

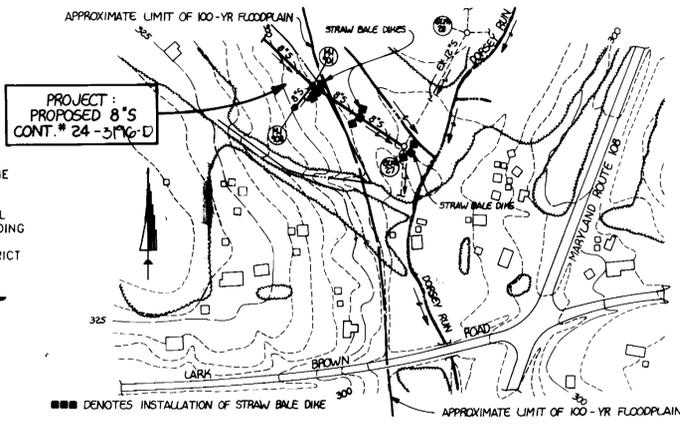
THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY HOWARD COUNTY SOIL CONSERVATION DISTRICT.

APPROVED: *[Signature]* 5/8/92
HOWARD SOIL CONSERVATION DISTRICT DATE

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF HOWARD COUNTY DESIGN MANUAL & STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AND ALSO AS SHOWN ON THE GRADING AND SEDIMENT CONTROL PLAN F92-47 REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND HOWARD COUNTY TECHNICAL SERVICES.

[Signature] 5/8/92
HOWARD COUNTY SOIL CONSERVATION SERVICE DATE

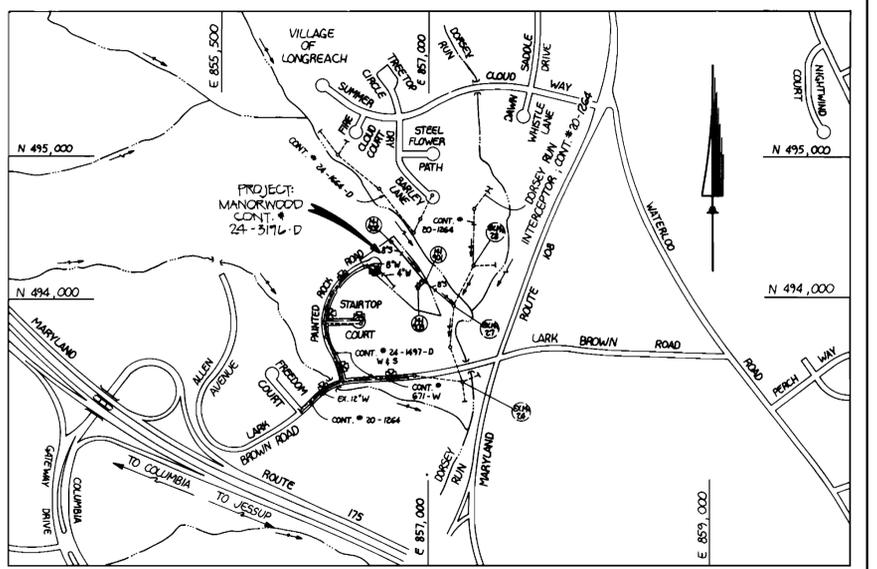
PLAN REFERENCE NUMBERS:
P 71-18
F 72-47



SEDIMENT CONTROL MAP FOR WORK WITHIN 100-YEAR FLOODPLAIN
SCALE: 1" = 200'

ITEM	ESTIMATED	QUANTITIES		
		QUANTITIES	AS-BUILT TYPE	SUPPLIER
8" SEWER	484 L.F.	475	ETI	
4" SEWER	103 L.F.	104	ETI	
MANHOLES	3 EACH	3	ATLANTIC	
8" WATER	185 L.F.	175	GRIFEM	
4" WATER	145 L.F.	213	GRIFEM	
8" SEWER D.I.P.	260 L.F.	242	GRIFEM	
1" WHC	126 L.F.	114	FRANZONI W.C. SEE	
3/4" WHC	65 L.F.	171	FRANZONI W.C. SEE	
FIRE HYDRANTS	1 EACH	1	FRANZONI W.C. SEE	
8" VALVE	1 EACH	1	FRANZONI W.C. SEE	
6" VALVE	1 EACH	1	FRANZONI W.C. SEE	
4" VALVE	1 EACH	1	FRANZONI W.C. SEE	
1/2" DRAIN	7 L.F.	10.6	FRANZONI W.C. SEE	

NAME OF UTILITY CONTRACTOR: *[Blank]*
SURVEY & DRAFTING DIVISION AS-BUILT DATE:



VICINITY MAP
SCALE: 1" = 600'

TYPE OF BUILDING: SINGLE FAMILY RESIDENTIAL
NUMBER OF LOTS: 7 (7 BUILDABLE)
NO. OF WATER HOUSE CONNECTIONS: 7
NO. OF SEWER HOUSE CONNECTIONS: 7
DRAINAGE AREA: DORSEY RUN
TREATMENT PLANT: LITTLE PATUXENT WATER QUALITY MANAGEMENT CENTER, SAVAGE, HOWARD COUNTY

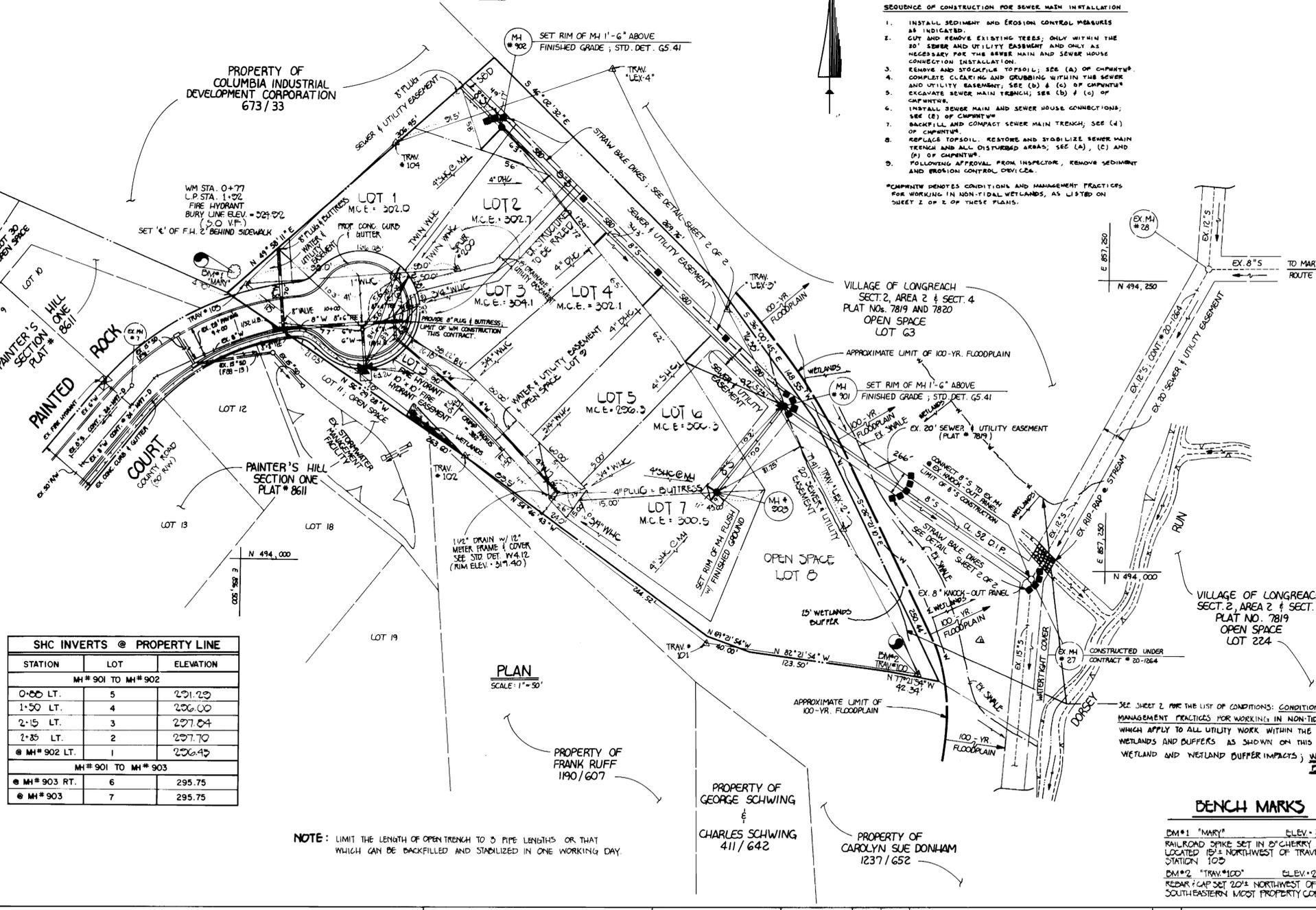
WATER & SEWER CODE FOR COUNTY USE ONLY
WATER NO. 608
SEWER NO. 3460000
TEST GRADIENT 100

SEQUENCE OF CONSTRUCTION FOR SEWER MAIN INSTALLATION

- INSTALL SEDIMENT AND EROSION CONTROL MEASURES AS INDICATED.
 - CUT AND REMOVE EXISTING TREES, ONLY WITHIN THE 20' SEWER AND UTILITY EASEMENT AND ONLY AS NECESSARY FOR THE SEWER MAIN AND SEWER HOUSE CONNECTION INSTALLATION.
 - REMOVE AND STOCKPILE TOPSOIL; SEE (A) OF CHMPTW.
 - COMPLETE CLEARING AND GRUBBING WITHIN THE SEWER AND UTILITY EASEMENT; SEE (B) & (C) OF CHMPTW.
 - EXCAVATE SEWER MAIN TRENCH; SEE (B) & (C) OF CHMPTW.
 - INSTALL SEWER MAIN AND SEWER HOUSE CONNECTIONS; SEE (E) OF CHMPTW.
 - BACKFILL AND COMPACT SEWER MAIN TRENCH; SEE (D) OF CHMPTW.
 - REPLACE TOPSOIL, RESTORE AND STABILIZE SEWER MAIN TRENCH AND ALL DISTURBED AREAS; SEE (A), (C) AND (F) OF CHMPTW.
 - FOLLOWING APPROVAL FROM INSPECTOR, REMOVE SEDIMENT AND EROSION CONTROL DEVICES.
- *CHMPTW DENOTES CONDITIONS AND MANAGEMENT PRACTICES FOR WORKING IN NON-TIDAL WETLANDS, AS LISTED ON SHEET 2 OF 2 OF THESE PLANS.

GENERAL NOTES

- APPROXIMATE LOCATION OF EXISTING MAINS ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING MAINS AND SERVICES AND MAINTAIN UNINTERRUPTED SUPPLY. ANY DAMAGED INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES.
- ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATUM.
- ALL PIPE ELEVATIONS ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 6'.
- FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (1989 AMENDMENTS) THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB SITE.
- WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL \square 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 DIG SHALL BE VERIFIED BY THE CONTRACTOR TO HIS OWN SATISFACTION. ANY DAMAGE TO EXISTING FACILITIES DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
C. & P. TELEPHONE COMPANY - 1-800-257-7777
STATE HIGHWAY ADMINISTRATION - 531-5533
BALTIMORE GAS & ELECTRIC CO. - CONTRACTOR SERVICES - 850-4620
BALTIMORE GAS & ELECTRIC CO. - UNDER GROUND DAMAGE CONTROL - 859-9004
BALTIMORE GAS & ELECTRIC CO. - TROUBLE SHOOTING - 298-9001
MISS UTILITY - 1-800-559-0100
COLONIAL PIPELINE CO. - 795-1390
BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS - 313-4900
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
- CONTRACTOR SHALL REMOVE TREE 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.
- ALL SEWER MAINS SHALL BE C.S.P.X., R.C.S.P., V.C.P.X., OR P.V.C. UNLESS OTHERWISE NOTED.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- T.B. DENOTES TEST BORING.
- MANHOLES SHOWN WITH 12" AND 18" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS, STANDARD DETAIL G 5.52. WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTINGS, UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS.
- HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT THE CELLAR CAN NOT BE SERVED.
- ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING, UNLESS OTHERWISE NOTED ON THE PLANS OR IN SPECIFICATIONS.
- MANHOLES LOCATED WITHIN THE PROPOSED ROADWAY SHALL HAVE STANDARD HEAVY TRAFFIC MANHOLES, FRAMES AND COVERS STANDARD DETAIL G5.15.
- THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALL.
- WATER MAINS AND WATER HOUSE CONNECTION LINES MUST BE PLACED SO AS TO HAVE ONE (1) FOOT SEPARATION FROM THE SEWER MAIN OR SEWER HOUSE CONNECTION AS THEY PASS ABOUT IT.
- ALL WATER MAINS TO BE D.I.P., CLASS 52 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-1/2" 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 THE BURY LINE ELEVATION SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE RESTRAINED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS. SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND 1005 OF THE STANDARD SPECIFICATIONS.
- CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH ANWA SPECIFICATIONS C-153; DUCTILE IRON COMPACT FITTINGS, 3-INCH THROUGH 12-INCH FOR WATER AND OTHER LIQUIDS.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, @ (410) 315-2450 AT LEAST FIVE 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.



SHC INVERTS @ PROPERTY LINE

STATION	LOT	ELEVATION
MH# 901 TO MH# 902		
0+00 LT.	5	291.29
1+50 LT.	4	296.00
2+15 LT.	3	297.84
2+35 LT.	2	297.70
@ MH# 902 LT.	1	296.45
MH# 901 TO MH# 903		
@ MH# 903 RT.	6	295.75
@ MH# 903	7	295.75

NOTE: LIMIT THE LENGTH OF OPEN TRENCH TO 3 PIPE LENGTHS OR THAT WHICH CAN BE BACKFILLED AND STABILIZED IN ONE WORKING DAY.

BENCH MARKS

- BM#1 "MARY" ELEV. 291.17
RAILROAD SPIKE SET IN CHERRY TREE LOCATED 15' NORTHWEST OF TRAVELER STATION 103
- BM#2 "TRAV#100" ELEV. 297.24
REBAR CAP SET 20' NORTHWEST OF SOUTHEASTERN MOST PROPERTY CORNER

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

[Signature] 5-12-92
DIRECTOR OF PUBLIC WORKS DATE

[Signature] 5/12/92
CHIEF, BUREAU OF ENGINEERING DATE

[Signature] 5/12/92
CHIEF, BUREAU OF UTILITIES DATE

[Signature] 5/12/92
CHIEF, LAND DEVELOPMENT DIVISION DATE

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
SUITE 100, 9171 BALTIMORE NATIONAL PIKE
ELLCOTT CITY, MARYLAND 21042
(301) 461-2855



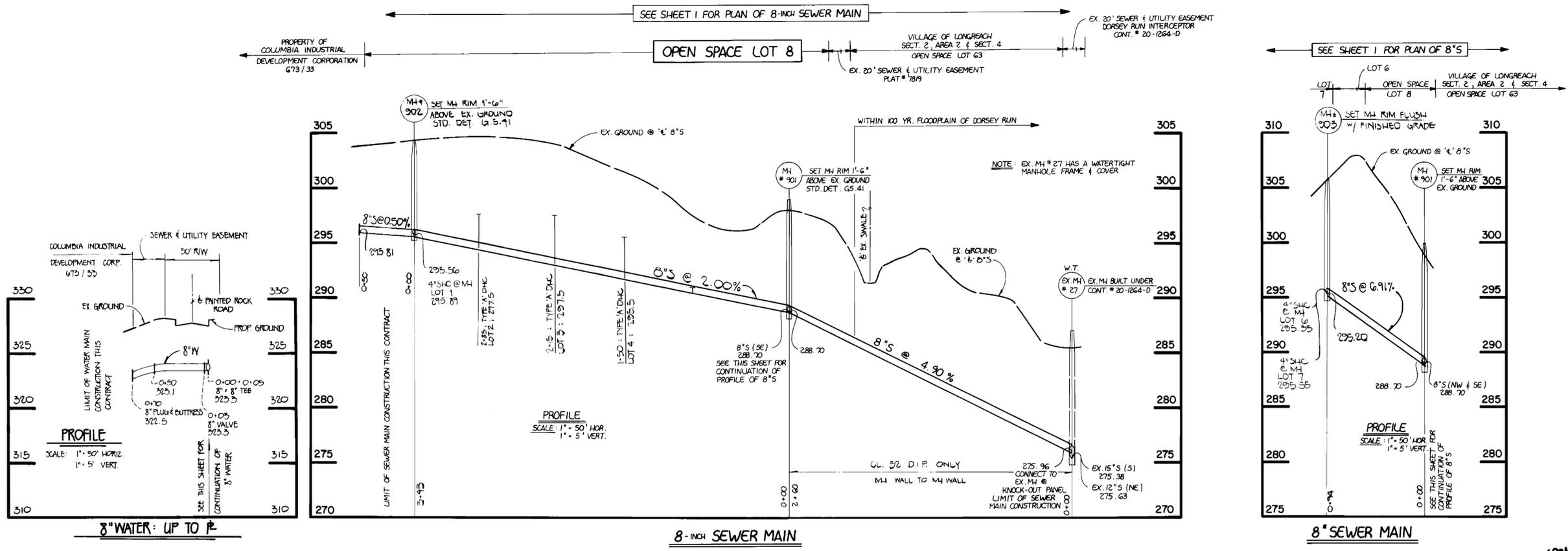
DES: MJM	JR	ADD WETLANDS BETWEEN MH# 901 & MH# 27	7-92
DRWN: SFH	M.F.	A. R. BILT	9/2/94
CHK: PWK			
DATE:	BY NO.	REVISION	DATE

WATER AND SEWER MAINS
PLAN

MANORWOOD
LOTS 1-9
CONTRACT NO. 24-3196-D
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

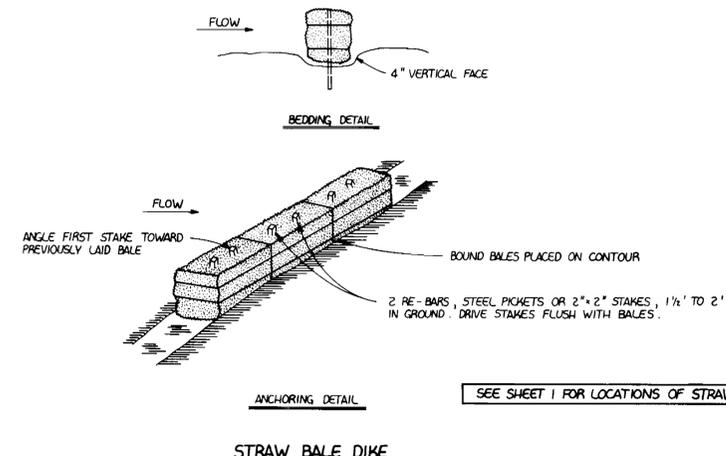
SCALE AS SHOWN
SHEET 1 OF 2

AS-BUILT 9/22/92

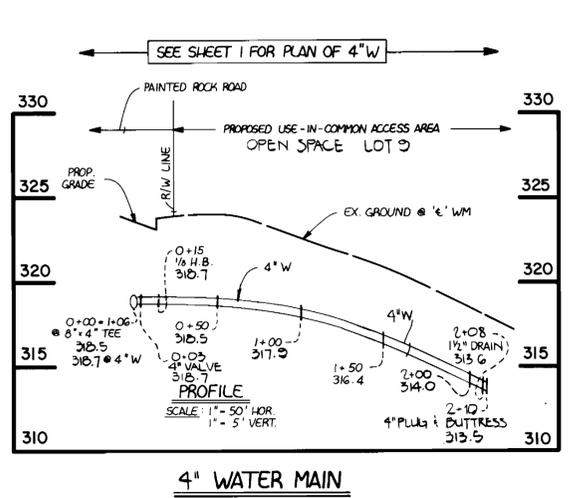
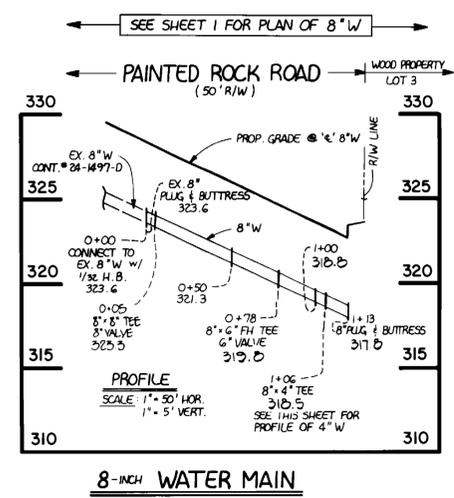


CONDITIONS AND MANAGEMENT PRACTICES FOR WORKING IN NON-TIDAL WETLANDS

- Strip, stockpile and maintain separately the top 6" of soil material, to be replaced as the top layer of the backfilled material.
- Remove excess fill or construction material or debris to an upland disposal area.
- Place materials in a location and manner which does not adversely impact surface or subsurface water flow into or out of the non-tidal wetland.
- Use previously excavated material as backfill, unless it contains waste metal products, unsightly debris, toxic material or any other deleterious substance. Use clean borrow material when excavated material is not suitable for use as backfill.
- Specify any non-tidal wetlands and buffers temporarily impacted by any proposed repair and maintenance activity or installation of the utility line. All stabilization in the wetland and buffer shall be of the following recommended species: Annual Ryegrass (*Lolium multiflorum*), Millet (*Seteria italica*), Oats (*Avena sp.*), and/or Rye (*Scaevola carnalis*). Other non-persistent vegetation may be acceptable, but must be approved by the Non-tidal Wetlands Division, Maryland DNR. Species shall not be utilized in the wetland or buffer. All temporary fills shall be removed in their entirety on or before the completion of construction.
- After installation has been completed, make post construction greening and elevations as non-tidal wetlands the same as the original grades and elevations.
- To protect important aquatic species, in-stream work is prohibited as determined by the classification of the stream as follows:
- Class I waters. In-stream work may not be conducted during the period March 1 through June 15, inclusive, during any year.



- BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT BALES.
- EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF 4 INCHES, AND PLACED SO THE BINDINGS ARE HORIZONTAL.
- BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR RE-BARS DRIVEN THROUGH THE BALE. THE FIRST STAKE IN EACH BALE SHALL BE DRIVEN TOWARD THE PREVIOUSLY LAID BALE AT AN ANGLE TO FORCE THE BALES TOGETHER. STAKES SHALL BE DRIVEN FLUSH WITH THE BALE.
- INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
- BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPED STORM FLOW OR DRAINAGE.



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

5-12-92
DATE

5-5-92
DATE

5-12-92
DATE

5-14-92
DATE

FISHER, COLLINS, AND CARTER, INC.
CONSULTING ENGINEERS AND LAND SURVEYORS
9171 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(301) 461-2855

9757

STATE OF MARYLAND
REGISTERED PROFESSIONAL ENGINEER
TERRELL A. FISHER

DES: MJM	JR	ADD WETLAND NOTES.	7-92
DRN: SFH			
CHK: PWK			
DATE:	BY	NO.	REVISION

WATER AND SEWER MAINS
PROFILES

600' SCALE MAP NO. 37

BLOCK NO.

MANORWOOD
LOTS 1-9
CONTRACT NO. 24-3176-D
SIXTH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 2 OF 2