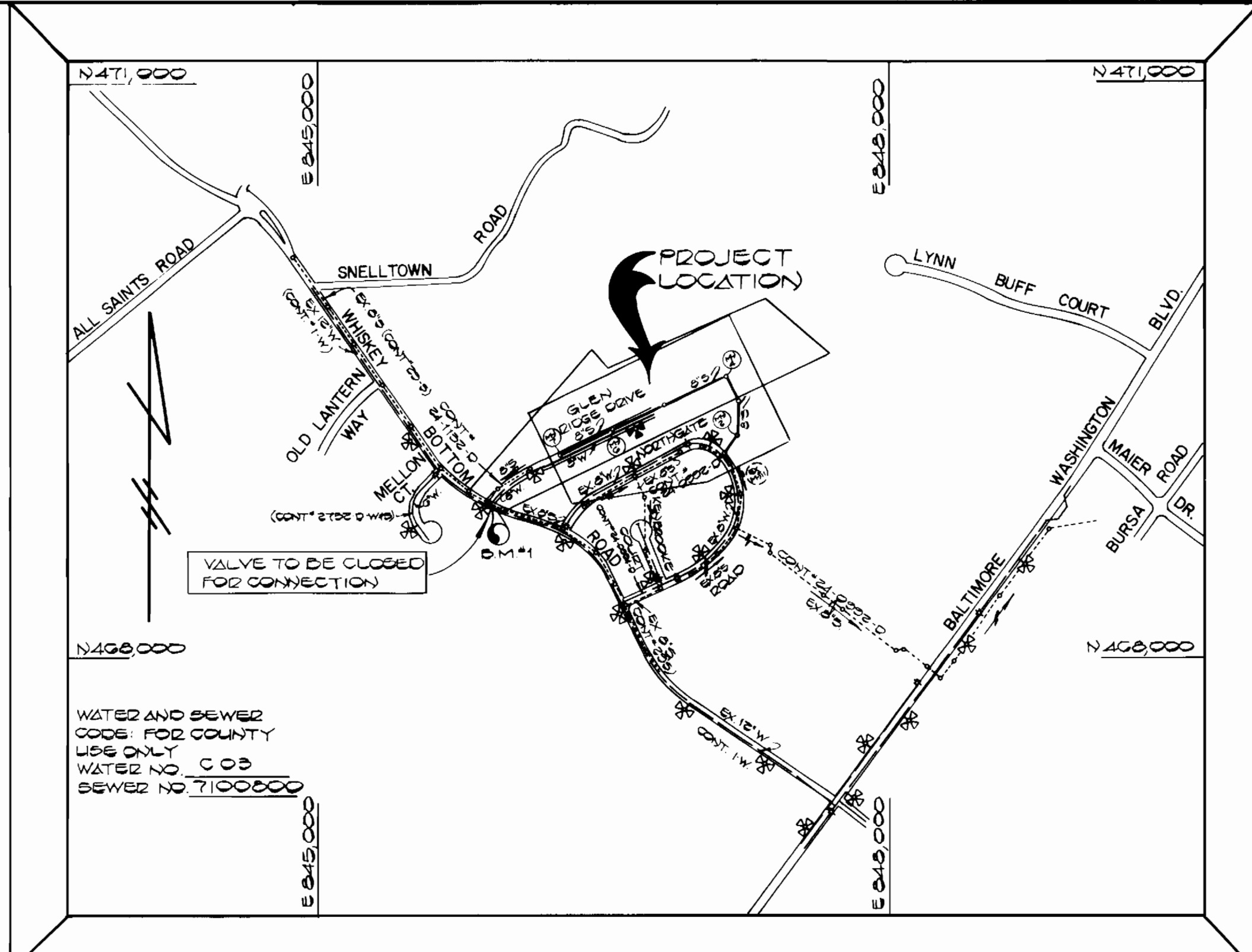


**BENCH MARKS**  
 B.M. #1 ELEV. 286.04  
 TOP 21M ELEVATION OF EX. SAN M<sup>3</sup> 110, IN WHICKEY BOTTOM ROAD - SEE VICINITY MAP  
 B.M. #2 ELEV. 282.30  
 ROADSIDE FLANGE MARKED 'X', EX. FIRE HYDRANT IN NORTHGATE ROAD - BETWEEN LOTS 30 & 31



TYPE OF BUILDING: SINGLE FAMILY  
 NUMBER OF LOTS: 23 (GRIFFIN PIPE)  
 NO. OF WATER HOUSE CONN.: 21  
 NO. OF SEWER HOUSE CONN.: 21  
 DRAINAGE AREA: LITTLE PATENT

**VICINITY MAP**  
 SCALE: 1"=600'

**MINIMUM SEWER SERVICE ELEVATIONS**

LOT	ELEVATION
LOT 1	270.3
LOT 2	269.7
LOT 3	269.7
LOT 4	269.1
LOT 5	267.0
LOT 6	266.1
LOT 7	265.1
LOT 8	265.1
LOT 9	264.4
LOT 10	264.4
LOT 11	262.5
LOT 12	262.5
LOT 13	262.3
LOT 14	262.3
LOT 15	262.3
LOT 16	264.3
LOT 17	263.6
LOT 18	265.0
LOT 19	267.0
LOT 20	267.0
LOT 21	269.1
LOT 22	270.1
LOT 23	271.1

**SEWER HOUSE CONNECTION INVERT ELEVATIONS AT PROPERTY LINE M<sup>3</sup> 5 TO M<sup>3</sup> 6**

STATION	LOT	INVERT
0+51 LT	LOT 14	253.46
1+07 RT	LOT 13	256.00
1+40 LT	LOT 15	253.40
1+57 RT	LOT 11	253.99
2+00 LT	LOT 11	250.41
2+24 RT	LOTS 10 & 11	250.40
2+67 RT	LOT 3	251.15
3+01 LT	LOTS 17 & 18	251.32

**M<sup>3</sup> 6 TO M<sup>3</sup> 7**

STATION	LOT	INVERT
0+16 RT	LOT 7	252.11
0+79 RT	LOT 7	253.00
1+12 LT	LOTS 3 & 4	253.00
1+49 RT	LOT 4	254.20
1+96 LT	LOT 1	253.24
2+44 RT	LOTS 2 & 3	253.72
2+59 LT	LOT 1	253.24
M <sup>3</sup> 7 LT	LOT 1	257.36
M <sup>3</sup> 7 RT	LOT 1	257.04

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH THE PROVISIONS OF THESE SPECIFICATIONS AND ALSO AS SHOWN ON THE GRADING AND SEDIMENT CONTROL PLAN F-04-50  
 REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS  
 DATE: 3-7-84

THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT  
 APPROVED: Robert W. Ziehm  
 DATE: 3-7-84

- 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 DAMAGE 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.C. & G.S.
  - ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
  - CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES BY A 2'-0" MINIMUM OR TUNNEL AS REQUIRED ANY COST INCURRED TO THE CONTRACTOR FOR TUNNELING OR BRACING AT POLES SHALL BE INCLUDED IN THE UNIT PRICES BID FOR CONSTRUCTION OF THE MAIN.
  - FOR DETAILS NOT SHOWN ON THE PLAN USE HOWARD COUNTY STANDARD DETAILS.
  - FOR MATERIALS AND CONSTRUCTION METHODS USE HOWARD COUNTY STANDARD SPECIFICATIONS.
  - CONTRACTOR SHALL LOCATE EXISTING UTILITIES A MINIMUM OF TWO (2) WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS IN THE VICINITY OF PROPOSED UTILITIES AT HIS OWN EXPENSE.
  - CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST (5) FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:

- BALTIMORE GAS AND ELECTRIC CO. - UNDERGROUND ELECTRIC DISTRIBUTION CUSTOMER SERVICE - (685-0123)
- BALTIMORE GAS AND ELECTRIC CO. - UNDERGROUND GAS DISTRIBUTION CUSTOMER SERVICE - (685-0123)
- ENGINEERING - "DAMAGE CONTROL" - (234-5621)
- "MISS UTILITY" - (1-559-0100)
- CHESAPEAKE AND POTOMAC (C&P) TELEPHONE CO. - (725-9976)
- BUREAU OF UTILITIES, HOWARD COUNTY - (992-2366)

- TREES ARE TO BE PROTECTED FROM DAMAGE TO MAXIMUM EXTENT. TREES LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
- CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG LINE OF EXCAVATION AS DIRECTED BY THE ENGINEER. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE CONSTRUCTION OF THE MAIN.
- PLACE REGULATION "MEN WORKING" AND WARNING SIGNS AS REQUIRED TO COMPLY WITH MARYLAND STATE HIGHWAY ADMINISTRATION MANUAL OF TRAFFIC CONTROL FOR HIGHWAY CONSTRUCTION AND MAINTENANCE OPERATION.
- ALL WATER MAINS TO BE C.I.P. OR D.I.P. UNLESS OTHERWISE NOTED.
- TOP OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- BLOCK ALL FITTINGS WITH CONCRETE.
- BURY LINE ELEVATIONS ON FIRE HYDRANTS SHALL BE SET TO THE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE STRAPPED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS. SOIL AROUND THE FIRE HYDRANTS SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 37.01 AND 37.05 OF THE STANDARD SPECIFICATIONS.
- ALL WATER HOUSE CONNECTIONS SHALL BE FOR AN INSIDE METER SETTING.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING SYSTEM.
- ALL SEWER MAINS SHALL BE C.S.P.X., V.C.P.X., A.C.P. CLASS 2400 OR PVC, UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALL.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER, UNLESS OTHERWISE NOTED.
- MANHOLES SHOWN WITH 12" AND 16" WALLS ARE WALL THICKNESSES WHEN BRICK MANHOLES ARE USED.
- WATER MAIN AND WATER HOUSE CONNECTION LINE MUST BE PLACED SO AS TO HAVE AT LEAST ONE (1) FOOT SEPARATION FROM THE SEWER MAIN OR SEWER HOUSE CONNECTION LINE AS THEY PASS ABOUT IT.
- FOR ALL COPPER WATER HOUSE CONNECTIONS, UTILIZE FLARED TYPE FITTINGS ONLY.

**QUANTITIES**

ITEM	EST'D	AS BUILT	SUPPLIER
6" SEWER	1385 LF	1360	JM Corp
8" SEWER	445 LF	444	JM Corp
MANHOLES	7 EA	7	Terre Hill
6" WATER	620 LF	620 LF	Griffin Pipe
8" WATER	11 LF	10 LF	Griffin Pipe
FIRE HYD	1 EA	1 EA	US Pipe & Found
1" WVC	125 LF	112 LF	Howell Metal
3/4" WVC	265 LF	295 LF	Howell Metal
6" VALVES	1 EA	1 EA	M.J.-U.S. Pipe
6" VALVE FH	1 EA	1 EA	"

**DEPARTMENT OF PUBLIC WORKS**  
 HOWARD COUNTY, MARYLAND  
 DATE: 3-11-84  
 DATE: 3-12-84

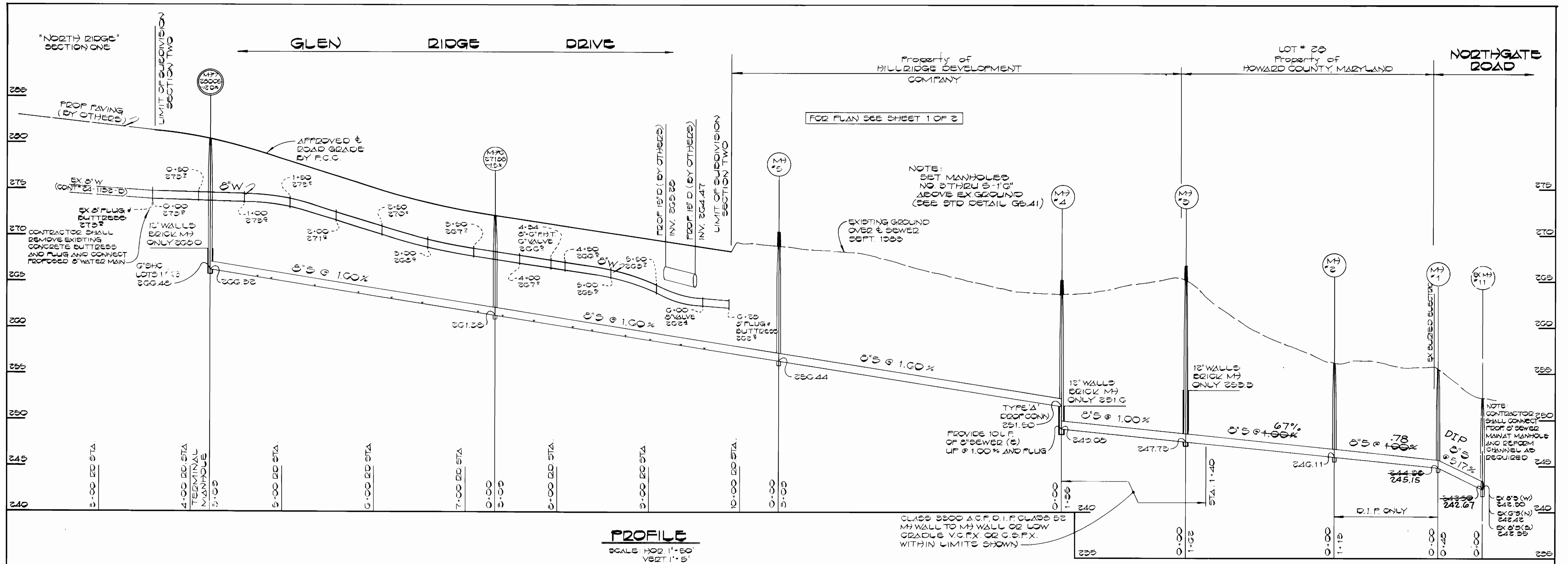
**FISHER, COLLINS, AND CARTER, INC.**  
 CONSULTING ENGINEERS AND LAND SURVEYORS  
 8388 COURT AVENUE  
 ELLICOTT CITY, MARYLAND 21043  
 461-2855

DES. D.B.S.	
DRN. D.B.S.	
CHK. T.A.F.	
DATE	
BY	
NO.	
REVISION	
DATE	

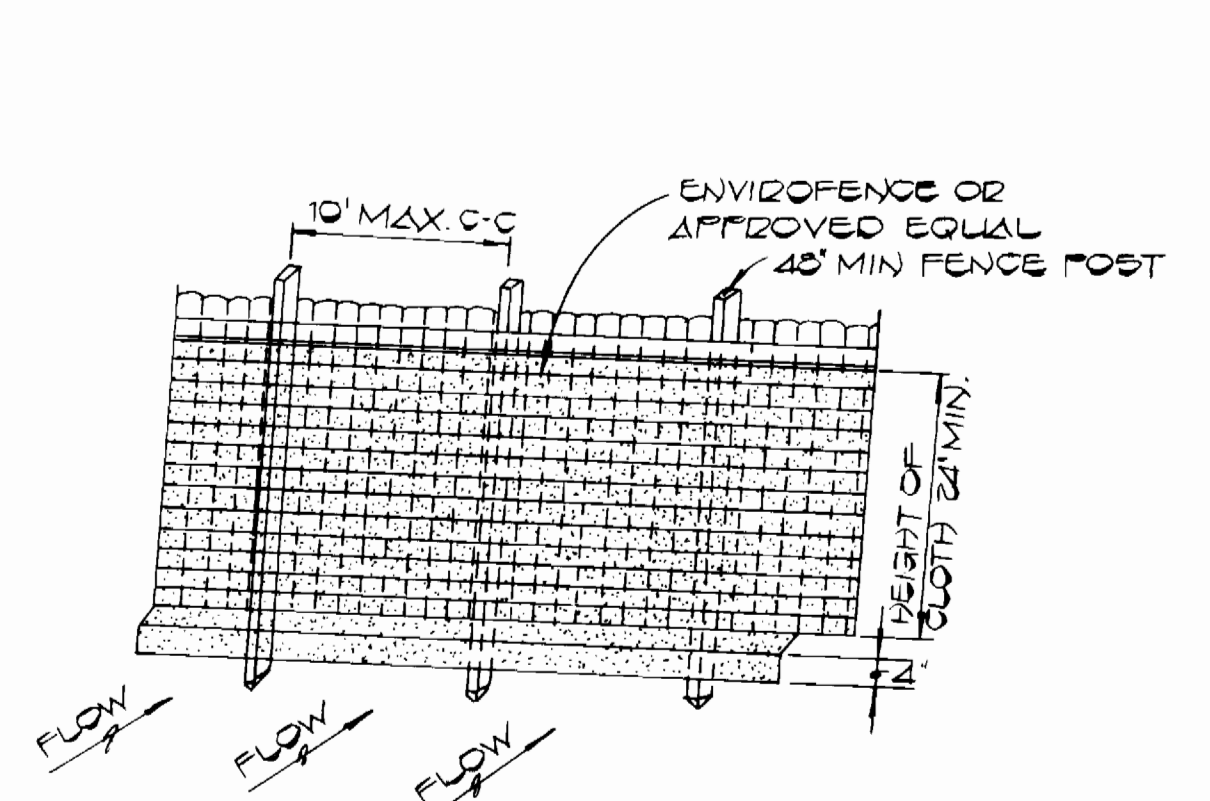
**PLAN**  
**WATER AND SEWER MAINS**  
 600 SCALE MAP NO. 47 BLOCK NO.

**NORTH RIDGE SECTION TWO**  
 CONTRACT NO. 24-1189-D  
 SIXTH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 SCALE: AS SHOWN  
 SHEET 1 OF 2



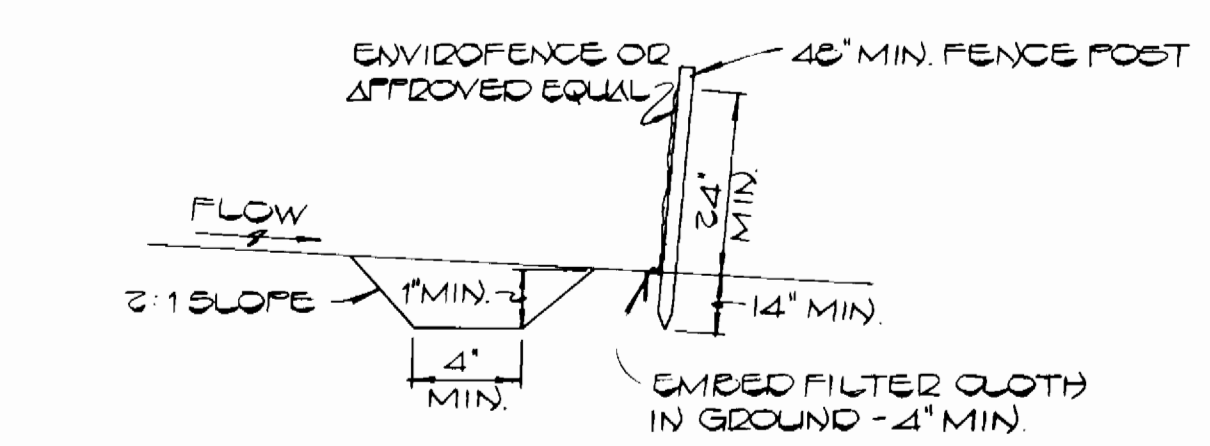


**PROFILE**  
SCALE: HOR. 1"=50'  
VERT. 1"=5'

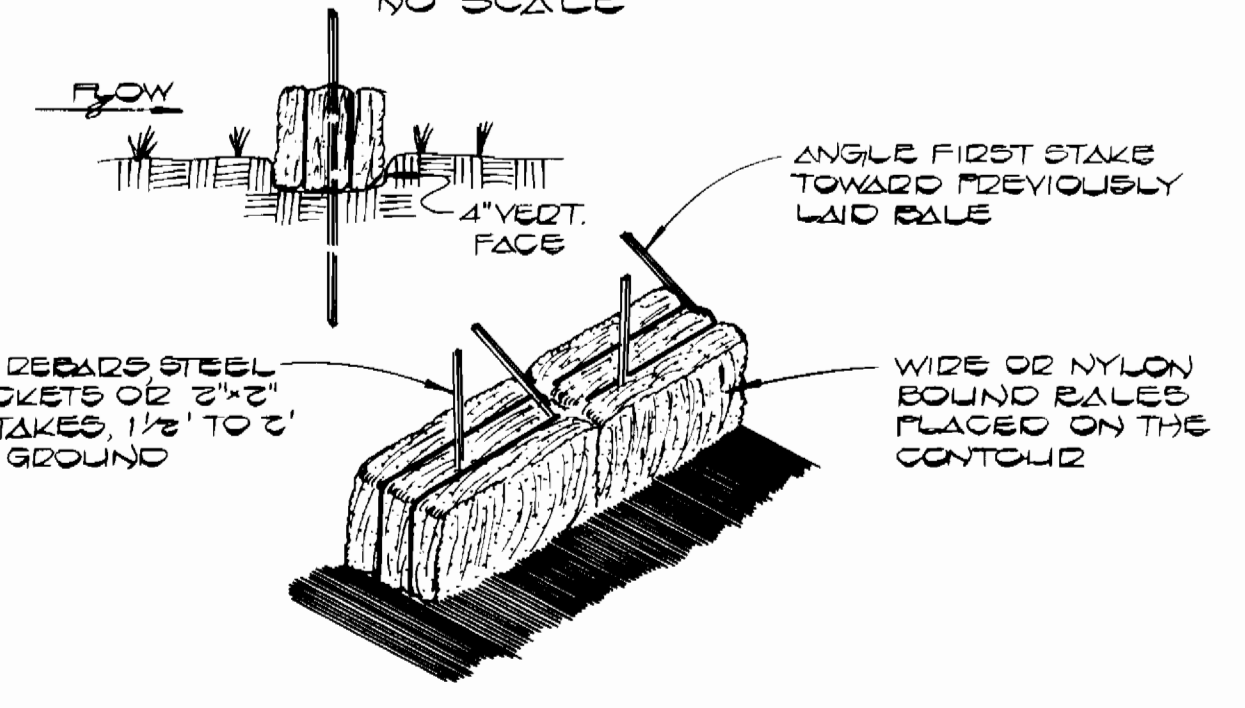


DIVERSION BERMS ARE REQUIRED EVERY 250 FEET ON CONTINUOUS SLOPES OF 4% OR GREATER. THE BERMS SHALL CONFORM TO THE TYPICAL SECTION HEREON. THEY SHALL BE CONSTRUCTED ACROSS THE CONSTRUCTION AREA IMMEDIATELY AFTER THE BACKFILLING OF THE PIPE AND PRIOR TO PLACING STABILIZATION IN ORDER TO PREVENT EROSION OF THE BACKFILLED AREAS.

**TEMPORARY EARTH DIVERSION BERM**  
NO SCALE



**SILT FENCE DETAIL**  
NO SCALE



**STRAW BALE DIKE**  
NO SCALE

CONTRACT NO. 24-1189-D  
NORTH RIDGE (SECTION TWO)  
WATER AND SEWER EXTENSION  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
3-12-84  
3-12-84

FISHER, COLLINS, AND CARTER, INC.  
CONSULTING ENGINEERS AND LAND SURVEYORS  
8388 COURT AVENUE  
ELLCOTT CITY, MARYLAND 21043  
461-2855

DES. D.B.S.	
DRN. D.B.S.	
CHK. T.A.F.	
DATE	
BY	NO
REVISION	DATE

**PROFILE**  
**WATER AND SEWER MAINS**  
600' SCALE MAP NO. 47 BLOCK NO.

**NORTH RIDGE SECTION TWO**  
CONTRACT NO. 24-1189-D  
SIXTH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 2 OF 2