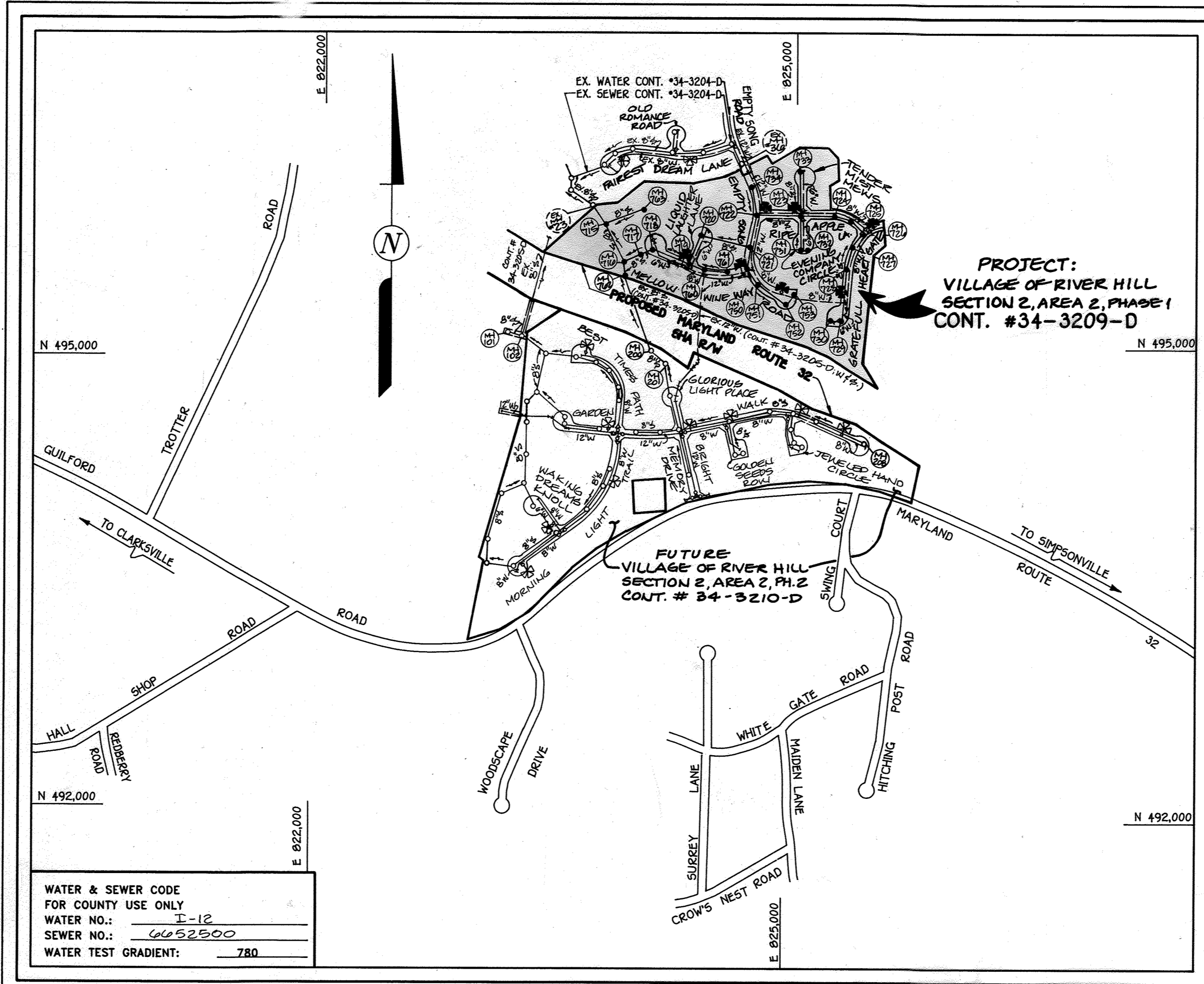


W.H.C. CHART (AS-BUILT)					
LOCATION	DISTANCE	LOCATION	DISTANCE	LOCATION	DISTANCE
LOT 128	51.4'	LOT 129	117'	LOT 130	117'
LOT 129	117'	LOT 130	117'	LOT 131	117'
LOT 130	117'	LOT 131	117'	LOT 132	117'
LOT 131	117'	LOT 132	117'	LOT 133	117'
LOT 132	117'	LOT 133	117'	LOT 134	117'
LOT 133	117'	LOT 134	117'	LOT 135	117'
LOT 134	117'	LOT 135	117'	LOT 136	117'
LOT 135	117'	LOT 136	117'	LOT 137	117'
LOT 136	117'	LOT 137	117'	LOT 138	117'
LOT 137	117'	LOT 138	117'	LOT 139	117'
LOT 138	117'	LOT 139	117'	LOT 140	117'
LOT 139	117'	LOT 140	117'	LOT 141	117'
LOT 140	117'	LOT 141	117'	LOT 142	117'
LOT 141	117'	LOT 142	117'	LOT 143	117'
LOT 142	117'	LOT 143	117'	LOT 144	117'
LOT 143	117'	LOT 144	117'	LOT 145	117'
LOT 144	117'	LOT 145	117'	LOT 146	117'
LOT 145	117'	LOT 146	117'	LOT 147	117'
LOT 146	117'	LOT 147	117'	LOT 148	117'
LOT 147	117'	LOT 148	117'	LOT 149	117'
LOT 148	117'	LOT 149	117'	LOT 150	117'
LOT 149	117'	LOT 150	117'	LOT 151	117'
LOT 150	117'	LOT 151	117'	LOT 152	117'
LOT 151	117'	LOT 152	117'	LOT 153	117'
LOT 152	117'	LOT 153	117'	LOT 154	117'
LOT 153	117'	LOT 154	117'	LOT 155	117'
LOT 154	117'	LOT 155	117'	LOT 156	117'
LOT 155	117'	LOT 156	117'	LOT 157	117'
LOT 156	117'	LOT 157	117'	LOT 158	117'
LOT 157	117'	LOT 158	117'	LOT 159	117'
LOT 158	117'	LOT 159	117'	LOT 160	117'
LOT 159	117'	LOT 160	117'	LOT 161	117'
LOT 160	117'	LOT 161	117'	LOT 162	117'
LOT 161	117'	LOT 162	117'	LOT 163	117'

QUANTITIES				
ITEM	ESTIMATED	QUANTITIES	AS-BUILT	SUPPLIER
12" WATER	1075 L.F.	1,055'	CL 52	ATLANTIC STATES - AI PIPES
8" WATER	1,254 L.F.	1,250'	CL 52	" " " " " "
6" WATER	1,211 L.F.	1,200'	CL 52	" " " " " "
4" WATER	10 L.F.	14'	CL 52	" " " " " "
1" WHC	1527 L.F.	1470'	TYPE K	HOWELL METALS - BR.S.
3/4" WHC	1530 L.F.	1500'	TYPE K	" " " " " "
FIRE HYDRANTS	6 EACH	6 EA.		MUELLER CO. - BR.S.
12" VALVE	4 EACH	4 EA.		MUELLER CO. - BR.S.
8" VALVE	6 EACH	6 EA.		" " " " " "
6" VALVE	6 EACH	6 EA.		" " " " " "
6" VALVE (W/O FH.)	4 EACH	4 EA.		" " " " " "
4" VALVE	2 EACH	2 EA.		" " " " " "
8" SEWER	3535 L.F.	3534'	SDR 35	J-M MFG. CO. - BR.S.
8" D.I.P. SEWER	875 L.F.	873'	CL 52	ATLANTIC STATES - AI PIPES
4" SEWER	3407 L.F.	3400'	SDR 35	J-M MFG. CO. - BR.S.
MANHOLES	28 EACH	28 EA.	PRECAST	ATLANTIC CONCRETE
NAME OF UTILITY CONTRACTOR: GAINES AND COMPANY, INC.				
SURVEY & DRAFTING DIVISION AS-BUILT DATE:				



TYPE OF BUILDING: RESIDENTIAL  
 NUMBER OF LOTS: 111 (BUILDABLE: 1109)  
 NO. OF WATER HOUSE CONNECTIONS: 109  
 NO. OF SEWER HOUSE CONNECTIONS: 110  
 DRAINAGE AREA: MIDDLE PATUXENT  
 TREATMENT PLANT: LITTLE PATUXENT WATER QUALITY MANAGEMENT CENTER

**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.G.S. DATUM.
- ALL PIPE ELEVATIONS ARE INVERT ELEVATIONS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 6". CLEAR ALL POLES 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 (1991 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  $\square$  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 - 850-4820
  - 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.
- T.B. DENOTES TEST BORING.
- MANHOLES SHOWN WITH 12" AND 16" WALLS ARE FOR BRICK MANHOLES ONLY.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATER TIGHT FRAME AND COVERS, STANDARD DETAIL G 5.52.
- WHERE WATER TIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS.
- HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT THE CELLAR CANNOT BE SERVED.
- ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING, UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS.
- MANHOLES LOCATED WITHIN THE PROPOSED ROADWAY SHALL HAVE STANDARD HEAVY TRAFFIC MANHOLE FRAMES AND COVERS, STANDARD DETAIL G 5.51.
- THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALL.
- WATER MAINS AND WATER HOUSE CONNECTION LINES MUST BE PLACED AS TO HAVE ONE (1) FOOT SEPARATION FROM THE SEWER MAIN OR SEWER HOUSE CONNECTION AS THEY PASS ABOUT IT.
- 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 BUTTERFUSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR IN THE DRAWINGS.
- FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATION SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE RESTRAINED AND BUTTERFUSED 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.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, (410) 313-2450 AT LEAST FIVE WORKING DAYS BEFORE ANY OPEN CUT OF ANY COUNTY ROAD OR BORING/JACKING OPERATION IN COUNTY ROADS FOR LAYING WATER/SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(c) OF THE HOWARD COUNTY CODE.

**CONTRACT No. 34-3209-D**  
**VILLAGE OF RIVER HILL**  
**SECTION 2 AREA 2**  
**PHASE 1**  
**WATER AND SEWER MAIN EXTENSIONS**  
**HOWARD COUNTY, MARYLAND**  
**DEPARTMENT OF PUBLIC WORKS**

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

APPROVED: *John H. ...* 7/6/93  
 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-93-80 REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

*John H. ...* 7/6/93  
 HOWARD SOIL CONSERVATION DISTRICT DATE

PLAN REFERENCE NUMBERS:  
 P 92-15  
 F 93-80

CONTRACT NO. 34-3209-D  
 VILLAGE OF RIVER HILL  
 SECTION 2, AREA 2, PHASE 1  
 WATER AND SEWER EXTENSIONS  
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND

*James M. ...* 7/8/93  
 DIRECTOR OF PUBLIC WORKS DATE

*Richard E. ...* 7/8/93  
 CHIEF, BUREAU OF ENGINEERING DATE

*Michael A. ...* 6-25-93  
 CHIEF, BUREAU OF UTILITIES DATE

*John H. ...* 7/6/93  
 CHIEF, LAND DEVELOPMENT DIVISION DATE

FISHER, COLLINS & CARTER, INC.  
 CIVIL ENGINEERING CONSULTANTS &  
 LAND SURVEYORS  
 SUITE 100, 9171 BALTIMORE NATIONAL PIKE  
 ELLICOTT CITY, MARYLAND 21042  
 (410) 461 - 2855

#9757  
 STATE OF MARYLAND  
 TERRELL A. FISHER

DES: P.W.K./M.J.M. KCI MELLOW WINEWAY SEWER AND STREAM STABILIZATION SHEETS 8A THROUGH 8N ADDED 8/20/93

DRWN: D.A.N.

CHK: P.W.K.

DATE: 2-5-93

TITLE SHEET

600' SCALE MAP NO. 35 BLOCK NO. 15

VILLAGE OF RIVER HILL  
 SECTION 2, AREA 2, PHASE 1  
 LOTS 128 - 236, 240 & 241

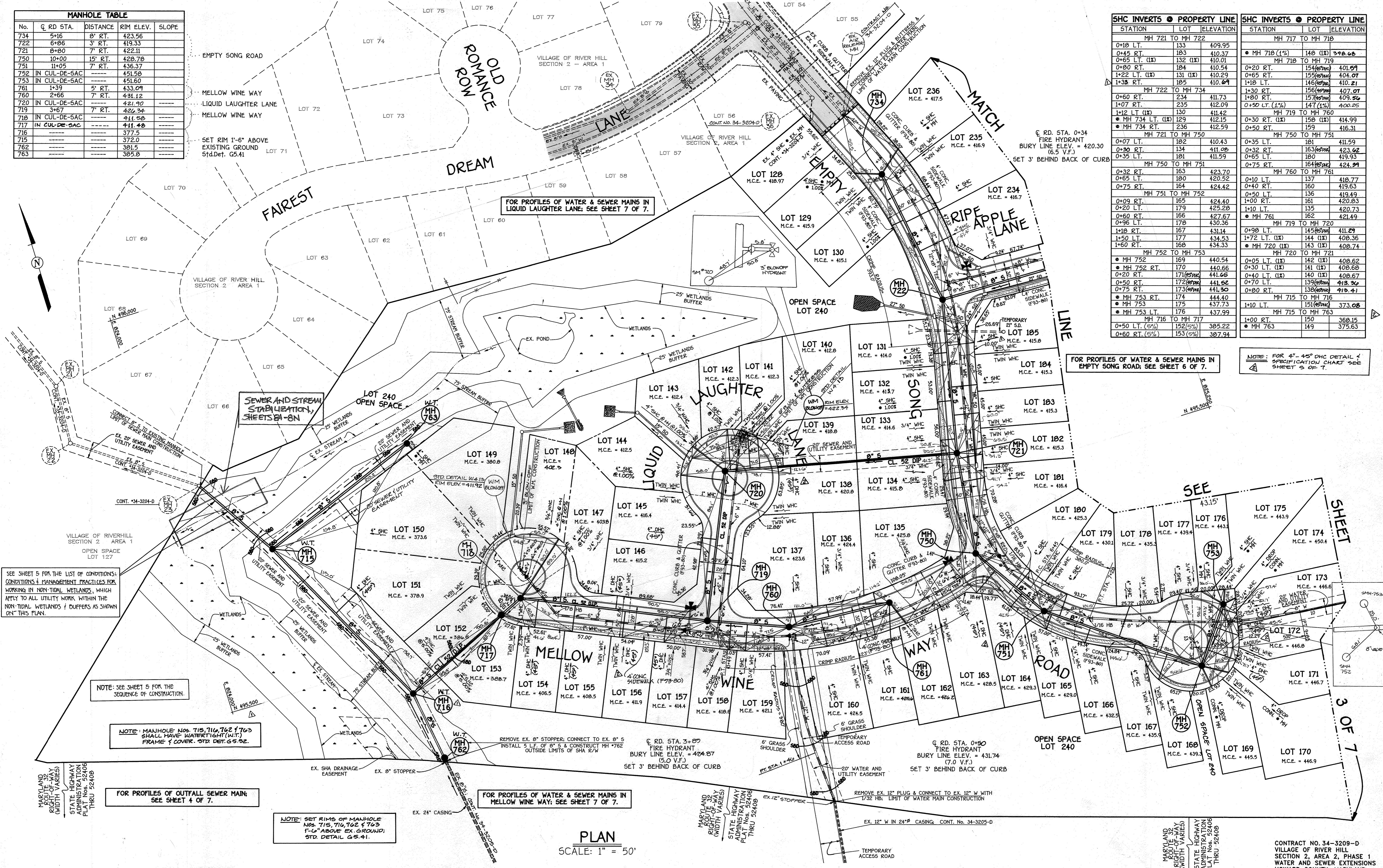
CONTRACT NO. 34-3209-D  
 FIFTH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 1 OF 2

MANHOLE TABLE				
No.	Q. RD. STA.	DISTANCE	RIM ELEV.	SLOPE
734	5+16	8' RT.	423.56	
722	6+06	3' RT.	419.33	
721	8+00	7' RT.	422.11	
750	10+00	15' RT.	420.79	
751	11+05	7' RT.	436.37	
752	IN CUL-DE-SAC		451.60	
753	IN CUL-DE-SAC		451.60	
761	1+39	5' RT.	433.09	
760	2+66	7' RT.	431.12	
720	IN CUL-DE-SAC		421.90	
719	3+67	7' RT.	422.34	
718	IN CUL-DE-SAC		411.58	
717	IN CUL-DE-SAC		411.48	
716			377.5	
715			372.0	
762			381.5	
763			385.8	

SHC INVERTS • PROPERTY LINE			SHC INVERTS • PROPERTY LINE		
STATION	LOT	ELEVATION	STATION	LOT	ELEVATION
MH 721 TO MH 722			MH 717 TO MH 718		
0+18 LT.	133	409.95	• MH 718 (1%)	148 (IX)	398.68
0+45 RT.	183	410.37	MH 718 TO MH 719		
0+65 LT. (IX)	132 (IX)	410.01	0+20 RT.	154 (IX)	401.59
0+80 RT.	184	410.54	0+65 RT.	155 (IX)	404.07
1+22 LT. (IX)	131 (IX)	410.29	1+18 LT.	146 (IX)	410.21
1+38 RT.	185	410.67	1+30 RT.	156 (IX)	407.07
MH 722 TO MH 734			1+80 RT.	157 (IX)	409.50
0+60 RT.	234	411.73	0+30 LT. (1%)	147 (IX)	400.25
1+07 RT.	235	412.09	MH 719 TO MH 720		
1+12 LT. (IX)	130	411.42	• MH 734 LT. (IX)	129	412.15
• MH 734 LT. (IX)	129	412.15	0+30 RT. (IX)	158 (IX)	414.99
• MH 734 RT. (IX)	236	412.59	0+50 RT.	159	416.31
MH 721 TO MH 750			MH 750 TO MH 751		
0+07 LT.	182	410.43	0+35 LT.	181	411.59
0+30 RT.	134	411.08	0+32 RT.	163 (IX)	423.62
0+35 LT.	181	411.59	0+65 LT.	180	419.93
MH 750 TO MH 751			0+75 RT.	164 (IX)	424.91
0+32 RT.	163	423.70	MH 760 TO MH 761		
0+65 LT.	180	420.52	0+10 LT.	137	418.77
0+75 RT.	164	424.42	0+40 RT.	160	419.63
MH 751 TO MH 752			0+50 LT.	136	419.49
0+09 RT.	165	424.40	1+00 RT.	161	420.83
0+20 LT.	179	425.28	1+10 LT.	135	420.73
0+60 RT.	166	427.67	• MH 761	162	421.49
0+96 LT.	178	430.36	MH 719 TO MH 720		
1+18 RT.	167	431.14	0+98 LT.	145 (IX)	411.29
1+50 LT.	177	434.53	1+72 LT. (IX)	144 (IX)	408.36
1+60 RT.	168	434.33	• MH 720 (IX)	143 (IX)	408.74
MH 752 TO MH 753			MH 720 TO MH 721		
• MH 752	169	440.54	0+05 LT. (IX)	142 (IX)	408.62
• MH 752 RT.	170	440.66	0+30 LT. (IX)	141 (IX)	408.68
0+20 RT.	171 (IX)	441.68	0+40 LT. (IX)	140 (IX)	408.67
0+50 RT.	172 (IX)	441.62	0+70 LT.	139 (IX)	413.96
0+75 RT.	173 (IX)	441.30	0+80 RT.	138 (IX)	418.41
• MH 753 RT.	174	444.40	MH 715 TO MH 716		
• MH 753	175	437.73	1+10 LT.	151 (IX)	373.08
• MH 753 LT.	176	437.99	MH 715 TO MH 763		
MH 716 TO MH 717			1+00 RT.	150	368.15
0+50 LT. (5%)	152 (5%)	385.22	• MH 763	149	375.63
0+60 RT. (5%)	153 (5%)	387.94			



SEE SHEET 5 FOR THE LIST OF CONDITIONS, CONDITIONS & MANAGEMENT PRACTICES FOR WORKING IN NON-TIDAL WETLANDS, WHICH APPLY TO ALL UTILITY WORK WITHIN THE NON-TIDAL WETLANDS & BUFFERS AS SHOWN ON THIS PLAN.

NOTE: SEE SHEET 5 FOR THE SEQUENCE OF CONSTRUCTION.

NOTE: MANHOLE NOS. 715, 716, 762 & 763 SHALL HAVE WATER-TIGHT (W.T.) FRAME & COVER. STD. DET. G5.52.

FOR PROFILES OF OUTFALL SEWER MAIN; SEE SHEET 4 OF 7.

NOTE: SET RIMS OF MANHOLE NOS. 715, 716, 762 & 763 1'-6" ABOVE EX. GROUND; STD. DET. G5.41.

FOR PROFILES OF WATER & SEWER MAINS IN MELLOW WINE WAY; SEE SHEET 7 OF 7.

FOR PROFILES OF WATER & SEWER MAINS IN EMPTY SONG ROAD; SEE SHEET 6 OF 7.

NOTE: FOR 4" - 48" DHC DETAIL & SPECIFICATION CHART SEE SHEET 3 OF 7.

PLAN  
SCALE: 1" = 50'

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*James M. ...* 7/8/93  
DIRECTOR OF PUBLIC WORKS DATE

*James M. ...* 7/8/93  
CHIEF, BUREAU OF ENGINEERING

*Michael A. ...* 6-25-93  
CHIEF, BUREAU OF UTILITIES

*Michael A. ...* 7/6/93  
CHIEF, LAND DEVELOPMENT DIVISION

FISHER, COLLINS & CARTER, INC.  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
SUITE 100, 9171 BALTIMORE NATIONAL PIKE  
ELLCOTT CITY, MARYLAND 21042  
(410) 461-2855

TERRELL A. FISHER

DES:	P.W.K./M.J.M.	FC/C	MH 716 TO BE WATER-TIGHT & RELOCATED SHC TO LOTS 185 & 193	8/93
DRWN:	D.A.N.	K.C.I.	ADJUST 45" DHC'S - ADDED CHART & DETAIL	7/93
CHK:	P.W.K.		MELLOW WINE WAY SEWER AND STREAM STABILIZATION, SHEETS 6A THROUGH 6N ADDED	8/20/93
DATE:	2-5-93			
BY:	NO.	REVISION		DATE

PLAN  
WATER & SEWER MAINS

60' SCALE MAP NO. 35 BLOCK NO. 15

VILLAGE OF RIVER HILL  
SECTION 2, AREA 2, PHASE 1  
LOTS 128 - 236, 240 & 241

CONTRACT NO. 34-3209-D  
FIFTH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 2 OF 7

SHC INVERTS @ PROPERTY LINE		
STATION	LOT	ELEVATION
MH 723 TO MH 731		
0+50 LT.	197	423.81
1+20 RT.	187	425.87
1+30 LT.	196	426.97
1+53 RT.	188	427.16
1+60 LT.	195	428.01
1+88 RT. (IX)	189 (IX)	427.68
MH 731 TO MH 732		
• MH 731	190	428.39
• MH 731 RT.	191	428.13
0+20 RT.	192	432.88
• MH 732 RT.	193	433.13
• MH 732	194	433.33
MH 723 TO MH 733		
0+63 RT.	223	424.91
1+32 LT. (IX)	232 (IX)	427.29
1+42 RT.	224	428.16
1+80 LT.	231	429.49
1+85 RT.	225 (IX)	433.85
2+37 LT.	230	432.07
2+52 RT.	226	433.75
• MH 733 LT.	229	433.09
• MH 733	228	437.10
• MH 733 RT.	227	434.33

FOR PROFILES OF WATER & SEWER MAINS IN EVENING COMPANY CIRCLE; SEE SHEET 5 OF 7.

FOR PROFILES OF WATER & SEWER MAINS IN TENDER MIST MEWS; SEE SHEET 5 OF 7.

FOR PROFILES OF WATER & SEWER MAINS IN RIPE APPLE LANE; SEE SHEET 4 OF 7.

FOR PROFILES OF WATER & SEWER MAINS IN GRATEFULL HEART GATE; SEE SHEET 5 OF 7.

MANHOLE TABLE				
No.	Q RD STA.	DISTANCE	RIM ELEV.	SLOPE
723	2+53	7' RT.	433.57	+6.55%
724	4+50	8' RT.	446.44	+6.55%
725	5+59	5' RT.	453.62	+6.04%
726	0+10	7' RT.	457.94	+1.00%
727	1+13	9' RT.	458.91	+1.00%
728	2+40	9' RT.	460.46	+1.76%
729	IN CUL-DE-SAC	-----	466.46	-----
730	IN CUL-DE-SAC	-----	466.61	-----
731	IN CUL-DE-SAC	-----	439.57	-----
732	IN CUL-DE-SAC	-----	440.29	-----
733	IN CUL-DE-SAC	-----	446.53	-----

PLAN  
SCALE: 1" = 50'

SHC INVERTS @ PROPERTY LINE		
STATION	LOT	ELEVATION
MH 722 TO MH 723		
1+43 LT. (IX)	233 (IX)	417.02
1+50 RT.	186	417.43
MH 723 TO MH 724		
1+35 RT.	198	430.63
MH 724 TO MH 725		
• MH 724	199	434.69
• MH 725 RT.	200	441.24
MH 725 TO MH 726		
• MH 725 LT.	FUTURE LOT	441.44
0+80 LT.	FUTURE LOT	444.56
MH 726 TO MH 727		
• MH 726	222	445.11
0+20 LT.	221	444.86
MH 727 TO MH 728		
• MH 727 RT.	201	445.16
• MH 727 LT.	220	448.20
0+40 RT.	202	445.69
0+90 LT.	219	446.66
MH 728 TO MH 729		
• MH 728 (IX)	203 (IX)	444.98
0+32 RT.	204	447.61
0+50 LT.	218	447.61
1+05 RT.	205	448.94
1+20 LT.	217	449.49
1+53 RT.	206 (IX)	452.31
1+70 LT.	216	450.40
2+18 RT.	207	451.17
2+40 LT.	215	451.67
2+88 LT.	214	452.54
MH 729 TO MH 730		
• MH 729 LT.	213	452.83
• MH 729 (IX)	212 (IX)	452.64
0+25 LT.	211	453.13
• MH 730 LT.	210	453.55
• MH 730	209	453.45
• MH 730 RT.	208	453.51

NOTE: FOR 41" & 48" CIRC DETAIL & SPECIFICATION CHART SEE SHEET 5 OF 7.

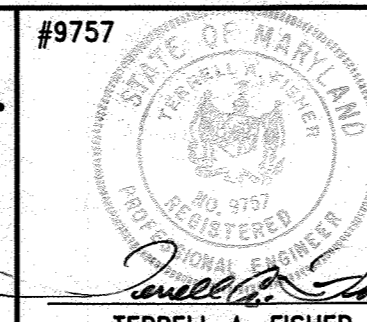
CONTRACT NO. 34-3209-D  
VILLAGE OF RIVER HILL  
SECTION 2, AREA 2, PHASE 1  
WATER AND SEWER EXTENSIONS  
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

James M. ... 7/8/93  
DIRECTOR OF PUBLIC WORKS DATE  
Michael A. ... 6-25-93  
CHIEF, BUREAU OF UTILITIES DATE

FISHER, COLLINS & CARTER, INC.

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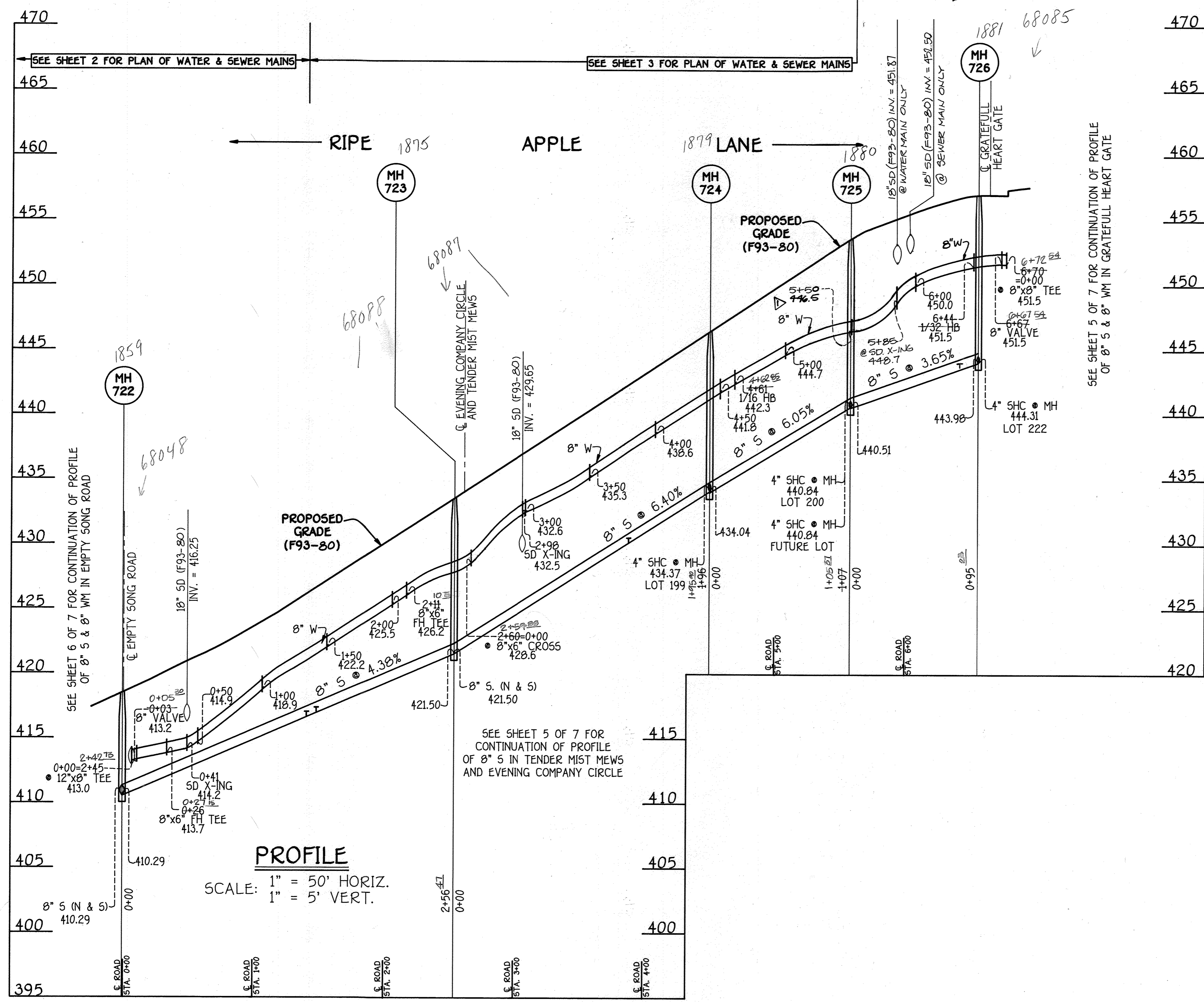
DES:	P.W.K./M.J.M.	DATE:	2-5-93
DRWN:	D.A.N.	BY:	NO.
CHK:	P.W.K.	REVISION:	
DATE:	2-5-93	DATE:	9/93

PLAN  
WATER & SEWER MAINS

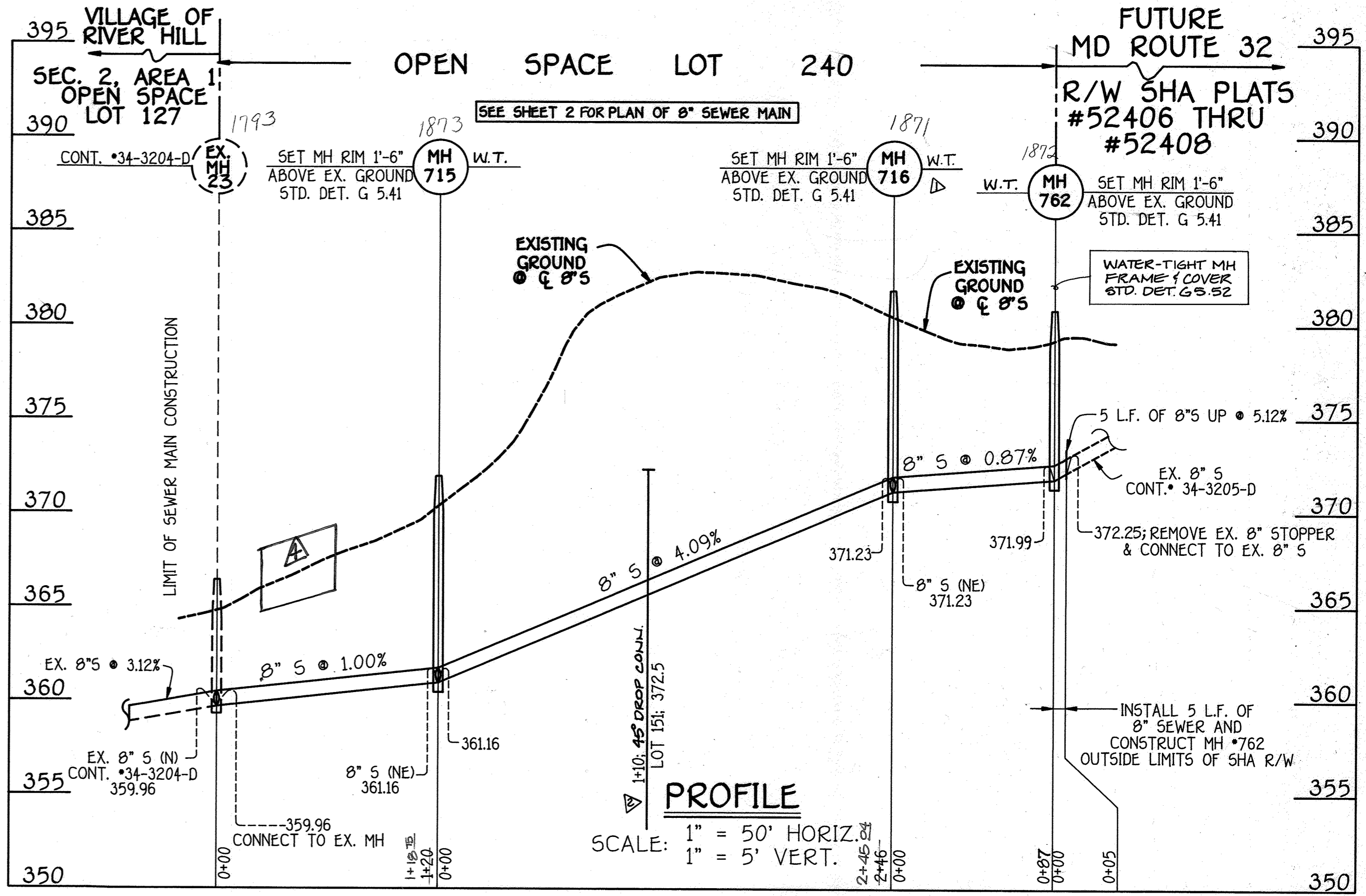
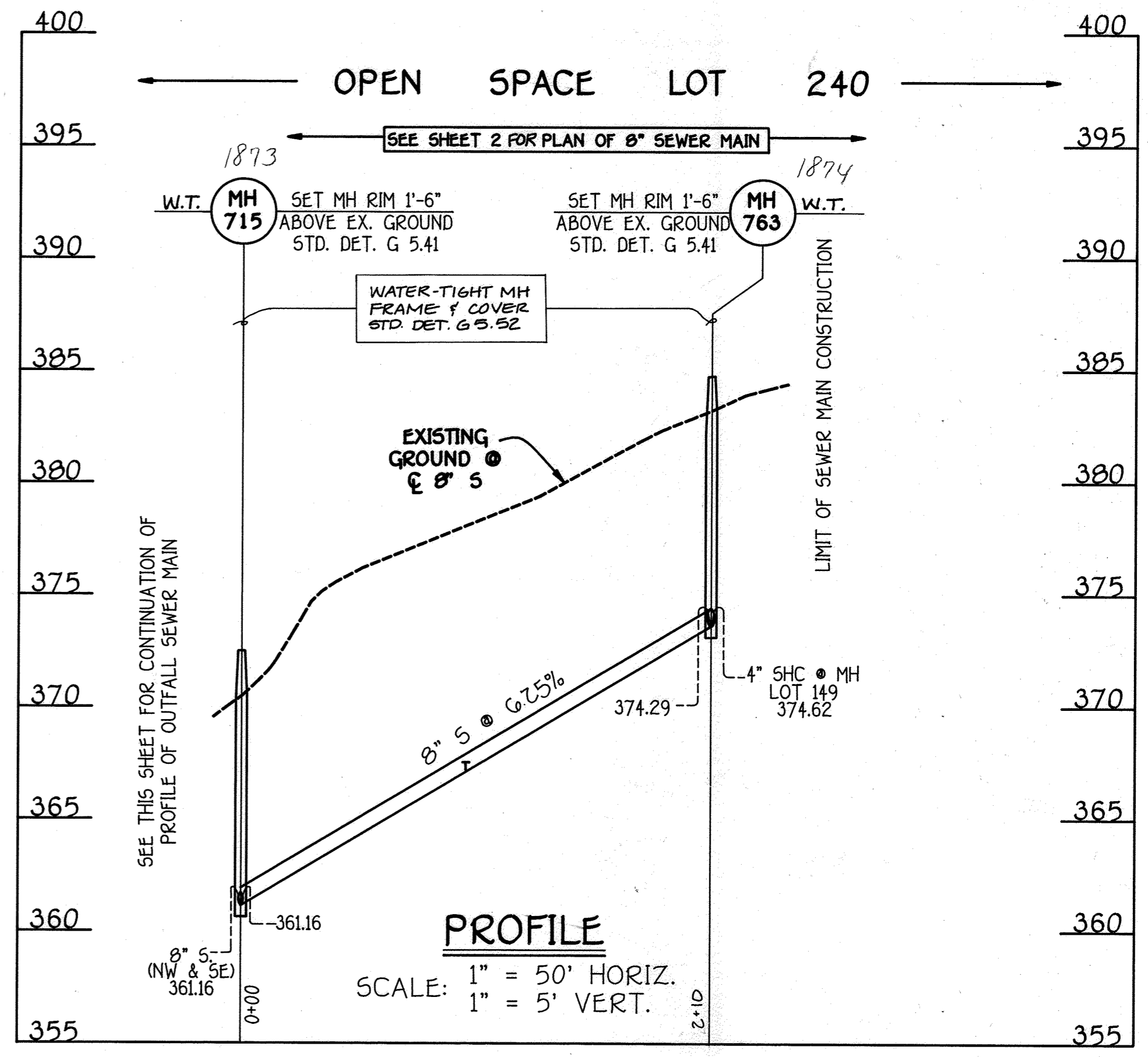
600' SCALE MAP NO. 35 BLOCK NO. 15

VILLAGE OF RIVER HILL  
SECTION 2, AREA 2, PHASE 1  
LOTS 128 - 236, 240 & 241  
CONTRACT NO. 34-3209-D  
FIFTH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 3 OF 7



SEE SHEET 5 OF 7 FOR CONTINUATION OF PROFILE OF 8" S & 8" WM IN GRATEFULL HEART GATE



DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
James M. [Signature] 7/8/93  
DIRECTOR OF PUBLIC WORKS DATE  
[Signature] 7/8/93  
CHIEF, BUREAU OF ENGINEERING  
[Signature] 7/8/93  
CHIEF, LAND DEVELOPMENT DIVISION DATE

FISHER, COLLINS & CARTER, INC.  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
SUITE 100, 9171 BALTIMORE NATIONAL PIKE  
ELLCOTT CITY, MARYLAND 21042  
(410) 461-2855

#9757  
TERRELL A. FISHER

DES:	P.W.K./M.J.M.	FC/C	ELIMINATED SD CROSS. MH # 716 TO BE WATER-TIGHT	8/93
DRWN:	D.A.N.	KCI	ADJUST 45" DIA. - ADDED CHART & DETAIL	9/93
CHK:	P.W.K.		MELLOW WINE WAY SEWER AND STREAM STABILIZATION, SHEETS BA THROUGH ON ADDED	8/19
DATE:	2-5-93	BY NO.	REVISION	DATE

PROFILES  
WATER & SEWER MAINS  
600' SCALE MAP NO. 35 BLOCK NO. 15

VILLAGE OF RIVER HILL  
SECTION 2, AREA 2, PHASE 1  
LOTS 128 - 236, 240 & 241  
CONTRACT NO. 34-3209-D  
FIFTH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 4 OF 7

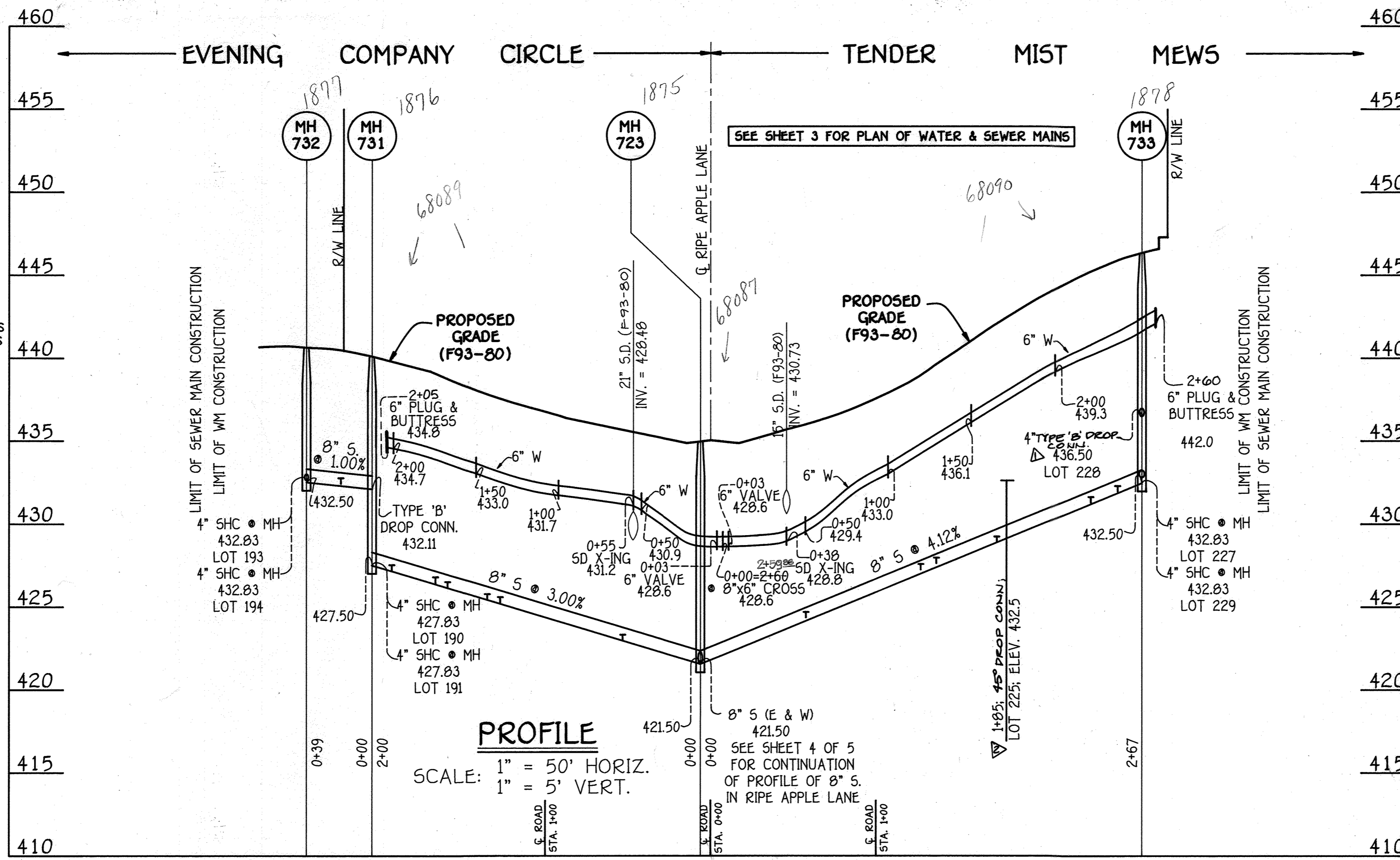
CONTRACT NO. 34-3209-D  
VILLAGE OF RIVER HILL  
SECTION 2, AREA 2, PHASE 1  
WATER AND SEWER EXTENSIONS  
HOWARD COUNTY, MARYLAND

**SEQUENCE OF CONSTRUCTION**

- OBTAIN THE REQUIRED GRADING PERMIT.
- INSTALL THE REQUIRED SEDIMENT AND EROSION CONTROL DEVICES: AS INDICATED ON SHEET 2.
- CLEAR AND GRUB AS NECESSARY; ONLY AS REQUIRED FOR EXCAVATION AND INSTALLATION OF THE WATER & SEWER MAINS; ONLY WITHIN THE DESIGNATED WATER, SEWER & UTILITY EASEMENTS.
- NOTE:** THE LENGTH OF OPEN WATER & SEWER MAIN TRENCH SHALL BE LIMITED TO THREE (3) PIPE LENGTHS OR THAT WHICH WILL BE BACKFILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
- CONSTRUCT ALL UTILITIES (SEWER MAINS, WATER MAINS, SHC'S, WHC'S). THE CONTRACTOR SHALL REFERENCE THIS SHEET FOR A LIST OF CONDITIONS, CONDITIONS AND MANAGEMENT PRACTICES FOR WORKING IN NONTIDAL WETLANDS. THESE CONDITIONS APPLY TO ALL UTILITY WORK CONDUCTED WITHIN THE NONTIDAL WETLANDS AND BUFFERS AS SHOWN ON THE PLANS.
- AFTER PERMISSION HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL EROSION & SEDIMENT CONTROL DEVICES.

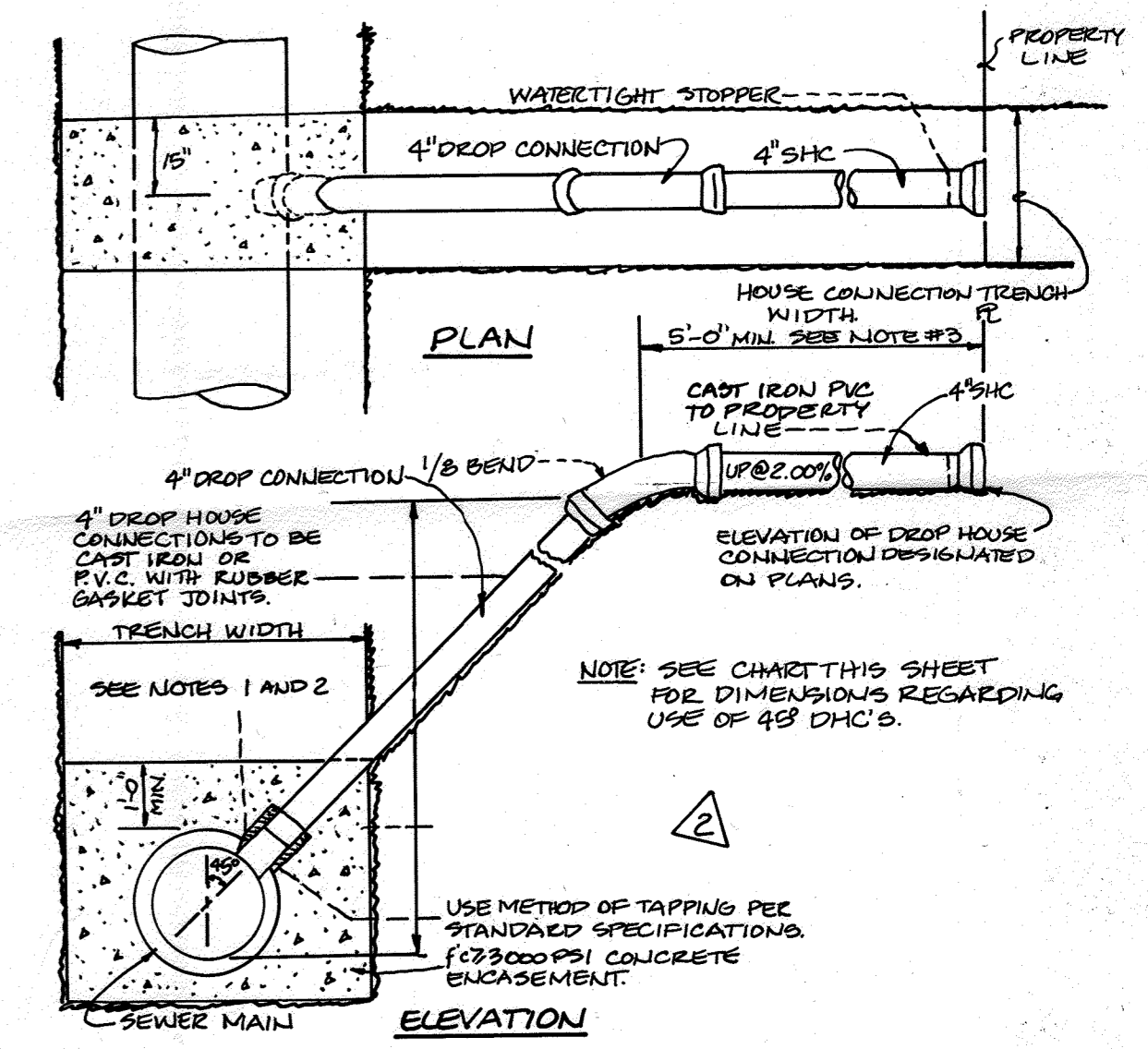
**CONDITIONS & MANAGEMENT PRACTICES FOR WORKING IN NONTIDAL WETLANDS OR BUFFERS**

- STRIP, STOCKPILE AND MAINTAIN THE TOP 6 INCHES OF SOIL MATERIAL; TO BE REPLACED AS THE TOP LAYER OF THE BACKFILLED MATERIAL.
  - REMOVE EXCESS FILL OR CONSTRUCTION MATERIAL OR DEBRIS TO AN UPLAND DISPOSAL AREA, OUTSIDE OF ANY WETLAND, BUFFER, OR FLOODPLAIN.
  - PLACE MATERIALS IN A LOCATION AND MANNER WHICH DOES NOT ADVERSELY IMPACT SURFACE OR SUBSURFACE WATER FLOW INTO OR OUT OF THE NONTIDAL WETLAND.
  - USE PREVIOUSLY EXCAVATED MATERIAL AS UTILITY LINE BACKFILL, UNLESS IT CONTAINS WASTE METAL PRODUCTS, UNSIGHTLY DEBRIS, TOXIC MATERIAL OR ANY OTHER DELETERIOUS SUBSTANCE. USE CLEAN BORROW MATERIAL WHEN EXCAVATED MATERIAL IS NOT SUITABLE FOR USE AS BACKFILL.
  - RECTIFY ANY NONTIDAL WETLANDS AND BUFFERS TEMPORARILY IMPACTED BY ANY PROPOSED REPAIR AND MAINTENANCE ACTIVITY OR INSTALLATION OF THE UTILITY LINE. ALL STABILIZATION IN THE WETLAND BUFFER SHALL BE OF THE FOLLOWING RECOMMENDED SPECIES: ANNUAL RYEGRASS (LOLIUM MULTIFLORUM), MILLET (SETARIA ITALICA), OATS (UNIOLA SP.), AND/OR RYE (SECALE CEREALE). OTHER NON-PERSISTENT VEGETATION MAY BE ACCEPTABLE, BUT MUST BE APPROVED BY THE NONTIDAL WETLANDS DIVISION. KENTUCKY 31 FESCUE SHALL NOT BE UTILIZED IN THE WETLAND OR BUFFER. ALL TEMPORARY FILLS SHALL BE REMOVED IN THEIR ENTIRETY ON OR BEFORE THE COMPLETION OF CONSTRUCTION.
  - AFTER INSTALLATION HAS BEEN COMPLETED, MAKE POST CONSTRUCTION GRADES AND ELEVATIONS OF NONTIDAL WETLANDS THE SAME AS THE ORIGINAL GRADES AND ELEVATIONS.
- TO PROTECT IMPORTANT AQUATIC SPECIES, IN-STREAM WORK IS PROHIBITED AS DETERMINED BY THE CLASSIFICATION OF THE STREAM AS FOLLOWS:
- CLASS I WATERS. IN-STREAM WORK MAY NOT BE CONDUCTED DURING THE PERIOD MARCH 1 THROUGH JUNE 15, INCLUSIVE, DURING ANY YEAR.



NOTE: SEE THIS SHEET FOR SEQUENCE OF CONSTRUCTION.

NOTE: SEE SHEET 2 FOR THE DELINEATION OF WETLANDS AND WETLAND BUFFERS.

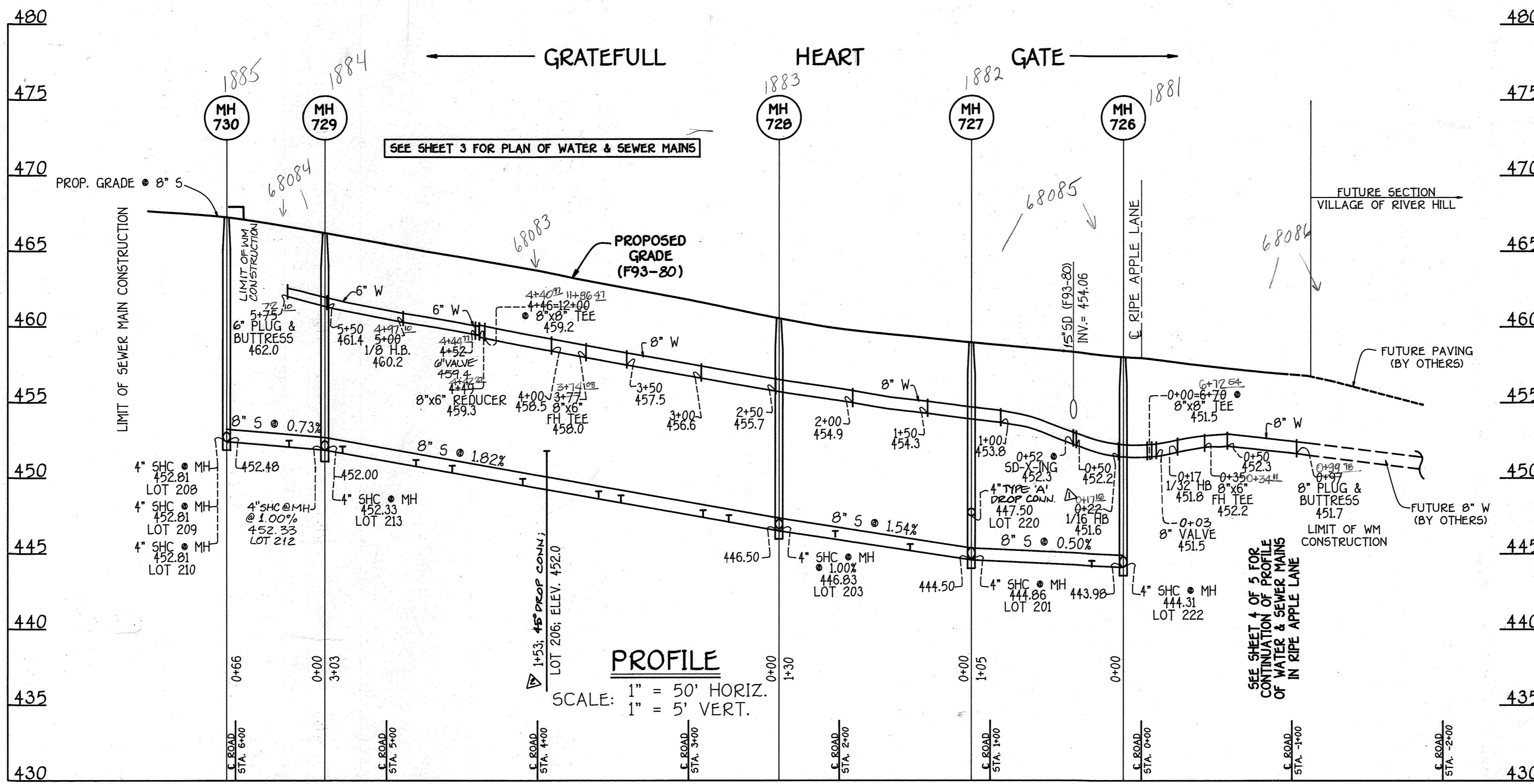


**4" - 45° DROP HOUSE CONNECTION CHART**

LOT NO.	INN @ 8" SEWER	INN @ 1/8 BEND	DISTANCE @ 2 1/2" MAIN TO 1/8 BEND	DISTANCE @ 2 1/2" 1/8 BEND TO IT
138	408.31	413.31	5.0'	5.0'
139	408.26	413.26	5.0'	5.0'
145	407.47	411.00	3.53'	14.47'
146	402.36	410.00	7.64'	10.36'
151	365.66	372.80	7.14'	29.16'
154	398.32	401.00	2.68'	28.32'
155	400.18	403.60	3.42'	28.68'
156	402.86	406.60	3.74'	28.36'
157	404.92	409.00	4.08'	27.92'
163	417.24	423.00	5.76'	31.24'
164	420.56	424.00	3.44'	19.56'
171	436.56	441.00	4.44'	32.56'
172	436.78	441.00	4.22'	28.78'
173	436.96	441.00	4.04'	14.96'
206	449.28	452.00	2.72'	15.28'
225	429.12	432.80	3.68'	67.62'

NOTE: FOR 4" - 45° DHC SPECS, SEE DETAIL ABOVE THIS SHEET.

CONTRACT NO. 34-3209-D  
VILLAGE OF RIVER HILL  
SECTION 2, AREA 2, PHASE 1  
WATER AND SEWER EXTENSIONS  
HOWARD COUNTY, MARYLAND



DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
James A. Lewis 7/8/93  
DIRECTOR OF PUBLIC WORKS DATE  
Michael A. Bunnello 6-25-93  
CHIEF, BUREAU OF UTILITIES DATE

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS  
SUITE 100, 9171 BALTIMORE NATIONAL PIKE  
ELLCOTT CITY, MARYLAND 21042  
(410) 451-2855

#9757  
TERRELL A. FISHER

DES: P.W.K./M.J.M. 8/93  
DRWN: D.A.N. 9/93  
CHK: P.W.K.  
DATE: 2-5-93

ADDED TYPE 'A' OR 'B' DROP CONNECTIONS  
ADJUST 45 DHC'S - ADDED CHART & DETAIL

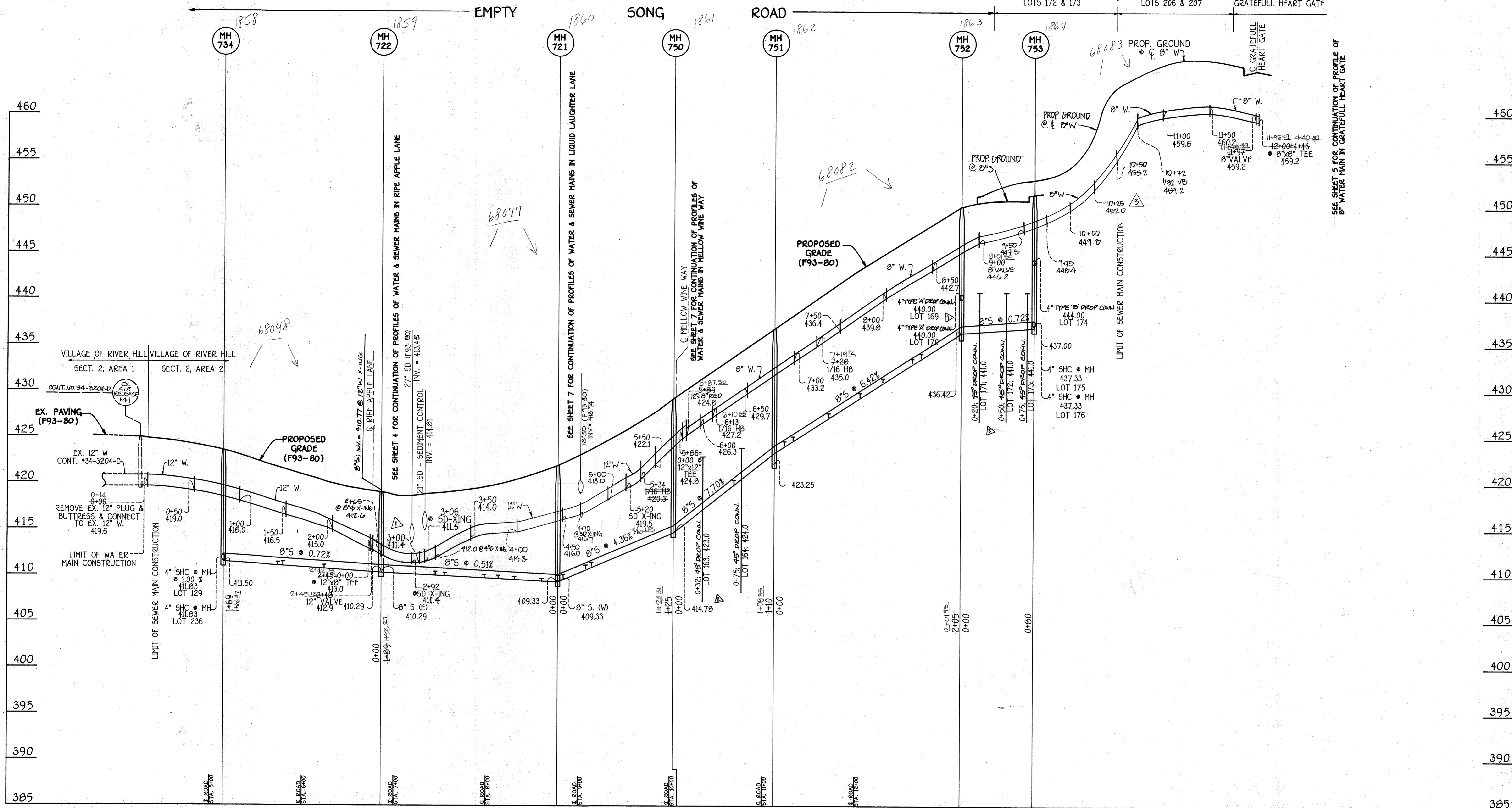
**PROFILES WATER & SEWER MAINS**  
600' SCALE MAP NO. 35 BLOCK NO. 15

VILLAGE OF RIVER HILL  
SECTION 2, AREA 2, PHASE 1  
CONTRACT NO. 34-3209-D  
FIFTH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 5 OF 7

SEE SHEET 2 FOR PLAN OF WATER & SEWER MAINS

SEE SHEET 3 FOR PLAN OF 8" WATER MAIN



PROFILE

SCALE: 1" = 50' HORIZ.  
1" = 5' VERT.

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

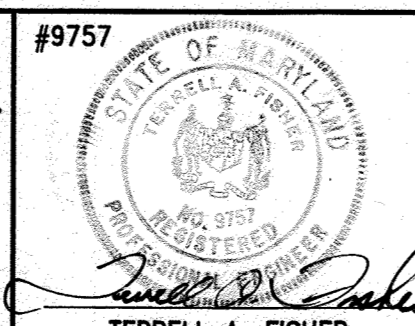
James M. Lewis 7/8/93  
DIRECTOR OF PUBLIC WORKS DATE

Michael A. Surinello 8-25-93  
CHIEF, BUREAU OF UTILITIES DATE

7/8/93  
CHIEF, BUREAU OF ENGINEERING

7/8/93  
CHIEF, LAND DEVELOPMENT DIVISION

**FISHER, COLLINS & CARTER, INC.**  
CIVIL ENGINEERING CONSULTANTS &  
LAND SURVEYORS  
SUITE 100, 9171 BALTIMORE NATIONAL PIKE  
ELICOTT CITY, MARYLAND 21042  
(410) 461-2855



DES: P.W.K./M.J.M.	FC&C	ADDED SEWER CROSSING & TYPE 'A' OR 'B' DROP CONN.	8/93
DRWN: D.A.N.	FC&C	ADJUST 45° DK'S - ADDED CHART & DETAIL	9/93
CHK: P.W.K.	FC&C	REVISE WM PROFILE BETWEEN EMPTY SONG RD & GRATEFULL HEART GATE	1/94
DATE: 2-5-93			
BY NO.		REVISION	DATE

PROFILES  
WATER & SEWER MAINS

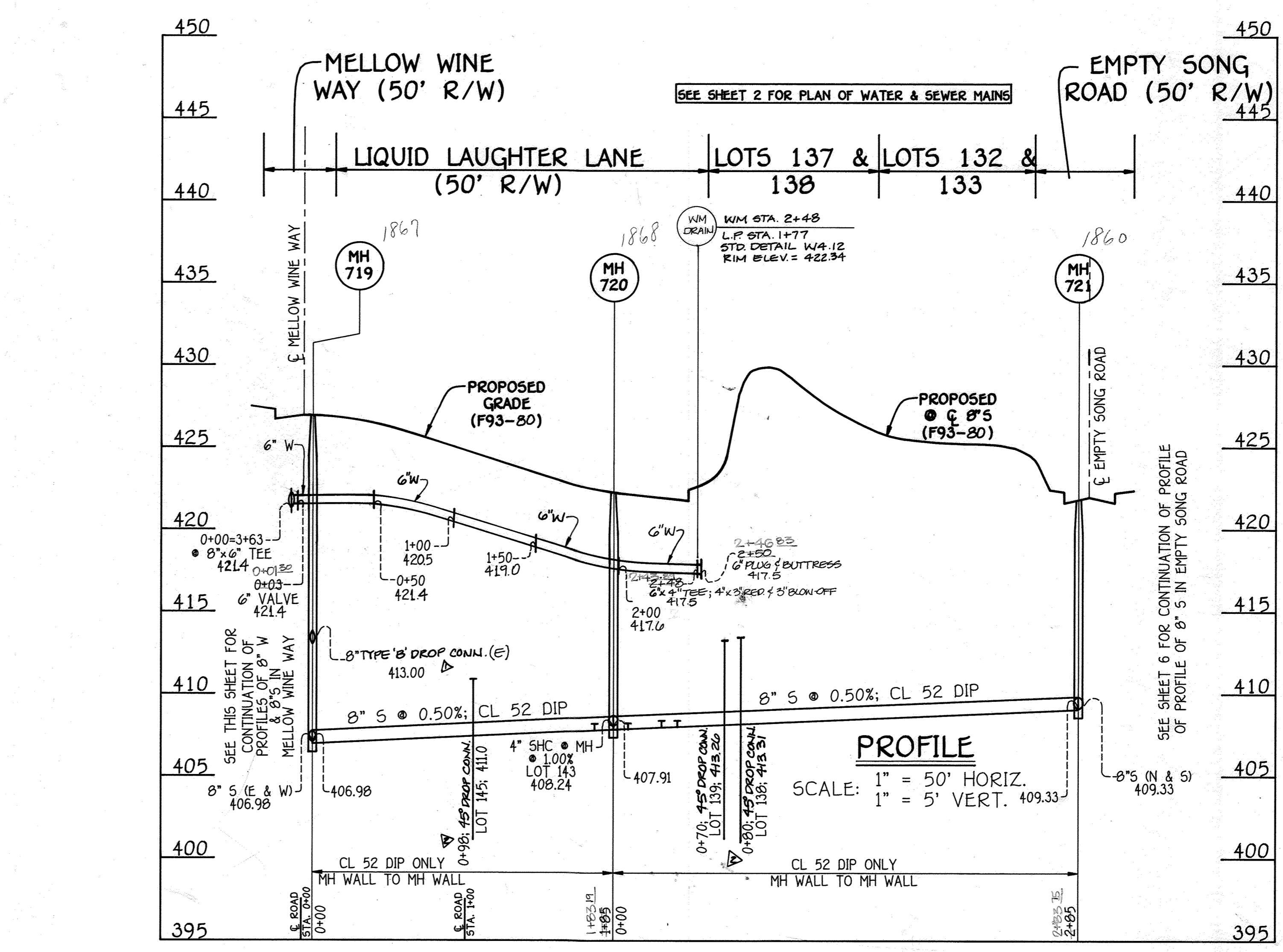
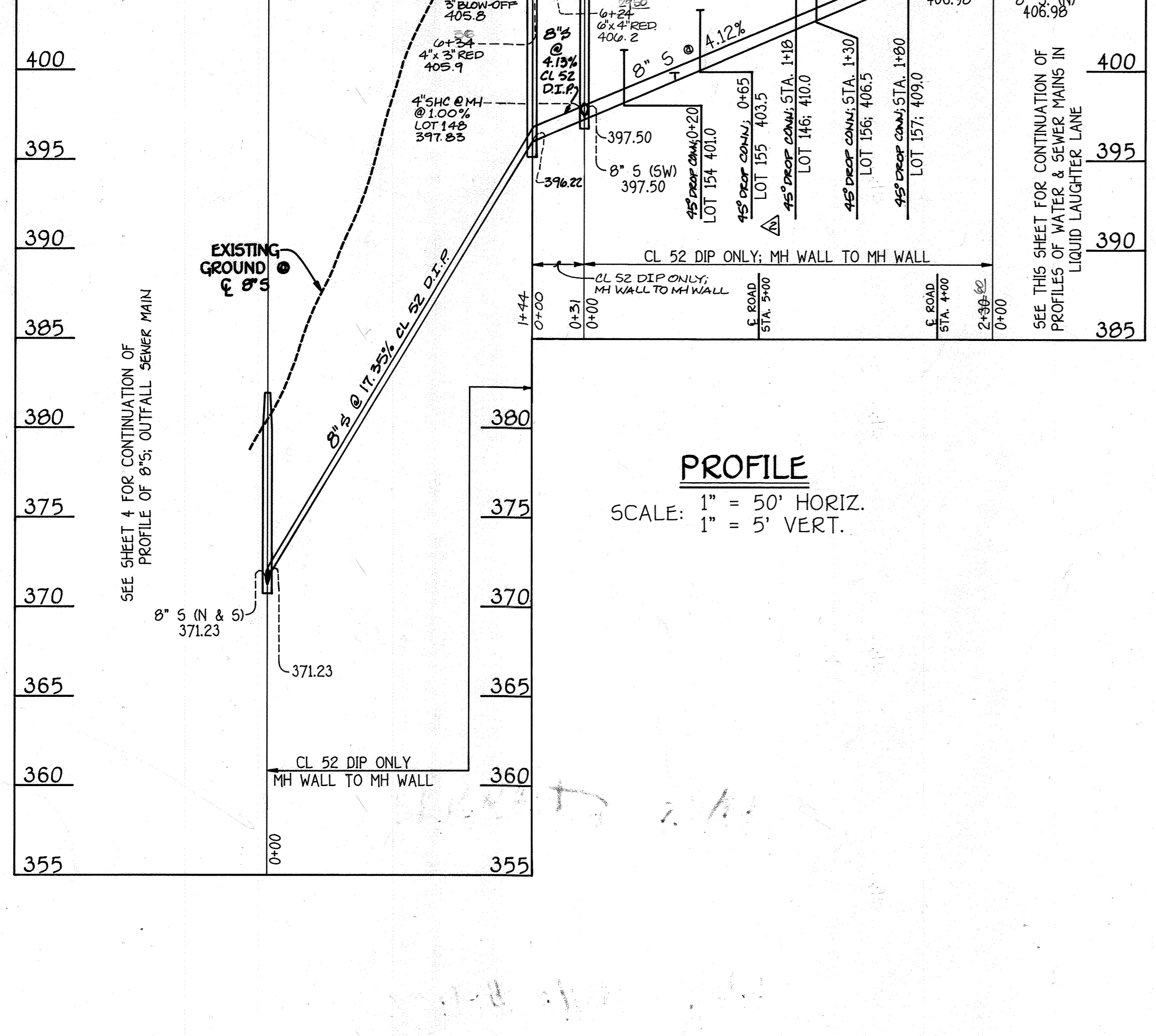
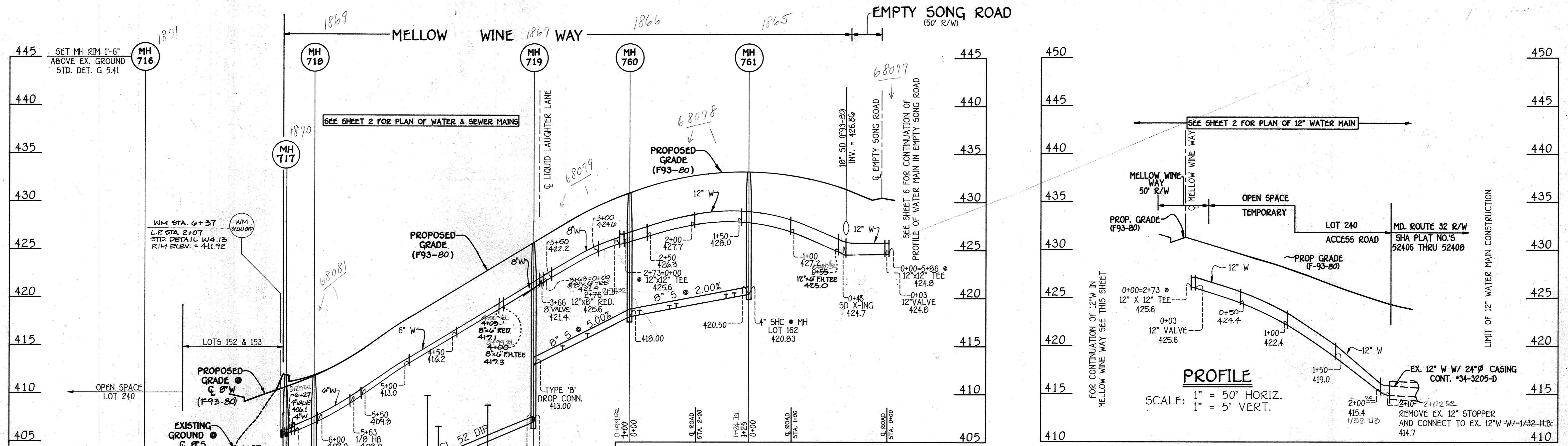
600' SCALE MAP NO. 35 BLOCK NO. 15

VILLAGE OF RIVER HILL  
SECTION 2, AREA 2, PHASE 1  
LOTS 128 - 236, 240 & 241

CONTRACT NO. 34-3209-D  
FIFTH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 6 OF 7



DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND  
 Director of Public Works: James M. Lewis, 7/8/93  
 Chief, Bureau of Engineering: [Signature], 7/8/93  
 Chief, Bureau of Utilities: Michael A. [Signature], 6-25-93  
 Chief, Land Development Division: [Signature], 7/8/93

FISHER, COLLINS & CARTER, INC.  
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 TERRELL A. FISHER

DES: P.W.K./M.J.M.	FC/C	ADDED TYPE 'A' OR 'B' DROP CONNECTIONS.	8/93
DRWN: D.A.N.	FC/C	ADJUST 45° DIPS - ADDED CHART & DETAIL	9/93
CHK: P.W.K.			
DATE: 2-5-93			

PROFILES  
 WATER & SEWER MAINS  
 600' SCALE MAP NO. 35 BLOCK NO. 15

VILLAGE OF RIVER HILL  
 SECTION 2, AREA 2, PHASE 1  
 LOTS 128 - 236, 240 & 241  
 CONTRACT NO. 34-3209-D  
 FIFTH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 SHEET 7 OF 7

CONTRACT NO. 34-3209-D  
 VILLAGE OF RIVER HILL  
 SECTION 2, AREA 2, PHASE 1  
 WATER AND SEWER EXTENSIONS  
 HOWARD COUNTY, MARYLAND