
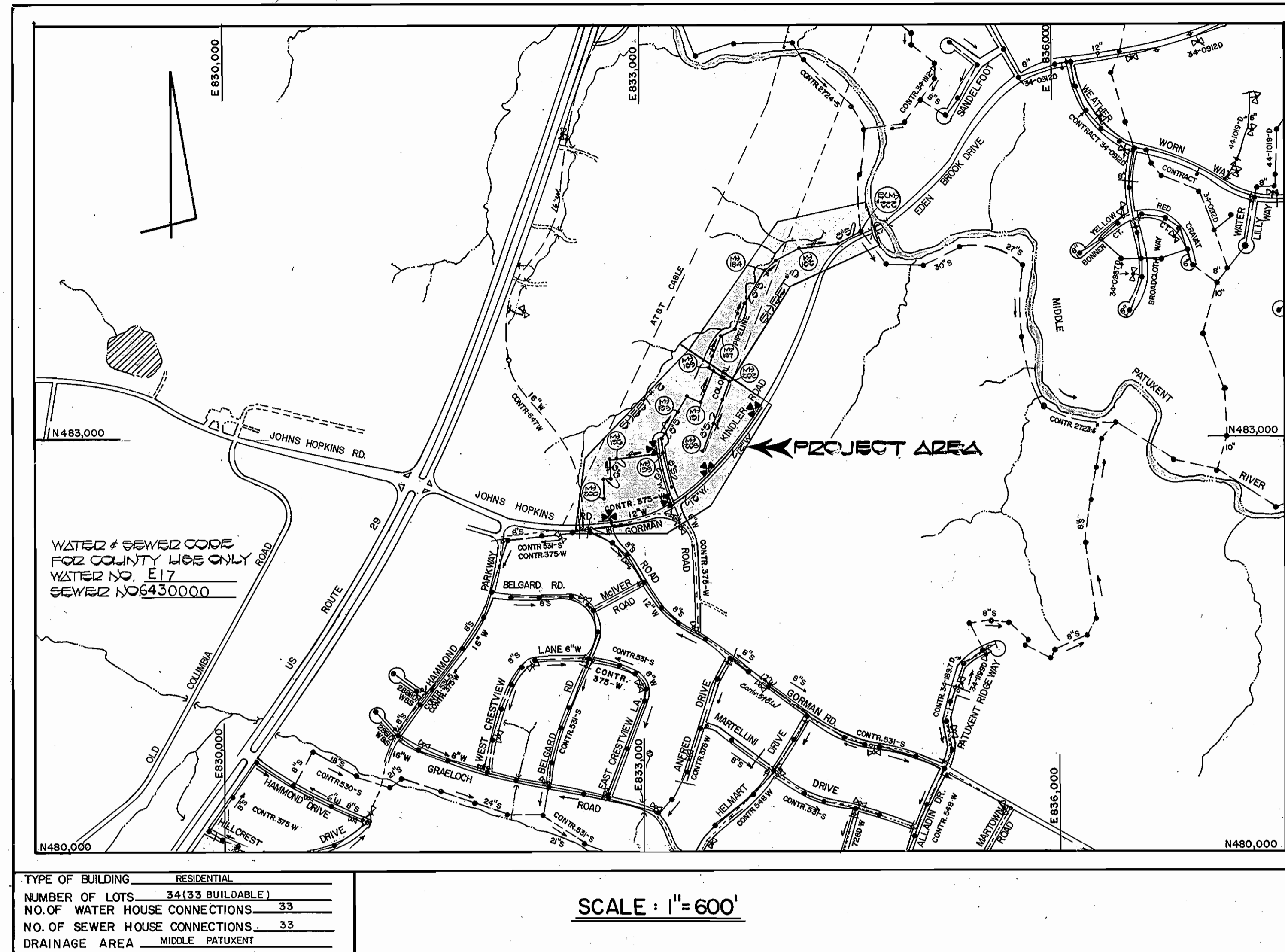


**GENERAL NOTES**

- 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". CLEAR ALL POLES BY 2'-0" MINIMUM OR TUNNEL AS REQUIRED. THE OWNER HAS CONTACTED THE UTILITIES COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON THE DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR THE BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONEY OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
- CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:  
 AT&T COMPANY: 922-2196  
 BALTIMORE GAS & ELECTRIC COMPANY-CONTRACTOR SERVICES: 561-2585  
 BALTIMORE GAS & ELECTRIC COMPANY-UNDER GROUND DAMAGE CONTROL: 234-5621  
 BALTIMORE GAS & ELECTRIC COMPANY-TROUBLE SHOOTING: 298-9013  
 COLONIAL PIPELINE COMPANY: 795-1390  
 "MISS UTILITY": 1-559-0100  
 CHESAPEAKE & POTOMAC TELEPHONE COMPANY: 725-9976  
 BUREAU OF UTILITIES-HOWARD COUNTY: 992-2366
- TREES ARE TO BE PROTECTED FROM DAMAGE TO MAXIMUM EXTENT. TREES 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 AS DIRECTED BY THE ENGINEER. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
- PLACE REGULATION "MEN WORKING" AND WARNING SIGNS AS REQUIRED TO COMPLY WITH MARYLAND STATE HIGHWAY ADMINISTRATION MANUAL OF TRAFFIC CONTROL FOR HIGHWAY CONSTRUCTION AND MAINTENANCE OPERATIONS.
- ALL SEWER MAINS SHALL BE C.S.P.X., R.C.S.P., P.V.C., V.C.P.X. OR A.C.P. CLASS 2400 UNLESS OTHERWISE NOTED.
- CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALLS.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER, UNLESS OTHERWISE NOTED.
- MANHOLES SHOWN WITH 12" AND 16" WALLS ARE BRICK MANHOLES ONLY.
- ALL WATER MAINS TO BE D.I.P. UNLESS OTHERWISE NOTED.
- TOP OF WATER MAINS TO HAVE A MINIMUM OF 3'-6" COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- BURY LINE ELEVATIONS ON FIRE HYDRANTS SHALL BE SET TO THE 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 TO BE COMPACTED IN ACCORDANCE WITH SECTION 1003 AND 1008 OF THE STANDARD SPECIFICATIONS.
- ALL WATER HOUSE CONNECTIONS SHALL BE FOR AN INSIDEMETER SETTING.
- THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING SYSTEM.
- 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 LOCATED WITHIN PROPOSED ROADWAY SHALL HAVE STANDARD HEAVY TRAFFIC MANHOLE FRAME AND COVER, STANDARD DETAIL G5-51.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS, STANDARD DETAIL G5-52. WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- FOR ALL COPPER WATER HOUSE CONNECTIONS, UTILIZE FLARED TYPED FITTINGS ONLY. 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 LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
- ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.

QUANTITIES			
ITEM	EST'D	AS-BUILT	SUPPLIER
8" SEWER	3000 L.F.	2917 L.F.	EXT. BELAIR ROAD SUPPLY
8" SEWER (D.I.P.)	475 L.F.	1155 L.F.	GRIFFIN GRIFFIN
MANHOLES	75 EA.	25 EA.	TERRE HILL
12" WATER	1070 L.F.	1072 L.F.	GRIFFIN GRIFFIN
8" WATER	447 L.F.	442 L.F.	"
6" WATER	200 L.F.	107 L.F.	"
F. HYDR	4 EA.	5 EA.	U.S.P. BELAIR ROAD SUPPLY
3/4" WHC	305 L.F.	457 L.F.	HOWELL " " "
1" WHC	240 L.F.	257 L.F.	" " " "
8" SEWER	605 L.F.	600' PVC D.I.P.	EXT. TECH. " " "
12" VALVE	3 EA.	3 EA.	U.S.P. " " "
8" VALVE	1 EA.	1 EA.	" " " "
12" G.T.S. & G.V.	1 EA.	1 EA.	" " " "



**CONTRACT NO. 34-1333-D**  
**TWIN OAKS**  
**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 15 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 F85-130

REVIEW FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEET ITS TECHNICAL REQUIREMENTS.

*James M. Melman* 7/24/85  
 SOIL CONSERVATION SERVICE DATE

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

APPROVED:

*Stephen L. Haly* 7/29/85  
 HOWARD SOIL CONSERVATION DISTRICT DATE

CONTRACT NO. 34-1333-D  
 TWIN OAKS  
 WATER AND SEWER EXTENSION  
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Robert M. Bessinger 8-7-85 DIRECTOR OF PUBLIC WORKS DATE Robert M. Bessinger 7-30-85 CHIEF, BUREAU OF UTILITIES DATE	FISHER, COLLINS, AND CARTER, INC. CONSULTING ENGINEERS AND LAND SURVEYORS 8398 COURT AVENUE ELLICOTT CITY, MARYLAND 21043 Ferrell A. Fisher DATE	STATE OF MARYLAND FERRELL A. FISHER PROFESSIONAL ENGINEER NO. 9157 EXPIRES 12-31-85	DES: _____ DRN: _____ CHK: _____ DATE: _____ BY NO. _____ REVISION _____ DATE _____	TITLE SHEET	TWIN OAKS WATER AND SEWER MAIN EXTENSION CONTRACT NO. 34-1333-D SIXTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	SCALE AS SHOWN SHEET 1 OF 6
--	--	---	---	-------------	---	--------------------------------

**BENCH MARKS**

B.M.#1 ELEVY 390.0  
 HO 00 MON # 219001, IN FRONT  
 OF PLOT LOTS 1-4

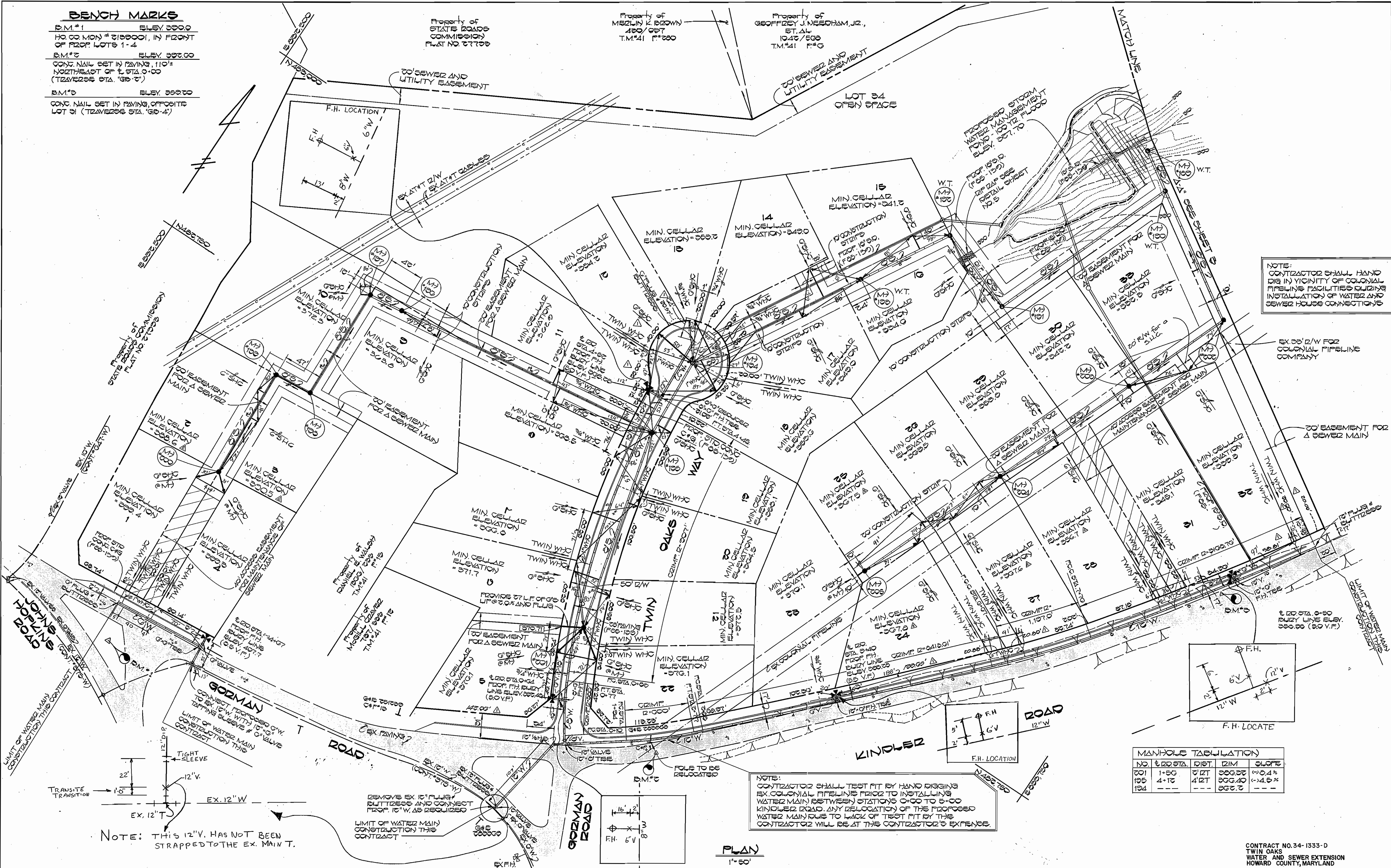
B.M.#2 ELEVY 392.00  
 CONC. NAIL SET IN PAVING, 110'S  
 NORTHEAST OF E. STA 0+00  
 (TRAVERSE STA. '98-2')

B.M.#3 ELEVY 393.00  
 CONC. NAIL SET IN PAVING, OPPOSITE  
 LOT 31 (TRAVERSE STA. '98-4')

Property of  
 STATE BOARD  
 COMMISSION  
 PLAT NO. 67709

Property of  
 MELVIN K. BROWN  
 480/087  
 T.M.#41 P#200

Property of  
 GEOFFREY J. NEEDHAM, JR.,  
 ET. AL.  
 1042/509  
 T.M.#41 P#0



NOTE:  
 CONTRACTOR SHALL HAND  
 DIG IN VICINITY OF COLONIAL  
 PIPELINE FACILITIES GUIDING  
 INSTALLATION OF WATER AND  
 SEWER HOUSE CONNECTIONS

**MANHOLE TABULATION**

NO.	E. OF STA.	DIST.	DIM.	SLOPE
101	1+50	0' 12"	30.00	0.04%
105	4+10	4' 12"	30.40	0.45%
104	---	---	30.2	---

NOTE:  
 CONTRACTOR SHALL TEST FIT BY HAND DIGGING  
 EX. COLONIAL PIPELINE PRIOR TO INSTALLING  
 WATER MAIN BETWEEN STATIONS 0+00 TO 6+00  
 KINDLER ROAD. ANY RELOCATION OF THE PROPOSED  
 WATER MAIN DUE TO LACK OF TEST FIT BY THE  
 CONTRACTOR WILL BE AT THE CONTRACTOR'S EXPENSE.

NOTE: THIS 12" V. HAS NOT BEEN  
 STRAPPED TO THE EX. MAIN T.

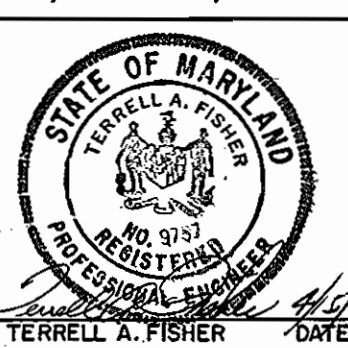
**PLAN**  
 1" = 60'

CONTRACT NO. 34-1333-D  
 TWIN OAKS  
 WATER AND SEWER EXTENSION  
 HOWARD COUNTY, MARYLAND

**DEPARTMENT OF PUBLIC WORKS**  
 HOWARD COUNTY, MARYLAND

Director of Public Works: *[Signature]* 8-7-85  
 Chief, Bureau of Engineering: *[Signature]* 8-6-85  
 Chief, Bureau of Utilities: *[Signature]* 7-30-85  
 Chief, Land Development Division: *[Signature]*

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



DES: D.B.C.			
DRN: D.B.C.			
CHK: T.A.F.	BAJ	REVISE SHC FOR LOTS 2, 3, 24, 25, 27, 28	11/12/85
DATE: 4/10/86	200	REVISE FRONT FOOTING FOR LOTS 8, 11, 12, 24, 25, 26, 30, 34	8/27/89
BY NO.		REVISION	DATE

**PLAN**  
 WATER AND SEWER MAIN

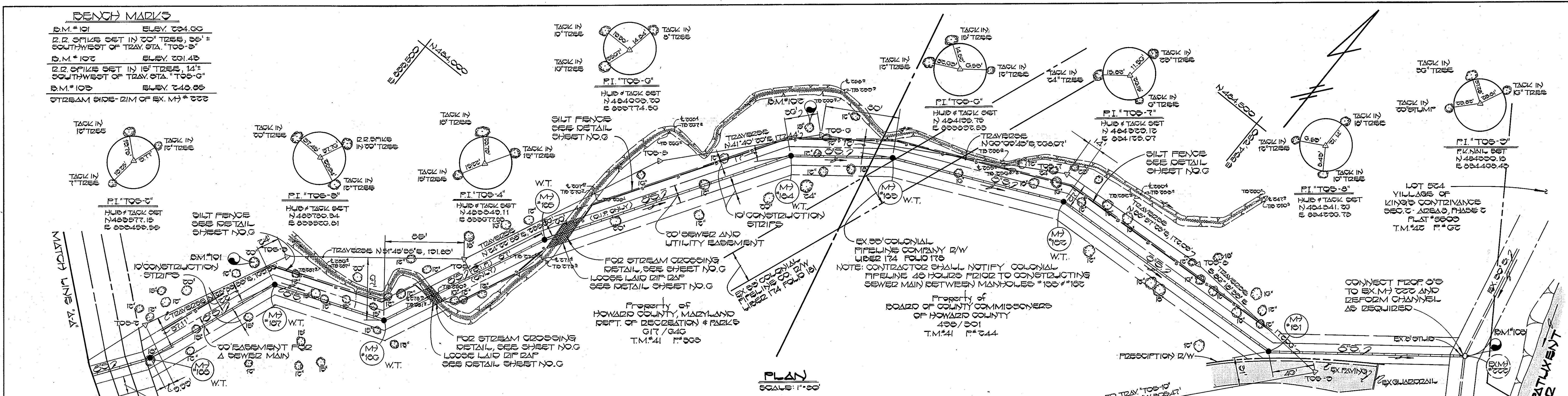
600' SCALE MAP NO. 41 BLOCK NO.

**TWIN OAKS**  
 WATER AND SEWER MAIN EXTENSION  
 CONTRACT NO. 34-1333-D  
 SIXTH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND

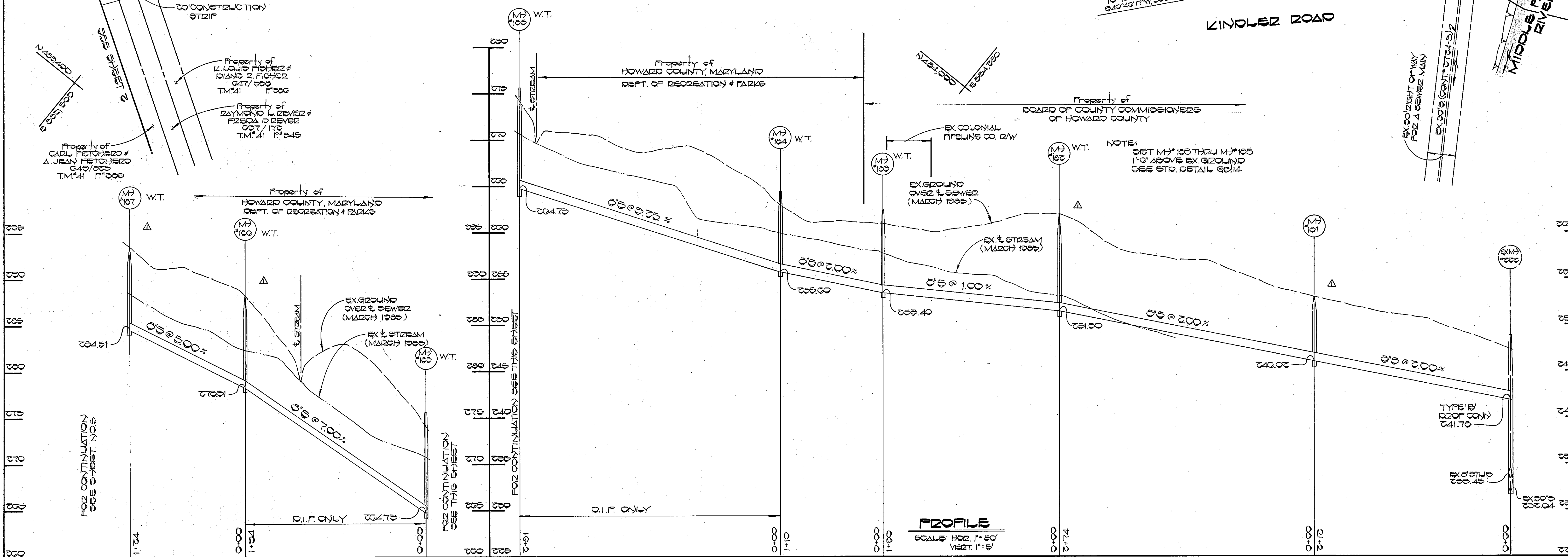
SCALE AS SHOWN  
 SHEET 2 OF 2

**BENCH MARKS**

B.M. # 101 ELEV. 294.00  
 D.D. SPIKE SET IN 20' TREES, 35' SOUTHWEST OF TRAV. STA. 'TOS-3'  
 B.M. # 102 ELEV. 291.43  
 D.D. SPIKE SET IN 15' TREES, 14' SOUTHWEST OF TRAV. STA. 'TOS-0'  
 B.M. # 103 ELEV. 248.95  
 STREAM SIDE - DIM OF EX. M# 222



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

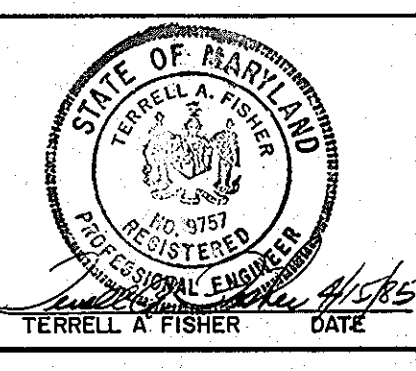


**PROFILE**  
 SCALE: HOR. 1"=50'  
 VERT. 1"=5'

CONTRACT NO. 34-1333-D  
 TWIN OAKS  
 WATER AND SEWER EXTENSION  
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS  
 HOWARD COUNTY, MARYLAND  
 Director of Public Works: *Richard M. Beisinger* 8-7-85  
 Chief, Bureau of Utilities: *Richard M. Beisinger* 7-30-85

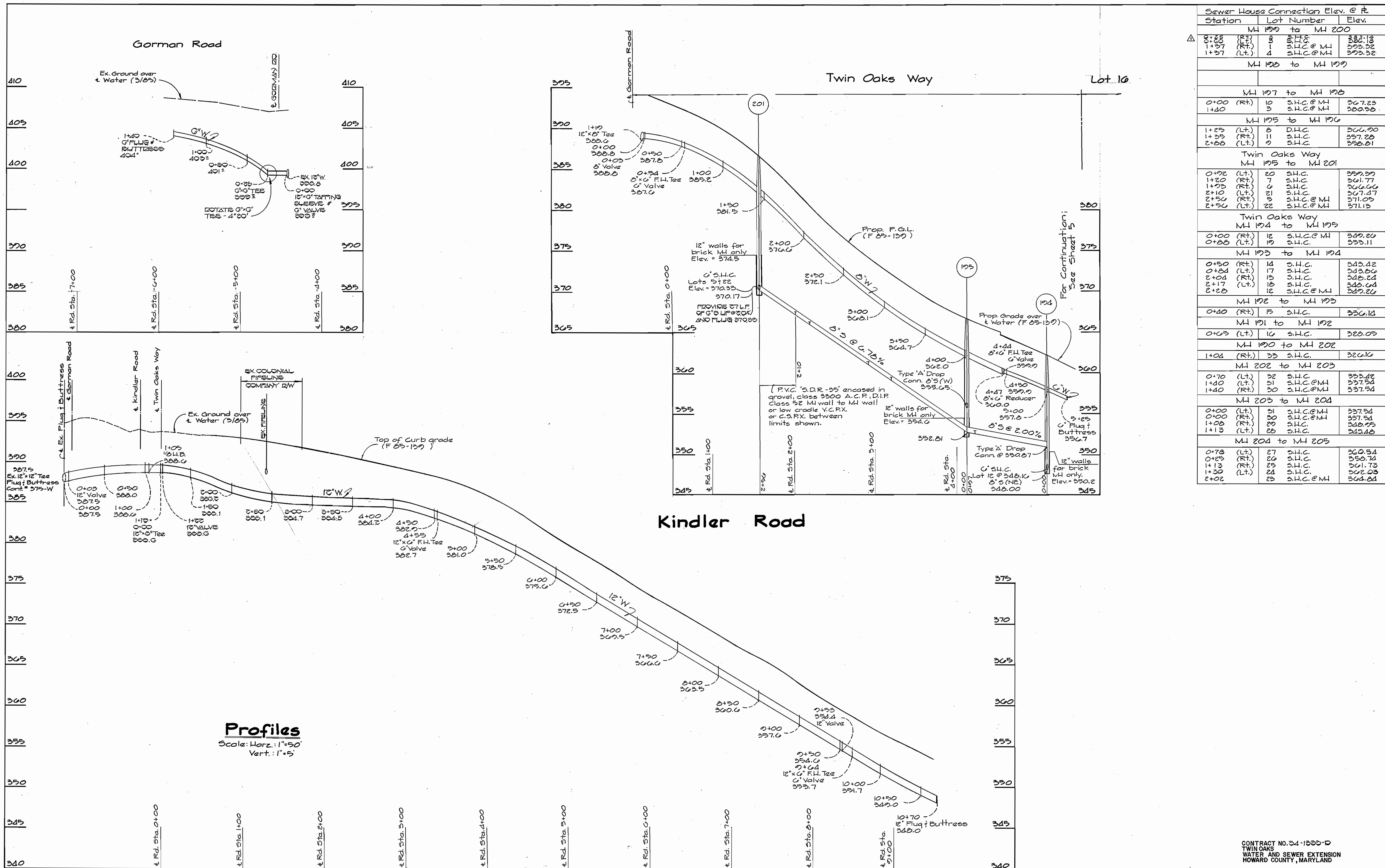
FISHER, COLLINS, AND CARTER, INC.  
 CONSULTING ENGINEERS AND LAND SURVEYORS  
 8388 COURT AVENUE  
 ELLICOTT CITY, MARYLAND 21043



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

PLAN AND PROFILES  
 WATER AND SEWER MAIN  
 600' SCALE MAP NO. 41 BLOCK NO.

TWIN OAKS  
 WATER AND SEWER MAIN EXTENSION  
 CONTRACT NO. 34-1333-D  
 SIXTH ELECTION DISTRICT  
 HOWARD COUNTY, MARYLAND  
 SCALE AS SHOWN  
 SHEET 2 OF 2



Sewer House Connection Elev. @ Ft			
Station	Lot Number	Elev.	
MH 199 to MH 200			
0+25 (RT)	3	S.H.C.	383.18
1+37 (RT)	1	S.H.C. @ MH	385.52
1+37 (LT)	4	S.H.C. @ MH	385.52
MH 198 to MH 199			
MH 197 to MH 198			
0+00 (RT)	10	S.H.C. @ MH	367.23
1+40	3	S.H.C. @ MH	369.56
MH 195 to MH 196			
1+25 (LT)	8	D.H.C.	366.90
1+25 (RT)	11	S.H.C.	367.28
2+00 (LT)	9	S.H.C.	368.81
Twin Oaks Way MH 195 to MH 201			
0+22 (LT)	20	S.H.C.	359.39
1+20 (RT)	7	S.H.C.	361.77
1+25 (RT)	6	S.H.C.	366.66
2+10 (LT)	21	S.H.C.	367.47
2+50 (RT)	5	S.H.C. @ MH	371.05
2+50 (LT)	22	S.H.C. @ MH	371.13
Twin Oaks Way MH 194 to MH 195			
0+00 (RT)	12	S.H.C. @ MH	349.80
0+80 (LT)	19	S.H.C.	353.11
MH 193 to MH 194			
0+50 (RT)	14	S.H.C.	345.42
0+80 (LT)	17	S.H.C.	343.86
2+04 (RT)	13	S.H.C.	348.24
2+17 (LT)	18	S.H.C.	348.64
2+20 (LT)	12	S.H.C. @ MH	349.26
MH 192 to MH 193			
0+40 (RT)	15	S.H.C.	336.18
MH 191 to MH 192			
0+05 (LT)	16	S.H.C.	328.03
MH 190 to MH 202			
1+04 (RT)	23	S.H.C.	326.16
MH 202 to MH 203			
0+70 (LT)	22	S.H.C.	335.42
1+40 (LT)	21	S.H.C. @ MH	337.54
1+40 (RT)	20	S.H.C. @ MH	337.54
MH 203 to MH 204			
0+00 (LT)	21	S.H.C. @ MH	337.54
0+00 (RT)	20	S.H.C. @ MH	337.54
1+05 (RT)	23	S.H.C.	348.95
1+13 (LT)	22	S.H.C.	349.46
MH 204 to MH 205			
0+78 (LT)	27	S.H.C.	360.54
0+25 (RT)	26	S.H.C.	359.74
1+13 (RT)	25	S.H.C.	361.73
1+30 (LT)	24	S.H.C.	362.03
2+02 (LT)	23	S.H.C. @ MH	364.24

**Profiles**  
Scale: Horz.: 1"=50'  
Vert.: 1"=5'

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

*R. M. Bevinger* 7/30/85  
DIRECTOR OF PUBLIC WORKS DATE

*M. J. ...*  
CHIEF, BUREAU OF UTILITIES DATE

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

*T. A. Fisher*  
REGISTERED PROFESSIONAL ENGINEER  
DATE

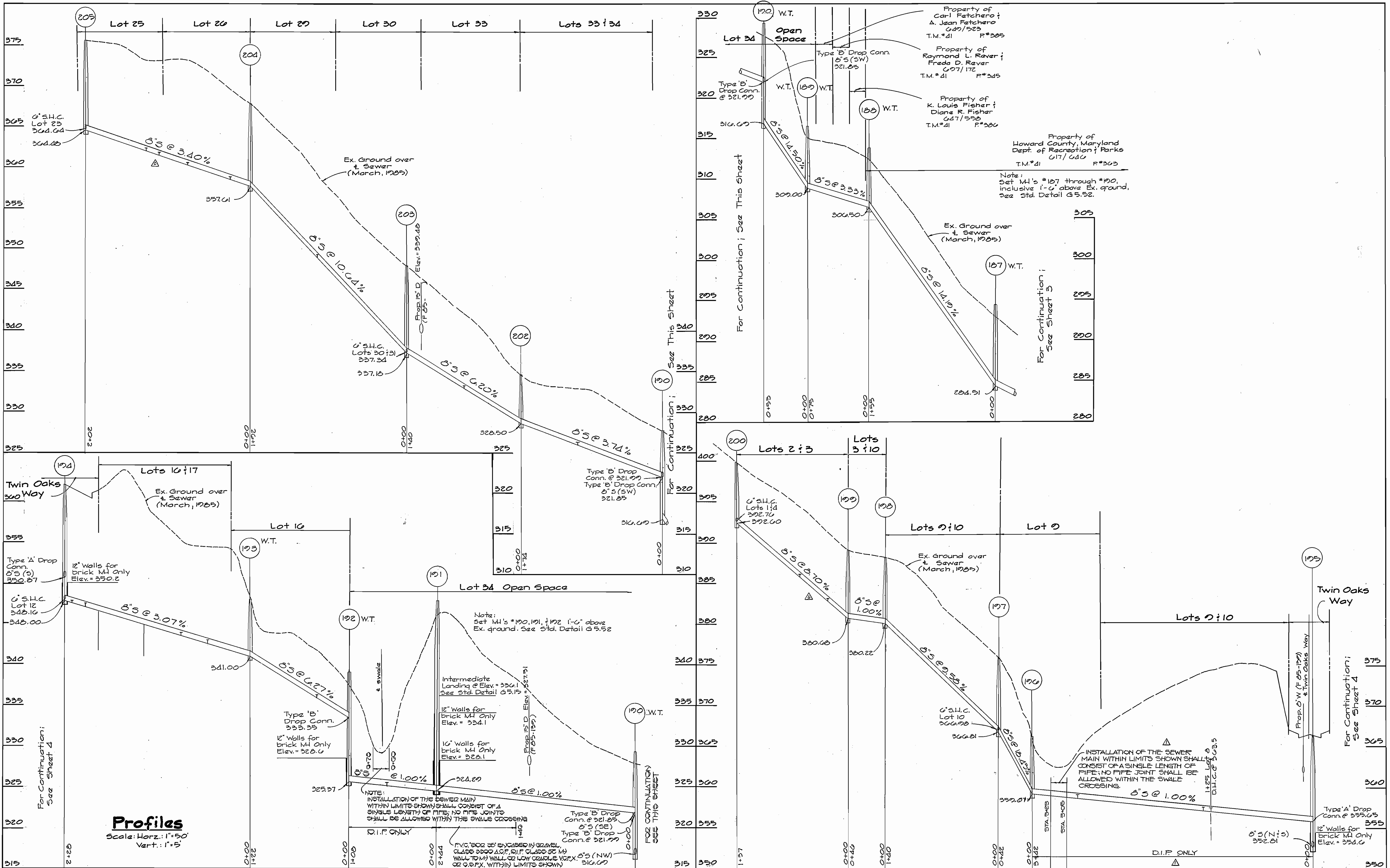
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DATE:	RAI
BY:	NO.
REVISION:	DATE

PROFILES  
WATER AND SEWER MAIN

600' SCALE MAP NO. 41 BLOCK NO.

TWIN OAKS  
WATER AND SEWER MAIN EXTENSION  
CONTRACT NO. 34-1333-D  
SIXTH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 4 OF 6



**Profiles**  
Scale: Horz.: 1"=50'  
Vert.: 1"=5'

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

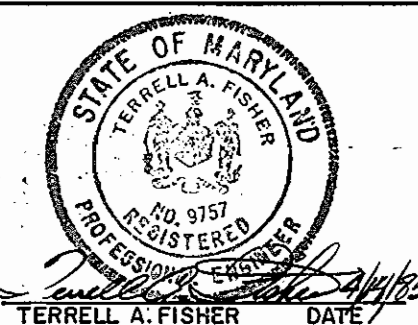
*Robert M. Brinson* 8-7-85  
DIRECTOR OF PUBLIC WORKS DATE

*Robert M. Brinson* 7-13-85  
CHIEF, BUREAU OF UTILITIES DATE

*Robert M. Brinson* 8-29-85  
CHIEF, BUREAU OF ENGINEERING DATE

*Robert M. Brinson* 8-29-85  
CHIEF, LAND DEVELOPMENT DIVISION DATE

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



DES:			
DRN:			
CHK:	R.A.I.	REVISE PROFILES TO REFLECT CURRENT CHANGES	11/2/85
DATE:	D.S.F.	ADD PIPE JOINT NOTE MH 195 TO MH 196, DESIGNATE D.I.F. ONLY MH 195 TO MH 196	9/24/85
BY:	NO.	REVISION	DATE

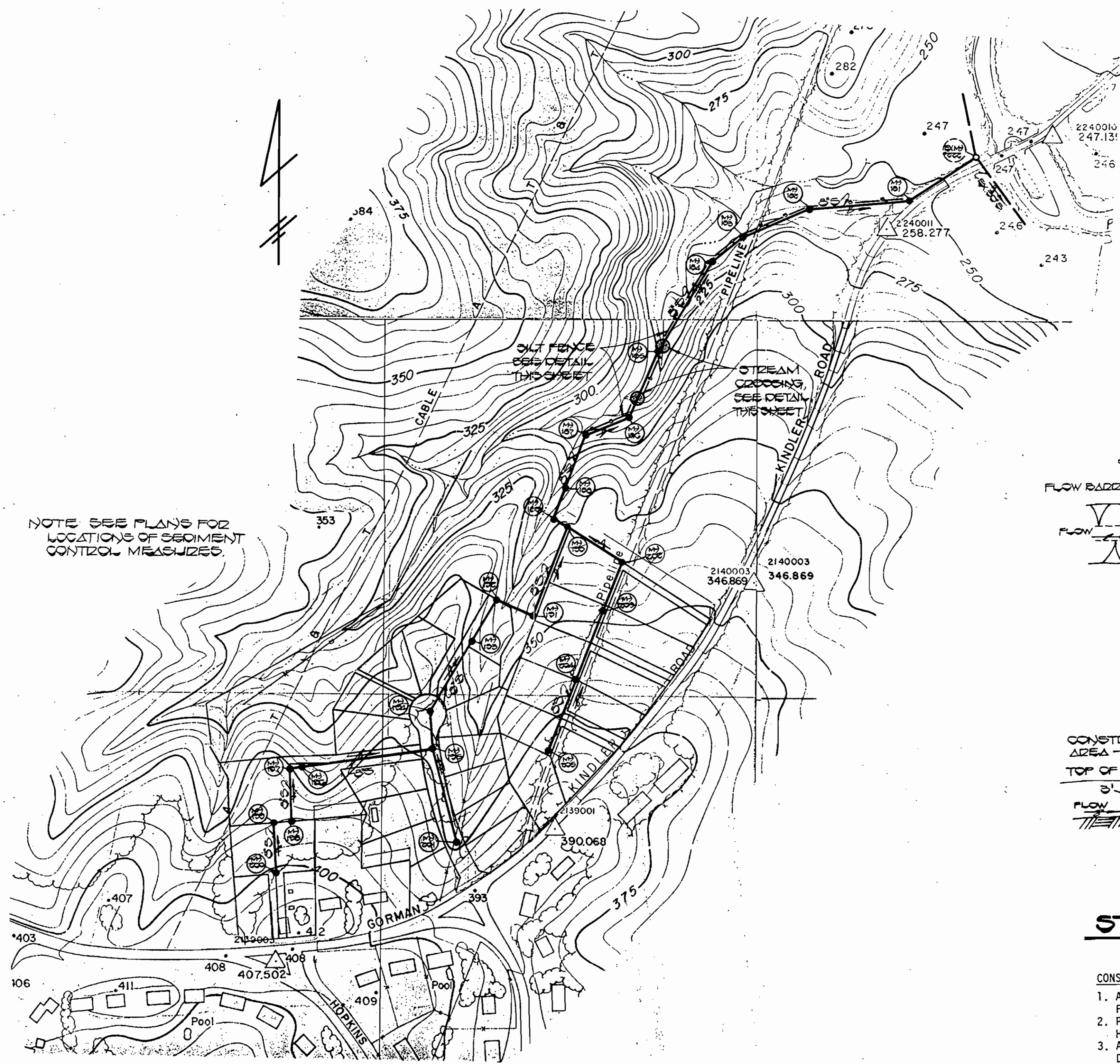
PROFILES AND DETAILS  
WATER AND SEWER MAIN

600' SCALE MAP NO. 41 BLOCK NO. \_\_\_\_\_

**TWIN OAKS**  
WATER AND SEWER MAIN EXTENSION  
CONTRACT NO. 34-1333-D  
SIXTH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

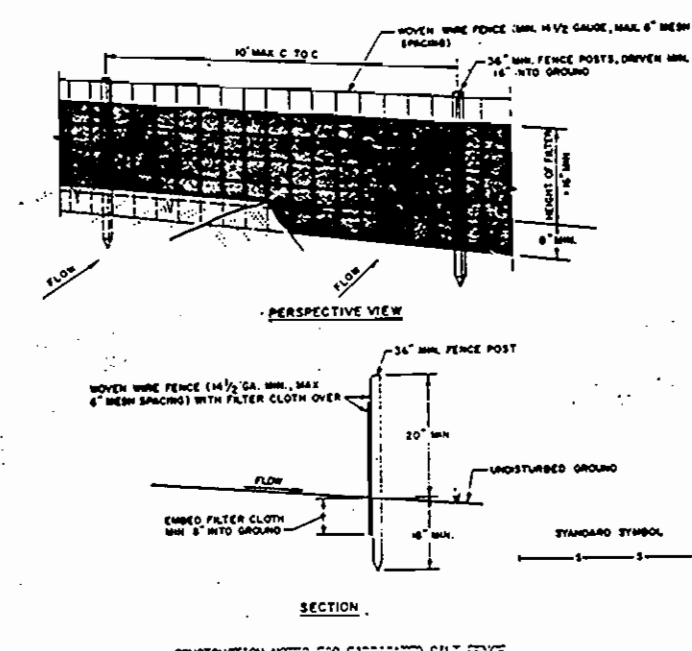
SCALE AS SHOWN

SHEET 5 OF 6



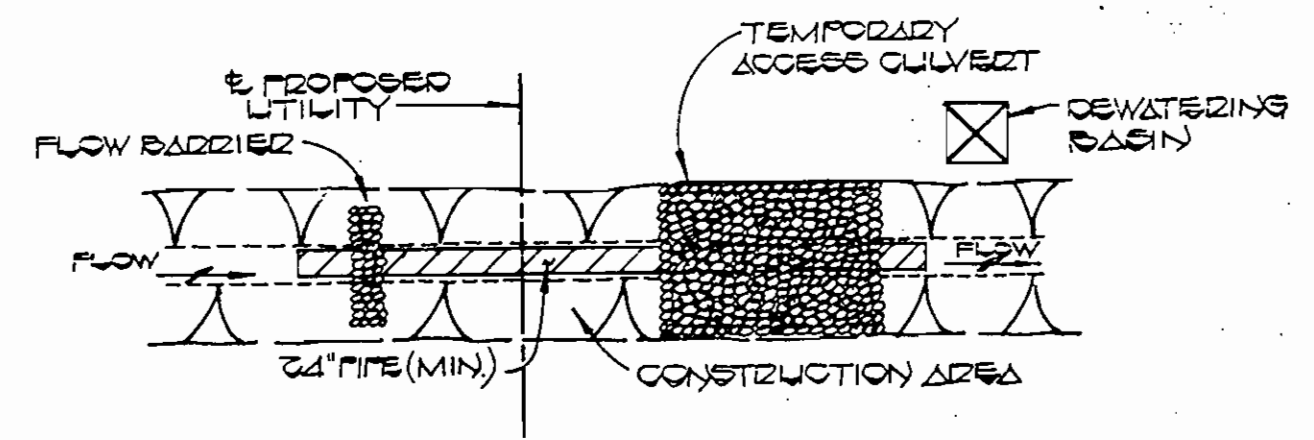
NOTE: SEE PLANS FOR LOCATIONS OF SEDIMENT CONTROL MEASURES.

**DRAINAGE AREA MAP**  
SCALE: 1" = 200'



- CONSTRUCTION NOTES FOR ASSUMED SILT FENCE:**
1. MOVE SILT FENCE TO BE FACTURED SECURELY TO FENCE POSTS WITH WIRE TIES OR EGGDOLLS.
  2. FILTER CLOTH TO BE FACTURED SECURELY TO WOOD POSTS WITH WIRE TIES OR EGGDOLLS.
  3. MAKE NO SETTLES OF FILTER CLOTH. CHECK EACH SIDE THAT SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
  4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND REPAIRS SHOULD BE MADE IMMEDIATELY IN THE SILT FENCE.
- POSTS:** STEEL EGGDOLL 1" OR 1 1/2" TYPE OR IF WOODWORK
- FENCE:** 10' WIDE, 10' GA. 12' GAL. PLY. FIBER CLOTH
- FILTER CLOTH:** 10' WIDE, 10' GA. 12' GAL. PLY. FIBER CLOTH
- PREPARED UNIT:** GEOTEX, EGGDOLLS, EGGDOLLS, EGGDOLLS

**SILT FENCE**  
NO SCALE



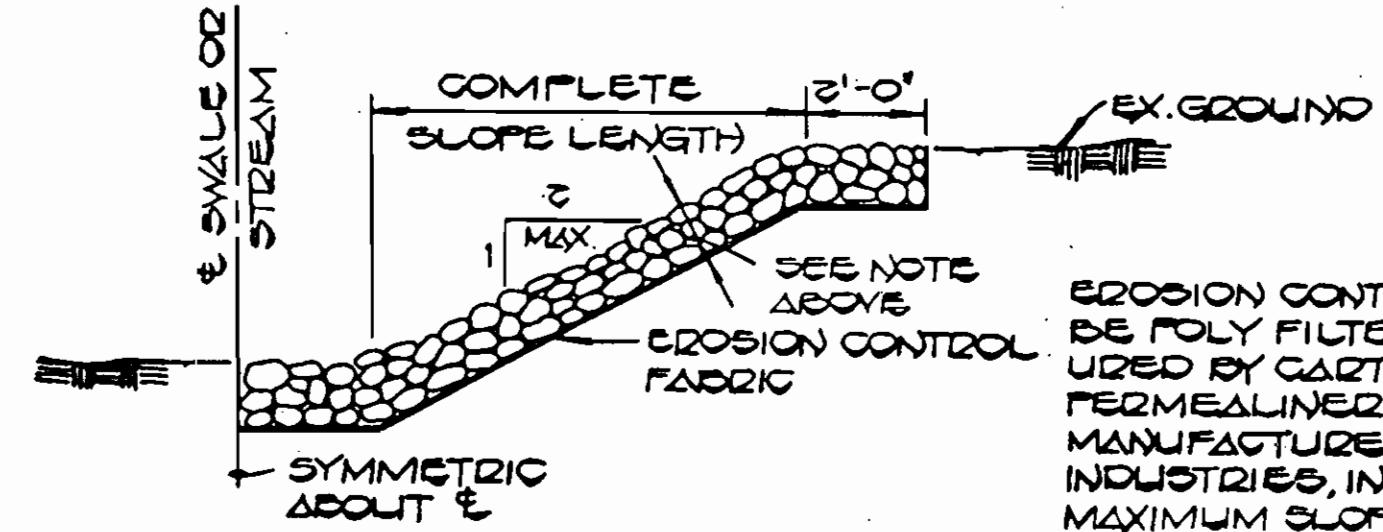
**STREAM CROSSING DETAIL**  
NO SCALE

- CONSTRUCTION REQUIREMENTS:**
1. ALL EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSTALLED AS THE FIRST ORDER OF BUSINESS.
  2. PIPES MUST BE SIZED TO ACCOMMODATE THE NORMAL STREAM FLOW AND SHALL HAVE A MINIMUM DIAMETER OF AT LEAST 24-INCHES.
  3. ALL DEWATERING OF THE CONSTRUCTION AREA SHALL BE PUMPED TO A DEWATERING BASIN OR OTHERWISE FILTERED PRIOR TO RE-ENTERING THE STREAM.
  4. THE FLOW BARRIER SHALL BE A MINIMUM OF 3 FEET IN DEPTH AND BE CONSTRUCTED OF MATERIALS WHICH SHALL BE SIZED TO WITHSTAND NORMAL STREAM FLOW VELOCITIES.
  5. THE TEMPORARY CULVERT CROSSING SHALL BE CONSTRUCTED IN ACCORDANCE WITH STANDARD DETAIL (TAC-2), 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SEDIMENT AND EROSION CONTROL.
  6. SEDIMENT CONTROL DEVICES SHALL REMAIN IN PLACE UNTIL ALL DISTURBED AREAS ARE STABILIZED AND THE INSPECTING AUTHORITY APPROVES THEIR REMOVAL.

**EROSION AND SEDIMENT CONTROL NOTES**

1. ALL SEDIMENT CONTROL OPERATIONS ARE TO BE DONE IN ACCORDANCE WITH SECTION 15 OF THE HOWARD COUNTY DESIGN MANUAL AND THE STANDARDS AND SPECIFICATIONS FOR SEDIMENT CONTROL IN DEVELOPING AREAS.
2. IMMEDIATELY FOLLOWING BACKFILL OF PIPE TRENCHES, ALL DISTURBED AREAS ARE TO BE STABILIZED WITH SEED AND MULCH IN ACCORDANCE WITH REFERENCED STANDARDS AND SPECIFICATIONS AND THE FOLLOWING STABILIZATION NOTES:
  - A. SEEDBED SHOULD BE PREPARED TO A MINIMUM DEPTH OF 3 INCHES WHEN THE AREA TO BE SEEDING HAS BEEN RECENTLY LOOSENED TO THE EXTENT THAT AN ADEQUATE SEEDBED EXISTS, NO ADDITIONAL TREATMENT IS REQUIRED.
  - B. LIME TO A PH OF 6.0 BUT IN THE ABSENCE OF A SOIL TEST, APPLY A MINIMUM OF ONE TON/ACRE OF GROUND LIMESTONE.
  - C. FERTILIZE AT THE MINIMUM RATE OF 500 POUNDS OF 10-10-10 PER ACRE.
  - D. MULCH THE SEEDING AREA WITH SMALL GRAIN STRAW AT A RATE OF 1.5 TONS PER ACRE.
  - E. SEED THE AREAS WITH KENTUCKY 31 TALL FESCUE AT A RATE OF 60 LBS./AC. THE SEEDING DATES ARE SPRING - 3/15 TO 5/15.

**RIP-RAP NOTE**  
RIP-RAP SHALL BE PLACED OVER ALL DISTURBED AREAS WITHIN THE FULL WIDTH OF THE RIGHT-OF-WAY AT THOSE LOCATIONS INDICATED ON THE DRAWINGS.



**LOOSE LAID RIP RAP DETAIL**  
NO SCALE

EROSION CONTROL FABRIC SHALL BE POLY FILTER-X AS MANUFACTURED BY CARTRIDGE MILLS, INC. OR FERMALINER M-1105 AS MANUFACTURED BY STAFF INDUSTRIES, INC. OR EQUAL. MAXIMUM SLOPE SHALL BE 2:1.

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

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



DES:					
DRN:					
CHK:					
DATE:					
BY:	NO.	REVISION	DATE	600' SCALE MAP NO.	BLOCK NO.

**SEDIMENT CONTROL & DETAILS**

**TWIN OAKS**  
WATER AND SEWER MAIN EXTENSION  
CONTRACT NO. 34-1333-D  
SIXTH ELECTION DISTRICT  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 2 OF 2

CONTRACT NO. 34-1333-D  
TWIN OAKS  
WATER AND SEWER EXTENSION  
HOWARD COUNTY, MARYLAND