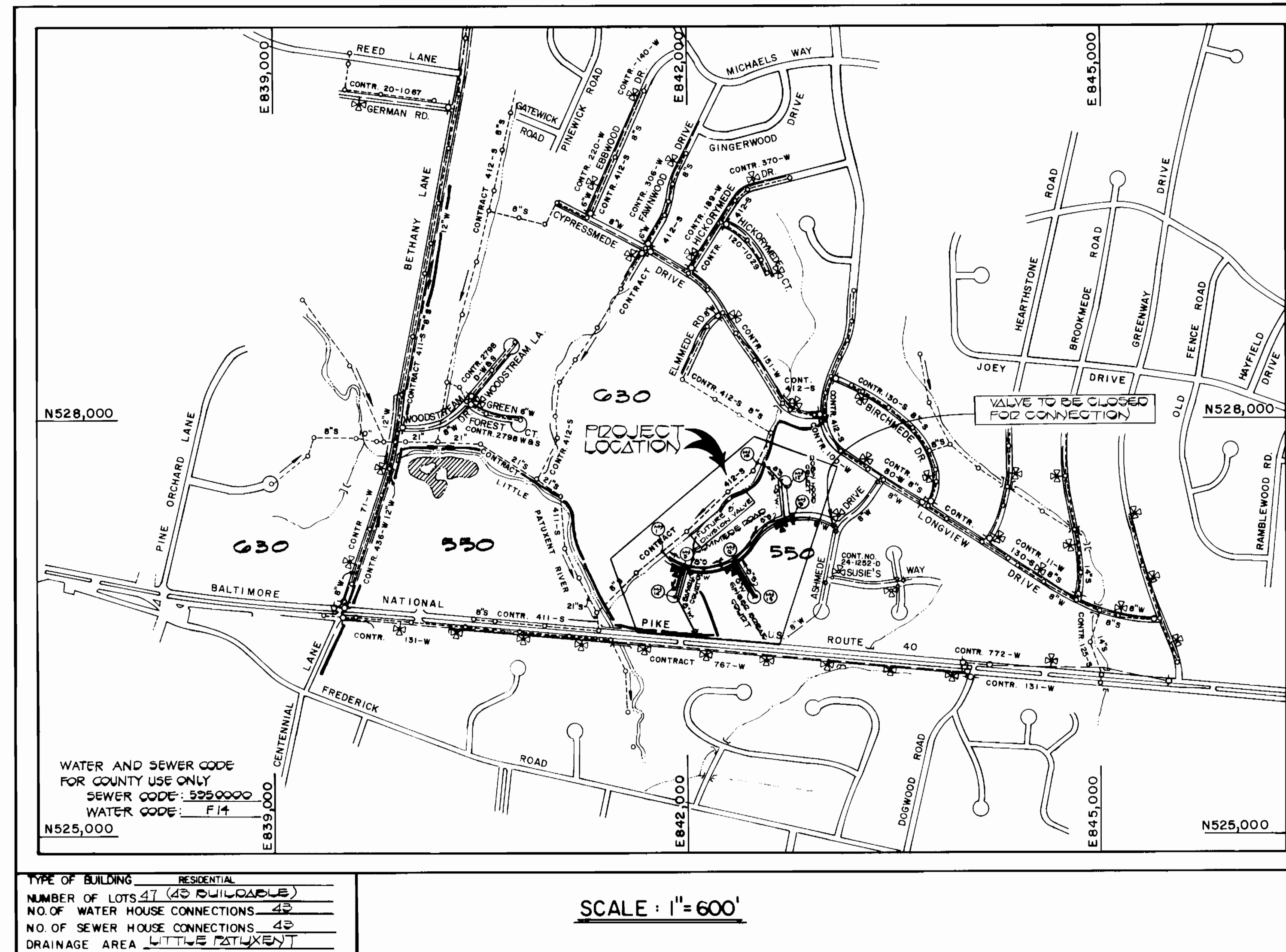


GENERAL NOTES

- 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: 561-2585
 BALTIMORE GAS & ELECTRIC CO. UNDERGROUND DAMAGE CONTROL: 234-5621
 BALTIMORE GAS & ELECTRIC CO. TROUBLE SHOOTING: 298-9013
 MISS UTILITY: 1-559-0100
 COLONIAL PIPELINE COMPANY: 795-1390
 BUREAU OF UTILITIES, HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS: 992-2366
- 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 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.
- 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 G5.51.

QUANTITIES			
ITEM	EST'D	AS-BUILT	SUPPLIER
8" SEWER	1001 L.F.	1862	HUNTER ENG. PASTIF
6" SEWER (O.M.)	30 L.F.	27	J. K. H. S. I. N.
6" PVC	1250 L.F.	1251	HUNTER ENG. PASTIF
MANHOLES	14 EA.	14 EA.	ATLANTIC PIPE CO.
6" WATER	1000 L.F.	1005	W. B. L. E. R. I. N.
6" WATER	650 L.F.	648	W. B. L. E. R. I. N.
FIRE HYD.	3 EA.	3	MUNICIPAL SUPPLIES
3/4" WHC	510 L.F.	631	
1" WHC	445 L.F.	455	
6" VALVES	5 EA.	5	
6" VALVE (S.S.)	7 EA.	2	
1 1/2" COZAIN	7 EA.	2	
2" WHC	10 L.F.	10	



CONTRACT NO. 24-1455-D
ENCHANTED FOREST ESTATES
SECTION 1 AREA 1
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 F89-14C

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

John M. DeLoe 5-14-86
 U.S. SOIL CONSERVATION SERVICE DATE

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

APPROVED:

Stephen L. Frank 5/14/86
 HOWARD SOIL CONSERVATION DISTRICT DATE

CONTRACT NO. 24-1455-D
 ENCHANTED FOREST ESTATES
 SECTION ONE AREA ONE
 WATER AND SEWER EXTENSION
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND DATE: 5-21-86 DIRECTOR OF PUBLIC WORKS DATE: 5-20-86 CHIEF, BUREAU OF UTILITIES	FISHER, COLLINS, AND CARTER, INC. CONSULTING ENGINEERS AND LAND SURVEYORS 8388 COURT AVENUE ELLIKOTT CITY, MARYLAND 21043 DATE: 5/14/86	DES. D.B.S. DRN. D.B.S. CHK. T.A.F. DATE: 5/14/86	TITLE SHEET 600' SCALE MAP NO. 24 BLOCK NO. 343	ENCHANTED FOREST ESTATES SECTION 1 AREA 1 CONTRACT NO. 24-1455-D SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND SCALE AS SHOWN SHEET 1 OF 4
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BENCH MARKS

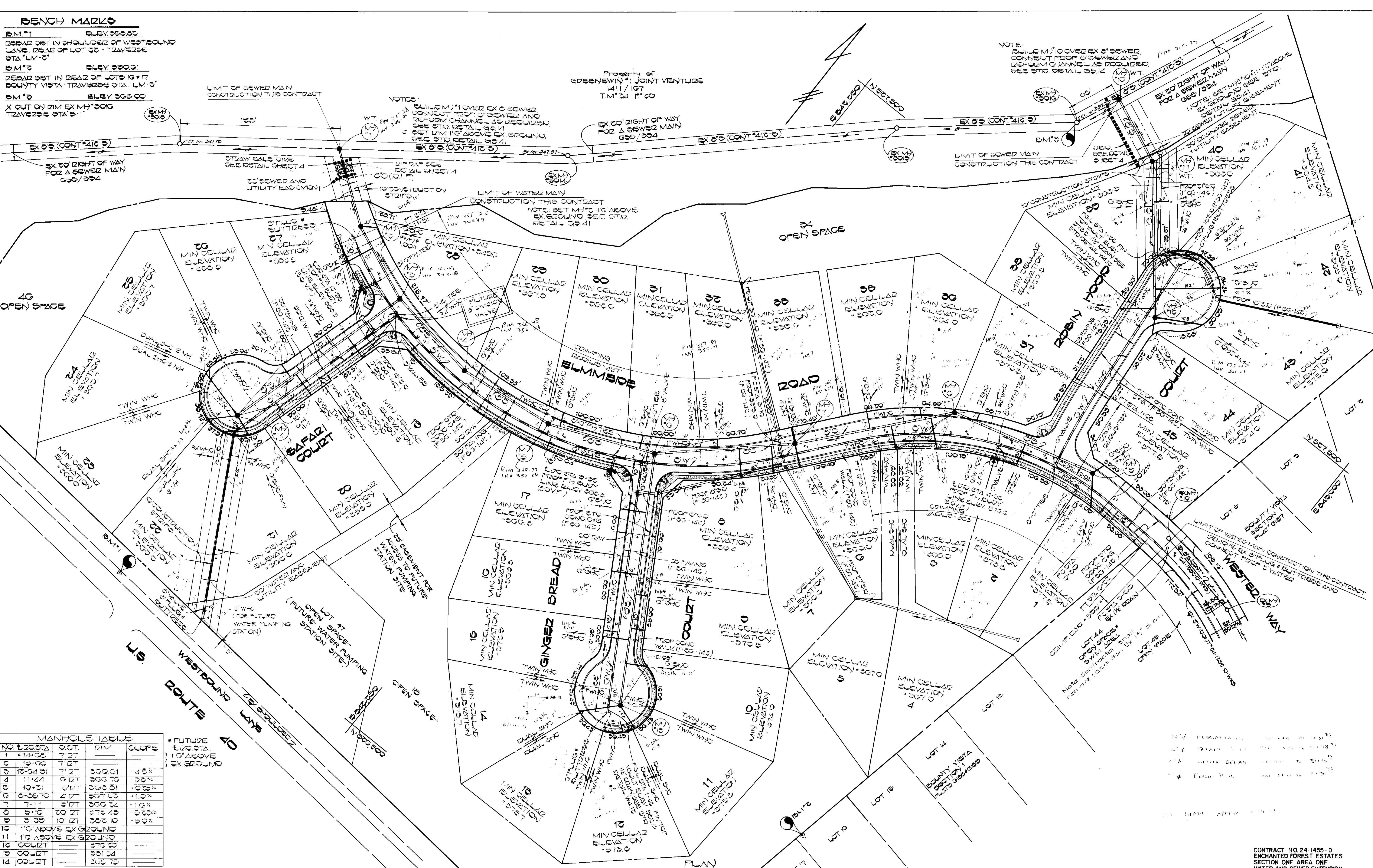
B.M.#1 ELEV. 390.62
 BEAR SET IN SHOULDER OF WESTBOUND LANE, BEAR OF LOT 22 - TRAVELERS STA 14+00
 B.M.#2 ELEV. 390.61
 BEAR SET IN BEAR OF LOTS 10 & 17 COUNTY VISTA - TRAVELERS STA 14+50
 B.M.#3 ELEV. 396.00
 X-CUT ON DIM EX MH 300 TRAVELERS STA 5+10

LIMIT OF SEWER MAIN CONSTRUCTION THIS CONTRACT

Property of GREENWIN #1 JOINT VENTURE 1411 167 T.M.#24 P.20

NOTE: BUILD MH 10 OVER EX 6" SEWER, CONNECT FROM 6" SEWER AND REFORM CHANNEL AS REQUIRED. SEE STD DETAIL G5 14.

NOTES:
 1. BUILD MH 10 OVER EX 6" SEWER, CONNECT FROM 6" SEWER AND REFORM CHANNEL AS REQUIRED. SEE STD DETAIL G5 14.
 2. SET DIM 1'0" ABOVE EX GROUND. SEE STD DETAIL G5 41.
 EX 6" (CONT. 412-5)



NO.	STA	RSET	DIM	SLOPE	REMARKS
1	14+00	7'12"			
2	15+00	7'12"			
3	16+04.31	7'12"	360.01	-4.5%	
4	11+44	6'12"	360.76	-3.8%	
5	10+21	5'12"	358.51	+0.25%	
6	6+36.70	4'12"	367.56	+1.0%	
7	7+11	5'12"	369.24	-1.6%	
8	5+16	3'12"	373.48	-5.25%	
9	3+39	10'12"	382.10	-5.0%	
10					1'0" ABOVE EX GROUND
11					1'0" ABOVE EX GROUND
12	COURT		379.00		
13	COURT		381.54		
14	COURT		382.75		

* FUTURE 6" DIA STA 1'0" ABOVE EX GROUND

CONTRACT NO. 24-1455-D
 ENCHANTED FOREST ESTATES
 SECTION ONE AREA ONE
 WATER AND SEWER EXTENSION
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

[Signature] DATE: 5-20-86
 DIRECTOR OF PUBLIC WORKS

[Signature] DATE: 5-20-86
 CHIEF, BUREAU OF UTILITIES

[Signature] DATE: 5-20-86
 CHIEF, LAND DEVELOPMENT DIVISION

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

8388 COURT AVENUE
 ELLICOTT CITY, MARYLAND 21043

[Signature] DATE: 5/20/86
 TERRELL A. FISHER

DES: DBC	DATE: 5/20/86	BY: NO	REVISION:
DRN: GBE			
CHK: T.A.F.			

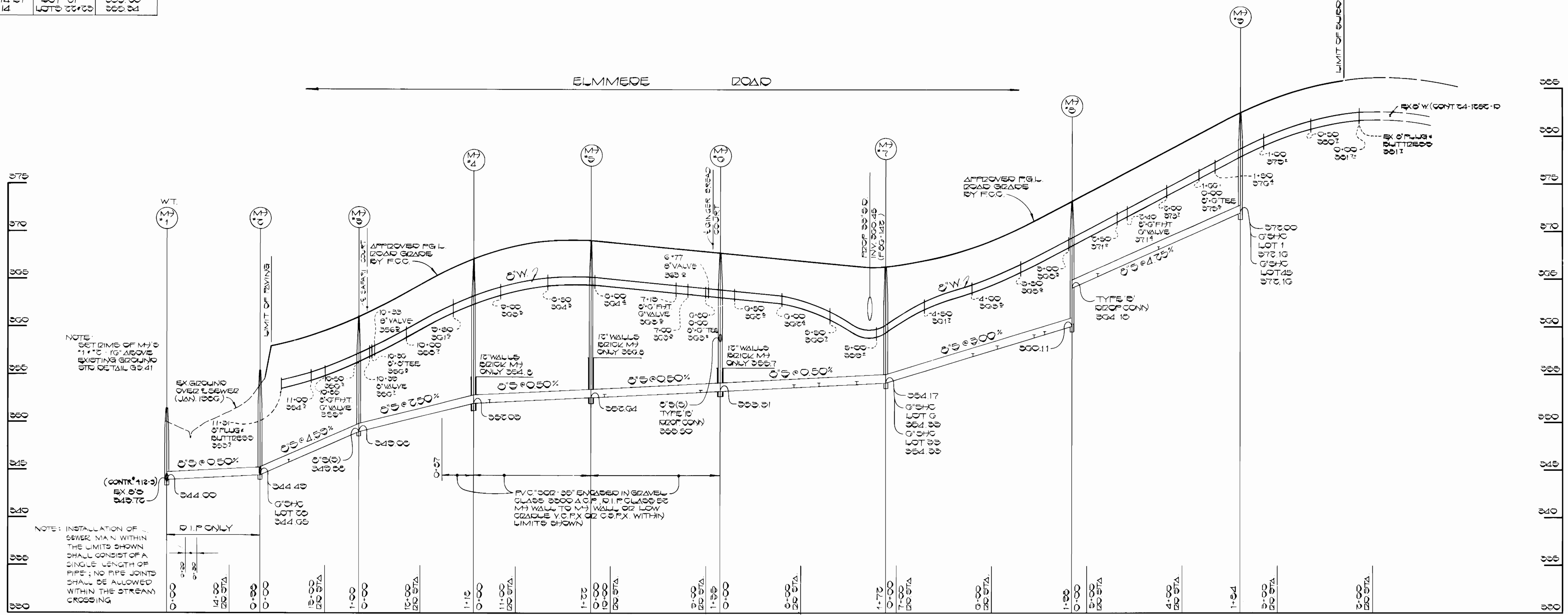
PLAN
 WATER & SEWER MAINS

DATE: 5/20/86 SCALE MAP NO. 24 BLOCK NO. 242

ENCHANTED FOREST ESTATES
 SECTION ONE AREA ONE
 CONTRACT NO. 24-1455-D
 SECOND ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 2 OF 4

SEWER HOUSE CONNECTION INVERT ELEVATIONS AT PROPERTY LINE					
STATION	LOT	ELEVATION	STATION	LOT	ELEVATION
M7 3 TO M7 5					
M7 3 LT	LOT 28	352.81	0+50 LT	LOT 40	356.97
0+30 IZT	LOT 27	349.75	0+55 IZT	LOT 39	356.57
M7 4 TO M7 5					
0+10 LT	LOT 29	352.56	1+15 LT	LOT 41 (1x)	350.10
M7 5 TO M7 6					
0+14 LT	LOT 30	353.15	1+50 LT	LOT 42 (1x)	351.00
1+15 LT	LOT 31	353.00	1+55 IZT	LOT 38	351.75
M7 6 TO M7 7					
0+77 LT	LOT 32	354.02	M7 12 LT	LOT 43 (1x)	370.15
1+03 IZT	LOT 3	354.05	M7 12	LOT 44 (1x)	369.44
1+45 IZT	LOT 7	354.75	M7 7 TO M7 8		
M7 7 IZT	LOT 6	354.33	M7 7 IZT	LOT 35	357.40
M7 7 LT	LOT 33	354.75	1+15 IZT	LOTS 4+5	355.45
M7 8 TO M7 9					
0+75 IZT	LOT 17	351.00	1+55 LT	LOT 36	359.00
1+45 LT	LOT 16	354.75	0+35 IZT	LOT 2	359.55
1+74 LT	LOT 9	355.35	M7 9 IZT	LOT 1	372.00
2+30 IZT	LOT 15	357.75	M7 9 LT	LOT 45	370.50
2+59 LT	LOT 10	356.00	M7 9 TO M7 10		
M7 13 LT	LOTS 11+12	370.00	0+35 LT	LOT 37	355.00
M7 13 IZT	LOTS 13+14	371.21	0+55 IZT	LOT 2	359.55
M7 13 TO M7 14					
0+75 LT	LOT 13	351.00	M7 10 IZT	LOT 3	359.55
1+57 IZT	LOT 20	353.00	1+04 IZT	LOT 20	353.55
1+04 IZT	LOT 20	353.55	M7 14 IZT	LOTS 21+22	355.00
M7 14 IZT	LOTS 21+22	355.00	M7 14 LT	LOT 21	355.00
M7 14	LOTS 22+23	355.04	M7 14	LOTS 22+23	355.04



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

CONTRACT NO. 24-1455-D
ENCHANTED FOREST ESTATES
SECTION ONE AREA ONE
WATER AND SEWER EXTENSION
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DATE: 5-20-06
DATE: 5-20-06

CHIEF, BUREAU OF UTILITIES
CHIEF, LAND DEVELOPMENT DIVISION

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

8388 COURT AVENUE
ELLCOTT CITY, MARYLAND 21043

TERRELL A. FISHER
DATE: 4/18/06

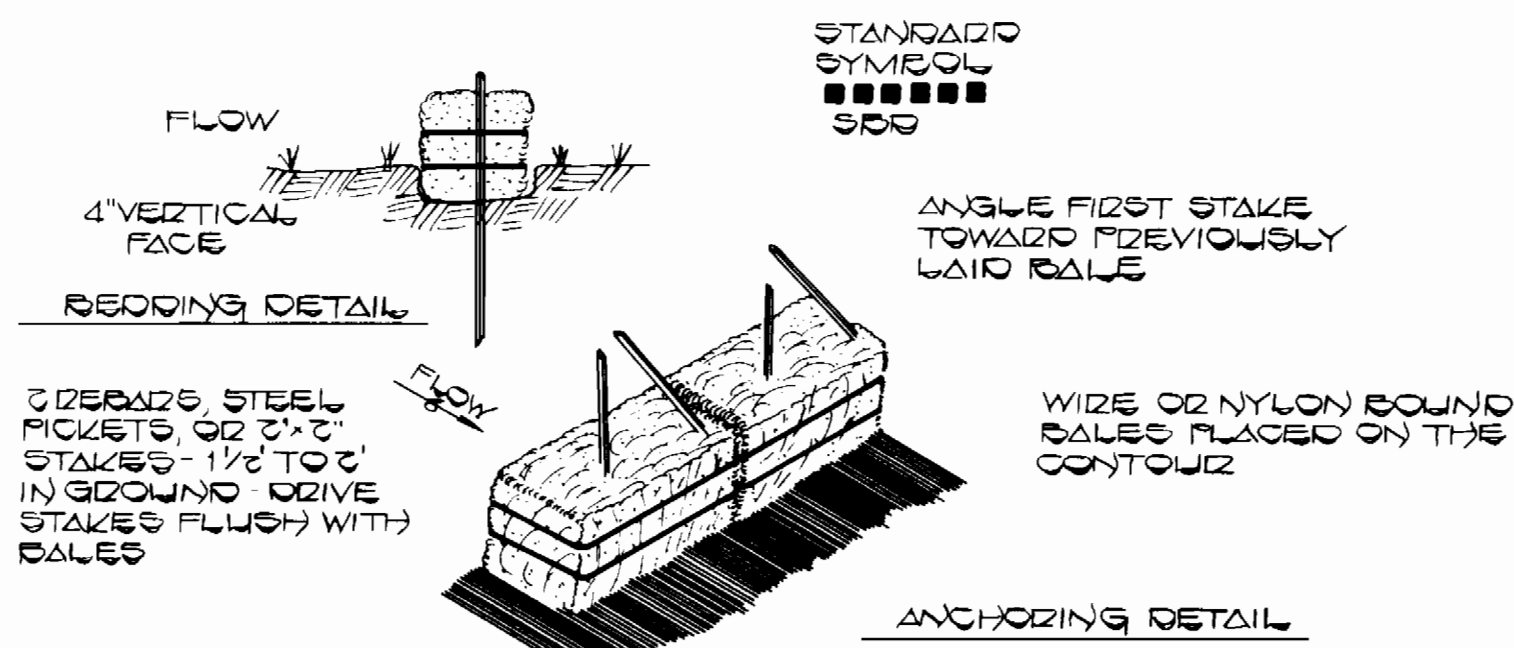
DES: P.C.S.	BY: NO.	REVISION	DATE
DRN: P.C.S.			
CHK: T.A.F.			

PROFILES
WATER & SEWER MAINS

600' SCALE MAP NO. 24 BLOCK NO. 28

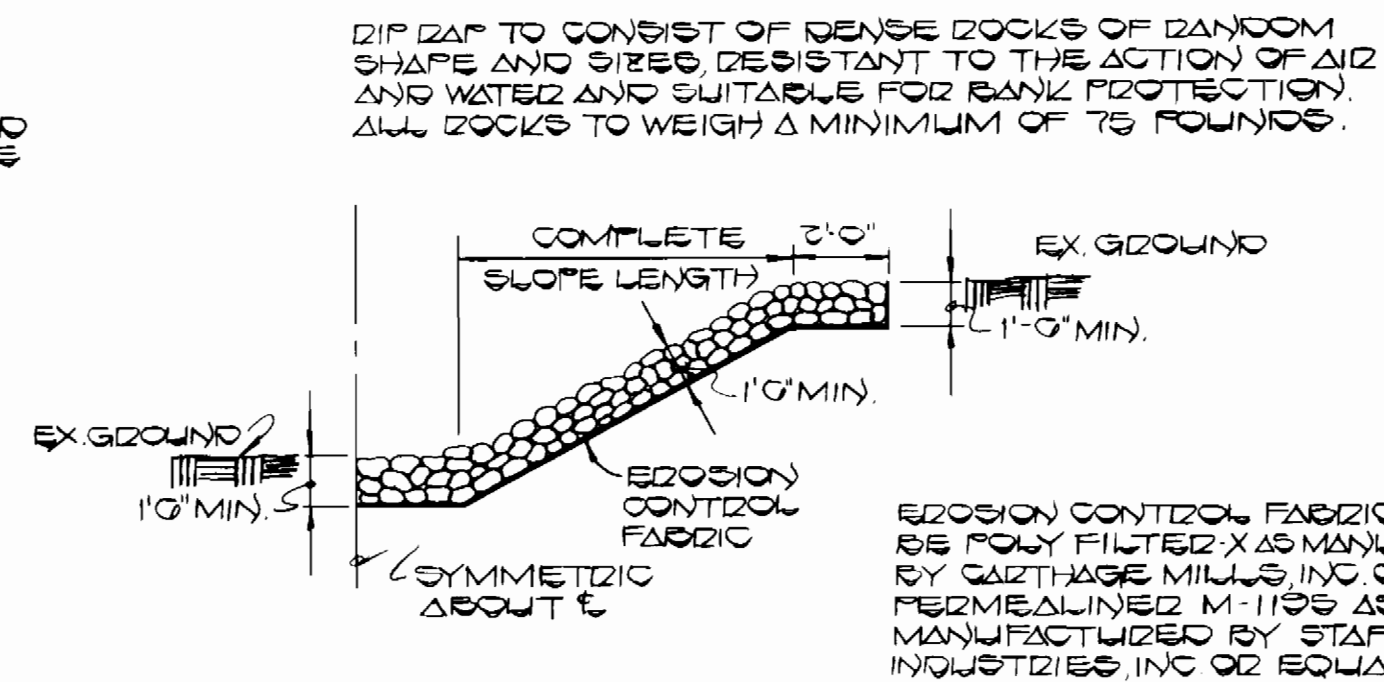
ENCHANTED FOREST ESTATES
SECTION ONE AREA ONE
CONTRACT NO. 24-1455-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 3 OF 4

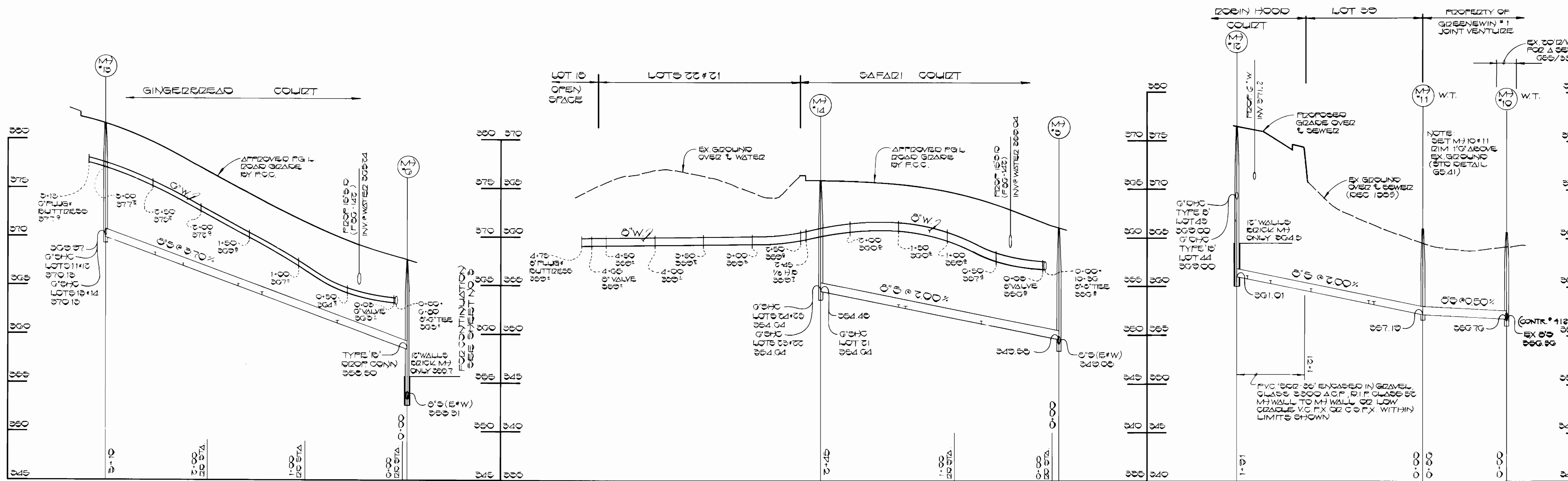
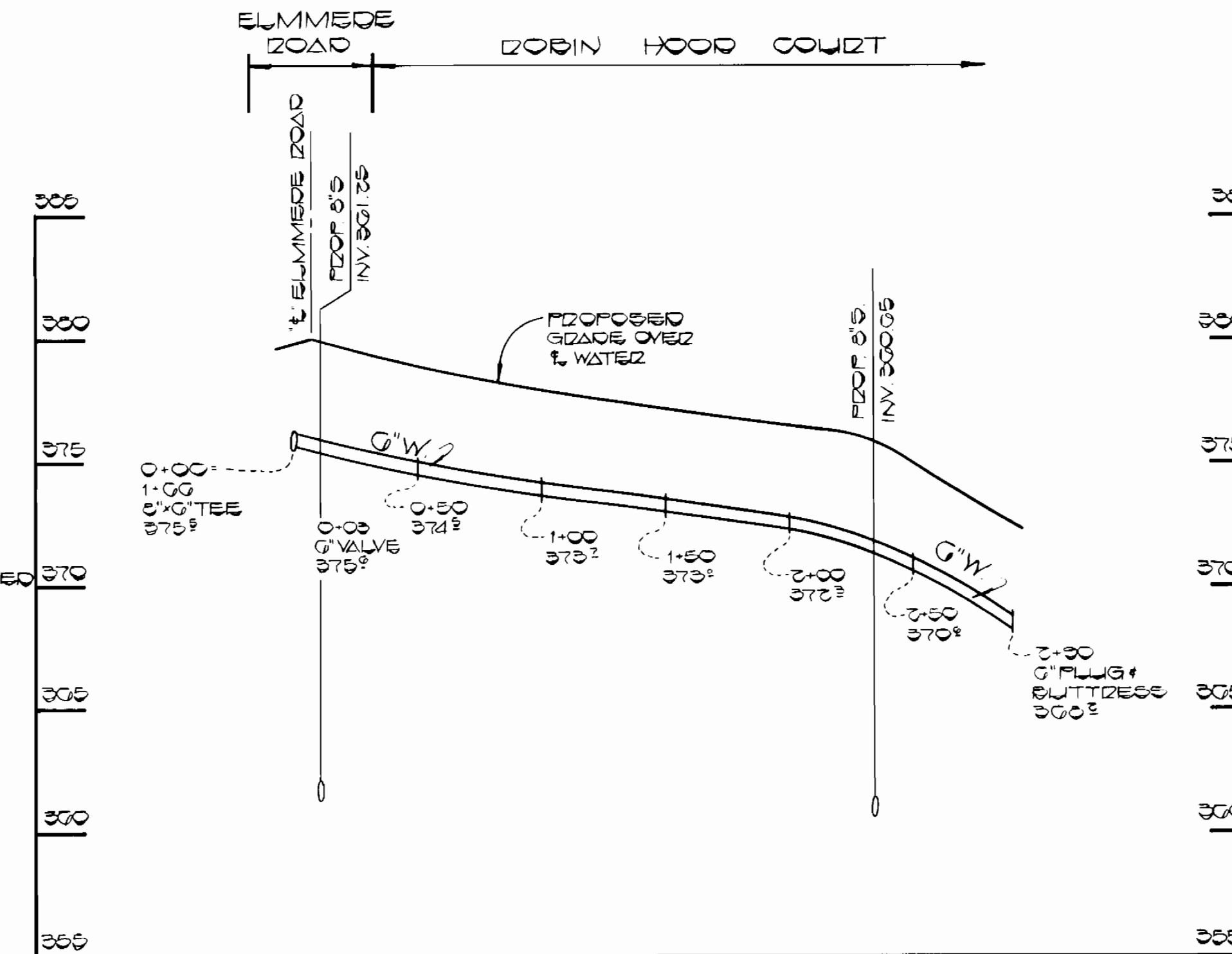


STRAW BALE DIKE
NO SCALE

- 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 BINDINGS ARE HORIZONTAL.
 3. BALES SHALL BE SECURELY ANCHORED IN PLACE BY EITHER TWO STAKES OR DECADES (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.
 4. INSPECTION SHALL BE FREQUENT AND REPAIR & REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
 5. BALES SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFULNESS SO AS NOT TO BLOCK OR IMPERE STORM FLOW OR DRAINAGE.



UNGROUTED RIP RAP DETAIL
NO SCALE



PROFILES
SCALE: HORZ 1" = 50'
VERT 1" = 5'

CONTRACT NO. 24-1455-D
ENCHANTED FOREST ESTATES
SECTION ONE AREA ONE
WATER AND SEWER EXTENSION
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

W. F. Neuman
DIRECTOR OF PUBLIC WORKS
DATE: 5-22-86

William E. Riley
CHIEF, BUREAU OF ENGINEERING
DATE: 5-20-86

Robert R. Quinn
CHIEF, BUREAU OF UTILITIES
DATE: 5-20-86

Terrell A. Fisher
CHIEF, LAND DEVELOPMENT DIVISION
DATE: 5-20-86

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

8388 COURT AVENUE
ELLCOTT CITY, MARYLAND 21043

STATE OF MARYLAND
REGISTERED PROFESSIONAL ENGINEERS
TERRELL A. FISHER
DATE: 12/1/86

DES: DRS					
DRN: DRS					
CHK: T.A.F.					
DATE: 12/1/86	BY: NO.	REVISION	DATE	600' SCALE MAP NO. 24	BLOCK NO. 275

PROFILES AND DETAILS
WATER & SEWER MAINS

ENCHANTED FOREST ESTATES
SECTION ONE AREA ONE
CONTRACT NO. 24-1455-D
SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 4 OF 4