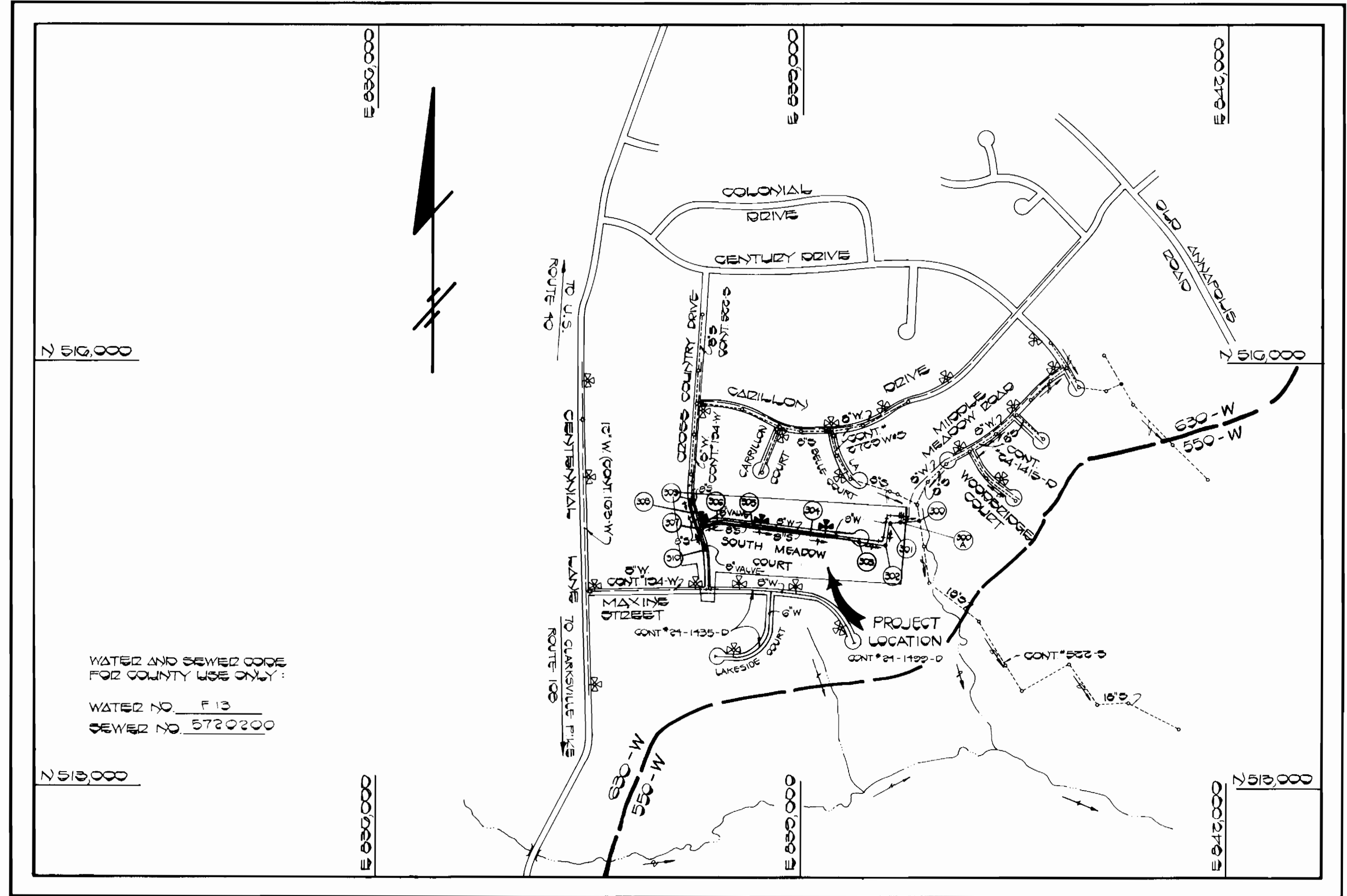


**GENERAL NOTES**

- 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.G.S. DATUM.
- ALL PIPE ELEVATIONS SHOWN 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. THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
- 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. UNDERGROUND DAMAGE CONTROL: 859-9004  
 BALTIMORE GAS & ELECTRIC CO. TROUBLE SHOOTING: 298-9001  
 MISS UTILITY: 1-559-0100  
 COLONIAL PIPELINE COMPANY: 795-1390  
 BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS: 992-2366  
 CHESAPEAKE & POTOMAC (C.B.P.) TELEPHONE COMPANY 1-800-257-7777
- 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 LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
- 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 ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE STRAPPED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS. SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1003 AND 1008 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
- FOR ALL COPPER WATER HOUSE CONNECTIONS, UTILIZE FLARED TYPED FITTINGS ONLY.
- ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING, UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS. (STD. DETAIL W.3.21).
- WATER MAINS AND WATER HOUSE CONNECTION LINES 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.
- MANHOLES DESIGNATED M.T. IN PLAN AND PROFILE SHALL HAVE WATER-TIGHT FRAME AND COVERS STANDARD DETAIL GS.52 WHERE WATER-TIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- ALL SEWER MAINS SHALL BE C.S.P.X., R.C.S.P., V.C.P.X., A.C.P. CLASS 2400 OR P.V.C. 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 FOR BRICK MANHOLES ONLY.
- MANHOLES LOCATED WITHIN PROPOSED ROADWAY SHALL HAVE STANDARD HEAVY TRAFFIC MANHOLE FRAME AND COVER, STANDARD DETAIL GS.51.

QUANTITIES			
ITEM	EST'D	AS BUILT	SUPPLIER
0" SEWER	4,000 L.F.	1948 L.F.	KELANER CO. SUPPLY CO. INC.
MANHOLES	12 EA.	12 EACH	ATLANTIC CONC. PRODUCTS CO.
6" WATER	2,375 L.F.	2385.0 L.F.	1" IRON PIPE PRODUCTS CO.
6" WATER	40 L.F.	26.0 L.F.	"
FIRE HYD.	3 EA.	3 EACH	DELAIR CO. SUPPLY CO. INC.
3/4" W.F.C.	250 L.F.	490. L.F.	"
1" W.F.C.	410 L.F.	359. L.F.	"
6" S.H.C.	582 L.F.	599.6 L.F.	"
6" VALVE	3 EA.	3 EACH	"
6" VALVE	3 EA.	3 EACH	"
6" VALVE	1 EA.	1 EACH	"
6" VALVE	50 EA.	50 EACH	"



WATER AND SEWER CODE FOR COUNTY USE ONLY:  
 WATER NO. F.13  
 SEWER NO. 5729200

TYPE OF BUILDING	RESIDENTIAL
NUMBER OF LOTS	41 (10 BUILDABLE)
NO. OF WATER HOUSE CONNECTIONS	40
NO. OF SEWER HOUSE CONNECTIONS	40
DRAINAGE AREA	LITTLE PATUXENT

(ROUTE 100 PUMPING STATION)

SCALE: 1" = 600'

# CONTRACT NO. 24-1499-D

# THE WILLOWS

## SECTION 2

## WATER AND SEWER MAIN EXTENSIONS

# HOWARD COUNTY, MARYLAND

## DEPARTMENT OF PUBLIC WORKS

SEDIMENT CONTROL MEASURES FOR THIS CONTRACT WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE HOWARD COUNTY DESIGN MANUAL AND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS AND ALSO AS SHOWN ON THE GRADING AND SEDIMENT CONTROL PLAN F86-220

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

*James M. Nelson* 3-20-87  
 U.S. SOIL CONSERVATION SERVICE DATE

PLAN REFERENCE NUMBERS  
 F 86 - 220  
 SDP 86 - 195

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

APPROVED:  
*Stephen J. ...* 3-20-87  
 HOWARD SOIL CONSERVATION DISTRICT DATE

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

*Robert M. ...* 3-30-87  
 DIRECTOR OF PUBLIC WORKS DATE

*William ...* 3-30-87  
 CHIEF, BUREAU OF ENGINEERING DATE

*William ...* 3-30-87  
 CHIEF, LAND DEVELOPMENT DIVISION DATE

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

DESIGNED BY	DATE	BY	NO.	REVISION	DATE
CHKD. T.A.F.	9/10/87				
DRN. J.O.					
CHKD. T.A.F.					

TITLE	SHEET
600' SCALE MAP NO. 30	BLOCK NO. 132

THE WILLOWS  
 SECTION 2  
 CONTRACT NO. 24-1499-D  
 SECOND ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 SHEET 1 OF 5

CONTRACT NO. 24-1499-D  
 THE WILLOWS  
 SECTION 2  
 WATER AND SEWER EXTENSIONS  
 HOWARD COUNTY, MARYLAND

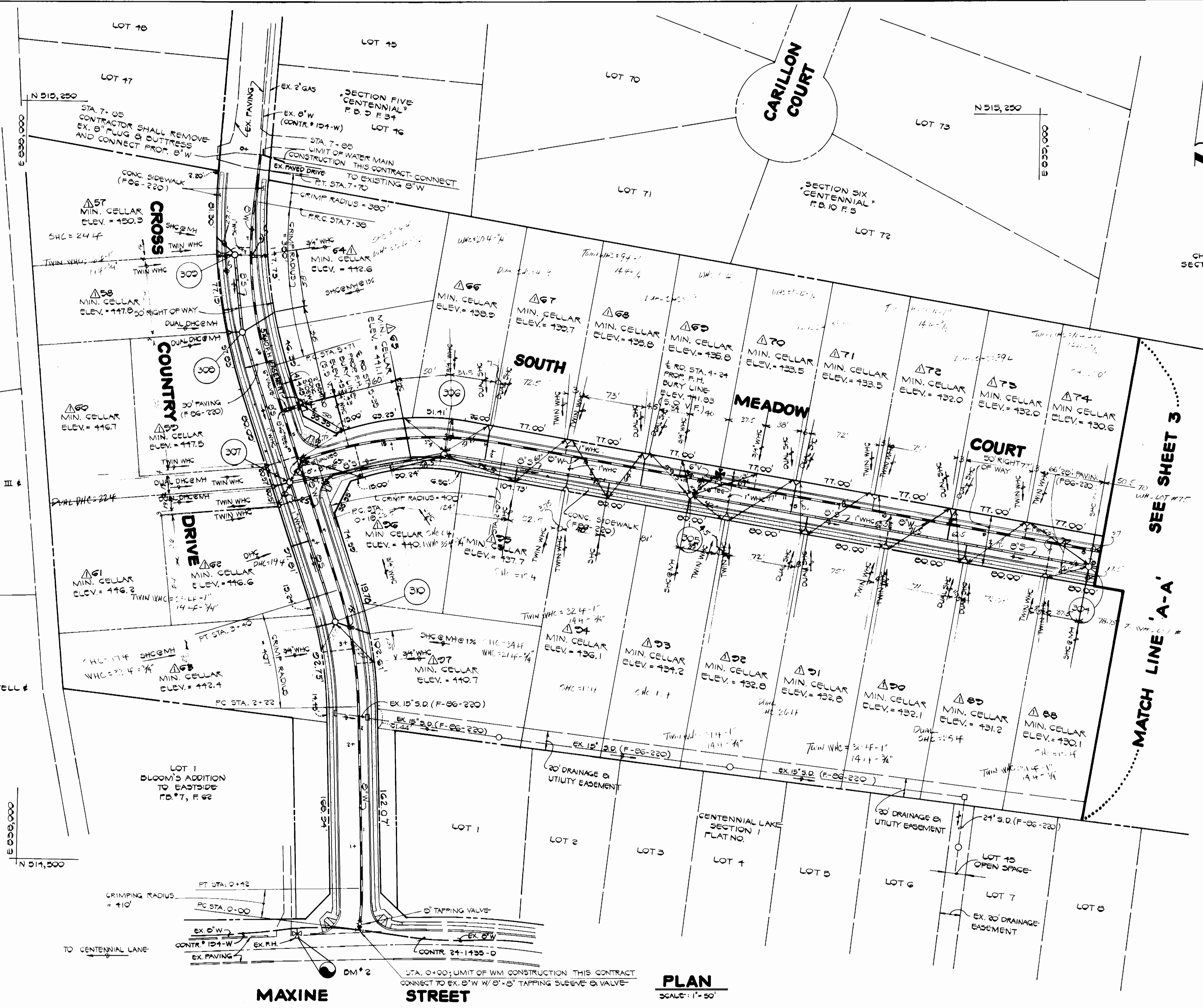
**BENCH MARK:**

BM #1 ELEV. 306.17  
 X-GUT RIM SAN. MH BETWEEN LOTS  
 & LA BELLE CT. CHATEAU VALLEY  
 SECT. 1 AREA 4  
 BM #2 ELEV. 111.41  
 ROAD SIDE FLANGE COLT @ F.H. @  
 INTERSECTION OF MAXINE STREET &  
 PROPOSED CROSS COUNTRY DRIVE

LOT #3  
 CHATEAU VALLEY  
 SECTION 1 AREA 4  
 BLOCK 'E'  
 PLAT # 402D

MANHOLE TABLE				
NO.	'E' ROAD STA.	DISTANCE	RIM ELEVATION	SLOPE
304	0+00	7' RT.	137.61	-1.00%
305	4+00	7' RT.	141.61	-1.00%
306	1+52	10' RT.	147.60	-3.00%
307	4+65	7' LT.	152.10	+1.00%
308	6+20	10' LT.	153.56	+1.00%
309	6+25	7' LT.	154.83	+2.35%
310	3+24	6' LT.	150.72	+1.00%

SEWER HOUSE CONNECTIONS INVERT ELEVATIONS @ PROPERTY LINE		
STATION	LOT	ELEVATION
MH 304 TO MH 305		
@ MH 304 (LT)	△ LOT 68	124.53
@ MH 304 (RT)	△ LOT 74	124.81
1+23 (LT)	△ LOTS 80 & 70	125.67
1+13 (RT)	△ LOTS 72 & 73	126.15
2+82 (LT)	△ LOTS 21 & 22	127.26
2+22 (RT)	△ LOTS 70 & 71	127.71
@ MH 305 (LT)	△ LOT 23	128.53
MH 305 TO MH 306		
@ MH 305 (LT)	△ LOT 25	128.53
0+50 (RT)	△ LOTS 68 & 69	129.25
0+82 (LT)	△ LOT 24	130.44
1+74 (LT)	△ LOT 25	132.68
2+06 (RT)	△ LOTS 66 & 67	133.87
MH 306 TO MH 307		
0+33 (RT)	△ LOT 65	135.20
0+55 (LT)	△ LOT 26	139.62
@ MH 307 (WEST)	△ LOTS 60 & 61 (DHC)	139.36
MH 307 TO MH 308		
@ MH 307 (LT)	△ LOTS 60 & 61 (DHC)	139.36
@ MH 308 (LT)	△ LOTS 58 & 59 (DHC)	142.30
@ MH 308 (RT)	△ LOT 64 (1%)	139.25
@ MH 308 (RT)	△ LOT 64 (1%)	139.25
MH 308 TO MH 309		
@ MH 308 (LT)	△ LOTS 58 & 59 (DHC)	142.30
@ MH 309 (RT)	△ LOT 64 (1%)	139.25
@ MH 309 (LT)	△ LOT 57	144.61
MH 307 TO MH 310		
@ MH 307 (RT)	△ LOTS 60 & 61 (DHC)	139.36
0+61 (RT)	△ LOT 62 (DHC)	141.20
@ MH 310 (LT)	△ LOT 27 (1%)	136.83
@ MH 310 (RT)	△ LOT 63	136.55



**MAXINE STREET**  
**PLAN**  
 SCALE: 1" = 50'

SEE SHEETS 4 & 5 FOR PROFILES OF 8" W & 8" S

CONTRACT NO. 24-1499-D  
 THE WILLOWS  
 SECTION 2  
 WATER AND SEWER EXTENSIONS  
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND  
 Director of Public Works: *W. F. Nunnery* 3-30-17  
 Chief, Bureau of Engineering: *Robert H. Beisinger* 3-30-17  
 Chief, Bureau of Utilities: *Robert H. Beisinger* 3-30-17

FISHER, COLLINS AND CARTER, INC.  
 CONSULTING ENGINEERS AND LAND SURVEYORS  
 8388 COURT AVENUE  
 ELLICOTT CITY, MARYLAND 21043  
 State of Maryland Seal: *Terrell A. Fisher* 11/26/87

DES: P.W.K.  
 DRN: J.O.  
 CHK: T.A.F.  
 DATE: 11/26/87  
 D.A.N. & REVISION LOT NUMBERS: 6-11-87  
 BY NO. REVISION DATE

**PLAN**  
**WATER AND SEWER MAINS**  
 600' SCALE MAP NO. 30 BLOCK NO. 1 & 2

**THE WILLOWS**  
 SECTION 2  
 CONTRACT NO. 24-1499-D  
 SECOND ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 SHEET 2 OF 5

AS-BUILT

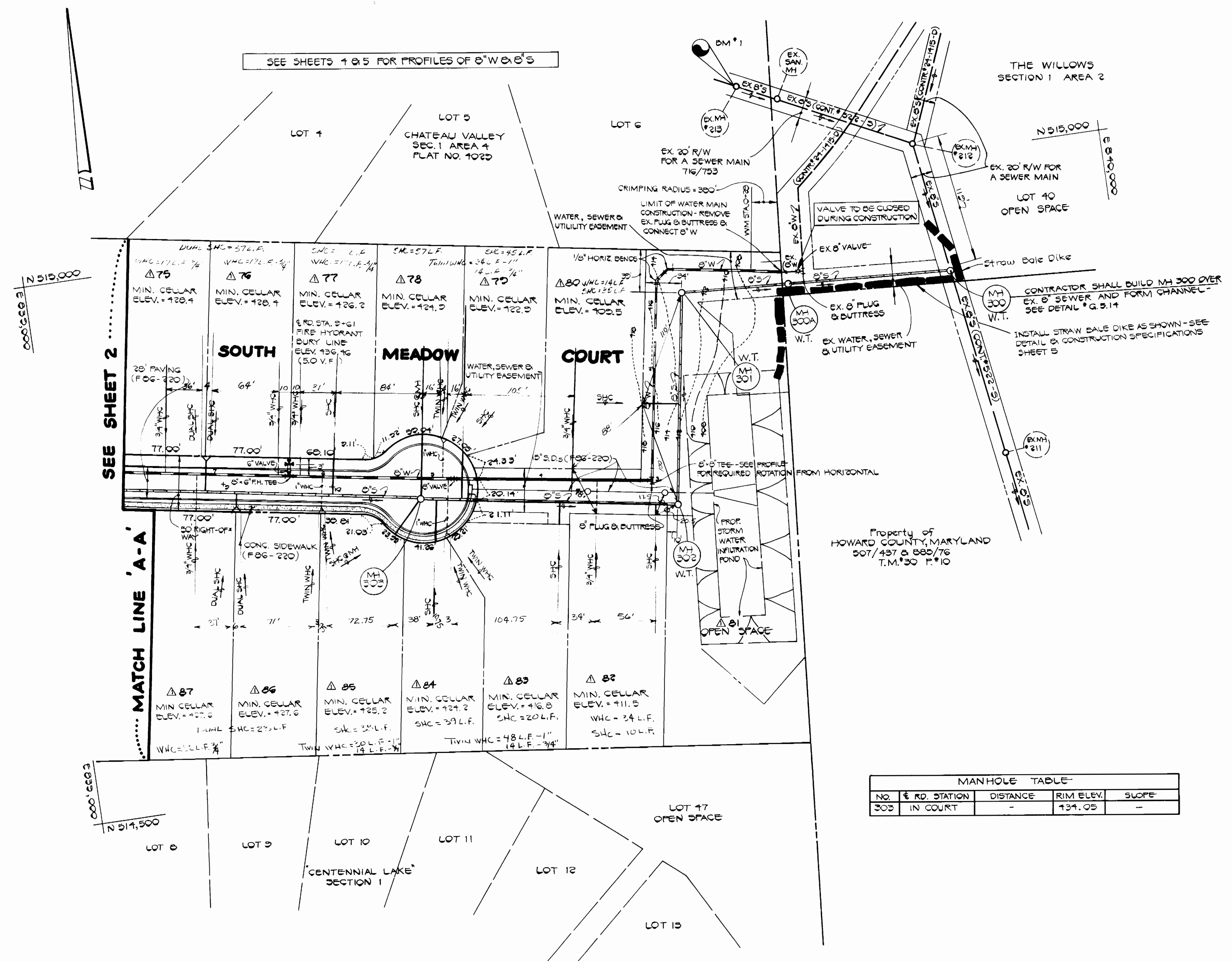
**BENCH MARKS**

B.M. \*1 ELEV. 386.17

X-CUT ON RIM OF EX. SAN. MH \*213;  
APPROX. 105' NORTH OF PROPOSED SAN.  
MH \*300A

SEE SHEETS 4 & 5 FOR PROFILES OF 8" W & 8" S

SEWER HOUSE CONNECTIONS INVERT ELEVATION AT PROPERTY LINE		
STATION	LOT	ELEVATION
MH 301 TO MH 302		
1+03 (RT)	LOT *80 Δ	404.31
MH 302 TO MH 303		
0+20 (LT)	LOT *82 Δ	406.49
1+09 (LT)	LOT *83 Δ	411.54
2+00 (RT)	LOT *79 Δ	417.81
2+23 (LT)	LOT *84 Δ	419.07
8 MH 303 (LT)	LOT *85 Δ	419.90
8 MH 303 (RT)	LOT *78 Δ	420.30
MH 303 TO MH 304		
8 MH 303 (LT)	LOT *85 Δ	419.90
8 MH 303 (RT)	LOT *78 Δ	420.30
0+82 (RT)	LOT *77 Δ	421.19
1+70 (LT)	LOTS *86 & *87 Δ	423.13
1+90 (RT)	LOTS *75 & *76 Δ	423.22
8 MH 304 (LT)	LOT 88 Δ	424.53
8 MH 304 (RT)	LOT 74 Δ	424.81



MANHOLE TABLE				
NO.	RD. STATION	DISTANCE	RIM ELEV.	SLOPE
303	IN COURT	-	434.05	-

**PLAN**  
SCALE: 1" = 50'

BRUNING 44-13269150

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*John F. Newmy* 3-30-87  
DIRECTOR OF PUBLIC WORKS DATE

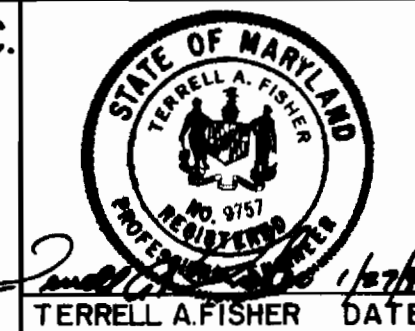
*Robert H. ...* 3-30-87  
CHIEF BUREAU OF UTILITIES DATE

*Michael H. ...* 3-28-87  
CHIEF, LAND DEVELOPMENT DIVISION DATE

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

8388 COURT AVENUE  
ELLICOTT CITY, MARYLAND 21043

*Terrell A. Fisher* 1/26/87  
DATE



DES: P.W.K.	
DRN: J.O.	
CHK: T.A.F.	
DRAWN BY: 1	REVISE LOT NUMBERS 6-11-87
DATE: 1/26/87	DATE: 6-11-87

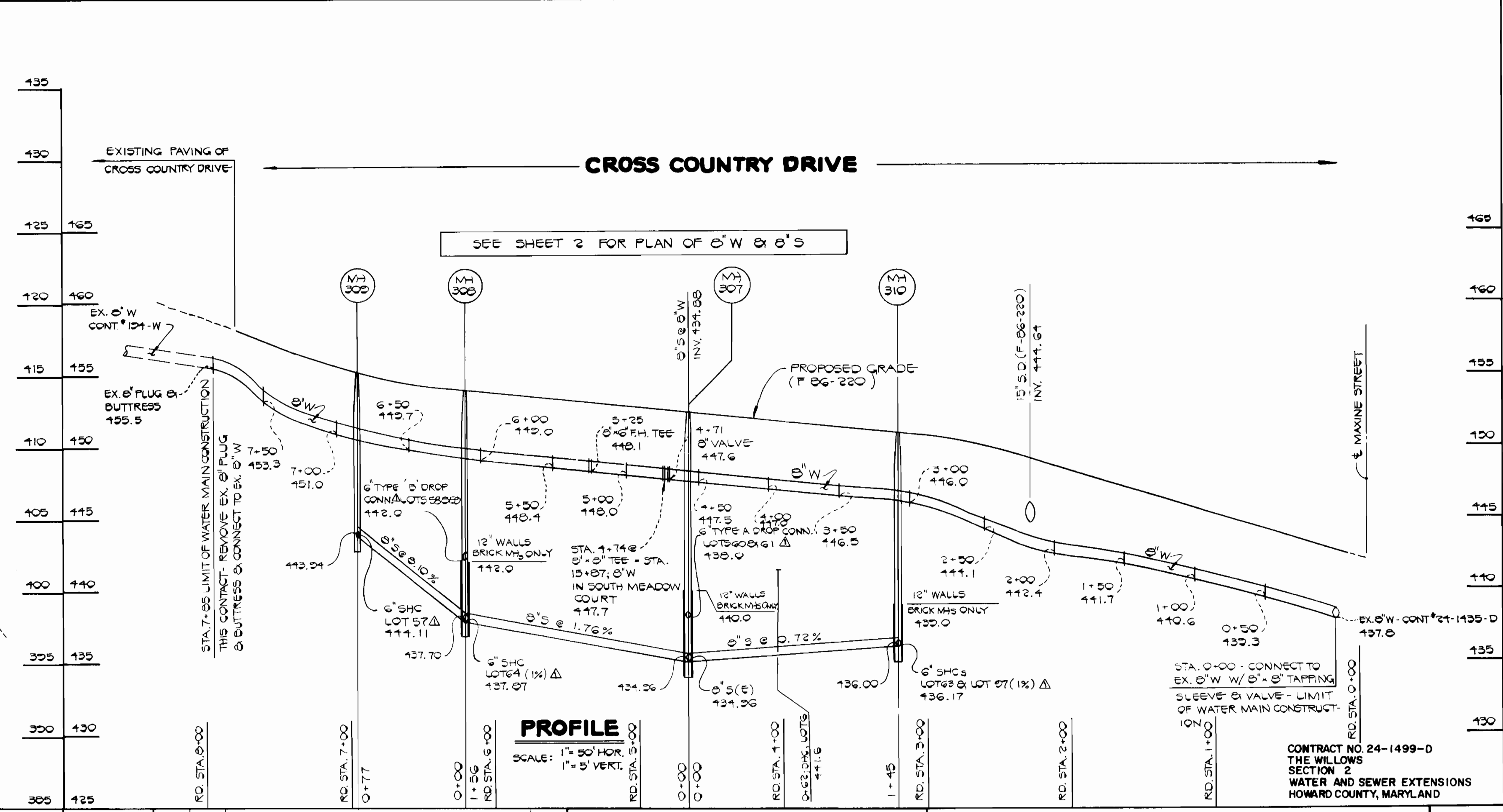
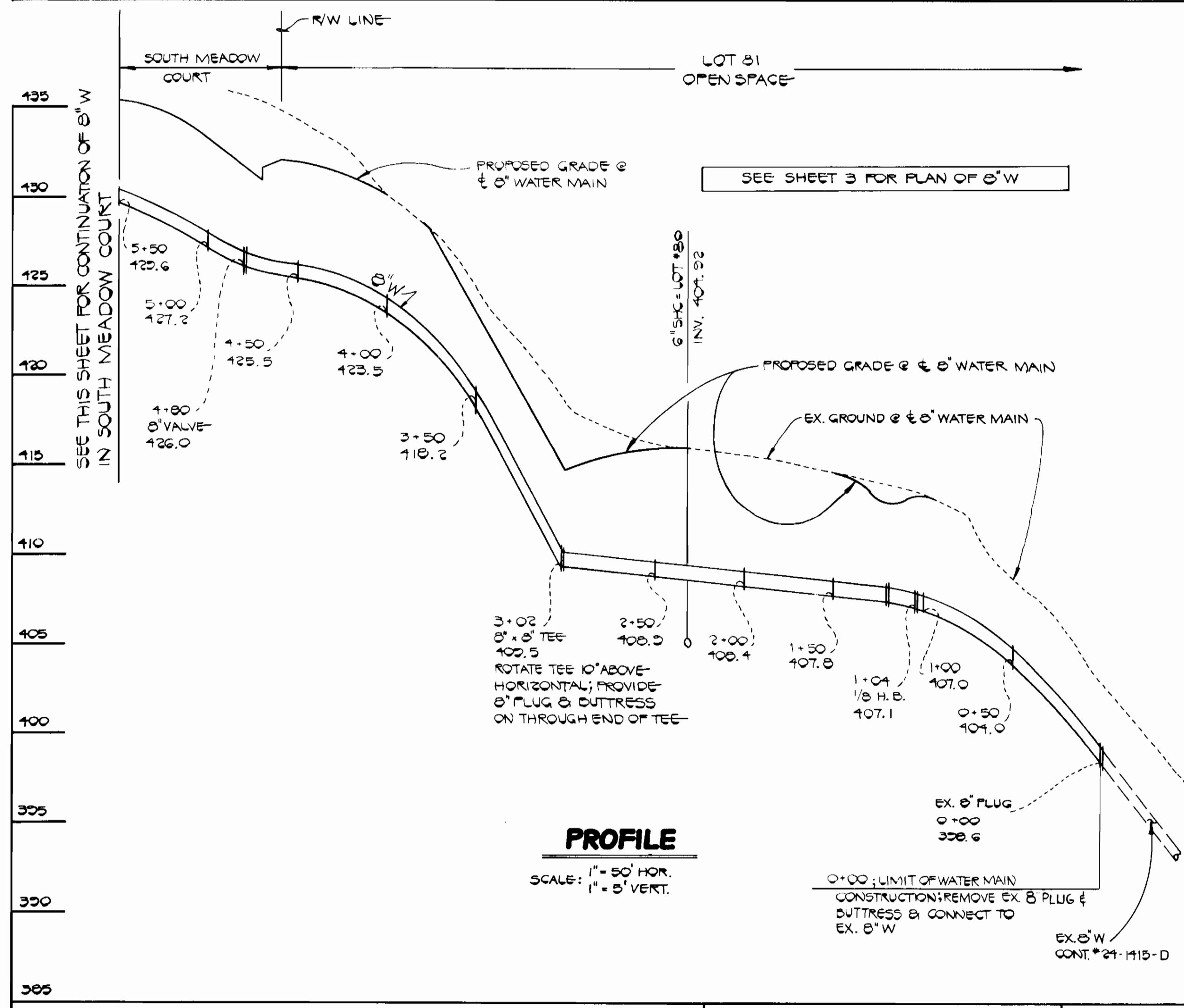
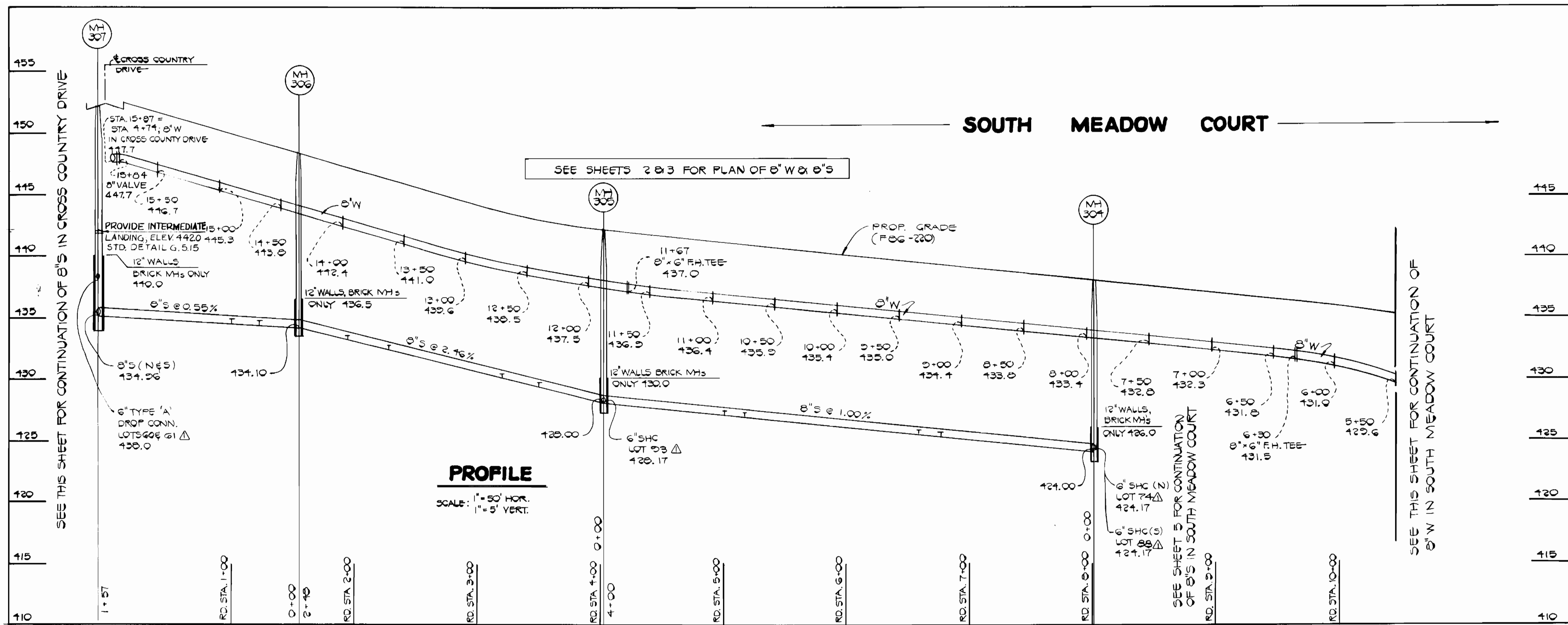
**PLAN**  
WATER AND SEWER MAINS

600' SCALE MAP NO. 30 BLOCK NO. 1 & 2

**THE WILLOWS**  
SECTION 2  
CONTRACT NO. 24-1499-D  
SECOND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 3 OF 5

AS-BUILT



DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*George F. Nemy*  
DIRECTOR OF PUBLIC WORKS DATE 3-30-87

*Robert Ringer*  
CHIEF BUREAU OF UTILITIES DATE 3-30-87

*William S. Riley*  
CHIEF, BUREAU OF ENGINEERING DATE 3-30-87

*William H. Fisher*  
CHIEF, LAND DEVELOPMENT DIVISION DATE 3-28-87

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

8388 COURT AVENUE  
ELLCOTT CITY, MARYLAND 21043

STATE OF MARYLAND  
TERRELL A. FISHER DATE

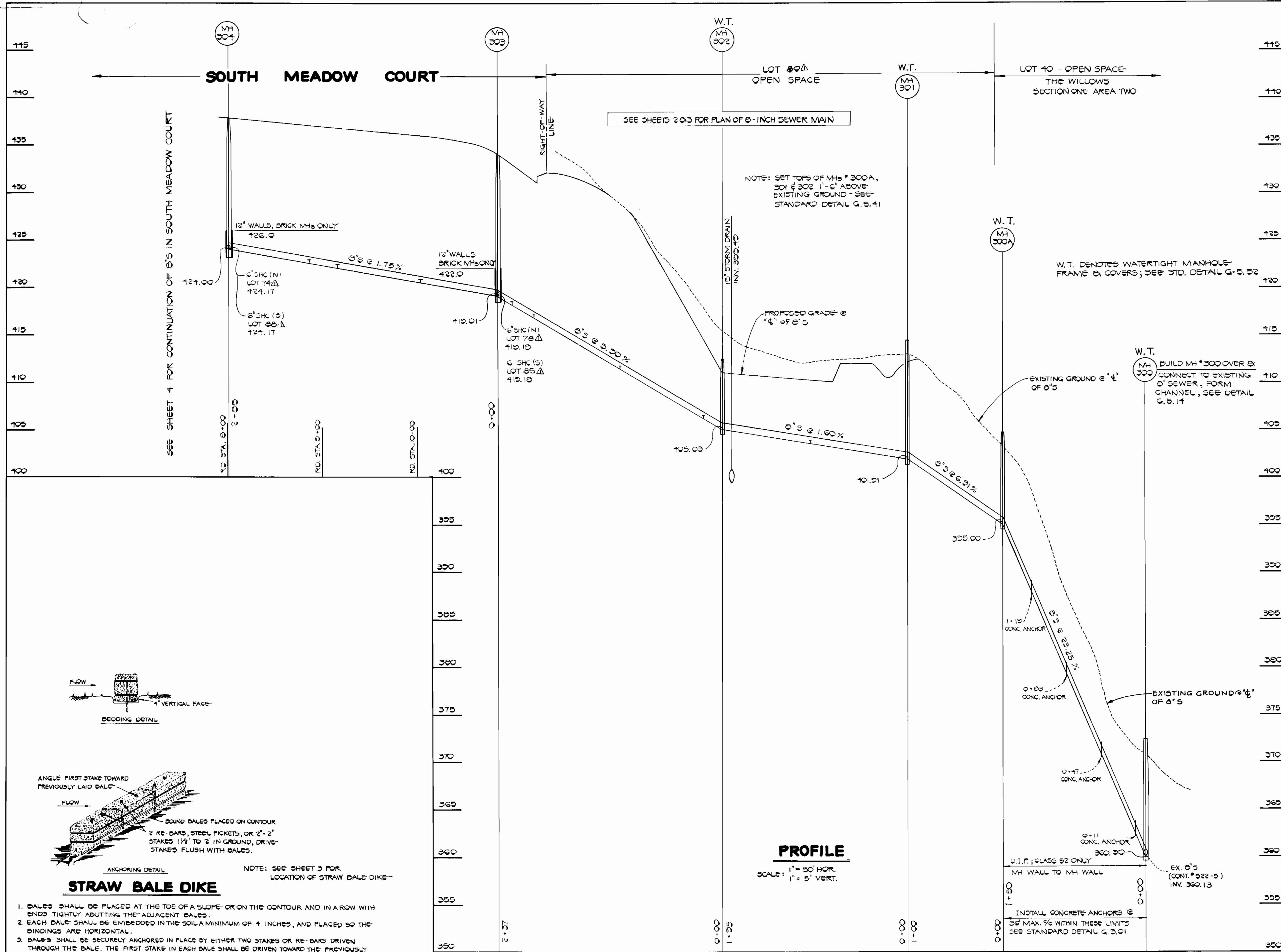
DES. P.W.K.	
DRN. J.O.	
CHK. T.A.F.	
D.A.N.	Δ
BY	NO.
REVISION	DATE
REVISE LOT NUMBERS	6-11-87

PROFILES  
WATER AND SEWER MAINS

600' SCALE MAP NO. 30 BLOCK NO. 182

THE WILLOWS  
SECTION 2  
CONTRACT NO. 24-1499-D  
SECOND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 4 OF 5



115  
110  
105  
100  
355  
350  
305  
300  
360  
375  
370  
365  
360  
355  
350

SEE SHEET 4 FOR CONTINUATION OF 8" S IN SOUTH MEADOW COURT

12" WALLS, BRICK MHS ONLY  
 126.0

6" SHC (N) LOT 74 Δ  
 124.17

6" SHC (S) LOT 80 Δ  
 124.17

12" WALLS, BRICK MHS ONLY  
 122.0

6" SHC (N) LOT 78 Δ  
 119.10

6" SHC (S) LOT 85 Δ  
 119.10

15" STORM DRAIN  
 INV. 302.10

PROPOSED GRADE @  
 "E" OF 8" S

EXISTING GROUND @ "E"  
 OF 8" S

W.T. MH 300A

W.T. DENOTES WATERTIGHT MANHOLE FRAME & COVERS; SEE STD. DETAIL G-5.52

W.T. MH 300  
 BUILD MH #300 OVER EX. CONNECT TO EXISTING 8" SEWER, FORM CHANNEL, SEE DETAIL G.5.14

EXISTING GROUND @ "E" OF 8" S

1-12 CONG. ANCHOR

0-03 CONG. ANCHOR

0-17 CONG. ANCHOR

0-11 CONG. ANCHOR

360.30

D.I.P.; CLASS B2 ONLY  
 MH WALL TO MH WALL

EX. 8" S (CONT. # 22-5)  
 INV. 360.13

INSTALL CONCRETE ANCHORS @  
 36" MAX. 5% WITHIN THESE LIMITS  
 SEE STANDARD DETAIL G.3.01

LOT 80 Δ  
 OPEN SPACE

LOT 40 - OPEN SPACE  
 THE WILLOWS  
 SECTION ONE AREA TWO

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Director of Public Works Chief, Bureau of Utilities	FISHER, COLLINS AND CARTER, INC. CONSULTING ENGINEERS AND LAND SURVEYORS 8388 COURT AVENUE ELLICOTT CITY, MARYLAND 21043	TERRELL A. FISHER DATE: 1/26/87	DES: P.W.K.		PROFILES & DETAILS SEWER MAINS	CONTRACT NO. 24-1499-D THE WILLOWS SECTION 2 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE AS SHOWN SHEET 5 OF 5
			DRN: J.O. CHK: T.A.F.	DATE: 1/26/87			

AS-BUILT