EXHIBIT D

COMPONENTS OF CONTRACT PLANS SET

ROADWAY PLANS

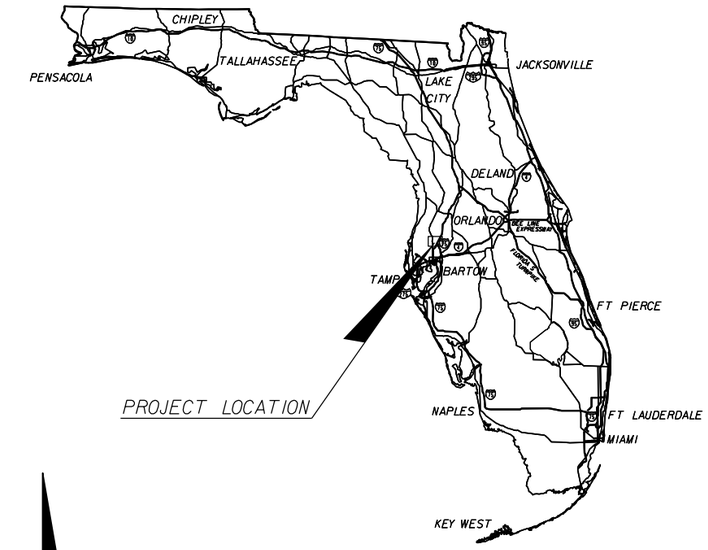
PASCO COUNTY ENGINEERING DEPARTMENT

CONTRACT PLANS

STARKEY RANCH VILLAGE 1

RANGELAND BOULEVARD
HEART PINE AVENUE
CONSTRUCTION PLANS

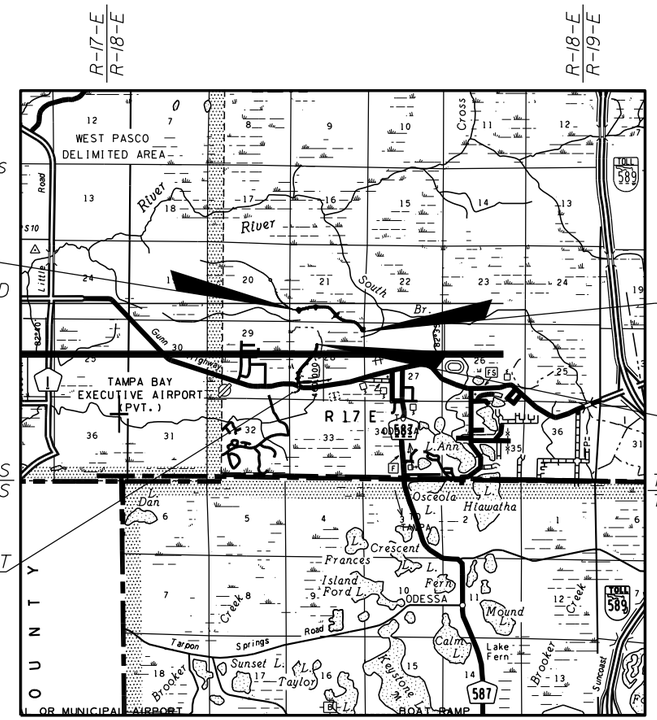
PASCO COUNTY, FLORIDA



A DETAILED INDEX APPEARS ON THE KEY SHEET OF EACH COMPONENT

INDEX OF ROADWAY PLANS

SHEET NO.	SHEET DESCRIPTION
1	KEY SHEET
2	GENERAL NOTES
3-6	DRAINAGE STRUCTURE DATA TABLES
7	TYPICAL SECTIONS
8-24	RANGELAND BLVD/HEART PINE AVE PLAN SHEETS
25-40	RANGELAND BLVD/HEART PINE AVE PROFILE SHEETS
41-44	ROUND-A-BOUT DETAIL SHEETS
45-52	RANGELAND BLVD DRAINAGE STRUCTURE CROSS SECTION
53-59	HEART PINE AVE DRAINAGE STRUCTURE CROSS SECTION
60	CONSTRUCTION SURFACE WATER MANAGEMENT PLAN
61-73	RANGELAND BLVD CROSS SECTIONS
74-87	HEART PINE AVE CROSS SECTIONS
S-1 - S-17	RANGLAND BLVD/HEART PINE AVE SIGNING AND PAVEMENT MARKING SHEETS
U-1 - U-20A	RANGELAND BLVD UTILITY ADJUSTMENT SHEETS
U-20A - U-34	HEART LINE AVE UTILITY ADJUSTMENT SHEETS



BEGIN RANGELAND BLVD
STA. 98+54.40
℄ CONST. RANGELAND BLVD

END RANGELAND BLVD
STA. 150+68.67
℄ CONST. TOWER ROAD.

END HEART PINE AVE CONST
STA. 127+78.13
℄ CONST. HEART PINE RD

BEGIN HEART PINE AVE CONST
STA. 88+52.03
℄ CONST. HEART PINE RD

N

0 1 2
Miles

THESE PLANS HAVE BEEN PREPARED IN ACCORDANCE WITH THE MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE FOR STREETS AND HIGHWAYS, STATE OF FLORIDA IN EFFECT AT THE TIME OF PASCO COUNTY APPROVAL, AND ARE IN COMPLIANCE WITH THE STANDARDS THEREIN.

ADDITIONAL GOVERNING STANDARDS AND SPECIFICATIONS INCLUDE:
FLORIDA DEPARTMENT OF TRANSPORTATION,
DESIGN STANDARDS DATED 2010,
AND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION DATED 2010,
AS AMENDED BY CONTRACT DOCUMENTS.

APPLICABLE DESIGN STANDARDS MODIFICATIONS: JAN. 1, 2010

For Design Standards Modifications click on "Design Standards" at the following web site:
http://www.dot.state.fl.us/rddesign/

NOTE: VERIFIED WETLAND LINES SHOWN HEREIN WERE PERMITTED UNDER ERP 42013843.008.

ROADWAY SHOP DRAWINGS TO BE SUBMITTED TO:

THOMAS D. SULLIVAN
HEIDT DESIGN, LLC
5806-B Breckenridge Parkway
TAMPA, FLORIDA 33610
(813) 253-5311

PLANS PREPARED BY:

HEIDT DESIGN
5806-B Breckenridge Parkway
Tampa, Florida 33610
Office: 813-253-5311
Fax: 813-464-7629
www.HeidtDesign.com

ENGINEERING BUSINESS CERTIFICATE OF AUTHORIZATION NO. 28782

NOTE: THE SCALE OF THESE PLANS MAY HAVE CHANGED DUE TO REPRODUCTION.

STARKEY RANCH VILLAGE 1
COLLECTOR ROAD
SUBMITTAL REVIEW
JANUARY 17, 2014

PROJECT LENGTH IS BASED ON ℄ OF CONSTRUCTION

LENGTH OF PROJECT		
	LINEAR FEET	MILES
ROADWAY	9141.34	1.731
BRIDGES	0.00	0.000
NET LENGTH OF PROJECT	9141.34	1.731
EXCEPTIONS	0.00	0.000
GROSS LENGTH OF PROJECT	9141.34	1.731

KEY SHEET REVISIONS	
DATE	DESCRIPTION

ROADWAY PLANS
ENGINEER OF RECORD: THOMAS D. SULLIVAN

P.E. NO.: 55358

SHEET NO.
1

$USER$ $DATE$ $TIME$ $FILE$

GENERAL NOTES

1. BENCHMARK ELEVATIONS SHOWN ON THE PLANS ARE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 29).

2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN FROM THE ENGINEER OR OWNER A COPY OF ALL PERTINENT PERMITS RELATED TO THIS PROJECT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASSURE THAT ALL CONSTRUCTION ACTIVITIES ARE IN COMPLIANCE WITH THE CONDITIONS OF ALL PERMITS AND APPROVALS. CONTRACTOR IS ALSO RESPONSIBLE FOR HAVING THEIR DEWATERING PLAN APPROVED BY SWFWMD.

3. ALL CONSTRUCTION, MATERIALS AND WORKMANSHIP ARE TO BE IN ACCORDANCE WITH PASCO COUNTY REGULATIONS AND FDOT SPECIFICATIONS, LATEST EDITION.

4. ANY U.S.C. & G.S. MONUMENT WITHIN LIMITS OF CONSTRUCTION IS TO BE PROTECTED. IF IN DANGER OF DAMAGE, PROJECT ENGINEER SHOULD NOTIFY;
   DIRECTOR, NATIONAL GEODETIC SURVEY
   1315 EAST WEST HIGHWAY
   SILVER SPRING, MARYLAND 20910-2382
   PHONE: (301) 713-3242

5. THE LOCATION OF UTILITIES SHOWN IN THE PLANS ARE BASED ON LIMITED INVESTIGATION TECHNIQUES AND SHOULD BE CONSIDERED APPROXIMATE ONLY.

6. THE CONTRACTOR SHALL VERIFY THE LOCATION, ELEVATION, AND DIMENSIONS OF ALL EXISTING UTILITIES, STRUCTURES, AND OTHERS FEATURES AFFECTING HIS WORK AND SHALL COMPLY WITH ALL STATE, COUNTY, AND LOCAL ORDINANCES AND OBTAIN ANY NECESSARY WORK PERMITS THAT MAY BE REQUIRED PRIOR TO CONSTRUCTION.

7. ANY PUBLIC LAND CORNER WITHIN THE LIMITS OF CONSTRUCTION SHALL BE PROTECTED. IF A CORNER MONUMENT IS IN DANGER OF BEING DESTROYED AND HAS NOT BEEN PROPERLY REFERENCED, THE ENGINEER SHOULD NOTIFY THE DISTRICT LOCATION SURVEYOR, WITHOUT DELAY, BY TELEPHONE.

8. THE CONTRACTOR SHALL PROVIDE AT LEAST 48 HOURS NOTICE TO THE VARIOUS UTILITY COMPANIES IN ORDER TO LOCATE AND IDENTIFY THEIR EXISTING UNDERGROUND FACILITIES PRIOR TO CONSTRUCTION, AS ESTABLISHED BY THE "UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT".

9. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL OF THE COORDINATION OF CONSTRUCTION SCHEDULING BETWEEN THE CONTRACTOR & ALL UTILITY AGENCIES.
   NOTE : THIS INCLUDES MEETING WITH UTILITY AGENCIES PRIOR TO THE PRE-CONSTRUCTION CONFERENCE TO ADJUST THEIR SCHEDULES TO COINCIDE WITH THE CONTRACTORS CONSTRUCTION SCHEDULE. (REFERENCE CONTRACT DOCUMENTS.)

10. ALL SUBSURFACE CONSTRUCTION SHALL COMPLY WITH THE "TRENCH SAFETY ACT." THE CONTRACTOR SHALL ENSURE THAT THE METHOD OF TRENCH PROTECTION AND CONSTRUCTION IS IN COMPLIANCE WITH OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REGULATIONS.

11. THE COUNTY RESERVES THE RIGHT TO PERFORM QUALITY ASSURANCE TESTING ON ALL MATERIALS DELIVERED TO HE PROJECT AND TO REJECT ALL MATERIALS NOT MEETING ACCEPTABLE STANDARDS.

12. IN THE EVENT EXCAVATION OF UNSUITABLE MATERIAL IS REQUIRED, IT MAY BE USED ACCORDANCE WITH STANDARD INDEX 505.

13. FILL OBTAINED THROUGH EXCAVATION OF STREETS AND DETENTION PONDS SHALL BE PLACED ON LOTS AND ADJACENT LAND IN ACCORDANCE WITH THE MASTER DRAINAGE AND GRADING PLAN AS DIRECTED BY THE ENGINEER.

14. EXISTING DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS SHALL REMAIN UNLESS OTHERWISE NOTED.

15. ALL STORM DRAINS SHALL BE CLEANED PRIOR TO FINAL ACCEPTANCE. ALL EXPENSES INCURRED FOR THIS WORK WILL BE INCLUDED IN THE PRICE BID FOR THE STORM DRAINS.

16. ALL SIDEWALK RAMPS SHALL BE BUILT PER THE LATEST F.D.O.T. STANDARD INDEX AND COMPLY WITH AMERICANS WITH DISABILITIES ACT (ADA) AT THE TIME OF BID. ALL SIDEWALK RAMPS CONCRETE AND ASPHALT SHALL HAVE DETECTABLE WARNING SURFACES THAT COMPLY TO THE LATEST F.D.O.T. STANDARD INDEX. ALL TRUNCATED DOME PLACEMENT SHALL COMPLY WITH FDOT STANDARD INDEX 304, SHEET 6 OF 6.

17. ALL RADIAL DRIVEWAYS SHALL MATCH MAINLINE PAVEMENT DESIGN.

18. POSSIBLE TREE TRIMMING AND REMOVAL MAY BE REQUIRED TO PROVIDE ADEQUATE SIGHT DISTANCE, OR AS ORDERED BY THE ENGINEER, AND SHALL COMPLY WITH STANDARD INDEX 546. ALL EXPENSES INCURRED FOR THIS WORK WILL BE INCLUDED IN THE PRICE BID FOR CLEARING & GRUBBING.

19. DURING DEWATERING OPERATIONS, THE CONTRACTOR SHALL NOT DISCHARGE DIRECTLY TO RECEIVING WATERS, EXISTING CONVEYANCES TO RECEIVING WATERS OR WETLAND SYSTEMS. TEMPORARY SEDIMENT BASINS OR TRAPS SHALL BE UTILIZED TO COLLECT THE DISCHARGE FROM DEWATERING ACTIVITIES TO ELIMINATE THE POTENTIAL FOR OFFSITE SEDIMENT TRANSPORT.

20. SITE CLEARING SHALL BE PERFORMED PER THE APPROVED CONSTRUCTION PLANS AND IN ACCORDANCE WITH APPLICABLE PASCO COUNTY ORDINANCES.

21. ALL EROSION CONTROL FENCES AND BARRIERS SHALL BE ERECTED PRIOR TO ANY LAND ALTERATIONS, MAINTAINED DURING CONSTRUCTION, AND REMOVED FOLLOWING SOIL STABILIZATION AND FINAL DRESSING. ALL EROSION CONTROL INSTALLATION AND INSTALLATION COORDINATION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

22. SILTATION ACCUMULATIONS GREATER THAN THE LESSER OF 12 INCHES OR ONE-HALF THE DEPTH OF THE SILTATION BARRIER SHALL BE IMMEDIATELY REMOVED AND PLACED IN UPLAND AREAS.

23. DURING LAND ALTERATION AND CONSTRUCTION ACTIVITIES, IT SHALL BE UNLAWFUL TO REMOVE VEGETATION BY GRUBBING OR TO PLACE SOIL DEPOSITS, SOLVENTS, CONSTRUCTION MATERIAL, MACHINERY OR OTHER EQUIPMENT OF ANY KIND WITHIN THE DRIP LINE OF A TREE TO REMAIN ON THE SITE UNLESS OTHERWISE APPROVED BY THE COUNTY.

24. SOD SHALL BE PLACED IN ACCORDANCE WITH APPLICABLE CITY/COUNTY/FDOT STANDARDS AS WELL AS IN ACCORDANCE WITH STANDARD AND SPECIFIC CONDITIONS IN THE SWFWMD PERMIT, IF APPLICABLE THIS SHALL INCLUDE SODDING OF ALL POND EMBANKMENTS OF A SLOPE 1:5 OR GREATER TO THE NW LINE.

25. OVERALL CLEAN-UP SHALL BE ACCOMPLISHED BY THE CONTRACTOR IN ACCORDANCE WITH COUNTY STANDARDS OR AS DIRECTED BY THE ENGINEER. ANY AND ALL EXPENSES INCURRED FOR THIS WORK SHALL BE INCLUDED IN THE UNIT PRICE BID FOR OTHER ITEMS.

26. THE CONTRACTOR SHALL ENDEAVOR TO PROTECT PRIVATE PROPERTY. ANY DAMAGE CAUSED BY THE CONTRACTOR IN THE PERFORMACE OF HIS WORK SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE.

27. ANY DAMAGE TO STATE, COUNTY, OR LOCAL ROADS CAUSED BY THE CONTRACTOR'S HAULING OR EXCAVATION EQUIPMENT SHALL BE REPAIRED BY THE CONTRACTOR AS DIRECTED BY THE ENGINEER. PAYMENT SHALL NOT BE MADE FOR THIS WORK.

28. ALL CALL-OUTS TO R/W ARE FROM BASELINE OF SURVEY.

29. TREE ABBREVIATION LEGEND:

    SLP = SLASH PINE

    LAO = LAUREL OAK

    CYP = CYPRESS

    LIO = LIVE OAK

    WO = WATER OAK

    LLP = LONG LEAF PINE

30. THE 12' CONCRETE SIDEWALK PROPOSED ALONG THE RIGHT SIDE OF THE PROPOSED TYPICAL SECTION SHALL BE 6" THICK SIDEWALK.

WETLAND NOTES:

1. "CONSERVATION AREA" DESIGNATION IS GIVEN TO ALL PROTECTED WETLANDS IN PASCO COUNTY. THEY ARE NOT INTENDED TO DESIGNATE "CONSERVATION EASEMENT" FOR SWFWMD.

2. WETLAND LIMITS, AS SHOWN, WERE PERMITTED UNDER ERP NO. 42013843.008.

DATE	DESCRIPTION	BY
	REVISIONS	

Engineering Business Certificate of Authorization No.: 28782
HEIDT DESIGN, LLC
5806-B Breckenridge Parkway
Tampa, Florida 33610
Office: 813-253-5311
Fax: 813-464-7629
DATE:
THOMAS D. SULLIVAN NO. 55358
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1)

JOB NO.

DESIGN: SULLIVAN

DRAWN: COGAN

DATE: OCT. 1, 2012

FILE

GENERAL NOTES (1)

PREPARED FOR: WHEELOCK STREET CAPITAL

Elevations based on North American Vertical Datum 1988 (NAVD 88)
Conversion from NAVD 88 to NGVD 29 = +0.83 Feet

$USER$ $DATE$ $TIME$ $FILE$

STRUCTURE TABLE

STR. NO.	STR. TYPE	TOP ELEV.	COMMENTS
1	TYPE 1 CURB INLET	46.35	
2	4' DIA. TYPE P MANHOLE	45.82	
3	TYPE 1 CURB INLET	44.88	
4	TYPE 1 CURB INLET	45.05	
5	4' DIA. TYPE P MANHOLE	45.50	
6	4' DIA. TYPE P MANHOLE	44.64	
7	TYPE 1 CURB INLET	43.80	
8	4' DIA. TYPE P MANHOLE	44.22	
9	TYPE 1 CURB INLET	43.80	
10	TYPE 1 CURB INLET	43.65	
11	TYPE 1 CURB INLET	43.65	
12	4' DIA. TYPE P MANHOLE	43.92	
12A	4' DIA. TYPE P MANHOLE	44.30	
12B	MES	38.90	
13	TYPE 1 CURB INLET	43.48	
14	TYPE 1 CURB INLET	43.48	
17	TYPE 2 CURB INLET	43.48	
18	TYPE 1 CURB INLET	43.48	
19	TYPE 1 CURB INLET	43.48	
20	TYPE 1 CURB INLET	43.48	

STRUCTURE TABLE

STR. NO.	STR. TYPE	TOP ELEV.	COMMENTS
21	TYPE 1 CURB INLET	43.48	
22	TYPE 1 CURB INLET	43.48	
23	TYPE 1 CURB INLET	43.63	
24	MES	39.48	
25	TYPE 1 CURB INLET	43.85	
26	TYPE 2 CURB INLET	43.48	
27	TYPE 1 CURB INLET	43.48	
28A	6' DIA. TYPE J MANHOLE	44.15	
29	TYPE 1 CURB INLET	43.85	
30	TYPE 1 CURB INLET	43.48	
31	TYPE 1 CURB INLET	44.08	
32	TYPE 1 CURB INLET	44.08	
32A	4' DIA. TYPE P MANHOLE	44.76	
32B	TYPE 1 CURB INLET	43.95	
33	TYPE 2 CURB INLET	43.48	
34	6' DIA. TYPE J MANHOLE	43.83	
35	6' DIA. TYPE J MANHOLE	44.23	
36	TYPE 1 CURB INLET	43.58	
37	TYPE 2 CURB INLET	43.58	
38	6' DIA. TYPE J MANHOLE	44.20	

STRUCTURE TABLE

STR. NO.	STR. TYPE	TOP ELEV.	COMMENTS
39	TYPE 1 CURB INLET	43.58	
40	TYPE 2 CURB INLET	43.58	
41	8' DIA. TYPE J MANHOLE	44.20	
42	TYPE 1 CURB INLET	44.28	
43	MES	40.50	
44	TYPE 1 CURB INLET	43.88	
45	TYPE 1 CURB INLET	43.85	
46	TYPE 1 CURB INLET	44.23	
47	MES	40.70	
48	TYPE 2 CURB INLET	42.68	
49	TYPE 1 CURB INLET	42.68	
50	TYPE 1 CURB INLET	43.05	
51	4' DIA. TYPE P MANHOLE	43.83	
52	TYPE 1 CURB INLET	43.26	
53	TYPE 2 CURB INLET	42.68	
54	TYPE 2 CURB INLET	42.68	
55	TYPE 1 CURB INLET	43.55	
56	6' DIA. TYPE J MANHOLE	43.62	
57	TYPE 1 CURB INLET	42.65	
58	TYPE 1 CURB INLET	42.65	

STRUCTURE TABLE

STR. NO.	STR. TYPE	TOP ELEV.	COMMENTS
59	MES	39.50	
60	TYPE 1 CURB INLET	44.33	
61	TYPE 1 CURB INLET	44.18	
62	TYPE 1 CURB INLET	44.15	
63	4' DIA. TYPE P MANHOLE	44.27	
64	TYPE 1 CURB INLET	43.53	
65	TYPE 1 CURB INLET	43.53	
66	TYPE 1 CURB INLET	43.75	
67	4' DIA. TYPE P MANHOLE	43.54	
68	TYPE 1 CURB INLET	43.25	
69	TYPE 1 CURB INLET	43.25	
70	TYPE 1 CURB INLET	43.25	
71	TYPE 1 CURB INLET	43.25	
72	TYPE 1 CURB INLET	43.25	
73	TYPE 1 CURB INLET	43.25	
74	6' DIA. TYPE J MANHOLE	43.63	
75	6' DIA. TYPE J MANHOLE	44.21	
76	TYPE E GTI	42.40	
77	4' DIA. TYPE P MANHOLE	43.02	
78	TYPE 2 CURB INLET	42.28	

STRUCTURE TABLE

STR. NO.	STR. TYPE	TOP ELEV.	COMMENTS
79	TYPE 1 CURB INLET	42.60	
80	TYPE 2 CURB INLET	43.77	
81	TYPE 1 CURB INLET	44.15	
82	TYPE E GTI	43.90	
83	6' DIA. TYPE J MANHOLE	44.40	
84	6' DIA. TYPE J MANHOLE	44.67	
85	TYPE 1 CURB INLET	44.28	
86	TYPE 1 CURB INLET	44.25	
88	TYPE 6 FDOT CURB INLET	43.46	
89	TYPE 1 CURB INLET	42.85	
89A	TYPE 1 CURB INLET	42.85	
89B	4' DIA. TYPE P MANHOLE	43.52	
89C	TYPE 6 FDOT CURB INLET	43.46	
90	4' DIA. TYPE P MANHOLE	44.25	
91	6' DIA. TYPE J MANHOLE	44.88	
92	TYPE E GTI	43.74	
93	4' DIA. TYPE P MANHOLE	45.08	
94	6' DIA. TYPE J MANHOLE	44.77	
95	TYPE 6 FDOT CURB INLET	44.22	
96	TYPE 6 FDOT CURB INLET	44.22	

STRUCTURE TABLE

STR. NO.	STR. TYPE	TOP ELEV.	COMMENTS
97	MES	39.10	
98	TYPE 1 CURB INLET	43.78	
99	TYPE 1 CURB INLET	43.75	
100	TYPE 1 CURB INLET	43.78	
101	TYPE 1 CURB INLET	43.75	
102	4' DIA. TYPE P MANHOLE	44.49	
103	4' DIA. TYPE P MANHOLE	44.22	
104	TYPE E GTI	43.50	
105	4' DIA. TYPE P MANHOLE	43.63	
106	TYPE 2 CURB INLET	43.25	
107	TYPE 2 CURB INLET	43.25	
108	TYPE E GTI	43.70	
109	6' DIA. TYPE J MANHOLE	43.65	
110	6' DIA. TYPE J MANHOLE	43.64	
111	TYPE 1 CURB INLET	43.25	
112	TYPE 2 CURB INLET	43.25	
113	5' DIA. TYPE J MANHOLE	43.40	
114	6' DIA. TYPE J MANHOLE	43.66	
115	TYPE E GTI	44.20	
116	5' DIA. TYPE J MANHOLE	43.44	

STRUCTURE TABLE

STR. NO.	STR. TYPE	TOP ELEV.	COMMENTS
117	5' DIA. TYPE J MANHOLE	43.26	
118	TYPE 2 CURB INLET	43.25	
119	TYPE 2 CURB INLET	43.25	
120	5' DIA. TYPE J MANHOLE	44.09	
121	5' DIA. TYPE J MANHOLE	44.57	
122	TYPE 1 CURB INLET	44.65	
123	TYPE 1 CURB INLET	44.65	
124	MES	39.10	
125	TYPE 1 CURB INLET	43.78	
126	TYPE 1 CURB INLET	43.75	
127	4' DIA. TYPE P MANHOLE	44.25	
128	TYPE 1 CURB INLET	45.05	
129	TYPE 1 CURB INLET	45.05	
130	4' DIA. TYPE P MANHOLE	45.35	
131	4' DIA. TYPE P MANHOLE	44.98	
132	MES	37.62	
133	TYPE E GTI	43.86	
134	TYPE 6 FDOT CURB INLET	45.44	
135	MES	39.10	
136	TYPE 1 CURB INLET	45.25	

STRUCTURE TABLE

STR. NO.	STR. TYPE	TOP ELEV.	COMMENTS
137	TYPE 1 CURB INLET	45.25	
138	MES	39.10	
139	TYPE 6 FDOT CURB INLET	44.07	
140	TYPE 6 FDOT CURB INLET	44.07	
141	MES	37.53	
142	TYPE E GTI	43.50	
143	TYPE 1 CURB INLET	44.25	
144	TYPE 1 CURB INLET	44.28	
145	MES	41.93	
146	TYPE E GTI	43.60	
147	MES	40.99	
148	TYPE 1 CURB INLET	43.45	
149	TYPE 1 CURB INLET	43.48	
150	MES	40.03	
151	TYPE 1 CURB INLET	43.48	
152	TYPE 1 CURB INLET	43.48	
153	MES	40.12	
154	MES	39.00	
155	TYPE 1 CURB INLET	43.48	
156	TYPE 1 CURB INLET	43.48	

STRUCTURE TABLE

STR. NO.	STR. TYPE	TOP ELEV.	COMMENTS
156A	MES	39.00	
157	TYPE 1 CURB INLET	43.05	
158	TYPE 2 CURB INLET	43.08	
159	5' DIA. TYPE J MANHOLE	44.18	
160	5' DIA. TYPE J MANHOLE	43.84	
161	TYPE C GTI	42.05	
162	TYPE 1 CURB INLET	43.45	
163	TYPE 1 CURB INLET	43.48	
164	5' DIA. TYPE J MANHOLE	43.94	
165	5' DIA. TYPE J MANHOLE	44.24	
166	TYPE 1 CURB INLET	43.75	
167	TYPE 1 CURB INLET	43.78	
168	6' DIA. TYPE J MANHOLE	44.05	
169	MES	38.60	
170	TYPE E GTI	43.00	
171	TYPE 6 FDOT CURB INLET	41.88	
171A	4' DIA. TYPE P MANHOLE	44.24	
172	TYPE 6 FDOT CURB INLET	41.88	
173	5' DIA. TYPE J MANHOLE	42.92	
174	TYPE E GTI	43.30	

STRUCTURE TABLE

STR. NO.	STR. TYPE	TOP ELEV.	COMMENTS
175	TYPE 1 CURB INLET	43.74	
176	TYPE 1 CURB INLET	43.72	
177	5' DIA. TYPE J MANHOLE	44.29	
178	TYPE 6 FDOT CURB INLET	43.95	
179	TYPE 6 FDOT CURB INLET	43.95	
180	MES	39.10	
181	TYPE E GTI	42.50	
182	4' DIA. TYPE P MANHOLE	42.89	
183	TYPE 6 FDOT CURB INLET	43.16	
184	TYPE 6 FDOT CURB INLET	43.16	
185	TYPE E GTI	43.00	
186	TYPE 6 FDOT CURB INLET	44.21	
187	TYPE 1 CURB INLET	44.25	
188	TYPE 1 CURB INLET	44.28	
189	TYPE 6 FDOT CURB INLET	44.86	
190	5' DIA. TYPE J MANHOLE	45.55	
191	5' DIA. TYPE J MANHOLE	46.05	
192	TYPE 6 FDOT CURB INLET	44.73	
192A	TYPE 6 FDOT CURB INLET	45.07	
192B	MES	39.20	

ELEVATIONS BASED ON:
NORTH AMERICAN VERTICAL DATUM 1988
CONVERSION:
NAVD 88 TO NGVD 29 = +0.85

DATE	DESCRIPTION	BY
	REVISIONS	

INCORPORATED BUSINESS CERTIFICATE OF AUTHORIZATION NO. 3782
HEIDT DESIGN
5806-B Breckenridge Parkway
Tampa, Florida 33610
Office: 813-253-5311
Fax: 813-464-7829
www.HeidtDesign.com
DATE:
THOMAS D. SULLIVAN P.E. NO. 55358
FLORIDA PROFESSIONAL ENGINEER

RANGELAND BOULEVARD - STARKEY VILLAGE 1

PROJECT NO. TSR-SR-1007

STORM STRUCTURE DATA

CIP PROJ NO. #####

PREPARED FOR: PASCO COUNTY DEPARTMENT OF PUBLIC WORKS

DESIGN XXXX

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

STRUCTURE TABLE			
STR. NO.	STR. TYPE	TOP ELEV.	COMMENTS
193	TYPE 2 CURB INLET	42.08	
194	TYPE 2 CURB INLET	43.95	
194A	TYPE 2 CURB INLET	43.76	
194B	4' DIA. TYPE P MANHOLE	42.91	
194C	TYPE 1 CURB INLET	42.08	
195	MES	39.20	
196	TYPE 1 CURB INLET	42.58	
197	TYPE 1 CURB INLET	42.58	
198	4' DIA. TYPE P MANHOLE	43.36	
199	4' DIA. TYPE P MANHOLE	43.94	
200	TYPE 1 CURB INLET	41.98	
201	TYPE 1 CURB INLET	41.98	
202	4' DIA. TYPE P MANHOLE	42.39	
203	4' DIA. TYPE P MANHOLE	42.38	
204	TYPE 2 CURB INLET	42.08	
205	TYPE 2 CURB INLET	42.08	
206	5' DIA. TYPE J MANHOLE	44.55	
207	TYPE 1 CURB INLET	44.08	
208	TYPE 1 CURB INLET	44.08	
209	MES	39.00	

STRUCTURE TABLE			
STR. NO.	STR. TYPE	TOP ELEV.	COMMENTS
210	TYPE 1 CURB INLET	41.68	
211	TYPE 1 CURB INLET	41.68	
212	4' DIA. TYPE P MANHOLE	42.20	
213	4' DIA. TYPE P MANHOLE	42.20	
214	TYPE 2 CURB INLET	41.68	
215	TYPE 1 CURB INLET	41.68	
216	TYPE 1 CURB INLET	41.98	
217	TYPE 1 CURB INLET	41.98	
218	4' DIA. TYPE P MANHOLE	42.25	
219	MES	38.93	
220	TYPE 2 CURB INLET	41.68	
221	TYPE 1 CURB INLET	41.68	
222	4' DIA. TYPE P MANHOLE	42.38	
223	TYPE 2 CURB INLET	41.68	
224	TYPE 1 CURB INLET	41.68	
225	MES	38.60	
226	TYPE 1 CURB INLET	41.98	
227	TYPE 1 CURB INLET	41.98	
228	4' DIA. TYPE P MANHOLE	42.62	
229	4' DIA. TYPE P MANHOLE	42.32	

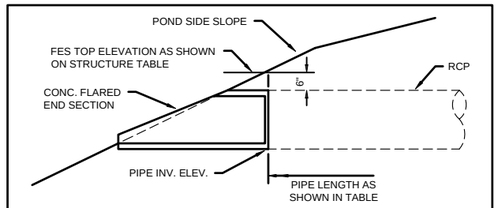
STRUCTURE TABLE			
STR. NO.	STR. TYPE	TOP ELEV.	COMMENTS
230	TYPE 1 CURB INLET	41.98	
231	TYPE 1 CURB INLET	41.98	
232	TYPE 1 CURB INLET	41.98	
233	TYPE 1 CURB INLET	41.98	
235	MES	38.70	
300	TYPE 6 FDOT CURB INLET	43.02	
301	TYPE 6 FDOT CURB INLET	42.65	
302	4' DIA. TYPE P MANHOLE	42.67	
303	TYPE 6 FDOT CURB INLET	42.48	
304	TYPE 6 FDOT CURB INLET	42.48	
305	4' DIA. TYPE P MANHOLE	43.31	
306	4' DIA. TYPE P MANHOLE	42.87	
307	TYPE 6 FDOT CURB INLET	42.63	
308	TYPE 6 FDOT CURB INLET	42.63	
309	4' DIA. TYPE P MANHOLE	43.28	
310	TYPE E GTI	43.51	
310A	TYPE 6 FDOT CURB INLET	42.63	
311	TYPE 6 FDOT CURB INLET	42.63	
312	MES	39.00	
313	TYPE 6 FDOT CURB INLET	45.70	

STRUCTURE TABLE			
STR. NO.	STR. TYPE	TOP ELEV.	COMMENTS
314	TYPE 6 FDOT CURB INLET	45.70	
315	4' DIA. TYPE P MANHOLE	46.23	
316	TYPE 6 FDOT CURB INLET	45.23	
317	TYPE 6 FDOT CURB INLET	45.23	
318	MES	40.82	
400	TYPE D GTI	41.50	
400A	MES	41.00	
402	TYPE D GTI	41.50	
402A	MES	41.00	
404	TYPE D GTI	43.20	
404A	MES	42.70	
408	TYPE D GTI	41.00	
408A	MES	40.40	
410	TYPE D GTI	42.30	
410A	MES	41.80	
412	TYPE D GTI	41.70	
412A	MES	41.10	
414	TYPE D GTI	41.70	
414A	MES	41.10	
416	TYPE D GTI	41.70	

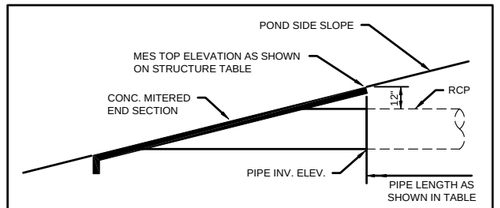
STRUCTURE TABLE			
STR. NO.	STR. TYPE	TOP ELEV.	COMMENTS
416A	MES	41.10	
418	TYPE D GTI	41.30	
418A	MES	40.70	
420	TYPE D GTI	42.20	
420A	MES	41.60	
501	MES	2.00	
502	MES	2.00	
503	MES	2.00	
504	MES	2.00	
505	MES	2.00	
506	MES	2.00	
507	MES	2.00	
508	MES	2.00	
509	MES	2.00	
510	MES	2.00	
511	MES	2.00	
512	MES	2.00	
513	END WALL	2.00	
514	MES	41.68	
515	END WALL	42.08	

STRUCTURE TABLE			
STR. NO.	STR. TYPE	TOP ELEV.	COMMENTS
516	MES	41.68	
517	END WALL	42.08	
518	MES	41.68	
519	END WALL	2.00	
520	MES	41.68	
521	END WALL	2.00	
522	MES	41.68	
523	END WALL	42.08	
524	MES	41.68	
525	MES	3.25	
526	MES	3.25	
527	MES	3.25	
528	MES	3.25	
529	MES	3.25	
530	MES	3.25	
531	MES	3.25	
532	MES	3.25	
533	MES	3.25	
534	MES	3.25	
535	MES	3.25	

STRUCTURE TABLE			
STR. NO.	STR. TYPE	TOP ELEV.	COMMENTS
536	MES	3.25	



FES FLARED END SECTION TOP ELEVATION DIAGRAM
SCALE: NTS



MES MITERED END SECTION TOP ELEVATION DIAGRAM
SCALE: NTS

NOTES:

- ALL FLARED END SECTIONS (FES) ARE SPECIFIED FDOT INDEX #270 UNLESS OTHERWISE NOTED.
- ALL MITERED END SECTIONS (MES) ARE SPECIFIED FDOT INDEX #272 UNLESS OTHERWISE NOTED.
- END SECTION TOP ELEVATION DENOTES THE ELEVATION ON POND SIDE SLOPE AS SHOWN ON DETAILS "FES" AND "MES", THIS SHEET.

ELEVATIONS BASED ON:
NORTH AMERICAN VERTICAL DATUM 1988
CONVERSION:
NAVD 88 TO NGVD 29 = +0.85

DATE	DESCRIPTION	BY
	REVISIONS	

PROFESSIONAL ENGINEER CERTIFICATE OF AUTHORIZATION NO. 3762
HEIDT DESIGN
5806-B Breckenridge Parkway
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DATE:
THOMAS D. SULLIVAN P.E. NO. 55358
FLORIDA PROFESSIONAL ENGINEER

RANGELAND BOULEVARD - STARKEY VILLAGE 1

PROJECT NO. TSR-SR-1007

CIP PROJ NO. #####

DESIGN XXXX

STORM STRUCTURE DATA

PREPARED FOR: PASCO COUNTY DEPARTMENT OF PUBLIC WORKS

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

PIPE TABLE

STR. START	STR. END	PIPE DIMENSION & MATERIAL	LENGTH	SLOPE	START INV.	END INV.	FALL IN FEET
1	2	18" RCP	169	0.35%	39.80	39.20	0.60
2	4	18" RCP	92	0.22%	38.50	38.30	0.20
3	4	18" RCP	31	0.32%	40.40	40.30	0.10
4	5	24" RCP	72	0.14%	37.80	37.70	0.10
5	6	30" RCP	250	0.16%	37.70	37.30	0.40
6	7	30" RCP	110	0.18%	37.30	37.10	0.20
7	8	30" RCP	85	0.12%	37.10	37.00	0.10
8	12	30" RCP	88	0.11%	37.00	36.90	0.10
9	11	18" RCP	58	0.17%	37.00	36.90	0.10
10	11	18" RCP	32	0.31%	39.00	38.90	0.10
11	12	30" RCP	48	0.21%	36.30	36.20	0.10
12	12A	30" RCP	169	0.12%	36.20	36.00	0.20
12A	12B	36" RCP	75	0.13%	36.00	35.90	0.10
13	14	18" RCP	31	0.32%	38.90	38.80	0.10
14	7	18" RCP	55	0.18%	38.80	38.70	0.10
17	18	18" RCP	31	0.32%	39.00	38.90	0.10
18	20	24" RCP	109	0.18%	37.00	36.80	0.20
19	20	18" RCP	31	0.32%	39.00	38.90	0.10
20	21	30" RCP	269	0.07%	36.30	36.10	0.20
21	22	30" RCP	31	0.32%	36.10	36.00	0.10

PIPE TABLE

STR. START	STR. END	PIPE DIMENSION & MATERIAL	LENGTH	SLOPE	START INV.	END INV.	FALL IN FEET
22	23	36" RCP	58	0.17%	36.00	35.90	0.10
23	24	36" RCP	155	0.06%	36.00	35.90	0.10
25	28A	36" RCP	341	0.09%	35.90	35.60	0.30
26	25	30" RCP	120	0.17%	36.60	36.40	0.20
26	27	24" RCP	31	0.32%	37.20	37.10	0.10
28A	33	36" RCP	116	0.09%	35.60	35.50	0.10
30	33	18" RCP	31	0.32%	38.10	38.00	0.10
31	32	18" RCP	31	0.32%	38.10	38.00	0.10
32	32A	18" RCP	118	0.17%	38.00	37.80	0.20
32A	28A	24" RCP	251	0.16%	37.30	36.90	0.40
32B	29	18" RCP	43	0.23%	38.10	38.00	0.10
32B	28A	18" RCP	32	0.31%	38.00	37.90	0.10
33	34	42" RCP	89	0.11%	35.30	35.20	0.10
34	35	48" RCP	254	0.08%	35.00	34.80	0.20
35	37	48" RCP	199	0.10%	34.80	34.60	0.20
36	37	18" RCP	35	0.29%	39.10	39.00	0.10
37	38	48" RCP	160	0.13%	34.60	34.40	0.20
38	40	54" RCP	256	0.08%	34.20	34.00	0.20
39	40	18" RCP	39	0.26%	39.10	39.00	0.10
40	41	54" RCP	185	0.11%	34.00	33.80	0.20

PIPE TABLE

STR. START	STR. END	PIPE DIMENSION & MATERIAL	LENGTH	SLOPE	START INV.	END INV.	FALL IN FEET
41	42	60" RCP	57	0.18%	33.50	33.40	0.10
42	43	60" RCP	154	0.06%	33.40	33.30	0.10
44	45	18" RCP	38	0.26%	39.40	39.30	0.10
45	46	18" RCP	108	0.19%	39.30	39.10	0.20
46	47	24" RCP	153	0.13%	38.60	38.40	0.20
48	49	18" RCP	31	0.32%	38.20	38.10	0.10
49	50	24" RCP	116	0.17%	36.30	36.10	0.20
50	51	30" RCP	246	0.08%	35.80	35.60	0.20
51	52	30" RCP	87	0.12%	35.50	35.40	0.10
52	55	36" RCP	88	0.11%	35.10	35.00	0.10
53	54	18" RCP	43	0.23%	38.20	38.10	0.10
54	55	24" RCP	185	0.11%	35.10	34.90	0.20
55	56	36" RCP	236	0.08%	34.50	34.30	0.20
56	58	42" RCP	241	0.08%	33.90	33.70	0.20
57	58	18" RCP	70	0.28%	38.20	38.00	0.20
58	59	48" RCP	42	0.24%	33.10	33.00	0.10
60	62	18" RCP	63	0.16%	38.40	38.30	0.10
61	62	18" RCP	38	0.26%	39.70	39.60	0.10
62	63	24" RCP	129	0.15%	37.50	37.30	0.20
63	66	24" RCP	82	0.12%	37.20	37.10	0.10

PIPE TABLE

STR. START	STR. END	PIPE DIMENSION & MATERIAL	LENGTH	SLOPE	START INV.	END INV.	FALL IN FEET
64	65	18" RCP	32	0.31%	39.10	39.00	0.10
65	66	24" RCP	59	0.17%	37.10	37.00	0.10
66	67	30" RCP	270	0.11%	36.60	36.30	0.30
67	68	30" RCP	34	0.30%	36.10	36.00	0.10
68	71	30" RCP	36	0.28%	36.00	35.90	0.10
69	70	18" RCP	35	0.29%	38.80	38.70	0.10
70	71	18" RCP	231	0.17%	37.50	37.10	0.40
71	74	36" RCP	38	0.27%	35.50	35.40	0.10
72	73	18" RCP	37	0.27%	38.80	38.70	0.10
73	74	18" RCP	75	0.27%	37.00	36.80	0.20
74	75	36" RCP	104	0.10%	35.40	35.30	0.10
75	81	36" RCP	135	0.07%	35.30	35.20	0.10
76	77	18" RCP	108	0.18%	39.40	39.20	0.20
77	79	18" RCP	33	0.30%	39.20	39.10	0.10
78	79	24" RCP	40	0.25%	37.30	37.20	0.10
79	80	36" RCP	308	0.06%	34.30	34.10	0.20
80	81	36" RCP	102	0.10%	34.10	34.00	0.10
81	83	42" RCP	44	0.23%	34.00	33.90	0.10
82	83	18" RCP	165	0.18%	37.80	37.50	0.30
83	84	42" RCP	78	0.13%	33.90	33.80	0.10

PIPE TABLE

STR. START	STR. END	PIPE DIMENSION & MATERIAL	LENGTH	SLOPE	START INV.	END INV.	FALL IN FEET
84	86	42" RCP	180	0.06%	33.80	33.70	0.10
85	86	18" RCP	38	0.26%	39.80	39.70	0.10
86	91	42" RCP	143	0.07%	33.70	33.60	0.10
88	89C	18" RCP	87	0.23%	38.70	38.50	0.20
89	89A	18" RCP	45	0.22%	37.60	37.50	0.10
89A	89B	18" RCP	136	0.22%	37.20	36.90	0.30
89B	89C	18" RCP	64	0.31%	36.90	36.70	0.20
89C	90	24" RCP	219	0.18%	36.70	36.30	0.40
90	91	24" RCP	225	0.13%	36.30	36.00	0.30
91	94	48" RCP	185	0.05%	33.60	33.50	0.10
92	93	18" RCP	161	0.19%	40.70	40.40	0.30
93	94	18" RCP	101	0.20%	40.40	40.20	0.20
94	96	60" RCP	149	0.07%	32.90	32.80	0.10
95	96	18" RCP	87	0.23%	39.50	39.30	0.20
96	97	60" RCP	42	0.24%	32.70	32.60	0.10
98	99	18" RCP	38	0.26%	39.30	39.20	0.10
99	102	24" RCP	67	0.15%	37.20	37.10	0.10
100	101	18" RCP	38	0.26%	39.30	39.20	0.10
101	102	18" RCP	36	0.28%	37.60	37.50	0.10
102	103	30" RCP	132	0.08%	36.90	36.80	0.10

PIPE TABLE

STR. START	STR. END	PIPE DIMENSION & MATERIAL	LENGTH	SLOPE	START INV.	END INV.	FALL IN FEET
103	107	30" RCP	142	0.14%	36.80	36.60	0.20
104	105	24" RCP	145	0.14%	39.00	38.80	0.20
105	106	30" RCP	77	0.65%	38.30	37.80	0.50
106	107	36" RCP	201	0.10%	37.30	37.10	0.20
107	109	36" RCP	73	0.14%	36.30	36.20	0.10
108	109	18" RCP	144	0.21%	40.70	40.40	0.30
109	110	36" RCP	106	0.09%	36.20	36.10	0.10
110	113	36" RCP	104	0.10%	35.40	35.30	0.10
111	112	18" RCP	35	0.29%	38.80	38.70	0.10
112	113	18" RCP	72	0.14%	38.20	38.10	0.10
113	114	42" RCP	64	0.16%	34.80	34.70	0.10
114	116	42" RCP	103	0.10%	34.30	34.20	0.10
115	116	18" RCP	151	0.46%	37.70	37.00	0.70
116	117	42" RCP	50	0.20%	34.20	34.10	0.10
117	119	42" RCP	64	0.16%	34.10	34.00	0.10
118	119	18" RCP	220	0.18%	38.80	38.40	0.40
119	120	42" RCP	63	0.16%	34.00	33.90	0.10
120	121	42" RCP	81	0.12%	33.90	33.80	0.10
121	123	48" RCP	72	0.14%	33.60	33.50	0.10
122	123	18" RCP	57	0.18%	40.20	40.10	0.10

PIPE TABLE

STR. START	STR. END	PIPE DIMENSION & MATERIAL	LENGTH	SLOPE	START INV.	END INV.	FALL IN FEET
123	124	48" RCP	319	0.13%	33.50	33.10	0.40
125	126	18" RCP	38	0.26%	39.30	39.20	0.10
126	127	18" RCP	126	0.16%	38.10	37.90	0.20
127	131	24" RCP	217	0.18%	37.20	36.80	0.40
128	129	18" RCP	51	0.19%	36.60	36.50	0.10
129	130	18" RCP	105	0.19%	36.50	36.30	0.20
130	131	18" RCP	109	0.18%	36.40	36.20	0.20
131	132	24" RCP	78	0.26%	35.40	35.20	0.20
133	134	18" RCP	257	0.16%	40.80	40.40	0.40
134	135	18" RCP	42	0.24%	36.70	36.60	0.10
136	137	18" RCP	45	0.22%	40.80	40.70	0.10
137	138	18" RCP	174	0.17%	36.90	36.60	0.30
139	140	18" RCP	86	0.23%	39.30	39.10	0.20
140	141	18" RCP	42	0.24%	35.80	35.70	0.10
142	143	18" RCP	146	0.21%	40.50	40.20	0.30
143	144	18" RCP	40	0.25%	40.20	40.10	0.10
144	145	18" RCP	32	0.31%	39.80	39.70	0.10
146	147	18" RCP	216	0.19%	38.60	38.20	0.40
148	149	18" RCP	39	0.26%	39.00	38.90	0.10
149	150	18" RCP	32	0.32%	38.30	38.20	0.10

PIPE TABLE

STR. START	STR. END	PIPE DIMENSION & MATERIAL	LENGTH	SLOPE	START INV.	END INV.	FALL IN FEET
151	152	18" RCP	35	0.29%	39.00	38.90	0.10
152	153	18" RCP	35	0.29%	38.30	38.20	0.10
154	155	36" RCP	38	0.00%	35.00	35.00	0.00
155	156	36" RCP	35	0.00%	35.00	35.00	0.00
156	156A	36" RCP	42	0.00%	35.00	35.00	0.00
157	158	18" RCP	39	0.26%	38.60	38.50	0.10
158	159	30" RCP	192	0.10%	37.50	37.30	0.20
159	160	36" RCP	171	0.12%	36.80	36.60	0.20
160	163	36" RCP	86	0.12%	36.60	36.50	0.10
161	162	18" RCP	78	0.38%	37.50	37.20	0.30
162	163	18" RCP	38	0.26%	37.20	37.10	0.10
163	164	36" RCP	128	0.08%	36.50	36.40	0.10
164	165	42" RCP	221	0.09%	35.90	35.70	0.20
165	167	42" RCP	124	0.08%	35.70	35.60	0.10
166	167	18" RCP	41	0.24%	39.30	39.20	0.10
167	168	48" RCP	104	0.10%	35.10	35.00	0.10
168	169	48" RCP	104	0.10%	33.70	33.60	0.10
170	171A	18" RCP	115	0.17%	36.40	36.20	0.20
171	172	24" RCP	86	0.12%	35.60	35.50	0.10
171A	171	18" RCP	56	0.18%	36.20	36.10	0.10

PIPE TABLE

STR. START	STR. END	PIPE DIMENSION & MATERIAL	LENGTH	SLOPE	START INV.	END INV.	FALL IN FEET
172	173	30" RCP	147	0.14%	34.50	34.30	0.20
173	177	30" RCP	294	0.07%	34.30	34.10	0.20
174	175	18" RCP	104	0.48%	39.80	39.30	0.50
175	176	18" RCP	37	0.27%	39.30	39.20	0.10
176	177	24" RCP	257	0.19%	37.50	37.00	0.50
177	179	36" RCP	355	0.08%	34.10	33.80	0.30
178	179	18" RCP	87	0.23%	38.20	38.00	0.20
179	180	42" RCP	42	0.24%	33.80	33.70	0.10
181	182	18" RCP	261	0.15%	39.50	39.10	0.40
182	184	24" RCP	122	0.16%	38.60	38.40	0.20
183	184	18" RCP	87	0.23%	38.40	38.20	0.20
184	186	30" RCP	323	0.09%	37.20	36.90	0.30
185	186	18" RCP	261	0.15%	38.40	38.00	0.40
186	189	30" RCP	202	0.10%	36.90	36.70	0.20
187	188	18" RCP	38	0.26%	39.80	39.70	0.10
188	189	18" RCP	136	0.15%	37.90	37.70	0.20
189	190	36" RCP	163	0.06%	36.20	36.10	0.10
190	191	36" RCP	167	0.12%	32.00	31.80	0.20
191	192A	42" RCP	303	0.13%	31.80	31.40	0.40
192	192A	18" RCP	87	0.00%	40.19	40.19	0.00

PIPE TABLE

STR. START	STR. END	PIPE DIMENSION & MATERIAL	LENGTH	SLOPE	START INV.	END INV.	FALL IN FEET
192A	192B	42" RCP	47	0.21%	31.40	31.30	0.10
193	194C	18" RCP	35	0.29%	35.10	35.00	0.10
194	194A	18" RCP	45	0.22%	36.50	36.40	0.10
194A	194B	18" RCP	120	0.17%	36.30	36.10	0.20
194B	194C	18" RCP	109	0.18%	36.00	35.80	0.20
194C	195	24" RCP	186	0.11%	34.50	34.30	0.20
196	197	18" RCP	35	0.29%	38.10	38.00	0.10
197	198	18" RCP	99	0.20%	38.00	37.80	0.20
198	199	18" RCP	82	0.24%	37.80	37.60	0.20
199	208	24" RCP	227	0.13%	37.10	36.80	0.30
200	201	18" RCP	37	0.27%	37.50	37.40	0.10
201	202	24" RCP	91	0.11%	36.90	36.80	0.10
202	203	24" RCP	84	0.12%	36.80	36.70	0.10
203	205	30" RCP	56	0.18%	36.20	36.10	0.10
204	205	18" RCP	47	0.21%	37.60	37.50	0.10
205	206	36" RCP	400	0.08%	35.60	35.30	0.30
206	208	36" RCP	200	0.10%	35.30	35.10	0.20
207	208	18" RCP	45	0.22%	39.60	39.50	0.10
208	209	42" RCP	186	0.05%	34.60	34.50	0.10
210	211	18" RCP	35	0.29%	37.20	37.10	0.10

PIPE TABLE

STR. START	STR. END	PIPE DIMENSION & MATERIAL	LENGTH	SLOPE	START INV.	END INV.	FALL IN FEET
211	212	18" RCP	128	0.16%	37.10	36.90	0.20
212	213	24" RCP	106	0.19%	36.40	36.20	0.20
213	215	24" RCP	135	0.15%	36.20	36.00	0.20
214	215	18" RCP	38	0.26%	37.20	37.10	0.10
215	224	30" RCP	339	0.09%	35.50	35.20	0.30
216	217	18" RCP	31	0.32%	37.50	37.40	0.10
217	218	18" RCP	64	0.31%	37.40	37.20	0.20
218	219	18" RCP	64	0.31%	36.90	36.70	0.20
220	221	18" RCP	41	0.24%	37.20	37.10	0.10
221	222	30" RCP	178	0.11%	35.70	35.50	0.20
222	224	30" RCP	213	0.09%	35.50	35.30	0.20
223	224	18" RCP	42	0.24%	37.20	37.10	0.10
224	225	36" RCP	186	0.05%	34.70	34.60	0.10
226	227	18" RCP	31	0.32%	37.50	37.40	0.10
227	228	18" RCP	171	0.23%	37.40	37.00	0.40
228	229	18" RCP	179	0.11%	37.00	36.80	0.20
229	231	18" RCP	120	0.17%	36.80	36.60	0.20
230	231	18" RCP	40	0.25%	37.50	37.40	0.10
231	235	24" RCP	152	0.13%	35.80	35.60	0.20
232	233	18" RCP	33	0.30%	37.50	37.40	0.10

PIPE TABLE

STR. START	STR. END	PIPE DIMENSION & MATERIAL	LENGTH	SLOPE	START INV.	END INV.	FALL IN FEET
233	231	24" RCP	267	0.11%	36.10	35.80	0.30
300	302	18" RCP	149	0.20%	38.30	38.00	0.30
301	302	18" RCP	138	0.22%	37.90	37.60	0.30
302	304	18" RCP	132	0.23%	37.60	37.30	0.30
303	304	18" RCP	112	0.18%	37.70	37.50	0.20
304	305	24" RCP	215	0.14%	36.80	36.50	0.30
305	306	24" RCP	249	0.12%	36.50	36.20	0.30
306	308	24" RCP	112	0.18%	36.20	36.00	0.20
307	308	18" RCP	94	0.21%	37.90	37.70	0.20
308	309	30" RCP	358	0.08%	35.50	35.20	0.30
309	311	30" RCP	145	0.14%	35.20	35.00	0.20
310A	310	18" RCP	44	0.23%	36.70	36.60	0.10
310A	311	18" RCP	99	0.20%	36.60	36.40	0.20
311	312	30" RCP	46	0.22%	35.20	35.10	0.10
313	314	18" RCP	87	0.23%	41.00	40.80	0.20
314	315	18" RCP	256	0.16%	40.80	40.40	0.40
315	317	24" RCP	356	0.17%	39.90	39.30	0.60
316	317	18" RCP	87	0.23%	40.50	40.30	0.20
317	318	24" RCP	62	0.16%	36.10	36.00	0.10
400	400A	36" RCP	16	0.61%	37.10	37.00	0.10

ELEVATIONS BASED ON:
NORTH AMERICAN VERTICAL DATUM 1988
CONVERSION:
NAVD 88 TO NGVD 29 = +0.85

DATE	DESCRIPTION	BY
	REVISIONS	

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DATE:
THOMAS D. SULLIVAN P.E. NO. 55358
FLORIDA PROFESSIONAL ENGINEER

RANGELAND BOULEVARD - STARKEY VILLAGE I

PROJECT NO. TSR-SR-1007

CIP PROJ NO. #####

DESIGN XXXX

STORM STRUCTURE DATA

PREPARED FOR: PASCO COUNTY DEPARTMENT OF PUBLIC WORKS

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

PIPE TABLE							
STR. START	STR. END	PIPE DIMENSION & MATERIAL	LENGTH	SLOPE	START INV.	END INV.	FALL IN FEET
402	402A	36" RCP	15	0.65%	37.10	37.00	0.10
404	404A	36" RCP	17	0.60%	38.80	38.70	0.10
408	408A	36" RCP	31	0.32%	36.50	36.40	0.10
410	410A	36" RCP	28	0.35%	37.90	37.80	0.10
412	412A	36" RCP	37	0.27%	37.20	37.10	0.10
414	414A	36" RCP	20	0.50%	37.20	37.10	0.10
416	416A	36" RCP	20	0.50%	37.20	37.10	0.10
418	418A	36" RCP	17	0.58%	36.80	36.70	0.10
420	420A	36" RCP	19	0.53%	37.70	37.60	0.10
501	502	38 x 60" ERCP	94	0.32%	34.50	34.20	0.30
503	504	38 x 60" ERCP	94	0.32%	34.50	34.20	0.30
505	506	38 x 60" ERCP	94	0.32%	34.50	34.20	0.30
507	508	38 x 60" ERCP	94	0.32%	34.50	34.20	0.30
509	510	38 x 60" ERCP	94	0.32%	34.50	34.20	0.30
511	512	38 x 60" ERCP	94	0.32%	34.50	34.20	0.30
513	514	38 x 60" ERCP	81	0.50%	38.50	38.10	0.40
515	516	38 x 60" ERCP	81	0.49%	38.50	38.10	0.40
517	518	38 x 60" ERCP	82	0.49%	38.50	38.10	0.40
519	520	38 x 60" ERCP	82	0.49%	38.50	38.10	0.40
521	522	38 x 60" ERCP	83	0.48%	38.50	38.10	0.40

PIPE TABLE							
STR. START	STR. END	PIPE DIMENSION & MATERIAL	LENGTH	SLOPE	START INV.	END INV.	FALL IN FEET
523	524	38 x 60" ERCP	83	0.48%	38.50	38.10	0.40
525	526	48 x 76" ERCP	188	0.27%	37.30	36.80	0.50
527	528	48 x 76" ERCP	189	0.27%	37.30	36.80	0.50
529	530	48 x 76" ERCP	188	0.27%	37.30	36.80	0.50
531	532	48 x 76" ERCP	187	0.27%	37.30	36.80	0.50
533	534	48 x 76" ERCP	187	0.27%	37.30	36.80	0.50
535	536	48 x 76" ERCP	186	0.27%	37.30	36.80	0.50

ELEVATIONS BASED ON:
NORTH AMERICAN VERTICAL DATUM 1988
CONVERSION:
NAVD 88 TO NGVD 29 = +0.85

DATE	DESCRIPTION	BY
REVISIONS		

PROFESSIONAL ENGINEERING CERTIFICATE OF AUTHORIZATION NO. 3782
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FLORIDA PROFESSIONAL ENGINEER

RANGELAND BOULEVARD - STARKEY VILLAGE 1

PROJECT NO. TSR-SR-1007

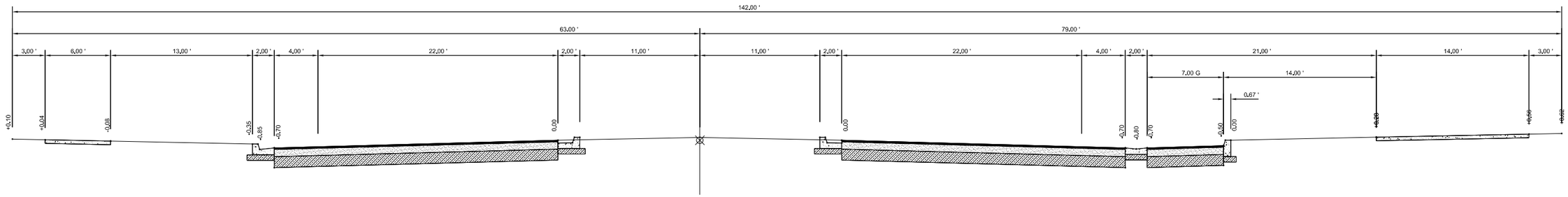
CIP PROJ NO. #####

DESIGN XXXX

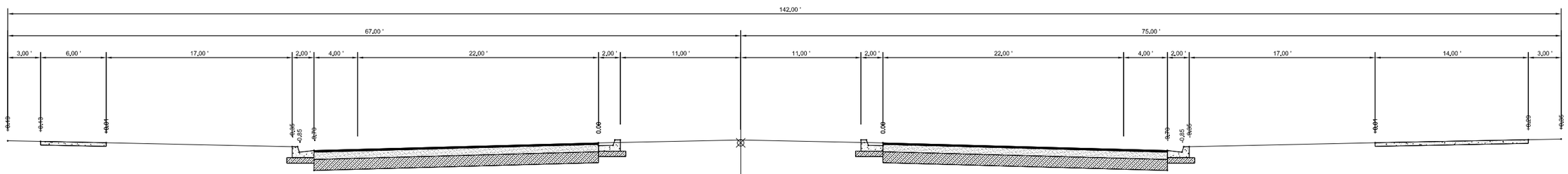
STORM STRUCTURE DATA

PREPARED FOR: PASCO COUNTY DEPARTMENT OF PUBLIC WORKS

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet



RANGELAND BOULEVARD
TYPICAL SECTION
STA 98+54.40 TO STA 150+68.67



RS-142-FULL

HEART PINE AVENUE
TYPICAL SECTION
STA 88+52.03 TO STA 127+78.13

NEW CONSTRUCTION

OPTIONAL BASE GROUP 6 WITH
TYPE SP STRUCTURAL COURSE (TRAFFIC B)(2")
AND FRICTION COURSE FC-12.5 (1½")(RUBBER)

WIDENING (SEE PLAN SHEETS FOR DETAILS)

OPTIONAL BASE GROUP 6 WITH
TYPE SP STRUCTURAL COURSE (TRAFFIC C)(2")
AND FRICTION COURSE FC-12.5 (1½")(RUBBER)

MILLING (SEE PLAN SHEETS FOR DETAILS)

MILL EXISTING ASPHALT PAVEMENT (1.5" AVG. DEPTH)

RESURFACING (SEE PLAN SHEETS FOR DETAILS)

TYPE SP STRUCTURAL COURSE (TRAFFIC C)(1½")

DATE	DESCRIPTION	BY
	REVISIONS	

$USER$ $DATE$ $TIME$ $FILE$

Engineering Business Certificate of Authorization No.: 28782
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Tampa, Florida 33610
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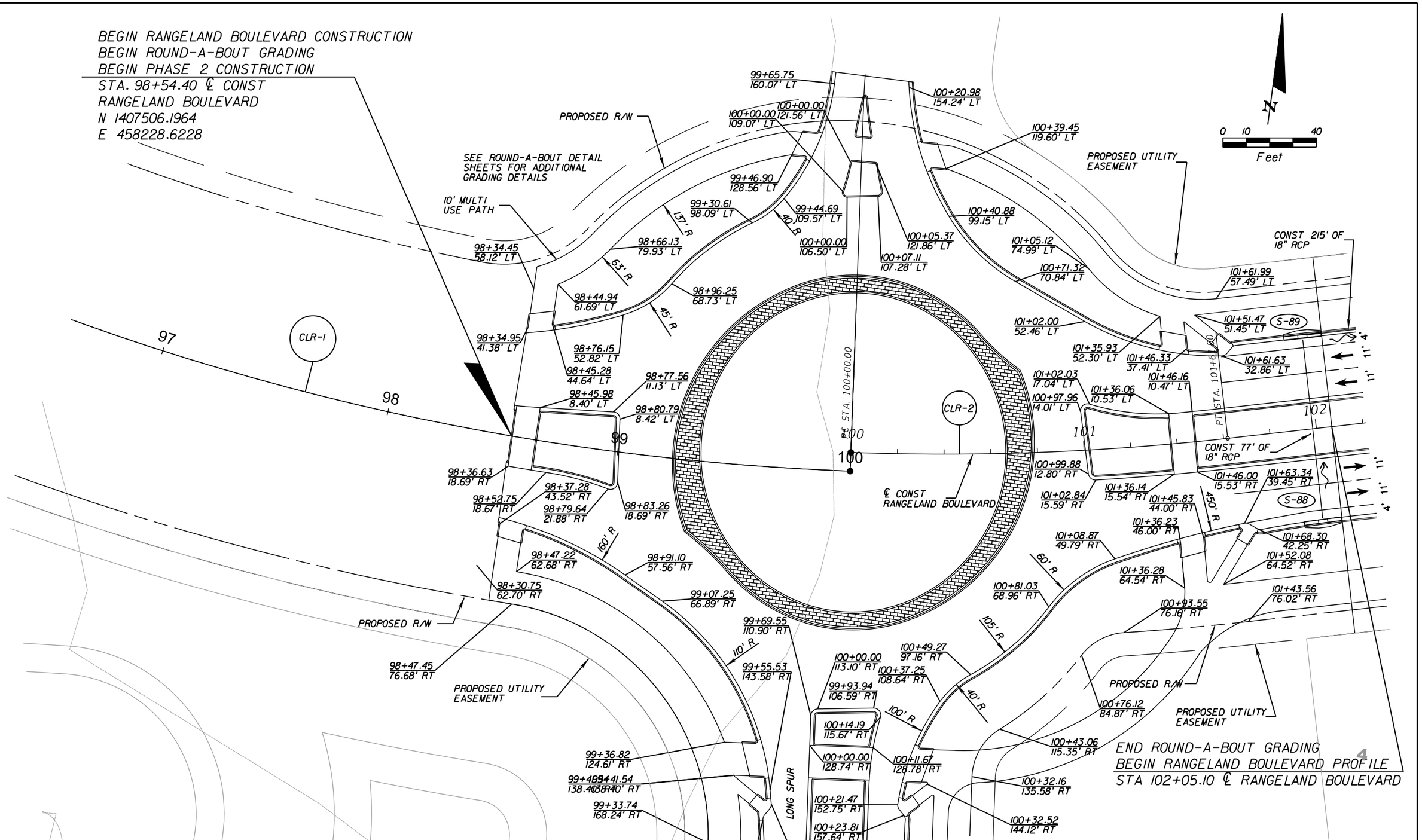
DATE:
THOMAS D. SULLIVAN NO. 55358
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1)

JOB NO.	TYPICAL SECTIONS
DESIGN SULLIVAN	
DRAWN COGAN	PREPARED FOR: WHEELOCK STREET CAPITAL
DATE OCT. 1, 2012	Elevations based on North American Vertical Datum 1988 (NAVD 88) Conversion from NAVD 88 to NGVD 29 = +0.83 Feet
FILE	SHEET 7 OF 87 SHEETS

BEGIN RANGELAND BOULEVARD CONSTRUCTION
BEGIN ROUND-A-BOUT GRADING
BEGIN PHASE 2 CONSTRUCTION
STA. 98+54.40 ℄ CONST
RANGELAND BOULEVARD
N 1407506.1964
E 458228.6228



CURVE DATA CLR-1
PI STA. = 95+93.91
Δ = 44° 43' 17" (LT)
D = 5° 12' 31"
T = 452.51
L = 858.59
R = 1,100.00
PC STA. = 91+41.40
PT STA. = 100+00.00

CURVE DATA CLR-2
PI STA. = 100+81.05
Δ = 8° 29' 22" (LT)
D = 5° 14' 49"
T = 81.05
L = 161.80
R = 1,092.00
PC STA. = 100+00.00
PT STA. = 101+61.80

SEE STARKEY RANCH VILLAGE I CONSTRUCTION PLANS FOR ADDITIONAL DETAILS

DATE	DESCRIPTION	BY
	REVISIONS	

Engineering Business Certificate of Authorization No. 28782
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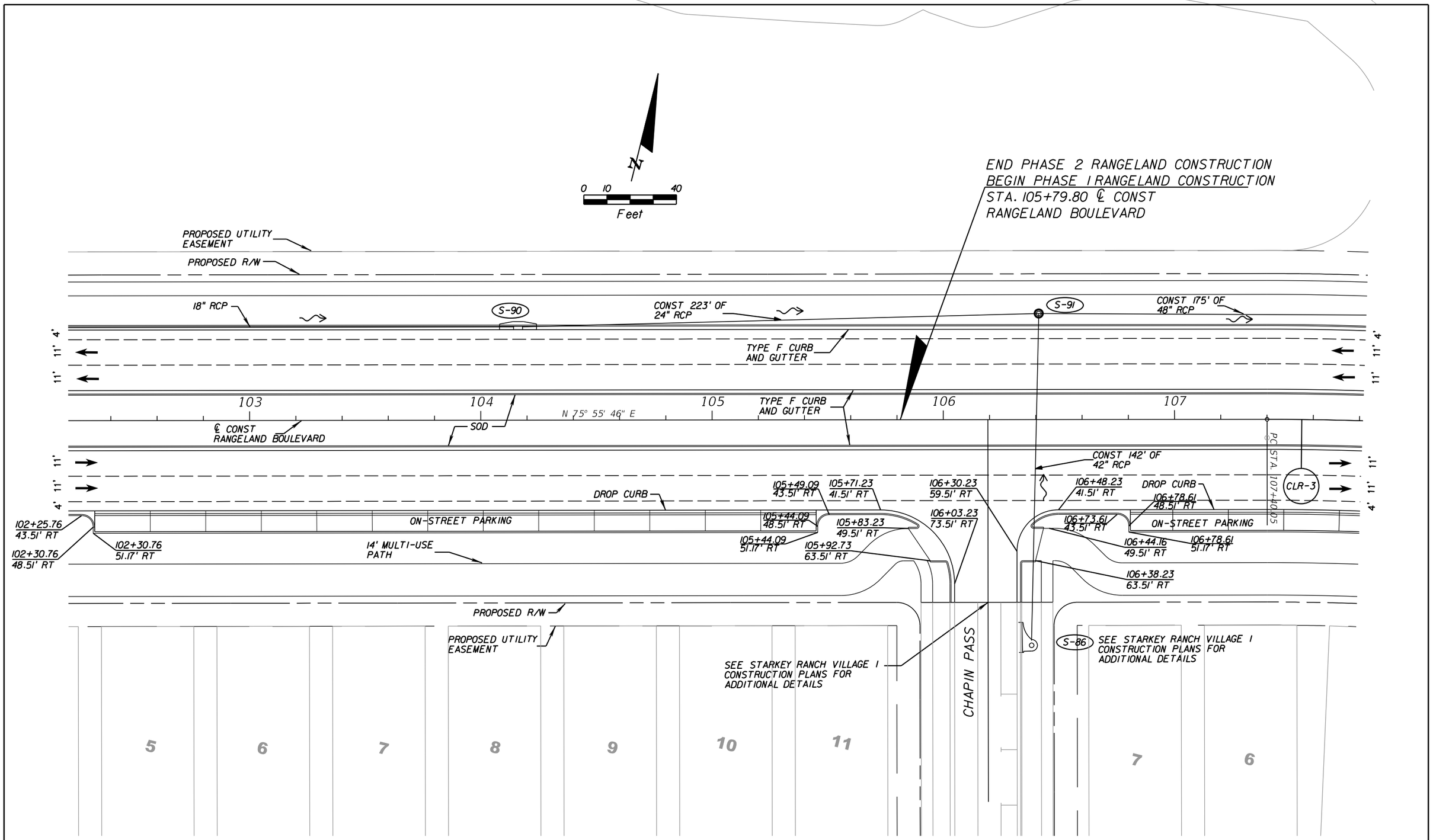
Tampa, Florida 33610
Office: 813-253-5311
Fax: 813-464-7629
DATE:
THOMAS D. SULLIVAN NO. 55358
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - RANGELAND BLVD

JOB NO.	RANGELAND BOULEVARD PLAN SHEET (1) STA 96+41.49 TO STA 102+20.00
DESIGN SULLIVAN	
DRAWN COGAN	PREPARED FOR: WHEELOCK STREET CAPITAL
DATE OCT. 1, 2012	Elevations based on North American Vertical Datum 1988 (NAVD 88) Conversion from NAVD 88 to NGVD 29 = +0.83 Feet
FILE	SHEET 8 OF 87 SHEETS

$USER$ $DATE$ $TIME$ $FILE$



CURVE DATA CLR-3
PI STA. = 108+84.19
Δ = 14° 04' 14" (RT)
D = 4° 54' 20"
T = 144.14
L = 286.84
R = 1,168.00
PC STA. = 107+40.05
PT STA. = 110+26.88

DATE	DESCRIPTION	BY
	REVISIONS	

$USER$ $DATE$ $TIME$ $FILE$

Engineering Business Certificate of Authorization No.: 28782

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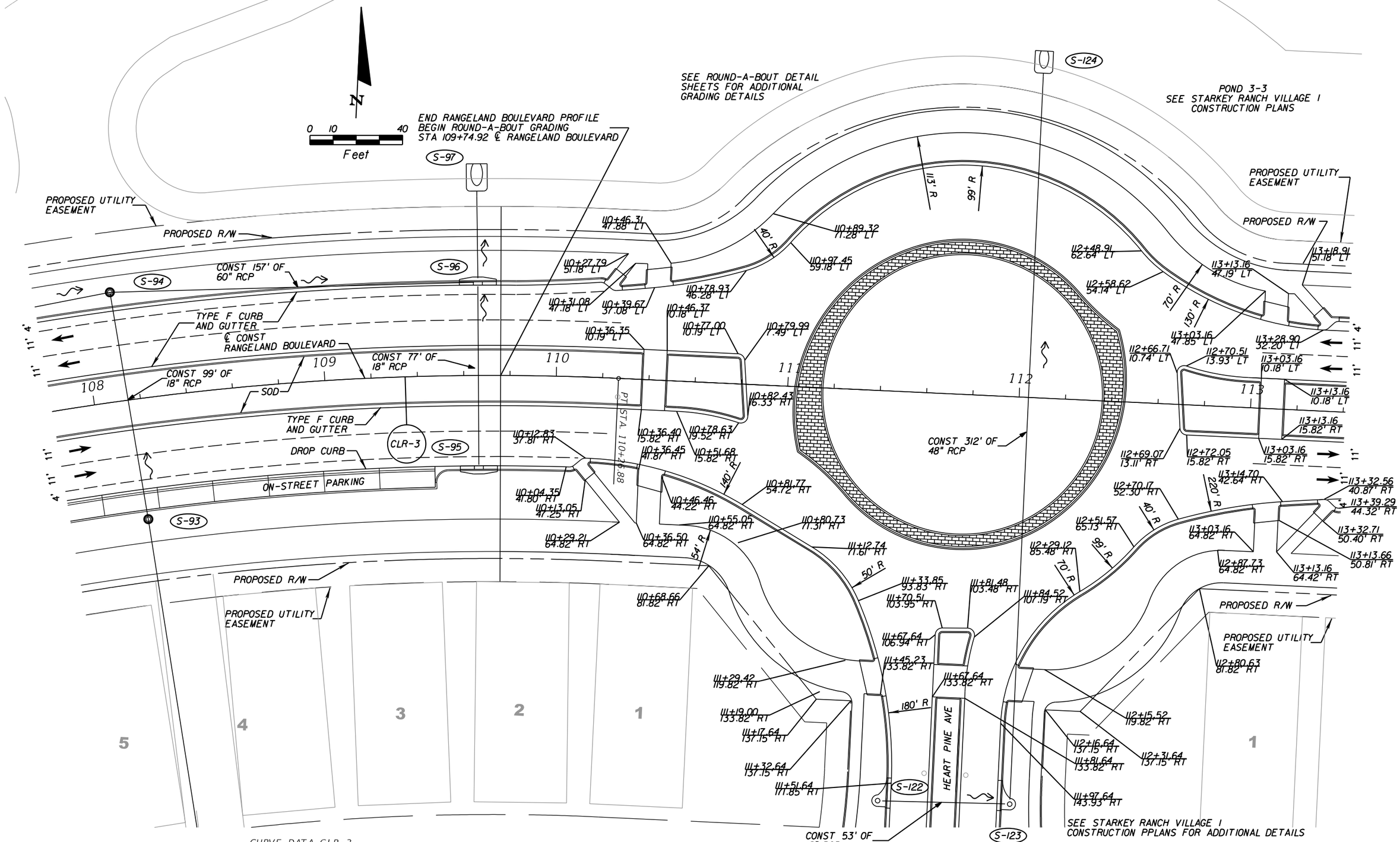
DATE:
THOMAS D. SULLIVAN NO. 55358
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - RANGELAND BLVD

JOB NO.	RANGELAND BOULEVARD PLAN SHEET (2) STA 102+20.00 TO STA 107+80.00
DESIGN SULLIVAN	
DRAWN COGAN	PREPARED FOR: WHEELOCK STREET CAPITAL
DATE OCT. 1, 2012	Elevations based on North American Vertical Datum 1988 (NAVD 88) Conversion from NAVD 88 to NGVD 29 = +0.83 Feet
FILE	SHEET 9 OF 87 SHEETS



CURVE DATA CLR-3
PI STA. = 108+84.19
Δ = 14° 04' 14" (RT)
D = 4° 54' 20"
T = 144.14
L = 286.84
R = 1,168.00
PC STA. = 107+40.05
PT STA. = 110+26.88

DATE	DESCRIPTION	BY
	REVISIONS	

Engineering Business Certificate of Authorization No. 28782

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THOMAS D. SULLIVAN NO. 55358
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - RANGELAND BLVD

JOB NO.	RANGELAND BOULEVARD PLAN SHEET (3) STA 107+80.00 TO STA 113+40.00
DESIGN SULLIVAN	
DRAWN COGAN	PREPARED FOR: WHEELOCK STREET CAPITAL
DATE OCT. 1, 2012	Elevations based on North American Vertical Datum 1988 (NAVD 88) Conversion from NAVD 88 to NGVD 29 = +0.83 Feet
FILE	SHEET 10 OF 87 SHEETS

$USER$ $DATE$ $TIME$ $FILE$

END ROUND-A-BOUT GRADING
BEGIN RANGELAND BOULEVARD PROFILE
STA 114+02.42 ℄ RANGELAND BOULEVARD

N

0 10 40
Feet

POND 3-3
SEE STARKEY RANCH VILLAGE I
CONSTRUCTION PLANS

END PHASE I RANGELAND CONSTRUCTION
BEGIN PHASE 3 RANGELAND CONSTRUCTION
STA. 116+59.78 ℄ CONST
RANGELAND BOULEVARD

PROPOSED UTILITY EASEMENT

S-135

CONST 44' OF 18" RCP

PROPOSED R/W

6' CONCRETE S/W

S-138

S-141

CONST 43' OF 18" RCP

S-140

S-134

TYPE F CURB AND GUTTER

CONST 173' OF 18" RCP

CONST 77' OF 18" RCP

114 115 116 117 118 119

Due East

℄ CONST RANGELAND BOULEVARD

SOD

PC STA. 118+07.60

114+03.12 43.85' RT

CONST 251' OF 18" RCP

114+08.20 48.82' RT

DROP CURB

115+58.53 43.82' RT

115+80.81 41.82' RT

116+50.92 41.82' RT

TYPE F CURB AND GUTTER

S-139

CLR-4

ON-STREET PARKING

ON-STREET PARKING

114+08.20 51.48' RT

115+53.53 51.48' RT

115+53.53 48.82' RT

115+98.86 59.82' RT

116+32.86 59.82' RT

116+69.08 43.82' RT

116+74.01 51.48' RT

116+74.01 48.82' RT

116+78.30 78.82' RT

14' MULTI-USE PATH

115+53.42 78.82' RT

115+70.39 71.79' RT

14' MULTI-USE PATH

115+72.87 81.82' RT

116+61.33 71.79' RT

115+83.36 63.82' RT

116+48.36 63.82' RT

115+82.87 91.82' RT

116+58.87 81.82' RT

116+48.87 91.82' RT

RIDERS PASS

2 3 4 5

1 2 3 4 5 6

1 2

SEE STARKEY RANCH VILLAGE I
CONSTRUCTION PLANS FOR ADDITIONAL DETAILS

11' 4'
11'
11'
11'
4' 11'

CURVE DATA CLR-4

PI STA.	=	120+92.80
Δ	=	50° 15' 38" (RT)
D	=	9° 25' 25"
T	=	285.20
L	=	533.35
R	=	608.00
PC STA.	=	118+07.60
PT STA.	=	123+40.94

DATE	DESCRIPTION	BY
	REVISIONS	

$USER$ $DATE$ $TIME$ $FILE$

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DATE:
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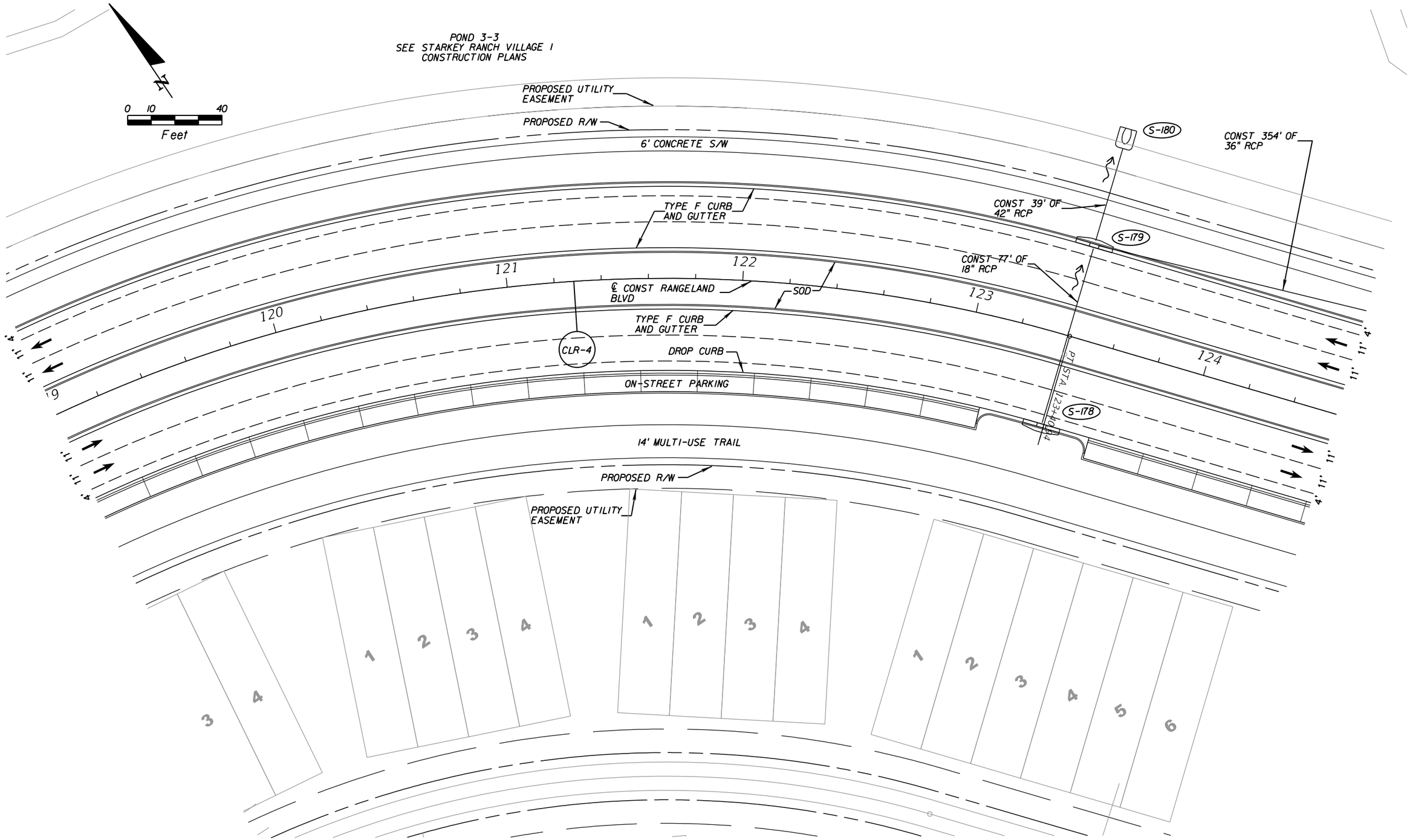
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - RANGELAND BLVD

JOB NO.	RANGELAND BOULEVARD PLAN SHEET (4) STA 113+40.00 TO STA 119+00.00
DESIGN SULLIVAN	
DRAWN COGAN	PREPARED FOR: WHEELOCK STREET CAPITAL
DATE OCT. 1, 2012	Elevations based on North American Vertical Datum 1988 (NAVD 88) Conversion from NAVD 88 to NGVD 29 = +0.83 Feet
FILE	SHEET 11 OF 87 SHEETS



CURVE DATA CLR-4

PI STA.	=	120+92.80
Δ	=	50° 15' 38" (RT)
D	=	9° 25' 25"
T	=	285.20
L	=	533.35
R	=	608.00
PC STA.	=	118+07.60
PT STA.	=	123+40.94

DATE	DESCRIPTION	BY
REVISIONS		

$USER$ $DATE$ $TIME$ $FILE$

Engineering Business Certificate of Authorization No. 28782
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DATE:
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FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - RANGELAND BLVD

JOB NO.	RANGELAND BOULEVARD PLAN SHEET (5) STA 119+00.00 TO STA 124+60.00
DESIGN SULLIVAN	
DRAWN COGAN	PREPARED FOR: WHEELOCK STREET CAPITAL
DATE OCT. 1, 2012	Elevations based on North American Vertical Datum 1988 (NAVD 88) Conversion from NAVD 88 to NGVD 29 = +0.83 Feet
FILE	SHEET 12 OF 87 SHEETS

SEE STARKEY RANCH VILLAGE I
CONSTRUCTION PLANS FOR ADDITIONAL DETAILS

WETLAND C-35
CATEGORY II

WETLAND C-58
CATEGORY III

0 10 40
Feet

END RANGELAND BOULEVARD PROFILE
BEGIN ROUND-A-BOUT GRADING
STA 126+33.63 ℄ RANGELAND BOULEVARD

SEE ROUND-A-BOUT DETAIL
SHEETS FOR ADDITIONAL
GRADING DETAILS

END ROUND-A-BOUT GRADING
BEGIN RANGELAND BOULEVARD PROFILE
STA 129+96.26 ℄ RANGELAND BOULEVARD

PROPOSED UTILITY
EASEMENT

PROPOSED R/W

6' CONCRETE S/W

36" RCP

TYPE F CURB
AND GUTTER

SOD

S 39° 44' 22" E

ON-STREET PARKING

14' MULTI-USE PATH

CONST 293' OF
30" RCP

CONST 255' OF
24" RCP

CONST 33' OF
18" RCP

℄ CONST
RANGELAND BLVD

PC STA. 128+13.36

BERRY PICK
TRAIL

S-177
S-173
S-175
S-176
CLR-5

125
126
127
128
129
130

CURVE DATA CLR-5
PI STA. = 133+02.63
Δ = 48° 16' 11" (LT)
D = 5° 14' 49"
T = 489.28
L = 919.98
R = 1,092.00
PC STA. = 128+13.36
PT STA. = 137+33.33

SEE STARKEY RANCH VILLAGE I
CONSTRUCTION PLANS FOR ADDITIONAL DETAILS

DATE	DESCRIPTION	BY
	REVISIONS	

$USER$ $DATE$ $TIME$ $FILE$

Engineering Business Certificate of Authorization No. 28782
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Tampa, Florida 33610
Office: 813-253-5311
Fax: 813-464-7629

DATE:
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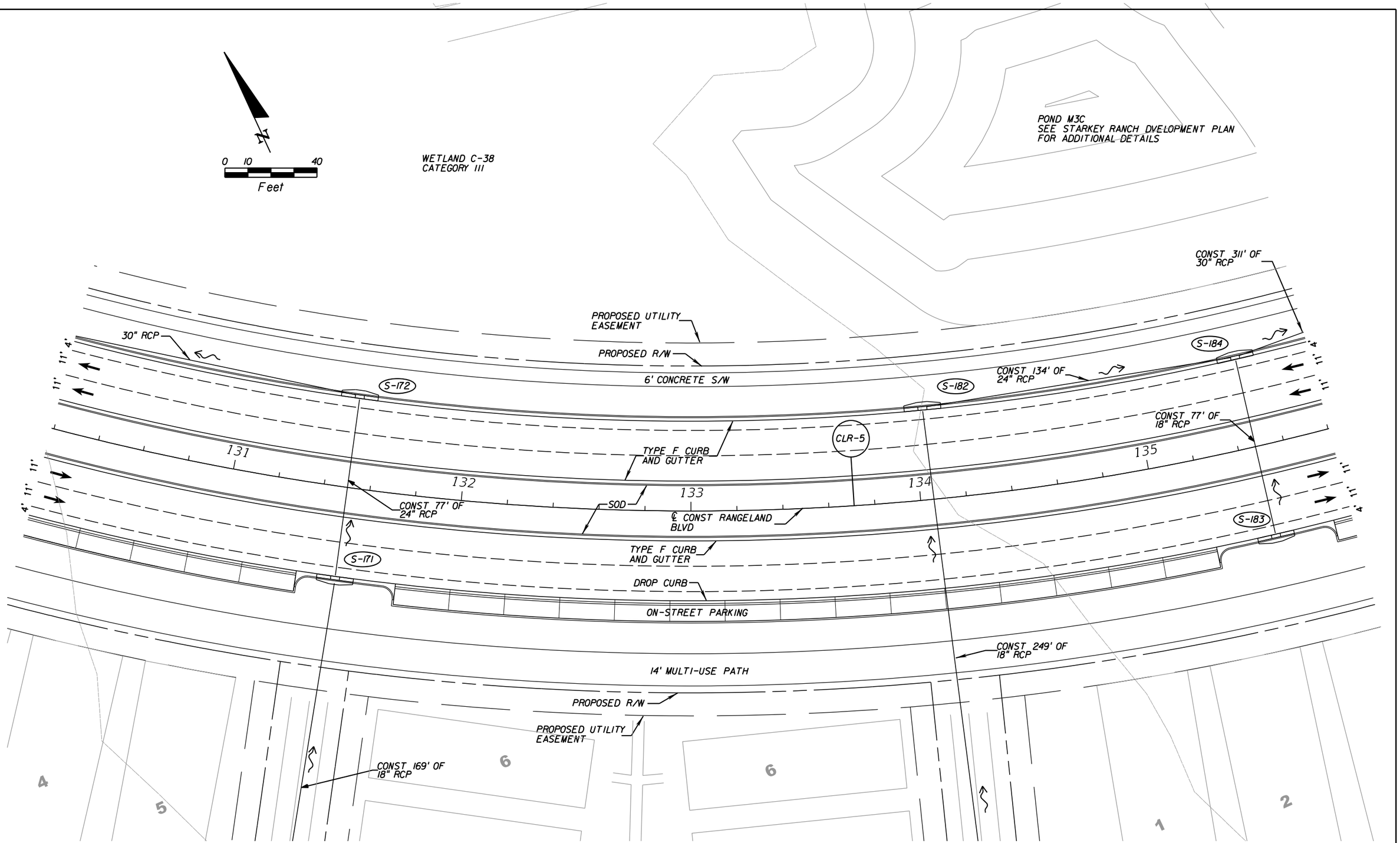
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - RANGELAND BLVD

JOB NO.	RANGELAND BOULEVARD PLAN SHEET (6) STA 124+60.00 TO STA 130+20.00
DESIGN SULLIVAN	
DRAWN COGAN	PREPARED FOR: WHEELOCK STREET CAPITAL
DATE OCT. 1, 2012	Elevations based on North American Vertical Datum 1988 (NAVD 88) Conversion from NAVD 88 to NGVD 29 = +0.83 Feet
FILE	SHEET 13 OF 87 SHEETS



CURVE DATA CLR-5
PI STA. = 133+02.63
Δ = 48° 16' 11" (LT)
D = 5° 14' 49"
T = 489.28
L = 919.98
R = 1,092.00
PC STA. = 128+13.36
PT STA. = 137+33.33

DATE	DESCRIPTION	BY
	REVISIONS	

$USER$ $DATE$ $TIME$ $FILE$

Engineering Business Certificate of Authorization No. 28782
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Tampa, Florida 33610
Office: 813-253-5311
Fax: 813-464-7629
DATE:
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FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - RANGELAND BLVD

JOB NO.	RANGELAND BOULEVARD PLAN SHEET (7) STA 130+20.00 TO STA 135+80.00
DESIGN SULLIVAN	
DRAWN COGAN	PREPARED FOR: WHEELOCK STREET CAPITAL
DATE OCT. 1, 2012	Elevations based on North American Vertical Datum 1988 (NAVD 88) Conversion from NAVD 88 to NGVD 29 = +0.83 Feet
FILE	SHEET 14 OF 87 SHEETS

WETLAND C-37
CATEGORY II

POND M3D
SEE STARKEY RANCH VILLAGE I
CONSTRUCTION PLANS FOR ADDITIONAL DETAILS

0 10 40
Feet

PROPOSED UTILITY EASEMENT
PROPOSED R/W
6' CONCRETE S/W
30" RCP
CONST 208' OF 30" RCP
CONST 161' OF 36" RCP
S-186
S-189
CLR-5
CLR-6
PT STA. 137+33.33
PC STA. 139+35.54
TYPE F CURB AND GUTTER
SOD
136
137
138
139
140
141
S 88° 00' 33" E
℄ CONST RANGELAND BLVD
TYPE F CURB AND GUTTER
DROP CURB
ON-STREET PARKING
CONST 130' OF 18" RCP
14' MULTI-USE PATH
CONST 253' OF 18" RCP
PROPOSED R/W
PROPOSED UTILITY EASEMENT
BATTEN LANE
S-187
S-188
SEE STARKEY RANCH VILLAGE I CONSTRUCTIO PLANS FOR ADDITIONAL DETAILS

139+82.40 43.90' RT
140+08.10 41.92' RT
139+77.00 48.92' RT
140+16.26 49.92' RT
139+77.00 51.56' RT
139+97.78 54.08' RT
139+85.18 62.91' RT
139+78.60 64.89' RT
140+11.05 84.30' RT
140+60.00 76.80' RT
140+30.13 63.30' RT
140+82.63 49.96' RT
140+96.01 41.96' RT
141+14.44 43.96' RT
141+19.85 48.99' RT
141+00.94 56.53' RT
141+08.06 62.43' RT
141+19.85 51.63' RT
141+15.36 64.96' RT
140+76.45 86.03' RT

4 5 6 7 8 6 5

CURVE DATA CLR-5
PI STA. = 133+02.63
Δ = 48° 16' 11" (LT)
D = 5° 14' 49"
T = 489.28
L = 919.98
R = 1,092.00
PC STA. = 128+13.36
PT STA. = 137+33.33

CURVE DATA CLR-6
PI STA. = 142+32.24
Δ = 48° 32' 35" (RT)
D = 8° 42' 27"
T = 296.70
L = 557.48
R = 658.00
PC STA. = 139+35.54
PT STA. = 144+93.02

DATE	DESCRIPTION	BY
	REVISIONS	

$USER$ $DATE$ $TIME$ $FILE$

Engineering Business Certificate of Authorization No.: 28782
HEIDT DESIGN, LLC
5806-B Breckenridge Parkway
Tampa, Florida 33610
Office: 813-253-5311
Fax: 813-464-7629

DATE:
THOMAS D. SULLIVAN NO. 55358
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - RANGELAND BLVD

JOB NO.	RANGELAND BOULEVARD PLAN SHEET (8) STA 135+80.00 TO STA 141+40.00
DESIGN SULLIVAN	
DRAWN COGAN	PREPARED FOR: WHEELOCK STREET CAPITAL
DATE OCT. 1, 2012	Elevations based on North American Vertical Datum 1988 (NAVD 88) Conversion from NAVD 88 to NGVD 29 = +0.83 Feet
FILE	SHEET 15 OF 87 SHEETS

POND 8-1
SEE STARKEY RANCH VILLAGE I
CONSTRUCTION PLANS FOR ADDITIONAL DETAILS

S-526 S-528 S-530 S-532 S-534 S-536

S-192

CONST 44' OF 42" RCP

PROPOSED UTILITY EASEMENT

PROPOSED R/W

CONST 167' OF 36" RCP

6' CONCRETE S/W

S-191

30" RCP

S-190

TYPE F CURB AND GUTTER

142 143 144 145 146 147

℄ CONST RANGELAND BLVD

CLR-6

TYPE F CURB AND GUTTER

SOD

PT STA. 144+93.02

DROP CURB

ON-STREET PARKING

14' MULTI-USE PATH

PROPOSED R/W

PROPOSED UTILITY EASEMENT

CONST 188' OF 6 - 48"X76" RCP

S-525 S-527 S-529 S-531 S-533 S-535

POND M3B
SEE STARKEY RANCH VILLAGE I
CONSTRUCTION PLANS FOR ADDITIONAL DETAILS

0 10 40
Feet

CURVE DATA CLR-6
PI STA. = 142+32.24
Δ = 48° 32' 35" (RT)
D = 8° 42' 27"
T = 296.70
L = 557.48
R = 658.00
PC STA. = 139+35.54
PT STA. = 144+93.02

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FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - RANGELAND BLVD

JOB NO.

DESIGN: SULLIVAN

DRAWN: COGAN

DATE: OCT. 1, 2012

FILE

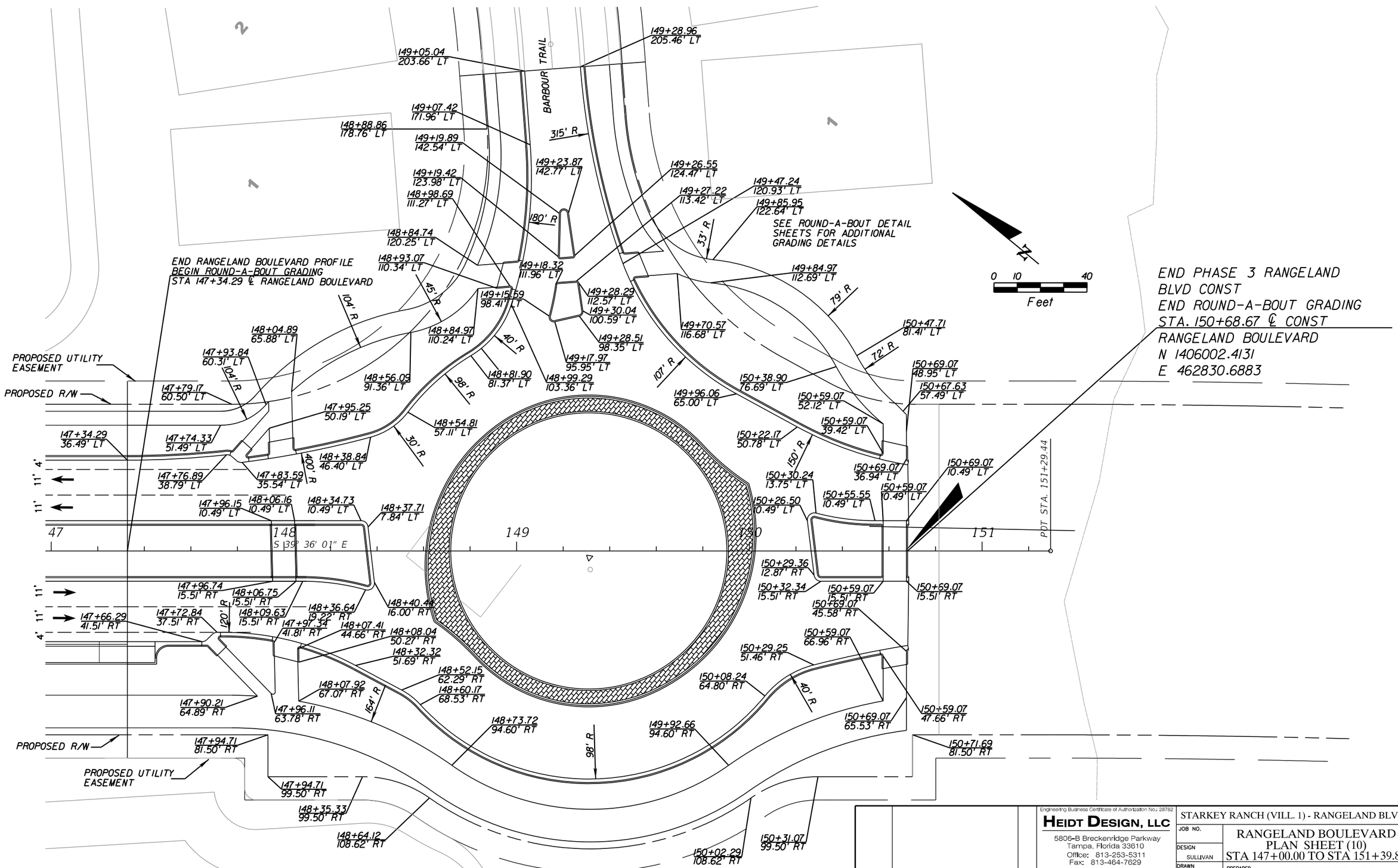
RANGELAND BOULEVARD
PLAN SHEET (9)
STA 141+40.00 TO STA 147+00.00

PREPARED FOR: WHEELOCK STREET CAPITAL

Elevations based on North American Vertical Datum 1988 (NAVD 88)
Conversion from NAVD 88 to NGVD 29 = +0.83 Feet

SHEET 16 OF 87 SHEETS

$USER$ $DATE$ $TIME$ $FILE$



DATE	DESCRIPTION	BY
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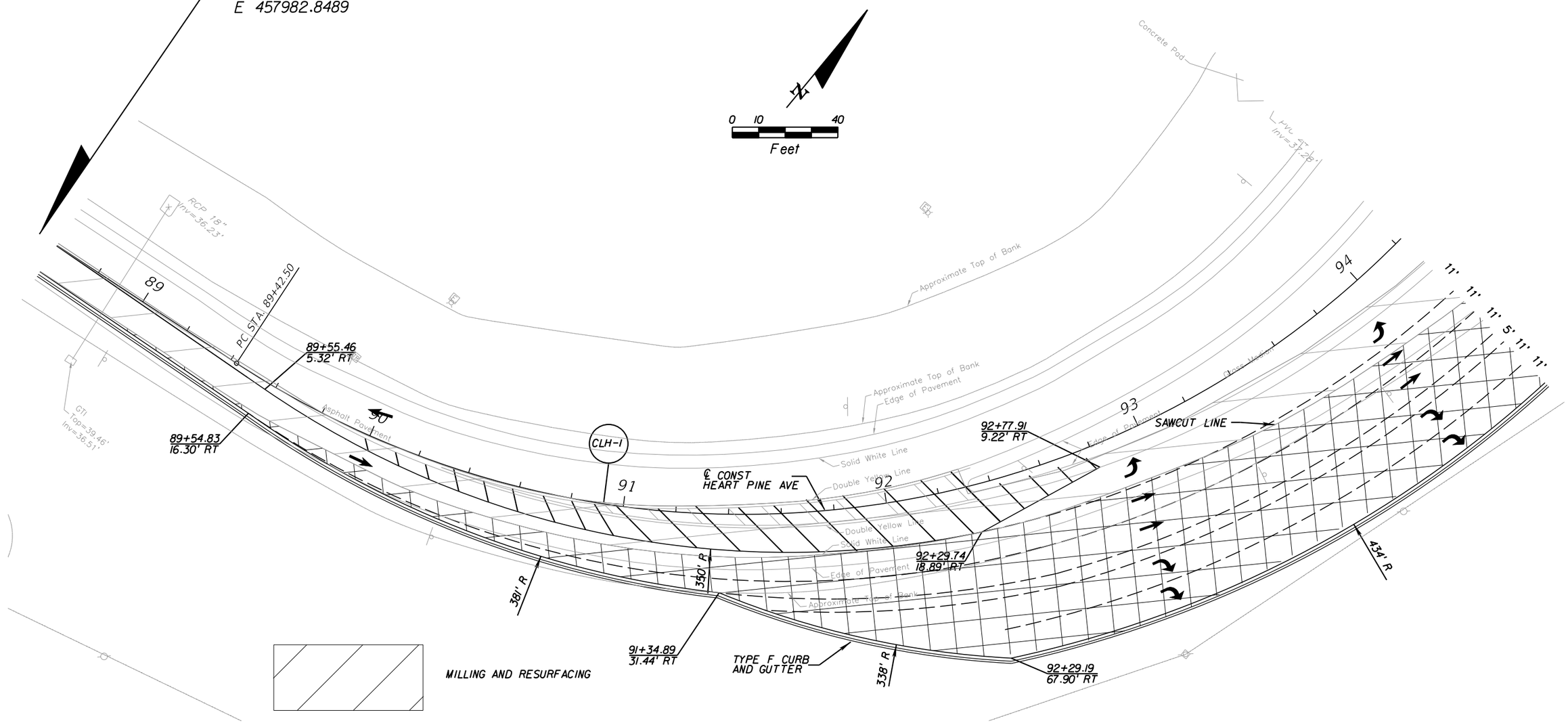
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - RANGELAND BLVD

JOB NO.	RANGELAND BOULEVARD PLAN SHEET (10) STA 147+00.00 TO STA 151+39.86
DESIGN SULLIVAN	
DRAWN COGAN	PREPARED FOR: WHEELOCK STREET CAPITAL
DATE OCT. 1, 2012	Elevations based on North American Vertical Datum 1988 (NAVD 88) Conversion from NAVD 88 to NGVD 29 = +0.83 Feet
FILE	SHEET 17 OF 87 SHEETS

$USER$ $DATE$ $TIME$ $FILE$

BEGIN TRINITY BOULEVARD MILLING
RESURFACING AND WIDENING
STA. 88+52.03 ℄ CONST
HEART PINE AVE
N 1401925.5250
E 457982.8489



MILLING AND RESURFACING

WIDENING

CURVE DATA CLH-1
PI STA. = 92+86.00
Δ = 88° 55' 37" (LT)
D = 16° 22' 13"
T = 343.51
L = 543.22
R = 350.00
PC STA. = 89+42.50
PT STA. = 94+85.72

DATE	DESCRIPTION	BY
	REVISIONS	

$USER$ $DATE$ $TIME$ $FILE$

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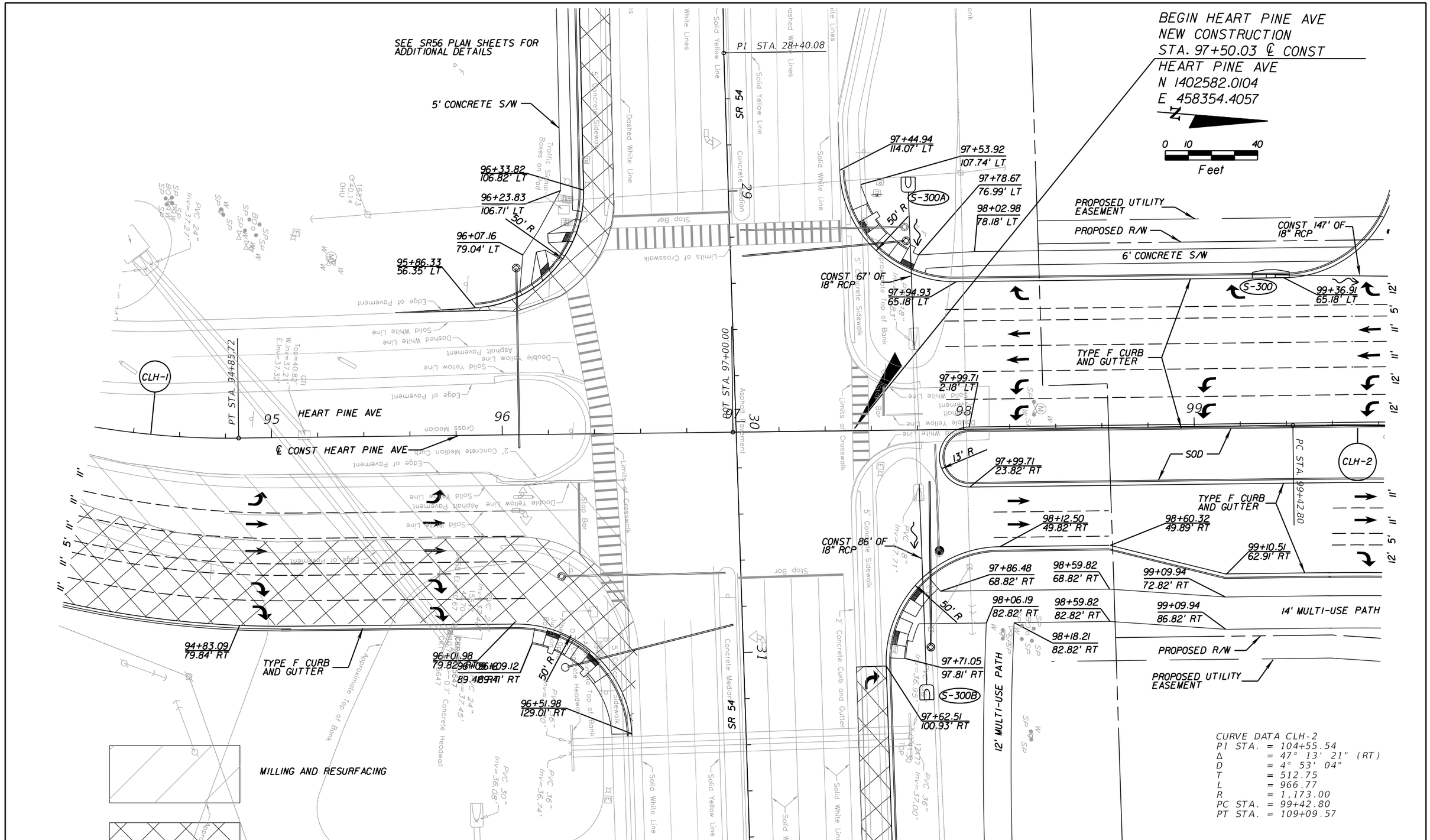
DATE:
THOMAS D. SULLIVAN NO. 55358
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - HEART PINE AVE

JOB NO.	HEART PINE AVE PLAN SHEET (1) STA 88+52.03 TO STA 94+20.00
DESIGN SULLIVAN	
DRAWN COGAN	PREPARED FOR: WHEELOCK STREET CAPITAL
DATE OCT. 1, 2012	Elevations based on North American Vertical Datum 1988 (NAVD 88) Conversion from NAVD 88 to NGVD 29 = +0.83 Feet
FILE	SHEET 18 OF 87 SHEETS



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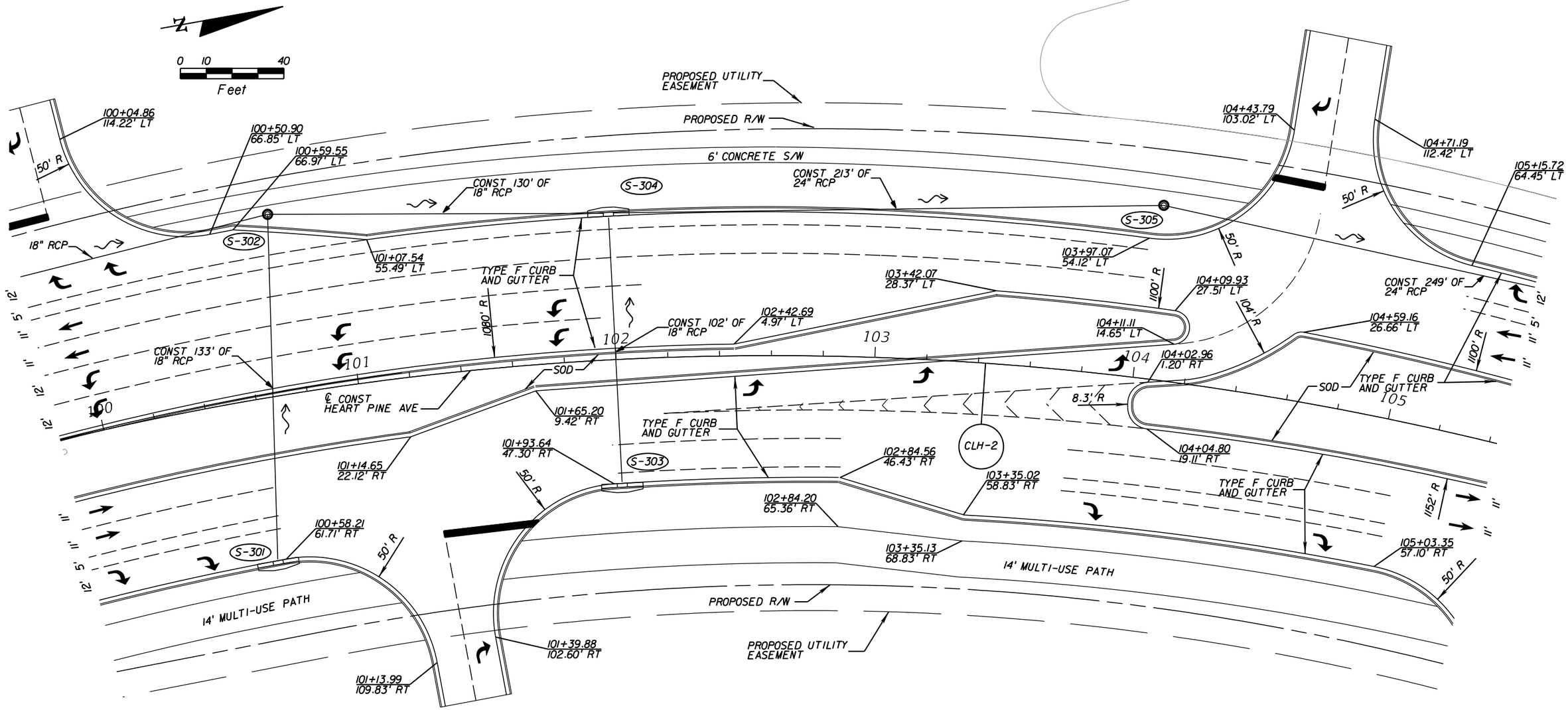
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - HEART PINE AVE

JOB NO.	HEART PINE AVE PLAN SHEET (2) STA 94+20.00 TO STA 99+80.00
DESIGN SULLIVAN	
DRAWN COGAN	PREPARED FOR: WHEELOCK STREET CAPITAL
DATE OCT. 1, 2012	Elevations based on North American Vertical Datum 1988 (NAVD 88) Conversion from NAVD 88 to NGVD 29 = +0.83 Feet
FILE	SHEET 19 OF 87 SHEETS

$USER$ $DATE$ $TIME$ $FILE$



CURVE DATA CLH-2
PI STA. = 104+55.54
Δ = 47° 13' 21" (RT)
D = 4° 53' 04"
T = 512.75
L = 966.77
R = 1,173.00
PC STA. = 99+42.80
PT STA. = 109+09.57

DATE	DESCRIPTION	BY
	REVISIONS	

$USER$ $DATE$ $TIME$ $FILE$

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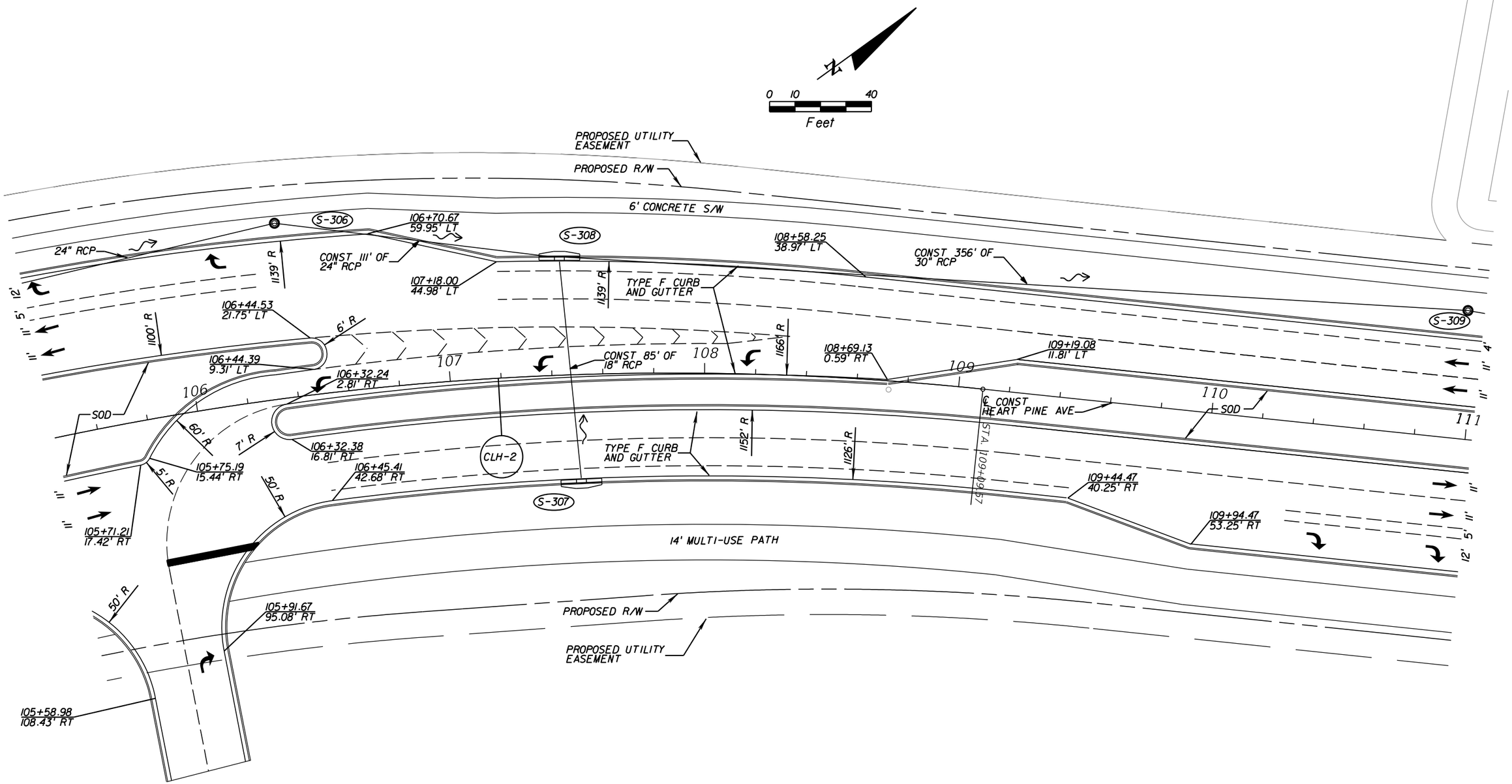
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - HEART PINE AVE

JOB NO.	HEART PINE AVE PLAN SHEET (3) STA 99+80.00 TO STA 105+40.00
DESIGN SULLIVAN	
DRAWN COGAN	PREPARED FOR: WHEELOCK STREET CAPITAL
DATE OCT. 1, 2012	Elevations based on North American Vertical Datum 1988 (NAVD 88) Conversion from NAVD 88 to NGVD 29 = +0.83 Feet
FILE	SHEET 20 OF 87 SHEETS



CURVE DATA CLH-2
PI STA. = 104+55.54
Δ = 47° 13' 21" (RT)
D = 4° 53' 04"
T = 512.75
L = 966.77
R = 1,173.00
PC STA. = 99+42.80
PT STA. = 109+09.57

DATE	DESCRIPTION	BY
	REVISIONS	

$USER$ $DATE$ $TIME$ $FILE$

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Tampa, Florida 33610
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Fax: 813-464-7629

DATE:
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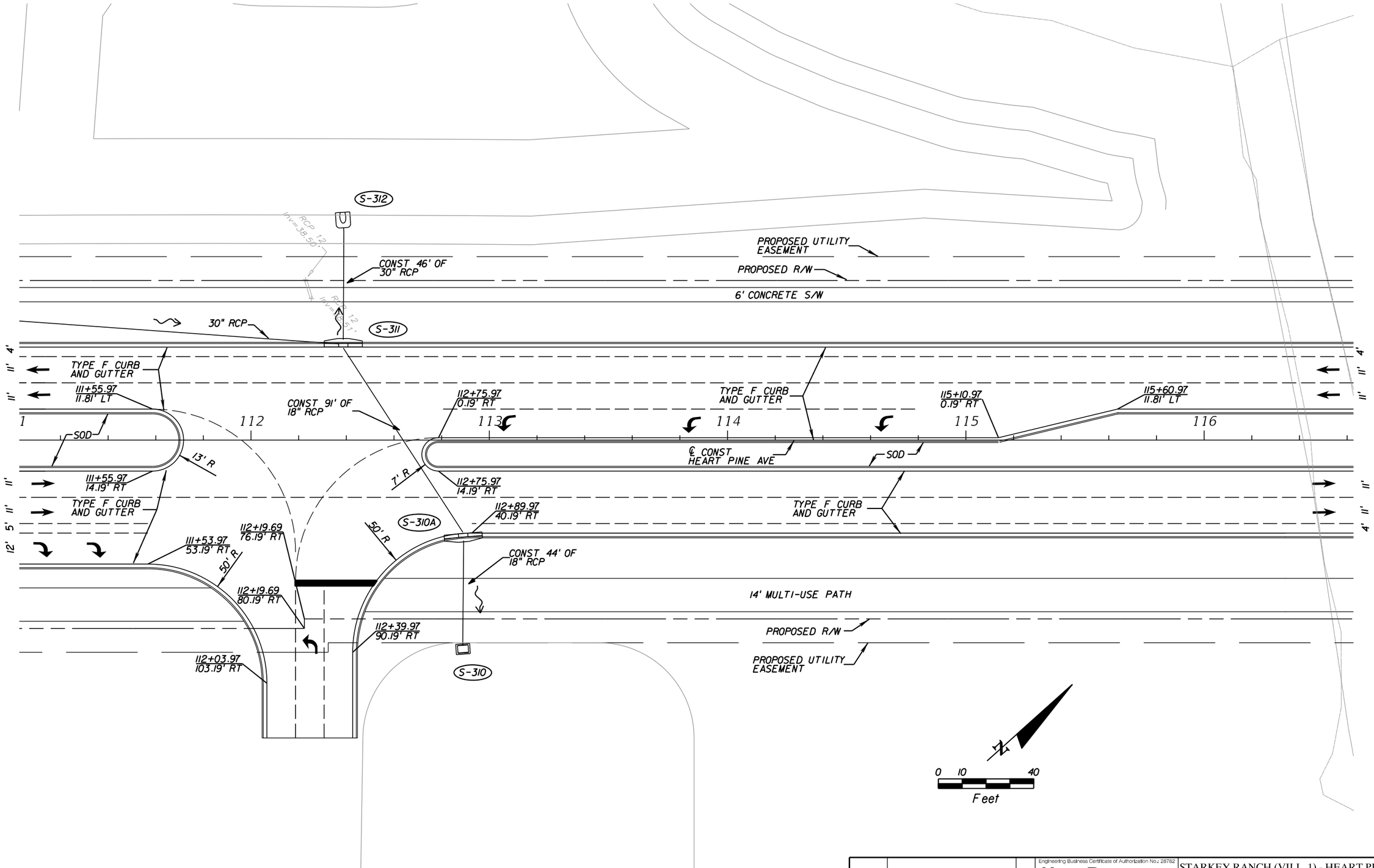
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - HEART PINE AVE

JOB NO.	HEART PINE AVE PLAN SHEET (4) STA 105+40.00 TO STA 111+00.00
DESIGN SULLIVAN	
DRAWN COGAN	PREPARED FOR: WHEELOCK STREET CAPITAL
DATE OCT. 1, 2012	Elevations based on North American Vertical Datum 1988 (NAVD 88) Conversion from NAVD 88 to NGVD 29 = +0.83 Feet
FILE	SHEET 21 OF 87 SHEETS



DATE	DESCRIPTION	BY
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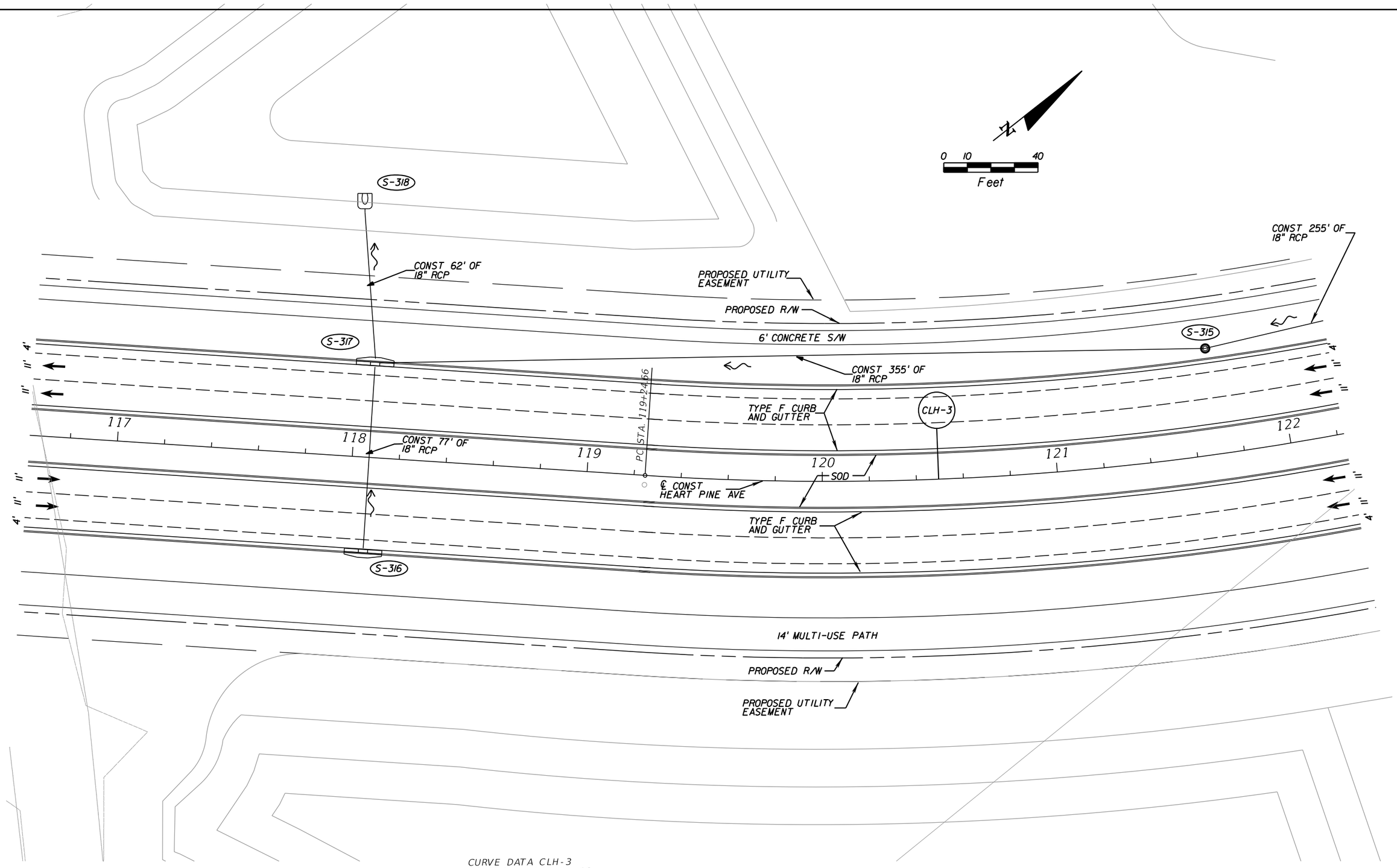
STARKEY RANCH (VILL. 1) - HEART PINE AVE

JOB NO.	HEART PINE AVE PLAN SHEET (5) STA 111+00.00 TO STA 116+60.00
DESIGN SULLIVAN	
DRAWN COGAN	PREPARED FOR: WHEELOCK STREET CAPITAL
DATE OCT. 1, 2012	Elevations based on North American Vertical Datum 1988 (NAVD 88) Conversion from NAVD 88 to NGVD 29 = +0.83 Feet
FILE	SHEET 22 OF 87 SHEETS

$USER$ $DATE$ $TIME$ $FILE$



CURVE DATA CLH-3
PI STA. = 123+81.66
Δ = 41° 49' 28" (LT)
D = 4° 47' 26"
T = 457.00
L = 873.05
R = 1,196.00
PC STA. = 119+24.66
PT STA. = 127+97.71

DATE	DESCRIPTION	BY
	REVISIONS	

$USER$ $DATE$ $TIME$ $FILE$

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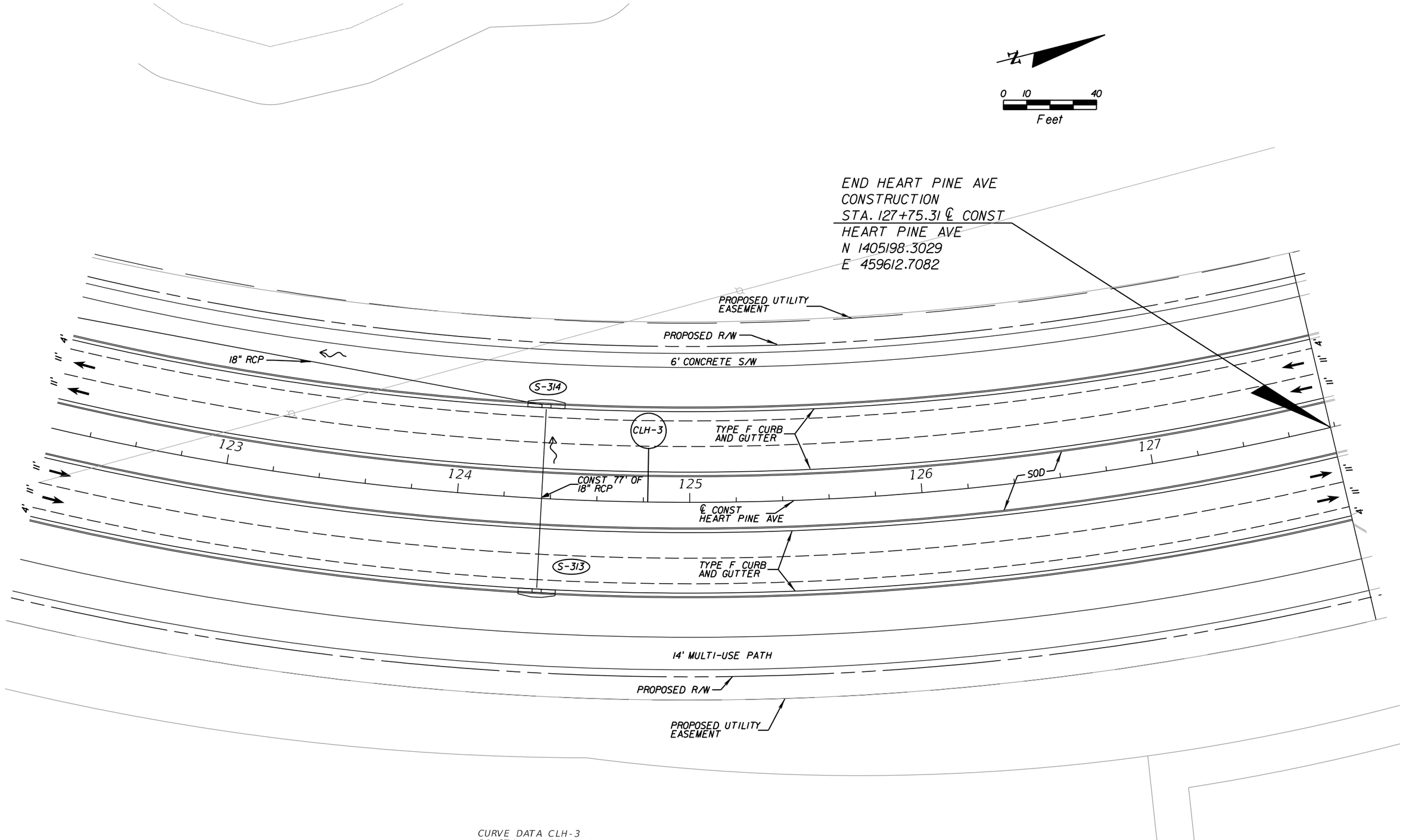
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - HEART PINE AVE

JOB NO.	HEART PINE AVE PLAN SHEET (6) STA 116+60.00 TO STA 122+20.00
DESIGN SULLIVAN	
DRAWN COGAN	PREPARED FOR: WHEELOCK STREET CAPITAL
DATE OCT. 1, 2012	Elevations based on North American Vertical Datum 1988 (NAVD 88) Conversion from NAVD 88 to NGVD 29 = +0.83 Feet
FILE	SHEET 23 OF 87 SHEETS



CURVE DATA CLH-3
PI STA. = 123+81.66
Δ = 41° 49' 28" (LT)
D = 4° 47' 26"
T = 457.00
L = 873.05
R = 1,196.00
PC STA. = 119+24.66
PT STA. = 127+97.71

DATE	DESCRIPTION	BY
REVISIONS		

$USER$ $DATE$ $TIME$ $FILE$

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DATE:
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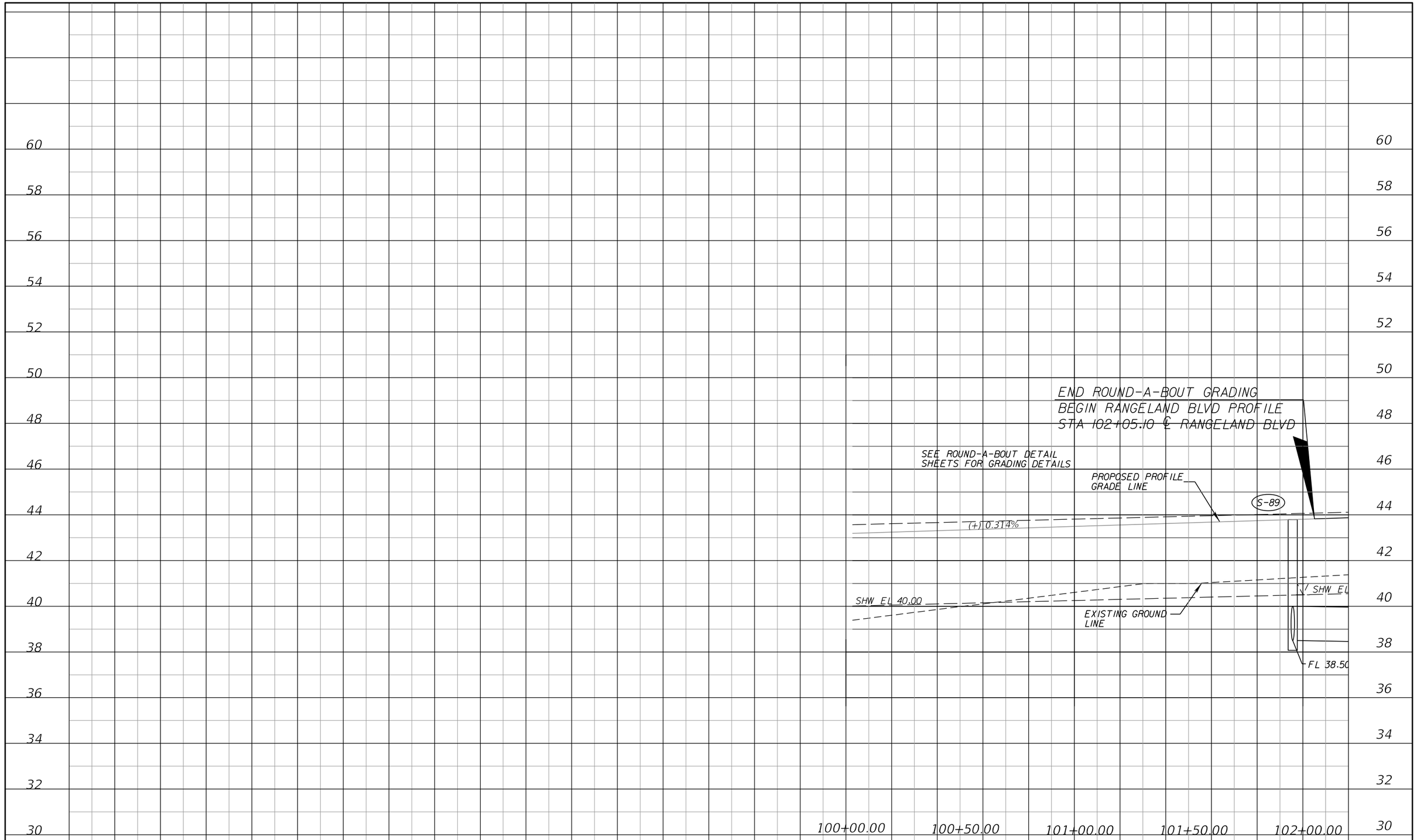
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - HEART PINE AVE

JOB NO.	HEART PINE AVE PLAN SHEET (7) STA 122+20.00 TO STA 127+75.31
DESIGN SULLIVAN	
DRAWN COGAN	PREPARED FOR: WHEELOCK STREET CAPITAL
DATE OCT. 1, 2012	Elevations based on North American Vertical Datum 1988 (NAVD 88) Conversion from NAVD 88 to NGVD 29 = +0.83 Feet
FILE	SHEET 24 OF 87 SHEETS



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DATE:
THOMAS D. SULLIVAN NO. 55358
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1)- RANGELAND BLVD

PROJECT NO.

CIP PROJECT NO

DESIGN
TOM SULLIVAN

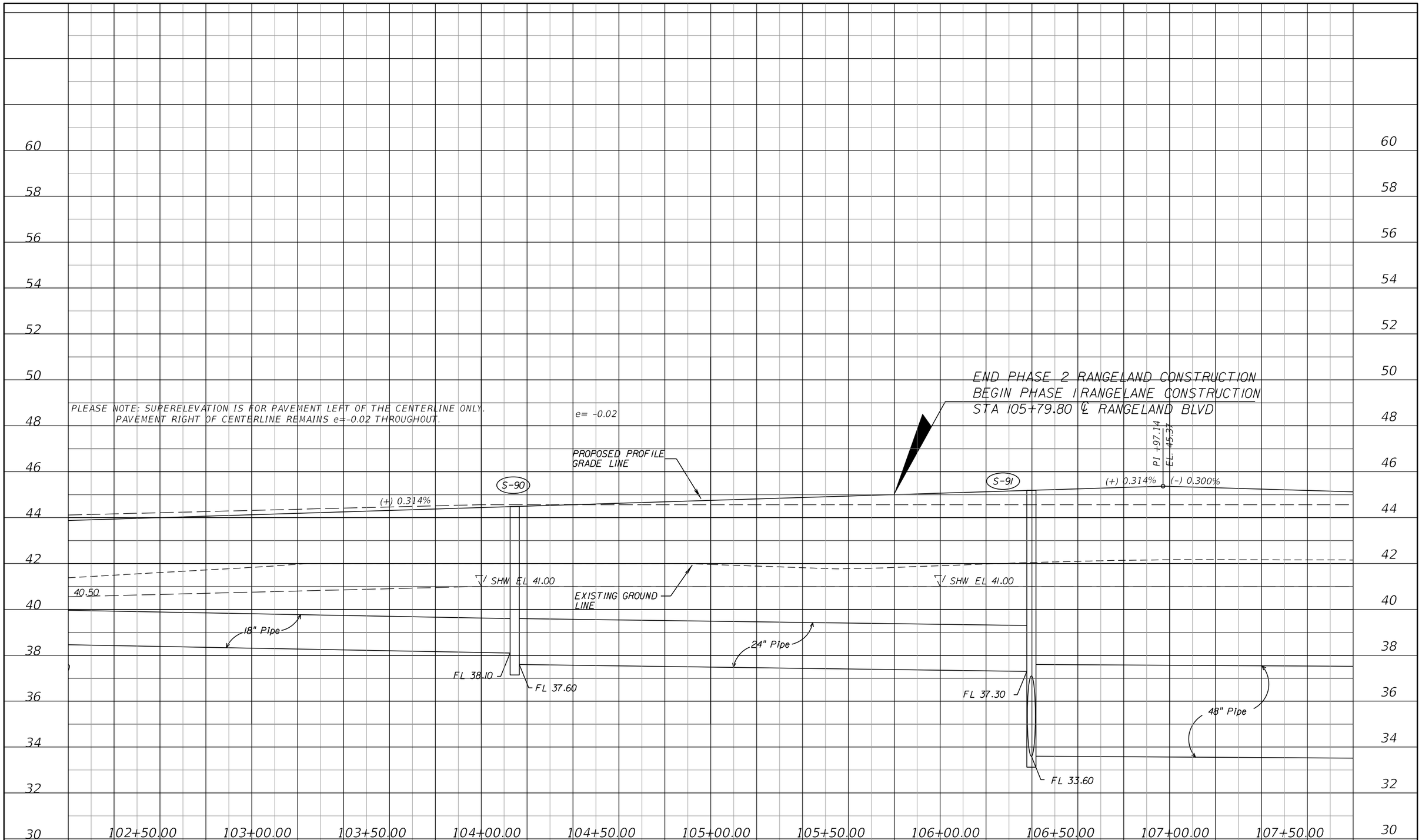
RANGELAND BLVD
PROFILE SHEET (1)
STA 96+41.49 TO STA 102+20.00

PREPARED FOR: WHEELOCK STREET CAPITAL

Elevations based on North American Vertical Datum 1988 (NAVD 88)
Conversion from NAVD 88 to NGVD 29 = +0.89 Feet

SHEET 25 OF 87 SHEETS

$USER$ $DATE$ $TIME$ $FILE$



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DATE:
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STARKEY RANCH (VILL. 1)- RANGELAND BLVD

PROJECT NO.

CIP PROJECT NO

DESIGN
TOM SULLIVAN

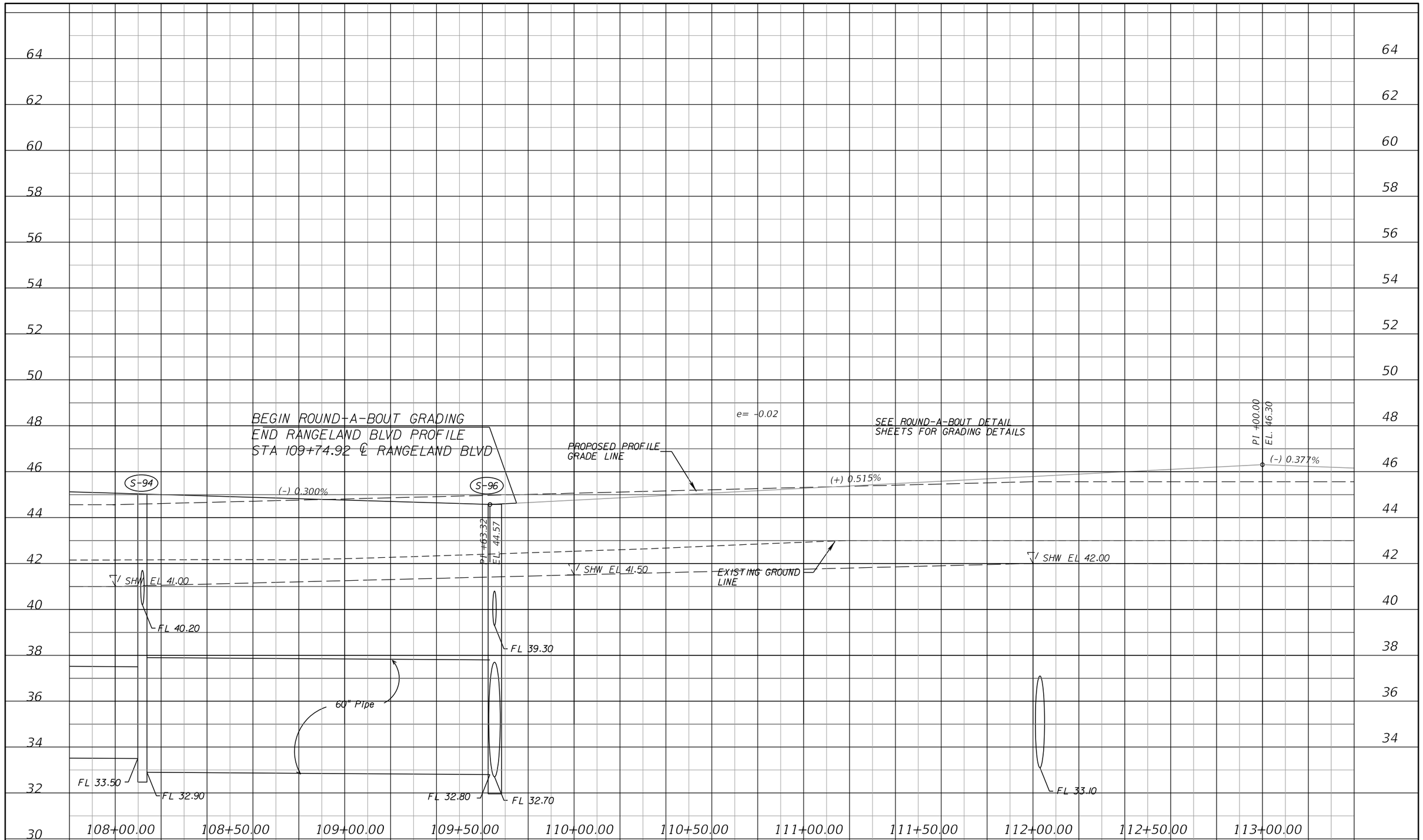
RANGELAND BLVD
PROFILE SHEET (2)
STA 102+20.00 TO STA 107+80.00

PREPARED FOR: WHEELOCK STREET CAPITAL

Elevations based on North American Vertical Datum 1988 (NAVD 88)
Conversion from NAVD 88 to NGVD 29 = +0.89 Feet

SHEET 26 OF 87 SHEETS

$USER$ $DATE$ $TIME$ $FILE$



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FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1)- RANGELAND BLVD

PROJECT NO.

CIP PROJECT NO

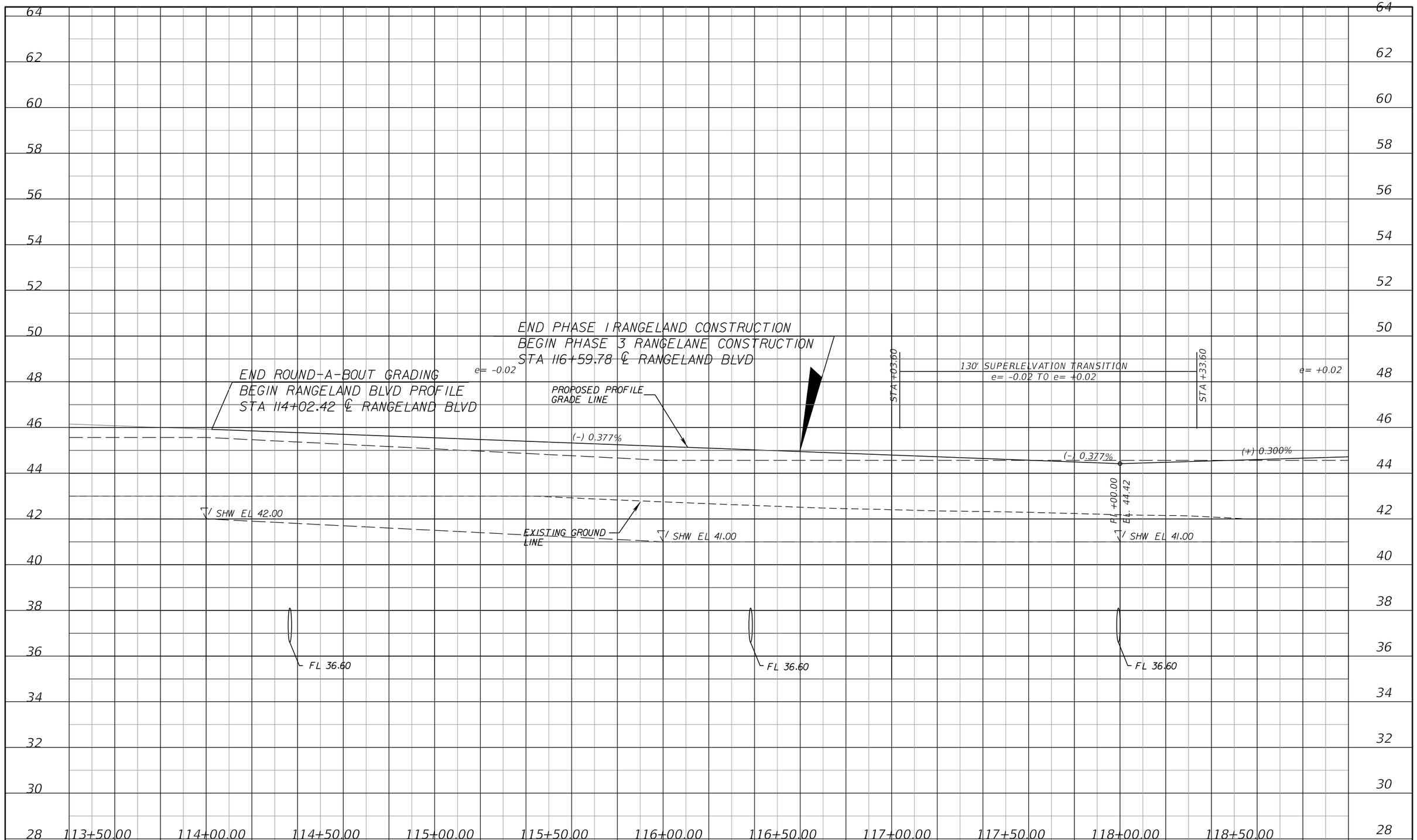
DESIGN
TOM SULLIVAN

RANGELAND BLVD
PROFILE SHEET (3)
STA 107+80.00 TO STA 113+40.00

PREPARED FOR: WHEELOCK STREET CAPITAL

Elevations based on North American Vertical Datum 1988 (NAVD 88)
Conversion from NAVD 88 to NGVD 29 = +0.89 Feet

SHEET 27 OF 87 SHEETS



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STARKEY RANCH (VILL. 1)- RANGELAND BLVD

PROJECT NO.

CIP PROJECT NO

DESIGN
TOM SULLIVAN

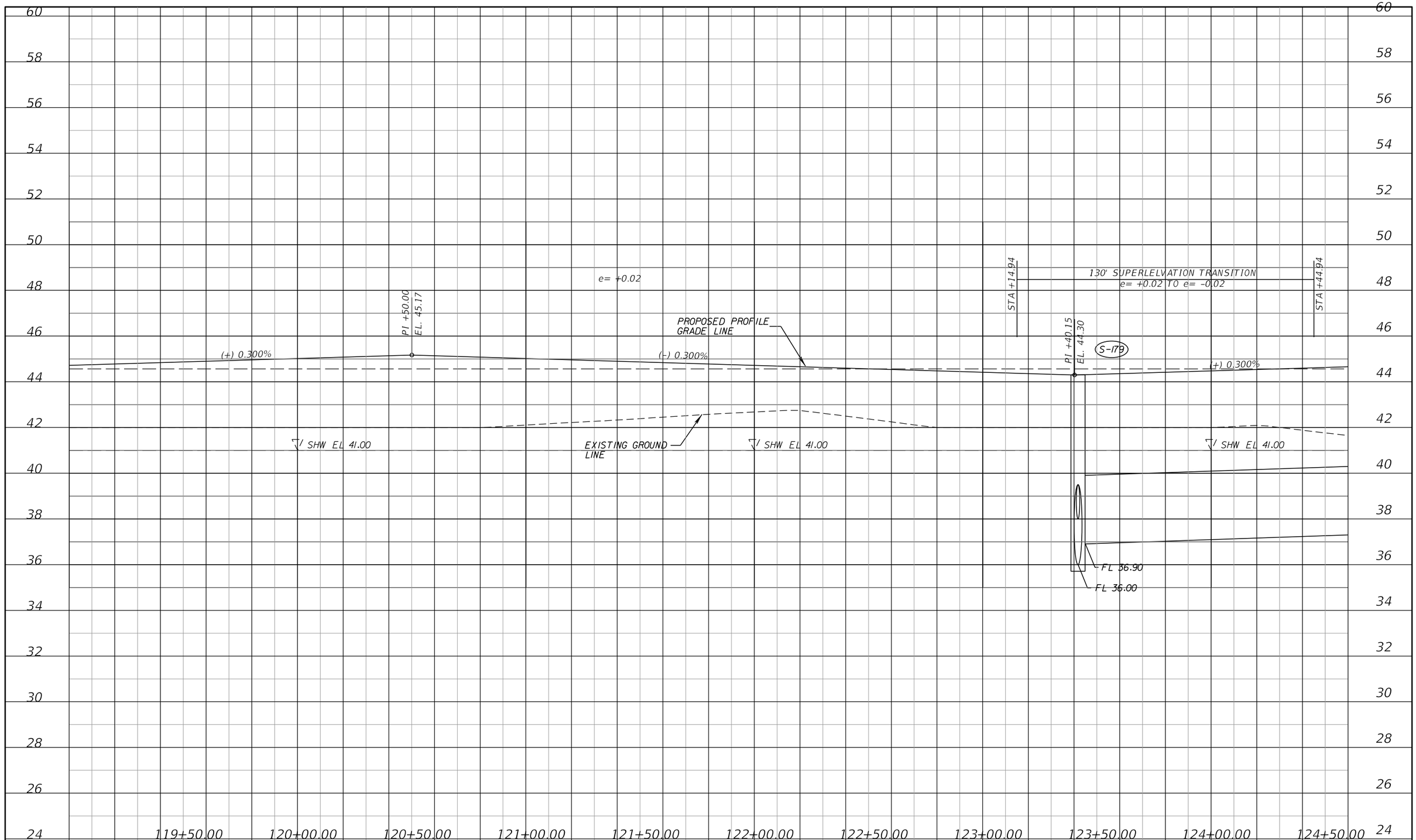
RANGELAND BLVD
PROFILE SHEET (4)
STA 113+40.00 TO STA 119+00.00

PREPARED FOR: WHEELOCK STREET CAPITAL

Elevations based on North American Vertical Datum 1988 (NAVD 88)
Conversion from NAVD 88 to NGVD 29 = +0.89 Feet

SHEET 28 OF 87 SHEETS

$USER$ $DATE$ $TIME$ $FILE$



DATE	DESCRIPTION	BY
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DATE:
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FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1)- RANGELAND BLVD

PROJECT NO.

RANGELAND BLVD
PROFILE SHEET (5)
STA 119+00.00 TO STA 124+60.00

CIP PROJECT NO

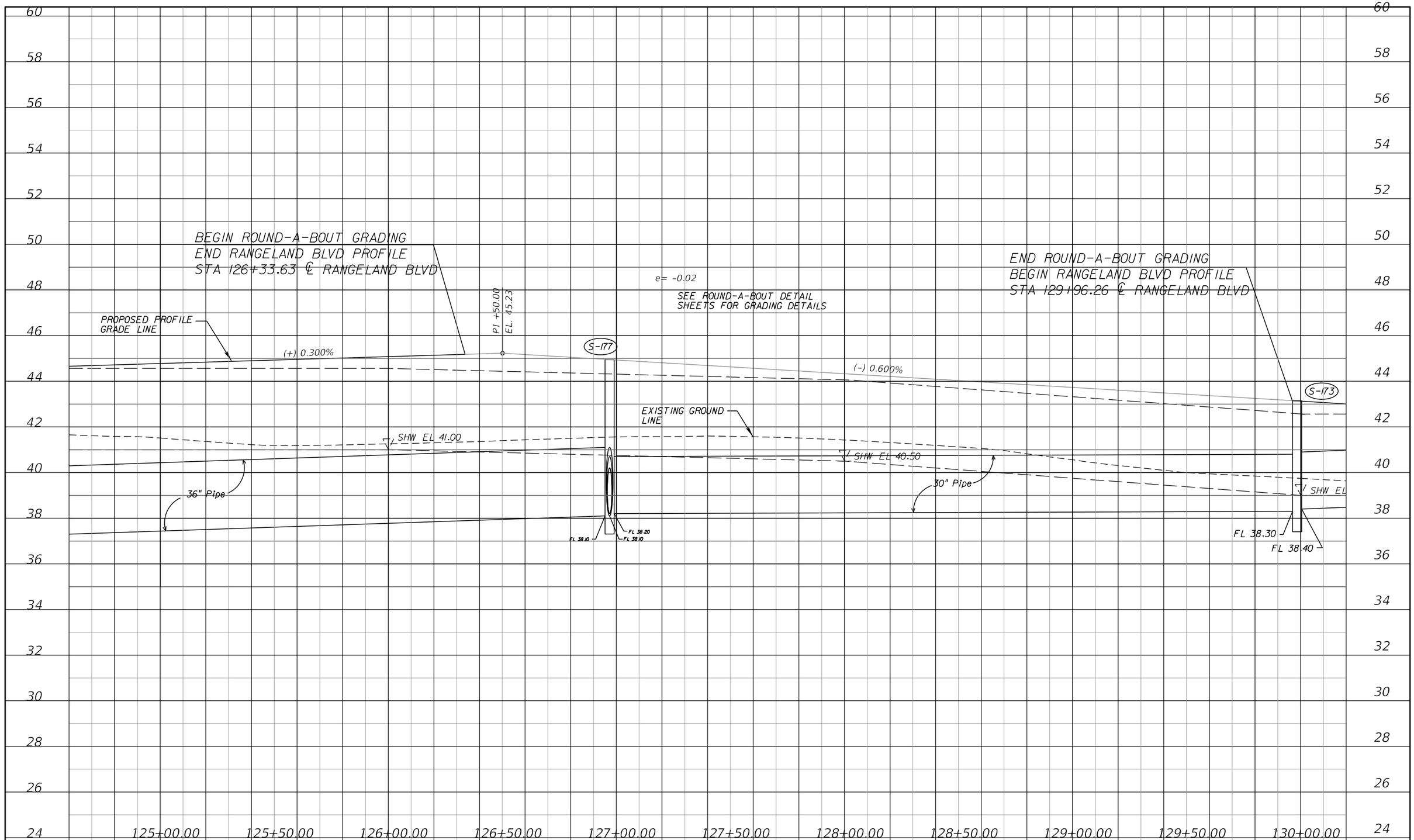
PREPARED FOR: WHEELOCK STREET CAPITAL

DESIGN
TOM SULLIVAN

Elevations based on North American Vertical Datum 1988 (NAVD 88)
Conversion from NAVD 88 to NGVD 29 = +0.89 Feet

SHEET 29 OF 87 SHEETS

$USER$ $DATE$ $TIME$ $FILE$



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STARKEY RANCH (VILL. 1)- RANGELAND BLVD

PROJECT NO.

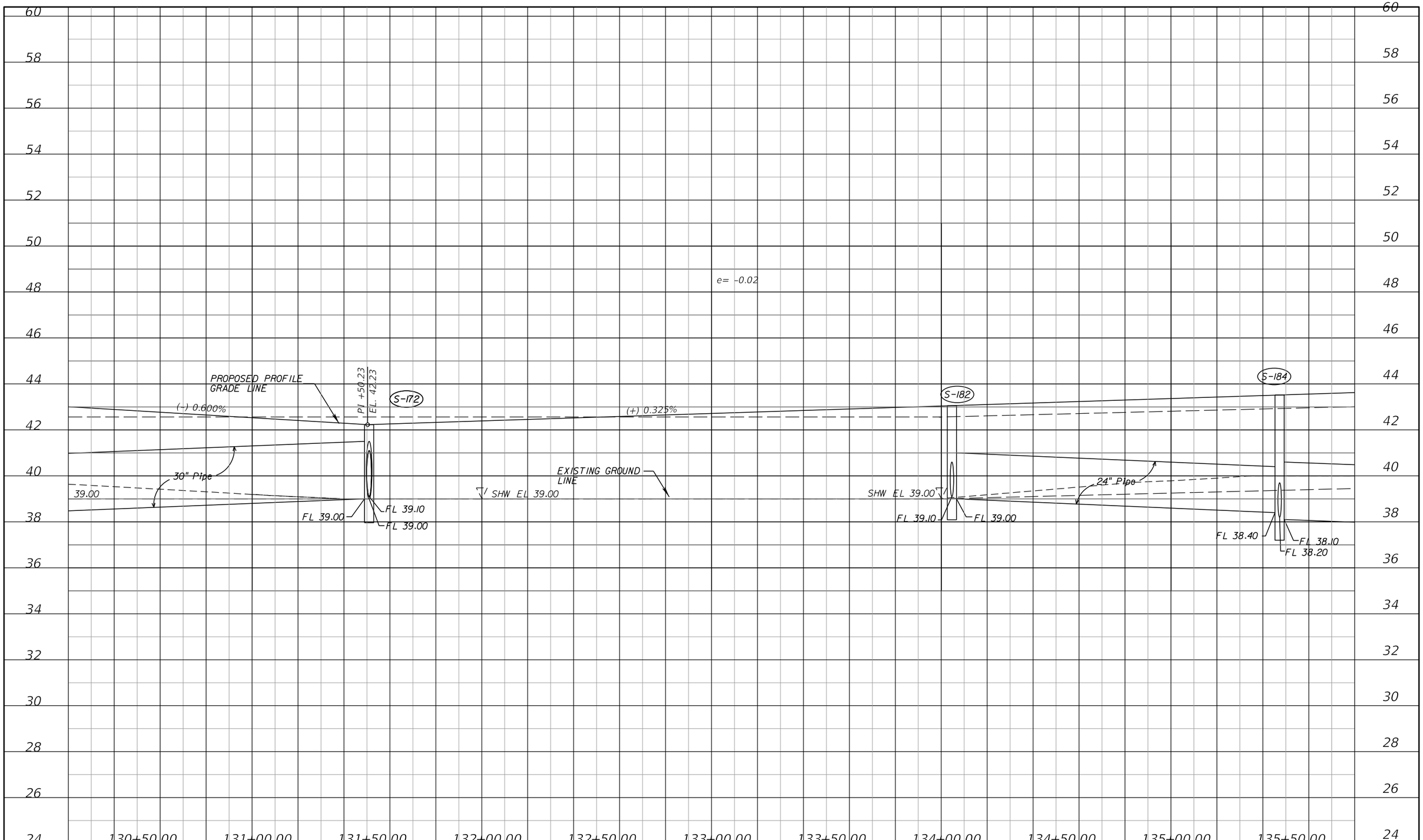
CIP PROJECT NO

DESIGN
TOM SULLIVAN

RANGELAND BLVD
PROFILE SHEET (6)
STA 124+60.00 TO STA 130+20.00

PREPARED FOR: WHEELOCK STREET CAPITAL

Elevations based on North American Vertical Datum 1988 (NAVD 88)
Conversion from NAVD 88 to NGVD 29 = +0.89 Feet



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STARKEY RANCH (VILL. 1)- RANGELAND BLVD

PROJECT NO.

CIP PROJECT NO

DESIGN
TOM SULLIVAN

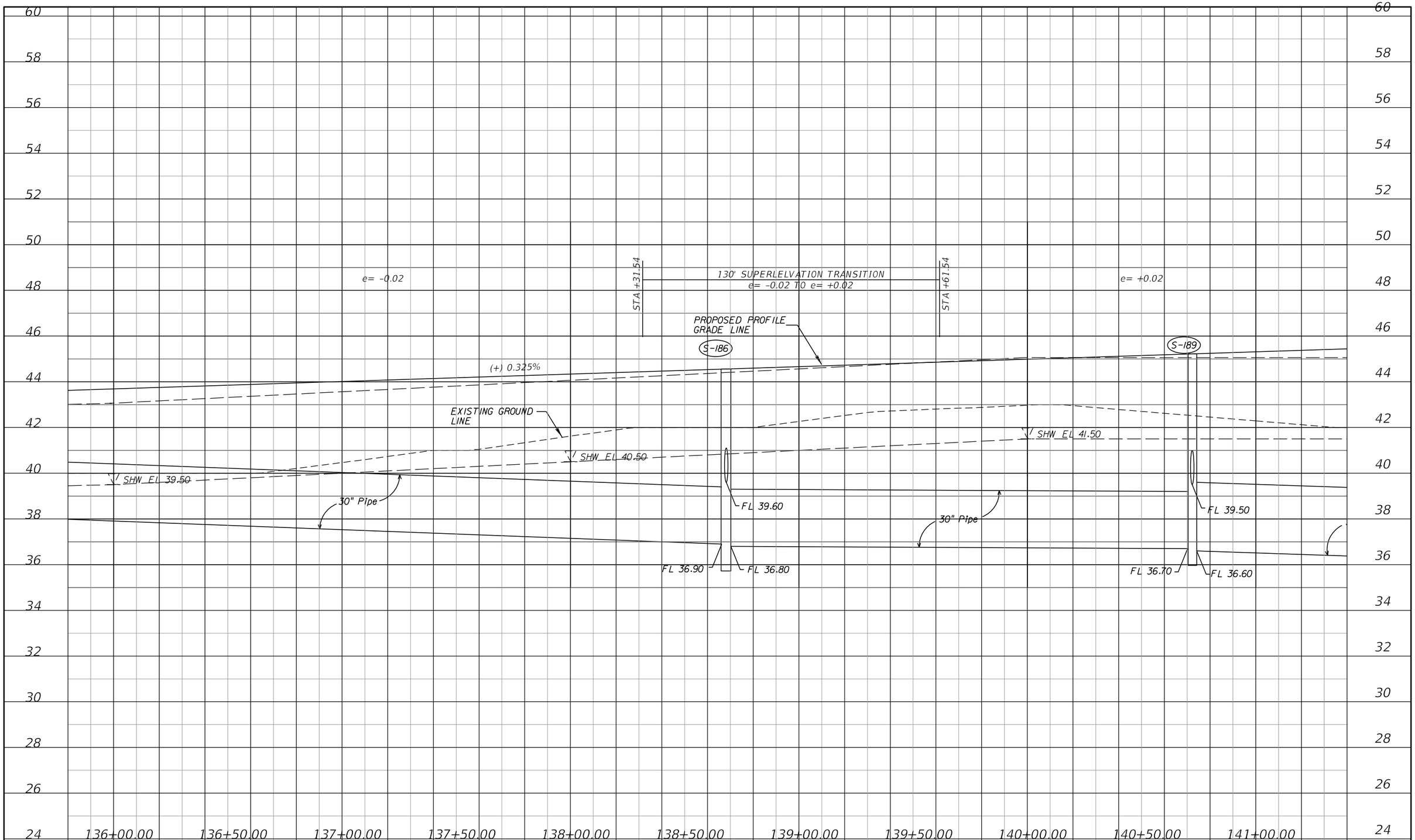
RANGELAND BLVD
PROFILE SHEET (7)
STA 130+20.00 TO STA 135+80.00

PREPARED FOR: WHEELOCK STREET CAPITAL

Elevations based on North American Vertical Datum 1988 (NAVD 88)
Conversion from NAVD 88 to NGVD 29 = +0.89 Feet

SHEET 31 OF 87 SHEETS

$USER$ $DATE$ $TIME$ $FILE$



DATE	DESCRIPTION	BY
	REVISIONS	

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HEIDT DESIGN
5806-B Breckenridge Parkway
Tampa, Florida 33610
Office: 813-253-5311
Fax: 813-464-7629
www.HeidtDesign.com

DATE:
THOMAS D. SULLIVAN NO. 55358
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1)- RANGELAND BLVD

PROJECT NO.

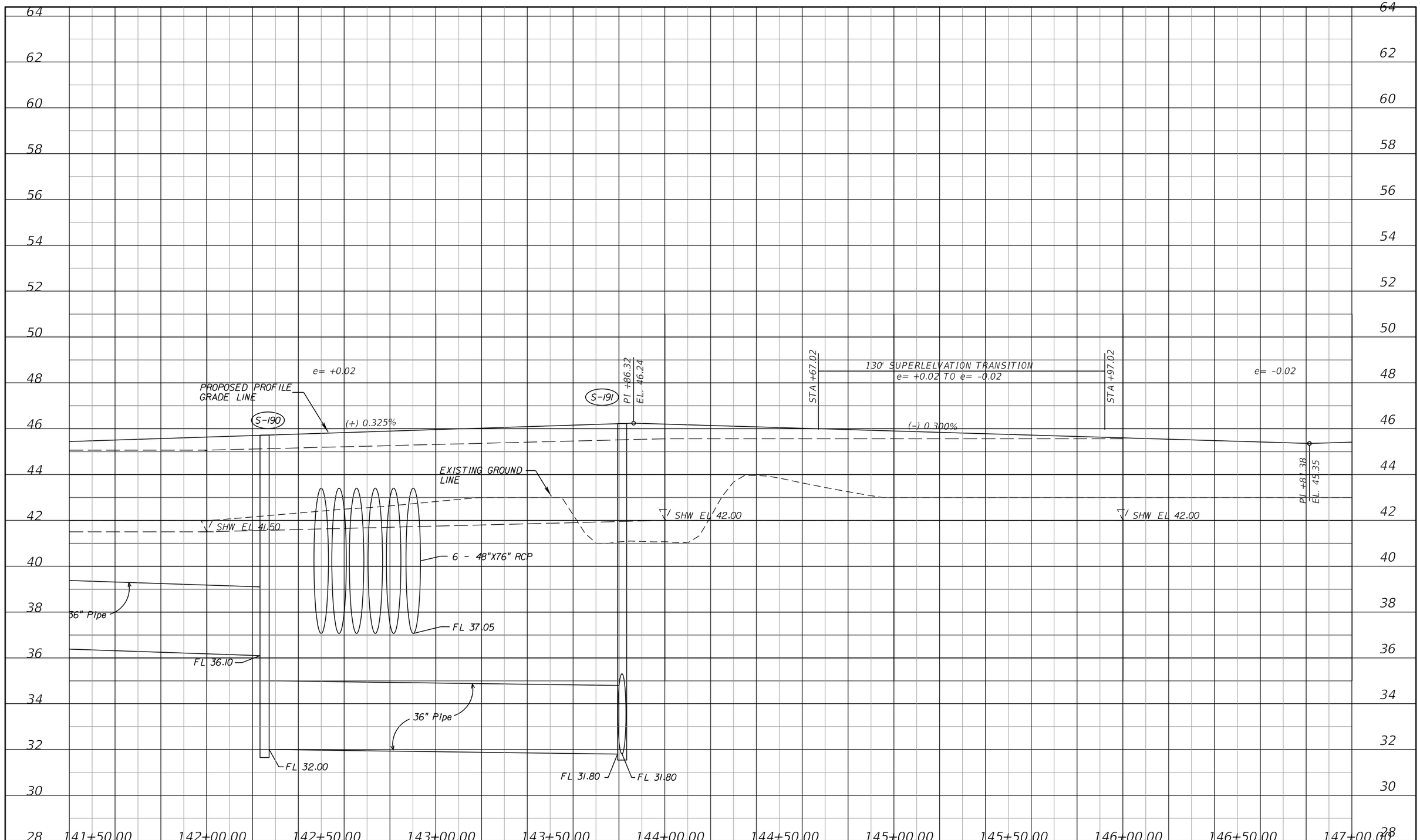
CIP PROJECT NO

DESIGN
TOM SULLIVAN

RANGELAND BLVD
PROFILE SHEET (8)
STA 135+80.00 TO STA 141+40.00

PREPARED FOR: WHEELOCK STREET CAPITAL

Elevations based on North American Vertical Datum 1988 (NAVD 88)
Conversion from NAVD 88 to NGVD 29 = +0.89 Feet



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DATE:
THOMAS D. SULLIVAN NO. 55358
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1)- RANGELAND BLVD

PROJECT NO.

CIP PROJECT NO

DESIGN
TOM SULLIVAN

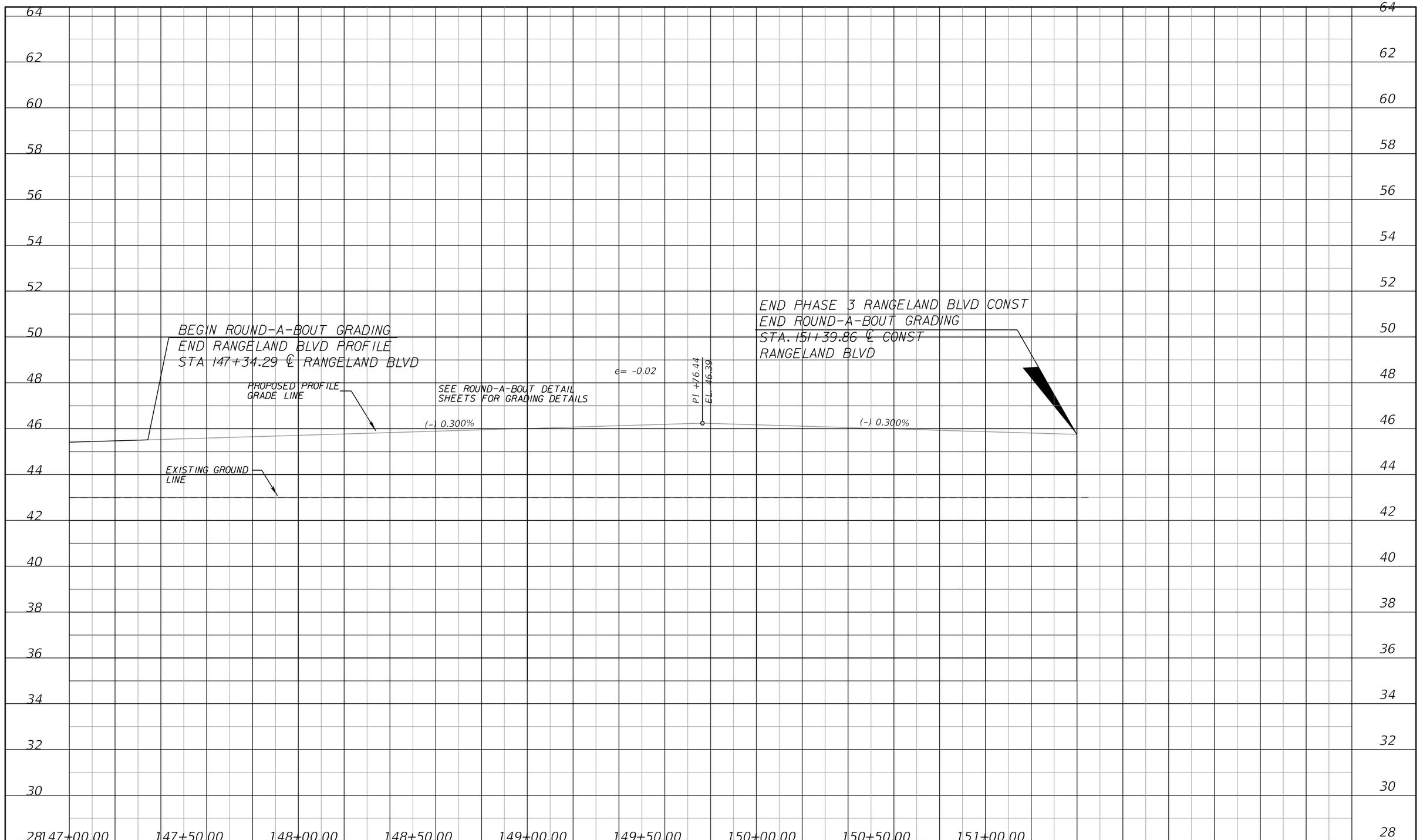
RANGELAND BLVD
PROFILE SHEET (9)
STA 141+40.00 TO STA 147+00.00

PREPARED FOR: WHEELOCK STREET CAPITAL

Elevations based on North American Vertical Datum 1988 (NAVD 88)
Conversion from NAVD 88 to NGVD 29 = +0.89 Feet

SHEET 33 OF 87 SHEETS

$USER$ $DATE$ $TIME$ $FILE$



DATE	DESCRIPTION	BY
	REVISIONS	

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DATE:
THOMAS D. SULLIVAN NO. 55358
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1)- RANGELAND BLVD

PROJECT NO.

CIP PROJECT NO

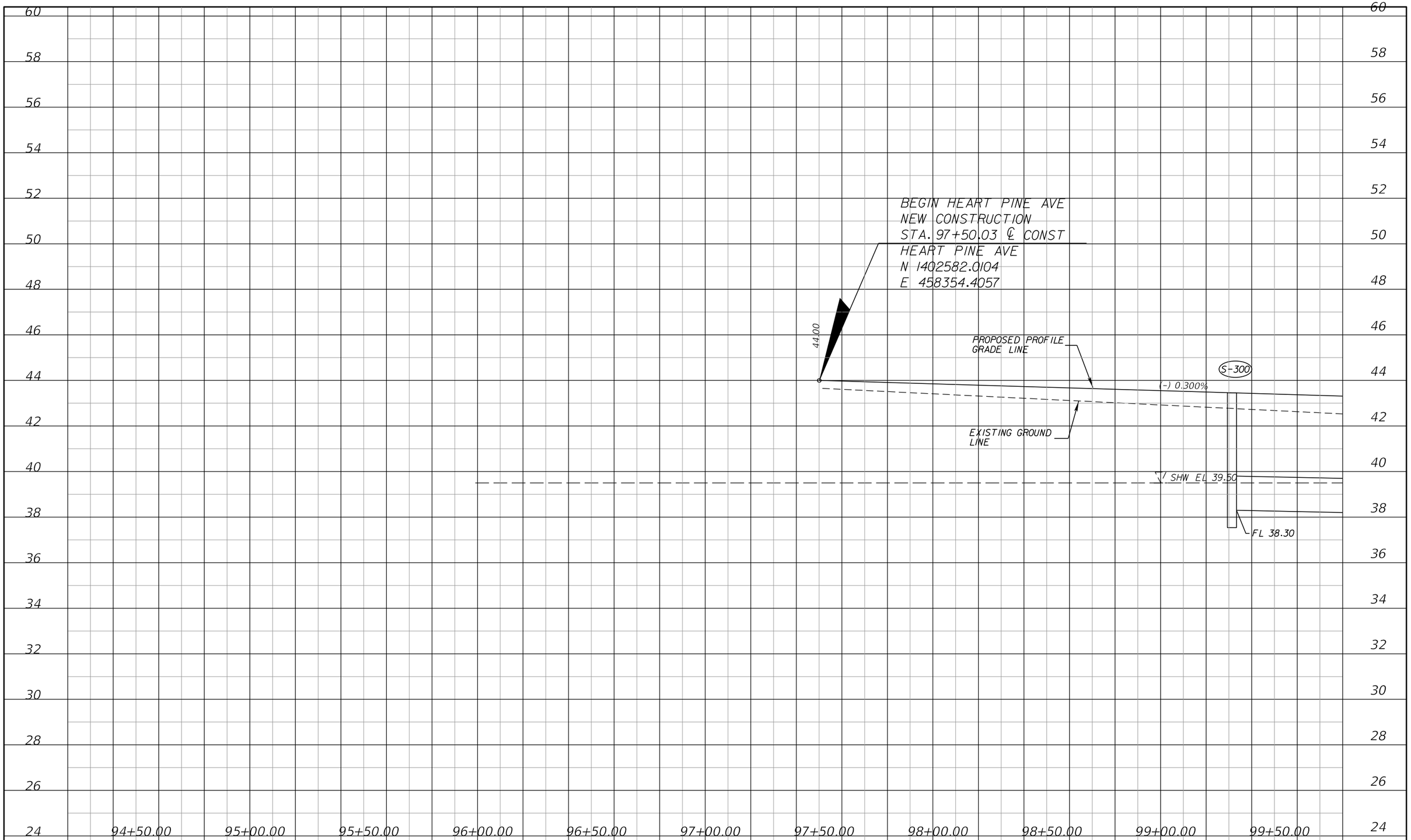
DESIGN
TOM SULLIVAN

RANGELAND BLVD
PROFILE SHEET (10)
STA 147+00.00 TO STA 151+39.86

PREPARED FOR: WHEELOCK STREET CAPITAL

Elevations based on North American Vertical Datum 1988 (NAVD 88)
Conversion from NAVD 88 to NGVD 29 = +0.89 Feet

SHEET 34 OF 87 SHEETS



DATE	DESCRIPTION	BY
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DATE:
THOMAS D. SULLIVAN NO. 55358
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - HEART PINE AVE

PROJECT NO.

CIP PROJECT NO

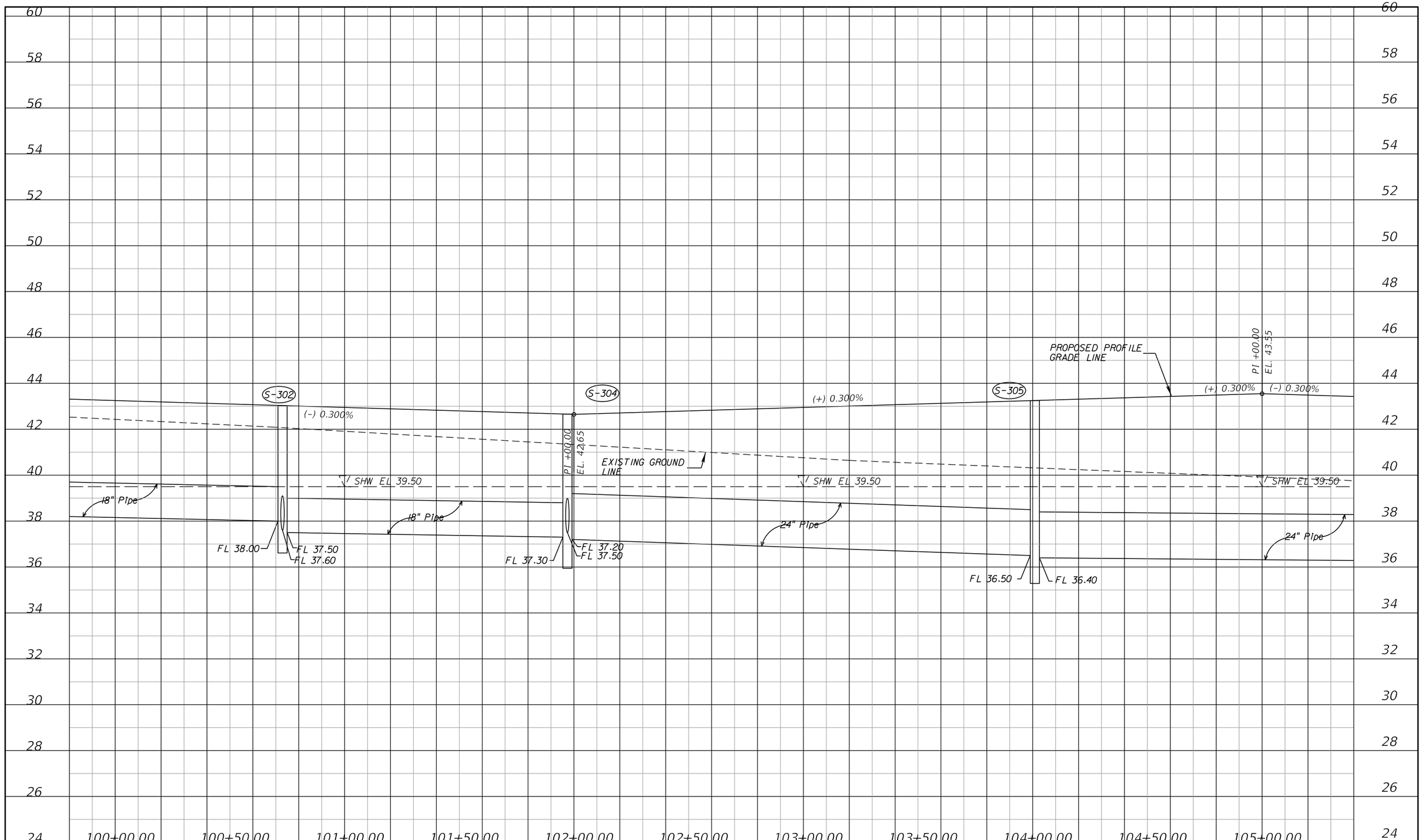
DESIGN
TOM SULLIVAN

HEART PINE AVENUE
PROFILE SHEET (1)
STA 97+50.03 TO STA 99+80.00

PREPARED FOR: WHEELOCK STREET CAPITAL

Elevations based on North American Vertical Datum 1988 (NAVD 88)
Conversion from NAVD 88 to NGVD 29 = +0.89 Feet

$USER$ $DATE$ $TIME$ $FILE$



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DATE:
THOMAS D. SULLIVAN NO. 55358
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - HEART PINE AVE

PROJECT NO.

HEART PINE AVENUE
PROFILE SHEET (2)
STA 99+80.00 TO STA 105+40.00

CIP PROJECT NO

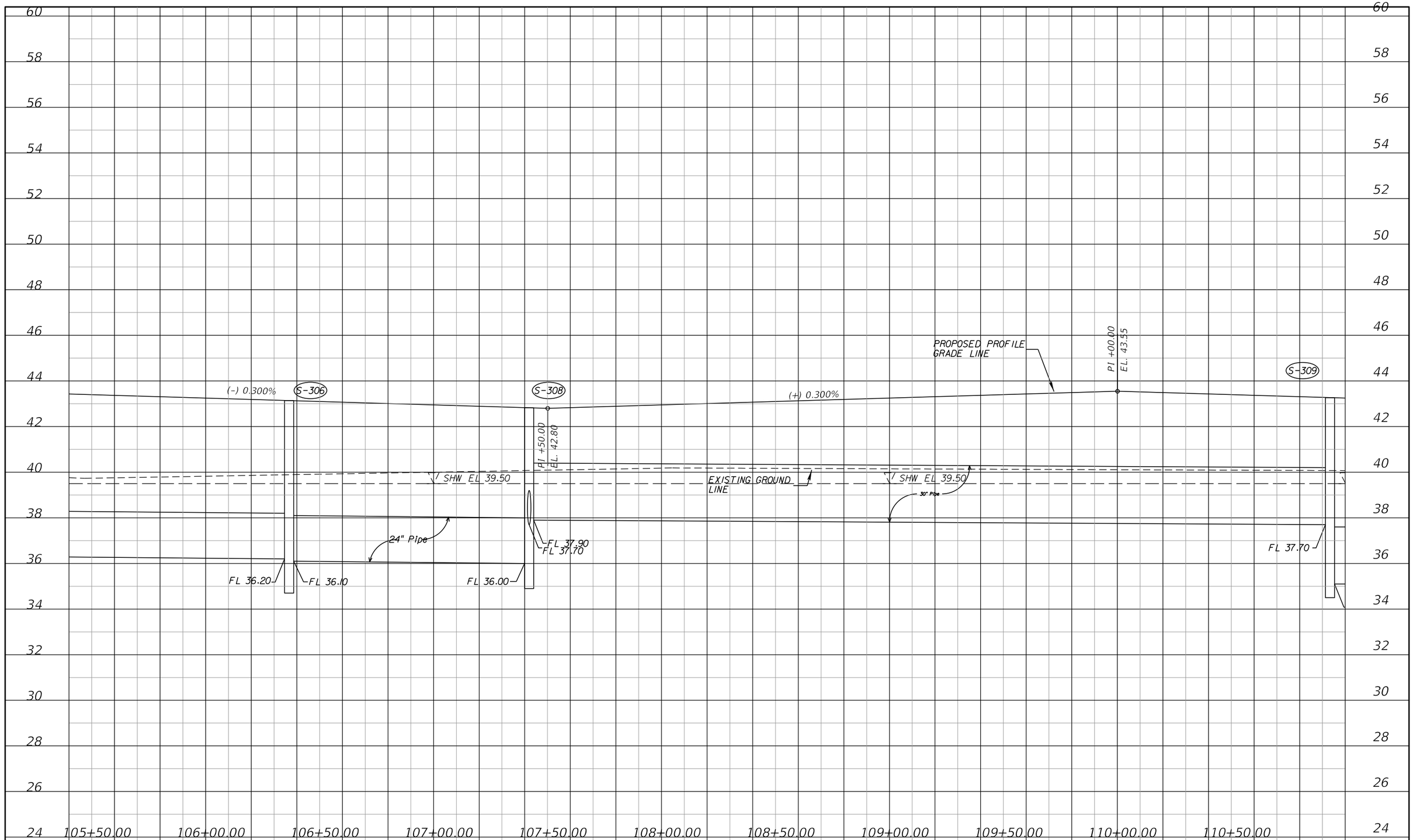
PREPARED FOR: WHEELOCK STREET CAPITAL

DESIGN
TOM SULLIVAN

Elevations based on North American Vertical Datum 1988 (NAVD 88)
Conversion from NAVD 88 to NGVD 29 = +0.89 Feet

SHEET 36 OF 87 SHEETS

$USER$ $DATE$ $TIME$ $FILE$



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DATE:
THOMAS D. SULLIVAN NO. 55358
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - HEART PINE AVE

PROJECT NO.

CIP PROJECT NO

DESIGN
TOM SULLIVAN

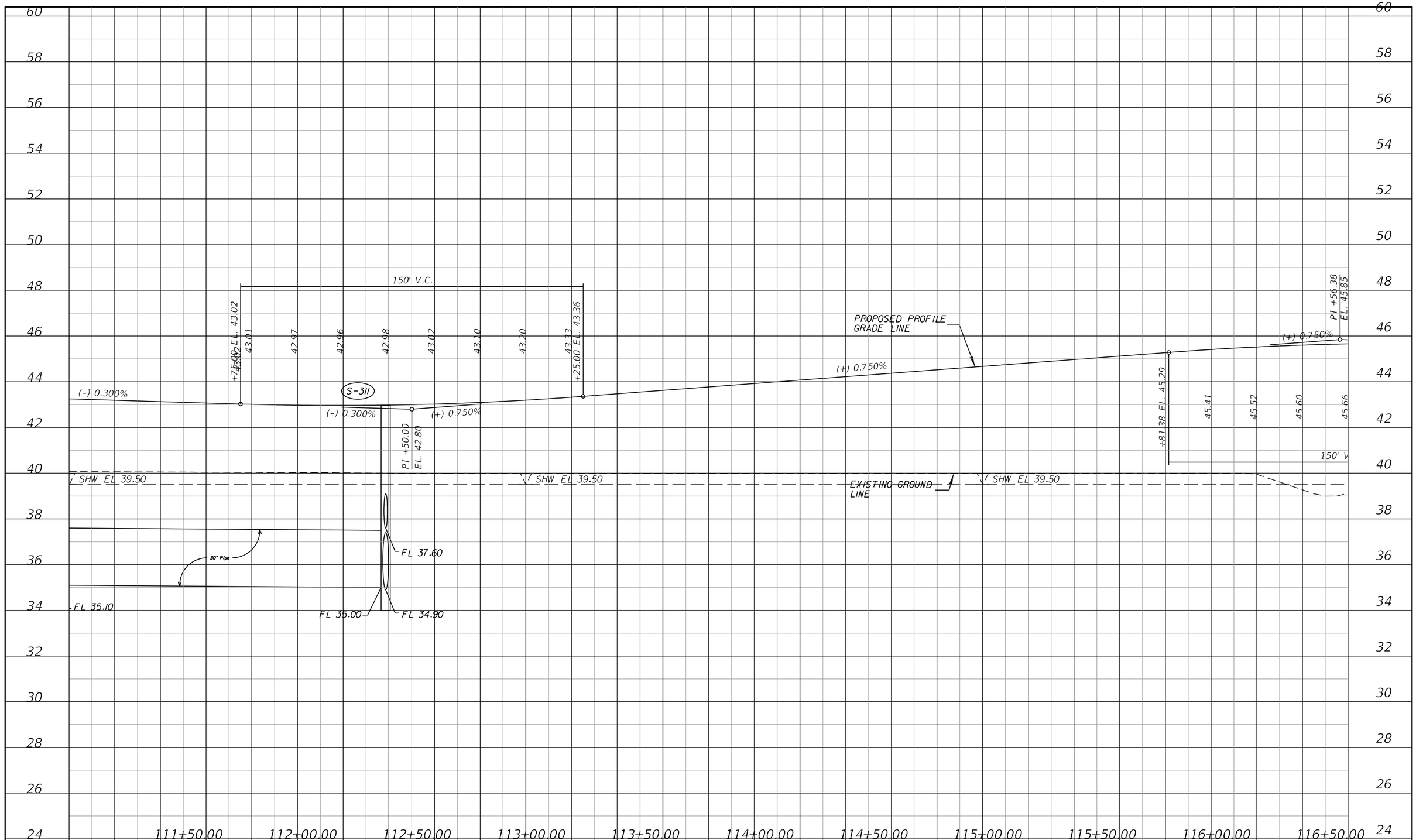
HEART PINE AVENUE
PROFILE SHEET (3)
STA 105+40.00 TO STA 111+00.00

PREPARED FOR: WHEELOCK STREET CAPITAL

Elevations based on North American Vertical Datum 1988 (NAVD 88)
Conversion from NAVD 88 to NGVD 29 = +0.89 Feet

SHEET 37 OF 87 SHEETS

$USER$ $DATE$ $TIME$ $FILE$



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DATE:
THOMAS D. SULLIVAN NO. 55358
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - HEART PINE AVE

PROJECT NO.

CIP PROJECT NO

DESIGN
TOM SULLIVAN

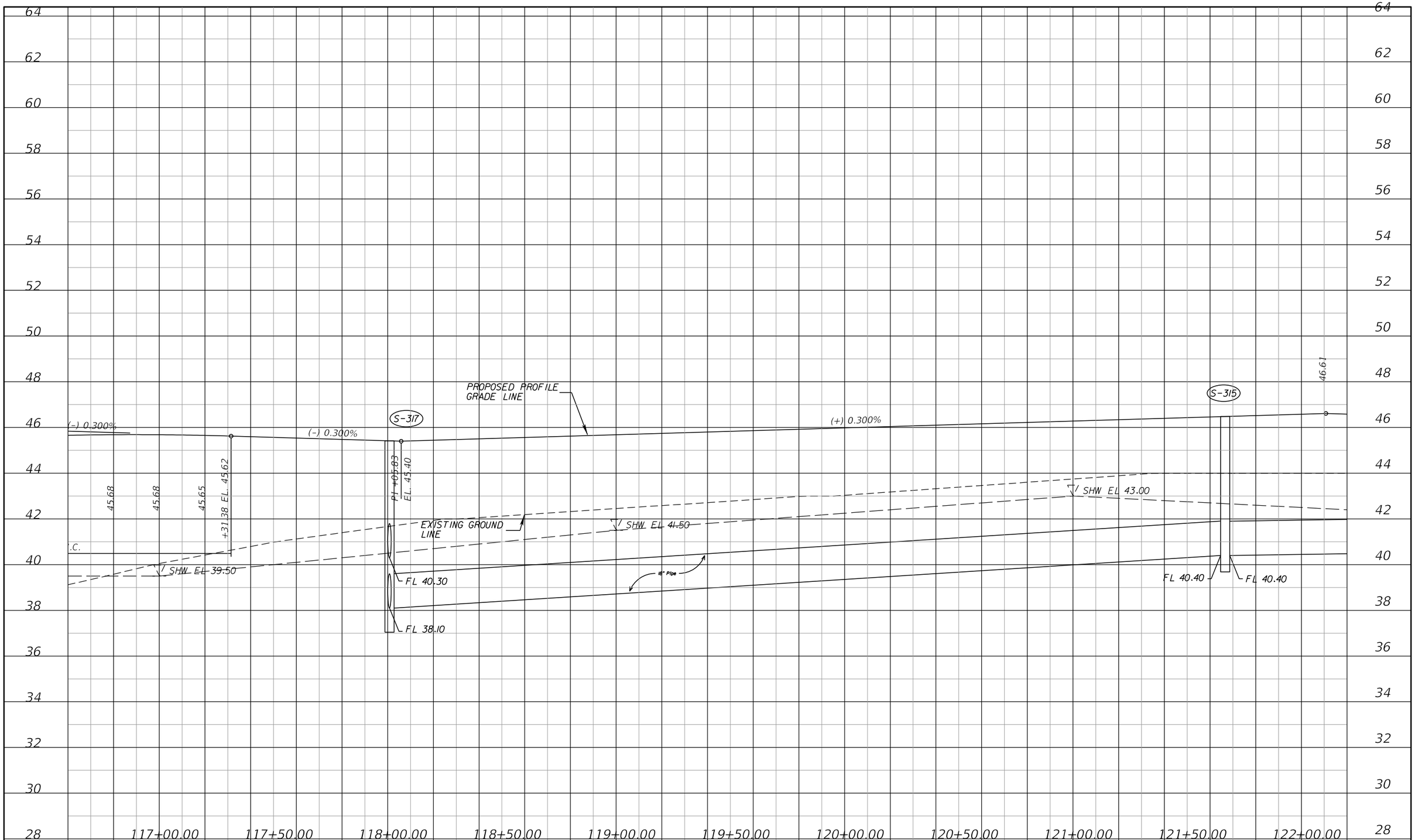
HEART PINE AVENUE
PROFILE SHEET (4)
STA 111+00.00 TO STA 116+60.00

PREPARED FOR: WHEELOCK STREET CAPITAL

Elevations based on North American Vertical Datum 1988 (NAVD 88)
Conversion from NAVD 88 to NGVD 29 = +0.89 Feet

SHEET 38 OF 87 SHEETS

$USER$ $DATE$ $TIME$ $FILE$



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DATE:
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FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - HEART PINE AVE

PROJECT NO.

CIP PROJECT NO

DESIGN
TOM SULLIVAN

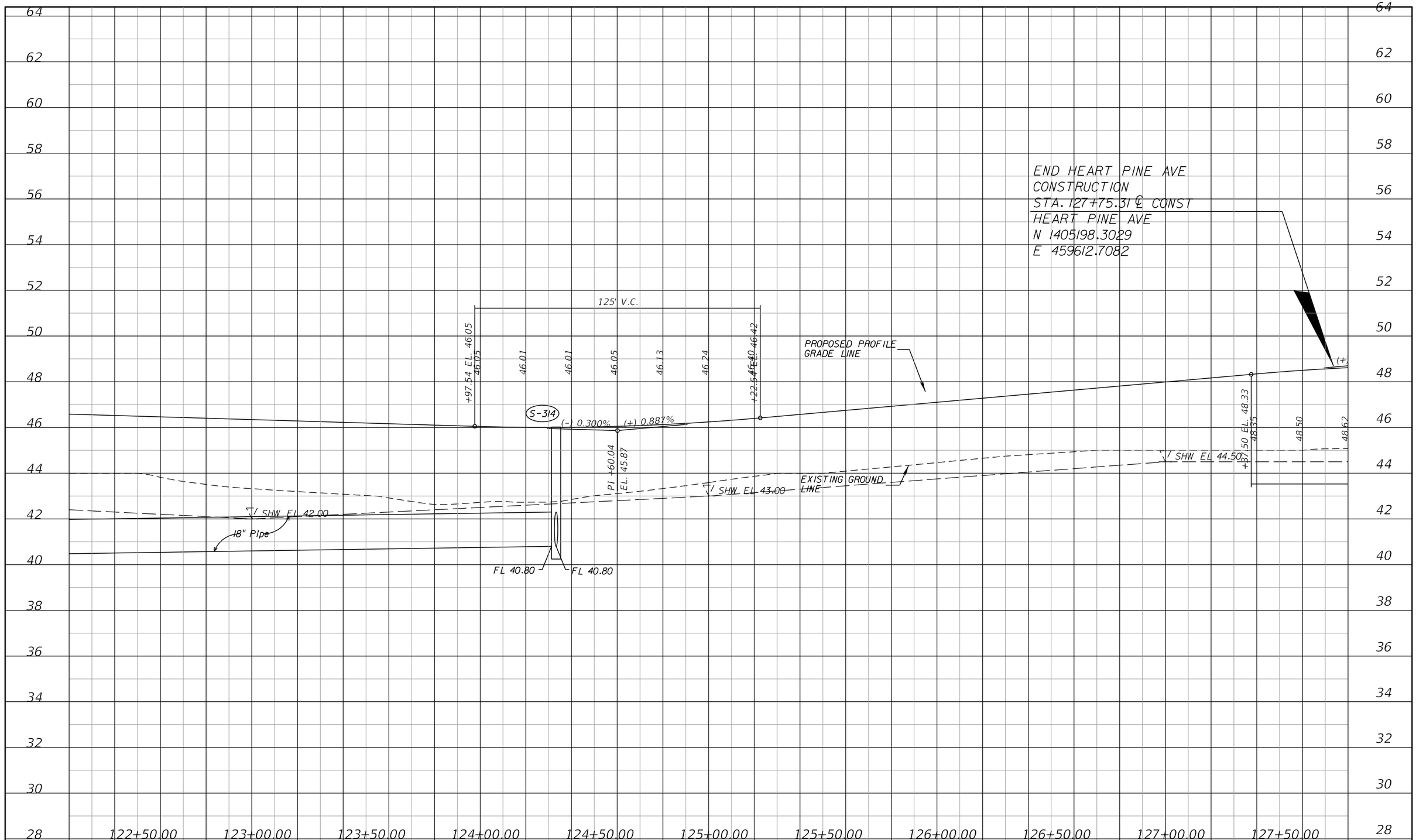
HEART PINE AVENUE
PROFILE SHEET (5)
STA 116+60.00 TO STA 122+20.00

PREPARED FOR: WHEELOCK STREET CAPITAL

Elevations based on North American Vertical Datum 1988 (NAVD 88)
Conversion from NAVD 88 to NGVD 29 = +0.89 Feet

SHEET 39 OF 87 SHEETS

$USER$ $DATE$ $TIME$ $FILE$



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DATE:
THOMAS D. SULLIVAN NO. 55358
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - HEART PINE AVE

PROJECT NO.

HEART PINE AVENUE
PROFILE SHEET (6)
STA 122+20.00 TO STA 127+75.31

CIP PROJECT NO

PREPARED FOR: WHEELOCK STREET CAPITAL

DESIGN
TOM SULLIVAN

Elevations based on North American Vertical Datum 1988 (NAVD 88)
Conversion from NAVD 88 to NGVD 29 = +0.89 Feet

SHEET 40 OF 87 SHEETS

$USER$ $DATE$ $TIME$ $FILE$

RANGELAND BOULEVARD

TYPE "F" CURB
TYPE "D" CURB
FDOT TYPE "A" CURB
TYPE "A" CURB

+52.71
44.62' LT.

+52.99
13.13' LT.

+53.75
13.00' RT.

+54.55
35.36' RT.

+76.44
35.00' LT.

+66.67
35.00' RT.

+16.45
25.00' RT.

+60.47
25.00' LT.

PT: 11+85.52

PC: 11+27.19

LONG SPUR

C-506

POND 4-1
DHW_{25}=41.80
DLW=40.25
NW=39.80

0 50 100
GRAPHIC SCALE: 1" = 50'

N

DATE	DESCRIPTION	BY
	REVISIONS	

ENGINEERING BUSINESS CERTIFICATE OF AUTHORIZATION NO. 28762

HEIDT DESIGN
5806-B Breckenridge Parkway
Tampa, Florida 33610
Office: 813-253-5311
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DATE:
THOMAS D. SULLIVAN P.E. NO. 55358
FLORIDA PROFESSIONAL ENGINEER

RANGELAND BOULEVARD - STARKEY VILLAGE 1

PROJECT NO. TSR-SR-1007

CIP PROJ NO. #####

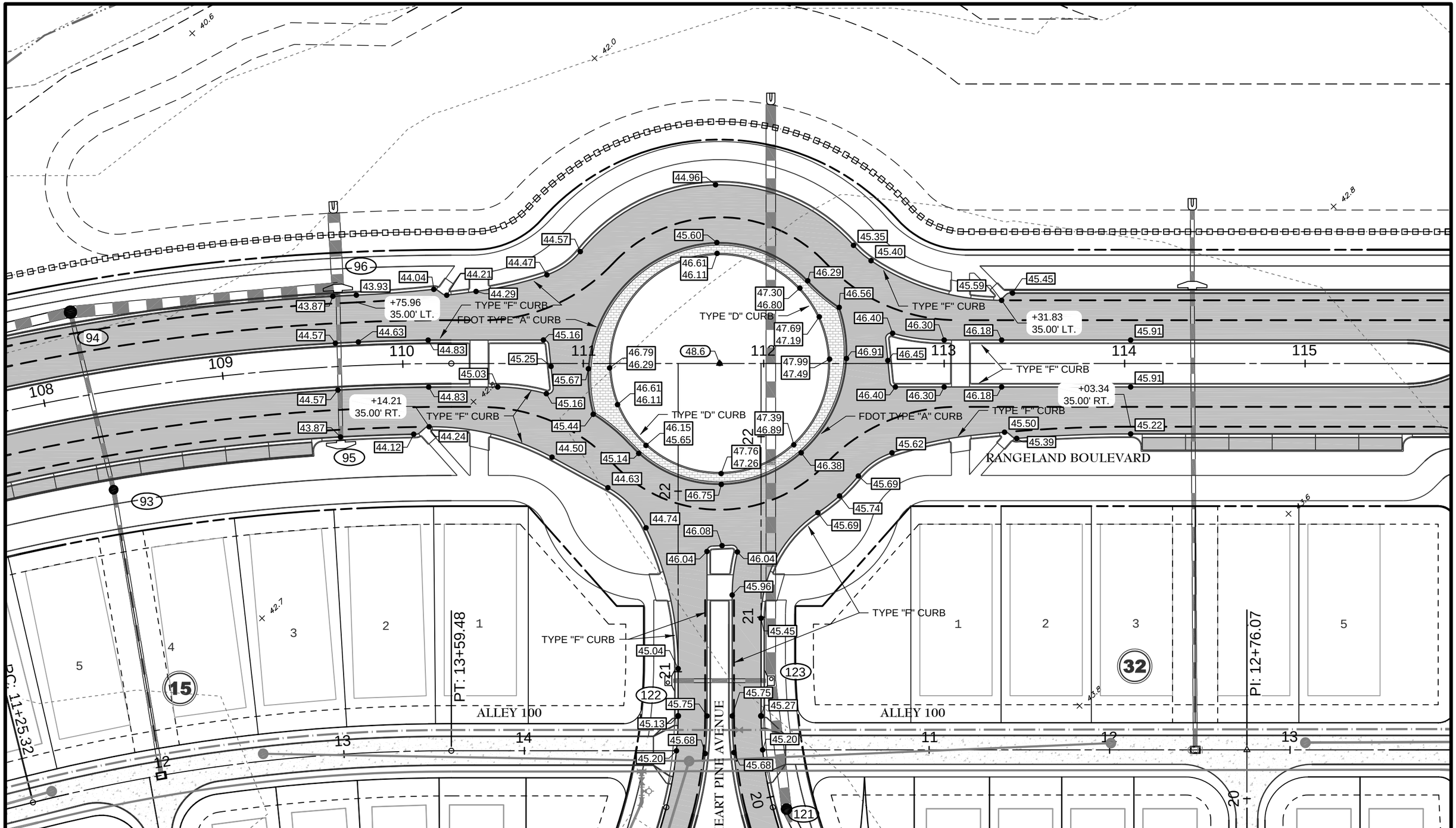
DESIGN XXXX

ROUND-A-BOUT DETAIL SHEET

PREPARED FOR: PASCO COUNTY DEPARTMENT OF PUBLIC WORKS

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET 41 OF 87 SHEETS



ENGINEERING BUSINESS CERTIFICATE OF AUTHORIZATION NO. 27762

HEIDT DESIGN
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Fax: 813-464-7629
www.HeidtDesign.com

DATE: THOMAS D. SULLIVAN P.E. NO. 55358
FLORIDA PROFESSIONAL ENGINEER

DATE	DESCRIPTION	BY
REVISIONS		

RANGELAND BOULEVARD - STARKEY VILLAGE 1

PROJECT NO. TSR-SR-1007

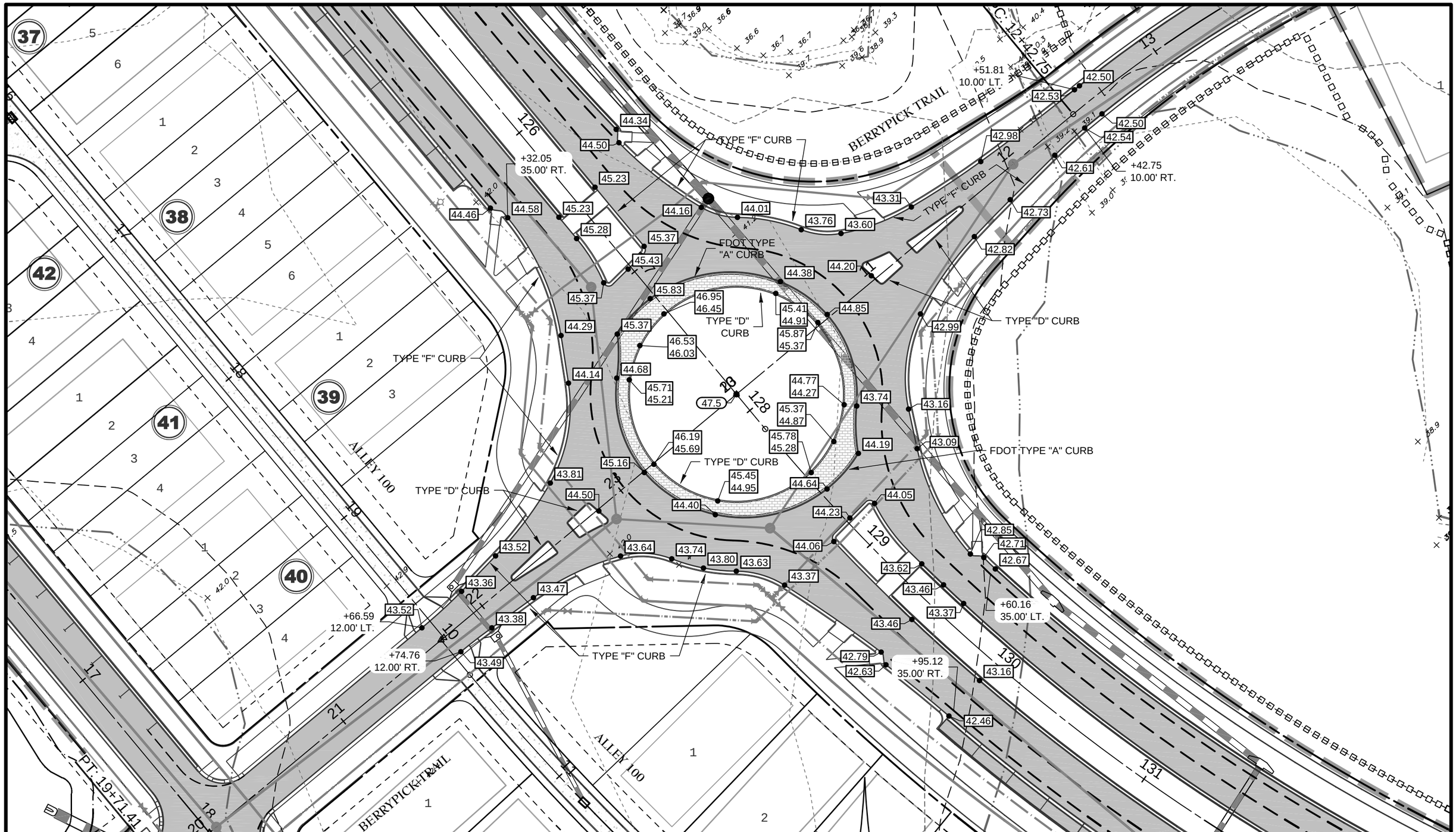
CIP PROJ NO. #####

DESIGN XXXX

ROUND-A-BOUT DETAIL SHEET

PREPARED FOR: PASCO COUNTY DEPARTMENT OF PUBLIC WORKS

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet



DATE	DESCRIPTION	BY
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ENGINEERING BUSINESS CERTIFICATE OF AUTHORIZATION NO. 27783

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DATE:
THOMAS D. SULLIVAN P.E. NO. 55358
FLORIDA PROFESSIONAL ENGINEER

RANGELAND BOULEVARD - STARKEY VILLAGE 1

PROJECT NO. TSR-SR-1007

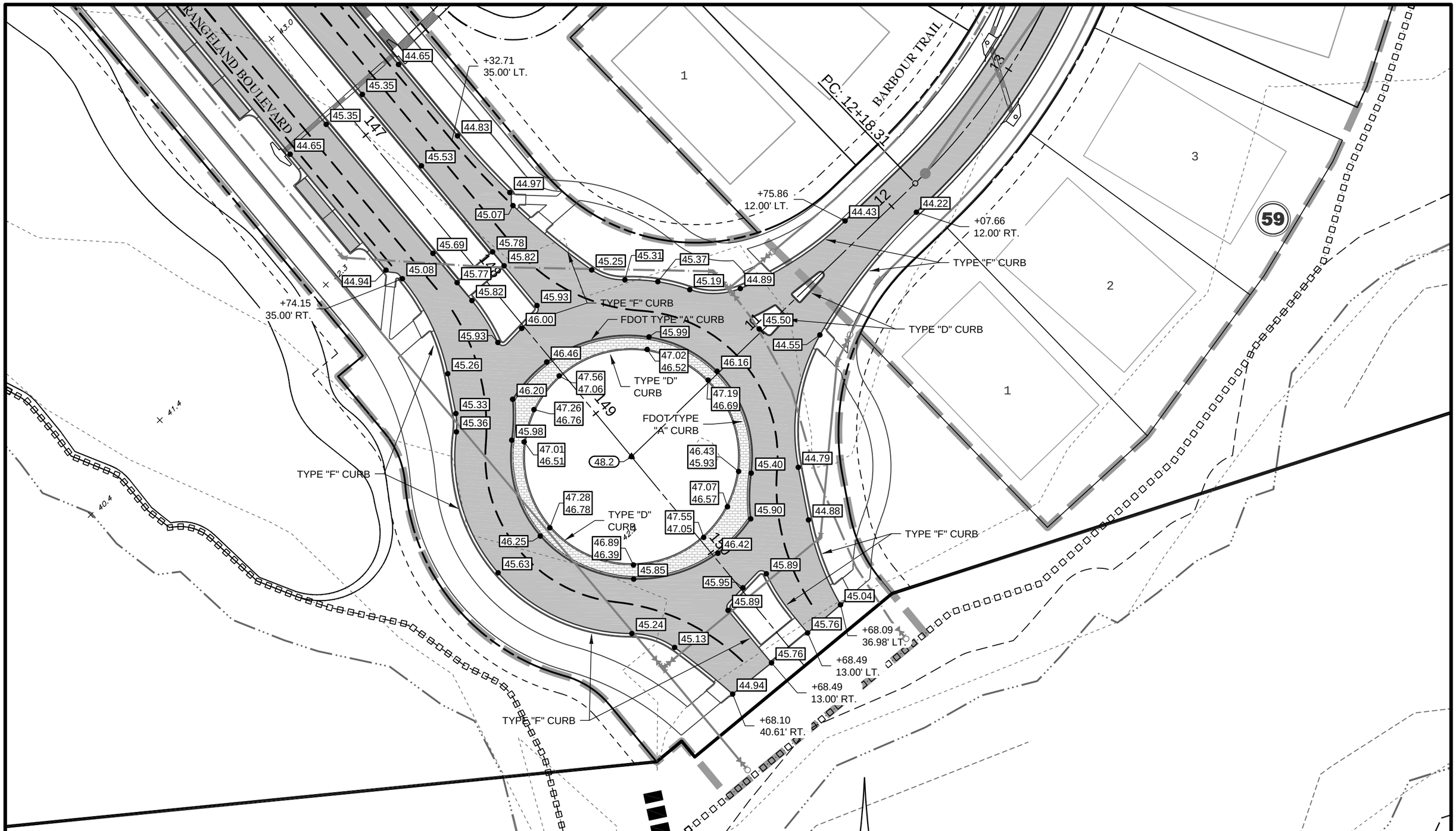
CIP PROJ NO. #####

DESIGN XXXX

ROUND-A-BOUT DETAIL SHEET

PREPARED FOR: PASCO COUNTY DEPARTMENT OF PUBLIC WORKS

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet



DATE	DESCRIPTION	BY
	REVISIONS	

BUSINESS NO BUSINESS CERTIFICATE OF AUTHORIZATION NO. 2762

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DATE:
THOMAS D. SULLIVAN P.E. NO. 55358
FLORIDA PROFESSIONAL ENGINEER

RANGELAND BOULEVARD - STARKEY VILLAGE 1

PROJECT NO. TSR-SR-1007

CIP PROJ NO. #####

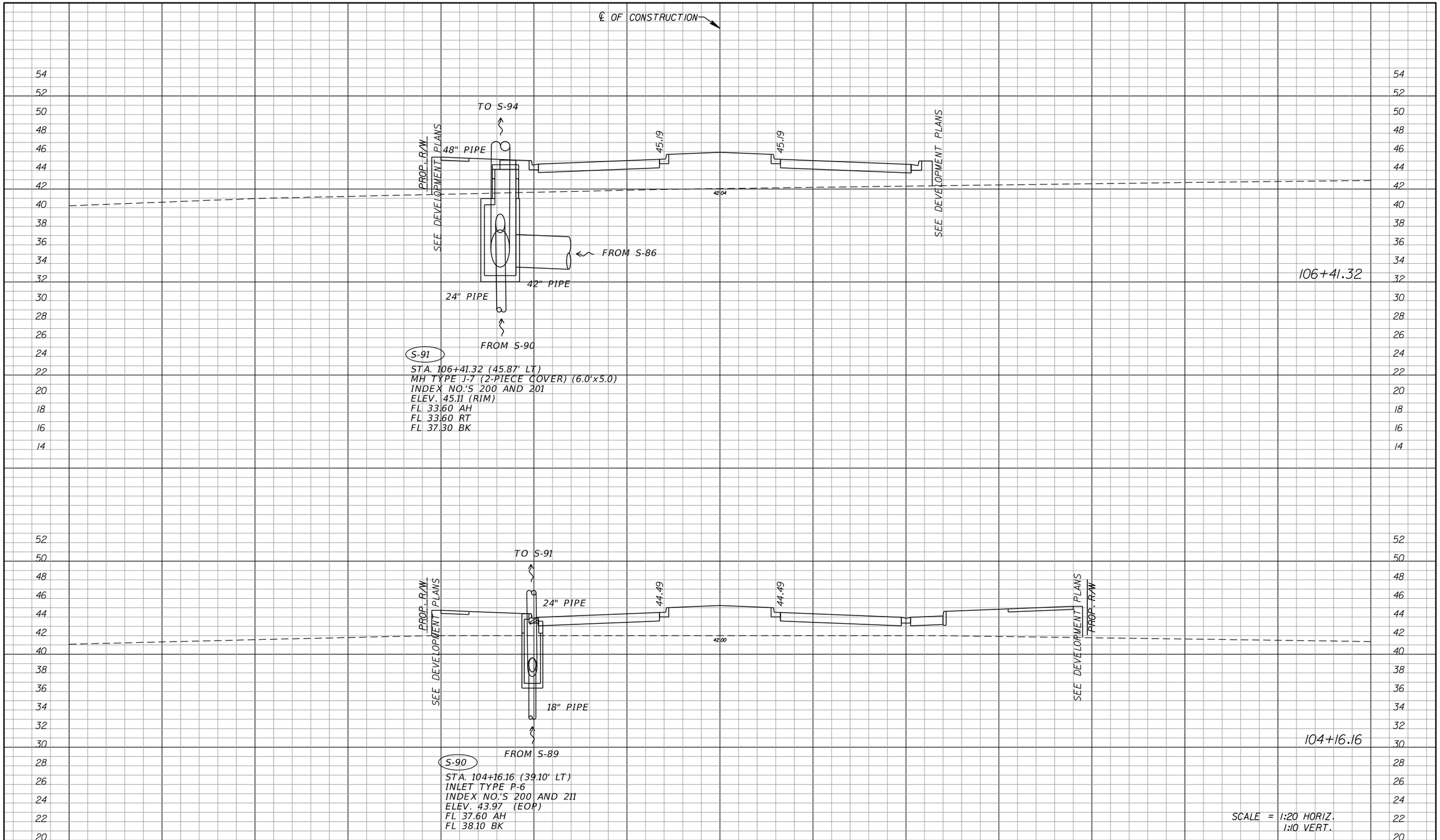
DESIGN XXXX

ROUND-A-BOUT DETAIL SHEET

PREPARED FOR: PASCO COUNTY DEPARTMENT OF PUBLIC WORKS

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET 44 OF 87 SHEETS



DATE	DESCRIPTION	BY
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ENGINEERING BUSINESS CERTIFICATE OF AUTHORIZATION NO. 28782

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DATE:
THOMAS D. SULLIVAN NO. 55358
FLORIDA PROFESSIONAL ENGINEER

RANGELAND BOULEVARD

PROJECT NO:

CIP PROJECT NO

DESIGN BY: SULLIVAN

FILE: DRSTRD01.DGN

DRAINAGE STRUCTURE CROSS SECTIONS

PREPARED FOR: WHEELOCK STREET CAPITAL

Elevations based on North American Vertical Datum 1988 (NAVD 88)
Conversion from NAVD 88 to NGVD 29 = +0.89 Feet

SHEET 45 OF 87 SHEETS

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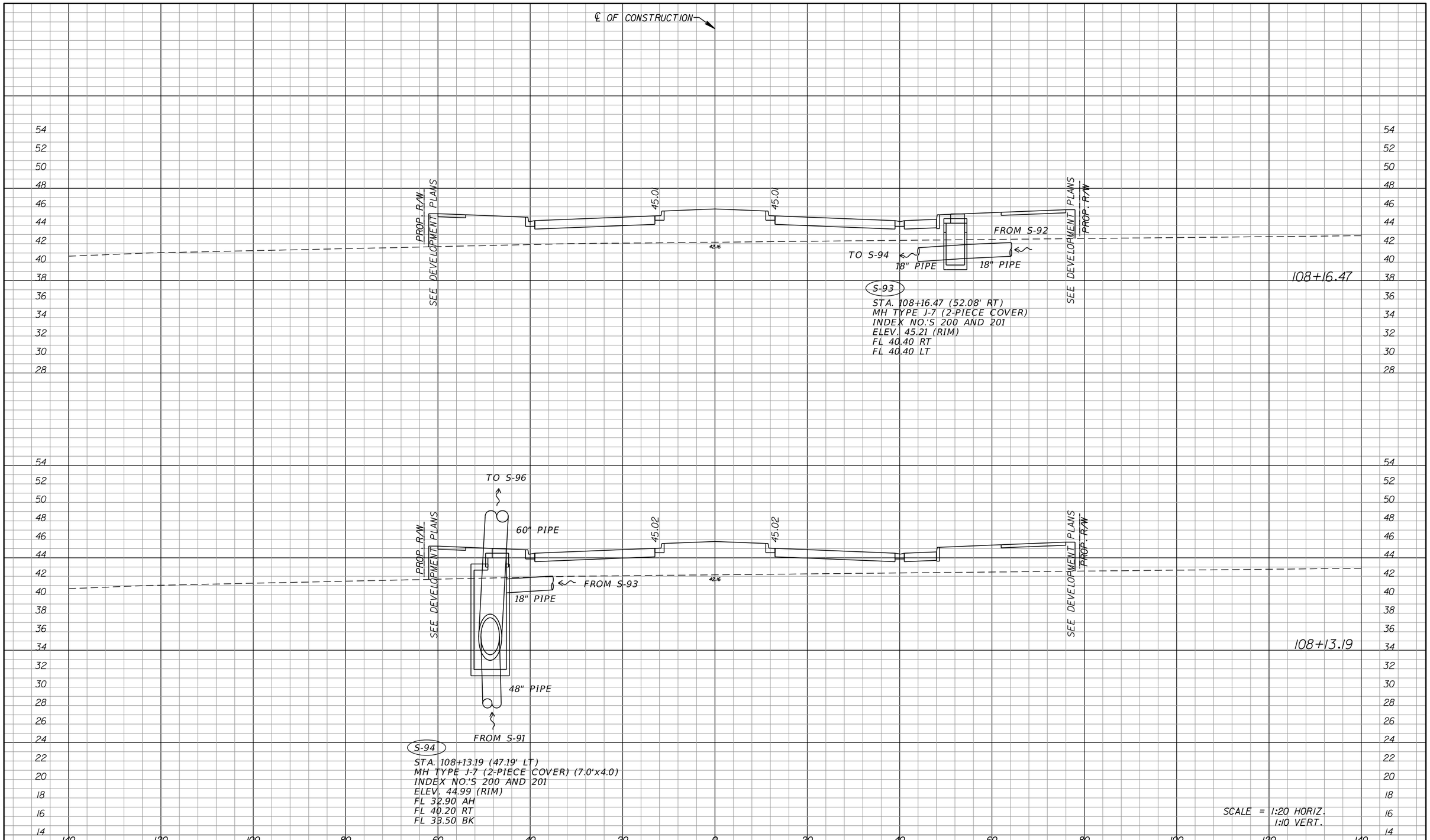

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	REVISIONS	

ENGINEERING BUSINESS CERTIFICATE OF AUTHORIZATION NO. 25782

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DATE:
THOMAS D. SULLIVAN NO. 55358
FLORIDA PROFESSIONAL ENGINEER

RANGELAND BOULEVARD

PROJECT NO:

CIP PROJECT NO

DRAINAGE STRUCTURE CROSS SECTIONS

PREPARED FOR: WHEELOCK STREET CAPITAL

DESIGN BY: SULLIVAN

Elevations based on North American Vertical Datum 1988 (NAVD 88)
Conversion from NAVD 88 to NGVD 29 = +0.89 Feet

FILE: DRSTRD01.DGN

SHEET 46 OF 87 SHEETS

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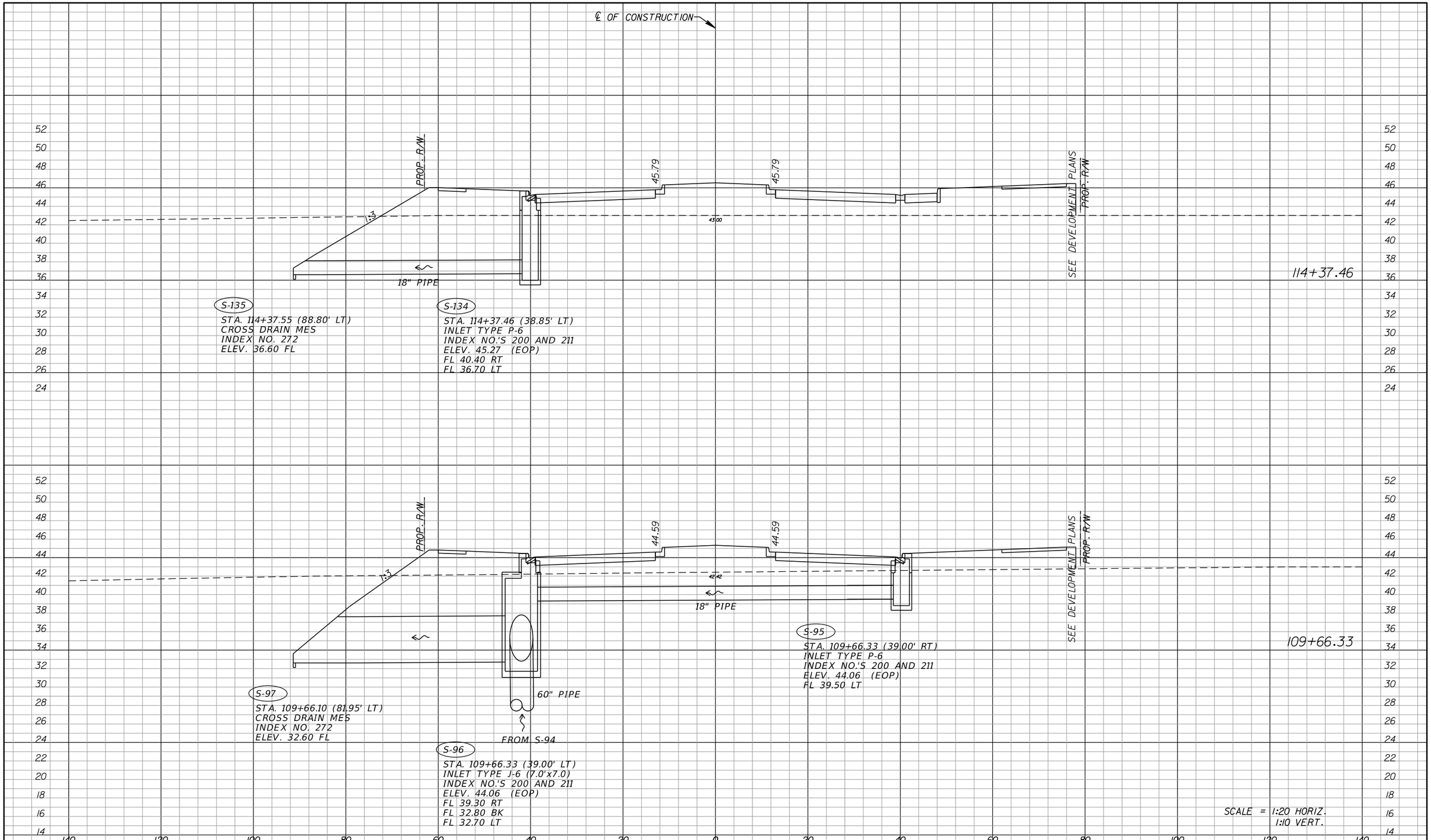

DATE	DESCRIPTION	BY
	REVISIONS	

ENGINEERING BUSINESS CERTIFICATE OF AUTHORIZATION NO. 25782

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DATE:

THOMAS D. SULLIVAN NO. 55358
FLORIDA PROFESSIONAL ENGINEER

RANGELAND BOULEVARD

PROJECT NO:

CIP PROJECT NO

DRAINAGE STRUCTURE CROSS SECTIONS

PREPARED FOR: WHEELOCK STREET CAPITAL

DESIGN BY: SULLIVAN

Elevations based on North American Vertical Datum 1988 (NAVD 88)
Conversion from NAVD 88 to NGVD 29 = +0.89 Feet

FILE: DRSTRD01.DGN

SHEET 47 OF 87 SHEETS

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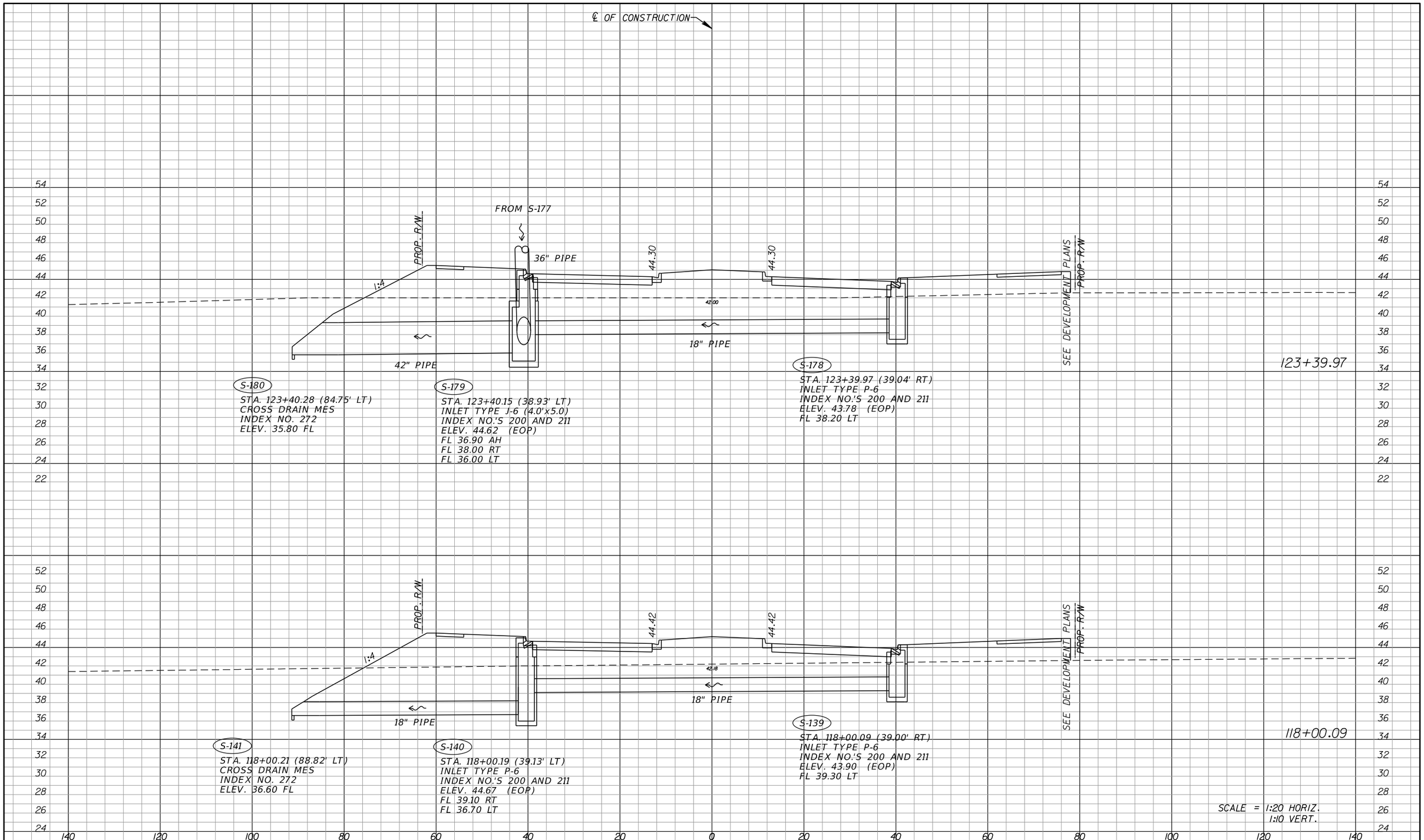

DATE	DESCRIPTION	BY
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RANGELAND BOULEVARD

PROJECT NO:

CIP PROJECT NO

DRAINAGE STRUCTURE CROSS SECTIONS

PREPARED FOR: WHEELOCK STREET CAPITAL

DESIGN BY: SULLIVAN

Elevations based on North American Vertical Datum 1988 (NAVD 88)
Conversion from NAVD 88 to NGVD 29 = +0.89 Feet

FILE: DRSTRD01.DGN

SHEET 48 OF 87 SHEETS

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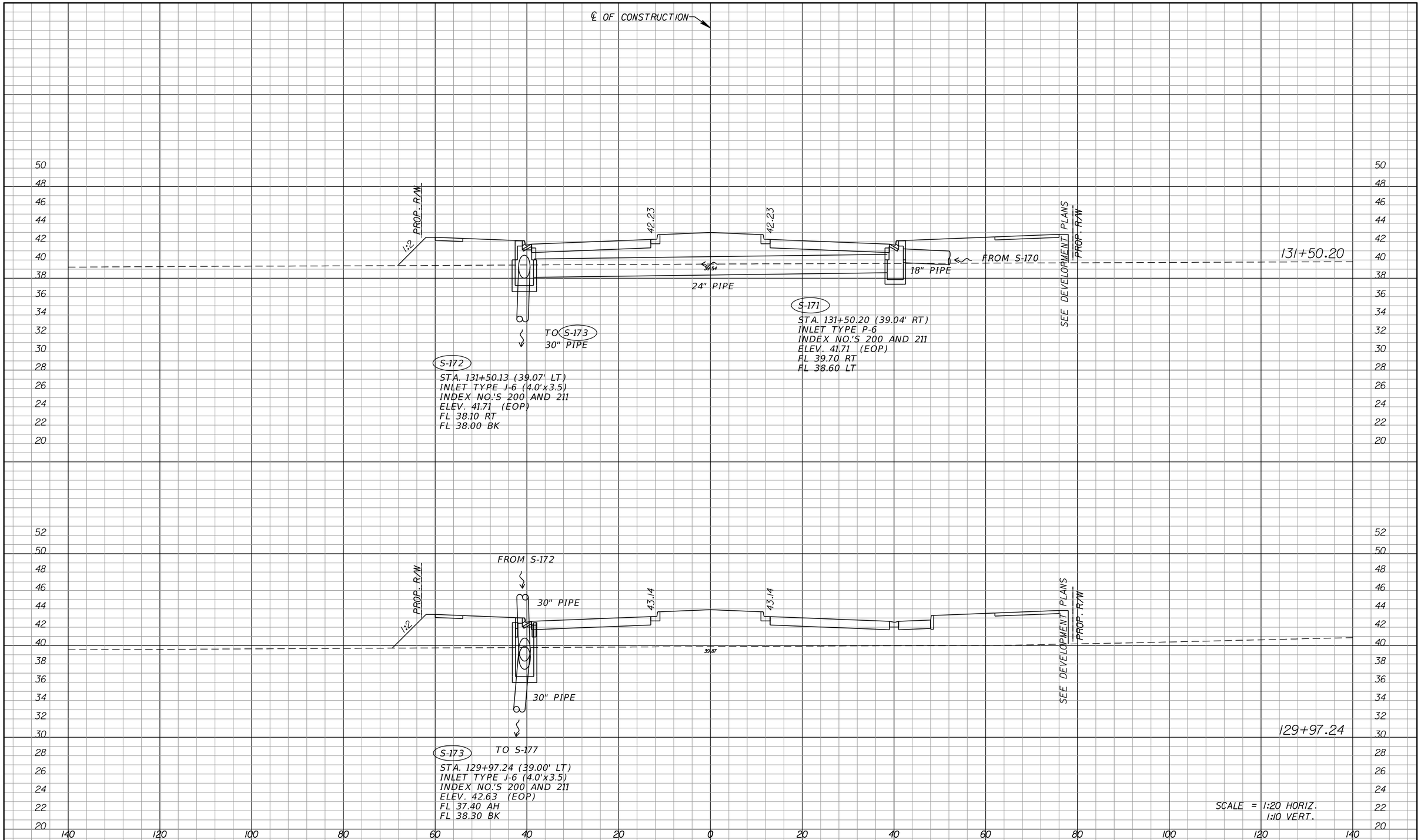

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DATE:
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RANGELAND BOULEVARD

PROJECT NO:

CIP PROJECT NO

DESIGN BY: SULLIVAN

FILE: DRSTRD01.DGN

DRAINAGE STRUCTURE CROSS SECTIONS

PREPARED FOR: WHEELOCK STREET CAPITAL

Elevations based on North American Vertical Datum 1988 (NAVD 88)
Conversion from NAVD 88 to NGVD 29 = +0.89 Feet

SHEET 49 OF 87 SHEETS

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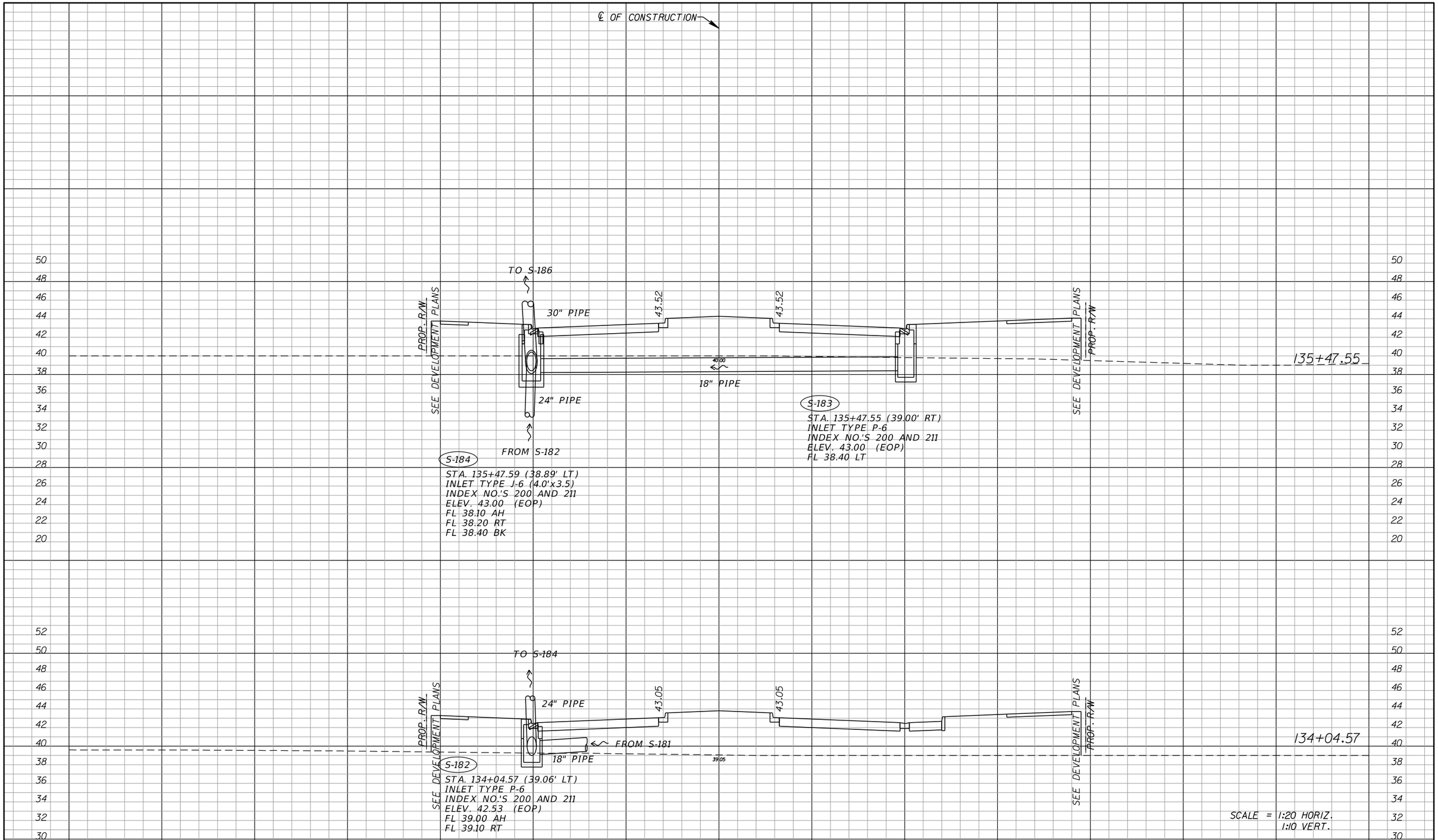

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FLORIDA PROFESSIONAL ENGINEER

RANGELAND BOULEVARD

PROJECT NO:

CIP PROJECT NO

DESIGN BY: SULLIVAN

FILE: DRSTRD01.DGN

DRAINAGE STRUCTURE CROSS SECTIONS

PREPARED FOR: WHEELOCK STREET CAPITAL

Elevations based on North American Vertical Datum 1988 (NAVD 88)
Conversion from NAVD 88 to NGVD 29 = +0.89 Feet

SHEET 50 OF 87 SHEETS

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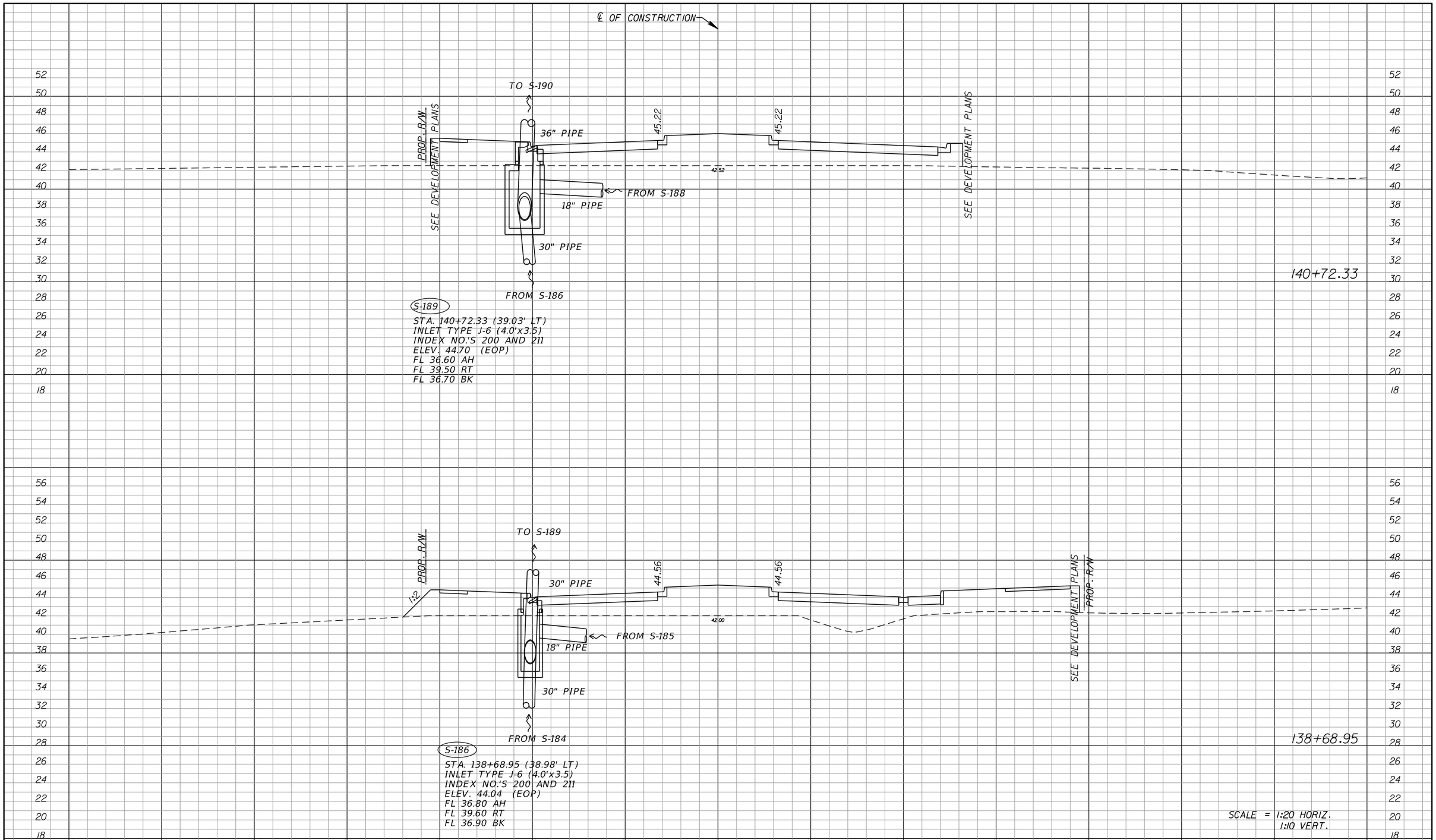

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DATE:
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RANGELAND BOULEVARD

PROJECT NO:

CIP PROJECT NO

DRAINAGE STRUCTURE CROSS SECTIONS

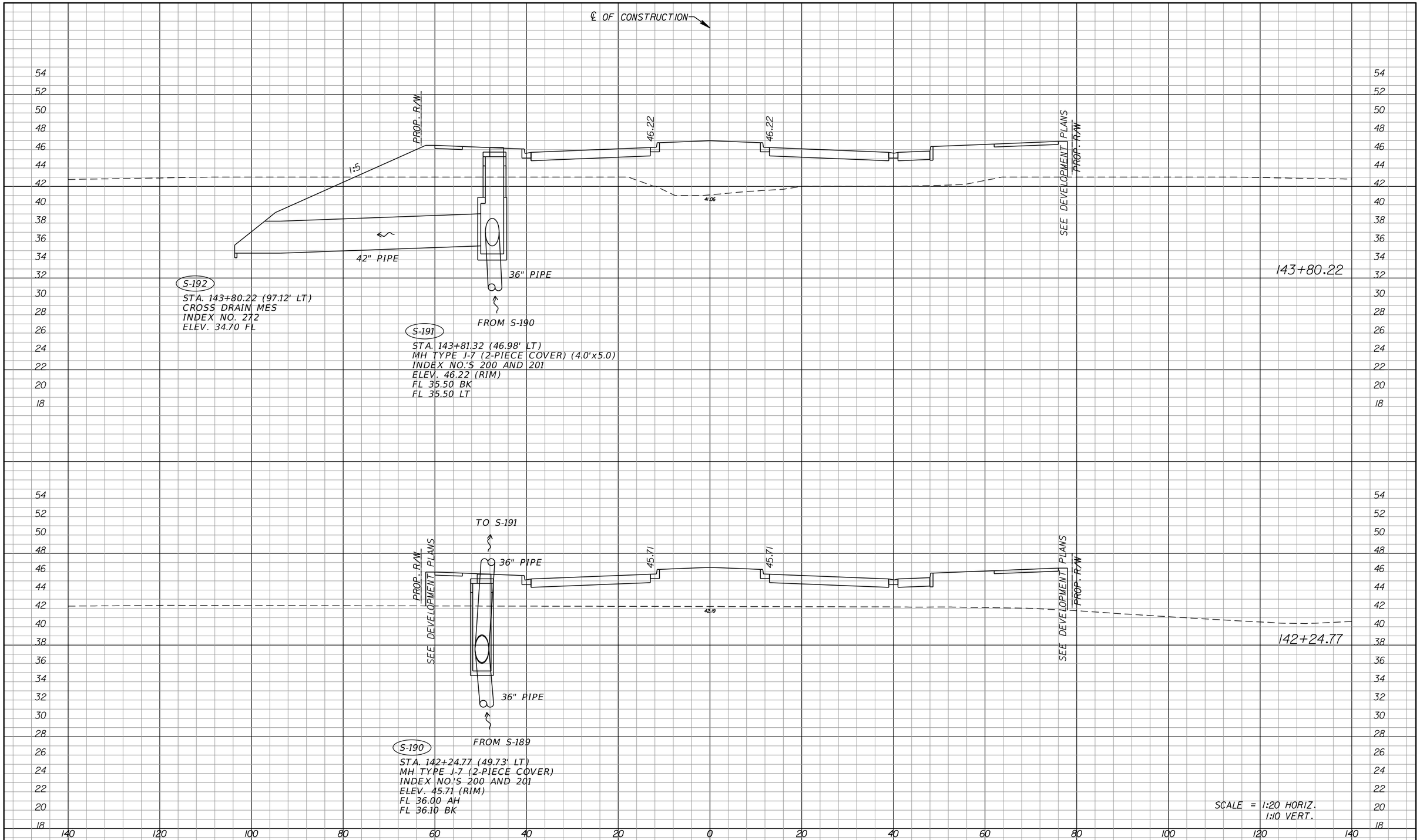
PREPARED FOR: WHEELOCK STREET CAPITAL

DESIGN BY: SULLIVAN

Elevations based on North American Vertical Datum 1988 (NAVD 88)
Conversion from NAVD 88 to NGVD 29 = +0.89 Feet

FILE: DRSTRD01.DGN

SHEET 51 OF 87 SHEETS



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ENGINEERING BUSINESS CERTIFICATE OF AUTHORIZATION NO. 28782

HEIDT DESIGN
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DATE:
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FLORIDA PROFESSIONAL ENGINEER

RANGELAND BOULEVARD

PROJECT NO:

CIP PROJECT NO

DESIGN BY: SULLIVAN

FILE: DRSTRD01.DGN

DRAINAGE STRUCTURE CROSS SECTIONS

PREPARED FOR: WHEELOCK STREET CAPITAL

Elevations based on North American Vertical Datum 1988 (NAVD 88)
Conversion from NAVD 88 to NGVD 29 = +0.89 Feet

SHEET 52 OF 87 SHEETS

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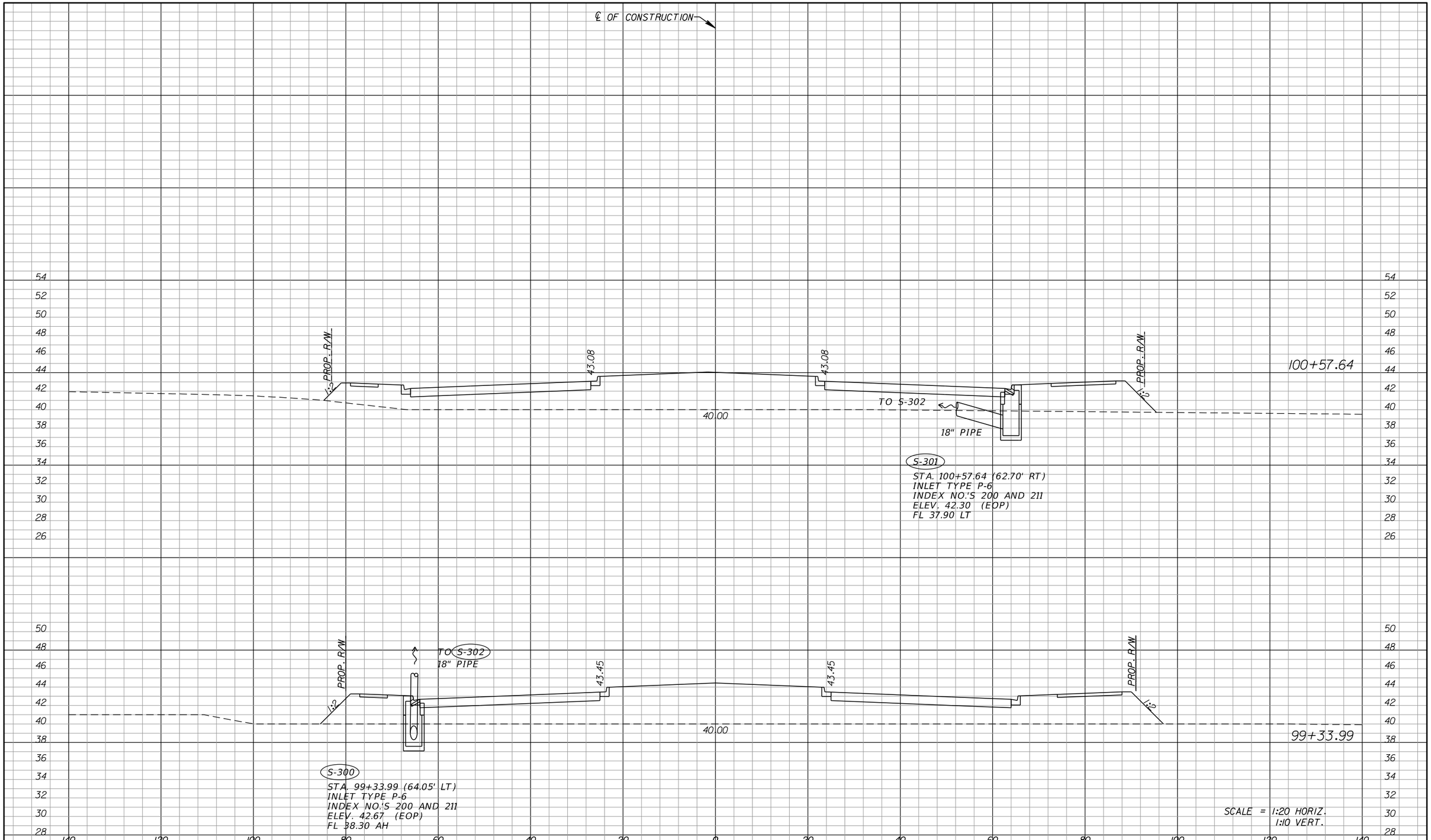

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DATE:
THOMAS D. SULLIVAN NO. 55358
FLORIDA PROFESSIONAL ENGINEER

HEART PINE AVENUE

PROJECT NO:

CIP PROJECT NO

DRAINAGE STRUCTURE CROSS SECTIONS

PREPARED FOR: WHEELOCK STREET CAPITAL

DESIGN BY: SULLIVAN

Elevations based on North American Vertical Datum 1988 (NAVD 88)
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SHEET 53 OF 87 SHEETS

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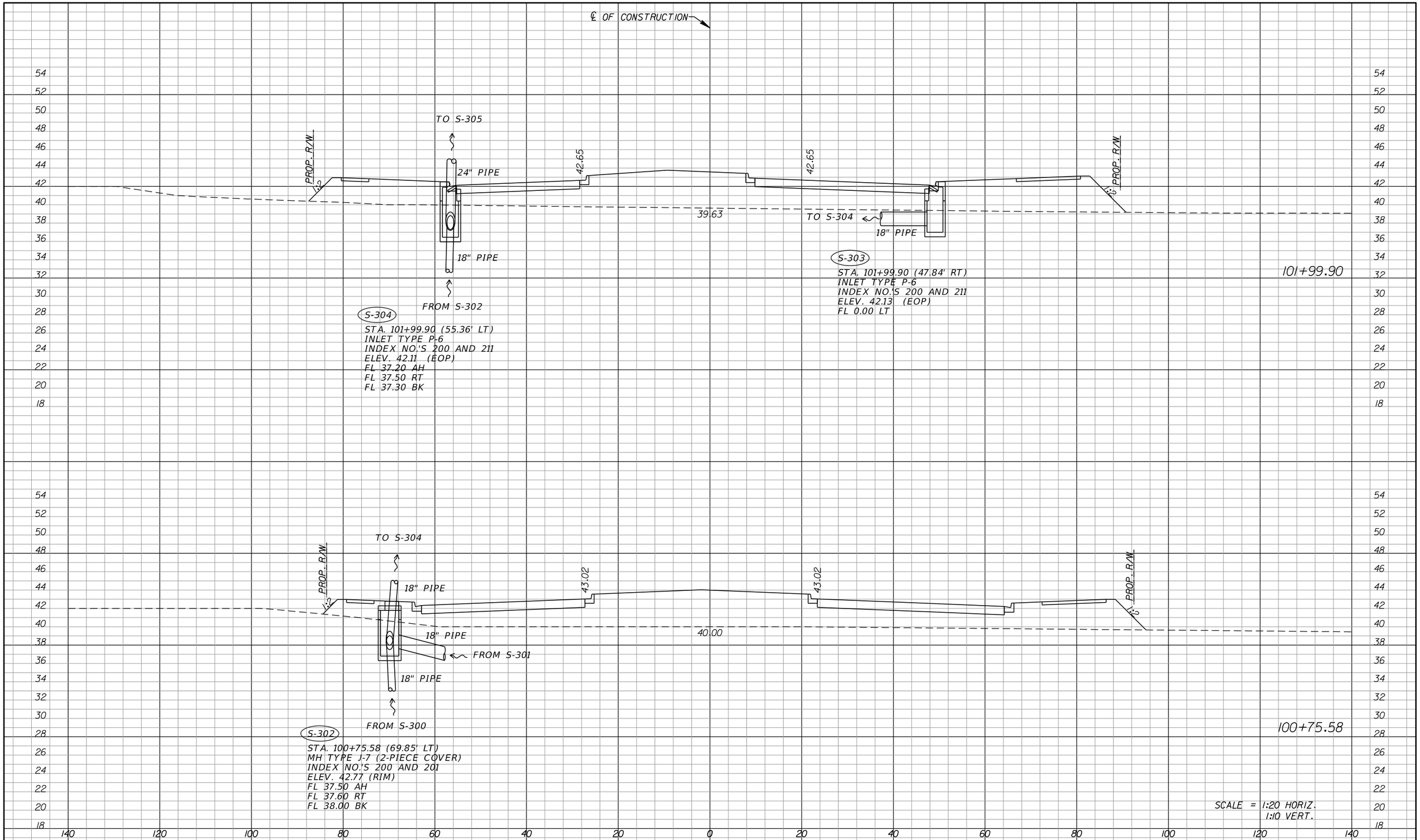

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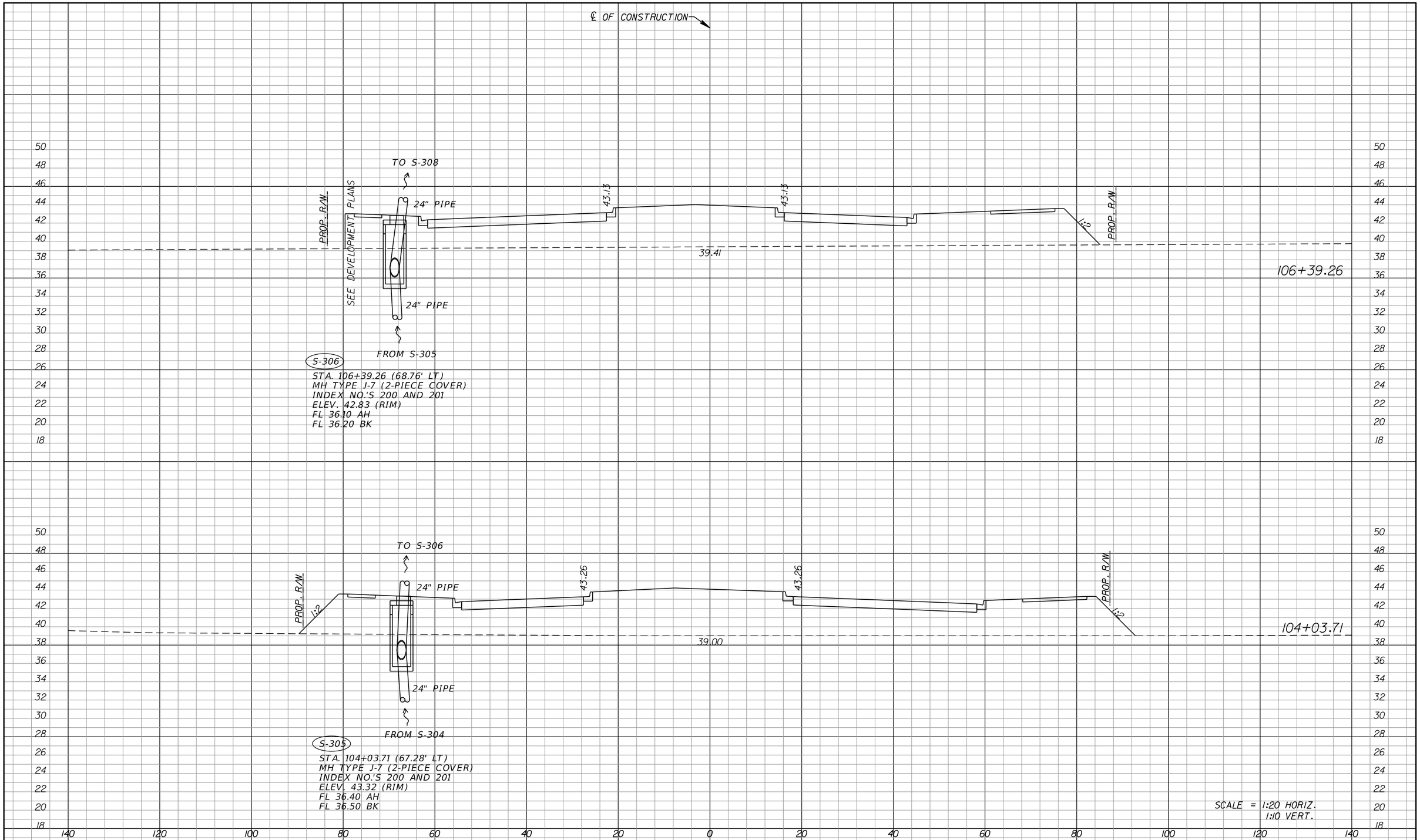

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PROJECT NO:

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SHEET 55 OF 87 SHEETS

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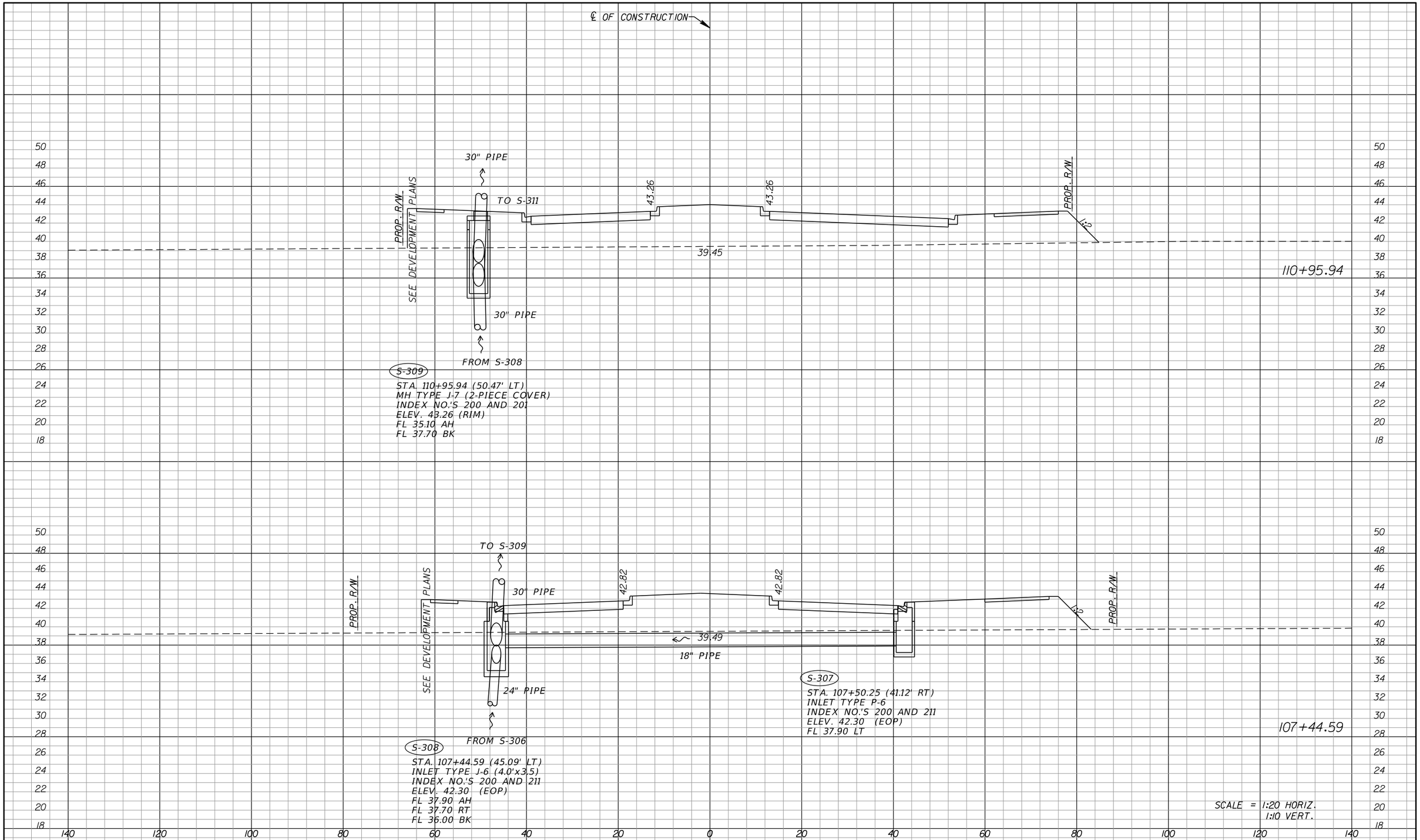

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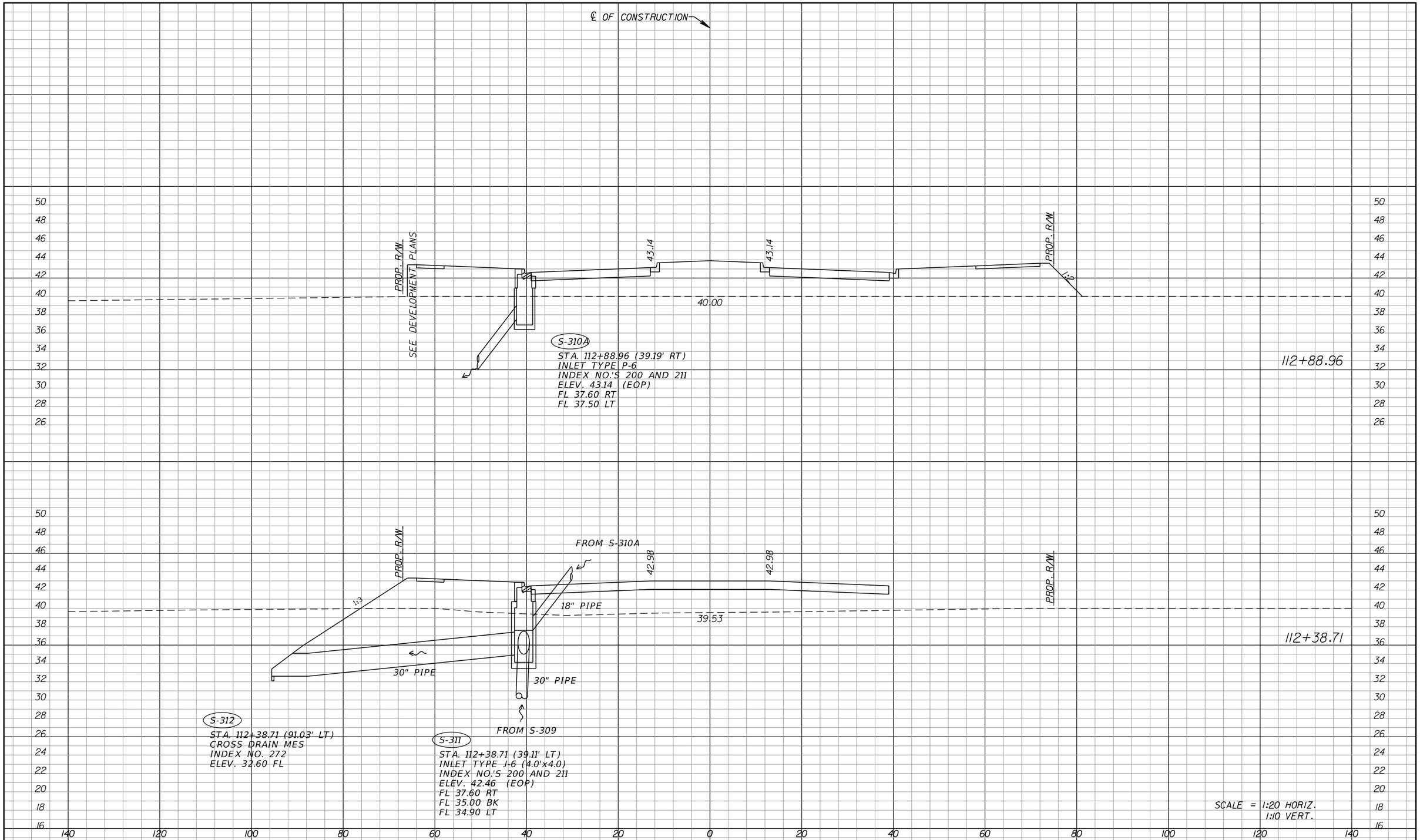

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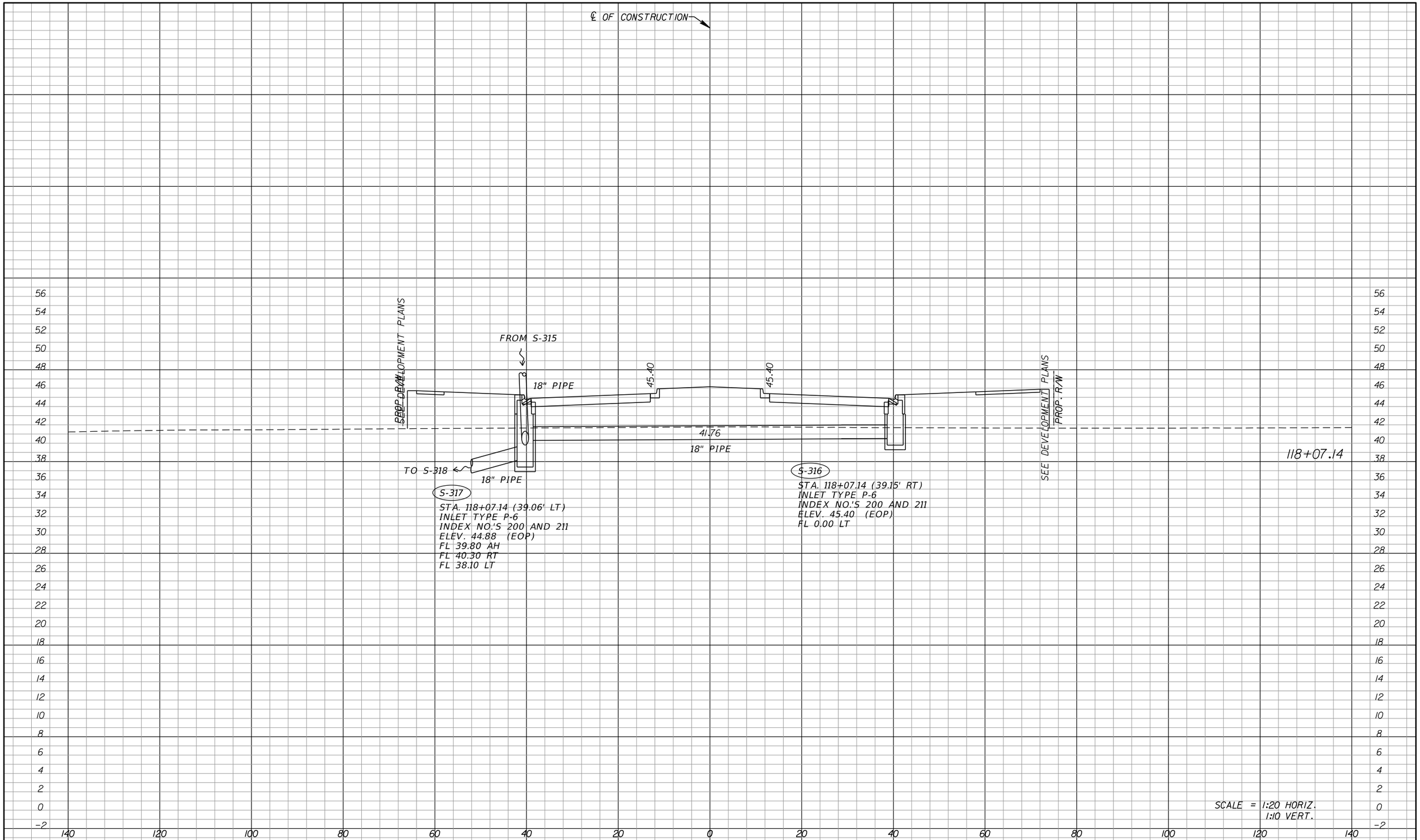

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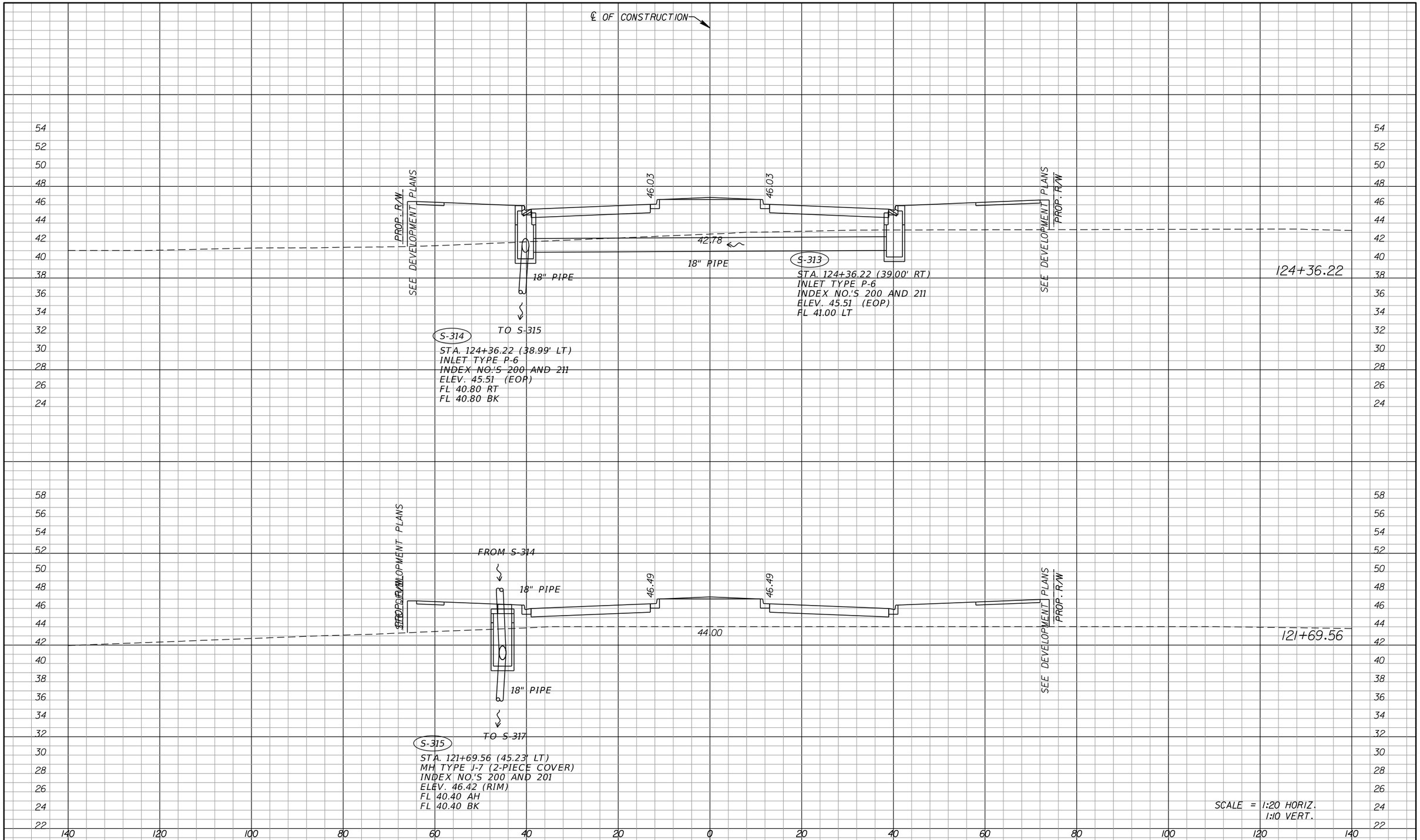

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STORM WATER POLLUTION PREVENTION PLAN

Contained on these plans and within the following notes is a storm water pollution prevention plan (swppp) which has been developed by Heidt Design, LLC in accordance with the Florida Department of Environmental Protection's (FDEP) "National Pollutant Discharge Elimination System" (NPDES) generic permit for stormwater discharge from large and small construction activities.

The following entities are identified as team members of "SWPP": Heidt Design, LLC, the developer as identified in the title box of these plans, and the site contractor and his sub-contractors. Each team member has specific responsibilities and obligations. In general, all team members, with regard to their involvement and responsibilities on the project, are to implement all necessary storm water management controls to assure compliance with the NPDES generic permit for storm water discharges from construction activities, the Southwest Florida Water Management District Permit, the applicable local governing agency (i.e. Pasco County) and the guidelines listed in the SWPP. The duties and responsibilities of the team members as they pertain to the SWPP are as follows:

HEIDT DESIGN, LLC:

A. Develop SWPP including, but not limited to, retention/detention ponds, control structures, erosion control methods and locations and stabilization criteria. This design is included within these construction plans and the following notes and instructions.

B. Submit and obtain the necessary design related storm water permits from the Florida Department of Environmental Protection, the Southwest Florida Water Management District and other applicable governmental bodies.

C. Upon notification by the developer of his intent to commence construction, submit a notice of intent to the FDEP on behalf of the developer and copy the contractor including SWPP certification and copy of the permit.

D. Submit to SWFWMD and the operator of the municipal separate storm water system, if applicable, a letter of construction commencement.

E. Complete and submit a notice of termination and certification for developer. The NOT's shall be submitted no more than 30 days after;

(a) Completion of the project and final stabilization of the site or

(b) When responsibility for the site has ended. Final stabilization as defined by EPA is when all soil disturbing activities at the site have been completed and a uniform (e.g. evenly distributed, without large bare areas) perennial vegetative cover with a density of 70% of the native background vegetative cover for the area has been established on all unpaved areas and areas not covered by permanent structures. As an alternative, equivalent permanent stabilization measures (such as riprap, gabions, or geotextiles) may be employed. The client shall notify Heidt Design, LLC when one of these criteria has been met.

CONTRACTOR:

A. Sign and return to Heidt a contractors certification form certifying your understanding of and willingness to comply with the Storm Water Pollution Prevention Plan no later than 48 hours prior to commencement of construction. Also, each subcontractor affected by the SWPP must certify to the contractor that they understand and shall comply with the NPDES Permit and SWPP. A record of these certifications shall be maintained by the contractor on site.

B. During construction, assure compliance with the designed Storm Water Pollution Prevention plans prepared by Heidt Design, LLC and the NPDES Generic Permit for storm water discharges from large and small construction activities.

C. Maintain a copy of the construction plans, which include the Storm Water Pollution Prevention Plan, the NOI, and all inspection reports and certifications on site.

D. Undertake all reasonable Best Management Practices (BMP's) to assure that silted or otherwise polluted storm water is not allowed to discharge from the site during all phases of construction. Stabilization BMP's that may be used include:

Temporary or permanent seeding, mulching, geotextiles, sodding, vegetative buffer strips, protection of trees and preservation of mature vegetation. Structural erosion and sediment control BMP's that may be used include: straw bale dikes, silt fences, earth dikes, brush barriers, drainage swales, check dams, subsurface drain, pipe slope drain, level spreaders, storm drain inlet protection, outlet protection, sediment traps, and temporary sediment basins. Detention ponds may also be used as temporary sediment basins. Additional BMP's that may need to be implemented include: providing protected storage areas for chemicals, paints, solvents, fertilizers, and other potentially toxic materials. Providing waste receptacles at convenient locations and providing regular collection of wastes, including building material wastes. Minimizing off-site tracking of sediments. Making adequate preparations, including training and equipment to contain spills of oil and hazardous materials. Complying with applicable state or local waste disposal, sanitary sewer or septic system regulations and the use of appropriate pollution prevention measures for allowable non-storm water components of discharge.

E. Notify Heidt Design, LLC and the developer in writing of any non-storm water pollution sources which are being stored, or otherwise used during the construction of the project, i.e., fertilizers, fuels, pesticides, other chemicals. This notification should be accompanied with the contractor's design and methods to prevent pollution run-off from these sources.

F. Develop a maintenance and inspection plan which includes, but is not limited to the following:

(a) The specific areas to be inspected and maintained that includes all the disturbed areas and material storage areas of the site.

(b) The erosion and sediment controls identified in the swppp to be maintained and inspected and those additional controls that the contractor deems necessary.

(c) Maintenance procedures.

(d) The procedure to follow if additional work is required or whom to call.

(e) Inspections and maintenance forms.

(f) The personnel assigned to each task.

The following shall be inspected a minimum of once a week or within 24 hours after 0.50 inches of rainfall:

Stabilization measures (once a month if fully stabilized).

Structural controls.

Discharge points.

Construction entrances and exits.

Areas used for storage of exposed materials.

An inspection form shall be completed for each inspection. Any permit violations should be noted and corrective measures shall be taken no later than 7 days after the inspection occurred. If revisions to the SWPP are needed, a report form for changes in the SWPP shall be completed and a copy sent to Heidt Design, LLC the original shall be kept on-site as documentation of the change. If the inspection passes, a certification that the facility is in compliance with the SWPP and the NPDES Permit must be signed by a duly authorized representative of the principal executive official of the operator of the SWPP with one of the following qualifications:

1. Has successfully completed the Florida Stormwater, Erosion and Sediment Control Inspector Training Program.
2. Successfully completed a similar training program.
3. Has enough practical on the job training to be qualified to perform the inspections.
4. Retain inspection reports and certifications for at least three years.

G. Site stabilization measures shall be initiated as soon as practical but in no case more than 7 days, in portions of the site where construction activities have temporarily or permanently ceased.

H. Releases in excess of reportable quantities.

1. The discharge of hazardous substances or oil in the stormwater discharge(s) from a facility or activity shall be prevented or minimized in accordance with the applicable Stormwater Pollution Prevention Plan for the facility or activity. This permit does not relieve the operator of the reporting requirements of 40 cfr part 117 and 40 cfr part 302. Where a release containing a hazardous substance in an amount equal to or in excess of a reporting quantity established under either 40 cfr 117 or 40 cfr 302, occurs during a 24 hour period:

   A. The operator is required to notify the State Warning Point (800-210-0519 or 850-413-9911) as soon as he or she has knowledge of the discharge;

   B. The operator shall submit within 14 calendar days of knowledge of the release a written description of: the release (including the type and estimate of the amount of material released), the date that such release occurred, the circumstances leading to the release, and remedial steps to be taken, to the Florida Department of Environmental Protection, NPDES Stormwater Section, Mail Station 2500, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and

   C. The Stormwater Pollution Prevention Plan required under part V of this permit must be modified within 14 calendar days of knowledge of the release to: provide a description of the release, the circumstances leading to the release, and the date of the release. In addition, the plan must be reviewed to identify measures to prevent the reoccurrence of such releases and to respond to such releases, and the plan must be modified where appropriate.

2. This permit does not authorize the discharge of hazardous substances or oil resulting from an on-site spill.

DEVELOPER:

A. Notify Heidt of your intent to commence construction. Sign the Notice of Intent form as operator of the storm water discharge facility and permittee and return to Heidt Design, LLC.

B. Sign a certification of Storm Water Pollution Prevention Plan and return to Heidt Design, LLC.

C. Notify Heidt when it is time to submit a Notice of Termination as defined under part E of the Heidt Design, LLC section of the SWPP. Sign and return to Heidt Design, LLC for submittal to FDEP a Notice of Termination form and certification.

PRE-DEVELOPED SITE INFORMATION:

1. Total Site Acreage: 498.0± AC.
2. Land Use: UNDEVELOPED - AGRICULTURAL
3. Vegetation: RANGE LAND, BAHIA GRASS PASTURE
4. Receiving waters or municipal separate storm water system: ANCLOTE RIVER
5. 2 Year/24 Hour Rainfall Depth: 4.5"
6. Soil Types: NARCOOSSEE, SELLERS, SMYRNA, SAMSULA, MYAKKA

PROJECT INFORMATION:

1. Project Type - RESIDENTIAL
2. Anticipated Construction Sequence is as follows:
   1. Complete Erosion Control Installation
   2. Clearing and Grubbing
   3. Earthwork Activities
   4. Storm Water System Construction
   5. Utility Construction
   6. Base and Pavement Construction
   7. Final Stabilization

The BMP's listed in part D of the Contractor Dection of the SWPP shall be considered during all phases of construction.

3. Anticipated Start Date: 04/01/2014
4. Anticipated Completion Date: 07/15/2015
5. Total Acres Disturbed: 294.0 Ac.
6. Pre-Developed "C" Factor: 0.20
7. Post-Developed "C" Factor: 0.45
8. The Storm Water Management System, upon completion of construction and appropriate certification and as-built submittals will be operated and maintained by WS-TSR, LLC.
9. The potential source of pollution from this project is on-site development and construction activity.

OWNER'S INSTRUCTIONS FOR MAINTENANCE AND INSPECTION OF STORMWATER FILTER FACILITIES

Drainage systems should be inspected on a routine basis to ensure that they are functioning properly. Inspections can be on an annual or semi-annual basis, but should always be conducted following major storms. Systems that incorporate infiltration are most critical since poor maintenance practices can soon render them inefficient. Visual inspections of sand filters, control structures, and outfall pipes are highly recommended. It should be stressed that good records should be kept on all maintenance operations to help plan future work and identify facilities requiring attention.

Sand filter surfaces are sometimes scarified or break up silt deposits and restore porosity. This should be accomplished after all sediment has been removed from the surface. After removing large debris (cups, paper, wood, etc.) it is recommended that raking the top 3" will properly scarify the surface or it may be required to replace the sand. Another technique requires removing the sand for washing.

The filter system is designed to have a wet-dry cycle to inhibit algae or bacterial growth. Cleanout frequency of filter beds will depend on whether they are vegetated or non-vegetated and will be a function of their storage capacity, infiltration characteristics, volume of inflow, and sediment load. Filter beds should be inspected closely at least once a year.

Perforated underdrain pipes are located 2' below the sand and cleanouts are located at the end of the system. In the even of sediment build-up in the underdrain pipe, cleaning can be accomplished throught the cleanout with several of the techniques outlined below.

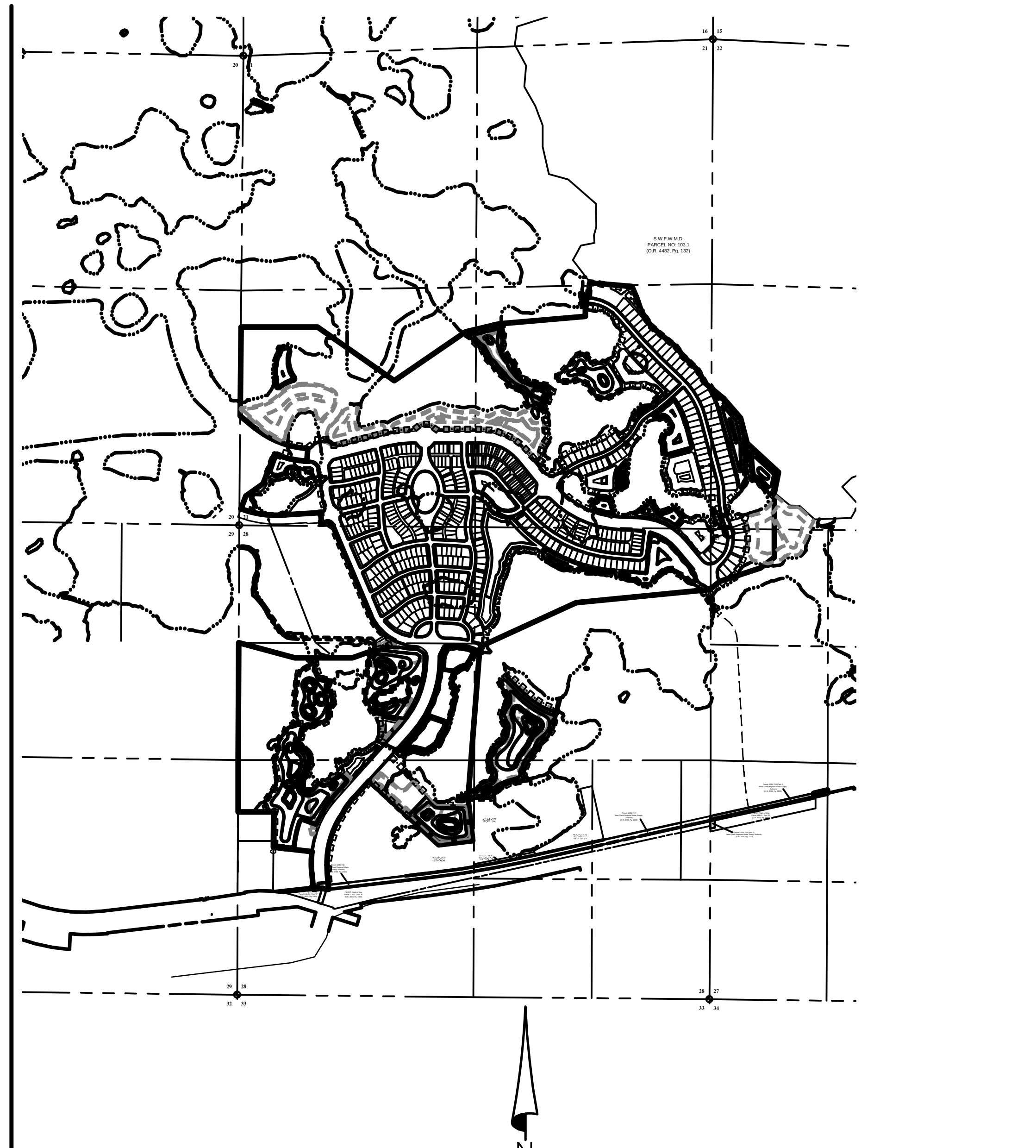
Methods and equipment for cleanout of systems various types of equipment are available commercially for maintenance of drainage systems. The most frequently used equipment and techniques are listed below.

1. Vacuum Pump
   This device is normally used to remove sediment from sumps and pipes. The equipment for this system is generally mounted on a vehicle. It requires a 200 - 300 gallon (0.757 - 1.36m) holding tank and a vacuum pump that has a 10" (254mm) diameter flexible hose with a serrated metal end for breaking up cake sediment. A two-man crew can clean a catch basin in 5 to 10 minutes. this system can remove stones, bricks, leaves, litter and sediment deposits. Normal working depth is 0' - 20' (0 to 6m).

2. Water Jet Spray
   This equipment is generally mounted on a self-contained vehicle with a high pressure pump and a 200 - 300 gallons (0.760 to 1.140m) water supply. A 3" (76mm) flexible hose line with a metal nozzle that directs jets of water at a reverse angle, which propels the nozzle forward while blasting debris backwards toward the catch basin. As the hose line is reeled in, the jetting action forces all debris to the catch basin where it is removed by the vacuum pump equipment. Normal length of hose is approximately 200' (61m). Because of the energy supplied by the water jet, it should not be used to clean erodible trench walls.

GENERAL EROSION AND TURBIDITY CONTROL NOTES

1. The Site Subcontractor shall be responsible for installation and maintenance of all erosion and turbidity controls and the quality and quantity of offsite or wetland discharges.
2. Prior to construction, the Site Subcontractor is responsible for having his dewatering plan and turbidity control plan approved by the applicable reviewing agencies. Refer to the project's permit approvals and permit conditions for agencies requiring such review and approval. Questions concerning appropriate techniques should be addressed to those agencies and/or discussed with the project engineer and owner.
3. The appropriate turbidity and erosion control methodologies selected by the Site Subcontractor for this project should be made following assessment of the plans and project site specific factors and after consultations as needed with the project engineer and appropriate agencies. The Site Subcontractor will be responsible for obtaining any and all necessary permits for such activity; several factors to consider are listed below:
   A. Clay content in excavated materials and/or permeabilities rates
   B. Depth of cut in ponds, trenches, or utility lines
   C. Ambient ground water levels
   D. Actual rainfall amounts and time of year relative to normal rainy season
   E. Proximity to wetlands, water bodies or offsite properties
   F. 'Class' designation of receiving water bodies (i.e., Outstanding Florida Waters, shellfish harvesting areas, etc.)
   G. Density, type, and proximity of upland vegetation to be retained during construction (for use as possible filtration areas)
   H. Fill height relative to natural grade and length and steepness of the proposed slopes
   I. Existing topography and directions of surface flow
   J. Type of equipment used
   K. Project type
   L. Duration of construction activities
   M. Separation distance of onsite ponds
   N. Ambient quality of surface and groundwater
   O. Temporary stockpile locations and heights
4. At the onset of construction, the Site Subcontractor, as the party responsible for implementation of the erosion and sediment control plan, shall assess the above described conditions and factors with respect to relative cost effectiveness and select the appropriate methods of protection. A fairly extensive list of techniques are presented below but it must be stressed that any or all of the following may be necessary to maintain water quality and quantity standards. The construction sequencing should be thought out in advance of initiation to provide adequate protection of water quality.
5. Discharges which exceed 29 N.T.U.'s over the background levels are in violation of state water quality standards. Discharges of water quantities which affect offsite properties or may damage wetlands are also prohibited by regulating agencies.
6. The erosion and turbidity control measures shown hereon are the minimum required for agency approval. Additional control and measures may be required due to the Site Subcontractor's construction sequence & unforeseen weather conditions. Any additional measures deemed necessary by the Site Subcontractor shall be included in the lump sum bid with no extras for materials and labor allowed.
7. Hay bales or silt screens shall be installed prior to land clearing to protect water quality and to identify areas to be protected from clearing activities and maintained for the duration of the project until all soil is stabilized.
8. Floating turbidity barriers shall be in place in flowing systems or in open water lake edges prior to initiation of earthwork and maintained for the duration of the project until all soil is stabilized.
9. No clay material shall be left exposed in any stormwater storage facility. If clay or sandy-clays are encountered during stormwater storage excavation, the Site Subcontractor shall notify the Engineer immediately before proceeding with further excavation. If the Engineer of Record has determined that such soils are non-confining and must be excavated to meet permit and design conditions, excavation may proceed after obtaining written authorization from the appropriate governing agency. If said soils are left exposed at the permitted and designed depth, the Site Subcontractor shall over-excavate the pond's bottom and side slopes by a minimum of twelve (12") inches and backfill with clean sands to help prevent suspension of fine particles in the water column.
10. The installation of temporary erosion control barriers shall be coordinated with the construction of the permanent erosion control features to the extent necessary to assure effective and continuous control of erosion and water pollution throughout the life of the construction phase.
11. The type of erosion control barriers used shall be governed by the nature of the construction operation and soil type that will be exposed. Silty and clayey material may require solid sediment barriers to prevent turbid water discharge, while sandy material may need only silt screens or hay bales to prevent erosion. Floating turbidity curtains should generally be used in open water situations. Diversion ditches or swales may be required to prevent turbid stormwater runoff from being discharged to wetlands or other water bodies. It may be necessary to employ a combination of barriers, ditches, and other erosion/turbidity control measures if conditions warrant.
12. Where pumps are to be used to remove turbid waters from construction areas, the water shall be treated prior to discharge to the wetlands. Treatment methods include, for example, turbid water being pumped into grassed swales or appropriate upland vegetated areas (other than upland preservation areas and wetland buffers), sediment basins, or confined by an appropriate enclosure such as turbidity barriers or low berms, and kept confined until turbidity levels meet State Water Quality Standards.
13. The Permittee shall schedule his operations such that the area of unprotected erodible earth exposed at any one time is not larger than the minimum area necessary for efficient construction operation, and the duration of exposed, uncompleted construction to the elements shall be as short as practicable. Clearing and grubbing shall be so scheduled and performed such that grading operations can follow immediately thereafter. Grading operations shall be so scheduled and performed that permanent erosion control features can follow immediately thereafter if conditions on the project permit.
14. Water derived from various dewatering methods should be passed through sufficiently wide areas of existing upland vegetation to filter out excess turbidity. If this is not sufficient, the water shall be retained in previously constructed permanent stormwater ponds or else retained in temporary sedimentation basins until the clarity is suitable to allow for its discharge. Plugging the outfalls from completed stormwater ponds may be needed to avoid discharge. However, such situations should be monitored closely to preclude berm failure if water levels rise too high.
15. Water can be transported around the site by the use of internal swales or by pumps and pipes.
16. Sheet flow of newly filled or scraped areas may be controlled or contained by the use of brush barriers, diversion swales, interceptor ditches or low berms. Flow should be directed toward areas where sediments can sufficiently settle out.
17. Exposed soils shall be stabilized as soon as possible, especially slopes leading to wetlands. Stabilization methods include solid sod, seeding and mulching or hydromulching to provide a temporary or permanent grass cover mulch blankets, filter fabrics, etc., can be employed to provide vegetative cover.
18. Energy dissipaters (such as rip rap, a gravel bed, hay bales, etc.) shall be installed at the discharge point of pipes or swales if scouring is observed.
19. Attempt to install roadway curb and gutters as soon as possible to reduce the surface area for erosion to occur.
20. Implement storm drain inlet protection (hay bales or gravel) to limit sedimentation within the stormwater system. Perform inspections and periodic cleaning of sediments which wash out into the streets until all soil is stabilized.
21. Water discharge velocities from impounded areas and temporary sedimentation basins shall be restricted to avoid scouring in receiving areas.
22. If water clarity does not reduce to state standards rapidly enough in holding ponds, it may be possible to use chemical agents such as alum to flocculate or coagulate the sediment particles.
23. Hay bales, silt screens, or gravel beds can be added around the pipe or swale discharge points to help clarify discharges. Spreader swales may help dissipate cloudy water prior to contact with wetlands.
24. All fuel storage areas or other hazardous storage areas shall conform to accepted state or federal criteria for such containment areas.
25. Vehicle or equipment washdown areas will be sufficiently removed from wetlands or offsite areas.
26. Fugitive dust controls (primarily by using water spray trucks) shall be employed as needed to control windborn emissions.
27. If the above controls remain ineffective in precluding release of turbid water, especially during pond or utility line dewatering, then the contractor may be compelled to use a vertical dewatering system such as well points or sock drains to withdraw groundwater which may already be clear enough to allow for direct discharge to wetlands.
28. Ongoing inspections and periodic maintenance by the Site Subcontractor shall occur throughout construction as necessary to insure the above methods are working suitably. This may be needed daily, if conditions so warrant. Site Subcontractors are encouraged to obtain and thoroughly review The Florida Development Manual: A Guide to Sound Land and Water Management, which was developed by the State of Florida Department of Environmental Protection in 1988. This provides fairly in-depth discussions of recommended techniques and also provides specific design and technical standards. A copy of this document is available for review at Heidt Design, LLC.
29. The contractor will perform daily inspections of all on-site wetlands within the construction area to ensure that water levels within those wetlands are not excessively impounded prior to the time when the permitted control structure or outfall is built. Water levels significantly above normal should be corrected at a frequency that prevents a change in the vegetative character or health of any wetlands.
30. Prior to commencement of clearing & grubbing or any soil disturbance, contractor shall coordinate with Heidt Design to schedule a pre-construction soil erosion and sediment control inspection with the Pasco County Stormwater Management Division.



0 1000 2000

GRAPHIC SCALE: 1" = 1000'

ELEVATIONS BASED ON:
NORTH AMERICAN VERTICAL DATUM 1988
CONVERSION:
NAVD 88 TO NGVD 29 = +0.85

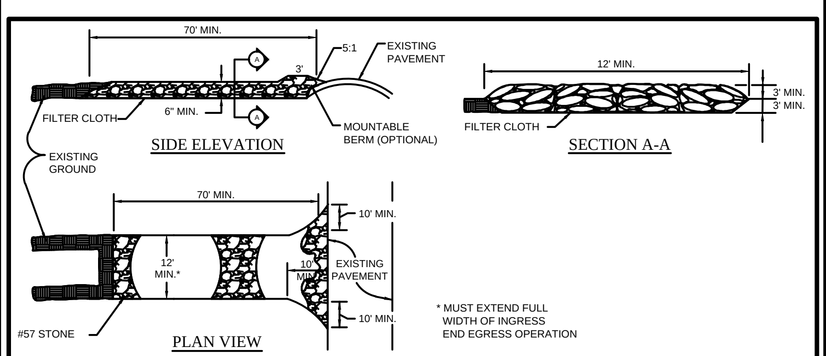
POND/LAKE EXCAVATION NOTE:

No excavation shall extend below the permitted design depths/elevations shown on the drawings, unless additional testing supports otherwise and the Engineer of Record has received verbal and/or written permission from the Water Management District. No lower semi-confining unit clayey soil material and/or no limestone materials shall be excavated, regardless if these materials are encountered within the permitted excavation depths/elevations. If any lower semi-confining unit clayey soil materials or limestone materials are encountered above the permitted depths/elevations, then excavation operations shall cease in the general area and the Engineer of Record shall be notified immediately.

WETLANDS NOTE:

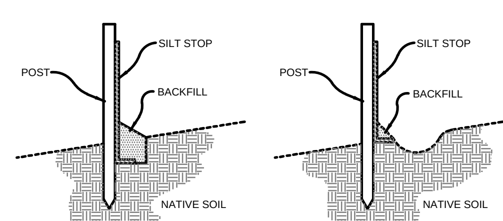
There are no wetland impacts proposed and therefore, no mitigation required.

"Conservation Area" designation is given to all protected wetlands per Pasco County requirements. They are not designated as "Conservation Easements" for SWFWMD compensation.



TYPICAL CONSTRUCTION ENTRANCE

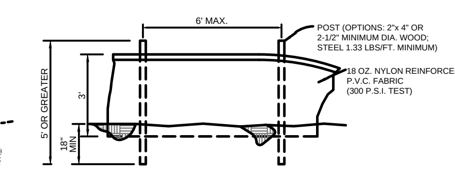
NOT TO SCALE



METHOD OF INSTALLATION

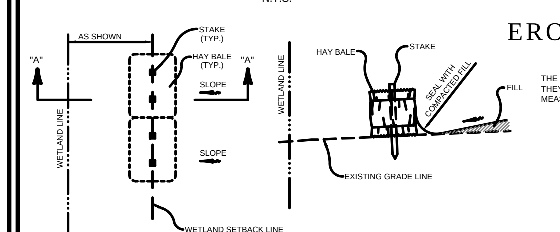
SILT SCREEN

N.T.S.



STAKED TURBIDITY BARRIER

N.T.S.



HAY BALE

N.T.S.

EROSION CONTROL DETAILS

NOTE:

THE EROSION BARRIERS, AS SHOWN, ARE NOT TO BE CONSTRUED TO MEAN THAT THEY ARE ALL THAT MAY BE REQUIRED. THE CONTRACTOR IS TO TAKE WHATEVER MEASURES NECESSARY TO CONTROL EROSION THROUGHOUT THE PROJECT.

LEGEND

Symbol	Description
EPCWL	EPC WETLAND LINE
WCAS	WETLAND CONS. AREA SETBACK
COE	COE WETLAND LINE
	SWFWMD PROJECT LIMITS (0.0 AC.)
	STAKED EROSION CONTROL

DATE	DESCRIPTION	BY

REVISIONS

ENGINEERING BUSINESS CERTIFICATE OF AUTHORIZATION NO. 28782
HEIDT DESIGN
5806-B Breckenridge Parkway
Tampa, Florida 33610
Office: 813-253-5311
Fax: 813-464-7629
www.HeidtDesign.com

DATE:
THOMAS D. SULLIVAN P.E. NO. 55358
FLORIDA PROFESSIONAL ENGINEER

HEART PINE AVENUE - STARKEY VILLAGE 1

PROJECT NO. TSR-SR-1007

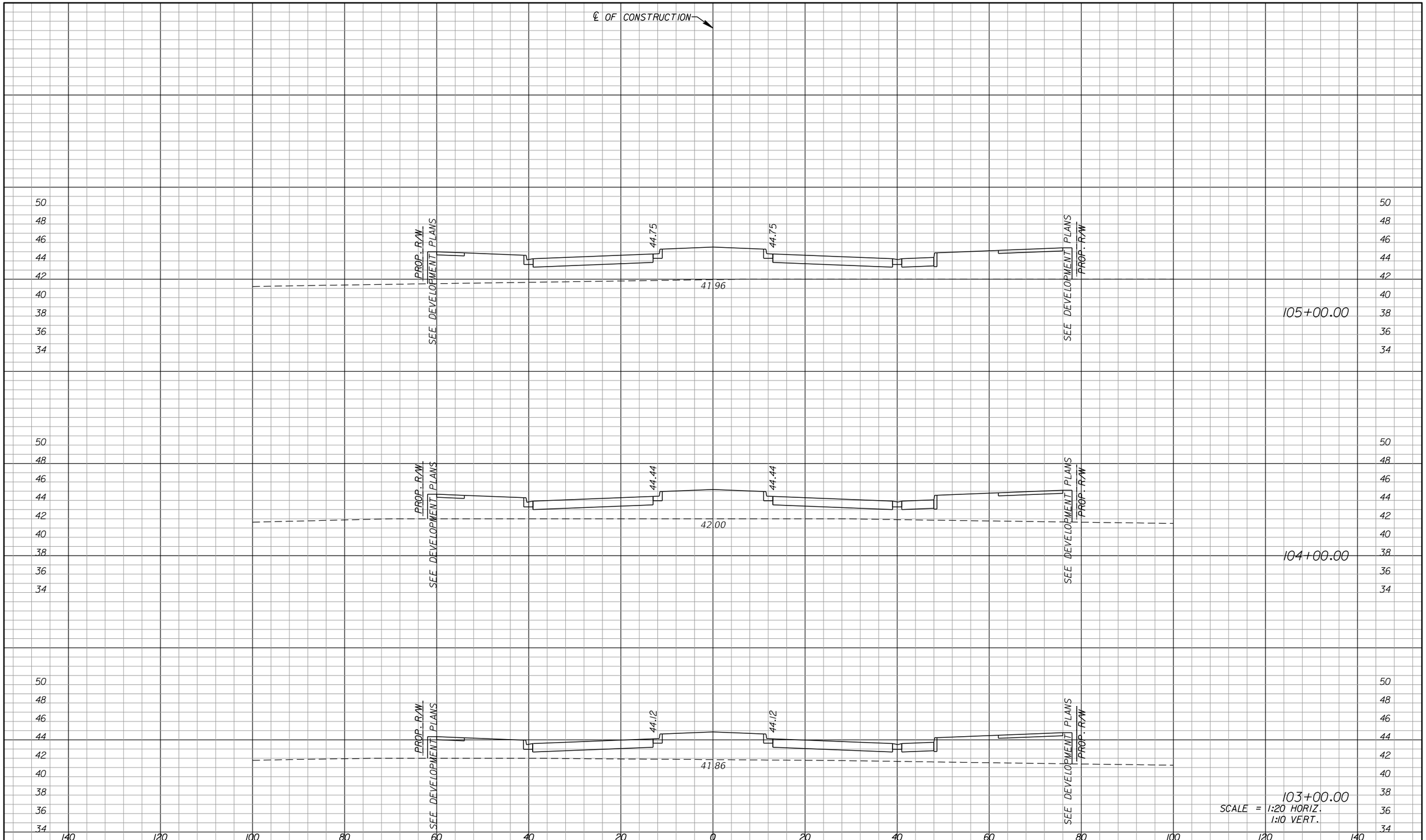
CIP PROJ NO. #####

DESIGN XXXX

CONSTRUCTION SURFACE WATER MANAGEMENT PLAN

PREPARED FOR: PASCO COUNTY DEPARTMENT OF PUBLIC WORKS

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet



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www.HeidtDesign.com

DATE:

THOMAS D. SULLIVAN NO. 55358
FLORIDA PROFESSIONAL ENGINEER

RANGELAND BOULEVARD

PROJECT NO:

CIP PROJECT NO

CROSS SECTIONS

PREPARED FOR: WHEELOCK STREET CAPITAL

DESIGN BY: SULLIVAN

Elevations based on North American Vertical Datum 1988 (NAVD 88)
Conversion from NAVD 88 to NGVD 29 = +0.89 Feet

FILE: DRSTRD01.DGN

SHEET 61 OF 87 SHEETS

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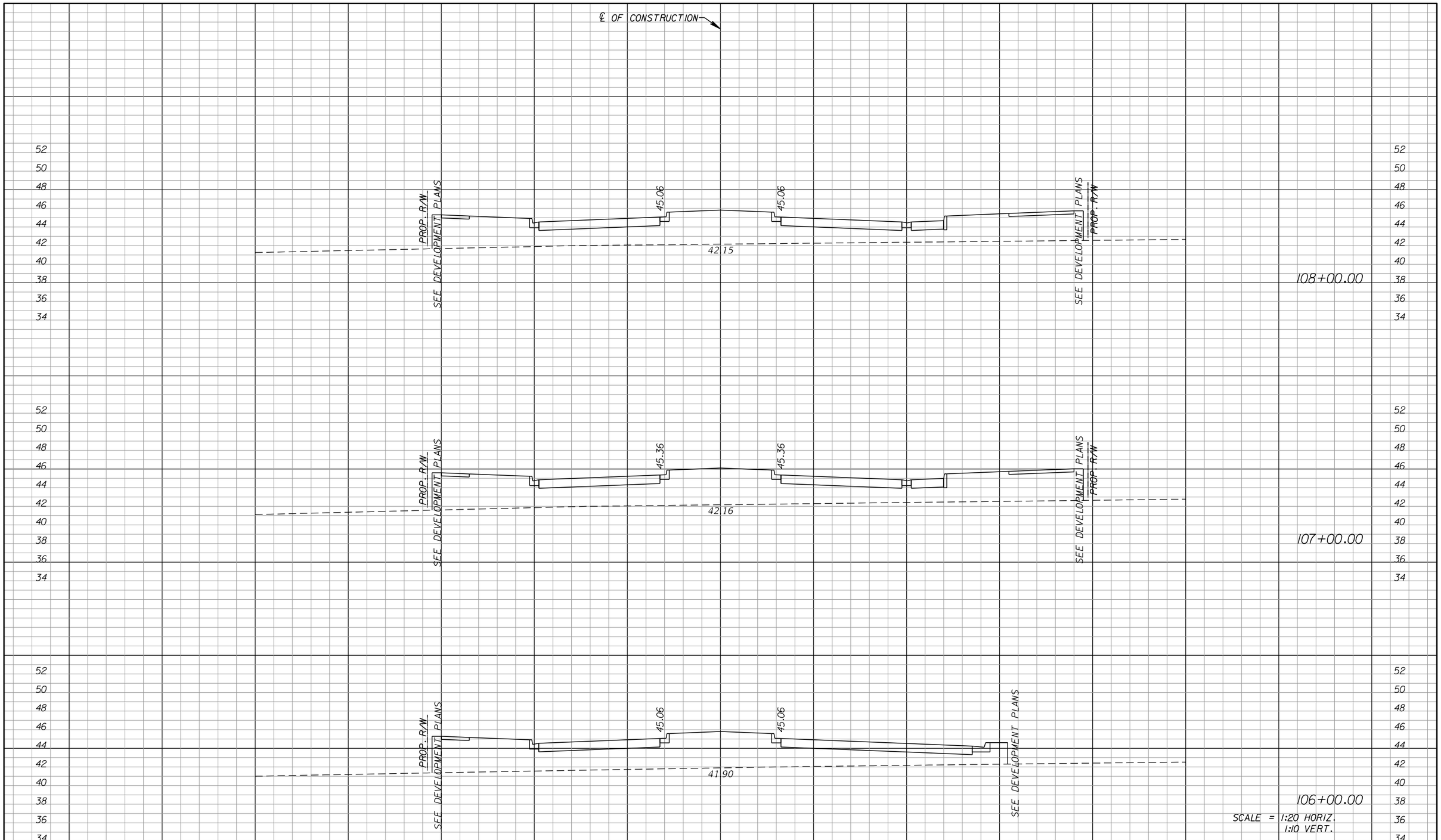

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SHEET 62 OF 87 SHEETS

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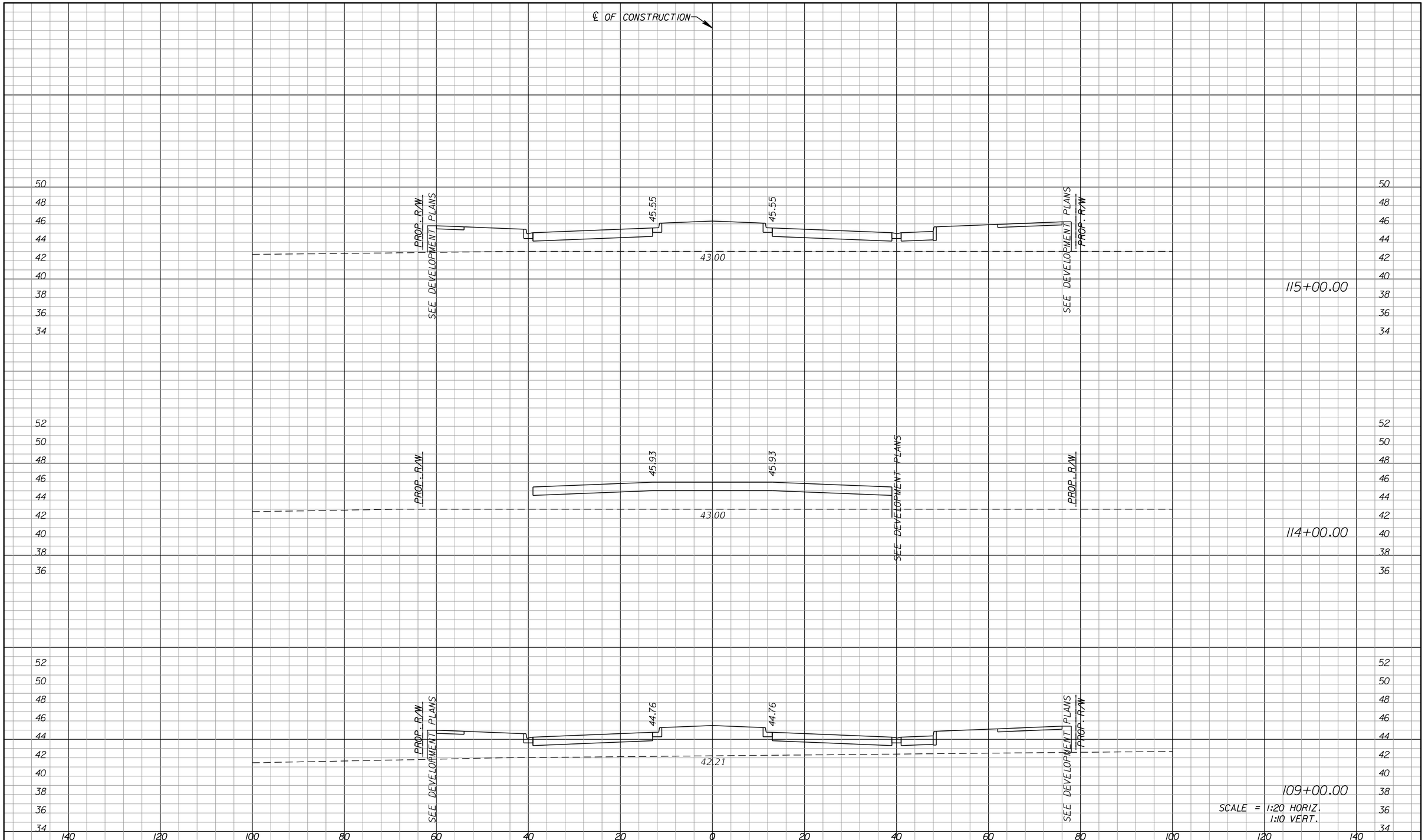

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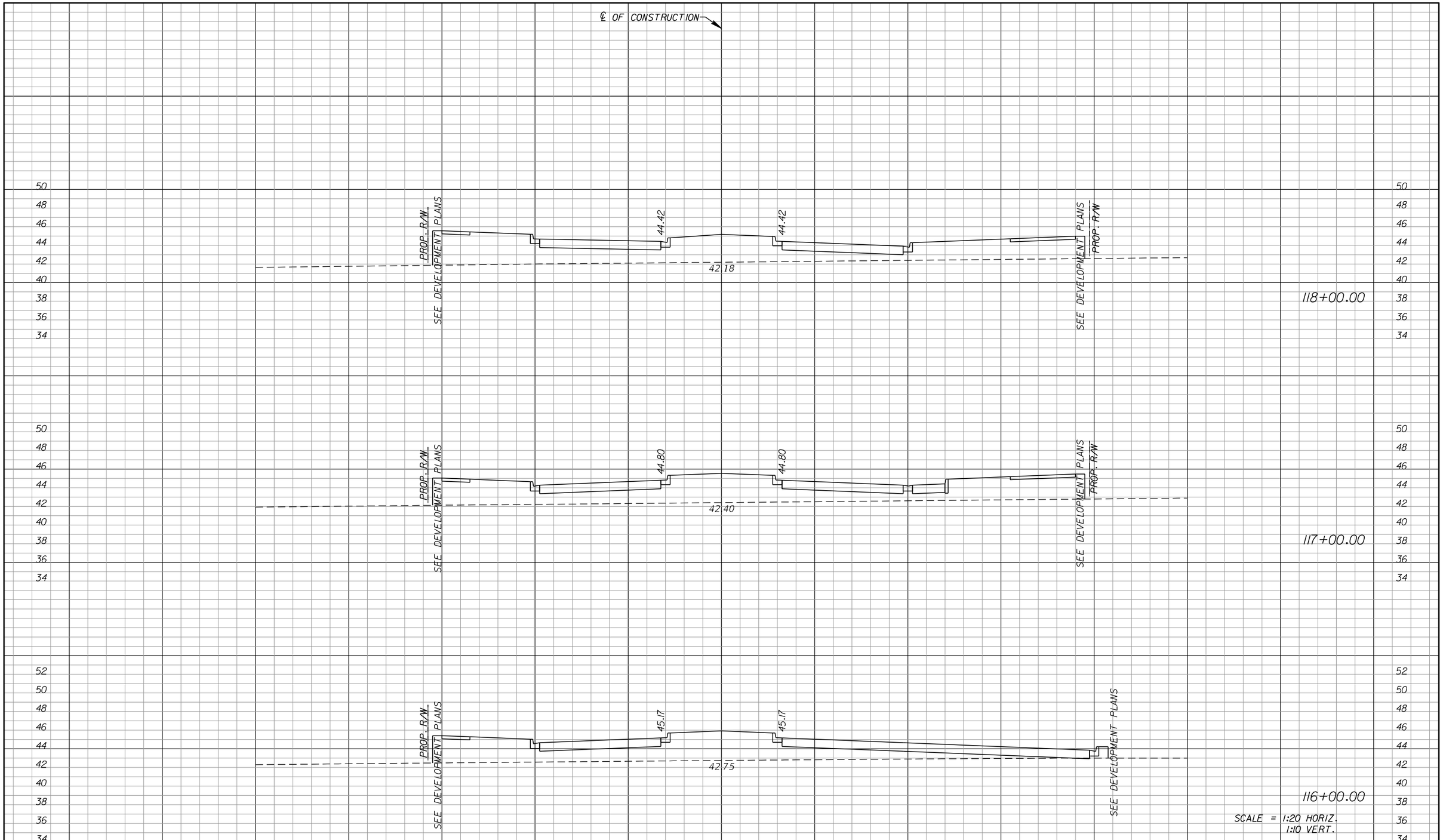

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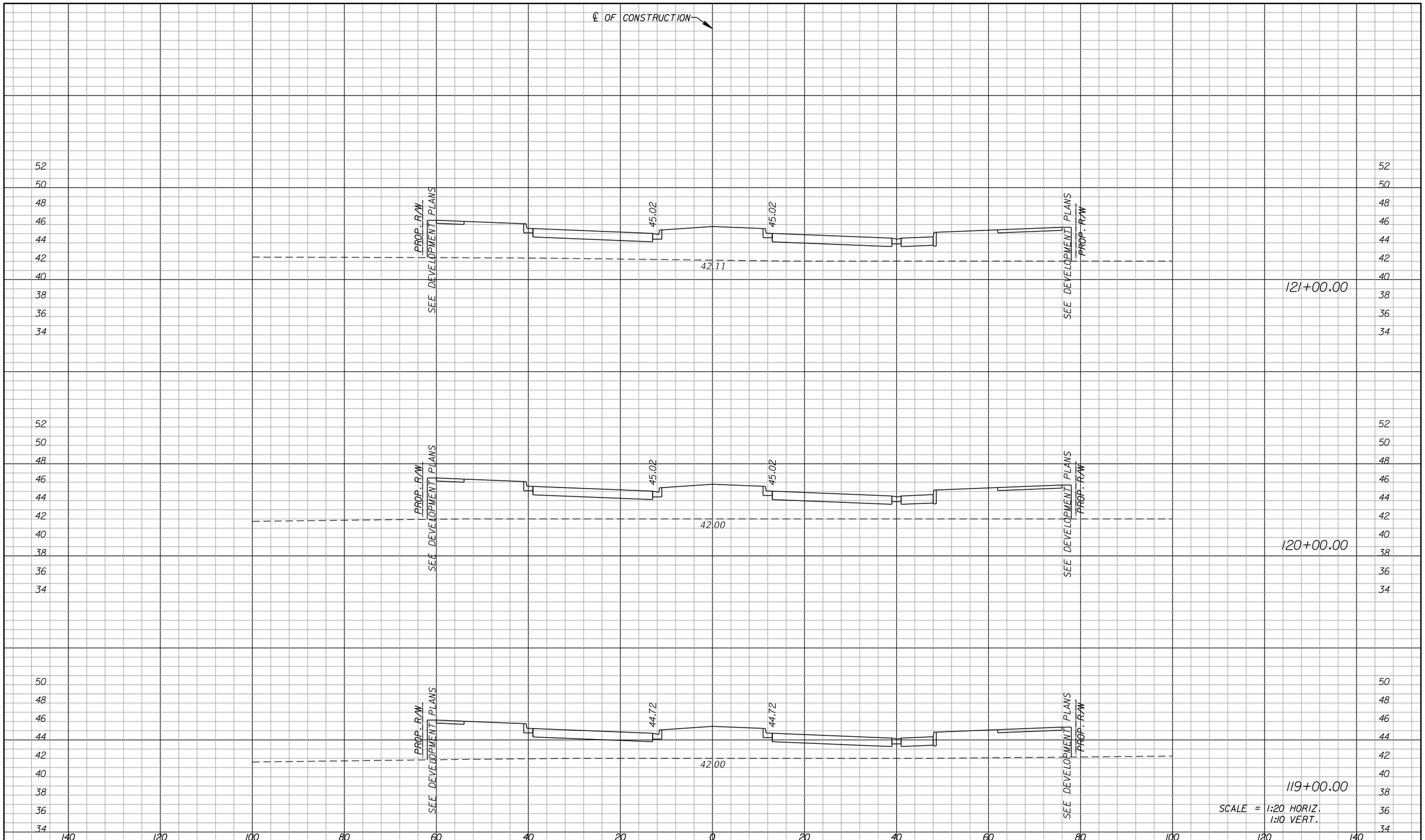

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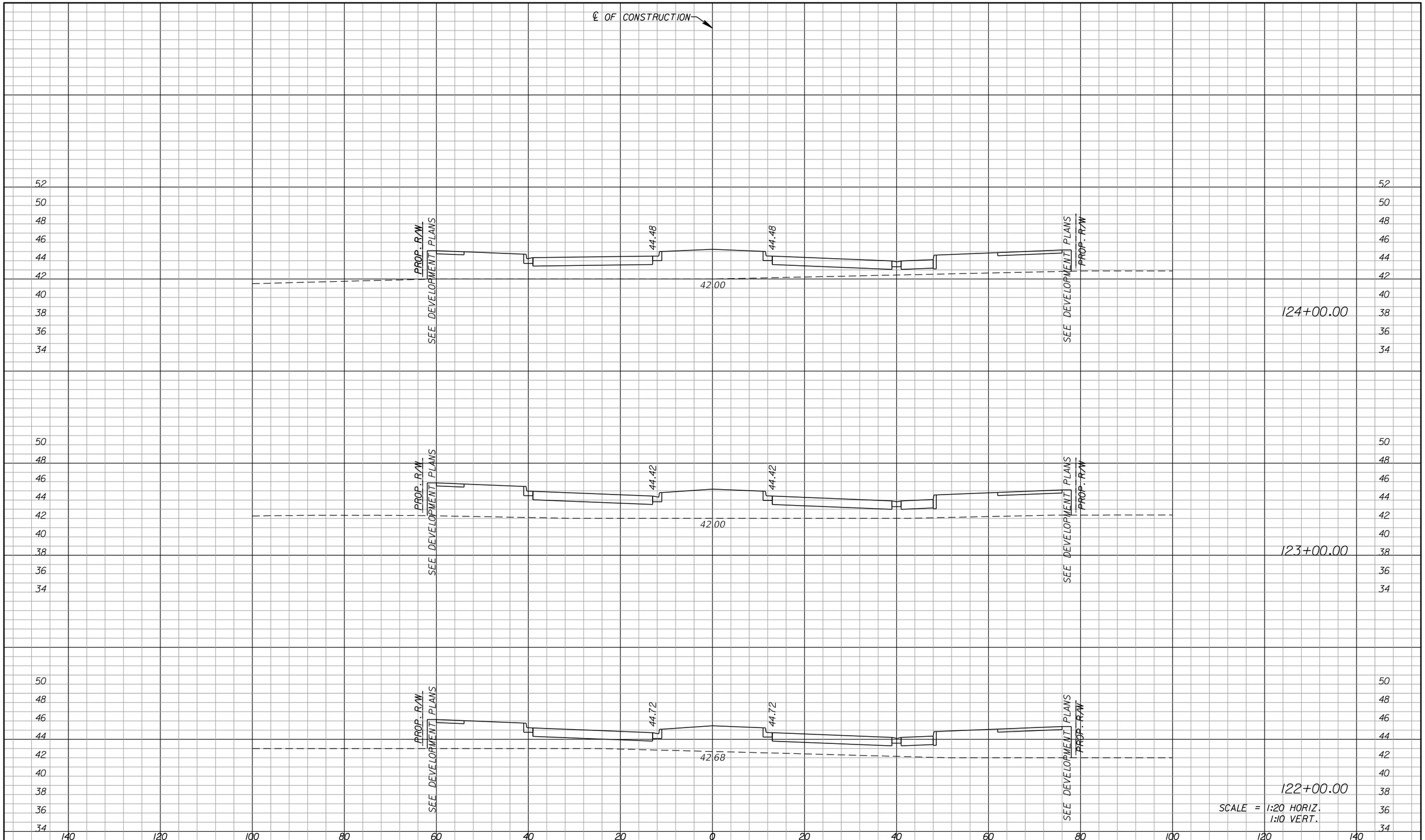

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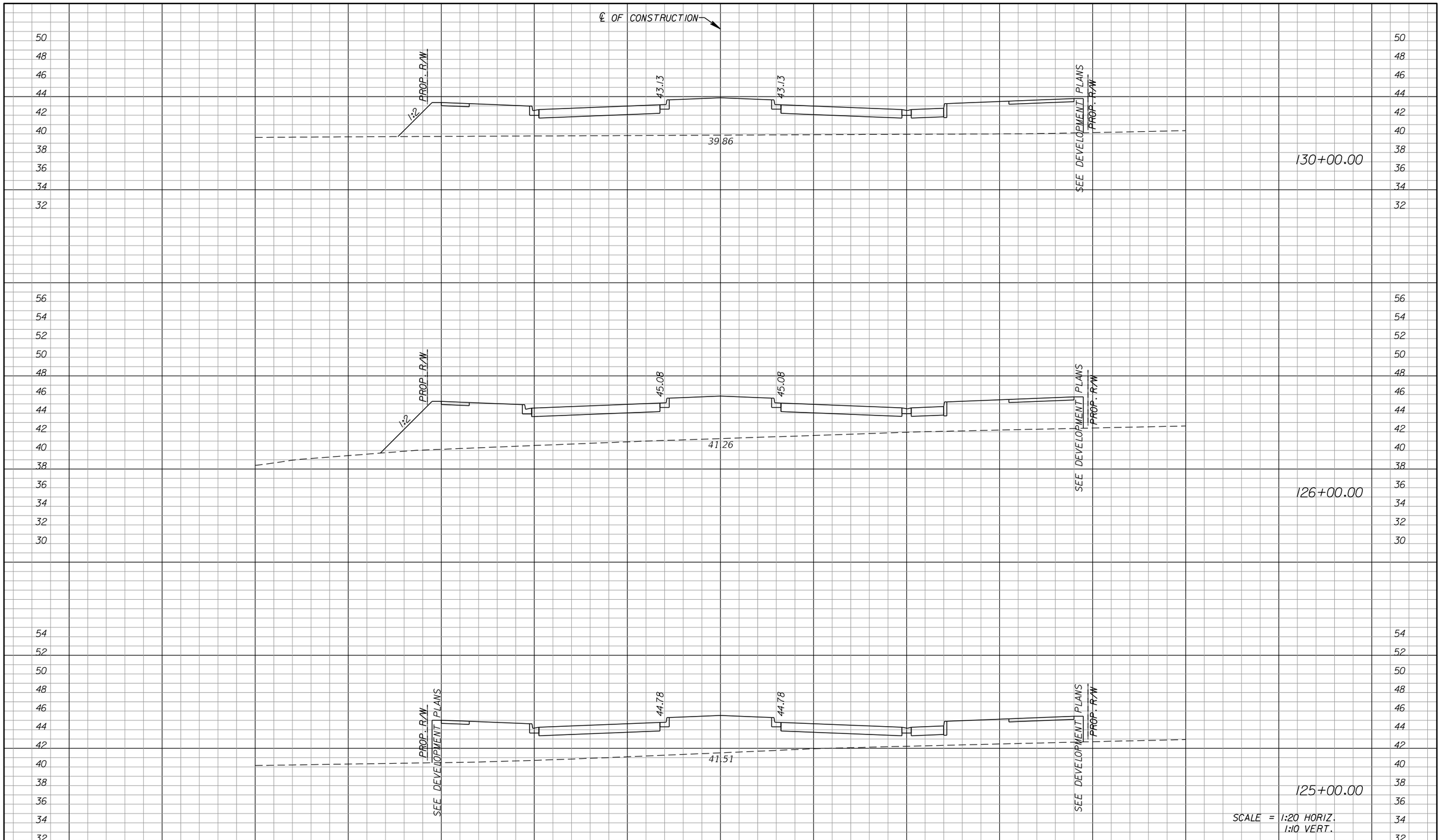
SHEET 66 OF 87 SHEETS



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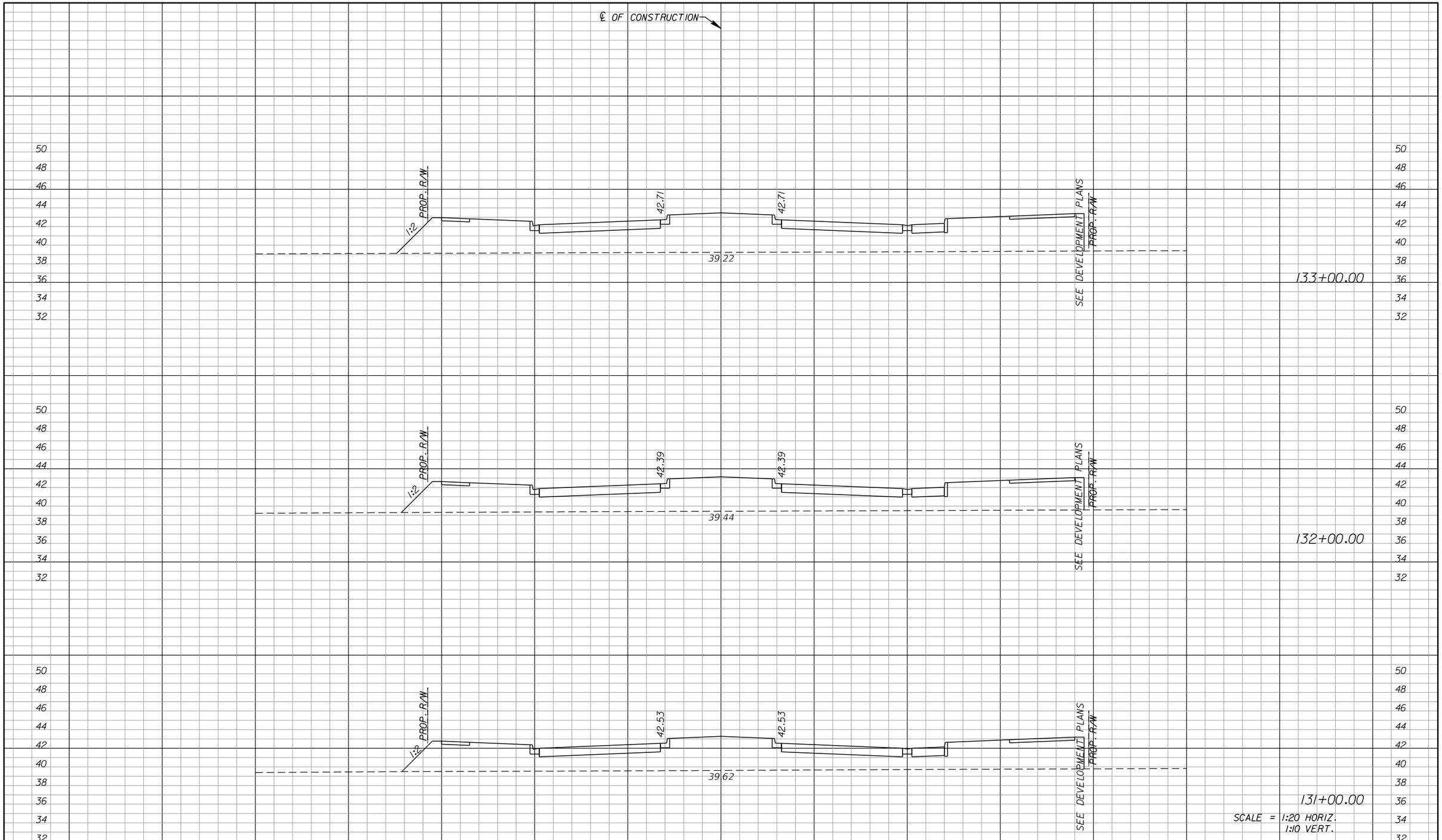

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SHEET 68 OF 87 SHEETS

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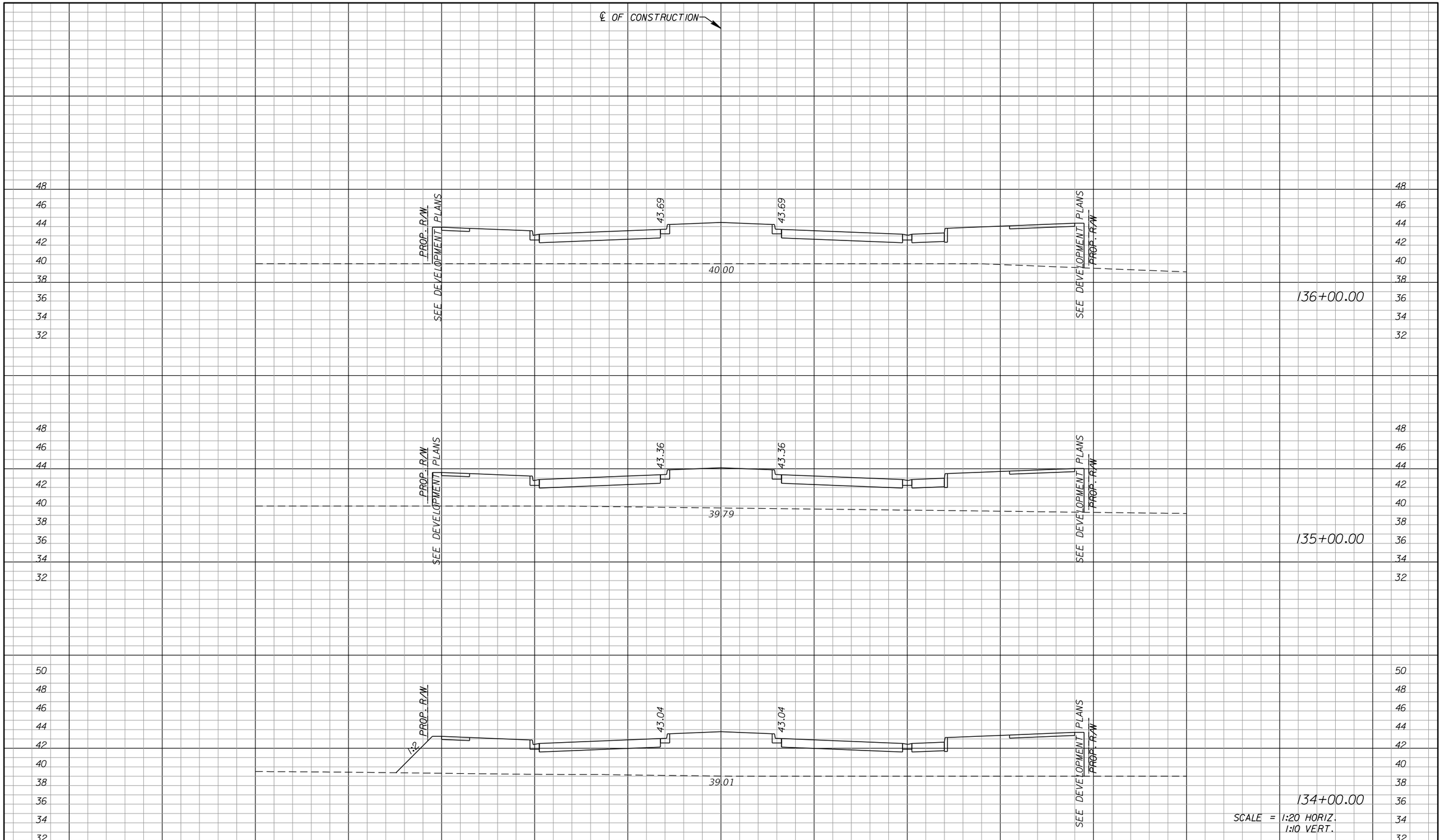

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SHEET 69 OF 87 SHEETS

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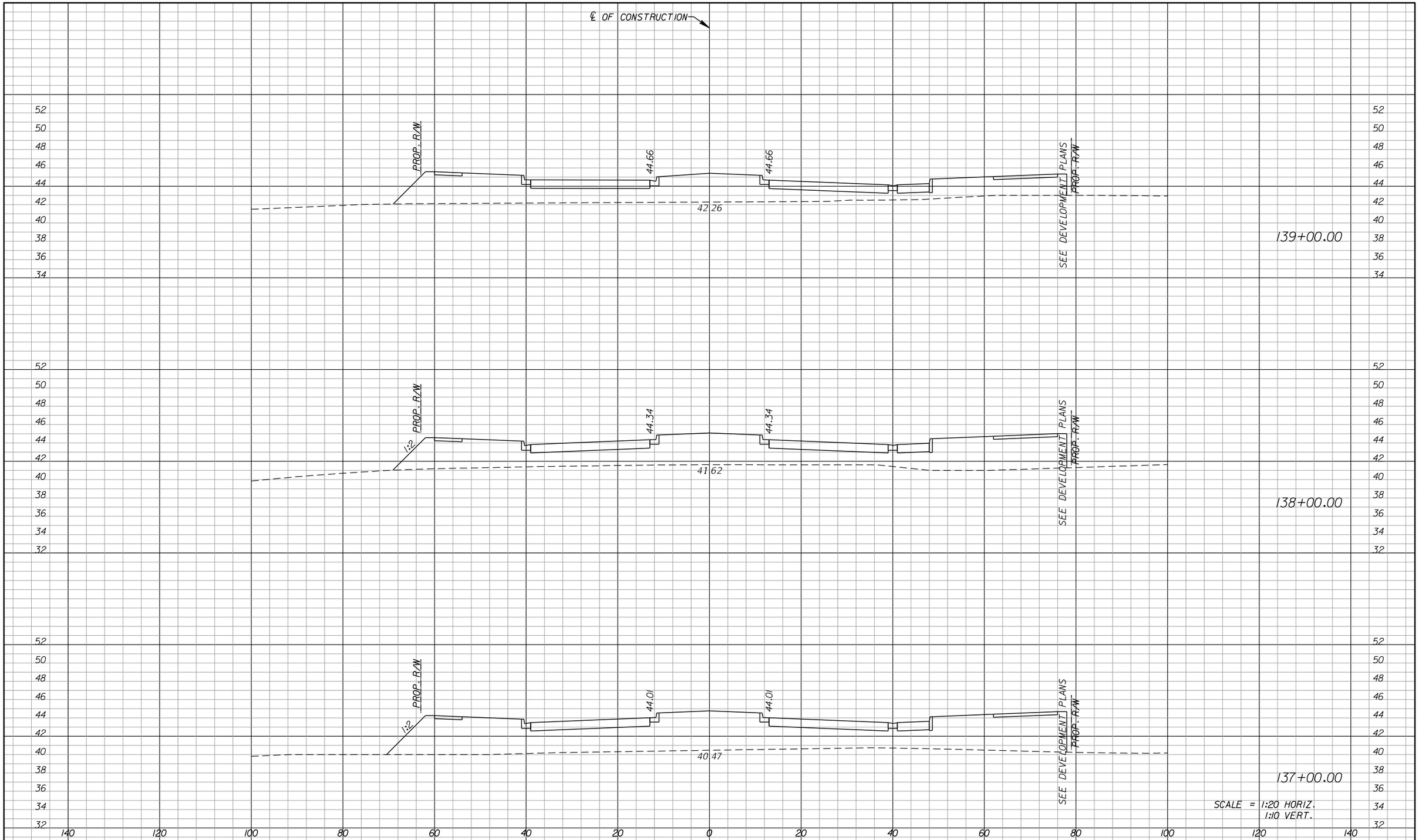

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SHEET 70 OF 87 SHEETS

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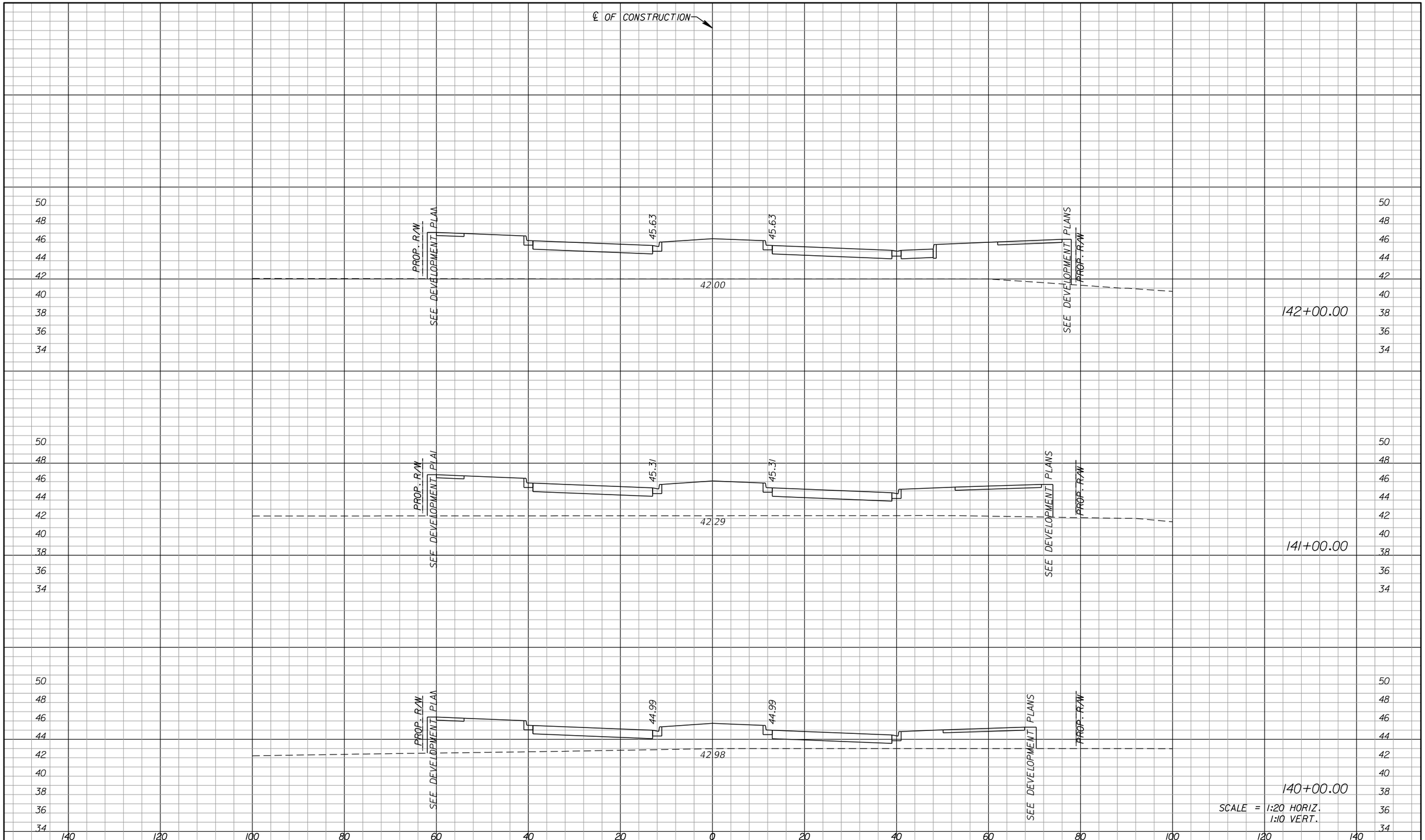

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Conversion from NAVD 88 to NGVD 29 = +0.89 Feet

FILE: DRSTRD01.DGN

SHEET 71 OF 87 SHEETS

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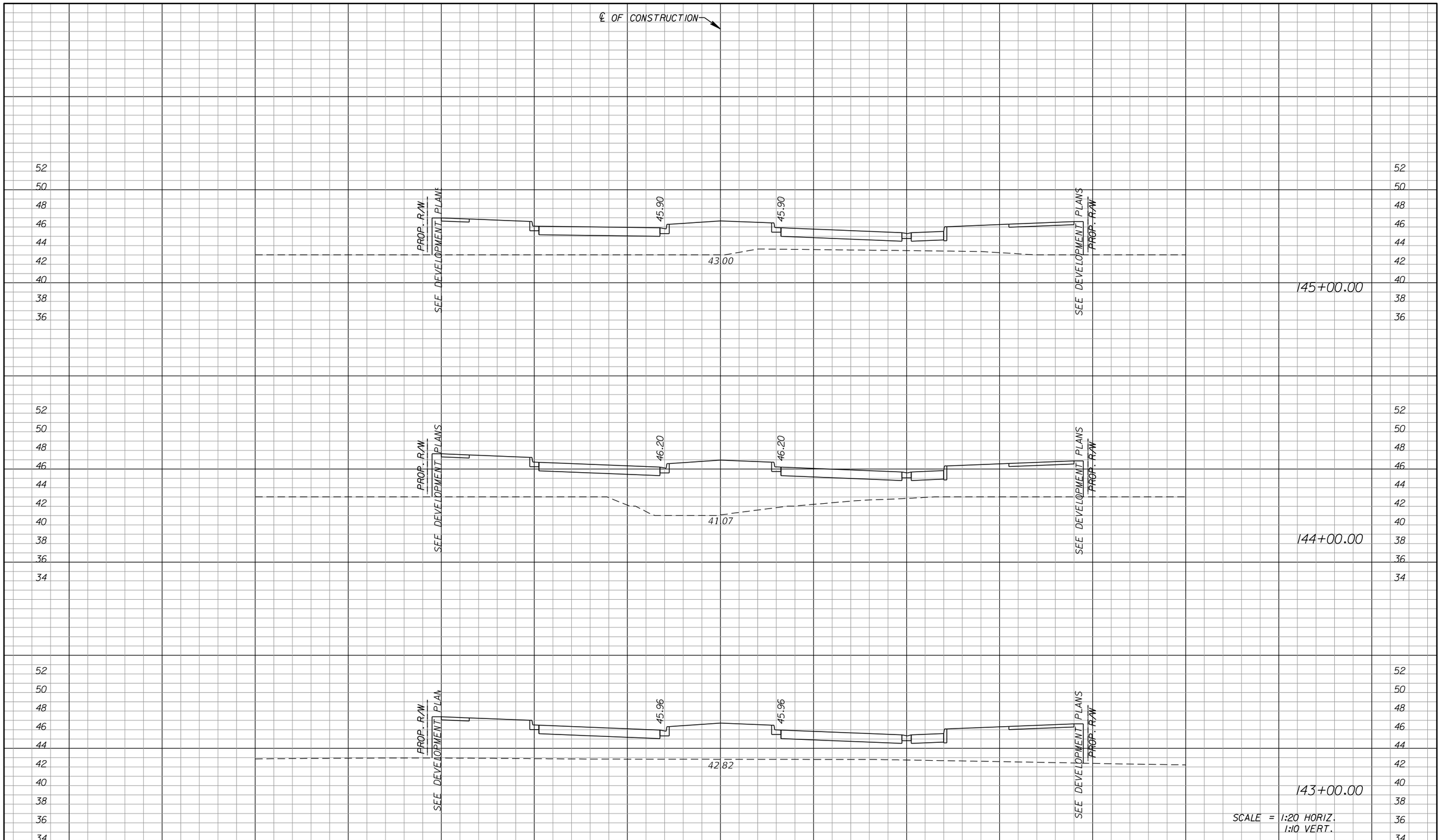

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PROJECT NO:

CIP PROJECT NO

DESIGN BY: SULLIVAN

FILE: DRSTRD01.DGN

CROSS SECTIONS

PREPARED FOR: WHEELOCK STREET CAPITAL

Elevations based on North American Vertical Datum 1988 (NAVD 88)
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SHEET 72 OF 87 SHEETS

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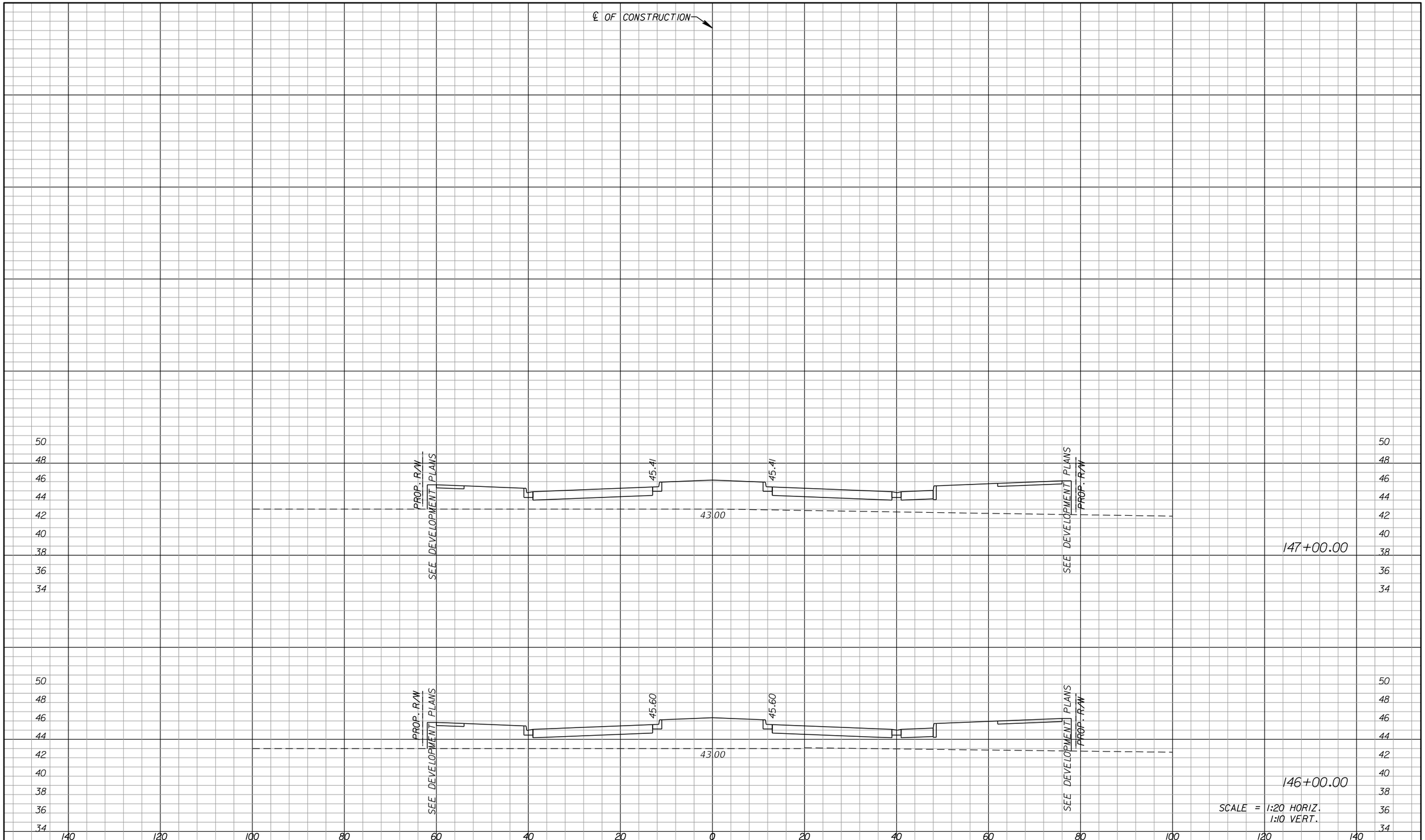

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SHEET 73 OF 87 SHEETS

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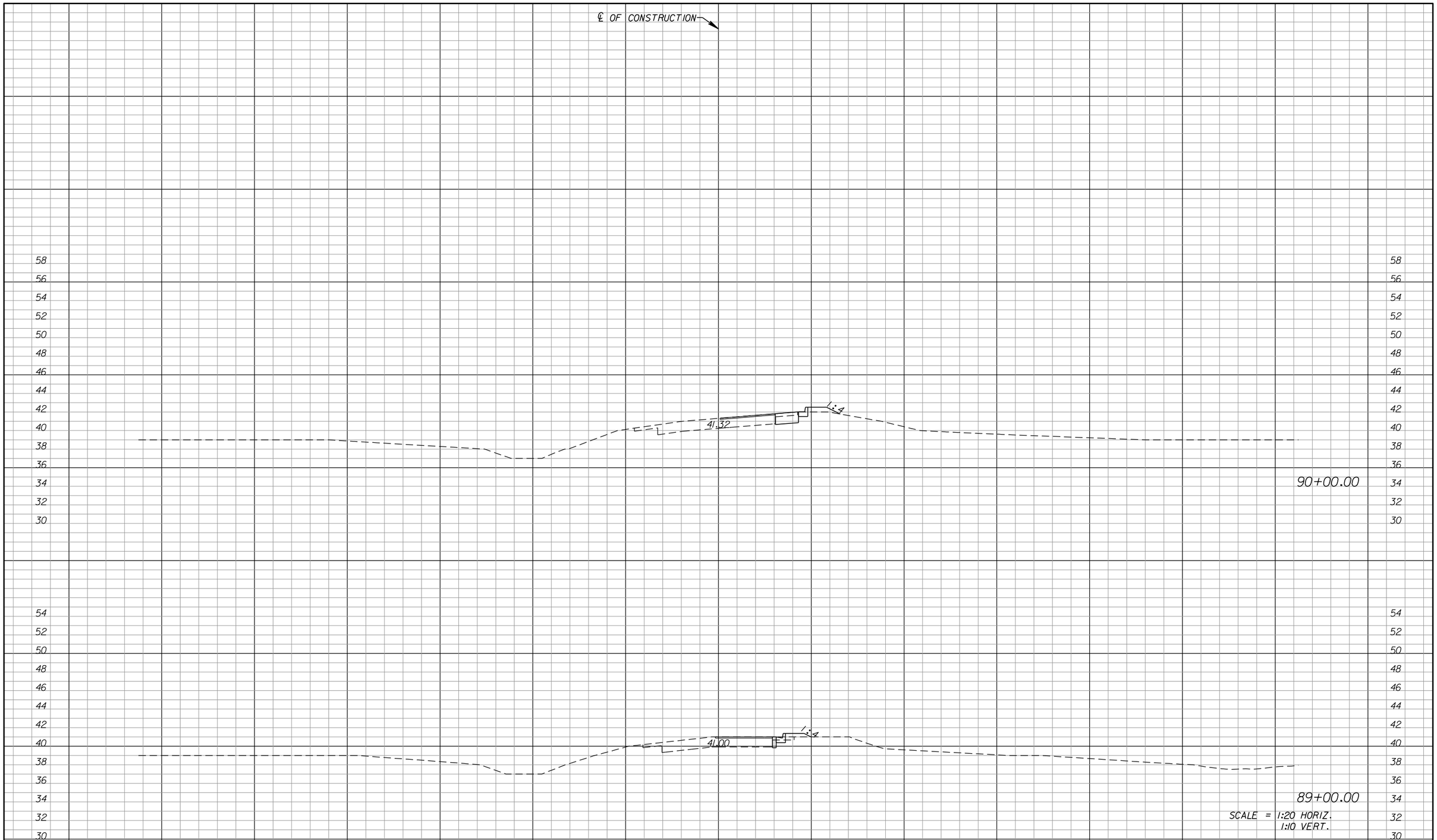

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DATE:

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FLORIDA PROFESSIONAL ENGINEER

PROJECT NO:

CIP PROJECT NO

DESIGN BY: SULLIVAN

FILE: DRSTRD01.DGN

HEART PINE AVE

CROSS SECTIONS

PREPARED FOR: WHEELOCK STREET CAPITAL

Elevations based on North American Vertical Datum 1988 (NAVD 88)
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SHEET 74 OF 87 SHEETS

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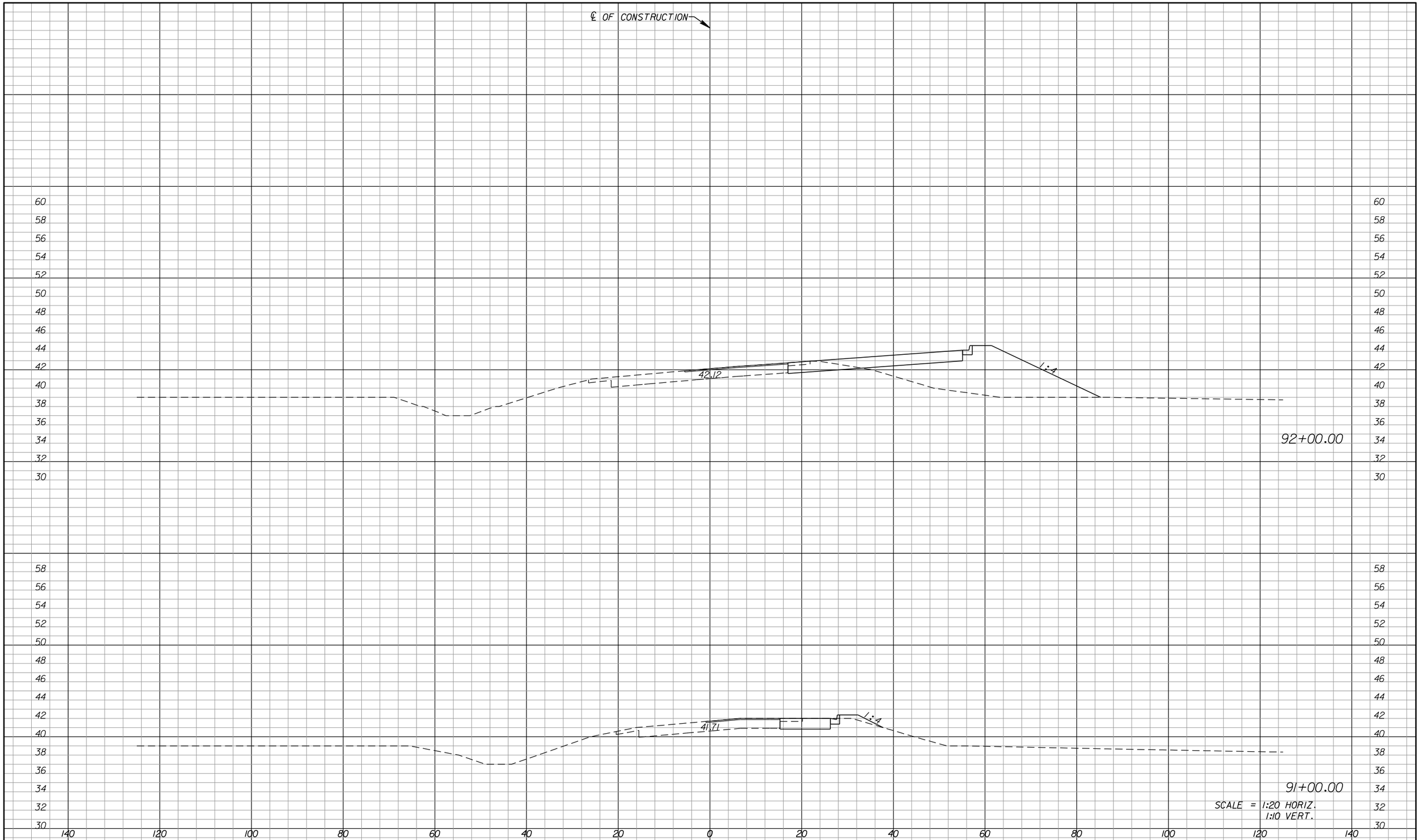

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Fax: 813-464-7629
www.HeidtDesign.com
DATE:
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FLORIDA PROFESSIONAL ENGINEER

HEART PINE AVE

CROSS SECTIONS

PROJECT NO:
CIP PROJECT NO
DESIGN BY: SULLIVAN
FILE: DRSTRD01.DGN
PREPARED FOR: WHEELOCK STREET CAPITAL
Elevations based on North American Vertical Datum 1988 (NAVD 88)
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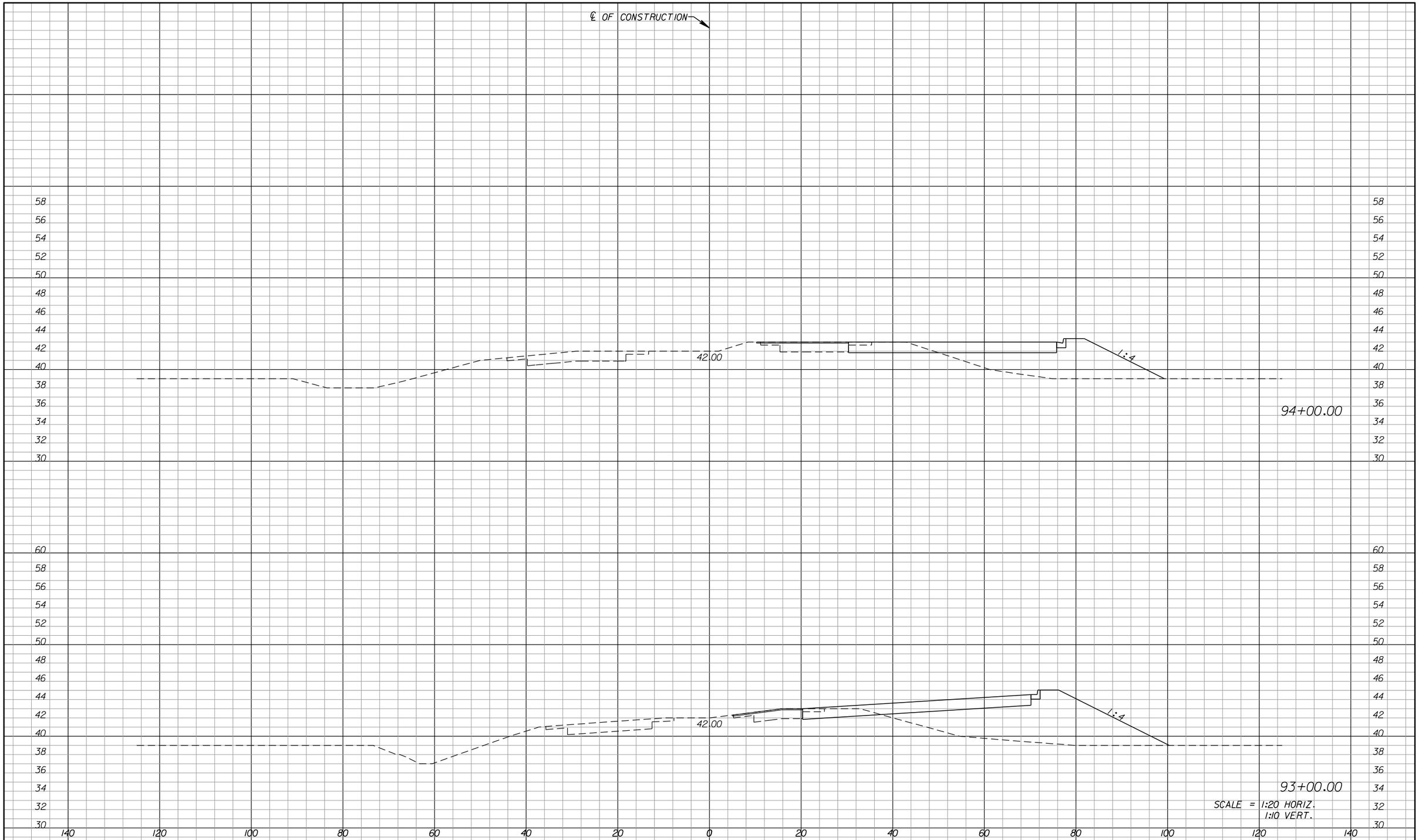

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HEART PINE AVE

PROJECT NO:

CIP PROJECT NO

DESIGN BY: SULLIVAN

FILE: DRSTRD01.DGN

CROSS SECTIONS

PREPARED FOR: WHEELOCK STREET CAPITAL

Elevations based on North American Vertical Datum 1988 (NAVD 88)
Conversion from NAVD 88 to NGVD 29 = +0.89 Feet

SHEET 76 OF 87 SHEETS

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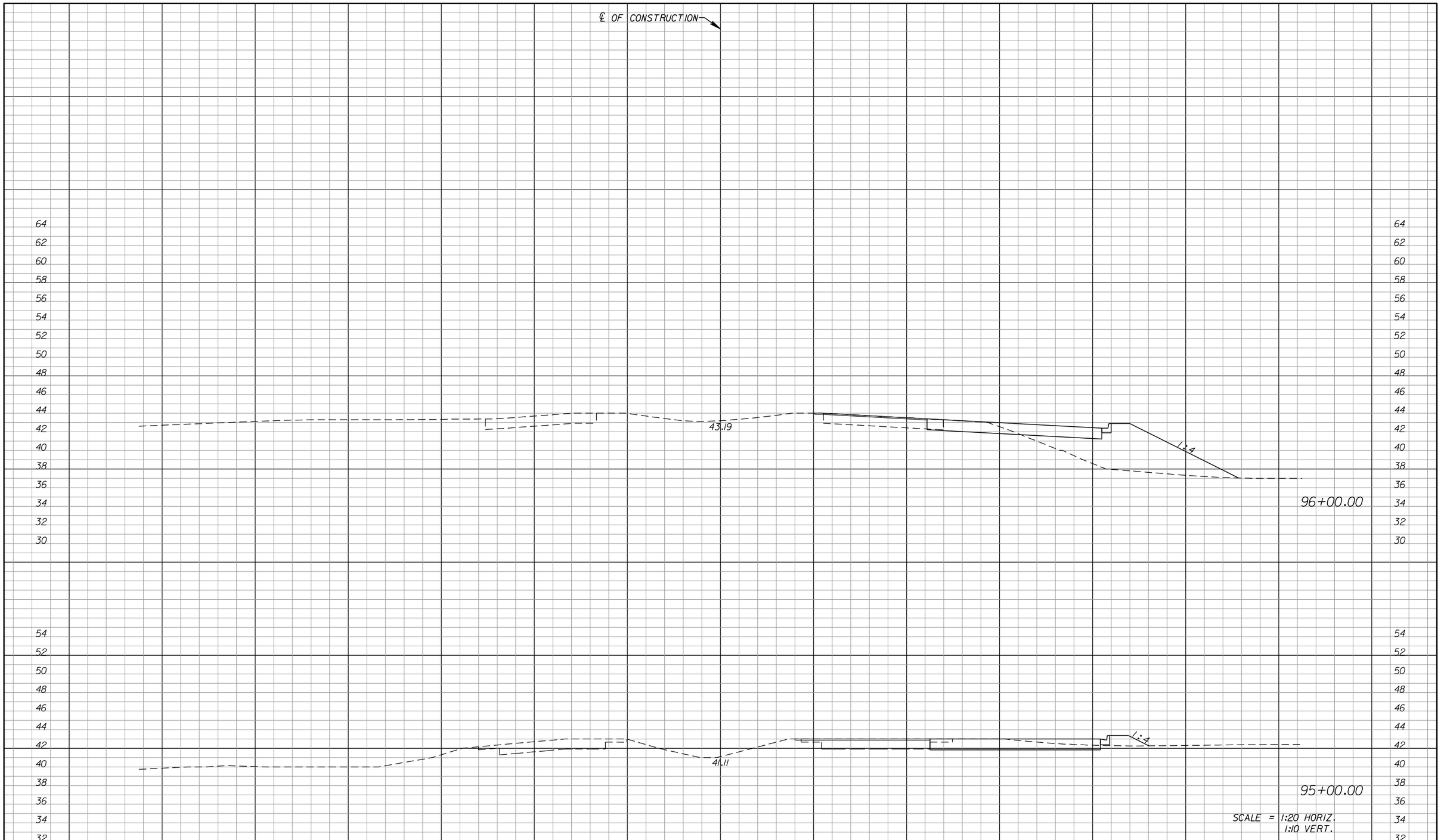

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DATE:

THOMAS D. SULLIVAN NO. 55358
FLORIDA PROFESSIONAL ENGINEER

HEART PINE AVE

PROJECT NO:

CIP PROJECT NO

DESIGN BY: SULLIVAN

FILE: DRSTRD01.DGN

CROSS SECTIONS

PREPARED FOR: WHEELOCK STREET CAPITAL

Elevations based on North American Vertical Datum 1988 (NAVD 88)
Conversion from NAVD 88 to NGVD 29 = +0.89 Feet

SHEET 77 OF 87 SHEETS

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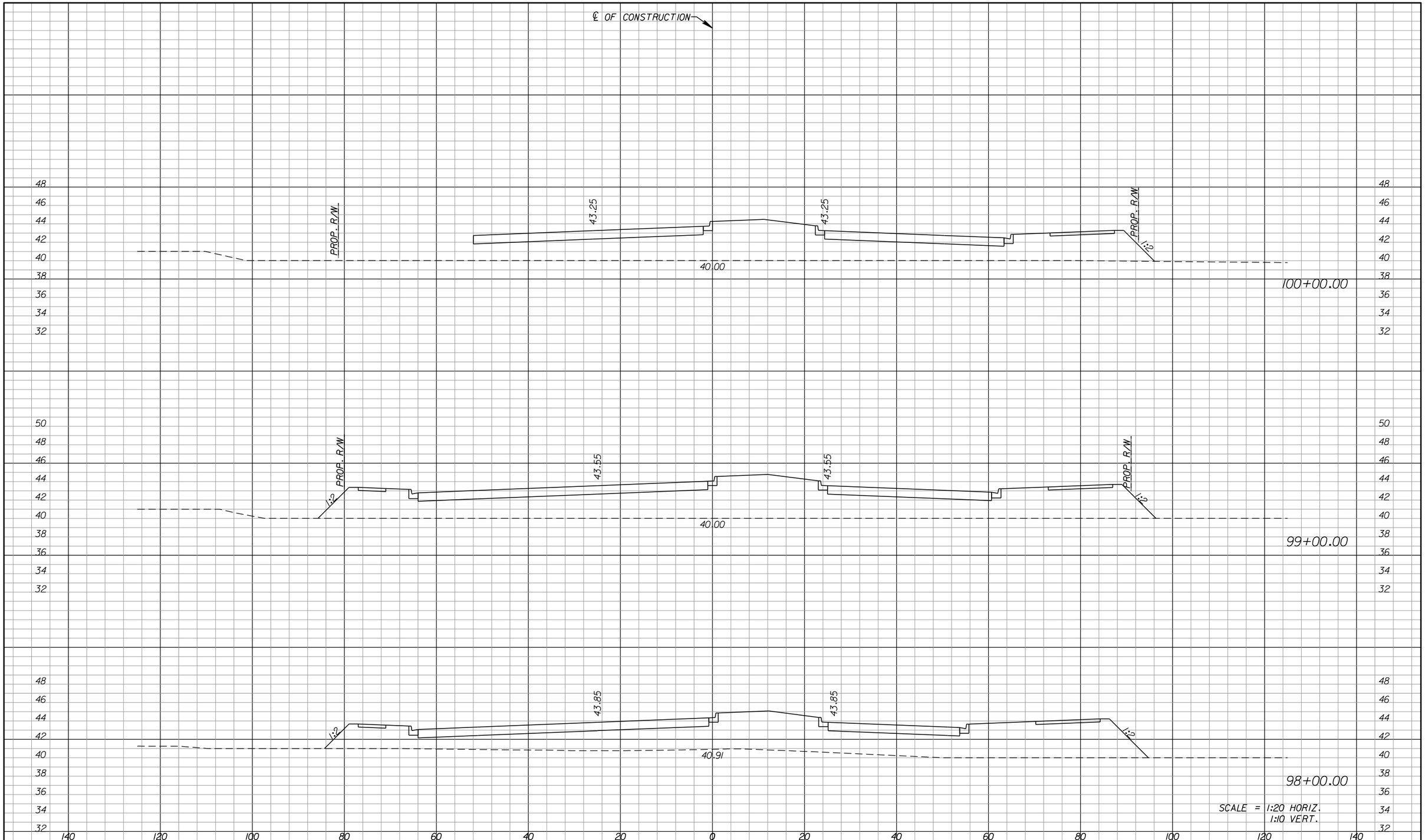

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THOMAS D. SULLIVAN NO. 55358
FLORIDA PROFESSIONAL ENGINEER

HEART PINE AVE

PROJECT NO:

CIP PROJECT NO

CROSS SECTIONS

PREPARED FOR: WHEELOCK STREET CAPITAL

DESIGN BY: SULLIVAN

Elevations based on North American Vertical Datum 1988 (NAVD 88)
Conversion from NAVD 88 to NGVD 29 = +0.89 Feet

FILE: DRSTRD01.DGN

SHEET 78 OF 87 SHEETS

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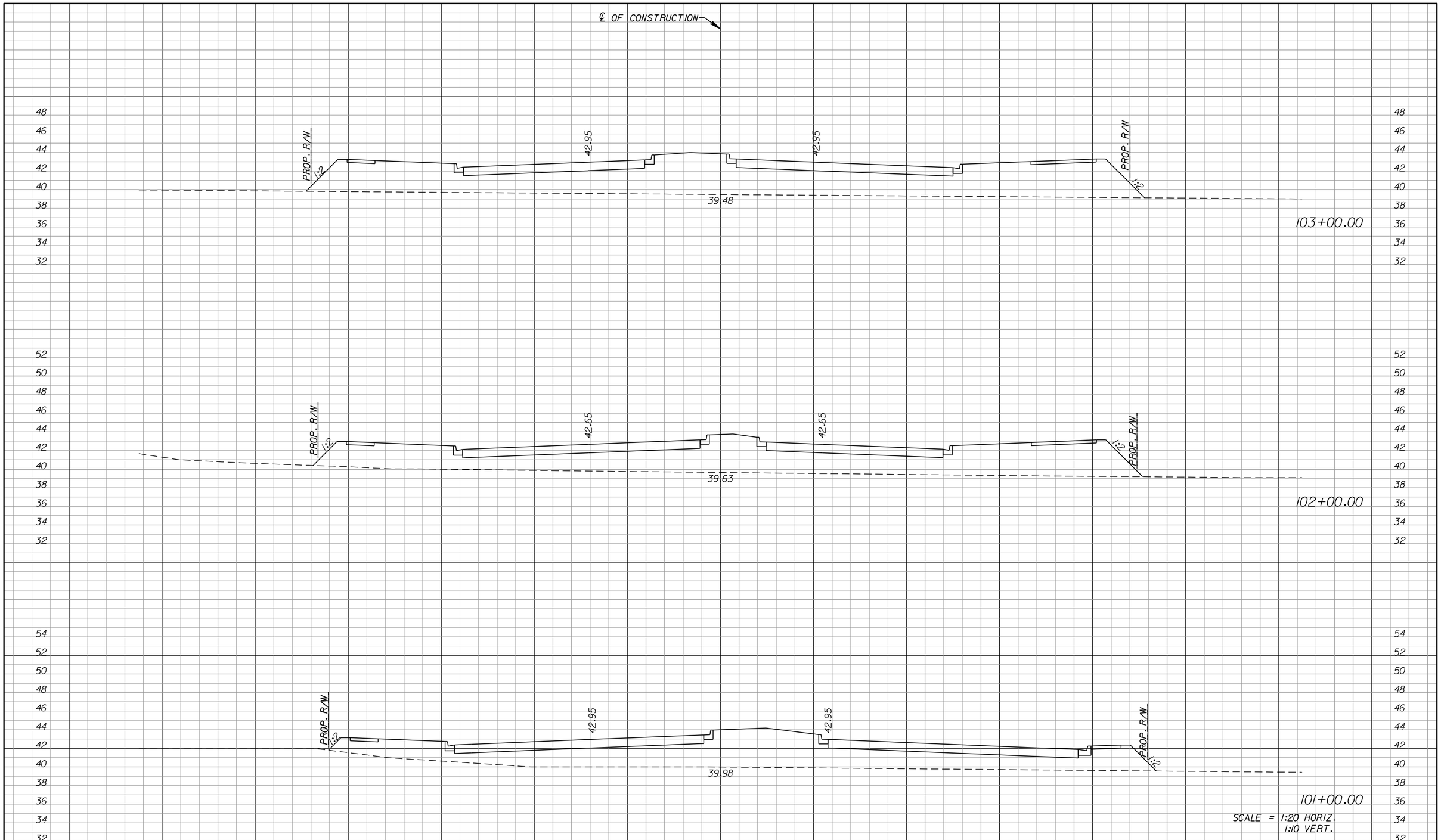

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CROSS SECTIONS

PREPARED FOR: WHEELOCK STREET CAPITAL

Elevations based on North American Vertical Datum 1988 (NAVD 88)
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SHEET 79 OF 87 SHEETS

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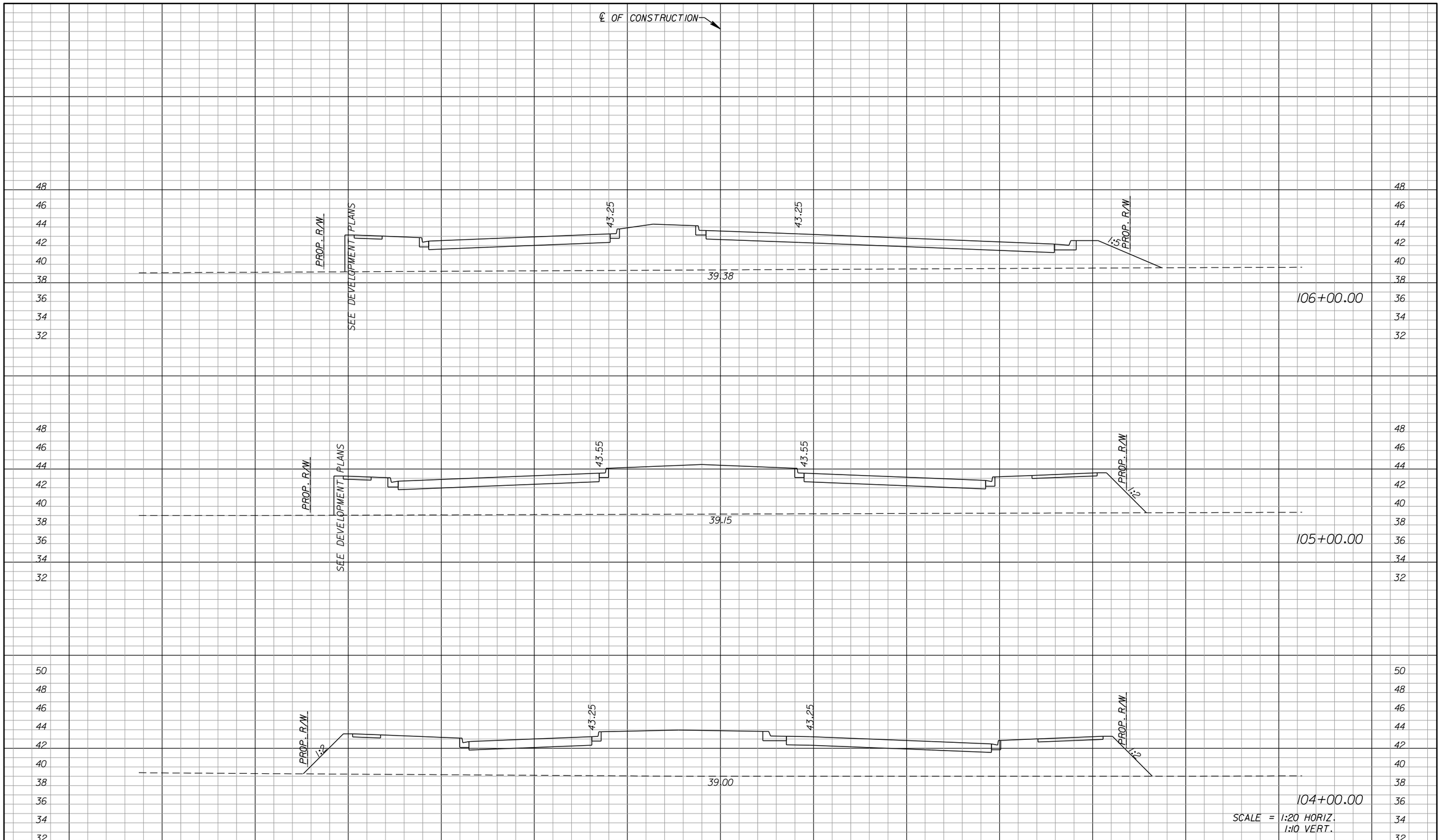

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FILE: DRSTRD01.DGN

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CROSS SECTIONS

PREPARED FOR: WHEELOCK STREET CAPITAL

Elevations based on North American Vertical Datum 1988 (NAVD 88)
Conversion from NAVD 88 to NGVD 29 = +0.89 Feet

SHEET 80 OF 87 SHEETS

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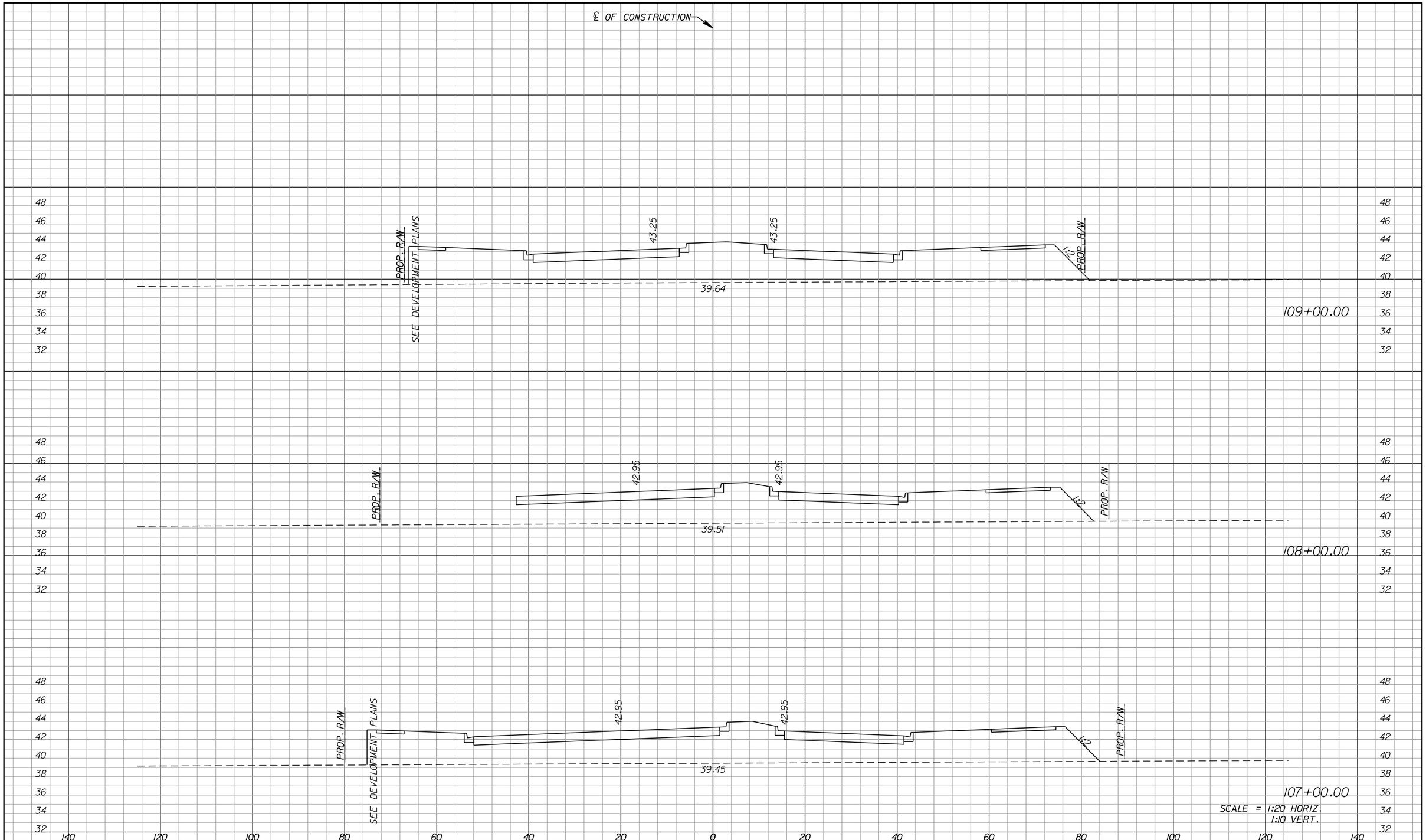

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DESIGN BY: SULLIVAN

Elevations based on North American Vertical Datum 1988 (NAVD 88)
Conversion from NAVD 88 to NGVD 29 = +0.89 Feet

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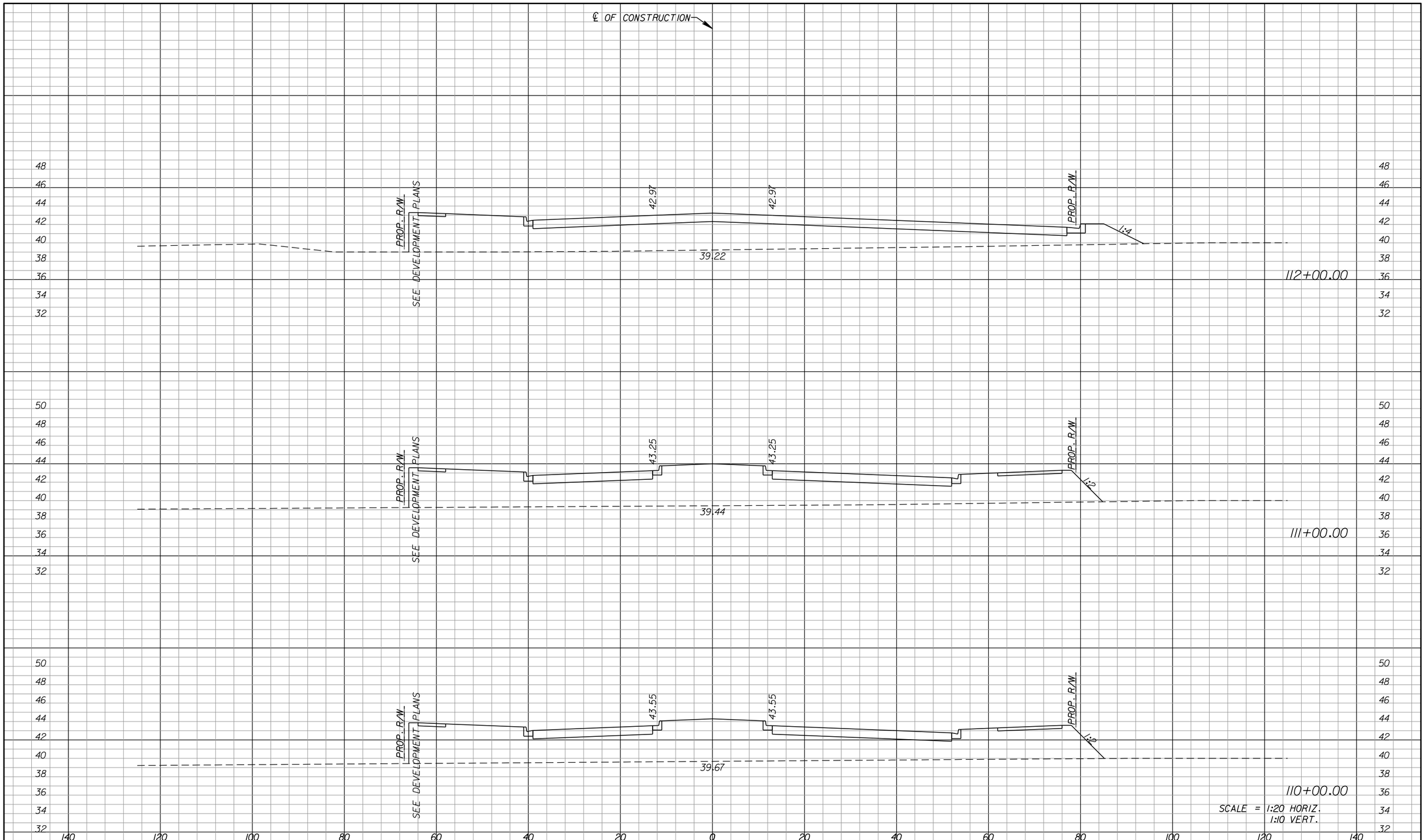

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HEART PINE AVE

PROJECT NO:

CIP PROJECT NO

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PREPARED FOR: WHEELOCK STREET CAPITAL

DESIGN BY: SULLIVAN

Elevations based on North American Vertical Datum 1988 (NAVD 88)
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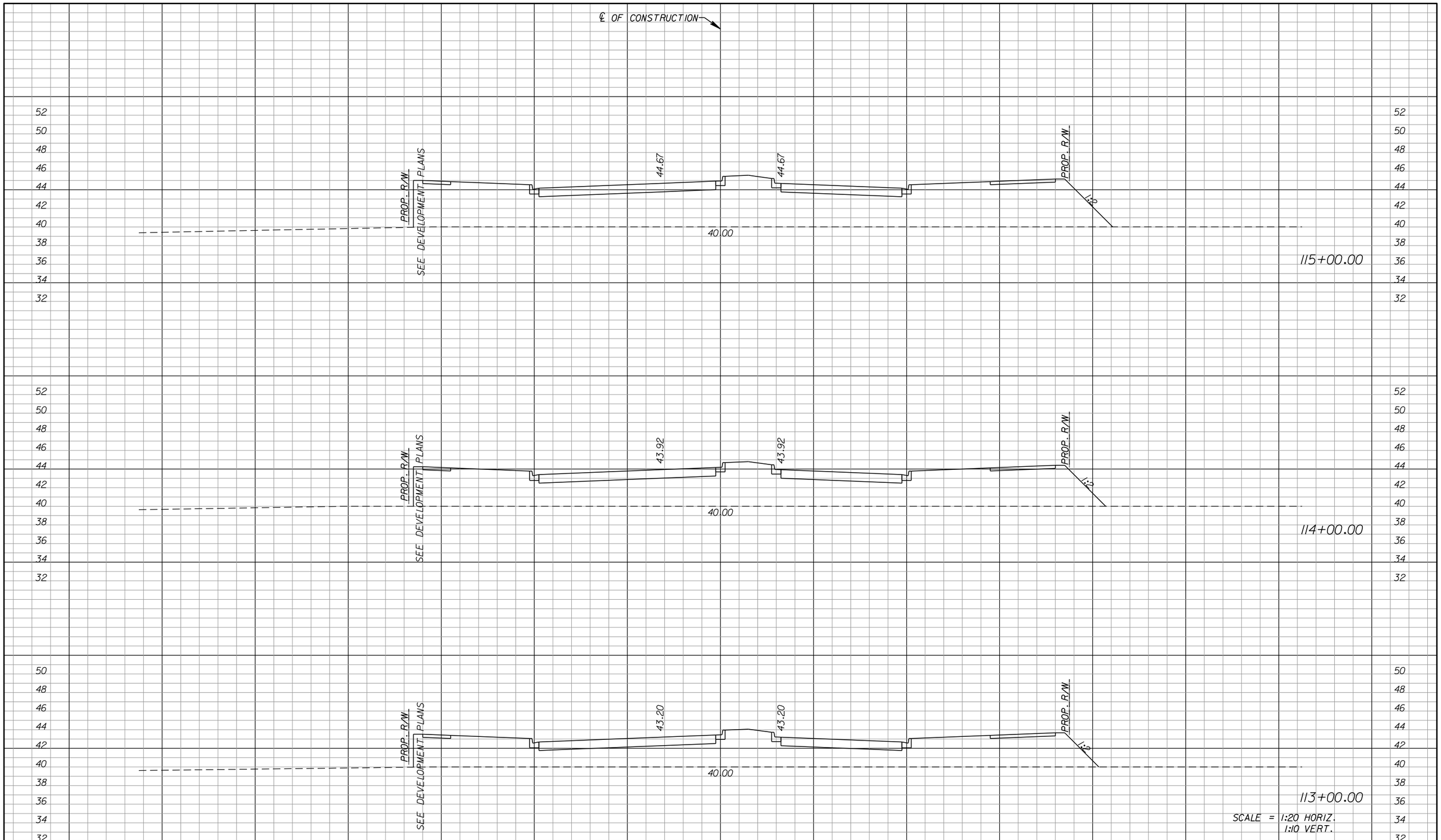

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CROSS SECTIONS

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Elevations based on North American Vertical Datum 1988 (NAVD 88)
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SHEET 83 OF 87 SHEETS

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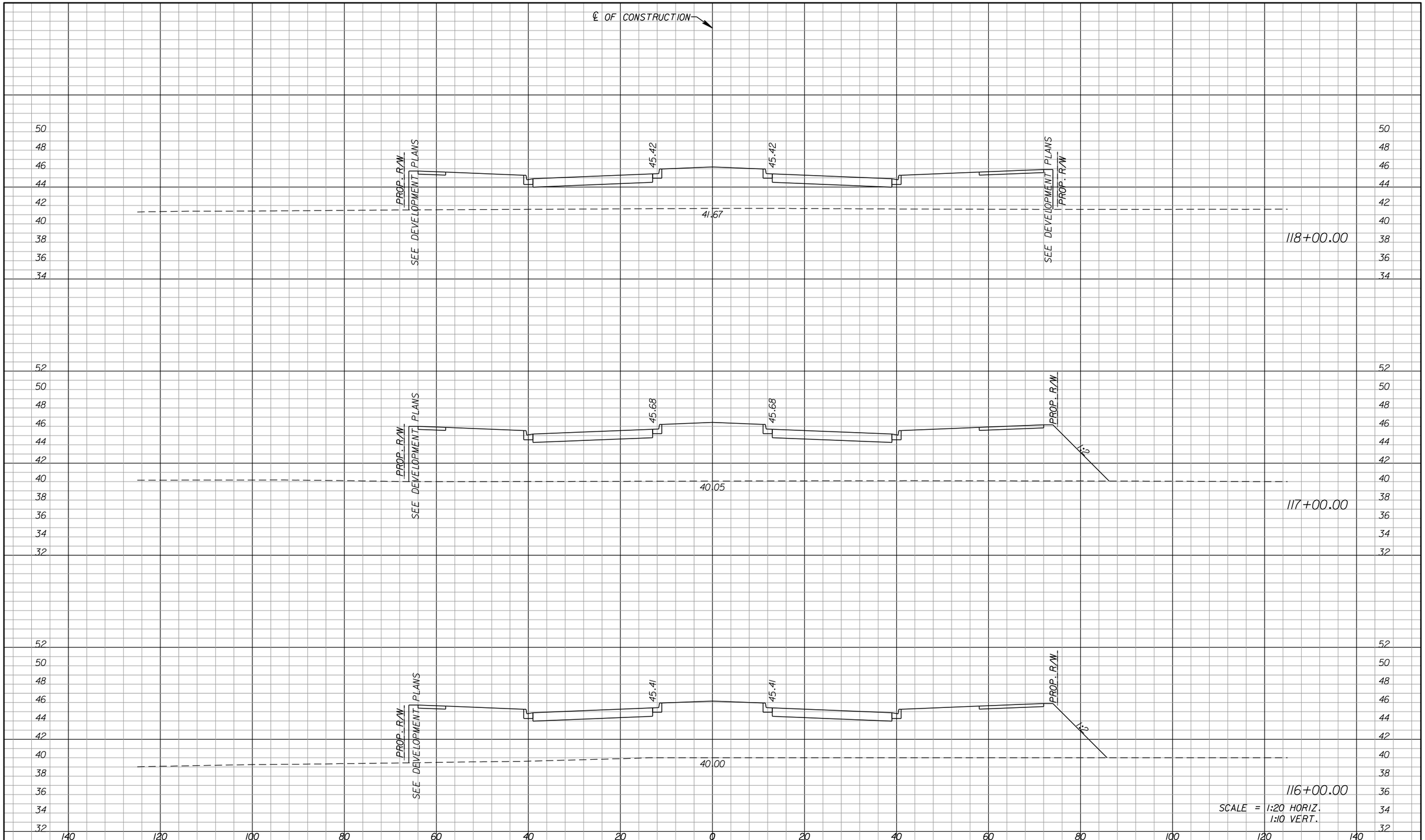

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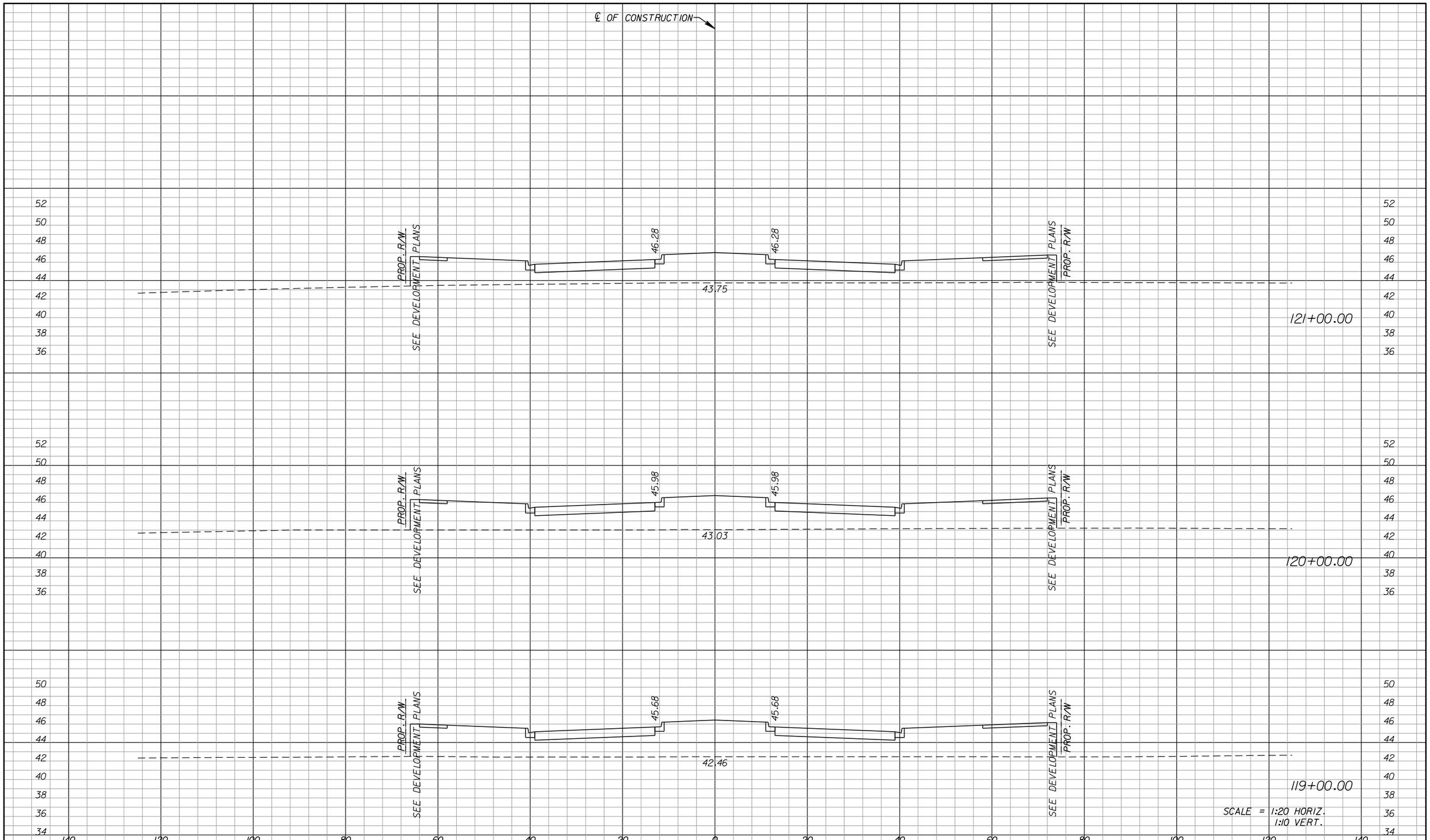

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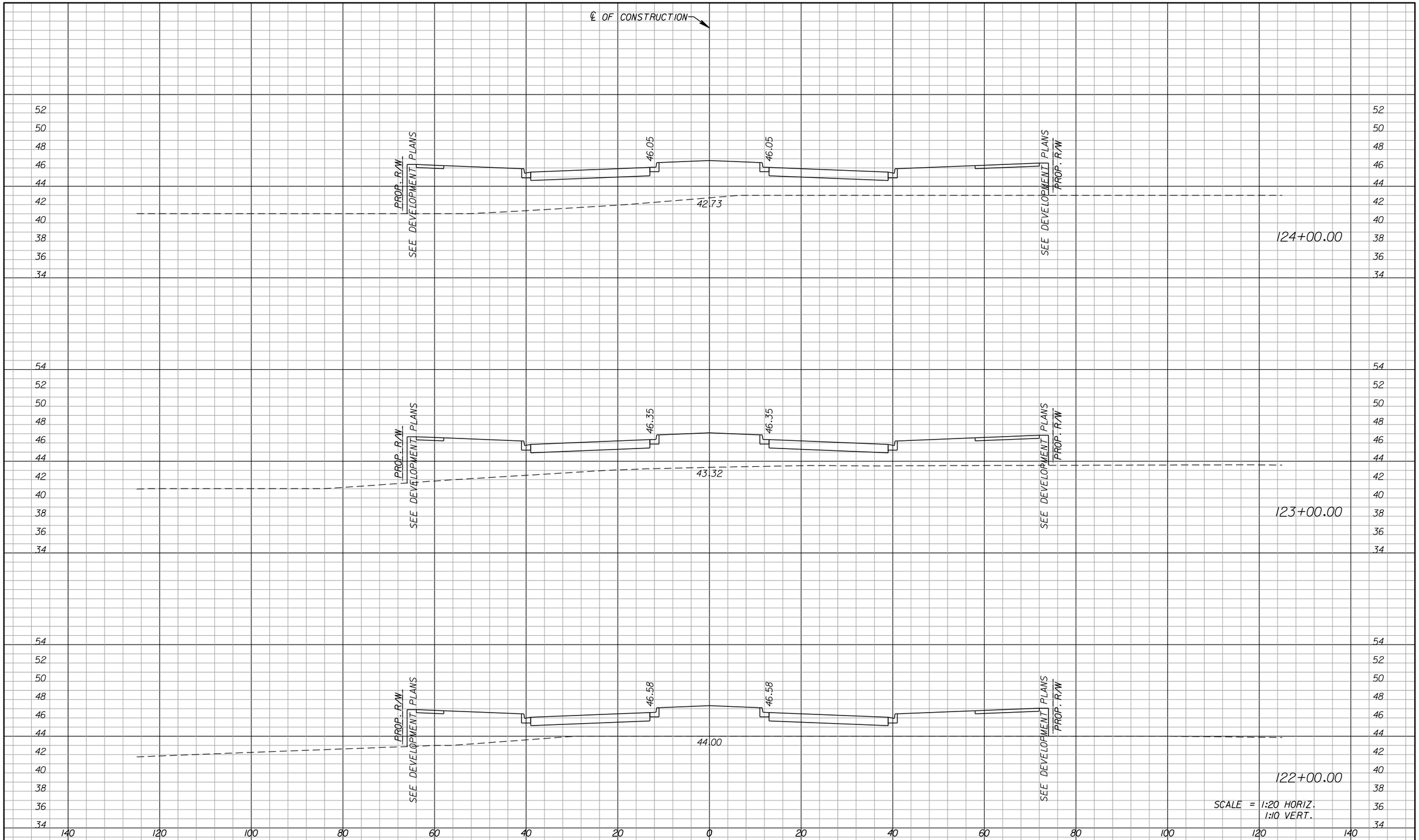

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SHEET 86 OF 87 SHEETS

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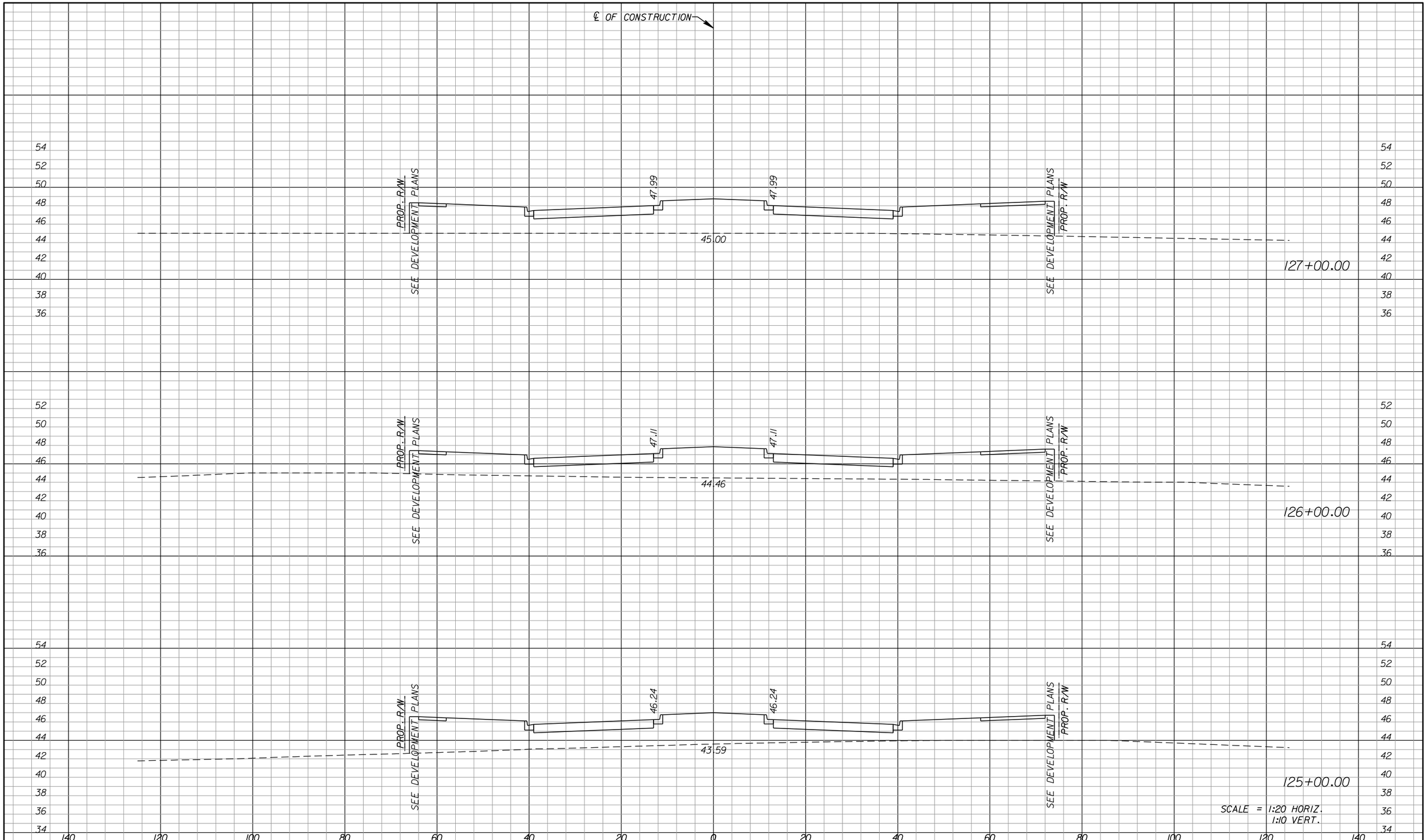

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SHEET 87 OF 87 SHEETS

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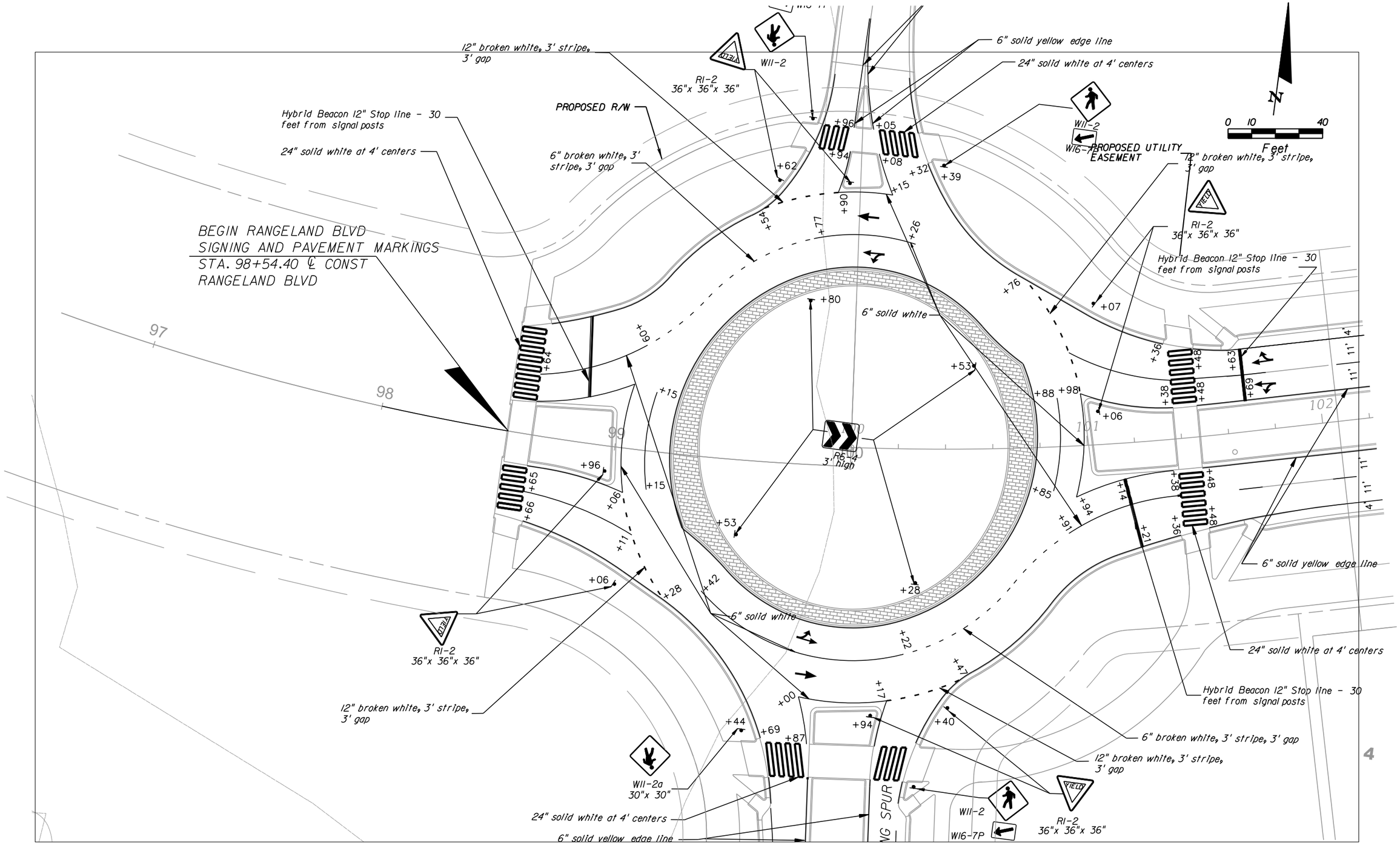

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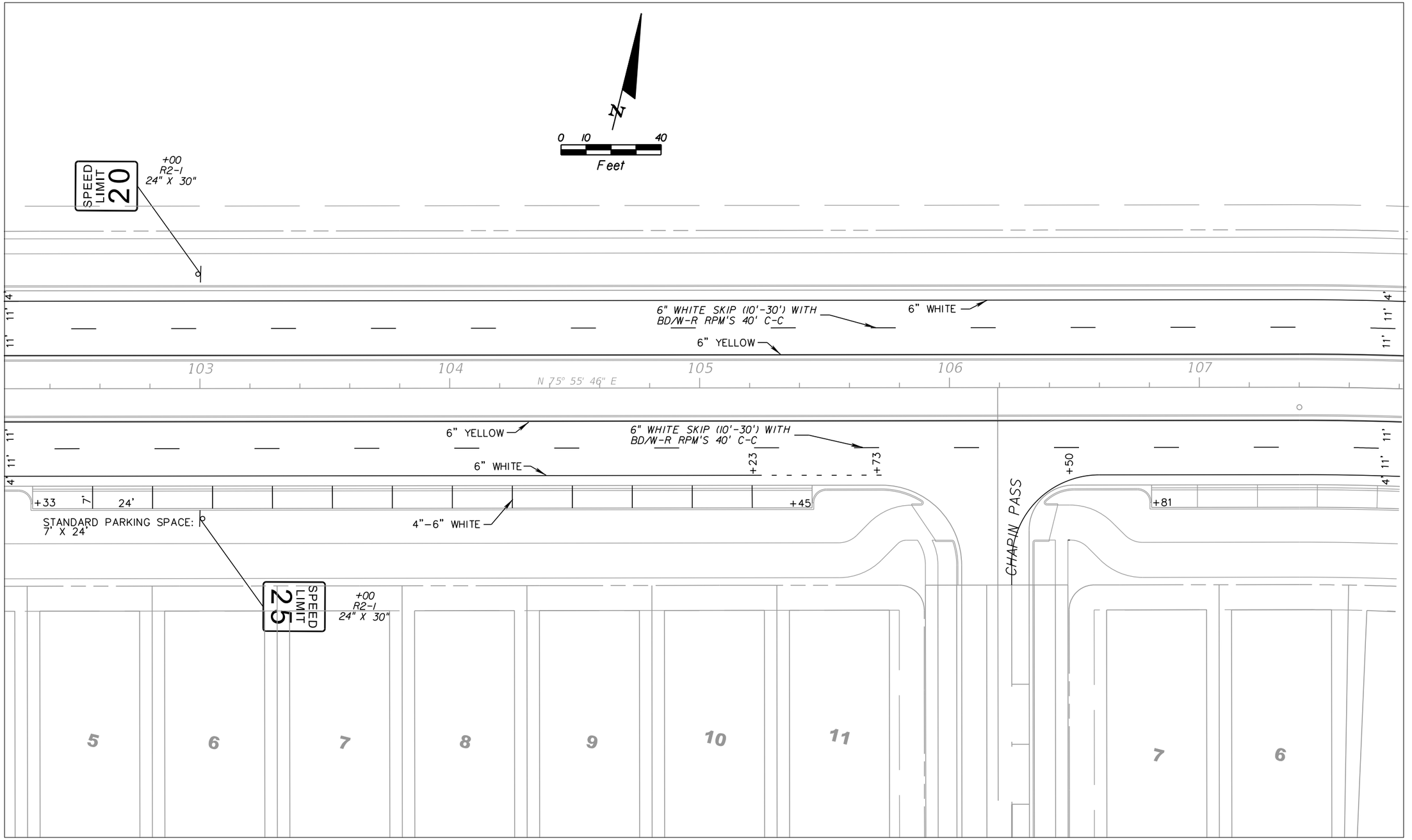
THOMAS D. SULLIVAN NO. 55358
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - RANGELAND BLVD

JOB NO.	SIGNING AND PAVEMENT MARKING SHEET (1) STA 96+41.49 TO STA 102+20.00
DESIGN SULLIVAN	
DRAWN COGAN	PREPARED FOR: WHEELOCK STREET CAPITAL
DATE OCT. 1, 2012	Elevations based on North American Vertical Datum 1988 (NAVD 88) Conversion from NAVD 88 to NGVD 29 = +0.83 Feet
FILE	SHEET S-1 OF S-17 SHEETS

$USER$ $DATE$ $TIME$ $FILE$



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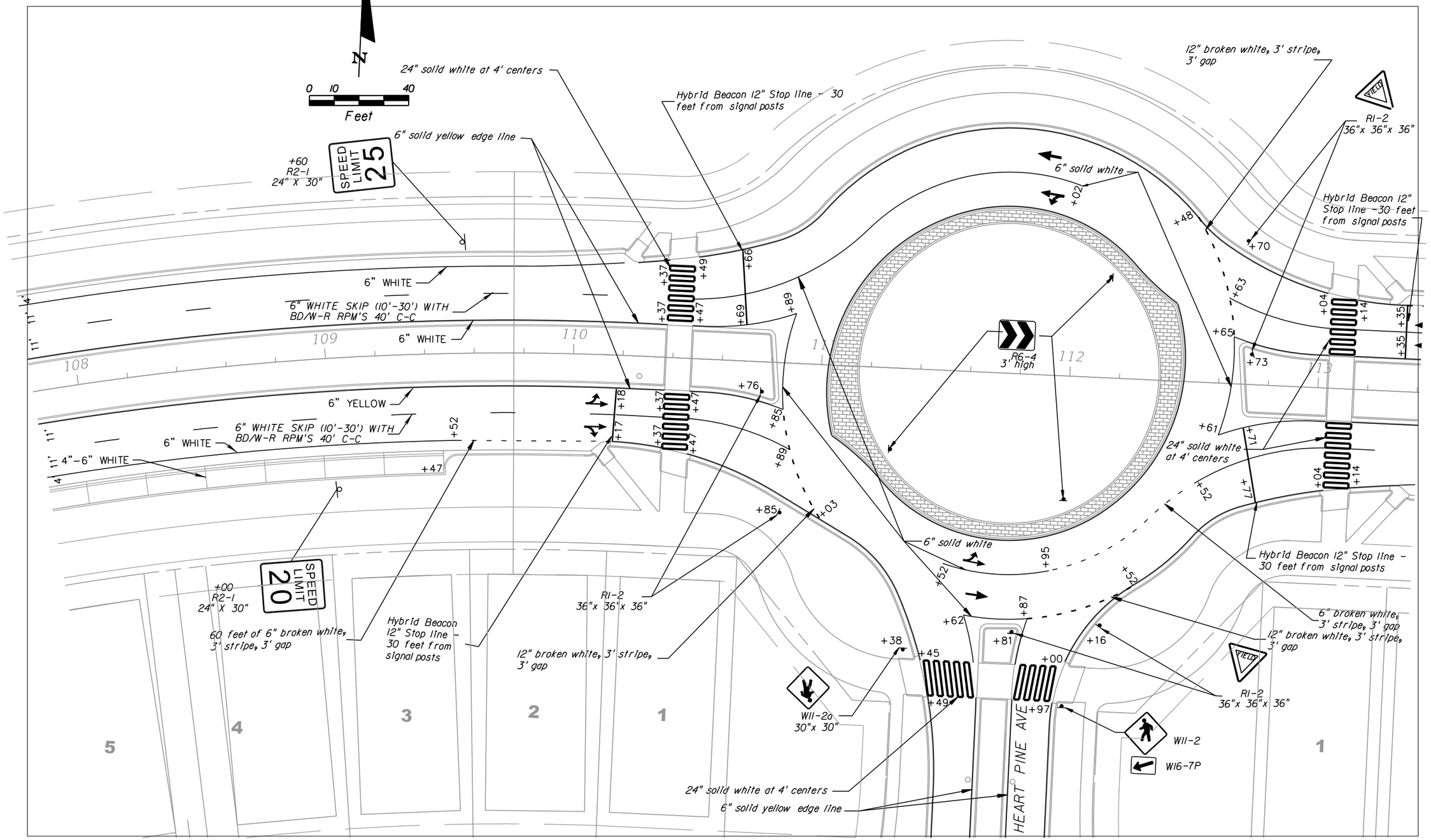
DATE:

THOMAS D. SULLIVAN NO. 55358
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - RANGELAND BLVD

JOB NO.	SIGNING AND PAVEMENT MARKING SHEET (2) STA 102+20.00 TO STA 107+80.00
DESIGN SULLIVAN	
DRAWN COGAN	PREPARED FOR: WHEELOCK STREET CAPITAL
DATE OCT. 1, 2012	Elevations based on North American Vertical Datum 1988 (NAVD 88) Conversion from NAVD 88 to NGVD 29 = +0.83 Feet
FILE	SHEET S-2 OF S-17 SHEETS

$USER$ $DATE$ $TIME$ $FILE$



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DATE:
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FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - RANGELAND BLVD

JOB NO.	SIGNING AND PAVEMENT MARKING SHEET (3) STA 107+80.00 TO STA 113+40.00
DESIGN SULLIVAN	
DRAWN COGAN	PREPARED FOR: WHEELOCK STREET CAPITAL
DATE OCT. 1, 2012	Elevations based on North American Vertical Datum 1988 (NAVD 88) Conversion from NAVD 88 to NGVD 29 = +0.83 Feet
FILE	SHEET S-3 OF S-17 SHEETS

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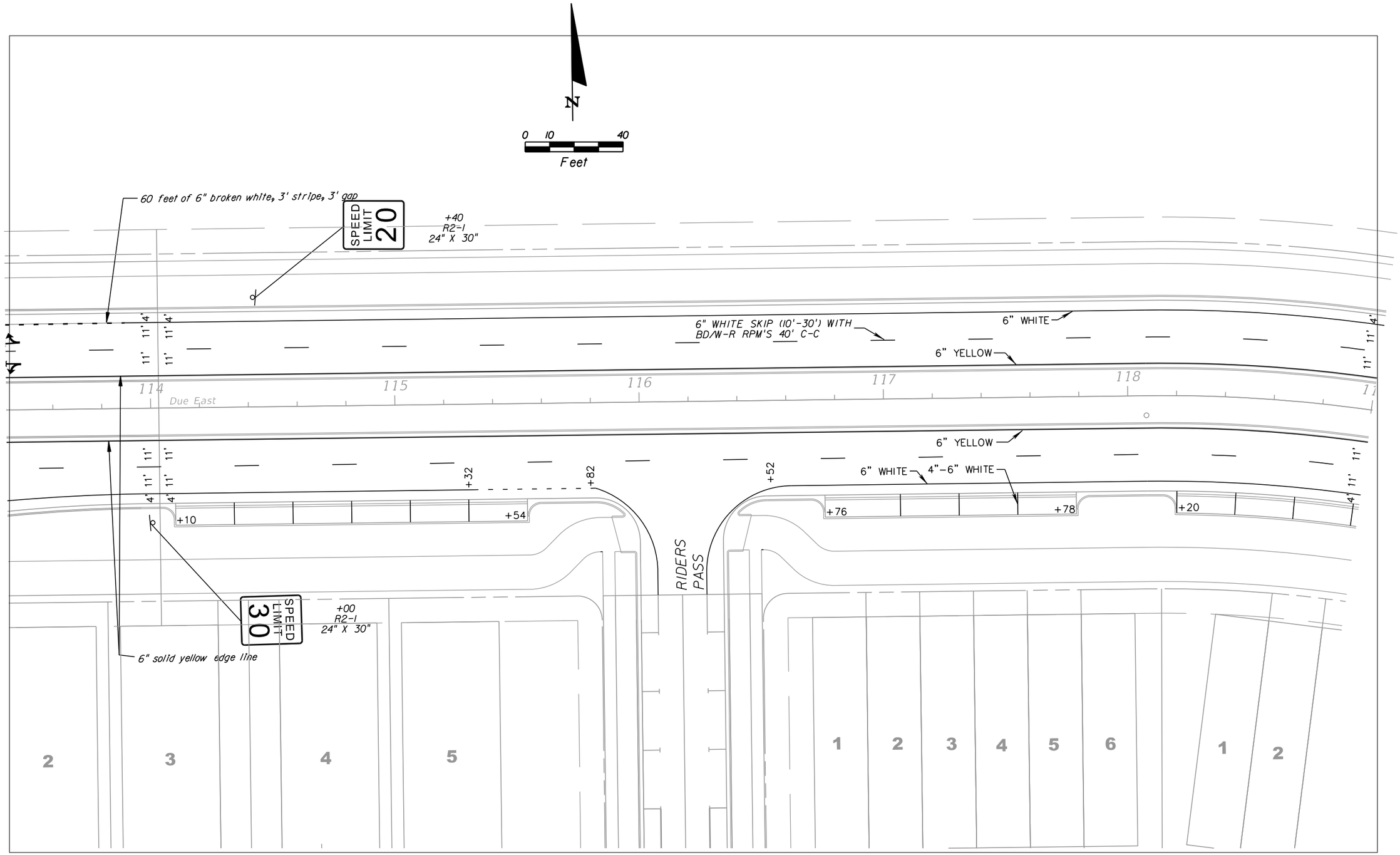

DATE	DESCRIPTION	BY
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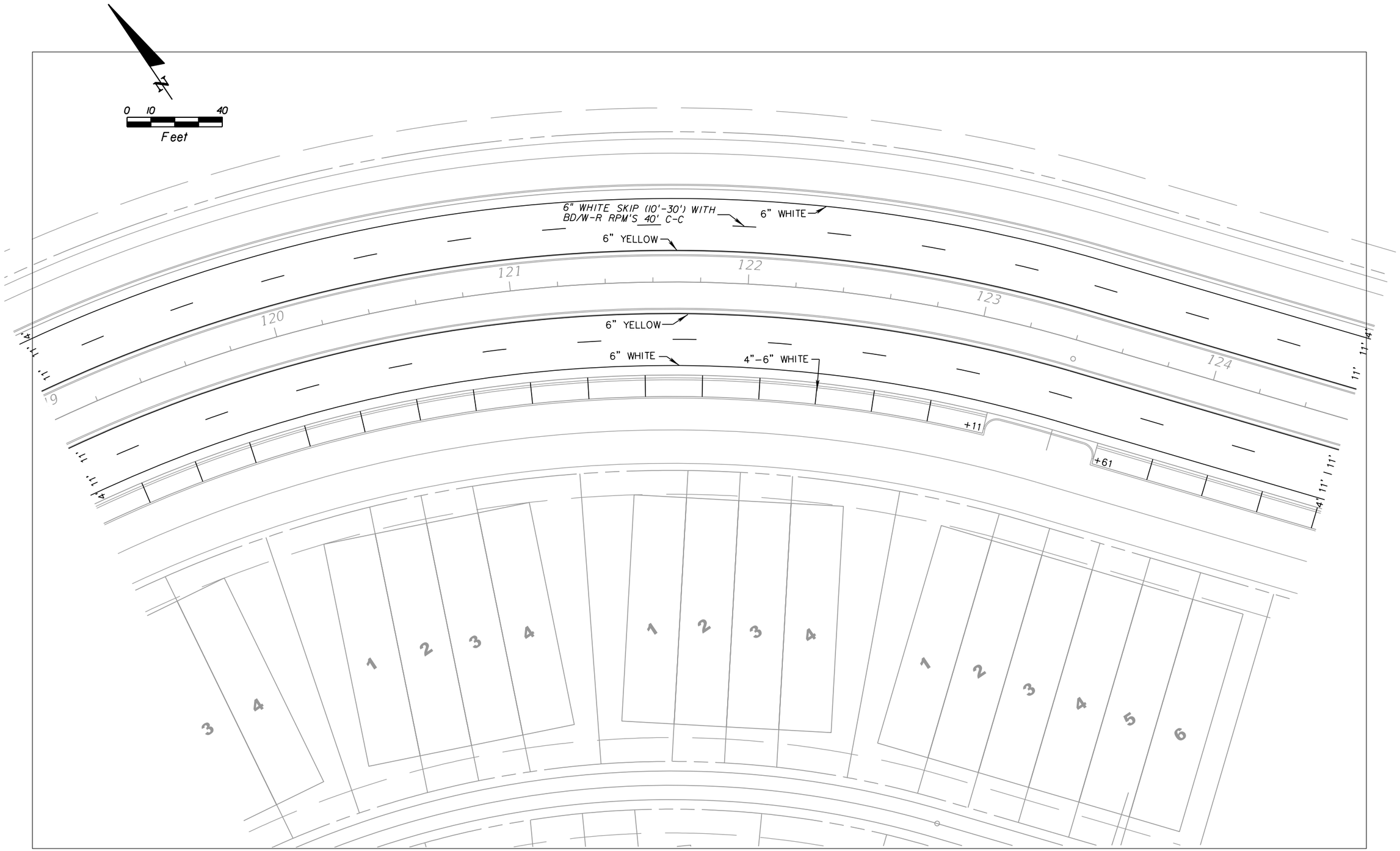
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - RANGELAND BLVD

JOB NO.	SIGNING AND PAVEMENT MARKING SHEET (4) STA 113+40.00 TO STA 119+00.00
DESIGN SULLIVAN	
DRAWN COGAN	PREPARED FOR: WHEELOCK STREET CAPITAL
DATE OCT. 1, 2012	Elevations based on North American Vertical Datum 1988 (NAVD 88) Conversion from NAVD 88 to NGVD 29 = +0.83 Feet
FILE	SHEET S-4 OF S-17 SHEETS

$USER$ $DATE$ $TIME$ $FILE$



DATE	DESCRIPTION	BY
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FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - RANGELAND BLVD

JOB NO.	SIGNING AND PAVEMENT MARKING SHEET (5) STA 119+00.00 TO STA 124+60.00
DESIGN SULLIVAN	
DRAWN COGAN	PREPARED FOR: WHEELOCK STREET CAPITAL
DATE OCT. 1, 2012	Elevations based on North American Vertical Datum 1988 (NAVD 88) Conversion from NAVD 88 to NGVD 29 = +0.83 Feet
FILE	SHEET S-5 OF S-17 SHEETS

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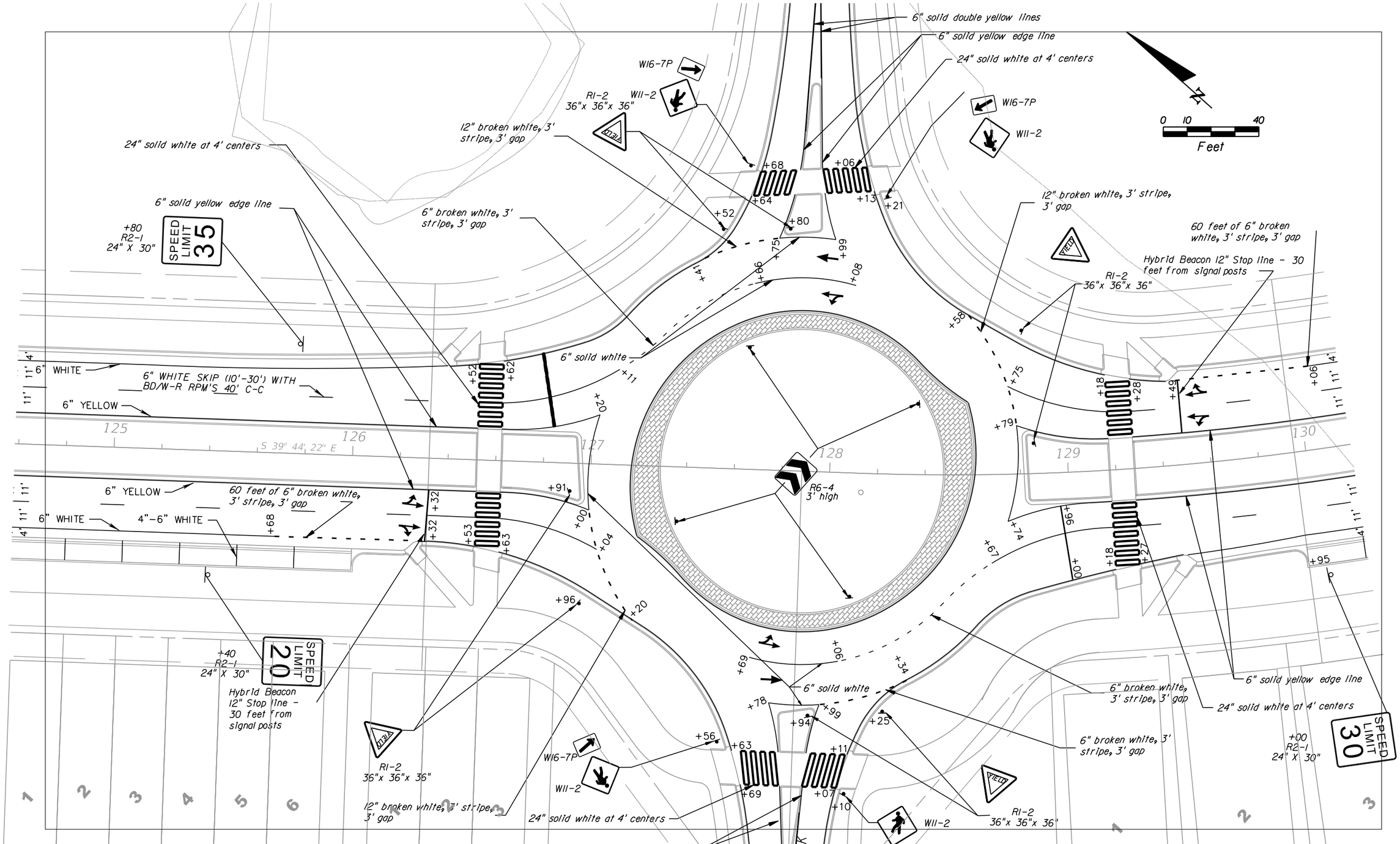

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STARKEY RANCH (VILL. 1) - RANGELAND BLVD

JOB NO.	SIGNING AND PAVEMENT MARKING SHEET (6) STA 124+60.00 TO STA 130+20.00
DESIGN SULLIVAN	
DRAWN COGAN	PREPARED FOR: WHEELOCK STREET CAPITAL
DATE OCT. 1, 2012	Elevations based on North American Vertical Datum 1988 (NAVD 88) Conversion from NAVD 88 to NGVD 29 = +0.83 Feet
FILE	SHEET S-6 OF S-17 SHEETS

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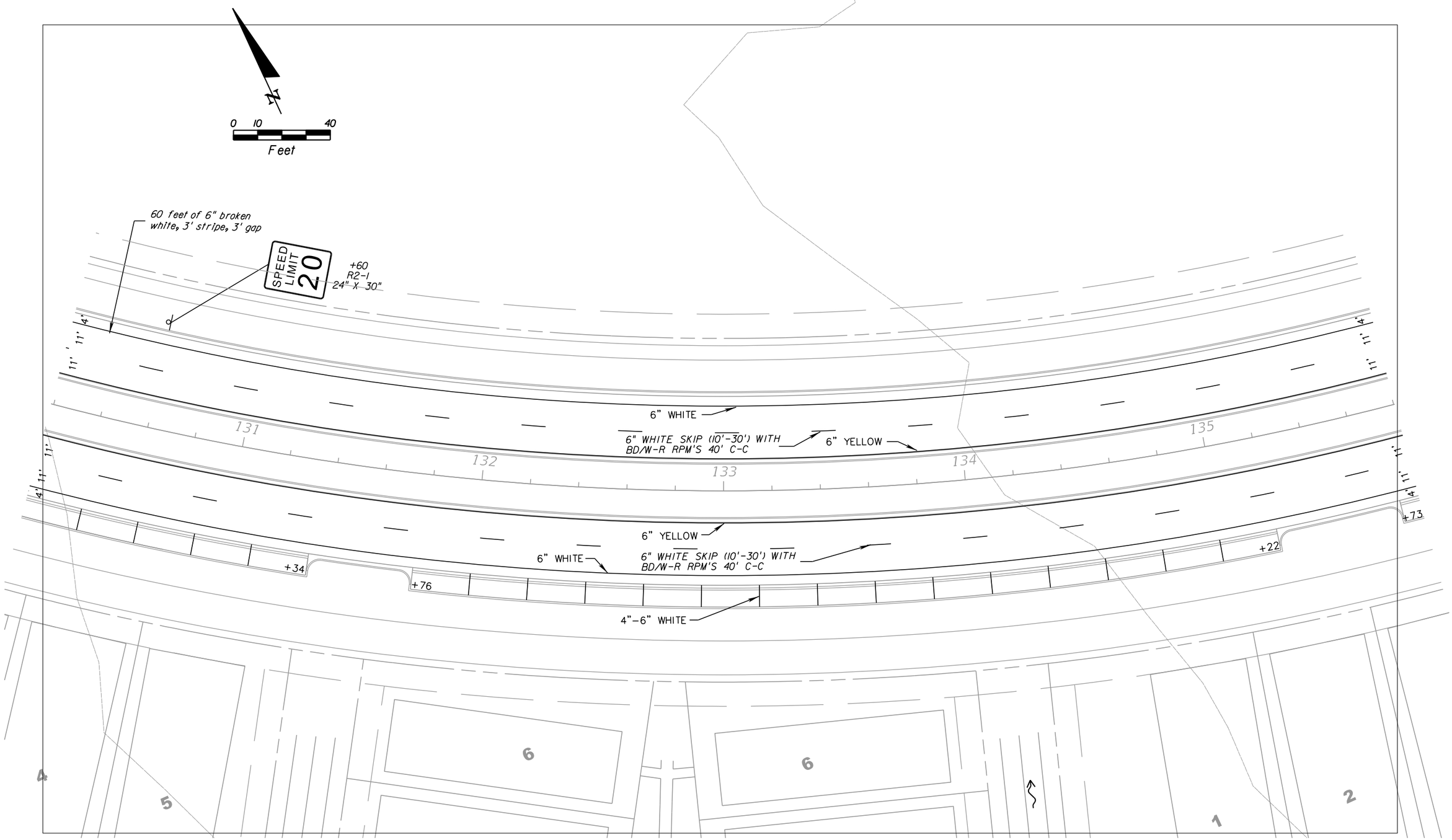

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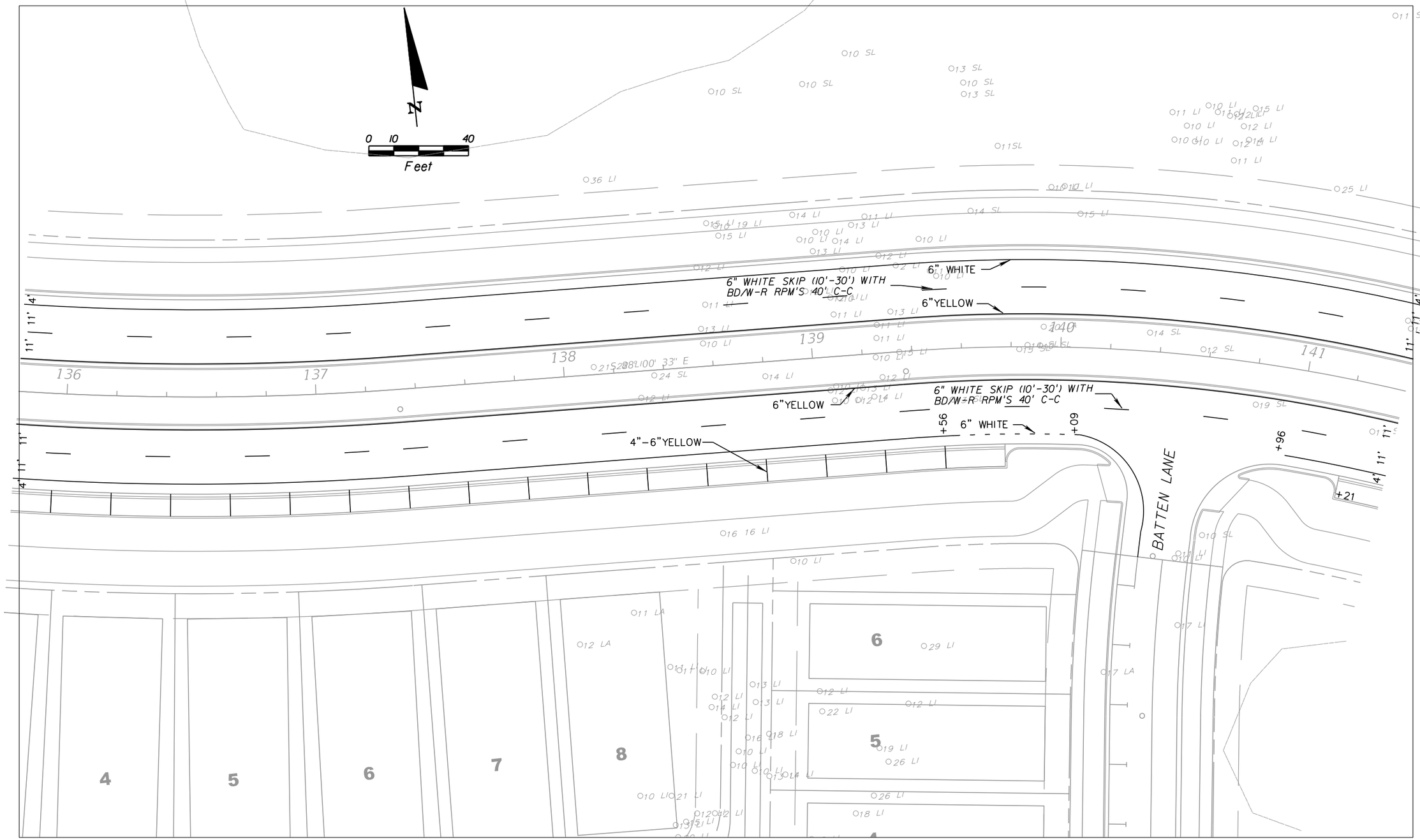
STARKEY RANCH (VILL. 1) - RANGELAND BLVD

JOB NO.	SIGNGIN AND PAVEMENT MARKING SHEET (7) STA 130+20.00 TO STA 135+80.00
DESIGN SULLIVAN	
DRAWN COGAN	PREPARED FOR: WHEELOCK STREET CAPITAL
DATE OCT. 1, 2012	Elevations based on North American Vertical Datum 1988 (NAVD 88) Conversion from NAVD 88 to NGVD 29 = +0.83 Feet
FILE	SHEET S-7 OF S-17 SHEETS



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STARKEY RANCH (VILL. 1) - RANGELAND BLVD

JOB NO.	SIGING AND PAVEMENT MARKING SHEET (8) STA 135+80.00 TO STA 141+40.00
DESIGN SULLIVAN	
DRAWN COGAN	PREPARED FOR: WHEELOCK STREET CAPITAL
DATE OCT. 1, 2012	Elevations based on North American Vertical Datum 1988 (NAVD 88) Conversion from NAVD 88 to NGVD 29 = +0.83 Feet
FILE	SHEET S-8 OF S-17 SHEETS

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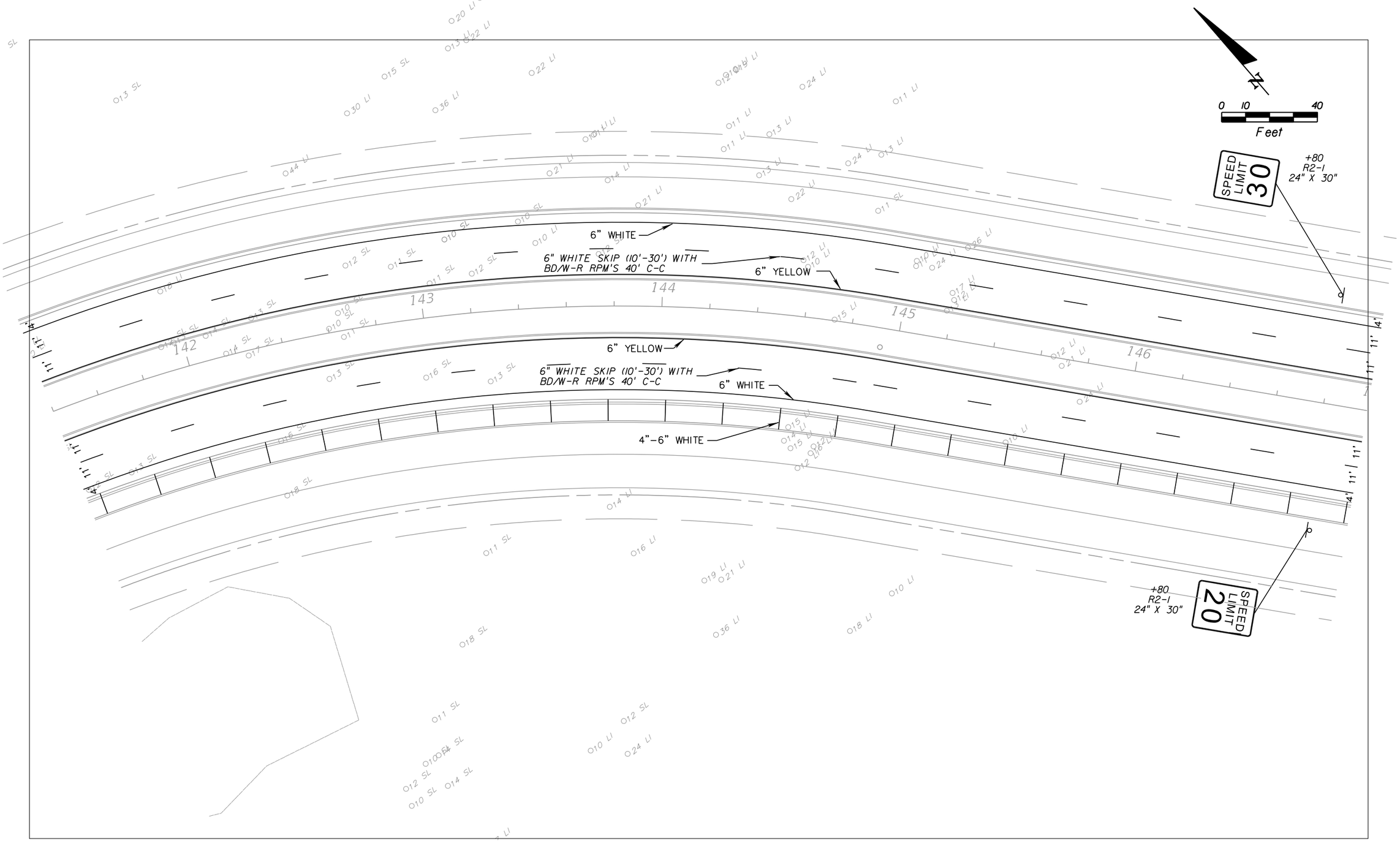

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STARKEY RANCH (VILL. 1) - RANGELAND BLVD

JOB NO.

DESIGN: SULLIVAN

DRAWN: COGAN

DATE: OCT. 1, 2012

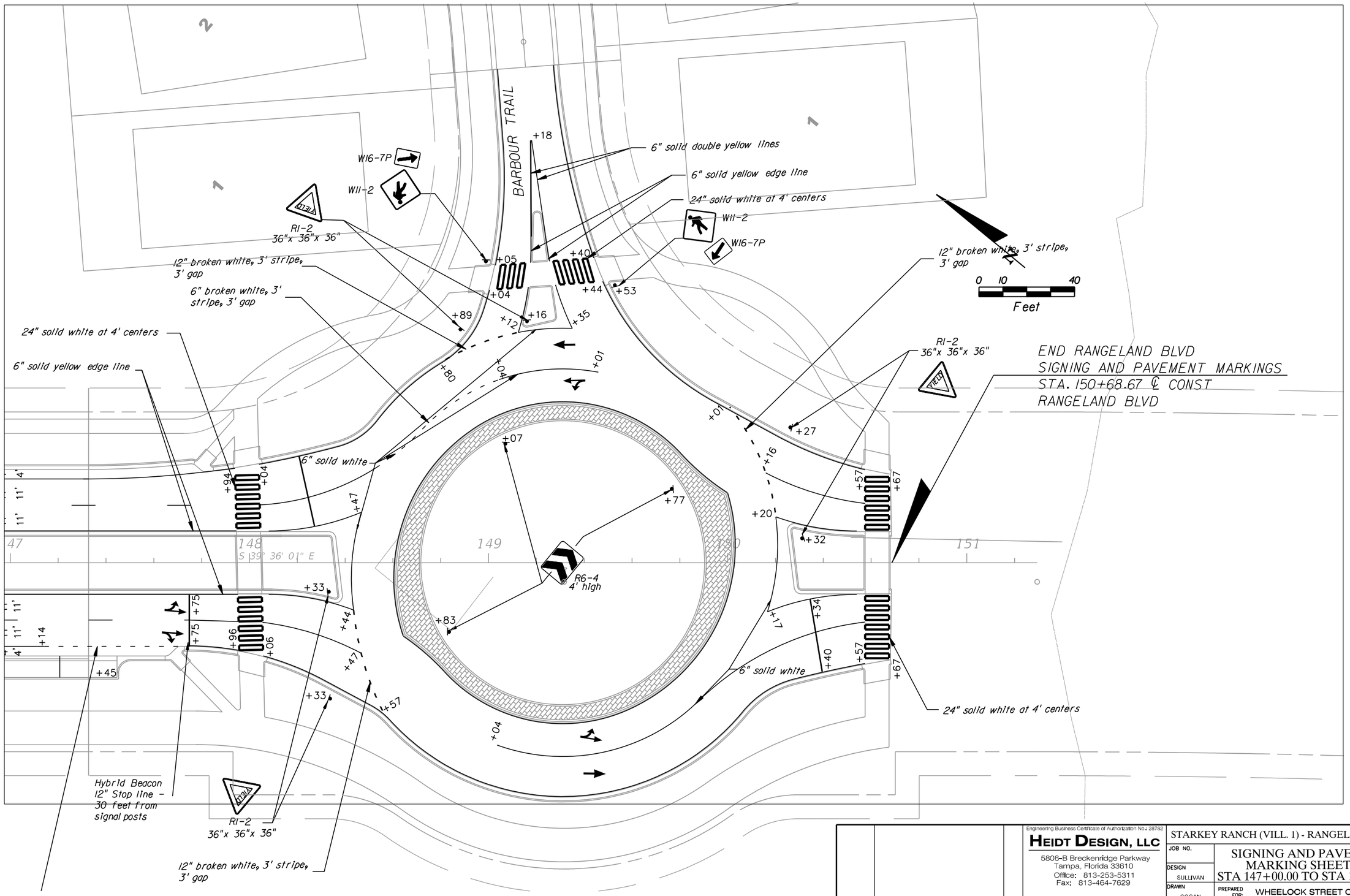
FILE

SIGNING AND PAVEMENT MARKING SHEET (9)
STA 141+40.00 TO STA 147+00.00

PREPARED FOR: WHEELOCK STREET CAPITAL

Elevations based on North American Vertical Datum 1988 (NAVD 88)
Conversion from NAVD 88 to NGVD 29 = +0.83 Feet

SHEET S-9 OF S-17 SHEETS



DATE	DESCRIPTION	BY
	REVISIONS	

Engineering Business Certificate of Authorization No.: 28782

HEIDT DESIGN, LLC

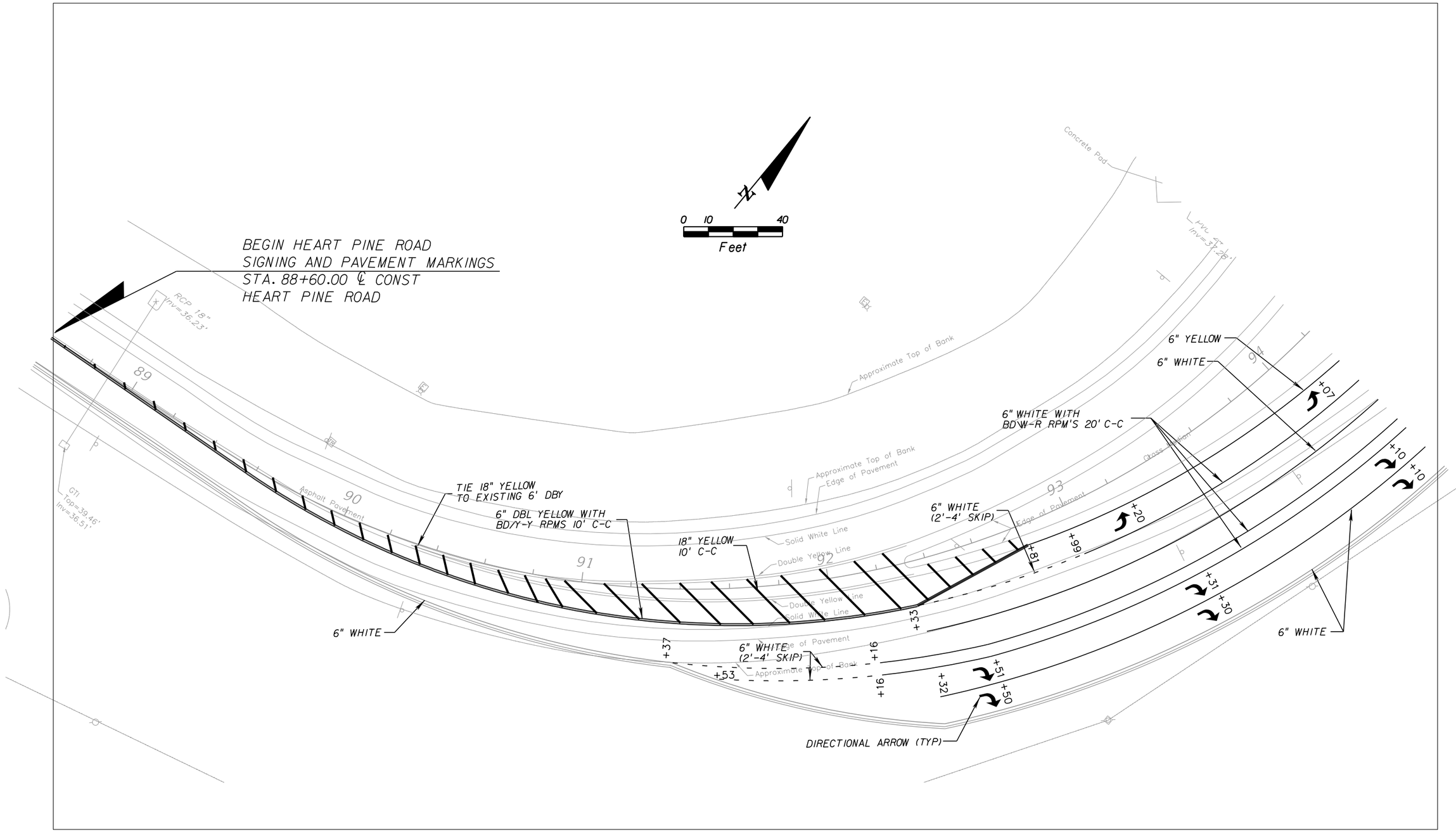
5806-B Breckenridge Parkway
Tampa, Florida 33610
Office: 813-253-5311
Fax: 813-464-7629

DATE:
THOMAS D. SULLIVAN NO. 55358
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - RANGELAND BLVD

JOB NO.	SIGNING AND PAVEMENT MARKING SHEET (10) STA 147+00.00 TO STA 151+39.86
DESIGN SULLIVAN	
DRAWN COGAN	PREPARED FOR: WHEELOCK STREET CAPITAL
DATE OCT. 1, 2012	Elevations based on North American Vertical Datum 1988 (NAVD 88) Conversion from NAVD 88 to NGVD 29 = +0.83 Feet
FILE	SHEET S-10 OF S-17 SHEETS

$USER$ $DATE$ $TIME$ $FILE$



DATE	DESCRIPTION	BY	
	REVISIONS		

Engineering Business Certificate of Authorization No.: 28782

HEIDT DESIGN, LLC

5806-B Breckenridge Parkway
Tampa, Florida 33610
Office: 813-253-5311
Fax: 813-464-7629

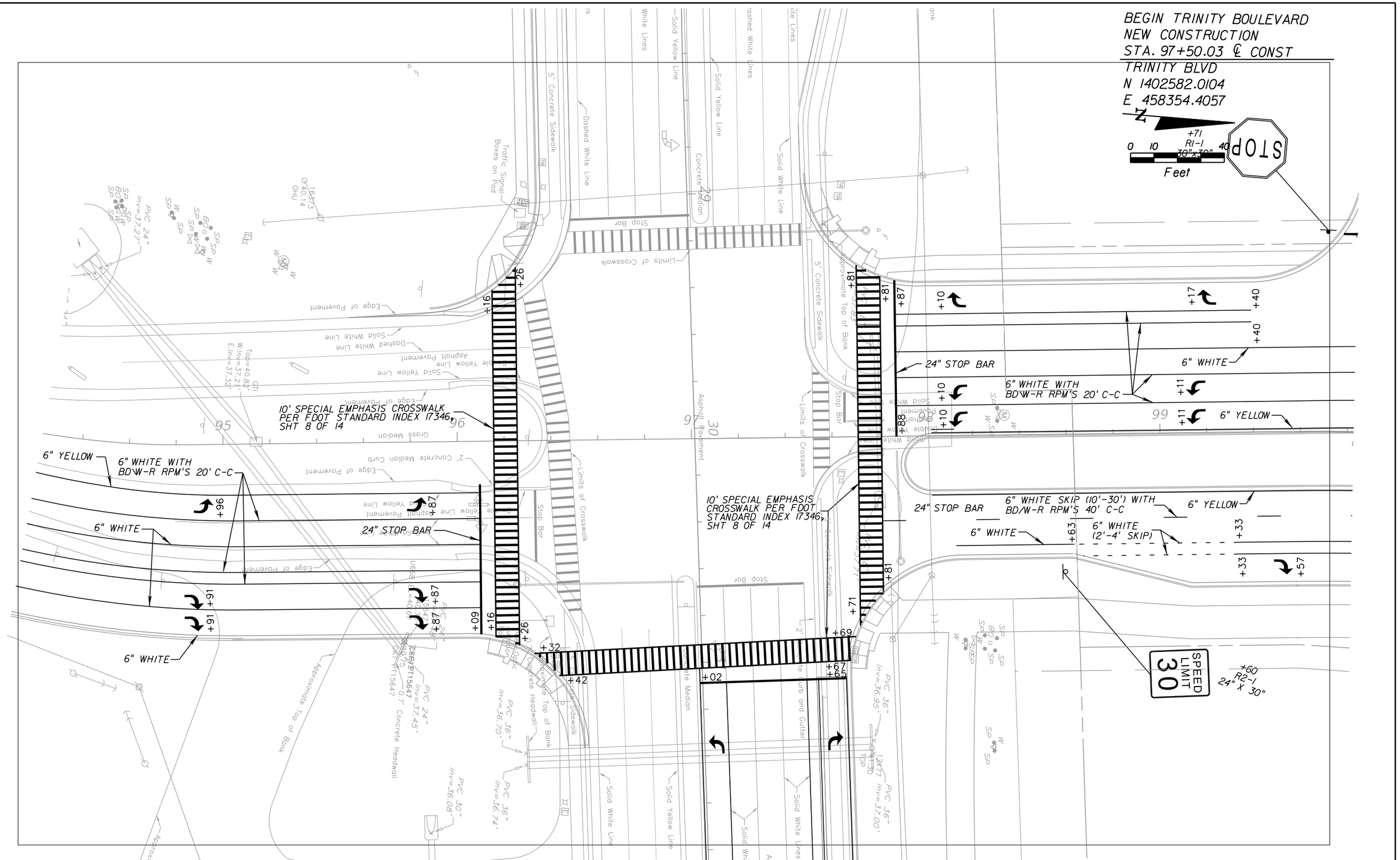
DATE:
THOMAS D. SULLIVAN NO. 55358
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - HEART PINE AVE

JOB NO.	SIGNING AND PAVEMENT MARKING SHEET (1) STA 88+52.03 TO STA 94+20.00
DESIGN SULLIVAN	
DRAWN COGAN	PREPARED FOR: WHEELOCK STREET CAPITAL
DATE OCT. 1, 2012	Elevations based on North American Vertical Datum 1988 (NAVD 88) Conversion from NAVD 88 to NGVD 29 = +0.83 Feet
FILE	SHEET S-11 OF S-17 SHEETS

$USER$ $DATE$ $TIME$ $FILE$

BEGIN TRINITY BOULEVARD
NEW CONSTRUCTION
STA. 97+50.03 ℄ CONST
TRINITY BLVD
N 1402582.0104
E 458354.4057



SEE SR56 PLAN SHEETS FOR ADDITIONAL DETAILS

DATE	DESCRIPTION	BY
	REVISIONS	

Engineering Business Certificate of Authorization No.: 28782

HEIDT DESIGN, LLC

5806-B Breckenridge Parkway
Tampa, Florida 33610
Office: 813-253-5311
Fax: 813-464-7629

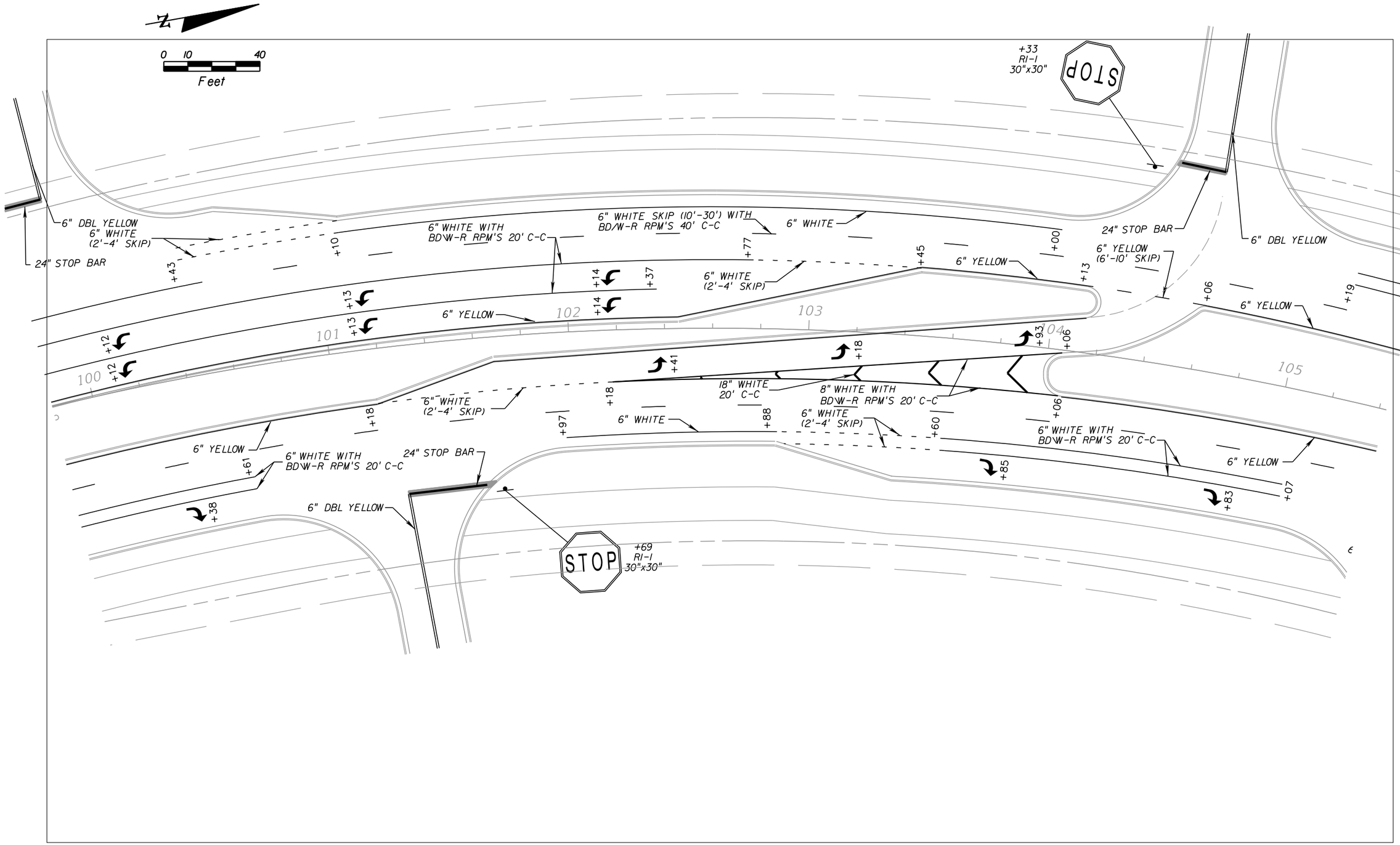
DATE:

THOMAS D. SULLIVAN NO. 55358
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - HEART PINE AVE

JOB NO.	SIGNING AND PAVEMENT MARKING SHEET (2) STA 94+20.00 TO STA 99+80.00
DESIGN SULLIVAN	
DRAWN COGAN	PREPARED FOR: WHEELOCK STREET CAPITAL
DATE OCT. 1, 2012	Elevations based on North American Vertical Datum 1988 (NAVD 88) Conversion from NAVD 88 to NGVD 29 = +0.83 Feet
FILE	SHEET S-12 OF S-17 SHEETS

$USER$ $DATE$ $TIME$ $FILE$



DATE	DESCRIPTION	BY
	REVISIONS	

Engineering Business Certificate of Authorization No.: 28782

HEIDT DESIGN, LLC

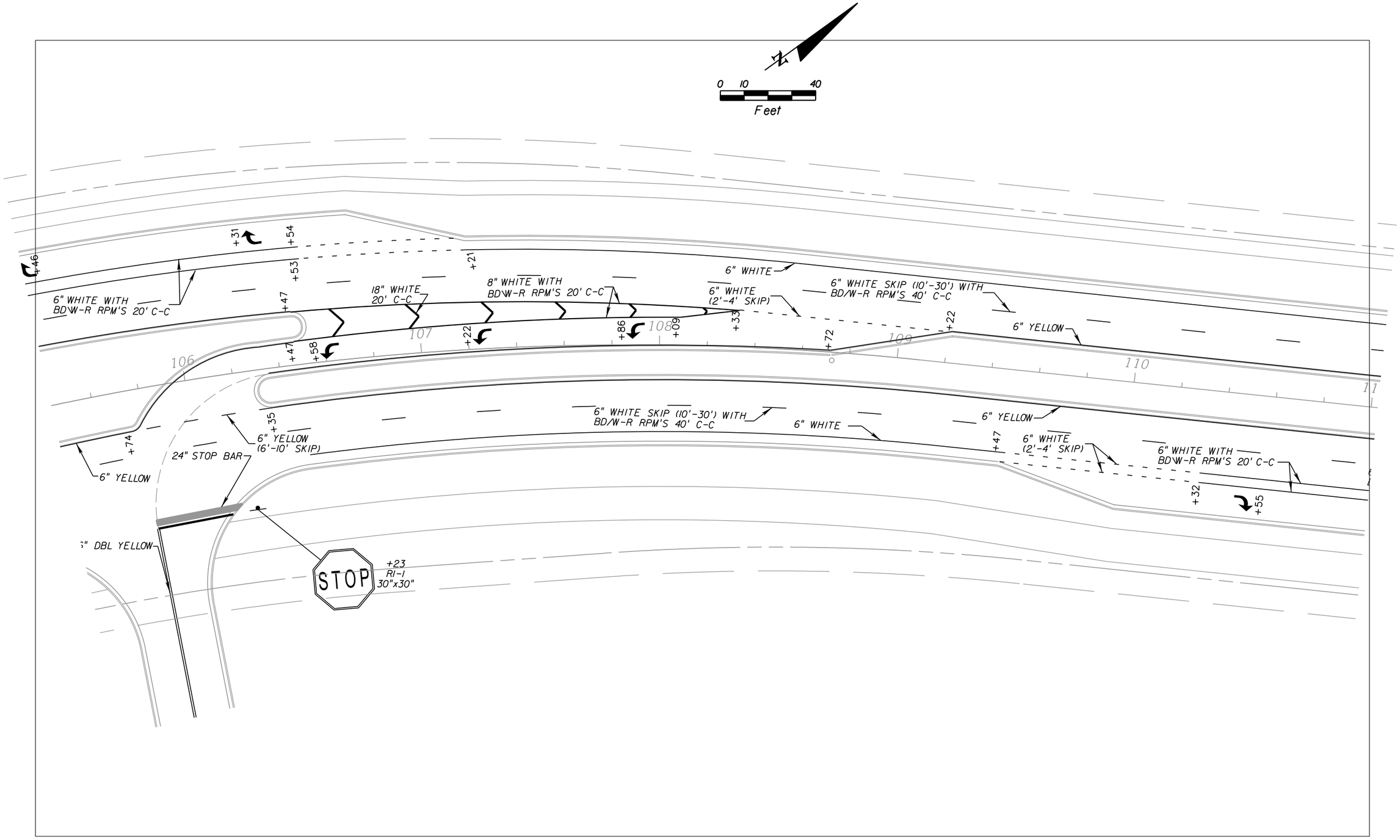
5806-B Breckenridge Parkway
Tampa, Florida 33610
Office: 813-253-5311
Fax: 813-464-7629

DATE:
THOMAS D. SULLIVAN NO. 55358
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - HEART PINE AVE

JOB NO.	SIGNING AND PAVEMENT MARKING SHEET (3) STA 99+80.00 TO STA 105+40.00
DESIGN SULLIVAN	
DRAWN COGAN	PREPARED FOR: WHEELOCK STREET CAPITAL
DATE OCT. 1, 2012	Elevations based on North American Vertical Datum 1988 (NAVD 88) Conversion from NAVD 88 to NGVD 29 = +0.83 Feet
FILE	SHEET S-13 OF S-17 SHEETS

$USER$ $DATE$ $TIME$ $FILE$



DATE	DESCRIPTION	BY
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$USER$ $DATE$ $TIME$ $FILE$

Engineering Business Certificate of Authorization No.: 28782

HEIDT DESIGN, LLC

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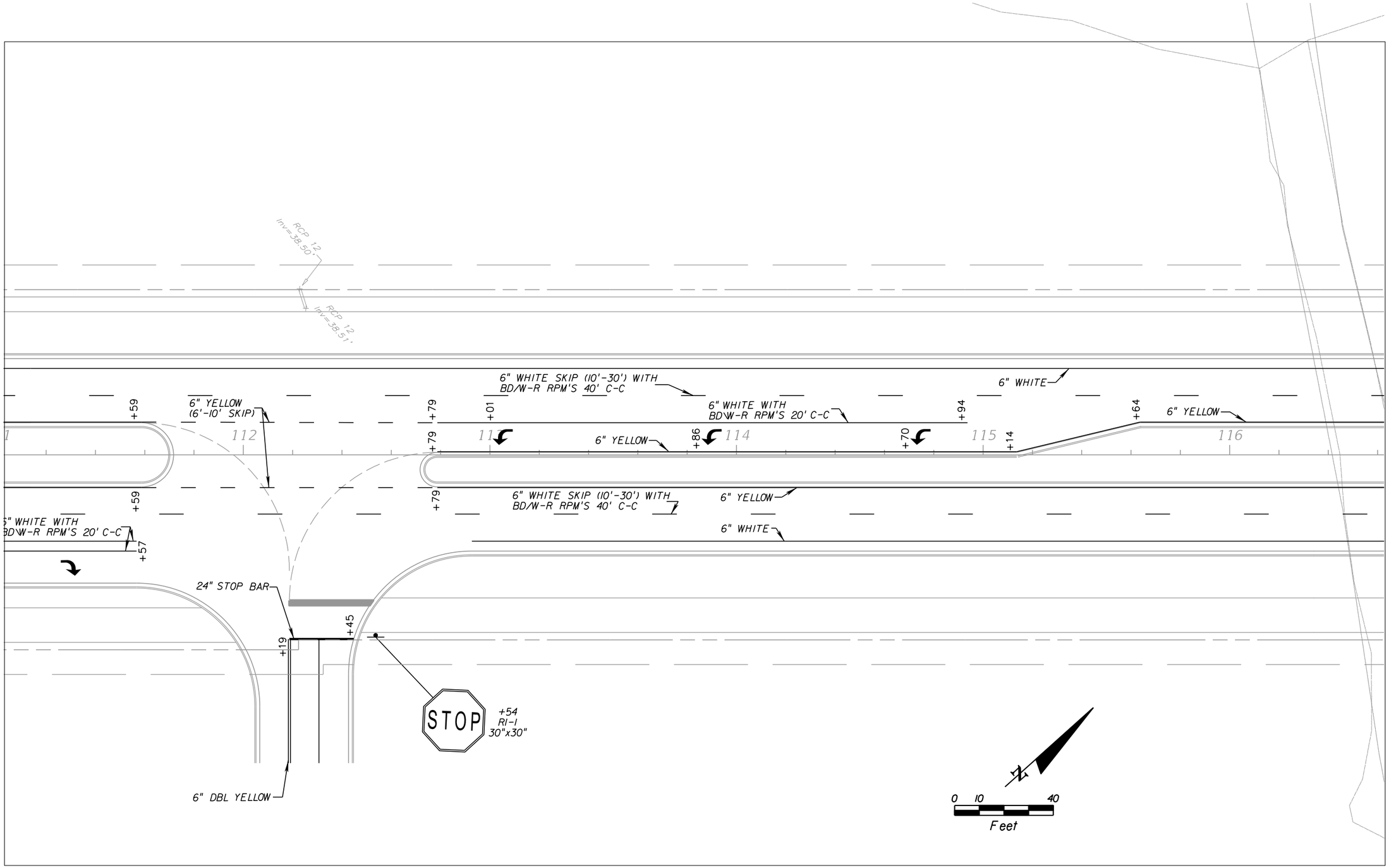
Tampa, Florida 33610
Office: 813-253-5311
Fax: 813-464-7629

DATE:
THOMAS D. SULLIVAN NO. 55358
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - HEART PINE AVE

JOB NO.	SIGNING AND PAVEMENT MARKING SHEET (4) STA 105+40.00 TO STA 111+00.00
DESIGN SULLIVAN	
DRAWN COGAN	PREPARED FOR: WHEELOCK STREET CAPITAL
DATE OCT. 1, 2012	Elevations based on North American Vertical Datum 1988 (NAVD 88) Conversion from NAVD 88 to NGVD 29 = +0.83 Feet
FILE	SHEET S-14 OF S-17 SHEETS



DATE	DESCRIPTION	BY
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$USER$ $DATE$ $TIME$ $FILE$

Engineering Business Certificate of Authorization No. 28782

HEIDT DESIGN, LLC

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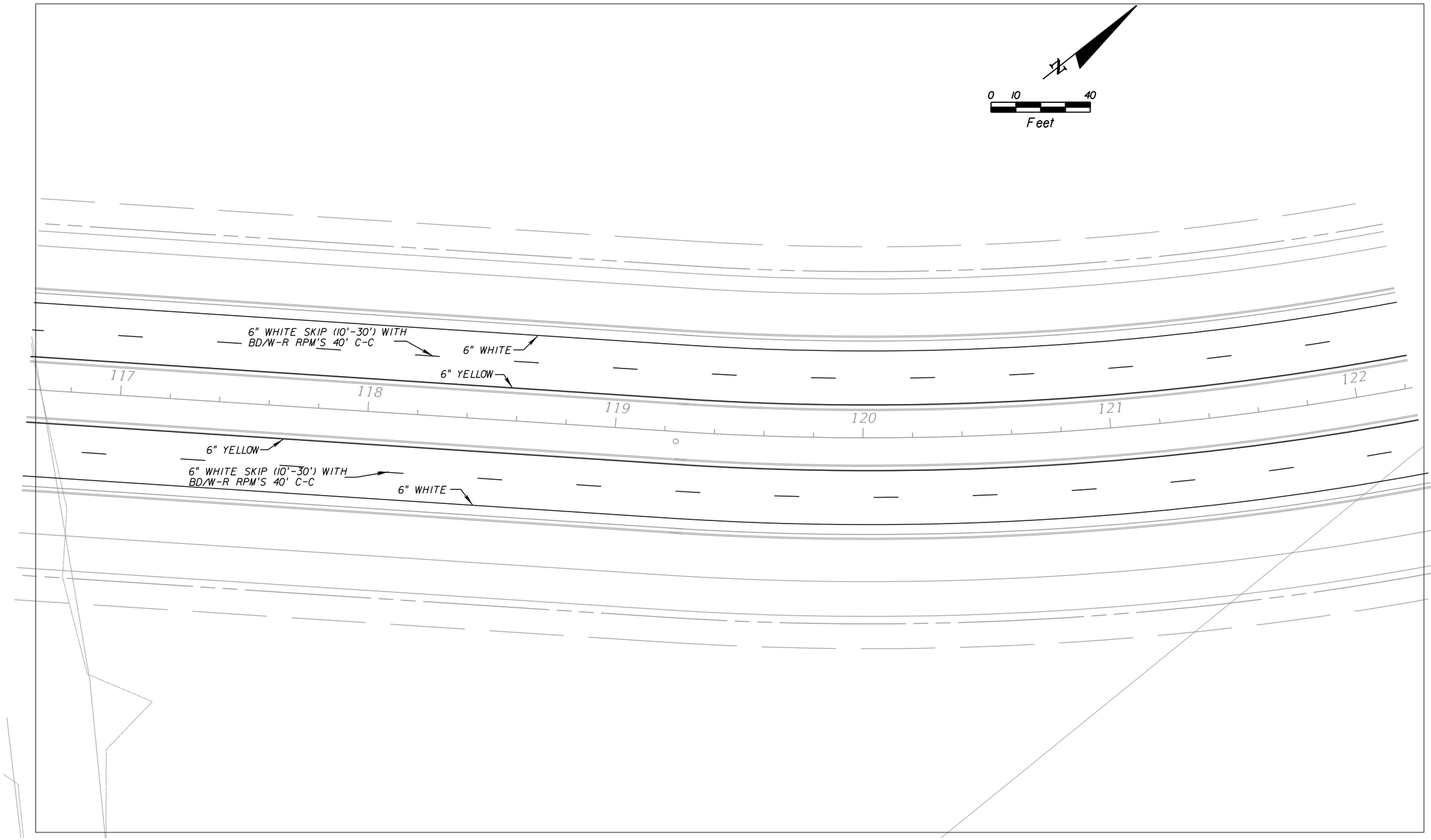
Office: 813-253-5311
Fax: 813-464-7629

DATE:
THOMAS D. SULLIVAN NO. 55358
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - HEART PINE AVE

JOB NO.	SIGNING AND PAVEMENT MARKING SHEET (5) STA 111+00.00 TO STA 116+60.00
DESIGN SULLIVAN	
DRAWN COGAN	PREPARED FOR: WHEELOCK STREET CAPITAL
DATE OCT. 1, 2012	Elevations based on North American Vertical Datum 1988 (NAVD 88) Conversion from NAVD 88 to NGVD 29 = +0.83 Feet
FILE	SHEET S-15 OF S-17 SHEETS



DATE	DESCRIPTION	BY
	REVISIONS	

$USER$ $DATE$ $TIME$ $FILE$

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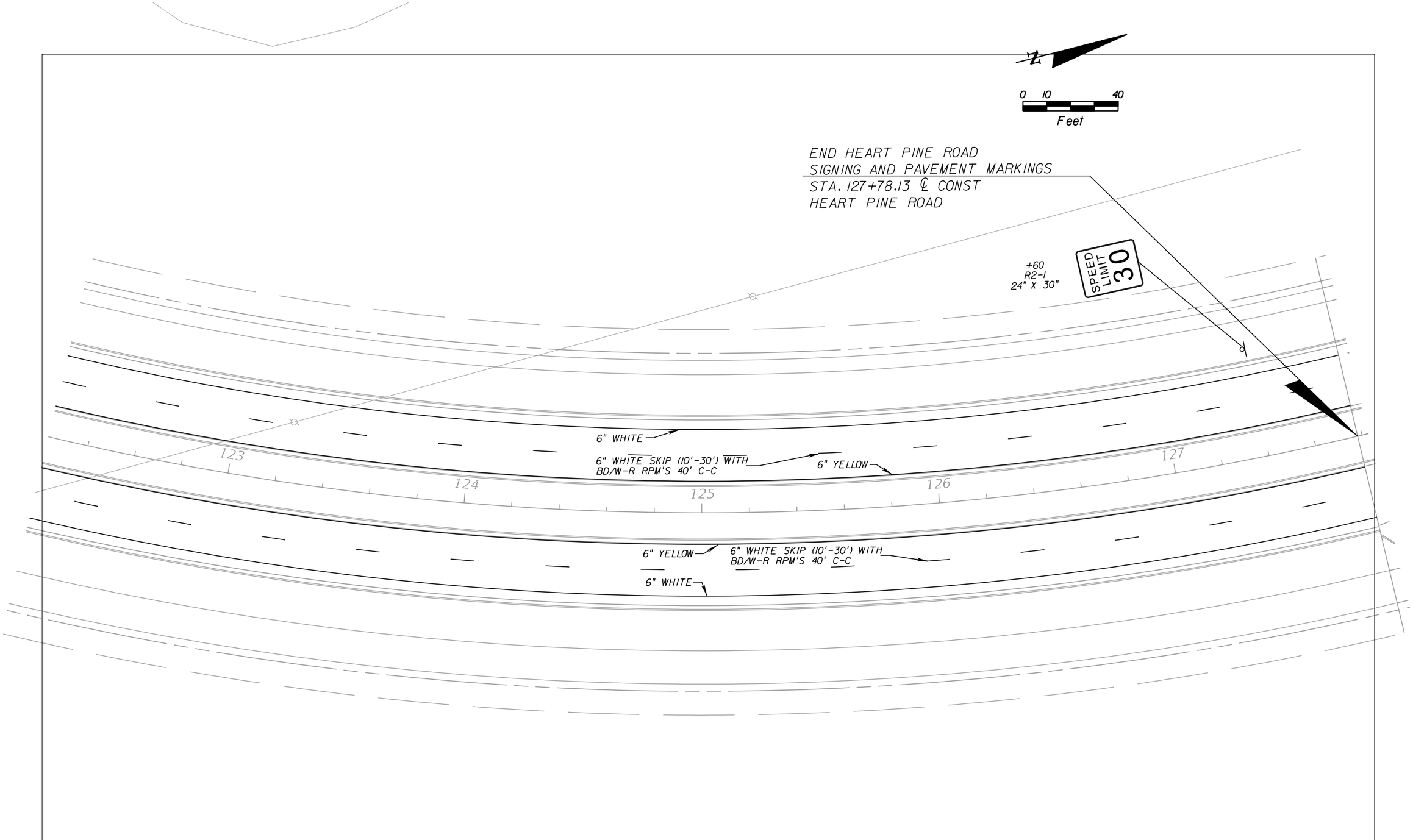
Tampa, Florida 33610
Office: 813-253-5311
Fax: 813-464-7629

DATE:

THOMAS D. SULLIVAN NO. 55358
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - HEART PINE AVE

JOB NO.	SIGNING AND PAVEMENT MARKING SHEET (6) STA 116+60.00 TO STA 122+20.00
DESIGN SULLIVAN	
DRAWN COGAN	PREPARED FOR: WHEELOCK STREET CAPITAL
DATE OCT. 1, 2012	Elevations based on North American Vertical Datum 1988 (NAVD 88) Conversion from NAVD 88 to NGVD 29 = +0.83 Feet
FILE	SHEET S-16 OF S-17 SHEETS



DATE	DESCRIPTION	BY
	REVISIONS	

$USER$ $DATE$ $TIME$ $FILE$

Engineering Business Certificate of Authorization No. 28782

HEIDT DESIGN, LLC

5806-B Breckenridge Parkway
Tampa, Florida 33610
Office: 813-253-5311
Fax: 813-464-7629

DATE:

THOMAS D. SULLIVAN NO. 55358
FLORIDA PROFESSIONAL ENGINEER

STARKEY RANCH (VILL. 1) - HEART PINE AVE

JOB NO.	SIGNING AND PAVEMENT MARKING SHEET (7) STA 122+20.00 TO STA 127+75.31
DESIGN SULLIVAN	
DRAWN COGAN	PREPARED FOR: WHEELOCK STREET CAPITAL
DATE OCT. 1, 2012	Elevations based on North American Vertical Datum 1988 (NAVD 88) Conversion from NAVD 88 to NGVD 29 = +0.83 Feet
FILE	SHEET S-17 OF S-17 SHEETS

CATEGORY III
4.82 ACRES
SHW=39.75

0 40 80
GRAPHIC SCALE: 1" = 40'
N

BO ASSEMBLY (RM)
6" GATE VALVE (RM)
40 LF± 8" SM
BO ASSEMBLY (WM)
8" GATE VALVE (WM)
C6
18" RCP
89A
89
C5
6" 45° BEND (RM)
150 LF± 6" RM
6" GATE VALVE (RM)
BO ASSEMBLY (RM)
8" 45° BEND (WM)
18" RCP
RANGELAND BOULEVARD
8" 45° BEND (WM)
185 LF± 8" SM
8" GATE VALVE (RM)
19 LF± 8" RM
26 LF± 6" RM
8" x 6" TEE (RM)
89B
18" RCP
89C
97
98
99
STA. 100+00.00 RANGELAND BLVD
STA. 36+77.64 LONG SPUR
PT: 101+61.80
BP: 100+00.00
PI: 36+77.64
100
EP: 100+00.00
100
101
102
18" RCP
278 LF± 8" SM
257 LF± 8" WM
LINE "E"
C4
8" GATE VALVE (WM)
88
10'
16'
8" GATE VALVE (WM)
BO ASSEMBLY (WM)
178 LF± 8" RM
8" 45° BEND (RM)
8" GATE VALVE (RM)
8" x 8" TEE (RM)
108 LF± 8" SM
8" 45° BEND (RM)
FH ASSEMBLY (WM)
135 LF± 8" WM
8" 45° BEND (WM)
62 LF± 8" RM
8" 45° BEND (RM)
43 LF± 8" WM
8" GATE VALVE (WM)
116 LF± 8" RM
C3
8" 45° BEND (WM)
8" GATE VALVE (WM)
8" x 8" TEE (WM)
112 LF± 8" WM
8" 45° BEND (WM)
15 LF± 8" RM
8" 45° BEND (WM)
97 LF± 8" WM
8" GATE VALVE (WM)
8" x 8" TEE (WM)
60 LF± 8" RM
11 LF± 8" WM
8" GATE VALVE (WM)
276 LF± 8" SM
49 LF± 8" WM
4
38
37
36

MATCH LINE STA 102+50
SEE SHEET U-03

SEE CONSTRUCTION PLANS FOR
STARKEY RANCH VILLAGE 1
PHASES 1-5

POND 4-1
DHW$_{25}$=41.80

LONG SPUR

24.0

DATE	DESCRIPTION	BY
	REVISIONS	

ENGINEERING BUSINESS CERTIFICATE OF AUTHORIZATION NO. 29782

HEIDT DESIGN
5806-B Breckenridge Parkway
Tampa, Florida 33610
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Fax: 813-464-7629
www.HeidtDesign.com

DATE:
THOMAS D. SULLIVAN P.E. NO. 55358
FLORIDA PROFESSIONAL ENGINEER

RANGELAND BOULEVARD - STARKEY VILLAGE 1

PROJECT NO. TSR-SR-1007

CIP PROJ NO. #####

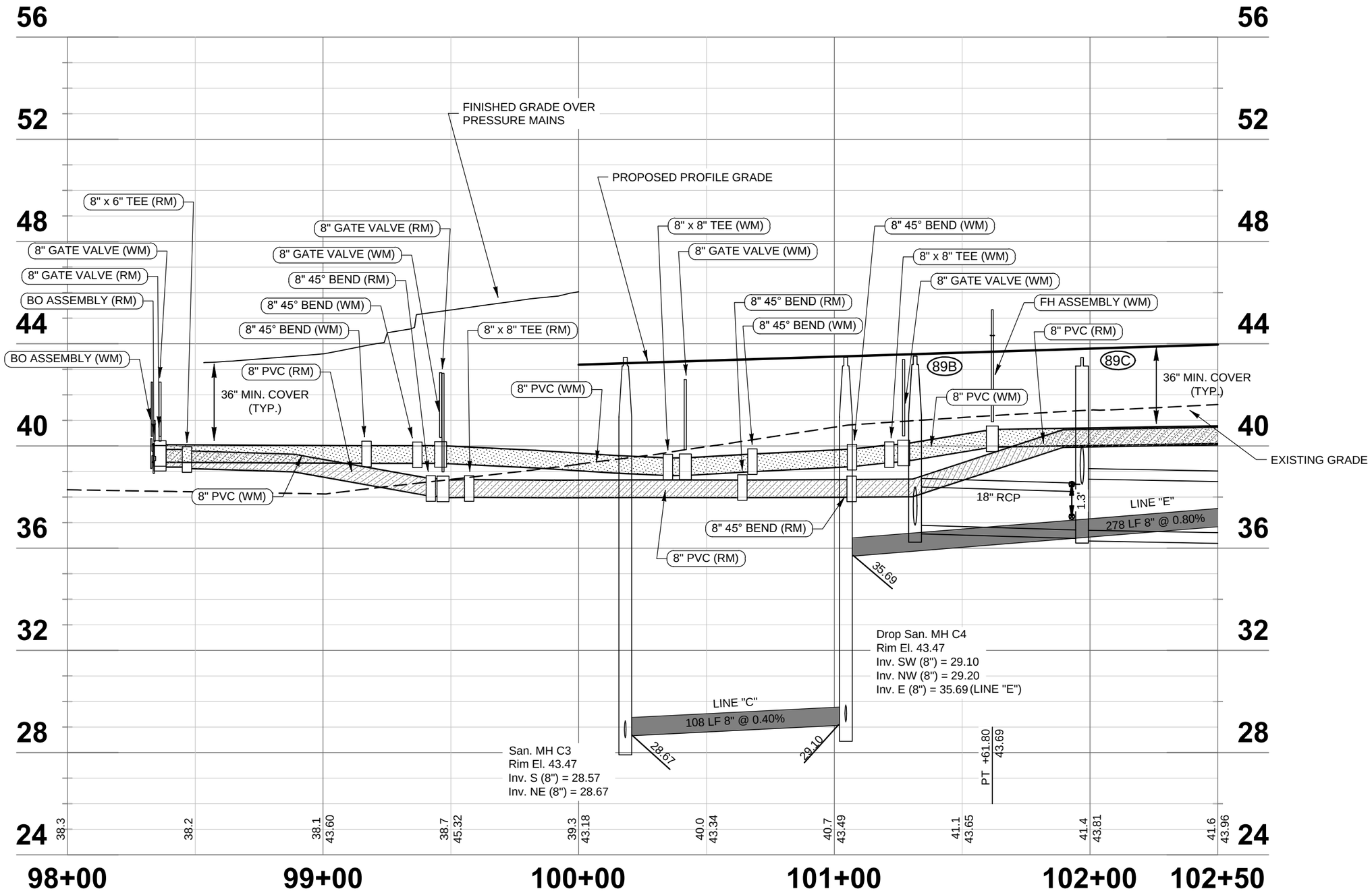
DESIGN XXXX

UTILITY IMPROVEMENTS
PLAN SHEET (U-01)
STA. 98+00 TO STA. 102+50

PREPARED FOR: **PASCO COUNTY DEPARTMENT OF PUBLIC WORKS**

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-01 OF U-34 SHEETS



0 40 80

HORIZONTAL SCALE: 1" = 40'

VERTICAL SCALE: 1" = 4'

DATE	DESCRIPTION	BY

REVISIONS

ENGINEERING BUSINESS CERTIFICATE OF AUTHORIZATION NO. 28782

HEIDT DESIGN
5806-B Breckenridge Parkway
Tampa, Florida 33610
Office: 813-253-5311
Fax: 813-464-7629
www.HeidtDesign.com

DATE:
THOMAS D. SULLIVAN P.E. NO. 55358
FLORIDA PROFESSIONAL ENGINEER

RANGELAND BOULEVARD - STARKEY VILLAGE I

PROJECT NO. TSR-SR-1007

CIP PROJ NO. #####

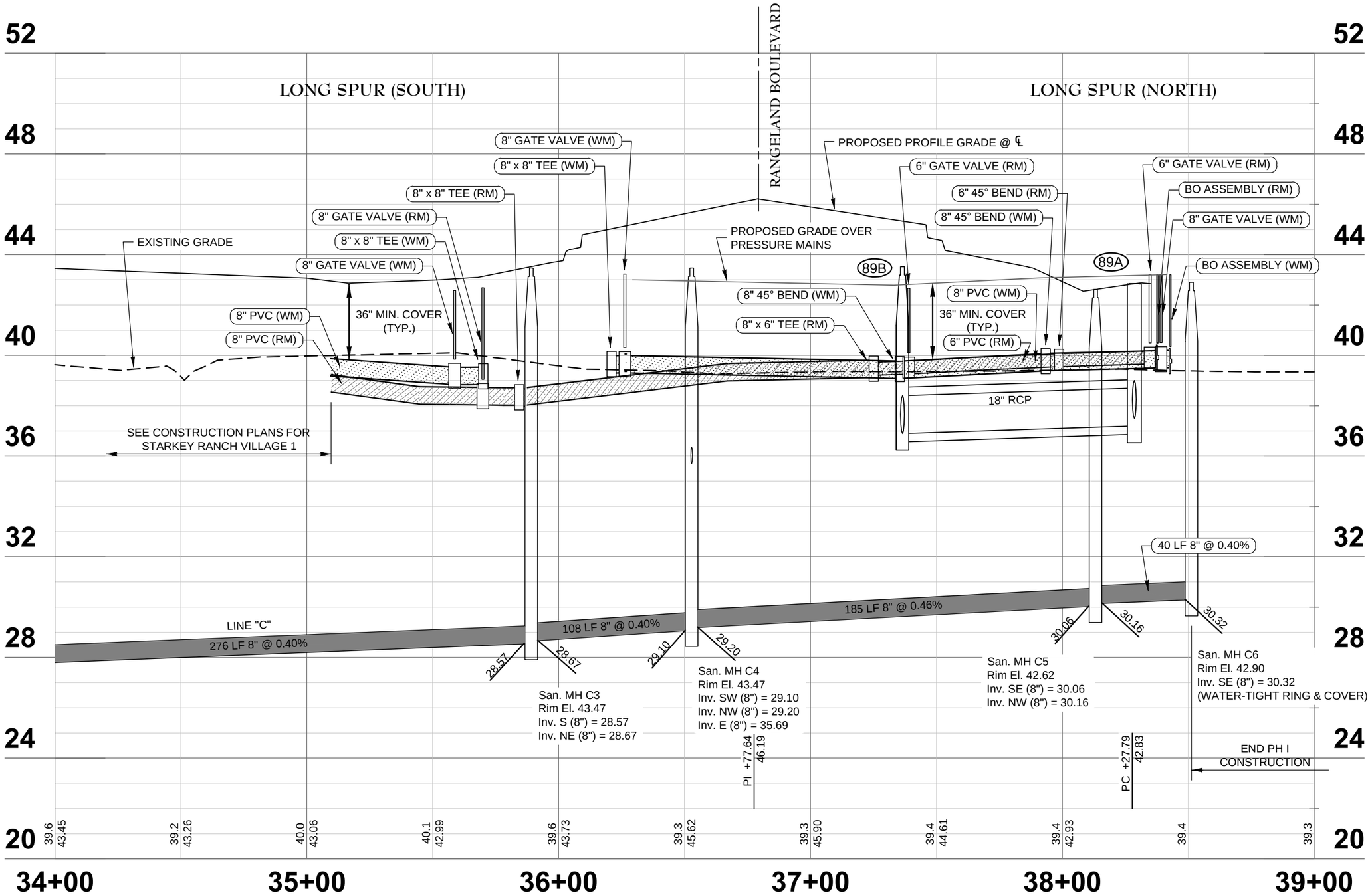
DESIGN XXXX

UTILITY IMPROVEMENTS
PROFILE SHEET (U-02)
STA. 98+00 TO STA 102+50

PREPARED FOR: PASCO COUNTY DEPARTMENT OF PUBLIC WORKS

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-02 OF U-34 SHEETS



0 40 80

HORIZONTAL SCALE: 1" = 40'

VERTICAL SCALE: 1" = 4'

DATE	DESCRIPTION	BY
	REVISIONS	

ENGINEERING BUSINESS CERTIFICATE OF AUTHORIZATION NO. 28782

HEIDT DESIGN
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Tampa, Florida 33610
Office: 813-253-5311
Fax: 813-464-7629
www.HeidtDesign.com

DATE:
THOMAS D. SULLIVAN P.E. NO. 55358
FLORIDA PROFESSIONAL ENGINEER

RANGELAND BOULEVARD - STARKEY VILLAGE 1

PROJECT NO. TSR-SR-1007

CIP PROJ NO. #####

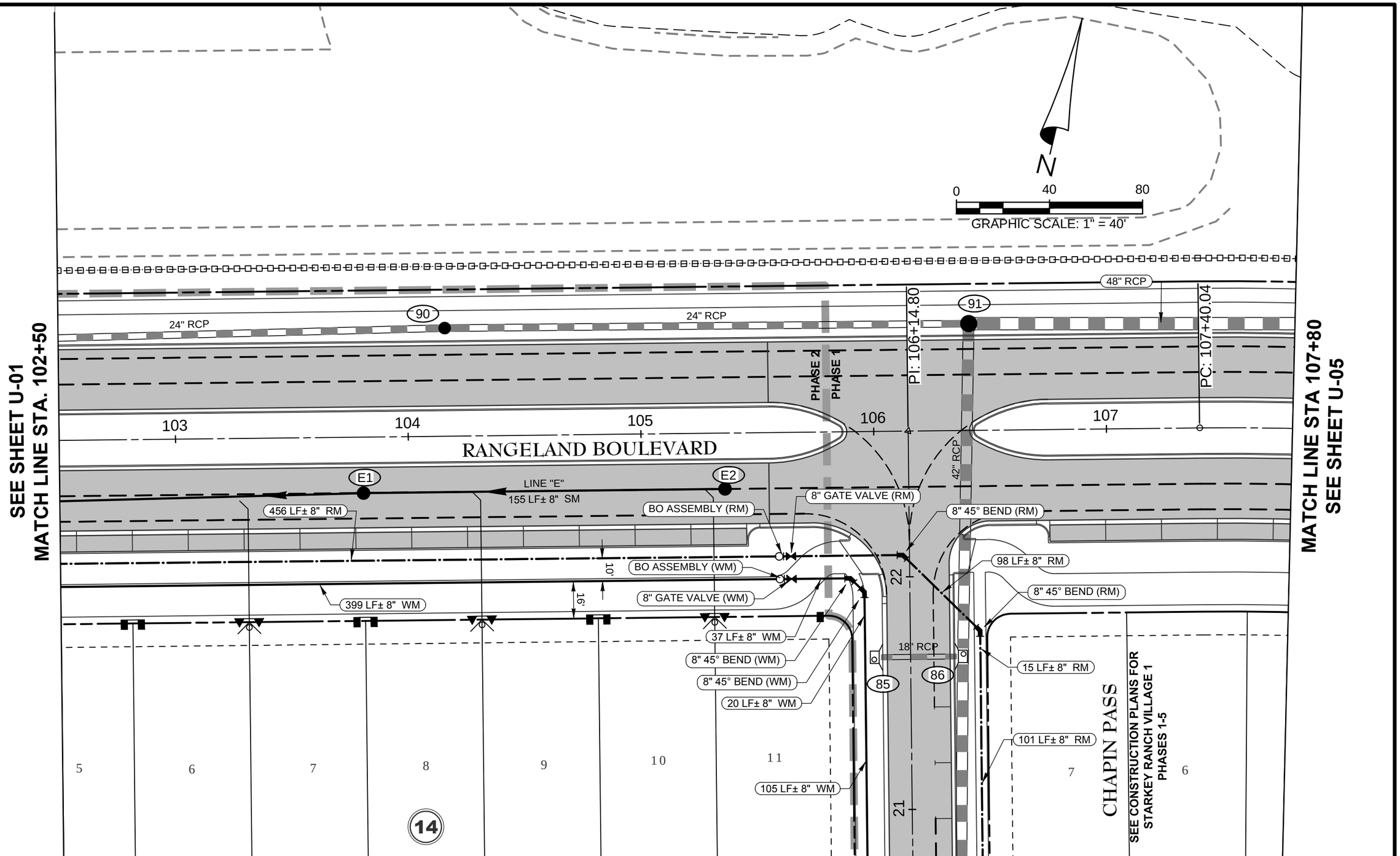
DESIGN XXXX

UTILITY IMPROVEMENTS
PROFILE SHEET (U-02A)
STA. 34+00 TO STA 39+00

PREPARED FOR: **PASCO COUNTY DEPARTMENT OF PUBLIC WORKS**

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-02A OF U-34 SHEETS



DATE	DESCRIPTION	BY
	REVISIONS	

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HEIDT DESIGN
5806-B Breckenridge Parkway
Tampa, Florida 33610
Office: 813-253-5311
Fax: 813-464-7629
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DATE:
THOMAS D. SULLIVAN P.E. NO. 55358
FLORIDA PROFESSIONAL ENGINEER

RANGELAND BOULEVARD - STARKEY VILLAGE 1

PROJECT NO. TSR-SR-1007

CIP PROJ NO. #####

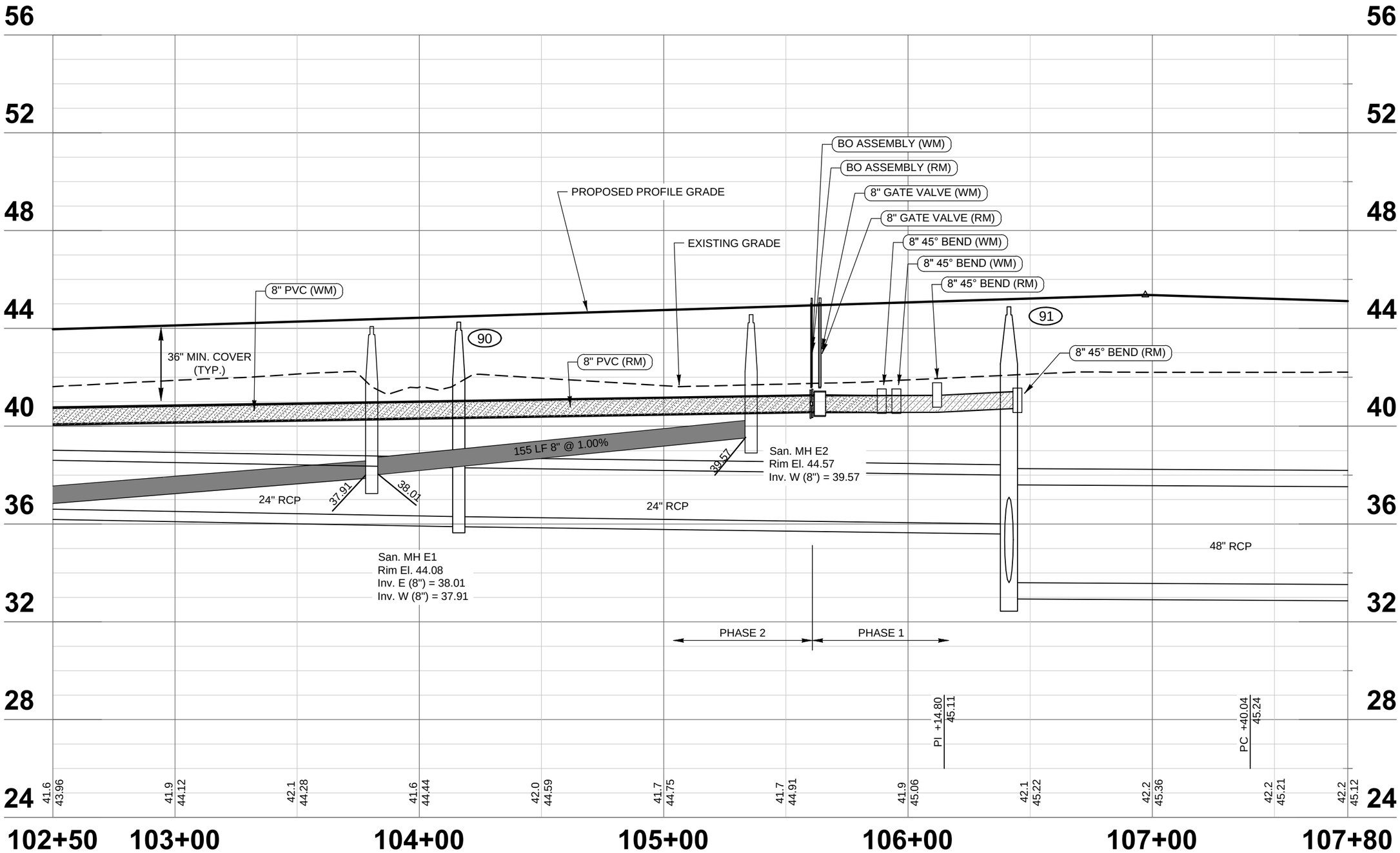
DESIGN XXXX

UTILITY IMPROVEMENTS
PLAN SHEET (U-03)
STA. 102+50 TO STA. 107+80

PREPARED FOR: **PASCO COUNTY**
DEPARTMENT OF PUBLIC WORKS

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-03 OF U-34 SHEETS



0 40 80

HORIZONTAL SCALE: 1" = 40'

VERTICAL SCALE: 1" = 4'

DATE	DESCRIPTION	BY
	REVISIONS	

ENGINEERING BUSINESS CERTIFICATE OF AUTHORIZATION NO. 28782

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Tampa, Florida 33610
Office: 813-253-5311
Fax: 813-464-7629
www.HeidtDesign.com

DATE:
THOMAS D. SULLIVAN P.E. NO. 55358
FLORIDA PROFESSIONAL ENGINEER

RANGELAND BOULEVARD - STARKEY VILLAGE I

PROJECT NO. TSR-SR-1007

CIP PROJ NO. #####

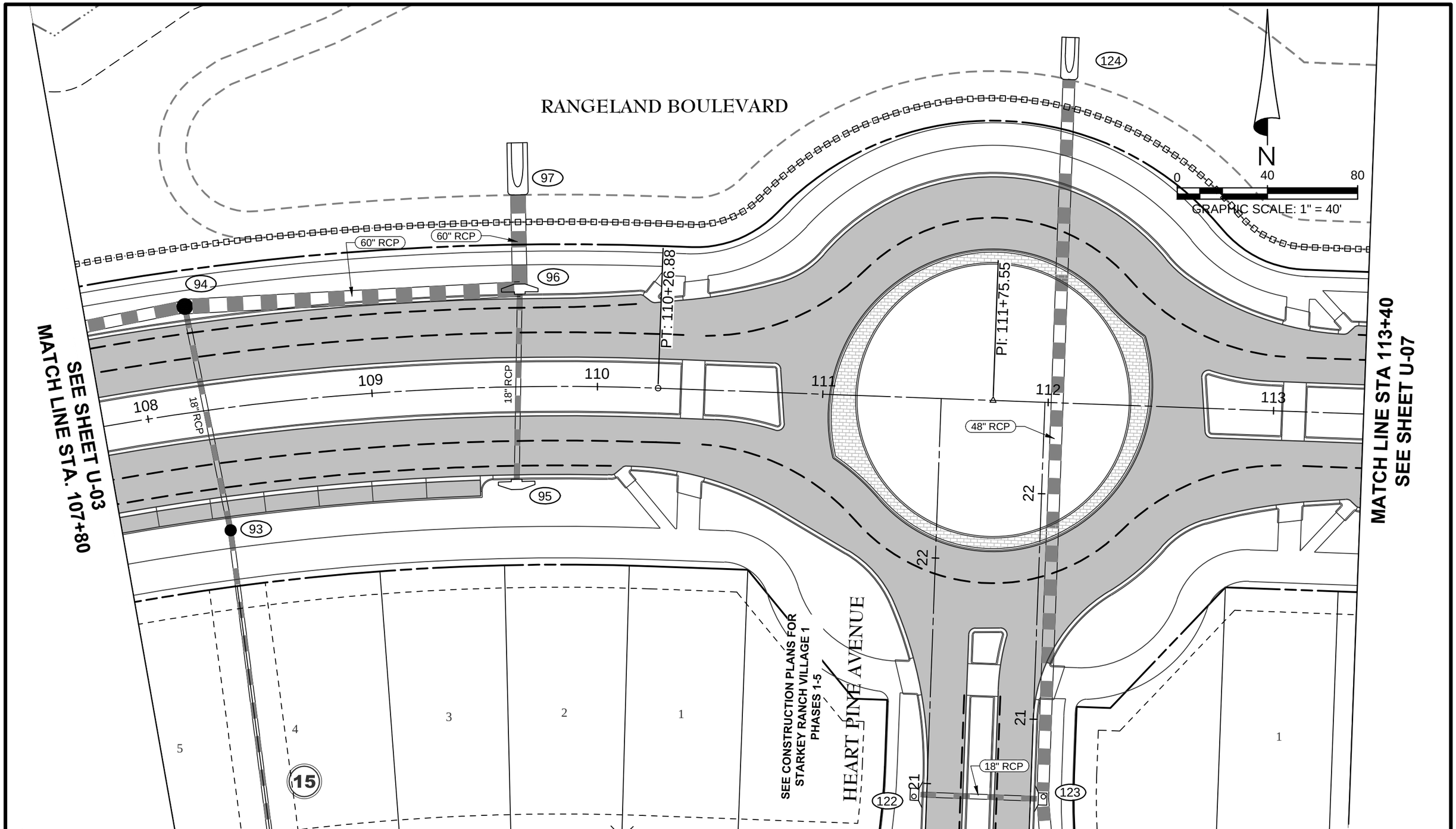
DESIGN XXXX

UTILITY IMPROVEMENTS
PROFILE SHEET (U-04)
STA. 102+50 TO STA 107+80

PREPARED FOR: PASCO COUNTY DEPARTMENT OF PUBLIC WORKS

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-04 OF U-34 SHEETS



DATE	DESCRIPTION	BY
REVISIONS		

ENGINEERING BUSINESS CERTIFICATE OF AUTHORIZATION NO. 28783

HEIDT DESIGN
5806-B Breckenridge Parkway
Tampa, Florida 33610
Office: 813-253-5311
Fax: 813-464-7629
www.HeidtDesign.com

DATE:
THOMAS D. SULLIVAN P.E. NO. 55358
FLORIDA PROFESSIONAL ENGINEER

RANGELAND BOULEVARD - STARKEY VILLAGE I

PROJECT NO. TSR-SR-1007

CIP PROJ NO. #####

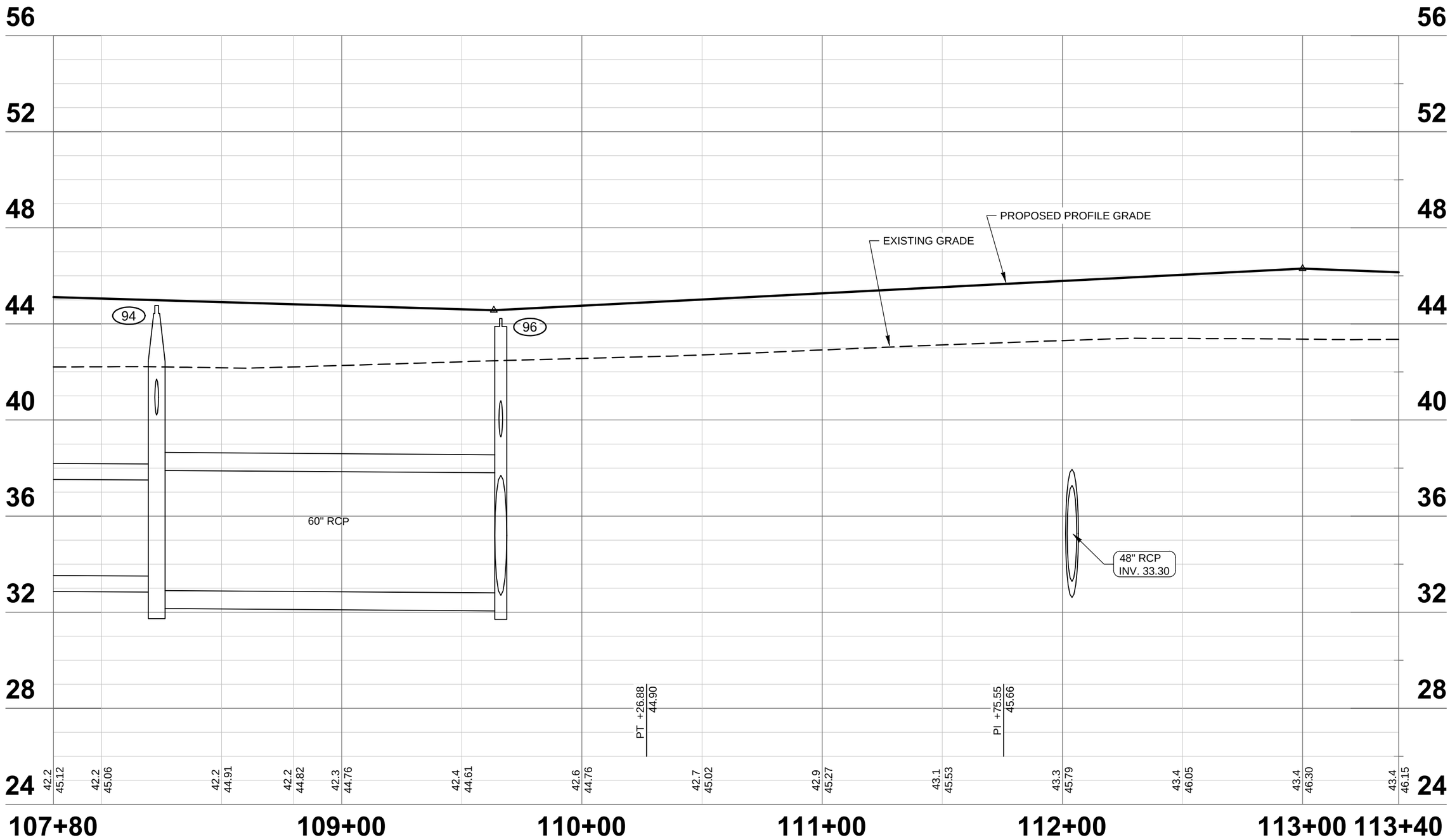
DESIGN XXXX

UTILITY IMPROVEMENTS
PLAN SHEET (U-05)
STA. 107+80 TO STA. 113+40

PREPARED FOR: **PASCO COUNTY DEPARTMENT OF PUBLIC WORKS**

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-05 OF U-34 SHEETS



0 40 80

HORIZONTAL SCALE: 1" = 40'

VERTICAL SCALE: 1" = 4'

DATE	DESCRIPTION	BY
	REVISIONS	

ENGINEERING BUSINESS CERTIFICATE OF AUTHORIZATION NO: 28782

HEIDT DESIGN
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DATE:
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FLORIDA PROFESSIONAL ENGINEER

RANGELAND BOULEVARD - STARKEY VILLAGE I

PROJECT NO. TSR-SR-1007

CIP PROJ NO. #####

DESIGN XXXX

UTILITY IMPROVEMENTS
PROFILE SHEET (U-06)
STA. 107+80 TO STA 113+40

PREPARED FOR: **PASCO COUNTY**
DEPARTMENT OF PUBLIC WORKS

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-06 OF U-34 SHEETS

EXISTING POND 3-3
SEE VILLAGE 1
MASS GRADING PLANS

N

0 40 80
GRAPHIC SCALE: 1" = 40'

RANGELAND BOULEVARD

SEE SHEET U-05
MATCH LINE STA. 113+40

MATCH LINE STA 119+00
SEE SHEET U-09

135 138 141
134 140
18" RCP
PI: 116+16.78
PC: 118+07.59
PHASE 1
PHASE 2
114 115 116 117 118
AA5 AA4
190 LF± 8" SM
8" 45° BEND (RM)
31'
8" GATE VALVE (RM)
139
97 LF± 8" RM
BO ASSEMBLY (RM)
BO ASSEMBLY (WM)
10'
16'
8" 45° BEND (RM)
8" GATE VALVE (WM)
136 137
32 LF± 8" WM
8" 45° BEND (WM)
8" 45° BEND (WM)
30'
123 LF± 8" WM
SEE CONSTRUCTION PLANS FOR
STARKEY RANCH VILLAGE 1
PHASES 1-5
RIDERS PASS
119 LF± 8" RM
2 3 4 5 6 1 2
32 33 34

DATE	DESCRIPTION	BY
REVISIONS		

ENGINEERING BUSINESS CERTIFICATE OF AUTHORIZATION NO. 28782

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FLORIDA PROFESSIONAL ENGINEER

RANGELAND BOULEVARD - STARKEY VILLAGE 1

PROJECT NO. TSR-SR-1007

CIP PROJ NO. #####

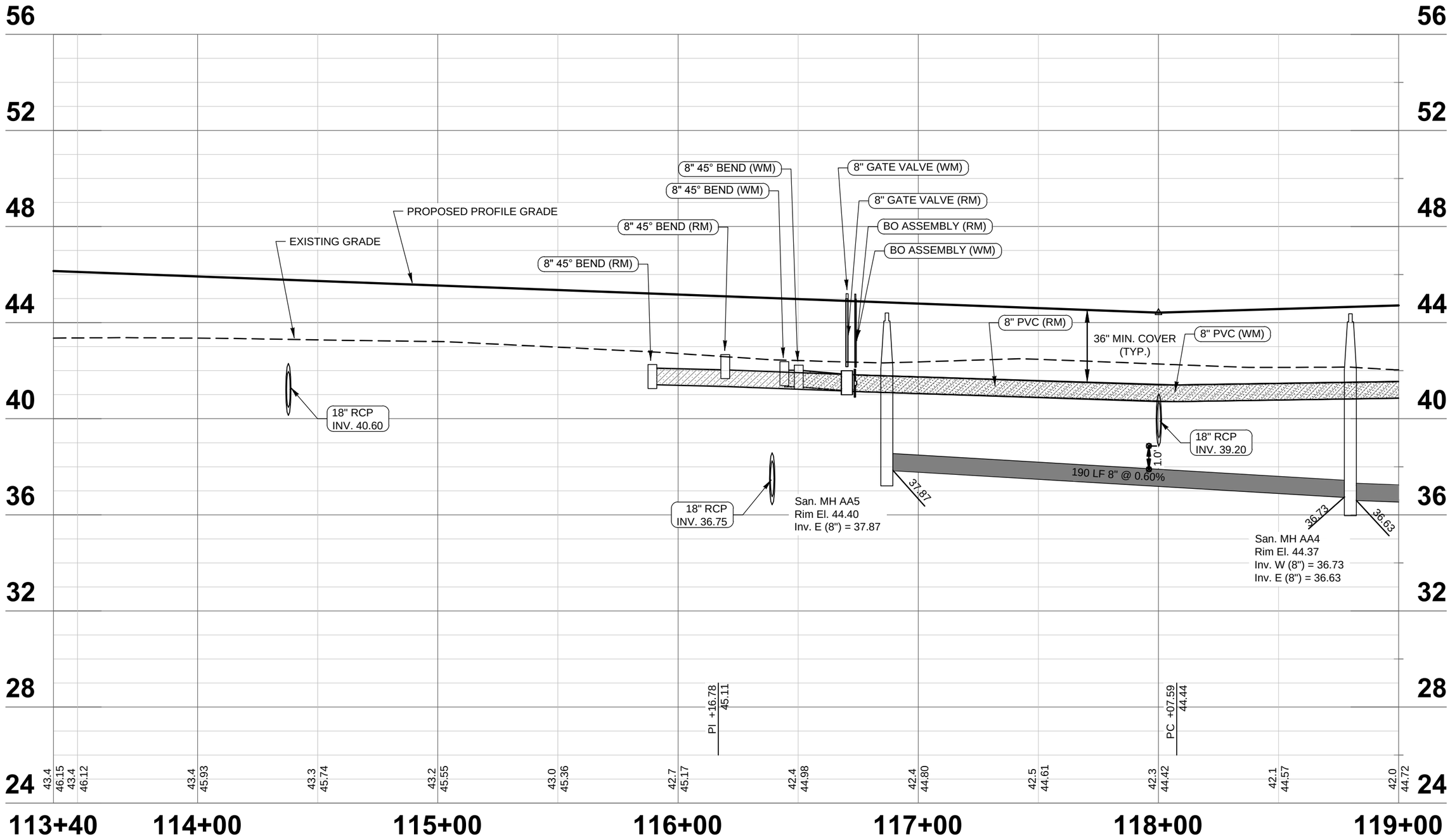
DESIGN XXXX

UTILITY IMPROVEMENTS
PLAN SHEET (U-07)
STA. 113+40 TO STA. 119+00

PREPARED FOR: PASCO COUNTY
DEPARTMENT OF PUBLIC WORKS

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-07 OF U-34 SHEETS



0 40 80

HORIZONTAL SCALE: 1" = 40'

VERTICAL SCALE: 1" = 4'

DATE	DESCRIPTION	BY
	REVISIONS	

ENGINEERING BUSINESS CERTIFICATE OF AUTHORIZATION NO. 28782

HEIDT DESIGN

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Tampa, Florida 33610
Office: 813-253-5311
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DATE:
THOMAS D. SULLIVAN P.E. NO. 55358
FLORIDA PROFESSIONAL ENGINEER

RANGELAND BOULEVARD - STARKEY VILLAGE I

PROJECT NO. TSR-SR-1007

CIP PROJ NO. #####

DESIGN XXXX

UTILITY IMPROVEMENTS
PROFILE SHEET (U-08)
STA. 113+40 TO STA 119+00

PREPARED FOR: **PASCO COUNTY**
DEPARTMENT OF PUBLIC WORKS

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-08 OF U-34 SHEETS

RANGELAND BOULEVARD

N

0 40 80

GRAPHIC SCALE: 1" = 40'

180

42" RCP

179

121 122 123 124 120

PT: 123+40.94

18" RCP

AA3

AA2

177 LF± 8" SM

214 LF± 8" SM

178

971 LF± 8" RM

8" GATE VALVE (WM)

FH ASSEMBLY (WM)

417 LF± 8" WM

10'

16'

10'

16'

SEE SHEET U-07
MATCH LINE STA. 119+00

MATCH LINE STA 124+60
SEE SHEET U-11

1 2 3 4 1 2 3 4 1 2 3 4 5 6

35 36 37

14 15 13

142

DATE	DESCRIPTION	BY
	REVISIONS	

ENGINEERING BUSINESS CERTIFICATE OF AUTHORIZATION NO. 28782

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Office: 813-253-5311
Fax: 813-464-7629
www.HeidtDesign.com

DATE:
THOMAS D. SULLIVAN P.E. NO. 55358
FLORIDA PROFESSIONAL ENGINEER

RANGELAND BOULEVARD - STARKEY VILLAGE I

PROJECT NO. TSR-SR-1007

CIP PROJ NO. #####

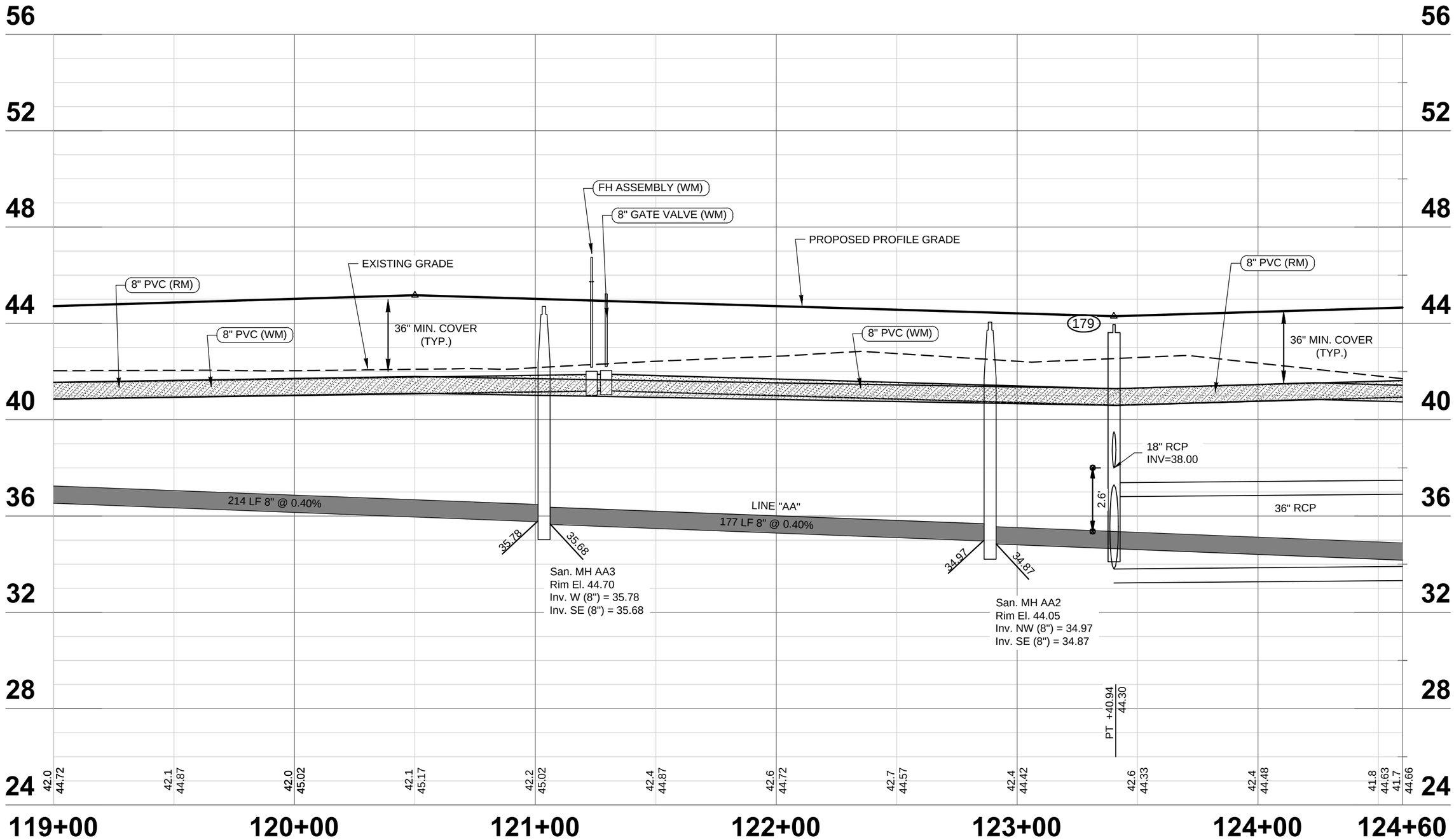
DESIGN XXXX

UTILITY IMPROVEMENTS
PLAN SHEET (U-09)
STA. 119+00 TO STA. 124+60

PREPARED FOR: **PASCO COUNTY**
DEPARTMENT OF PUBLIC WORKS

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-09 OF U-34 SHEETS



0 40 80

HORIZONTAL SCALE: 1" = 40'

VERTICAL SCALE: 1" = 4'

DATE	DESCRIPTION	BY
	REVISIONS	

ENGINEERING BUSINESS CERTIFICATE OF AUTHORIZATION NO: 28782

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FLORIDA PROFESSIONAL ENGINEER

RANGELAND BOULEVARD - STARKEY VILLAGE I

PROJECT NO. TSR-SR-1007

CIP PROJ NO. #####

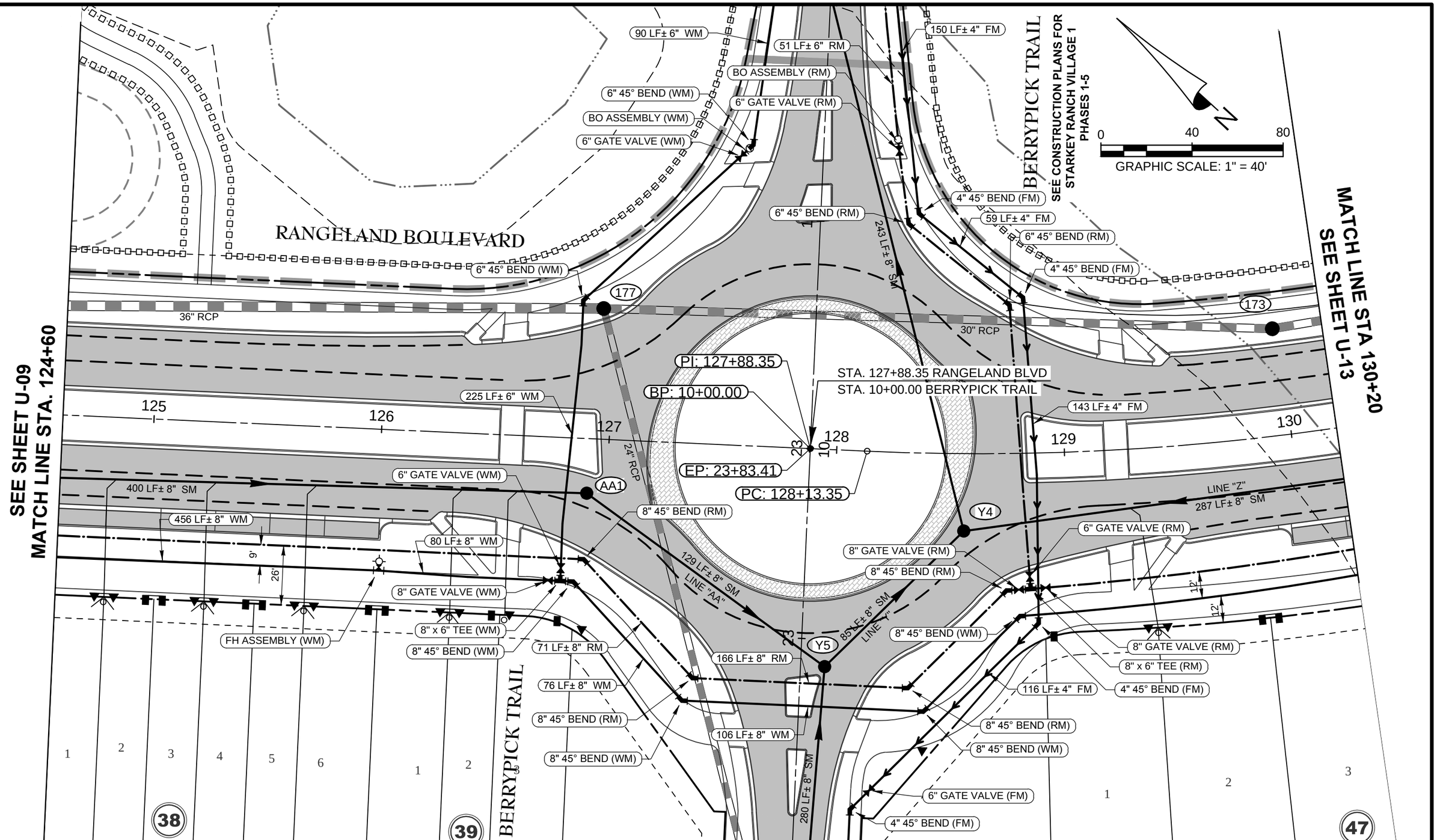
DESIGN XXXX

UTILITY IMPROVEMENTS
PROFILE SHEET (U-10)
STA. 119+00 TO STA 124+60

PREPARED FOR: **PASCO COUNTY**
DEPARTMENT OF PUBLIC WORKS

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-10 OF U-34 SHEETS



DATE	DESCRIPTION	BY
	REVISIONS	

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FLORIDA PROFESSIONAL ENGINEER

RANGELAND BOULEVARD - STARKEY VILLAGE 1

PROJECT NO. TSR-SR-1007

CIP PROJ NO. #####

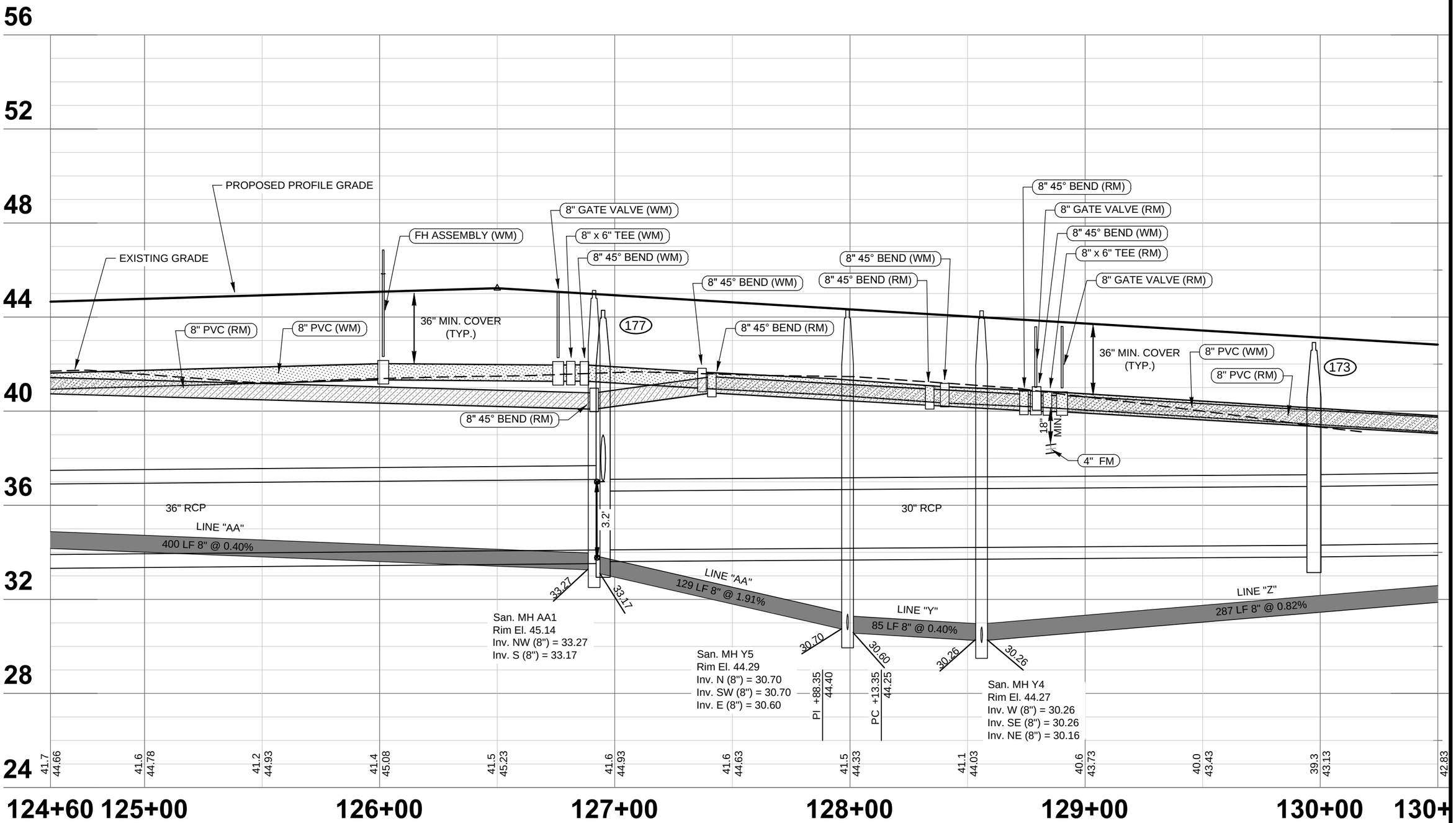
DESIGN XXXX

UTILITY IMPROVEMENTS
PLAN SHEET (U-11)
STA. 124+60 TO STA. 130+20

PREPARED FOR: **PASCO COUNTY**
DEPARTMENT OF PUBLIC WORKS

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-11 OF U-34 SHEETS



0 40 80

HORIZONTAL SCALE: 1" = 40'

VERTICAL SCALE: 1" = 4'

DATE	DESCRIPTION	BY
	REVISIONS	

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RANGELAND BOULEVARD - STARKEY VILLAGE I

PROJECT NO. TSR-SR-1007

CIP PROJ NO. #####

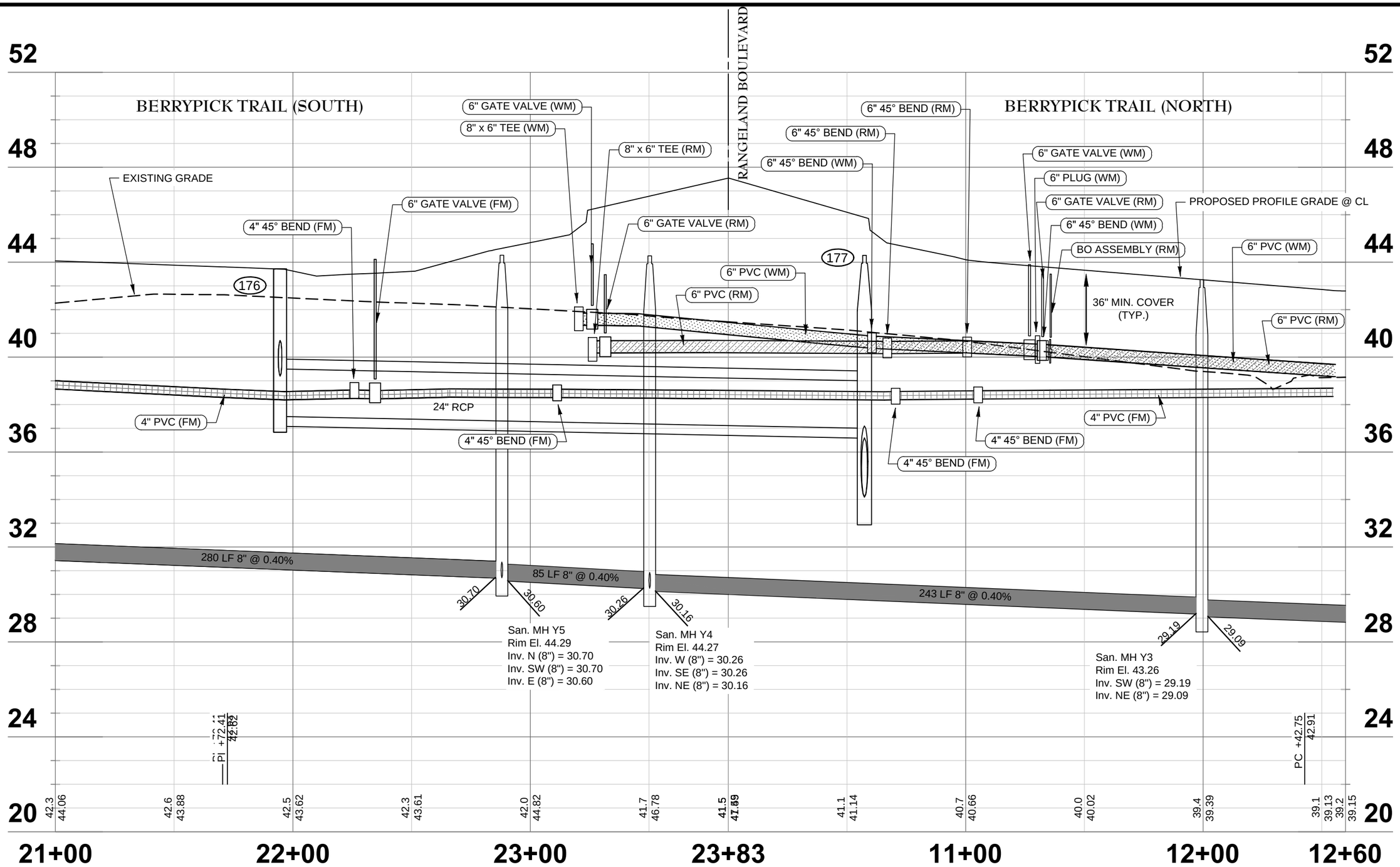
DESIGN XXXX

UTILITY IMPROVEMENTS
PROFILE SHEET (U-12)
STA. 124+60 TO STA 130+20

PREPARED FOR: PASCO COUNTY DEPARTMENT OF PUBLIC WORKS

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-12 OF U-34 SHEETS



0 40 80

HORIZONTAL SCALE: 1" = 40'

VERTICAL SCALE: 1" = 4'

DATE	DESCRIPTION	BY
	REVISIONS	

ENGINEERING BUSINESS CERTIFICATE OF AUTHORIZATION NO. 29782

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RANGELAND BOULEVARD - STARKEY VILLAGE I

PROJECT NO. TSR–SR–1007

CIP PROJ NO. #####

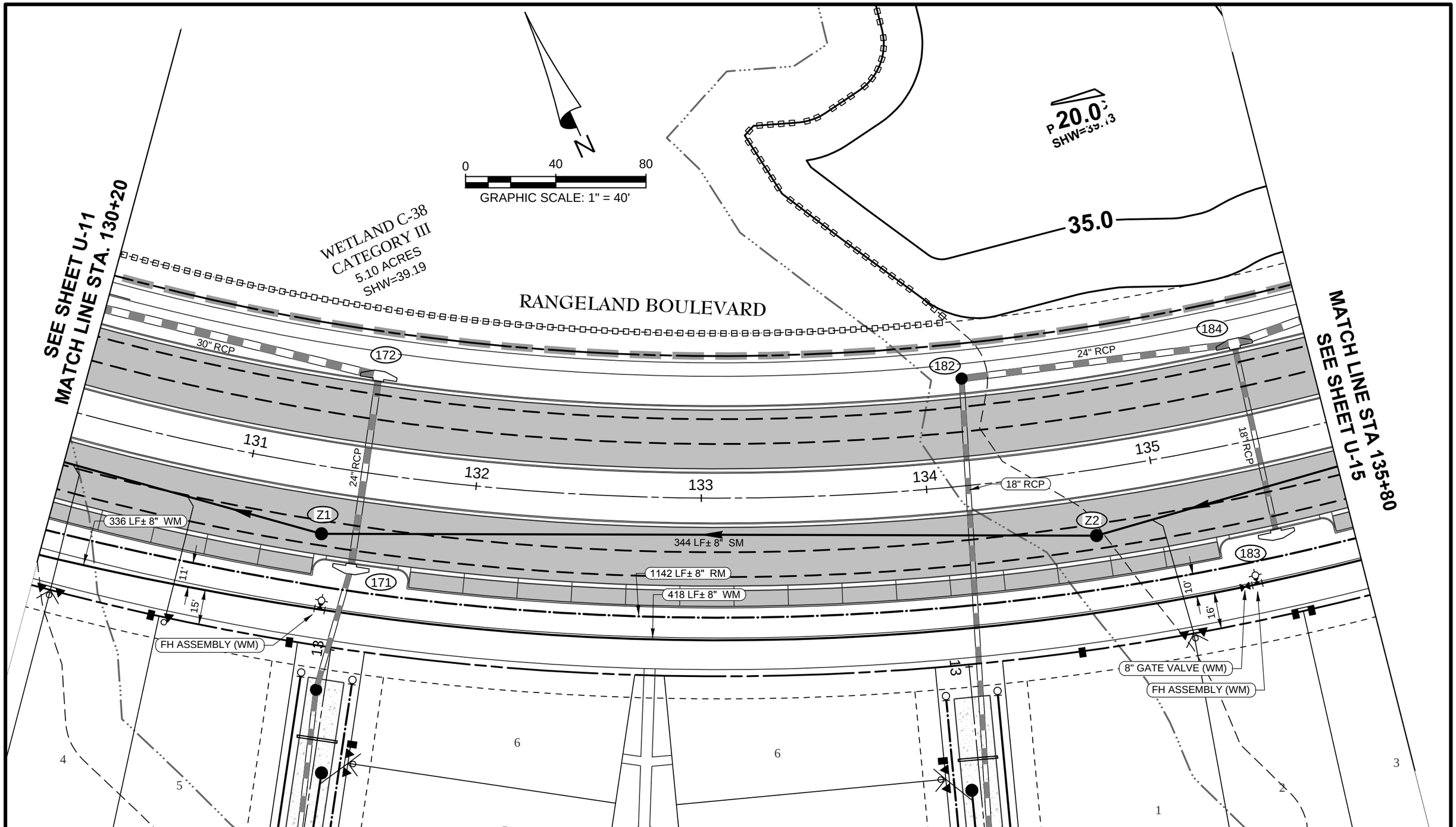
DESIGN XXXX

UTILITY IMPROVEMENTS
PROFILE SHEET (U-12A)
STA. 21+00 TO 23+83 & STA. 10+00 TO 12+60

PREPARED FOR: **PASCO COUNTY DEPARTMENT OF PUBLIC WORKS**

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-12A OF U-34 SHEETS



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RANGELAND BOULEVARD - STARKEY VILLAGE I

PROJECT NO. TSR-SR-1007

CIP PROJ NO. #####

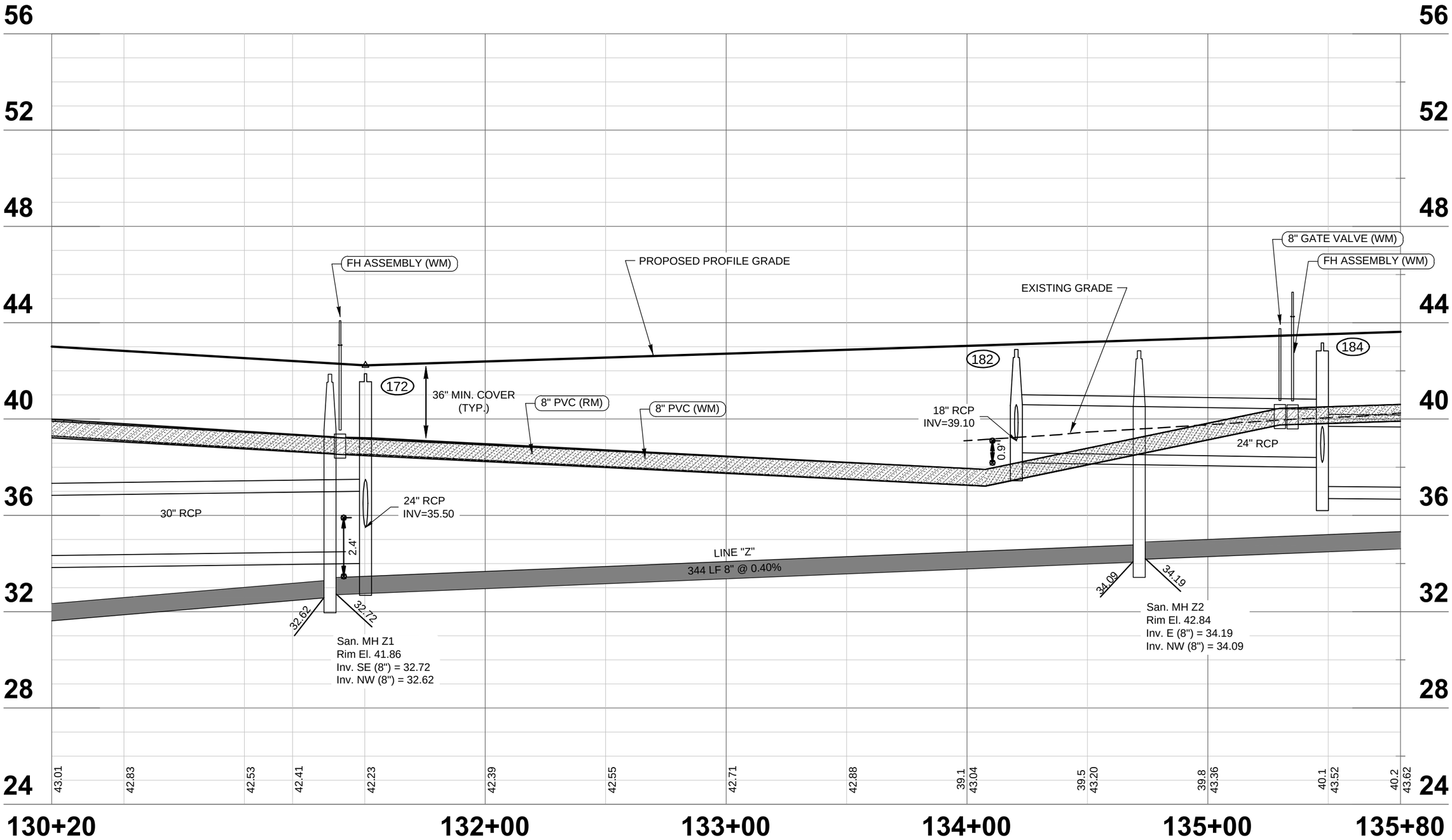
DESIGN XXXX

UTILITY IMPROVEMENTS
PLAN SHEET (U-13)
STA. 130+20 TO STA. 135+80

PREPARED FOR: **PASCO COUNTY DEPARTMENT OF PUBLIC WORKS**

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-13 OF U-34 SHEETS



0 40 80

HORIZONTAL SCALE: 1" = 40'

VERTICAL SCALE: 1" = 4'

DATE	DESCRIPTION	BY
	REVISIONS	

ENGINEERING BUSINESS CERTIFICATE OF AUTHORIZATION NO. 28782

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RANGELAND BOULEVARD - STARKEY VILLAGE I

PROJECT NO. TSR-SR-1007

CIP PROJ NO. #####

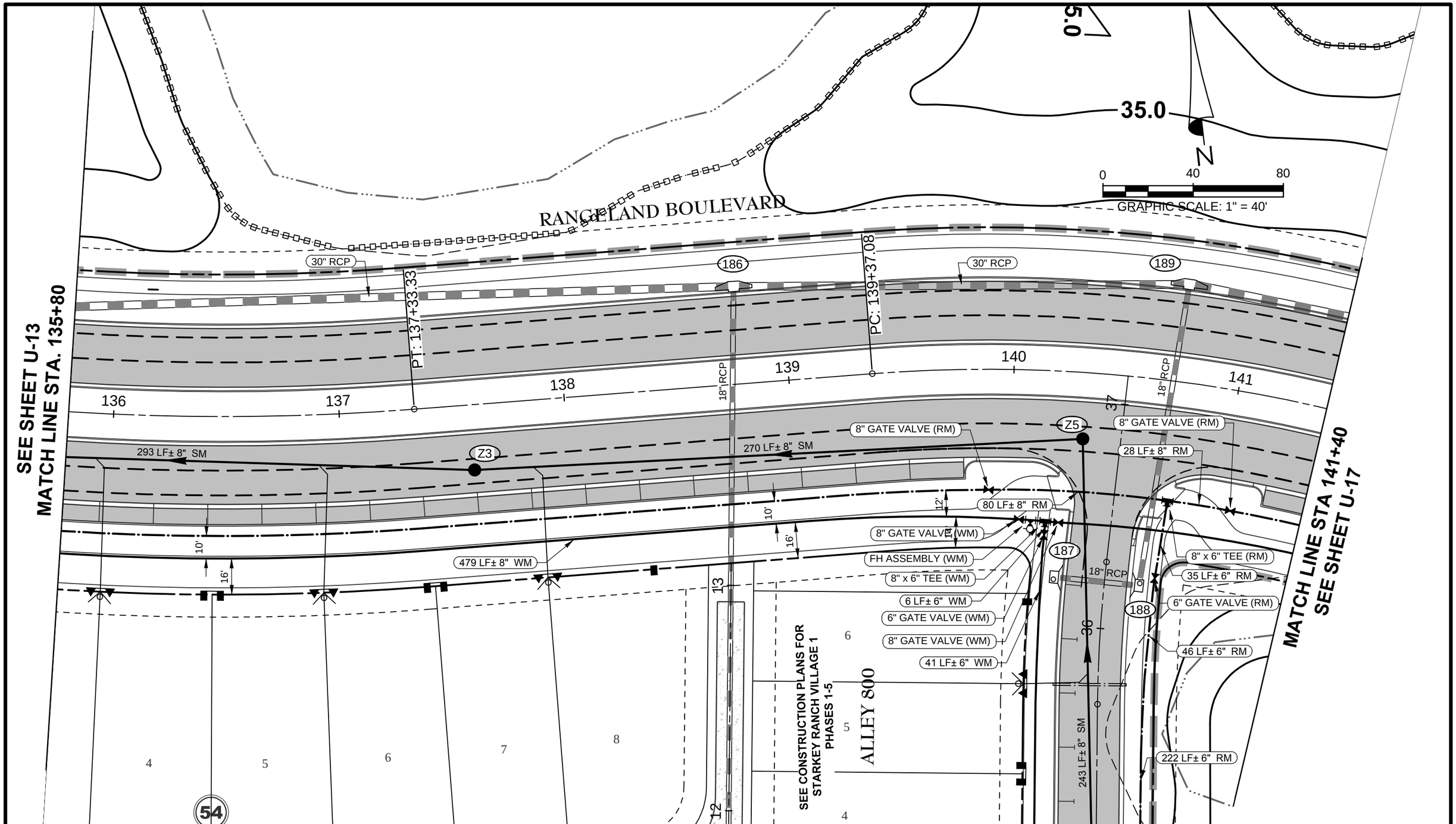
DESIGN XXXX

UTILITY IMPROVEMENTS
PROFILE SHEET (U-14)
STA. 130+20 TO STA 135+80

PREPARED FOR: **PASCO COUNTY DEPARTMENT OF PUBLIC WORKS**

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-14 OF U-34 SHEETS



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DATE:
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FLORIDA PROFESSIONAL ENGINEER

RANGELAND BOULEVARD - STARKEY VILLAGE 1

PROJECT NO. TSR-SR-1007

CIP PROJ NO. #####

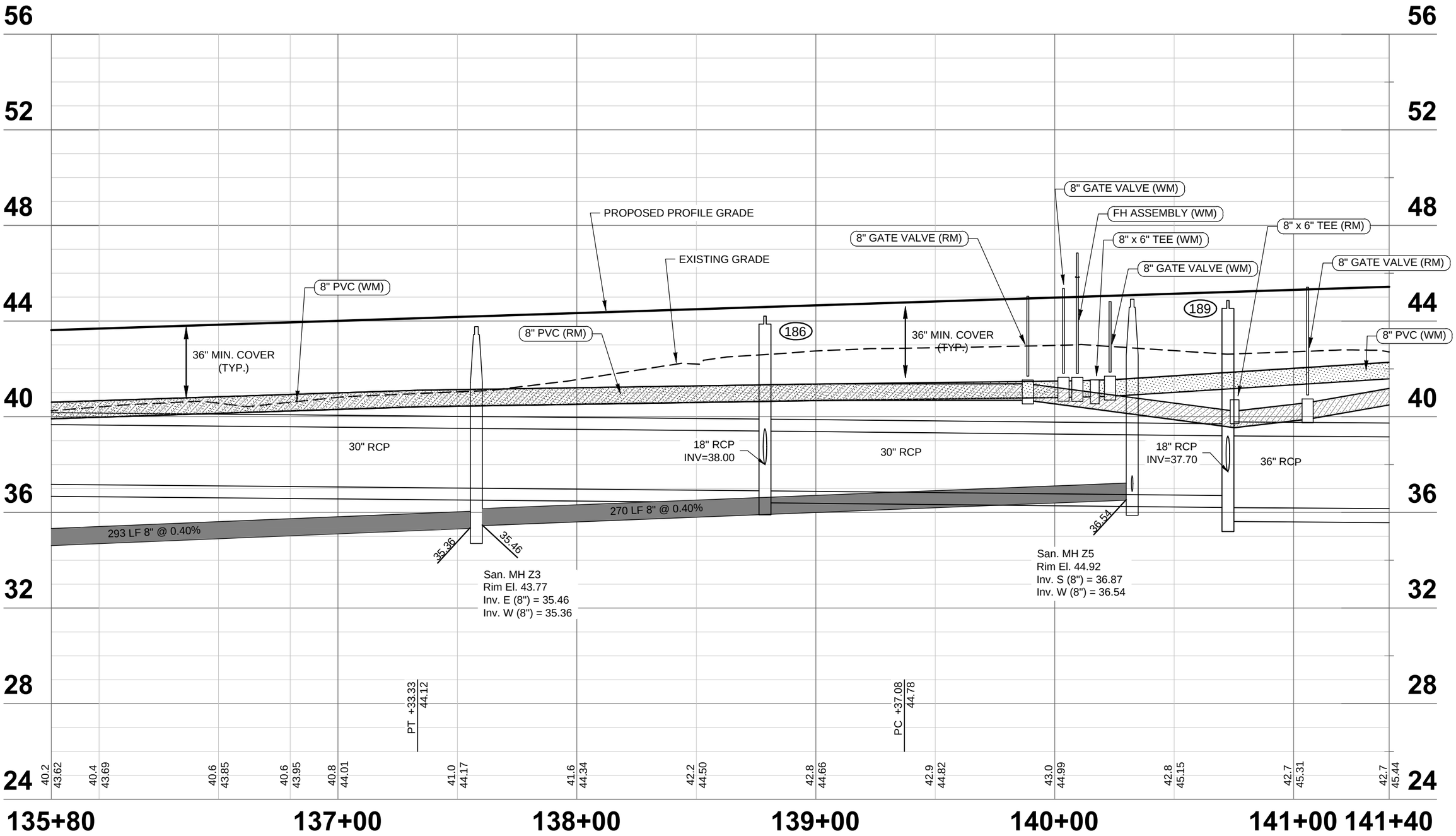
DESIGN XXXX

UTILITY IMPROVEMENTS
PLAN SHEET (U-15)
STA. 135+80 TO STA. 141+40

PREPARED FOR: **PASCO COUNTY DEPARTMENT OF PUBLIC WORKS**

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-15 OF U-34 SHEETS



0 40 80

HORIZONTAL SCALE: 1" = 40'

VERTICAL SCALE: 1" = 4'

DATE	DESCRIPTION	BY
	REVISIONS	

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RANGELAND BOULEVARD - STARKEY VILLAGE I

PROJECT NO. TSR-SR-1007

CIP PROJ NO. #####

DESIGN XXXX

UTILITY IMPROVEMENTS
PROFILE SHEET (U-16)
STA. 135+80 TO STA 141+40

PREPARED FOR: **PASCO COUNTY**
DEPARTMENT OF PUBLIC WORKS

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-16 OF U-34 SHEETS

POND M3D
SHW=39.13

RANGELAND BOULEVARD

39.2
42.2

0 40 80
GRAPHIC SCALE: 1" = 40'

N

526 528 530 532 534 536

190 191 192A 192B 192

36" RCP
42" RCP
42" RCP
18" RCP
48" x 76" ERCP
607 LF± 8" RM
436 LF± 8" WM
534 LF± 8" WM
FH ASSEMBLY (WM)
PT: 144+93.02

142 143 144 145 146

12'
14'
10'
16'

40.0
15.0

525 527 529 531 533 535

SEE SHEET U-15
MATCH LINE STA. 141+40

MATCH LINE STA 147+00
SEE SHEET U-19

DATE	DESCRIPTION	BY
	REVISIONS	

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RANGELAND BOULEVARD - STARKEY VILLAGE I

PROJECT NO. TSR-SR-1007

CIP PROJ NO. #####

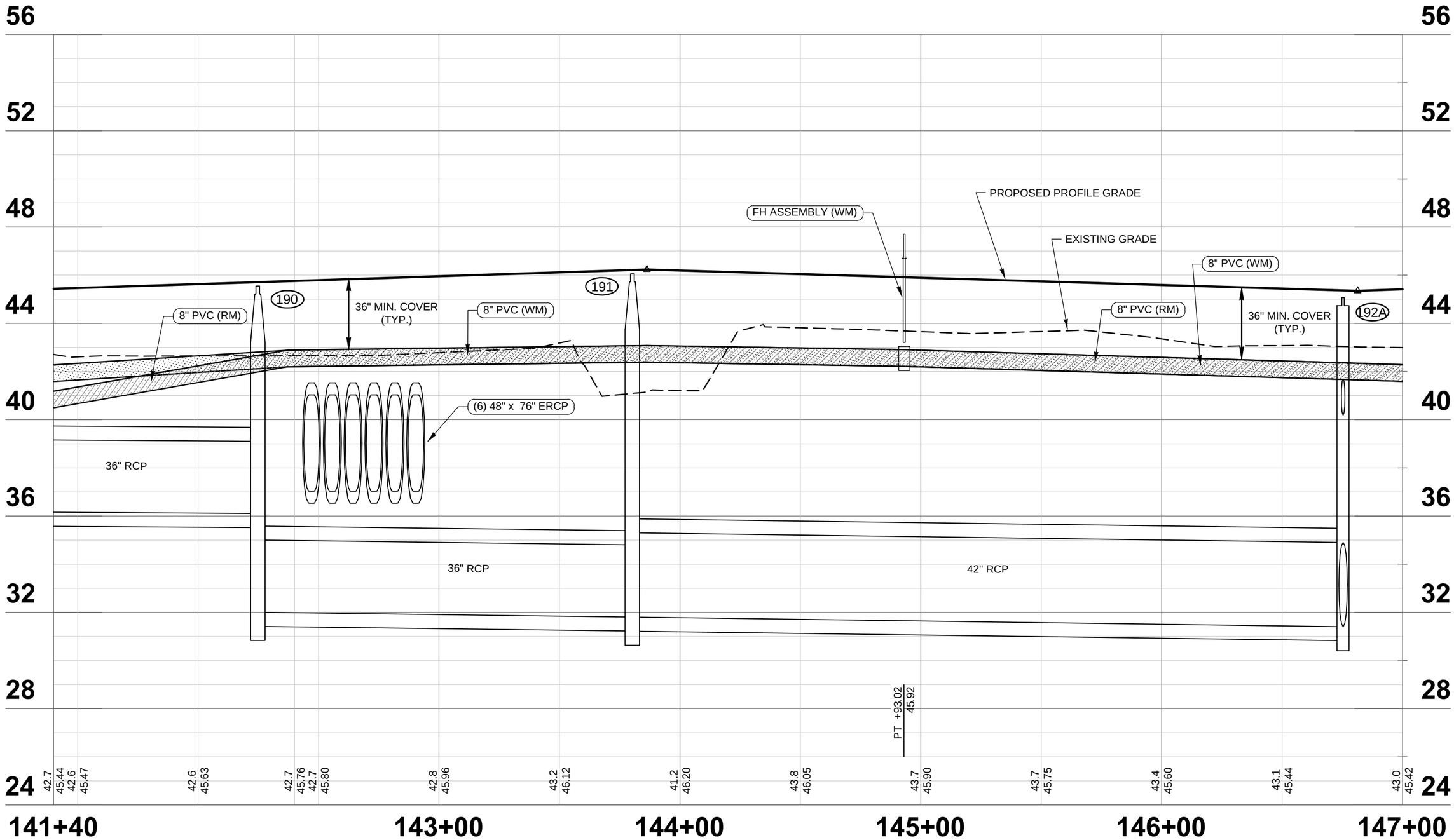
DESIGN XXXX

UTILITY IMPROVEMENTS
PLAN SHEET (U-17)
STA. 141+40 TO STA. 147+00

PREPARED FOR: PASCO COUNTY
DEPARTMENT OF PUBLIC WORKS

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-17 OF U-34 SHEETS



0 40 80

HORIZONTAL SCALE: 1" = 40'

VERTICAL SCALE: 1" = 4'

DATE	DESCRIPTION	BY
REVISIONS		

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RANGELAND BOULEVARD - STARKEY VILLAGE I

PROJECT NO. TSR-SR-1007

CIP PROJ NO. #####

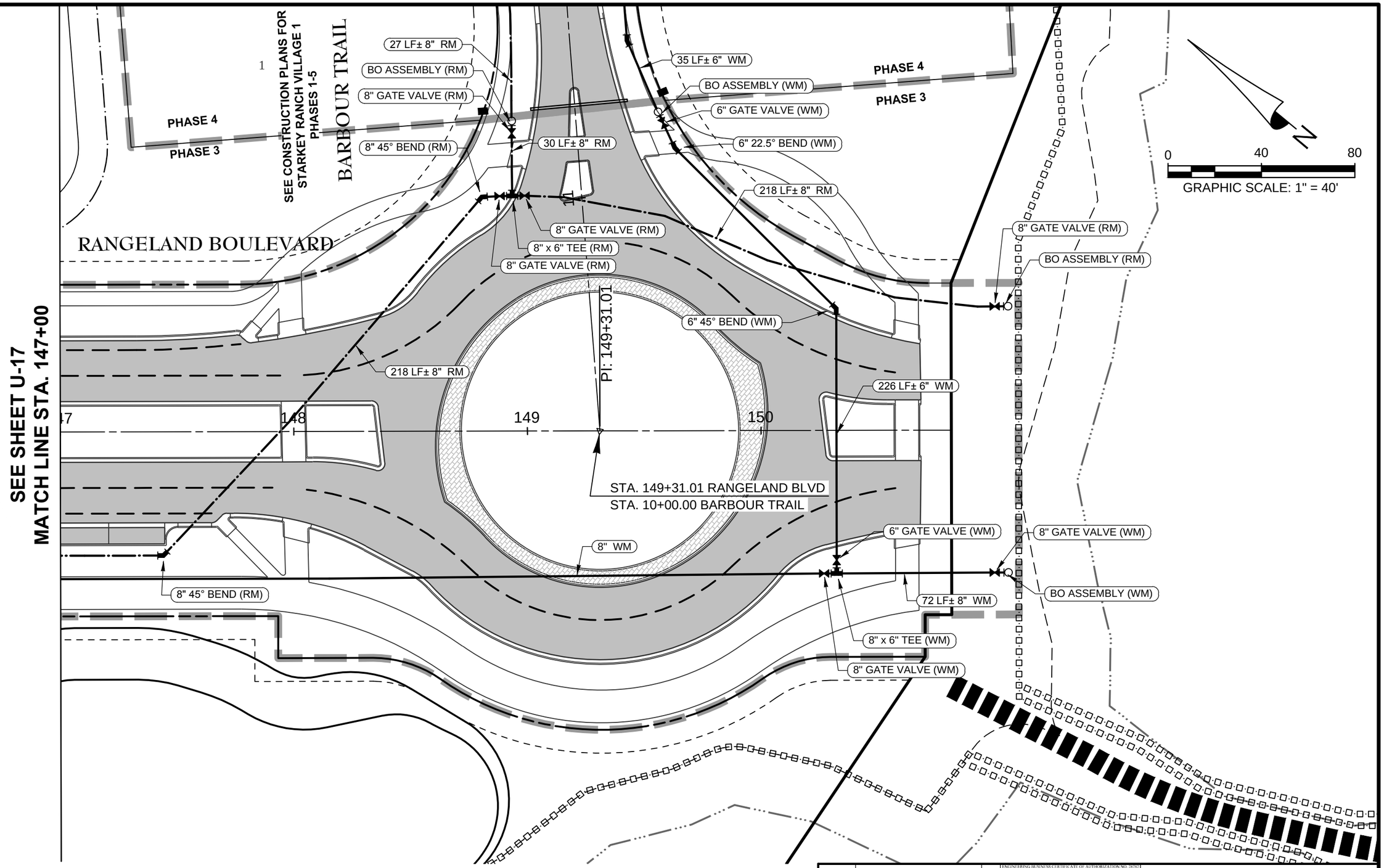
DESIGN XXXX

UTILITY IMPROVEMENTS
PROFILE SHEET (U-18)
STA. 141+40 TO STA 147+00

PREPARED FOR: PASCO COUNTY DEPARTMENT OF PUBLIC WORKS

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-18 OF U-34 SHEETS



DATE	DESCRIPTION	BY
	REVISIONS	

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DATE:
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FLORIDA PROFESSIONAL ENGINEER

RANGELAND BOULEVARD - STARKEY VILLAGE 1

PROJECT NO. TSR-SR-1007

CIP PROJ NO. #####

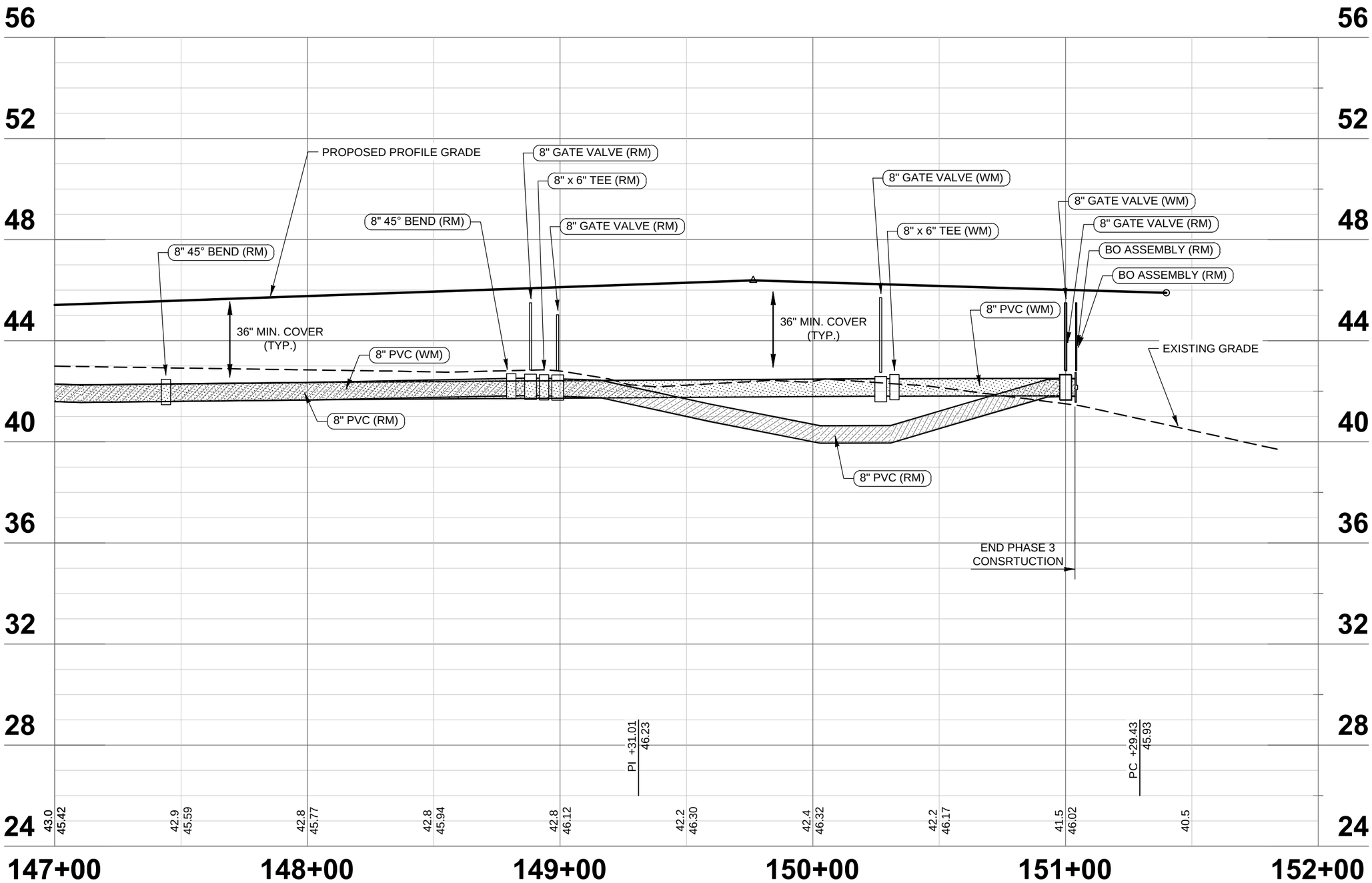
DESIGN XXXX

UTILITY IMPROVEMENTS
PLAN SHEET (U-19)
STA. 147+00 TO STA. 152+00

PREPARED FOR: **PASCO COUNTY DEPARTMENT OF PUBLIC WORKS**

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-19 OF U-34 SHEETS



0 40 80

HORIZONTAL SCALE: 1" = 40'

VERTICAL SCALE: 1" = 4'

DATE	DESCRIPTION	BY
	REVISIONS	

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RANGELAND BOULEVARD - STARKEY VILLAGE I

PROJECT NO. TSR–SR–1007

CIP PROJ NO. #####

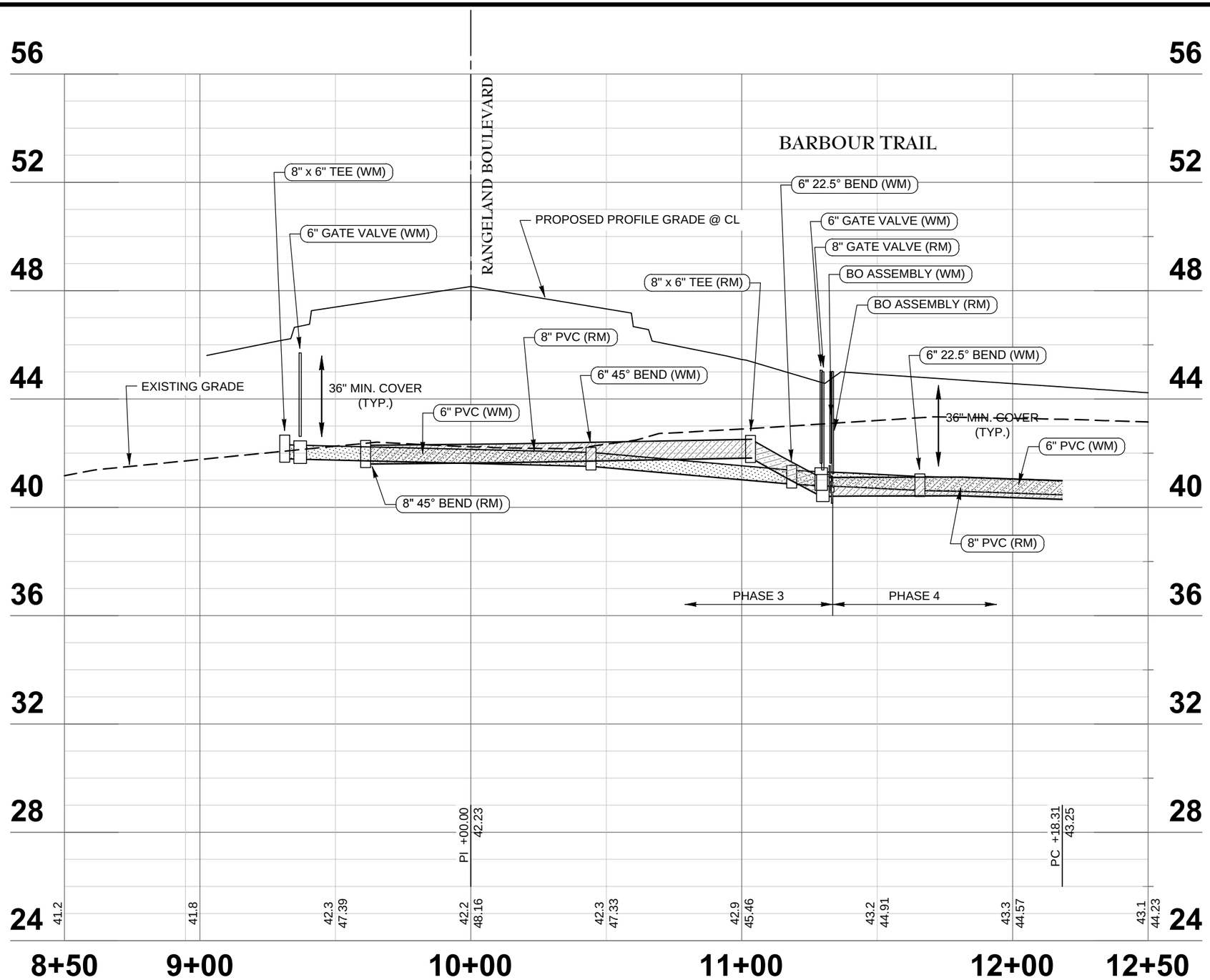
DESIGN XXXX

UTILITY IMPROVEMENTS
PROFILE SHEET (U-20)
STA. 147+00 TO STA 152+00

PREPARED FOR: **PASCO COUNTY DEPARTMENT OF PUBLIC WORKS**

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-20 OF U-34 SHEETS



0 40 80

HORIZONTAL SCALE: 1" = 40'

VERTICAL SCALE: 1" = 4'

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RANGELAND BOULEVARD - STARKEY VILLAGE I

PROJECT NO. TSR-SR-1007

CIP PROJ NO. #####

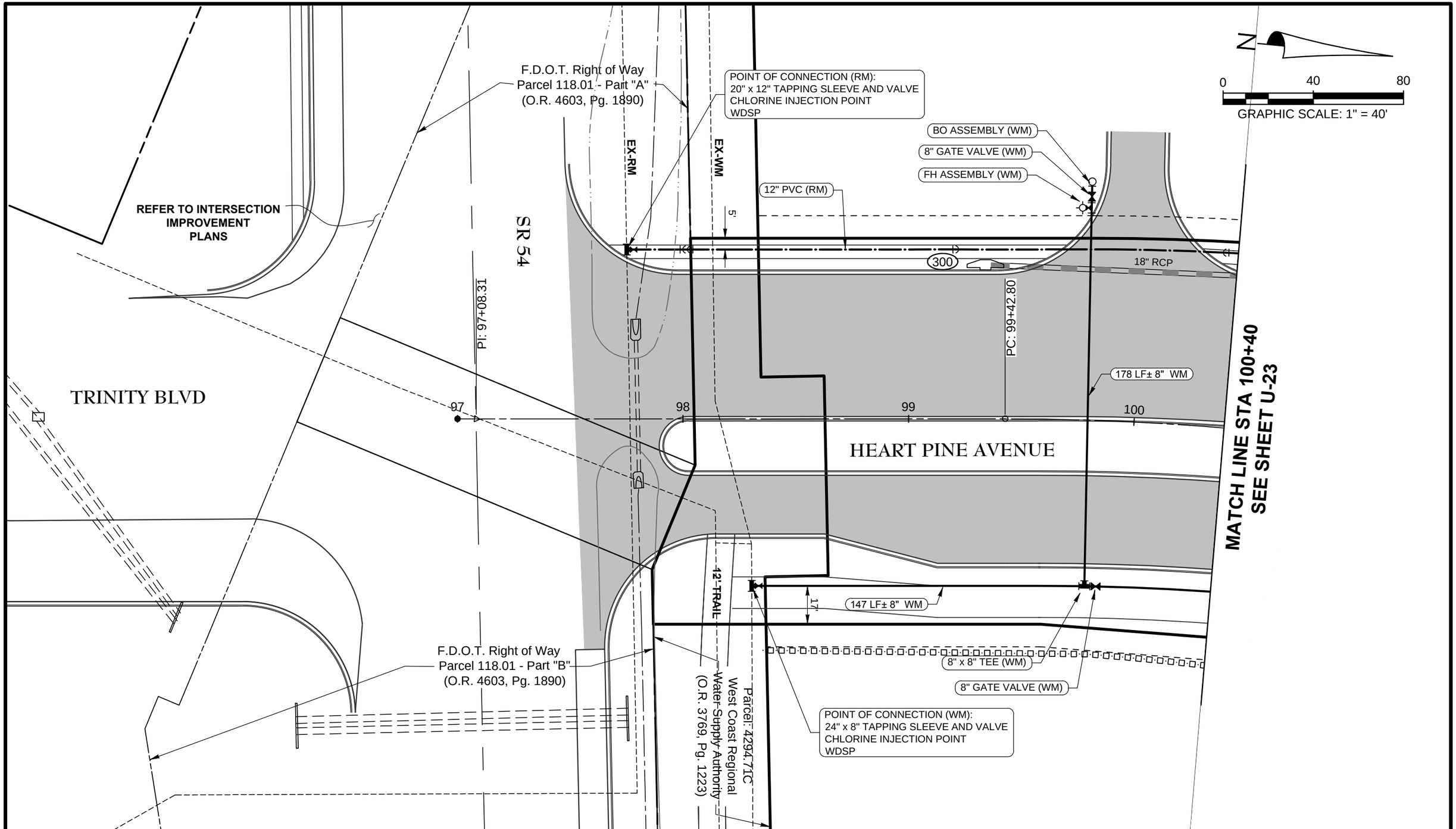
DESIGN XXXX

UTILITY IMPROVEMENTS
PROFILE SHEET (U-20A)
STA. 8+50 TO STA. 12+50

PREPARED FOR: **PASCO COUNTY DEPARTMENT OF PUBLIC WORKS**

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-20A OF U-34 SHEETS



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REVISIONS		

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DATE:
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FLORIDA PROFESSIONAL ENGINEER

HEART PINE AVENUE - STARKEY PHASE 1

PROJECT NO. TSR–SR–1006

CIP PROJ NO. #####

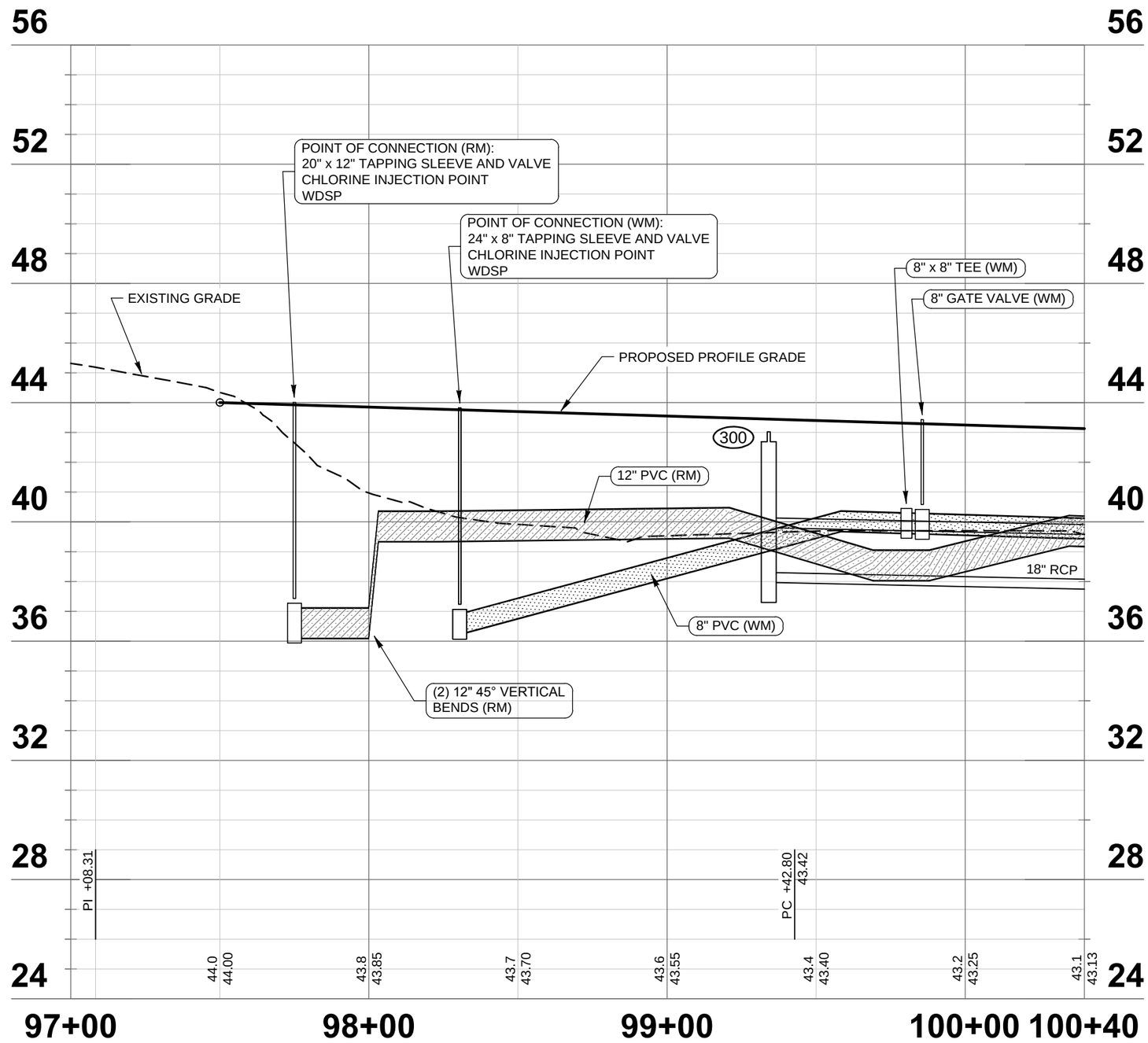
DESIGN XXXX

UTILITY IMPROVEMENTS
PLAN SHEET (U-21)
STA. 97+00 TO STA. 100+40

PREPARED FOR: **PASCO COUNTY**
DEPARTMENT OF PUBLIC WORKS

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-21 OF U-34 SHEETS



0 40 80

HORIZONTAL SCALE: 1" = 40'

VERTICAL SCALE: 1" = 4'

DATE	DESCRIPTION	BY
	REVISIONS	

ENGINEERING BUSINESS CERTIFICATE OF AUTHORIZATION NO. 28782

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DATE:
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HEART PINE AVENUE - STARKEY PHASE I

PROJECT NO. TSR-SR-1006

CIP PROJ NO. #####

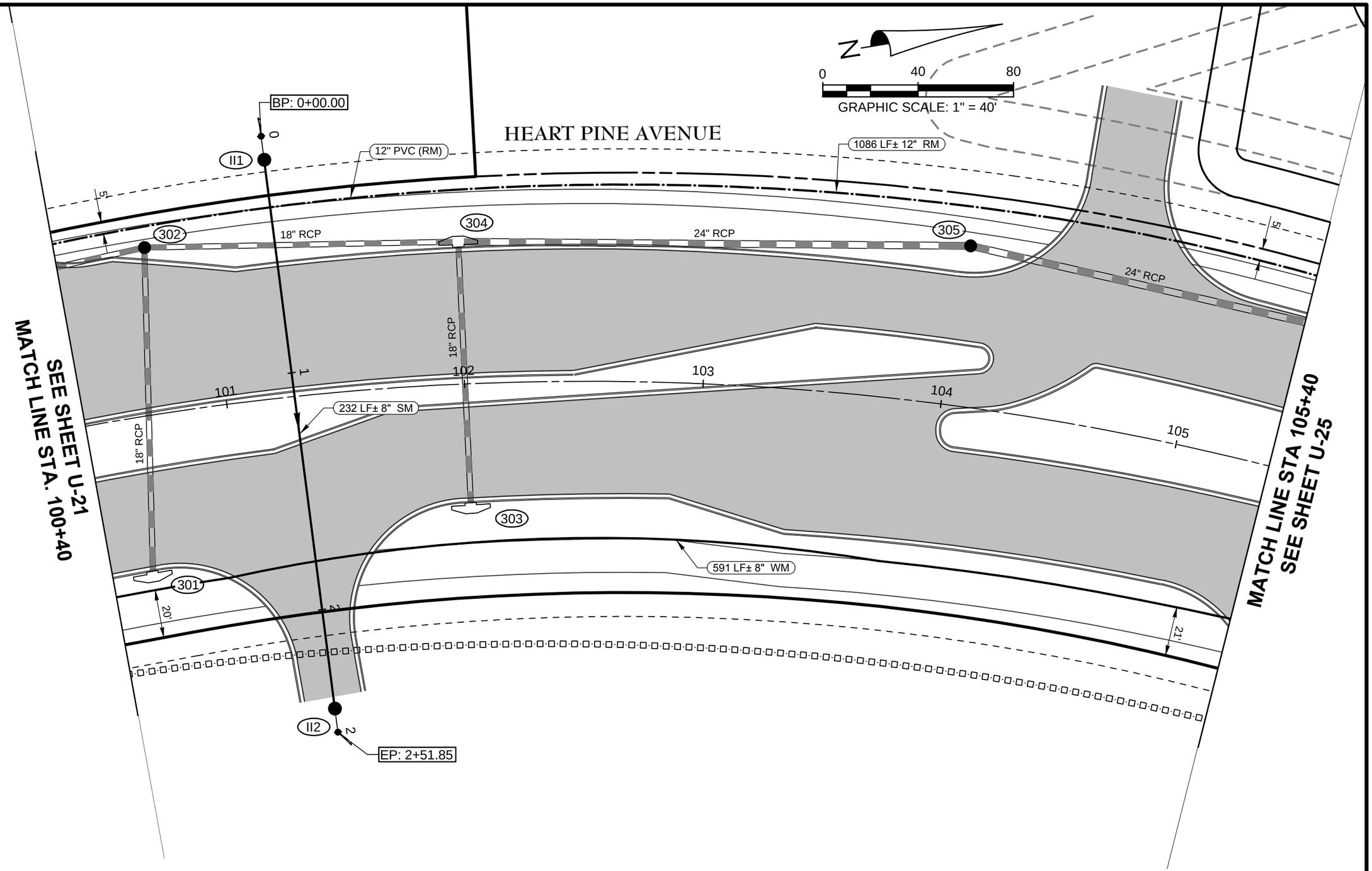
DESIGN XXXX

UTILITY IMPROVEMENTS
PROFILE SHEET (U-22)
STA. 97+00 TO STA 100+40

PREPARED FOR: **PASCO COUNTY DEPARTMENT OF PUBLIC WORKS**

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-22 OF U-34 SHEETS



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HEART PINE AVENUE - STARKEY PHASE 1

PROJECT NO. TSR–SR–1006

CIP PROJ NO. #####

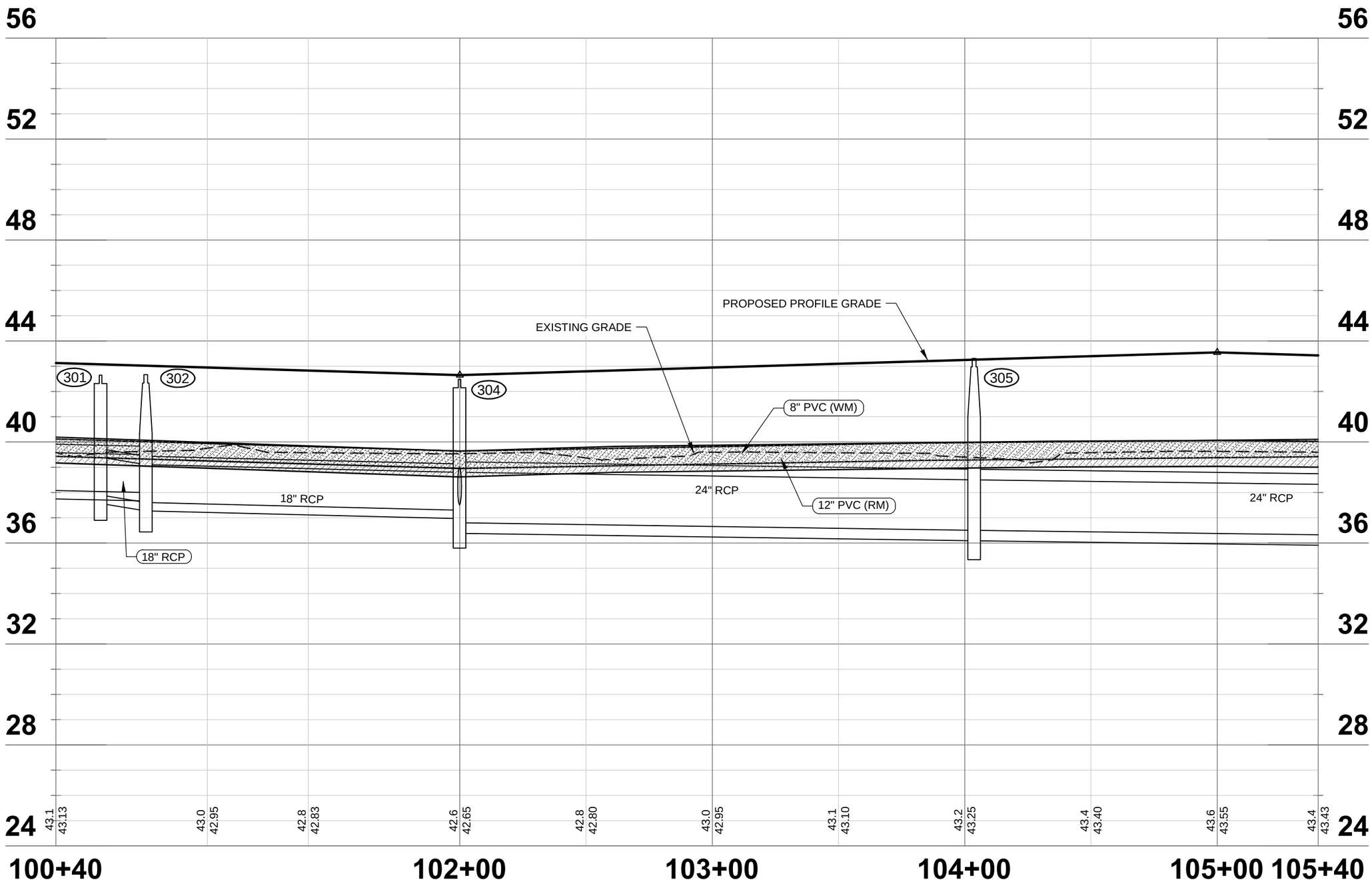
DESIGN XXXX

UTILITY IMPROVEMENTS
PLAN SHEET (U-23)
STA. 100+40 TO STA. 105+40

PREPARED FOR: **PASCO COUNTY DEPARTMENT OF PUBLIC WORKS**

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-23 OF U-34 SHEETS



0 40 80

HORIZONTAL SCALE: 1" = 40'

VERTICAL SCALE: 1" = 4'

DATE	DESCRIPTION	BY
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PROJECT NO. TSR-SR-1006

CIP PROJ NO. #####

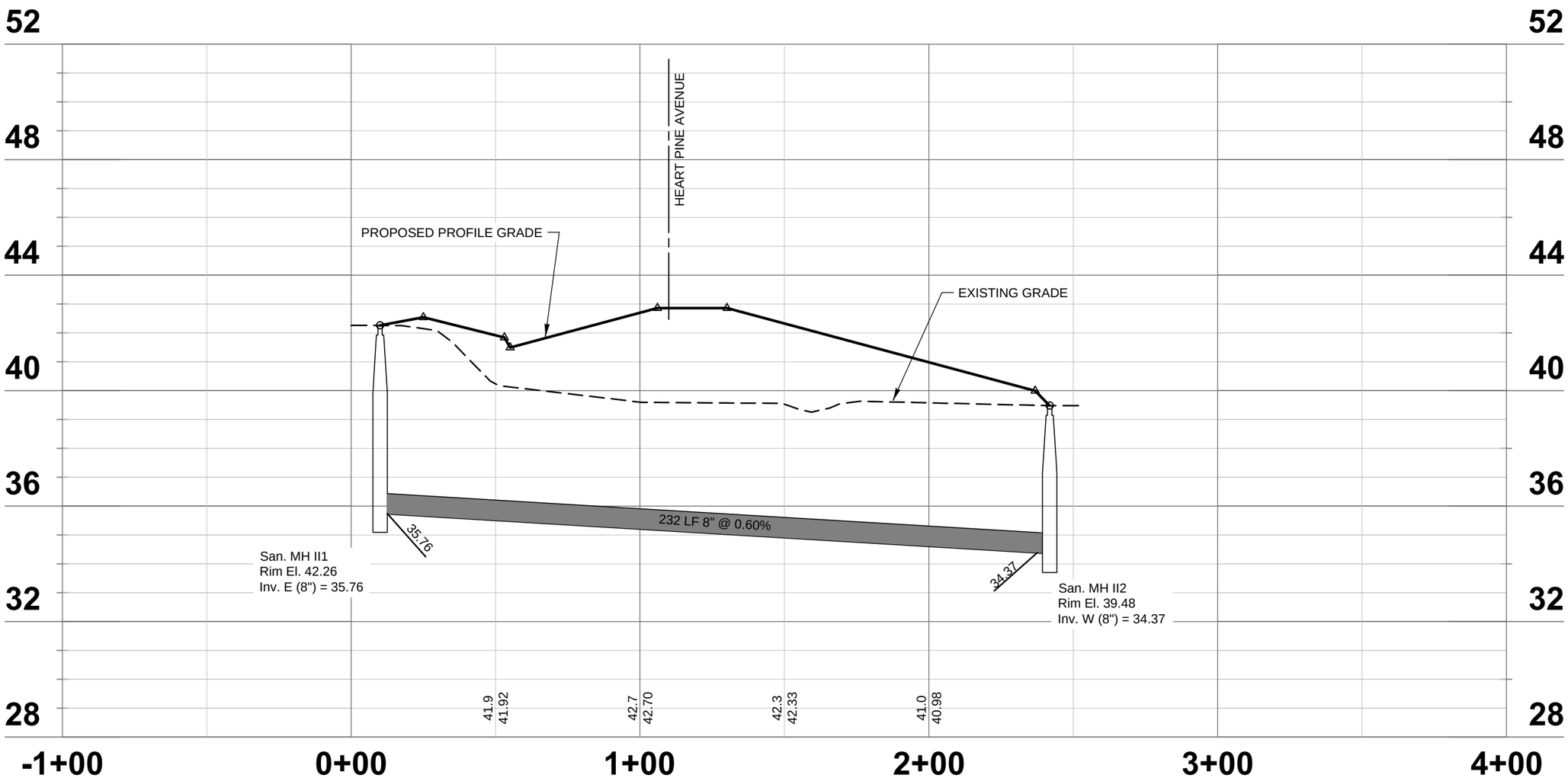
DESIGN XXXX

UTILITY IMPROVEMENTS
PROFILE SHEET (U-24)
STA. 100+40 TO STA. 105+40

PREPARED FOR: **PASCO COUNTY DEPARTMENT OF PUBLIC WORKS**

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-24 OF U-34 SHEETS



0 40 80

HORIZONTAL SCALE: 1" = 40'

VERTICAL SCALE: 1" = 4'

DATE	DESCRIPTION	BY
	REVISIONS	

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HEART PINE AVENUE - STARKEY PHASE I

PROJECT NO. TSR–SR–1006

CIP PROJ NO. #####

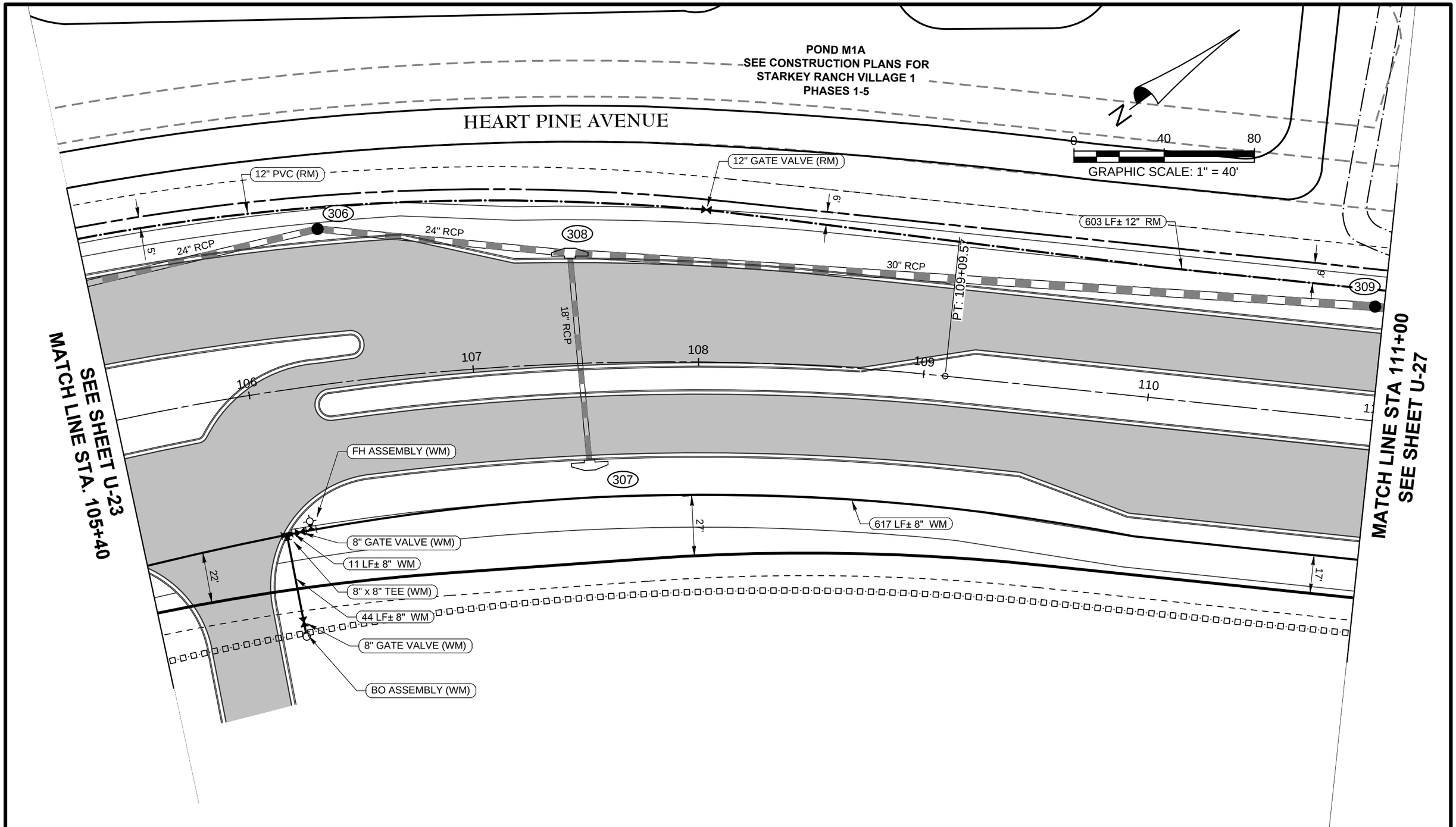
DESIGN XXXX

UTILITY IMPROVEMENTS
PROFILE SHEET (U-24A)
STA. -1+00 TO STA 4+00

PREPARED FOR: **PASCO COUNTY DEPARTMENT OF PUBLIC WORKS**

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-24A OF U-34 SHEETS



DATE	DESCRIPTION	BY
	REVISIONS	

ENGINEERING BUSINESS CERTIFICATE OF AUTHORIZATION NO. 29782

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5806-B Breckenridge Parkway
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Fax: 813-464-7629
www.HeidtDesign.com

DATE:
THOMAS D. SULLIVAN P.E. NO. 55358
FLORIDA PROFESSIONAL ENGINEER

HEART PINE AVENUE - STARKEY PHASE 1

PROJECT NO. TSR–SR–1006

CIP PROJ NO. #####

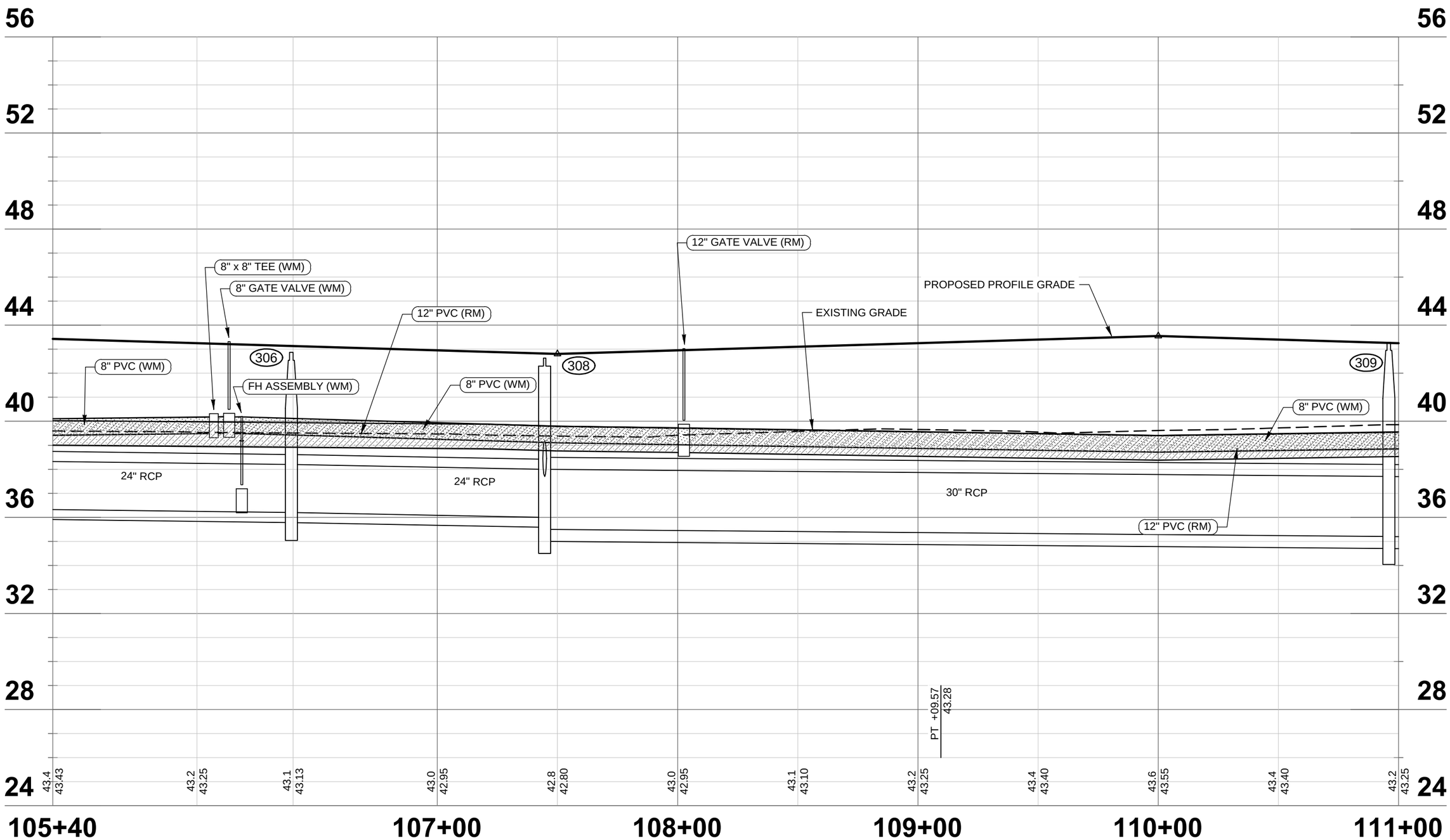
DESIGN XXXX

UTILITY IMPROVEMENTS
PLAN SHEET (U-25)
STA. 105+40 TO STA. 111+00

PREPARED FOR: **PASCO COUNTY DEPARTMENT OF PUBLIC WORKS**

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-25 OF U-34 SHEETS



0 40 80

HORIZONTAL SCALE: 1" = 40'

VERTICAL SCALE: 1" = 4'

DATE	DESCRIPTION	BY
	REVISIONS	

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HEART PINE AVENUE - STARKEY PHASE I

PROJECT NO. TSR–SR–1006

CIP PROJ NO. #####

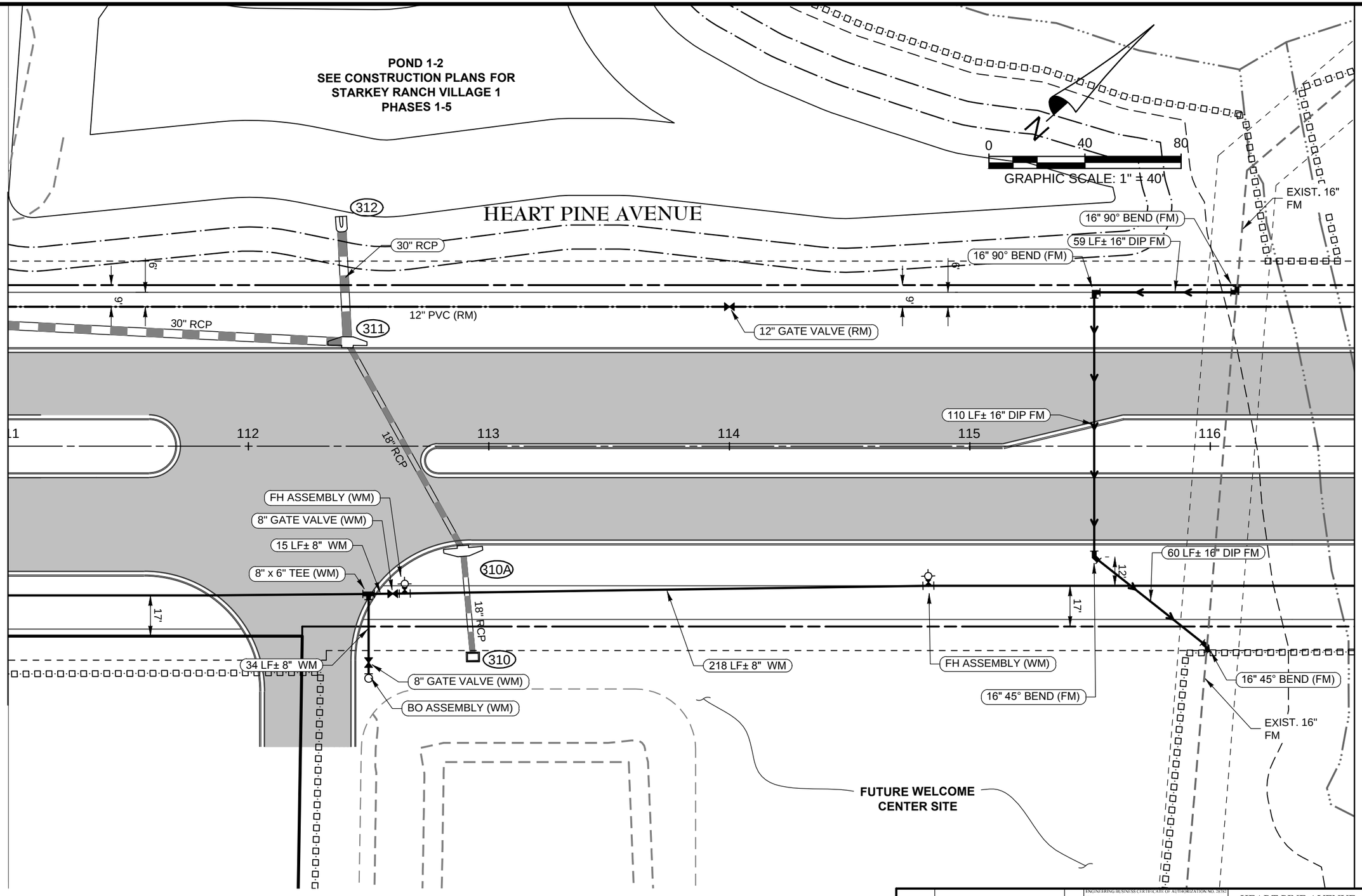
DESIGN XXXX

UTILITY IMPROVEMENTS
PROFILE SHEET (U-26)
STA. 105+40 TO STA 111+00

PREPARED FOR: **PASCO COUNTY DEPARTMENT OF PUBLIC WORKS**

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-26 OF U-34 SHEETS



DATE	DESCRIPTION	BY
	REVISIONS	

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HEART PINE AVENUE - STARKEY PHASE 1

PROJECT NO. TSR-SR-1006

CIP PROJ NO. #####

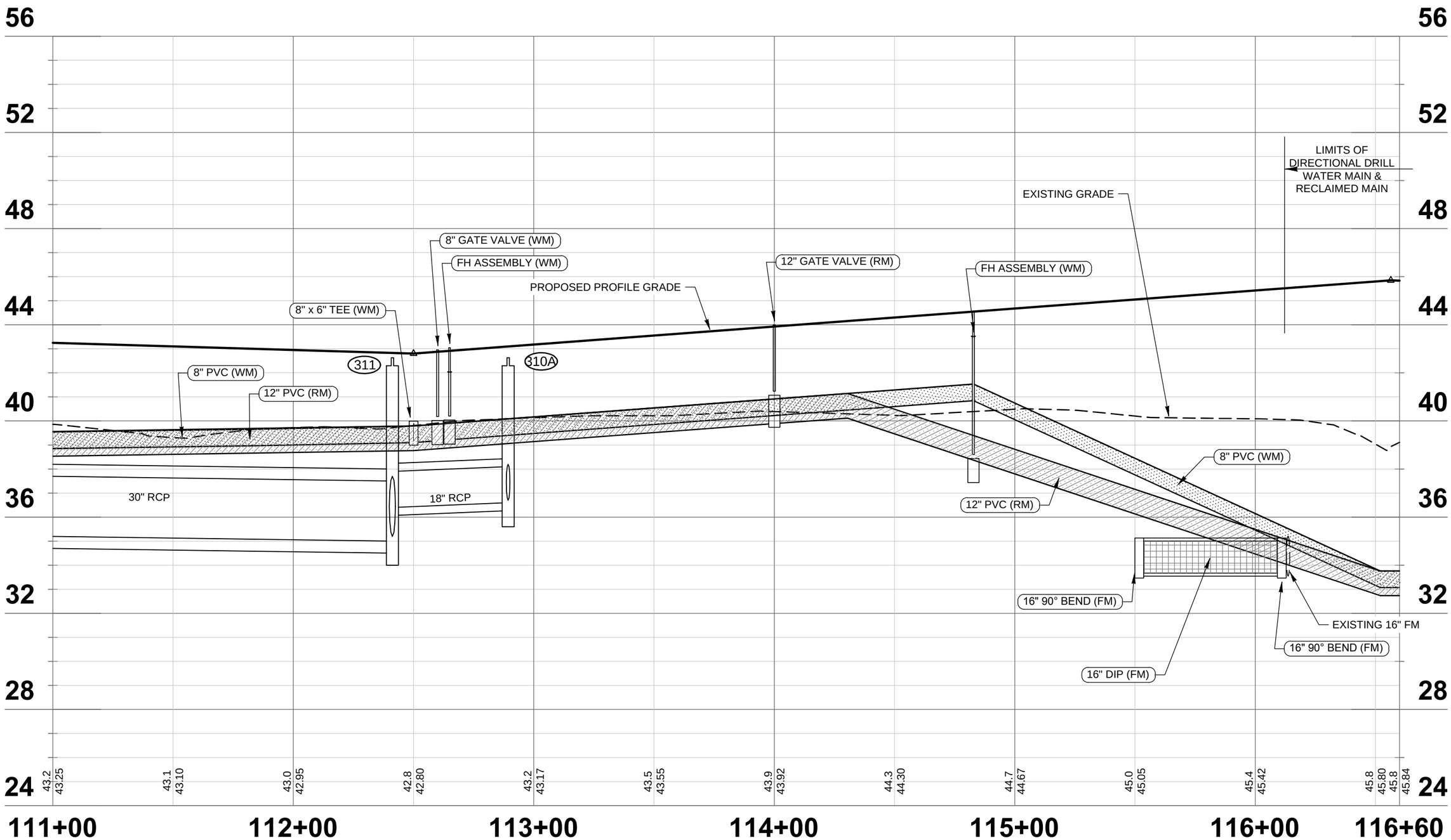
DESIGN XXXX

UTILITY IMPROVEMENTS
PLAN SHEET (U-27)
STA. 111+00 TO STA. 116+60

PREPARED FOR: **PASCO COUNTY**
DEPARTMENT OF PUBLIC WORKS

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-27 OF U-34 SHEETS



0 40 80

HORIZONTAL SCALE: 1" = 40'

VERTICAL SCALE: 1" = 4'

DATE	DESCRIPTION	BY
	REVISIONS	

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HEART PINE AVENUE - STARKEY PHASE 1

PROJECT NO. TSR–SR–1006

CIP PROJ NO. #####

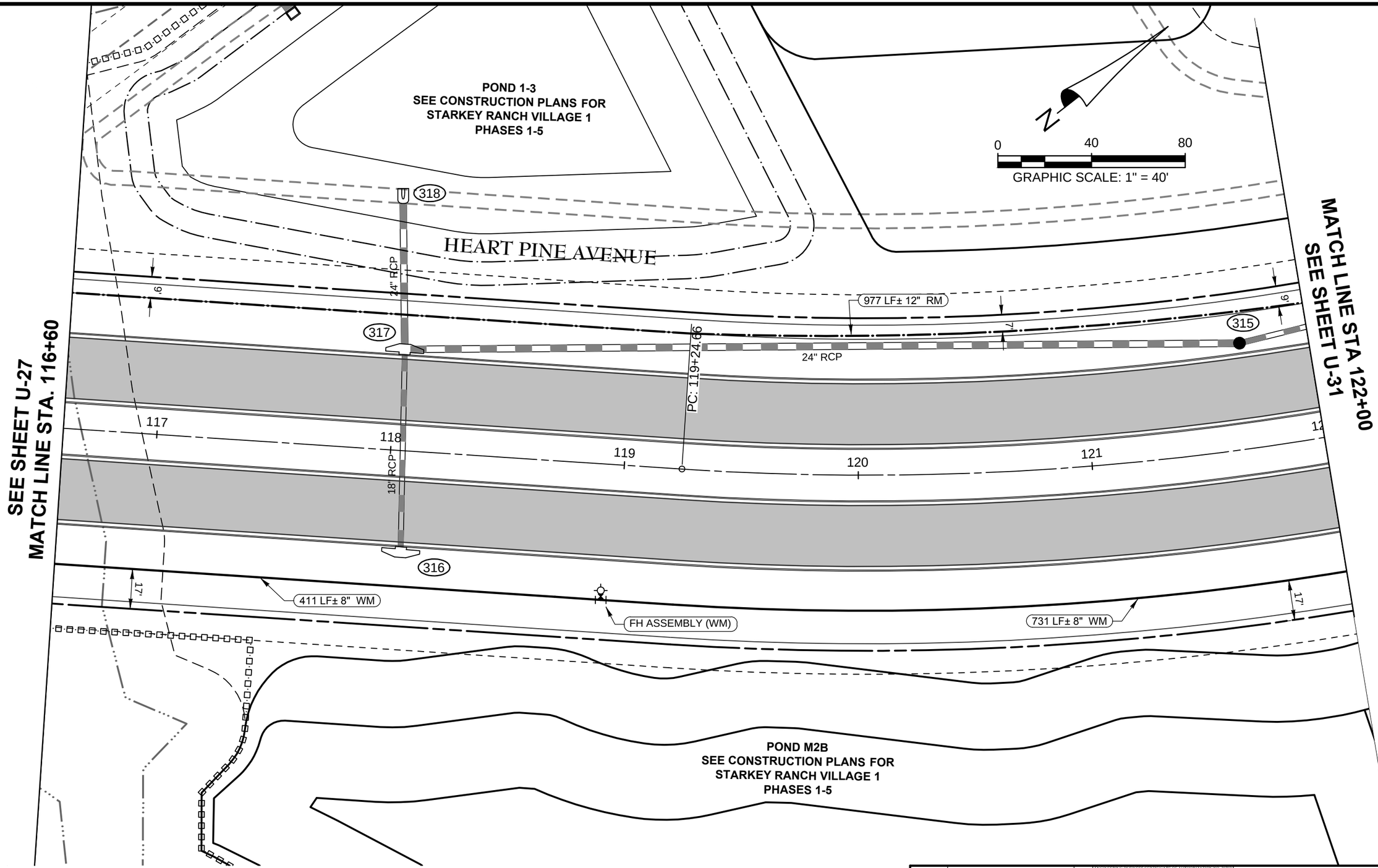
DESIGN XXXX

UTILITY IMPROVEMENTS
PROFILE SHEET (U-28)
STA. 111+00 TO STA 116+60

PREPARED FOR: **PASCO COUNTY DEPARTMENT OF PUBLIC WORKS**

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-28 OF U-34 SHEETS



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HEART PINE AVENUE - STARKEY PHASE 1

PROJECT NO. TSR–SR–1006

CIP PROJ NO. #####

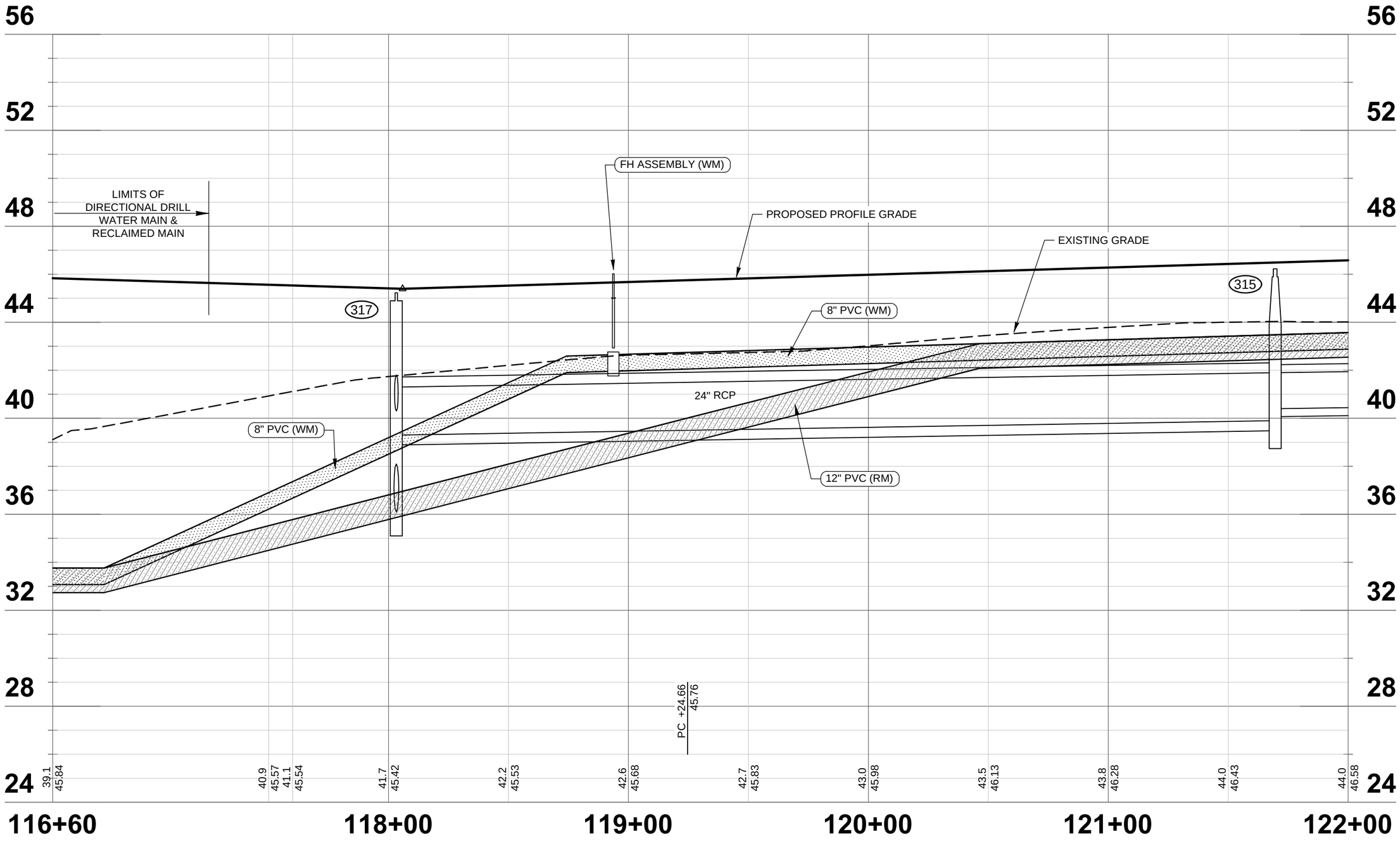
DESIGN XXXX

UTILITY IMPROVEMENTS
PLAN SHEET (U-29)
STA. 116+60 TO STA. 122+00

PREPARED FOR: **PASCO COUNTY**
DEPARTMENT OF PUBLIC WORKS

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-29 OF U-34 SHEETS



0 40 80

HORIZONTAL SCALE: 1" = 40'

VERTICAL SCALE: 1" = 4'

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HEART PINE AVENUE - STARKEY PHASE I

PROJECT NO. TSR-SR-1006

CIP PROJ NO. #####

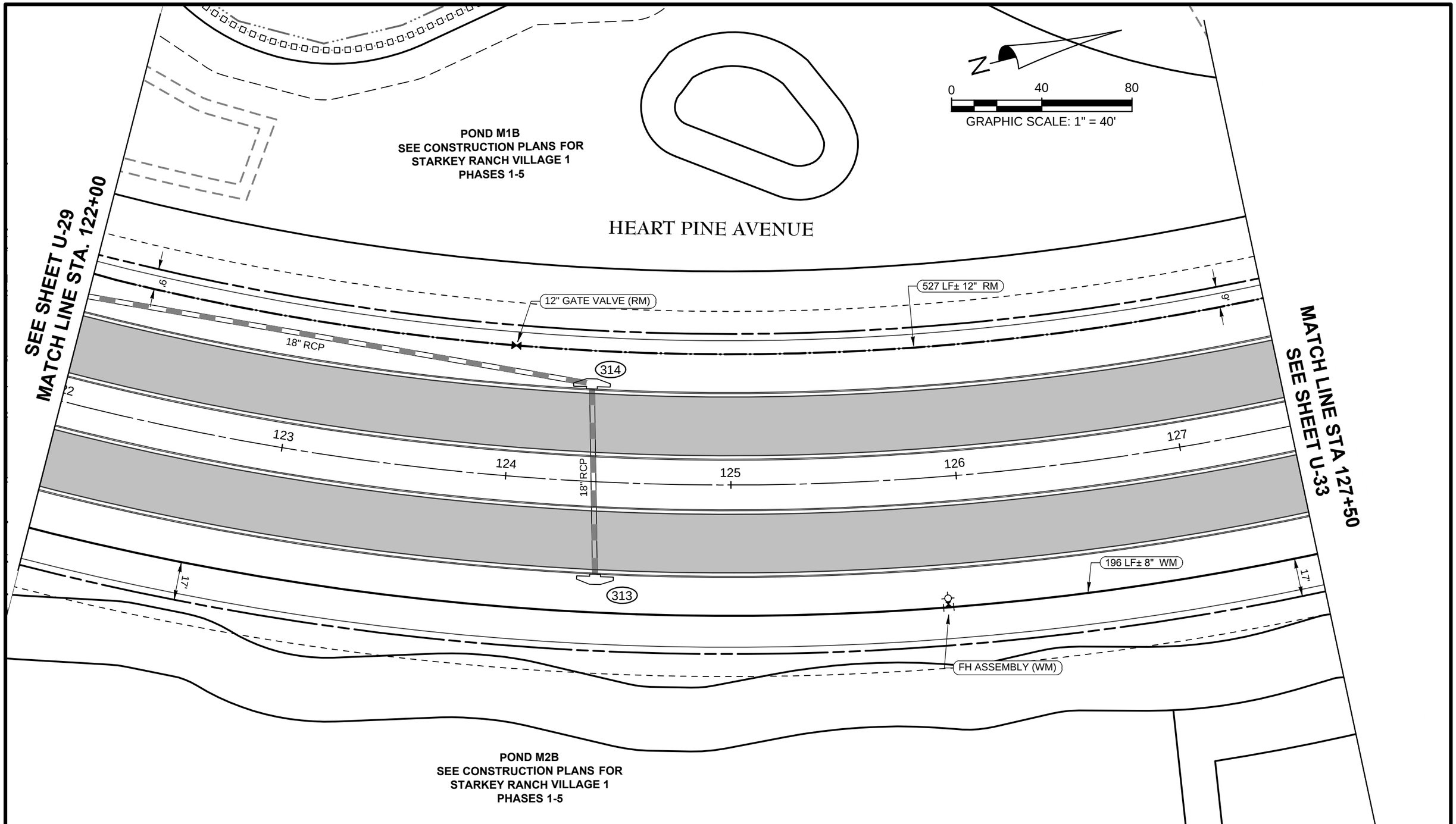
DESIGN XXXX

UTILITY IMPROVEMENTS
PROFILE SHEET (U-30)
STA. 116+60 TO STA 122+00

PREPARED FOR: **PASCO COUNTY DEPARTMENT OF PUBLIC WORKS**

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-30 OF U-34 SHEETS



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HEART PINE AVENUE - STARKEY PHASE 1

PROJECT NO. TSR-SR-1006

CIP PROJ NO. #####

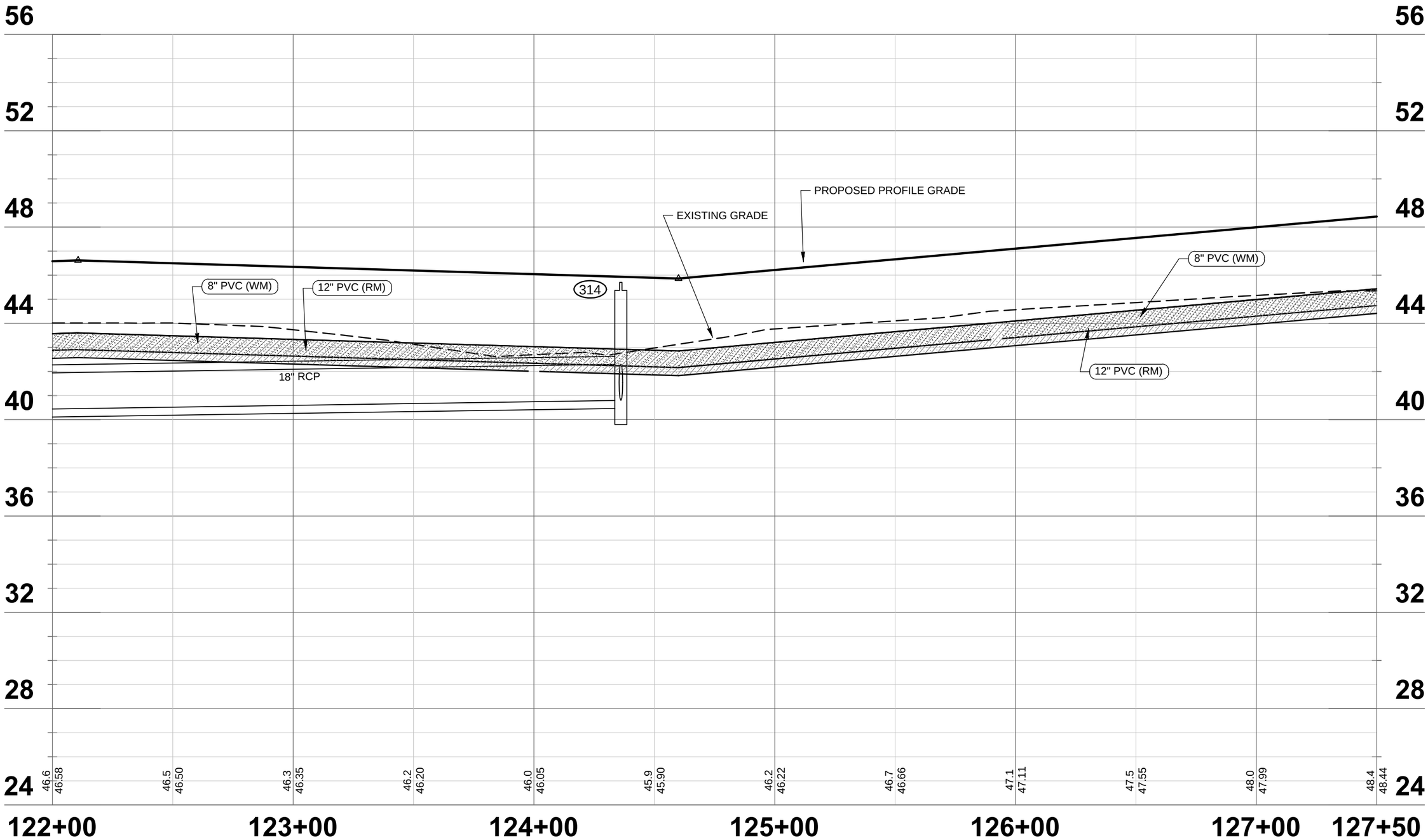
DESIGN XXXX

UTILITY IMPROVEMENTS
PLAN SHEET (U-31)
STA. 122+00 TO STA. 127+50

PREPARED FOR: **PASCO COUNTY DEPARTMENT OF PUBLIC WORKS**

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-31 OF U-34 SHEETS



0 40 80

HORIZONTAL SCALE: 1" = 40'

VERTICAL SCALE: 1" = 4'

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HEART PINE AVENUE - STARKEY PHASE I

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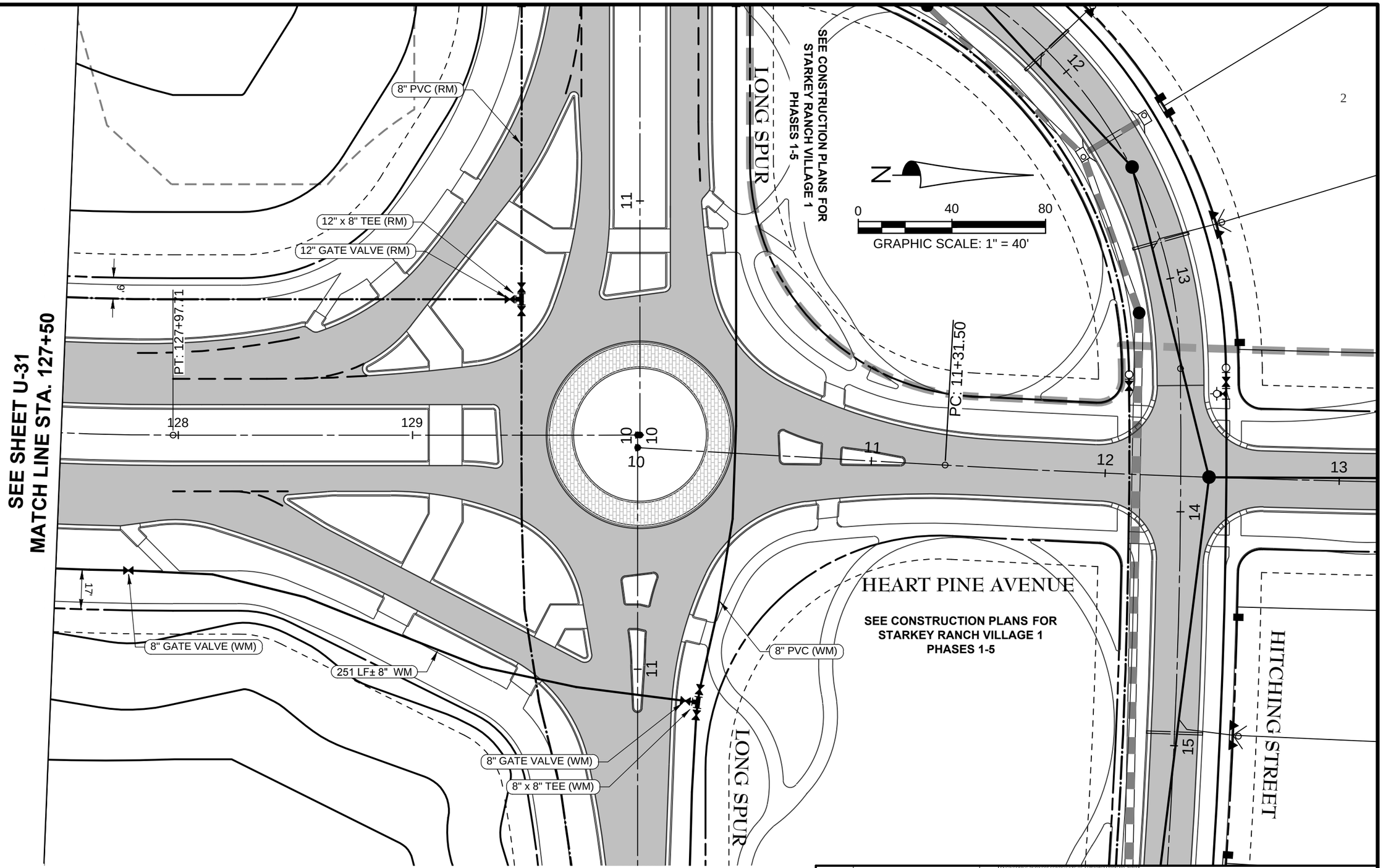
DESIGN XXXX

UTILITY IMPROVEMENTS
PROFILE SHEET (U-32)
STA. 122+00 TO STA 127+50

PREPARED FOR: **PASCO COUNTY DEPARTMENT OF PUBLIC WORKS**

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-32 OF U-34 SHEETS



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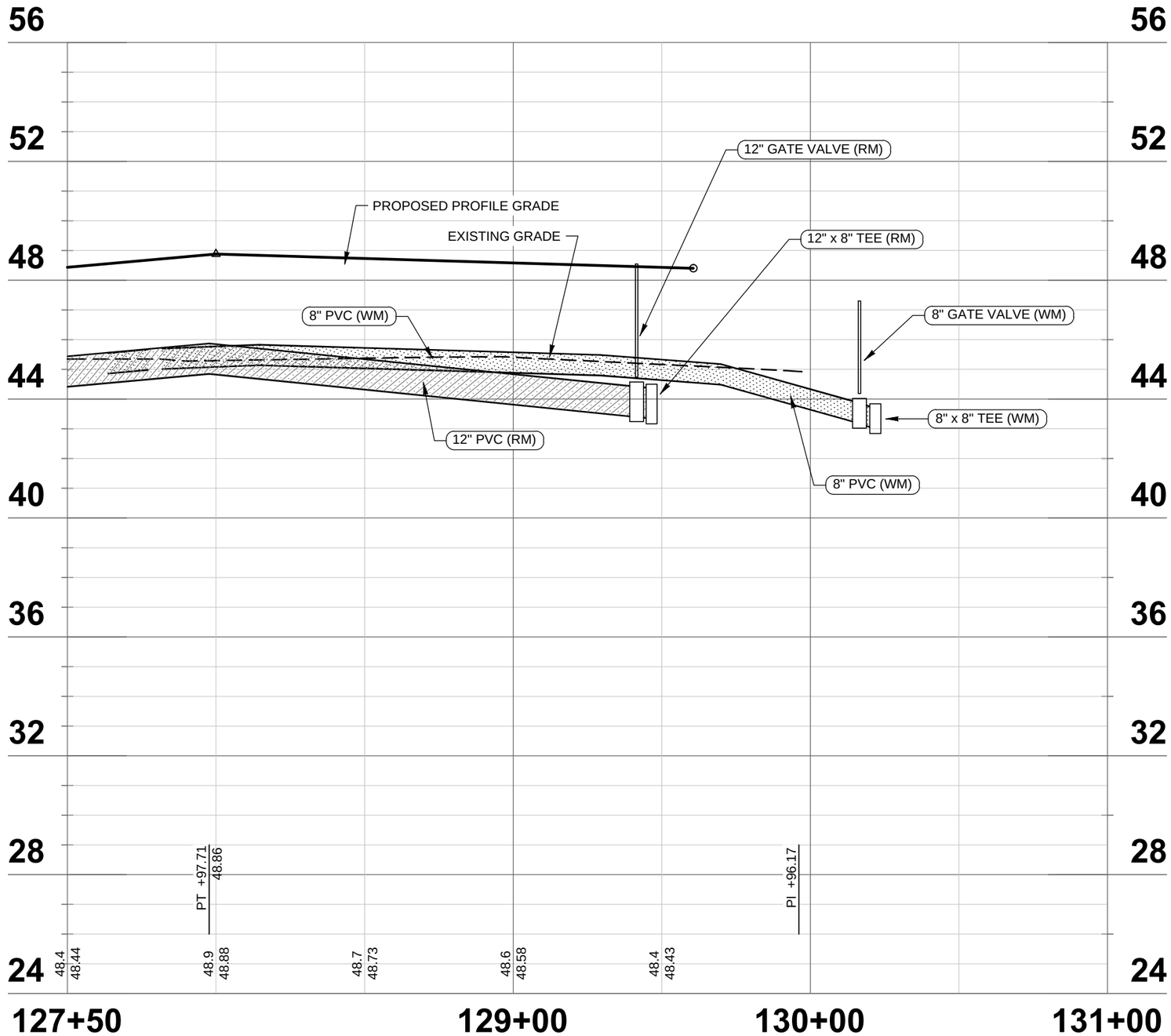
DESIGN XXXX

UTILITY IMPROVEMENTS
PLAN SHEET (U-33)
STA. 127+50 TO STA. 129+97

PREPARED FOR: **PASCO COUNTY**
DEPARTMENT OF PUBLIC WORKS

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
Conversion from NAVD 88 TO NGVD 29 = +0.85 Feet

SHEET U-33 OF U-34 SHEETS



0 40 80

HORIZONTAL SCALE: 1" = 40'

VERTICAL SCALE: 1" = 4'

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UTILITY IMPROVEMENTS
PROFILE SHEET (U-34)
STA. 127+50 TO STA 129+97

PREPARED FOR: **PASCO COUNTY DEPARTMENT OF PUBLIC WORKS**

Elevations based on NORTH AMERICAN VERTICAL DATUM (NAVD 88)
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SHEET U-34 OF U-34 SHEETS