

GENERAL NOTES

PART I

- 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 UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR 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.
- 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 (LATEST EDITION). 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 "T" 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. CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY CONFLICTS.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN THESE PLANS:

C. & P. TELEPHONE	597-8585
A. T. & T.	845-3803
STATE HIGHWAY ADMINISTRATION	591-5533
B.G. & E. CO. CONTRACTOR SERVICES	850-4620
B.G. & E. CO. UNDER GROUND DAMAGE CONTROL	787-4068
MISS UTILITY	1-800-257-7777
COLONIAL PIPELINE CO.	795-1390
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS BUREAU OF UTILITIES	313-4900
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE CONSTRUCTION OF THE MAIN.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (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 MAIN OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPA REQUIREMENTS PER SECTION 18.14(g) OF THE HOWARD COUNTY CODE.

PART II - WATER

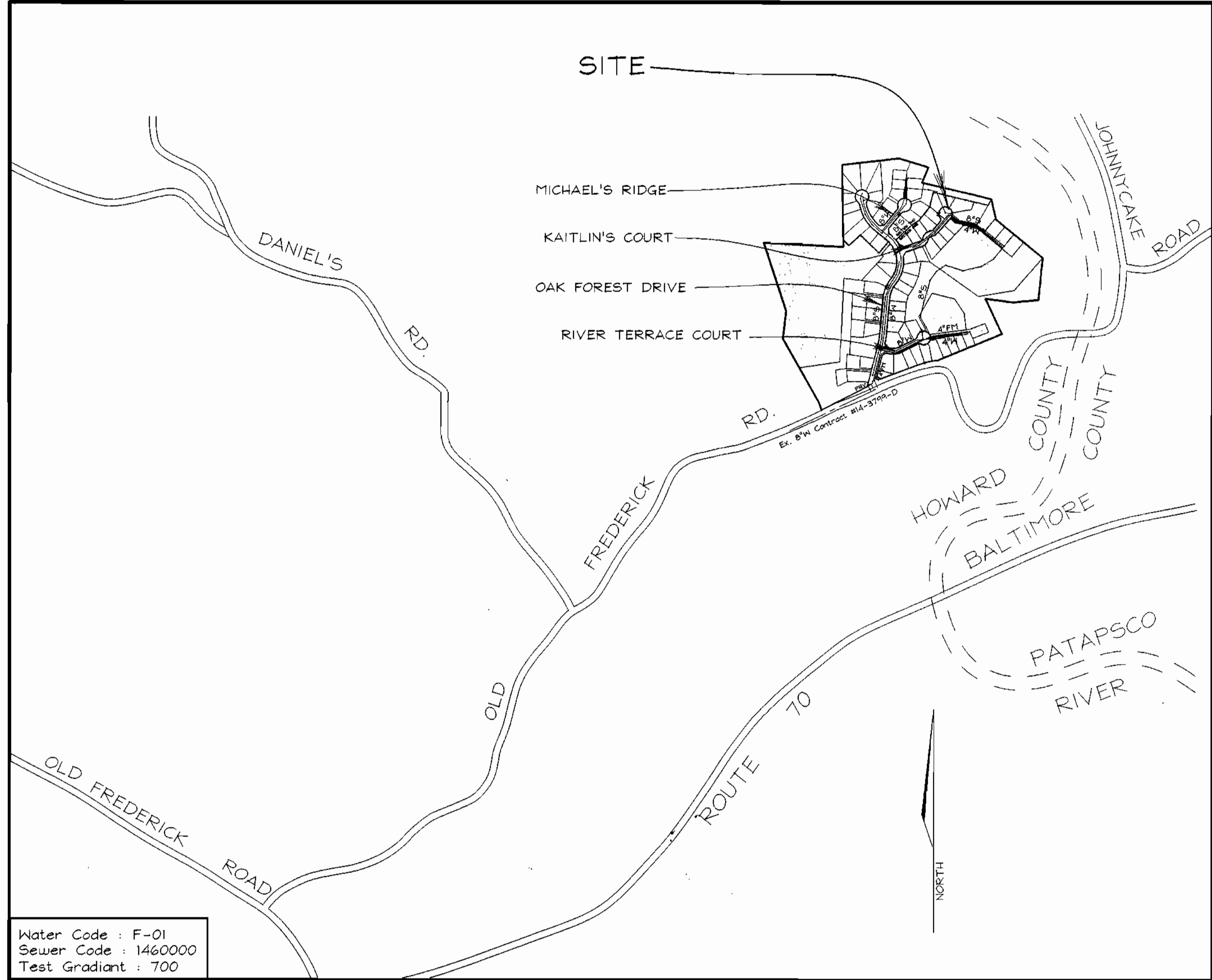
- ALL WATER MAINS TO BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
- TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3'-1/2" COVER UNLESS OTHERWISE NOTED.
- VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
- ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS 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 RESTRAINED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS. SOIL AROUND 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 WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING UNLESS OTHERWISE NOTED ON PLANS OR IN SPECIFICATIONS.

PART III - SEWER

- ALL SEWER MAINS SHALL BE DIP CLASS 52 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 DESIGNATED "T" IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS. STANDARD DETAIL 65.52 WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED. SET TOP OF FRAME 18" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.

TYPE OF BUILDING:	Single Family Detached
NO OF LOTS/PARCELS:	55
NO OF WATER HOUSE CONNECTIONS:	55
NO OF SEWER HOUSE CONNECTIONS:	55
DRAINAGE AREA:	Patapsco
TREATMENT PLANT:	Patapsco

Water Code : F-01
Sewer Code : 1460000
Test Gradient : 700

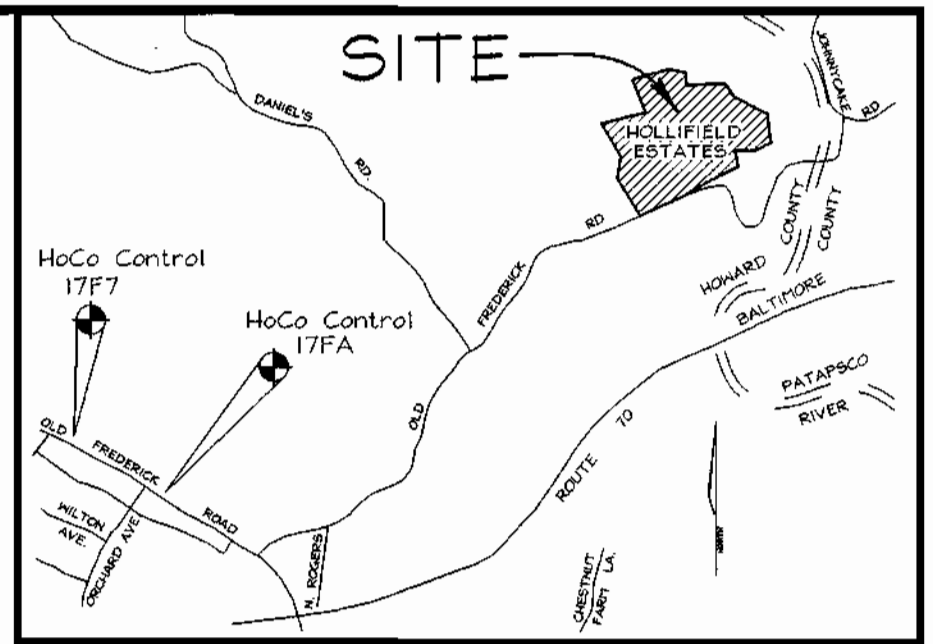


LOCATION PLAN
SCALE : 1"=600'

HOLLIFIELD ESTATES SECTION ONE PUBLIC WATER AND SEWER PLANS HOWARD COUNTY, MARYLAND CONTRACT NO. 14-3801-D

BENCHMARKS

177A	N594,949.55	E 1,364,629.51	El.=477.52
177F	N595,830.83	E 1,363,091.09	El.=470.19



VICINITY MAP
SCALE: 1"=2000'

QUANTITIES				
NAME OF UTILITY CONTRACTOR :				
SURVEY AND DRAFTING DIVISION AS-BUILT DATE :				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
1 1/2" THWC	365 Lf			
1" WHC	578 Lf			
4" SHC	1,096 Lf			
Std. Manhole	29			
8" Sewer	2,767 Lf			
8" Sewer DIP	1,149 Lf			
8" Valve	3			
6" Valve	6			
4" Valve	2			
8"x6" Tee	6			
8"x8" Tee	3			
Fire Hydrant	6			
8" 1/8 HB	3			
8" 1/16 HB	1			
4" 1/16 HB	2			
8" Cap & Buttriss	2			
4" Cap & Buttriss	1			
8" Water	2,003 Lf			
6" Water	150 Lf			
4" Water	729.49 Lf			
8"x4" Reducer	2			
1 1/2" Drain	2			

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE SPECIFICATIONS AND WITH THE ROAD CONSTRUCTION PLAN F-99-075

THIS DEVELOPMENT IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT. SOIL CONSERVATION DISTRICT	REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS. U.S. SOIL CONSERVATION DISTRICT
2/3/00	2/3/00

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

CHIEF, BUREAU OF UTILITIES

1-28-00
DATE

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

CHIEF, DEVELOPMENT ENGINEERING DIVISION

2/16
DATE

VOGEL & ASSOCIATES
ENGINEERS-SURVEYORS-PLANNERS

3891 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
Tel 410.451.5828 Fax 410.465.3966

DES: GAH/PS				
DRN: RLP/PS				
CHK: JCO				
DATE: Jan 2000	BY: NO.	REVISION	DATE	600' SCALE MAP NO. 18 BLOCK NO. 1 & 2

TITLE SHEET

HOLLIFIELD ESTATES I
SECTION ONE (LOTS 3-49)
CONTRACT NO. 14-3801-D

TAX MAP #18 PARCEL # 1 BLOCK # 1 AND 2
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

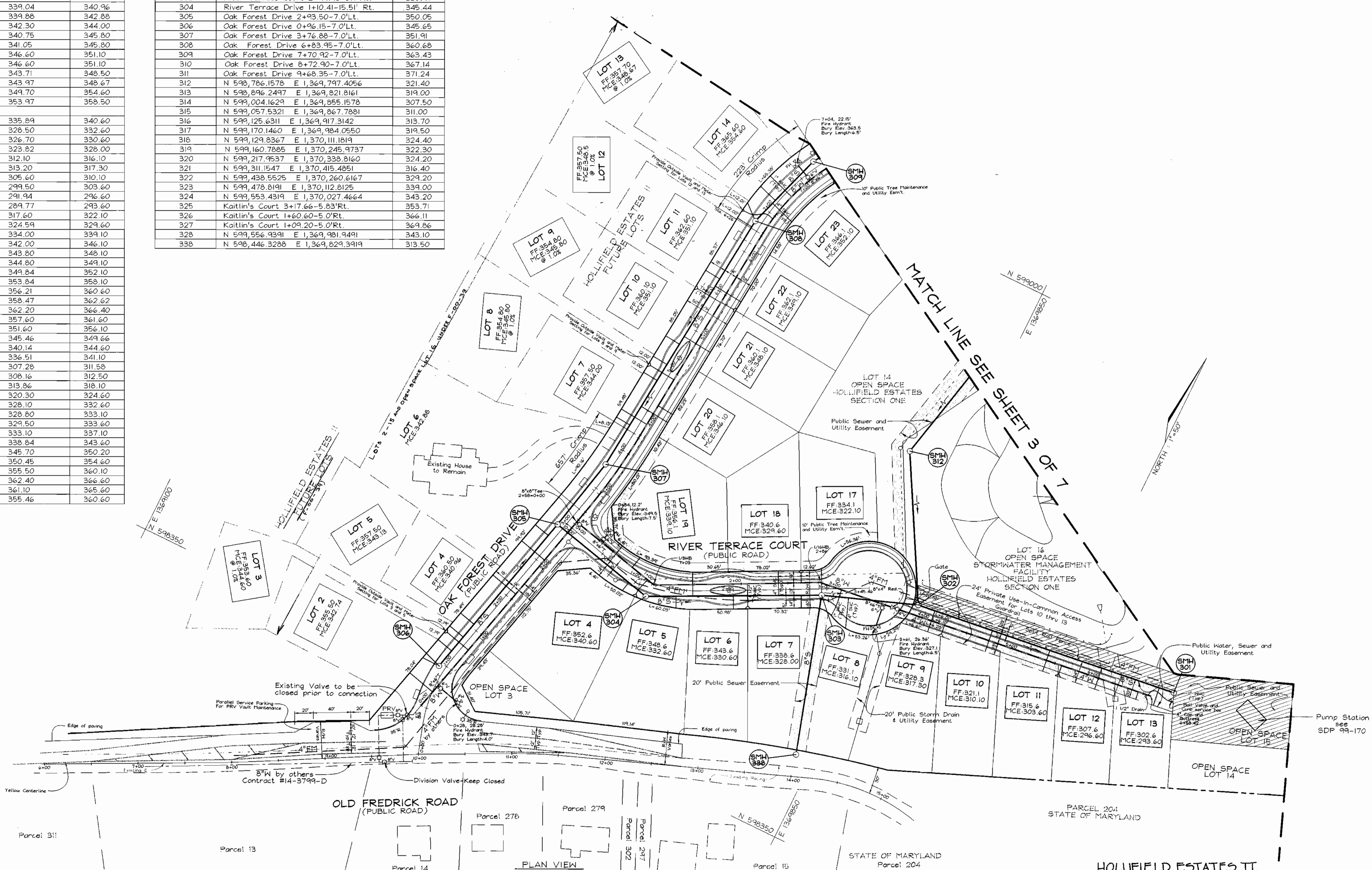
SHEET 1 OF 7

SEWER HOUSE CONNECTIONS

Lot #	Elev. @ Main	Elev. @ Lot/RW	MCE
Hollifield Est. II			
2	339.26	339.64	342.64
3 @ 1.0%	338.94	339.33	344.60
4	338.80	339.18	343.13
5	338.66	339.04	340.96
6	339.50	339.88	342.88
7	341.92	342.30	344.00
8 @ 1.0%	340.37	340.75	345.80
9 @ 1.0%	340.67	341.05	345.00
10	346.24	346.60	351.10
11	346.24	346.60	351.10
12 @ 1.0%	343.33	343.71	348.50
13 @ 1.0%	343.57	343.97	348.67
14	349.26	349.70	354.60
15	353.59	353.97	358.50
Hollifield Est.			
4	335.67	335.89	340.60
5	328.24	328.50	332.60
6	326.42	326.70	330.60
7	323.54	323.82	328.00
8	311.45	312.10	316.10
9	312.72	313.20	317.30
10	305.12	305.60	310.10
11	299.02	299.50	303.60
12	291.46	291.94	296.60
13	289.37	289.77	293.60
17	316.72	317.60	322.10
18	324.07	324.59	329.60
19	333.48	334.00	339.10
20	341.34	342.00	346.10
21	343.14	343.80	348.10
22	344.14	344.80	349.10
23	349.18	349.84	352.10
24	353.22	353.84	358.10
25	355.73	356.21	360.60
26	357.73	358.47	362.62
27	361.90	362.20	366.40
28	357.30	357.60	361.60
29	351.40	351.60	356.10
30	345.16	345.46	349.66
31	339.82	340.14	344.60
32	336.19	336.51	341.10
33	307.00	307.28	311.58
34	307.96	308.16	312.50
35	313.57	313.86	318.10
36	320.10	320.30	324.60
37	327.90	328.10	332.60
38	328.42	328.80	333.10
39	329.30	329.50	333.60
40	332.16	333.10	337.10
41	338.34	338.84	343.60
42	345.16	345.70	350.20
43	349.65	350.45	354.60
44	355.14	355.50	360.10
45	361.90	362.40	366.60
47	360.72	361.10	365.60
48	355.14	355.46	360.60

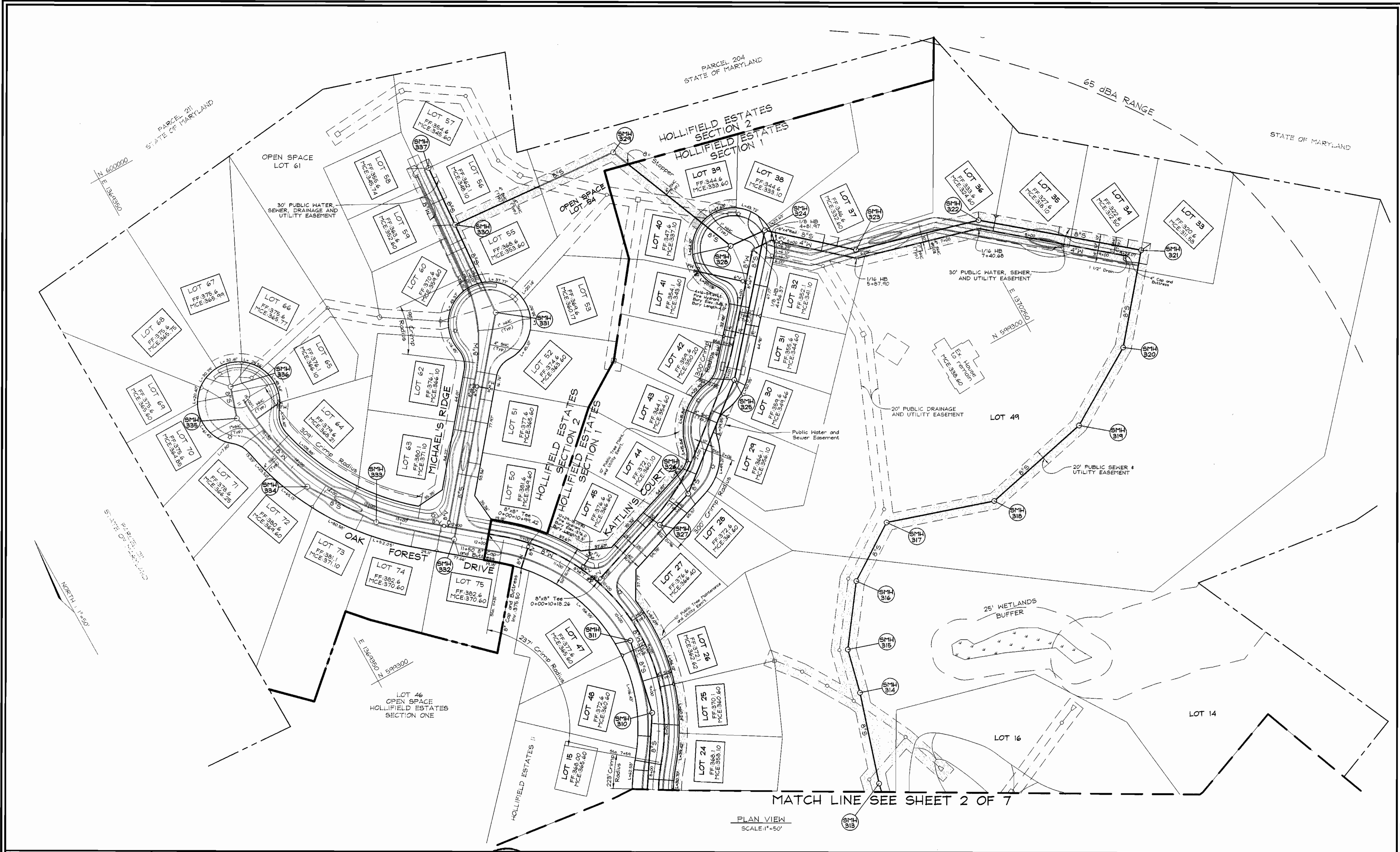
SEWER MANHOLE TABULATIONS

Manhole #	Location	Top Elev.
300	N 598,695.8974 E 1,370,213.0410	291.50
301	N598,677.1217 E 1,370,164.9276	294.20
302	N 598,641.6634 E 1,369,878.1910	323.80
303	River Terrace Court 2+94.43-6.7'Rt.	330.47
304	River Terrace Drive 1+10.41-15.51'Rt.	345.44
305	Oak Forest Drive 2+93.50-7.0'Lt.	350.05
306	Oak Forest Drive 0+96.15-7.0'Lt.	345.65
307	Oak Forest Drive 3+76.88-7.0'Lt.	351.91
308	Oak Forest Drive 6+83.95-7.0'Lt.	360.68
309	Oak Forest Drive 7+70.92-7.0'Lt.	363.43
310	Oak Forest Drive 8+72.90-7.0'Lt.	367.14
311	Oak Forest Drive 9+68.35-7.0'Lt.	371.24
312	N 598,786.1578 E 1,369,797.4056	321.40
313	N 598,896.2497 E 1,369,821.8161	319.00
314	N 599,004.1629 E 1,369,855.1578	307.50
315	N 599,057.5321 E 1,369,867.7881	311.00
316	N 599,125.6311 E 1,369,917.3142	313.70
317	N 599,170.1460 E 1,369,984.0550	319.50
318	N 599,129.8367 E 1,370,111.1819	324.40
319	N 599,160.7885 E 1,370,245.9737	322.30
320	N 599,217.9537 E 1,370,338.8160	324.20
321	N 599,311.1547 E 1,370,415.4851	316.40
322	N 599,438.5525 E 1,370,260.6167	329.20
323	N 599,478.8191 E 1,370,112.8125	339.00
324	N 599,553.4319 E 1,370,027.4664	343.20
325	Kaitlin's Court 3+17.66-5.83'Rt.	353.71
326	Kaitlin's Court 1+60.60-5.0'Rt.	366.11
327	Kaitlin's Court 1+09.20-5.0'Rt.	369.86
328	N 599,556.9391 E 1,369,931.9491	343.10
338	N 598,446.3288 E 1,369,829.3919	313.50



DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Chief, Bureau of Utilities	DEPARTMENT OF PLANNING & ZONING HOWARD COUNTY, MARYLAND Chief, Development Engineering Division	VOGEL & ASSOCIATES ENGINEERS-SURVEYORS-PLANNERS 3691 Park Avenue, Suite 101 • Elkott City, Maryland 21043 Tel 410.461.5828 Fax 410.465.3966	DES: GAH/PS DRN: PS CHK: JCO DATE: Jan. 2000	WATER AND SEWER PLAN 600' SCALE MAP NO. 18 BLOCK NO. 1 and 2	HOLLIFIELD ESTATES SECTION ONE (LOTS 3-15) CONTRACT #14-3801-D TAX MAP #18 2nd ELECTION DISTRICT PARCEL 1 HOWARD COUNTY, MARYLAND	SCALE AS SHOWN SHEET 2 OF 7
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PLAN VIEW
SCALE: 1" = 50'

MATCH LINE SEE SHEET 2 OF 7

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

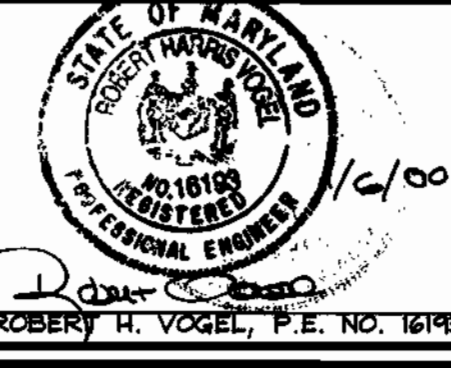
Robert B. ...
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

...
CHIEF, DEVELOPMENT ENGINEERING DIVISION

VOGEL & ASSOCIATES
ENGINEERS-SURVEYORS-PLANNERS

3681 Park Avenue, Suite 101 • Elkott City, Maryland 21043
Tel 410.461.5828 Fax 410.465.3966



DES: GAH/PS	DATE: Jan 2000
DRN: PS	BY: NO.
CHK: JCO	REVISION
	DATE

WATER AND SEWER PLAN

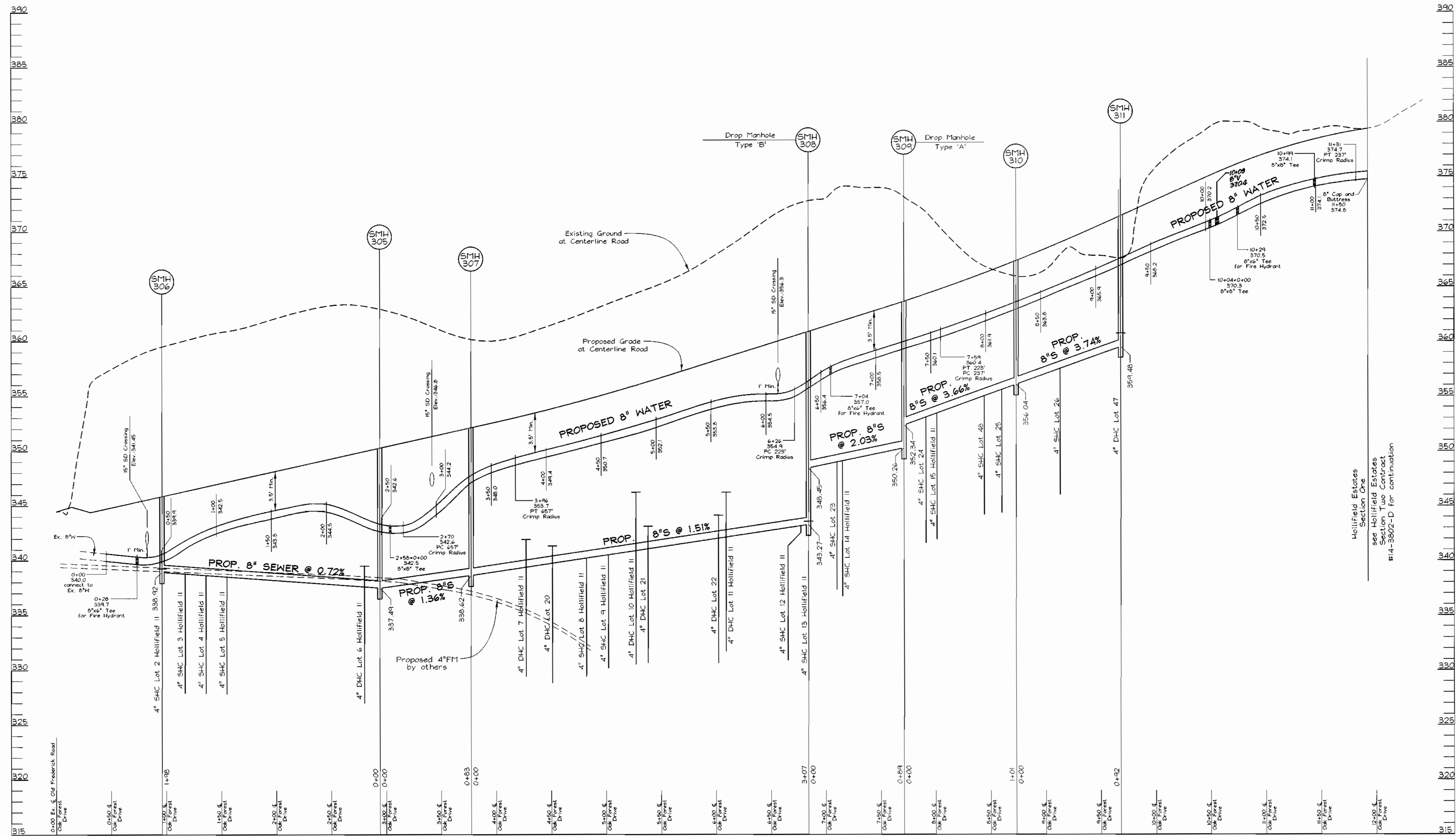
600' SCALE MAP NO. 18 BLOCK NO.

HOLLIFIELD ESTATES
SECTION ONE (LOTS 3-49)
CONTRACT #14-3801-D

TAX MAP #18 PARCEL 1
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 3 OF 7

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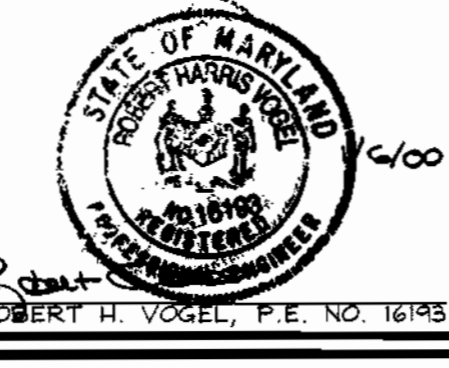


WATER AND SEWER PROFILES
 OAK FOREST DRIVE
 SCALE: HORIZONTAL - 1"=50'
 VERTICAL - 1"=5'

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Chief, Bureau of Utilities
 1-28-00

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
 Chief, Development Engineering Division
 2/10

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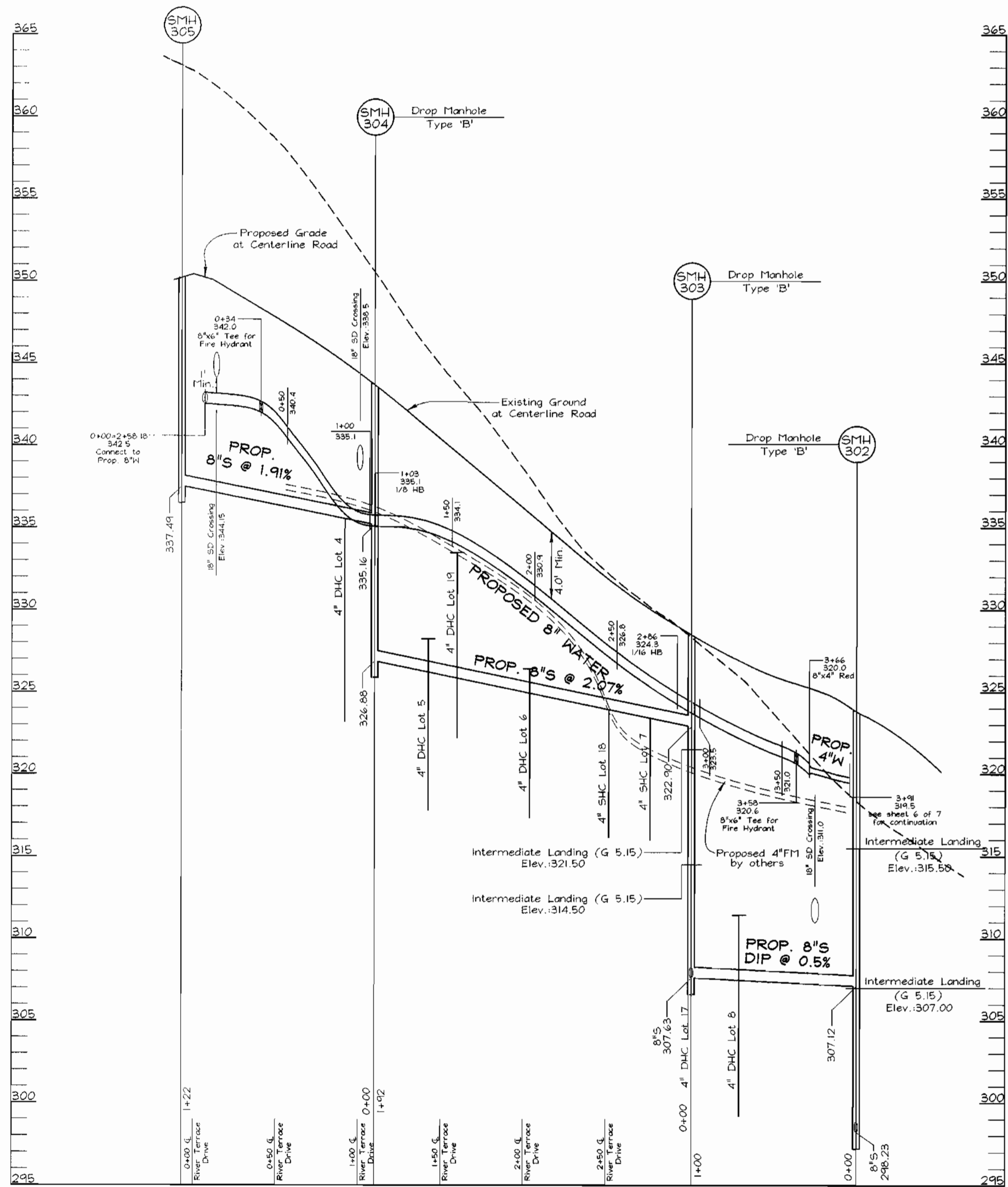
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WATER AND SEWER PROFILES
 600' SCALE MAP NO. 18 BLOCK NO. 1 & 2

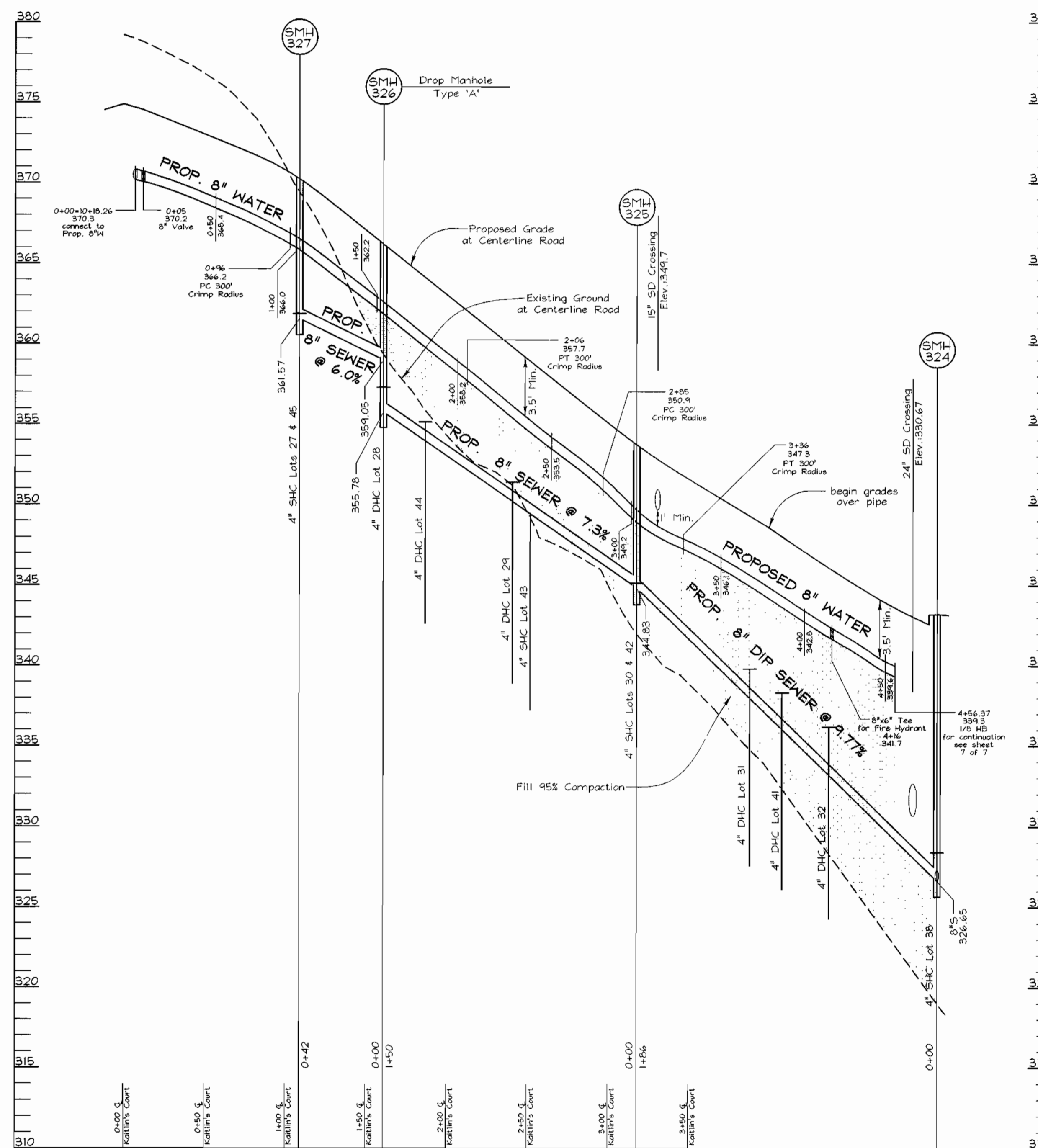
HOLLIFIELD ESTATES I
 SECTION ONE (LOTS 3-49)
 CONTRACT #14-3801-D
 TAX MAP #18 PARCEL 1
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 4 OF 7

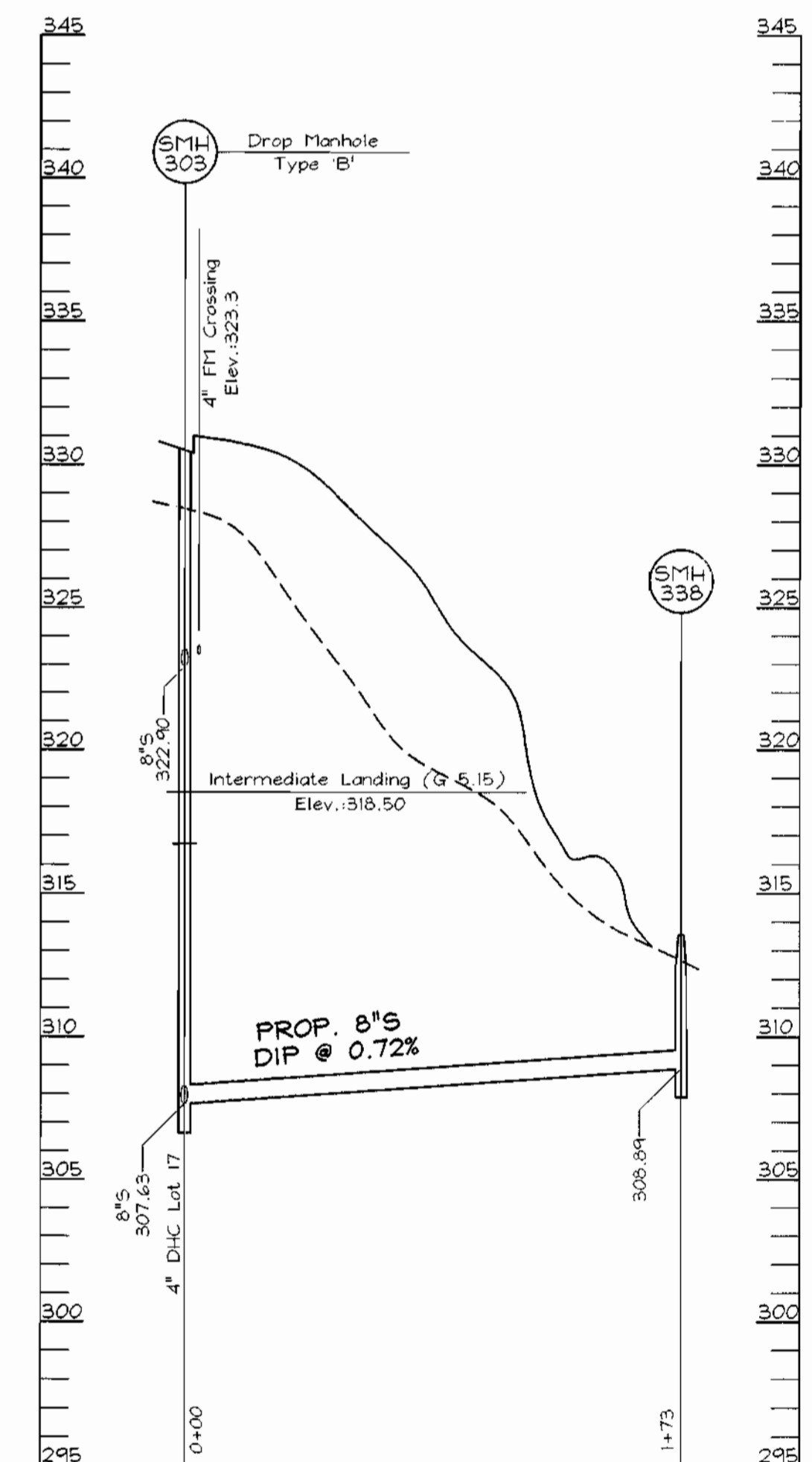
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**WATER & SEWER PROFILES
RIVER TERRACE COURT**
SCALE: HORIZONTAL = 1"=50'
VERTICAL = 1"=5'



**WATER & SEWER PROFILES
KAITLIN'S COURT**
SCALE: HORIZONTAL = 1"=50'
VERTICAL = 1"=5'



**SEWER PROFILES
SCALE: HORIZONTAL = 1"=50'
VERTICAL = 1"=5'**

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

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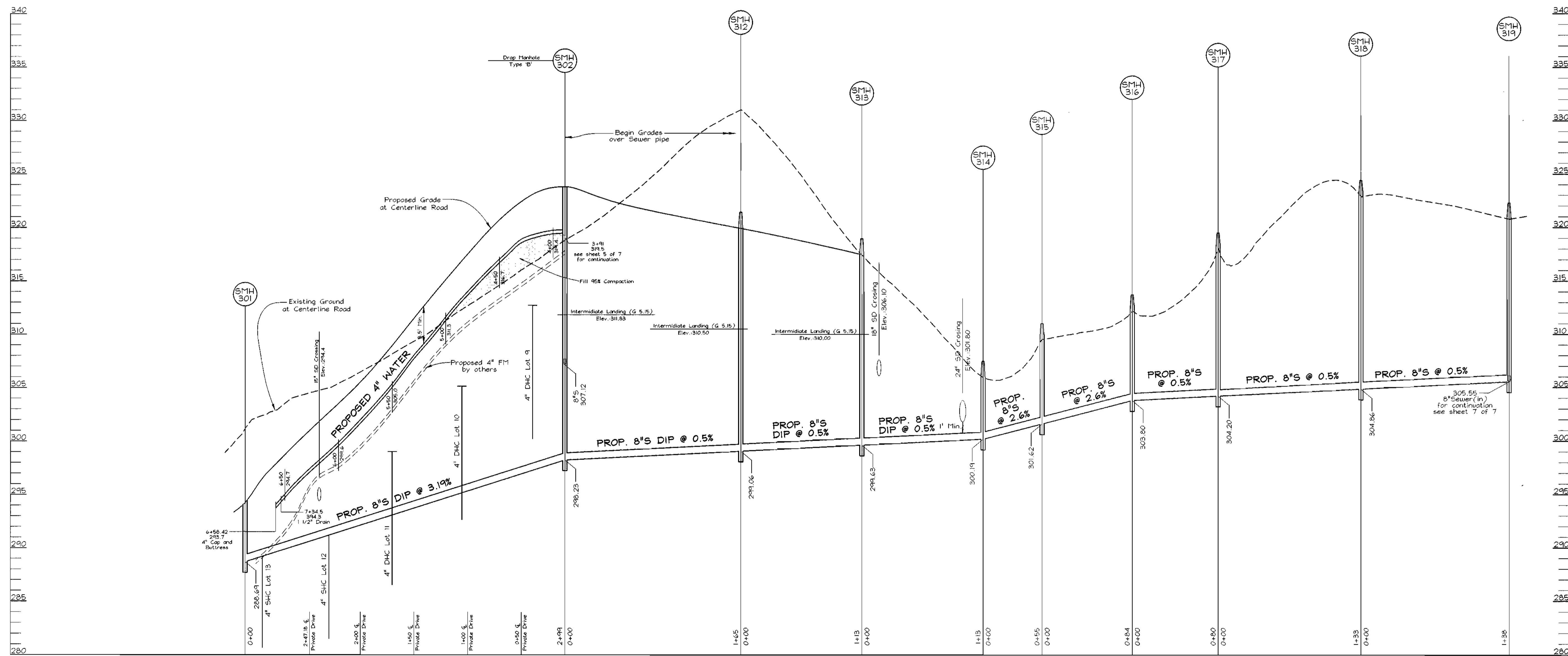


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WATER AND SEWER PROFILES
600' SCALE MAP NO. 18 BLOCK NO. 1 & 2

HOLLIFIELD ESTATES I
SECTION ONE LOTS 3-49
CONTRACT #14-3801-D
TAX MAP #18 PARCEL 1
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 5 OF 7

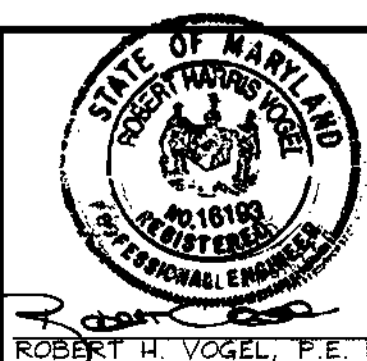


WATER AND SEWER PROFILES
 SCALE: HORIZONTAL = 1"=50'
 VERTICAL = 1"=5'

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND

VOGEL & ASSOCIATES
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 3891 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
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DES: GAH/PS

DRN: PS

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REVISION

DATE

WATER AND SEWER PROFILES

600' SCALE MAP NO. 18 BLOCK NO. 1 & 2

HOLLIFIELD ESTATES I

SECTION ONE LOTS 3-49

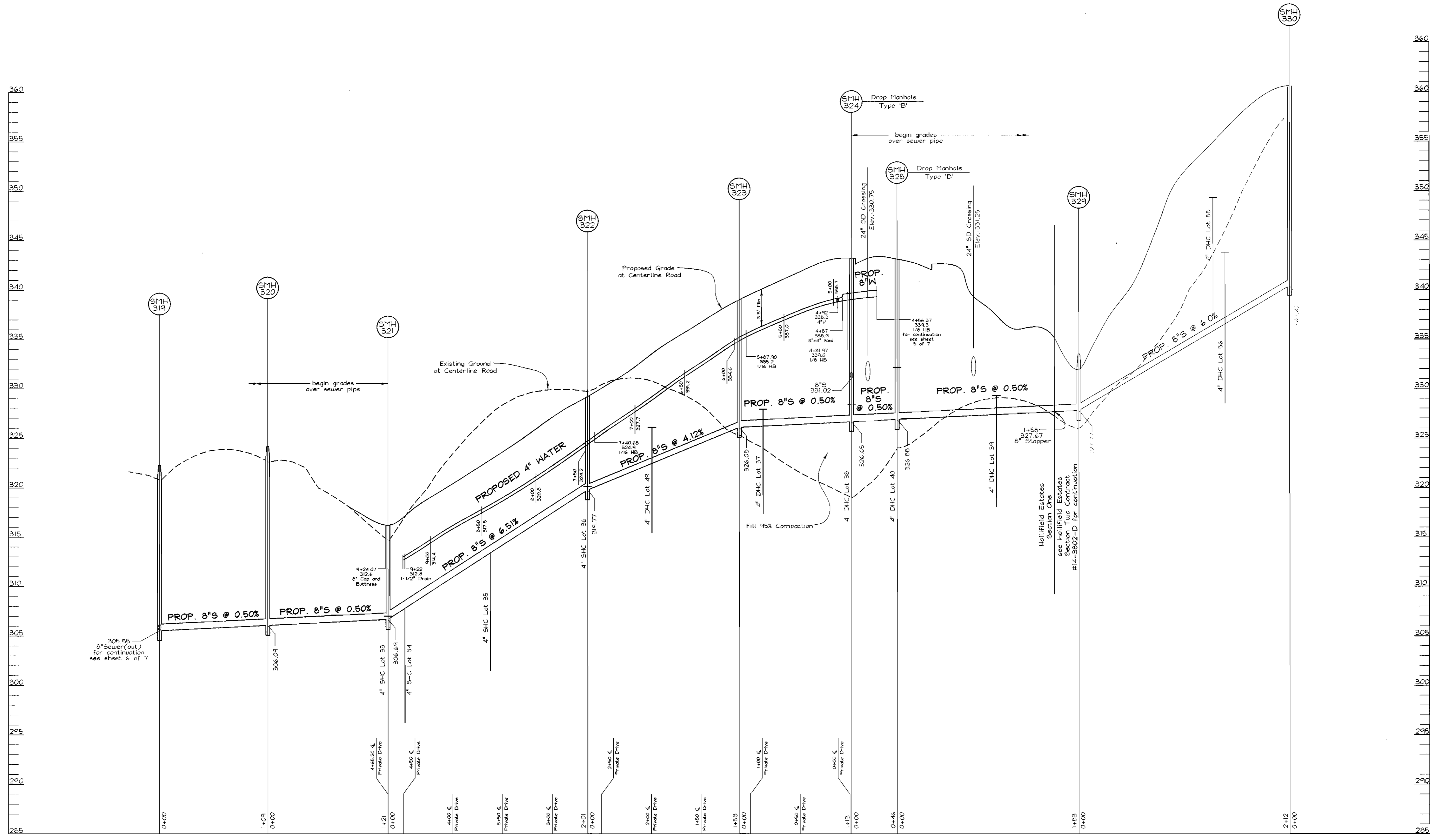
CONTRACT #14-3801-D

TAX MAP #18
 2ND ELECTION DISTRICT

PARCEL 1
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 6 OF 7



WATER AND SEWER PROFILES
 SCALE: HORIZONTAL - 1"=50'
 VERTICAL - 1"=5'

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

Robert H. Vogel
 CHIEF, BUREAU OF UTILITIES

1-28-00
 DATE

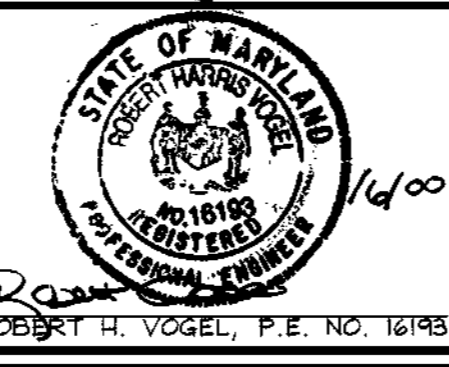
DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND

[Signature]
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

2/1/00
 DATE

VOGEL & ASSOCIATES
 ENGINEERS-SURVEYORS-PLANNERS

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WATER AND SEWER PROFILES

600' SCALE MAP NO. 18 BLOCK NO. 1 & 2

HOLLIFIELD ESTATES I
 SECTION ONE LOTS 3-49
 CONTRACT #14-3801-D

TAX MAP #18
 2ND ELECTION DISTRICT

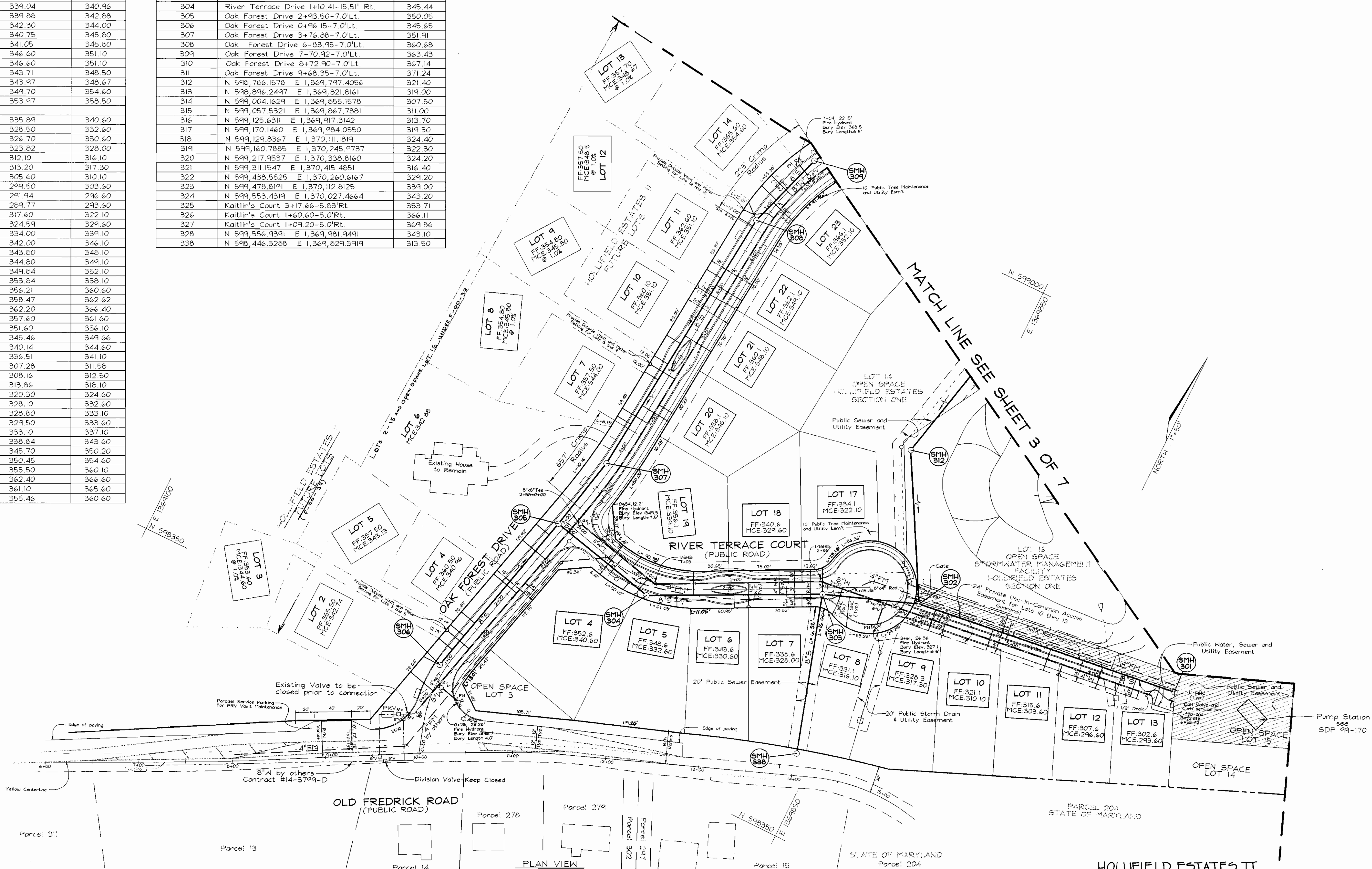
PARCEL 1
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 7 OF 7

SEWER HOUSE CONNECTIONS			
Lot #	Elev. @ Main	Elev. @ Lot/RW	MCE
Hollifield Est. II			
2	339.26	339.64	342.64
3 @ 1.0%	338.94	339.33	344.60
4	338.80	339.18	343.13
5	338.66	339.04	340.96
6	339.50	339.88	342.88
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24	353.22	353.84	358.10
25	355.73	356.21	360.60
26	357.73	358.47	362.62
27	361.90	362.20	366.40
28	357.30	357.60	361.60
29	351.40	351.60	356.10
30	345.16	345.46	349.66
31	339.82	340.14	344.60
32	336.19	336.51	341.10
33	307.00	307.28	311.58
34	307.96	308.16	312.50
35	313.57	313.86	318.10
36	320.10	320.30	324.60
37	327.90	328.10	332.60
38	328.42	328.80	333.10
39	329.30	329.50	333.60
40	332.16	333.10	337.10
41	338.34	338.84	343.60
42	345.16	345.70	350.20
43	349.65	350.45	354.60
44	355.14	355.50	360.10
45	361.90	362.40	366.60
47	360.72	361.10	365.60
48	355.14	355.46	360.60

SEWER MANHOLE TABULATIONS			
Manhole #	Location	Top Elev.	
300	N 598,695.8974 E 1,370,213.0410	291.50	
301	N598,677.1217 E 1,370,164.9276	294.20	
302	N 598,641.6634 E 1,369,878.1910	323.80	
303	River Terrace Court 2+94.43-6.7Rt.	330.47	
304	River Terrace Drive 1+10.41-15.51' Rt.	345.44	
305	Oak Forest Drive 2+93.50-7.0'Lt.	350.05	
306	Oak Forest Drive 0+96.15-7.0'Lt.	345.65	
307	Oak Forest Drive 3+76.88-7.0'Lt.	351.91	
308	Oak Forest Drive 6+83.95-7.0'Lt.	360.68	
309	Oak Forest Drive 7+70.92-7.0'Lt.	363.43	
310	Oak Forest Drive 8+72.90-7.0'Lt.	367.14	
311	Oak Forest Drive 9+68.35-7.0'Lt.	371.24	
312	N 598,786.1578 E 1,369,747.4056	321.40	
313	N 598,846.2497 E 1,369,821.8161	319.00	
314	N 599,004.1629 E 1,369,855.1578	307.50	
315	N 599,057.5321 E 1,369,867.7881	311.00	
316	N 599,125.6311 E 1,369,917.3142	313.70	
317	N 599,170.1460 E 1,369,984.0550	319.50	
318	N 599,129.8367 E 1,370,111.1819	324.40	
319	N 599,160.7885 E 1,370,245.9737	322.30	
320	N 599,217.9537 E 1,370,338.8160	324.20	
321	N 599,311.1547 E 1,370,415.4851	316.40	
322	N 599,438.5525 E 1,370,260.6167	329.20	
323	N 599,478.8191 E 1,370,112.8125	339.00	
324	N 599,553.4319 E 1,370,027.4664	343.20	
325	Kaitlin's Court 3+17.66-5.83' Rt.	353.71	
326	Kaitlin's Court 1+60.60-5.0' Rt.	366.11	
327	Kaitlin's Court 1+09.20-5.0' Rt.	369.86	
328	N 599,556.9391 E 1,369,981.9491	343.10	
338	N 598,446.3288 E 1,369,829.3919	313.50	



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert H. Vogels 1-28-07
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

Robert H. Vogels 2/16
CHIEF, DEVELOPMENT ENGINEERING DIVISION

VOGEL & ASSOCIATES
ENGINEERS-SURVEYORS-PLANNERS

3691 Park Avenue, Suite 101 • Elliott City, Maryland 21043
Tel 410.461.5828 Fax 410.465.3066

STATE OF MARYLAND
PROFESSIONAL ENGINEER
ROBERT H. VOGEL, P.E. NO. 16193

DES:	GAH/PS		
DRN:	PS		
CHK:	JCO		
DATE:	Jan. 2000		
BY:	NO.	REVISION	DATE
	1	REVISE FRONT PROPERTY LINE DIMENSIONS	3/15/07

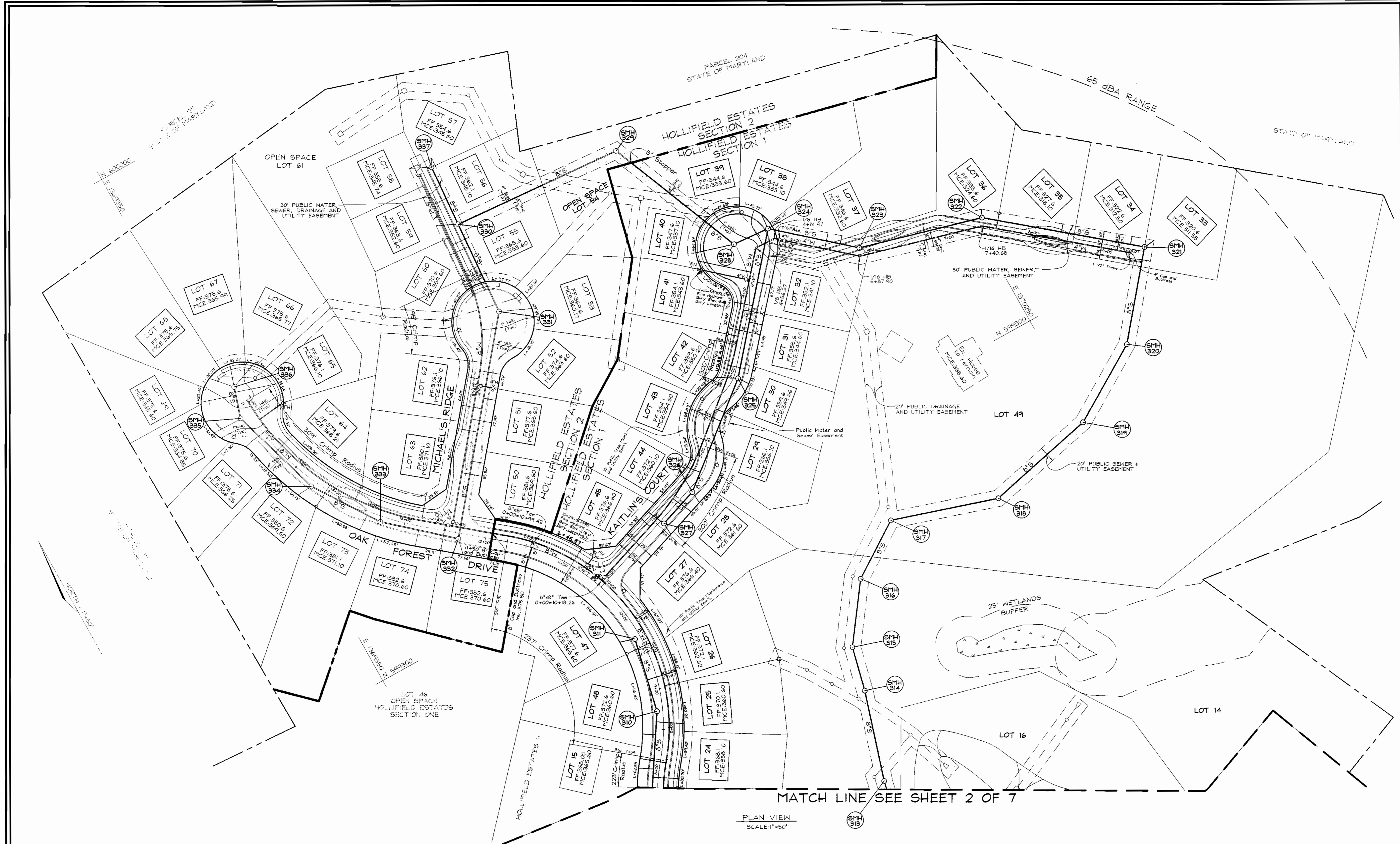
WATER AND SEWER PLAN

600' SCALE MAP NO. 18 BLOCK NO. 1 and 2

HOLLIFIELD ESTATES II
SECTION ONE (LOTS 3-47)
CONTRACT #14-3801-D
PARCEL 1
HOWARD COUNTY, MARYLAND

TAX MAP #18
2nd ELECTION DISTRICT

SCALE AS SHOWN
SHEET 2 OF 7



MATCH LINE SEE SHEET 2 OF 7

PLAN VIEW
SCALE: 1"=50'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

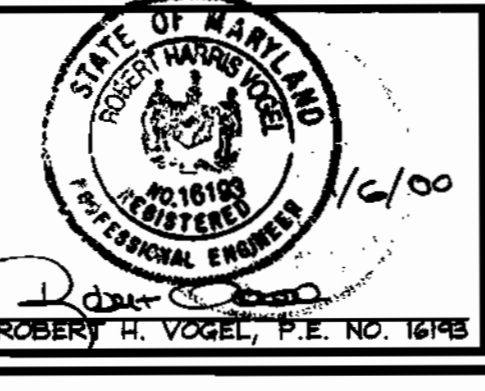
Robert H. Vogel
CHIEF, BUREAU OF UTILITIES 1-28-00

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

Robert H. Vogel
CHIEF, DEVELOPMENT ENGINEERING DIVISION 2/16

VOGEL & ASSOCIATES
ENGINEERS-SURVEYORS-PLANNERS

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DES:	GAH/PS		
DRN:	PS		
CHK:	JCO		
DATE:	Jan. 2000		
BY:	NO.		
REVISION:	1 REVISE FRONT PROPERTY LINE DIMENSIONS	3/15/00	
DATE:			

WATER AND SEWER PLAN

600' SCALE MAP NO. 18 BLOCK NO. _____

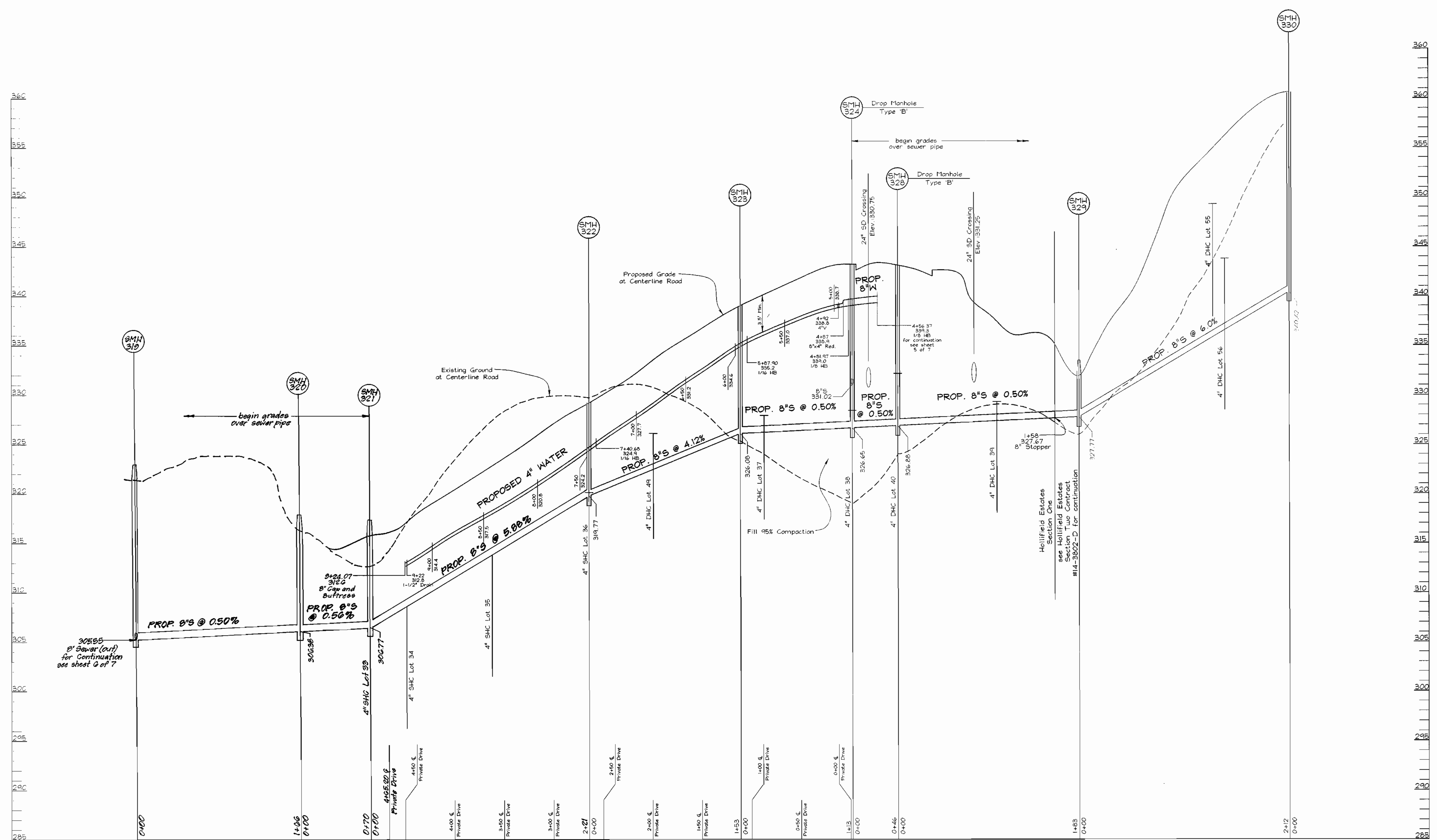
HOLLIFIELD ESTATES I
SECTION ONE (LOTS 3-49)
CONTRACT #14-3801-D

TAX MAP #18
2nd ELECTION DISTRICT

PARCEL 1
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 3 OF 7



WATER AND SEWER PROFILES
 SCALE: HORIZONTAL - 1"=50'
 VERTICAL - 1"=5'

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

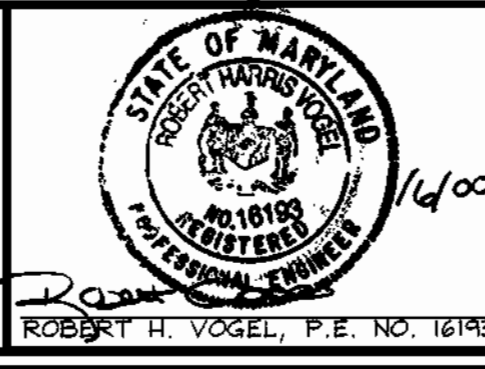
Robert D. ...
 CHIEF, BUREAU OF UTILITIES
 1-28-00
 DATE

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND

[Signature]
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 2/12
 DATE

VOGEL & ASSOCIATES
 ENGINEERS-SURVEYORS-PLANNERS

3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
 Tel 410.461.2828 Fax 410.463.3986



DES:	GAH/PS				
DRN:	PS				
CHK:	JCO				
DATE:	Jan 2000	BY	NO.	1	313.01
		REVISION		DATE	
		Rev. Profile from SMH 319 to SMH 321		3/13/01	

WATER AND SEWER PROFILES

600' SCALE MAP NO. 18 BLOCK NO. 1 & 2

HOLLIFIELD ESTATES I
 SECTION ONE LOTS 3-49
 CONTRACT #14-3801-D

TAX MAP #18
 2ND ELECTION DISTRICT


PARCEL 1
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 7 OF 7

GENERAL NOTES

PART I

- 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 UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON DRAWINGS. IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR 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.
- 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 (LATEST EDITION). 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. CONTRACTOR TO NOTIFY THE ENGINEER IMMEDIATELY OF ANY CONFLICTS.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN THESE PLANS.

C. & P. TELEPHONE	597-5505
A.T. & T.	865-3803
STATE HIGHWAY ADMINISTRATION	531-5533
B.G.E. CO. CONTRACTOR SERVICES	850-4620
B.G.E. CO. UNDER GROUND DAMAGE CONTROL	787-9069
MISS UTILITY	1-800-257-7777
COLONIAL PIPELINE CO.	745-1390
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS	313-4900
BUREAU OF UTILITIES	
- TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
- THE CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR THE CONSTRUCTION OF THE MAIN.
- THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (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 MAIN OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 19.14(c) OF THE HOWARD COUNTY CODE.

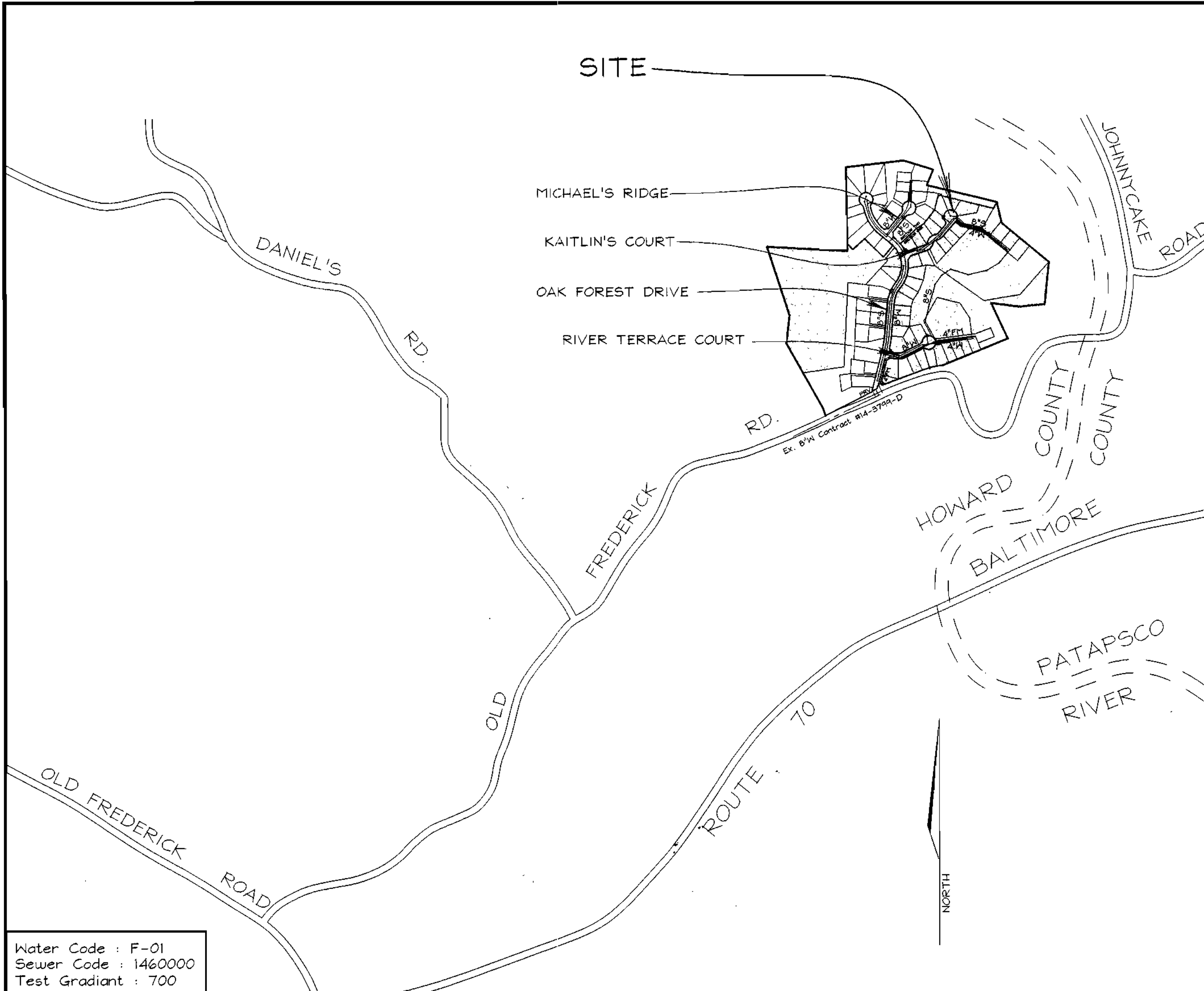
PART II - WATER

- 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 RESTRAINED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS. SOIL AROUND 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 WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTING UNLESS OTHERWISE NOTED ON PLANS OR IN SPECIFICATIONS.

PART III - SEWER

- ALL SEWER MAINS SHALL BE DIP CLASS 52 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 DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVERS. STANDARD DETAIL GS 52. WHERE WATERTIGHT MANHOLE FRAME AND COVER IS USED, SET TOP OF FRAME 18" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.

TYPE OF BUILDING:	Single Family Detached
NO. OF LOTS/PARCELS:	55
NO. OF WATER HOUSE CONNECTIONS:	55
NO. OF SEWER HOUSE CONNECTIONS:	55
DRAINAGE AREA:	Patapsco
TREATMENT PLANT:	Patapsco



LOCATION PLAN
SCALE : 1"=600'

HOLLIFIELD ESTATES

SECTION ONE

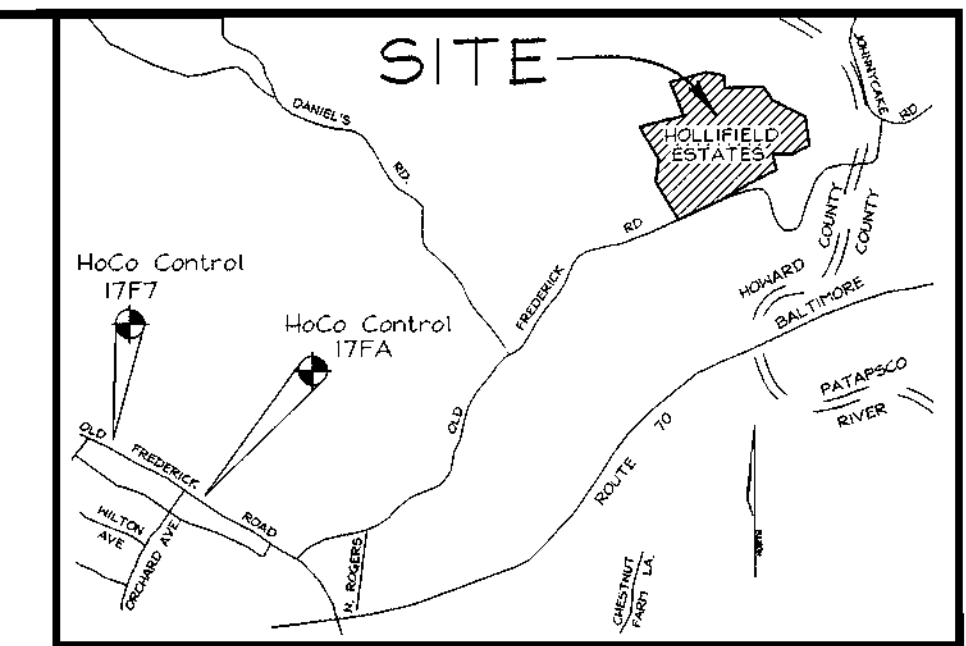
PUBLIC WATER AND SEWER PLANS

HOWARD COUNTY, MARYLAND

CONTRACT NO. 14-3801-D

BENCHMARKS

17FA	N594,949.55	E 1,364,629.51	EL. +477.52
17F7	N595,830.83	E 1,363,091.07	EL. +470.19



VICINITY MAP
SCALE: 1"=2000'

QUANTITIES (WATER & SEWER)

NAME OF UTILITY CONTRACTOR :				
SURVEY AND DRAFTING DIVISION AS-BUILT DATE 10/16/01				
ITEMS	QUANTITIES ESTIMATED	AS-BUILT		
		QUANTITIES	TYPE	MANUFACTURER/SUPPLIER
1 1/2" THWC	365 LF	0		
1" WHC	578 LF	1445	KOOPER	READING BELAIR RD SUPPLY
4" SHC	1,096 LF			
Std. Manhole	29	29 EA.	PRECAST	ATLANTIC PRECAST
8" Sewer	2,767 LF	2,717	P.V.C.	J.M. BELAIR ROAD SUPPLY
8" Sewer DIP	1,149 LF	1,115	D.I.P.	GRIFFIN
8" Valve	3	3 EA.	R.S.	MUELLER CO. BELAIR RD SUPPLY
6" Valve	6	6 EA.	R.S.	MUELLER CO.
4" Valve	2	2 EA.	R.S.	MUELLER CO.
8"x6" Tee	6	6 EA.	D.I.P.	TYLER PIPE
8"x8" Tee	3	3 EA.	D.I.P.	TYLER PIPE
Fire Hydrant	6	6 EA.	CENTURION	MUELLER CO.
8" 1/8 HB	3	3 EA.	D.I.P.	TYLER
8" 1/16 HB	1	0	D.I.P.	TYLER
4" 1/16 HB	2	2 EA.	D.I.P.	TYLER
8" Cap & Buttress	2	2 EA.	D.I.P.	TYLER
4" Cap & Buttress	1	1 EA.	D.I.P.	TYLER
8" Water	2,003 LF	2,040	D.I.P.	GRIFFIN
6" Water	150 LF	165	D.I.P.	GRIFFIN
4" Water	729.49 LF	721	D.I.P.	GRIFFIN
8"x4" Reducer	2	2 EA.	D.I.P.	TYLER
1 1/2" Drain	2	2 EA.		MUELLER

SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE SPECIFICATIONS AND WITH THE ROAD CONSTRUCTION PLAN F-99-075

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

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

John Robertson 2/3/00
SOIL CONSERVATION DISTRICT

Sheryl Simmons 2/3/00
U.S. SOIL CONSERVATION DISTRICT

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND



3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
Tel 410.461.5828 Fax 410.465.3965



DES: GAH/PS

DRN: RLP/PS

CHK: JCO

DATE: Jan 2000

K.C.I.	1	ASBUILT CONDITIONS ADDED TO PLAN	10/16/01
BY	NO.	REVISION	DATE

TITLE SHEET

HOLLIFIELD ESTATES II
SECTION ONE LOTS 2-15 & OPEN
SPACE LOT 14 UNDER F-00-397

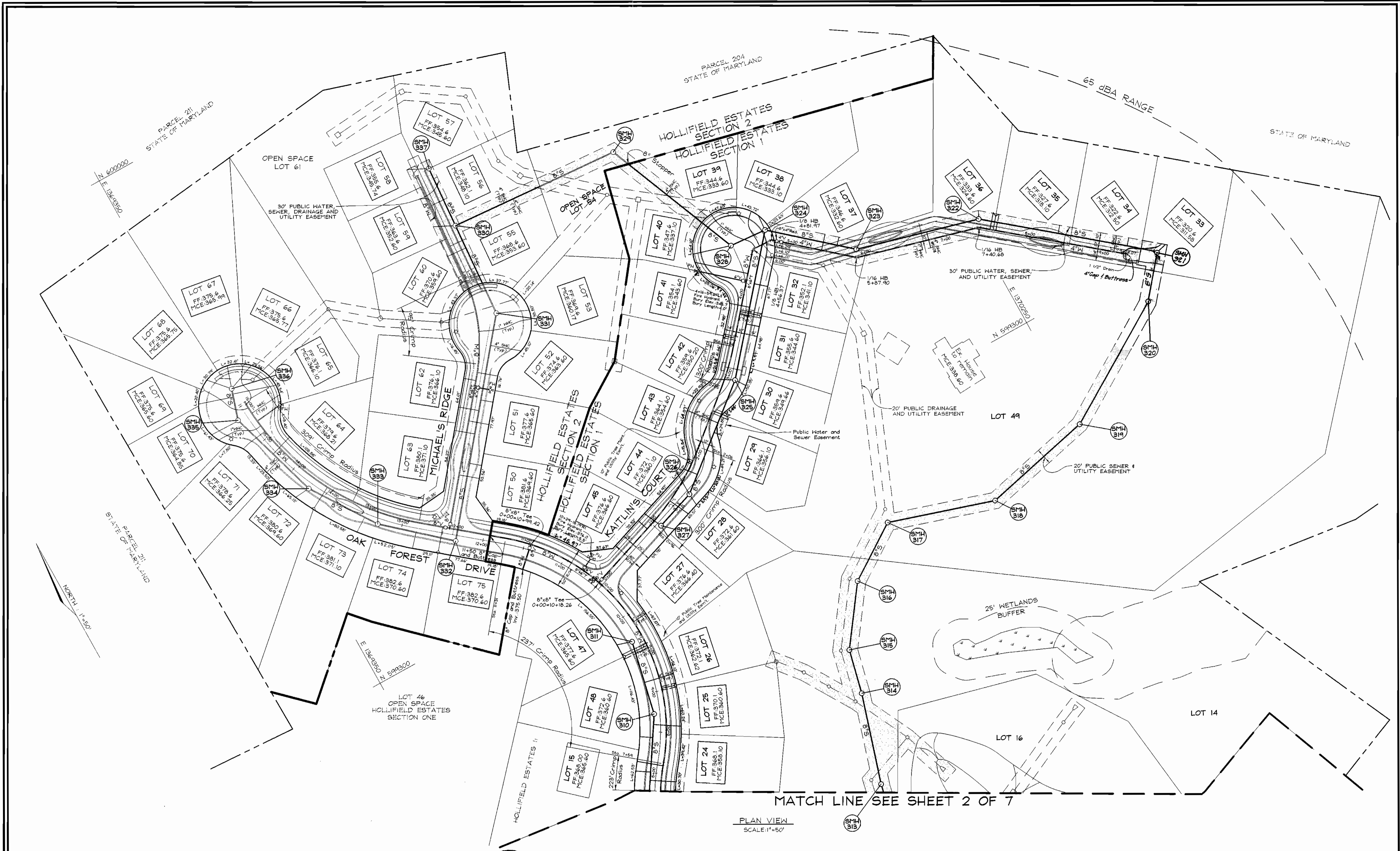
HOLLIFIELD ESTATES I
SECTION ONE (LOTS 3-49)
CONTRACT NO. 14-3801-D

TAX MAP #18
6TH ELECTION DISTRICT

PARCEL # 1
BLOCK # 1 AND 2
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 1 OF 7



MATCH LINE SEE SHEET 2 OF 7

PLAN VIEW
SCALE: 1"=50'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert Dennis
CHIEF, BUREAU OF UTILITIES

1-28-00
DATE

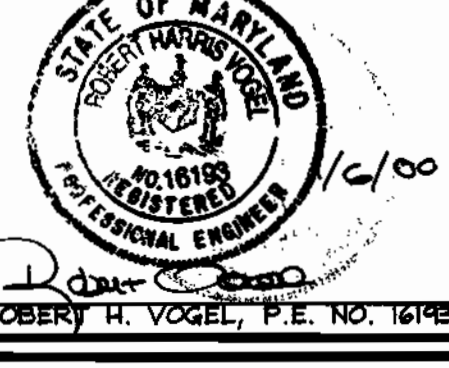
DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

Robert H. Vogel
CHIEF, DEVELOPMENT ENGINEERING DIVISION

2/10
DATE

VOGEL & ASSOCIATES
ENGINEERS-SURVEYORS-PLANNERS

3691 Park Avenue, Suite 101 • Elcott City, Maryland 21043
Tel 410.461.5828 Fax 410.465.3966



DES:	GAH/PS				
DRN:	PS				
CHK:	JCO	PS	2	Rev. SMH 320 & 321 locations	10/16/01 3/13/01
DATE:	Jan. 2000	BY:	NO.	REVISION	DATE
				1	REVISE FRONT PROPERTY LINE DIMENSIONS
					3/15/00

WATER AND SEWER PLAN

600' SCALE MAP NO. 18 BLOCK NO.

HOLLIFIELD ESTATES I
SECTION ONE (LOTS 3-47)
CONTRACT #14-3801-D

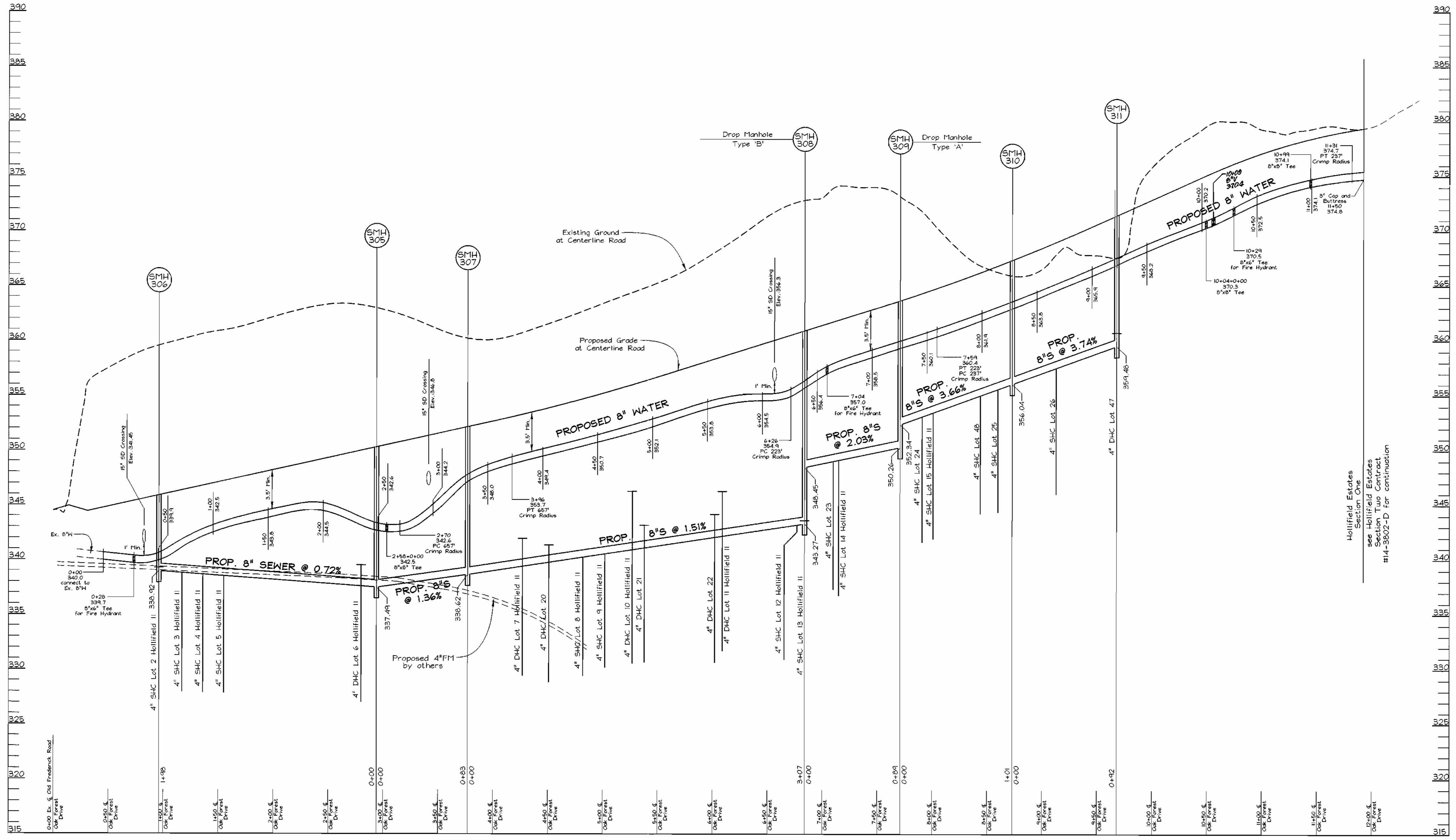
TAX MAP #18
2nd ELECTION DISTRICT

PARCEL 1
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 3 OF 7

C:\Land Projects\99-013\dugh\Section One\60463.dwg-ps 01.07.00

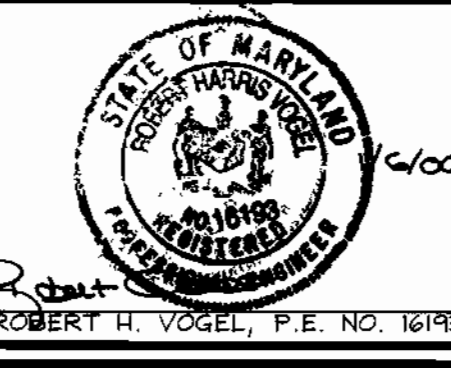


WATER AND SEWER PROFILES
OAK FOREST DRIVE
 SCALE: HORIZONTAL - 1"=50'
 VERTICAL - 1"=5'

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Chief, Bureau of Utilities
 DATE: 1/28/00

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
 Chief, Development Engineering Division
 DATE: 2/1/00

VOGEL & ASSOCIATES
 ENGINEERS-SURVEYORS-PLANNERS
 3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
 Tel 410.461.5628 Fax 410.465.3966

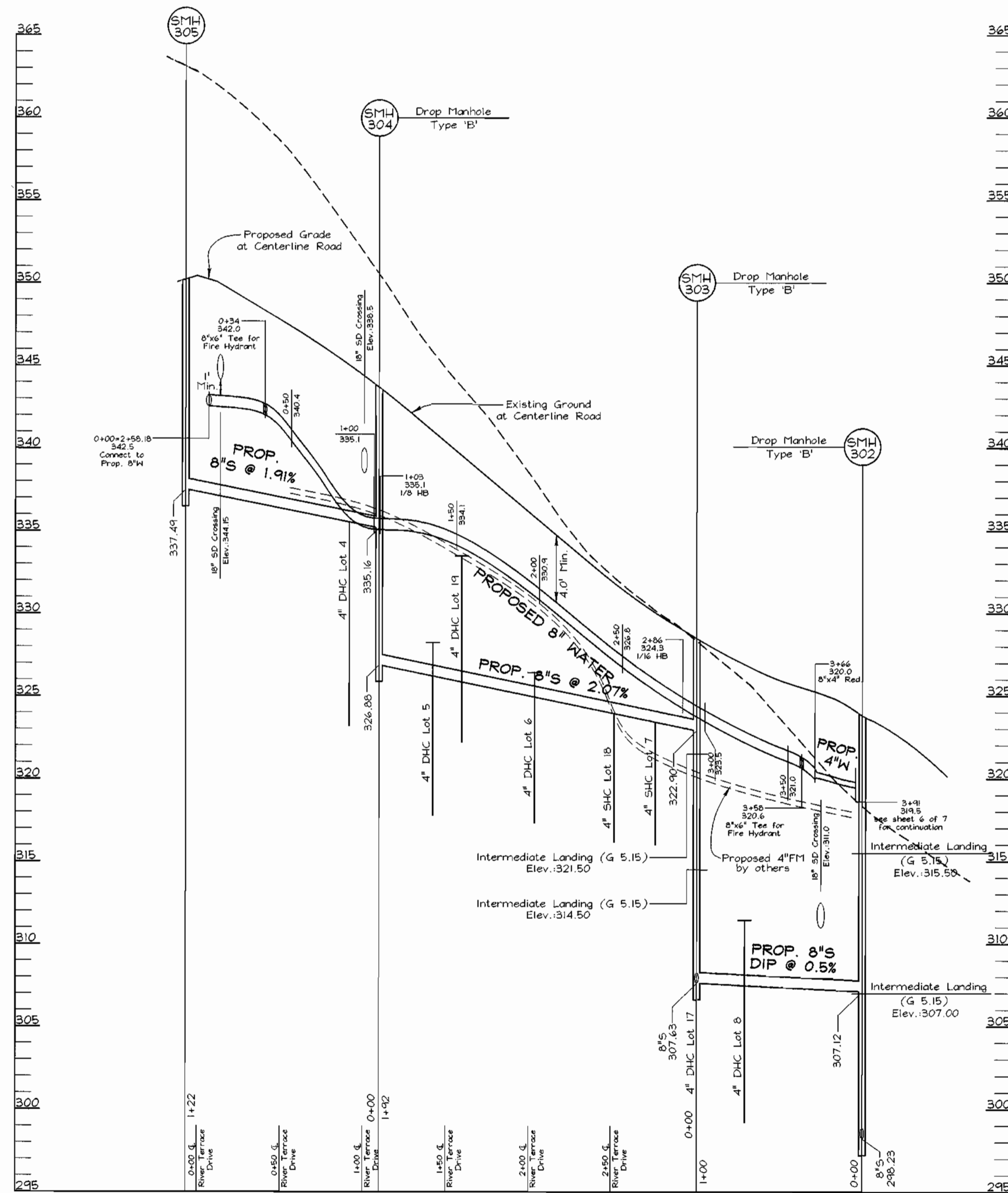


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DRN: PS			
CHK: JCO			
DATE: Jan. 2000	BY NO.	REVISION	DATE

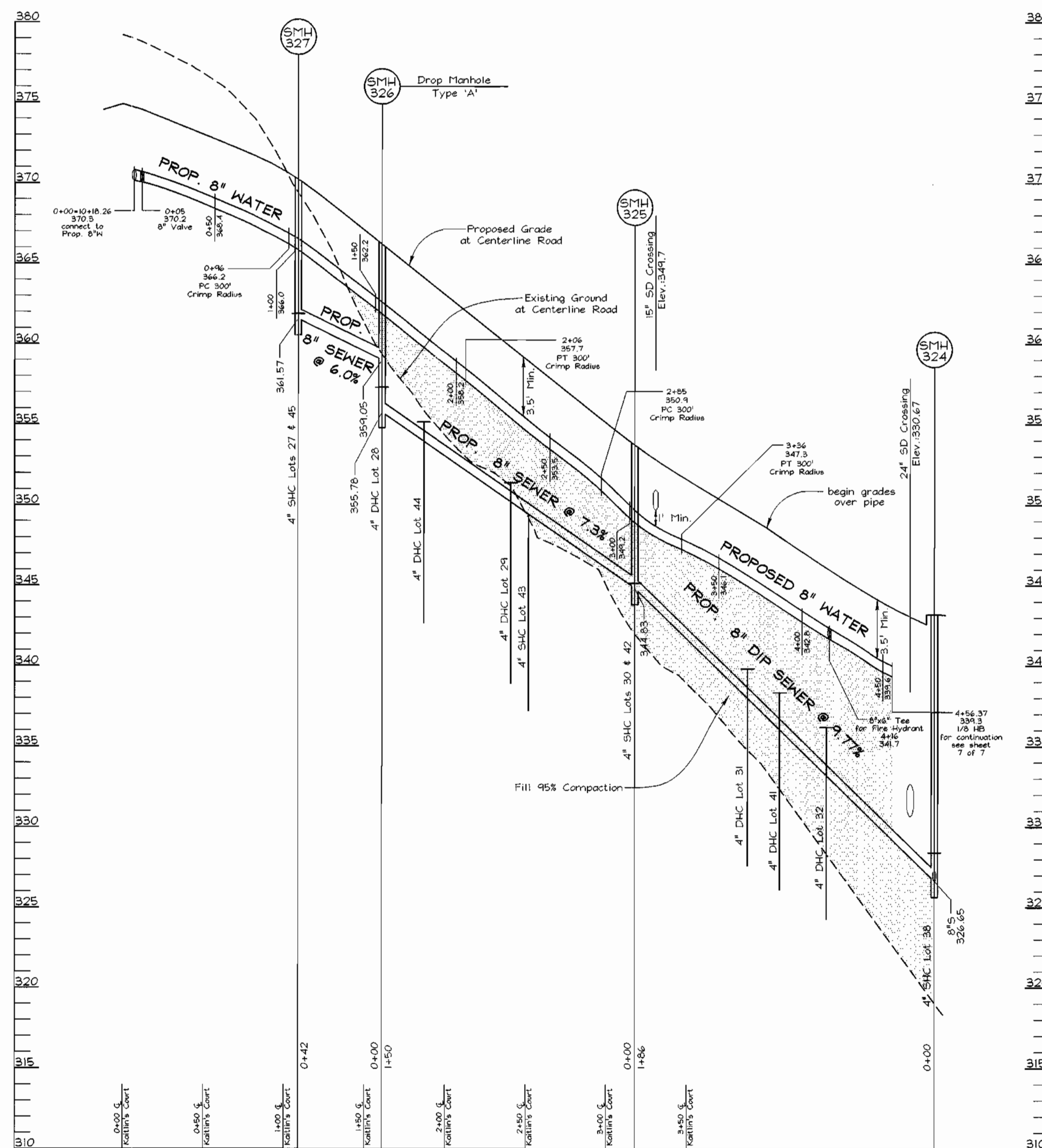
WATER AND SEWER PROFILES
 600' SCALE MAP NO. 18 BLOCK NO. 1 & 2

HOLLIFIELD ESTATES I
 SECTION ONE (LOTS 3-49)
 CONTRACT #14-3801-D
 TAX MAP #18 PARCEL 1
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

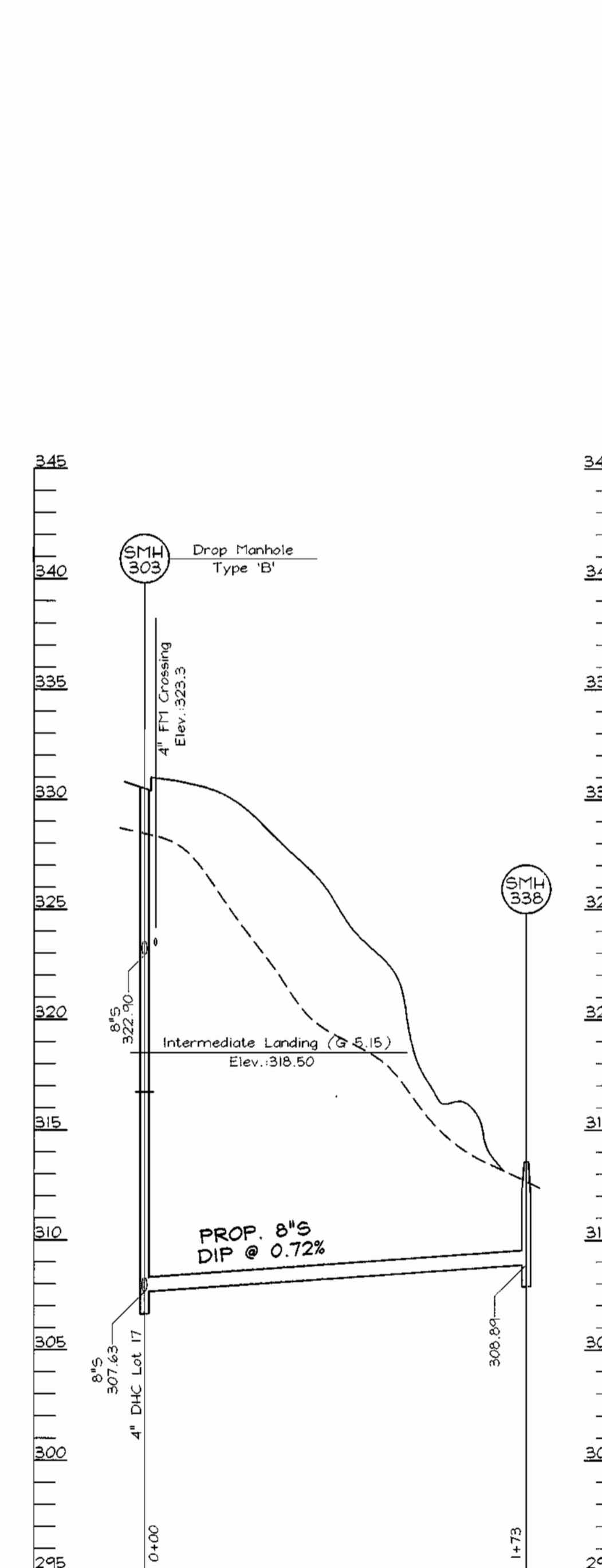
SCALE AS SHOWN
 SHEET 4 OF 7



**WATER & SEWER PROFILES
RIVER TERRACE COURT**
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



**WATER & SEWER PROFILES
KAITLIN'S COURT**
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



SEWER PROFILES
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

VOGEL & ASSOCIATES
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3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
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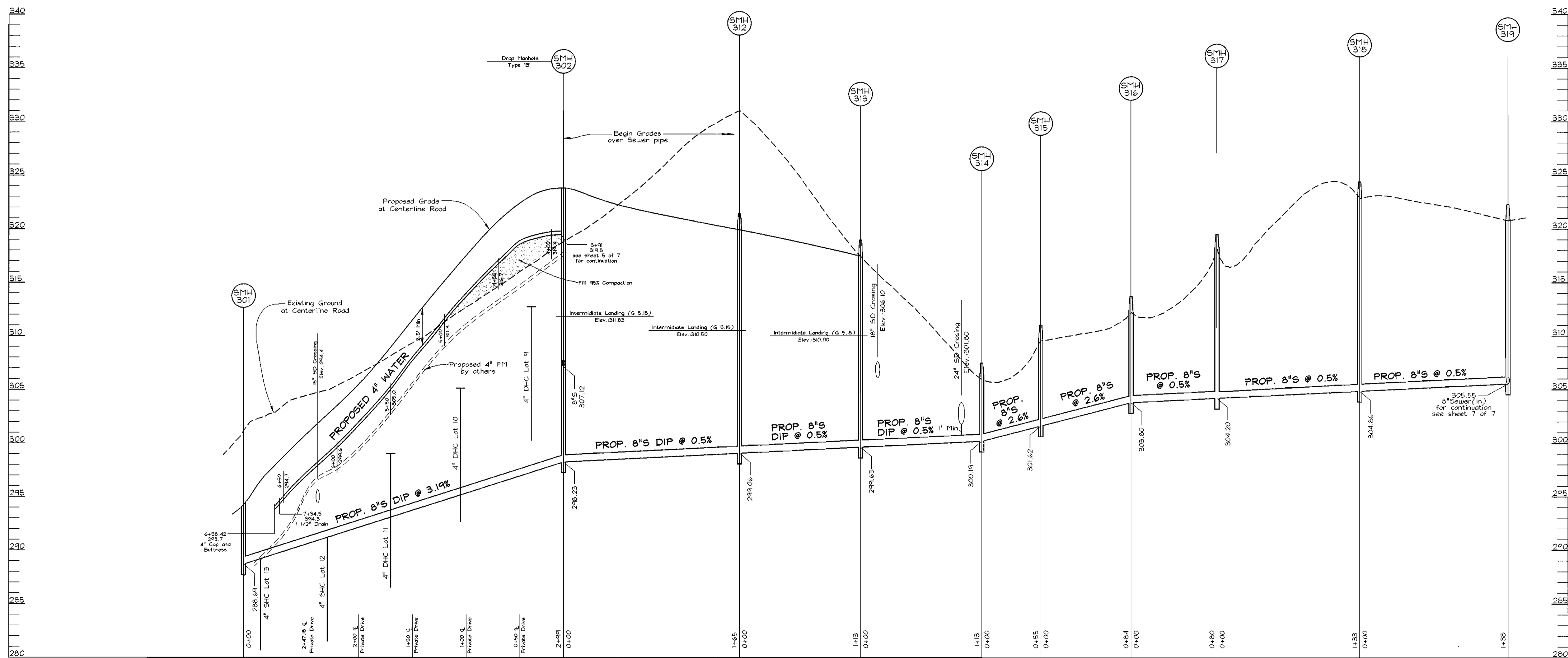
DES: GAH/PS					
DRN: PS					
CHK: JCO					
DATE: Jan. 2000	BY NO.	REVISION	DATE	600' SCALE MAP NO. 18	BLOCK NO. 1 & 2

WATER AND SEWER PROFILES

HOLLIFIELD ESTATES I
SECTION ONE LOTS-3-49
CONTRACT #14-3801-D

TAX MAP #18 PARCEL 1
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 5 OF 7

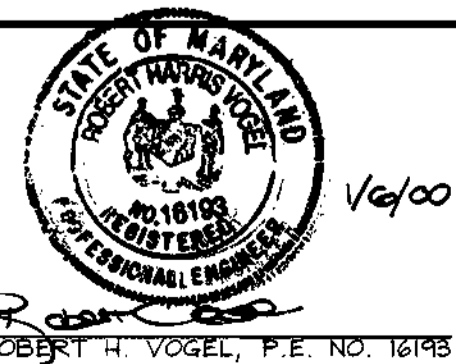


WATER AND SEWER PROFILES
 SCALE: HORIZONTAL - 1"=50'
 VERTICAL - 1"=5'

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND

VOGEL & ASSOCIATES
 ENGINEERS-SURVEYORS-PLANNERS
 3591 Park Avenue, Suite 101 • Elkott City, Maryland 21043
 Tel 410.461.5828 Fax 410.465.3965



DES: GAH/PS
 DRN: PS
 CHK: JCO
 DATE: Jan 2000

BY NO. REVISION

DATE

WATER AND SEWER PROFILES

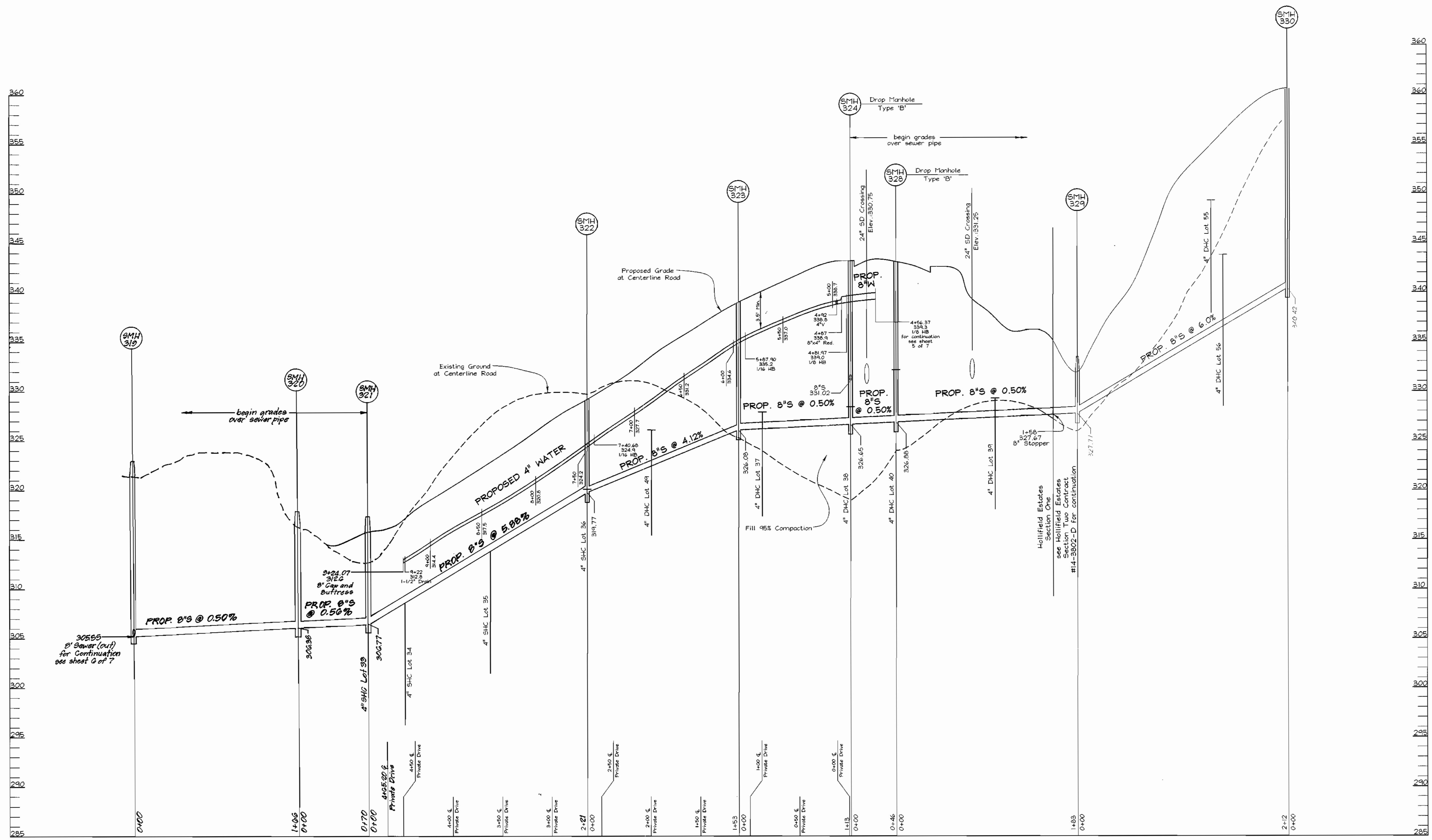
600' SCALE MAP NO. 1B BLOCK NO. 1 & 2

HOLLIFIELD ESTATES I

SECTION ONE LOTS 3-4
 CONTRACT #14-3801-D
 TAX MAP #18 PARCEL 1
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 6 OF 7

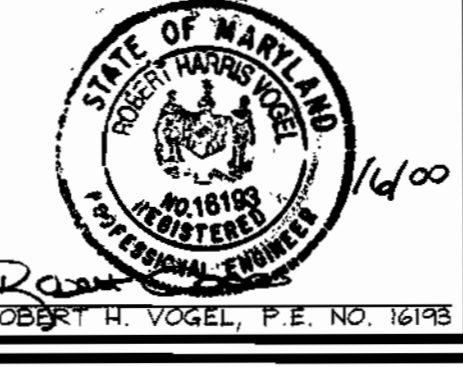


WATER AND SEWER PROFILES
 SCALE: HORIZONTAL - 1"=50'
 VERTICAL - 1"=5'

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
 Robert D. ... 1-28-00
 CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING
 HOWARD COUNTY, MARYLAND
 ... 2/1/00
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

VOGEL & ASSOCIATES
 ENGINEERS-SURVEYORS-PLANNERS
 3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
 Tel: 410.461.5628 Fax: 410.465.3696



DES:	GAH/PS		
DRN:	PS		
CHK:	JCO		
DATE:	Jan. 2000	Rev. Profile from SMH 319 to SMH 321	3.13.01
BY:	NO.	REVISION	DATE

WATER AND SEWER PROFILES
 600' SCALE MAP NO. 18 BLOCK NO. 1 & 2

HOLLIFIELD ESTATES I
 SECTION ONE LOTS 3-49
 CONTRACT #14-3801-D
 TAX MAP #18 PARCEL 1
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

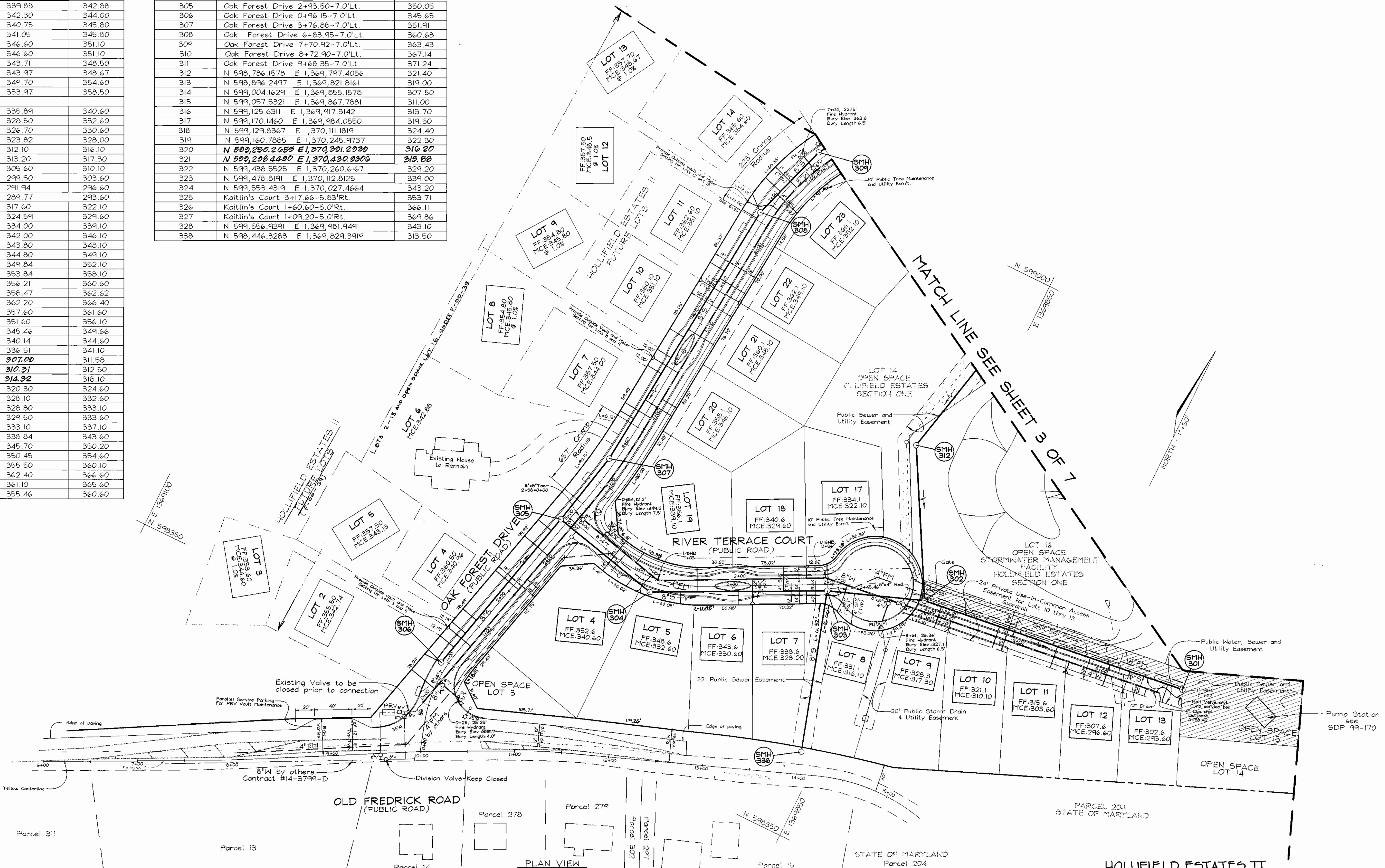
SCALE AS SHOWN
 SHEET 7 OF 7

SEWER HOUSE CONNECTIONS

Lot #	FF @ Lot/RW	Elev. @ Lot/RW	MCE
Hollifield Est. I			
2	339.24	339.64	342.64
3 @ 1.0%	339.34	339.33	344.60
4	339.61	339.18	343.13
5	339.88	339.04	340.96
6	339.88	339.88	342.88
7	342.30	342.30	344.00
8 @ 1.0%	340.31	340.75	345.80
9 @ 1.0%	341.07	341.05	345.80
10	346.24	346.60	351.10
11	346.24	346.60	351.10
12 @ 1.0%	343.31	343.71	348.50
13 @ 1.0%	343.51	343.97	348.67
14	349.26	349.70	354.60
15	353.54	353.97	358.50
Hollifield Est.			
4	338.61	338.89	340.60
5	338.24	338.50	332.60
6	336.47	326.70	330.60
7	323.84	323.82	328.00
8	311.45	312.10	316.10
9	312.75	313.20	317.30
10	305.10	305.60	310.10
11	299.09	299.50	303.60
12	291.46	291.94	296.60
13	289.31	289.77	293.60
17	276.12	276.60	282.10
18	324.07	324.59	329.60
19	333.46	334.00	339.10
20	341.34	342.00	346.10
21	343.14	343.80	348.10
22	344.14	344.80	349.10
23	349.18	349.84	352.10
24	353.21	353.84	358.10
25	358.75	359.21	360.60
26	351.71	358.47	362.62
27	361.71	362.20	366.40
28	357.31	357.60	361.60
29	351.46	351.60	356.10
30	345.16	345.46	349.66
31	339.82	340.14	344.60
32	336.19	336.51	341.10
33	306.77	307.09	311.58
34	306.09	310.31	312.50
35	314.00	314.32	318.10
36	322.11	320.30	324.60
37	327.30	328.10	332.60
38	326.47	328.60	333.10
39	329.30	329.50	333.60
40	332.16	333.10	337.10
41	336.34	338.84	343.60
42	345.16	345.70	350.20
43	349.64	350.45	354.60
44	351.14	355.50	360.10
45	361.00	362.40	366.60
47	360.72	361.10	365.60
48	353.14	355.46	360.60

SEWER MANHOLE TABULATIONS

Manhole #	Location	Top Elev.
300	N 598,695.8974 E 1,370,213.0410	291.50
301	N598,677.1217 E 1,370,164.9276	294.20
302	N 598,641.6634 E 1,369,878.1910	323.80
303	River Terrace Court 2+94.43-6.7'RT.	330.47
304	River Terrace Drive 1+10.41-15.51' Rt.	345.44
305	Oak Forest Drive 2+93.50-7.0'Lt.	350.05
306	Oak Forest Drive 0+96.15-7.0'Lt.	345.65
307	Oak Forest Drive 3+76.88-7.0'Lt.	351.91
308	Oak Forest Drive 6+83.95-7.0'Lt.	360.68
309	Oak Forest Drive 7+70.92-7.0'Lt.	363.43
310	Oak Forest Drive 8+72.90-7.0'Lt.	367.14
311	Oak Forest Drive 9+68.35-7.0'Lt.	371.24
312	N 598,786.1578 E 1,369,797.4056	321.40
313	N 598,896.2497 E 1,369,821.8161	319.00
314	N 599,004.1629 E 1,369,855.1578	307.50
315	N 599,057.5321 E 1,369,867.7881	311.00
316	N 599,125.6311 E 1,369,917.3142	313.70
317	N 599,170.1460 E 1,369,984.0550	319.50
318	N 599,129.8367 E 1,370,111.1819	324.40
319	N 599,160.7885 E 1,370,245.9737	322.30
320	N 599,250.2055 E 1,370,301.2930	316.20
321	N 599,290.4480 E 1,370,430.8906	315.80
322	N 599,438.5525 E 1,370,260.6167	329.20
323	N 599,478.8191 E 1,370,112.8125	339.00
324	N 599,553.4319 E 1,370,027.4664	343.20
325	Kaitlin's Court 3+17.66-5.83'RT.	353.71
326	Kaitlin's Court 1+60.60-5.0'RT.	366.11
327	Kaitlin's Court 1+09.20-5.0'RT.	369.86
328	N 599,556.9391 E 1,369,981.9491	343.10
338	N 598,446.3288 E 1,369,829.3919	313.50



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Robert W. ...
CHIEF, BUREAU OF UTILITIES

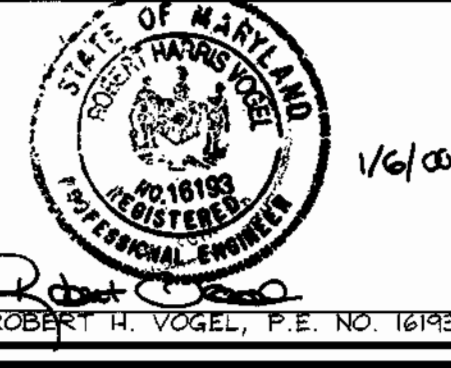
DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

...
CHIEF, DEVELOPMENT ENGINEERING DIVISION

VOGEL & ASSOCIATES
ENGINEERS-SURVEYORS-PLANNERS

3091 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
Tel 410.481.5628 Fax 410.483.3566

ROBERT H. VOGEL, P.E. NO. 16193



DES: GAH/PS			
DRN: PS			
CHK: JCO	PS	2	Rev. Sewer Elevation
DATE: Jan. 2000	BY NO.	1	REVISE FRONT PROPERTY LINE DIMENSIONS
			REVISION
		3/13/01	
		3/15/02	

WATER AND SEWER PLAN

600' SCALE MAP NO. 18 BLOCK NO. 1 and 2

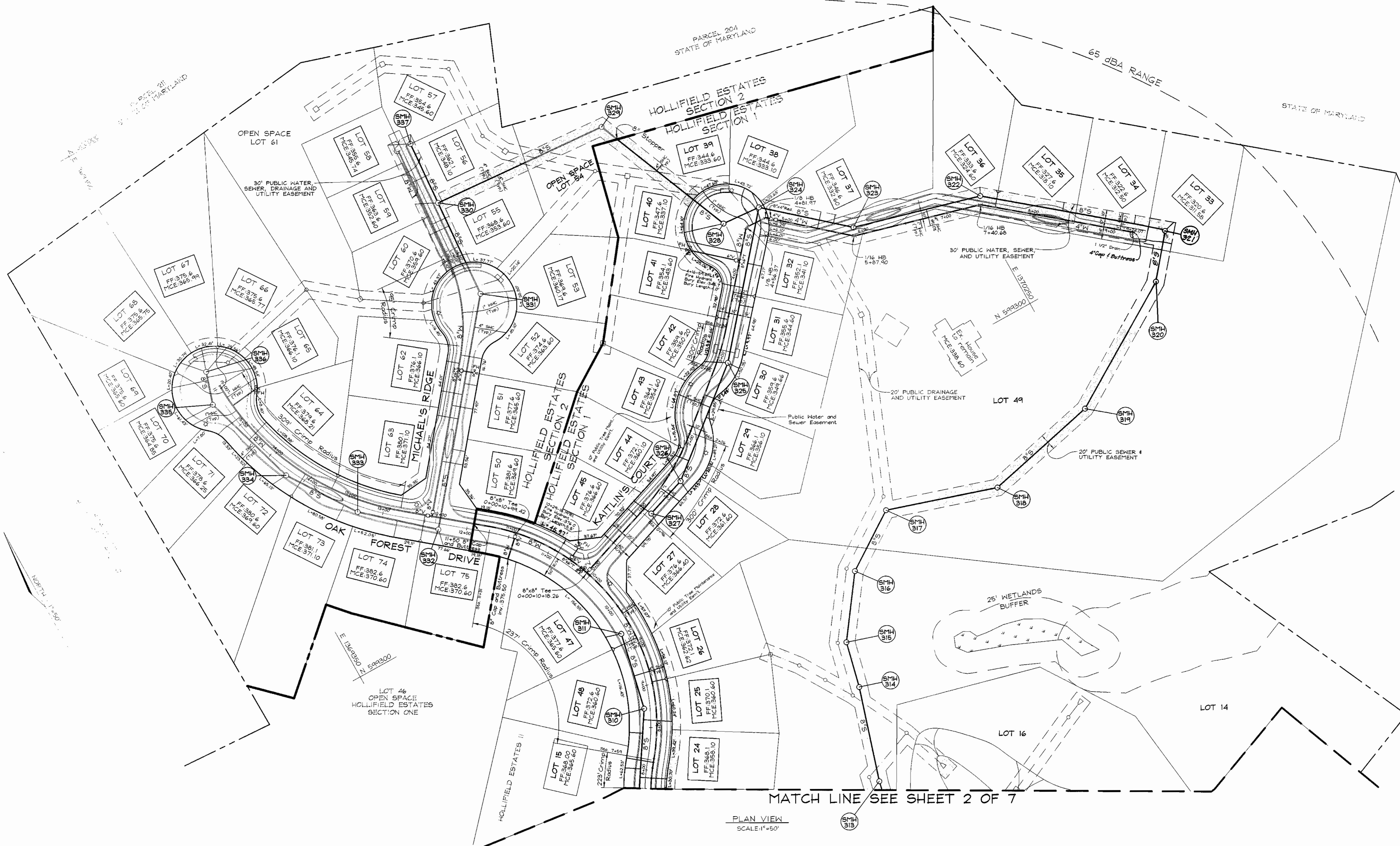
HOLLIFIELD ESTATES II
SECTION ONE (LOTS 3-47)
CONTRACT #14-3801-D

TAX MAP #18
2nd ELECTION DISTRICT

PARCEL 1
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
SHEET 2 OF 7

C:\Land Projects\99-015\dwg\Section One\4x2.dwg as of 1/27/00



PLAN VIEW
SCALE 1"=50'

MATCH LINE SEE SHEET 2 OF 7

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

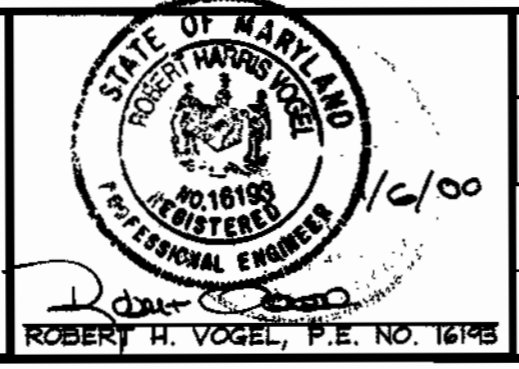
Robert H. Vogel
CHIEF, BUREAU OF UTILITIES

DEPARTMENT OF PLANNING & ZONING
HOWARD COUNTY, MARYLAND

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Tel 410.461.5828 Fax 410.465.3666



DES:	GAH/PS				
DRN:	PS				
CHK:	JCO	PS	2	Rev. SMH 320 & 321 locations	3/13/01
		1		REVISE FRONT PROPERTY LINE DIMENSIONS	3/15/00
DATE:	Jan 2000	BY:	NO.	REVISION	DATE

WATER AND SEWER PLAN

600' SCALE MAP NO. 18 BLOCK NO.

HOLLIFIELD ESTATES I
SECTION ONE (LOTS 3-49)
CONTRACT #14-3801-D

TAX MAP #18
2nd ELECTION DISTRICT

PARCEL 1
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN

SHEET 3 OF 7