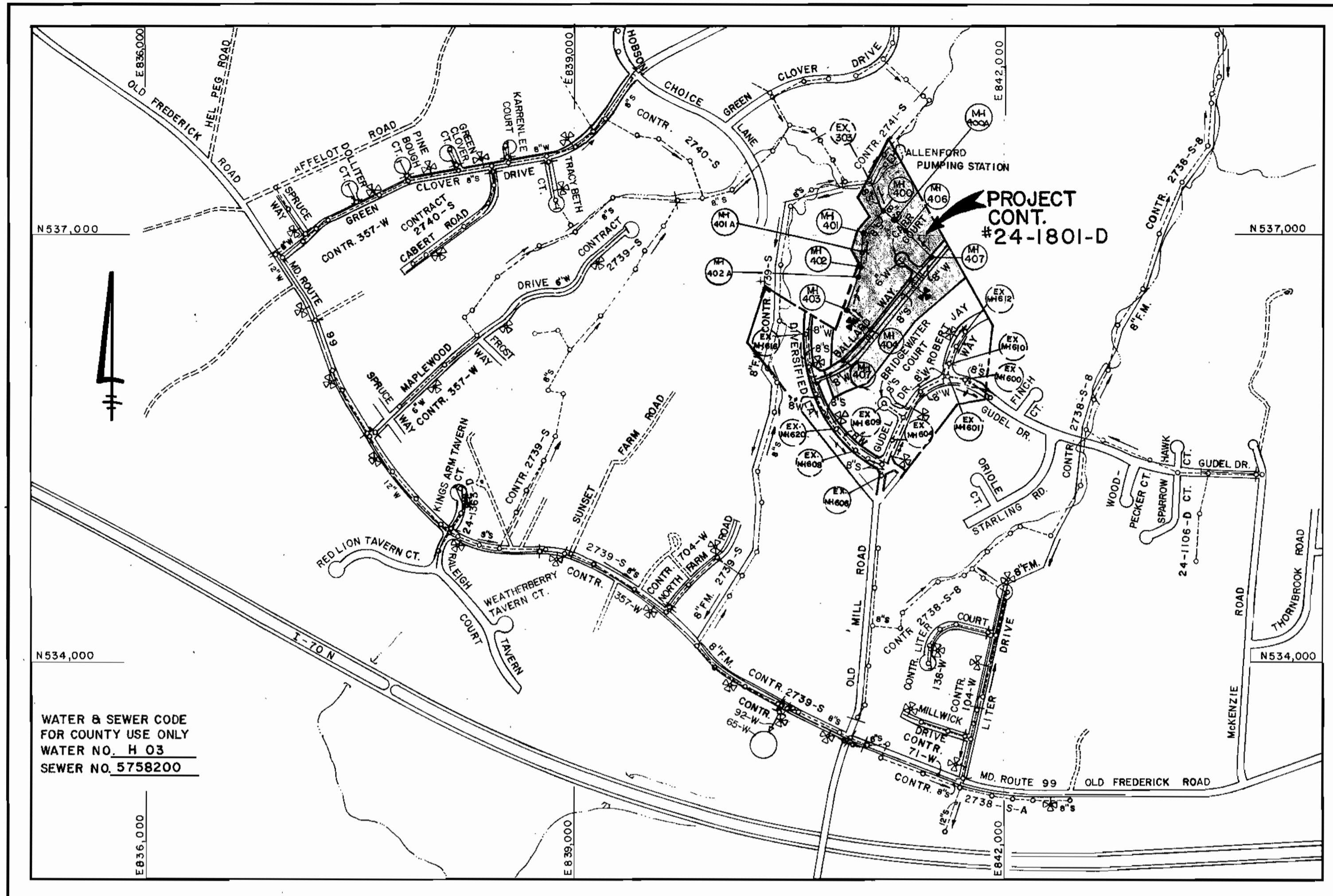


**GENERAL NOTES**

- 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  
 C & 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.
- 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 W.T. IN PLAN AND PROFILE SHALL HAVE WATER-TIGHT FRAME AND COVERS STANDARD DETAIL 65.52 WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- ALL 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 65.51.
- ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH AWWA SPECIFICATION C-153: DUCTILE IRON COMPACT FITTINGS, 3-INCH THROUGH 12-INCH FOR WATER & OTHER LIQUIDS.



QUANTITIES			
ITEM	EST'D	AS-BUILT	SUPPLIER
8" SEWER	2,137 L.F.	2084 L.F.	BRS
8" S(D.I.P.)	198 L.F.	193 L.F.	ATLANTIC C.P.
6" SEWER	1,030 L.F.	1032 L.F.	BRS
MANHOLES	12 EA.	12 EA.	ATLANTIC C.P.
8" WATER	1,095 L.F.	1195 L.F.	" "
6" WATER	213 L.F.	200 L.F.	" "
4" WATER	32 L.F.	28 L.F.	" "
FIRE HYD. 16" V	2 EA.	2 EA.	B.R.C.
3/4" WHC.	463 L.F.	537 L.F.	B.R.C.
1" WHC.	205 L.F.	144 L.F.	" "
BLOW-OFF	2 EA.	2 EA.	" "
8" VALVES	1 EA.	1 EA.	" "
6" VALVES (EXCL. FH)	1 EA.	1 EA.	" "

WATER & SEWER CODE FOR COUNTY USE ONLY  
 WATER NO. H 03  
 SEWER NO. 5758200

TYPE OF BUILDING	RESIDENTIAL
NUMBER OF LOTS	31 (30 BUILDABLE)
NO. OF WATER HOUSE CONNECTIONS	30
NO. OF SEWER HOUSE CONNECTIONS	30
DRAINAGE AREA	LITTLE PATUXENT

SCALE: 1" = 600'

TREATMENT PLANT: PATAPSCO WASTEWATER TREATMENT PLANT VIA THE ROUTE 108 PUMPING STATION.

# CONTRACT NO. 24-1801-D BRIDGEWATER SECTION 1 AREA 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 F 88-181

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.  
*James M. Helms* 5/20/88  
 U.S. SOIL CONSERVATION SERVICE DATE

PLAN REFERENCE NUMBERS:
S 87-83
P 88-15
F 88-181

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

APPROVED:  
*Robert W. Helms* 5/20/88  
 HOWARD SOIL CONSERVATION DISTRICT DATE

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND	
<i>James M. Helms</i> 5/20/88 DIRECTOR OF PUBLIC WORKS DATE	<i>Robert W. Helms</i> 5/27/88 CHIEF, BUREAU OF ENGINEERING DATE
<i>Robert M. Bowers</i> 5-26-88 CHIEF, BUREAU OF UTILITIES DATE	<i>James M. Helms</i> 5/27/88 CHIEF, LAND DEVELOPMENT DIVISION DATE

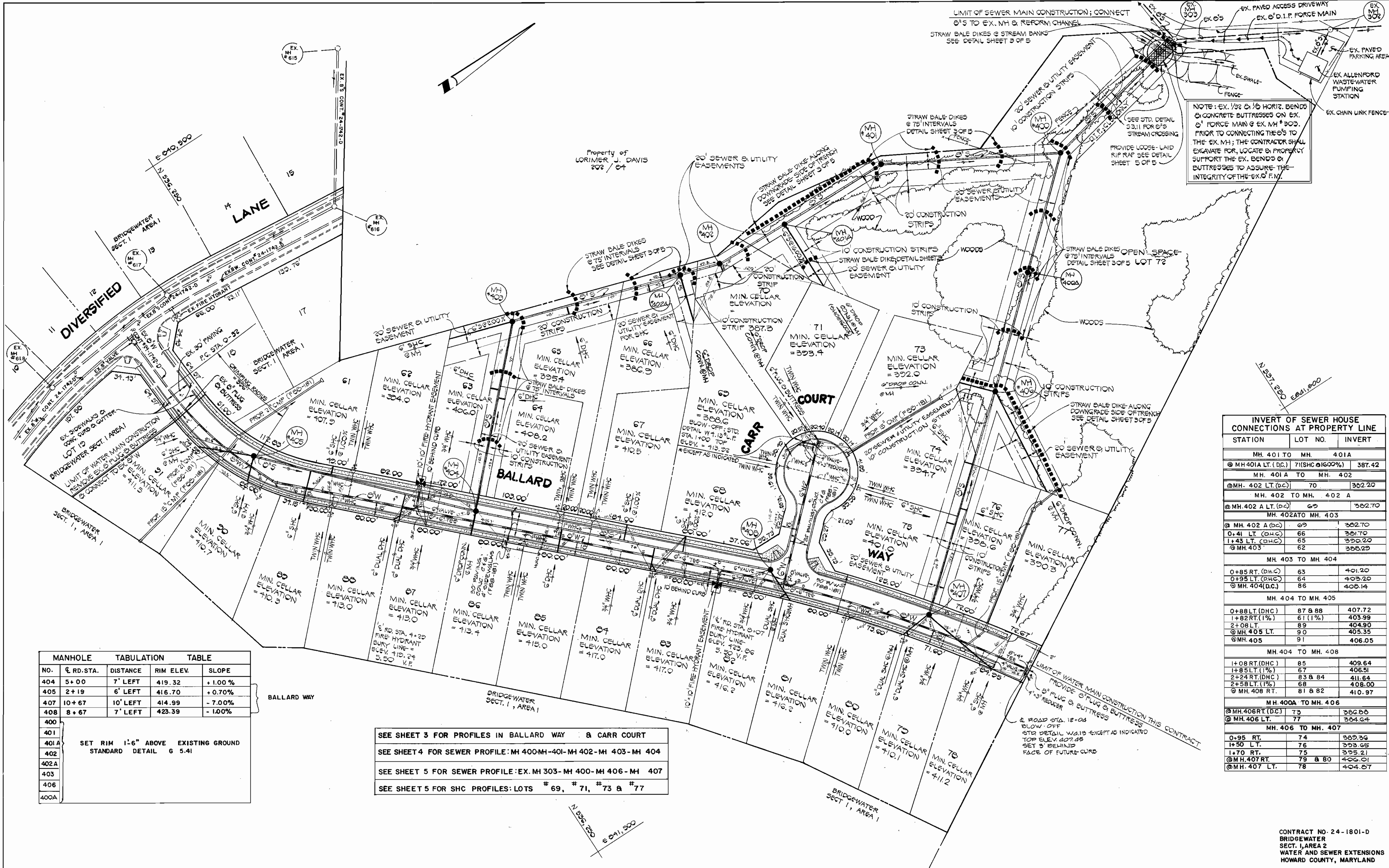
FISHER, COLLINS AND CARTER, INC. #9757 CONSULTING ENGINEERS AND LAND SURVEYORS 8388 COURT AVENUE ELLCOTT CITY, MARYLAND 21043
--

DES: T.A.F.			
DRN: J.O.			
CHK: P.W.K.			
DATE:	G.W. [ ]	REVISE VICINITY MAP	5-27-88
	BY NO	REVISION	DATE

TITLE SHEET
600' SCALE MAP NO. 17 BLOCK NO.

<b>BRIDGEWATER</b>	
SECTION 1 AREA 2	
CONTRACT NO. 24-1801-D	
SECOND ELECTION DISTRICT	
HOWARD COUNTY, MARYLAND	
SCALE AS SHOWN	SHEET 1 OF 5





NOTE: EX. 1/2" & 1/4" HORIZ. BENDS & CONCRETE BUTTRESSES ON EX. 6" FORCE MAIN & EX. MH #303. PRIOR TO CONNECTING THE 6" TO THE EX. MH, THE CONTRACTOR SHALL EXCAVATE FOR, LOCATE & PROPERLY SUPPORT THE EX. BENDS & BUTTRESSES TO ASSURE THE INTEGRITY OF THE EX. S.F.M.

STATION	LOT NO.	INVERT
MH. 401 TO MH. 401A		
@ MH. 401A LT. (D.C.)	71(SHC @ 16.00%)	387.42
MH. 401A TO MH. 402		
@ MH. 402 LT. (D.C.)	70	382.20
MH. 402 TO MH. 402 A		
@ MH. 402 A LT. (D.C.)	69	382.70
MH. 402A TO MH. 403		
@ MH. 402 A (D.C.)	69	382.70
0+41 LT. (D.H.C.)	66	381.70
1+43 LT. (D.H.C.)	65	380.20
@ MH. 403	62	388.25
MH. 403 TO MH. 404		
0+85 RT. (D.H.C.)	63	401.20
0+95 LT. (D.H.C.)	64	403.20
@ MH. 404 (D.C.)	86	408.14
MH. 404 TO MH. 405		
0+88 LT. (D.H.C.)	87 & 88	407.72
1+82 RT. (1%)	61 (1%)	403.99
2+08 LT.	89	404.90
@ MH. 405 LT.	90	405.35
@ MH. 405	91	406.05
MH. 404 TO MH. 408		
1+08 RT. (D.H.C.)	85	409.64
1+85 LT. (1%)	67	406.51
2+24 RT. (D.H.C.)	83 & 84	411.64
2+58 LT. (1%)	68	408.00
@ MH. 408 RT.	81 & 82	410.97
MH. 400A TO MH. 406		
@ MH. 406 RT. (D.C.)	73	386.86
@ MH. 406 LT.	77	384.64
MH. 406 TO MH. 407		
0+95 RT.	74	389.36
1+50 LT.	76	393.65
1+70 RT.	75	395.21
@ MH. 407 RT.	79 & 80	406.01
@ MH. 407 LT.	78	404.87

MANHOLE NO.	RD. STA.	DISTANCE	RIM ELEV.	SLOPE
404	5+00	7' LEFT	419.32	+1.00%
405	2+19	6' LEFT	416.70	+0.70%
407	10+67	10' LEFT	414.99	-7.00%
408	8+67	7' LEFT	423.39	-1.00%
401	SET RIM 1'-6" ABOVE EXISTING GROUND STANDARD DETAIL G 5.41			
401A				
402				
402A				
403				
406				
400A				

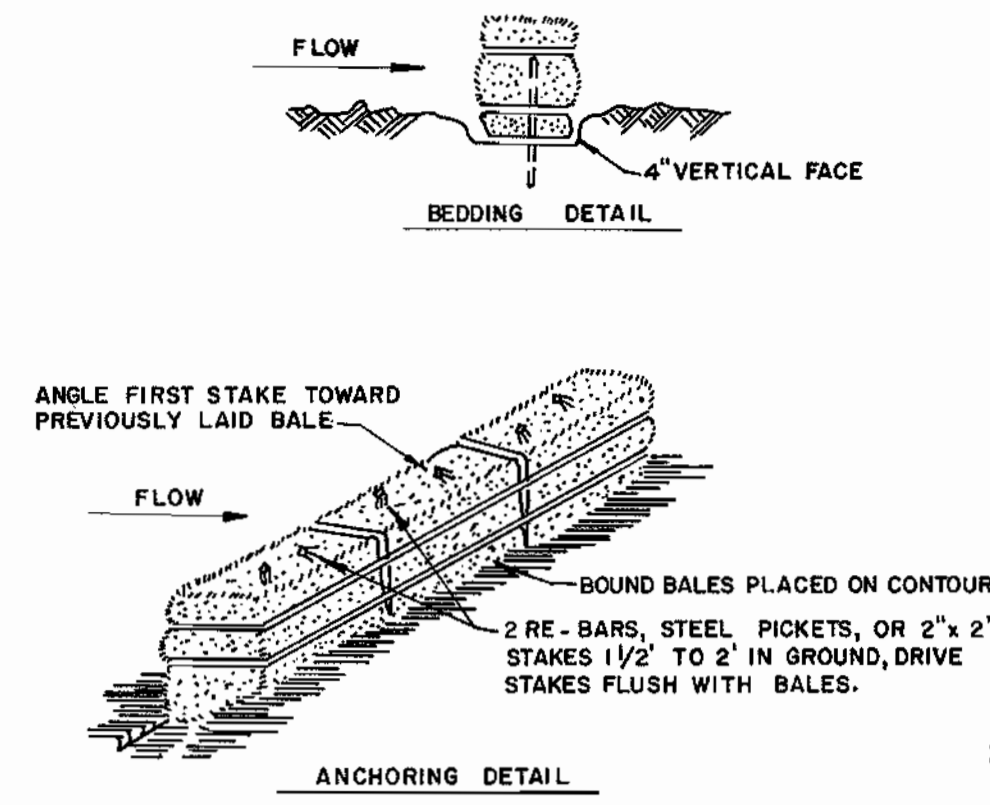
SEE SHEET 3 FOR PROFILES IN BALLARD WAY & CARR COURT  
 SEE SHEET 4 FOR SEWER PROFILE: MH 400-MH-401-MH 402-MH 403-MH 404  
 SEE SHEET 5 FOR SEWER PROFILE: EX. MH 303-MH 400-MH 406-MH 407  
 SEE SHEET 5 FOR SHC PROFILES: LOTS # 69, # 71, # 73 & # 77

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Director of Public Works: <i>James P. ...</i> 6/1/88 Chief, Bureau of Engineering: <i>Robert M. ...</i> 5/27/88 Chief, Bureau of Utilities: <i>Robert M. ...</i> 5-26-88 Chief, Land Development Division: <i>Robert M. ...</i> 5/27/88	FISHER, COLLINS AND CARTER, INC. CONSULTING ENGINEERS AND LAND SURVEYORS 8388 COURT AVENUE ELLICOTT CITY, MARYLAND 21043 #9757 Terrell A. Fisher, Date	STATE OF MARYLAND PROFESSIONAL ENGINEER TERRELL A. FISHER No. 9757	DES: P.W.K.						
			DRN: J.O.						
			CHK: T.A.F.						
			DATE: 3/24/88						
			G.W. BY NO.						
			REVISION						
			REVISION						
			DATE						
			600' SCALE MAP NO. 17						
			BLOCK NO.						

BRIDGE WATER  
 SECTION ONE AREA TWO  
 CONTRACT NO. 24-1801-D  
 SECOND ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

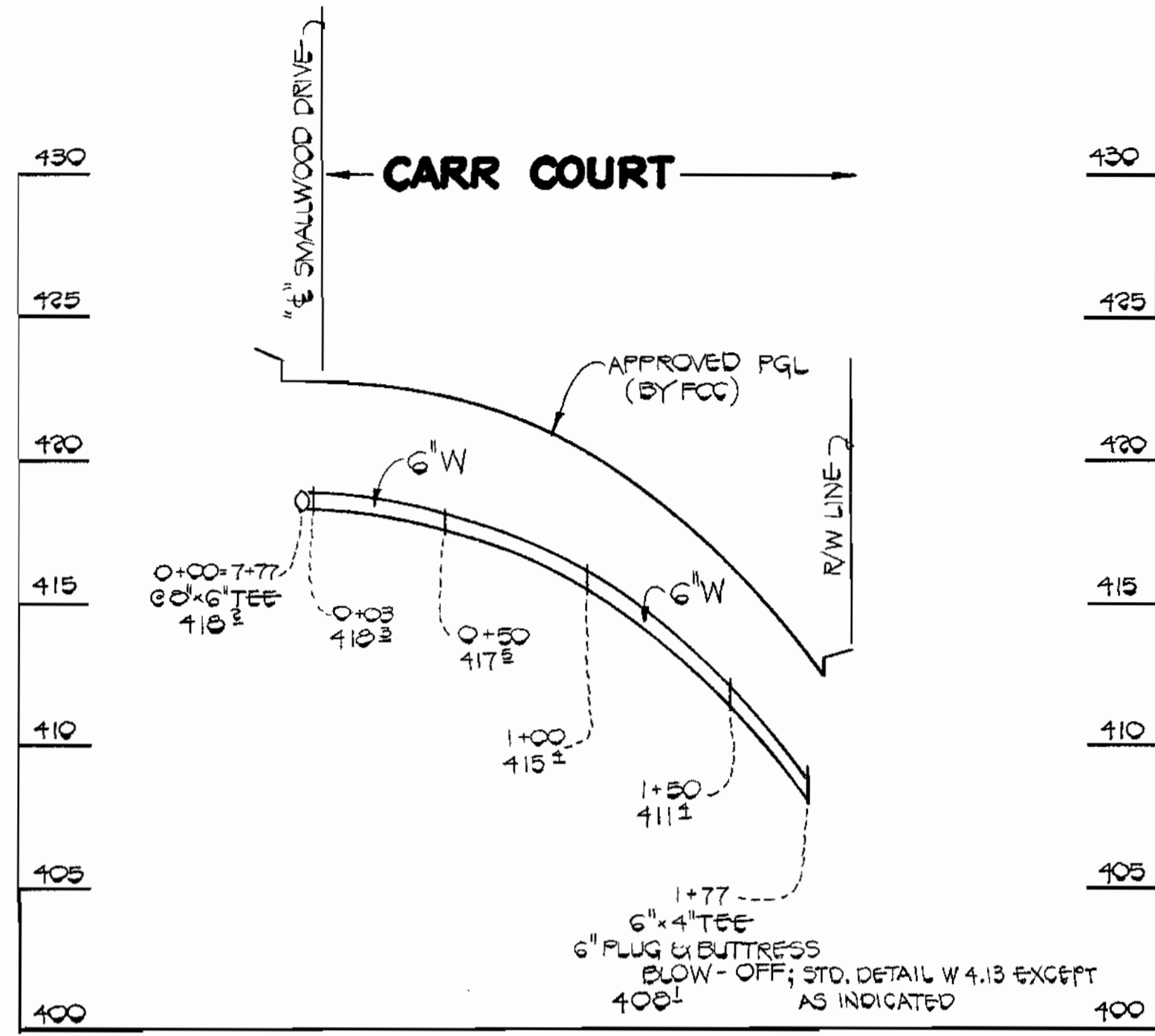
SCALE AS SHOWN  
 SHEET 2 OF 5



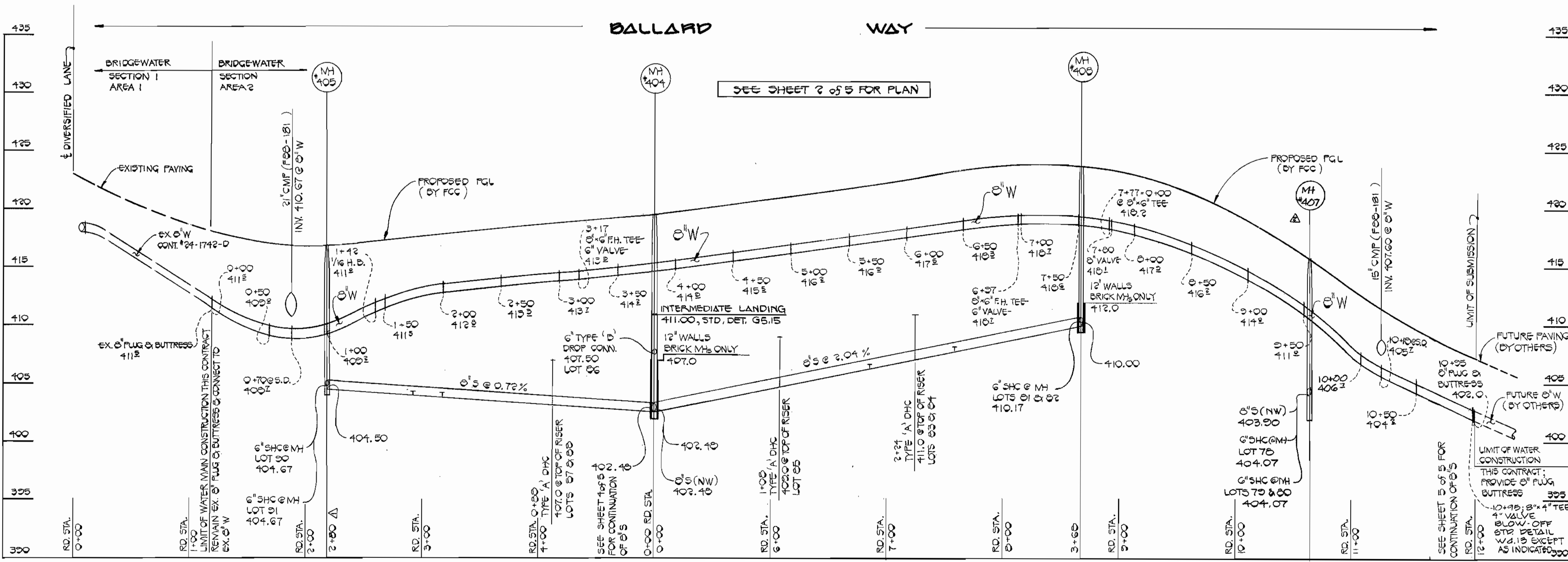


**STRAW BALE DIKE**

- 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 REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
- BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.



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



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

CONTRACT NO. 24-1801-D  
BRIDGE WATER SECT. 1, AREA 2  
WATER AND SEWER EXTENSIONS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*James M. Shaw* 5-26-88  
DIRECTOR OF PUBLIC WORKS DATE

*Robert J. Brinson* 5/27/88  
CHIEF, BUREAU OF UTILITIES DATE

*William R. Kelly* 5-27-88  
CHIEF, BUREAU OF ENGINEERING DATE

*Frank J. Ryan* 5/27/88  
CHIEF, LAND DEVELOPMENT DIVISION DATE

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

STATE OF MARYLAND  
TERRELL A. FISHER  
REGISTERED PROFESSIONAL ENGINEER  
NO. 9787

DATE: 5/27/88

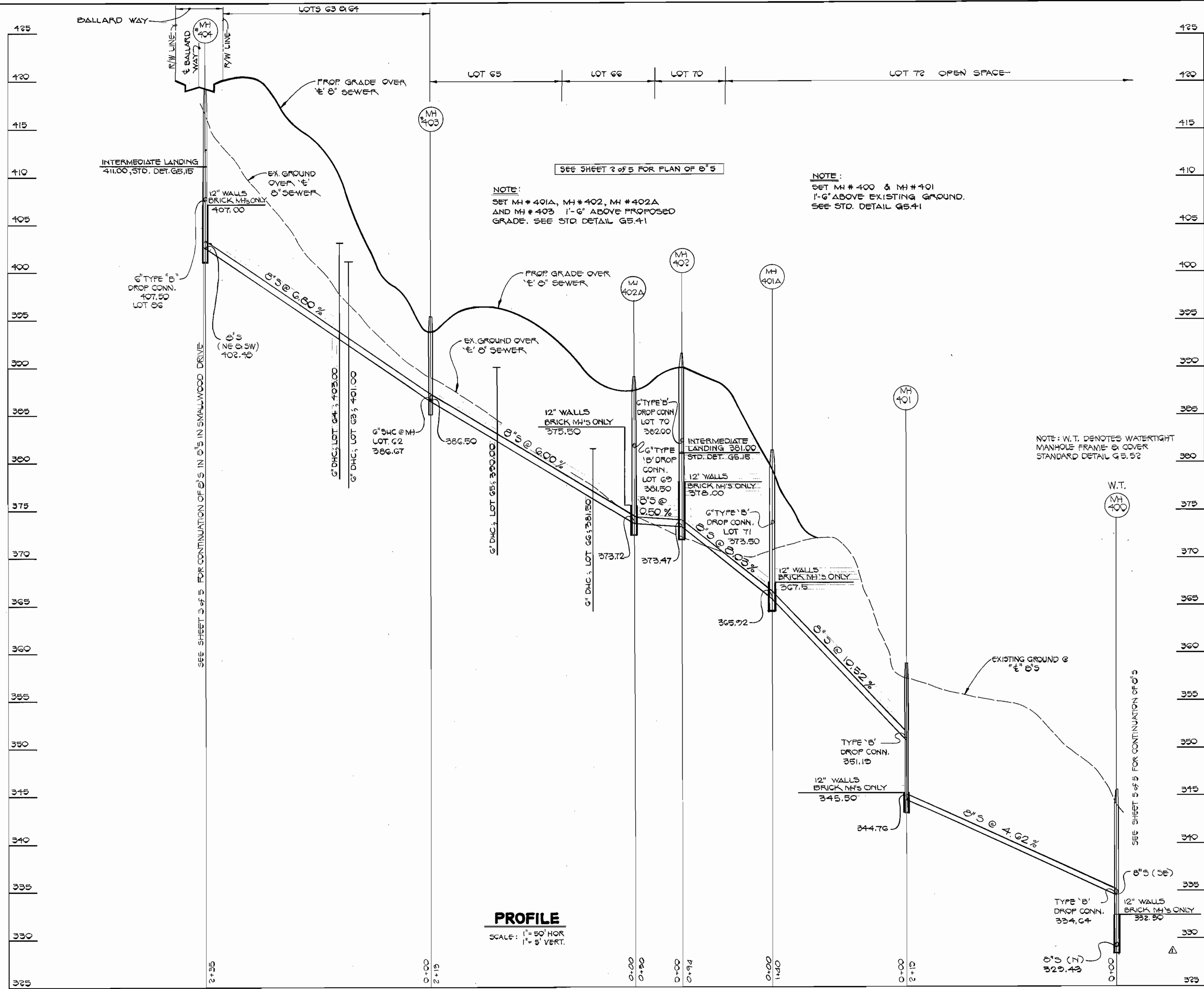
DES: P. W. K.			
DRN: J.O.			
CHK: T. A. F.			
DATE: 5/27/88			
BY NO.			
REVISION			
DATE			

**PROFILES**  
**WATER AND SEWER MAINS**

600' SCALE MAP NO. 17 BLOCK NO.

**BRIDGE WATER**  
SECTION ONE AREA TWO  
CONTRACT NO. 24-1801-D  
SECOND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 3 OF 5



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

SEE SHEET 2 OF 5 FOR PLAN OF 8" S

**NOTE:**  
SET MH # 401A, MH # 402, MH # 402A  
AND MH # 403 1'-6" ABOVE PROPOSED  
GRADE. SEE STD. DETAIL G5.41

**NOTE:**  
SET MH # 400 & MH # 401  
1'-6" ABOVE EXISTING GROUND.  
SEE STD. DETAIL G5.41

**NOTE:** W.T. DENOTES WATERTIGHT  
MANHOLE FRAME & COVER  
STANDARD DETAIL G5.52

CONTRACT NO. 24-1801-D  
BRIDGEWATER  
SECTION 1 AREA 2  
WATER AND SEWER EXTENSIONS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*James P. Kline* 2/2/88  
DIRECTOR OF PUBLIC WORKS DATE

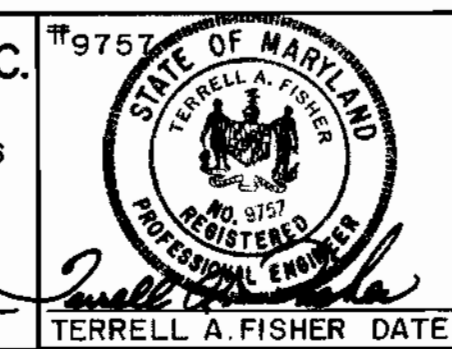
*Robert D. Sumner* 5-26-88  
CHIEF, BUREAU OF UTILITIES DATE

*James P. Kline* 2/2/88  
CHIEF, BUREAU OF ENGINEERING DATE

*Terrell A. Fisher* 5/17/88  
CHIEF, LAND DEVELOPMENT DIVISION DATE

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

8388 COURT AVENUE  
ELLICOTT CITY, MARYLAND 21043



DES: P. W. K.					
DRN: J. O.					
CHK: T. A. F.	G.W.	REVISION	DATE		
	DAI	REVISE SEWER MAIN PROFILES	5-2-88		
	BY	REVISE INVERT ELEVATION OF MH # 400.	5-2-88		
DATE: 2/2/88	NO.	REVISION	DATE		

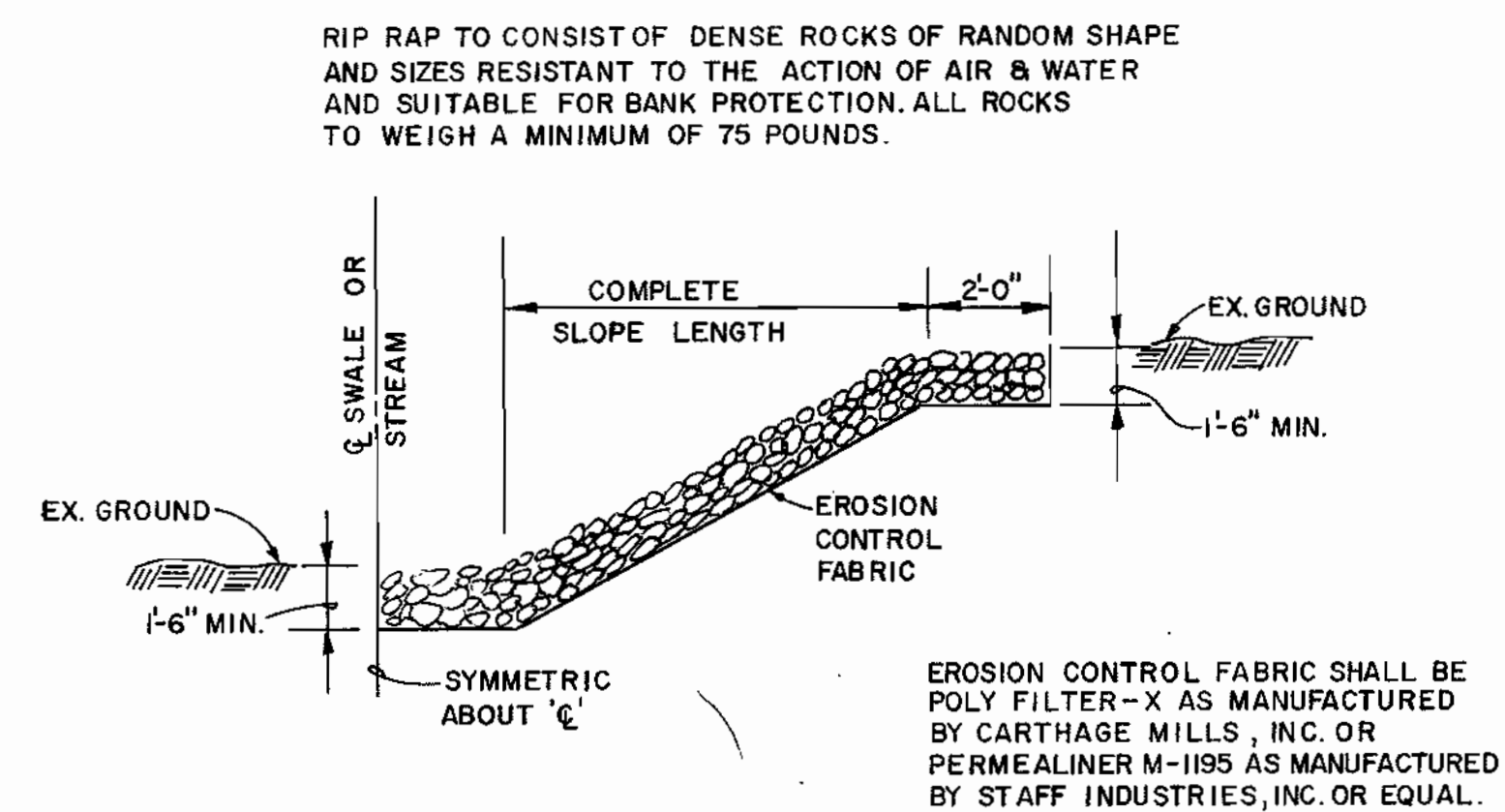
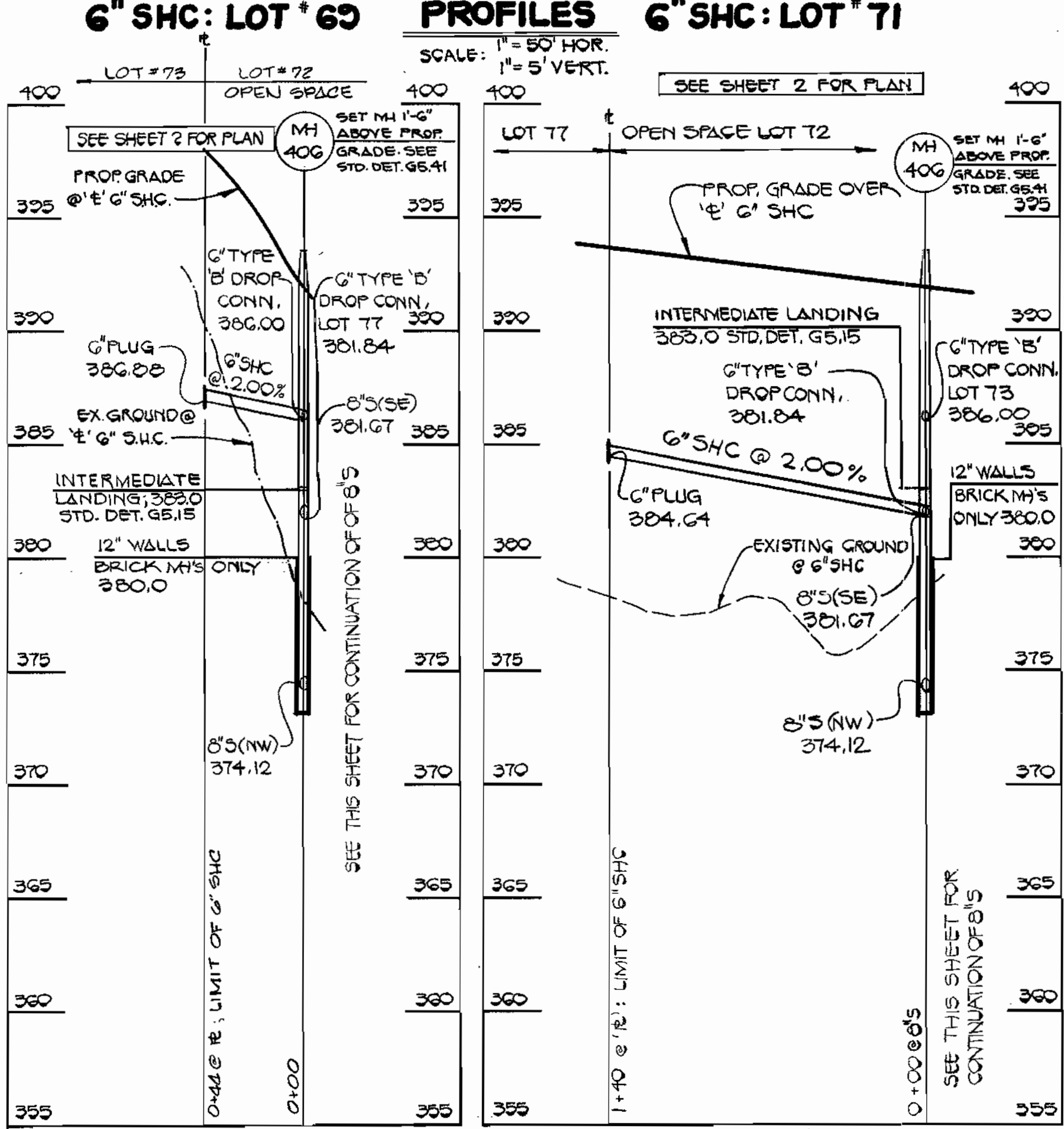
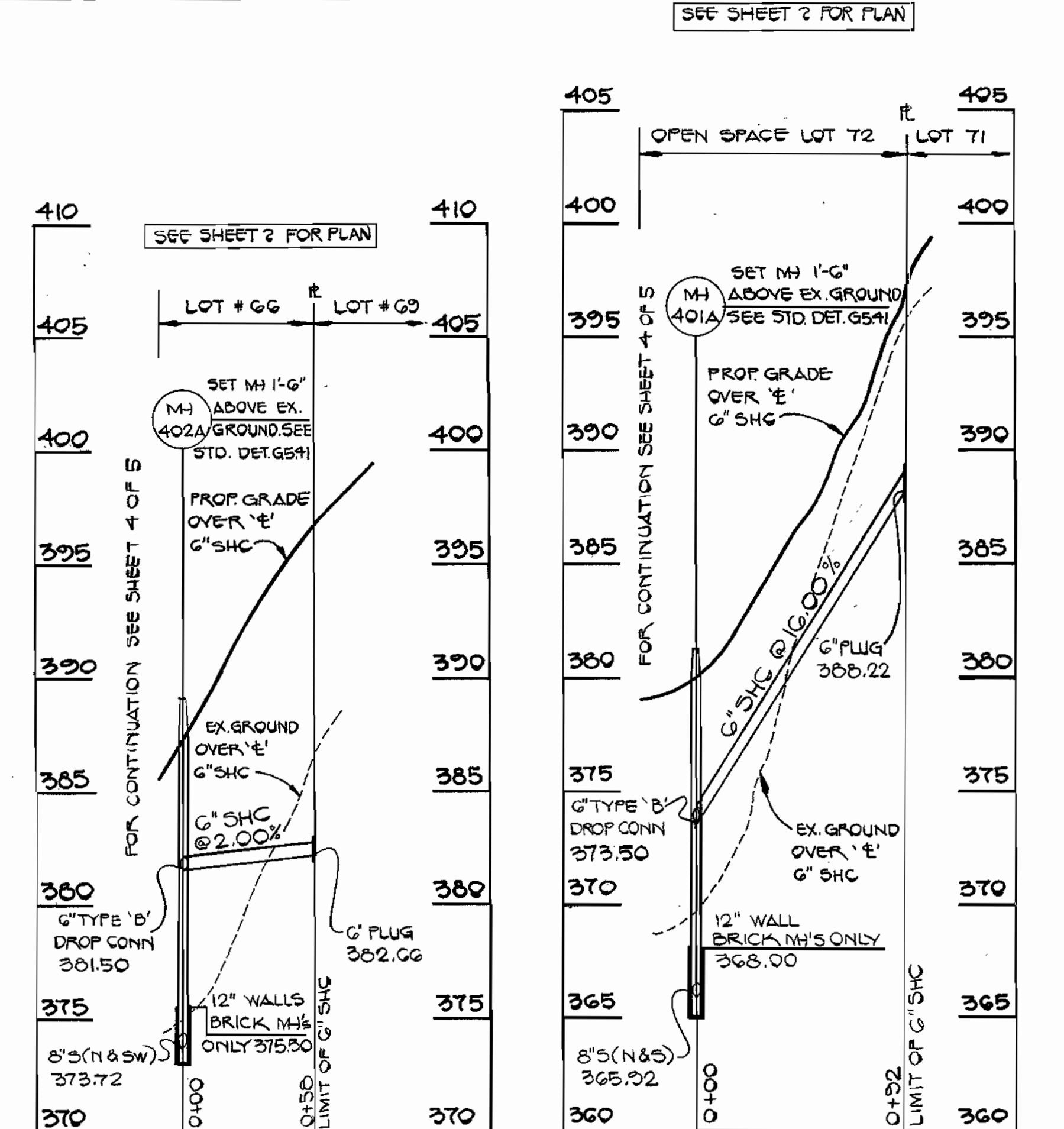
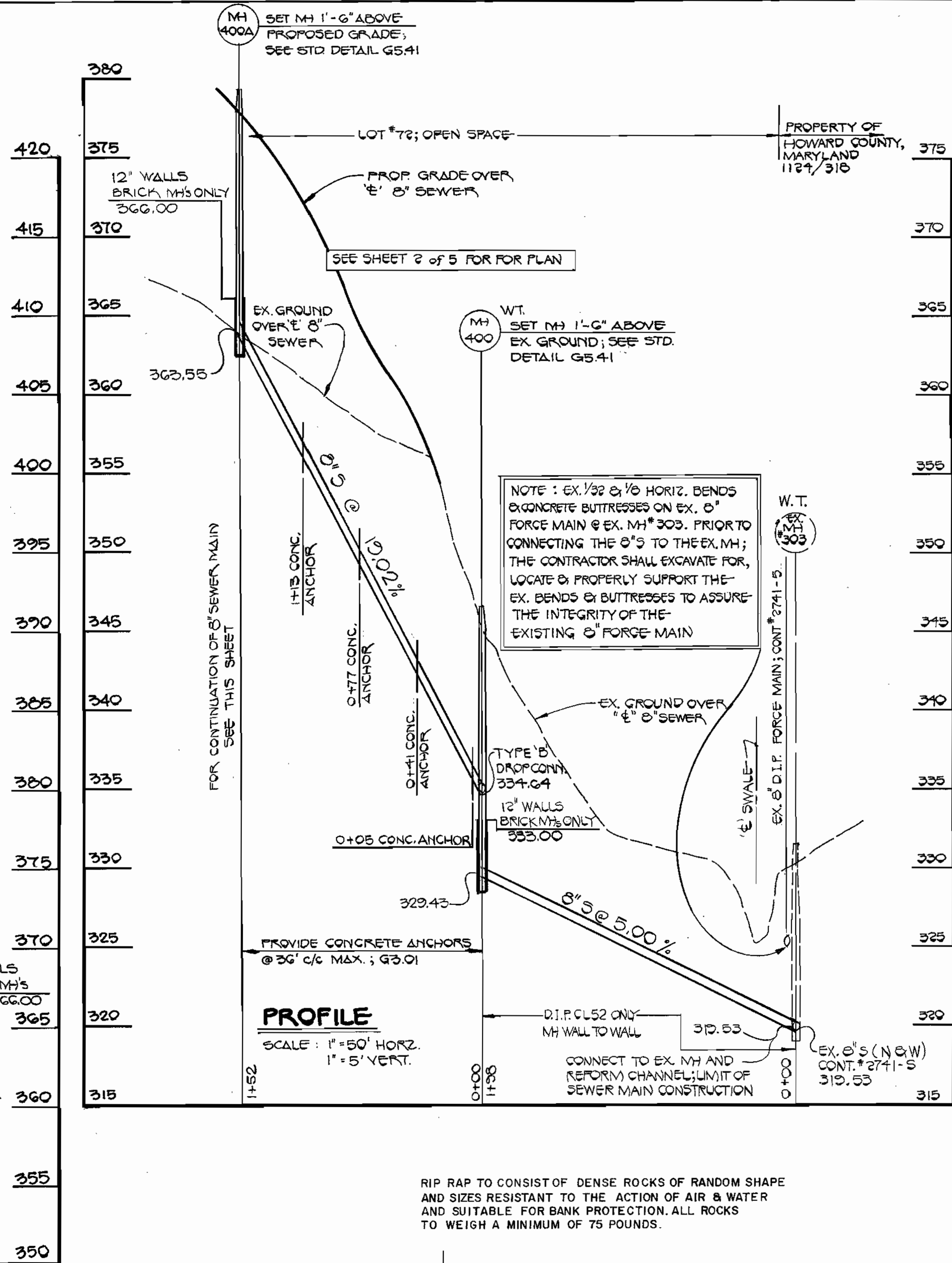
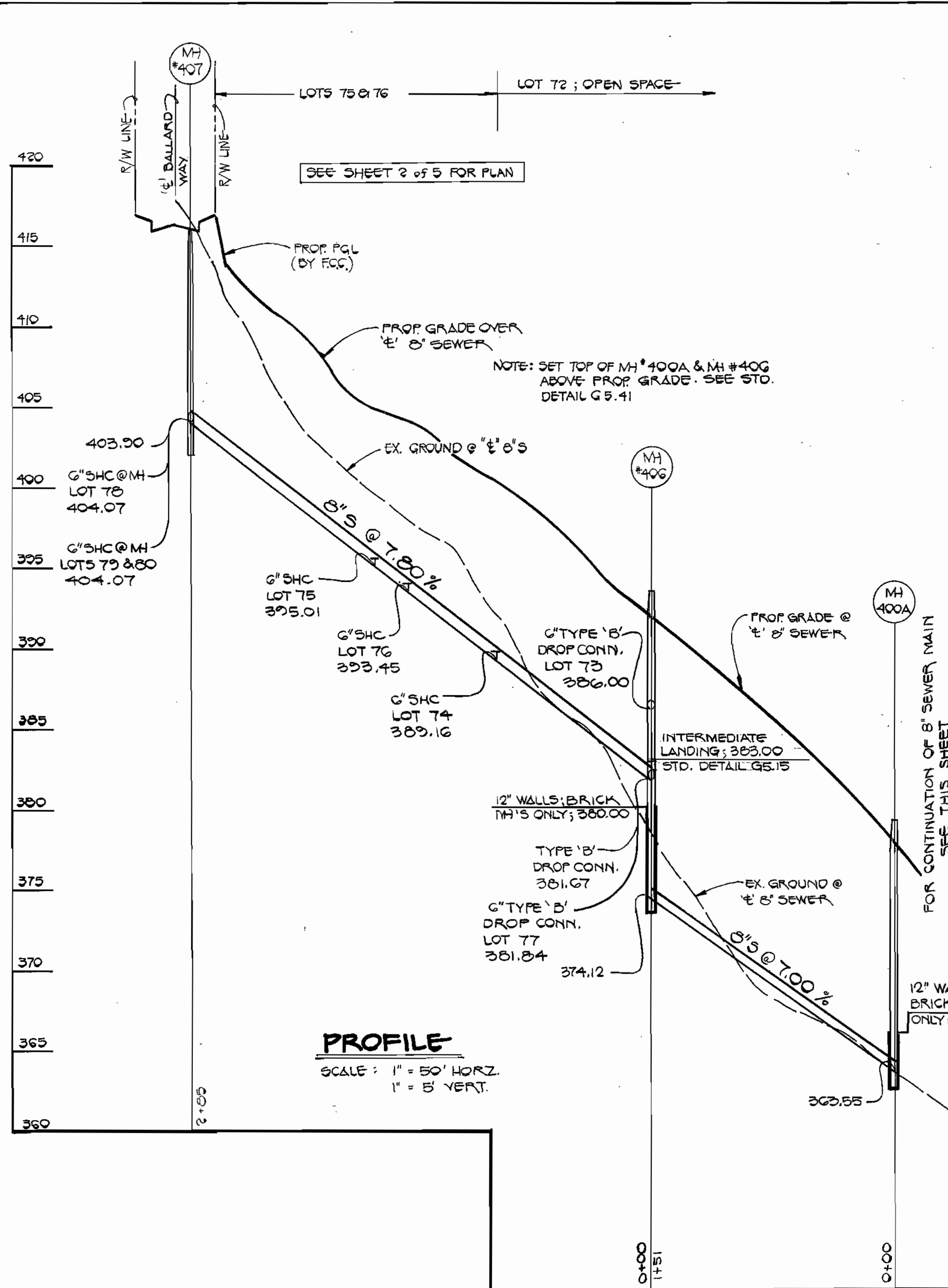
**PROFILES**  
**WATER AND SEWER MAINS**

600' SCALE MAP NO. 17 BLOCK NO.

**BRIDGEWATER**  
SECTION ONE AREA TWO  
CONTRACT NO. 24-1801-D  
SECOND ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 4 OF 5





DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND James A. Shaw 6/2/88 DIRECTOR OF PUBLIC WORKS DATE Robert H. Quinn 5-26-88 CHIEF, BUREAU OF UTILITIES DATE		FISHER, COLLINS AND CARTER, INC. #9757 CONSULTING ENGINEERS AND LAND SURVEYORS 8388 COURT AVENUE ELLICOTT CITY, MARYLAND 21043 Terrell A. Fisher DATE 7/1/88		DES: P.W.K. DRN: J.O. CHK: T.A.F. DATE: 7/1/88		REVISE SEWER MAIN PROFILES 5-8-88 BY NO. REVISION DATE		600' SCALE MAP NO. 17 BLOCK NO.		<b>PROFILES</b> <b>WATER AND SEWER MAINS</b>		<b>BRIDGEWATER</b> SECTION ONE AREA TWO CONTRACT NO. 24-1801-D BRIDGEWATER SECTION ONE, AREA TWO SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND		SCALE AS SHOWN SHEET 5 OF 5
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