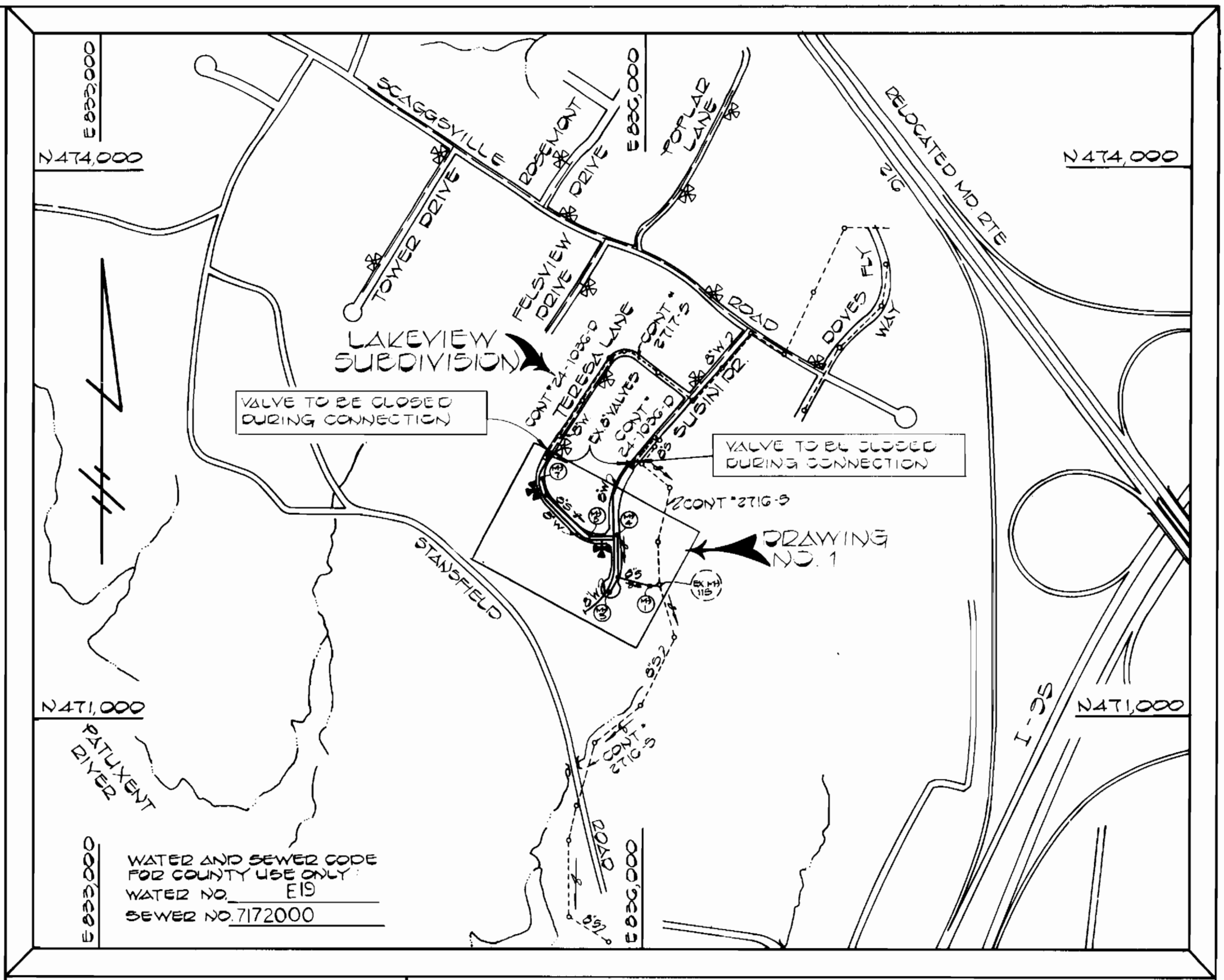
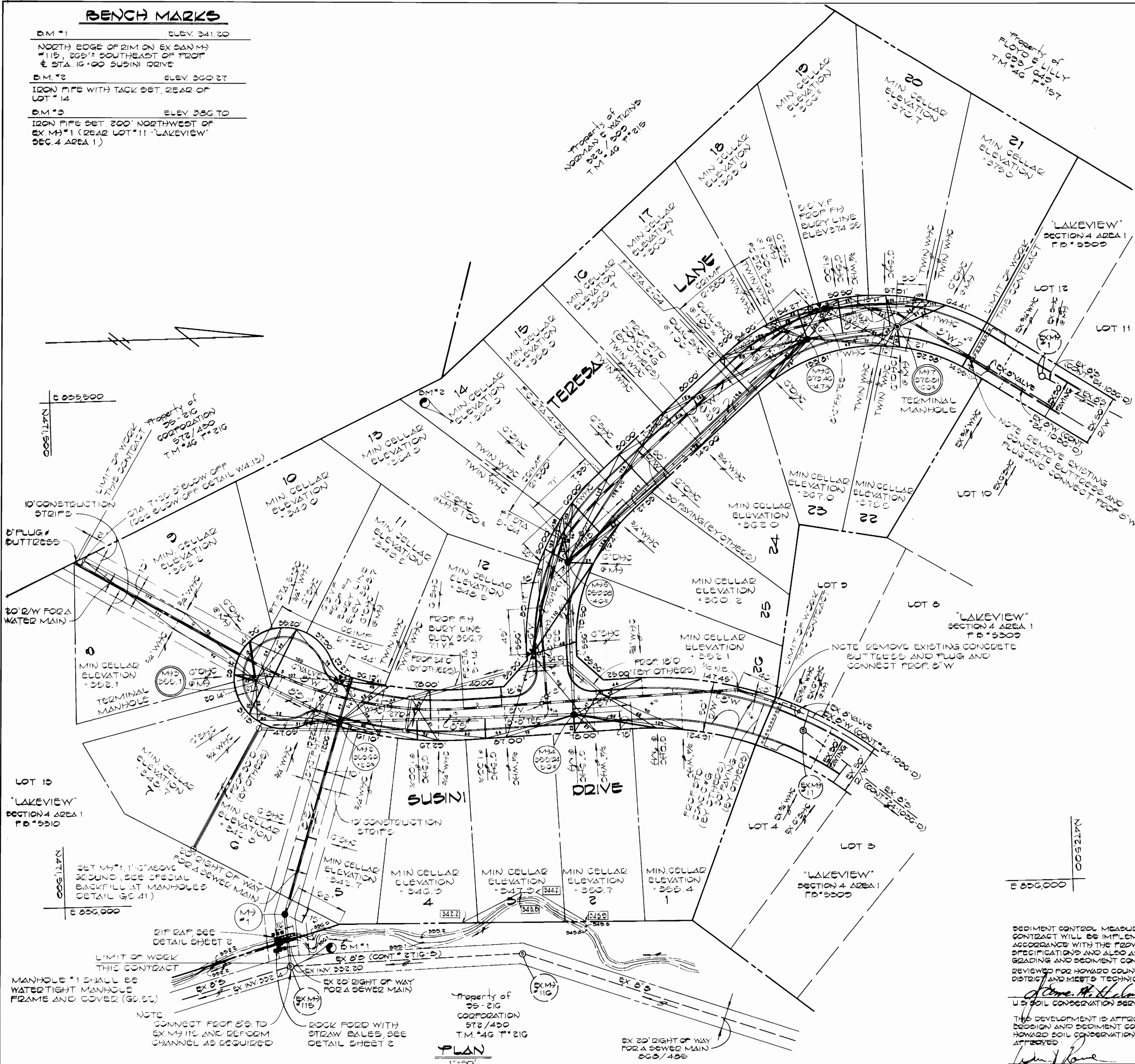


BENCH MARKS

DM #1 ELEV. 341.20
 NORTH EDGE OF RIM ON EX SAN M #115, 205' SOUTHEAST OF T207 & STA. 10+00 SUSINI DRIVE

DM #2 ELEV. 360.27
 IRON PIPE WITH TACK SET, REAR OF LOT #14

DM #3 ELEV. 386.70
 IRON PIPE SET 200' NORTHWEST OF EX M #11 (REAR LOT #11 "LAKEVIEW" SEC. 4 AREA 1)



TYPE OF BUILDINGS: SINGLE FAMILY DWELLING
 NUMBER OF LOTS: 26
 NO. OF WATER HOUSE CONN.: 26
 NO. OF SEWER HOUSE CONN.: 26
 DRAINAGE AREA: PATUXENT

VICINITY MAP
 SCALE: 1"=600'

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 2'-0" MINIMUM OR TUNNEL AS REQUIRED. ANY COST INCURRED TO THE CONTRACTOR FOR TUNNELING OR BRACING AT POLES SHALL BE INCLUDED IN UNIT PRICES BID FOR CONSTRUCTION OF THE MAIN.
- FOR DETAILS NOT SHOWN ON THE DRAWINGS 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 FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THE PLANS:
 BALTIMORE GAS AND ELECTRIC CO. - UNDERGROUND ELECTRIC DISTRIBUTION
 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 COMPANY - (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 CONSTRUCTION OF THE MAIN.
- PLACE REGULATION "MEN WORK" 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., D.I.P. OR P.C.C.P. UNLESS OTHERWISE NOTED.
- TOP OF ALL WATER MAINS TO 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 TO 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, P.V.C. OR H.D.P.E., UNLESS OTHERWISE NOTED.
- THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALL.
- ALL MANHOLE SHALL BE 4'-0" INSIDE DIAMETER, UNLESS OTHERWISE NOTED.
- MANHOLES SHOWN WITH 12" AND 16" WALLS ARE BRICK MANHOLES ONLY.
- 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 AS THEY PASS ABOUT IT.
- FOR ALL COPPER WATER HOUSE CONNECTIONS, UTILIZE FLARED TYPE FITTINGS ONLY.
- [343.9] DENOTED ELEVATION OF 100 YEAR FLOODPLAIN.

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 P-83-97

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

John P. Helms 5-11-83
 U.S. SOIL CONSERVATION SERVICE DATE

THIS DEVELOPMENT IS APPROVED FOR DESIGN AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT

Walter R. ... 5-11-83
 HOWARD SOIL CONSERVATION DISTRICT DATE

QUANTITIES			
ITEM	EST'D	AS-BUILT	SUPPLIER
8" SEWER	1142 LF	1,125	CALON PVC BELAIR SUPPLY
6" SEWER	775 LF	707	TERRE HILL
MANHOLES	7 EA.	7	TERRE HILL
8" WATER	1,336 LF	1,348	U.S. PIPE
6" WATER	36 LF	35	U.S. PIPE
12" W.H.C.	110 LF	111	FORD MOTOR CO.
3/4" W.H.C.	306 LF	449	FORD MOTOR CO.
PIPE HYD.	3 EA.	3	U.S. PIPE
2" BLOW OFF	1 EA.	1	U.S. PIPE

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

Robert M. ... 5-17-83
 DIRECTOR OF PUBLIC WORKS DATE

William F. ... 5-17-83
 CHIEF, BUREAU OF UTILITIES DATE

Richard ... 5-16-83
 CHIEF, BUREAU OF ENGINEERING DATE

William ... 5-17-83
 CHIEF, LAND DEVELOPMENT DIVISION DATE

FISHER, COLLINS AND CARTER, INC.
 CONSULTING ENGINEERS AND LAND SURVEYORS

8388 COURT AVENUE
 ELLICOTT CITY, MARYLAND 21043



DES. D.B.S.	DRN. D.B.S.	CHK. T.A.F.	DATE

PLAN

WATER AND SEWER MAINS

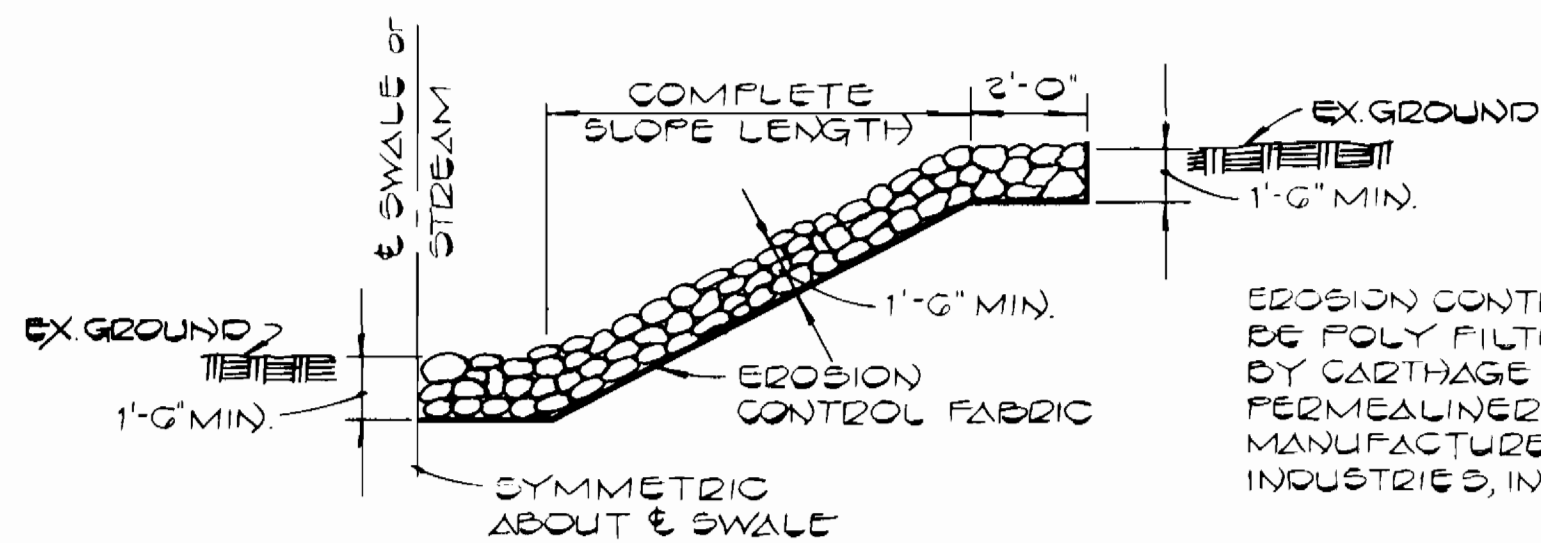
LAKEVIEW
 SECTION FOUR AREA TWO

CONTRACT NO. 24-1114-D
 SIXTH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

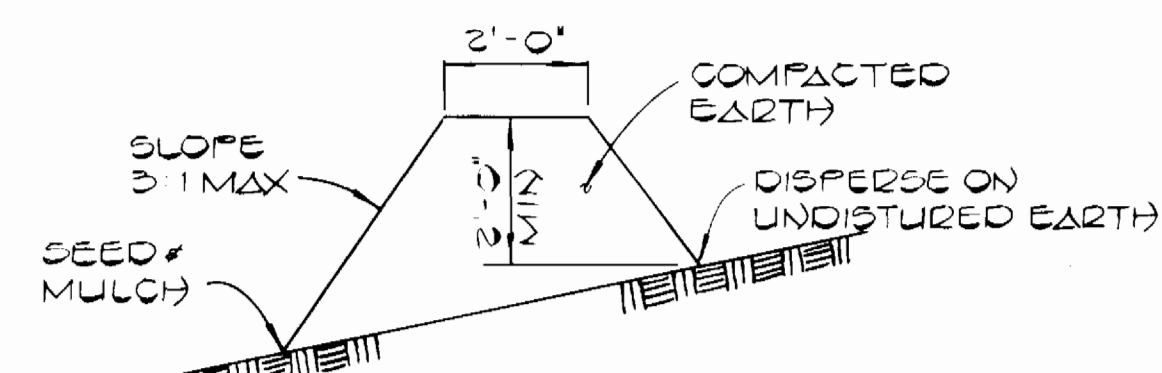
SCALE AS SHOWN

SHEET 1 OF 2

RIP RAP TO CONSIST OF DENSE ROCKS OF RANDOM SHAPE AND SIZES, RESISTANT TO THE ACTION OF AIR AND WATER AND SUITABLE FOR BANK PROTECTION. ALL ROCKS TO WEIGH A MINIMUM OF 75 POUNDS.



UNGRADED RIP RAP DETAIL
NO SCALE

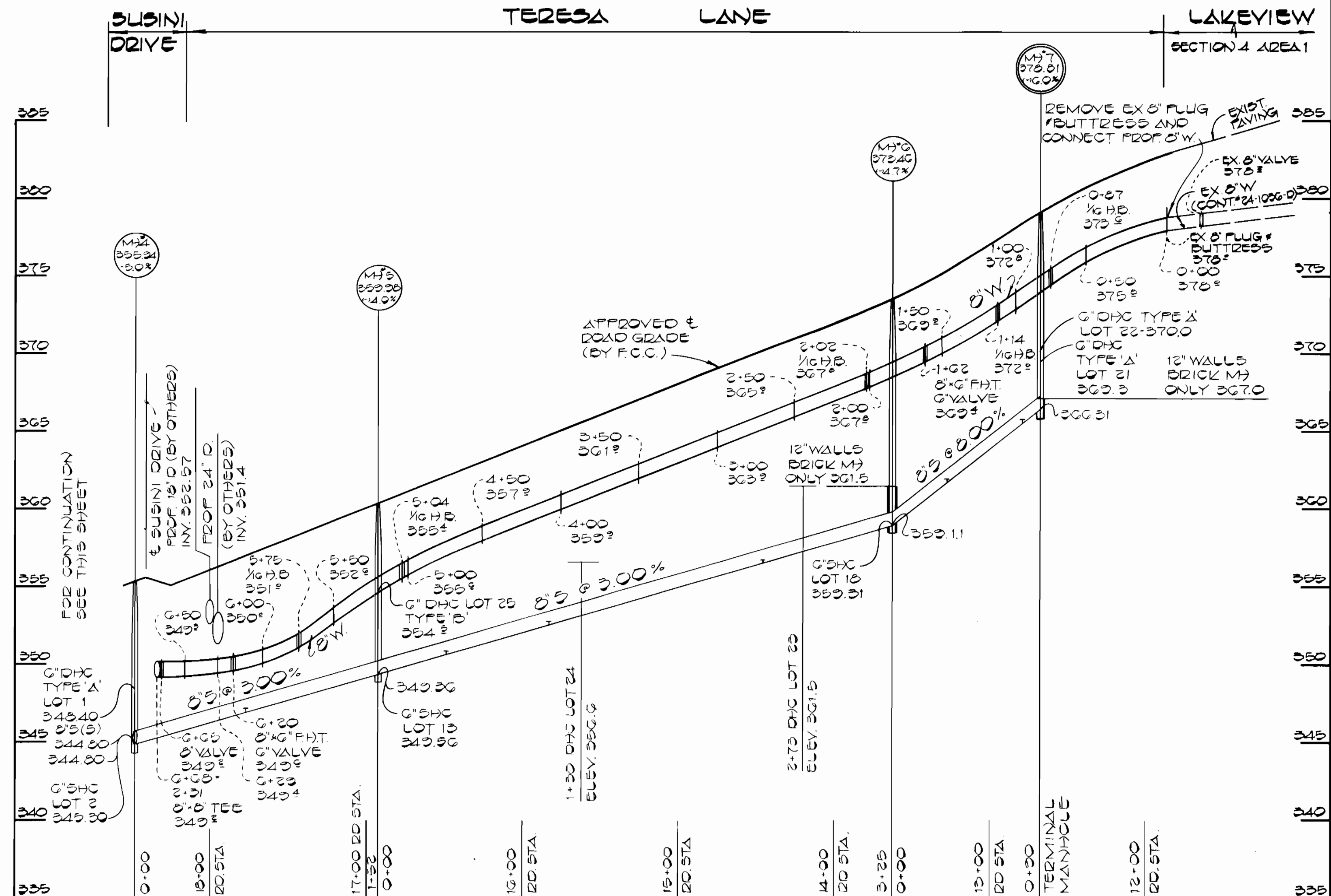


DIVERSION BERMS ARE REQUIRED EVERY 250 FEET ON CONTINUOUS SLOPES OF 4% OR GREATER. THE BERMS SHALL CONFORM TO THE TYPICAL SECTION SHOWN HEREON. THEY SHALL BE CONSTRUCTED ACROSS THE CONSTRUCTION AREA IMMEDIATELY AFTER THE BACKFILLING OF THE TRENCH AND PRIOR TO PLACING STABILIZATION IN ORDER TO PREVENT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

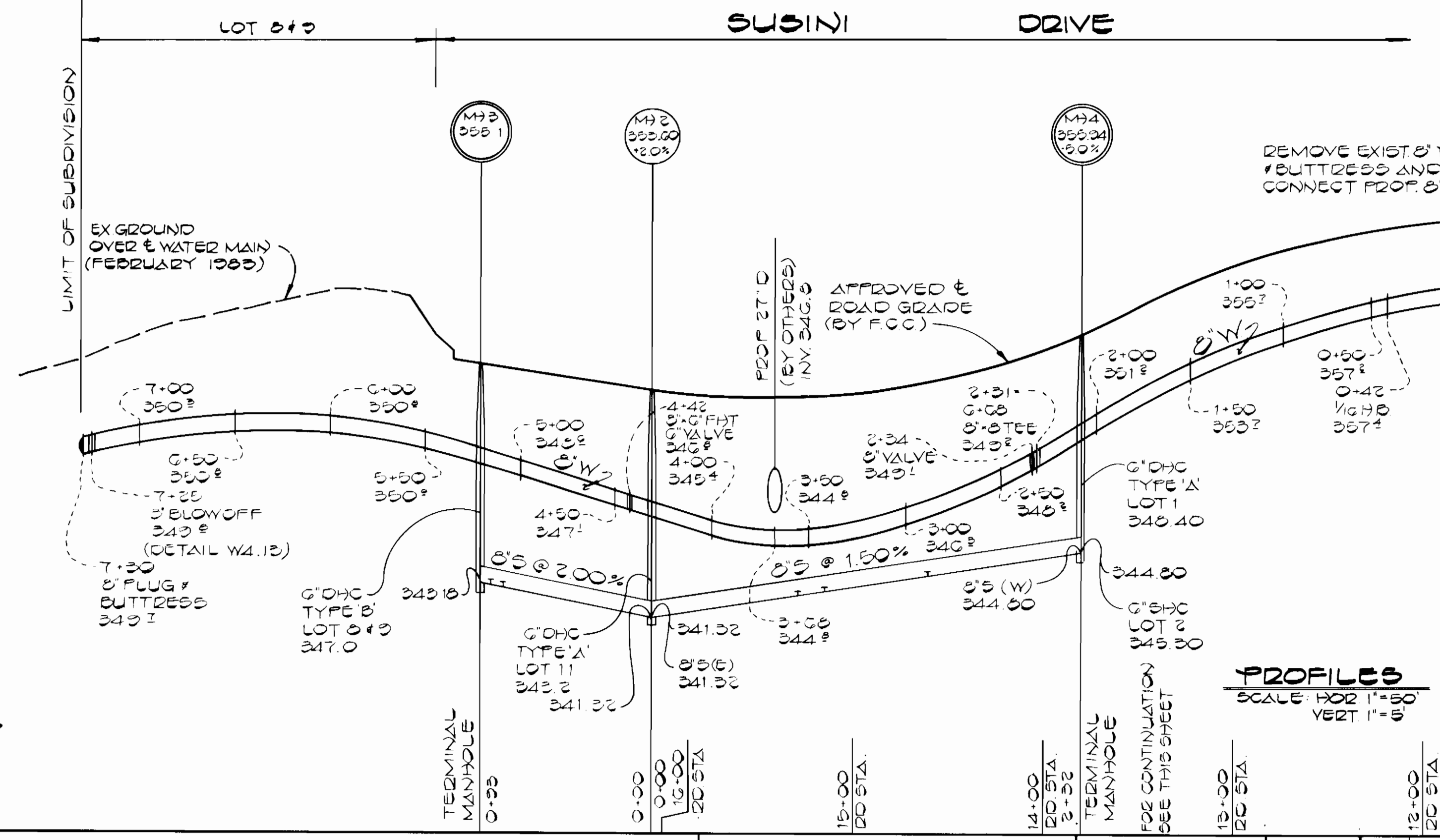
TEMPORARY EARTH DIVERSION BERM
NO SCALE

SEWER HOUSE CONNECTION
INVERT ELEVATIONS
AT PROPERTY LINE

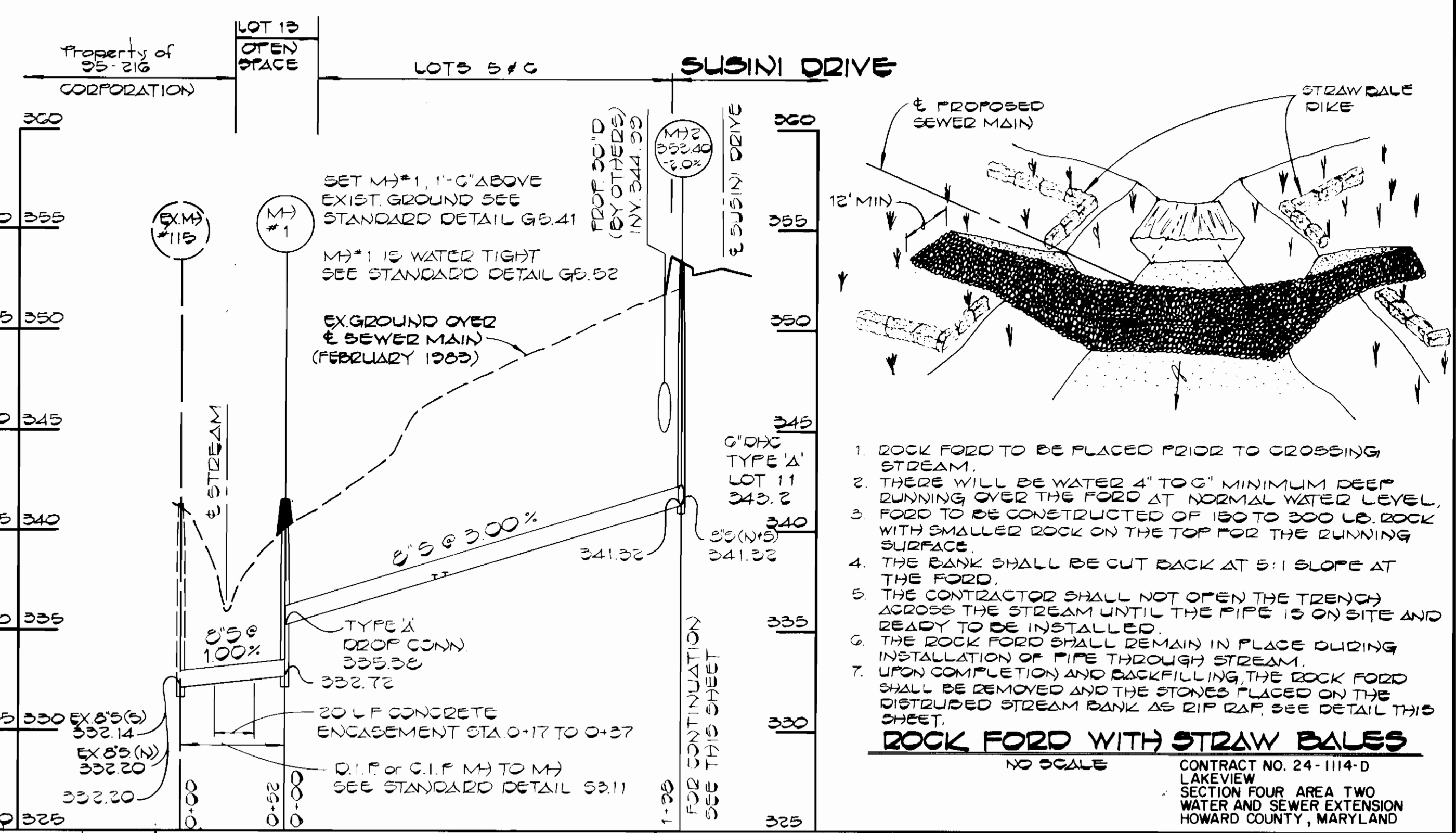
STATION	LOT	INVERT
M#1 TO M#2		
0+75	LT *6	337.91
0+80	RT *5	339.06
M#2	*11	344.12
M#2 TO M#3		
0+70	RT *10	344.24
0+84	LT *7	343.72
M#3	*3	347.46
M#3	*3	347.60
M#3 TO M#4		
0+77	RT *11	342.76
0+91	*12	343.99
1+49	RT *13	343.91
M#4	*2	349.06
M#4	*1	350.06
M#4 TO M#5		
0+72	RT *26	347.14
M#5	*25	349.02
M#5	*12	349.02
M#5 TO M#6		
0+44	LT *14	351.00
1+10	LT *15	353.64
1+30	RT *24	356.70
2+40	RT *17	357.33
2+73	RT *23	351.04
M#6	*10	359.01
M#6 TO M#7		
0+36	LT *19	362.77
0+84	LT *20	366.88
M#7	*21	370.36
M#7	*22	370.40



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



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



1. ROCK FORD TO BE PLACED PRIOR TO CROSSING STREAM.
2. THERE WILL BE WATER 4" TO 6" MINIMUM DEEP RUNNING OVER THE FORD AT NORMAL WATER LEVEL.
3. FORD TO BE CONSTRUCTED OF 150 TO 300 LB. ROCK WITH SMALLER ROCK ON THE TOP FOR THE RUNNING SURFACE.
4. THE BANK SHALL BE CUT BACK AT 5:1 SLOPE AT THE FORD.
5. THE CONTRACTOR SHALL NOT OPEN THE TRENCH ACROSS THE STREAM UNTIL THE PIPE IS ON SITE AND READY TO BE INSTALLED.
6. THE ROCK FORD SHALL REMAIN IN PLACE DURING INSTALLATION OF PIPE THROUGH STREAM.
7. UPON COMPLETION AND BACKFILLING, THE ROCK FORD SHALL BE REMOVED AND THE STONES PLACED ON THE DISTURBED STREAM BANK AS RIP RAP, SEE DETAIL THIS SHEET.

ROCK FORD WITH STRAW BALES
NO SCALE
CONTRACT NO. 24-1114-D
LAKEVIEW SECTION FOUR AREA TWO
WATER AND SEWER EXTENSION
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Director: <i>William F. Nelmer</i> 5-16-83 Chief, Bureau of Public Works Chief, Bureau of Utilities: <i>Robert B. ...</i> 5-13-83		FISHER, COLLINS, AND CARTER, INC. CONSULTING ENGINEERS AND LAND SURVEYORS 8388 COURT AVENUE ELLCOTT CITY, MARYLAND 21043 Chief, Bureau of Engineering: <i>William ...</i> 5-16-83 Chief, Land Development Division: <i>William ...</i> 5-16-83		DES. D.B.S. DRN. D.B.S. CHK. T.A.F. DATE 3-15-83	REVISION NO. _____ DATE _____	PROFILES AND DETAILS WATER AND SEWER MAINS	LAKEVIEW SECTION FOUR AREA TWO CONTRACT NO. 24-1114-D SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE AS SHOWN SHEET 2 OF 2
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