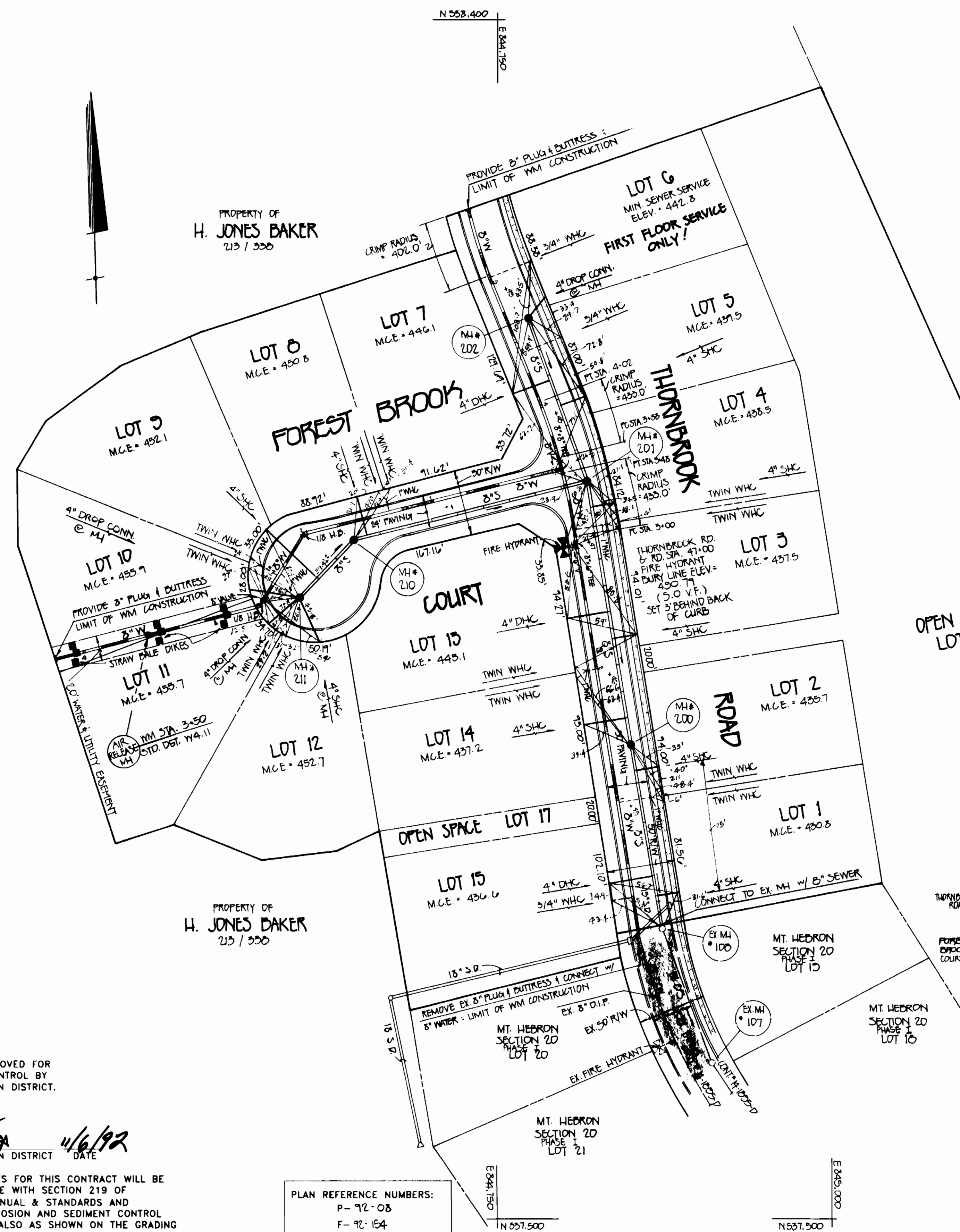
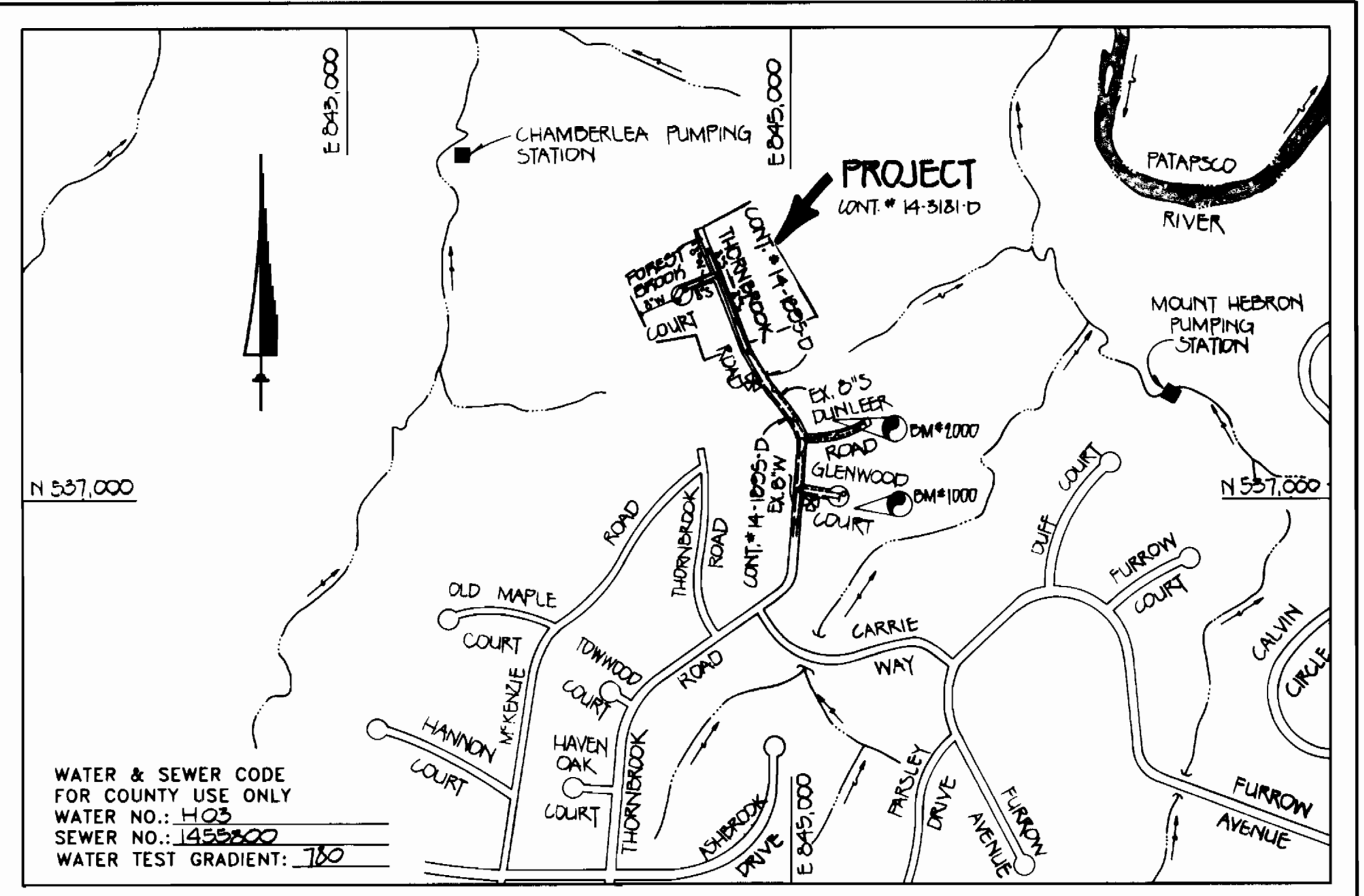


SEE SHEET 2 FOR PROFILES OF WATER & SEWER MAINS



QUANTITIES				
ITEM	ESTIMATED	AS-BUILT		
		QUANTITY	TYPE	SUPPLIER
8" S	710 LF	710 LF	PVC	WATER PRO
MANHOLES	5 EACH	5 EA	CONC.	ATLANTIC
4" S	450 LF	450 LF	PVC	B & C
8" W	780 LF	980 LF	DUCT	A-1
FIRE HYDRANT	1 EACH	1 EA		DITTO
1" WHC	121 LF	238 LF	COPPER	DITTO
3/4" WHC	203 LF	81 LF	COPPER	LAMBRIDGE
8" VALVES	3 EACH	3 EA	DUCT	WATER PRO
6" VALVES	1 EACH	1 EA		WATER PRO
AIR RELEASE MANHOLE	1 EACH	1 EA		WATER PRO

SHC INVERTS @ PROPERTY LINE		
STATION	LOT	ELEVATION
0+25 RT	EX MH 108 TO MH 200	435.40
0+25 LF	15 DHC	431.14
1+70 RT	2 DHC	430.01
0+20 LF	MH 200 TO MH 201	431.71
0+30 RT	3 DHC	431.05
1+00 LF	2 DHC	431.04
1+80 RT	4	433.05
0+00 RT	MH 201 TO MH 202	433.83
0+30 LF	7 DHC	440.04
0+142 LF	2 DHC (IF ONLY)	437.40
1+10 RT	MH 201 TO MH 210	435.31
0+40 LF	MH 210 TO MH 211	446.45
0+20 RT	11 DHC	450.38
0+21 LF	11 DHC	450.10
0+24 LF	11 DHC	447.09



WATER & SEWER CODE FOR COUNTY USE ONLY
 WATER NO.: HCS
 SEWER NO.: 14-3181-D
 WATER TEST GRADIENT: 1:80

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 SERVICE. 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.G.S. DATUM.
- ALL PIPE ELEVATIONS ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 6" CLEAR ALL TREES BY 2'-0" MINIMUM OR TUNNEL AS REQUIRED.
- 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 (M1) (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 [] AT THE LOCATION OF THE TEST PIT. A NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST PIT OR PITS IS INCLUDED ON THE DRAWINGS. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE 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:
 - STATE HIGHWAY ADMINISTRATION - 531-5533
 - BALTIMORE GAS & ELECTRIC CO. - CONTRACTOR SERVICES - 850-4620
 - BALTIMORE GAS & ELECTRIC CO. - UNDER GROUND DAMAGE CONTROL - 787-9068
 - MISS UTILITY - 1-800-257-7777
 - 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 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.
- ALL SEWER MAINS SHALL BE D.I.P., R.C.P., C.S.P.X., R.C.C.P., V.C.P.X., OR P.V.C. UNLESS OTHERWISE NOTED.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- MANHOLES SHOWN WITH 12" AND 16" 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.
- HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT THE CELLAR CANNOT BE SERVED.
- MANHOLES LOCATED WITHIN THE PROPOSED ROADWAY SHALL HAVE STANDARD HEAVY TRAFFIC MANHOLE FRAMES AND COVERS, STANDARD DETAIL G5.51.
- THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALL.
- ALL WATER MAINS SHALL 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 STRAPPED 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.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH AWWA SPECIFICATIONS C-153; DUCTILE IRON COMPACT FITTINGS, 3-INCH THROUGH 12-INCH FOR WATER AND OTHER LIQUIDS.
- ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING, UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS.

MH TABULATION CHART				
NO.	6" RD. STATION	DISTANCE	SLOPE	RIM ELEV.
100	45+50	7' RT.	+5.50%	446.03 #
201	47+48	7' RT.	+1.00%	450.56 #
202	48+77	7' RT.	-4.80%	446.51 #
210	1+73	@ 6'	+5.26%	497.10 #
211	CUL-DE-SAC	-----	+2.36%	499.00 #

SET RIMS FLUSH W/ PROP. GRADE

WM TABULATION CHART		
6" RD. STATION	APPURTENANCE	DISTANCE
THUNDERBROOK ROAD		
47+00	8" x 6" TEE	7' LT.
47+00	6" VALVE	10' LT.
47+05	8" VALVE	7' LT.
FOREST BROOK COURT		
0+10	8" VALVE	7' RT.
1+75	1/8 HD.	23' RT.

BENCHMARKS

BM 1000 ELEVATION: 407.81
 REBAR SET 27" SOUTHEAST OF LINEAR PROFILE STATION 1+55 GLENWOOD COURT ON LOT 45

BM 2000 ELEVATION: 423.62
 REBAR SET 11" NORTH OF 6" STATION 2+00 DUNLEER ROAD ON LOT 36

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

APPROVED: *[Signature]* 4/6/92
 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 F-92-154 REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

APPROVED: *[Signature]* 4/4/92
 U.S. SOIL CONSERVATION SERVICE DATE

PLAN REFERENCE NUMBERS:
 P-92-08
 F-92-154

PLAN
 SCALE: 1"=50'

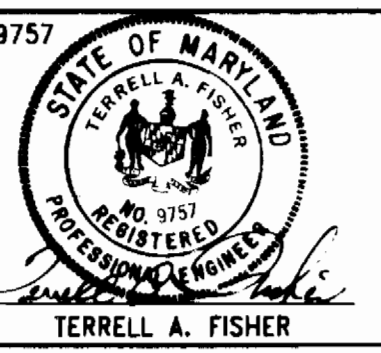
DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

[Signature] 11-3-92
 DIRECTOR OF PUBLIC WORKS DATE

[Signature] 4/4/92
 CHIEF, BUREAU OF ENGINEERING DATE

[Signature] 4/4/92
 CHIEF, LAND DEVELOPMENT DIVISION DATE

FISHER, COLLINS & CARTER, INC.
 CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
 SUITE 100, 8171 BALTIMORE NATIONAL PIKE
 ELICOTT CITY, MARYLAND 21042
 (301) 481-2855



DES: M.M.			
DRWN: M.M.			
CHK: P.W.K.			
DATE:			

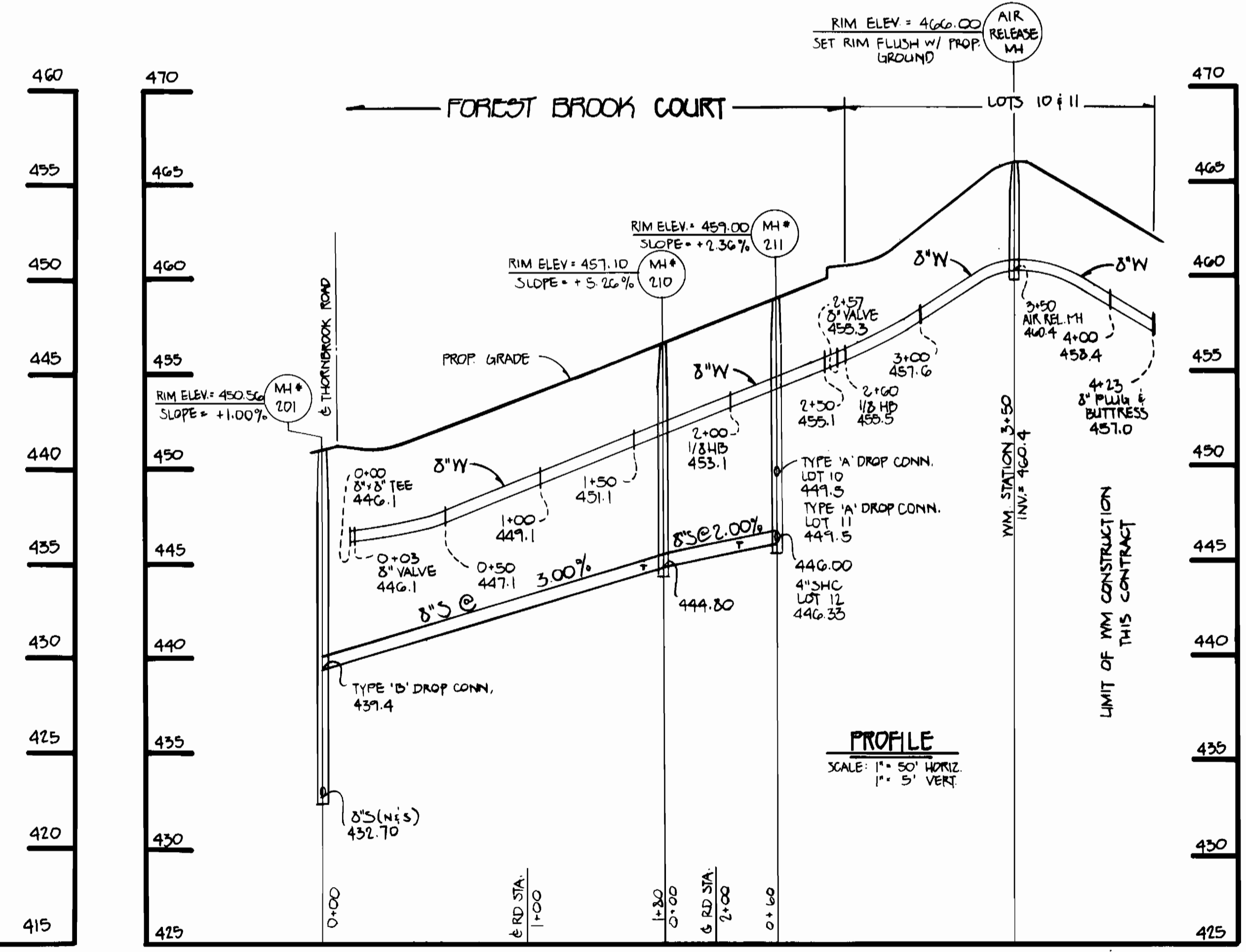
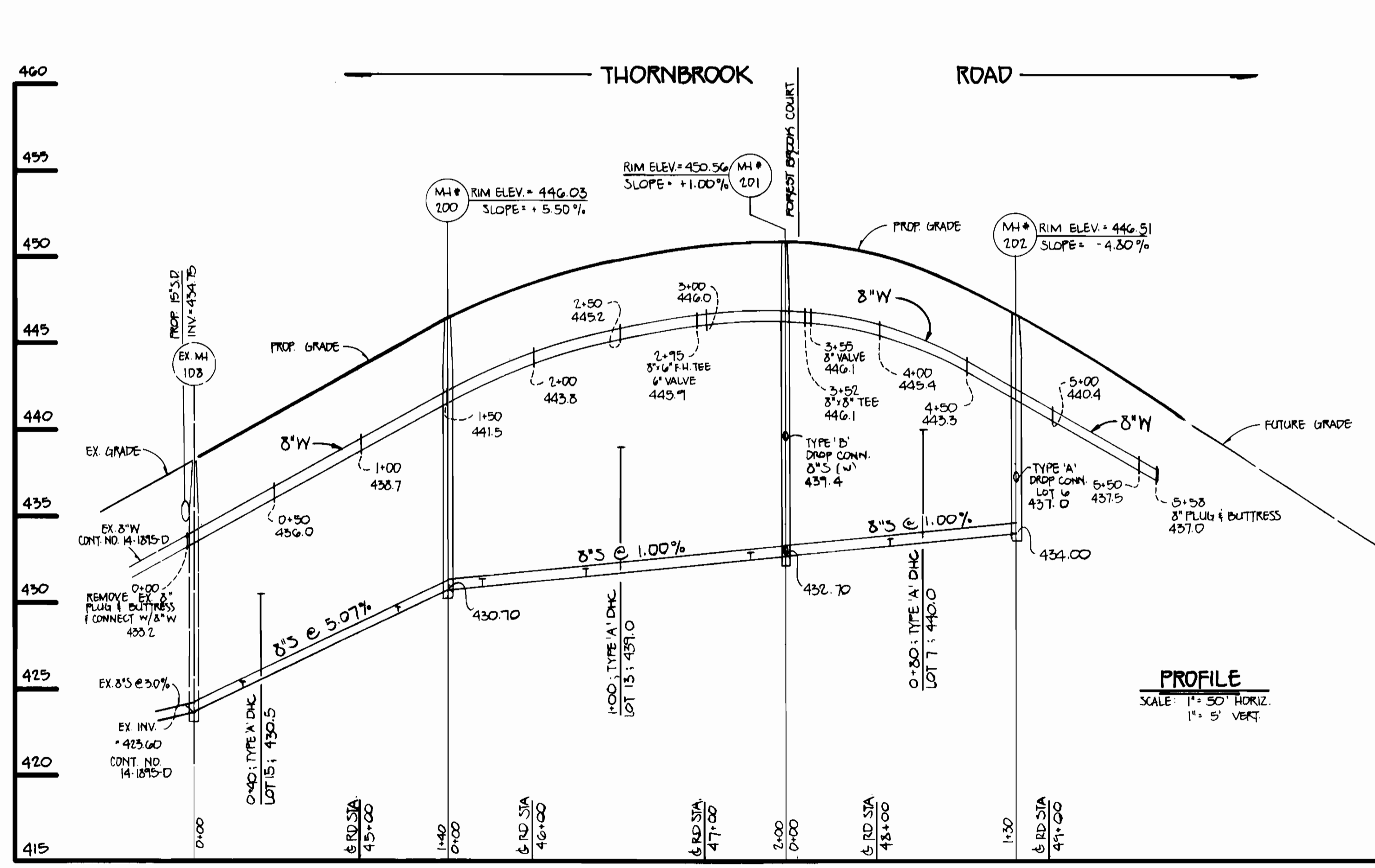
WATER & SEWER MAINS
 PLAN VIEW

600' SCALE MAP NO. 17 BLOCK NO. 3

MT. HEBRON : SECTION 21
 LOTS 1-17
 CONTRACT NO. 14-3181-D
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 1 of 2

SEE SHEET 1 FOR PLAN OF WATER & SEWER MAINS



CONTRACT NO. 14-3181-D
 MT. HEBRON
 SECTION 21 - LOTS 1-17
 WATER AND SEWER MAIN EXTENSIONS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Director of Public Works: James M. [Signature] 11-12-92
 Chief, Bureau of Engineering: [Signature] 11-19-92
 Chief, Bureau of Utilities: [Signature] 11-3-92
 Chief, Land Development Division: [Signature]

FISHER, COLLINS, AND CARTER, INC. #1751
 CONSULTING ENGINEERS AND LAND SURVEYORS
 9171 BALTIMORE NATIONAL PIKE - SUITE 100
 ELLICOTT CITY, MARYLAND 21043
 Terrell A. Fisher

DES: MM					
DRN: MM					
CHK: PWK					
DATE:	BY:	NO.	REVISION	DATE	

PROFILES
 WATER & SEWER MAINS
 600' SCALE MAP NO 17 BLOCK NO. 3

MT. HEBRON: SECTION 21
 LOTS 1-17
 CONTRACT NO. 14-3181-D
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 2 OF 2