

UNIT	FROM	TO	FEET	TO	FEET
1	W/C	M-16	32.6	1-42	68.4
1	S/C	"	44.0	"	68.0
2	W/C	"	62.4	"	62.4
2	S/C	"	66.0	"	66.0
3	W/C	"	77.3	"	67.7
3	S/C	"	84.0	"	72.0
4	W/C	1-43	61.8	1-38	70.0
4	S/C	M-16	27.6	"	50.0
5	W/C	1-43	88.3	"	58.5
5	S/C	"	100.0	"	47.0
6	W/C	SMH-8	19.4	"	27.7
6	S/C	"	24.8	"	35.6
7	W/C	"	15.0	"	11.3
7	S/C	"	21.7	"	11.0
8	W/C	SMH-3	34.0	"	27.0
8	S/C	SMH-5	56.8	"	47.0
9	W/C	"	25.0	"	26.0
9	S/C	"	33.3	"	33.0
10	W/C	"	63.0	"	48.2
10	S/C	"	73.0	"	39.4
11	W/C	"	65.5	"	54.0
11	S/H	"	48.0	"	62.2
12	W/C	"	31.0	"	85.5
12	S/C	"	57.6	"	75.5
13	W/C	"	27.0	"	23.0
13	S/C	"	25.1	"	20.5
14	W/C	"	28.0	"	1-40
14	S/C	"	66.0	"	89.6
15	W/C	"	37.0	"	70.2
15	S/C	"	47.0	"	51.4
16	W/C	"	55.5	"	45.0
16	S/C	"	74.4	"	28.7
17	W/C	"	64.6	"	32.3
17	S/C	SMH-4	65.6	"	38.4
18	W/C	"	59.0	"	35.7
18	S/C	"	39.6	"	47.0
19	W/C	"	50.3	"	41.8
20	W/C	"	28.7	"	58.8
20	S/C	"	27.4	"	60.4
21	W/C	SMH-3	32.0	"	52.4
21	S/C	"	23.5	"	28.5
22	W/C	"	41.5	"	43.3
22	S/C	"	53.2	"	31.7
23	W/C	"	62.0	"	22.0
23	S/C	"	74.3	"	12.0
24	W/C	SMH-4	51.2	"	3.8
24	S/C	"	62.0	"	20.8
25	W/C	"	24.0	"	37.7
25	S/C	"	41.8	"	30.0
26	W/C	"	20.7	"	53.7
26	S/C	"	12.0	"	1-40
27	W/C	"	53.7	"	1-37
27	S/C	1-36	64.7	"	75.0
28	W/C	"	44.0	"	55.7
28	S/C	"	35.0	"	48.3
29	W/C	"	18.0	"	34.4
29	S/C	"	10.0	"	22.6
30	W/C	"	13.7	"	22.0
30	S/C	"	30.0	"	34.7
31	W/C	"	31.0	"	43.6
31	S/C	"	66.0	"	55.7
32	W/C	"	56.7	"	57.4
32	S/C	"	97.7	"	57.3
33	W/C	"	67.7	"	67.0
34	W/C	1-36	35.5	"	20.0

UNIT	FROM	TO	FEET	TO	FEET
34	S/C	1-36	45.0	1-37	40.0
35	W/C	"	30.8	"	21.0
35	S/C	"	31.0	"	14.0
36	W/C	"	34.0	"	16.7
36	S/C	"	34.0	"	14.0
37	W/C	"	39.5	"	23.0
37	S/C	"	50.7	"	36.5
38	W/C	"	71.5	"	61.5
38	S/C	"	64.5	"	52.0
39	W/C	"	80.4	"	70.6
39	S/C	"	92.4	"	82.0
40	W/C	FH-28	26.0	SMH-7	72.5
40	S/C	"	14.1	"	64.0
41	W/C	"	36.8	"	82.0
41	S/C	"	46.8	"	82.0
42	W/C	"	68.4	"	84.2
42	S/C	"	90.0	"	82.0
43	W/C	"	24.5	"	24.5
43	S/C	"	28.8	"	28.8
44	W/C	"	14.0	"	14.0
44	S/C	"	32.0	"	36.0
45	W/C	"	36.0	"	36.0
45	S/C	"	41.5	"	32.0
46	W/C	SMH-12	75.0	FH-30	25.0
46	S/C	SMH-12	63.0	FH-30	12.0
47	W/C	SMH-12	11.0	1-20	81.0
47	S/C	SMH-12	18.0	"	72.0
48	W/C	"	38.0	"	48.0
48	S/C	"	60.0	"	71.0
49	W/C	"	54.0	"	54.0
49	S/C	"	75.0	"	101.0
50	W/C	"	11.0	"	11.0
50	S/C	"	22.0	"	22.0
51	W/C	"	16.0	"	53.0
51	S/C	"	62.0	"	97.0
52	W/C	"	24.0	"	24.0
52	S/C	"	44.0	"	55.0
53	W/C	"	9.0	"	36.0
53	S/C	"	26.0	"	26.0
54	W/C	SMH-15	29.0	1-20	31.0
54	S/C	SMH-15	29.0	"	29.0
55	W/C	"	28.0	"	28.0
55	S/C	"	40.0	"	40.0
56	W/C	"	10.0	"	10.0
56	S/C	"	20.0	"	20.0
57	W/C	"	15.0	"	15.0
57	S/C	"	25.0	"	25.0
58	W/C	"	15.0	"	15.0
58	S/C	"	25.0	"	25.0
59	W/C	"	10.0	"	10.0
59	S/C	"	20.0	"	20.0
60	W/C	"	10.0	"	10.0
60	S/C	"	20.0	"	20.0
61	W/C	"	10.0	"	10.0
61	S/C	"	20.0	"	20.0
62	W/C	"	10.0	"	10.0
62	S/C	"	20.0	"	20.0
63	W/C	"	10.0	"	10.0
63	S/C	"	20.0	"	20.0
64	W/C	"	10.0	"	10.0
64	S/C	"	20.0	"	20.0
65	W/C	"	10.0	"	10.0
65	S/C	"	20.0	"	20.0
66	W/C	"	10.0	"	10.0
66	S/C	"	20.0	"	20.0
67	W/C	"	10.0	"	10.0
67	S/C	"	20.0	"	20.0
68	W/C	"	10.0	"	10.0
68	S/C	"	20.0	"	20.0
69	W/C	"	10.0	"	10.0
69	S/C	"	20.0	"	20.0
70	W/C	"	10.0	"	10.0
70	S/C	"	20.0	"	20.0
71	W/C	"	10.0	"	10.0
71	S/C	"	20.0	"	20.0
72	W/C	"	10.0	"	10.0
72	S/C	"	20.0	"	20.0
73	W/C	"	10.0	"	10.0
73	S/C	"	20.0	"	20.0
74	W/C	"	10.0	"	10.0
74	S/C	"	20.0	"	20.0
75	W/C	"	10.0	"	10.0
75	S/C	"	20.0	"	20.0
76	W/C	"	10.0	"	10.0
76	S/C	"	20.0	"	20.0
77	W/C	"	10.0	"	10.0
77	S/C	"	20.0	"	20.0
78	W/C	"	10.0	"	10.0
78	S/C	"	20.0	"	20.0
79	W/C	"	10.0	"	10.0
79	S/C	"	20.0	"	20.0
80	W/C	"	10.0	"	10.0
80	S/C	"	20.0	"	20.0
81	W/C	"	10.0	"	10.0
81	S/C	"	20.0	"	20.0
82	W/C	"	10.0	"	10.0
82	S/C	"	20.0	"	20.0
83	W/C	"	10.0	"	10.0
83	S/C	"	20.0	"	20.0
84	W/C	"	10.0	"	10.0
84	S/C	"	20.0	"	20.0
85	W/C	"	10.0	"	10.0
85	S/C	"	20.0	"	20.0
86	W/C	"	10.0	"	10.0
86	S/C	"	20.0	"	20.0
87	W/C	"	10.0	"	10.0
87	S/C	"	20.0	"	20.0
88	W/C	"	10.0	"	10.0
88	S/C	"	20.0	"	20.0
89	W/C	"	10.0	"	10.0
89	S/C	"	20.0	"	20.0
90	W/C	"	10.0	"	10.0
90	S/C	"	20.0	"	20.0
91	W/C	"	10.0	"	10.0
91	S/C	"	20.0	"	20.0
92	W/C	"	10.0	"	10.0
92	S/C	"	20.0	"	20.0

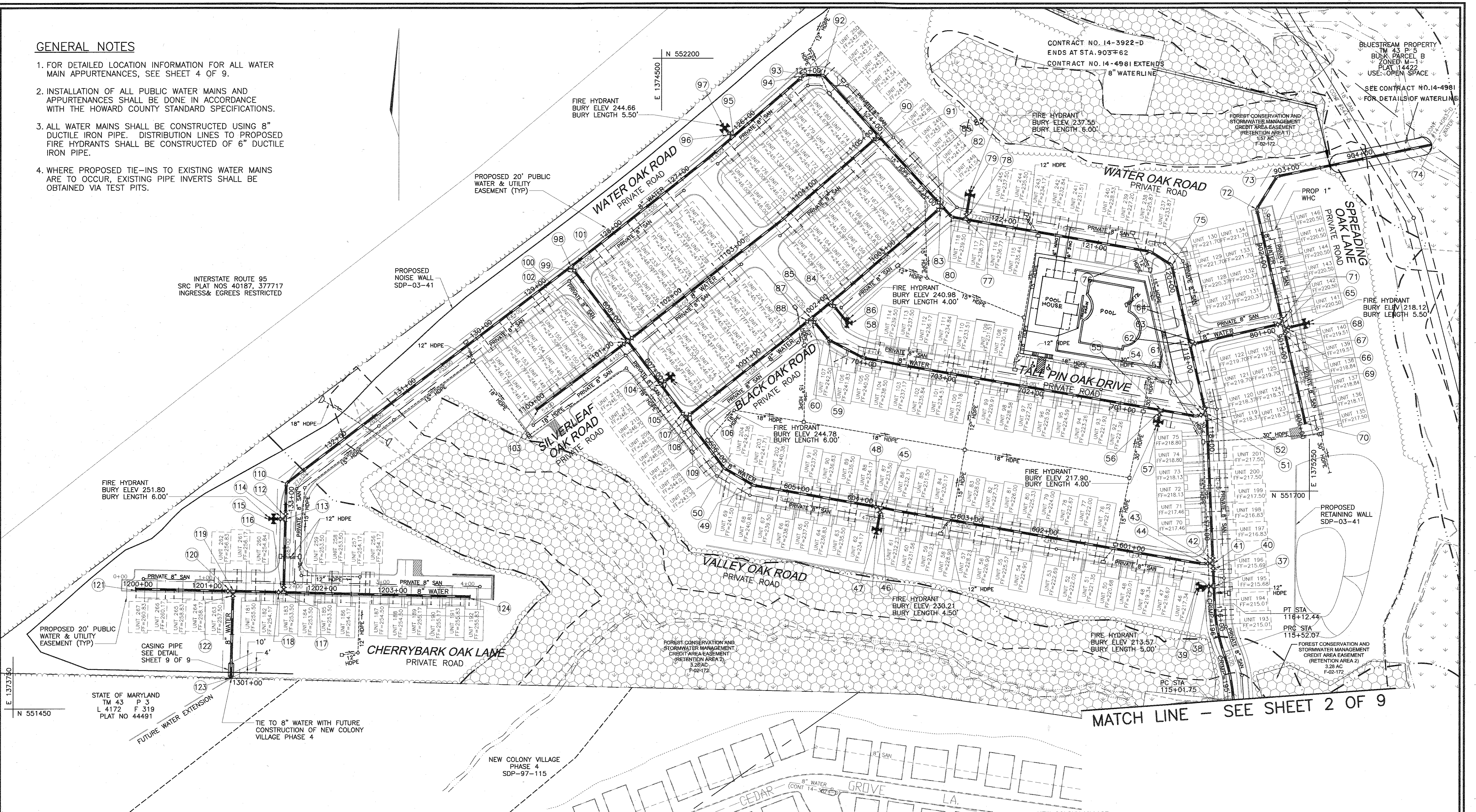
UNIT	FROM	TO	FEET	TO	FEET
92	W/C	"	10.0	"	10.0
92	S/C	"	20.0	"	20.0
93	W/C	"	10.0	"	10.0
93	S/C	"	20.0	"	20.0
94	W/C	"	10.0	"	10.0
94	S/C	"	20.0	"	20.0
95	W/C	"	10.0	"	10.0
95	S/C	"	20.0	"	20.0
96	W/C	"	10.0	"	10.0
96	S/C	"	20.0	"	20.0
97	W/C	"	10.0	"	10.0
97	S/C	"	20.0	"	20.0
98	W/C	"	10.0	"	10.0
98	S/C	"	20.0	"	20.0
99	W/C	"	10.0	"	10.0
99	S/C	"	20.0	"	20.0
100	W/C	"	10.0	"	10.0
100	S/C	"	20.0	"	20.0
101	W/C	"	10.0	"	10.0
101	S/C	"	20.0	"	20.0
102	W/C	"	10.0	"	10.0
102	S/C	"	20.0	"	20.0
103	W/C	"	10.0	"	10.0
103	S/C	"	20.0	"	20.0
104	W/C	"	10.0	"	10.0
104	S/C	"	20.0	"	20.0
105	W/C	"	10.0	"	10.0
105	S/C	"	20.0	"	20.0
106	W/C	"	10.0	"	10.0
106	S/C	"	20.0	"	20.0
107	W/C	"	10.0	"	10.0
107	S/C	"	20.0	"	20.0
108	W/C	"	10.0	"	10.0
108	S/C	"	20.0	"	20.0
109	W/C	"	10.0	"	10.0
109	S/C	"	20.0	"	20.0
110	W/C	"	10.0	"	10.0
110	S/C	"	20.0	"	20.0
111	W/C	"	10.0	"	10.0
111	S/C	"	20.0	"	20.0
112	W/C	"	10.0	"	10.0
112	S/C	"	20.0	"	20.0
113	W/C	"	10.0	"	10.0
113	S/C	"	20.0	"	20.0
114	W/C	"	10.0	"	10.0
114	S/C	"	20.0	"	20.0
115	W/C	"	10.0	"	10.0
115	S/C	"	20.0	"	20.0
116	W/C	"	10.0	"	10.0
116	S/C	"	20.0	"	20.0
117	W/C	"	10.0	"	10.0
117	S/C	"	20.0	"	20.0
118	W/C	"	10.0	"	10.0
118	S/C	"	20.0	"	20.0
119	W/C	"	10.0	"	10.0
119	S/C	"	20.0	"	20.0
120	W/C	"	10.0	"	10.0
120	S/C	"	20.0	"	20.0
121	W/C	"	10.0	"	10.0
121	S/C	"	20.0	"	20.0
122	W/C	"	10.0	"	10.0
122	S/C	"	20.0	"	20.0
123	W/C	"	10.0	"	10.0
123	S/C	"	20.0	"	20.0
124	W/C	"	10.0	"	10.0
124	S/C	"	20.0	"	20.0
125	W/C	"	10.0	"	10.0
125	S/C	"	20.0	"	20.0
126	W/C	"	10.0	"	10.0
126	S/C	"	20.0	"	20.0

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING  
 [Signature] 5/16/04  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION



**GENERAL NOTES**

- FOR DETAILED LOCATION INFORMATION FOR ALL WATER MAIN APPURTENANCES, SEE SHEET 4 OF 9.
- INSTALLATION OF ALL PUBLIC WATER MAINS AND APPURTENANCES SHALL BE DONE IN ACCORDANCE WITH THE HOWARD COUNTY STANDARD SPECIFICATIONS.
- ALL WATER MAINS SHALL BE CONSTRUCTED USING 8" DUCTILE IRON PIPE. DISTRIBUTION LINES TO PROPOSED FIRE HYDRANTS SHALL BE CONSTRUCTED OF 6" DUCTILE IRON PIPE.
- WHERE PROPOSED TIE-INS TO EXISTING WATER MAINS ARE TO OCCUR, EXISTING PIPE INVERTS SHALL BE OBTAINED VIA TEST PITS.



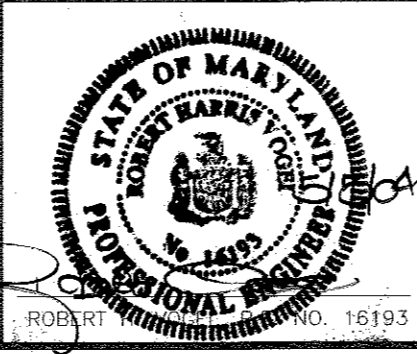
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*[Signature]* 5/16/04  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*[Signature]* 5-14-04  
 CHIEF, BUREAU OF UTILITIES DATE

**FWA**  
 FREDERICK WARD ASSOCIATES, INC.  
 REGIONAL OFFICES:  
 BEL AIR, MARYLAND AND WARRENTON, VIRGINIA  
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 www.frederickward.com



DESIGN BY: GMH  
 DRAWN BY: GMH  
 CHECKED BY: RHV  
 DATE: 11/3/2003

LK	BY	NO	REVISION	DATE
2			REVISE POOL HOUSE LAYOUT & WHC & SHC LOCATIONS	6/1/06

CORRIDOR 1 LTD PARTNERSHIP  
 TM 43 P 2  
 L 3328 F 643  
 L 4227 F 152  
 ZONED R-MH

**FINAL WATER AND SEWER CONSTRUCTION PLAN**

600' SCALE MAP NO. 43 BLOCK NO. 4

**THE OAKS AT WATERS EDGE**  
 CONTRACT NO. 14-3922-D

TAX MAP 43  
 1ST ELECTION DISTRICT

PARCELS 279, 647, AND PART OF 5  
 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
 SHEET 3 OF 9

N:\PROJECTS\2013\178\ENGR\DWG\TOWNHOUSE\WATER\FINAL\_03-water\_plan2.dwg Mod May 05 09:17:09 2004 e.lg



WATER MAIN APPURTENANCES

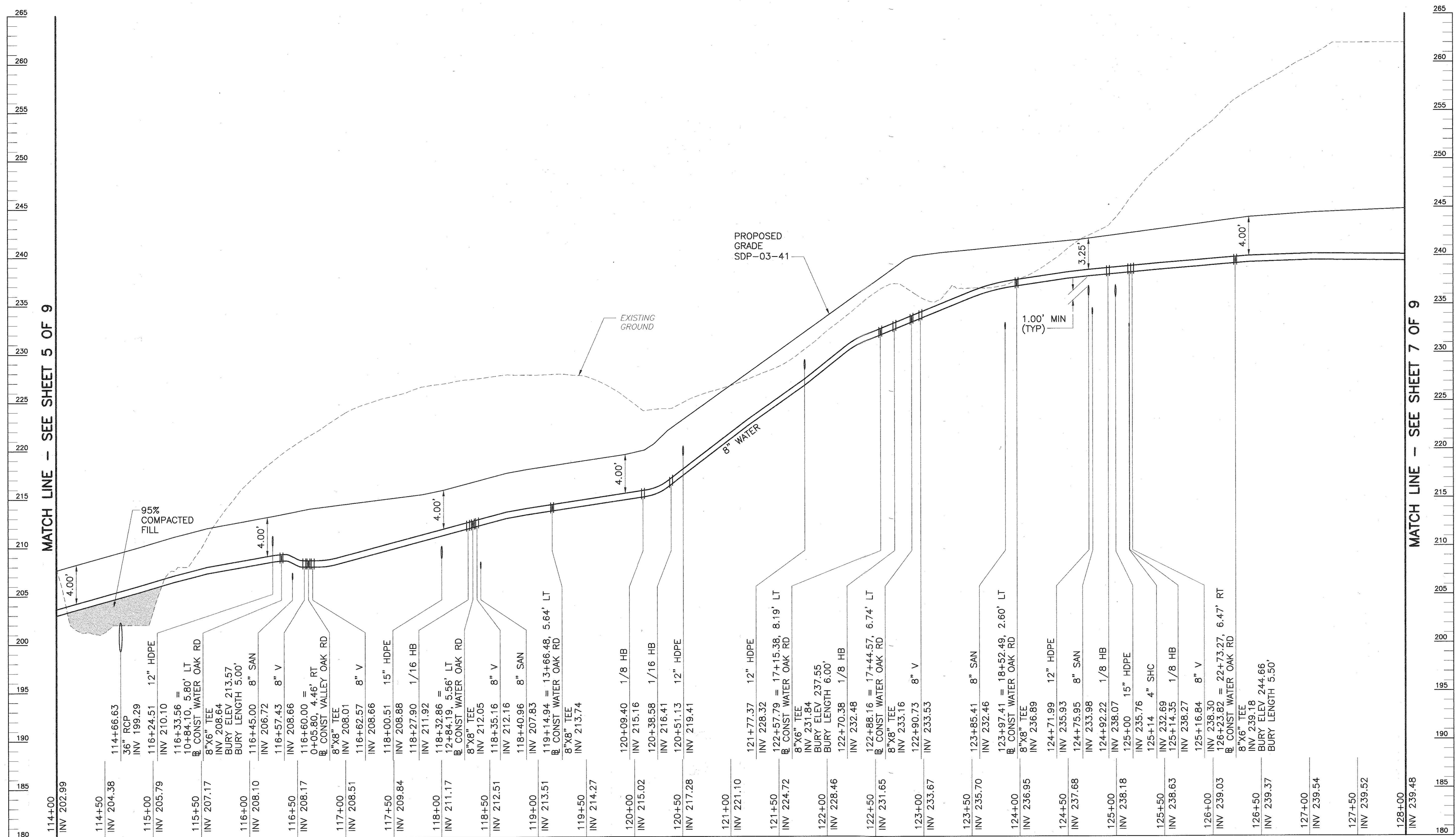
NO	TYPE	WM STA	ROAD STA	OFFSET	STREET	NORTHING	EASTING	NO	TYPE	WM STA	ROAD STA	OFFSET	STREET	NORTHING	EASTING	
1	TIE TO EX: 8" TS&V	100+35.27	0+39.56	1.44' LT	HARBOUR DRIVE	550292.0465	1374640.5623	63	8" V	800+02.39	13+66.50	3.12' LT	SPREADING OAK LA	551869.8579	1375114.1269	
2	1/8 HB	104+35.27	4+75.64	2.59' LT	HARBOUR DRIVE	550449.0622	1375045.7354	64	8" V	801+03.90	0+98.27	6.58' RT	SPREADING OAK LA	551892.5222	1375213.0714	
3	8"x6" TEE	105+18.84	(LP) 2+76	10.94' LT	CUL-DE-SAC	550530.7128	1375034.1422	65	8"x8" TEE	801+09.76	1+34.59	5.90' RT	SPREADING OAK LA	551893.8139	1375218.7523	
4	6" V	105+18.84	(LP) 2+76	8.64' LT	CUL-DE-SAC	550530.6668	1375058.8193	66	8"x6" TEE	901+13.21	1+40.70	5.90' RT	SPREADING OAK LA	551887.8622	1375220.1151	
5	FH	105+18.84	(LP) 2+76	3.89' RT	CUL-DE-SAC	550530.4004	1375045.3773	67	6" V	901+13.21	1+40.70	3.51' RT	SPREADING OAK LA	551888.3965	1375222.4484	
6	8" V	105+23.18	2+73.06	9.74' LT	CUL-DE-SAC	550535.0511	1375061.0556	68	FH	901+13.21	1+40.70	21.43' LT	SPREADING OAK LA	551893.4472	1375244.5070	
7	8"x8" TEE	105+63.52	0+22.44	14.90' LT	WATER OAK ROAD	550575.3648	1375059.1859	69	8" V	901+10.67	1+43.24	5.90' RT	SPREADING OAK LA	551885.3860	1375220.6820	
8	8" V	200+02.40	0+38.86	12.51' LT	WATER OAK ROAD	550575.3856	1375061.5834	70	8" CAP & BUTTRESS	901+00.00	2+53.91	5.57' RT	SPREADING OAK LA	551777.5064	1375245.3831	
9	RESTRAINT 8" CAP & BUTTR	201+70.78	1+57.23	9.36' RT	WATER OAK ROAD	550562.6477	1375229.4445	71	8" V	901+21.86	1+32.05	6.10' RT	SPREADING OAK LA	551896.2901	1375218.1854	
10	8"x8" TEE	105+71.55	0+30.40	13.86' LT	WATER OAK ROAD	550583.3878	1375059.2729	72	1/8 RESTRAINT HB	902+54.60			SPREADING OAK LA	552025.6889	1375188.5570	
11	8" V	300+02.44	0+30.77	16.23' LT	WATER OAK ROAD	550583.4500	1375056.8324	73	1/8 RESTRAINT HB	902+98.94			SPREADING OAK LA	552063.2659	1375212.1281	
12	1/16 HB	300+17.09	0+33.08	30.74' LT	WATER OAK ROAD	550583.9350	1375042.1444	74	RESTRAINT 8" CAP & BUTTR	904+81.48			SPREADING OAK LA	552099.7451	1375391.0255	
13	TIE TO EX	300+21.58	0+32.04	35.11' LT	WATER OAK ROAD	550583.3581	1375037.9390	75	1/8 HB	120+09.40	14+61.19	5.61' LT	WATER OAK ROAD	551961.3993	1375090.7111	
14	1/8 HB	108+05.21	2+58.11	13.92' LT	WATER OAK ROAD	550809.6932	1375090.0846	76	1/16 HB	120+38.58	14+91.61	6.79' LT	WATER OAK ROAD	551976.9079	1375065.9914	
15	8"x8" TEE	109+17.00	3+66.17	3.02' LT	WATER OAK ROAD	550890.9575	1375161.0014	77	8"x6" TEE	122+57.79	17+15.38	8.19' LT	WATER OAK ROAD	552014.3548	1374851.9989	
16	8" V	400+02.39	3+66.05	1.04' RT	WATER OAK ROAD	550889.1764	1375162.6005	78	6" V	122+57.79	17+15.73	5.83' LT	WATER OAK ROAD	552016.7127	1374852.4115	
17	1/8 HB	400+07.98	3+65.59	5.02' RT	WATER OAK ROAD	550885.0176	1375166.3342	79	FH	122+57.79	17+20.67	19.95' RT	WATER OAK ROAD	552042.5012	1374856.9243	
18	1/8 HB	401+20.00	1+06.11	8.90' RT	ENGLISH OAK CIRCLE	550874.4327	1375278.0419	80	1/8 HB	122+71.44	17+30.13	11.76' LT	WATER OAK ROAD	552017.1889	1374835.8036	
19	8"x6" TEE	401+30.82	1+16.42	6.47' RT	ENGLISH OAK CIRCLE	550881.1847	1375286.2076	81	THIS ITEM INTENTIONALLY REMOVED							
20	6" V	401+30.82	1+16.42	12.30' RT	ENGLISH OAK CIRCLE	550876.7012	1375289.9162	82	8"x8" TEE	122+88.16	17+44.57	6.74' LT	WATER OAK ROAD	552029.3227	1374824.7598	
21	FH	401+30.82	1+16.42	19.07' RT	ENGLISH OAK CIRCLE	550871.4881	1375294.2351	83	8" V	1000+02.28	0+08.92	2.77' RT	BLACK OAK ROAD	552027.8303	1374823.0280	
22	1/8 HB	401+42.63	1+125.14	8.36' RT	ENGLISH OAK CIRCLE	550888.7148	1375295.3143	84	8"x6" TEE	1002+15.16	1+77.83	7.13' RT	BLACK OAK ROAD	551918.4730	1374696.2063	
23	8" CAP & BUTTRESS	402+78.37	2+55.01	5.75' RT	ENGLISH OAK CIRCLE	551023.8420	1375308.1183	85	6" V	1002+15.16	1+77.83	1.30' RT	BLACK OAK ROAD	551913.9676	1374699.9006	
24	8" V	109+21.34	3+18.66	2.90' LT	WATER OAK ROAD	550892.6546	1375162.8916	86	FH	1002+15.16	1+77.83	23.23' LT	BLACK OAK ROAD	551894.9682	1374715.4245	
25	1/8 HB	109+35.32	3+84.68	0.20' LT	WATER OAK ROAD	550903.0936	1375174.8051	87	8"x8" TEE	1001+85.84	2+07.13	7.58' RT	BLACK OAK ROAD	551899.9394	1374673.4863	
26	8"x6" TEE	111+15.66	5+65.96	5.76' LT	WATER OAK ROAD	551082.8685	1375190.4605	88	8" V	1001+79.89	2+13.00	7.66' RT	BLACK OAK ROAD	551896.1645	1374668.8870	
27	6" V	111+15.66	5+65.96	8.16' LT	WATER OAK ROAD	551082.9820	1375189.2622	89	8" V	122+90.73	17+46.97	6.16' TL	WATER OAK ROAD	552031.2325	1374822.9919	
28	FH	111+15.66	5+65.96	19.30' LT	WATER OAK ROAD	551084.0334	1375178.1664	90	8"x8" TEE	123+97.41	18+52.49	2.60' LT	WATER OAK ROAD	552110.1276	1374751.2133	
29	8" V	111+18.20	5+68.50	5.76' LT	WATER OAK ROAD	551085.2850	1375191.8848	91	8" V	1105+00.31	0+05.00	5.61' RT	SILVERLEAF OAK RD	552008.5326	1374749.4283	
30	1/16 HB + 5' DEF/CRIMP	112+59.18	7+10.57	4.04' LT	WATER OAK ROAD	551225.6230	1375205.1825	92	1/8 HB	124+92.22	19+46.33	2.73' RT	WATER OAK ROAD	552180.2445	1374687.3948	
31	8"x8" TEE	113+28.50	7+80.51	6.41' LT	WATER OAK ROAD	551288.9687	1375177.0236	93	1/8 HB	125+14.35	19+65.22	6.56' RT	WATER OAK ROAD	552180.4036	1374665.2624	
32	8" V	500+02.73	7+80.25	8.79' LT	WATER OAK ROAD	551287.9624	1375174.8477	94	8" V	125+16.84	19+67.21	6.07' RT	WATER OAK ROAD	552178.7718	1374663.3699	
33	1/16 + 1/32 HB	500+42.76	7+76.86	48.96' LT	WATER OAK ROAD	551271.0038	1375138.1827	95	8"x6" TEE	126+23.82	22+73.27	6.47' RT	WATER OAK ROAD	552108.8912	1374582.3264	
34	TIE TO EX	501+77.67	7+69.93	80.47' LT	WATER OAK ROAD	551276.1362	1375103.6478	96	6" V	126+23.82	22+73.27	8.89' RT	WATER OAK ROAD	552110.7046	1374580.7628	
35	8" V	113+31.04	4+82.90	6.75' LT	WATER OAK ROAD	551291.2728	1375175.9540	97	FH	126+23.82	22+73.27	14.62' RT	WATER OAK ROAD	552115.0505	1374577.0156	
36	1/16 HB	113+37.41	7+88.79	7.83' LT	WATER OAK ROAD	551297.0461	1375173.2862	98	8"x8" TEE	128+62.55	23+12.44	7.61' RT	WATER OAK ROAD	551960.0918	1374395.6614	
37	8"x6" TEE	116+33.56	10+84.10	5.80' LT	WATER OAK ROAD	551590.3123	1375139.4930	99	8" V	608+68.99	23+12.44	5.07' RT	VALLEY OAK ROAD	551958.0683	1374397.2141	
38	6" V	116+33.56	10+84.10	8.19' LT	WATER OAK ROAD	551590.2070	1375137.1016	100	8"x8" CROSS	607+63.29	7+74.29	6.25' RT	VALLEY OAK ROAD	551873.9243	1374461.1597	
39	FH	116+33.56	10+84.10	21.00' LT	WATER OAK ROAD	551589.6658	1375124.3160	101	8" V	1100+00.00	3+74.95	9.47' RT	SILVERLEAF OAK RD	551875.3726	1374463.0656	
40	8" V	116+57.43	11+07.95	5.80' LT	WATER OAK ROAD	551614.1318	1375138.4784	102	8" V	1101+26.15	3+79.73	9.54' RT	SILVERLEAF OAK RD	551872.4760	1374459.2539	
41	8"x8" TEE	116+60.00	0+05.80	4.46' RT	VALLEY OAK ROAD	551616.6954	1375138.3692	103	8" CAP & BUTTRESS	1100+00.00	5+09.50	9.24' RT	SILVERLEAF OAK RD	551794.5406	1374355.7319	
42	8" V	116+62.57	11+16.46	5.78' LT	WATER OAK ROAD	551622.6372	1375138.1298	104	8"x6" TEE	607+00.26	7+11.26	6.57' RT	VALLEY OAK ROAD	551823.6796	1374499.3435	
43	8" V	600+02.39	0+08.19	4.42' RT	VALLEY OAK ROAD	551616.5902	1375135.9778	105	6" V	607+00.26	7+11.26	9.00' RT	VALLEY OAK ROAD	551825.1704	1374501.3052	
44	1/16 HB	600+12.17	0+17.96	4.42' RT	VALLEY OAK ROAD	551616.1742	1375126.2117	106	FH	607+00.26	7+11.26	15.68' RT	VALLEY OAK ROAD	551829.2077	1374506.6178	
45	8"x6" TEE	603+89.63	3+96.57	6.19' RT	VALLEY OAK ROAD	551681.2455	1374754.6575	107	8" V	605+54.37	6+65.41	6.81' RT	VALLEY OAK ROAD	551787.2196	1374527.1124	
46	6" V	603+89.63	3+96.57	3.88' RT	VALLEY OAK ROAD	551678.8883	1374753.9416	108	8"x8" TEE	606+51.83	6+62.83	6.82' RT	VALLEY OAK ROAD	551785.1682	1374528.6104	
47	FH	603+89.63	3+96.57	19.36' LT	VALLEY OAK ROAD	551656.0133	1374749.9387	109	8" V	1100+02.46	3+89.69	7.14' RT	BLACK OAK ROAD	551786.6590	1374530.5721	
48	8" V	603+93.97	3+99.13	6.26' RT	VALLEY OAK ROAD	551681.6840	1374751.8519	110	1/8 HB	132+75.48	27+21.20	13.54' RT	WATER OAK ROAD	551709.7379	1374066.2454	
49	1/16 HB	605+39.28	5+47.03	4.72' RT	VALLEY OAK ROAD	551707.0257	1374607.0351	111	THIS ITEM INTENTIONALLY REMOVED							
50	1/16 HB	605+78.86	5+88.68	4.73' RT	VALLEY OAK ROAD	551726.9867	1374572.8256	112	8" V	133+14.32	27+55.14	6.35' RT	WATER OAK ROAD	551670.9209	1374065.3187	
51	1/32 HB	118+27.90	12+78.98	5.26' LT	VALLEY OAK ROAD	551784.4691	1375131.2226	113	8"x6" TEE	133+16.61	27+57.43	6.35' RT	WATER OAK ROAD	551668.6274	1374065.2827	
52	8"x8" TEE	118+32.86	12+84.19	5.56' LT	VALLEY OAK ROAD	551789.3078	1375130.1147	114	6" V	133+16.61	27+51.43	8.74' RT	WATER OAK ROAD	551668.6689	1374062.8706	
53	8" V	700+02.39	0+08.02	8.06' LT	TALL PIN OAK DRIVE	551788.7703	1375127.7822	115	FH	133+16.61	27+57.43	15.75' RT	WATER OAK ROAD	551668.8333	1374055.8617	
54	1/16 HB	700+11.80	0+16.47	8.44' LT	TALL PIN OAK DRIVE	551786.6758	1375118.6124	116	8" V	133+98.90	1+86.95	7.46' RT	WATER OAK ROAD	551586.4550	1374063.3021	
55	8"x6" TEE	700+53.42	0+55.95	6.11' LT	TALL PIN OAK DRIVE	551793.8538	1375077.5934	117	8"x8" TEE	134+01.19	1+87.17	9.85' RT	WATER OAK ROAD	551584.0620	1374063.2450	
56	6" V	700+53.42	0+55.95	8.50' LT	TALL PIN OAK DRIVE	551791.4959	1375077.1808	118	8" V	1201+69.01	1+84.62	9.85' RT	CHERRYBARK OAK LA	551584.1227	1374060.7054	
57	FH	700+53.42	0+55.95	19.14' LT	TALL PIN OAK DRIVE	551781.0166	1375075.3470	119	8"x8" TEE	1201+12.93	1+28.54	9.85' RT	CHERRYBARK OAK LA	55158		



UNIT	FROM	TO	FEET	TO	FEET	UNIT	FROM	TO	FEET	TO	FEET	UNIT	FROM	TO	FEET	TO	FEET	UNIT	FROM	TO	FEET	TO	FEET	UNIT	FROM	TO	FEET	TO	FEET				
171	SHC	SMH 38	58		122	172	SHC	SDH 9	128	SMH 20	18	216	WHC	SMH 18	62	SMH 9	62	220	SHC	SMH 34	48	1-10	26	222	WHC	SMH 42	94	SMH 43	83				
172	WHC	"	77		100	173	WHC	"	123	SMH 12	17	FH 39	51	69	240	WHC	"	67	242	SHC	"	81	"	81	"	81	"	81	"	81			
173	SHC	"	89		89	174	SHC	"	112	"	23	"	61	217	WHC	"	31	22	240	SHC	"	77	"	77	223	SHC	"	97	"	82			
174	WHC	"	101		77	175	SHC	"	123	124	SHC	"	32	"	44	218	WHC	"	24	241	WHC	SMH 34	114	1-10	44	243	SHC	"	85	"	94		
175	SHC	"	123		57	176	WHC	"	135	136	WHC	"	47	"	38	219	SHC	"	21	242	SHC	"	106	"	51	244	WHC	"	106	"	73		
176	SHC	SMH 40	124	SMH 41	13	177	SHC	"	136	137	WHC	"	56	"	42	220	WHC	SMH 20	125	SMH 19	49	242	WHC	"	127	"	35	244	SHC	"	117	"	63
177	SHC	"	136		73	178	WHC	"	148	149	WHC	"	76	FH 29	43	221	SHC	"	138	243	WHC	"	156	"	30	245	SHC	"	132	"	40		
178	WHC	"	148		38	179	SHC	"	160	161	WHC	"	101	"	67	222	SHC	"	101	244	WHC	"	146	"	29	246	WHC	"	150	"	33		
179	SHC	"	160		64	180	SHC	"	172	173	WHC	"	76	"	221	WHC	"	78	245	SHC	"	173	"	39	247	SHC	"	159	"	25			
180	WHC	"	172		73	181	WHC	"	184	185	WHC	"	85	SMH 29	117	222	SHC	"	80	246	WHC	"	181	"	44	248	WHC	"	182	"	13		
181	SHC	"	184		85	182	SHC	"	196	197	SHC	1-2	26	"	129	221	WHC	"	64	247	WHC	"	189	"	50	249	SHC	"	175	"	17		
182	WHC	"	196		111	183	WHC	"	208	209	WHC	"	53	"	89	222	SHC	"	55	248	WHC	SMH 25	32	SMH 23	78	"	"	"	"	"	"		
183	SHC	"	208		97	184	SHC	"	220	221	SHC	"	76	"	108	223	WHC	"	31	249	SHC	"	23	"	89	8" ML VALVE #1	71.5	SMH 24	41.0	"	"		
184	WHC	"	220		122	185	WHC	"	232	233	SHC	"	50	"	79	224	SHC	"	42	250	WHC	"	68	"	68	6" # 4	FH B	15.0	SMH 7	49.8	"	"	
185	SHC	"	232		132	186	SHC	"	244	245	SHC	"	43	"	70	225	WHC	"	22	251	SHC	"	59	"	59	8" # 6	"	16.1	"	"	"		
186	WHC	"	244		132	187	WHC	"	256	257	WHC	"	51	"	24	226	SHC	"	15	252	WHC	"	73	"	37	8" # 8	"	50.0	"	"	"		
187	SHC	SMH 26	50		132	188	SHC	"	268	269	SHC	"	25	"	59	227	WHC	"	129	253	SHC	"	43	"	47	8" # 11	"	65.5	"	"	"		
188	WHC	"	268		132	189	WHC	"	280	281	SHC	"	40	SMH 15	40	SMH 16	74	228	SHC	"	126	39	249	WHC	"	81	"	22	8" # 16	"	23.5	SMH 14	31.5
189	SHC	"	280		132	190	SHC	"	292	293	SHC	"	30	"	62	229	WHC	"	117	254	SHC	"	60	"	29	8" # 24	"	22.5	"	"	"	"	
190	WHC	"	292		132	191	SHC	"	304	305	SHC	"	17	"	28	230	SHC	SMH 20	102	SMH 19	87	250	SHC	"	100	"	11	6" FH V # 20	FH 21	7.7	SMH 3	12.9	
191	SHC	SDH 9	20		132	192	SHC	"	316	317	SHC	"	43	"	43	231	WHC	"	79	251	WHC	"	112	"	11	6" FH V # 20	FH 21	7.7	SMH 3	12.9	"	"	
192	WHC	"	316		132	193	SHC	"	328	329	SHC	"	31	"	27	232	SHC	"	91	252	WHC	"	42	"	41	8" # 27	FH 28	12.5	1-37	07.0	"	"	
193	SHC	"	328		132	194	SHC	"	340	341	SHC	"	30	"	23	233	WHC	"	69	253	SHC	SMH 27	32	"	53	8" # 32	SMH 9	87.0	SMH 10	75.0	"	"	
194	WHC	"	340		132	195	SHC	"	352	353	SHC	"	17	"	28	234	SHC	"	56	254	SHC	"	50	"	38	8" # 36	"	87.7	"	"	"	"	
195	SHC	"	352		132	196	SHC	"	364	365	SHC	"	11	"	29	235	WHC	"	36	255	SHC	"	62	"	22	6" # 36	FH 39	27	SMH 15	21	"	"	
196	WHC	"	364		132	197	SHC	"	376	377	SHC	"	22	"	22	236	SHC	"	46	256	WHC	"	70	"	13	8" # 40	"	32	"	"	"	"	
197	SHC	"	376		132	198	SHC	"	388	389	SHC	"	33	"	29	237	WHC	"	28	257	SHC	"	83	"	0	8" # 42	"	37	"	"	"	"	
198	WHC	"	388		132	199	SHC	"	400	401	SHC	"	29	"	33	238	WHC	"	168	258	SHC	"	101	"	20	8" # 43	"	35	"	"	"	"	
199	SHC	"	400		132	200	SHC	"	412	413	SHC	"	29	"	33	239	WHC	"	10	259	SHC	"	101	"	20	8" # 43	"	35	"	"	"	"	
200	WHC	"	412		132	201	SHC	"	424	425	SHC	"	29	"	33	240	WHC	"	47	260	SHC	"	106	"	25	6" # 46	FH 47	24	1-24	73	"	"	
201	SHC	"	424		132	202	SHC	"	436	437	SHC	"	29	"	33	241	SHC	"	136	261	SHC	"	115	"	23	8" # 48	SMH 17	17	FH 10	51	"	"	
202	WHC	"	436		132	203	SHC	"	448	449	SHC	"	29	"	33	242	SHC	"	114	262	SHC	"	127	"	45	8" # 53	FH 57	53	SMH 20	15	"	"	
203	SHC	"	448		132	204	SHC	"	460	461	SHC	"	29	"	33	243	SHC	"	104	263	WHC	"	142	"	59	8" # 53	FH 57	53	SMH 20	15	"	"	
204	WHC	"	460		132	205	SHC	"	472	473	SHC	"	29	"	33	244	SHC	"	75	264	SHC	"	150	"	100	6" # 56	"	13	"	"	"	"	
205	SHC	"	472		132	206	SHC	"	484	485	SHC	"	29	"	33	245	SHC	"	86	265	WHC	"	12	"	89	8" # 59	SMH 22	14	SMH 23	26	"	"	
206	WHC	"	484		132	207	SHC	"	496	497	SHC	"	29	"	33	246	SHC	"	66	266	SHC	"	12	"	60	6" FH # 67	FH 68	23	SMH 42	22	"	"	
207	SHC	"	496		132	208	SHC	"	508	509	SHC	"	29	"	33	247	SHC	"	57	267	SHC	"	31	"	48	8" ML VAL # 69	"	25	SMH 42	25	"	"	
208	WHC	"	508		132	209	SHC	"	520	521	SHC	"	29	"	33	248	SHC	"	27	268	SHC	"	21	"	21	8" # 71	"	26	SMH 42	16	"	"	
209	SHC	"	520		132	210	SHC	"	532	533	SHC	"	29	"	33	249	SHC	"	20	269	SHC	"	21	"	21	6" FH	"	27	SMH 35	21	"	"	
210	WHC	"	532		132	211	SHC	"	544	545	SHC	"	29	"	33	250	SHC	"	15	270	SHC	"	30	"	30	8" ML	"	28	"	"	"	"	
211	SHC	"	544		132	212	SHC	"	556	557	SHC	"	29	"	33	251	SHC	"	163	271	SHC	"	37	"	136	8" # 80	"	36	"	"	"	"	
212	WHC	"	556		132	213	SHC	"	568	569	SHC	"	29	"	33	252	SHC	"	130	272	SHC	"	42	"	142	8" # 80	"	36	"	"	"	"	
213	SHC	"	568		132	214	SHC	"	580	581	SHC	"	29	"	33	253	SHC	"	148	273	SHC	"	67	"	108	8" # 80	"	36	"	"	"	"	
214	WHC	"	580		132	215	SHC	"	592	593	SHC	"	29	"	33	254	SHC	"	128	274	SHC	"	67	"	108	8" # 80	"	36	"	"	"	"	
215	SHC	"	592		132	216	SHC	"	604	605	SHC	"	29	"	33	255	SHC	"	119	275	SHC	"	67	"	108	8" # 80	"	36	"	"	"	"	
216	WHC	"	604		132	217	SHC	"	616	617	SHC	"	29	"	33	256	SHC	"	57	276	SHC	"	67	"	108	8" # 80	"	36	"	"	"	"	
217	SHC	"	616		132	218	SHC	"	628	629	SHC	"	29	"	33	257	SHC	"	57	277	SHC	"	67	"	108	8" # 80	"	36	"	"	"	"	
218	WHC	"	628		132	219	SHC	"	640	641	SHC	"	29	"	33	258	SHC	"	57	278	SHC	"	67	"	108	8" # 80	"	36	"	"	"	"	
219	SHC	"	640		132	220	SHC	"	652	653	SHC	"	29	"	33	259	SHC	"	57	279	SHC	"	67	"	108	8" # 80	"	36	"	"	"	"	
220	WHC	"	652		132	221	SHC	"	664	665	SHC	"	29	"	33	260	SHC	"	57	280	SHC	"	67	"	108	8" # 80	"	36	"	"	"	"	
221	SHC	"	664		132	222	SHC	"	676	677	SHC	"	29	"	33	261	SHC	"	57	281	SHC	"	67	"	108	8" # 80	"	36	"	"	"	"	
222	WHC	"	676		132	223	SHC	"	688	689	SHC	"	29	"	33	262	SHC	"	57	282	SHC	"	67	"	108	8" # 80	"	36	"	"	"	"	
223	SHC	"	688		132	224	SHC	"	700	701	SHC	"	29	"	33	263	SHC	"	57	283	SHC	"	67	"	108	8" # 80	"	36	"	"	"	"	
224	WHC	"	700		132	225	SHC	"	712	713	SHC	"	29</																				



M:\PROJECTS\2013\781\ENGR\DWG\TOWNHOUSE WATER\FINAL\06-WATER IP0152.dwg Fri Apr 09 11:51:36 2014 EA



MATCH LINE - SEE SHEET 5 OF 9

MATCH LINE - SEE SHEET 7 OF 9

**WATER OAK ROAD  
8" WATER**  
SCALE: HORZ: 1"=50'  
VERT: 1"=5'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*John DeMunn* 5/14/04  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Robert Bainger* 5-14-04  
CHIEF, BUREAU OF UTILITIES DATE



7125 RIVERWOOD DRIVE  
COLUMBIA, MARYLAND 21046-2354  
410-720-6900  
410-720-6226 fax

REGIONAL OFFICES:  
BEL AIR, MARYLAND AND WARRENTON, VIRGINIA  
www.frederickward.com



DESIGN BY: GMH				
DRAWN BY: GMH				
CHECKED BY: RHV				
DATE: 11/3/2003	BY	NO	REVISION	DATE

**FINAL WATER AND SEWER  
CONSTRUCTION PLAN**

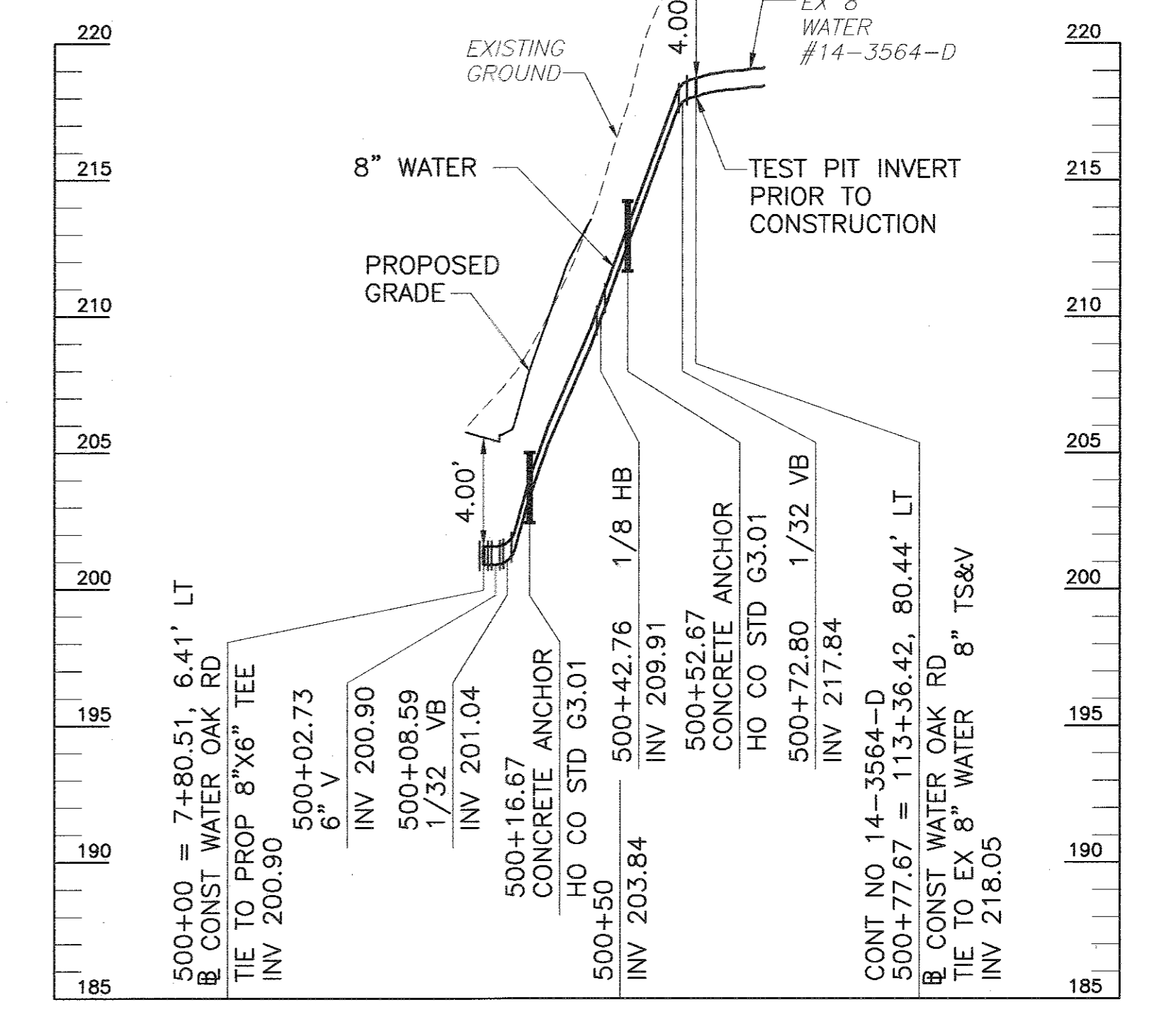
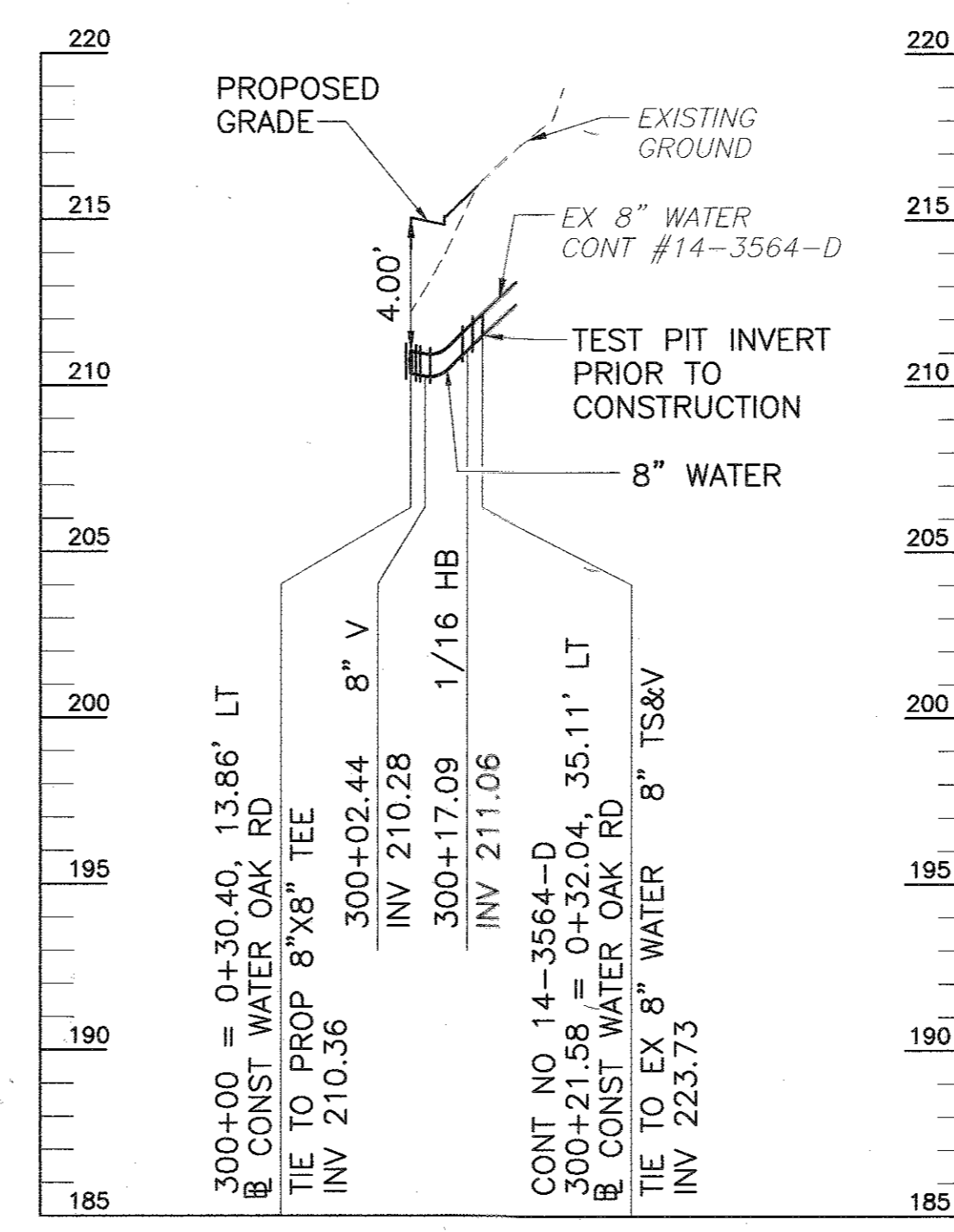
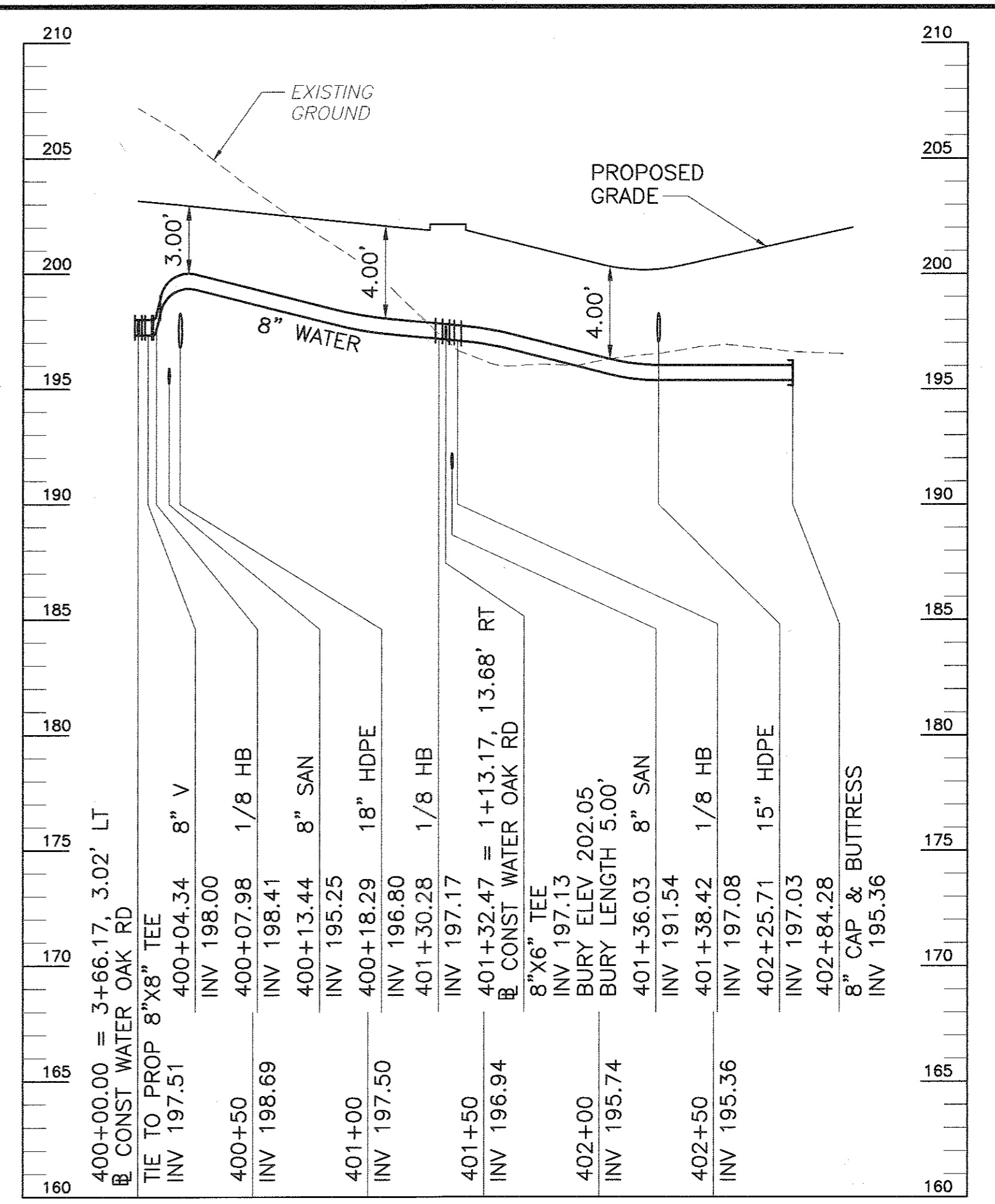
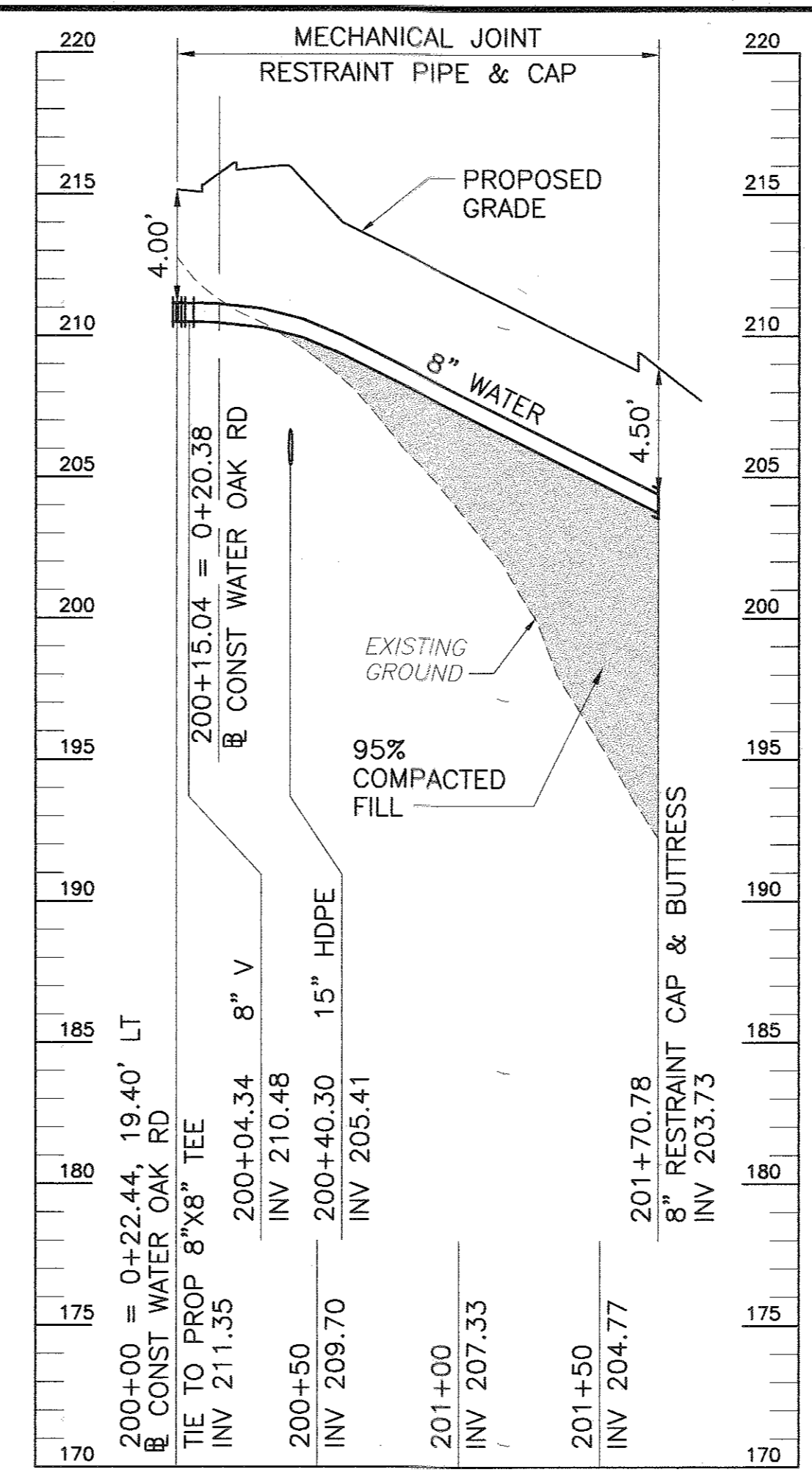
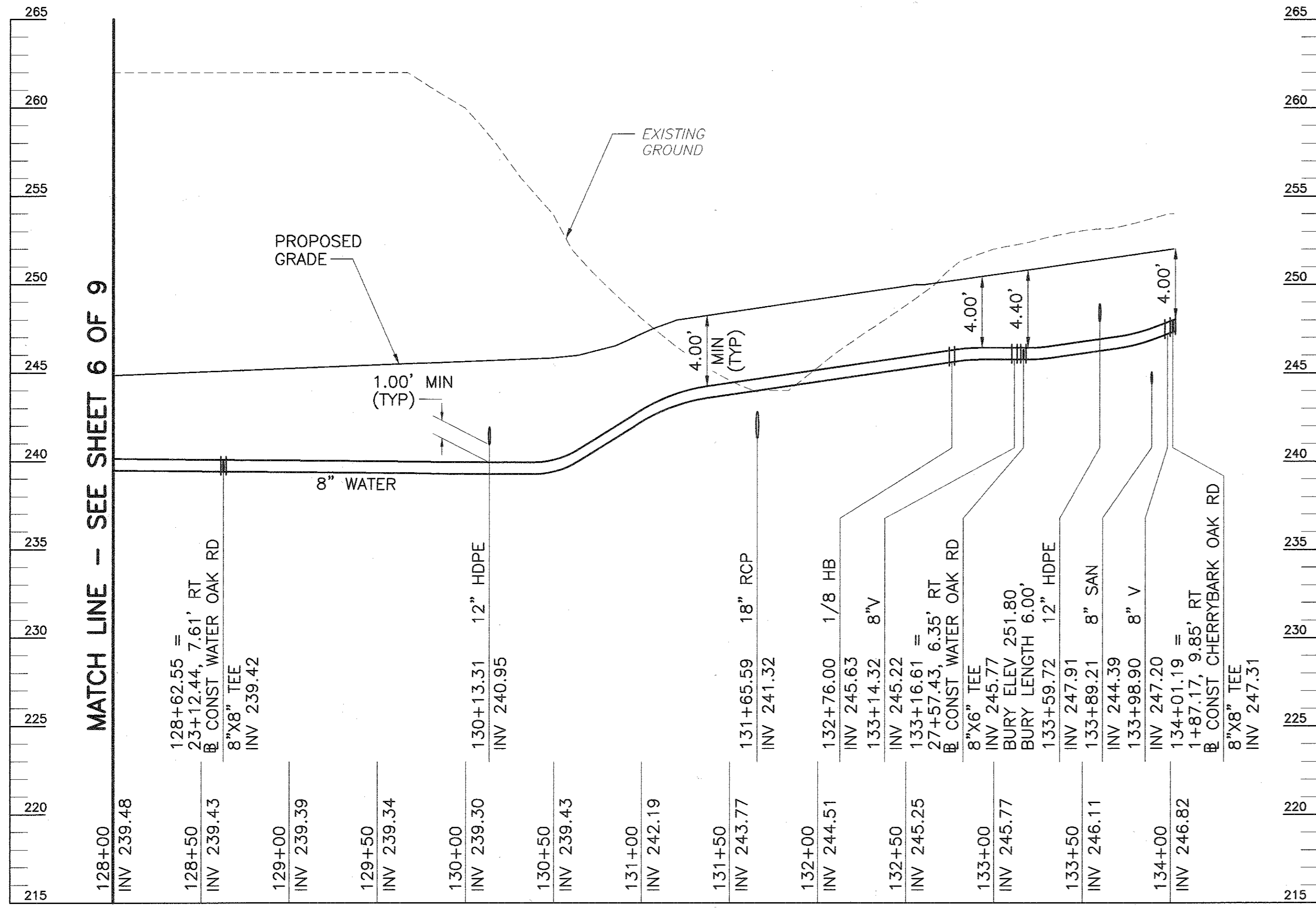
600' SCALE MAP NO. 43 BLOCK NO. 4

**THE OAKS AT WATERS EDGE  
CONTRACT NO. 14-3922-D**

TAX MAP 43  
1ST ELECTION DISTRICT

PARCELS 279, 647, AND PART OF 5  
HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 6 OF 9



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*Robert DeWitt* 5/10/04  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

*Robert DeWitt* 5-14-04  
CHIEF, BUREAU OF UTILITIES DATE

**FWA**  
FREDERICK WARD ASSOCIATES, INC.  
7125 RIVERWOOD DRIVE  
COLUMBIA, MARYLAND 21046-2354  
410-720-6900  
410-720-6226 fax  
REGIONAL OFFICES:  
BEL AIR, MARYLAND AND WARRENTON, VIRGINIA  
ARCHITECTS ENGINEERS PLANNERS SURVEYORS www.frederickward.com



DESIGN BY:	GMH
DRAWN BY:	GMH
CHECKED BY:	RHV
DATE:	11/3/2003
BY	NO
REVISION	
DATE	

**FINAL WATER AND SEWER CONSTRUCTION PLAN**

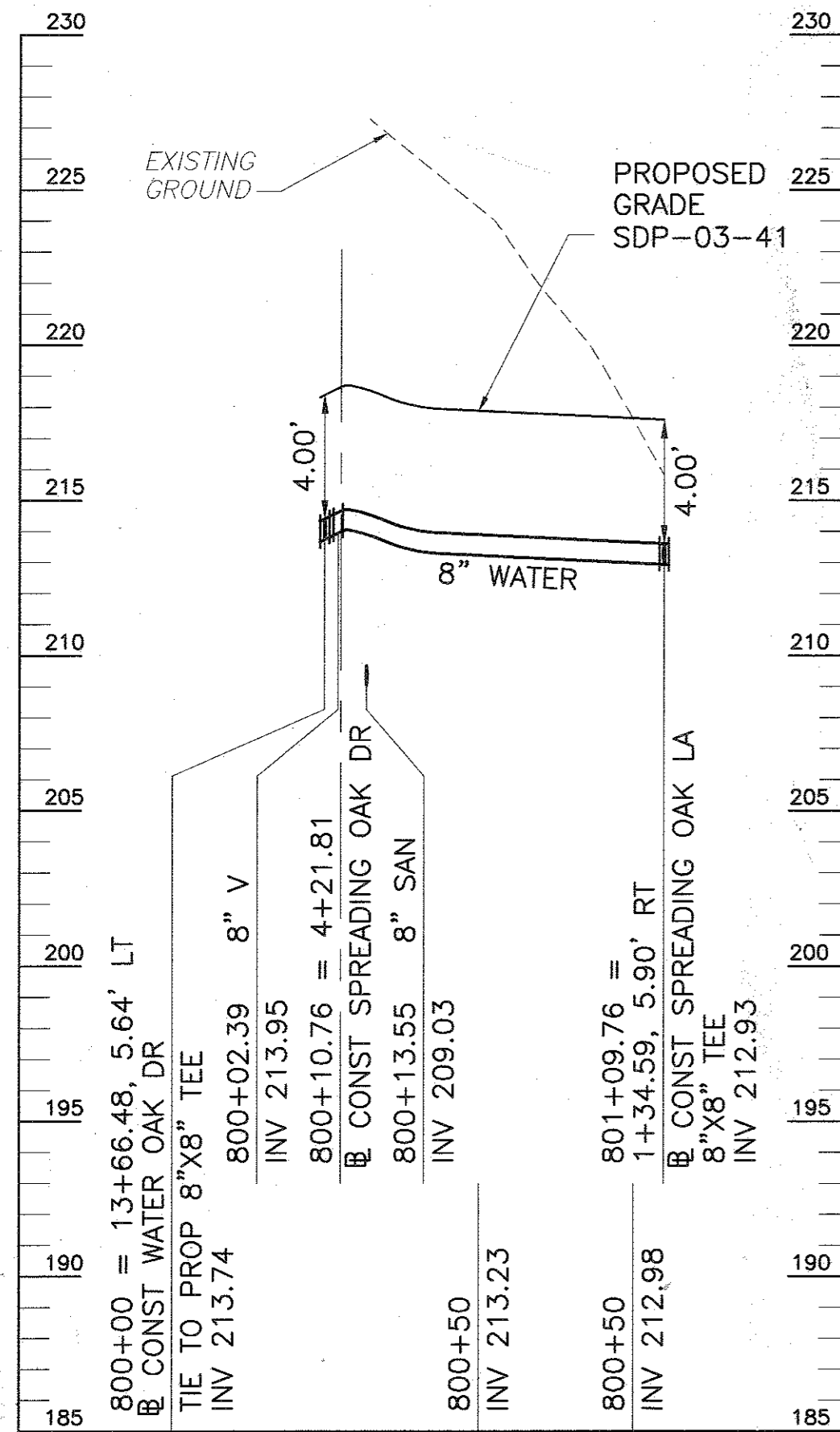
**THE OAKS AT WATERS EDGE**  
CONTRACT NO. 14-3922-D  
TAX MAP 43  
1ST ELECTION DISTRICT  
PARCELS 279, 647, AND PART OF 5  
HOWARD COUNTY, MARYLAND  
SHEET 7 OF 9

K:\PROJECTS\2019\178\DWG\DWG\TOWNHOUSE\WATER\FINAL\07-water\_prof.dwg Fri, Apr 08 11:53:50 2004 E4

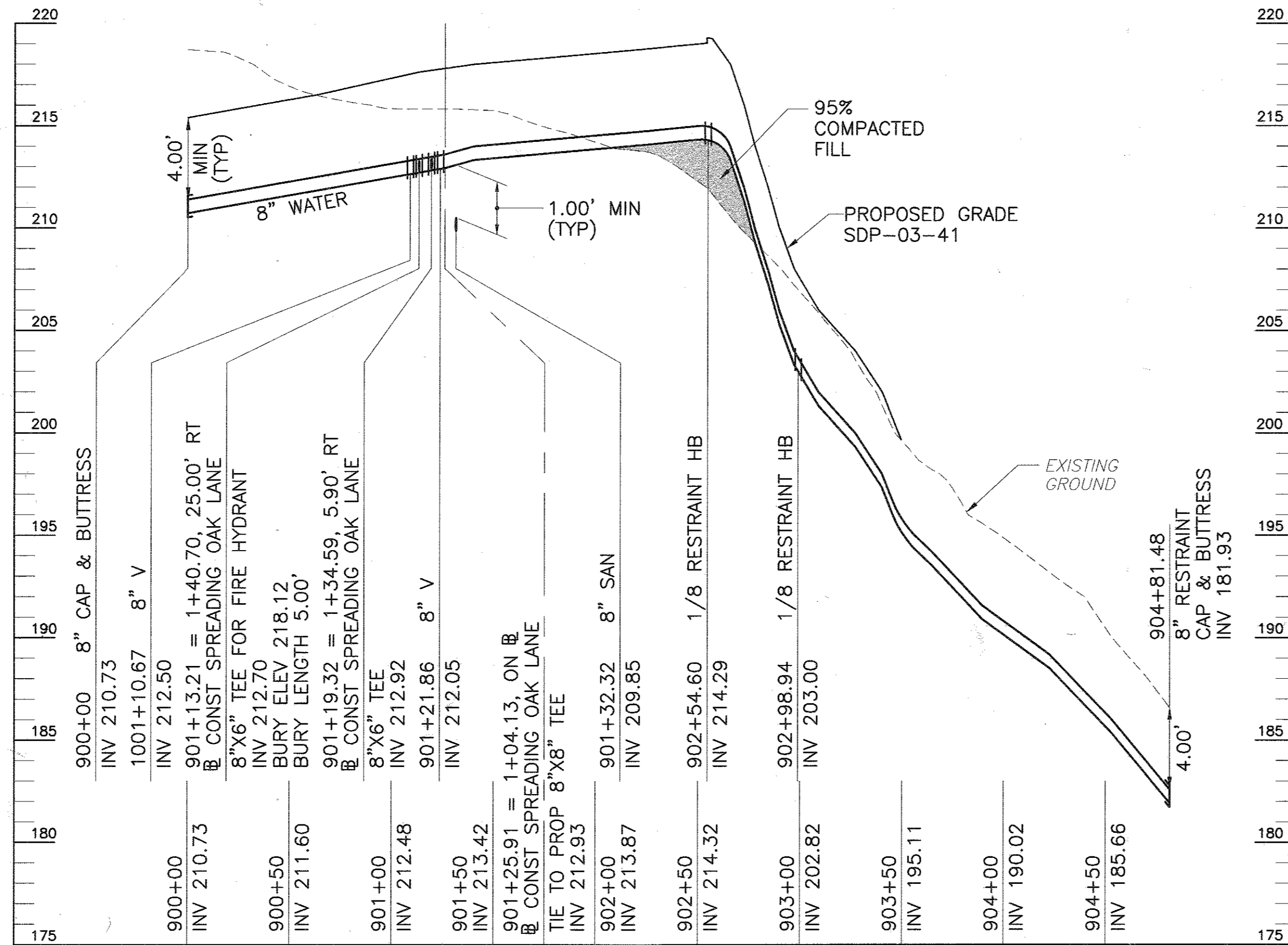




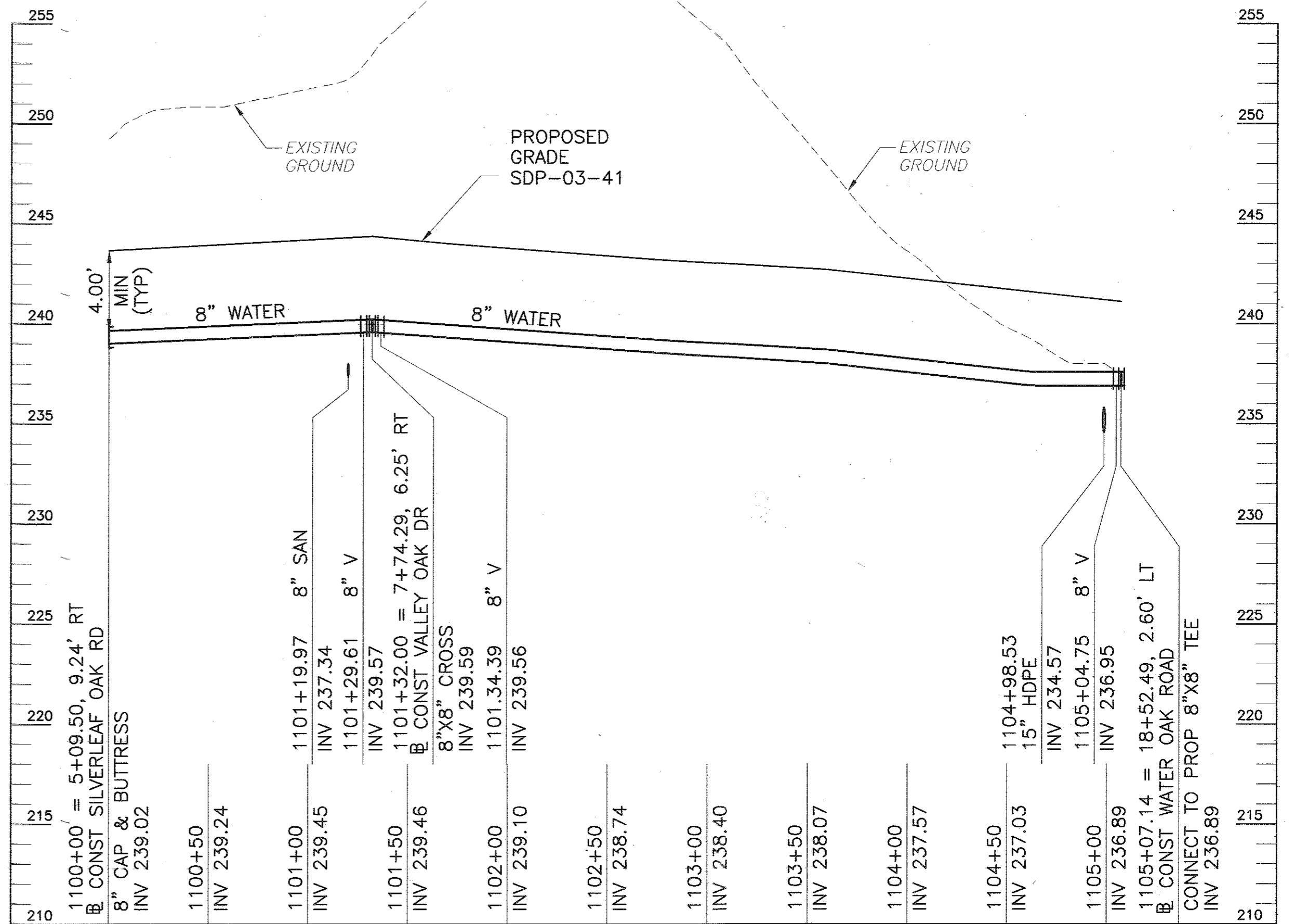




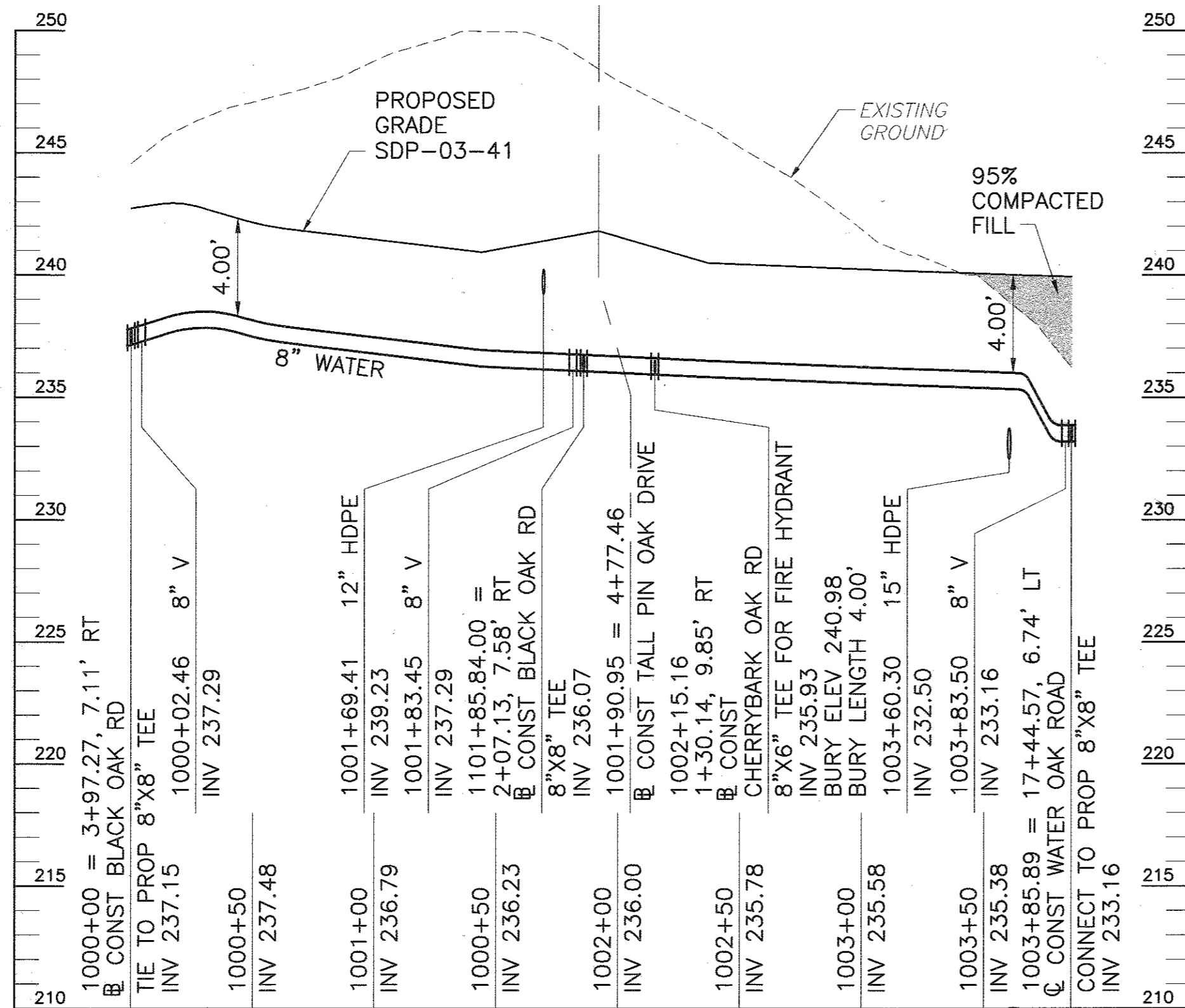
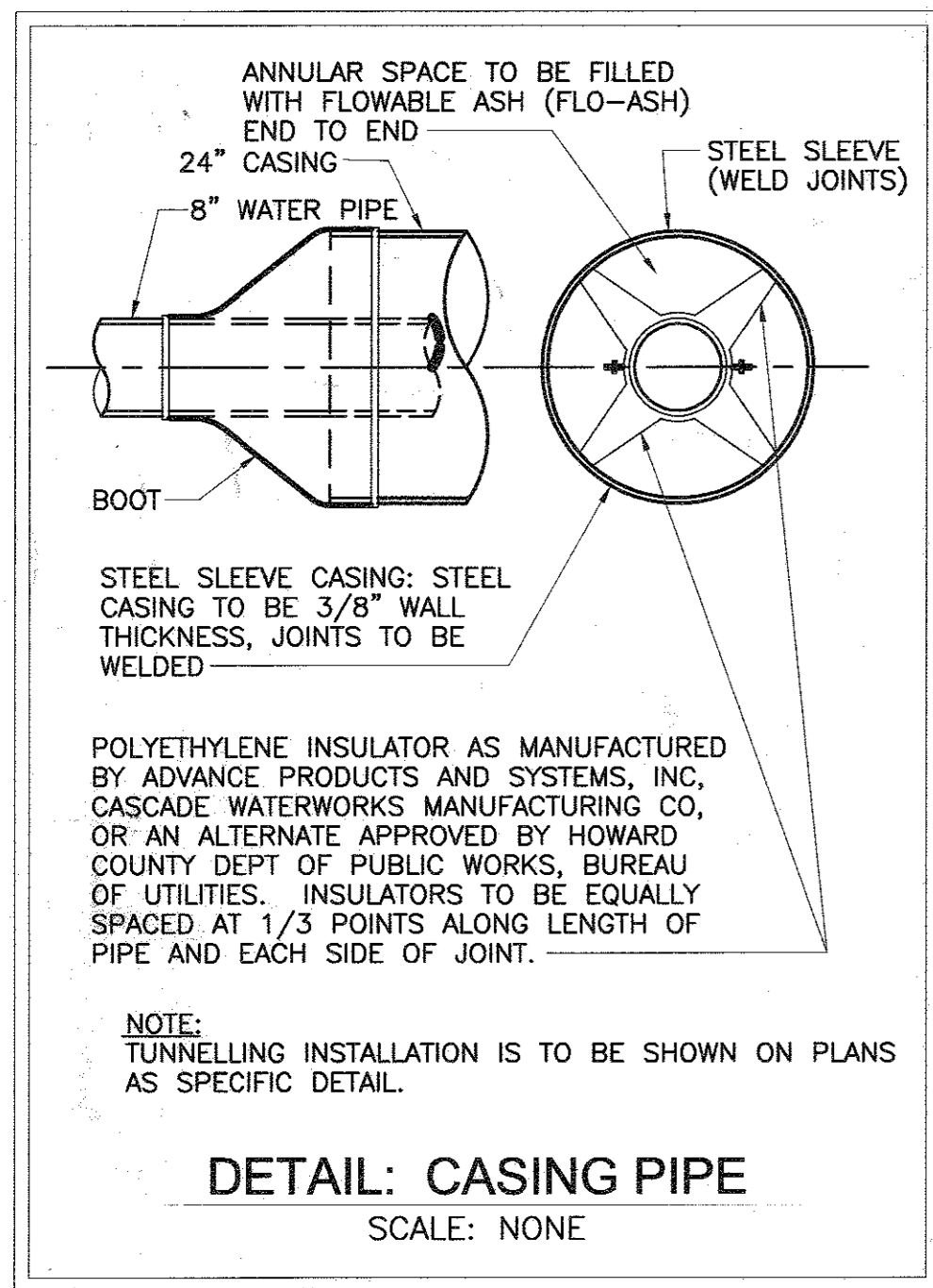
**SPREADING OAK LANE  
8" WATER**  
SCALE: HORZ: 1"=50'  
VERT: 1"=5'



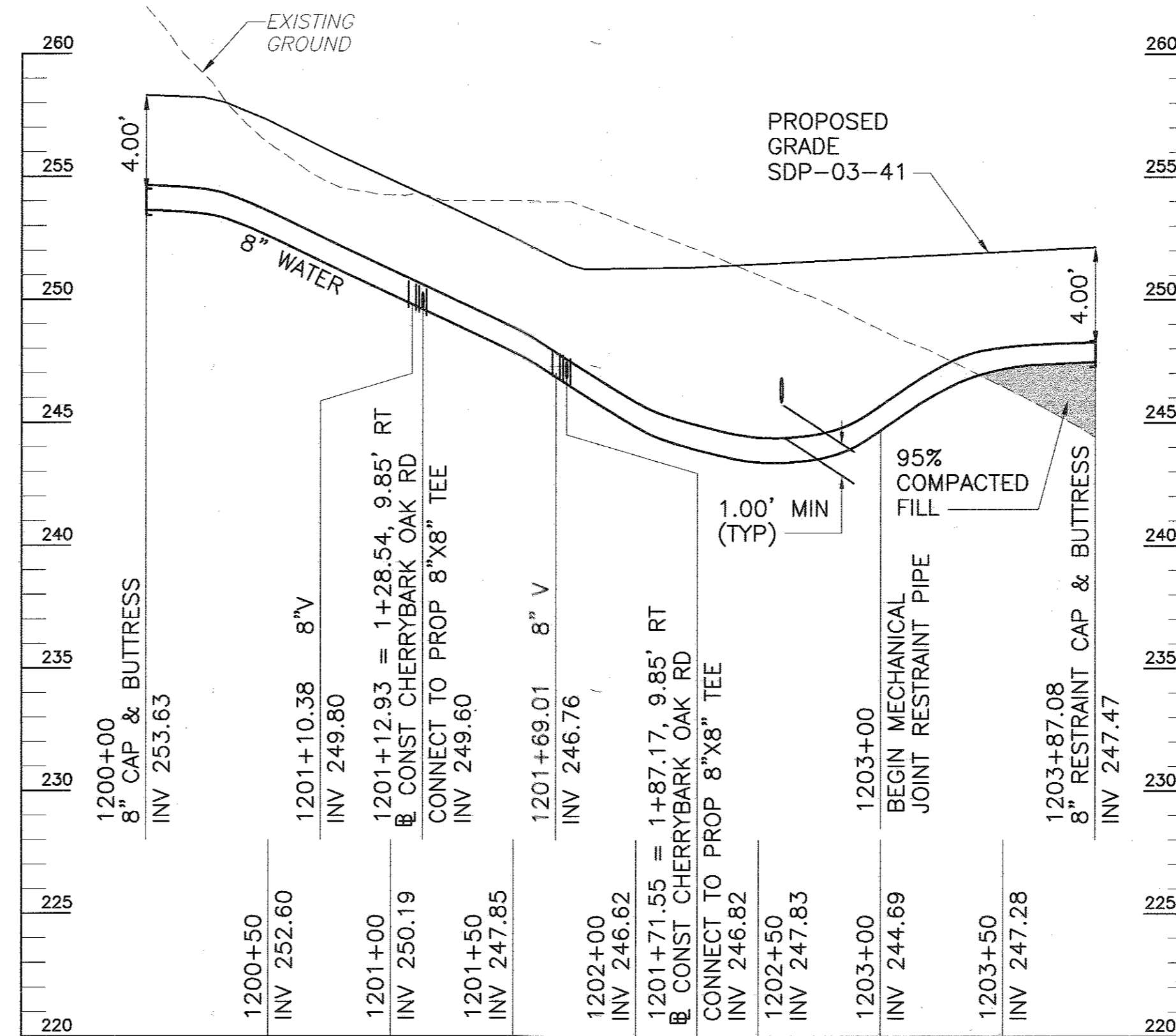
**SPREADING OAK LANE  
8" WATER**  
SCALE: HORZ: 1"=50'  
VERT: 1"=5'



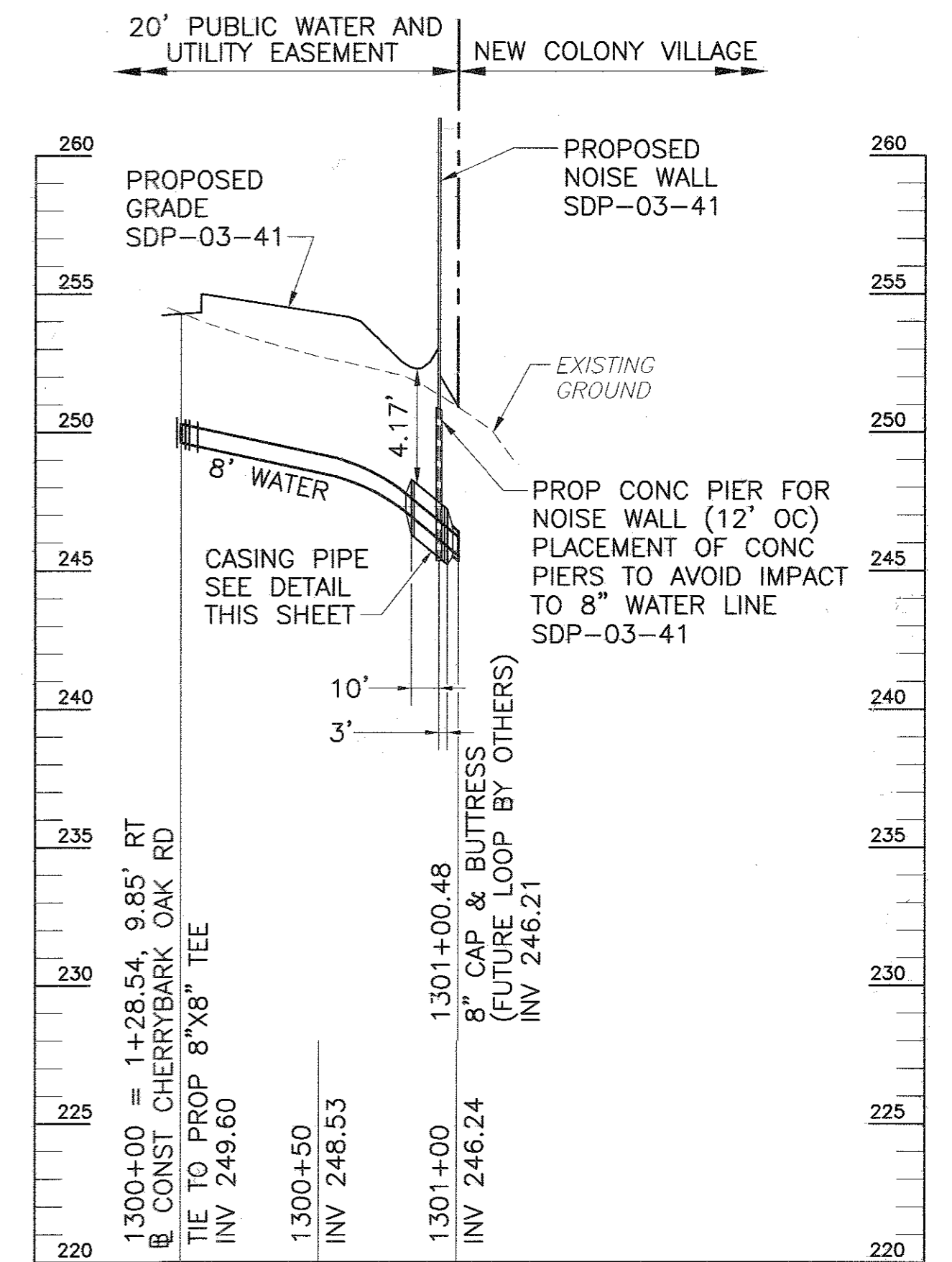
**SILVERLEAF OAK ROAD  
8" WATER**  
SCALE: HORZ: 1"=50'  
VERT: 1"=5'



**BLACK OAK ROAD  
8" WATER**  
SCALE: HORZ: 1"=50'  
VERT: 1"=5'



**CHERRYBARK OAK LANE  
8" WATER**  
SCALE: HORZ: 1"=50'  
VERT: 1"=5'



**TIE TO EXISTING (AT CHERRYBARK OAK LANE)  
8" WATER**  
SCALE: HORZ: 1"=50'  
VERT: 1"=5'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

*Chad Deamus* 5/16/04  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

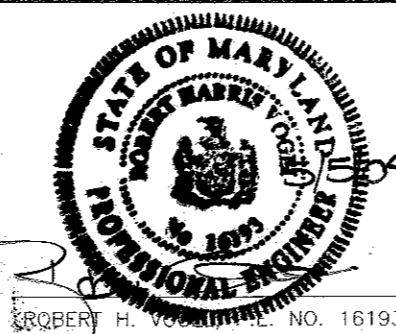
*Robert Beisinger* 5-14-04  
CHIEF, BUREAU OF UTILITIES DATE



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DESIGN BY: GMH	
DRAWN BY: GMH	
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DATE: 11/3/2003	
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REVISION	
DATE	

**FINAL WATER AND SEWER  
CONSTRUCTION PLAN**

600' SCALE MAP NO. 43 BLOCK NO. 4

**THE OAKS AT WATERS EDGE  
CONTRACT NO. 14-3922-D**

TAX MAP 43  
1ST ELECTION DISTRICT

PARCELS 279, 647, AND PART OF 5  
HOWARD COUNTY, MARYLAND

SCALE  
AS  
SHOWN

SHEET  
9 OF 9