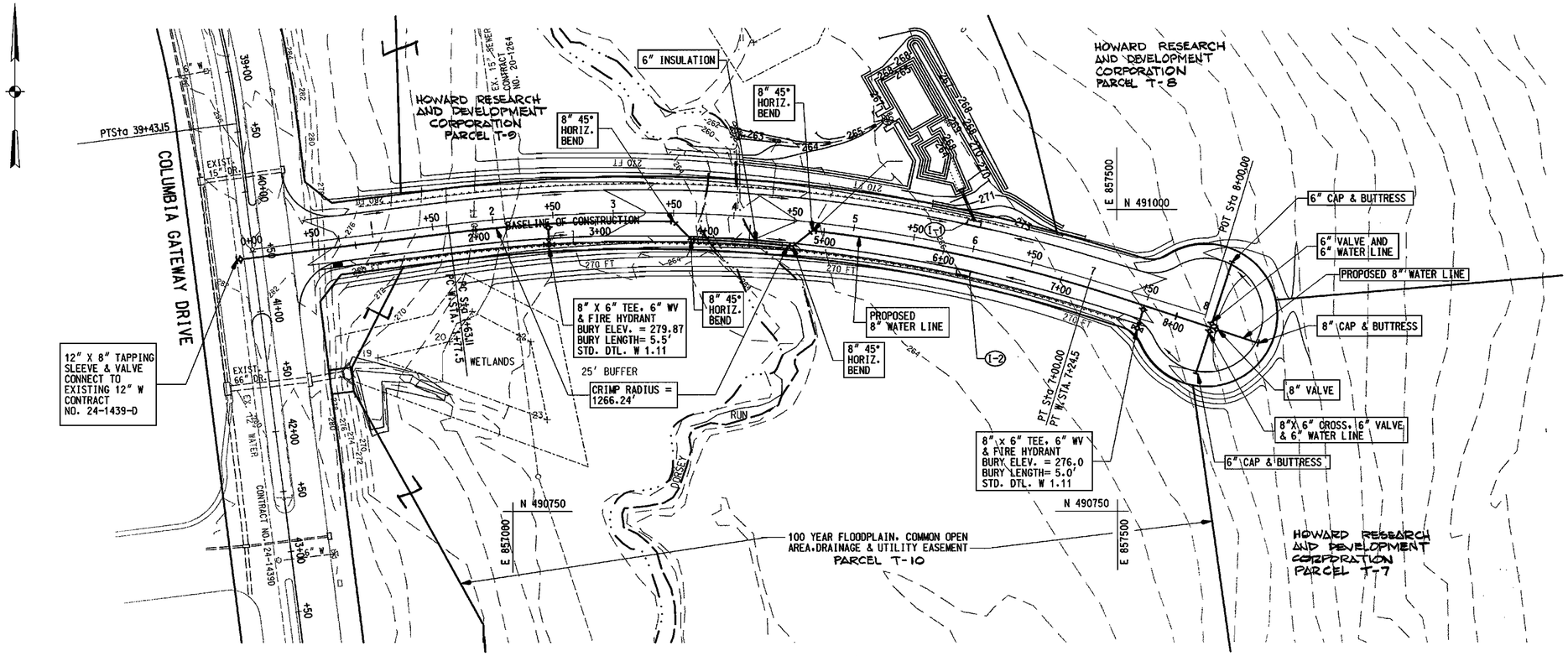
BY	NO.	REVISION	DATE

TITLE SHEET

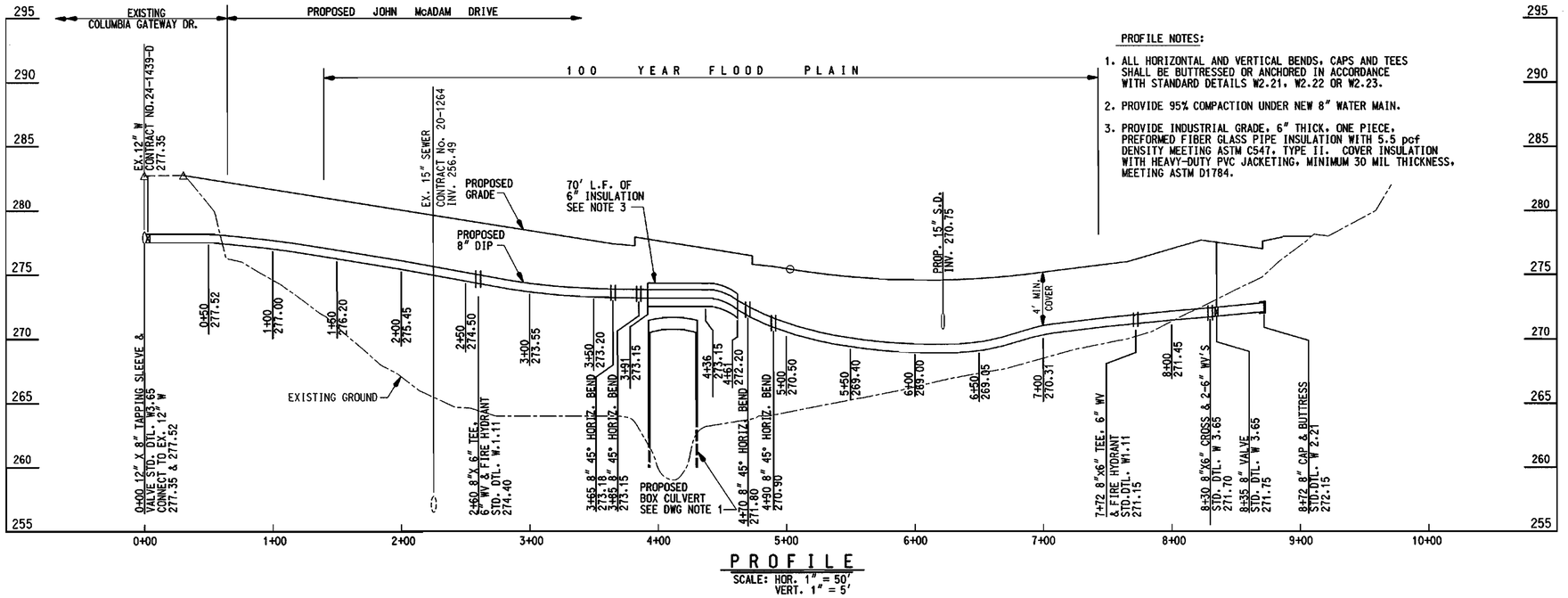
600' SCALE MAP NO. – BLOCK NO. –

COLUMBIA GATEWAY PARCELS T-7-10
COLUMBIA GATEWAY DRIVE
F-99-91
CONTRACT NO. 24-3748-D
ELECTION DISTRICT NO. 6
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
DWG.
SHEET 1 OF 6



PLAN
SCALE: 1" = 50'



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

DRAWING NOTE:

1. FOR ROADWAY CONSTRUCTION REFER TO COLUMBIA GATEWAY JOHN McADAM DRIVE CONTRACT DRAWINGS.

SEQUENCE OF CONSTRUCTION:

1. OBTAIN A GRADING PERMIT.
2. CONTACT HOWARD COUNTY BUREAU OF CONSTRUCTION INSPECTION DIVISION (410-313-1870) PRIOR TO STARTING DATE. (4 DAYS)
3. INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS PER SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL VOL. IV. (2 DAYS)
4. EXCAVATE AND INSTALL PROPOSED 8" WATER. (21 DAYS)
5. RESTORE TRENCHES TO THEIR ORIGINAL CONDITION AS PER HOWARD COUNTY STANDARDS WITH TEMPORARY PAVING HOWARD COUNTY STANDARD SPECIFICATION. (1 DAY)
6. STABILIZE TRENCHES BEYOND ROADWAY WITH TEMPORARY SEEDING. (2 DAYS)
7. UPON PERMISSION FROM HOWARD COUNTY SEDIMENT CONTROL INSPECTION, REMOVE SEDIMENT CONTROL DEVICES. (1 DAY)
8. INSTALL PERMANENT PAVING PATCH OVER TRENCH. (1 DAY)

WATER MAIN STAKE-OUT TABLE

8" WATER

STATION	DESCRIPTION	NORTH	EAST
0+00	12" X 8" TAPPING SLEEVE & VALVE	490,958.6600	856,772.2550
1+77.5	PC	490,987.6060	856,947.0970
3+65	8" 45° HORIZ. BEND	490,990.1120	857,133.7000
3+85	8" 45° HORIZ. BEND	490,975.3810	857,147.7920
4+70	8" 45° HORIZ. BEND	490,969.6270	857,232.2360
4+90	8" 45° HORIZ. BEND	490,982.1690	857,248.2990
7+24.5	PT	490,934.9241	857,476.8252
8+72	8" CAP	490,888.8232	857,617.5716

RESTORATION SCHEDULE

STA.	TO STA.	LENGTH	MATERIAL
0+00	0+47	47 FEET	BITUMINOUS PAVING
0+47	8+72	825 FEET	TEMPORARY SEEDING

RESTORATION NOTES :

1. SAW CUT THE EXISTING BITUMINOUS PAVING AND CURB AND GUTTER.
2. REPAIR BITUMINOUS PAVING IN ACCORDANCE WITH STANDARD DETAIL G4.01.

PROFILE NOTES:

1. ALL HORIZONTAL AND VERTICAL BENDS, CAPS AND TEES SHALL BE BUTTRESSED OR ANCHORED IN ACCORDANCE WITH STANDARD DETAILS W2.21, W2.22 OR W2.23.
2. PROVIDE 95% COMPACTION UNDER NEW 8" WATER MAIN.
3. PROVIDE INDUSTRIAL GRADE, 6" THICK, ONE PIECE, PREFORMED FIBER GLASS PIPE INSULATION WITH 5.5 pcf DENSITY MEETING ASTM C547, TYPE II. COVER INSULATION WITH HEAVY-DUTY PVC JACKETING, MINIMUM 30 MIL THICKNESS, MEETING ASTM D1784.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
CHIEF, BUREAU OF UTILITIES — DATE 4-9-99

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 4/12/99

WALLACE, MONTGOMERY & ASSOCIATES
CIVIL AND STRUCTURAL ENGINEERS
110 WEST ROAD
TOWSON, MARYLAND 21204

STATE OF MARYLAND — JOSEPH J. SIMMONS — No. 10981 — REGISTERED PROFESSIONAL ENGINEER — 4.7.99

DES: LAF
DRN: CCF
CHK: JJS
DATE: 2/99

BY	NO.	REVISION	DATE

PLAN AND PLAN AND PROFILE

600' SCALE MAP NO. _____ BLOCK NO. _____

COLUMBIA GATEWAY PARCELS T-7-10
COLUMBIA GATEWAY DRIVE
F-99-91
CONTRACT NO. 24-3748-D
ELECTION DISTRICT NO. 6
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
DWG.
SHEET 2 OF 6

w:\proj\98010\cadd\up02dgrs.dgn Apr. 07, 1999 14:11:58

DRAWING NOTES:

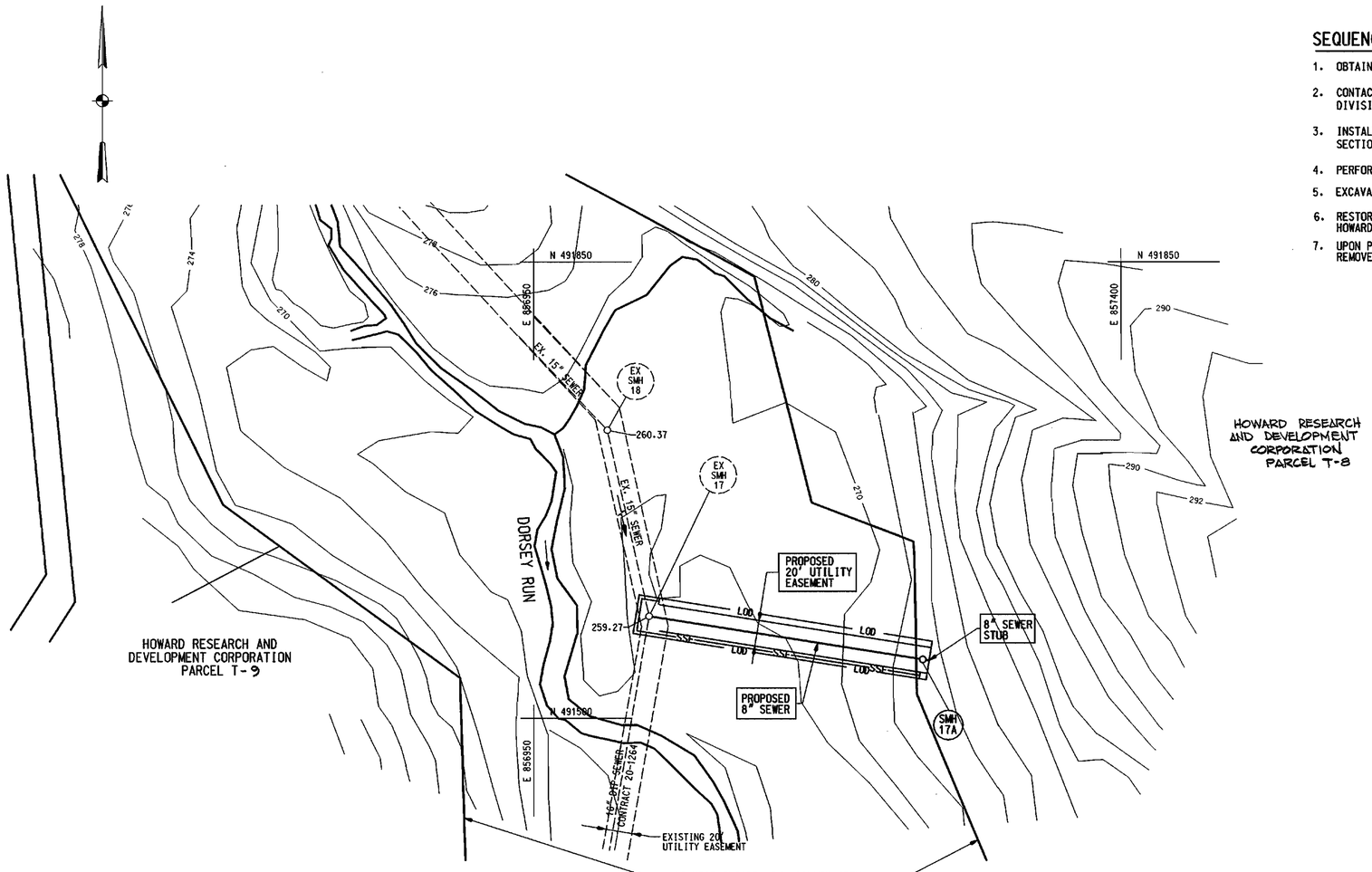
1. FOR ACCESS ROAD TO SITE, REFER TO MASS GRADING PLAN OF COLUMBIA GATEWAY JOHN McADAM DRIVE CONTRACT DRAWINGS.
2. RECONFIGURE EXISTING MANHOLE CHANNEL IN ACCORDANCE WITH STANDARD DETAIL G5.31.

SEQUENCE OF CONSTRUCTION:

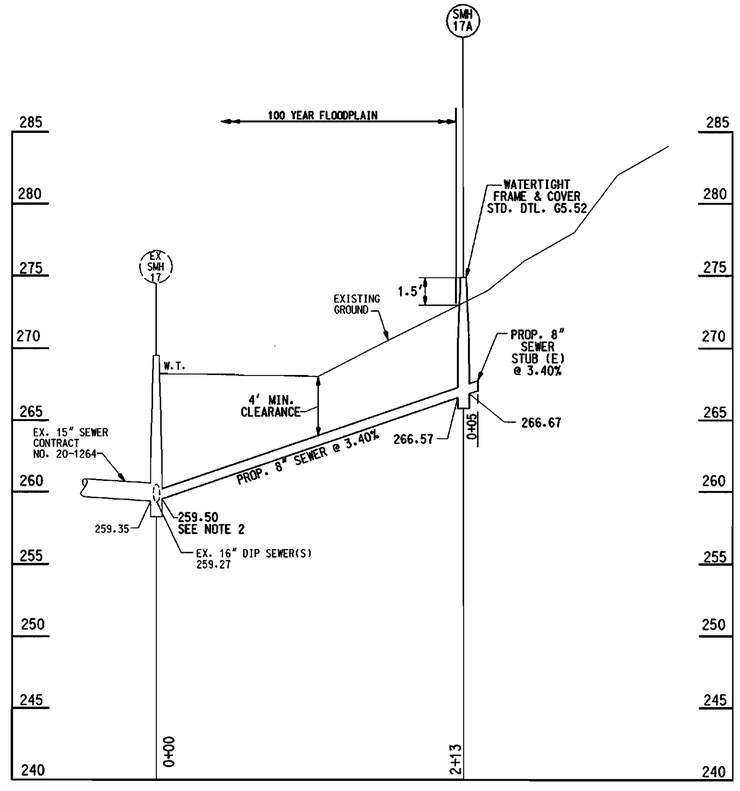
1. OBTAIN A GRADING PERMIT.
2. CONTACT HOWARD COUNTY BUREAU OF CONSTRUCTION INSPECTION DIVISION (410-313-1870) PRIOR TO STARTING DATE. (4 DAYS)
3. INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS PER SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL VOL. IV. (2 DAYS)
4. PERFORM CLEARING AND GRUBBING OPERATIONS (2 DAYS).
5. EXCAVATE AND INSTALL PROPOSED 8" SEWER (4 DAYS).
6. RESTORE TRENCHES TO THEIR ORIGINAL CONDITION WITH SEEDING AS PER HOWARD COUNTY STANDARDS AND SPECIFICATION.(2 DAY)
7. UPON PERMISSION FROM HOWARD COUNTY SEDIMENT CONTROL INSPECTION, REMOVE SEDIMENT CONTROL DEVICES. (1 DAY)

SEWER STAKE-OUT TABLE		
STRUCTURE	NORTH	EAST
17 A	491,544.9180	857,247.9710

RESTORATION SCHEDULE			
STA.	TO STA.	LENGTH	MATERIAL
EX. MH 17	EX. MH 17A	213 FEET	SEEDING
MH 17A	0+05	5 FEET	SEEDING



PLAN
SCALE: 1" = 50'



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

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Robert W. Berning 4-9-99
CHIEF, BUREAU OF UTILITIES — DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 4/9/99

WALLACE, MONTGOMERY & ASSOCIATES
CIVIL AND STRUCTURAL ENGINEERS
110 WEST ROAD
TOWSON, MARYLAND 21204

STATE OF MARYLAND — JOSEPH V. SIMONETTI — REG. NO. 21398 — PROFESSIONAL ENGINEER
5.24.99

DES: LAF
DRN: CCF
CHK: JJS
DATE: 2/99

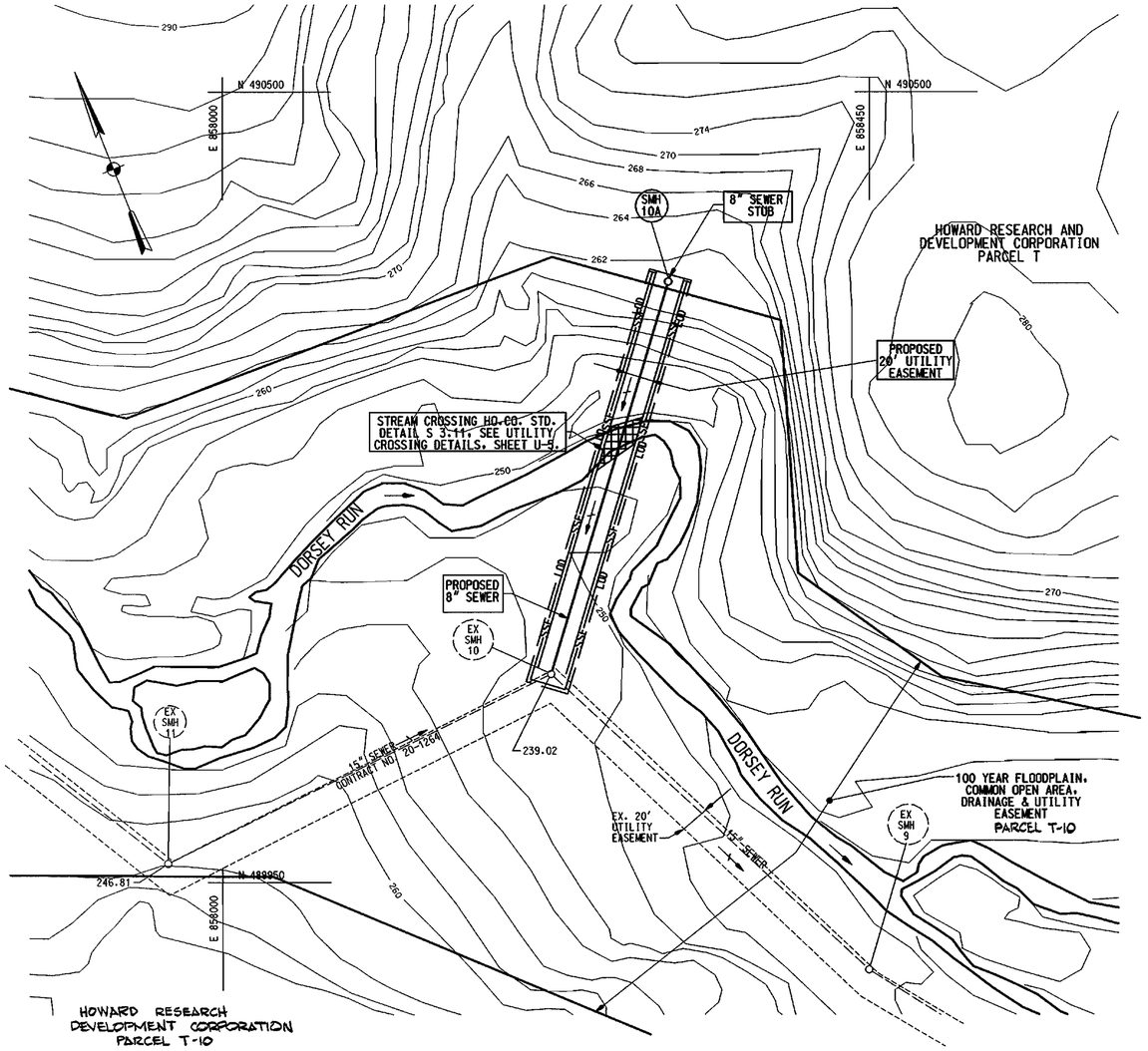
BY	NO.	REVISION	DATE

PLAN AND PROFILE
SEWER

600' SCALE MAP NO. _____ BLOCK NO. _____

COLUMBIA GATEWAY PARCELS T-7-10
COLUMBIA GATEWAY DRIVE
F-99-91
CONTRACT NO. 24-3748-D
ELECTION DISTRICT NO. 6
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
DWG.
SHEET 3 OF 6



PLAN
SCALE: 1" = 50'

DRAWING NOTE:

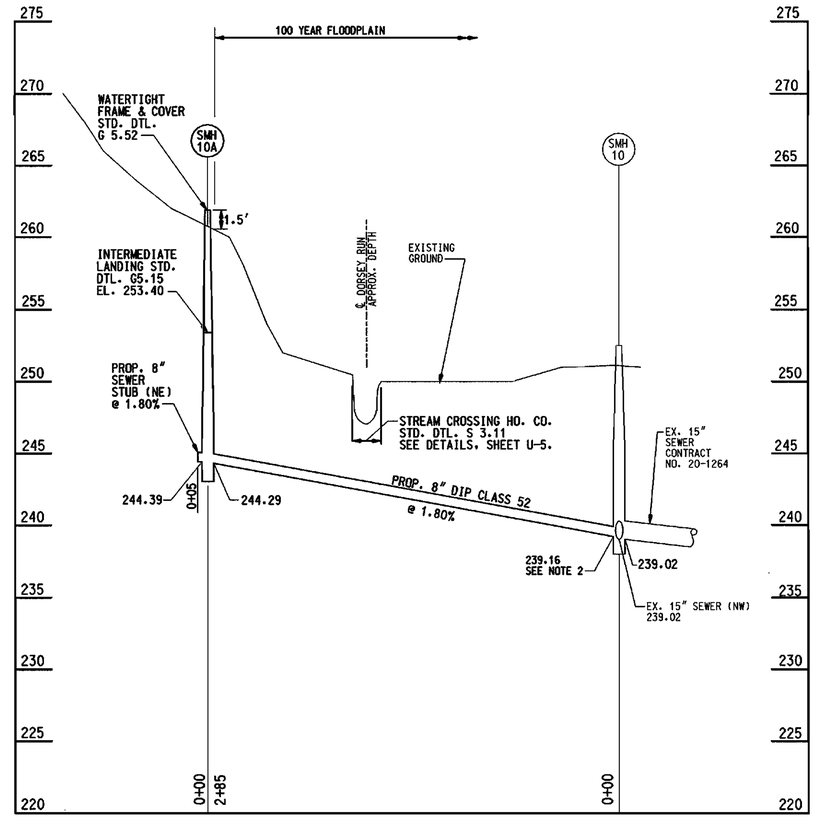
1. FOR ACCESS ROAD TO SITE, REFER TO MASS GRADING PLAN OF COLUMBIA GATEWAY JOHN McADAM DRIVE CONTRACT DRAWINGS.
2. RECONFIGURE EXISTING MANHOLE CHANNEL IN ACCORDANCE WITH STANDARD DETAIL G5.31.

SEQUENCE OF CONSTRUCTION:

1. OBTAIN A GRADING PERMIT.
2. CONTACT HOWARD COUNTY BUREAU OF CONSTRUCTION INSPECTION DIVISION (410-313-1870) PRIOR TO STARTING DATE. (4 DAYS)
3. INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS PER SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL VOL. IV. (2 DAYS)
4. PERFORM CLEARING AND GRUBBING OPERATIONS (2 DAYS).
5. EXCAVATE AND INSTALL PROPOSED 8" SEWER (6 DAYS).
6. RESTORE TRENCHES TO THEIR ORIGINAL CONDITION WITH SEEDING AS PER HOWARD COUNTY STANDARDS AND SPECIFICATION.(2 DAYS)
7. UPON PERMISSION FROM HOWARD COUNTY SEDIMENT CONTROL INSPECTION, REMOVE SEDIMENT CONTROL DEVICES. (1 DAY)

SEWER STAKE-OUT TABLE		
STRUCTURE	NORTH	EAST
10A	490367.8090	858309.8750

RESTORATION SCHEDULE			
STA.	TO STA.	LENGTH	MATERIAL
EX. MH 10	1+65	165 FEET	SEEDING
1+65	1+85	20 FEET	CLASS II RIPRAP
1+85	MH 10A	100 FEET	SEEDING
MH 10A	0+05	5 FEET	SEEDING



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

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
CHIEF, BUREAU OF UTILITIES — DATE 4-9-99

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 4/19/99

WALLACE, MONTGOMERY & ASSOCIATES
CIVIL AND STRUCTURAL ENGINEERS
110 WEST ROAD
TOWSON, MARYLAND 21204

STATE OF MARYLAND — JOSEPH J. SIMMONS — No. 21398 — PROFESSIONAL ENGINEER — 3-24-99

DES: LAF
DRN: CCF
CHK: JJS
DATE: 2/99

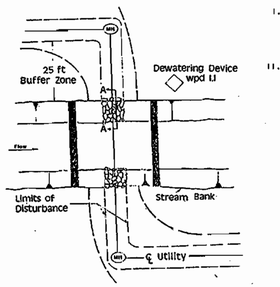
BY	NO.	REVISION	DATE

PLAN AND PROFILE
SEWER

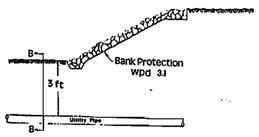
600' SCALE MAP NO. _____ BLOCK NO. _____

COLUMBIA GATEWAY PARCELS T-7-10
COLUMBIA GATEWAY DRIVE
F-99-91
CONTRACT NO. 24-3748-D
ELECTION DISTRICT NO. 6
HOWARD COUNTY, MARYLAND

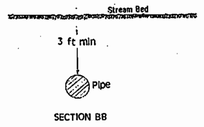
SCALE AS SHOWN
DWG.
SHEET 4 OF 6



PLAN VIEW



SECTION AA



SECTION BB

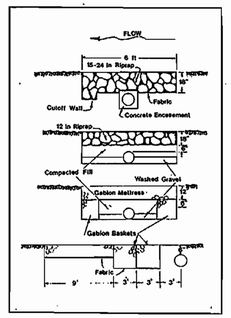
I. Description

This work shall consist of installing erosion control devices in and adjacent to temporary stream construction such as utility crossings.

II. Construction Requirements

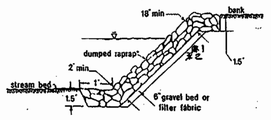
1. All erosion and sediment control devices shall be installed as the first order of work.
2. The contractor shall insure that a continuous perimeter control barrier is in place so as to minimize pollutants entering the water.
3. Excavated topsoil and subsoil shall be kept separate and replaced in their natural order.
4. All excavated materials shall be placed on the upland side of the excavation.
5. All construction shall take place during stream low flows. The length of construction time shall be limited to a maximum of 5 days for each crossing.
6. All utility crossings shall be placed at least three feet beneath the stream bed unless an alternative section is specifically approved by the Administration.
7. The contractor may elect to construct the utility crossing in two stages. In this case, a WRA approved flow barrier may be constructed to keep the construction area dry.
8. Sediment control devices are to remain in place until all disturbed areas are stabilized in accordance with an approved sediment and erosion control plan and the inspection authority approves their removal.

Alternatives



UTILITY CROSSING

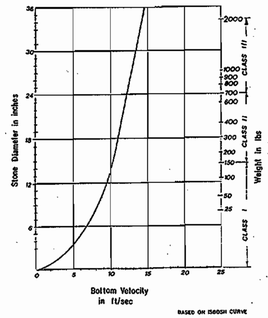
NOT TO SCALE



* size based on bankfull velocity

CROSS SECTION

SIZING RIPRAP PER STREAM VELOCITY



RIPRAP GRADATION

	Size	Percent of Total Weight Smaller than the Given Size
Class I	150 lb (70 kg) 2 lb (1 kg)	100 50 max
Class II	700 lb (320 kg) 20 lb (10 kg)	100 10 max
Class III	2000 lb (910 kg) 40 lb (20 kg)	100 10 max

I. Description

This work shall consist of protecting slopes and channels from erosion with coverings of stone in accordance with the plans and specifications shown on this drawing.

II. Material Specifications

1. Bedding:

A. Bank run gravel shall meet the following requirements:

% loss than	U.S. Standard selve size
100	2 1/2 in
85 - 100	1 in
60 - 100	1/2 in
35 - 70	No. 10
20 - 50	No. 40
3 - 20	No. 100

B. Geotextile filter fabric shall meet the following requirements:

Tensile Strength	200 lbs.
Burst Strength	350 lbs.
Puncture Strength	70 lbs.
Permeability	.02 cm/sec
Elongation at Failure	30%
Minimum Lap Length	24 in

2. Riprap:

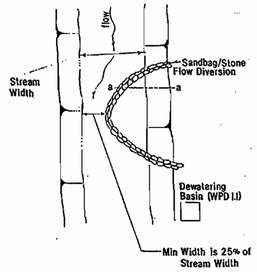
The maximum weight of stone shall be based upon the bankfull stream channel velocity, using the given chart. The gradation of the stone shall be as indicated.

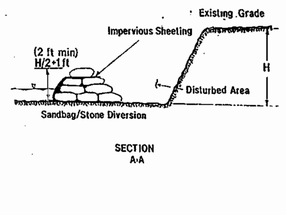
III. Construction Requirements

1. The contractor shall install all sediment and erosion control devices as a first order of business.
2. Provisions must be made to anchor the riprap at the stream bed so as to provide protection against undermining. If this cannot be accomplished by extending the toe trench as indicated in Cross Section, an alternative method of protection must received prior written approval of the Administration.
3. Excavation for riprap shall be made in reasonably close conformity with the existing stream slope and bed.
4. A filter bedding is required under all riprap. Bedding material shall consist of either a bank run gravel or a geotextile filter fabric meeting the specifications of II. 1B above.
5. The placement of riprap shall begin with the toe. The larger stones shall be placed in the toe and along the outside edges of the limits of the slope and channel protection. The riprap shall be placed with suitable equipment in such a manner as to produce a reasonably graded mass of stones with zero drop height. The placing of stones that cause extensive segregation is not allowed.
6. Any excavation voids existing along the edges of the completed slope and channel protection shall be backfilled.
7. All disturbed areas shall be permanently stabilized in accordance with an approved sediment and erosion control plan.

RIPRAP

NOT TO SCALE





SECTION A-A

I. Description

The work shall consist of installing flow diversions for the purpose of erosion control when construction activities take place within the stream channel such as bank stabilization or bridge abutment construction.

II. Material Specifications

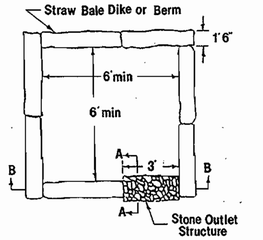
1. Sandbags: Sandbags shall consist of materials which are resistant to ultra-violet radiation, tearing and puncture and woven tightly enough to prevent leakage of fill material (i.e., sand, fine gravel, etc.).
2. Stone: Stone shall be washed and have a minimum diameter of 6 inches.
3. Sheeting: Sheeting shall consist of polyethylene or other material which is impervious and resistant to puncture and tearing.

III. Construction Requirements

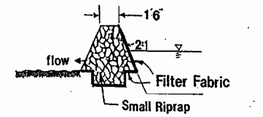
1. All erosion and sediment control devices shall be installed as the first order of work.
2. The diversion structure shall be installed from upstream to downstream.
3. The height of the diversion structure shall be one half the distance from stream bed to stream bank plus one foot, as indicated on the cross-section view.
4. All excavated materials shall be disposed of in a SCD approved disposal area outside the 100-year floodplain unless otherwise approved on the plans by the WRA.
5. All dewatering of the construction area shall be pumped to a dewatering basin prior to re-entering the stream.
6. Sheeting shall be overlapped such that the upstream portion covers the downstream portion with at least an 18-inch overlap.
7. Sediment control devices are to remain in place until all disturbed areas are stabilized in accordance with an approved sediment and erosion control plan and the inspecting authority approves their removal.

SANDBAG/STONE DIVERSION

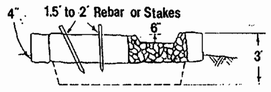
NOT TO SCALE



PLAN VIEW



SECTION AA



SECTION B B

I. Description

The work shall consist of the construction of a dewatering basin for the purpose of receiving sediment-laden water pumped from a construction site to allow filtration before the water re-enters the waterway.

II. Material Specifications

1. Riprap: Riprap shall consist of 4-8 inch washed stone or gravel.
2. Filter Fabric: The filter cloth shall be a woven or nonwoven fabric consisting only of continuous chain polymeric filaments or yarns of polyester. The fabric shall be inert to commonly encountered chemicals, hydro-carbons, mildew, and rot resistant. No. 6 stone (AASHTO 57) may be used on the inner-face for filtering instead of fabric.
3. Strawbales: Strawbales shall meet the criteria as specified in the Maryland Standards and Specifications for Soil Erosion and Sediment Control.

III. Construction Requirements

1. The contractor shall install all sediment and erosion control devices as the first order of business.
2. Excavated materials shall be stored such that sediments are prevented from entering the waterway; i.e., sediment perimeter controls may be necessary.
3. Excavated subsoil and topsoil shall be kept separate and replaced in their natural order.
4. Any dewatering of the construction area shall be filtered through a dewatering basin prior to entering the waterway.
5. The dewatering basin shall be excavated to a minimum depth of 3 feet.
6. Once the dewatering basin becomes filled to 1/2 of the excavated depth, accumulated sediment shall be removed and disposed of in a SCD approved disposal area outside the 100-year floodplain unless otherwise approved on the plans by the WRA.
7. Sediment control devices are to remain in place until all disturbed areas are stabilized and the inspecting authority approves their removal. All ground contours shall be returned to their original condition unless specifically approved otherwise by the Administration.

DEWATERING BASINS

NOT TO SCALE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Robert W. Berning 4-9-99
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
4/19/99
CHIEF, DEVELOPMENT ENGINEERING DATE

WALLACE, MONTGOMERY & ASSOCIATES
CIVIL AND STRUCTURAL ENGINEERS
110 WEST ROAD
TOWSON, MARYLAND 21204

STATE OF MARYLAND
JOSEPH J. SIMMONS
No. 21431
PROFESSIONAL ENGINEER
3.24.99

DES: LAF
DRN: MEK
CHK: JJS
DATE: 2/99

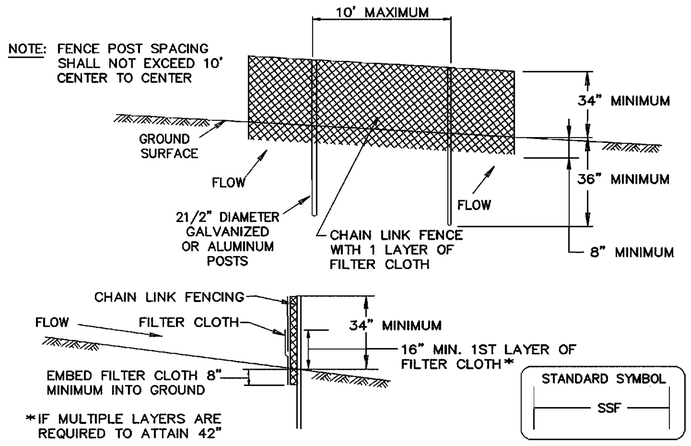
BY	NO.	REVISION	DATE

STREAM CROSSING DETAILS

600' SCALE MAP NO. — BLOCK NO. —

COLUMBIA GATEWAY PARCELS T-7-10
COLUMBIA GATEWAY DRIVE
F-99-91
CONTRACT NO. 24-3748-D
ELECTION DISTRICT NO. 6
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
DWG.
SHEET 5 OF 6



CONSTRUCTION SPECIFICATIONS

1. FENCING SHALL BE 42" IN HEIGHT AND CONSTRUCTED IN ACCORDANCE WITH THE LATEST MARYLAND STATE HIGHWAY DETAILS FOR CHAIN LINK FENCING. THE SPECIFICATION FOR A 6' FENCE SHALL BE USED, SUBSTITUTING 42" FABRIC AND 6' LENGTH POSTS.
2. CHAIN LINK FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES. THE LOWER TENSION WIRE, BRACE AND TRUSS RODS, DRIVE ANCHORS AND POST CAPS ARE NOT REQUIRED EXCEPT ON THE ENDS OF THE FENCE.
3. FILTER CLOTH SHALL BE FASTENED SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24" AT THE TOP AND MID SECTION.
4. FILTER CLOTH SHALL BE EMBEDDED A MINIMUM OF 8" INTO THE GROUND.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SILT BUILDUPS REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE, OR WHEN SILT REACHES 50% OF FENCE HEIGHT
7. FILTER CLOTH 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:

TENSILE STRENGTH	50 LBS/IN (MIN.)	TEST: MSMT 509
TENSILE MODULUS	20 LBS/IN (MIN.)	TEST: MSMT 509
FLOW RATE	0.3 GAL/FT²/MINUTE (MAX.)	TEST: MSMT 322
FILTERING EFFICIENCY	75% (MIN.)	TEST: MSMT 322

SUPER SILT FENCE

NOT TO SCALE

STANDARD SEDIMENT CONTROL NOTES

1. 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 (410–313–1855).
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE–DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITH: A.) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES STEPPER 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. 1, CHAPTER 7 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 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING, SOD, TEMPORARY SEEDING AND MULCHING (SEC. G). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL 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	= 133.4	ACRES
AREA DISTURBED	= 5.8	ACRES
AREA TO BE ROOFED OR PAVED	= 1.2	ACRES
AREA TO BE VEGETATIVELY STABILIZED	= 4.6	ACRES
TOTAL CUT	= 24,500	CU./YDS.
TOTAL FILL	= 24,300	CU./YDS.
OFF SITE WASTE/BORROW AREA LOCATION:	AT A LOCATION DETERMINED BY THE CONTRACTOR WITH AN ACTIVE GRADING PERMIT.	

8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9. ADDITIONAL SEDIMENT CONTROL 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 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.
11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACKFILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
12. SPOIL FROM THE TRENCHING OPERATION IS TO BE PLACED ON THE UPHILL SIDE OF THE TRENCH.

SEQUENCE OF CONSTRUCTION

1. OBTAIN A GRADING PERMIT.
2. CONTACT HOWARD COUNTY BUREAU OF CONSTRUCTION INSPECTION DIVISION (410–313–1870) PRIOR TO STARTING DATE. (4 DAYS)
3. INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS PER SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL VOL. IV. (2 DAYS)
4. EXCAVATE AND INSTALL PROPOSED 8" WATER & 8" SEWER (61 DAYS)
5. EXCAVATE AND INSTALL PROPOSED WATER CONNECTIONS (2 DAYS)
6. RESTORE TRENCHES TO THEIR ORIGINAL CONDITION AS PER HOWARD COUNTY STANDARDS WITH TEMPORARY PAVING HOWARD COUNTY STANDARD SPECIFICATION. (2 DAYS)
7. UPON PERMISSION FROM HOWARD COUNTY SEDIMENT CONTROL INSPECTION, REMOVE SEDIMENT CONTROL DEVICES. (1 DAY)
8. INSTALL PERMANENT PAVING PATCH OVER TRENCH. (2 DAYS)

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 (0.07 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 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 "1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" FOR RATE AND METHODS NOT COVERED.

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 (0.05 LBS/1000 SQ. FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, 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.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Robert W. Berning 4-9-99
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
CHIEF, DEVELOPMENT ENGINEERING DATE 4/19/99

WALLACE, MONTGOMERY & ASSOCIATES
CIVIL AND STRUCTURAL ENGINEERS
110 WEST ROAD
TOWSON, MARYLAND 21204

STATE OF MARYLAND — JOSEPH J. SIEGEL — No. 21708 — PROFESSIONAL ENGINEER
3.24.99

DES: LAF
DRN: MEK
CHK: JJS
DATE: 2/99

BY	NO.	REVISION	DATE

SEDIMENT CONTROL NOTES & DETAILS

600' SCALE MAP NO. -= _____ BLOCK NO. -= _____

COLUMBIA GATEWAY PARCELS T-7-10
COLUMBIA GATEWAY DRIVE
F-99-91
CONTRACT NO. 24-3748-D
ELECTION DISTRICT NO. 6
HOWARD COUNTY, MARYLAND

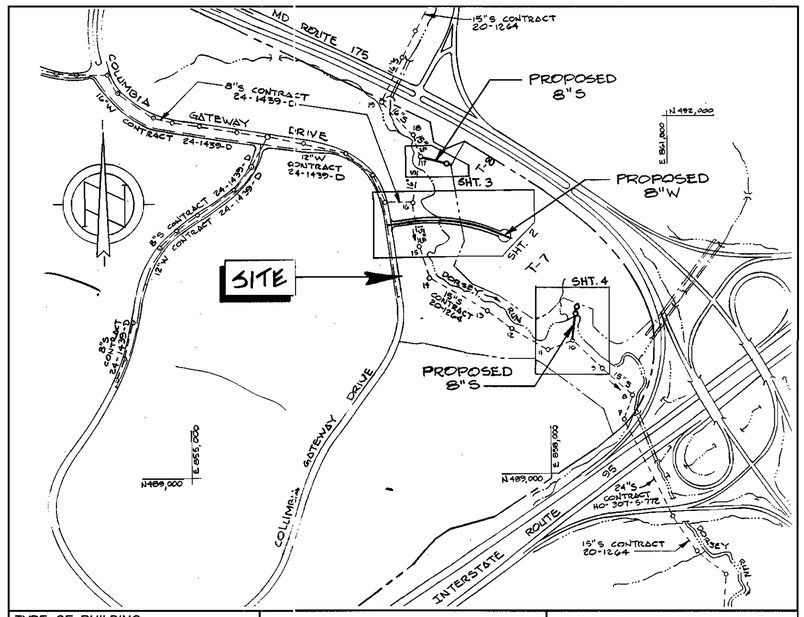
SCALE AS SHOWN
DWG.
SHEET 6 OF 6

COLUMBIA GATEWAY PARCELS T-7-10
8-INCH WATER AND 8-INCH SEWER EXTENSIONS
COLUMBIA GATEWAY DRIVE
F-99-91
CONTRACT NO. 24-3748-D

WATER QUANTITIES				
ITEM	QUANTITIES		TYPE MATERIAL	SUPPLIER
	ESTIMATED	AS BUILT		
8" WATER	802 LF	802	DIP 52	GRIFFIN PIPE
8" WATER W/ 6" INSULATION	70 LF	70 L.F.	DIP	" "
6" WATER	144 LF	144	DIP	GRIFFIN PIPE
12"x8" TAPPING SLEEVE AND VALVE ASSEMBLY	1 EACH	1	AWWA C-509	MUELLER COMP.
8" VALVE	1 EACH	1	RESILIENT SEAT GATE VALVE	" "
6" VALVE	4 EACH	4	RESILIENT SEAT GATE VALVE	" "
FIRE HYDRANTS	2 EACH	2	AWWA C-502	" "

SEWER QUANTITIES				
ITEM	QUANTITIES		TYPE MATERIAL	SUPPLIER
	ESTIMATED	AS BUILT		
8" SEWER	218 LF	218 L.F.	P.V.C. (SDR35)	U.S. FILTER
8" SEWER	290 LF	290	DIP 52	GRIFFIN PIPE
MANHOLES	2 EACH	2 EA	CONC.	ATLANTIC CONC. PIPE
MANHOLES – DEPTH > 6'	14 VF	14 V.F.	CONC.	" " "

NAME OF UTILITY CONTRACTOR: W.F. WILSON



TYPE OF BUILDING:
NUMBER OF BUILDABLE LOTS: 3
NO. OF NONBUILDABLE LOTS: 2
WATER HOUSE CONNECTIONS: 2
SEWER HOUSE CONNECTIONS: 2
DRAINAGE AREA: DORSEY RUN
TREATMENT PLANT:
LITTLE PATUXENT WWTP

VICINITY MAP
SCALE: 1" = 600'

WATER AND SEWER CODES FOR COUNTY USE ONLY:
WATER NO.: E-06
SEWER NO. 3390000/3380000
TEST GRADIENT: 700
ZONE: 550

INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	PLAN AND PROFILE – WATER
3	PLAN AND PROFILE – SEWER
4	PLAN AND PROFILE – SEWER
5	STREAM CROSSING DETAILS
6	SEDIMENT CONTROL NOTES & DETAILS

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE SPECIFICATIONS AND AS SHOWN ON F-99-52.

REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

Cheryl Simmons 4/16/99
NATURAL RESOURCES CONSERVATION SERVICE DATE

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

John R Robertson 4/16/99
HOWARD SOIL CONSERVATION DISTRICT DATE

GENERAL NOTES:

PART I

1. APPROXIMATE LOCATIONS 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.
2. ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES, NAD 83.
3. ALL VERTICAL CONTROLS ARE BASED ON NAVD 29.
4. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
5. CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES BY 5'–0" MINIMUM OR TUNNEL AS REQUIRED UNLESS OTHERWISE NOTED. 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 MONIES 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 LOCATIONS OF THE TEST PITS. 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. THE 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	410-313-4900
BELL ATLANTIC MARYLAND, INC.	1-800-621-9900
COLONIAL PIPELINE CO.	410-795-1390
MISS 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 THE 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 OPEN CUTTING OR BORING/JACKING OF ANY COUNTY ROAD 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.
12. ALL TRENCH BEDDING SHALL BE IN ACCORDANCE WITH STANDARD DETAIL G2.01: "TRENCH IN EARTH" FOR DIP AND "TRENCH FOR PVC PIPE AND HDPE PIPE".

PART II WATER

1. ALL WATER MAINS SHALL BE D.I.P. CLASS 52 WITH RESTRAINED JOINTS UNLESS OTHERWISE NOTED.
2. TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 4'–0" OF COVER UNLESS OTHERWISE NOTED.
3. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
4. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
5. FIRE HYDRANTS SHALL BE SET TO THE 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.
6. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.

PART III SEWER

1. ALL SEWER MAINS SHALL BE D.I.P. OR P.V.C. UNLESS OTHERWISE NOTED.
2. ALL MANHOLES SHALL BE 4'–0" INSIDE DIAMETER, UNLESS OTHERWISE NOTED.
3. FORCE MAINS SHALL BE D.I.P. ONLY. (N.A.)
4. MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
5. 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.
6. HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT THE CELLAR CANNOT BE SERVED. (N.A.)

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Robert M Berning 4-9-99
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
Alan Dennumm 4/19/99
CHIEF, DEVELOPMENT ENGINEERING DATE

WALLACE, MONTGOMERY & ASSOCIATES
CIVIL AND STRUCTURAL ENGINEERS
110 WEST ROAD
TOWSON, MARYLAND 21204

STATE OF MARYLAND — JOSEPH V. MEO — No. 21431 — REGISTERED PROFESSIONAL ENGINEER
3.24.99

DES: LAF
DRN: MEK
CHK: JJS
DATE: 2/99

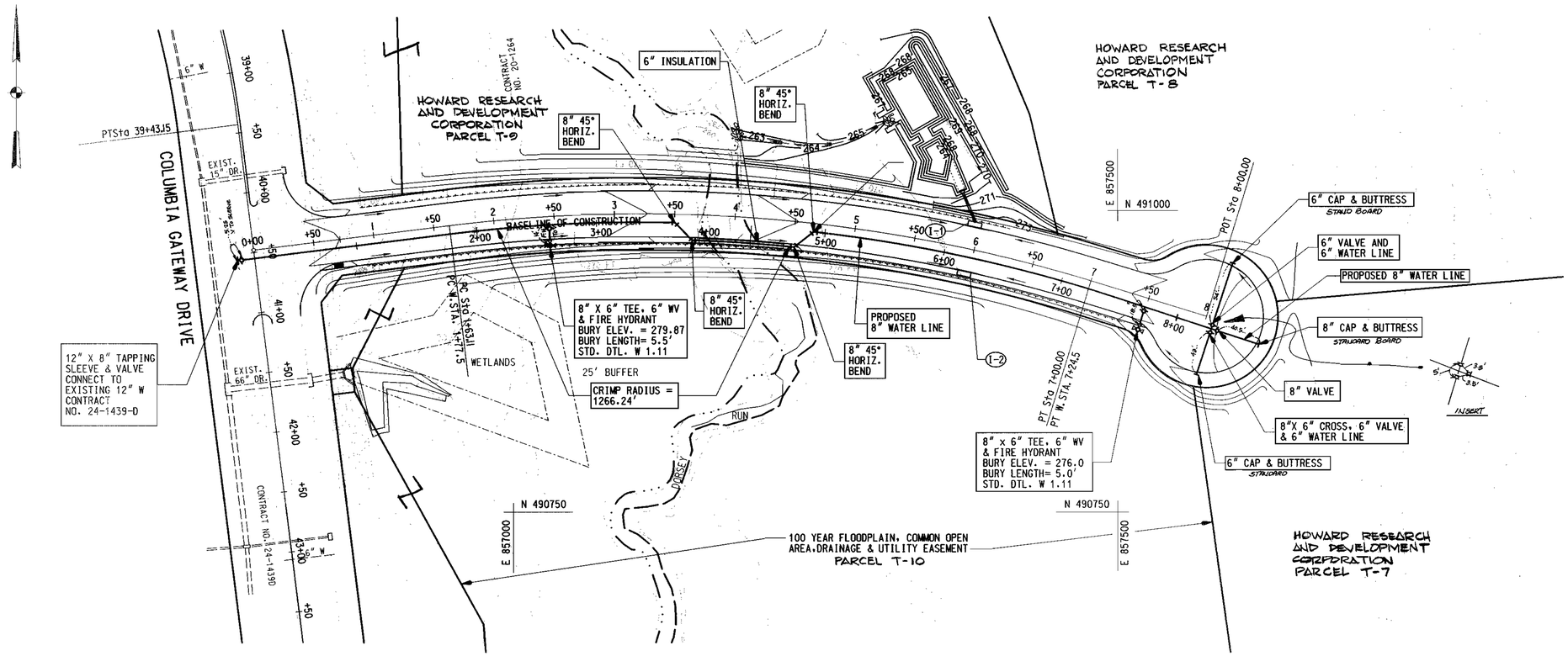
BY	NO.	REVISION	DATE
KCI	1	ASBUILT CONDITIONS	10/25/00

TITLE SHEET

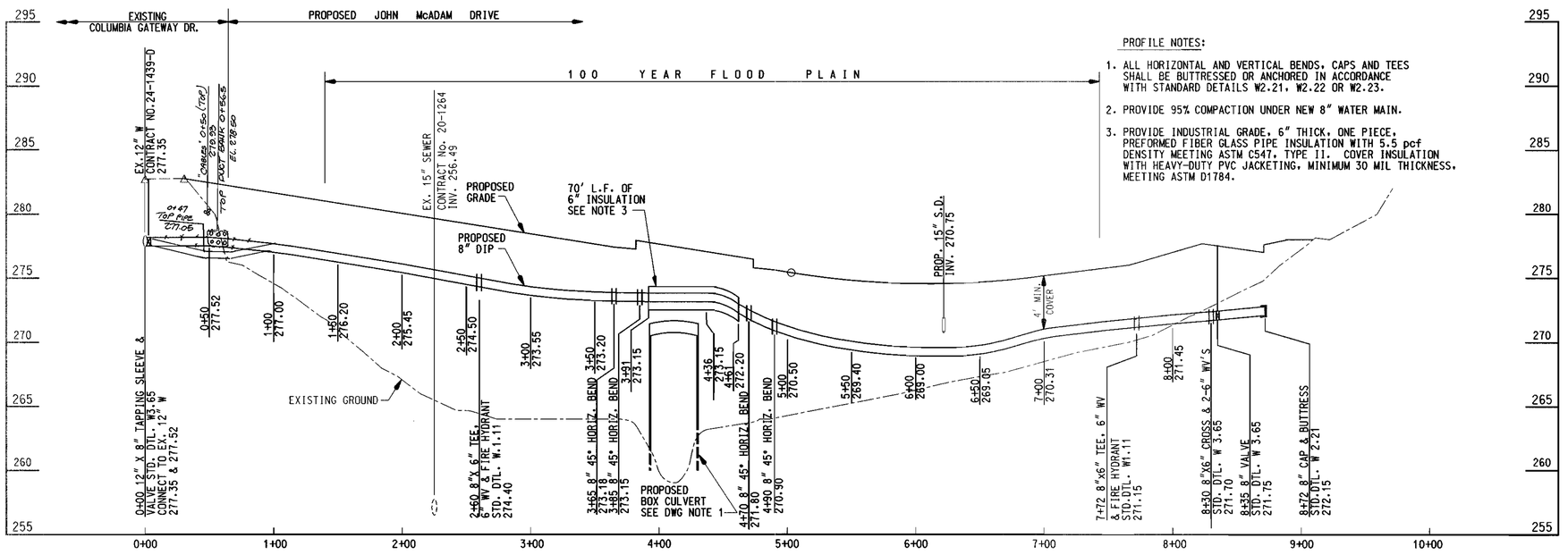
600' SCALE MAP NO. --- BLOCK NO. ---

COLUMBIA GATEWAY PARCELS T-7-10
COLUMBIA GATEWAY DRIVE
F-99-91
CONTRACT NO. 24-3748-D
ELECTION DISTRICT NO. 6
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
DWG.
SHEET 1 OF 6



PLAN
SCALE: 1" = 50'



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

PROFILE NOTES:

1. ALL HORIZONTAL AND VERTICAL BENDS, CAPS AND TEES SHALL BE BUTTRESSED OR ANCHORED IN ACCORDANCE WITH STANDARD DETAILS W2.21, W2.22 OR W2.23.
2. PROVIDE 95% COMPACTION UNDER NEW 8" WATER MAIN.
3. PROVIDE INDUSTRIAL GRADE, 6" THICK, ONE PIECE, PREFORMED FIBER GLASS PIPE INSULATION WITH 5.5 pcf DENSITY MEETING ASTM C547, TYPE II. COVER INSULATION WITH HEAVY-DUTY PVC JACKETING, MINIMUM 30 MIL THICKNESS, MEETING ASTM D1784.

DRAWING NOTE:

1. FOR ROADWAY CONSTRUCTION REFER TO COLUMBIA GATEWAY JOHN McADAM DRIVE CONTRACT DRAWINGS.

SEQUENCE OF CONSTRUCTION:

1. OBTAIN A GRADING PERMIT.
2. CONTACT HOWARD COUNTY BUREAU OF CONSTRUCTION INSPECTION DIVISION (410-313-1870) PRIOR TO STARTING DATE. (4 DAYS)
3. INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS PER SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL VOL. IV. (2 DAYS)
4. EXCAVATE AND INSTALL PROPOSED 8" WATER. (21 DAYS)
5. RESTORE TRENCHES TO THEIR ORIGINAL CONDITION AS PER HOWARD COUNTY STANDARDS WITH TEMPORARY PAVING HOWARD COUNTY STANDARD SPECIFICATION. (1 DAY)
6. STABILIZE TRENCHES BEYOND ROADWAY WITH TEMPORARY SEEDING. (2 DAYS)
7. UPON PERMISSION FROM HOWARD COUNTY SEDIMENT CONTROL INSPECTION, REMOVE SEDIMENT CONTROL DEVICES. (1 DAY)
8. INSTALL PERMANENT PAVING PATCH OVER TRENCH. (1 DAY)

WATER MAIN STAKE-OUT TABLE

8" WATER

STATION	DESCRIPTION	NORTH	EAST
0+00	12" X 8" TAPPING SLEEVE & VALVE	490,958.6600	856,772.2550
1+77.5	PC	490,987.6060	856,947.0970
3+65	8" 45° HORIZ. BEND	490,990.1120	857,133.7000
3+85	8" 45° HORIZ. BEND	490,975.3810	857,147.7920
4+70	8" 45° HORIZ. BEND	490,969.6270	857,232.2360
4+90	8" 45° HORIZ. BEND	490,982.1690	857,248.2990
7+24.5	PT	490,934.9241	857,476.8252
8+72	8" CAP	490,888.8232	857,617.5716

RESTORATION SCHEDULE

STA.	TO STA.	LENGTH	MATERIAL
0+00	0+47	47 FEET	BITUMINOUS PAVING
0+47	8+72	825 FEET	TEMPORARY SEEDING

RESTORATION NOTES :

1. SAW CUT THE EXISTING BITUMINOUS PAVING AND CURB AND GUTTER.
2. REPAIR BITUMINOUS PAVING IN ACCORDANCE WITH STANDARD DETAIL G4.01.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Robert W. Berning 4-9-99
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
4/7/99
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

WALLACE, MONTGOMERY & ASSOCIATES
CIVIL AND STRUCTURAL ENGINEERS
110 WEST ROAD
TOWSON, MARYLAND 21204

STATE OF MARYLAND — JOHN J. SIMS — REGISTERED PROFESSIONAL ENGINEER — 4-7-99

DES: LAF
DRN: CCF
CHK: JJS
DATE: 2/99

BY	NO.	REVISION	DATE
KOI	1	ASBUILT CONDITIONS ADDED TO PLAN	10/26/00

PLAN AND PROFILE

600' SCALE MAP NO. _____ BLOCK NO. _____

COLUMBIA GATEWAY PARCELS T-7-10
COLUMBIA GATEWAY DRIVE
F-99-91
CONTRACT NO. 24-3748-D
ELECTION DISTRICT NO. 6
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
DWG.
SHEET 2 OF 6

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DRAWING NOTES:

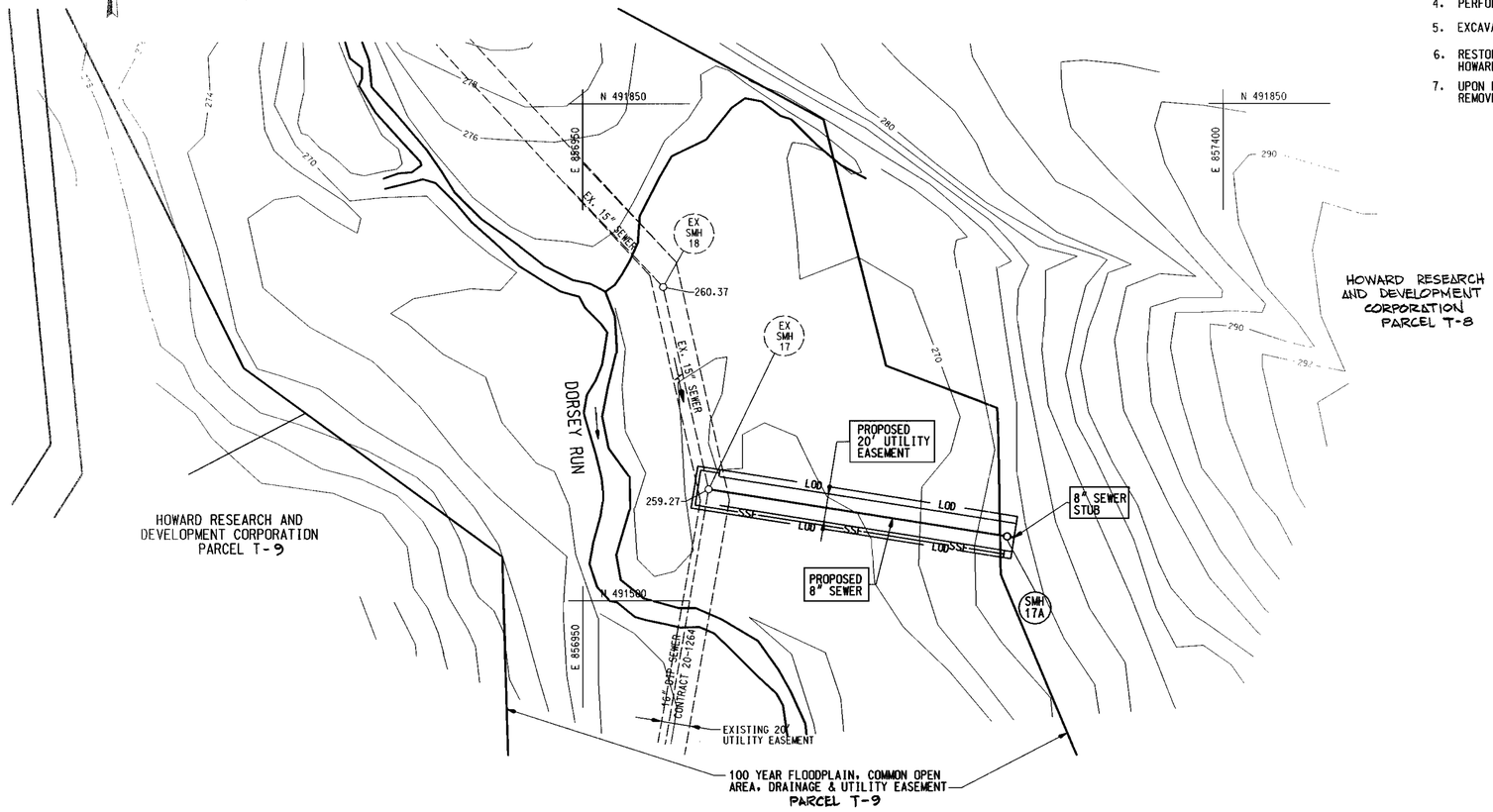
1. FOR ACCESS ROAD TO SITE, REFER TO MASS GRADING PLAN OF COLUMBIA GATEWAY JOHN McADAM DRIVE CONTRACT DRAWINGS.
2. RECONFIGURE EXISTING MANHOLE CHANNEL IN ACCORDANCE WITH STANDARD DETAIL G5.31.

SEQUENCE OF CONSTRUCTION:

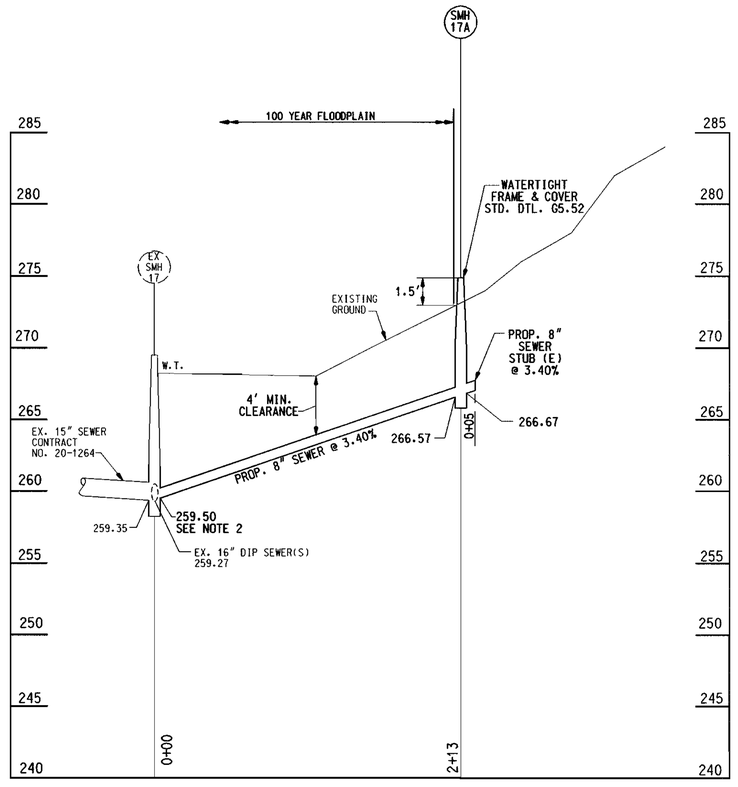
1. OBTAIN A GRADING PERMIT.
2. CONTACT HOWARD COUNTY BUREAU OF CONSTRUCTION INSPECTION DIVISION (410-313-1870) PRIOR TO STARTING DATE. (4 DAYS)
3. INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS PER SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL VOL. IV. (2 DAYS)
4. PERFORM CLEARING AND GRUBBING OPERATIONS (2 DAYS).
5. EXCAVATE AND INSTALL PROPOSED 8" SEWER (4 DAYS).
6. RESTORE TRENCHES TO THEIR ORIGINAL CONDITION WITH SEEDING AS PER HOWARD COUNTY STANDARDS AND SPECIFICATION.(2 DAY)
7. UPON PERMISSION FROM HOWARD COUNTY SEDIMENT CONTROL INSPECTION, REMOVE SEDIMENT CONTROL DEVICES. (1 DAY)

SEWER STAKE-OUT TABLE		
STRUCTURE	NORTH	EAST
17 A	491,544.9180	857,247.9710

RESTORATION SCHEDULE			
STA.	TO STA.	LENGTH	MATERIAL
EX. MH 17	EX. MH 17A	213 FEET	SEEDING
MH 17A	0+05	5 FEET	SEEDING



PLAN
SCALE: 1" = 50'



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

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Robert V. Berning 4.9.99
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 4/15/99

WALLACE, MONTGOMERY & ASSOCIATES
CIVIL AND STRUCTURAL ENGINEERS
110 WEST ROAD
TOWSON, MARYLAND 21204

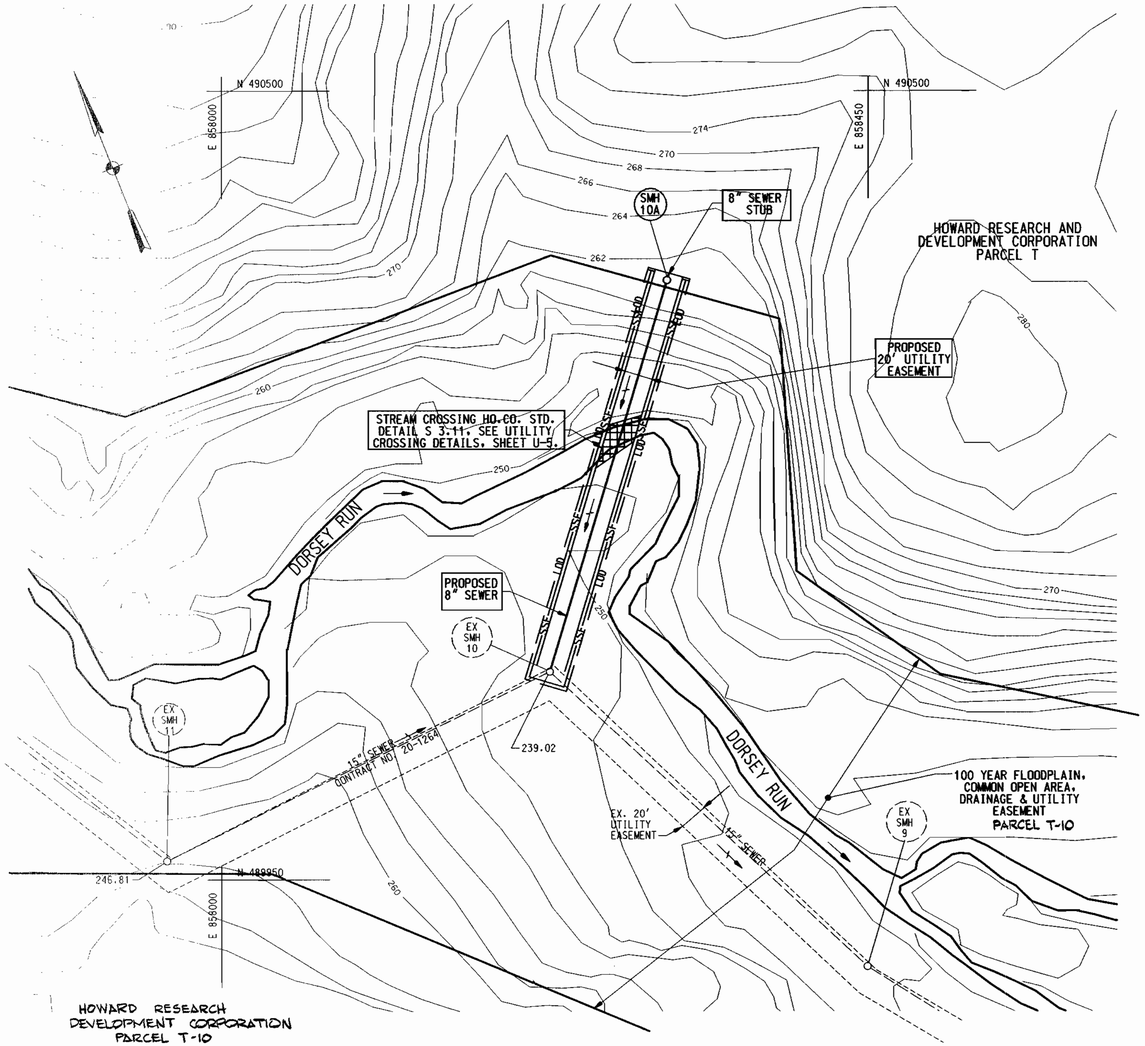
STATE OF MARYLAND — JOSEPH J. SIMMONS — PROFESSIONAL ENGINEER
5.24.99

DES: LAF						
DRN: CCF						
CHK: JJS						
DATE: 2/99	BY	NO.	REVISION	DATE	600' SCALE MAP NO. ____ BLOCK NO. ____	

PLAN AND PROFILE
SEWER

COLUMBIA GATEWAY PARCELS T-7-10
COLUMBIA GATEWAY DRIVE
F-99-91
CONTRACT NO. 24-3748-D
ELECTION DISTRICT NO. 6
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
DWG.
SHEET 3 OF 6



PLAN
SCALE: 1" = 50'

DRAWING NOTE:

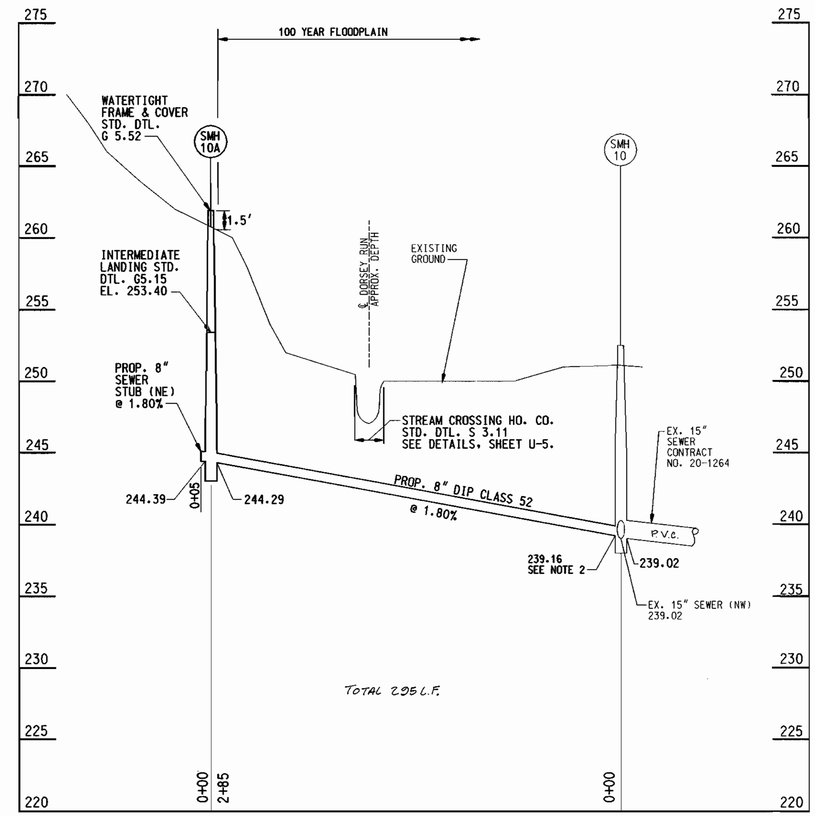
1. FOR ACCESS ROAD TO SITE, REFER TO MASS GRADING PLAN OF COLUMBIA GATEWAY JOHN McADAM DRIVE CONTRACT DRAWINGS.
2. RECONFIGURE EXISTING MANHOLE CHANNEL IN ACCORDANCE WITH STANDARD DETAIL G5.31.

SEQUENCE OF CONSTRUCTION:

1. OBTAIN A GRADING PERMIT.
2. CONTACT HOWARD COUNTY BUREAU OF CONSTRUCTION INSPECTION DIVISION (410-313-1870) PRIOR TO STARTING DATE. (4 DAYS)
3. INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS PER SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL VOL. IV. (2 DAYS)
4. PERFORM CLEARING AND GRUBBING OPERATIONS (2 DAYS).
5. EXCAVATE AND INSTALL PROPOSED 8" SEWER (6 DAYS).
6. RESTORE TRENCHES TO THEIR ORIGINAL CONDITION WITH SEEDING AS PER HOWARD COUNTY STANDARDS AND SPECIFICATION.(2 DAYS)
7. UPON PERMISSION FROM HOWARD COUNTY SEDIMENT CONTROL INSPECTION, REMOVE SEDIMENT CONTROL DEVICES. (1 DAY)

SEWER STAKE-OUT TABLE		
STRUCTURE	NORTH	EAST
10A	490367.8090	858309.8750

RESTORATION SCHEDULE			
STA.	TO STA.	LENGTH	MATERIAL
EX. MH 10	1+65	165 FEET	SEEDING
1+65	1+85	20 FEET	CLASS II RIPRAP
1+85	MH 10A	100 FEET	SEEDING
MH 10A	0+05	5 FEET	SEEDING



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

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
4-9-99
CHIEF, BUREAU OF UTILITIES — DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
4/19/99
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

WALLACE, MONTGOMERY & ASSOCIATES
CIVIL AND STRUCTURAL ENGINEERS
110 WEST ROAD
TOWSON, MARYLAND 21204

STATE OF MARYLAND — JOSEPH J. SIEMINSKI — No. 21437 — PROFESSIONAL ENGINEER
3.24.99

DES: LAF
DRN: CCF
CHK: JJS
DATE: 2/99

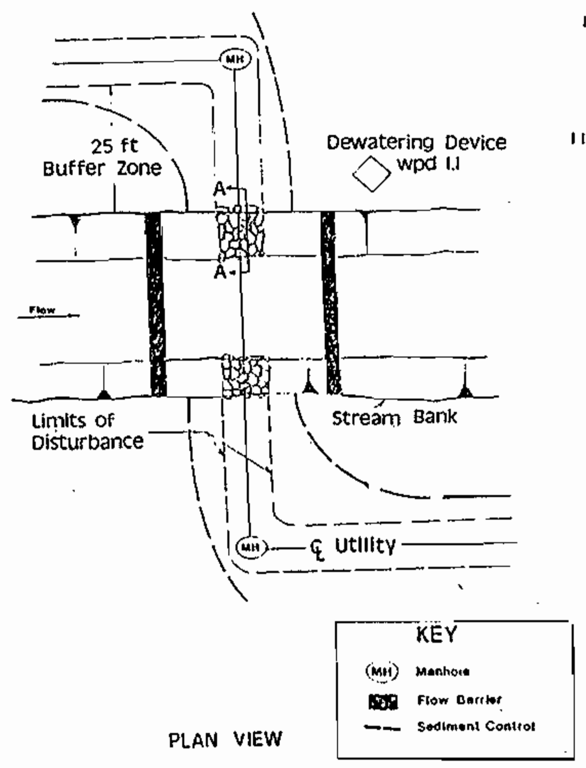
BY	NO.	REVISION	DATE

PLAN AND PROFILE
SEWER

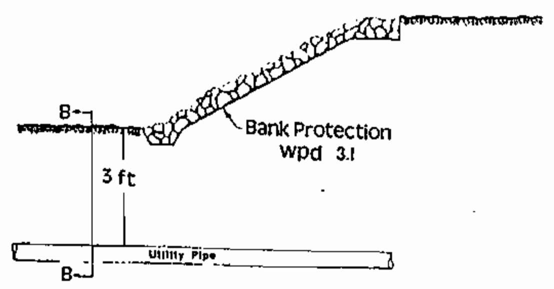
600' SCALE MAP NO. _____ BLOCK NO. _____

COLUMBIA GATEWAY PARCELS T-7-10
COLUMBIA GATEWAY DRIVE
F-99-91
CONTRACT NO. 24-3748-D
ELECTION DISTRICT NO. 6
HOWARD COUNTY, MARYLAND

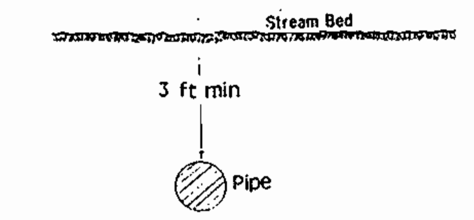
SCALE AS SHOWN
DWG.
SHEET 4 OF 6



PLAN VIEW



SECTION AA



SECTION BB

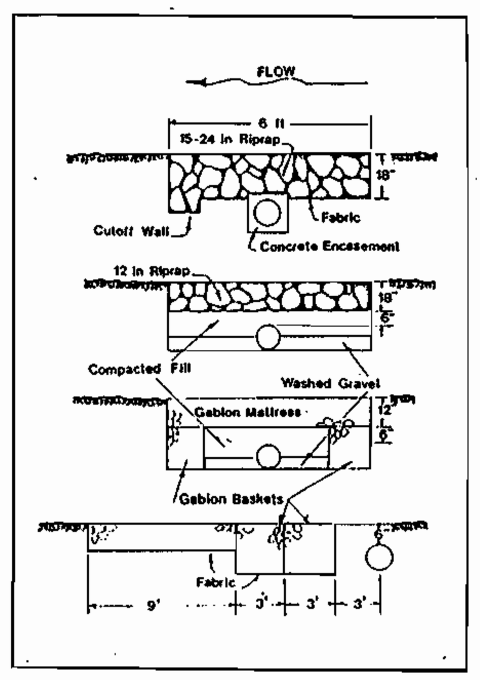
I. Description

This work shall consist of installing erosion control devices in and adjacent to temporary stream construction such as utility crossings.

II. Construction Requirements

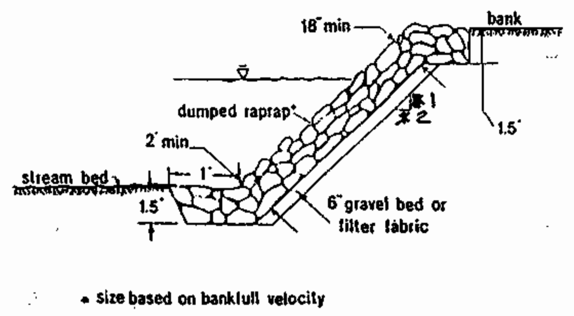
1. All erosion and sediment control devices shall be installed as the first order of work.
2. The contractor shall insure that a continuous perimeter control barrier is in place so as to minimize pollutants entering the water.
3. Excavated topsoil and subsoil shall be kept separate and replaced in their natural order.
4. All excavated materials shall be placed on the upland side of the excavation.
5. All construction shall take place during stream low flows. The length of construction time shall be limited to a maximum of 5 days for each crossing.
6. All utility crossings shall be placed at least three feet beneath the stream bed unless an alternative section is specifically approved by the Administration.
7. The contractor may elect to construct the utility crossing in two stages. In this case, a WRA approved flow barrier may be constructed to keep the construction area dry.
8. Sediment control devices are to remain in place until all disturbed areas are stabilized in accordance with an approved sediment and erosion control plan and the inspection authority approves their removal.

Alternatives



UTILITY CROSSING

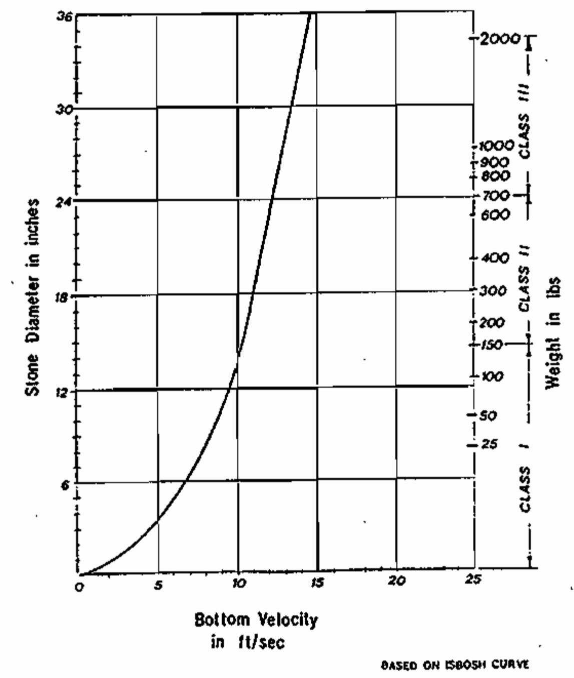
NOT TO SCALE



* size based on bankfull velocity

CROSS SECTION

SIZING RIPRAP PER STREAM VELOCITY



RIPRAP GRADATION

	Size	Percent of Total Weight Smaller than the Given Size
Class I	150 lb (70 kg) 2 lb (1 kg)	100 10 max
Class II	700 lb (320 kg) 20 lb (10 kg)	100 10 max
Class III	2000 lb (910 kg) 40 lb (20 kg)	100 10 max

I. Description

This work shall consist of protecting slopes and channels from erosion with coverings of stone in accordance with the plans and specifications shown on this drawing.

II. Material Specifications

1. Bedding:

A. Bank run gravel shall meet the following requirements:

% less than	U.S. Standard selve size
100	2 1/2 in
85 - 100	1 in
60 - 100	1/2 in
35 - 70	No. 10
20 - 50	No. 40
3 - 20	No. 200

B. Geotextile filter fabric shall meet the following requirements:

Tensile Strength	200 lbs.
Burst Strength	350 lbs.
Puncture Strength	70 lbs.
Permeability	.02 cm/sec
Elongation at Failure	30%
Minimum Lap Length	24 in

2. Riprap:

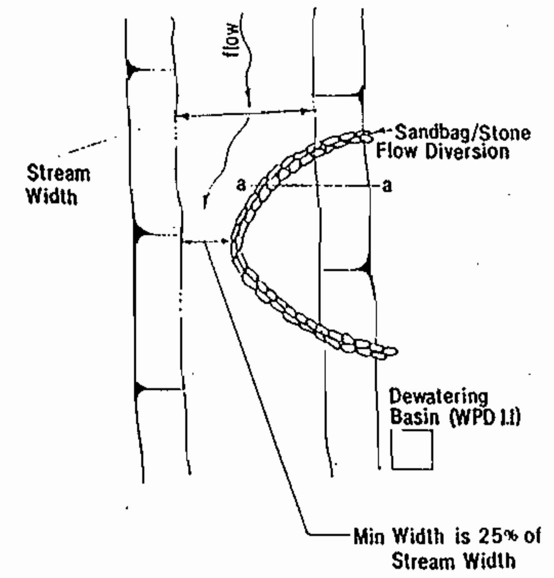
The maximum weight of stone shall be based upon the bankfull stream channel velocity, using the given chart. The gradation of the stone shall be as indicated.

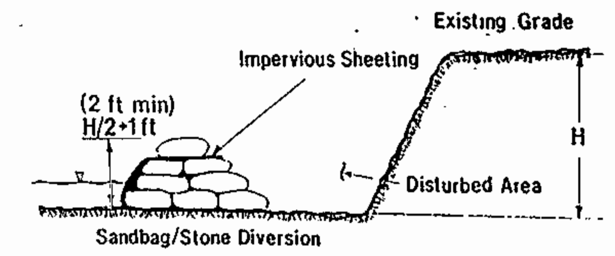
III. Construction Requirements

1. The contractor shall install all sediment and erosion control devices as a first order of business.
2. Provisions must be made to anchor the riprap at the stream bed so as to provide protection against undermining. If this cannot be accomplished by extending the toe trench as indicated in Cross Section, an alternative method of protection must received prior written approval of the Administration.
3. Excavation for riprap shall be made in reasonably close conformity with the existing stream slope and bed.
4. A filter bedding is required under all riprap. Bedding material shall consist of either a bank run gravel or a geotextile filter fabric meeting the specifications of II. 1B above.
5. The placement of riprap shall begin with the toe. The larger stones shall be placed in the toe and along the outside edges of the limits of the slope and channel protection. The riprap shall be placed with suitable equipment in such a manner as to produce a reasonably graded mass of stones with zero drop height. The placing of stones that cause extensive segregation is not allowed.
6. Any excavation voids existing along the edges of the completed slope and channel protection shall be backfilled.
7. All disturbed areas shall be permanently stabilized in accordance with an approved sediment and erosion control plan.

RIPRAP

NOT TO SCALE





SECTION
A-A

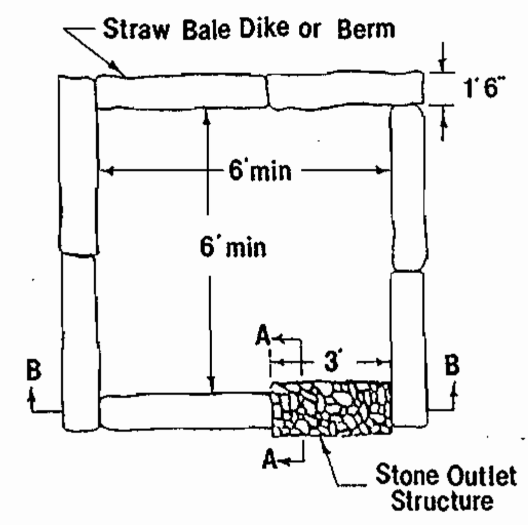
I. Description
The work shall consist of installing flow diversions for the purpose of erosion control when construction activities take place within the stream channel such as bank stabilization or bridge abutment construction.

II. Material Specifications
1. Sandbags: Sandbags shall consist of materials which are resistant to ultra-violet radiation, tearing and puncture and woven tightly enough to prevent leakage of fill material (i.e., sand, fine gravel, etc.).
2. Stone: Stone shall be washed and have a minimum diameter of 6 inches.
3. Sheeting: Sheeting shall consist of polyethylene or other material which is impervious and resistant to puncture and tearing.

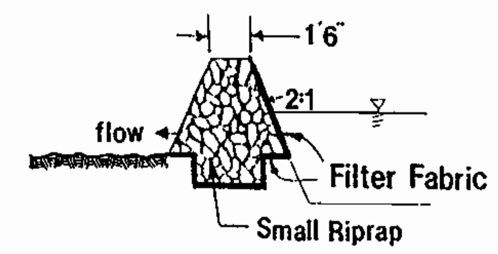
III. Construction Requirements
1. All erosion and sediment control devices shall be installed as the first order of work.
2. The diversion structure shall be installed from upstream to downstream.
3. The height of the diversion structure shall be one half the distance from stream bed to stream bank plus one foot, as indicated on the cross-section view.
4. All excavated materials shall be disposed of in a SCD approved disposal area outside the 100-year floodplain unless otherwise approved on the plans by the WRA.
5. All dewatering of the construction area shall be pumped to a dewatering basin prior to re-entering the stream.
6. Sheeting shall be overlapped such that the upstream portion covers the downstream portion with at least an 18-inch overlap.
7. Sediment control devices are to remain in place until all disturbed areas are stailized in accordance with an approved sediment and erosion control plan and the inspecting authority approves their removal.

SANDBAG/STONE DIVERSION

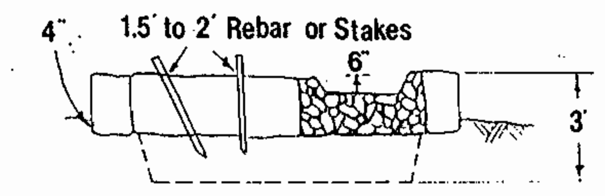
NOT TO SCALE



PLAN VIEW



SECTION AA



SECTION B B

I. Description

The work shall consist of the construction of a dewatering basin for the purpose of receiving sediment-laden water pumped from a construction site to allow filtration before the water re-enters the waterway.

II. Material Specifications

1. Riprap: Riprap shall consist of 4-8 inch washed stone or gravel.
2. Filter Fabric: The filter cloth shall be a woven or nonwoven fabric consisting only of continuous chain polymeric filaments or yarns of polyester. The fabric shall be inert to commonly encountered chemicals, hydro-carbons, mildew, and rot resistant. No. 6 stone (AASHTO 57) may be used on the inner-face for filtering instead of fabric.
3. Strawbales: Strawbales shall meet the criteria as specified in the Maryland Standards and Specifications for Soil Erosion and Sediment Control.

III. Construction Requirements

1. The contractor shall install all sediment and erosion control devices as the first order of business.
2. Excavated materials shall be stored such that sediments are prevented from entering the waterway; i.e., sediment perimeter controls may be necessary.
3. Excavated subsoil and topsoil shall be kept separate and replaced in their natural order.
4. Any dewatering of the construction area shall be filtered through a dewatering basin prior to entering the waterway.
5. The dewatering basin shall be excavated to a minimum depth of 3 feet.
6. Once the dewatering basin becomes filled to 1/2 of the excavated depth, accumulated sediment shall be removed and disposed of in a SCD approved disposal area outside the 100-year floodplain unless otherwise approved on the plans by the WRA.
7. Sediment control devices are to remain in place until all disturbed areas are stabilized and the inspecting authority approves their removal. All ground contours shall be returned to their original condition unless specifically approved otherwise by the Administration.

DEWATERING BASINS

NOT TO SCALE

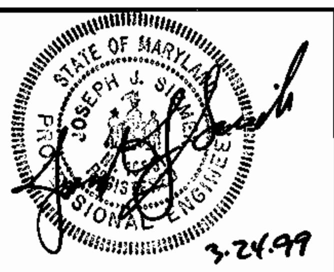
DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

4-9-99
CHIEF, BUREAU OF UTILITIES DATE

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND

4/19/99
CHIEF, DEVELOPMENT ENGINEERING DATE

WALLACE,
MONTGOMERY
& ASSOCIATES
CIVIL AND STRUCTURAL ENGINEERS
110 WEST ROAD
TOWSON, MARYLAND 21204



DES: LAF
DRN: MEK
CHK: JJS
DATE: 2/99

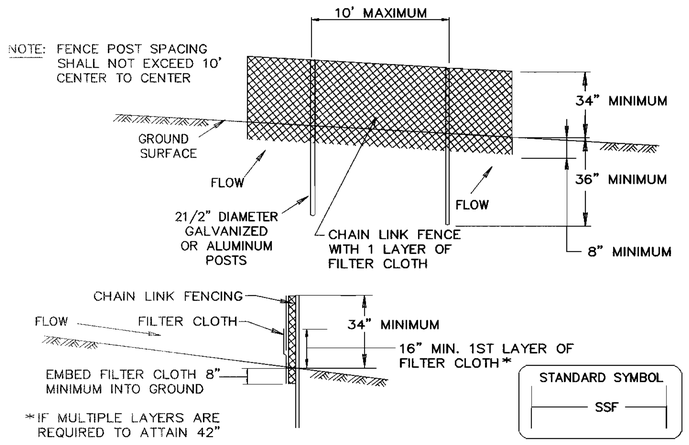
BY	NO.	REVISION	DATE

STREAM CROSSING DETAILS

600' SCALE MAP NO. – BLOCK NO. –

COLUMBIA GATEWAY PARCELS T-7-10
COLUMBIA GATEWAY DRIVE
F-99-91
CONTRACT NO. 24-3748-D
ELECTION DISTRICT NO. 6
HOWARD COUNTY. MARYLAND

SCALE AS SHOWN
DWG.
SHEET 5 OF 6



CONSTRUCTION SPECIFICATIONS

1. FENCING SHALL BE 42" IN HEIGHT AND CONSTRUCTED IN ACCORDANCE WITH THE LATEST MARYLAND STATE HIGHWAY DETAILS FOR CHAIN LINK FENCING. THE SPECIFICATION FOR A 6' FENCE SHALL BE USED, SUBSTITUTING 42" FABRIC AND 6' LENGTH POSTS.
2. CHAIN LINK FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES. THE LOWER TENSION WIRE, BRACE AND TRUSS RODS, DRIVE ANCHORS AND POST CAPS ARE NOT REQUIRED EXCEPT ON THE ENDS OF THE FENCE.
3. FILTER CLOTH SHALL BE FASTENED SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24" AT THE TOP AND MID SECTION.
4. FILTER CLOTH SHALL BE EMBEDDED A MINIMUM OF 8" INTO THE GROUND.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
6. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SILT BUILDUPS REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE, OR WHEN SILT REACHES 50% OF FENCE HEIGHT
7. FILTER CLOTH 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:

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: MSMT 322
FILTERING EFFICIENCY	75% (MIN.)	TEST: MSMT 322

SUPER SILT FENCE

NOT TO SCALE

STANDARD SEDIMENT CONTROL NOTES

1. 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 (410-313-1855).
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITH: A.) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES STEPPER 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. 1, CHAPTER 7 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 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING, SOD, TEMPORARY SEEDING AND MULCHING (SEC. G). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL 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	= 133.4	ACRES
AREA DISTURBED	= 5.8	ACRES
AREA TO BE ROOFED OR PAVED	= 1.2	ACRES
AREA TO BE VEGETATIVELY STABILIZED	= 4.6	ACRES
TOTAL CUT	= 24,500	CU./YDS.
TOTAL FILL	= 24,300	CU./YDS.
OFF SITE WASTE/BORROW AREA LOCATION:	AT A LOCATION DETERMINED BY THE CONTRACTOR WITH AN ACTIVE GRADING PERMIT.	

8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9. ADDITIONAL SEDIMENT CONTROL 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 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.
11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACKFILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
12. SPOIL FROM THE TRENCHING OPERATION IS TO BE PLACED ON THE UPHILL SIDE OF THE TRENCH.

SEQUENCE OF CONSTRUCTION

1. OBTAIN A GRADING PERMIT.
2. CONTACT HOWARD COUNTY BUREAU OF CONSTRUCTION INSPECTION DIVISION (410-313-1870) PRIOR TO STARTING DATE. (4 DAYS)
3. INSTALL EROSION AND SEDIMENT CONTROL DEVICES AS PER SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL VOL. IV. (2 DAYS)
4. EXCAVATE AND INSTALL PROPOSED 8" WATER & 8" SEWER (61 DAYS)
5. EXCAVATE AND INSTALL PROPOSED WATER CONNECTIONS (2 DAYS)
6. RESTORE TRENCHES TO THEIR ORIGINAL CONDITION AS PER HOWARD COUNTY STANDARDS WITH TEMPORARY PAVING HOWARD COUNTY STANDARD SPECIFICATION. (2 DAYS)
7. UPON PERMISSION FROM HOWARD COUNTY SEDIMENT CONTROL INSPECTION, REMOVE SEDIMENT CONTROL DEVICES. (1 DAY)
8. INSTALL PERMANENT PAVING PATCH OVER TRENCH. (2 DAYS)

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 (0.07 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 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 "1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" FOR RATE AND METHODS NOT COVERED.

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 (0.05 LBS/1000 SQ. FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, 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.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
CHIEF, BUREAU OF UTILITIES — DATE 4-9-99

DEPARTMENT OF PLANNING AND ZONING
HOWARD COUNTY, MARYLAND
CHIEF, DEVELOPMENT ENGINEERING — DATE 4/19/99

WALLACE, MONTGOMERY & ASSOCIATES
CIVIL AND STRUCTURAL ENGINEERS
110 WEST ROAD
TOWSON, MARYLAND 21204

STATE OF MARYLAND — JOSEPH J. SIEGEL — No. 21431 — REGISTERED PROFESSIONAL ENGINEER
3.24.99

DES: LAF
DRN: MEK
CHK: JJS
DATE: 2/99

BY	NO.	REVISION	DATE

SEDIMENT CONTROL NOTES & DETAILS

600' SCALE MAP NO. -= _____ BLOCK NO. -= _____

COLUMBIA GATEWAY PARCELS T-7-10
COLUMBIA GATEWAY DRIVE
F-99-91
CONTRACT NO. 24-3748-D
ELECTION DISTRICT NO. 6
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
DWG.
SHEET 6 OF 6