
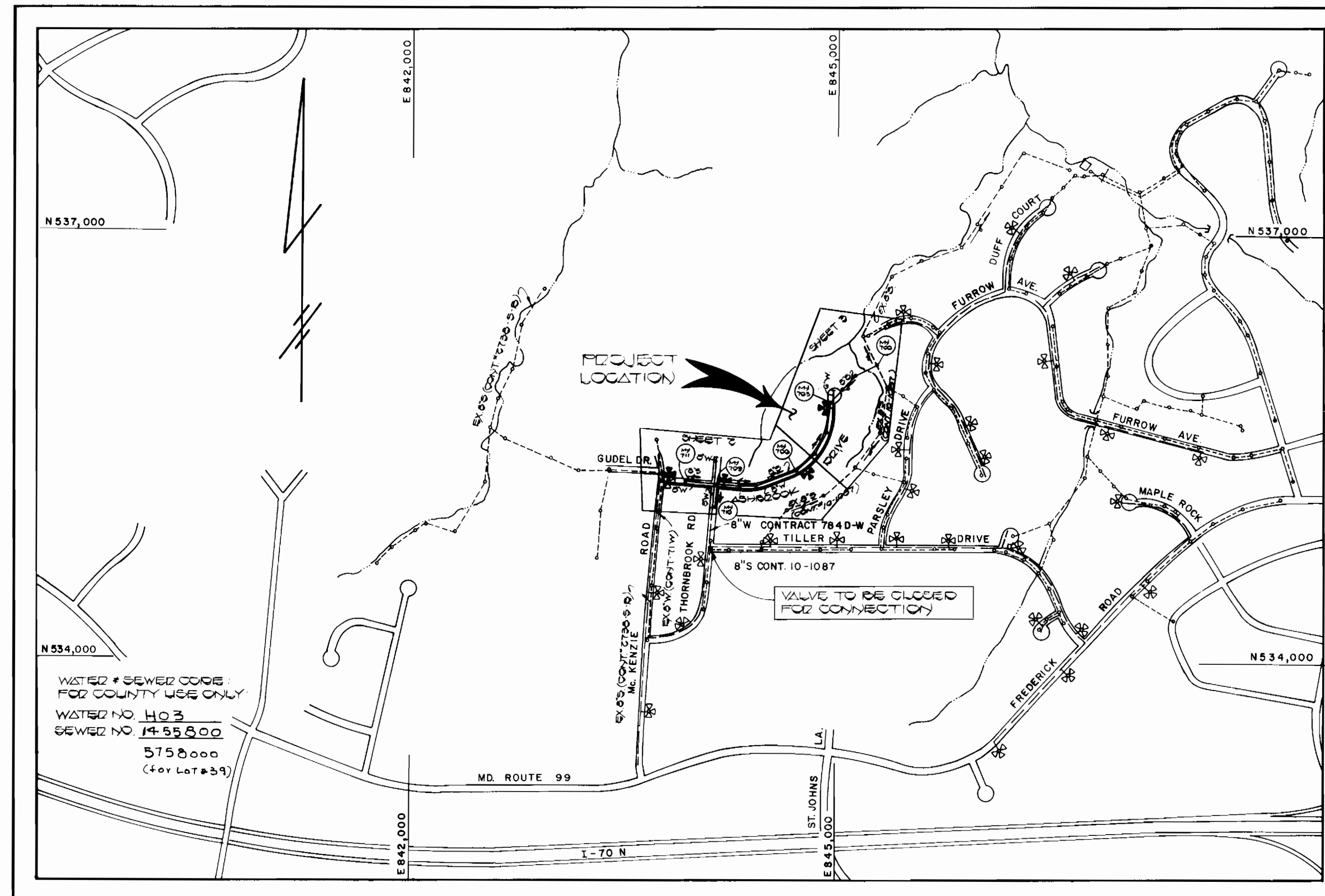


GENERAL NOTES

- 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. DATA.
- 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 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.



TYPE OF BUILDING	RESIDENTIAL
NUMBER OF LOTS	33 (30 BUILDABLE)
NO OF WATER HOUSE CONNECTIONS	33
NO OF SEWER HOUSE CONNECTIONS	33
DRAINAGE AREA	1247500

SCALE: 1" = 600'

CONTRACT NO. 14-1600-D MT. HEBRON SECTION 18 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 F87-100

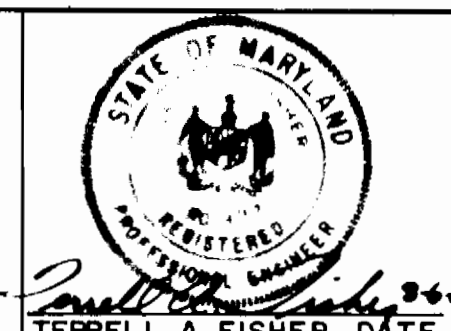
REVIEW FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
James M. Nelson 5-11-87
US SOIL CONSERVATION SERVICE DATE

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

APPROVED:
Stephen E. Fisher 5/11/87
HOWARD SOIL CONSERVATION DISTRICT DATE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Debra F. Nemy 5-19-87
DIRECTOR OF PUBLIC WORKS DATE
Michael A. Brown 5-17-87
CHIEF, BUREAU OF UTILITIES DATE

FISHER, COLLINS, AND CARTER, INC.
CONSULTING ENGINEERS AND LAND SURVEYORS
8388 COURT AVENUE
ELLKOTT CITY, MARYLAND 21043
Terrell A. Fisher 5-11-87
DATE



15. D.B.S.				
16. D.B.S.				
17. T.A.P.				
D.A.N.	ADD S.H.C. CLEANOUT TO QUANTITIES SHEET.	11/30/87		
HY	NO			

TITLE SHEET
600' SCALE MAP NO. 17 - BLOCK NO. 9410

MT. HEBRON
SECTION 18
CONTRACT NO. 14-1600-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
SCALE AS SHOWN
SHEET 1 OF 5

BENCH MARKS

B.M.# 1 ELEV. 429.97
 BEAR SET IN REAR OF LOT 2, 50' WEST OF P202. M.H.#10. (TRAVELERS STA. M+1)
 B.M.# 3 ELEV. 429.00
 X-CUT ON DIM OF EX. M.H.# 10, REAR OF LOT 9 #7. (TRAVELERS STA. M+3)

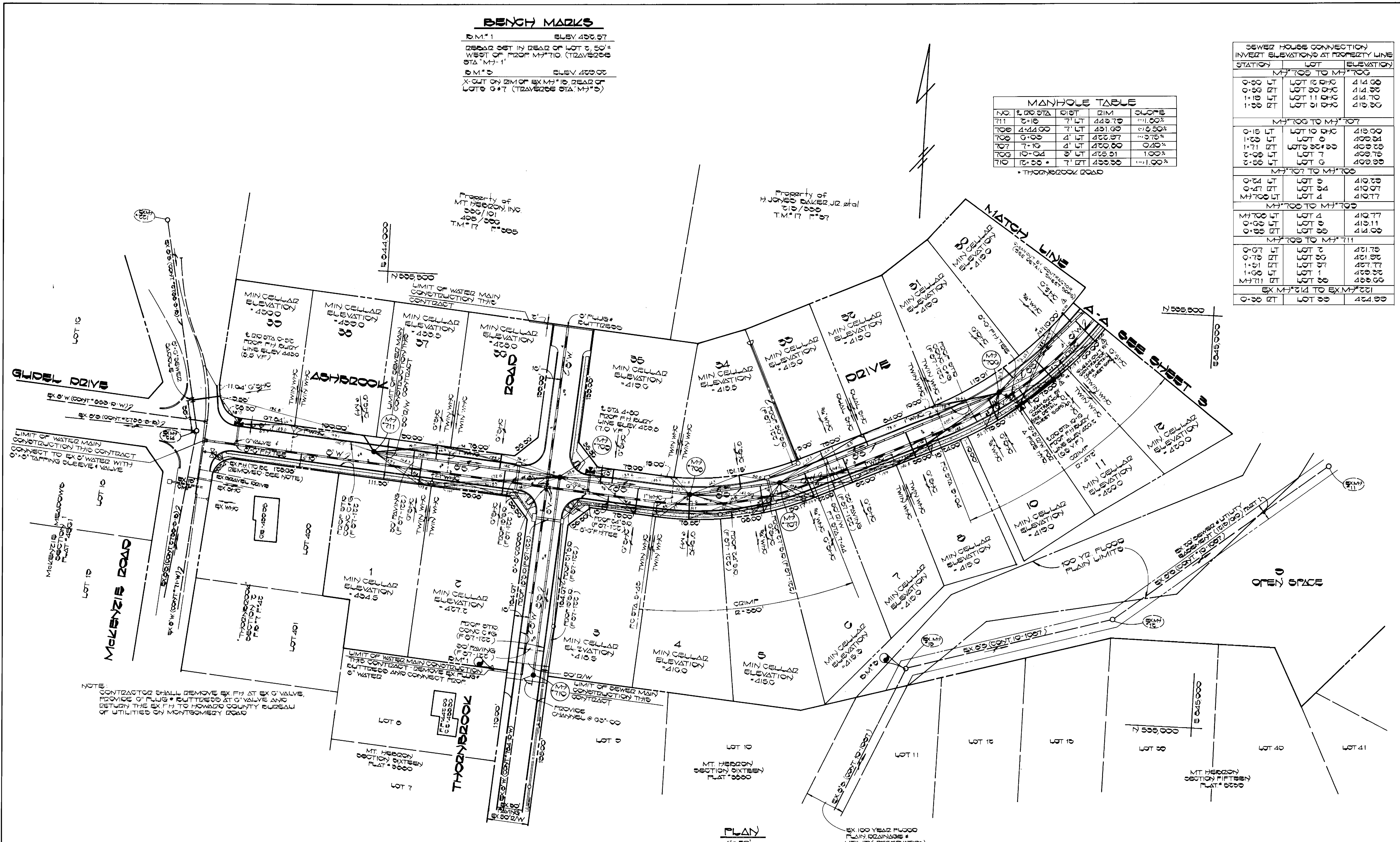
MANHOLE TABLE

NO.	SIZE	DIST.	DIM.	SLOPE
711	2'-10"	7' LT	429.79	-11.00%
709	4'-4.00"	7' LT	431.09	-11.50%
708	0'-00"	4' LT	422.97	-3.75%
707	7'-10"	4' LT	420.00	0.00%
706	10'-04"	3' LT	425.51	-1.00%
710	12'-00"	7' RT	429.00	-11.00%

• THORN BROOK ROAD

SEWER HOUSE CONNECTION INVERT ELEVATIONS AT PROPERTY LINE

STATION	LOT	ELEVATION
M.H.#705 TO M.H.#706		
0+30 LT	LOT 12 R/W	414.00
0+50 RT	LOT 30 R/W	414.00
1+10 LT	LOT 11 R/W	414.70
1+30 RT	LOT 31 R/W	413.30
M.H.#706 TO M.H.#707		
0+15 LT	LOT 10 R/W	413.00
1+25 LT	LOT 6	409.24
1+71 RT	LOTS 30, 31, 33	409.25
2+08 LT	LOT 7	409.75
2+55 LT	LOT 6	409.95
M.H.#707 TO M.H.#708		
0+24 LT	LOT 5	410.25
0+47 LT	LOT 4	410.07
M.H.#708 LT	LOT 4	410.77
M.H.#708 TO M.H.#709		
M.H.#708 LT	LOT 4	410.77
0+05 LT	LOT 3	413.11
0+25 RT	LOT 3	414.08
M.H.#709 TO M.H.#711		
0+07 LT	LOT 2	421.75
0+75 RT	LOT 3	421.98
1+51 LT	LOT 3	427.77
1+58 LT	LOT 1	429.30
M.H.#711	LOT 3	429.00
EX. M.H.#14 TO EX. M.H.#21		
0+38 RT	LOT 3	424.00



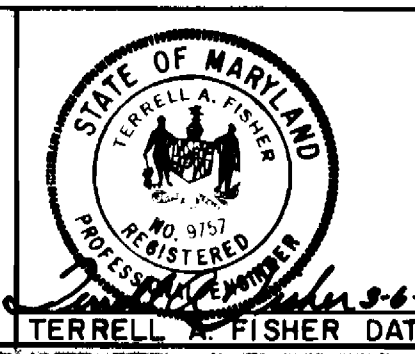
NOTE: CONTRACTOR SHALL REMOVE EX. F.H. AT EX. G VALVE, PROVIDE G PLUG & BUTTRESS AT G VALVE AND RETURN THE EX. F.H. TO HOWARD COUNTY BUREAU OF UTILITIES BY MONTGOMERY ROAD

PLAN
1" = 60'

CONTRACT NO. 14-1600-D
 MT. HEBRON - SECTION 18
 WATER & SEWER MAIN EXTENSION
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Director: *David C. Nease* 5-11-87
 Chief, Bureau of Engineering: *Michael E. Pappas* 5-18-87
 Chief, Bureau of Utilities: *Michael E. Pappas* 5/14/87
 Chief, Land Development Division: *Michael E. Pappas* 5-11-87

FISHER, COLLINS, AND CARTER, INC.
 CONSULTING ENGINEERS AND LAND SURVEYORS
 8388 COURT AVENUE
 ELLICOTT CITY, MARYLAND 21043
 Chief: *Terrell A. Fisher* 5-18-87
 Chief, Land Development Division: *Terrell A. Fisher* 5-11-87



DES: D.R.S.					
DRN: D.R.S.					
CHK: T.A.F.					
DATE: 5-14-87					
BY: NO.					
REVISION					
DATE					

PLAN
WATER & SEWER MAINS
 600' SCALE MAP NO. 17 BLOCK NO. 310

MT. HEBRON SECTION 18
 CONTRACT NO. 14-1600-D
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 SCALE AS SHOWN
 SHEET 2 OF 2

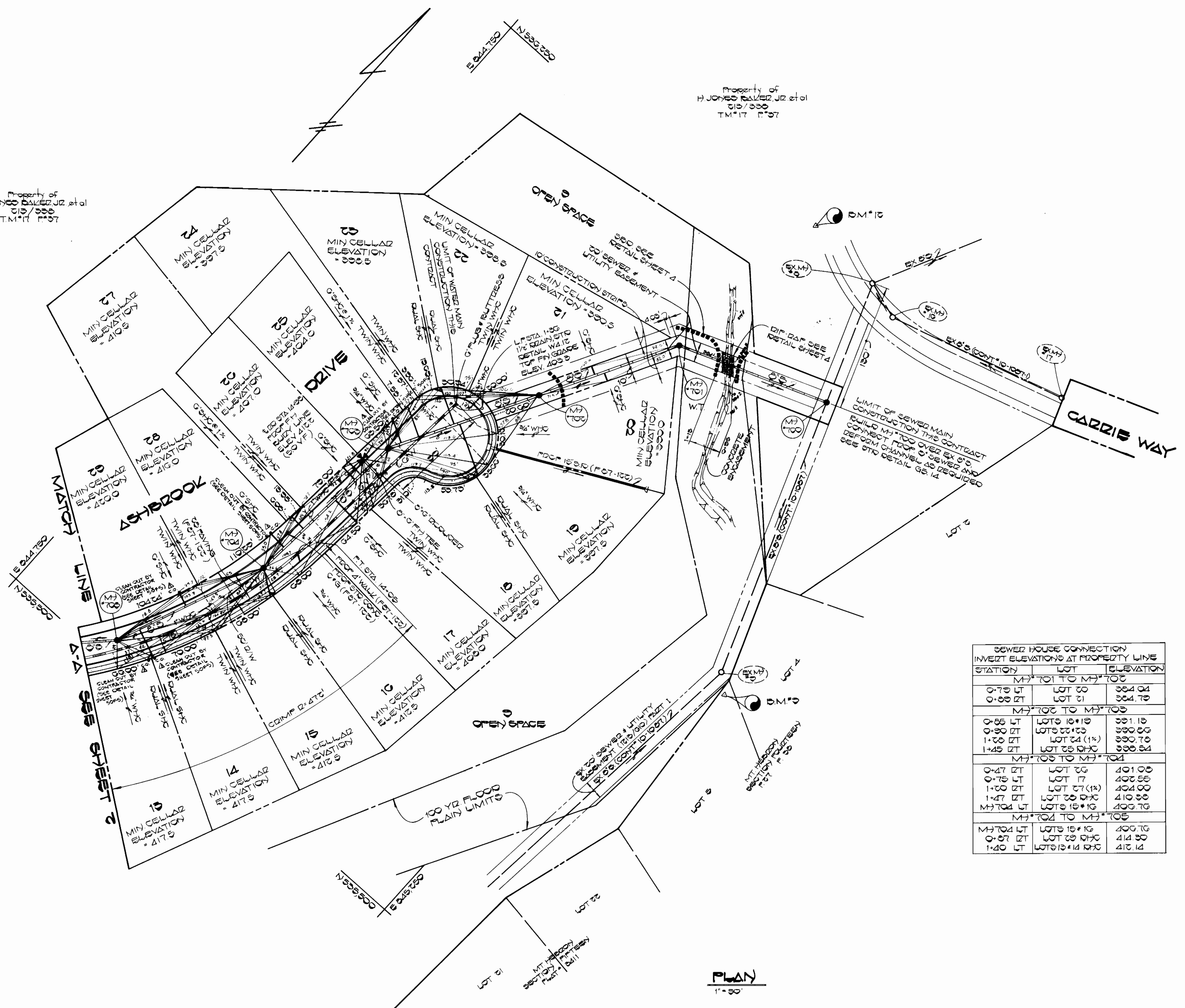
Property of
H JONES PALMER, JR et al
C/D 330
T.M.#17 R#37

Property of
H JONES PALMER, JR et al
C/D 330
T.M.#17 R#37

BENCH MARKS

B.M.#9 ELEV 300.00
BENCH SET, 65' ± SOUTHEAST OF
EX SAN M#0 (TRAVELER STA M#0)

B.M.#10 ELEV 300.00
BENCH SET, 60' ± NORTHWEST OF
EX SAN M#0 (TRAVELER STA M#10)



SEWER HOUSE CONNECTION
INVERT ELEVATIONS AT PROPERTY LINE

STATION	LOT	ELEVATION
M#701 TO M#702		
0-75 LT	LOT 20	304.04
0-80 RT	LOT 21	304.79
M#702 TO M#703		
0-85 LT	LOTS 10+19	301.10
0-90 RT	LOTS 22+23	300.00
1-00 RT	LOT 24 (1%)	300.70
1-45 RT	LOT 25 RHC	300.54
M#703 TO M#704		
0-47 RT	LOT 20	401.00
0-75 LT	LOT 17	400.55
1-00 RT	LOT 27 (1%)	404.00
1-47 RT	LOT 20 RHC	410.00
M#704 LT	LOTS 15+16	400.70
M#704 TO M#705		
M#704 LT	LOTS 15+16	400.70
0-87 RT	LOT 20 RHC	414.00
1-40 LT	LOTS 12+14 RHC	410.14

MANHOLE TABLE

NO	E. DD STA	DIST	DIM	SLOPE
700	10' ABOVE EX GROUND			
701	10' ABOVE EX GROUND			
702	EXISTING GROUND			
703	15+00	7' LT	400.10	0.1%
704	13+50	3' LT	400.00	0.0%
705	11+00	3' LT	400.07	0.2%

PLAN
1"=50'

CONTRACT NO. 14-1600-D
MT. HEBRON SECTION 18
WATER & SEWER MAIN EXTENSION
HOWARD COUNTY, MARYLAND

AS-DRAWN - 12.29.87

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

George F. Neumaier 5-11-87
DIRECTOR OF PUBLIC WORKS DATE

Michael A. Sullivan 5-14-87
CHIEF, BUREAU OF UTILITIES DATE

Michael A. Sullivan 5-18-87
CHIEF, BUREAU OF ENGINEERING DATE

Michael A. Sullivan 1-11-87
CHIEF, LAND DEVELOPMENT DIVISION DATE

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

TERRELL A. FISHER DATE



DES: R.R.S.			
DRN: R.R.S.			
CHK: T.A.F.			
DATE: 3-4-87	BY: NO.	REVISION	DATE

PLAN
WATER & SEWER MAINS

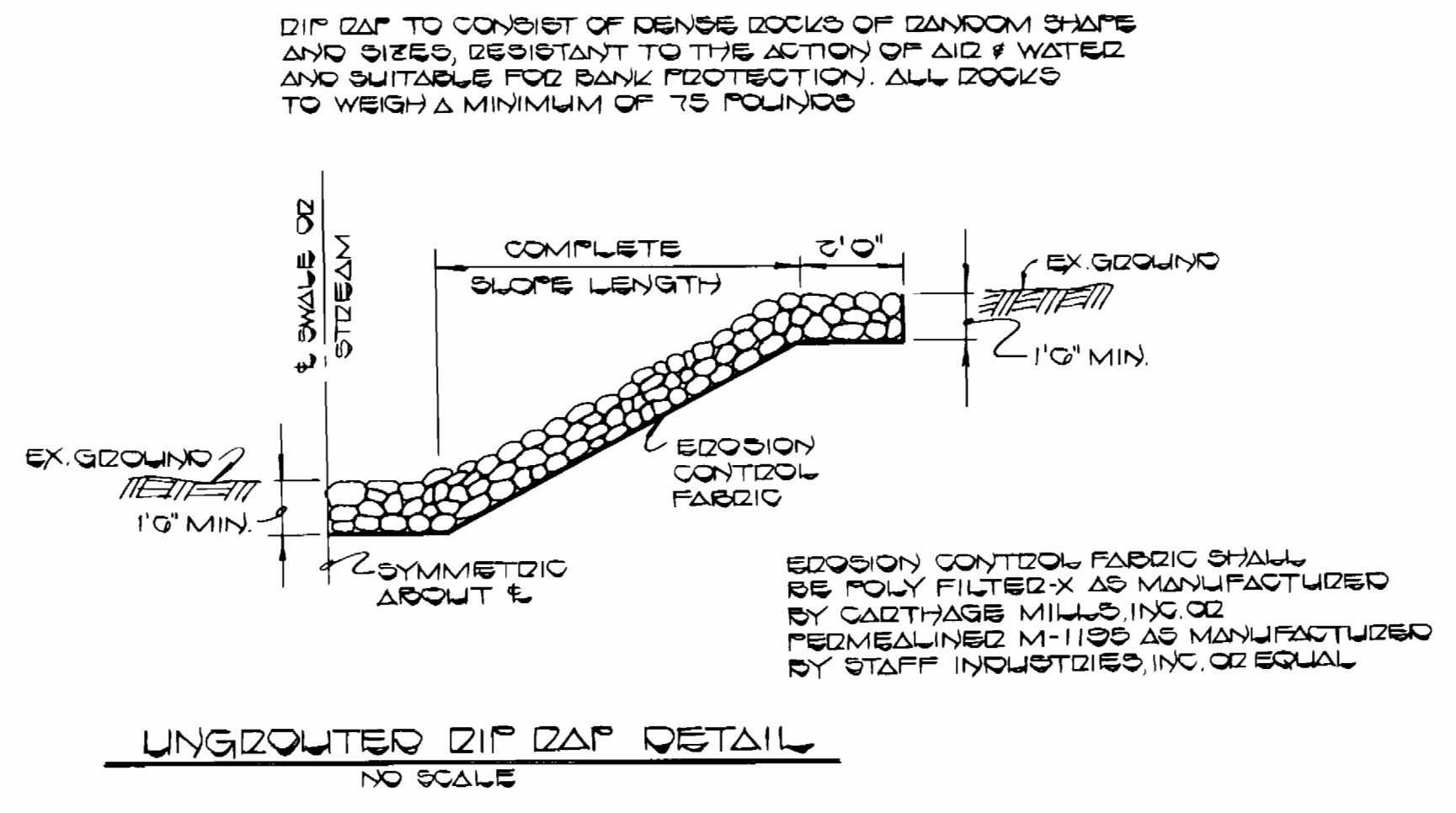
600' SCALE MAP NO. 17 BLOCK NO. 310

MT. HEBRON
SECTION 18
CONTRACT NO. 14-1600-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

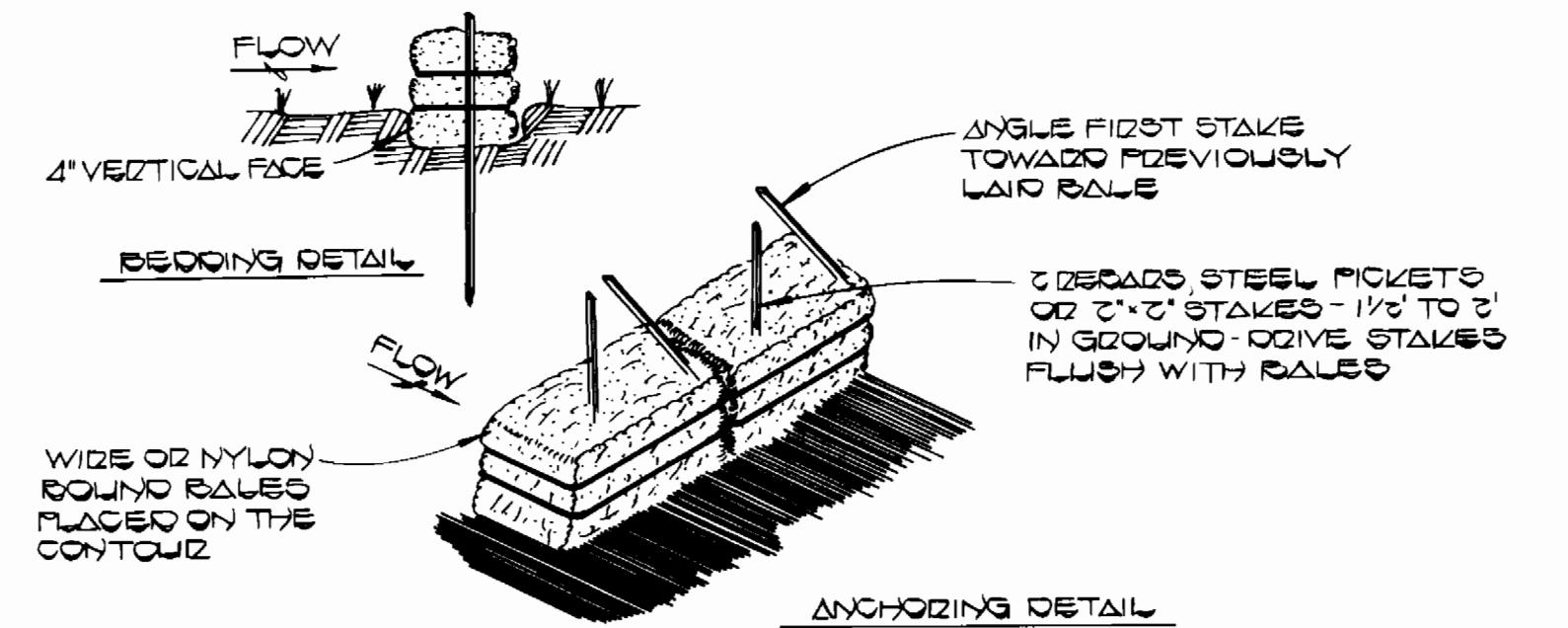
SCALE
AS
SHOWN

SHEET
3 OF 5

BRUNING 44-132-69150

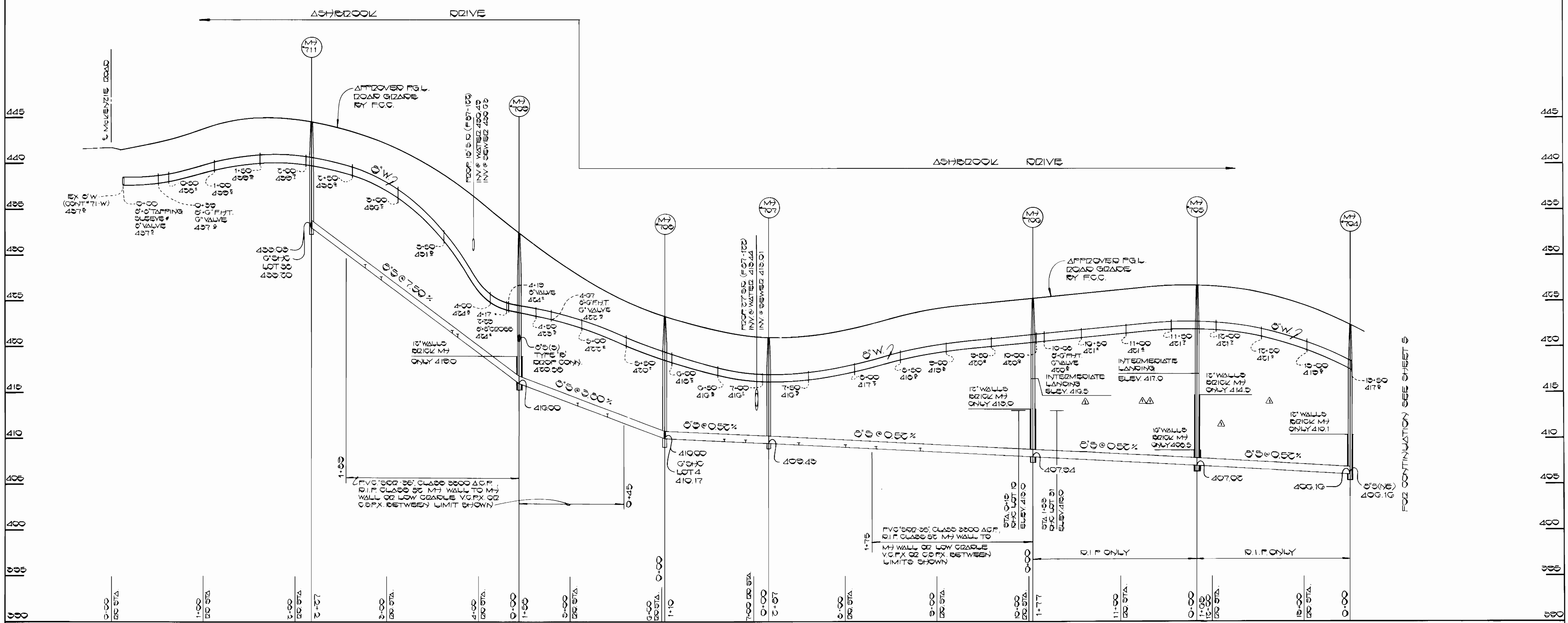


UNGRAVELLED RIP RAP DETAIL
NO SCALE



- CONSTRUCTION SPECIFICATIONS
1. BALES SHALL BE PLACED AT THE TOE OF A SLOPE OR ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ADJUTTING THE ADJACENT BALES.
 2. EACH BALE SHALL BE EMBEDDED IN THE SOIL A MINIMUM OF (4) INCHES AND PLACED SO THE RINDINGS ARE HORIZONTAL.
 3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR DEBARS DRIVEN THROUGH THE BALES. 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.
 4. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
 5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPROVE STORM FLOW OR RETAINAGE.

STRAW BALE DIKE
NO SCALE



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

AS-BUILT - 12 29 87

CONTRACT NO. 14-1600-D
MT. HEBRON SECTION 18
WATER & SEWER MAIN EXTENSION
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

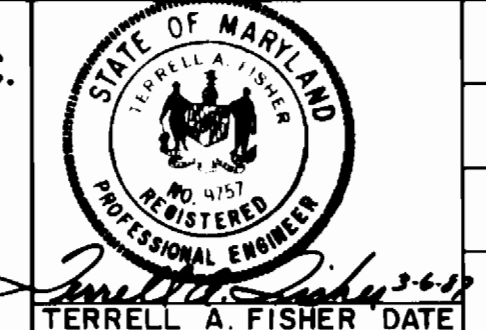
John F. Neenan
DIRECTOR OF PUBLIC WORKS
DATE: 5-14-87

Michael J. Sullivan
CHIEF, BUREAU OF UTILITIES
DATE: 5-14-87

William E. Kelly
CHIEF, BUREAU OF ENGINEERING
DATE: 5-18-87

CHIEF, LAND DEVELOPMENT DIVISION
DATE:

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



DES: P.C.C.			
DRN: P.C.C.			
CHK: T.A.F.			
DATE:			
BY:			
NO.			
REVISION			
DATE			

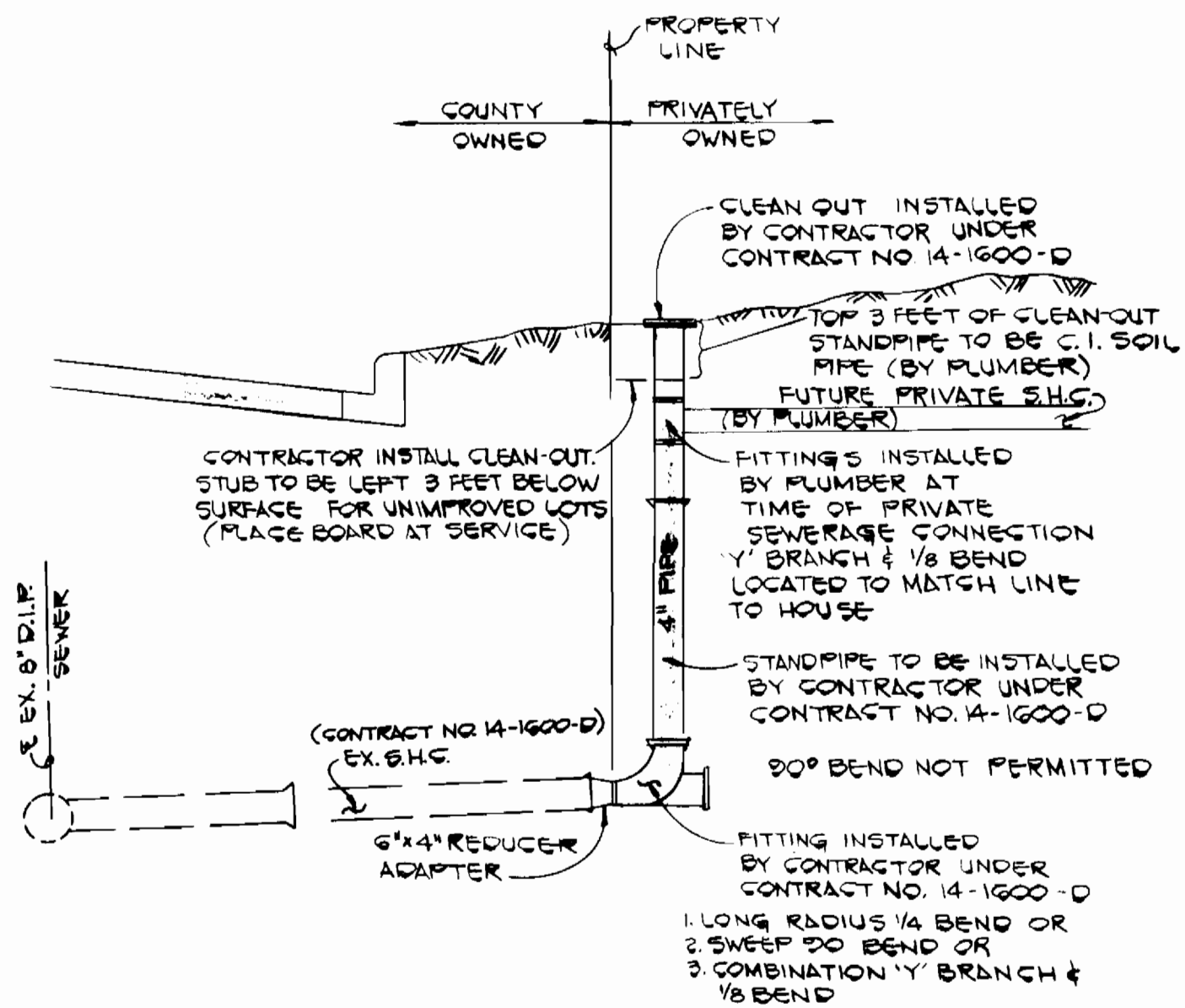
PROFILES
WATER & SEWER MAINS

600' SCALE MAP NO. 13 BLOCK NO. 3819

MT. HEBRON
SECTION 18
CONTRACT NO. 14-1600-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE
AS
SHOWN

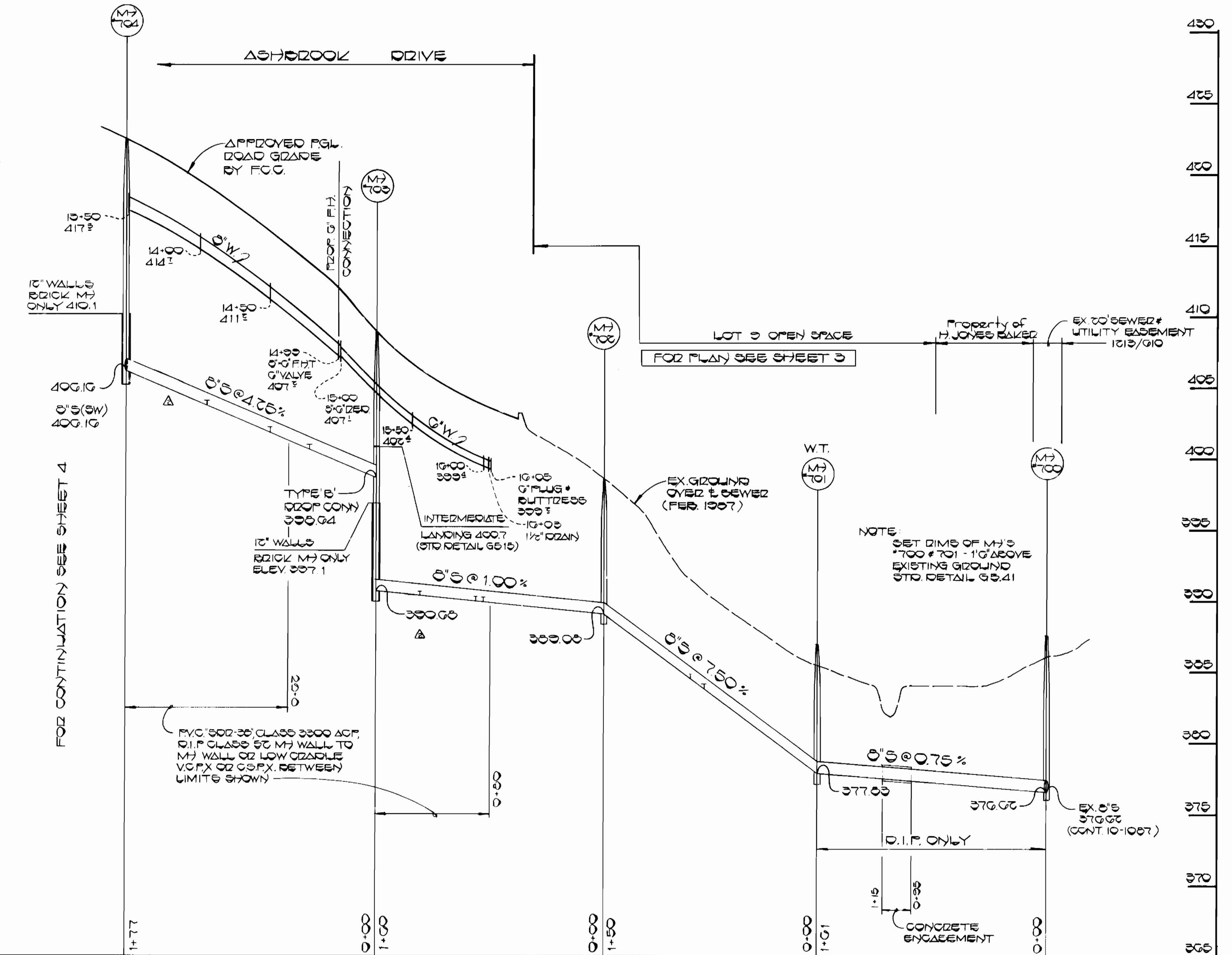
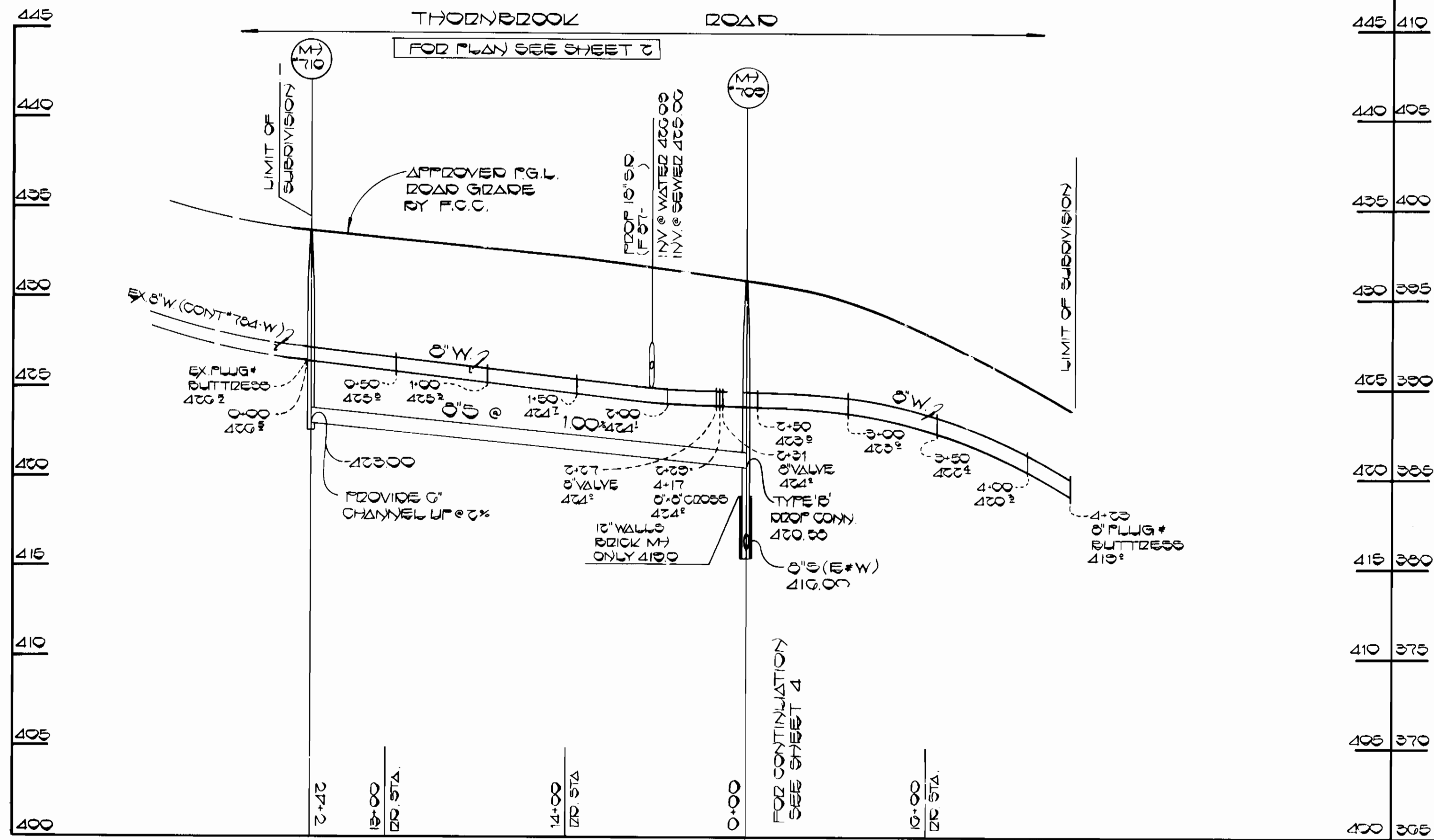
SHEET
4 OF 5



REVISED SEWER HOUSE CONNECTIONS

(BUILDING LOTS 11 THRU 14, LOT 25 AND LOTS 28 THRU 30)
NO SCALE

NOTE: CLEAN-OUT FITTINGS AND STANDPIPE MATERIAL UP TO WITHIN 3' OF GRADE TO BE THE SAME AS S.H.C.



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

AS-BUILT - 12-29-87

CONTRACT NO. 14-1600-D
MT. HEBRON
SECTION 18
WATER AND SEWER EXTENSION
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Director: *Joseph F. Neuma* DATE: 5-18-87
Chief, Bureau of Public Works

Chief, Bureau of Utilities: *Michael A. ...* DATE: 5-14-87

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

Chief, Bureau of Engineering: *...* DATE: 5-18-87
Chief, Land Development Division: *...* DATE: 5-15-87

STATE OF MARYLAND
TERRELL A. FISHER
REGISTERED PROFESSIONAL ENGINEER

DES: D. B. S.					
DRN: D. B. S.					
CHK: T. A. F.	DAN. Δ	REMOVE P.H.C. FROM PROFILE	11/30/87		
	DAN. Δ	ADD S.H.C. DETAIL.	11/30/87		
DATE:	BY:	NO.	REVISION	DATE	

PROFILES
WATER & SEWER MAINS

600' SCALE MAP NO. 17 BLOCK NO. 5*10

MT. HEBRON SECTION 18
CONTRACT NO. 14-1600-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 5 OF 5