

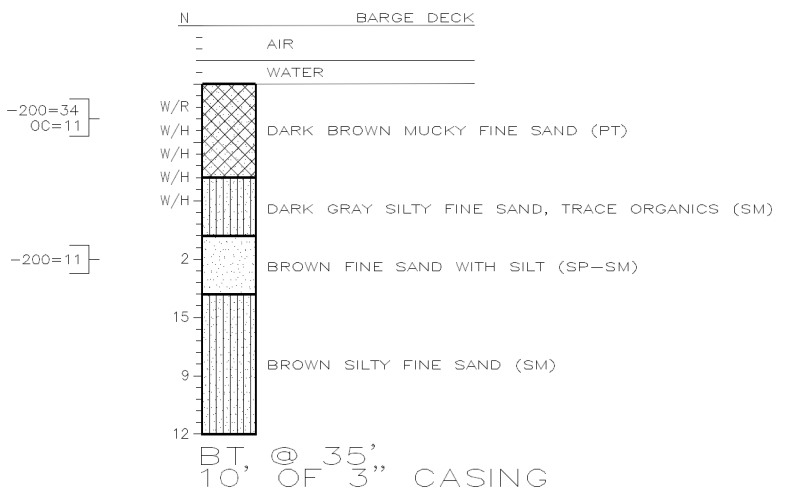
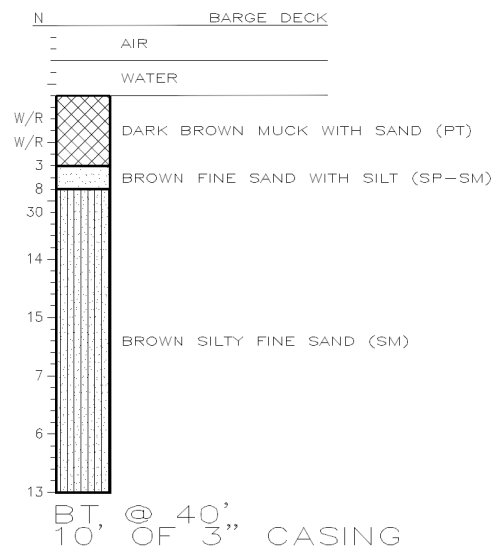
SPT BORING RESULTS FOR CULVERT (EAST OF JOHN YOUNG PARKWAY)

SCALE: AS SHOWN

CB-1  
STATION: 11+65  
OFFSET: 55' RIGHT  
DATE PERFORMED: 8-11-04

CB-2  
STATION: 11+70  
OFFSET: 80' LEFT  
DATE PERFORMED: 8-11-04

DEPTH (feet)



LEGEND:

- BT BORING TERMINATED
- N STANDARD PENETRATION RESISTANCE, BLOWS PER FOOT
- W/H WEIGHT OF HAMMER
- W/R WEIGHT OF ROD
- 200 PERCENT PASSING NO. 200 U.S. STANDARD SIEVE (FM 1-T 088)
- OC ORGANIC CONTENT (%) (FM 1-T 267)

SOIL LEGEND



NOTES

SUBSURFACE CONDITIONS SHOWN ON THE BORING LOGS DO NOT NECESSARILY REPRESENT THE CONDITIONS BETWEEN THE BORINGS LOCATION. ACTUAL CONDITIONS IN THE VICINITY OF THE BORINGS MAY VARY FROM THOSE SHOWN. UNIFIED SOIL CLASSIFICATIONS SHOWN ON THE BORING LOGS ARE BASED ON VISUAL EXAMINATION AND THE LABORATORY TEST RESULTS SHOWN.

THE STANDARD PENETRATION TEST BORINGS WERE PERFORMED IN ACCORDANCE WITH ASTM D-1586. STANDARD PENETRATION RESISTANCES ARE SHOWN ON THE BORING LOGS AT THE TEST DEPTHS IN BLOWS PER FOOT UNLESS OTHERWISE NOTED.

THE BORING LOCATIONS WERE NOT SURVEYED BUT APPROXIMATED USING PROMINENT SITE FEATURES SHOWN ON PLANS PROVIDED BY LOCHRANE ENGINEERING INC.

BASED ON A REVIEW OF THE U.S. GEOLOGICAL SURVEY MAP ENTITLED "POTENTIOMETRIC SURFACE OF THE UPPER FLORIDAN AQUIFER IN THE SEPTEMBER 2005" FOR THE PROJECT AREA, THE MAXIMUM ELEVATION OF THE ARTESIAN HEAD IS ESTIMATED TO BE APPROXIMATELY +55 TO +60 ft. NGVD. THE CONTRACTOR SHALL BE PREPARED TO HANDLE ARTESIAN HEAD LEVELS UP TO +55 TO +60 ft. NGVD.

SPLIT SPOON SAMPLER:  
INSIDE DIAMETER: 1.375 IN.  
OUTSIDE DIAMETER: 2.0 IN.  
AVG. HAMMER DROP: 30 IN.  
HAMMER WEIGHT: 140 LBS.  
HAMMER TYPE: SAFETY (MANUAL)

GRANULAR SOILS	N VALUE (blows/foot)	RELATIVE DENSITY
SANDS	0-4	VERY LOOSE
	4-10	LOOSE
	10-30	MED. DENSE
	30-50	DENSE
	OVER 50	VERY DENSE
NON-GRANULAR SOILS	N VALUE (blows/foot)	CONSISTENCY
SILTS, CLAYS, MUCK, PEAT	0-2	VERY SOFT
	2-4	SOFT
	4-8	FIRM
	8-15	STIFF
	15-30	VERY STIFF
	OVER 30	HARD

FIGURE 15

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

GEC  
GEC TECHNICAL AND ENVIRONMENTAL CONSULTANTS, INC.  
1230 E. HILLCREST STREET  
ORLANDO, FLORIDA 32803  
CERTIFICATE OF AUTHORIZATION NO. 00005882  
MICHAEL J. PREIM, P.E. 24041



**HOLDEN AVENUE BORING RESULTS**

SHEET NO. 145

SPT BORING RESULTS FOR CULVERT SOUTH OF LAKE BUCHANNAN  
 SCALE: AS SHOWN

- ▽ 0.5 ESTIMATED SEASONAL HIGH GROUNDWATER DEPTH (FT.)
- ▼ 1.8 ENCOUNTERED GROUNDWATER DEPTH (FT.)
- N STANDARD PENETRATION RESISTANCE, BLOWS PER FOOT
- (SP-SM) UNIFIED SOIL CLASSIFICATION SYMBOL
- BT BORING TERMINATED
- 200 PERCENT PASSING NO. 200 U.S. STANDARD SIEVE (FM 1-T 088)

SOIL LEGEND



NOTES

SUBSURFACE CONDITIONS SHOWN ON THE BORING LOGS DO NOT NECESSARILY REPRESENT THE CONDITIONS BETWEEN THE BORINGS LOCATION. ACTUAL CONDITIONS IN THE VICINITY OF THE BORINGS MAY VARY FROM THOSE SHOWN. UNIFIED SOIL CLASSIFICATIONS SHOWN ON THE BORING LOGS ARE BASED ON VISUAL EXAMINATION AND THE LABORATORY TEST RESULTS SHOWN.

THE STANDARD PENETRATION TEST BORINGS WERE PERFORMED IN ACCORDANCE WITH ASTM D-1586. STANDARD PENETRATION RESISTANCES ARE SHOWN ON THE BORING LOGS AT THE TEST DEPTHS IN BLOWS PER FOOT UNLESS OTHERWISE NOTED.

THE BORING LOCATIONS WERE STAKED AND SURVEYED BY LOCHRANE ENGINEERING, INC.

BASED ON A REVIEW OF THE U.S. GEOLOGICAL SURVEY MAP ENTITLED "POTENTIOMETRIC SURFACE OF THE UPPER FLORIDAN AQUIFER IN THE SEPTEMBER 2005" FOR THE PROJECT AREA, THE MAXIMUM ELEVATION OF THE ARTESIAN HEAD IS ESTIMATED TO BE APPROXIMATELY +55 TO +60 ft. NGVD. THE CONTRACTOR SHALL BE PREPARED TO HANDLE ARTESIAN HEAD LEVELS UP TO +55 TO +60 FT. NGVD.

SPLIT SPOON SAMPLER:  
 INSIDE DIAMETER: 1.375 IN.  
 OUTSIDE DIAMETER: 2.0 IN.  
 AVG. HAMMER DROP: 30 IN.  
 HAMMER WEIGHT: 140 LBS.  
 HAMMER TYPE: SAFETY (MANUAL)

GRANULAR SOILS	N VALUE (blows/foot)	RELATIVE DENSITY
SANDS	0-4	VERY LOOSE
	4-10	LOOSE
	10-30	MED. DENSE
	30-50	DENSE
	OVER 50	VERY DENSE

NON-GRANULAR SOILS	N VALUE (blows/foot)	CONSISTENCY
SILTS, CLAYS, MUCK, PEAT	0-2	VERY SOFT
	2-4	SOFT
	4-8	FIRM
	8-15	STIFF
	15-30	VERY STIFF
	OVER 30	HARD

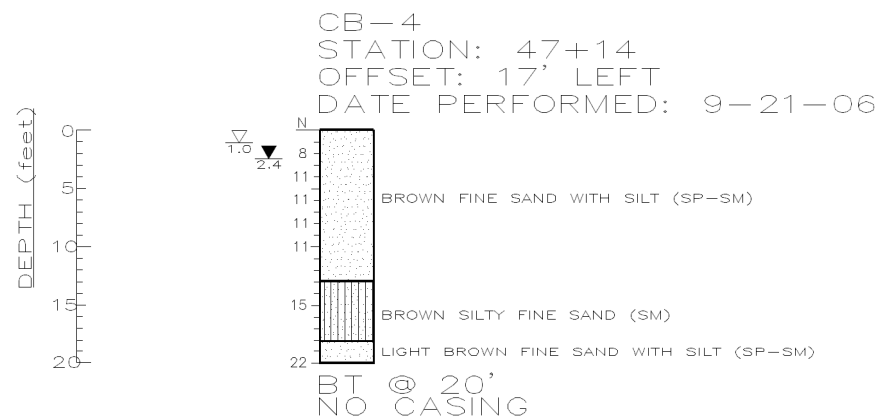
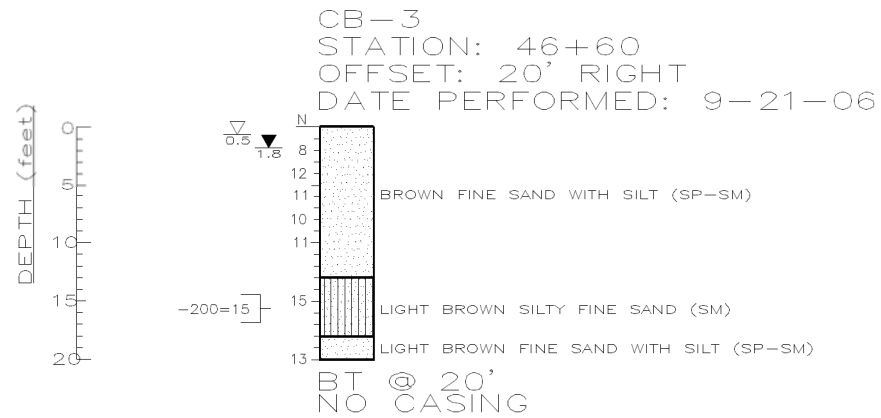


FIGURE 16

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

GEC  
 GEOTECHNICAL AND ENVIRONMENTAL  
 CONSULTANTS, INC.  
 1230 E. HILLCREST STREET  
 ORLANDO, FLORIDA 32803  
 CERTIFICATE OF AUTHORIZATION NO. 00005882  
 MICHAEL J. PREIM, P.E. 24041



**HOLDEN AVENUE  
 BORING RESULTS**

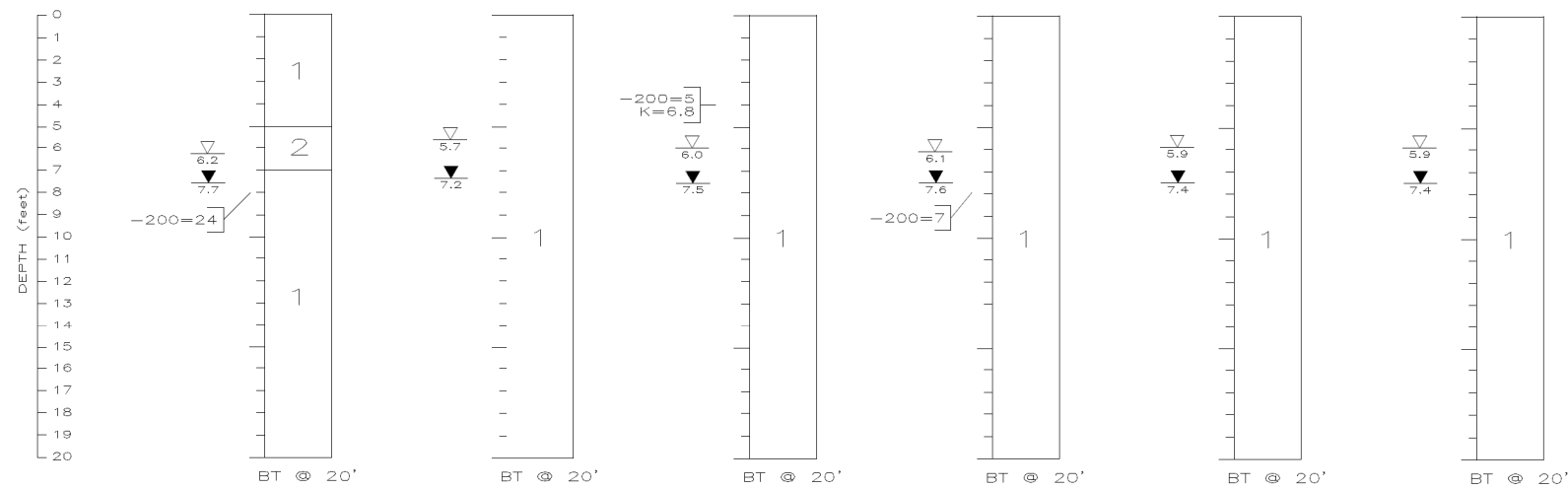
SHEET  
 NO.

146

**POND 3 BORING RESULTS**

SCALE: AS SHOWN

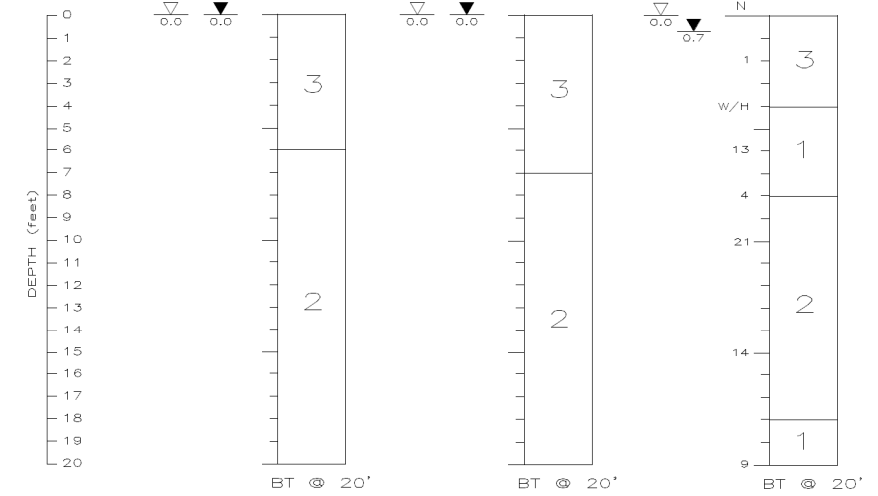
BORING NO.	PB-5	PB-6	PB-7	PB-8	PB-9	PB-10
STATION	69+50	69+50	70+50	71+00	71+00	71+00
OFFSET	350' RT	550' RT	450' RT	180' RT	350' RT	550' RT
DATE DRILLED	10-26-06	10-26-06	10-26-06	10-26-06	10-26-06	10-26-06



**POND 1 BORING RESULTS**

SCALE: AS SHOWN

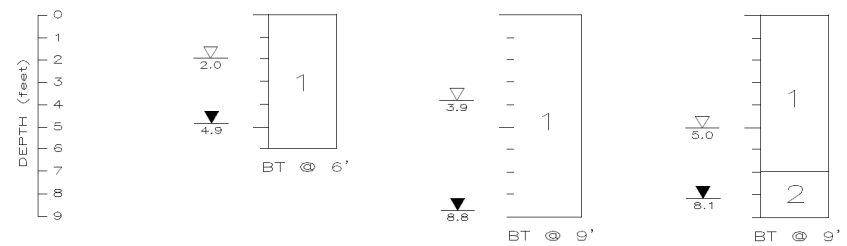
BORING NO.	PB-1	PB-2	PB-3
STATION	13+50	16+50	17+50
OFFSET	177' LT	174' LT	167' LT
DATE DRILLED	8-11-04	8-11-04	8-11-04



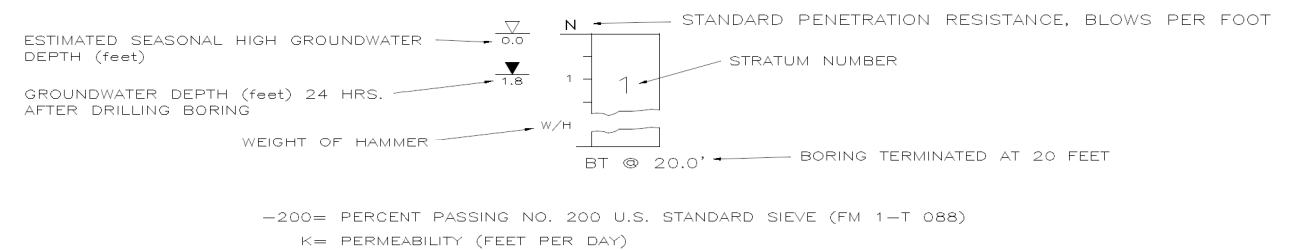
**POND 3 PRELIMINARY HAND AUGER BORING RESULTS**

SCALE: AS SHOWN

BORING NO.	HA-1	HA-2	HA-3
STATION	69+50	70+40	71+00
OFFSET	600' RT	450' RT	225' RT
DATE DRILLED	8-21-06	8-21-06	8-21-06



**BORING LEGEND**



STRATUM NUMBER	AASHTO SOIL CLASSIFICATION SYMBOL	DESCRIPTION
1	A-3	BROWN TO GRAY FINE SAND AND FINE SAND WITH SILT, OCCASIONAL TRACE ORGANICS AND CEMENTED LENSES
2	A-2-4	BROWN TO GRAY FINE SAND WITH SILT AND SILTY FINE SAND, OCCASIONAL TRACE ORGANICS
3	A-8	DARK BROWN MUCKY FINE SAND TO SANDY MUCK

FIGURE 17

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

**GEC**  
 GEOTECHNICAL AND ENVIRONMENTAL  
 CONSULTANTS, INC.  
 919 LAKE BALDWIN LANE  
 ORLANDO, FLORIDA 32814  
 CERTIFICATE OF AUTHORIZATION NO. 00005882  
 MICHAEL J. PREIM, P.E. 24041



**HOLDEN AVENUE  
 BORING RESULTS**

SHEET NO.  
**147**





STATION	<u>49+00</u>	<u>49+00</u>	<u>49+50</u>	<u>49+50</u>	<u>50+00</u>	<u>50+00</u>	<u>50+50</u>	<u>50+50</u>
OFFSET	<u>25' LEFT</u>	<u>50' RIGHT</u>	<u>50' LEFT</u>	<u>50' RIGHT</u>	<u>50' LEFT</u>	<u>50' RIGHT</u>	<u>50' LEFT</u>	<u>50' RIGHT</u>
	0.0 STANDING WATER (FT.) 0.0 MUCK (FT.) 0.5 SAND (FT.)	0.5 STANDING WATER (FT.) 1.0 MUCK (FT.) 0.5 SAND (FT.)	0.5 STANDING WATER (FT.) 3.0 MUCK (FT.) 0.5 SAND (FT.)	0.0 STANDING WATER (FT.) 1.0 MUCK (FT.) 0.5 SAND (FT.)	0.0 STANDING WATER (FT.) 0.0 MUCK (FT.) 0.5 SAND (FT.)	0.0 STANDING WATER (FT.) 0.5 MUCK (FT.) 0.5 SAND (FT.)	0.0 STANDING WATER (FT.) 0.0 MUCK (FT.) 0.5 SAND (FT.)	0.0 STANDING WATER (FT.) 0.5 MUCK (FT.) 0.5 SAND (FT.)
STATION	<u>51+00</u>	<u>51+00</u>						
OFFSET	<u>50' LEFT</u>	<u>32' RIGHT</u>						
	0.0 STANDING WATER (FT.) 0.0 MUCK (FT.) 0.5 SAND (FT.)	0.0 STANDING WATER (FT.) 0.5 MUCK (FT.) 0.5 SAND (FT.)						

**BOX CULVERT MUCK PROBE RESULTS (SOUTH OF LAKE BUCHANNAN)**  
SCALE: AS SHOWN

STATION	<u>46+30</u>	<u>46+30</u>	<u>46+40</u>	<u>46+40</u>	<u>46+50</u>	<u>46+50</u>	<u>46+60</u>	<u>46+60</u>
OFFSET	<u>40' RIGHT</u>	<u>50' RIGHT</u>	<u>40' RIGHT</u>	<u>50' RIGHT</u>	<u>40' RIGHT</u>	<u>50' RIGHT</u>	<u>40' RIGHT</u>	<u>50' RIGHT</u>
	0.0 STANDING WATER (FT.) 0.5 MUCK (FT.) 1.5 SAND (FT.)	0.2 STANDING WATER (FT.) 0.5 MUCK (FT.) 3.0 SAND (FT.)	0.0 STANDING WATER (FT.) 0.5 MUCK (FT.) 2.0 SAND (FT.)	3.0 STANDING WATER (FT.) 1.0 MUCK (FT.) 2.0 SAND (FT.)	1.5 STANDING WATER (FT.) 1.0 MUCK (FT.) 1.0 SAND (FT.)	3.0 STANDING WATER (FT.) 1.0 MUCK (FT.) 3.0 SAND (FT.)	1.5 STANDING WATER (FT.) 1.0 MUCK (FT.) 3.0 SAND (FT.)	2.0 STANDING WATER (FT.) 3.0 MUCK (FT.) 3.0 SAND (FT.)
STATION	<u>46+70</u>	<u>46+70</u>	<u>46+80</u>	<u>46+80</u>	<u>47+00</u>	<u>47+00</u>	<u>47+10</u>	<u>47+10</u>
OFFSET	<u>40' RIGHT</u>	<u>50' RIGHT</u>	<u>40' RIGHT</u>	<u>50' RIGHT</u>	<u>40' LEFT</u>	<u>50' LEFT</u>	<u>40' LEFT</u>	<u>50' LEFT</u>
	1.5 STANDING WATER (FT.) 0.5 MUCK (FT.) 3.0 SAND (FT.)	1.5 STANDING WATER (FT.) 1.0 MUCK (FT.) 2.0 SAND (FT.)	2.0 STANDING WATER (FT.) 2.0 MUCK (FT.) 3.0 SAND (FT.)	1.5 STANDING WATER (FT.) 3.0 MUCK (FT.) 2.0 SAND (FT.)	3.0 STANDING WATER (FT.) 1.5 MUCK (FT.) 0.5 SAND (FT.)	2.0 STANDING WATER (FT.) 0.5 MUCK (FT.) 0.5 SAND (FT.)	2.0 STANDING WATER (FT.) 2.0 MUCK (FT.) 0.5 SAND (FT.)	3.0 STANDING WATER (FT.) 2.0 MUCK (FT.) 2.0 SAND (FT.)
STATION	<u>47+20</u>	<u>47+20</u>	<u>47+30</u>	<u>47+30</u>	<u>47+40</u>	<u>47+40</u>	<u>47+50</u>	<u>47+50</u>
OFFSET	<u>40' LEFT</u>	<u>50' LEFT</u>	<u>40' LEFT</u>	<u>50' LEFT</u>	<u>40' LEFT</u>	<u>50' LEFT</u>	<u>40' LEFT</u>	<u>50' LEFT</u>
	2.0 STANDING WATER (FT.) 1.0 MUCK (FT.) 1.0 SAND (FT.)	3.0 STANDING WATER (FT.) 2.0 MUCK (FT.) 2.0 SAND (FT.)	2.5 STANDING WATER (FT.) 1.0 MUCK (FT.) 1.0 SAND (FT.)	2.5 STANDING WATER (FT.) 1.5 MUCK (FT.) 1.0 SAND (FT.)	1.0 STANDING WATER (FT.) 1.5 MUCK (FT.) 1.0 SAND (FT.)	4.0 STANDING WATER (FT.) 1.0 MUCK (FT.) 3.0 SAND (FT.)	0.5 STANDING WATER (FT.) 1.0 MUCK (FT.) 0.5 SAND (FT.)	4.0 STANDING WATER (FT.) 1.0 MUCK (FT.) 3.0 SAND (FT.)

FIGURE 20

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
6-28-07	RT	ADD POND 1 MUCK PROBE RESULTS (TLM)			

**GEC**  
 GEOTECHNICAL AND ENVIRONMENTAL  
 CONSULTANTS, INC.  
 919 LAKE BALDWIN LANE  
 ORLANDO, FLORIDA 32814  
 CERTIFICATE OF AUTHORIZATION NO. 00005882  
 MICHAEL J. PREIM, P.E. 24041



**HOLDEN AVENUE  
 PROBE RESULTS**

SHEET NO.

150

FORMER RELOCATED POND 1 MUCK PROBE RESULTS (PERFORMED 3-1-07)

SCALE: AS SHOWN

STATION	<u>17+60</u>	<u>18+35</u>	<u>19+45</u>	<u>20+40</u>	<u>20+45</u>	<u>20+50</u>	<u>20+55</u>	<u>20+55</u>																																																
OFFSET	410' LEFT	400' LT	400' LEFT	400' LEFT	510' LEFT	605' LEFT	700' LEFT	815' LEFT																																																
	<table border="1"> <tr><td>0</td><td>STANDING WATER (FT.)</td></tr> <tr><td>9.0</td><td>MUCK (FT.)</td></tr> <tr><td>0.5</td><td>SAND (FT.)</td></tr> </table>	0	STANDING WATER (FT.)	9.0	MUCK (FT.)	0.5	SAND (FT.)	<table border="1"> <tr><td>0.3</td><td>STANDING WATER (FT.)</td></tr> <tr><td>13.0</td><td>MUCK (FT.)</td></tr> <tr><td>1.0</td><td>SAND (FT.)</td></tr> </table>	0.3	STANDING WATER (FT.)	13.0	MUCK (FT.)	1.0	SAND (FT.)	<table border="1"> <tr><td>0.5</td><td>STANDING WATER (FT.)</td></tr> <tr><td>9.0</td><td>MUCK (FT.)</td></tr> <tr><td>1.0</td><td>SAND (FT.)</td></tr> </table>	0.5	STANDING WATER (FT.)	9.0	MUCK (FT.)	1.0	SAND (FT.)	<table border="1"> <tr><td>0.0</td><td>STANDING WATER (FT.)</td></tr> <tr><td>8.0</td><td>MUCK (FT.)</td></tr> <tr><td>2.0</td><td>SAND (FT.)</td></tr> </table>	0.0	STANDING WATER (FT.)	8.0	MUCK (FT.)	2.0	SAND (FT.)	<table border="1"> <tr><td>0.5</td><td>STANDING WATER (FT.)</td></tr> <tr><td>13.5</td><td>MUCK (FT.)</td></tr> <tr><td>0.5</td><td>SAND (FT.)</td></tr> </table>	0.5	STANDING WATER (FT.)	13.5	MUCK (FT.)	0.5	SAND (FT.)	<table border="1"> <tr><td>0.2</td><td>STANDING WATER (FT.)</td></tr> <tr><td>15.5</td><td>MUCK (FT.)</td></tr> <tr><td>0.3</td><td>SAND (FT.)</td></tr> </table>	0.2	STANDING WATER (FT.)	15.5	MUCK (FT.)	0.3	SAND (FT.)	<table border="1"> <tr><td>0.2</td><td>STANDING WATER (FT.)</td></tr> <tr><td>15.5</td><td>MUCK (FT.)</td></tr> <tr><td>0.3</td><td>SAND (FT.)</td></tr> </table>	0.2	STANDING WATER (FT.)	15.5	MUCK (FT.)	0.3	SAND (FT.)	<table border="1"> <tr><td>0.0</td><td>STANDING WATER (FT.)</td></tr> <tr><td>13.0</td><td>MUCK (FT.)</td></tr> <tr><td>0.5</td><td>SAND (FT.)</td></tr> </table>	0.0	STANDING WATER (FT.)	13.0	MUCK (FT.)	0.5	SAND (FT.)
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0.0	STANDING WATER (FT.)																																																							
13.0	MUCK (FT.)																																																							
0.5	SAND (FT.)																																																							
STATION	<u>19+65</u>	<u>18+70</u>	<u>17+80</u>																																																					
OFFSET	825' LEFT	825' LEFT	820' LEFT																																																					
	<table border="1"> <tr><td>0.0</td><td>STANDING WATER (FT.)</td></tr> <tr><td>14.5</td><td>MUCK (FT.)</td></tr> <tr><td>0.5</td><td>SAND (FT.)</td></tr> </table>	0.0	STANDING WATER (FT.)	14.5	MUCK (FT.)	0.5	SAND (FT.)	<table border="1"> <tr><td>0.0</td><td>STANDING WATER (FT.)</td></tr> <tr><td>14.5</td><td>MUCK (FT.)</td></tr> <tr><td>0.5</td><td>SAND (FT.)</td></tr> </table>	0.0	STANDING WATER (FT.)	14.5	MUCK (FT.)	0.5	SAND (FT.)	<table border="1"> <tr><td>0.0</td><td>STANDING WATER (FT.)</td></tr> <tr><td>9.5</td><td>MUCK (FT.)</td></tr> <tr><td>0.5</td><td>SAND (FT.)</td></tr> </table>	0.0	STANDING WATER (FT.)	9.5	MUCK (FT.)	0.5	SAND (FT.)																																			
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9.5	MUCK (FT.)																																																							
0.5	SAND (FT.)																																																							

POND 1 MUCK PROBE RESULTS (PERFORMED 8-29-08)

SCALE: AS SHOWN

STATION	<u>12+20</u>	<u>12+20</u>	<u>12+20</u>	<u>13+00</u>	<u>13+00</u>	<u>13+00</u>	<u>13+00</u>	<u>13+00</u>																																																
OFFSET	120' LEFT	190' LEFT	260' LEFT	120' LEFT	160' LEFT	200' LEFT	235' LEFT	270' LEFT																																																
	<table border="1"> <tr><td>2.0</td><td>STANDING WATER (FT.)</td></tr> <tr><td>2.5</td><td>MUCK (FT.)</td></tr> <tr><td>1.5</td><td>SAND (FT.)</td></tr> </table>	2.0	STANDING WATER (FT.)	2.5	MUCK (FT.)	1.5	SAND (FT.)	<table border="1"> <tr><td>3.0</td><td>STANDING WATER (FT.)</td></tr> <tr><td>3.0</td><td>MUCK (FT.)</td></tr> <tr><td>1.0</td><td>SAND (FT.)</td></tr> </table>	3.0	STANDING WATER (FT.)	3.0	MUCK (FT.)	1.0	SAND (FT.)	<table border="1"> <tr><td>2.0</td><td>STANDING WATER (FT.)</td></tr> <tr><td>3.0</td><td>MUCK (FT.)</td></tr> <tr><td>1.0</td><td>SAND (FT.)</td></tr> </table>	2.0	STANDING WATER (FT.)	3.0	MUCK (FT.)	1.0	SAND (FT.)	<table border="1"> <tr><td>3.0</td><td>STANDING WATER (FT.)</td></tr> <tr><td>6.0</td><td>MUCK (FT.)</td></tr> <tr><td>1.0</td><td>SAND (FT.)</td></tr> </table>	3.0	STANDING WATER (FT.)	6.0	MUCK (FT.)	1.0	SAND (FT.)	<table border="1"> <tr><td>3.5</td><td>STANDING WATER (FT.)</td></tr> <tr><td>10.0</td><td>MUCK (FT.)</td></tr> <tr><td>1.0</td><td>SAND (FT.)</td></tr> </table>	3.5	STANDING WATER (FT.)	10.0	MUCK (FT.)	1.0	SAND (FT.)	<table border="1"> <tr><td>2.0</td><td>STANDING WATER (FT.)</td></tr> <tr><td>13.0</td><td>MUCK (FT.)</td></tr> <tr><td>2.0</td><td>SAND (FT.)</td></tr> </table>	2.0	STANDING WATER (FT.)	13.0	MUCK (FT.)	2.0	SAND (FT.)	<table border="1"> <tr><td>3.5</td><td>STANDING WATER (FT.)</td></tr> <tr><td>13.0</td><td>MUCK (FT.)</td></tr> <tr><td>3.0</td><td>SAND (FT.)</td></tr> </table>	3.5	STANDING WATER (FT.)	13.0	MUCK (FT.)	3.0	SAND (FT.)	<table border="1"> <tr><td>3.5</td><td>STANDING WATER (FT.)</td></tr> <tr><td>12.0</td><td>MUCK (FT.)</td></tr> <tr><td>2.0</td><td>SAND (FT.)</td></tr> </table>	3.5	STANDING WATER (FT.)	12.0	MUCK (FT.)	2.0	SAND (FT.)
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STATION	<u>14+00</u>	<u>14+00</u>	<u>14+00</u>	<u>14+00</u>	<u>14+00</u>	<u>15+00</u>	<u>15+00</u>	<u>15+00</u>																																																
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STATION	<u>15+00</u>	<u>15+00</u>	<u>16+00</u>	<u>16+00</u>	<u>16+00</u>	<u>16+00</u>	<u>16+00</u>	<u>16+50</u>																																																
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STATION	<u>16+50</u>																																																							
OFFSET	235' LEFT																																																							
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0.5	SAND (FT.)																																																							

FIGURE 21

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
6-28-07	RT	ADD POND 1 MUCK PROBE RESULTS (TLM)			

GEC  
 GEOTECHNICAL AND ENVIRONMENTAL  
 CONSULTANTS, INC.  
 919 LAKE BALDWIN LANE  
 ORLANDO, FLORIDA 32814  
 CERTIFICATE OF AUTHORIZATION NO. 00005882  
 MICHAEL J. PREIM, P.E. 24041



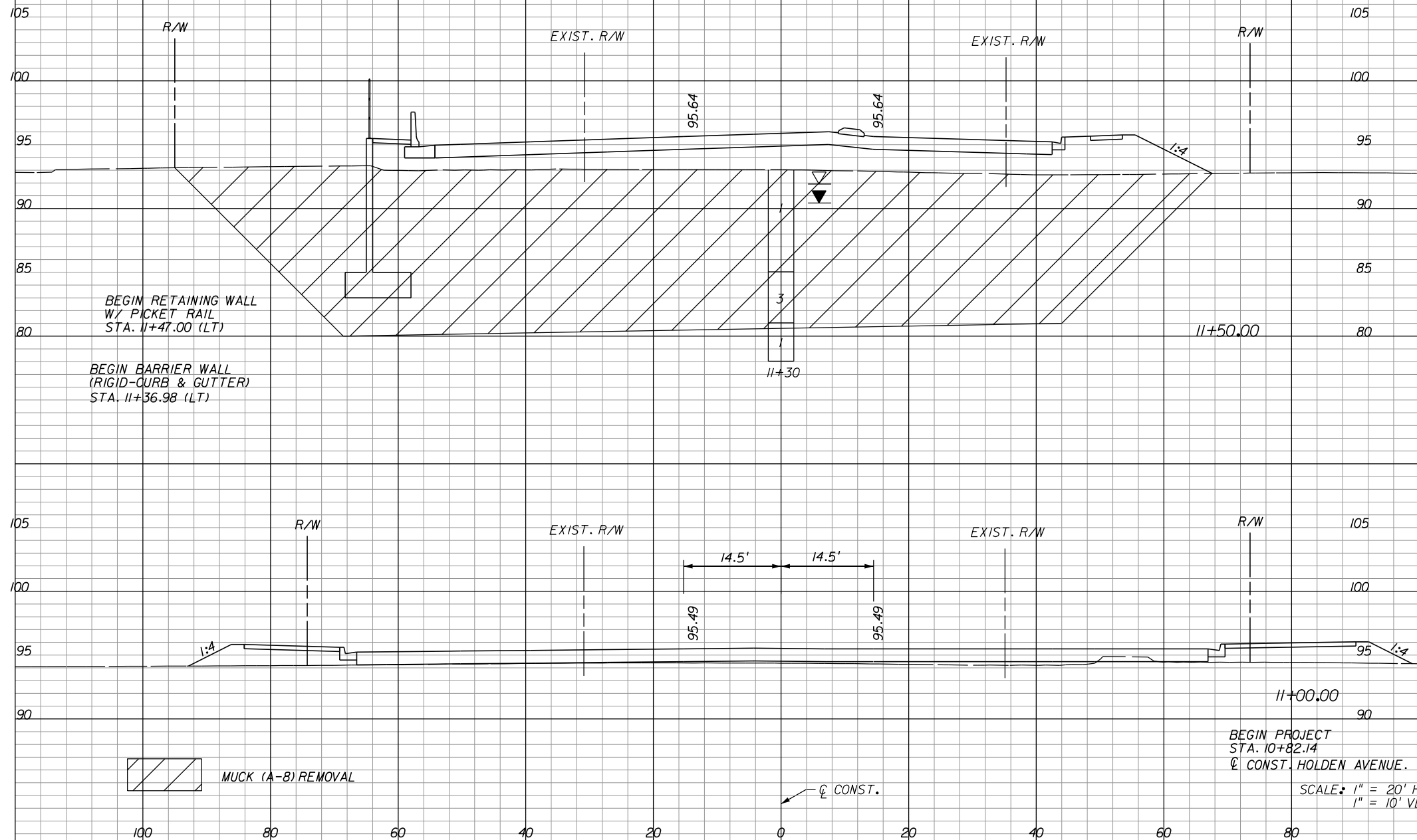
**HOLDEN AVENUE  
 PROBE RESULTS**

SHEET  
 NO.

151

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material			
Regular		Exc.	
A	V	A	V



3196	1717	1590	0
------	------	------	---

0	3	0	218	275	79	23	0
---	---	---	-----	-----	----	----	---

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

**LOCHRANE**  
ENGINEERS • SURVEYORS  
201 SOUTH BUMBY AVENUE ORLANDO, FLORIDA 32803  
PH: (407) 896-3317 FAX: (407) 896-9167 EMAIL: WWW.LOCHRANE.COM  
CERTIFICATE OF AUTHORIZATION NO. 2856  
FOREST W. ADKINS, P.E. P.E. NUMBER 56003

**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**HOLDEN AVENUE**  
**CROSS SECTIONS**

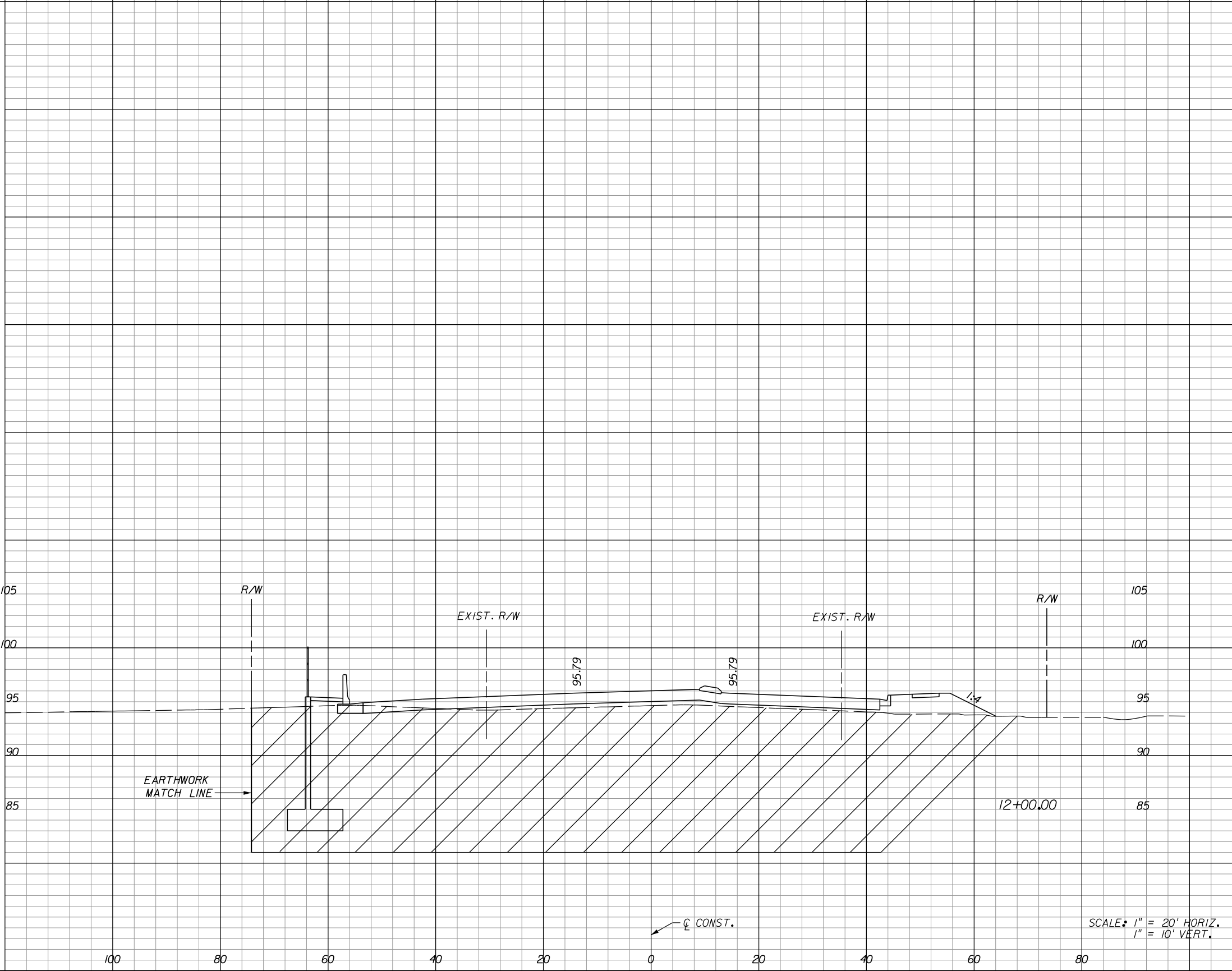
SHEET NO.	152
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A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material					
Regular		Exc.		Embankment	
A	V	A	V	A	V

1735	2450		
------	------	--	--



8	7	51	249
---	---	----	-----

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
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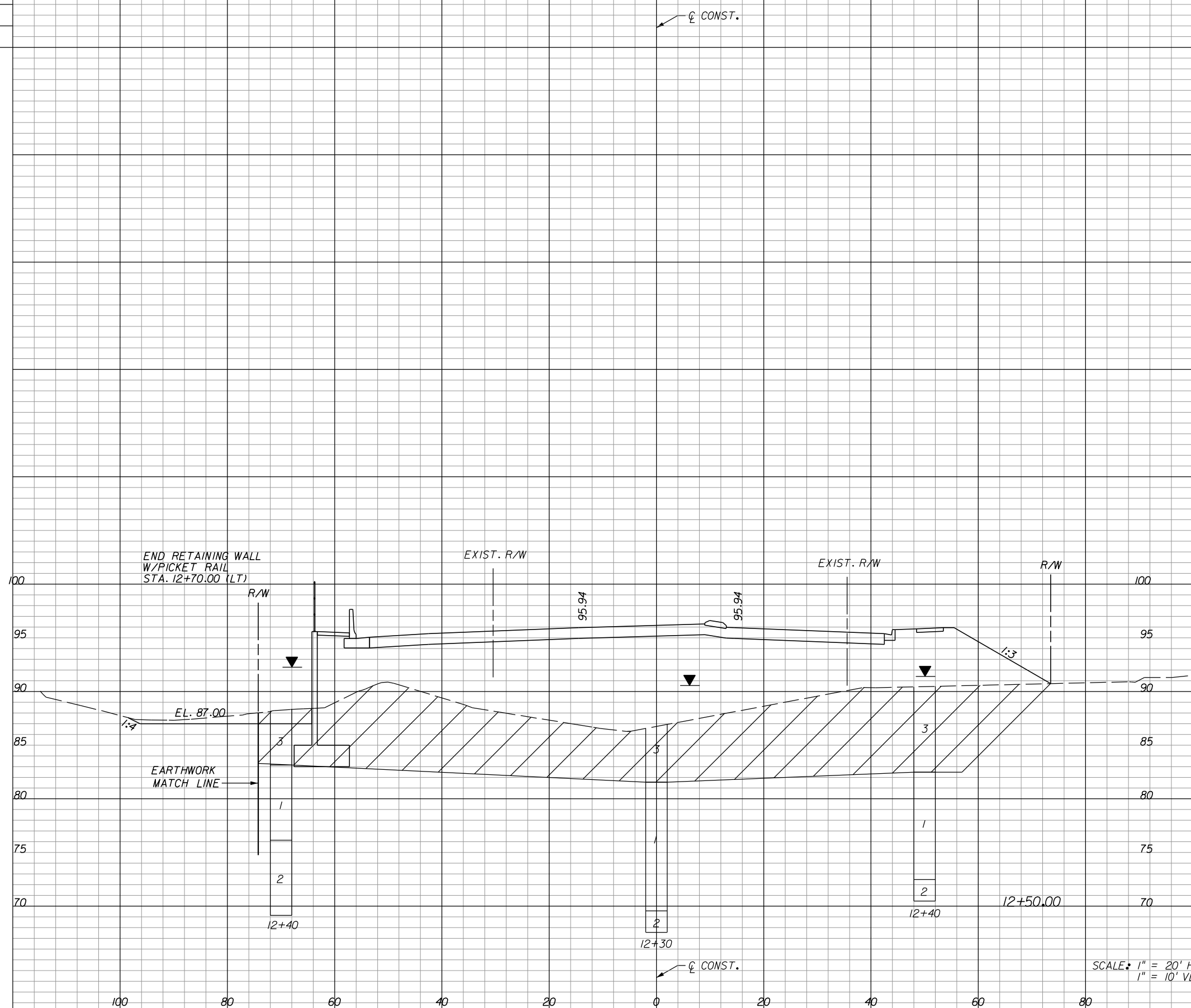
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.
153

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material					
Regular		Exc.		Embankment	
A	V	A	V	A	V



911	1943	A-8 Material		A-2, A-3 Material	
		Excavation	Embankment	Regular	Exc.
		A	V	A	V
				0	800
				7	788

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

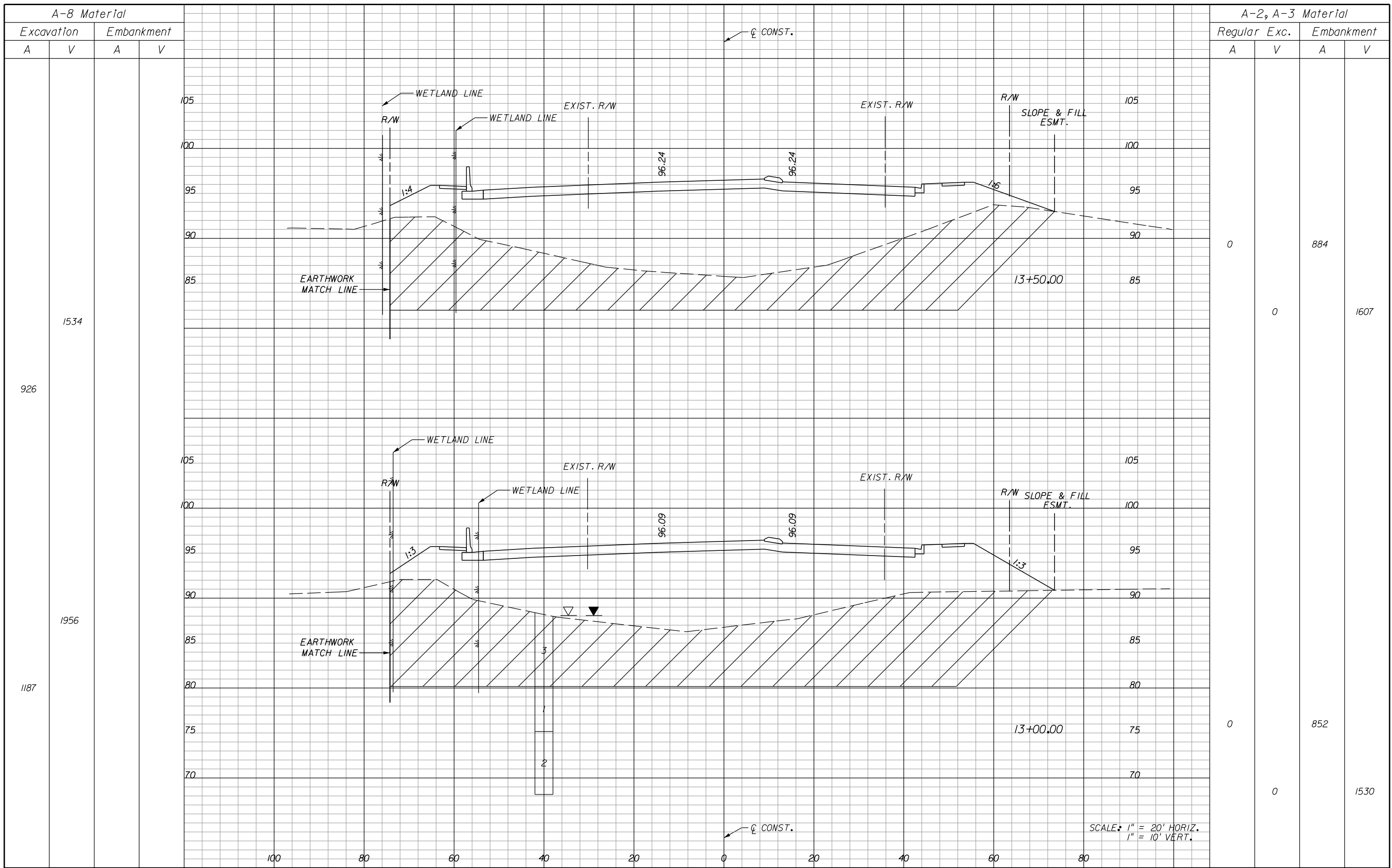
REVISIONS					
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**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.
154



REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

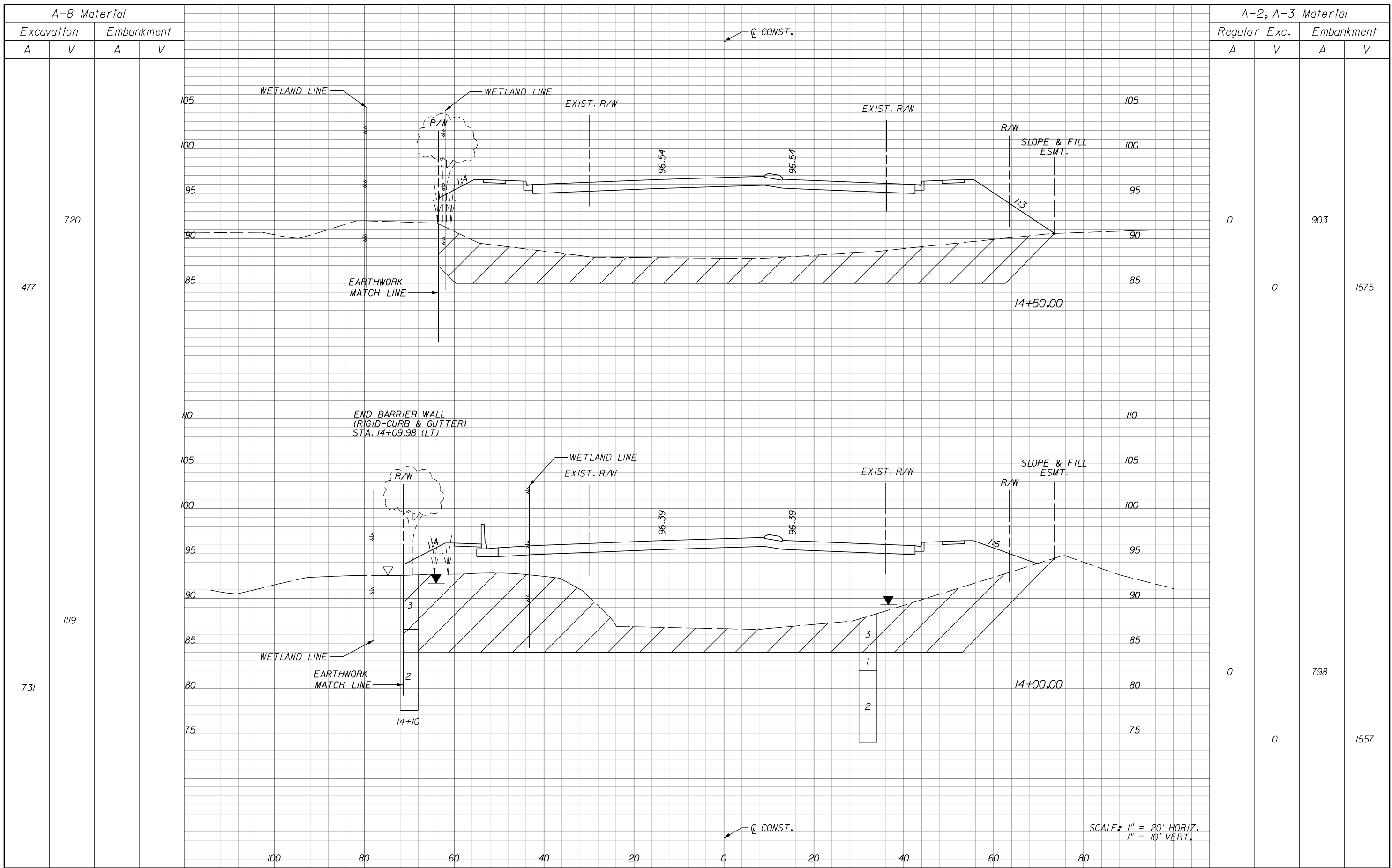
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**ORANGE COUNTY**  
**GOVERNMENT**  
 FLORIDA

**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
 155

SCALE: 1" = 20' HORIZ.  
 1" = 10' VERT.



REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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ENGINEERS • SURVEYORS  
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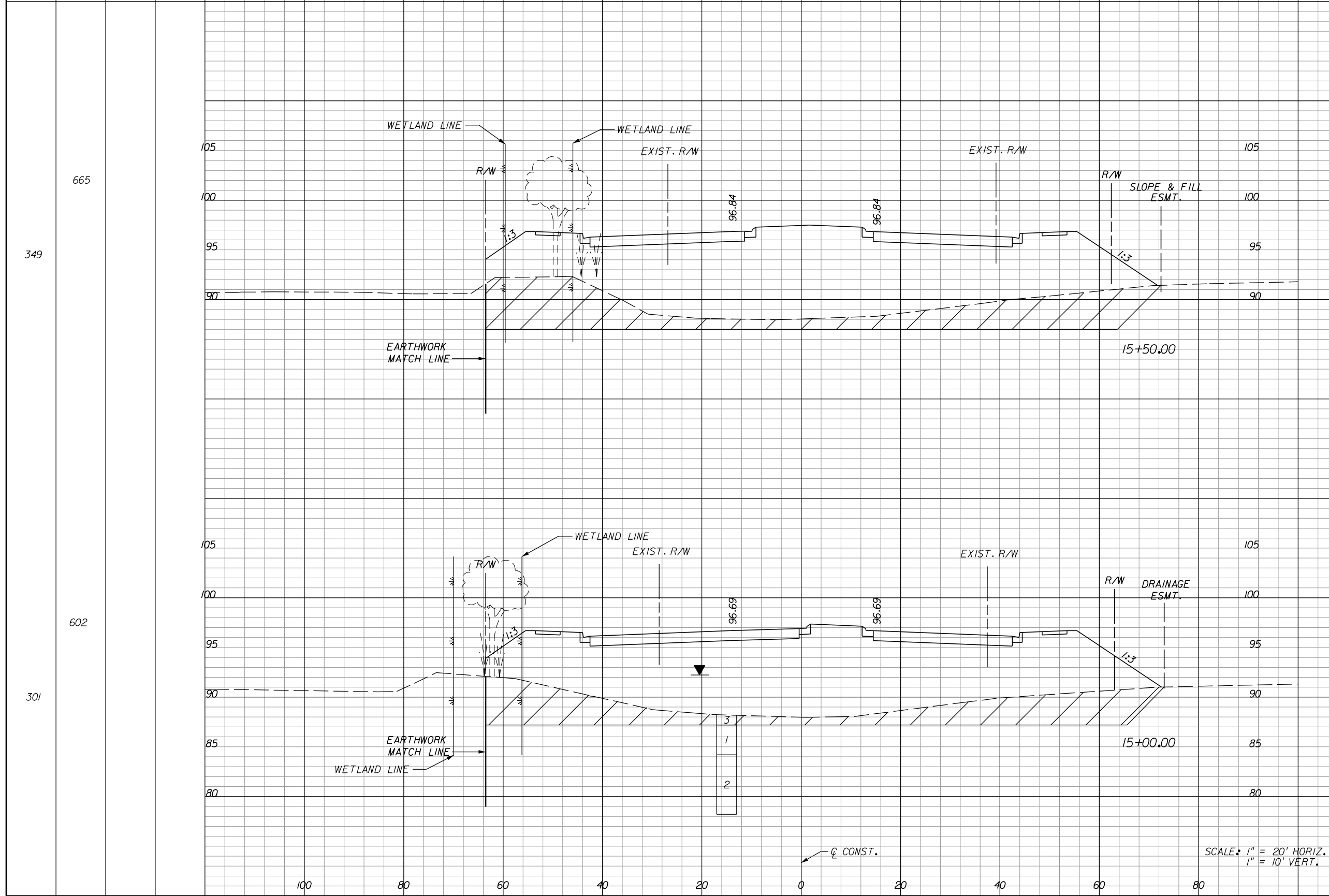
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.
156

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material			
Regular		Exc. Embankment	
A	V	A	V



665			
349	0	836	1541
602			
301	0	828	1603

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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**ORANGE COUNTY GOVERNMENT**  
FLORIDA

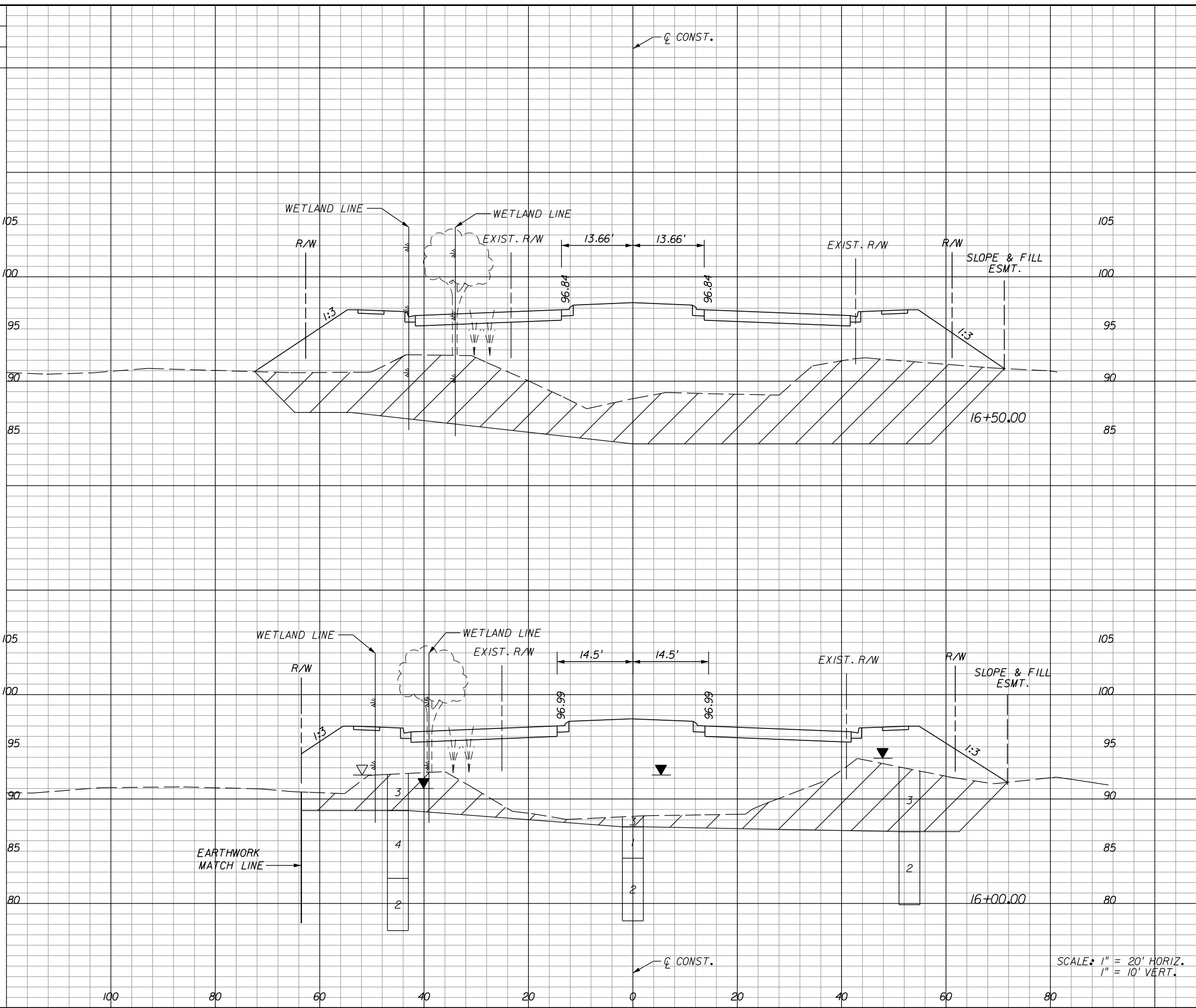
**HOLDEN AVENUE CROSS SECTIONS**

SHEET NO. 157

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material			
Regular Exc.		Embankment	
A	V	A	V

1465			
743			
1030			
369			



0		727	
0		1361	
0		743	
0		1462	

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

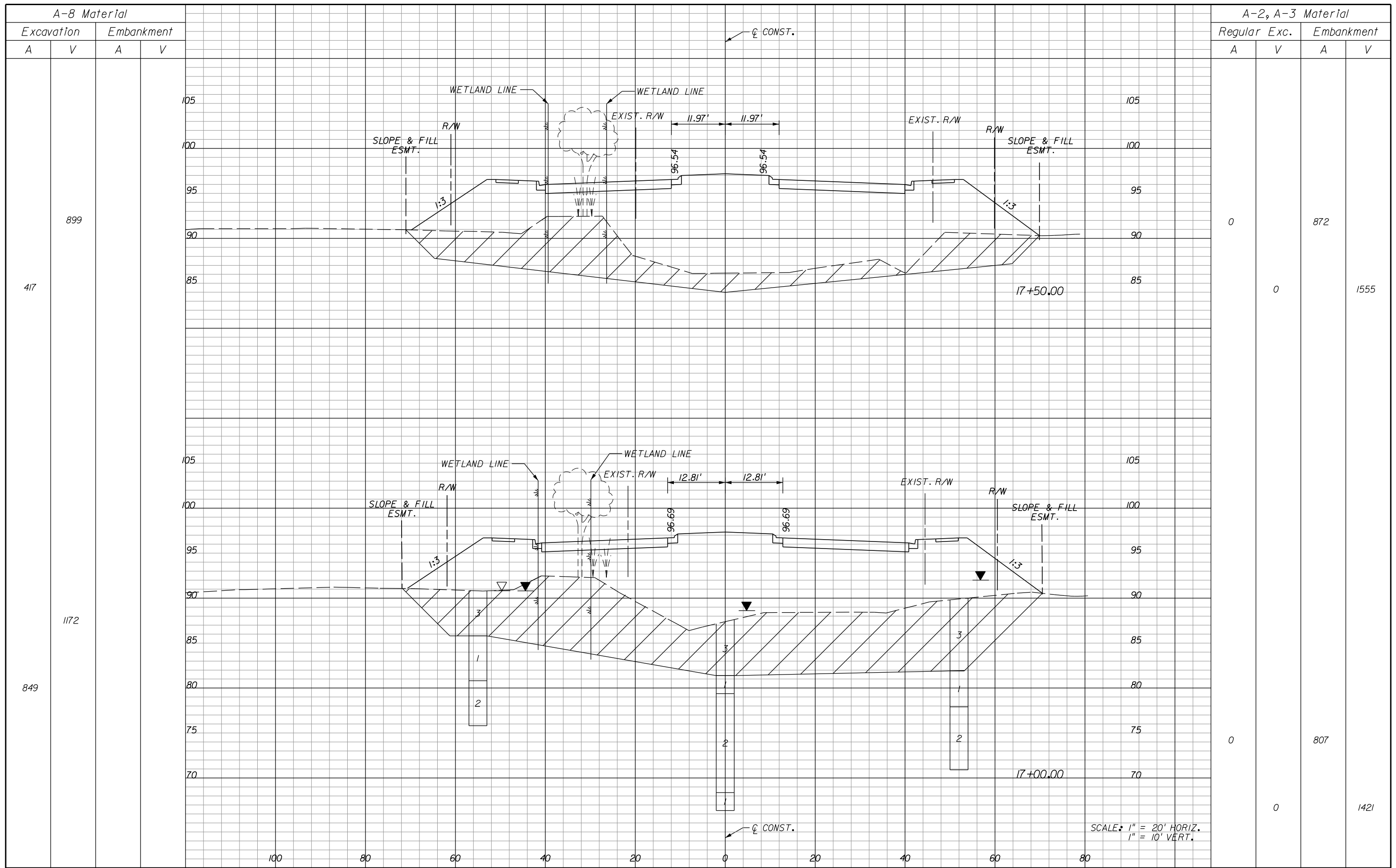
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**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.
158



A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material			
Regular Exc.		Embankment	
A	V	A	V

899			
417			
1172			
849			

0		872	
	0		1555
0		807	
	0		1421

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
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**ORANGE COUNTY**  
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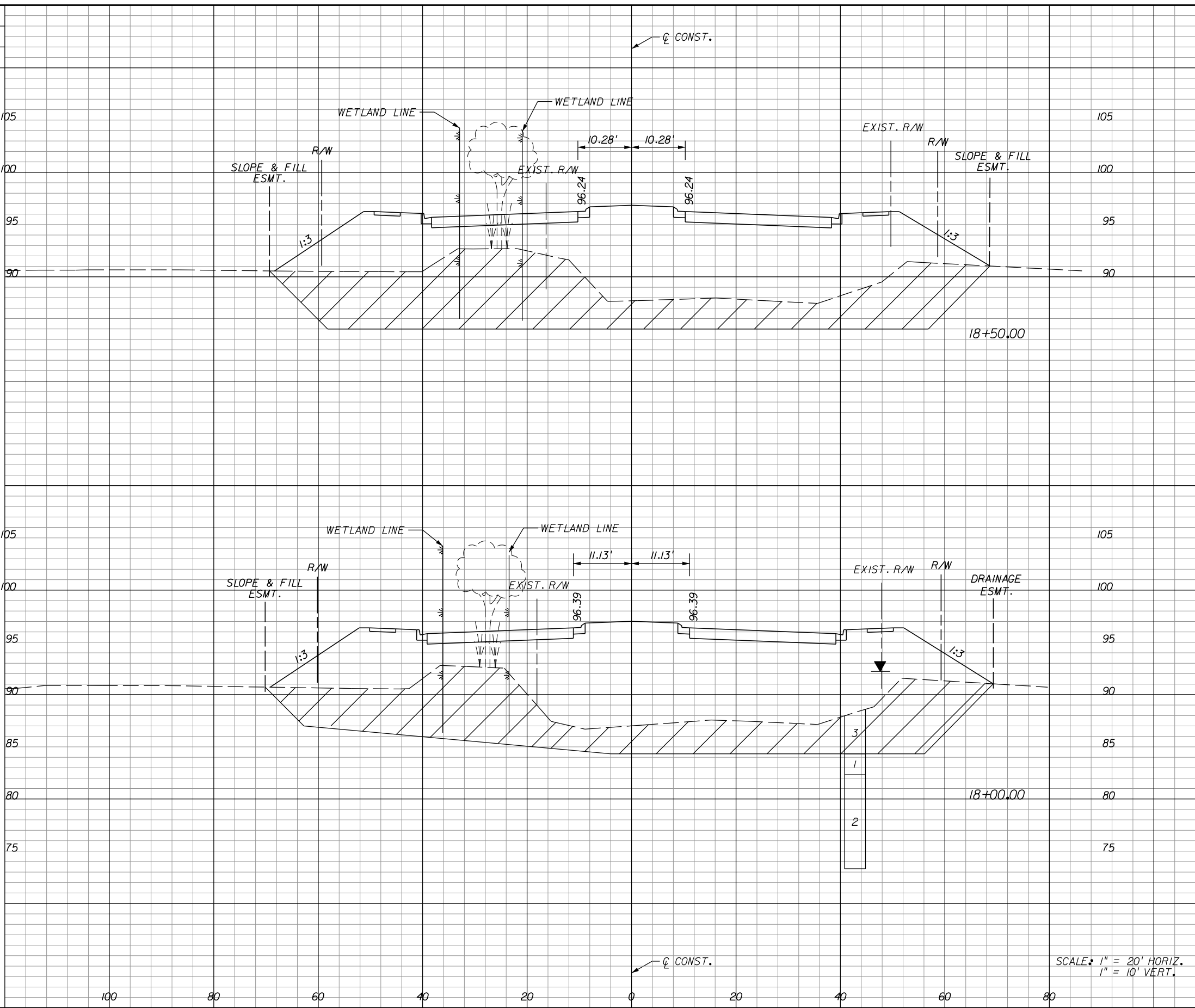
**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.
159

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material			
Regular Exc.		Embankment	
A	V	A	V

919			
611			
1079			
554			



0		687	
0			1365
0		787	
0			1537

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

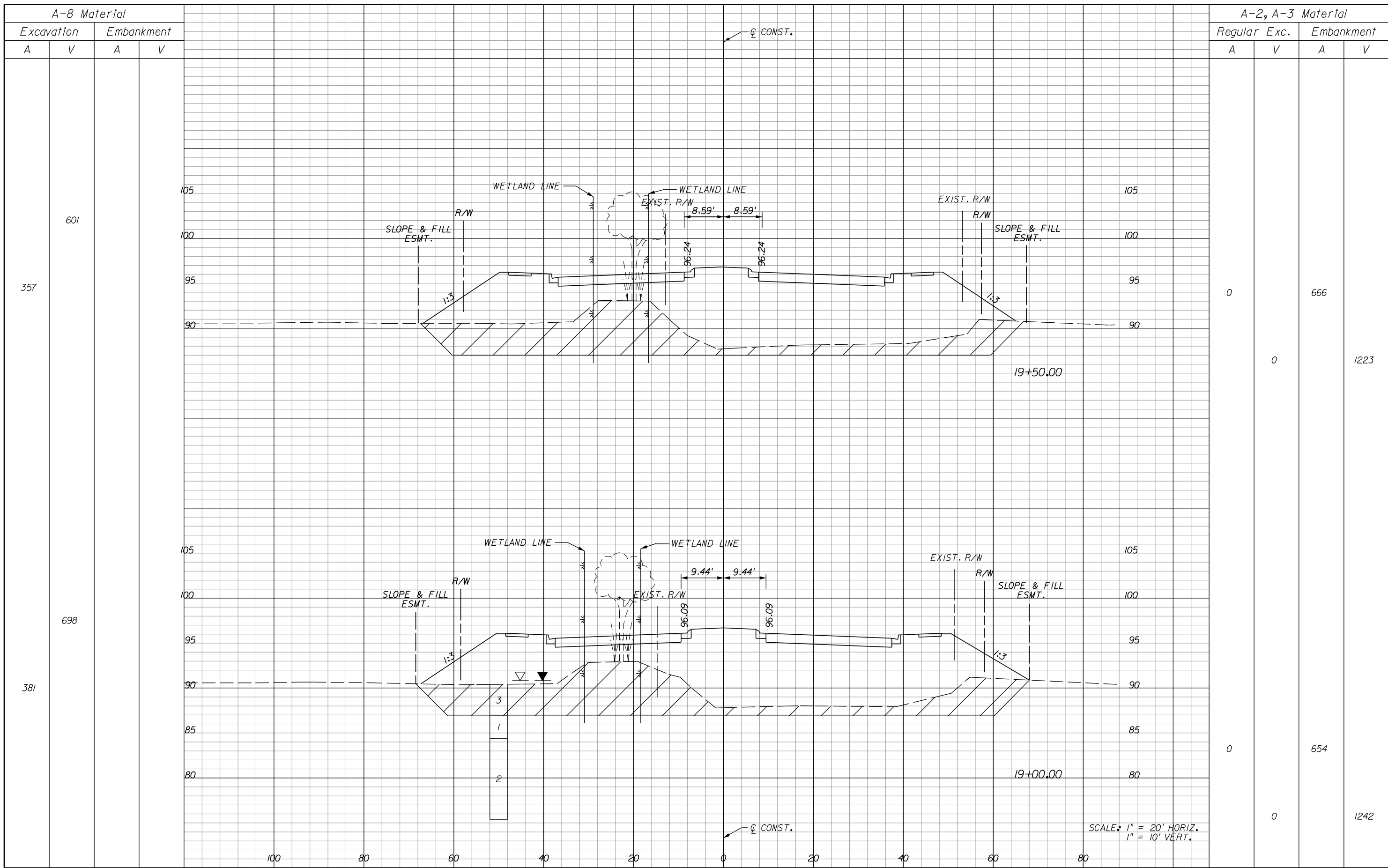
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**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.
160





A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material			
Regular Exc.		Embankment	
A	V	A	V

601			
357			
698			
381			

0		666	
0			1223
0		654	
0			1242

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

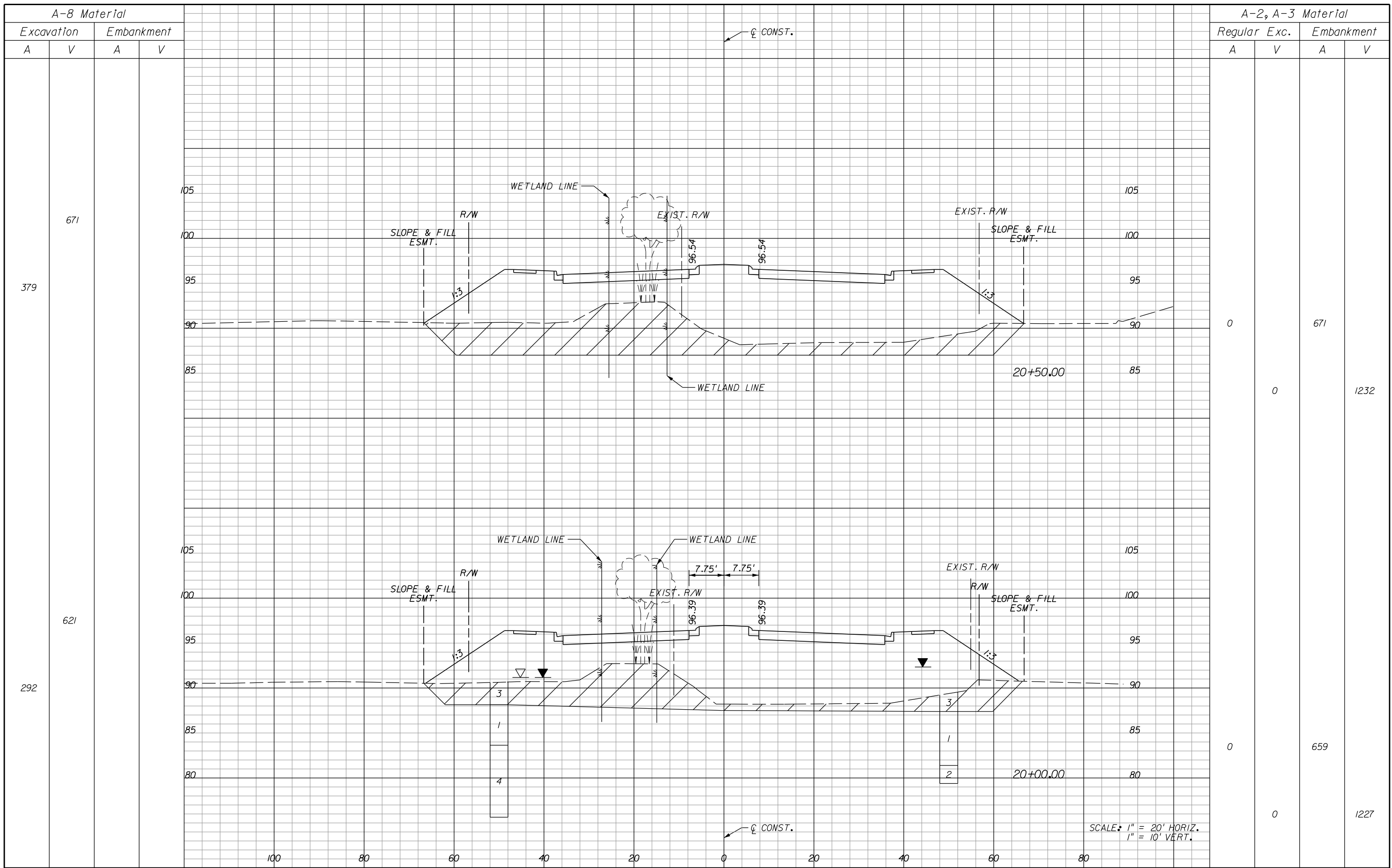
REVISIONS					
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FLORIDA

**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
161



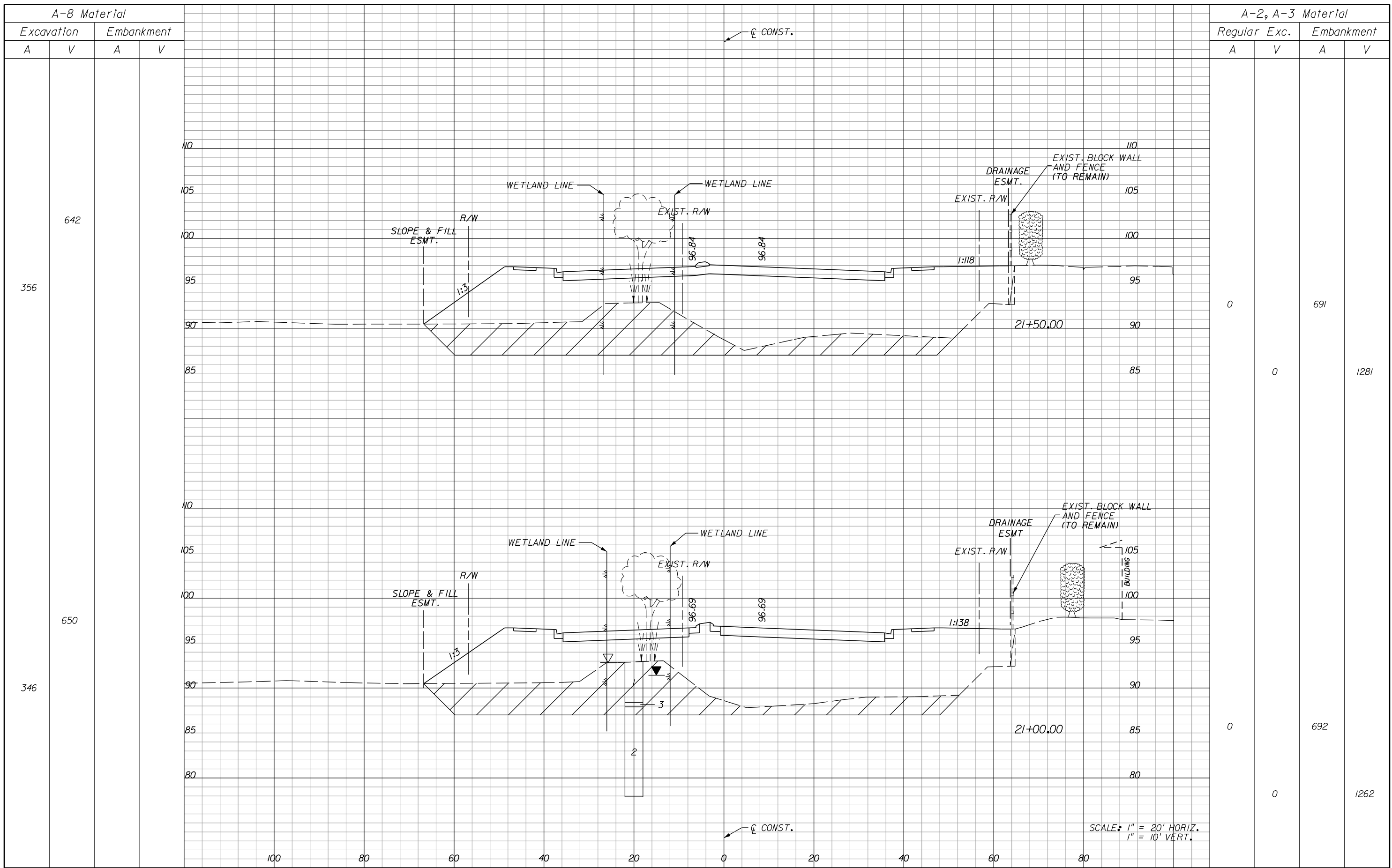
REVISIONS					
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**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
 162



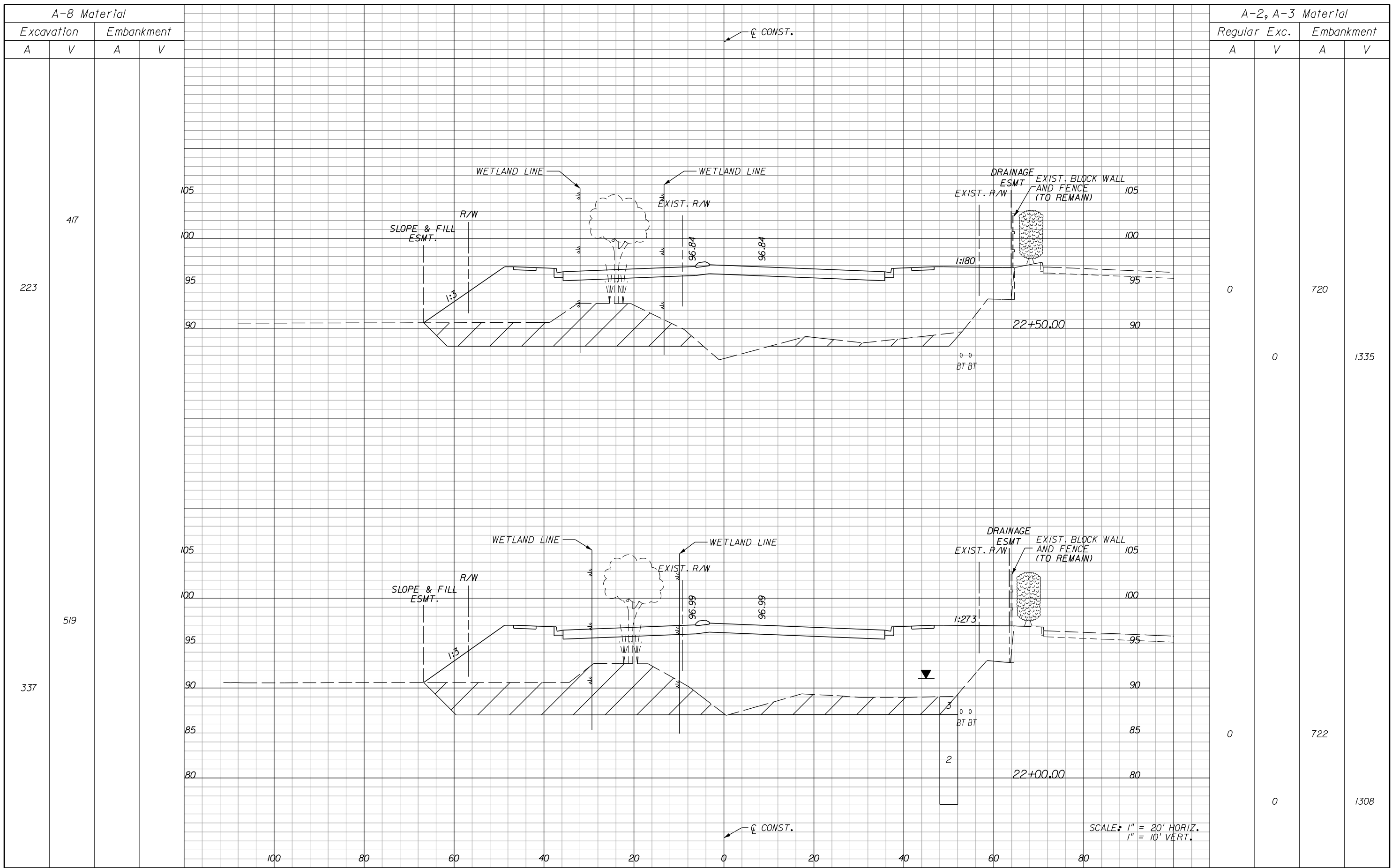
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**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.	163
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REVISIONS					
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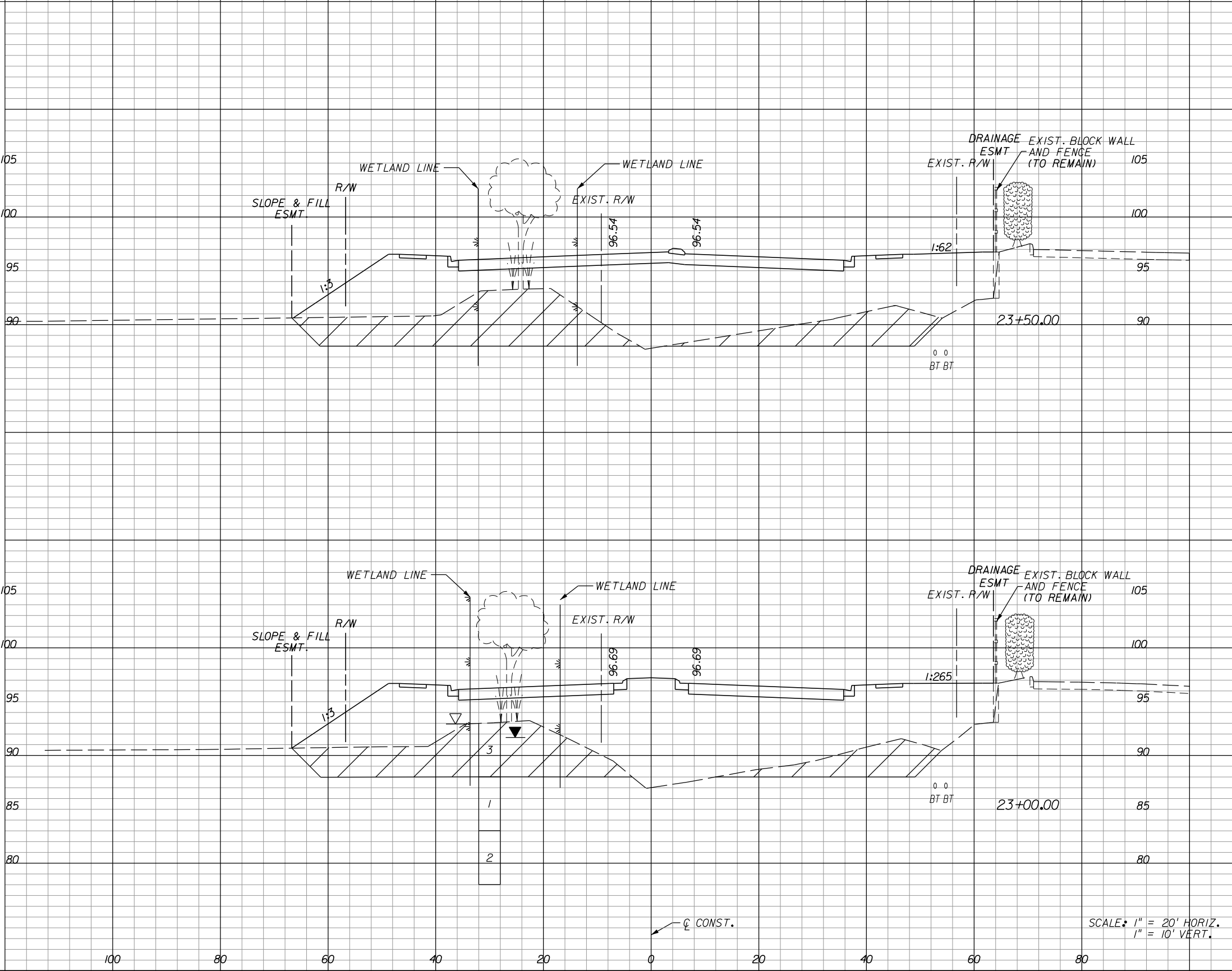
**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
 164

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material					
Regular		Exc.		Embankment	
A	V	A	V	A	V

588			
309			
543			
277			



0		592	
0			1157
0		658	
0			1276

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
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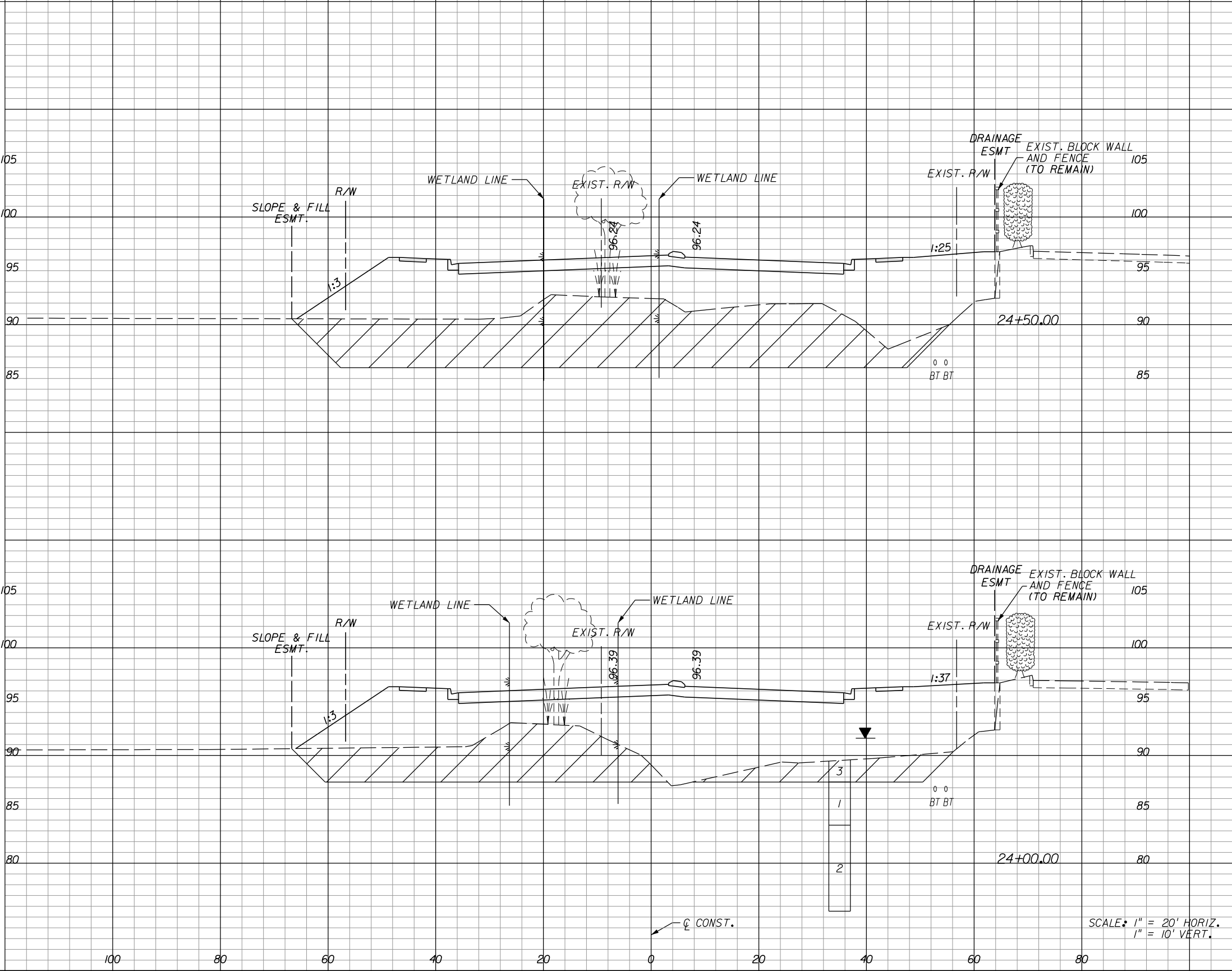
**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
165

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material					
Regular		Exc.		Embankment	
A	V	A	V	A	V

1239	580		
838	326		



0	0	514	1048
0	0	618	1121

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
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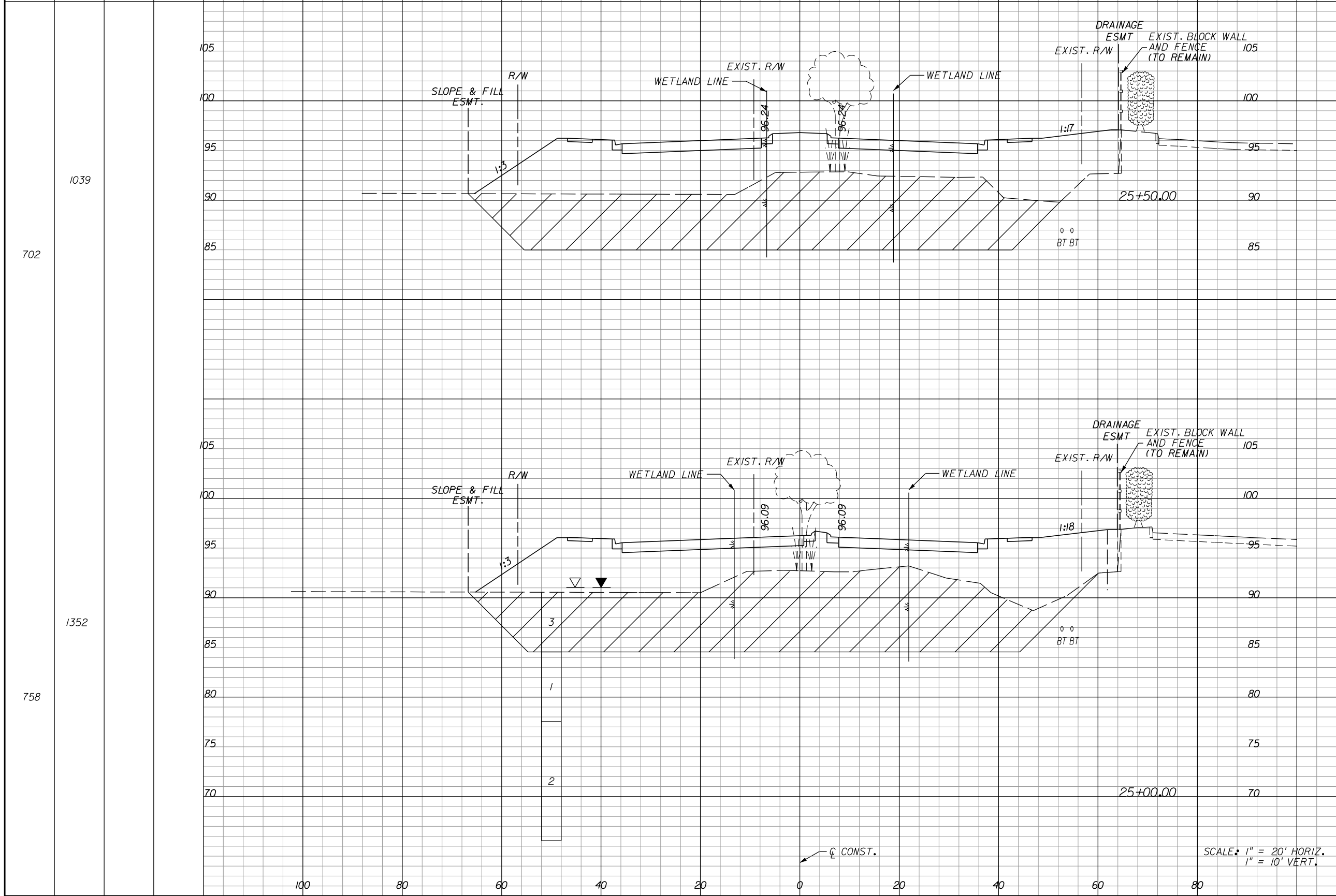
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
166

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material			
Regular Exc.		Embankment	
A	V	A	V



0	0	492	0
0	0	888	0
0	0	467	0
0	0	908	0

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

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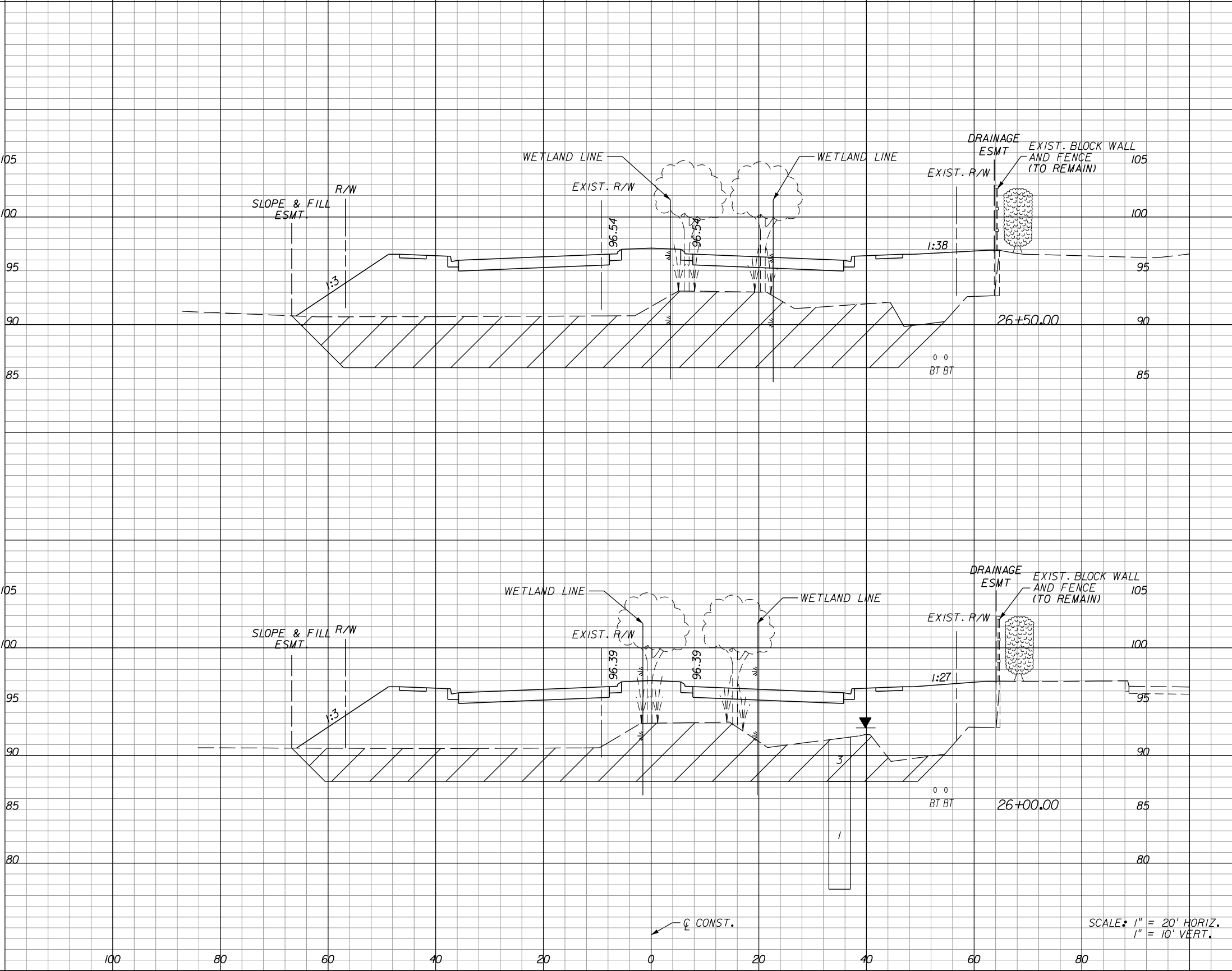
**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
167

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material			
Regular Exc.		Embankment	
A	V	A	V

1119			
608			
952			
420			



SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

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**HOLDEN AVENUE**  
**CROSS SECTIONS**

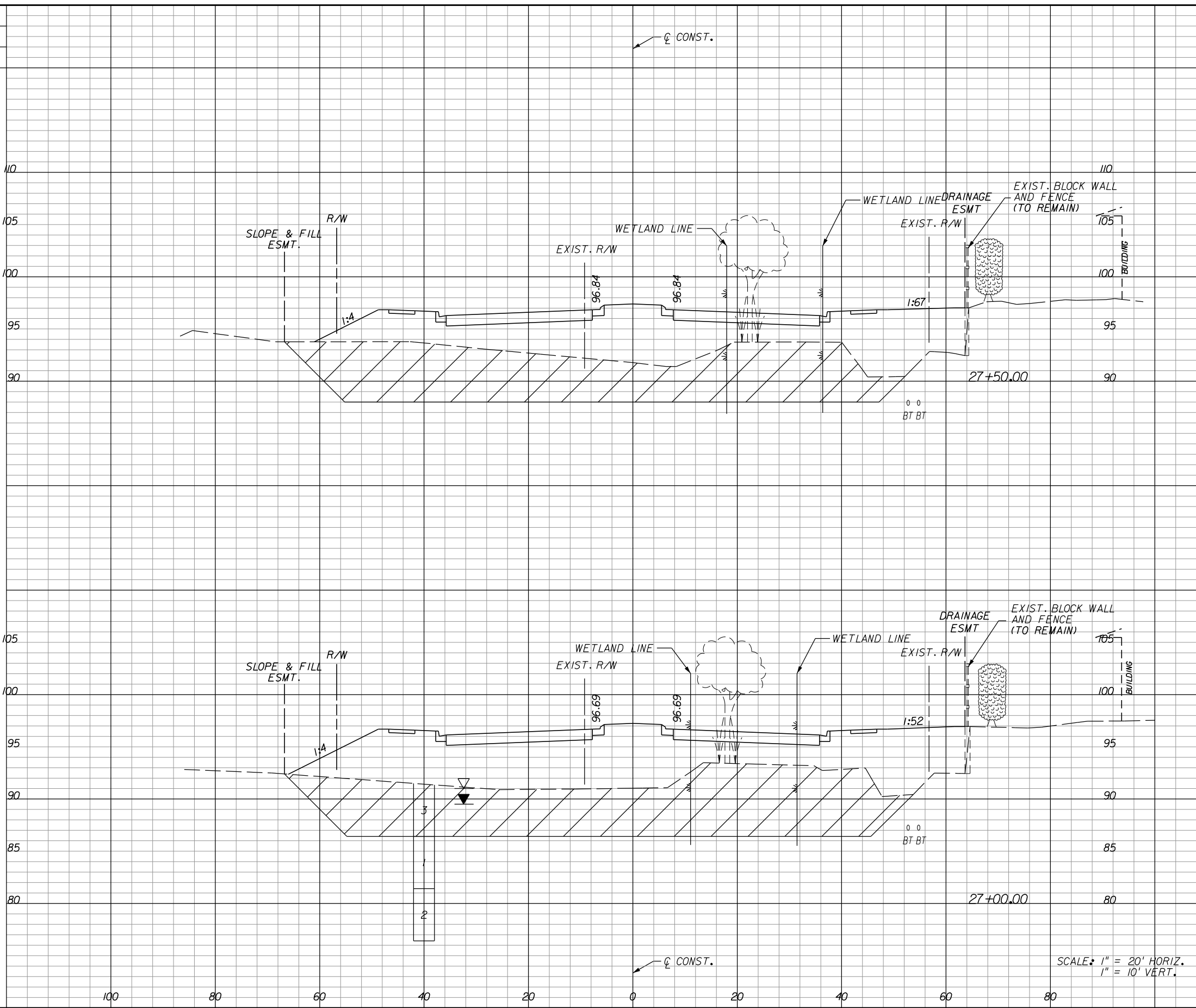
SHEET NO.
168



A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material			
Regular Exc.		Embankment	
A	V	A	V

931	542
1058	601



0	0	398	830
0	0	499	949

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

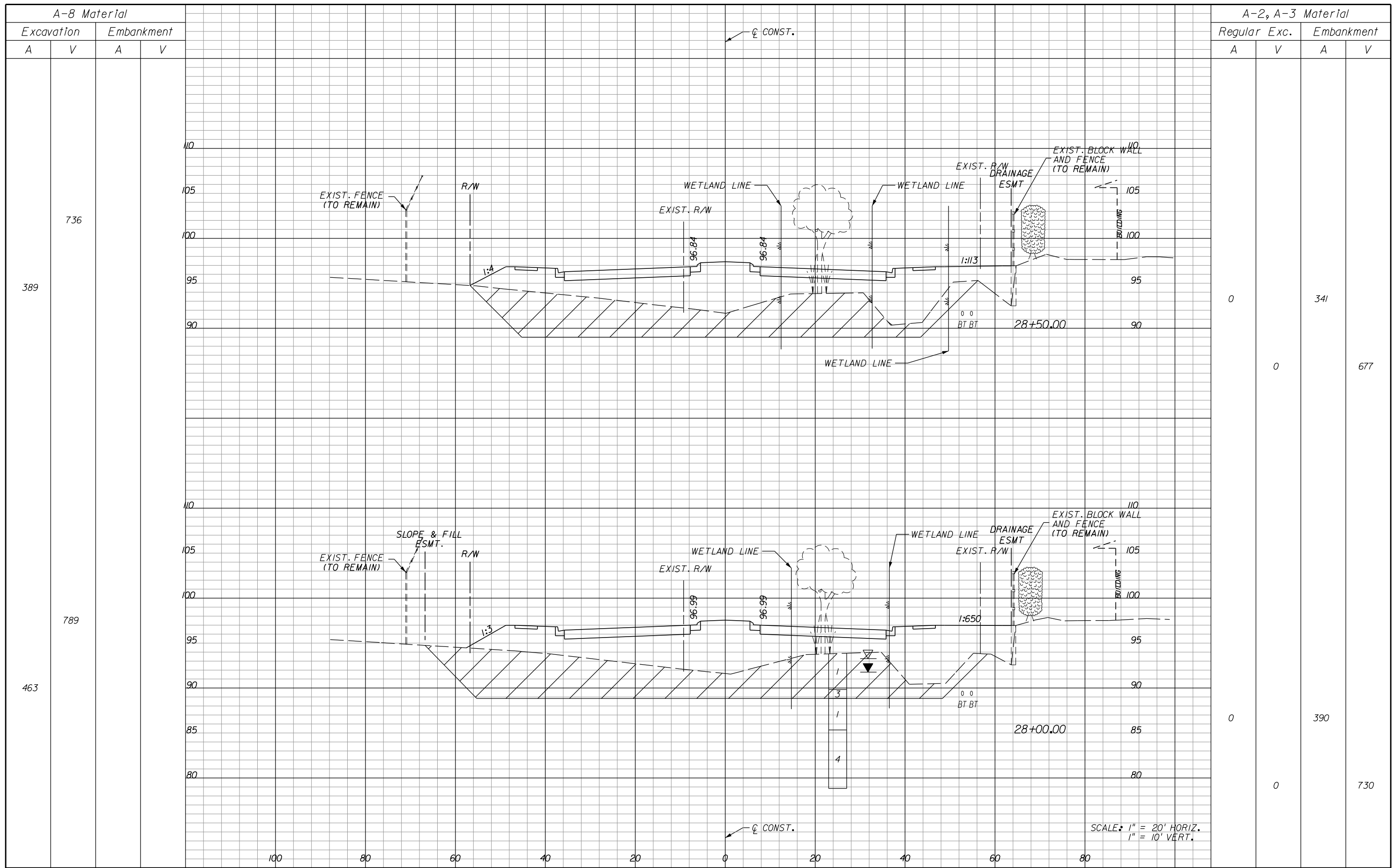
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**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
169



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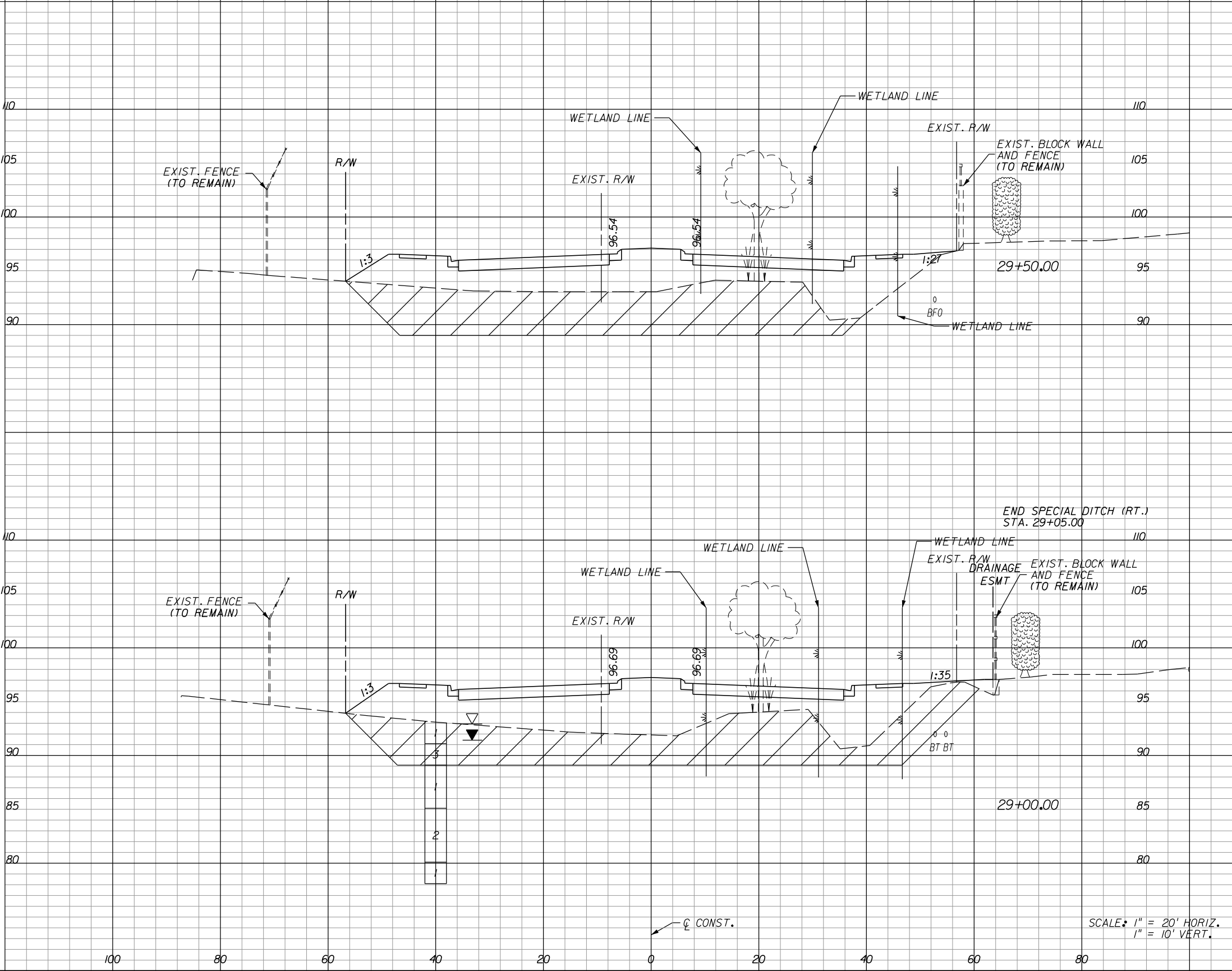
**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
 170

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material					
Regular		Exc.		Embankment	
A	V	A	V	A	V

469			
376			
724			
406			



SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

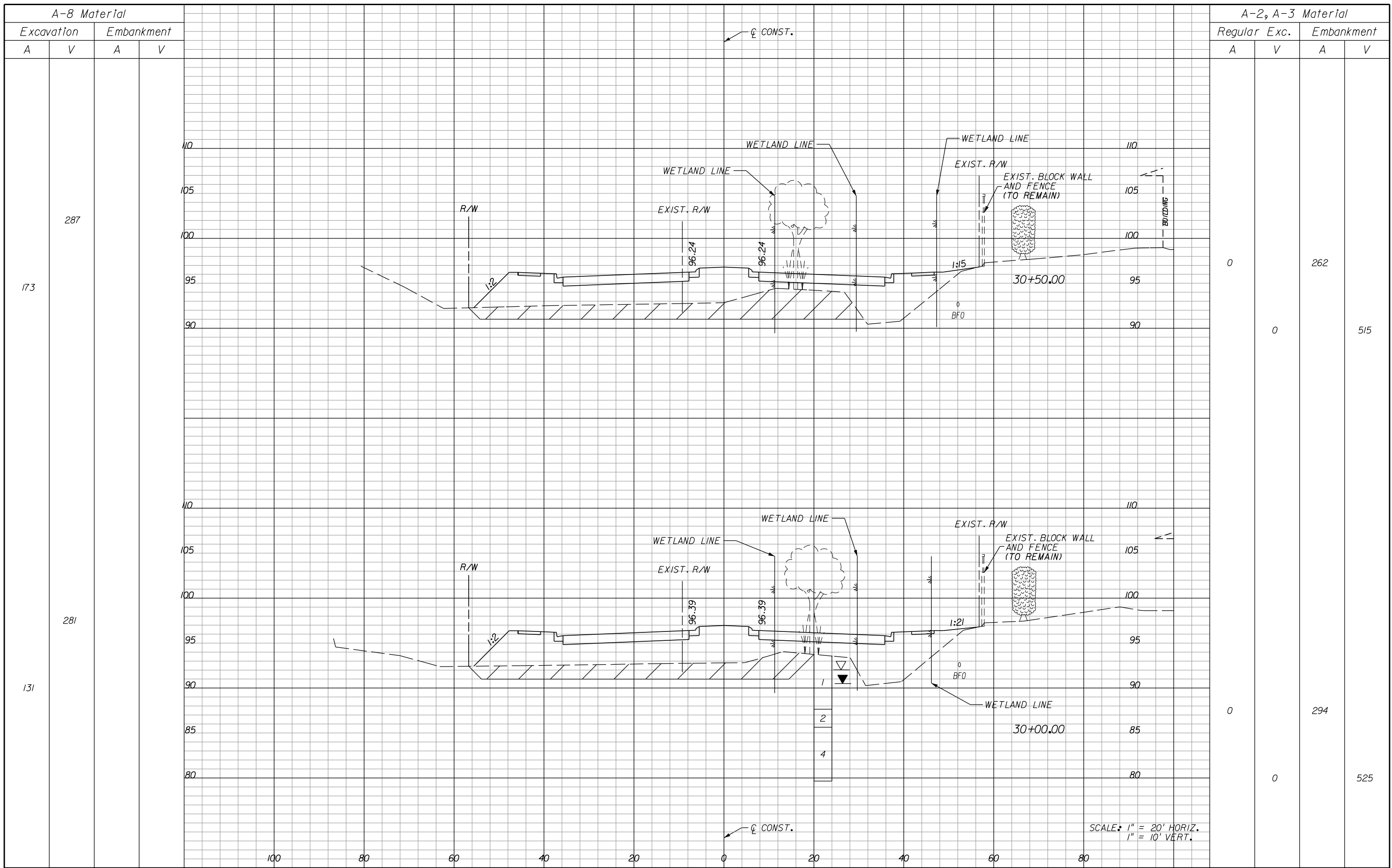
REVISIONS					
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FLORIDA

**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.	171
-----------	-----



A-8 Material			
Excavation		Embankment	
A	V	A	V
173	287		
131	281		

A-2, A-3 Material			
Regular Exc.		Embankment	
A	V	A	V
0	0	262	515
0	0	294	525

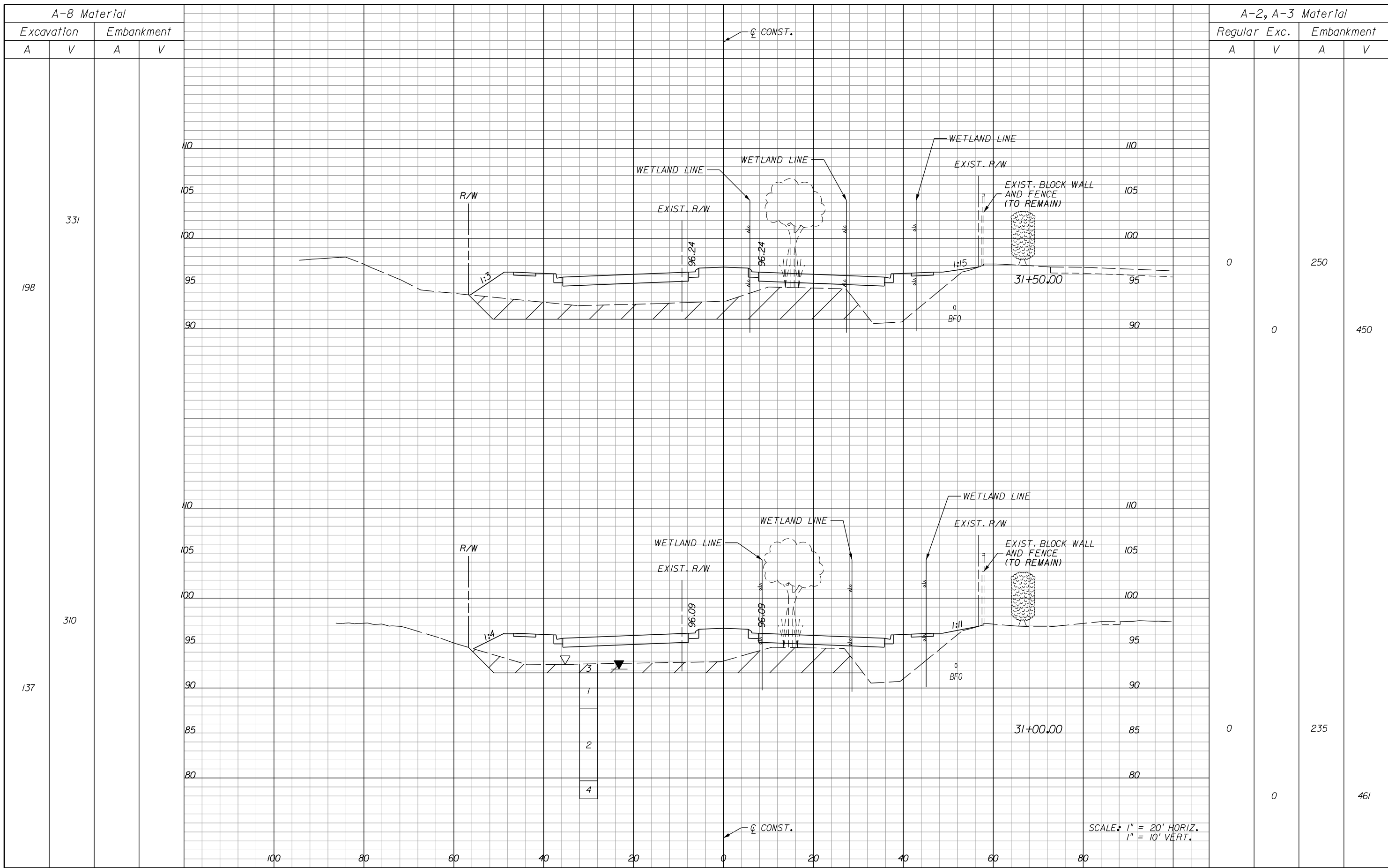
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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**ORANGE COUNTY**  
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**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
 172



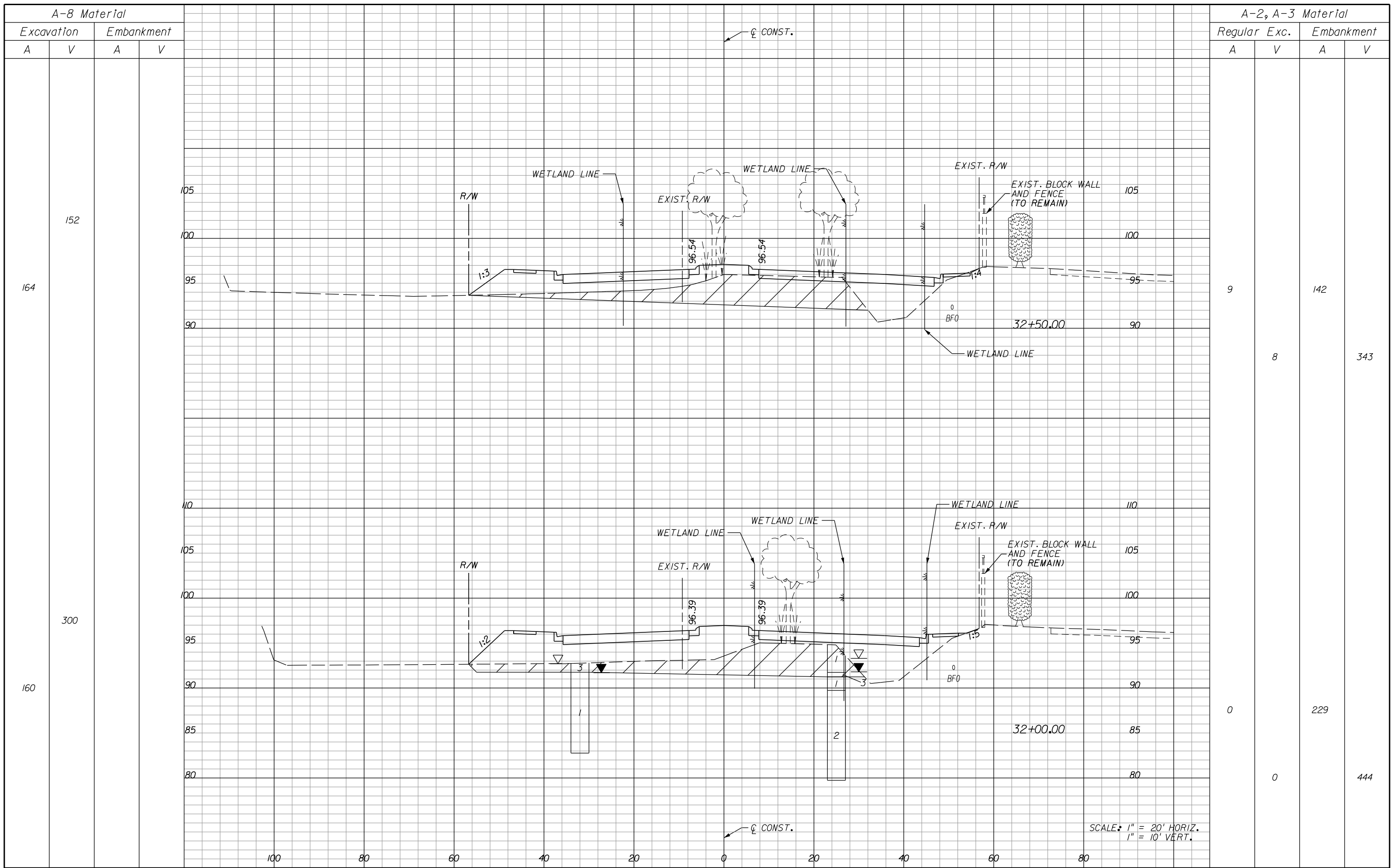
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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**ORANGE COUNTY**  
**GOVERNMENT**  
 FLORIDA

**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
 173



A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material					
Regular		Exc.		Embankment	
A	V	A	V	A	V

152			
164			
300			
160			

9		142	
8		343	
0		229	
0		444	

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

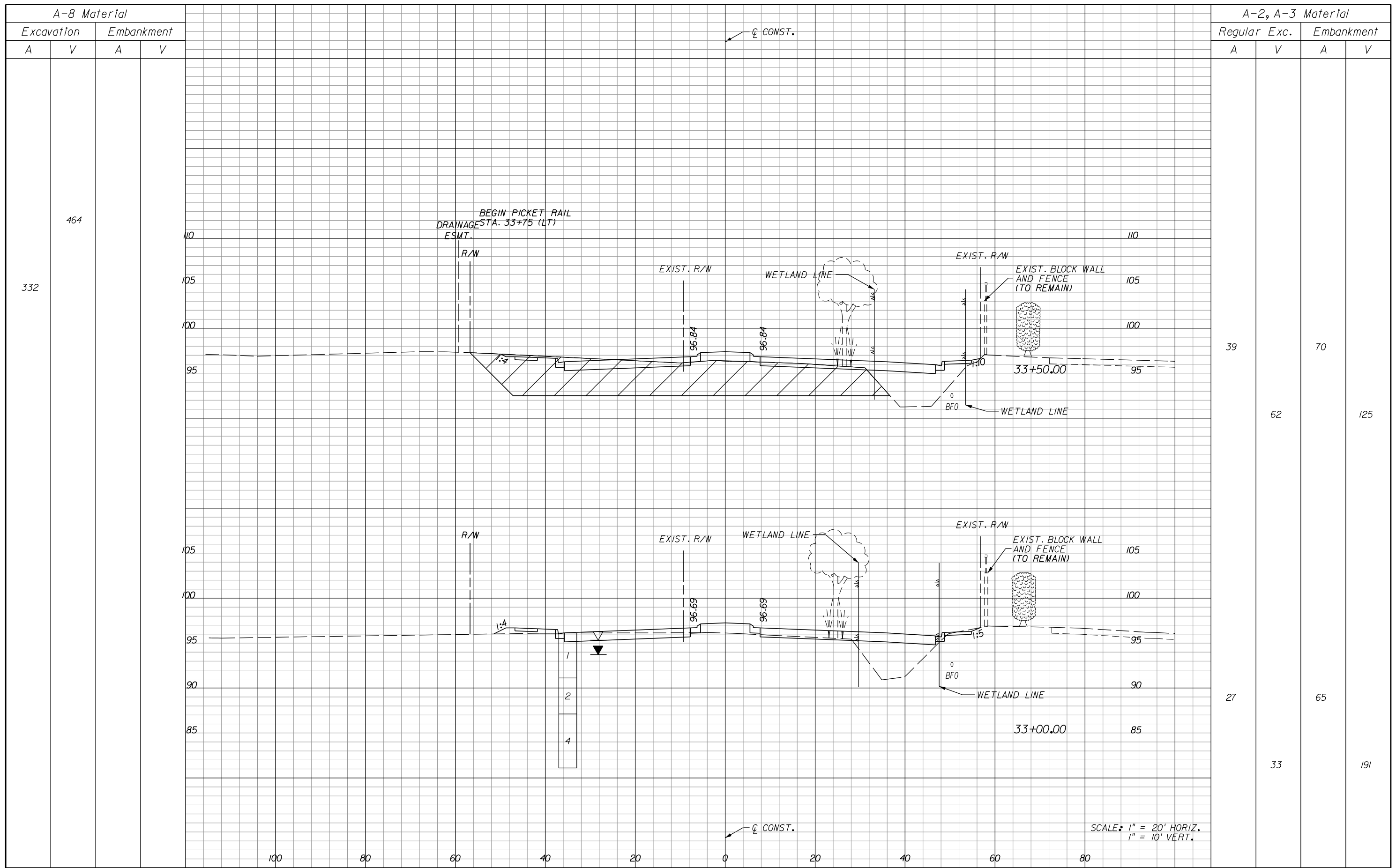
REVISIONS					
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**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
174



REVISIONS					
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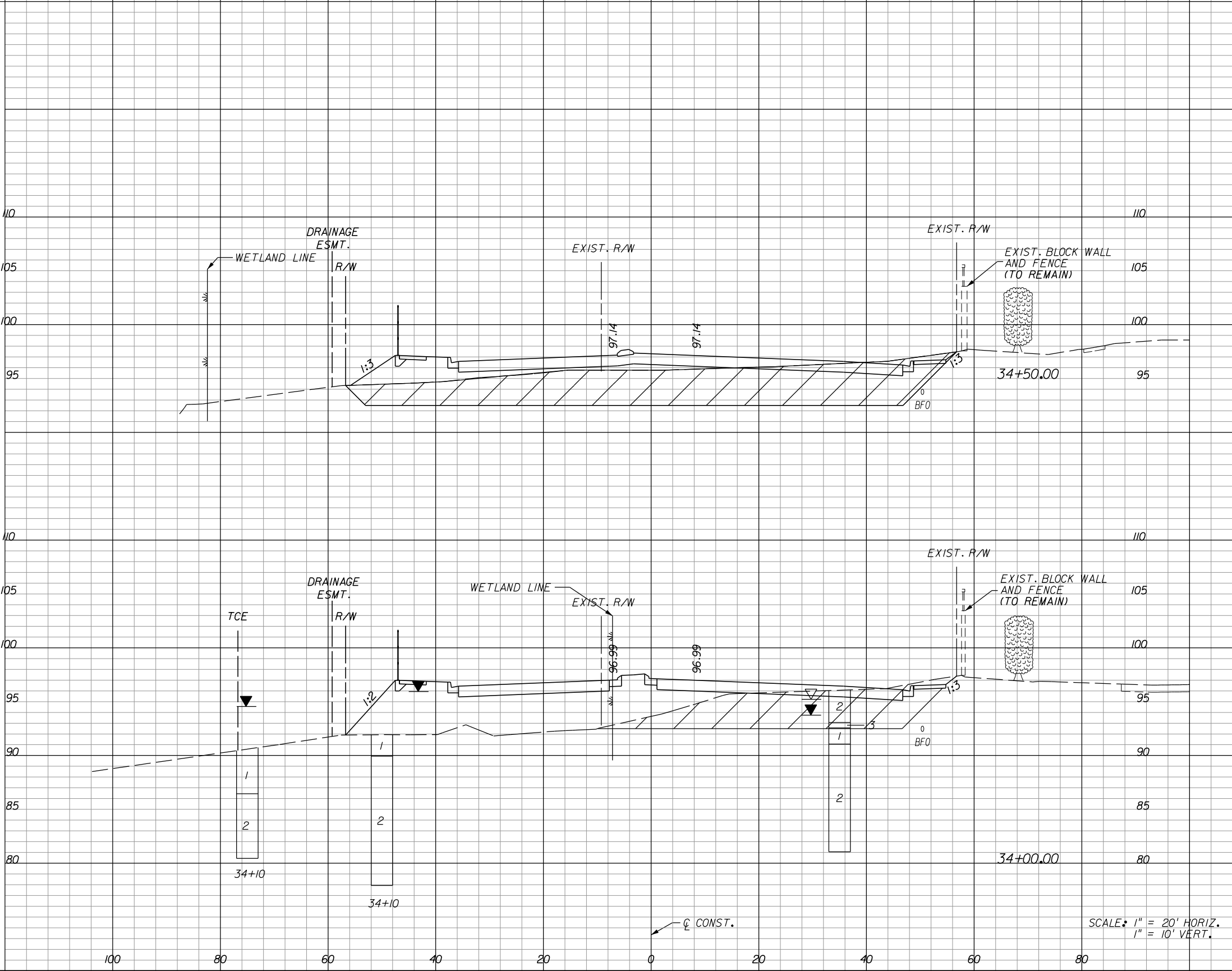
**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
 175

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material					
Regular		Exc.		Embankment	
A	V	A	V	A	V

315			
340			
471			
169			



28		51	
48		251	
23		220	
58		268	

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

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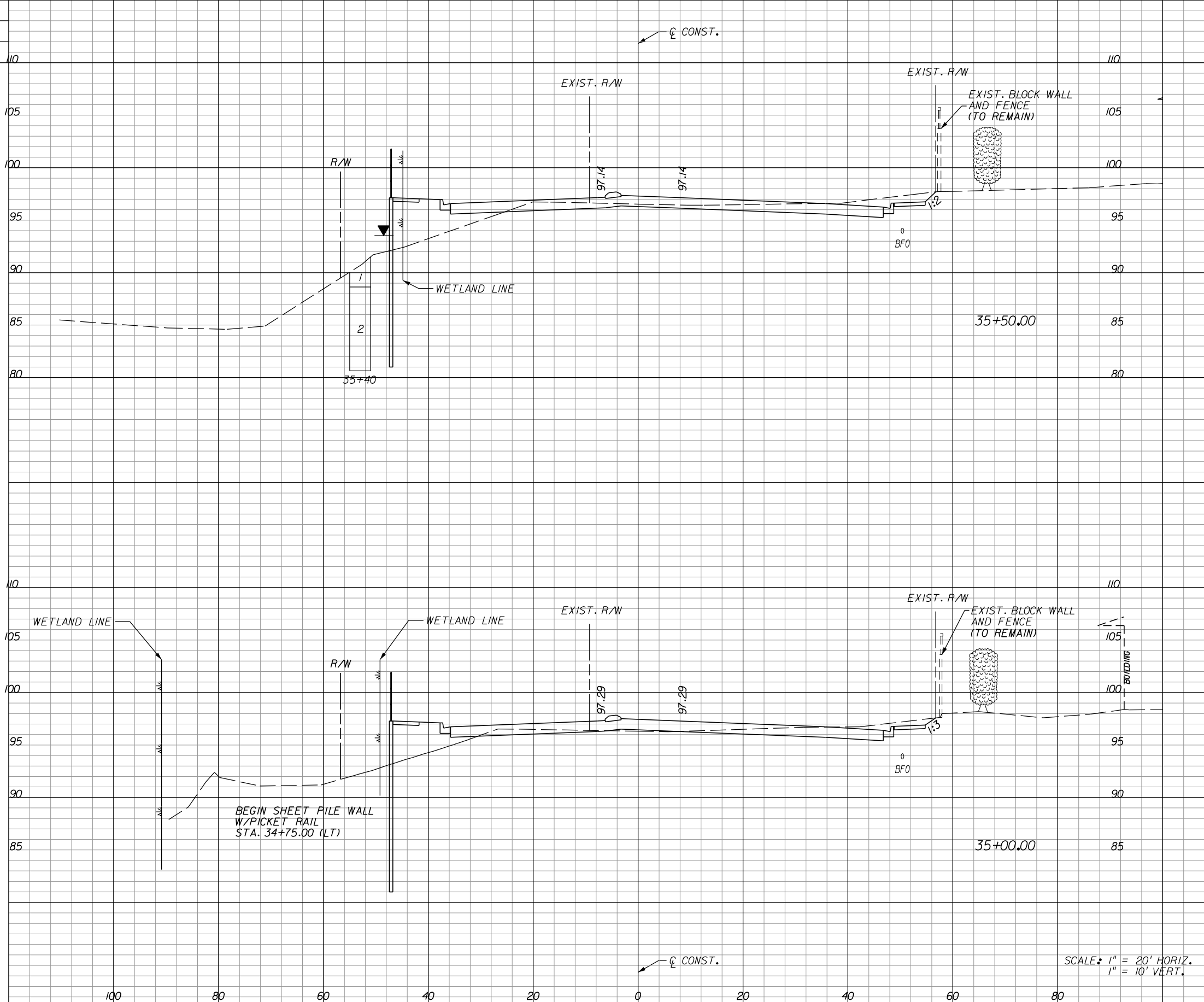
**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
176



A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material			
Regular Exc.		Embankment	
A	V	A	V



				62		39
					104	61
				50		27
					73	73

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

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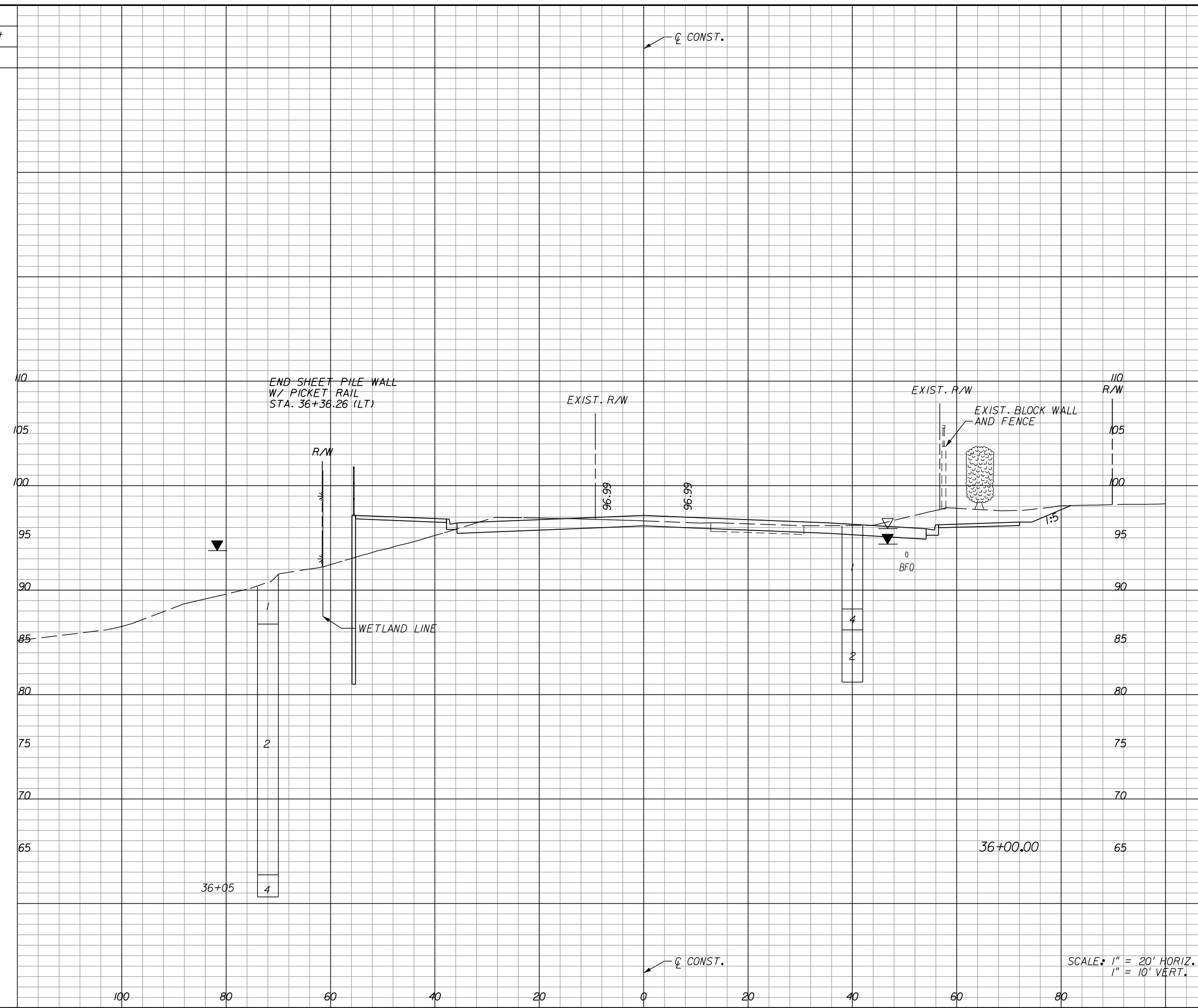
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
177

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material			
Regular		Exc.	
A	V	A	V



SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
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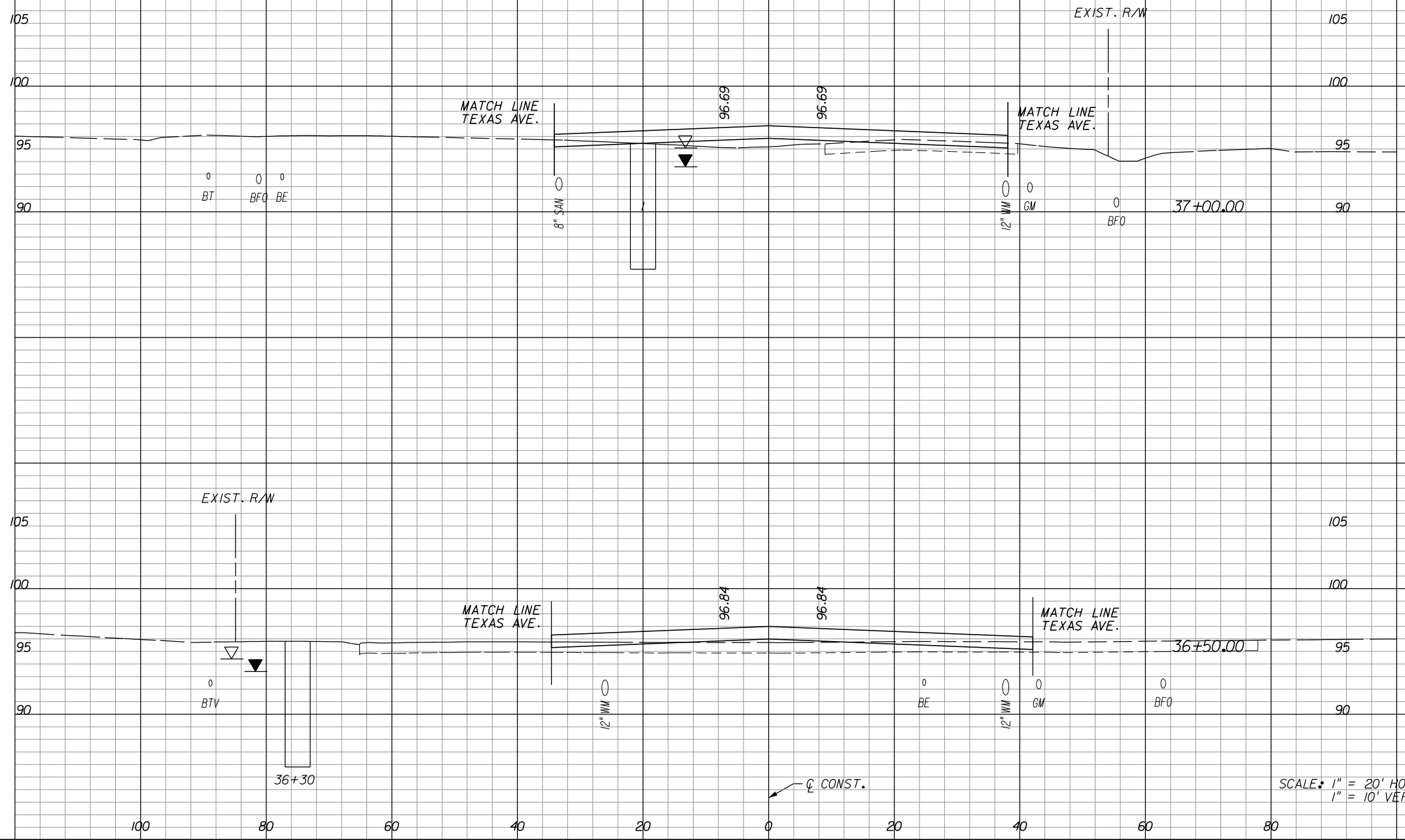
**ORANGE COUNTY GOVERNMENT**  
FLORIDA

**HOLDEN AVENUE CROSS SECTIONS**

SHEET NO. 178

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material			
Regular Exc.		Embankment	
A	V	A	V



11	13
24	16
14	4
128	38

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

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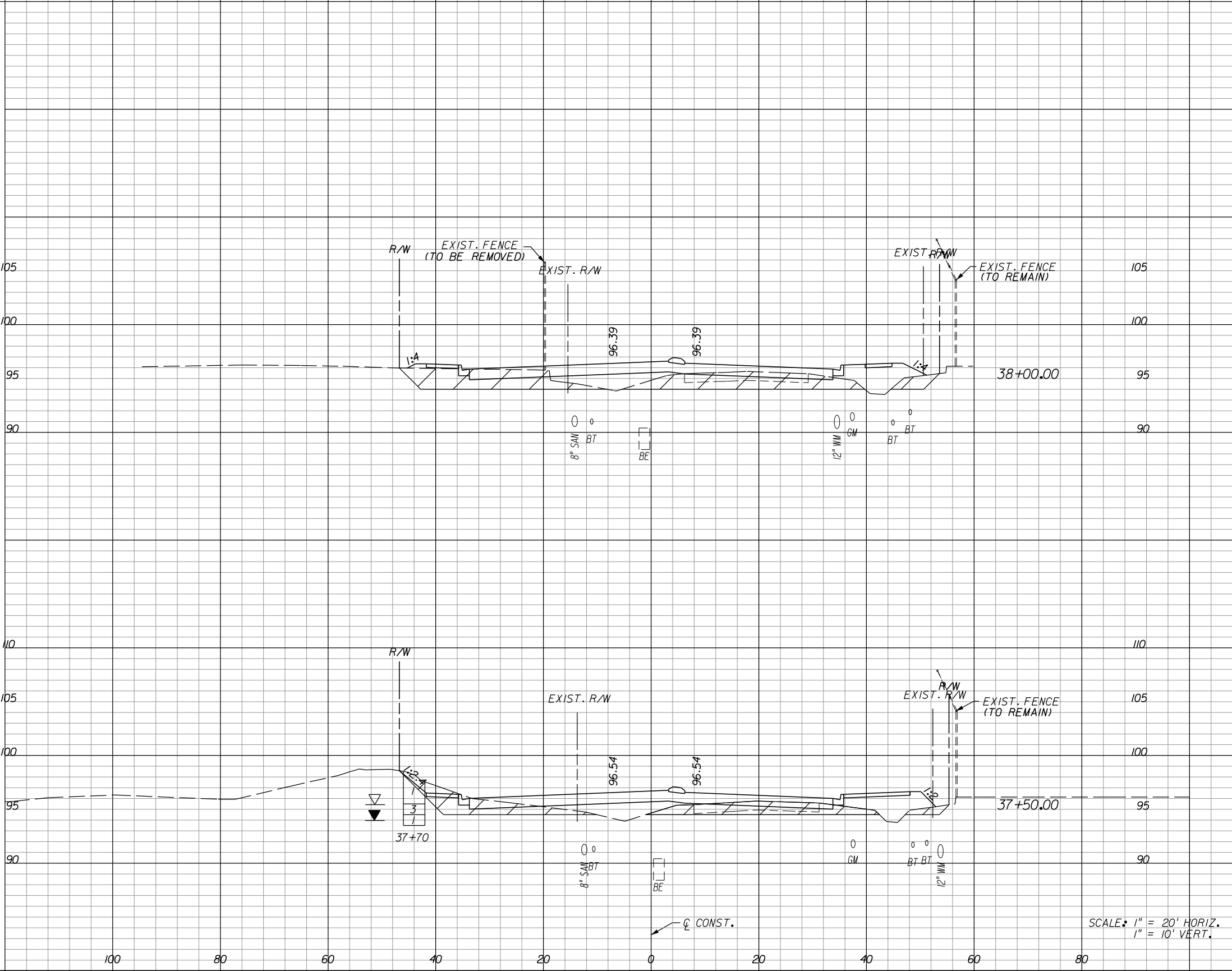
**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.
179

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material			
Regular Exc.		Embankment	
A	V	A	V

108			
117			
186			
84			
78			



23		47	
	45		84
26		44	
	34		53

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

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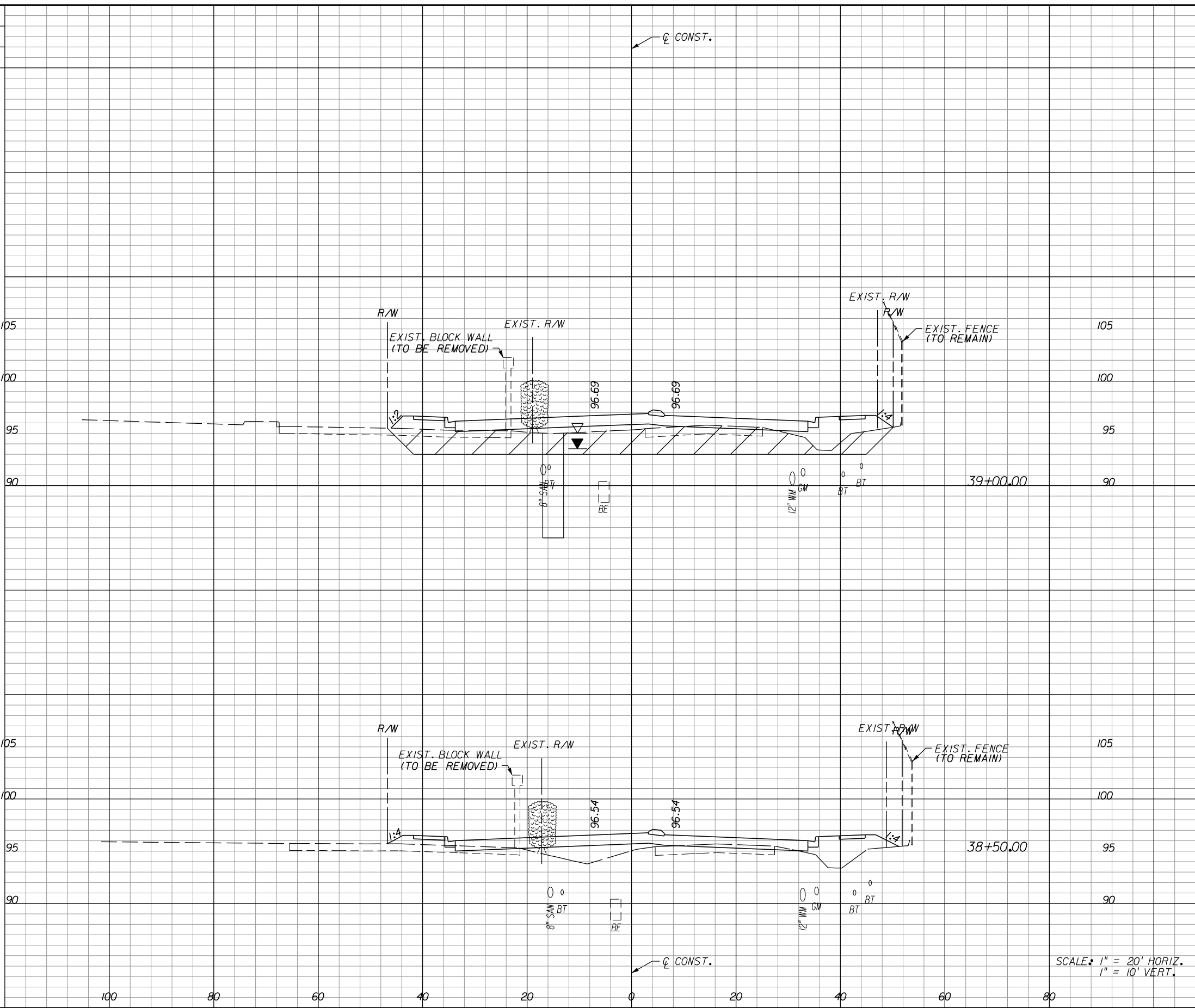
**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
180

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material					
Regular		Exc.		Embankment	
A	V	A	V	A	V

202	215		
0	187		



17	52		
48	108		
34	65		
53	104		

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

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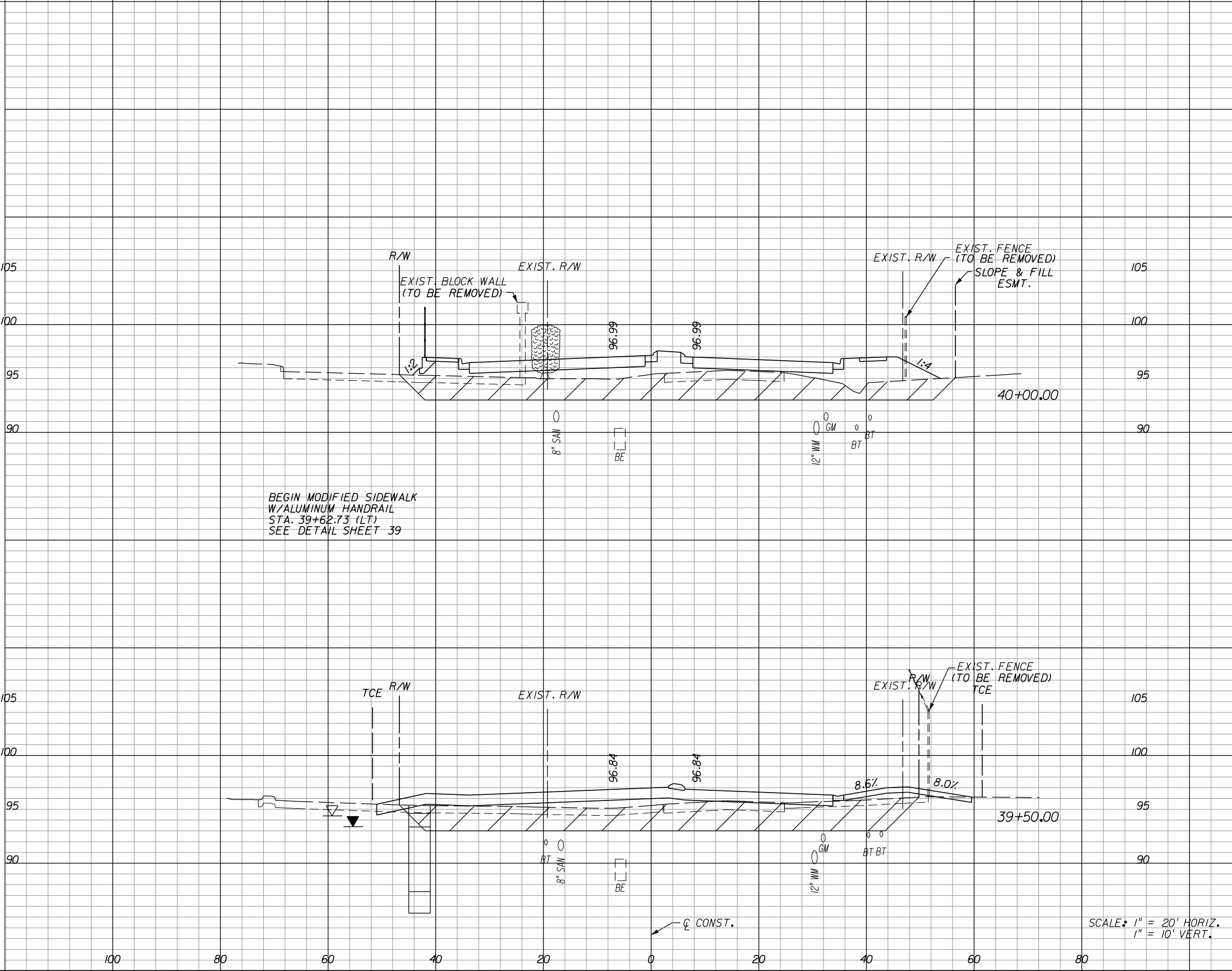
**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.
181

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material			
Regular Exc.		Embankment	
A	V	A	V

211	390		
227	406		



3	80	103
8	31	77

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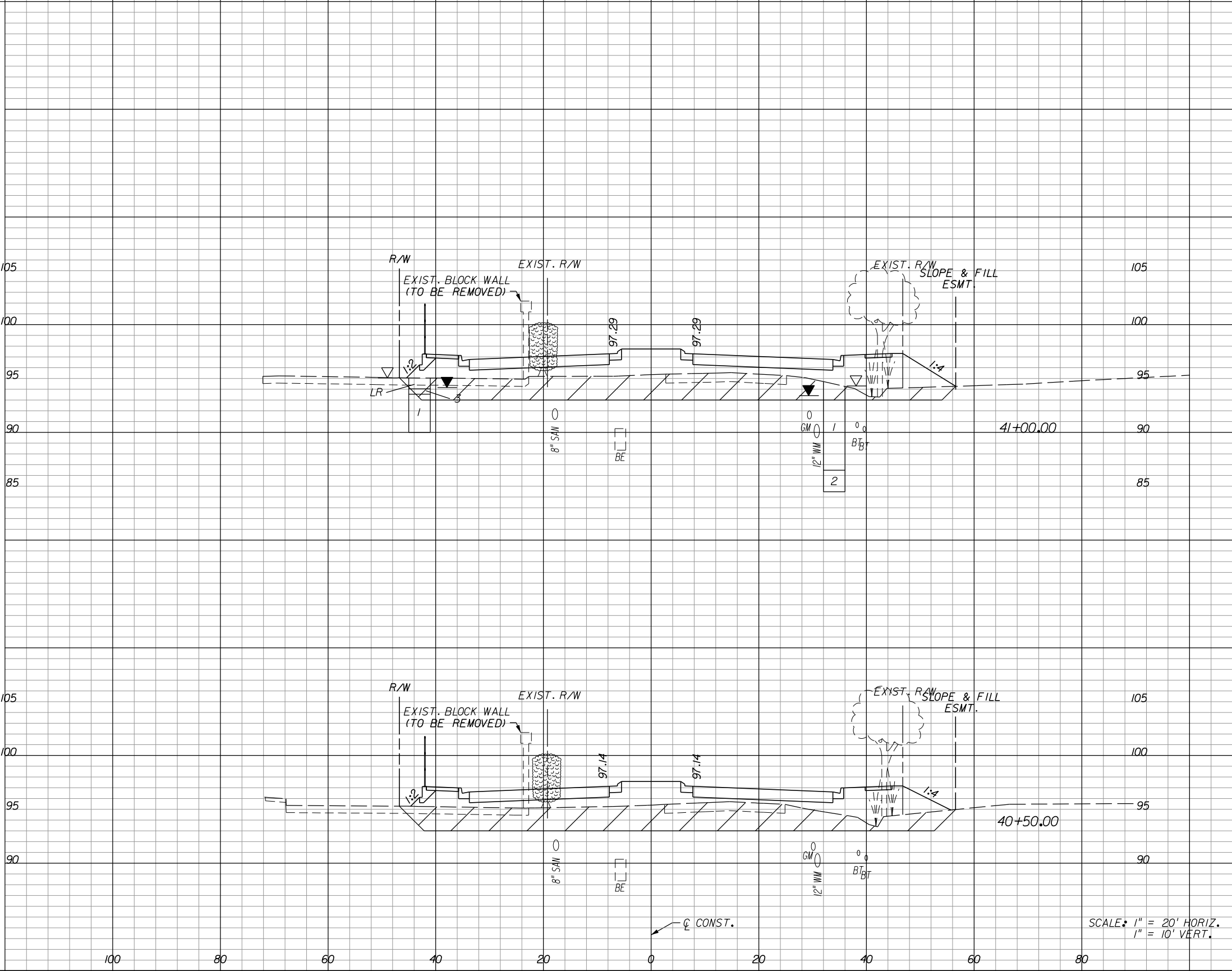
**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
182

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material					
Regular		Exc.		Embankment	
A	V	A	V	A	V

195	355		
375			
210			



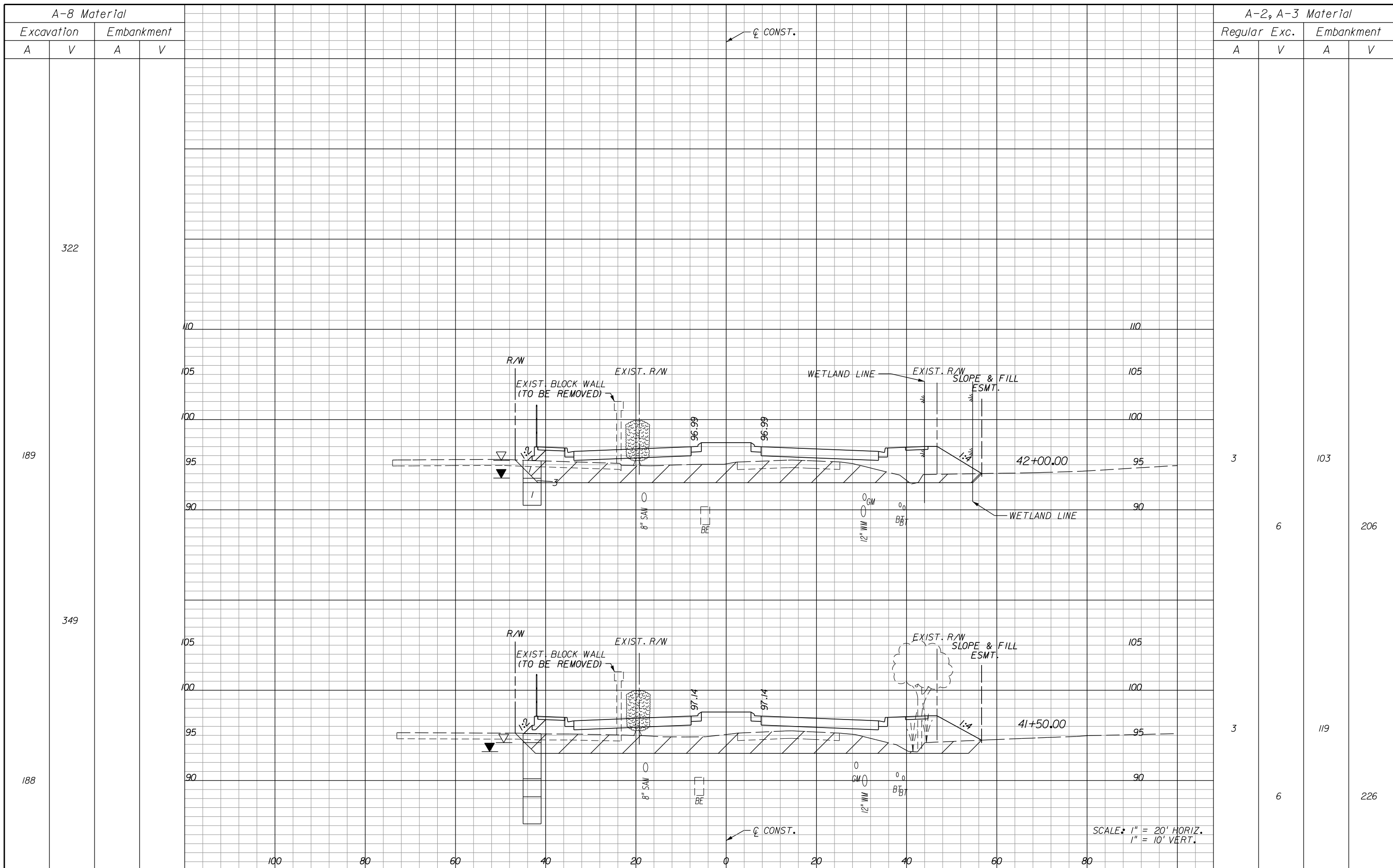
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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FOREST W. ADKINS, P.E. P.E. NUMBER 56003

**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.	183
-----------	-----



REVISIONS					
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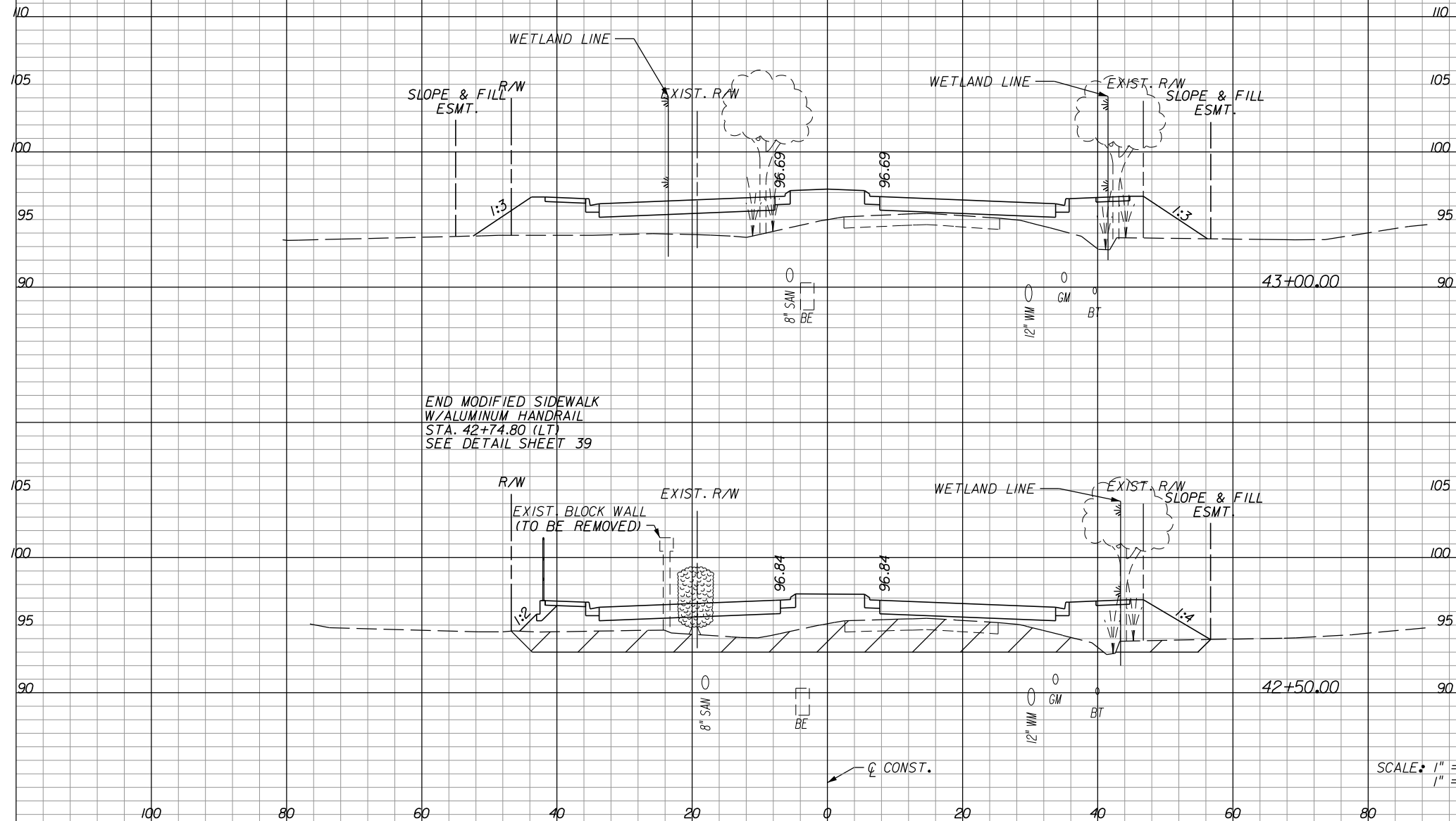
**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
 184



A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material			
Regular Exc.		Embankment	
A	V	A	V



END MODIFIED SIDEWALK  
W/ALUMINUM HANDRAIL  
STA. 42+74.80 (LT)  
SEE DETAIL SHEET 39

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

0  
147  
159

0  
164  
284  
1  
143  
4  
228

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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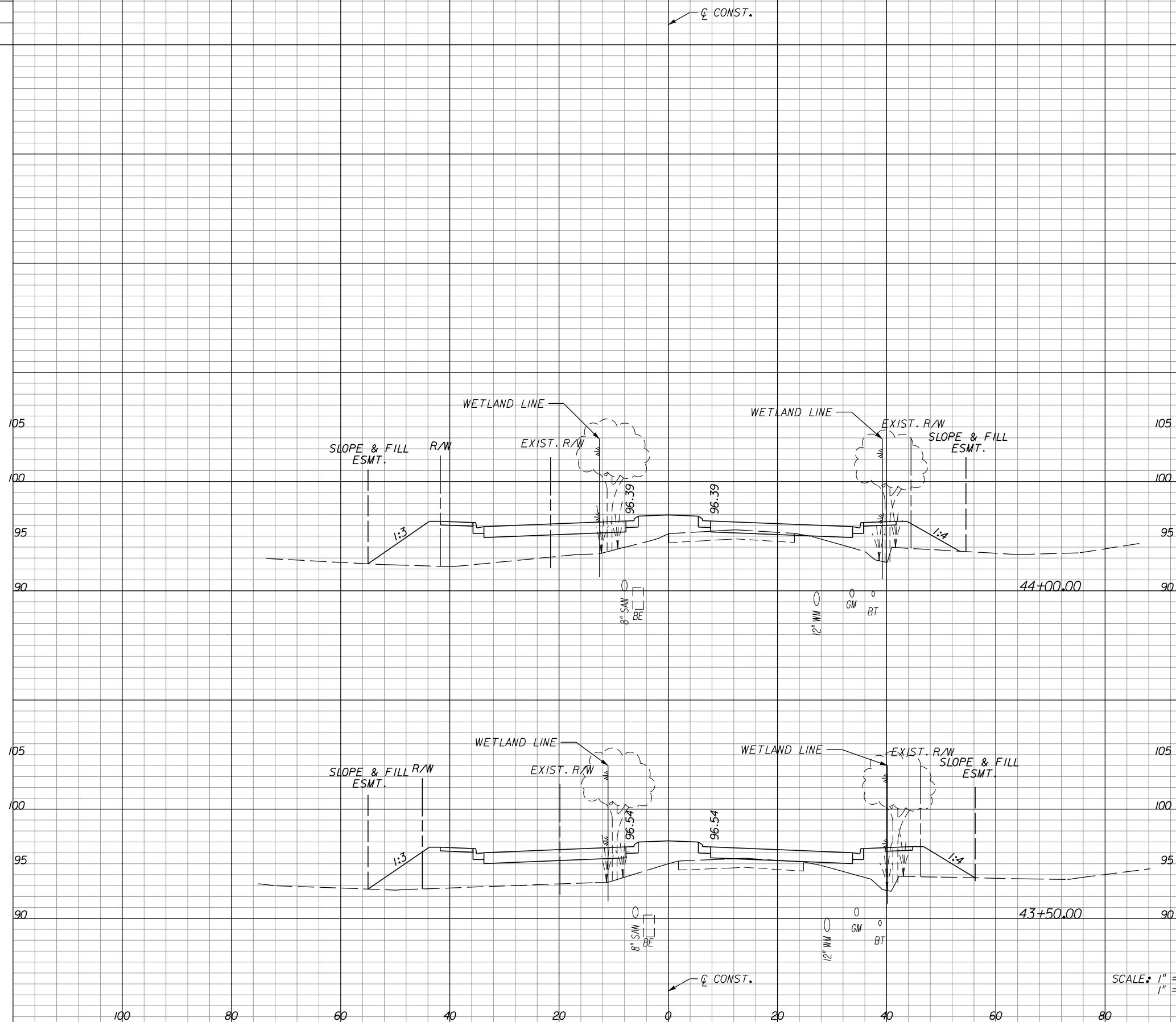
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
185

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material			
Regular Exc.		Embankment	
A	V	A	V



3	165
4	316
0	176
0	315

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

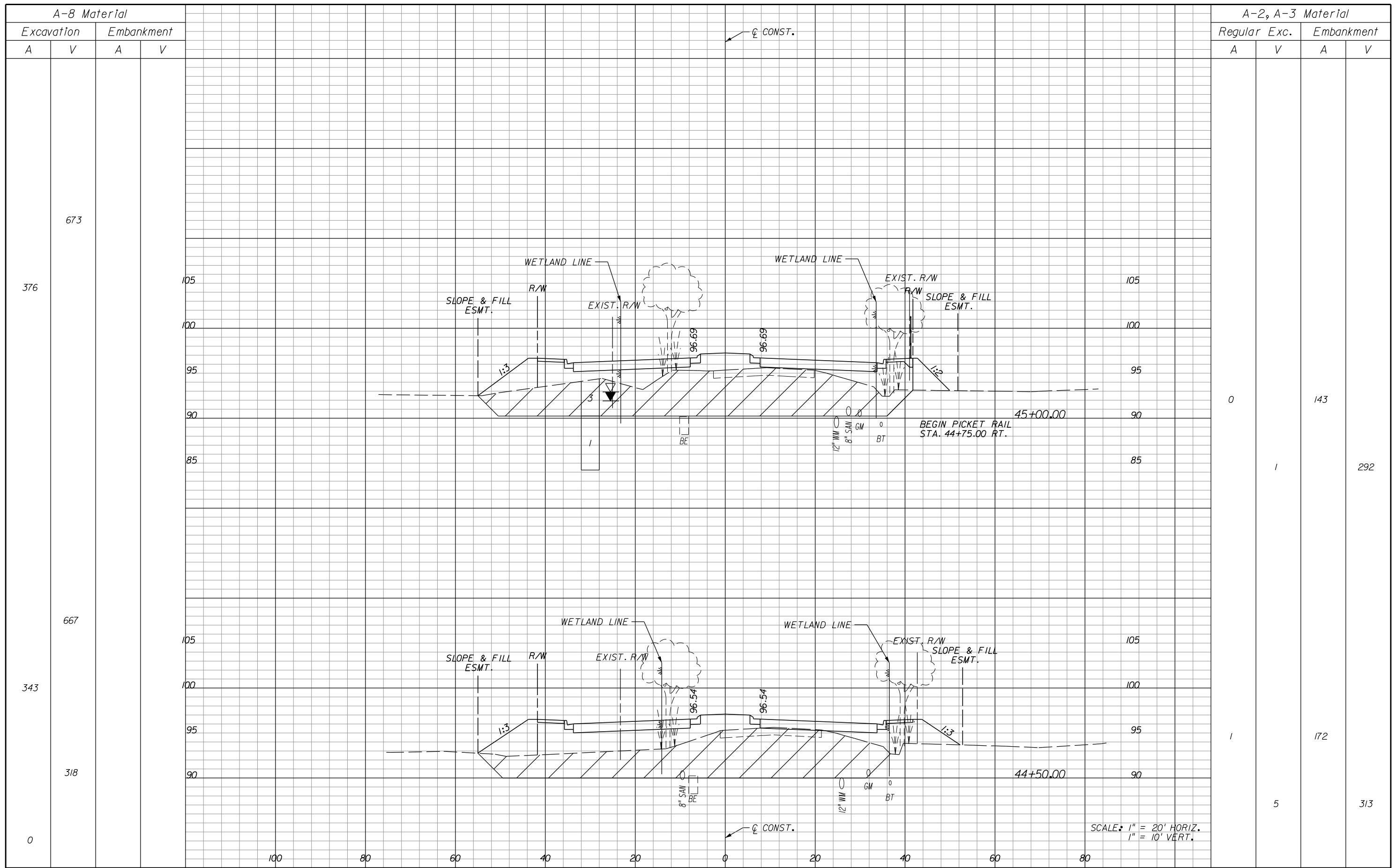
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.
186



REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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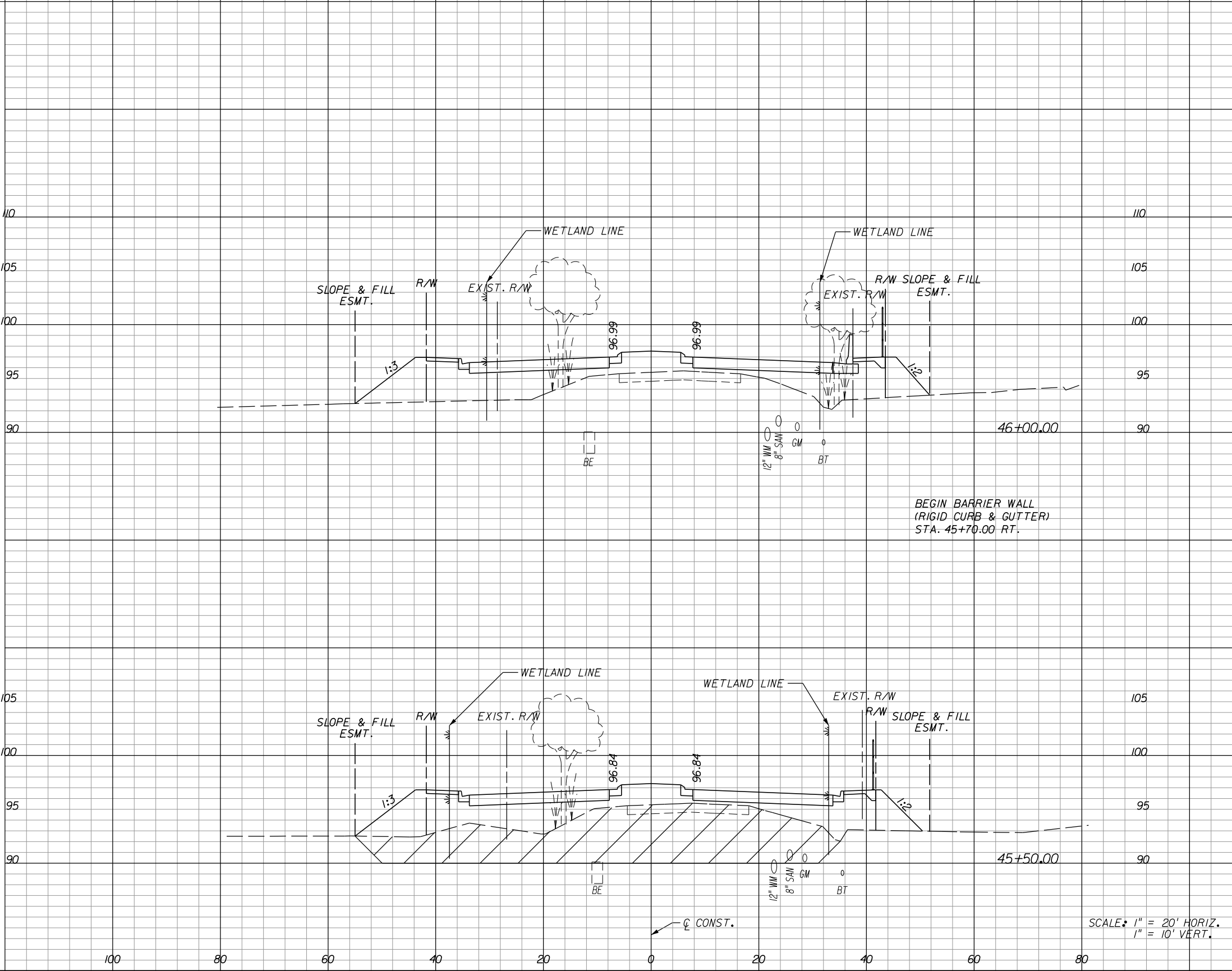
**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
 187

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material					
Regular		Exc.		Embankment	
A	V	A	V	A	V

0			
325			
351			



0		197	
0			359
0		190	
0			309

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
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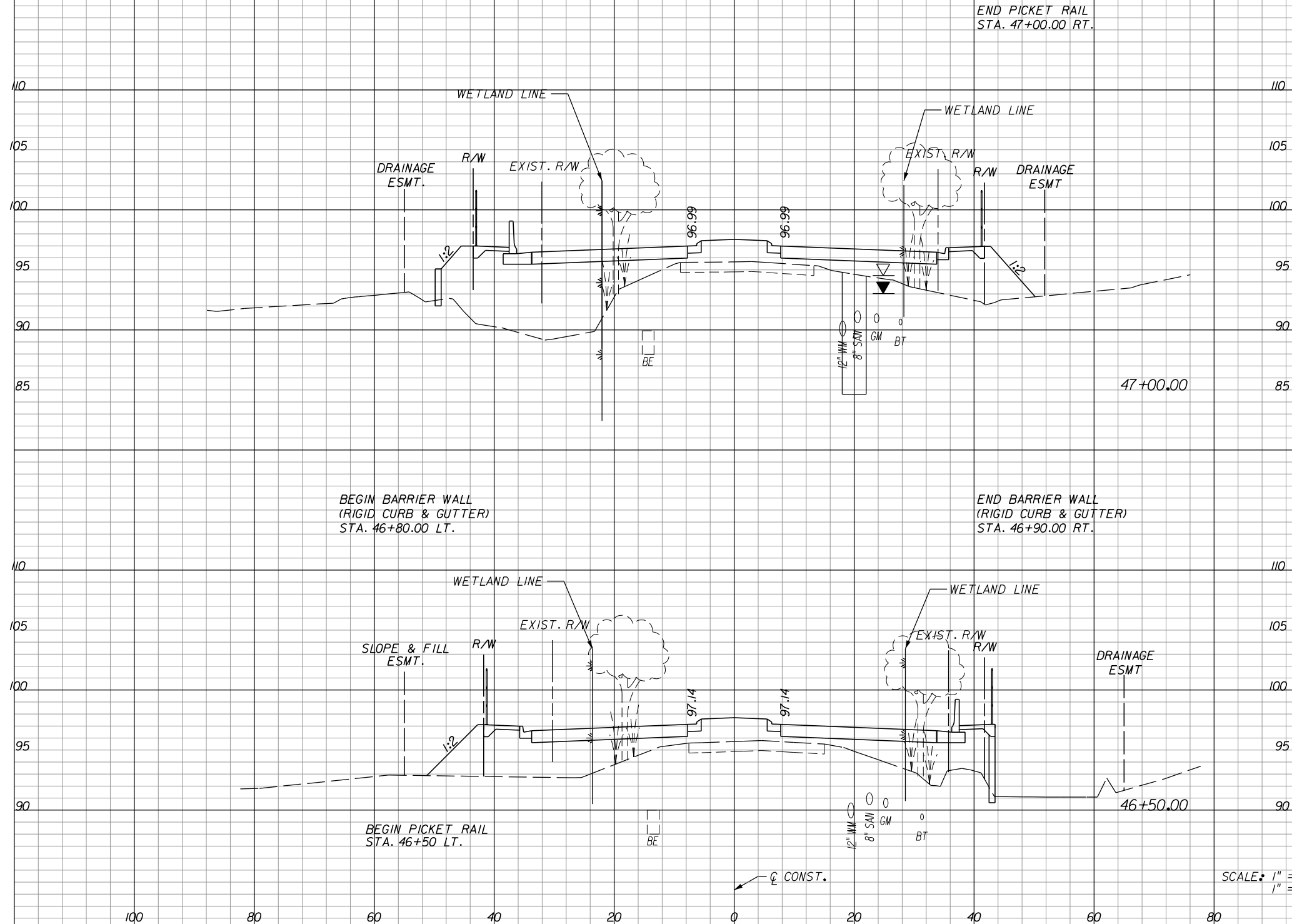
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.
188

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material			
Regular Exc.		Embankment	
A	V	A	V



0	0	283	0
0	0	479	0
0	0	234	0
0	0	400	0

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
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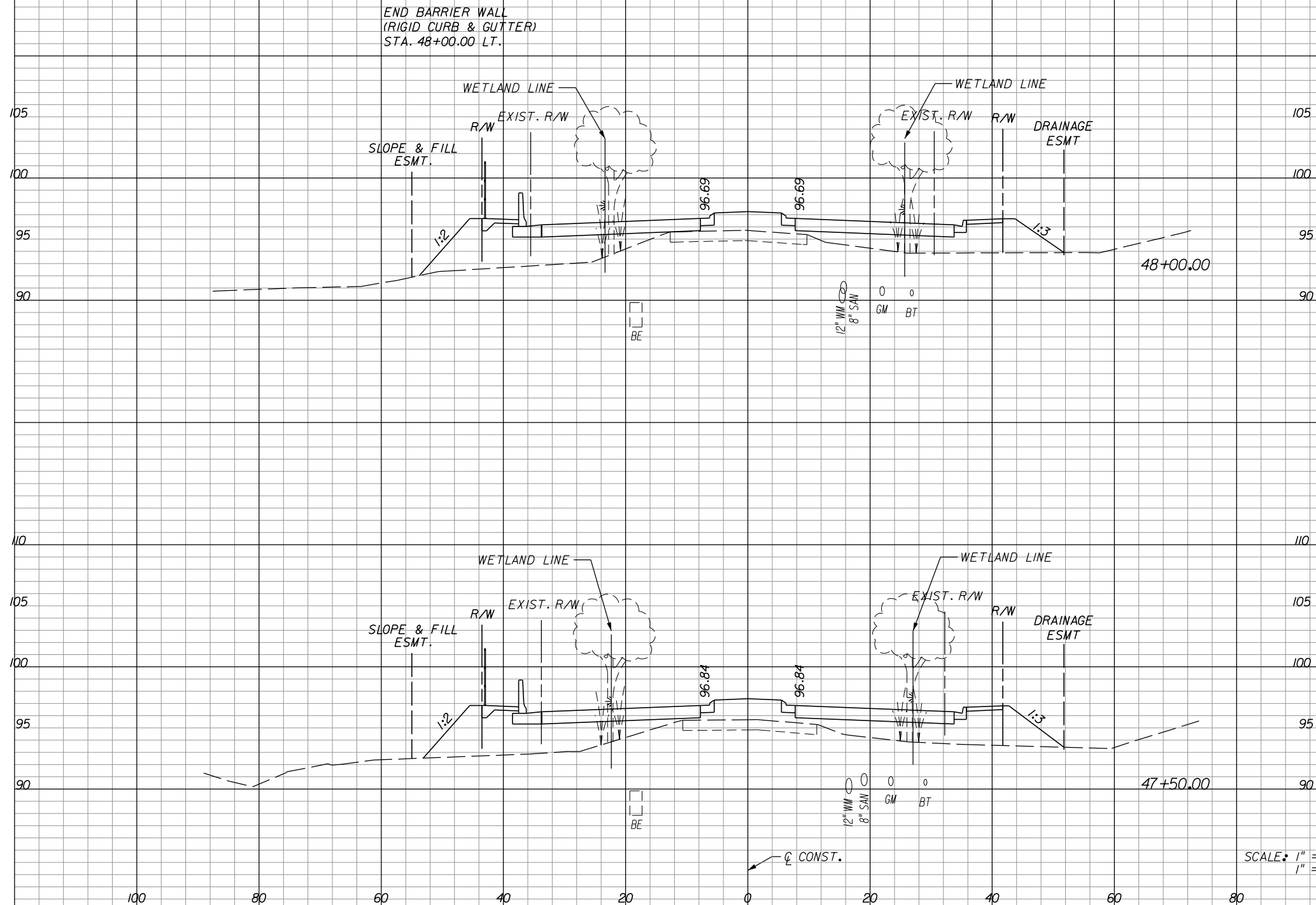
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.
189

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material					
Regular		Exc.		Embankment	
A	V	A	V	A	V



0	0	156	304
0	0	173	422

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

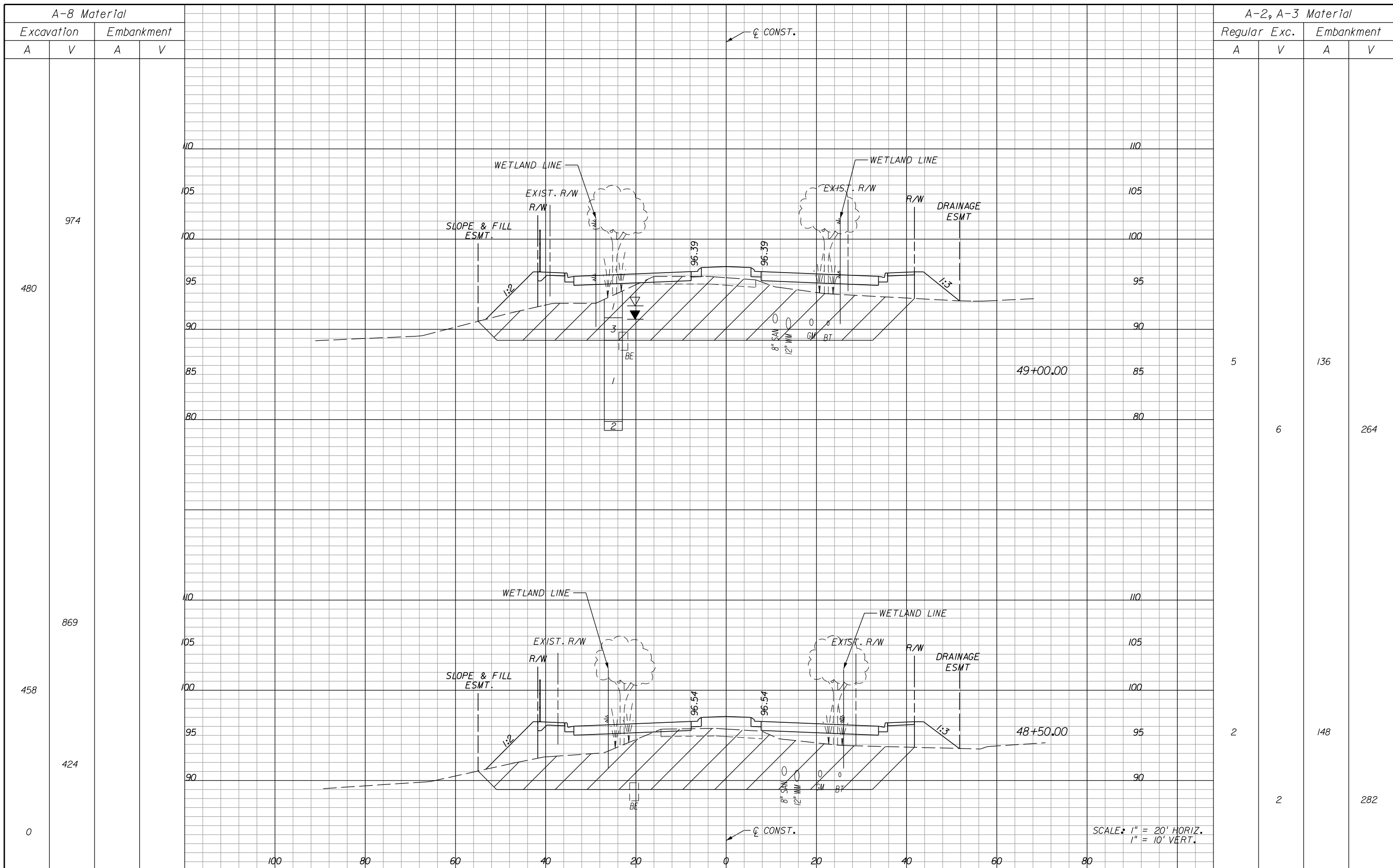
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.	190
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REVISIONS					
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**GOVERNMENT**  
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**HOLDEN AVENUE**  
**CROSS SECTIONS**

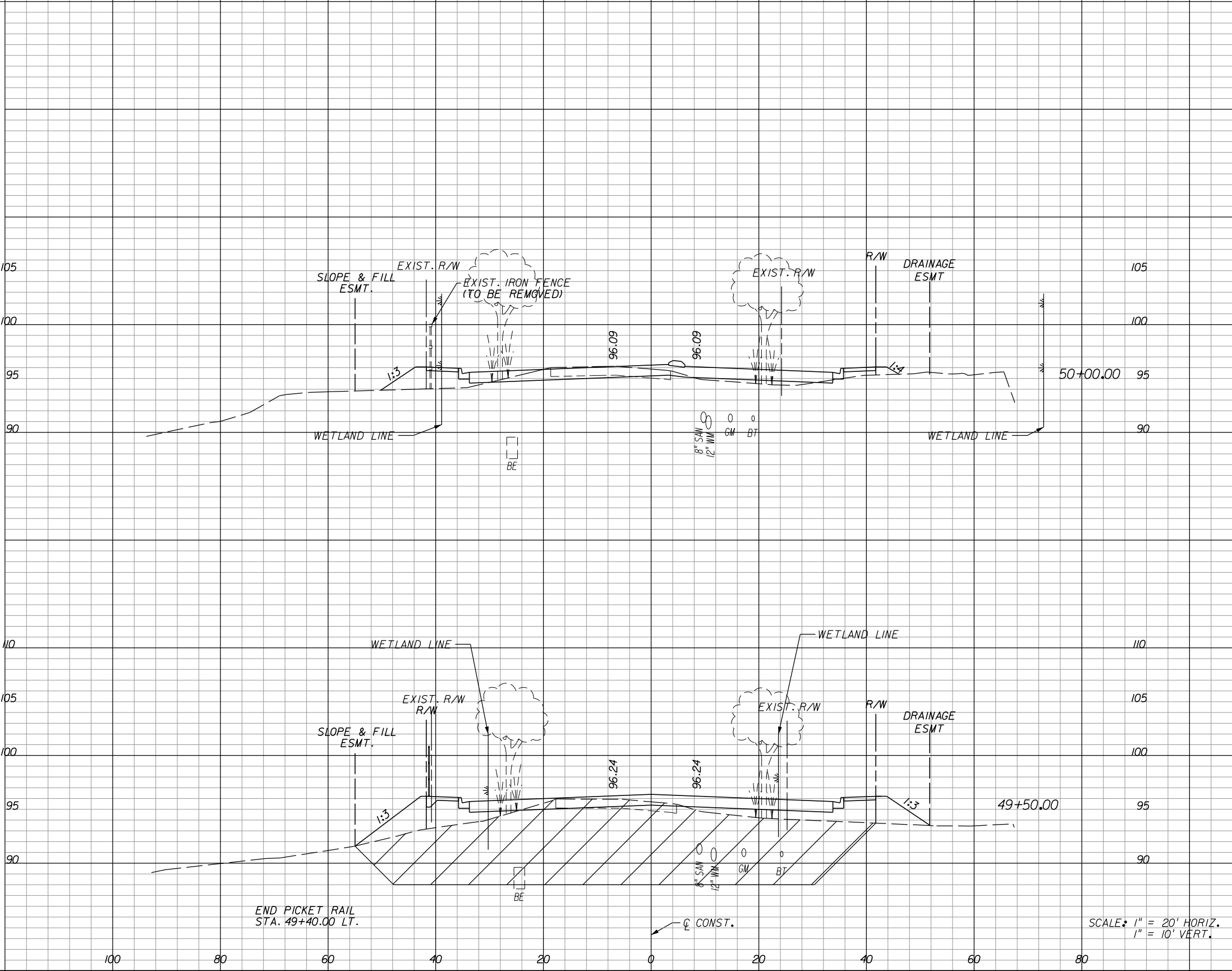
SHEET NO.  
 191

SCALE: 1" = 20' HORIZ.  
 1" = 10' VERT.

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material					
Regular		Exc.		Embankment	
A	V	A	V	A	V

148			
0			
530			
572			



28		34	
41		III	
16		86	
20		206	

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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**HOLDEN AVENUE**  
**CROSS SECTIONS**

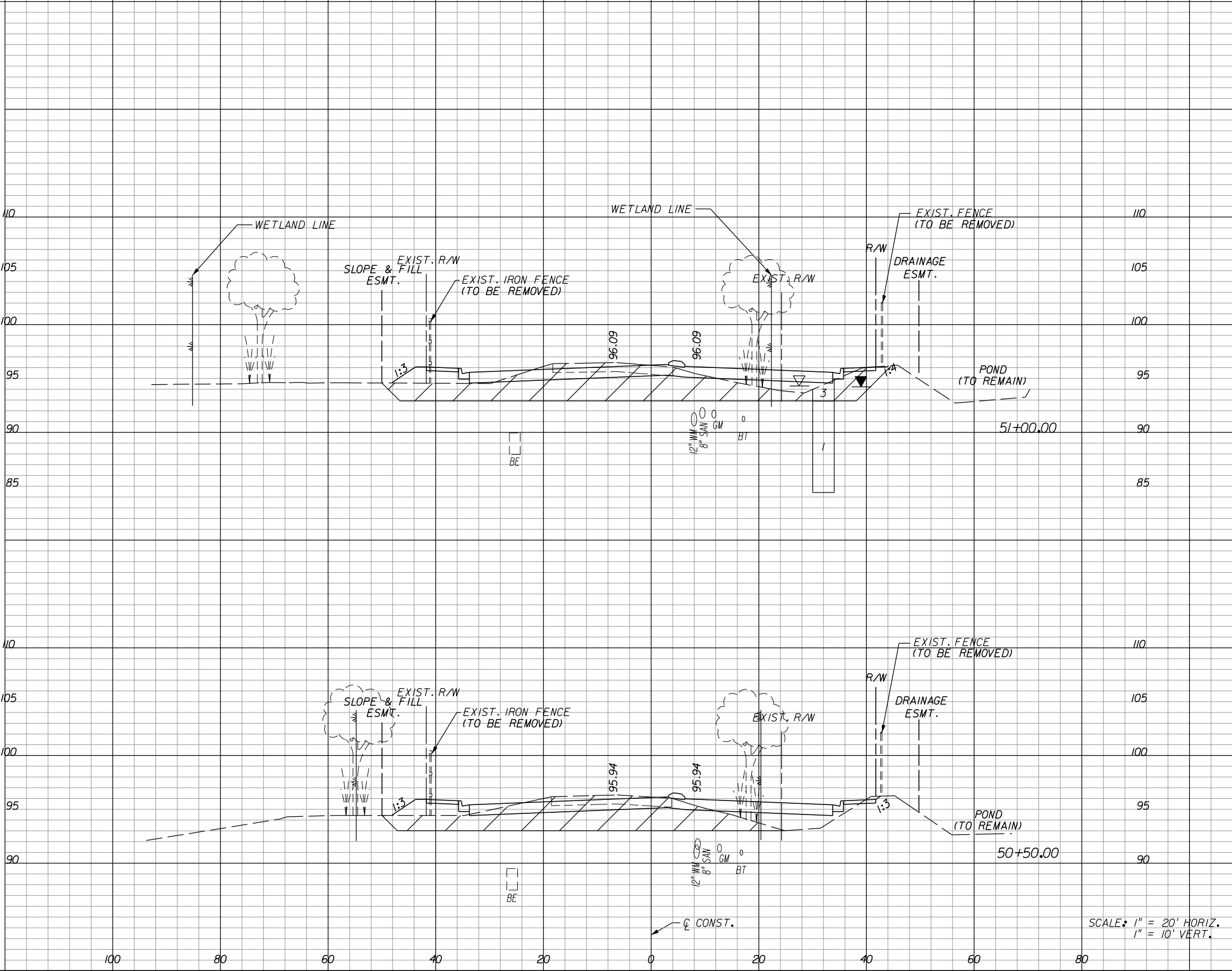
SHEET NO.
192



A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material					
Regular		Exc.		Embankment	
A	V	A	V	A	V

396			
206			
339			
160			



41		26	
	80		58
45		37	
	68		65

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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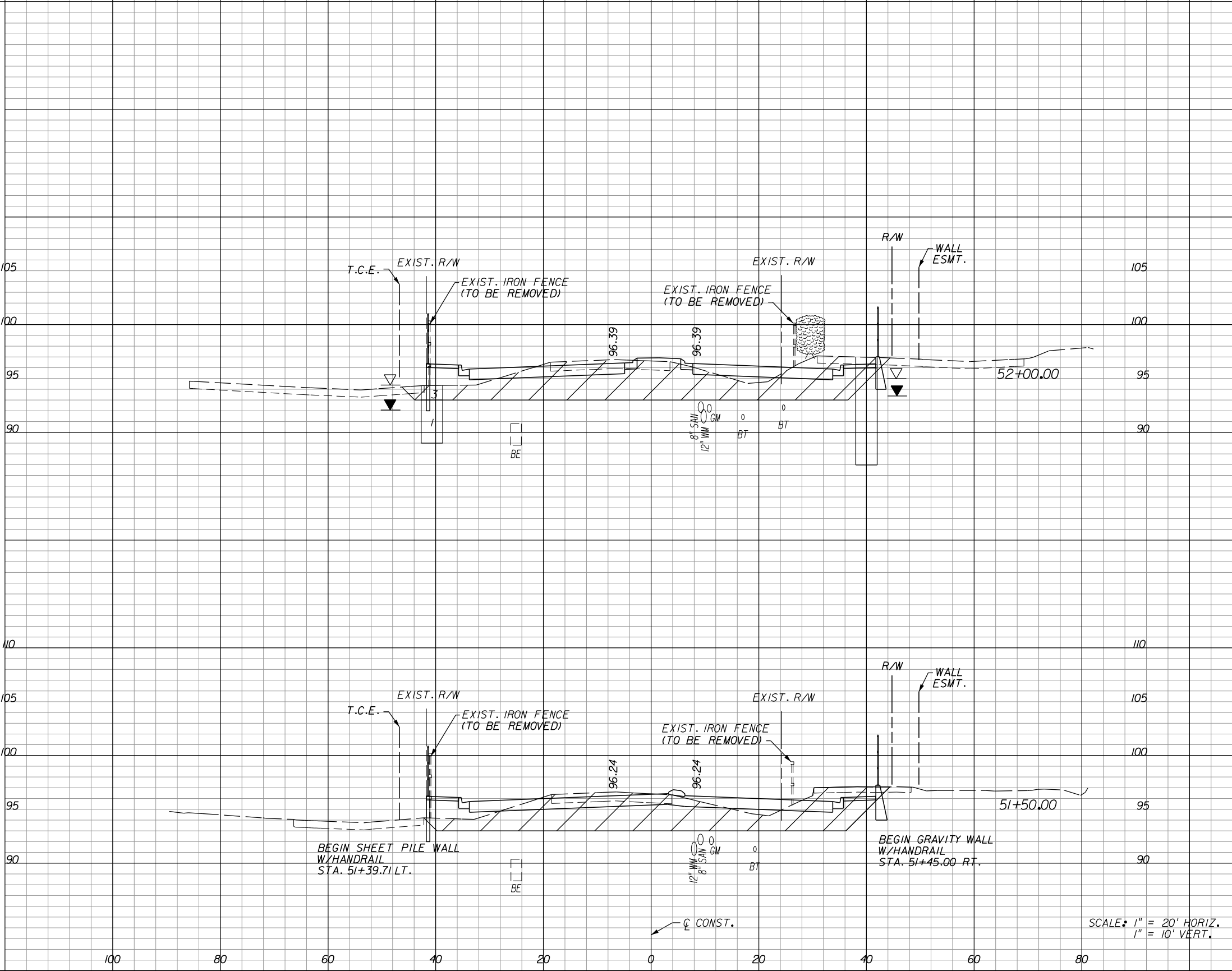
**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.
193

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material			
Regular		Exc.	
A	V	A	V

460			
240			
428			
222			



SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
4/22/14	TAA	PARCEL 1044 REVISION, REVISED DRAINAGE AND WALL ESMT TO TCE			
5/15/15	TAA	PARCEL 1044 REVISION 2			

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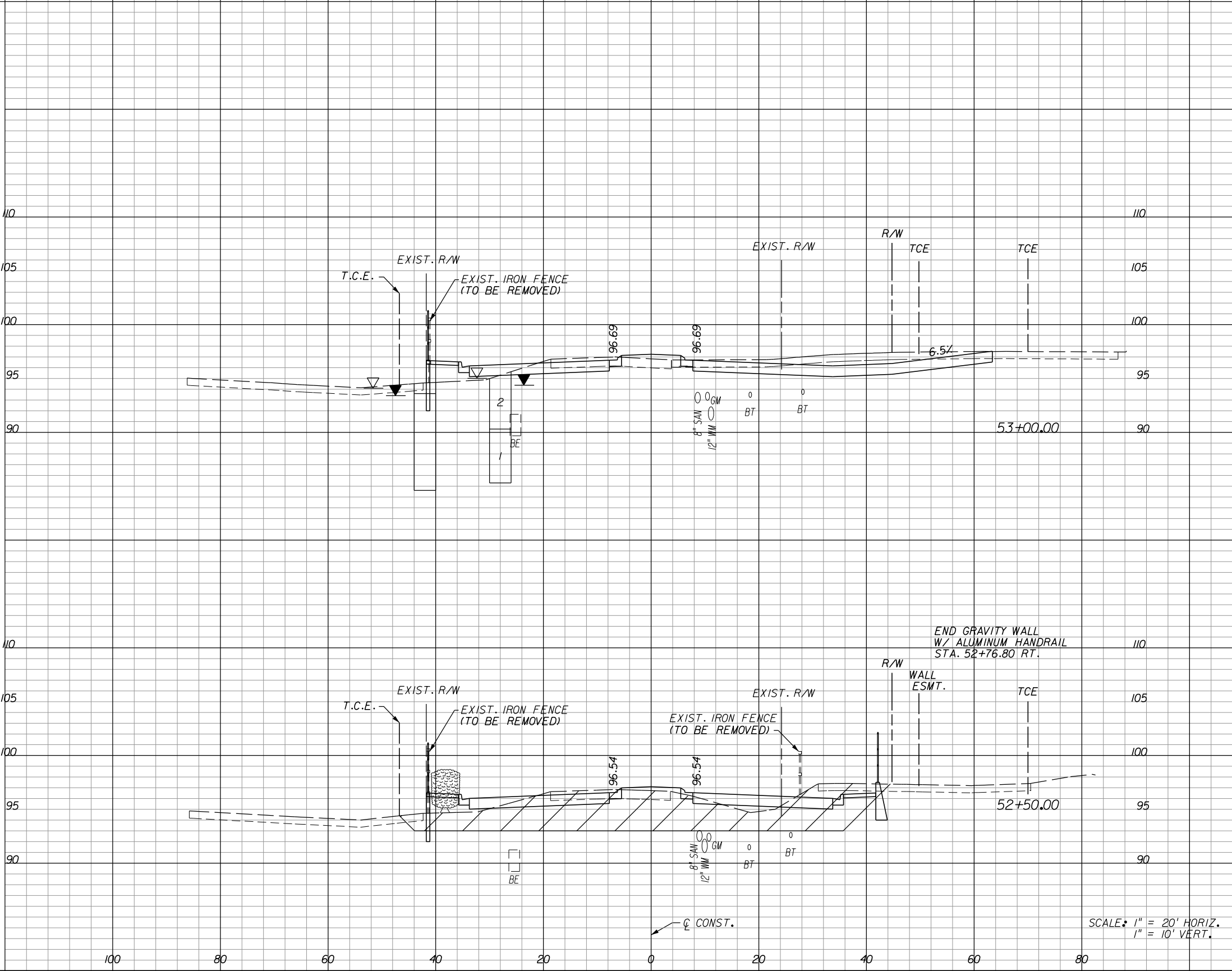
**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.
194

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material			
Regular		Exc.	
A	V	A	V

0	238	257
---	-----	-----



SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
4/3/13	TAA	PARCEL 1011 REVISIONS, DELETED SHEET PILE WALL STA. 53+21.75 TO STA. 58+84.00 RT.			
4/22/14	TAA	PARCEL 1044 REVISION, REVISED DRAINAGE AND WALL ESMT TO TCE			

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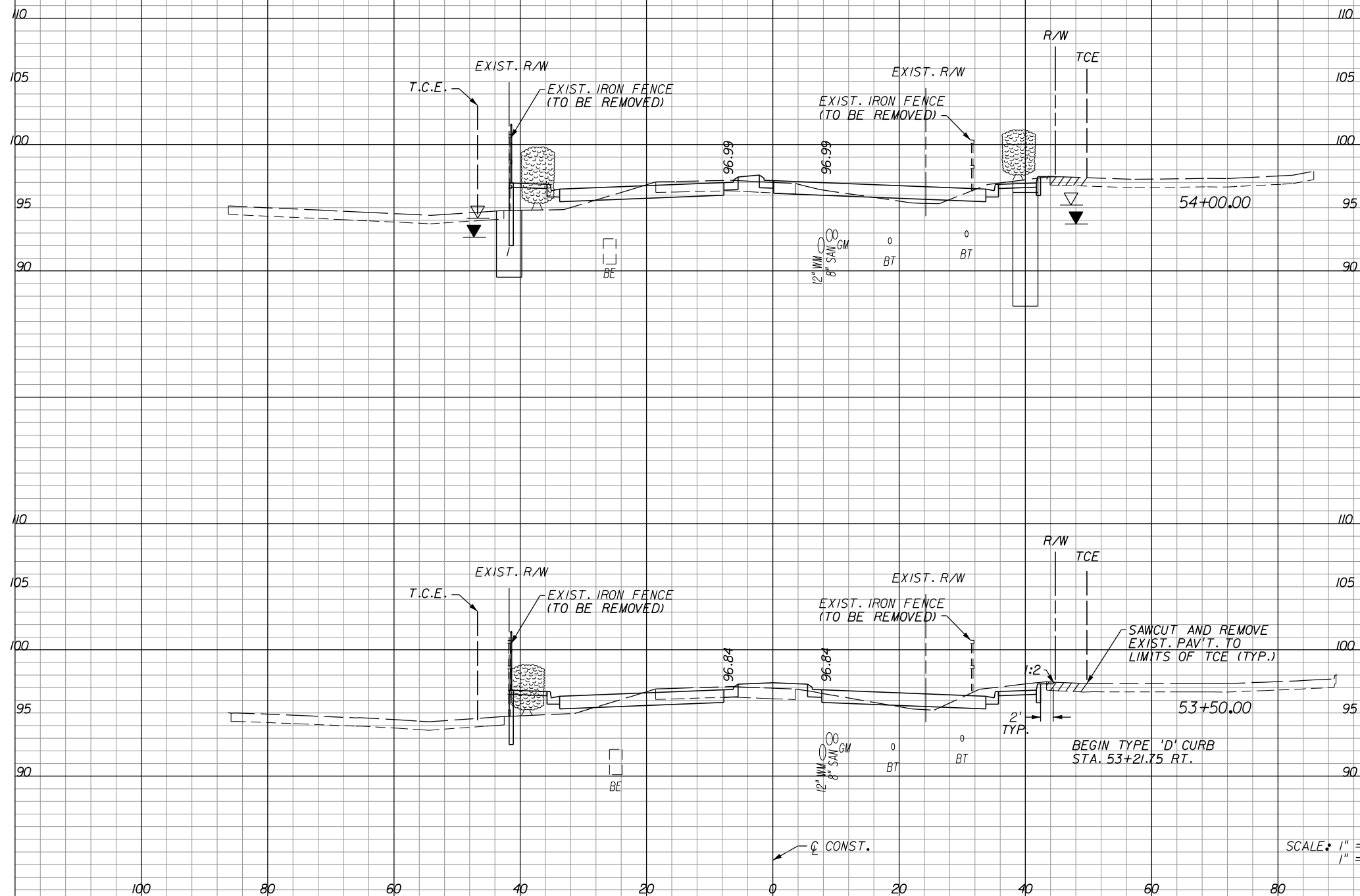
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.	195
-----------	-----

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material					
Regular		Exc.		Embankment	
A	V	A	V	A	V



43		16	
	82		31
45		17	
	139		29

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
4/3/13	TAA	PARCEL 1011 REVISIONS, DELETED SHEET PILE WALL STA. 53+21.75 TO STA. 58+84.00 RT.			
4/22/14	TAA	PARCEL 1044 REVISION, REVISED DRAINAGE AND WALL ESM'T TO TCE			

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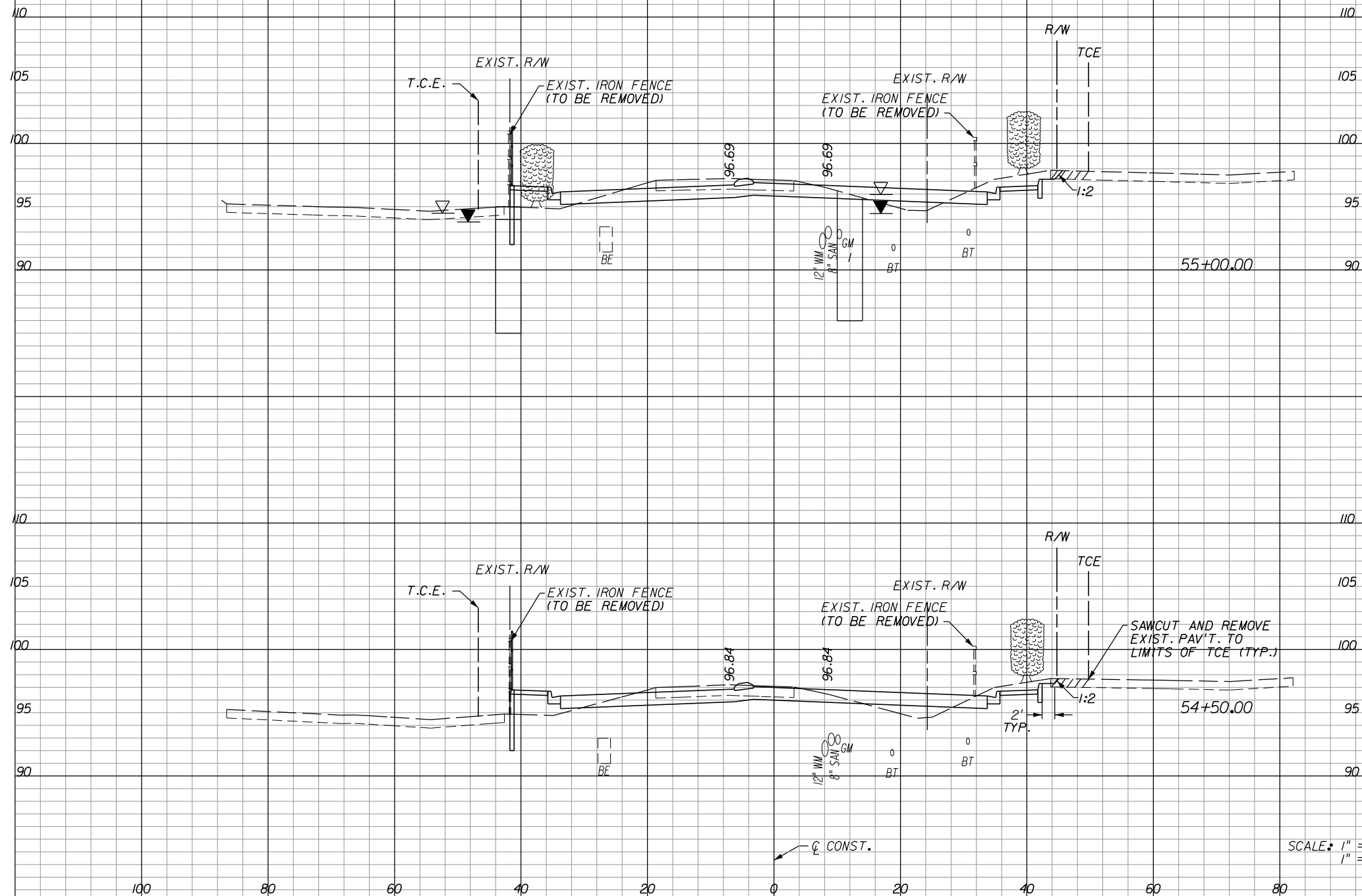
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.	196
-----------	-----

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material			
Regular		Exc.	
A	V	A	V



72	14
121	29
59	18
94	32

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
4/3/13	TAA	PARCEL 1011 REVISIONS, DELETED SHEET PILE WALL STA. 53+21.75 TO STA. 58+84.00 RT.			
4/22/14	TAA	PARCEL 1044 REVISION, REVISED DRAINAGE AND WALL ESM'T TO TCE			

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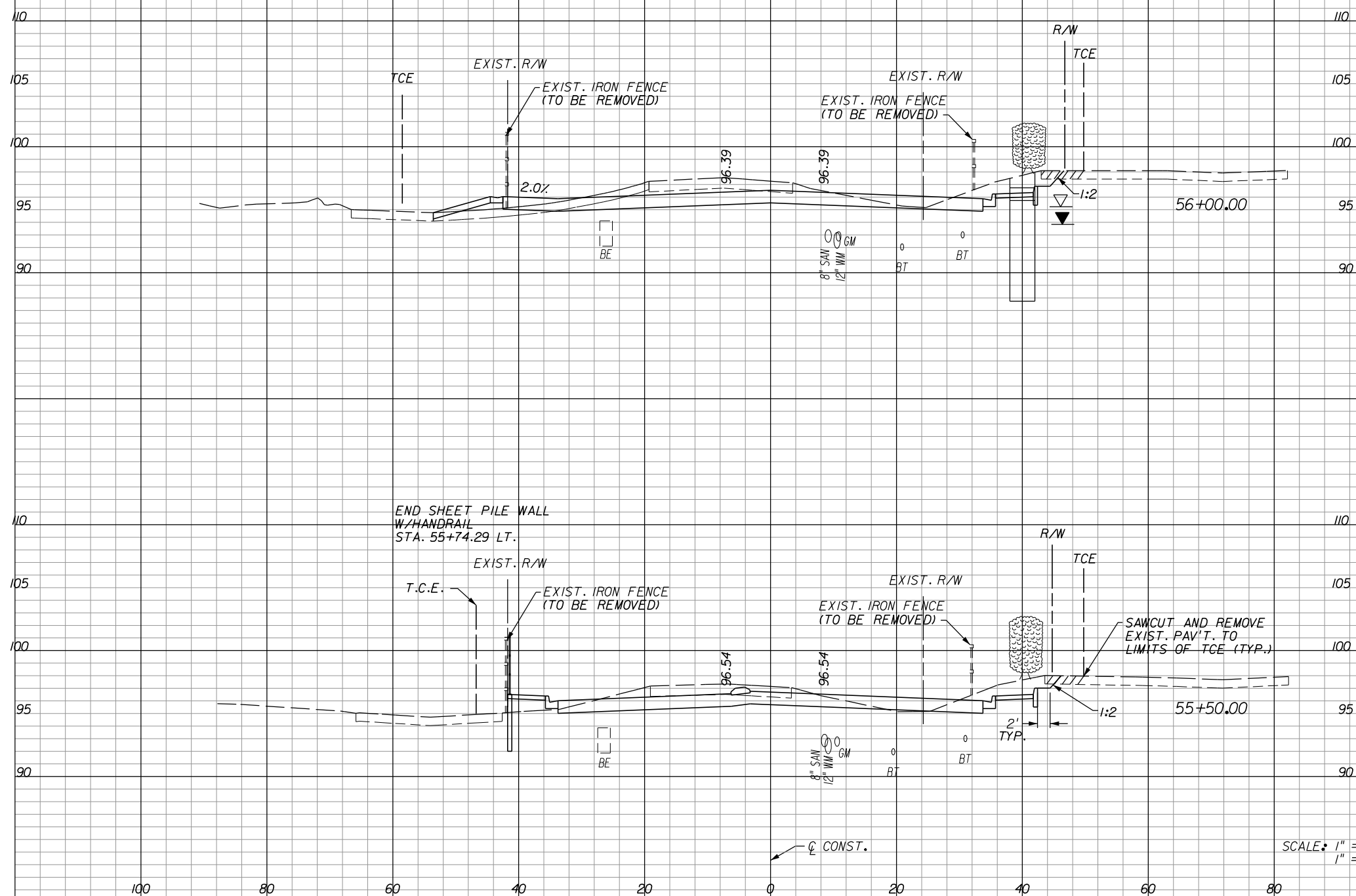
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.
197

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material					
Regular		Exc.		Embankment	
A	V	A	V	A	V



110	110	122	0
105	105		
100	100		
95	95	194	5
90	90		
110	110	88	5
105	105		
100	100		
95	95	148	17
90	90		

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
4/3/13	TAA	PARCEL 1011 REVISIONS, DELETED SHEET PILE WALL STA. 53+21.75 TO STA. 58+84.00 RT.			
4/22/14	TAA	PARCEL 1044 REVISION, REVISED DRAINAGE AND WALL ESM'T TO TCE			

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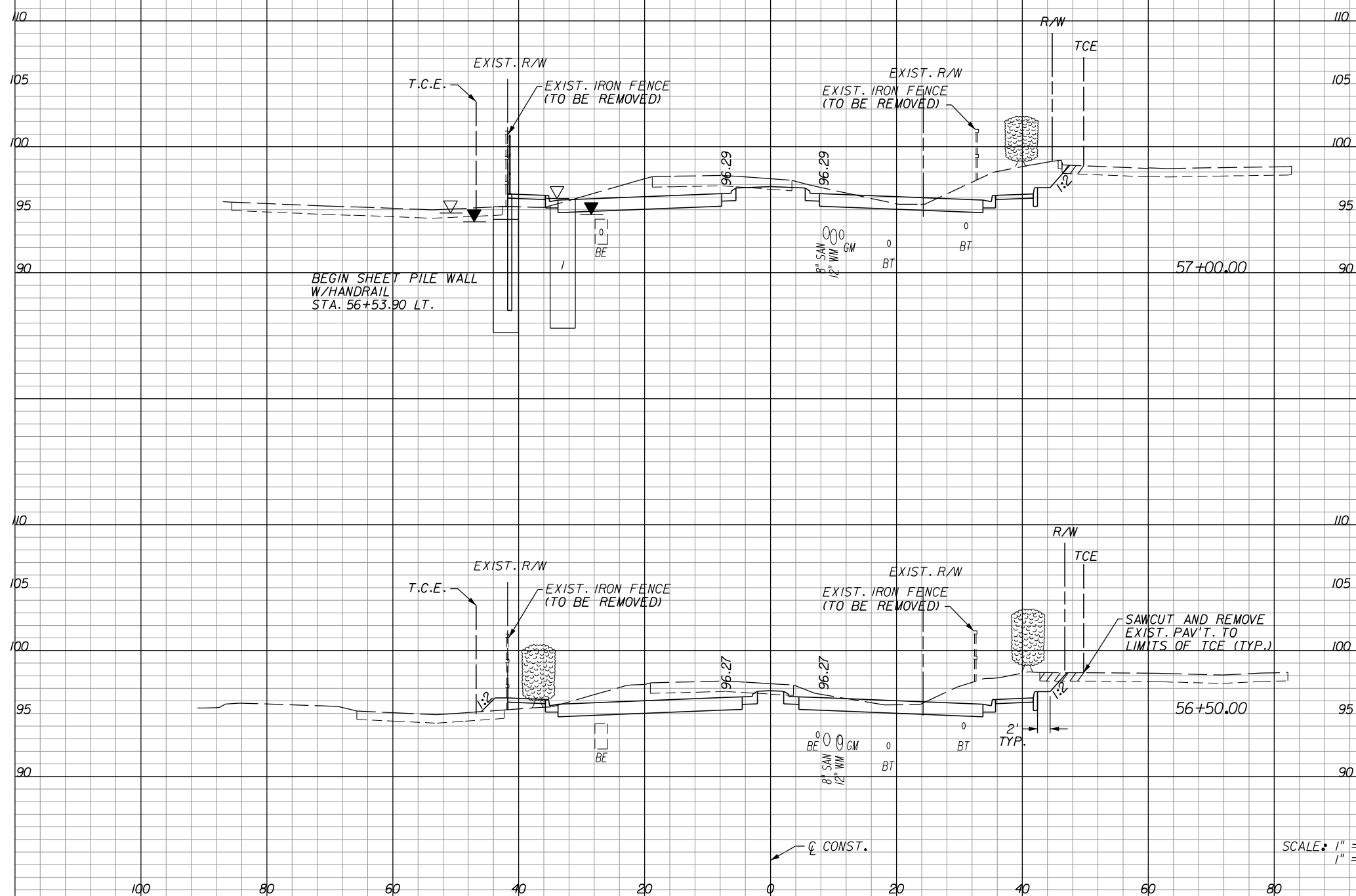
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.	198
-----------	-----

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material					
Regular		Exc.		Embankment	
A	V	A	V	A	V



131	3	5
247		
136	2	2
239		

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
4/3/13	TAA	PARCEL 1011 REVISIONS, DELETED SHEET PILE WALL STA. 53+21.75 TO STA. 58+84.00 RT.	5/15/15	TAA	PARCEL 1044 REVISION 2
4/22/14	TAA	PARCEL 1044 REVISION, REVISED DRAINAGE AND WALL ESM'T TO TCE			

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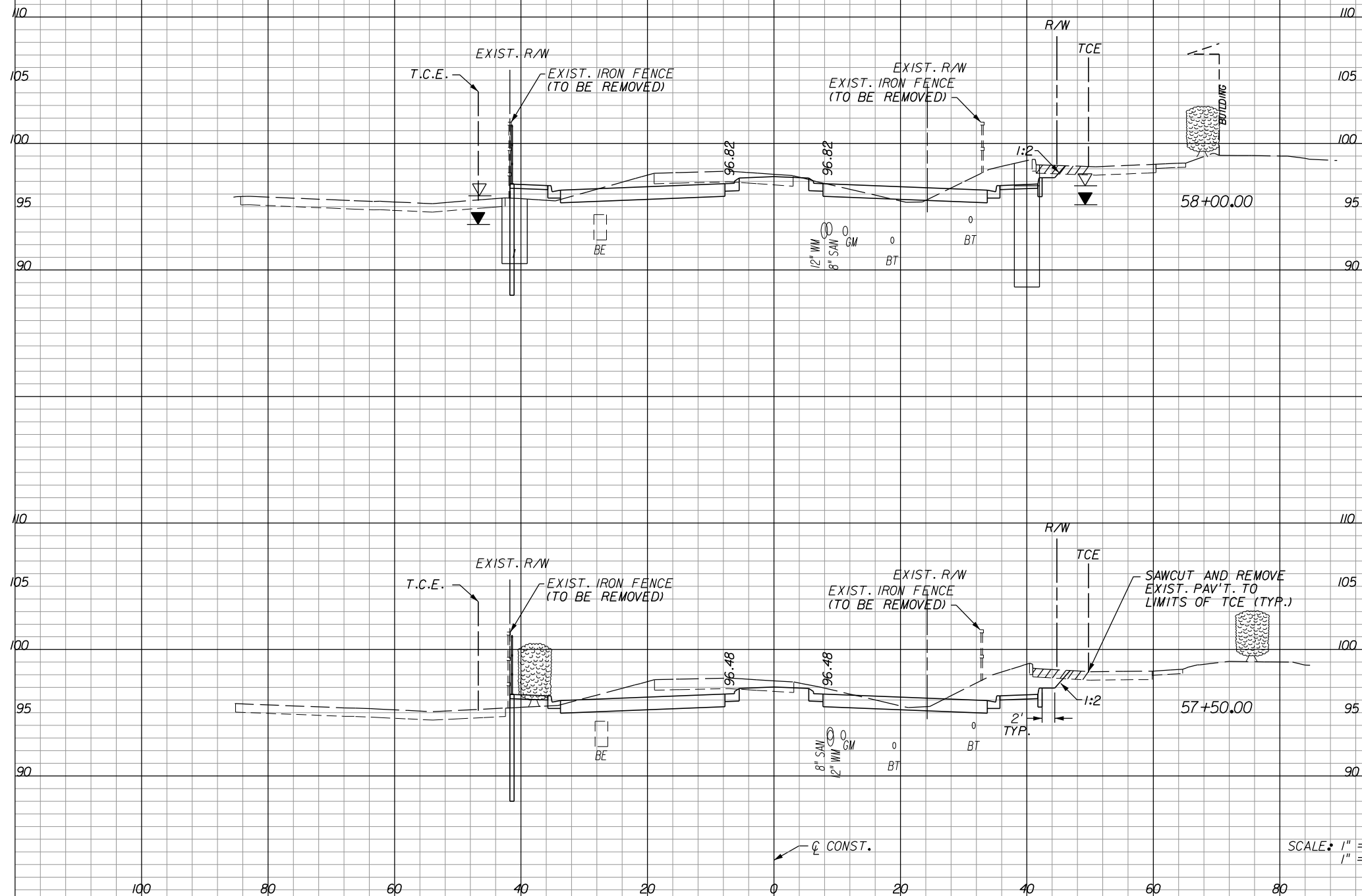
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.
199

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material			
Regular		Exc.	
A	V	A	V



SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
4/3/13	TAA	PARCEL 1011 REVISIONS, DELETED SHEET PILE WALL STA. 53+21.75 TO STA. 58+84.00 RT.			
4/22/14	TAA	PARCEL 1044 REVISION, REVISED DRAINAGE AND WALL ESM'T TO TCE			

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**GOVERNMENT**  
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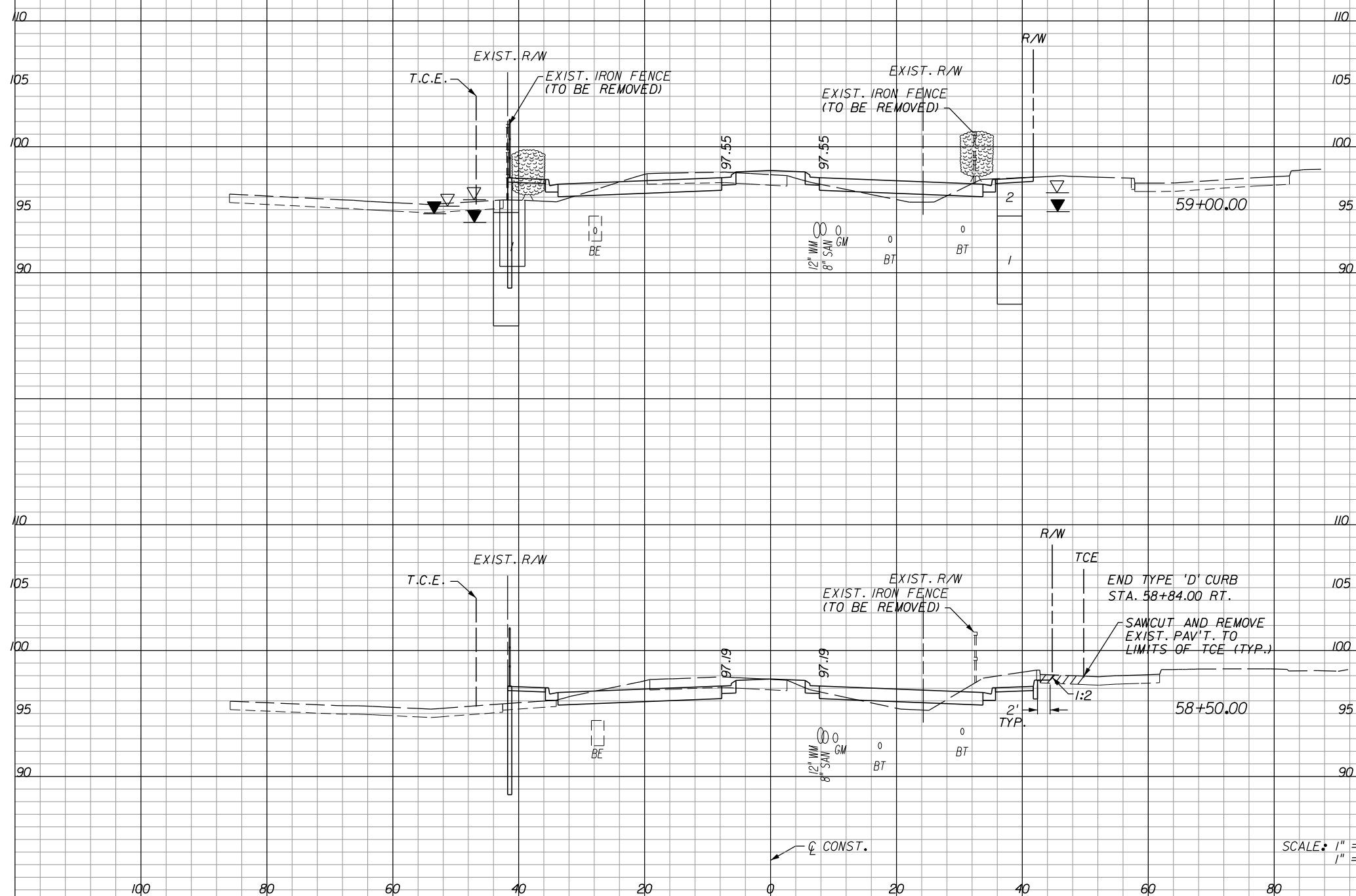
**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.	200
-----------	-----



A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material					
Regular		Exc.		Embankment	
A	V	A	V	A	V



41		18	
	96		26
63		10	
	153		14

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
4/3/13	TAA	PARCEL 1011 REVISIONS, DELETED SHEET PILE WALL STA. 53+21.75 TO STA. 58+84.00 RT.			
4/22/14	TAA	PARCEL 1044 REVISION, REVISED DRAINAGE AND WALL ESM'T TO TCE			

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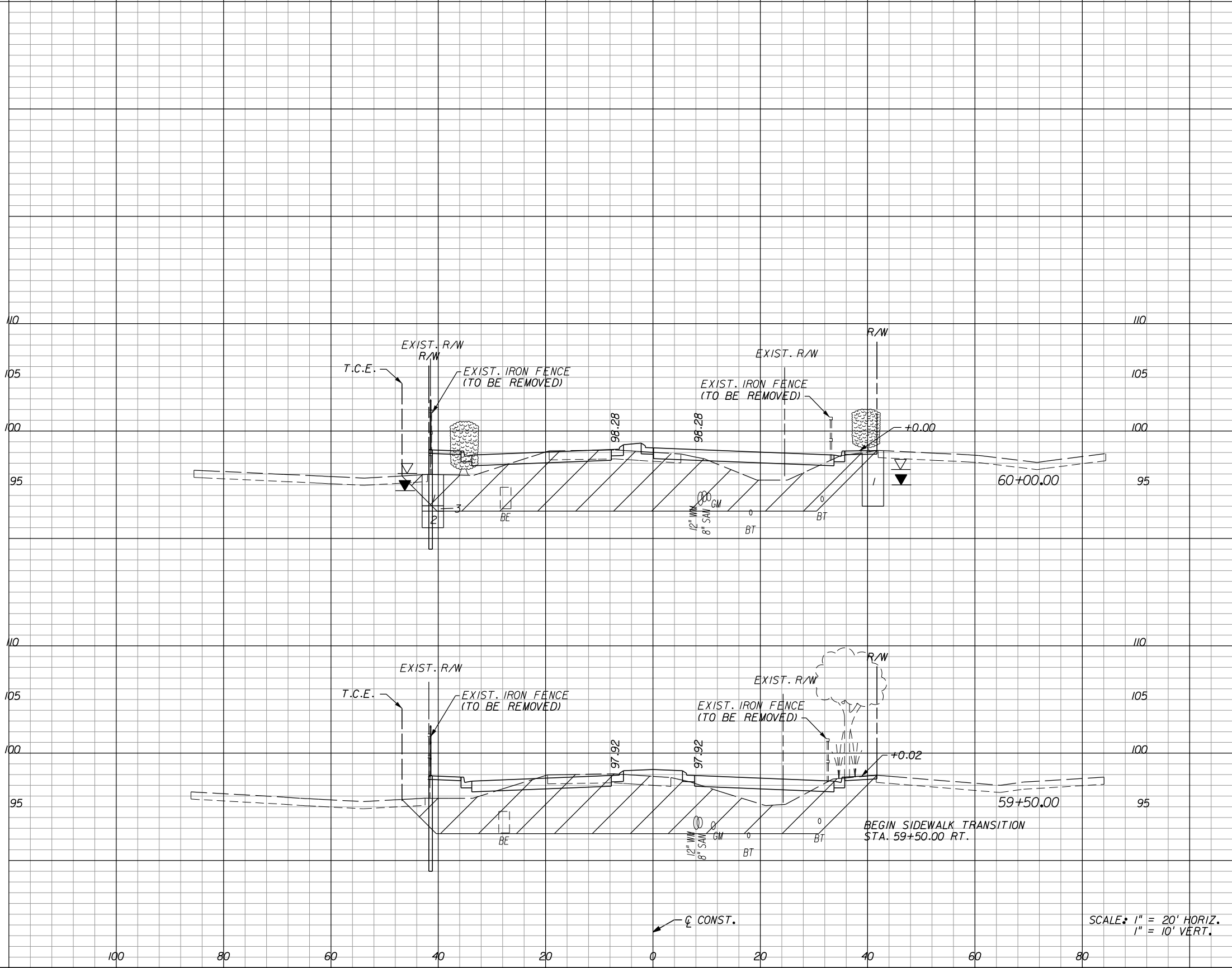
**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.	201
-----------	-----

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material			
Regular Exc.		Embankment	
A	V	A	V

356			
653			
349			
323			
0			



SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
4/22/14	TAA	PARCEL 1044 REVISION, REVISED DRAINAGE AND WALL ESM'T TO TCE			

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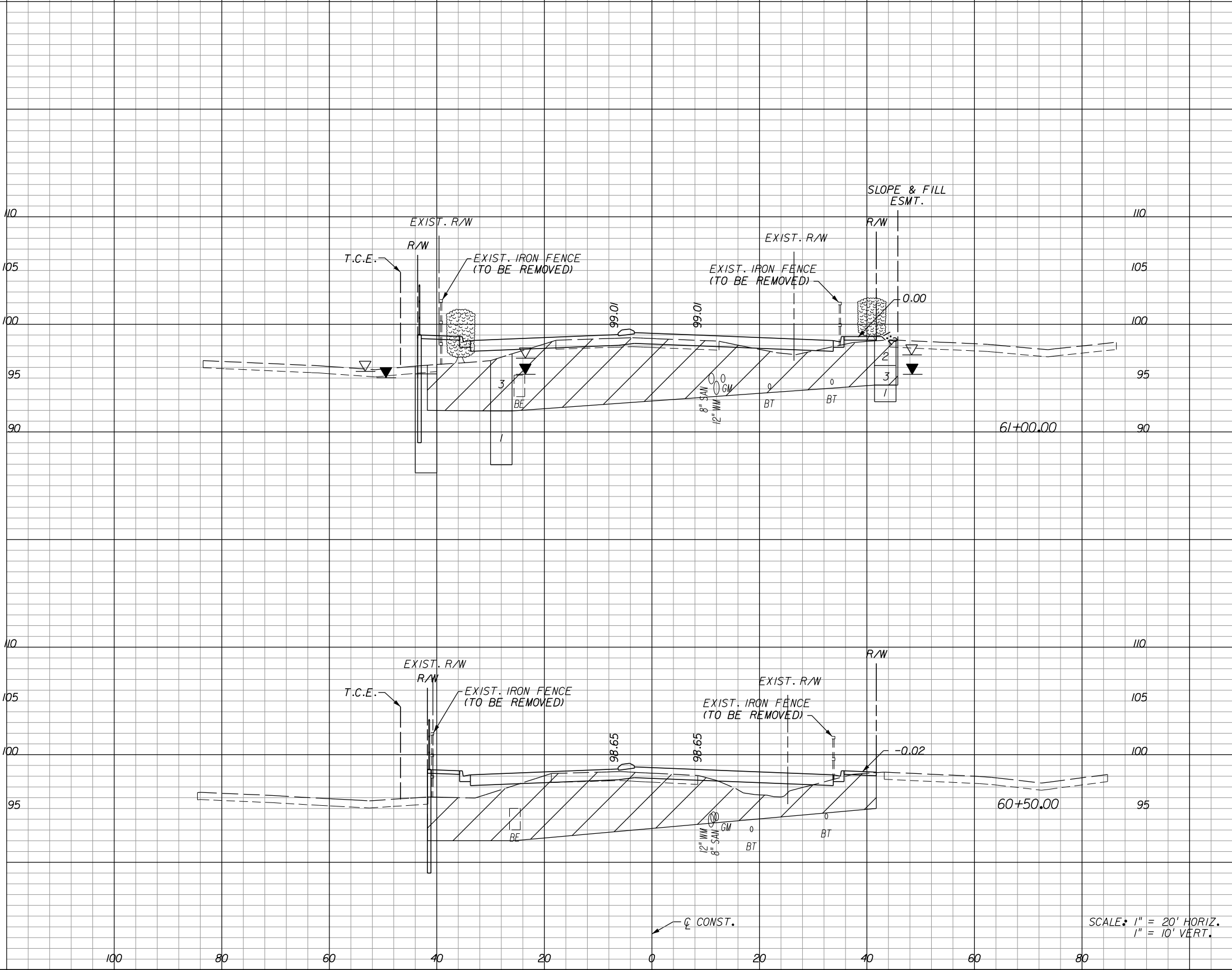
**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.
202

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material					
Regular		Exc.		Embankment	
A	V	A	V	A	V

786			
428			
722			
352			
656			



SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

4/22/14	TAA	PARCEL 1044 REVISION, REVISED DRAINAGE AND WALL ESMT TO TCE			
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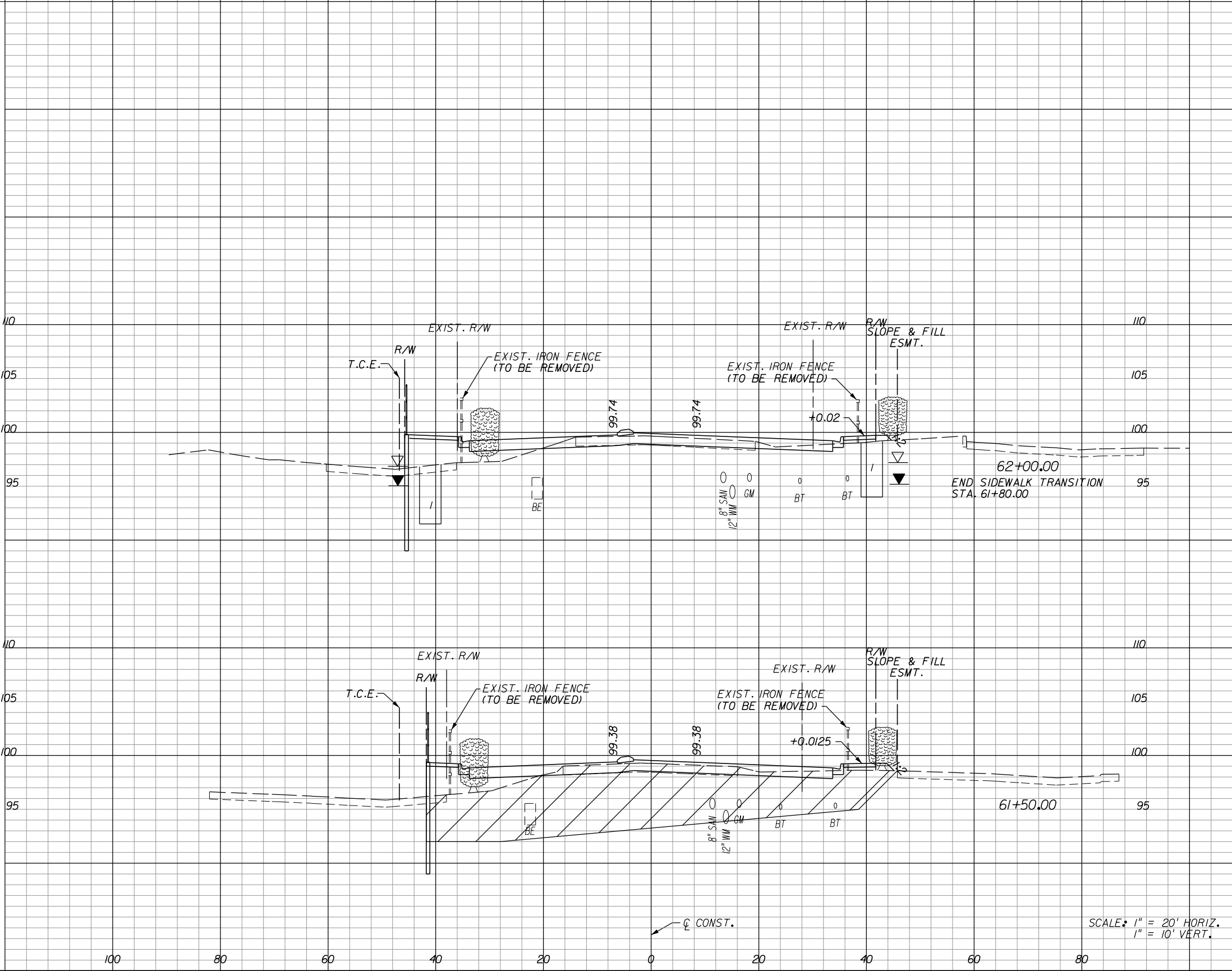
**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.	203
-----------	-----

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material			
Regular		Exc.	
A	V	A	V

0			
390			
421			



SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
4/22/14	TAA	PARCEL 1044 REVISION, REVISED DRAINAGE AND WALL ESMT TO TCE			

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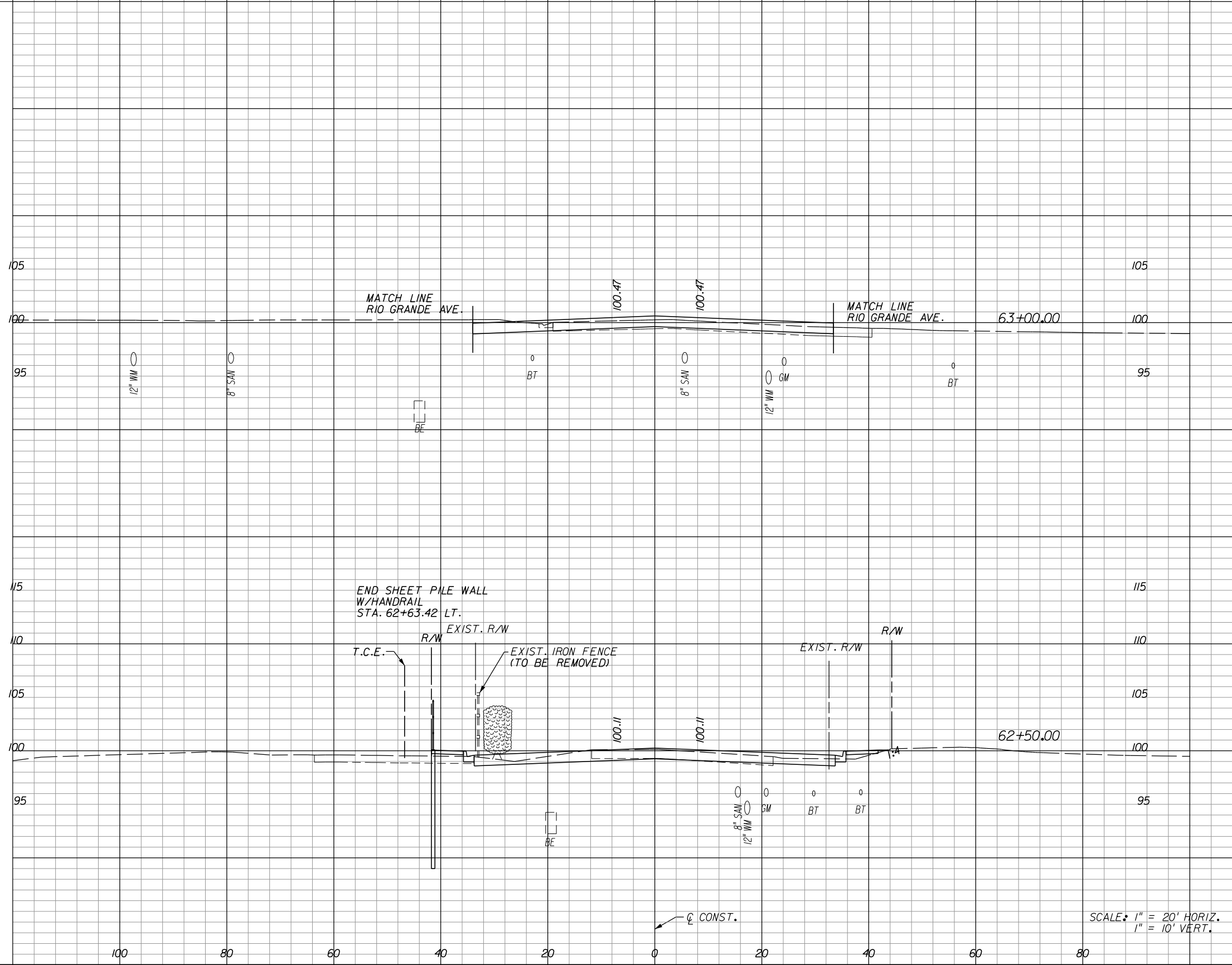
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.
204

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material					
Regular		Exc.		Embankment	
A	V	A	V	A	V



SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
4/22/14	TAA	PARCEL 1044 REVISION, REVISED DRAINAGE AND WALL ESM'T TO TCE			

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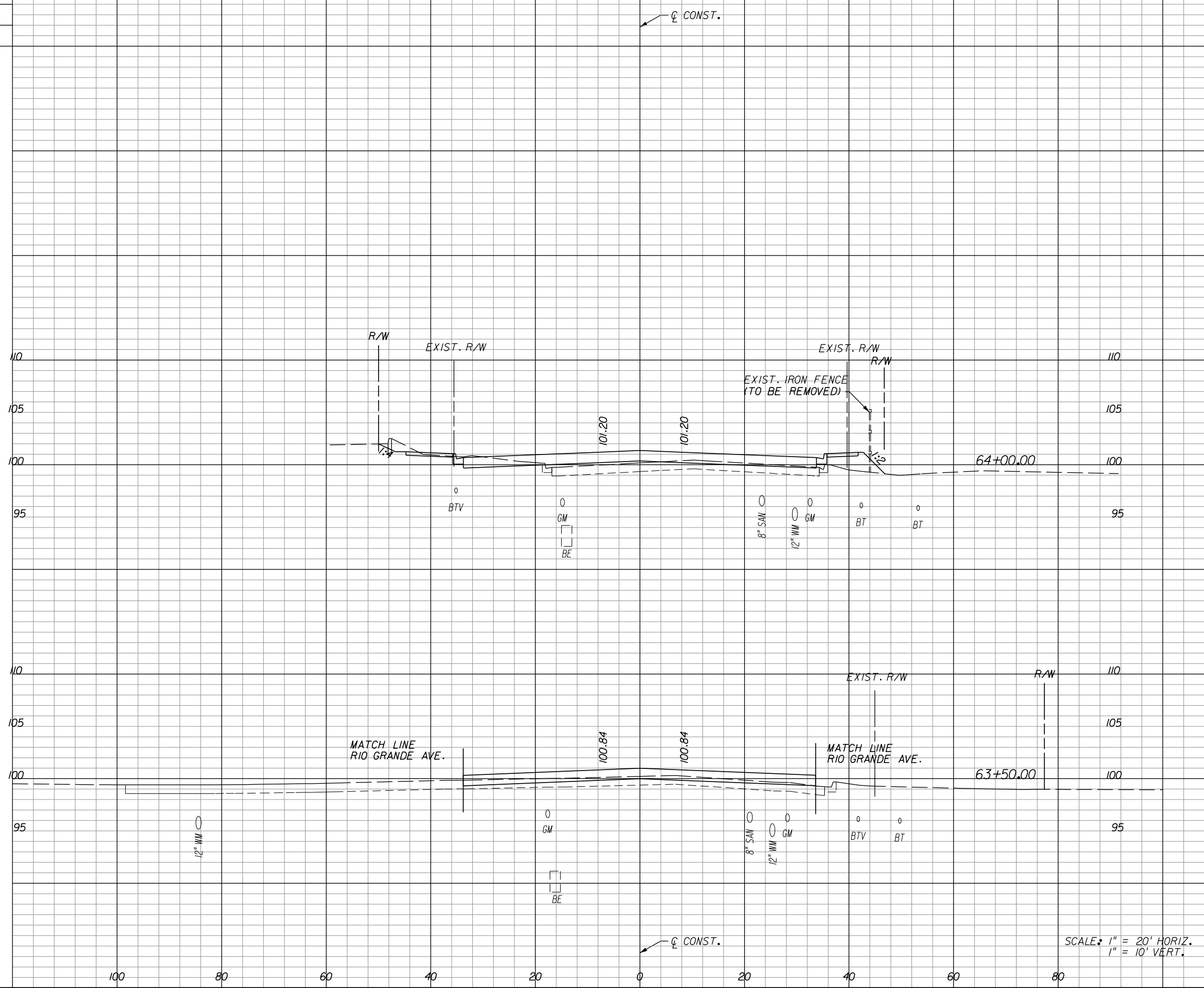
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
205

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material			
Regular Exc.		Embankment	
A	V	A	V



18	27	25
37		
22	0	0
66		

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
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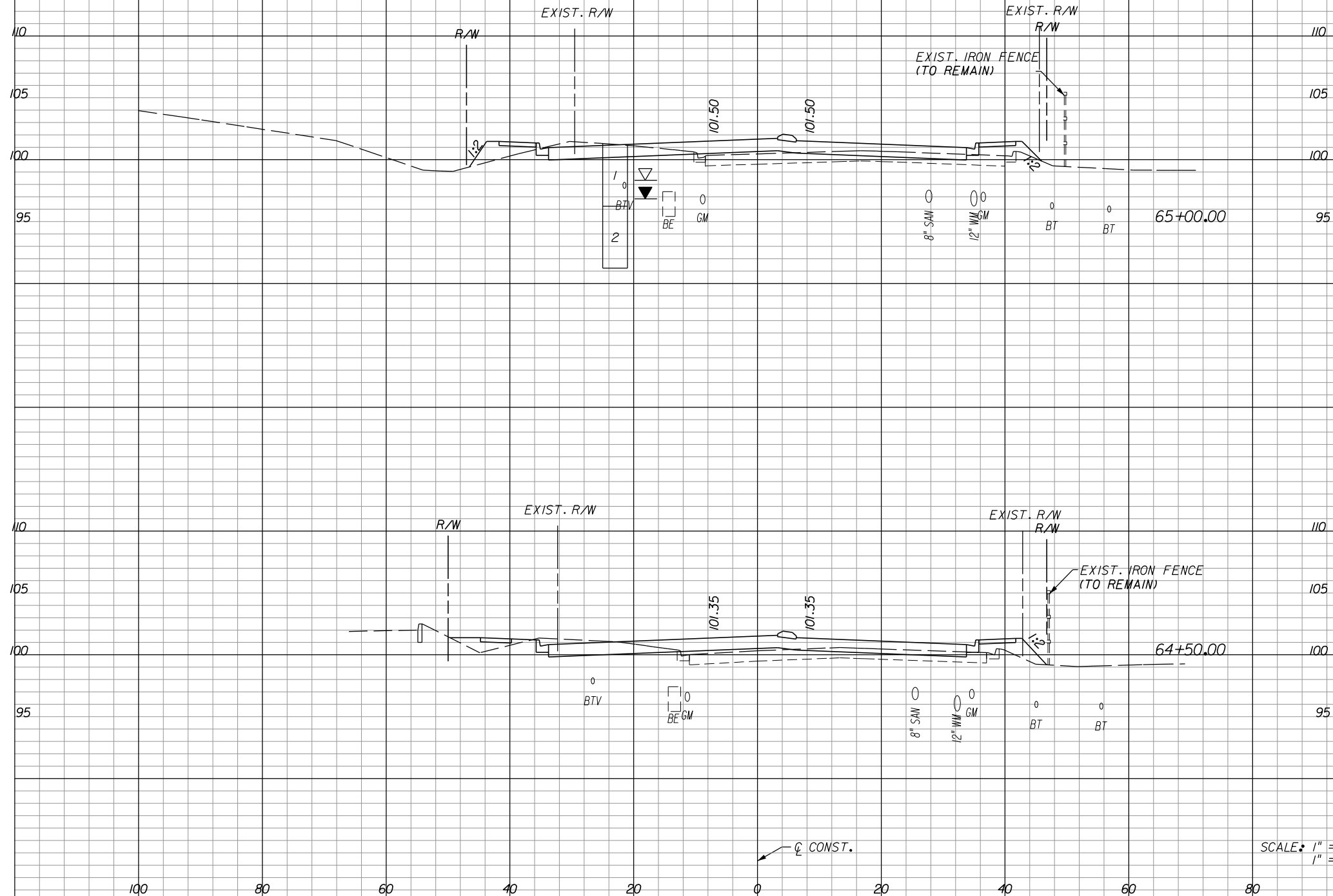
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
206

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material			
Regular Exc.		Embankment	
A	V	A	V



34		37	
	61		64
31		32	
	46		55

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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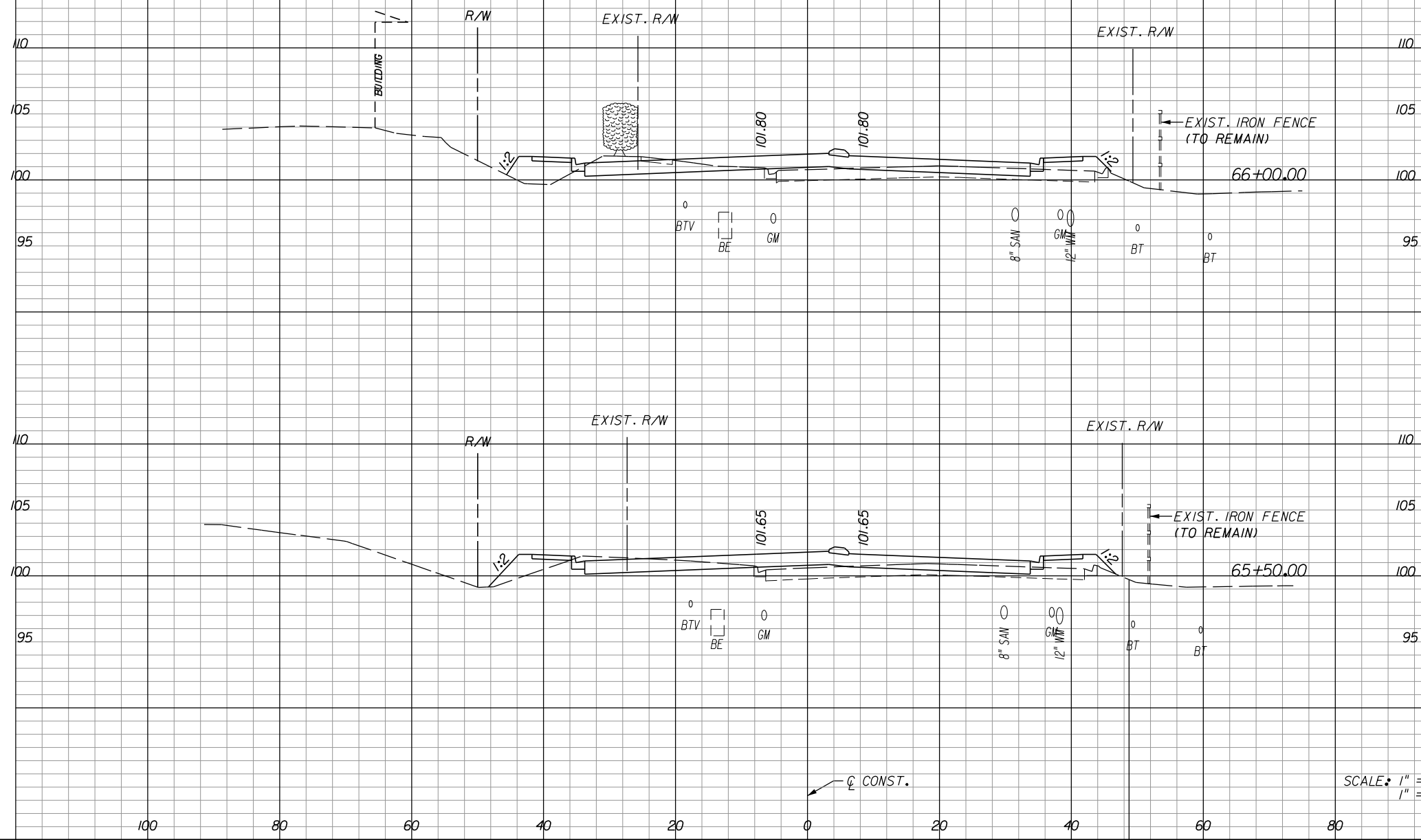
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.	207
-----------	-----

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material			
Regular Exc.		Embankment	
A	V	A	V



SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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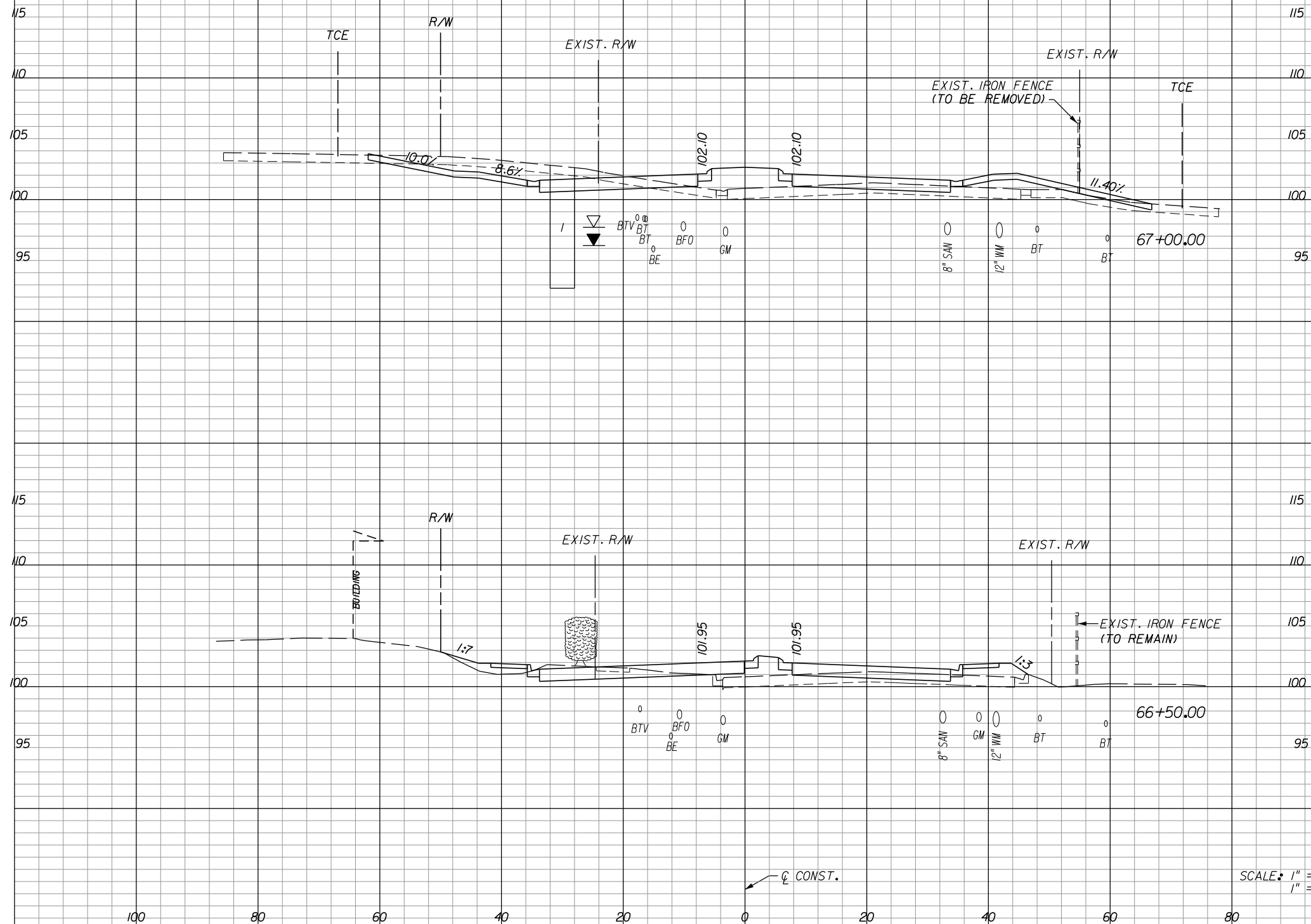
**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
208



A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material			
Regular Exc.		Embankment	
A	V	A	V



81		32	
	106		54
33		26	
	62		57

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
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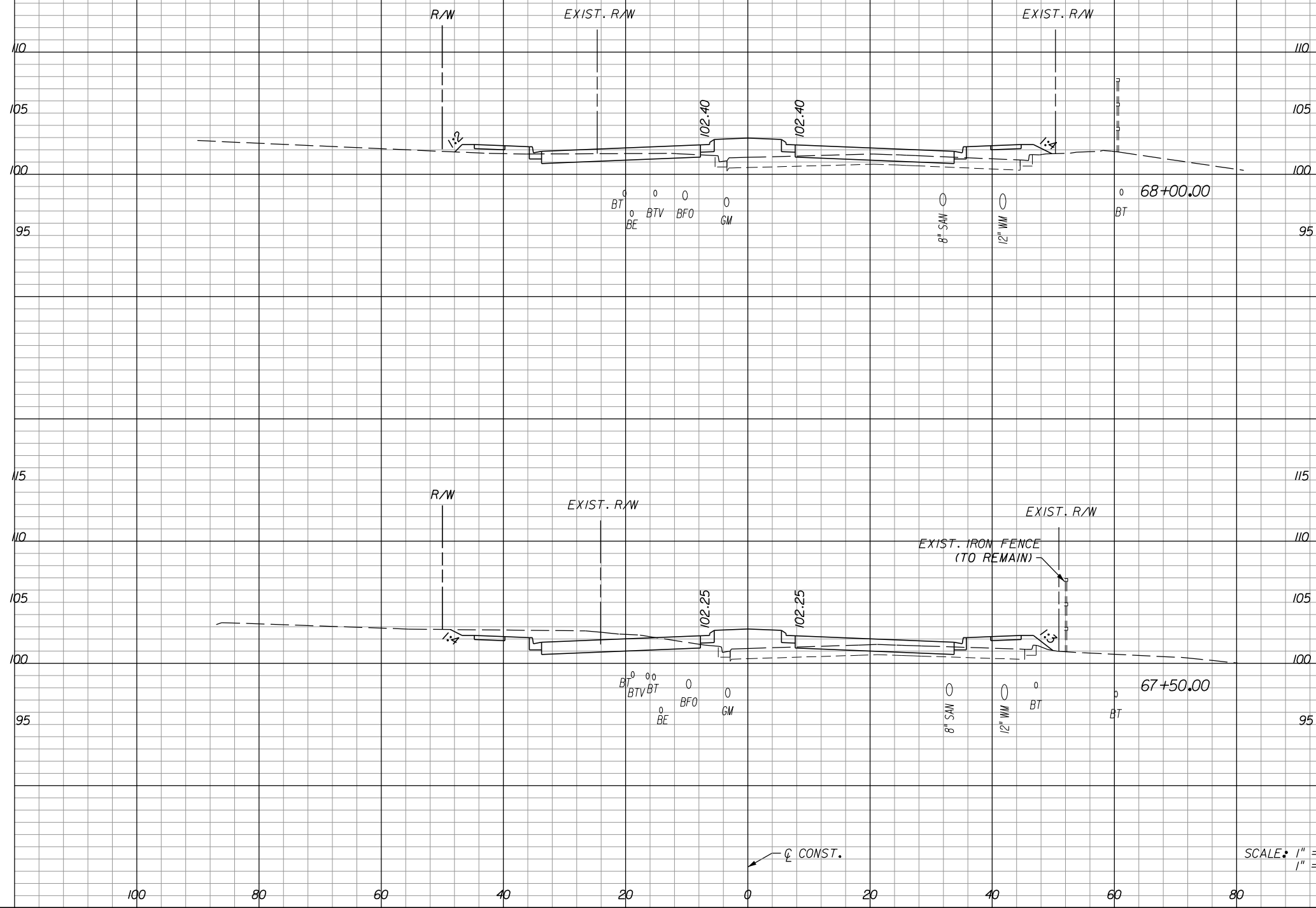
**ORANGE COUNTY**  
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**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.
209

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material					
Regular		Exc.		Embankment	
A	V	A	V	A	V



26	34	57	28
	77	128	56

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

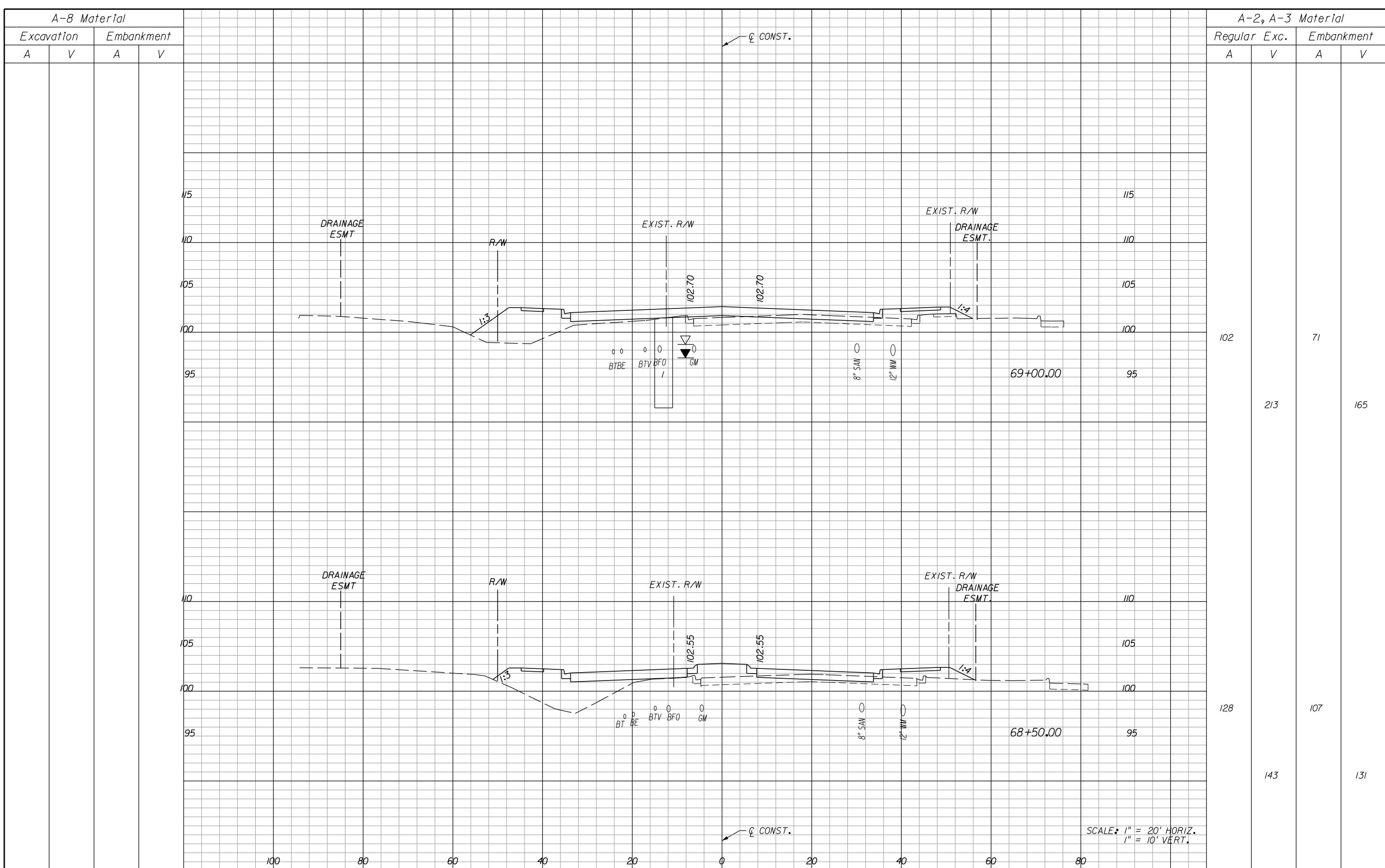
REVISIONS					
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**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.	210
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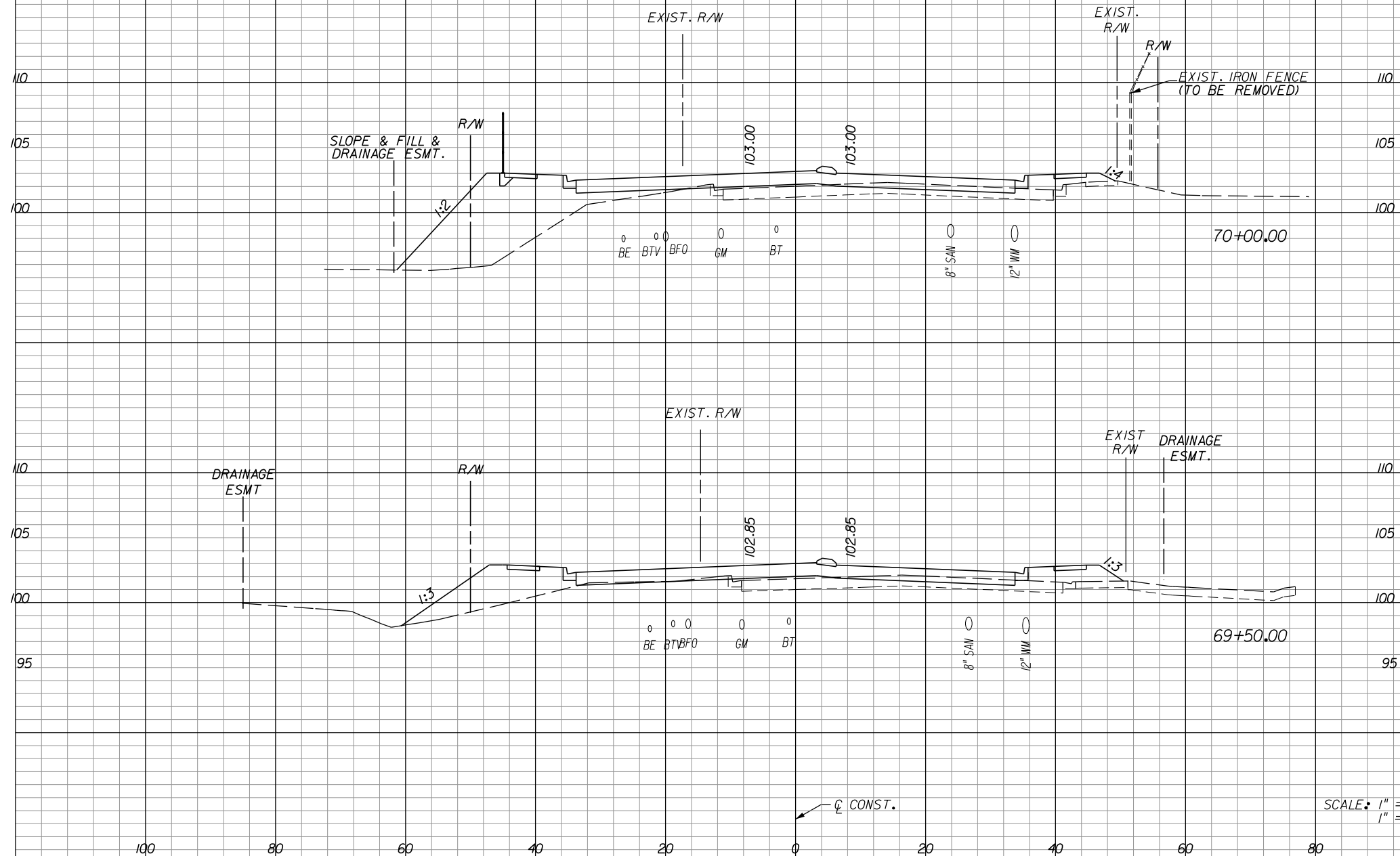
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.
211

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material			
Regular		Exc.	
A	V	A	V



11	117
73	156
68	52
157	113

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

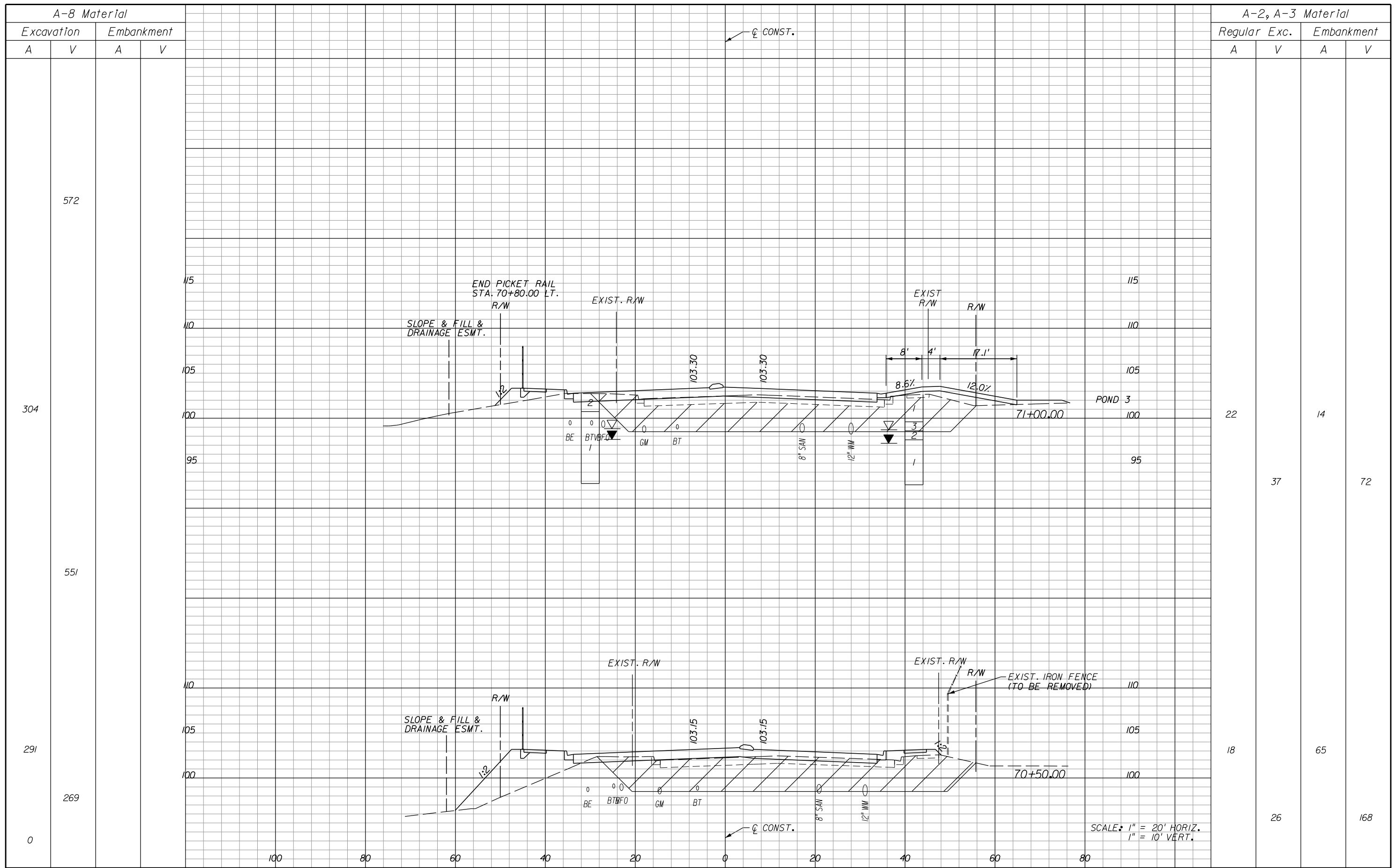
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.
212



REVISIONS					
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**GOVERNMENT**  
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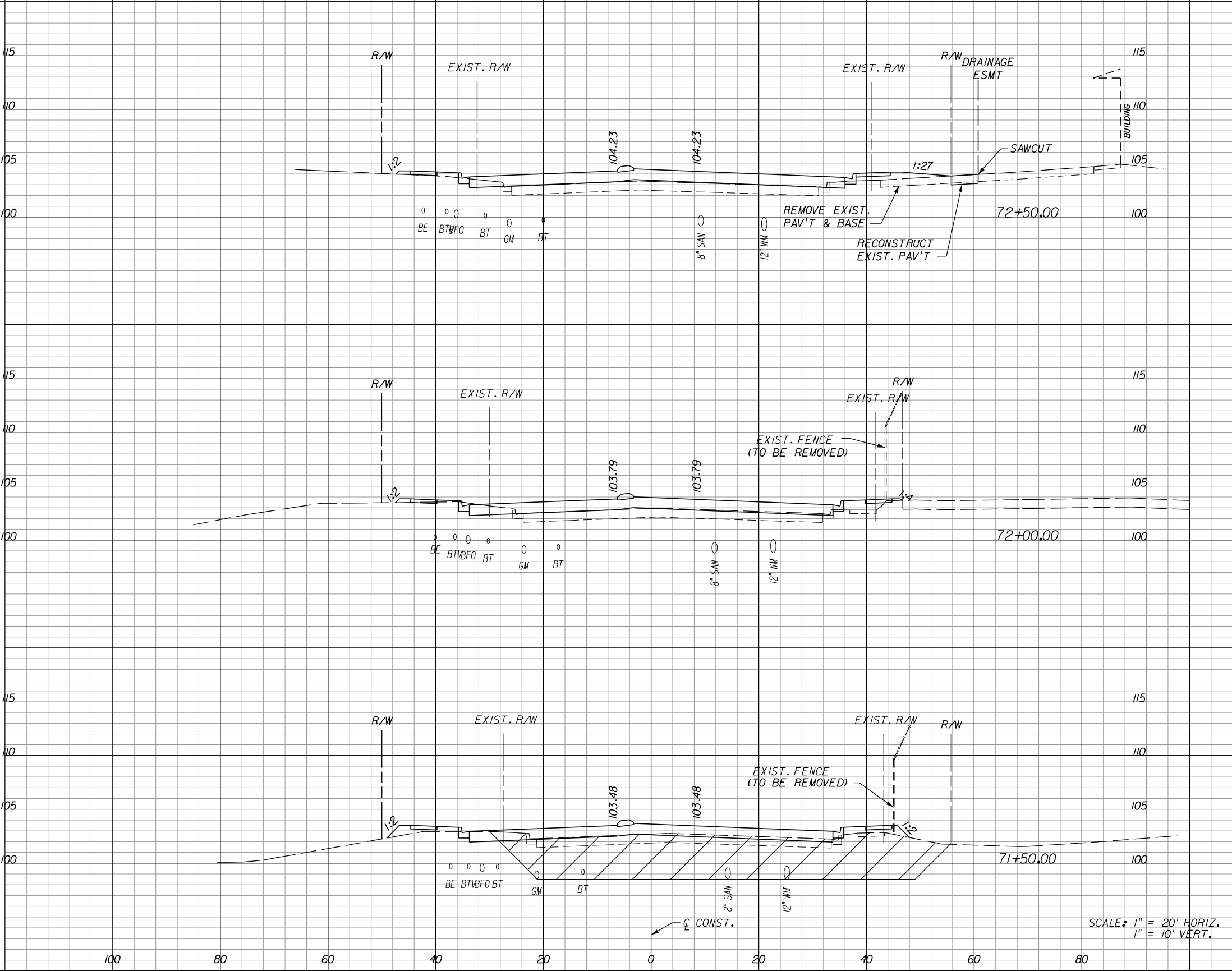
**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
 213

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material			
Regular Exc.		Embankment	
A	V	A	V

0			
291			
314			



15		5	
		25	11
12		7	
		29	16
19		10	
		39	22

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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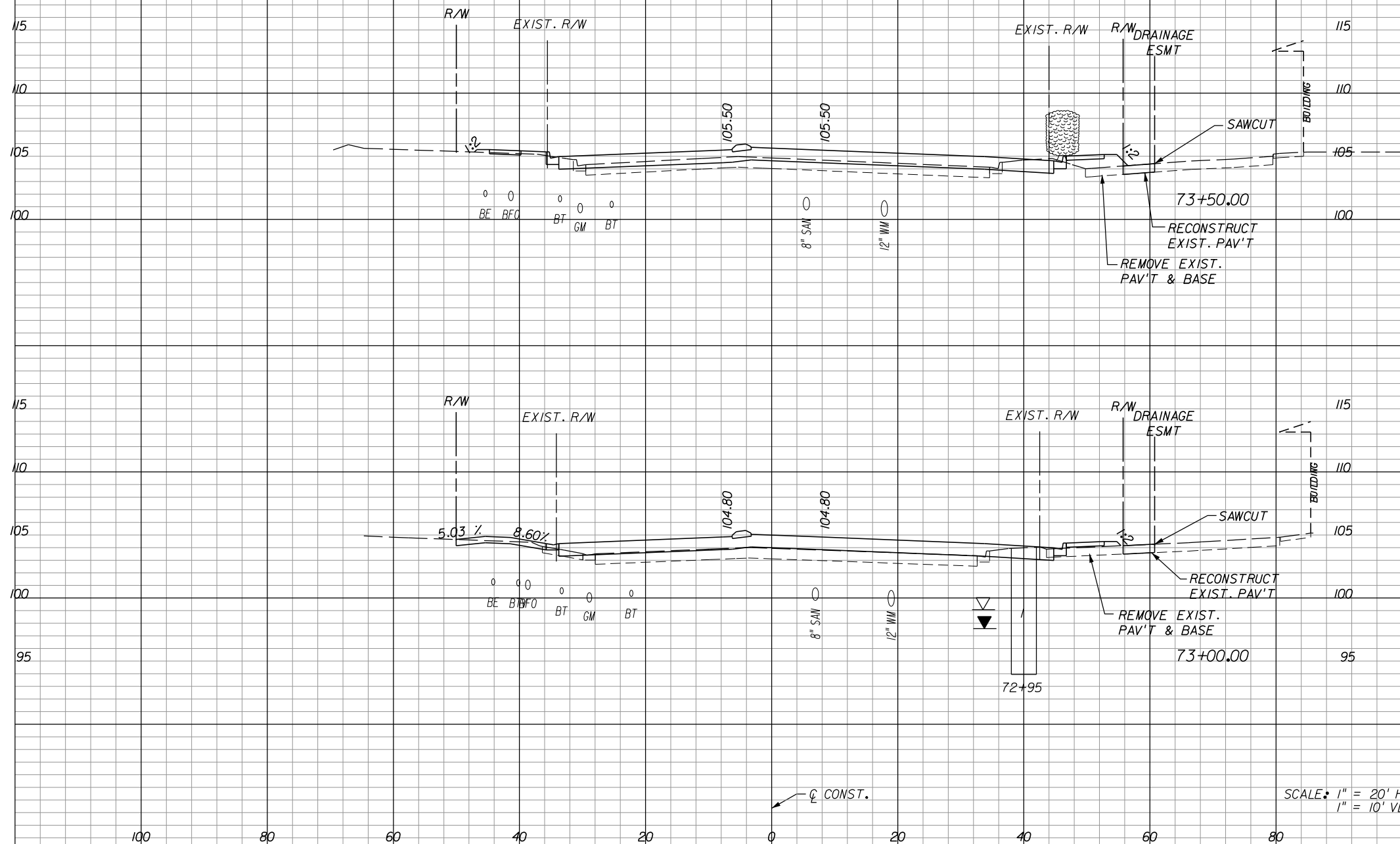
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.
214

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material			
Regular Exc.		Embankment	
A	V	A	V



32	4	8
42		
13	4	9
26		

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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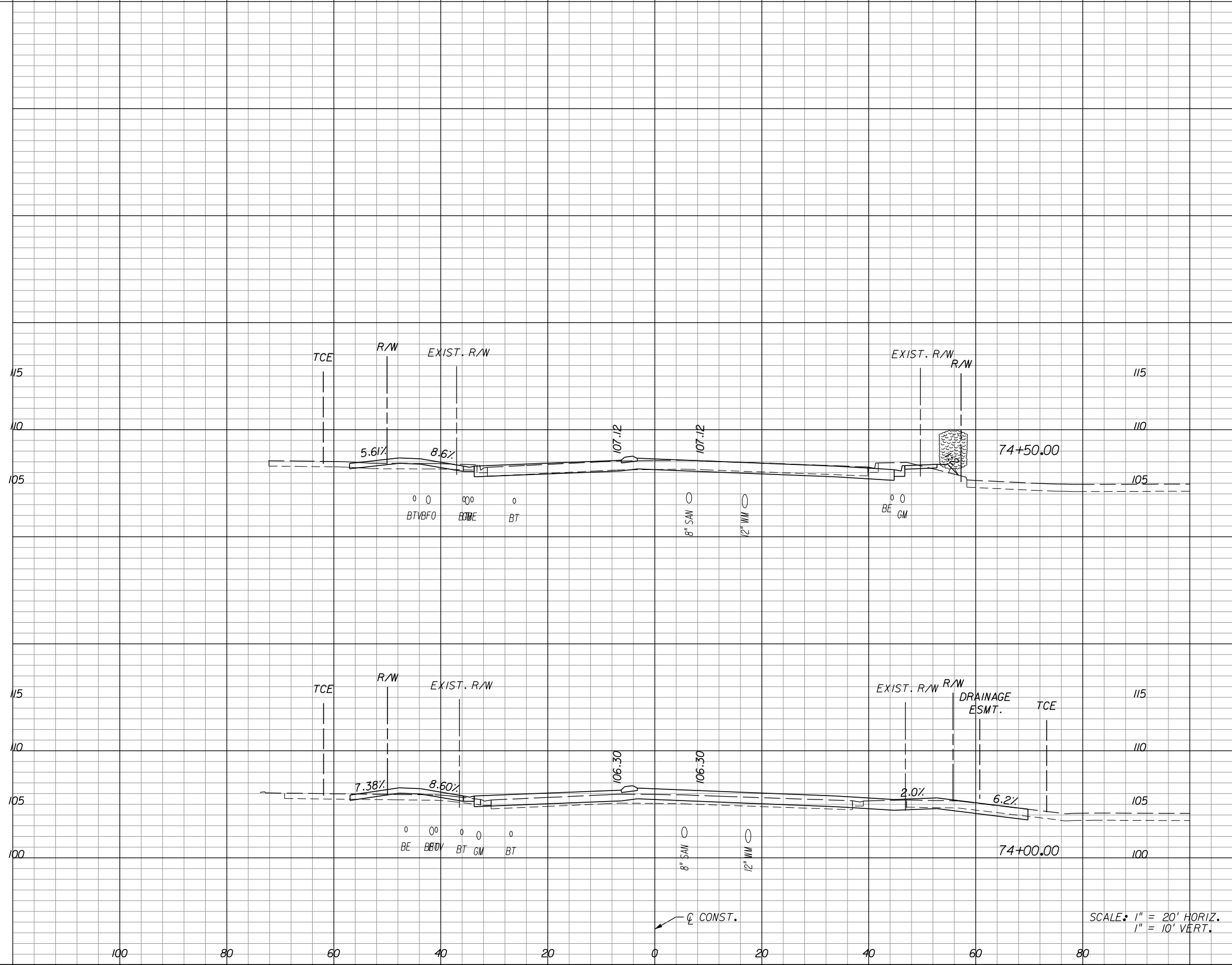
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.	215
-----------	-----

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material			
Regular Exc.		Embankment	
A	V	A	V



REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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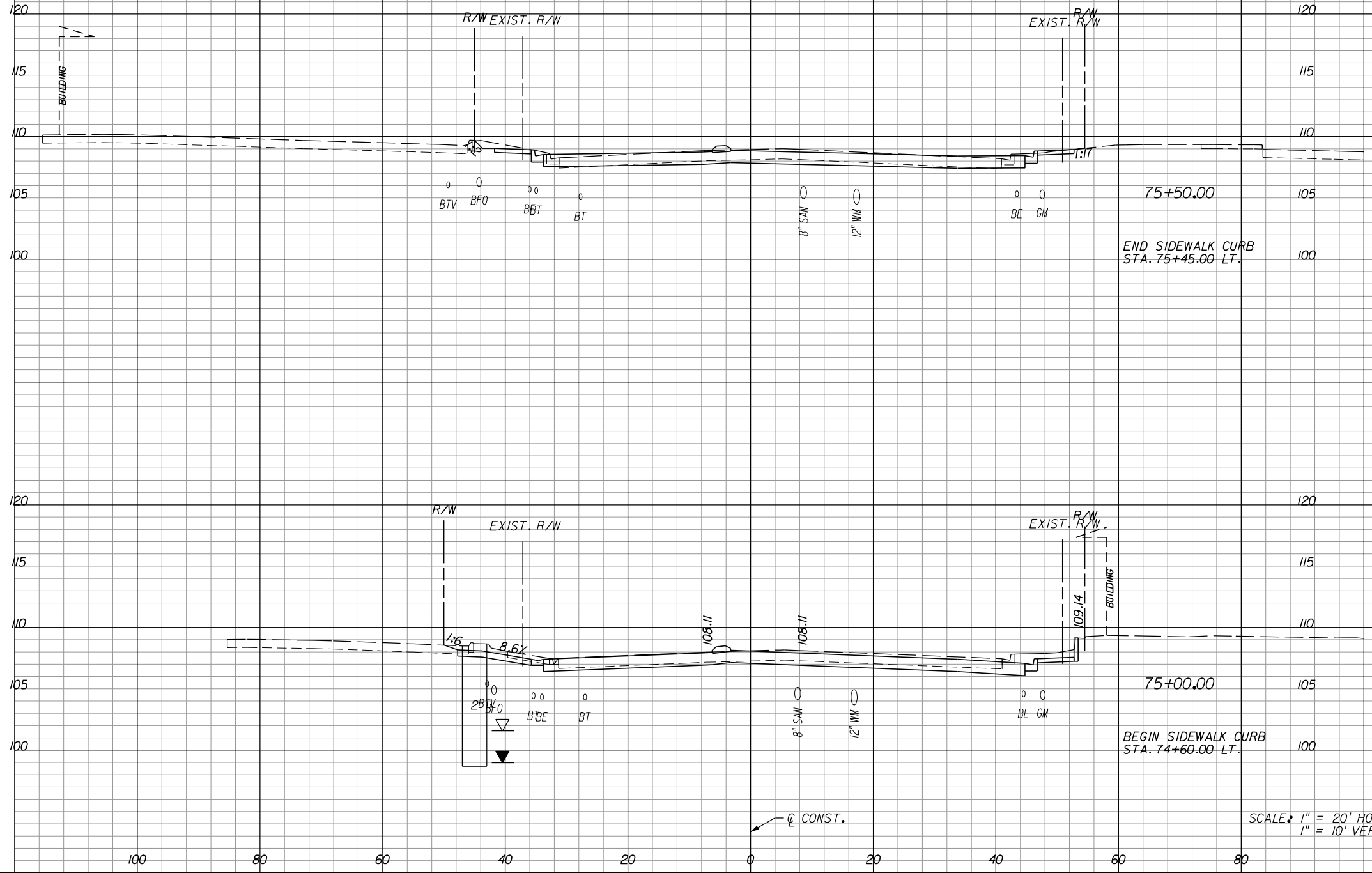
**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.
216



A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material					
Regular		Exc.		Embankment	
A	V	A	V	A	V



SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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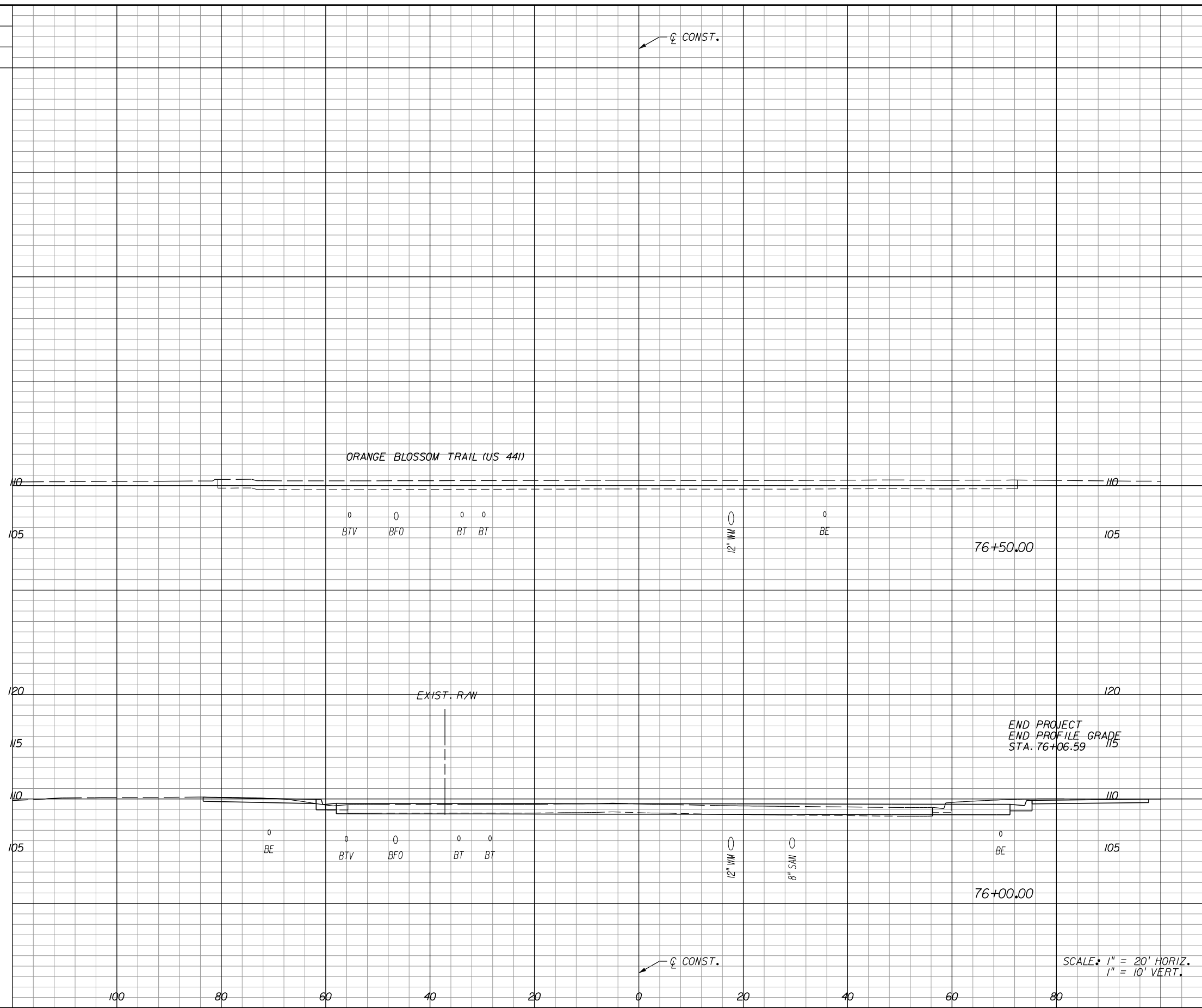
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
217

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material			
Regular		Exc.	
A	V	A	V



REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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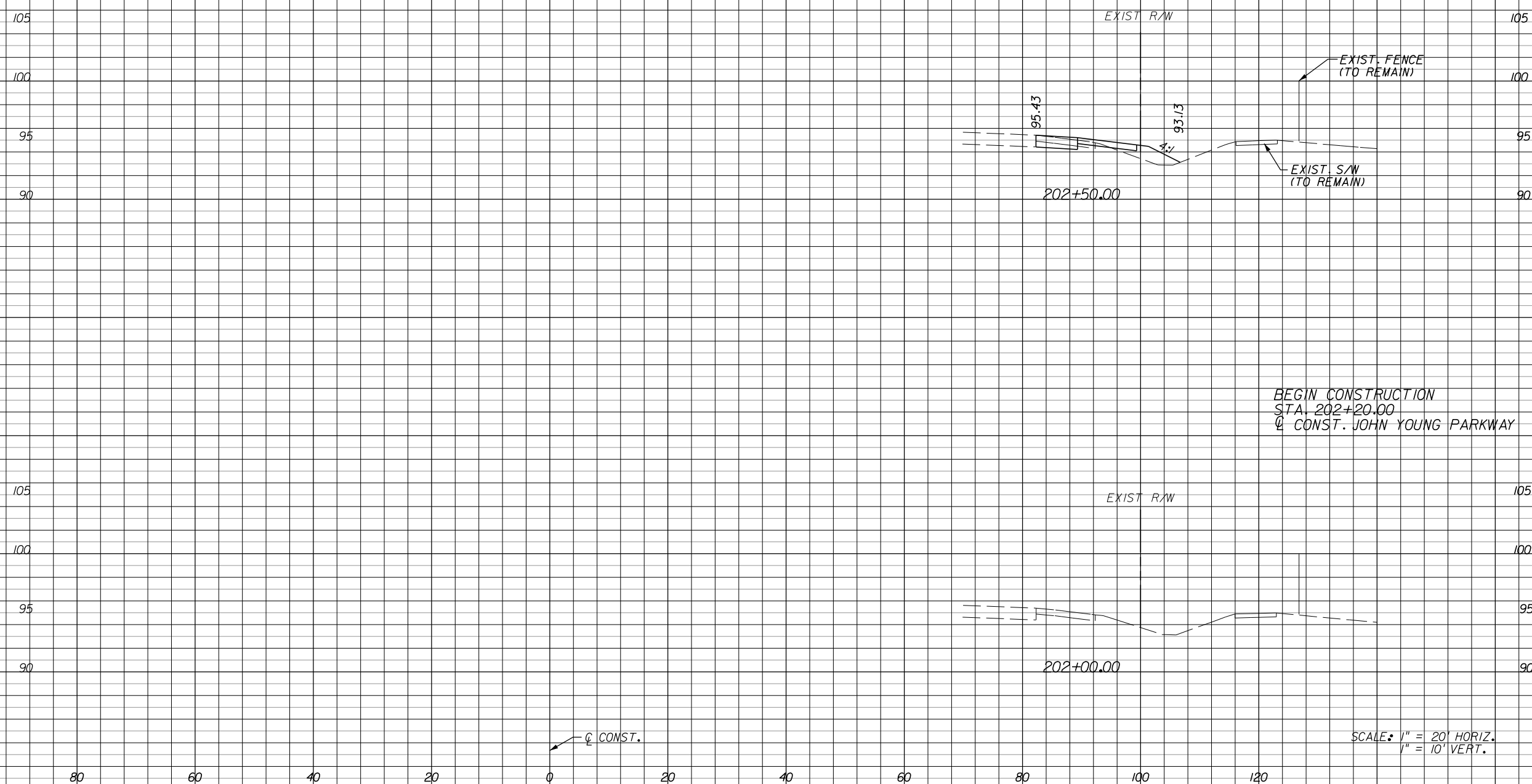
**ORANGE COUNTY**  
**GOVERNMENT**  
 FLORIDA

**HOLDEN AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
 218

Regular Exc. Embankment

A V A V



3		8	
	2		4
0		0	

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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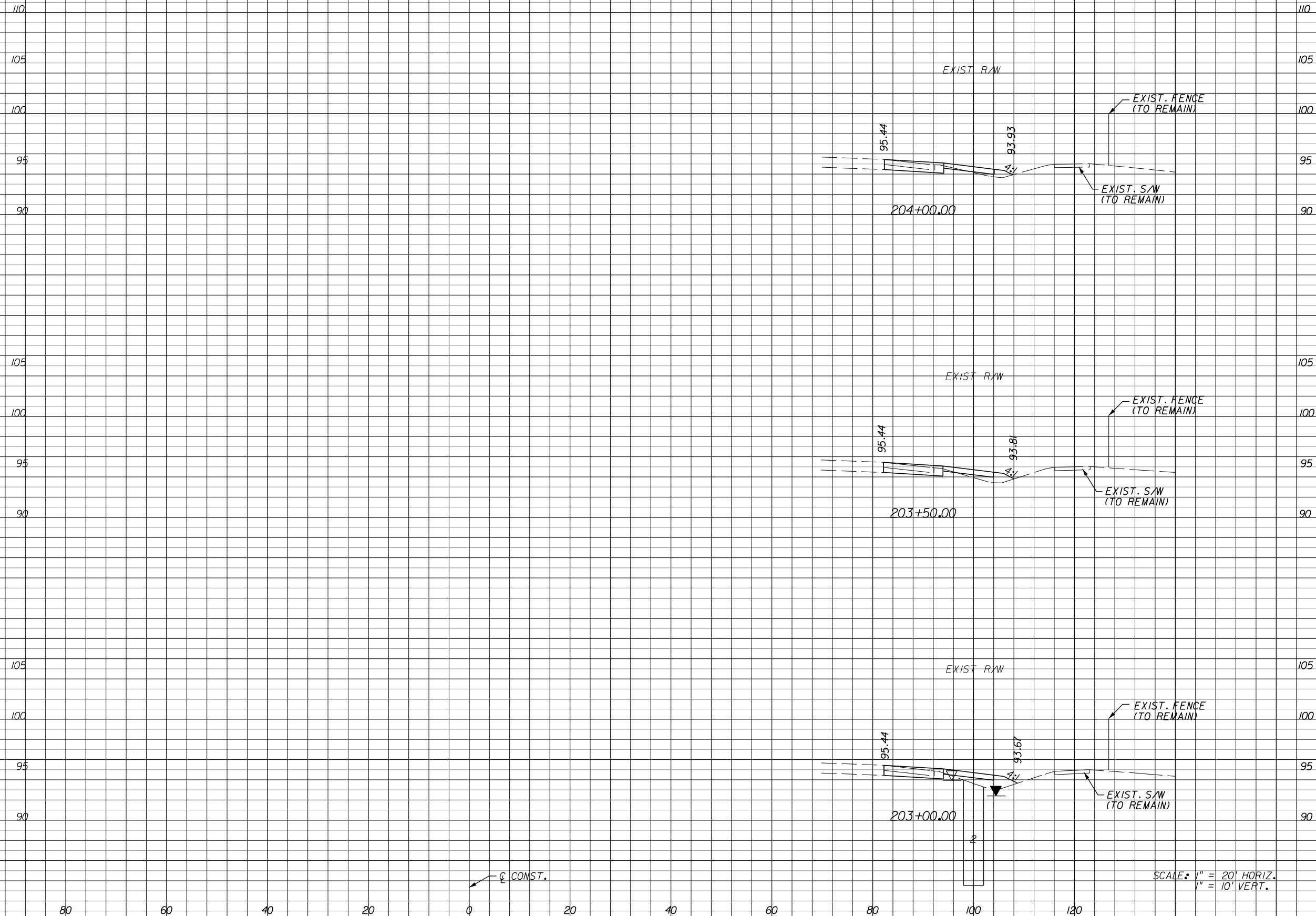
**ORANGE COUNTY**  
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 FLORIDA

**JOHN YOUNG PARKWAY**  
**CROSS SECTIONS**

SHEET NO.  
219

Regular Exc. Embankment

A V A V



5

5

5

9

9

7

3

5

9

7

13

116

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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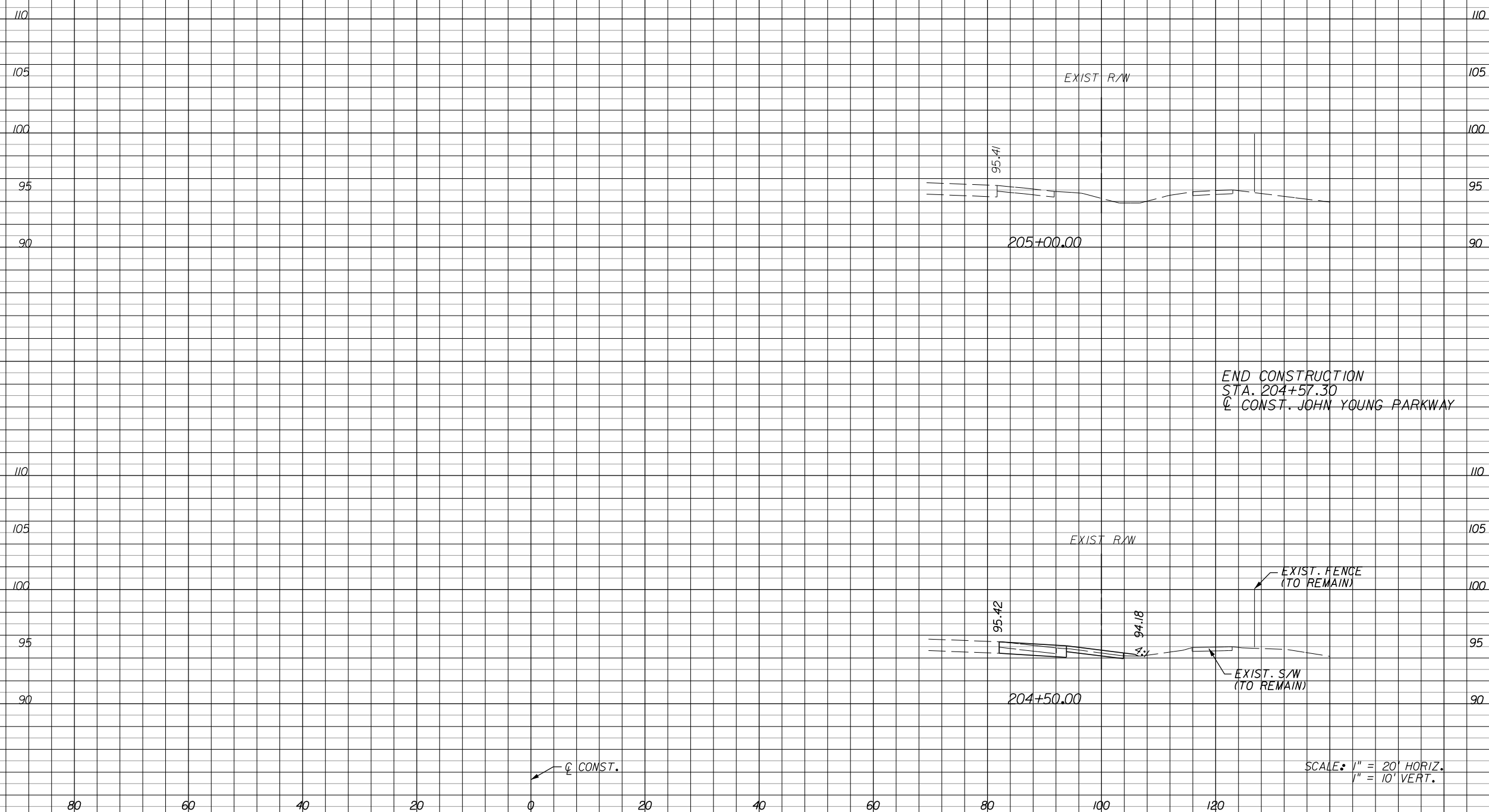
**JOHN YOUNG PARKWAY**  
**CROSS SECTIONS**

SHEET NO.  
220

Regular Exc. Embankment

A V A V

←  $\zeta$  CONST.



END CONSTRUCTION  
STA. 204+57.30  
 $\zeta$  CONST. JOHN YOUNG PARKWAY

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

0	0	0	0
1	1	1	1
8	12	1	4

←  $\zeta$  CONST.

REVISIONS			
DATE	BY	DESCRIPTION	DATE

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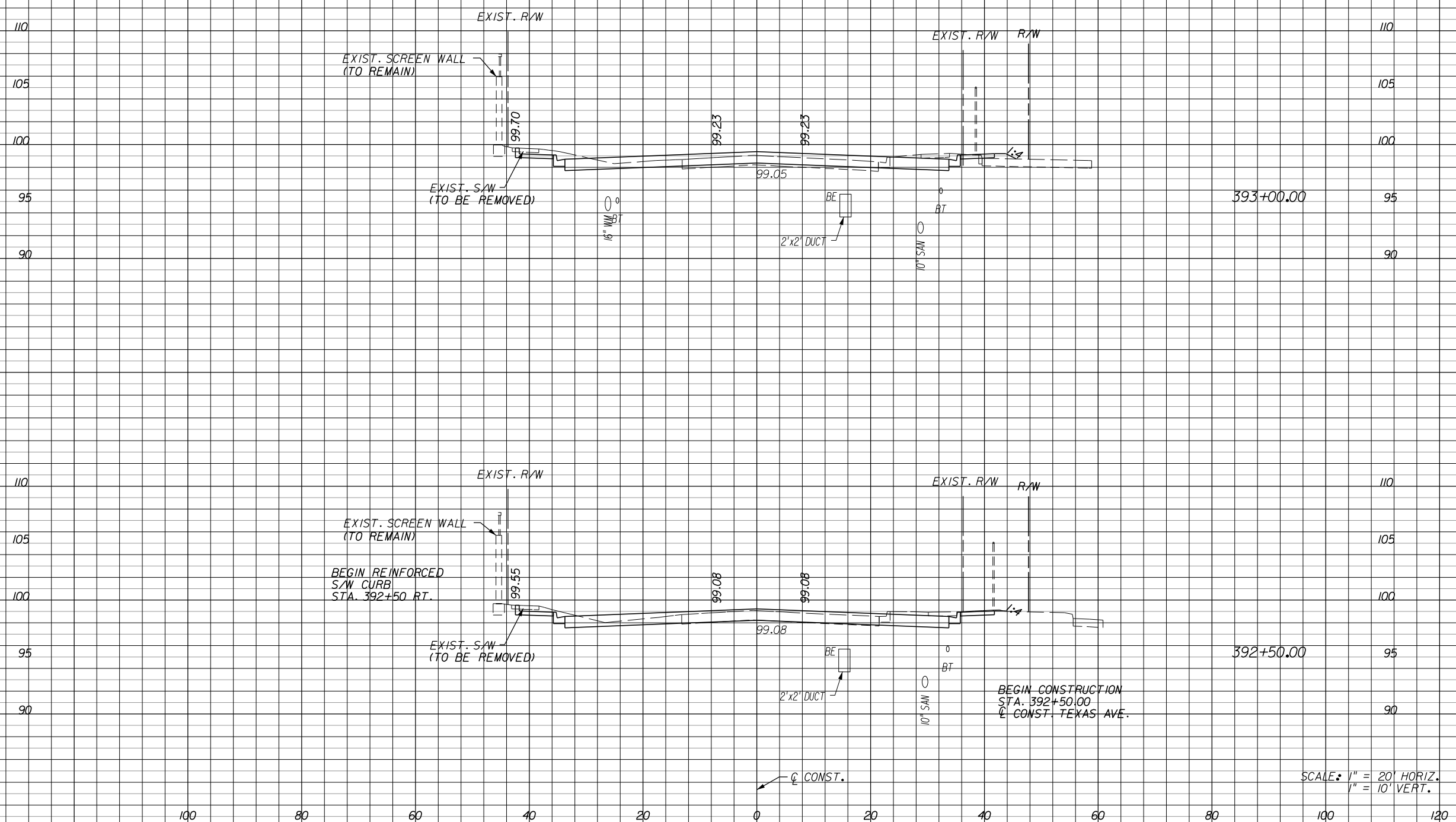
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**JOHN YOUNG PARKWAY**  
**CROSS SECTIONS**

SHEET NO.  
221

Regular Exc. Embankment

A V A V



42	80	4	17
43	0	14	0

REVISIONS

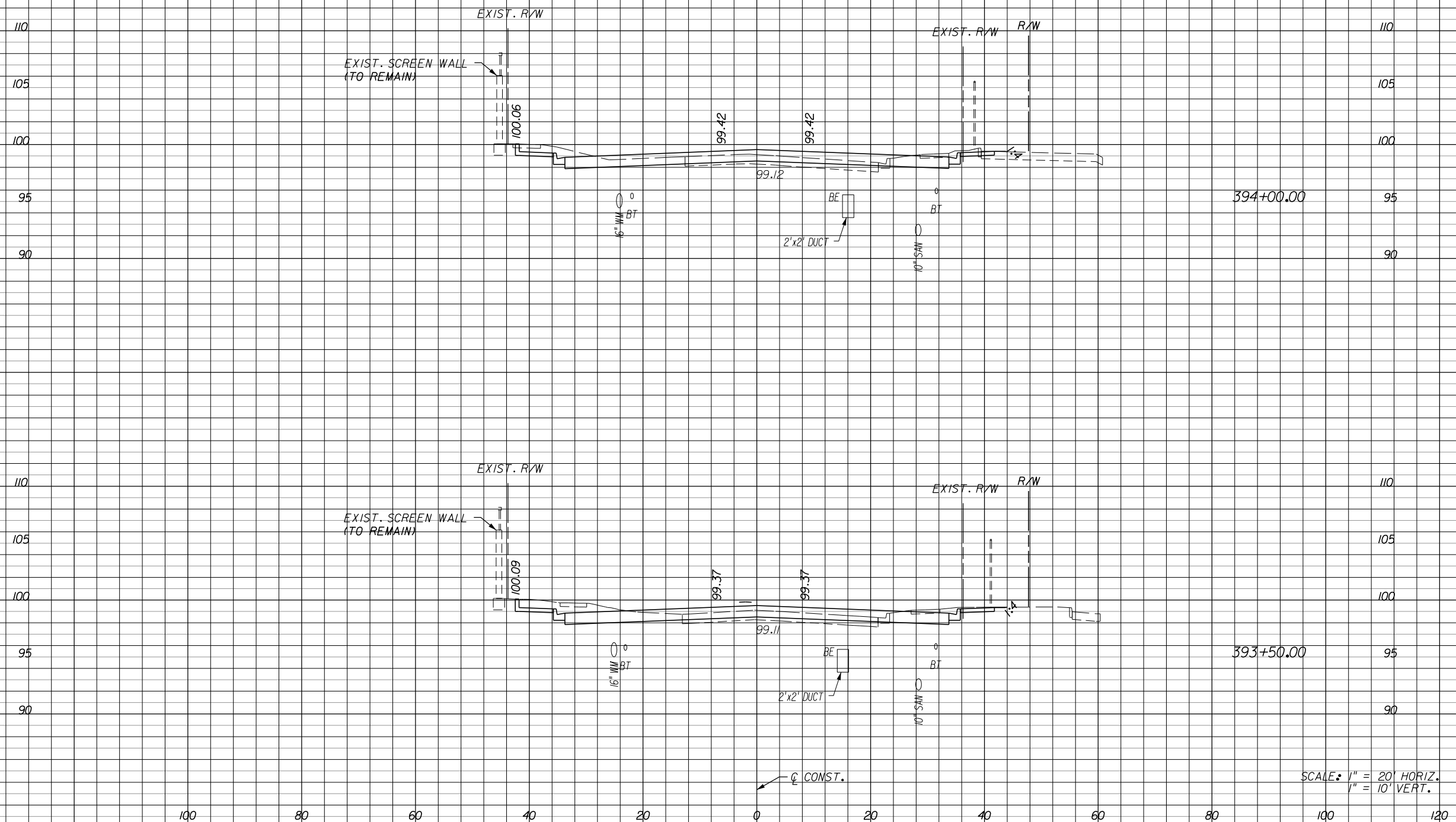
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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**GOVERNMENT**  
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**TEXAS AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
222



47	87	4	5
47	83	2	5

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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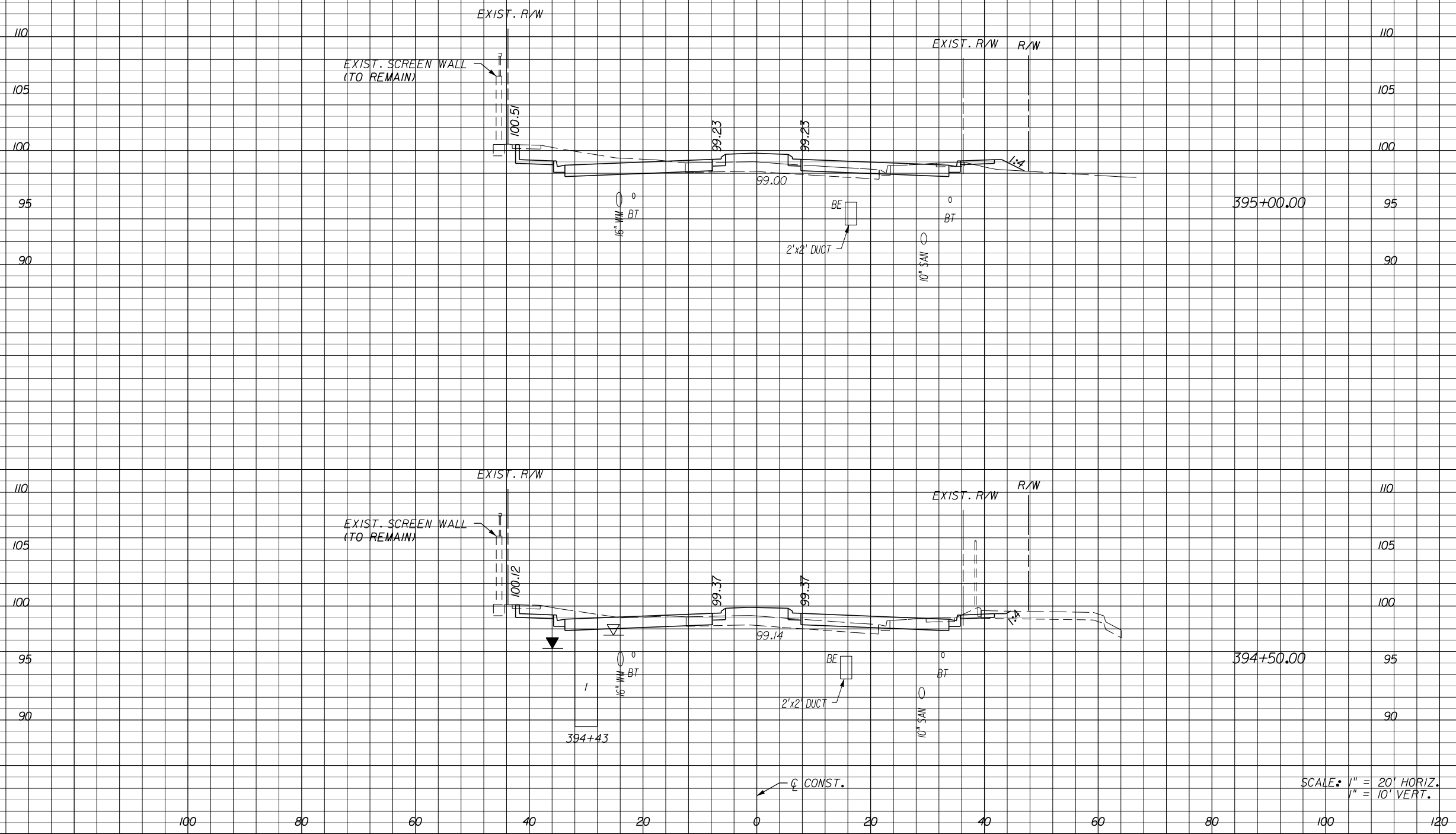
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**TEXAS AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
223

Regular Exc. Embankment

A V A V



72	11
122	15
60	6
100	9

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

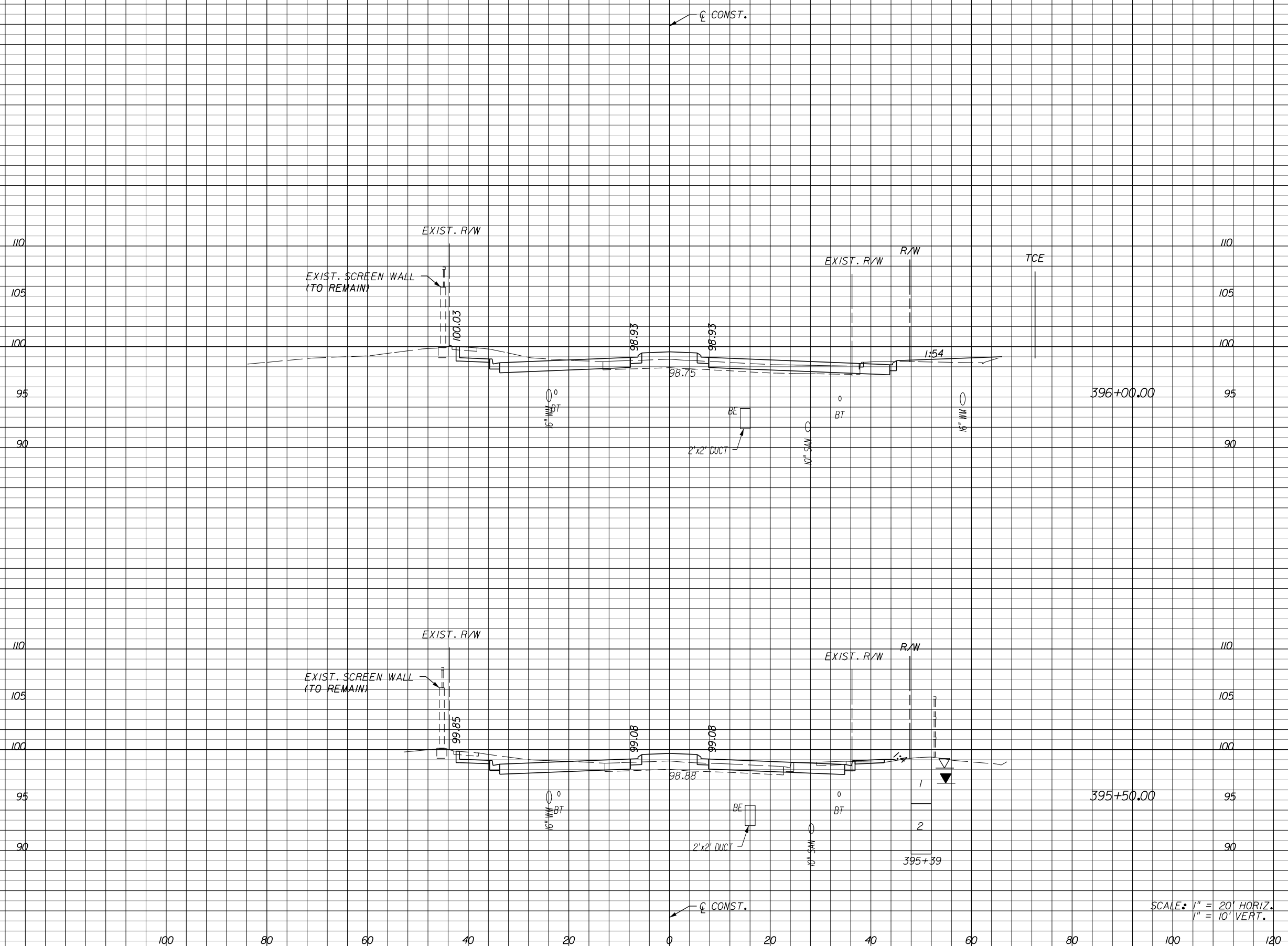
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**GOVERNMENT**  
FLORIDA

**TEXAS AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
224





67	18
123	25
66	9
128	18

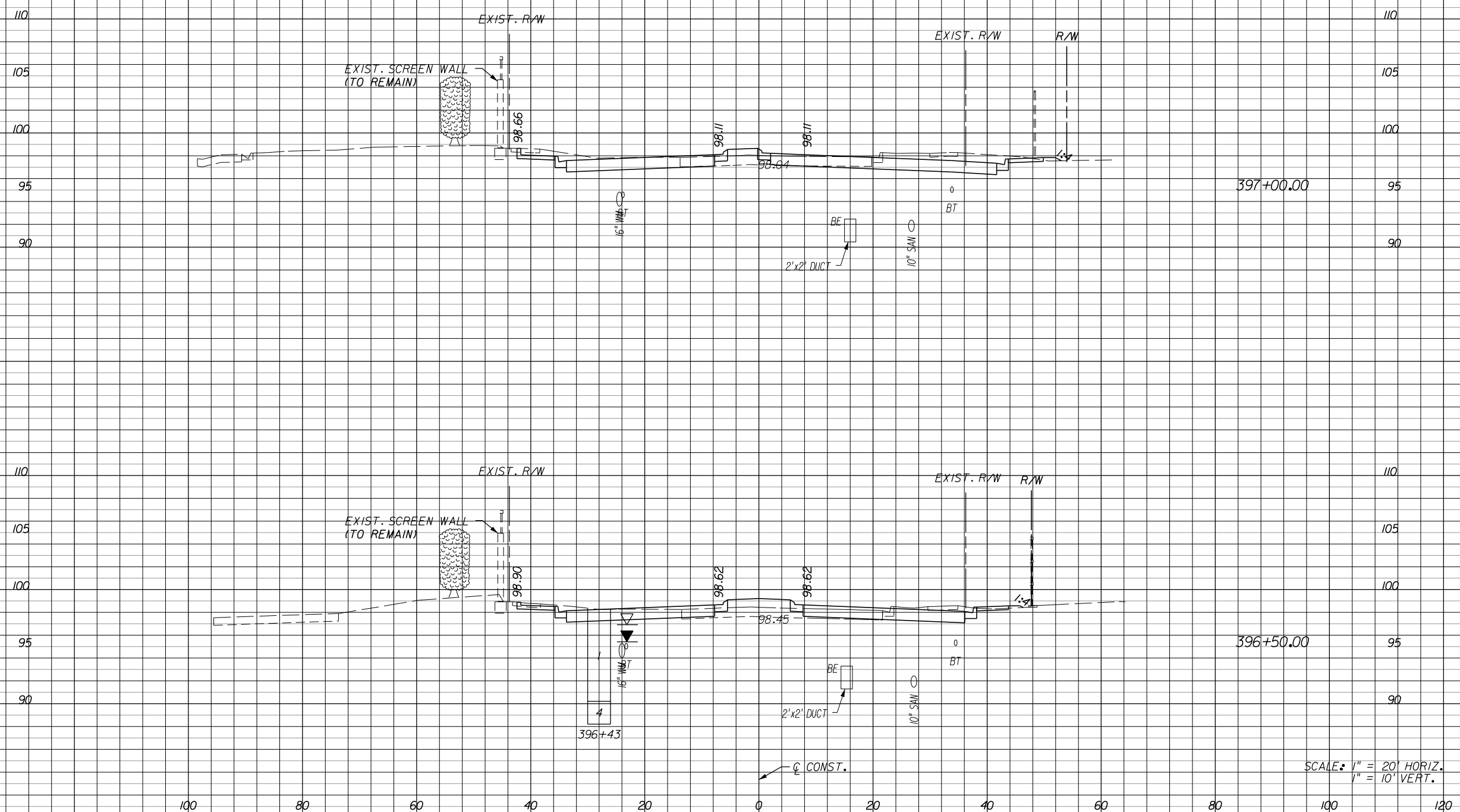
SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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**GOVERNMENT**  
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**TEXAS AVENUE**  
**CROSS SECTIONS**



85

138

5

13

64

121

9

24

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

100 80 60 40 20 0 20 40 60 80 100 120

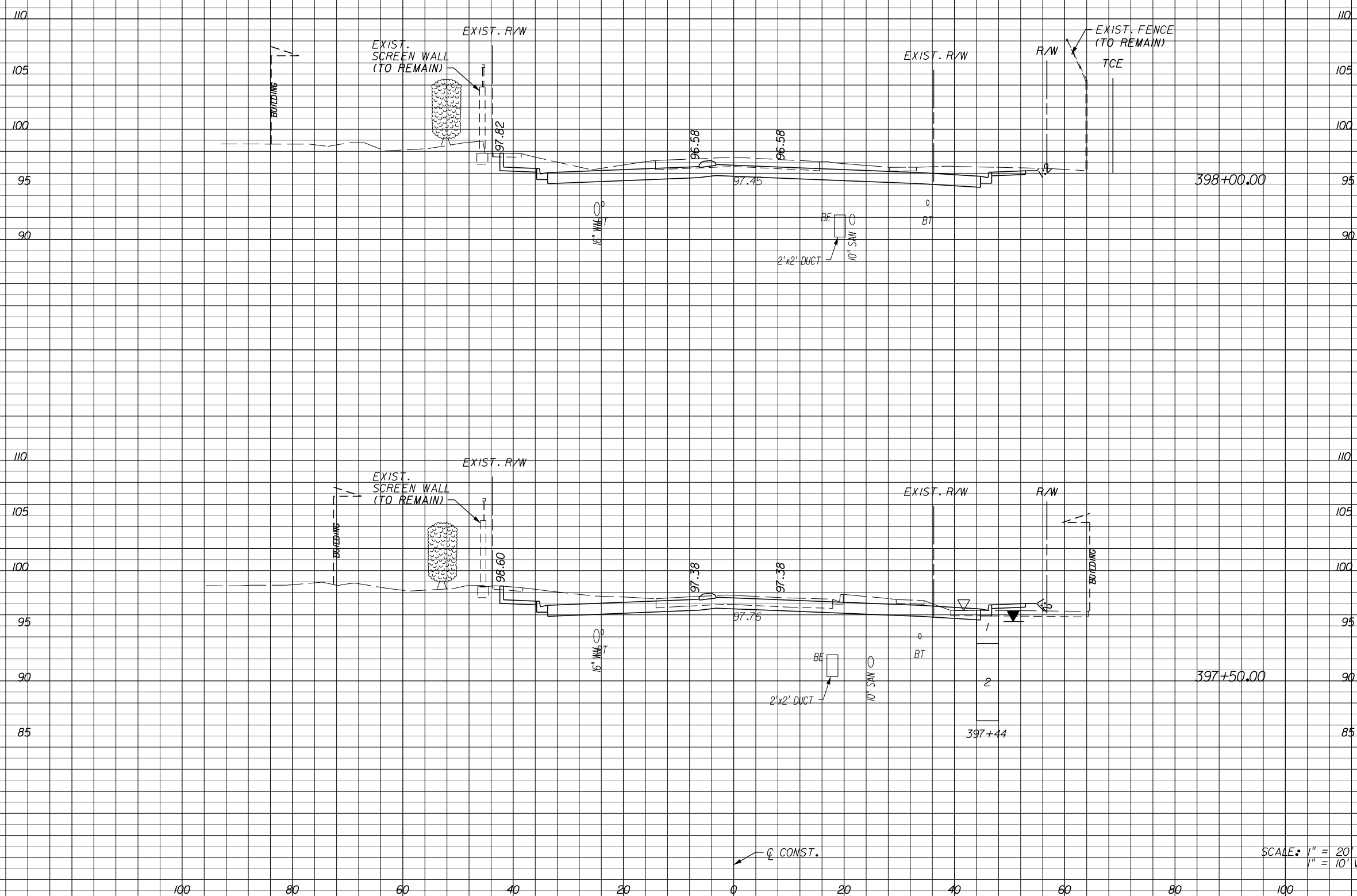
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**TEXAS AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
226



SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

118	0	0	0
206	5	5	5
104	6	6	6
175	10	10	10

REVISIONS			
DATE	BY	DESCRIPTION	

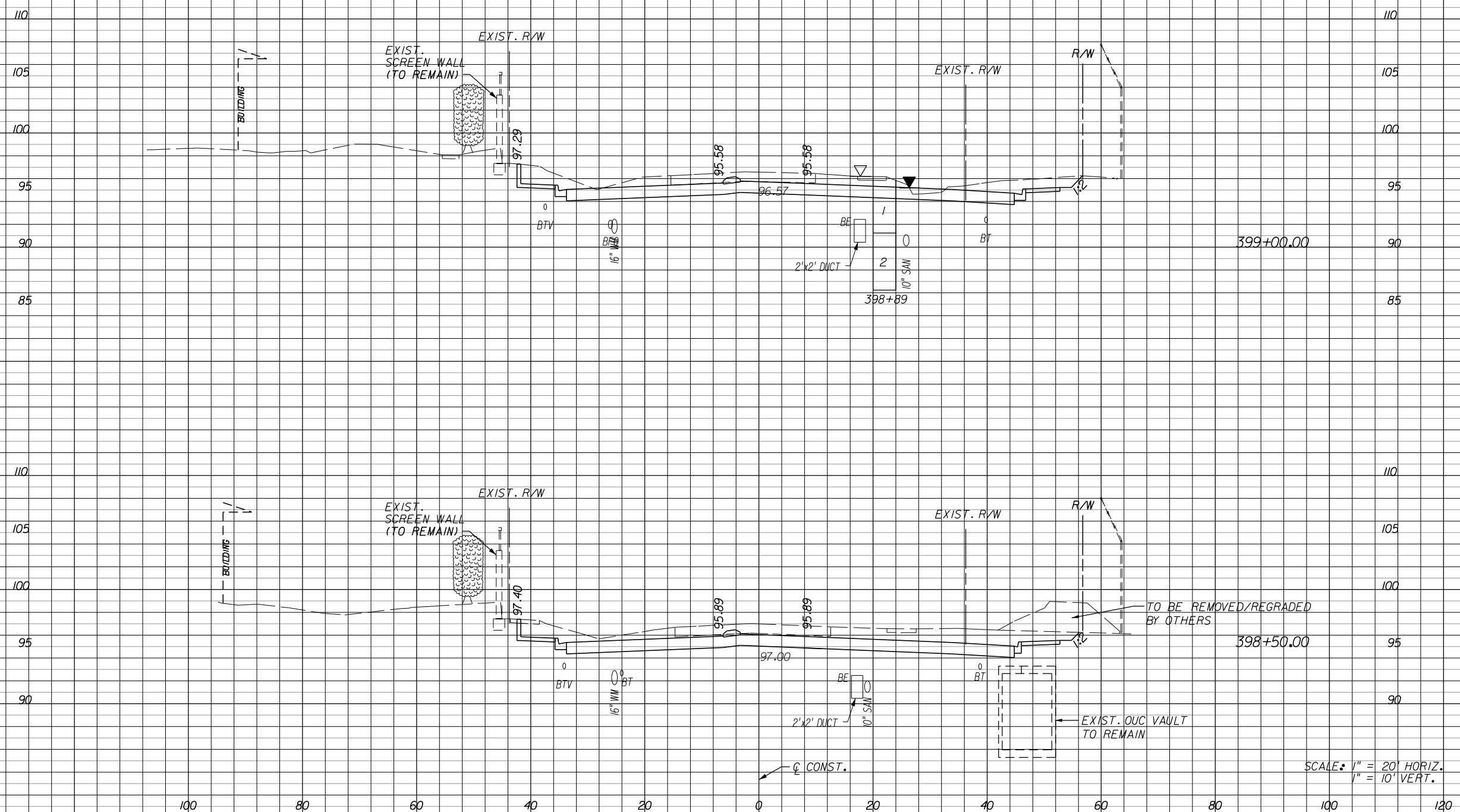
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**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**TEXAS AVENUE**  
**CROSS SECTIONS**

Regular Exc. Embankment

A V A V



130	0	0	0
274	0	0	0
166	0	0	0
263	0	0	0

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS			
DATE	BY	DESCRIPTION	DATE
1/23/15	TAA	PARCEL 1088 REVISION	

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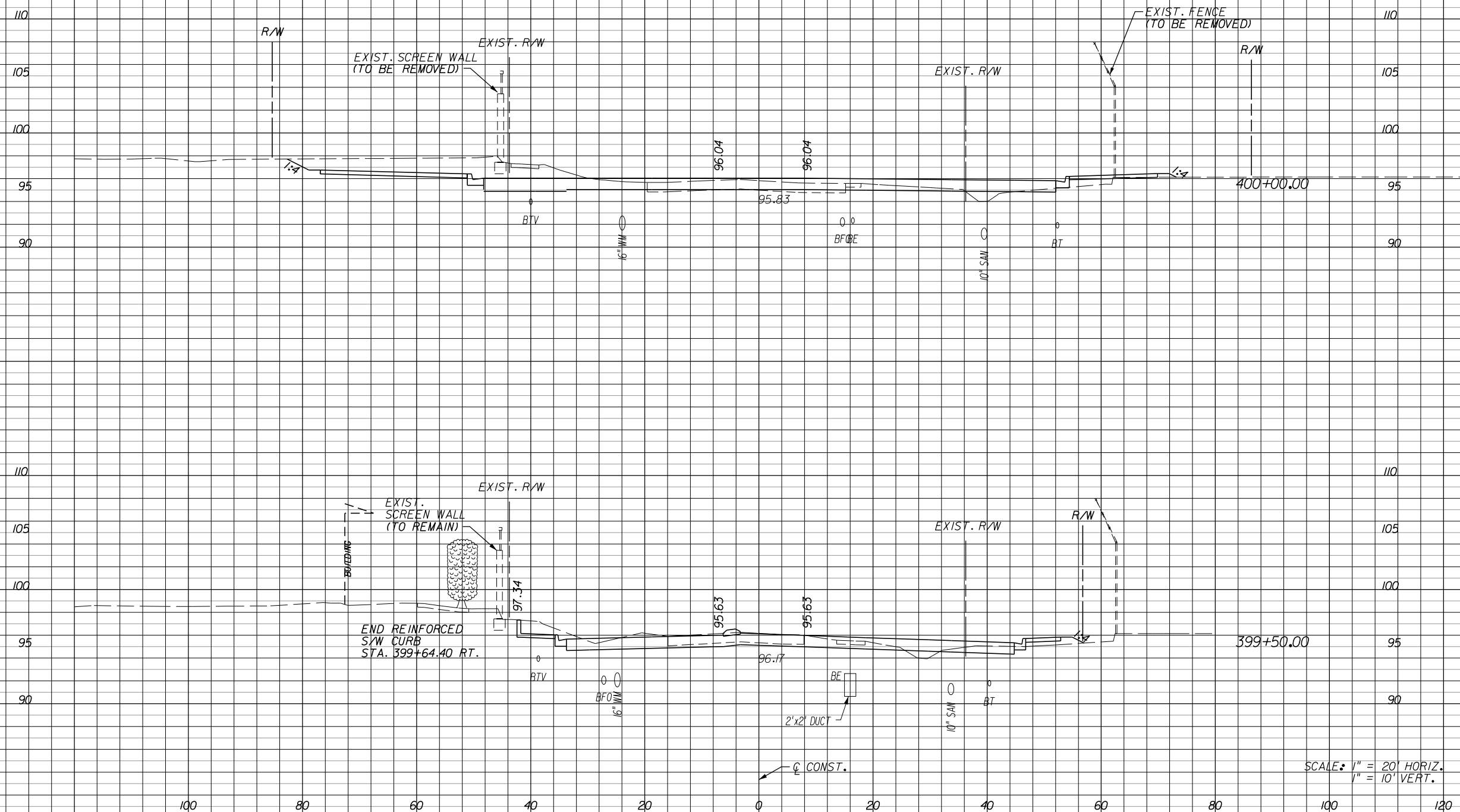
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**TEXAS AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
228

Regular Exc. Embankment

A V A V



148

6

222

9

92

4

206

3

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

100 80 60 40 20 0 20 40 60 80 100 120

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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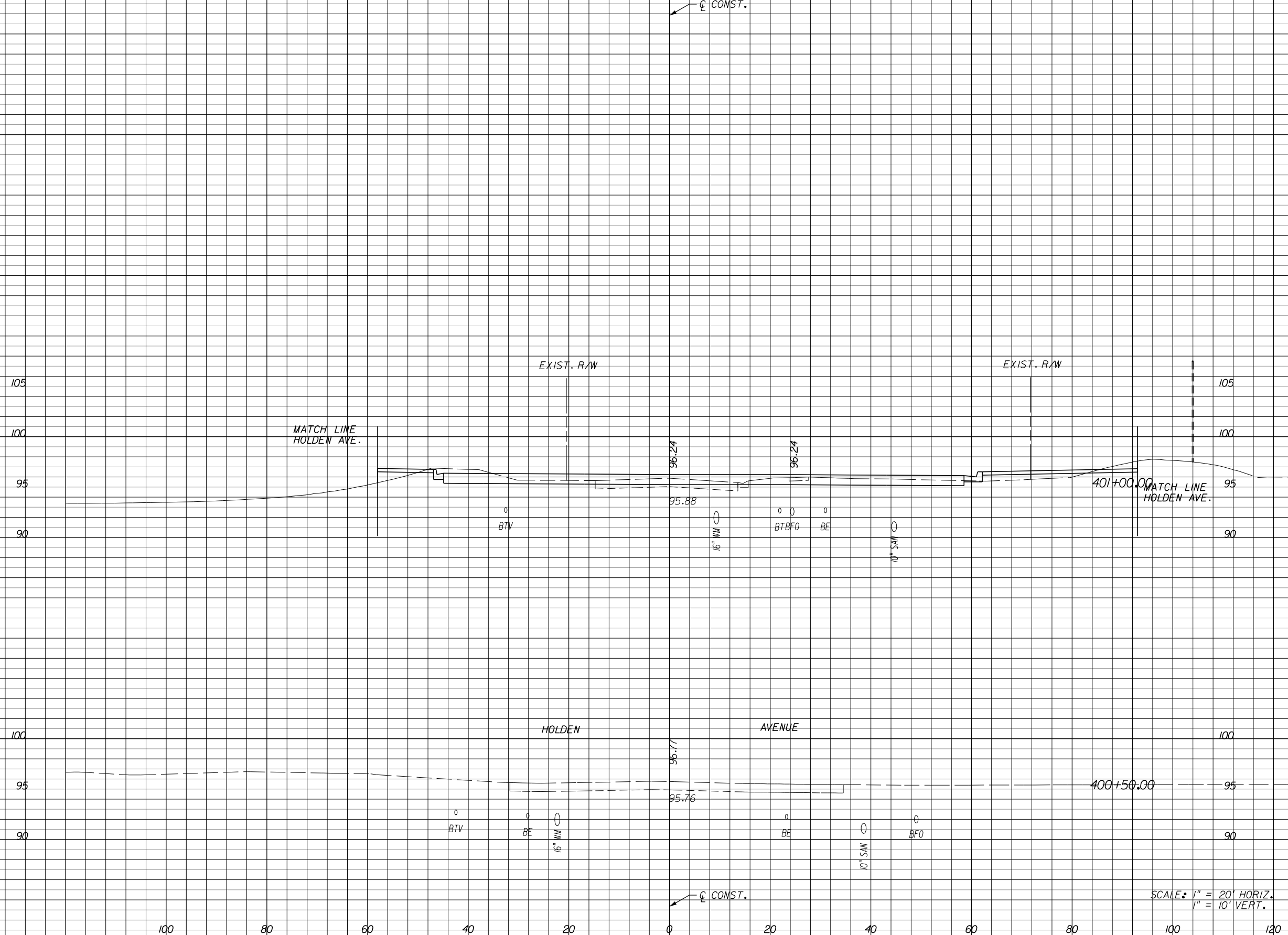
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**TEXAS AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
229

Regular Exc. Embankment

A V A V



72	14
407	38

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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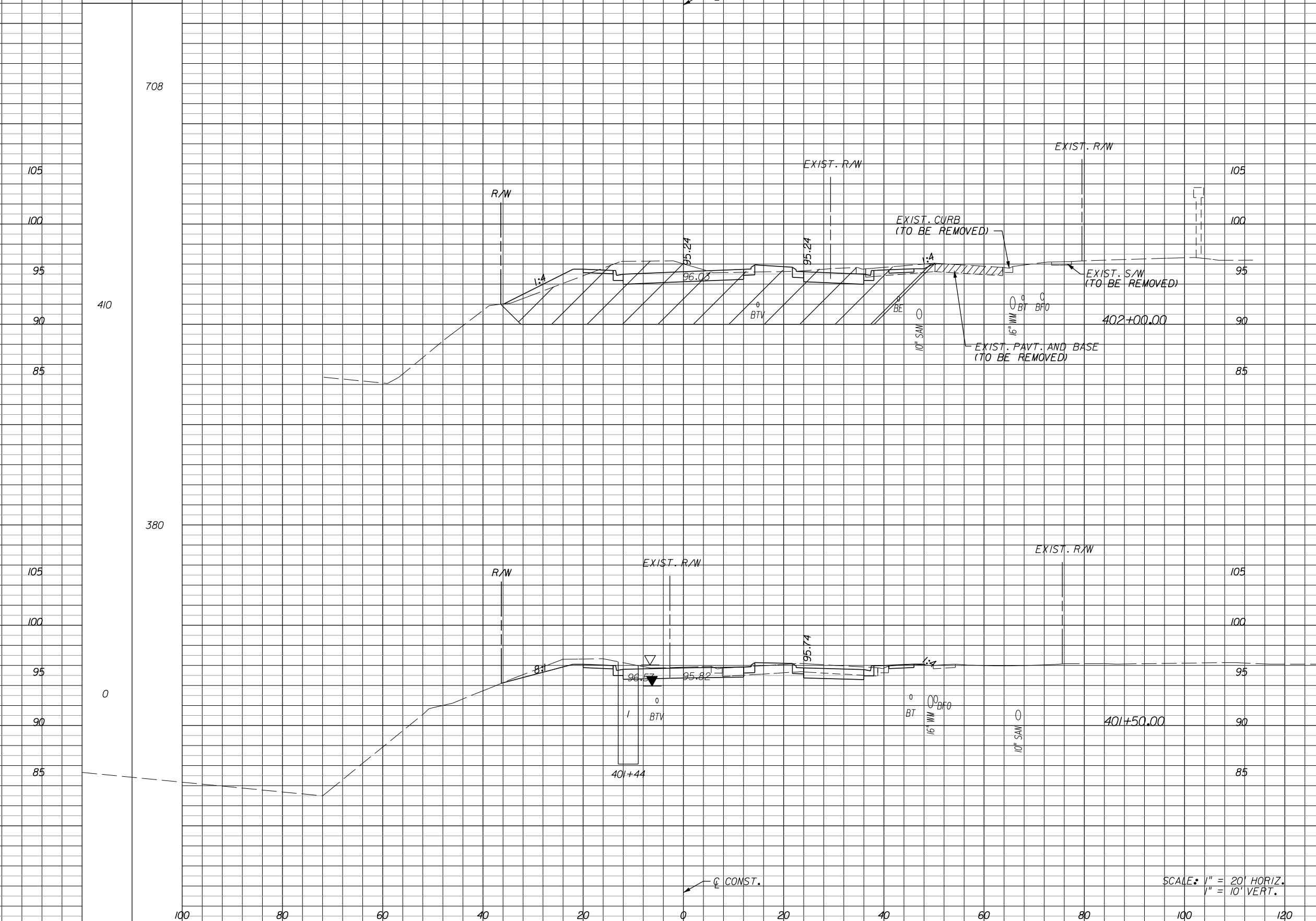
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**TEXAS AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
230

A-8 Exc.  
A V

Regular Exc. Embankment  
A V A V



Regular Exc.		Embankment	
A	V	A	V
71		14	
	126		15
65		2	
	127		15

100 80 60 40 20 0 20 40 60 80 100 120

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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**GOVERNMENT**  
FLORIDA

**TEXAS AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
231

A-8 Exc.

Regular Exc. Embankment

A V

A V A V

545

642

338

355

105

100

95

90

105

100

95

90

85

80

100

80

60

40

20

0

20

40

60

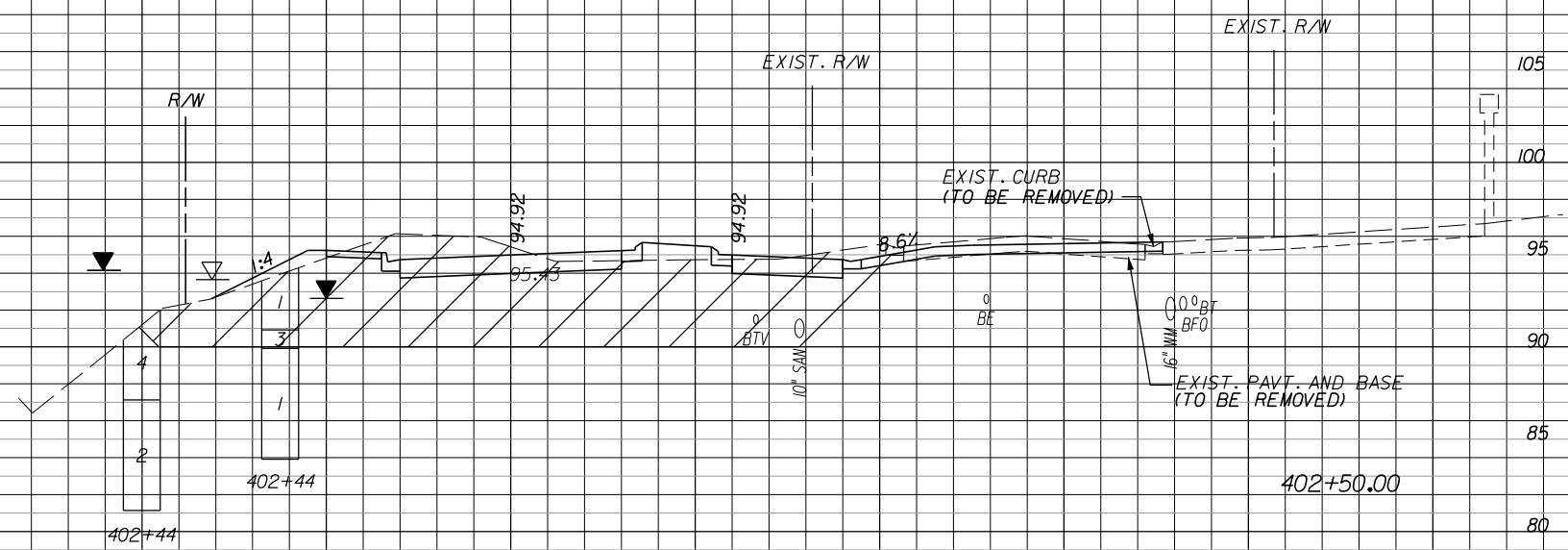
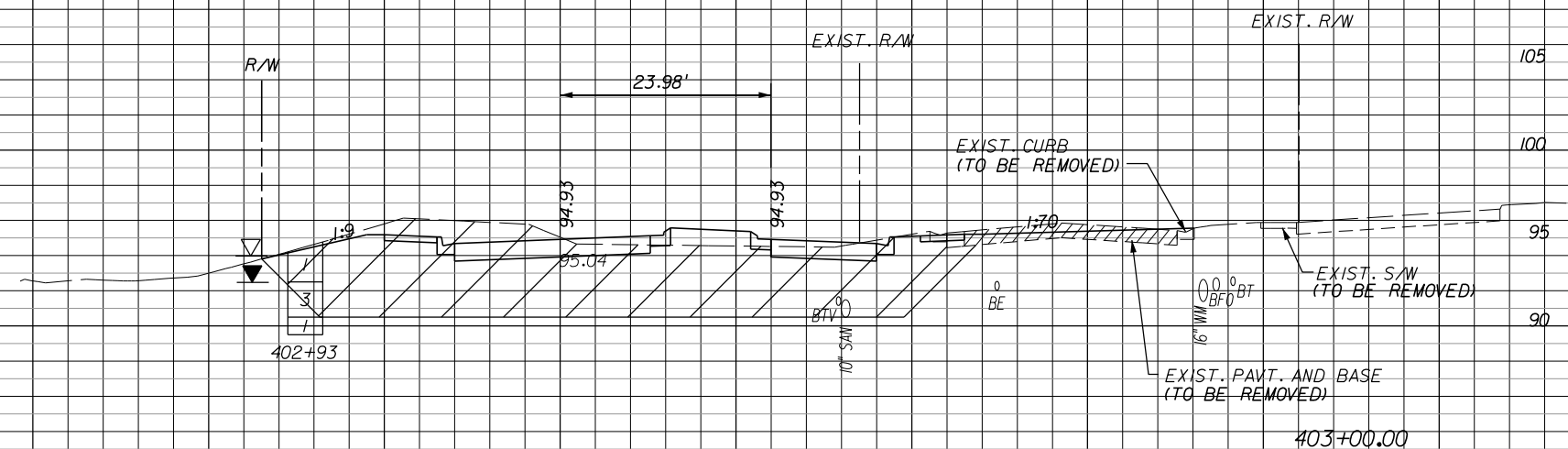
80

100

120

CL CONST.

CL CONST.



SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

59

129

8

18

80

140

12

24

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**TEXAS AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
232



A-8 Exc.

Regular Exc.

Embankment

A

V

A

V

A

V

105

100

95

90

85

80

75

105

100

95

90

85

80

75

113

337

3

229

16

244

251

15

35

68

40

CL CONST.

END PICKET RAIL  
STA. 404+00.00 LT

EXIST. R/W

R/W

EXIST. R/W

22.27'

EXIST. CURB  
(TO BE REMOVED)

EXIST. S/W  
(TO BE REMOVED)

EXIST. PAVT. AND BASE  
(TO BE REMOVED)

1:4

1:8.5

89.83

95.54

95.54

403+73

403+82

404+00.00

END SHEET PILE WALL  
w/ PICKET RAIL  
STA. 403+98.33 LT

BEGIN SHEET PILE WALL  
w/ PICKET RAIL  
STA. 403+54.00 LT

EXIST. R/W

R/W

EXIST. R/W

23.48'

EXIST. CURB  
(TO BE REMOVED)

EXIST. S/W  
(TO BE REMOVED)

EXIST. PAVT. AND BASE  
(TO BE REMOVED)

1:4

8.6%

94.37

95.22

95.22

403+43

403+41

403+50.00

BEGIN BARRIER WALL  
(RIGID-CURB & GUTTER)  
STA. 403+40.00 LT

CL CONST.

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

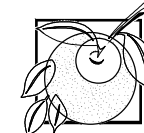
100 80 60 40 20 0 20 40 60 80 100 120

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**TEXAS AVENUE**  
**CROSS SECTIONS**

SHEET NO.

233

A-8 Exc.

Regular Exc. Embankment

A V

A V A V

452

105

100

95

90

194

368

105

100

95

90

85

203

293

100 80 60 40 20 0 20 40 60 80 100 120

CL CONST.

EXIST. R/W

105

100

95

90

R/W

EXIST. R/W

EXIST. FENCE (TO BE REMOVED)

EXIST. CURB (TO BE REMOVED)

EXIST. S/W (TO BE REMOVED)

EXIST. PAVT. AND BASE (TO BE REMOVED)

END BARRIER WALL (RIGID-CURB & GUTTER) STA. 404+85.00 LT

EXIST. R/W

105

100

95

90

85

R/W

EXIST. R/W

EXIST. FENCE (TO BE REMOVED)

EXIST. CURB (TO BE REMOVED)

EXIST. S/W (TO BE REMOVED)

EXIST. PAVT. AND BASE (TO BE REMOVED)

404+43

CL CONST.

SCALE: 1" = 20' HORIZ. 1" = 10' VERT.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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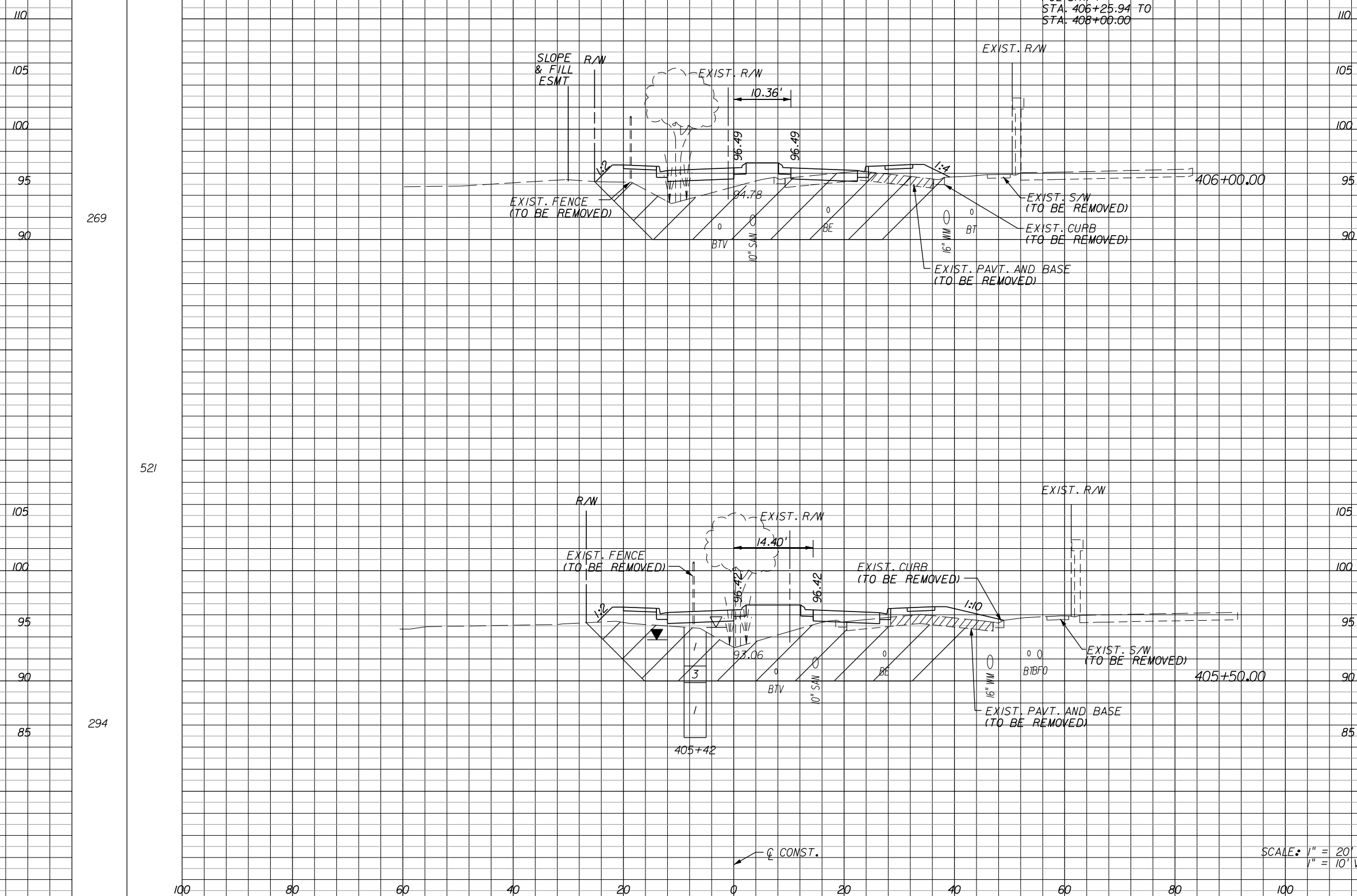
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**TEXAS AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
234

A-8 Exc.  
A V

Regular Exc. Embankment  
A V A V



269

294

7

2

9

3

58

68

117

152

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**TEXAS AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
235

A-8 Exc.  
A V

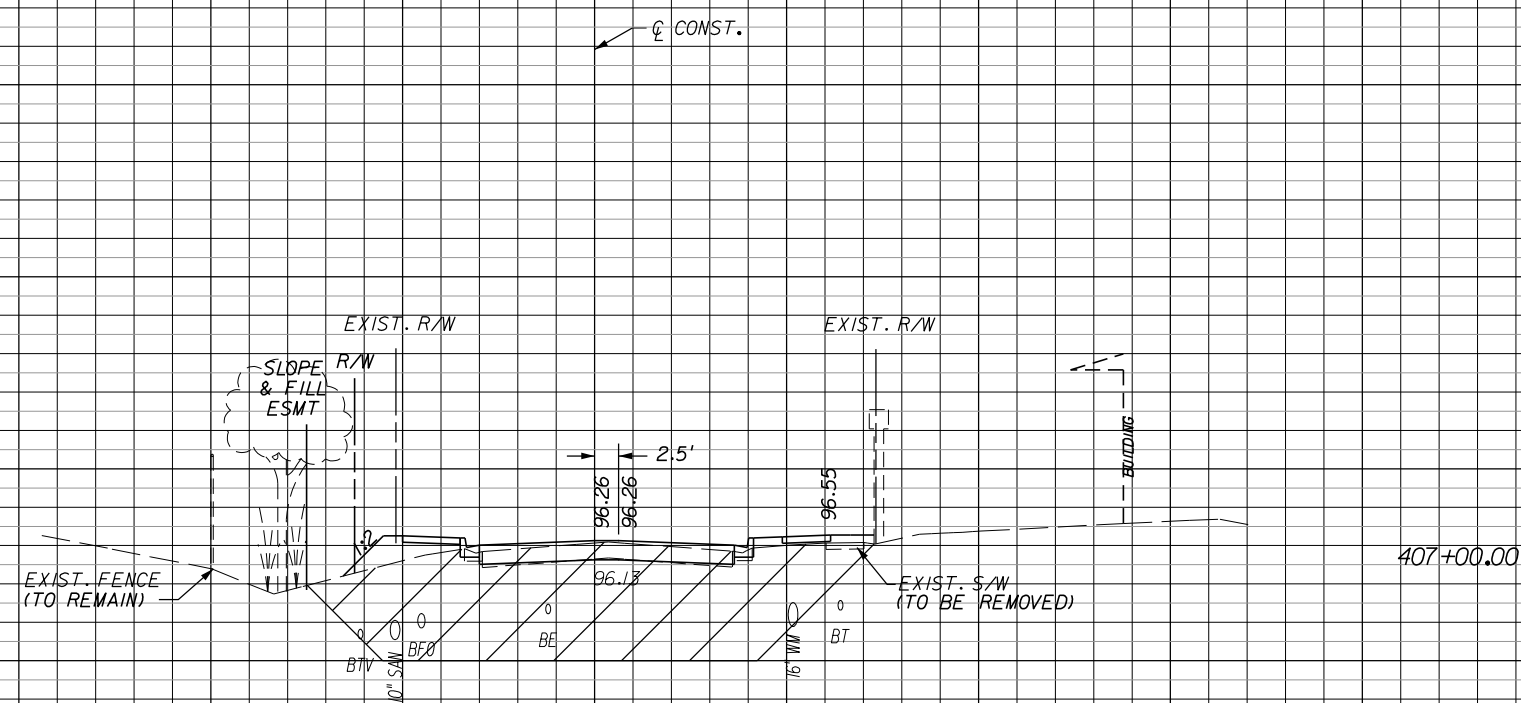
Regular Exc. Embankment  
A V A V

105  
100  
95  
90

105  
100  
95  
90

282  
588

23  
39  
12  
43

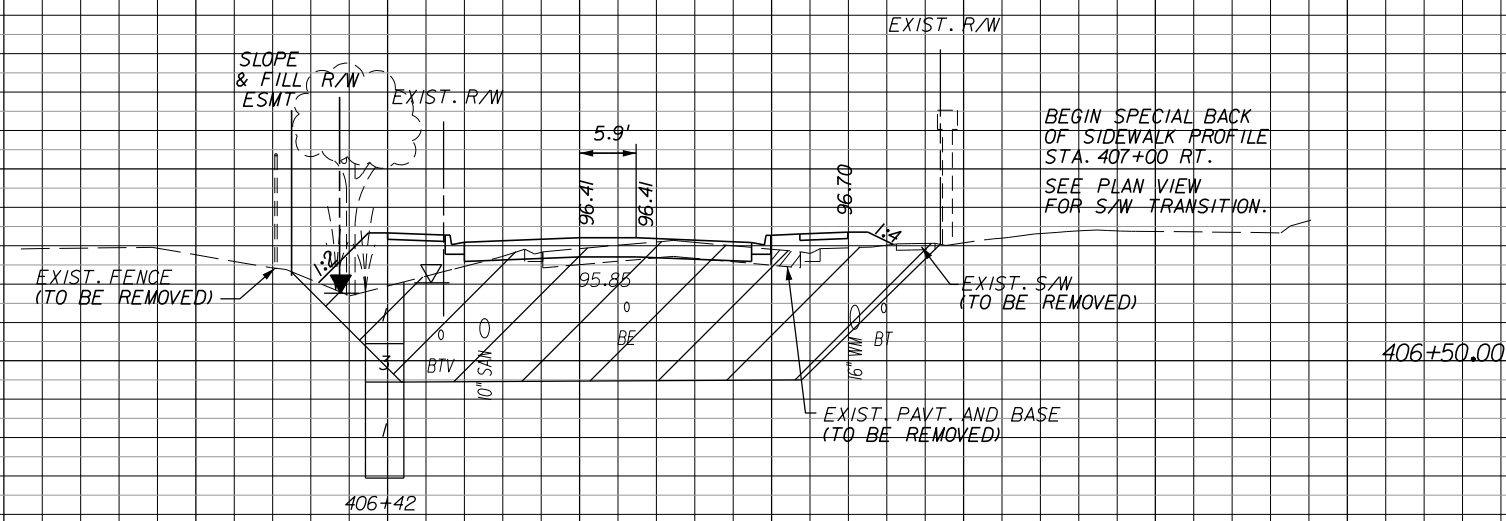


105  
100  
95  
90  
85

105  
100  
95  
90  
85

353  
576

19  
24  
35  
86



SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

100 80 60 40 20 0 20 40 60 80 100 120

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**TEXAS AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
236

A-8 Exc.  
A V

Regular Exc. Embankment  
A V A V

0

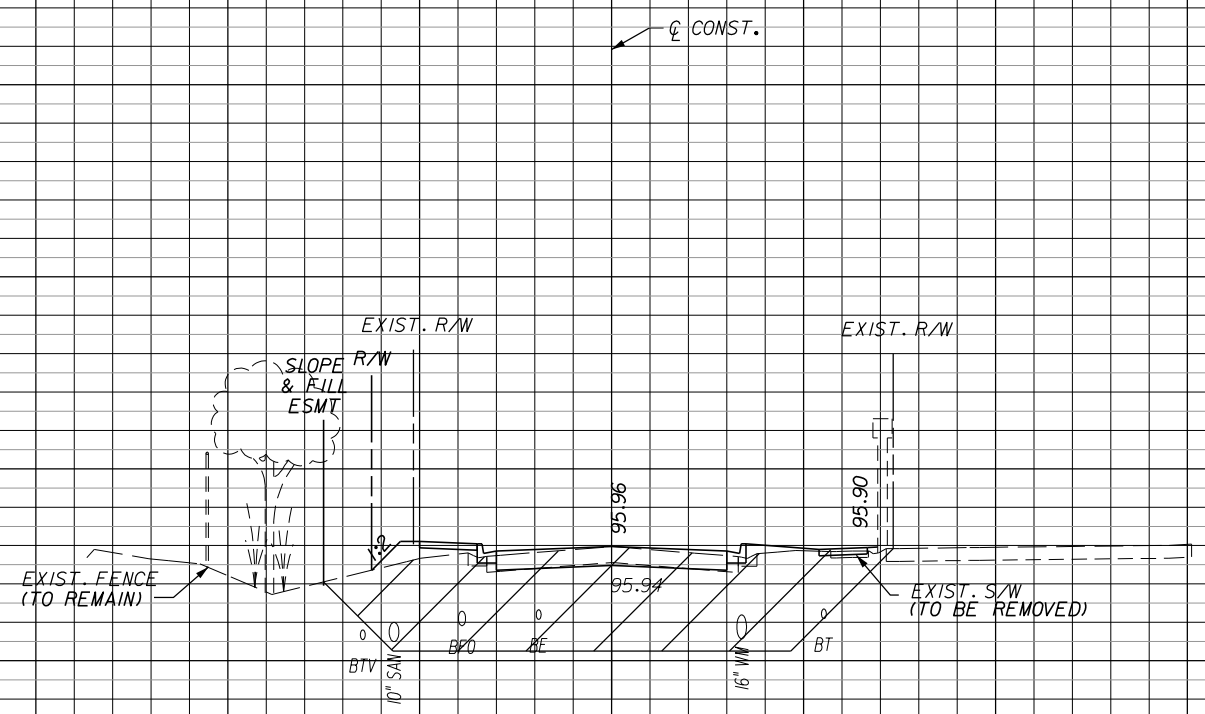
236

478

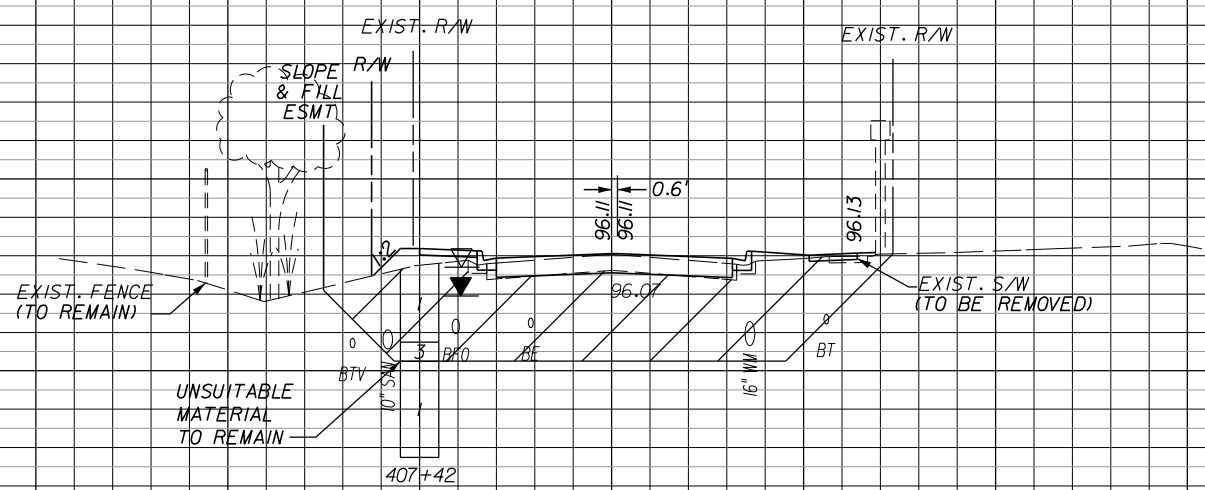
255

261

503



408+00.00



407+50.00

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

22

42

10

18

23

43

9

20

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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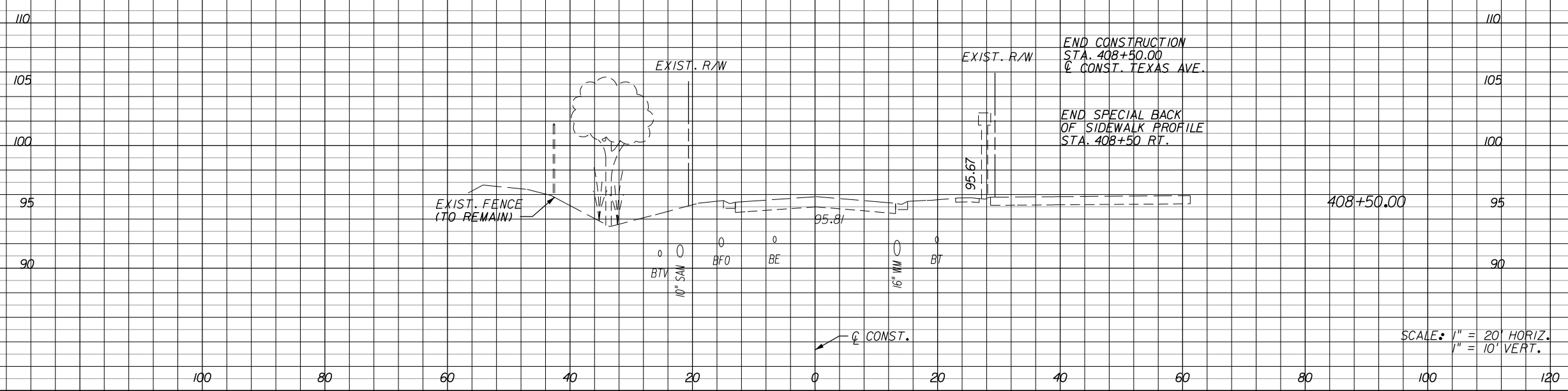
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**TEXAS AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
237

Regular		Exc.		Embankment	
A	V	A	V	A	V

← C CONST.



SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

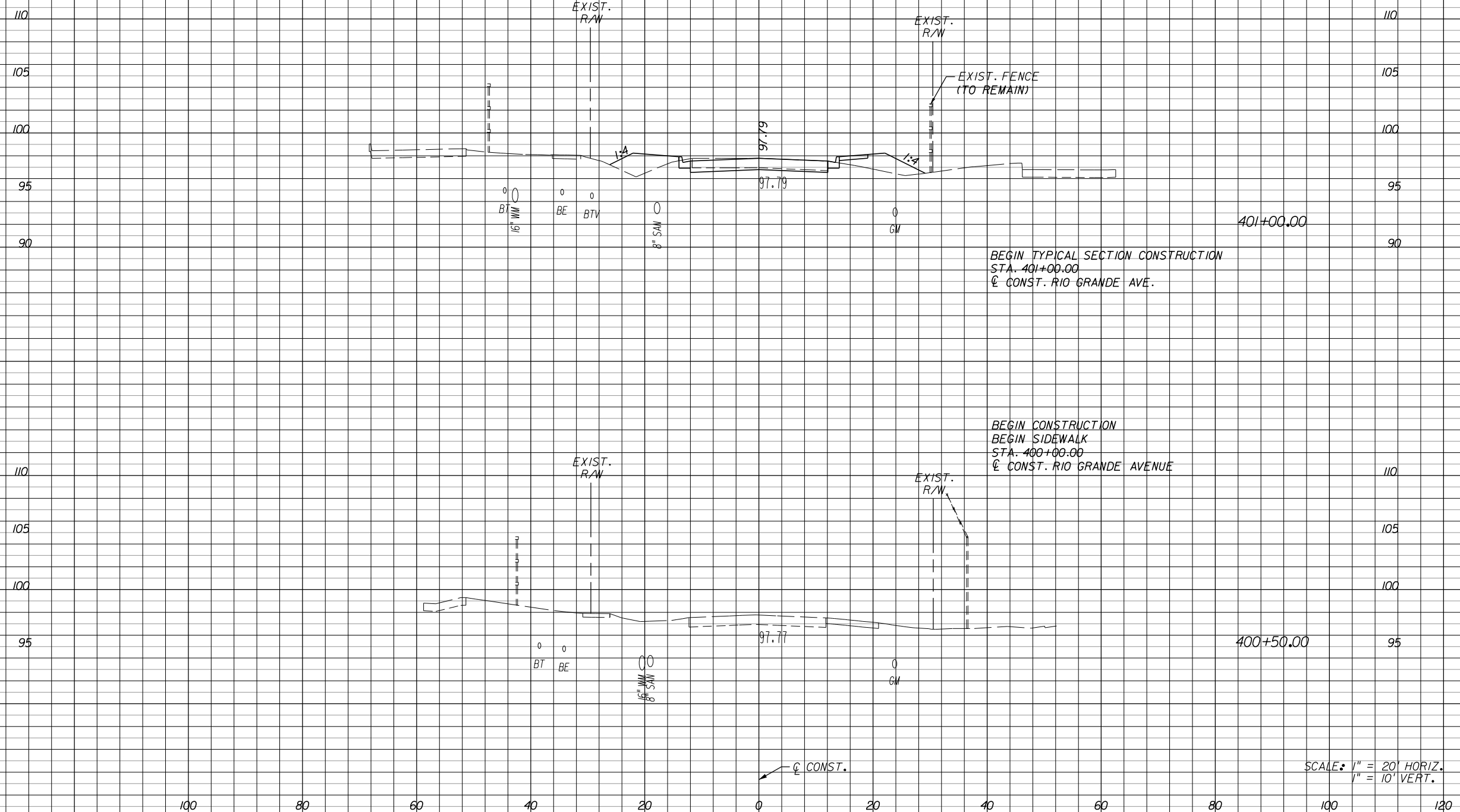
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**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**TEXAS AVENUE**  
**CROSS SECTIONS**

SHEET NO.  
238

Regular		Exc.		Embankment	
A	V	A	V	A	V



28		29	
	0		0

100      80      60      40      20      0      20      40      60      80      100      120

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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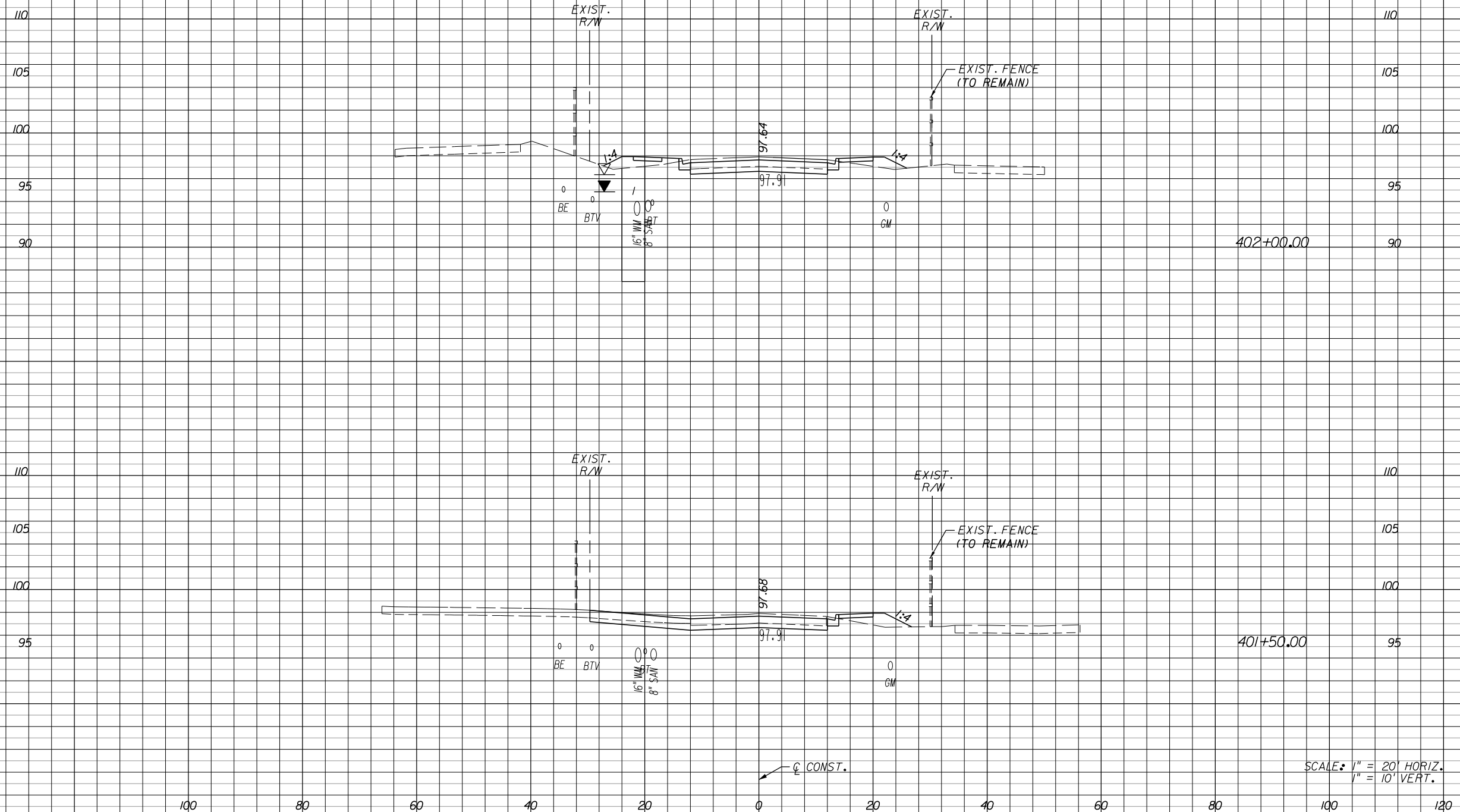
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**RIO GRANDE (SOUTH)**  
**CROSS SECTIONS**

SHEET NO.  
239

Regular Exc. Embankment

A V A V



37	14
82	21
52	8
74	34

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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**GOVERNMENT**  
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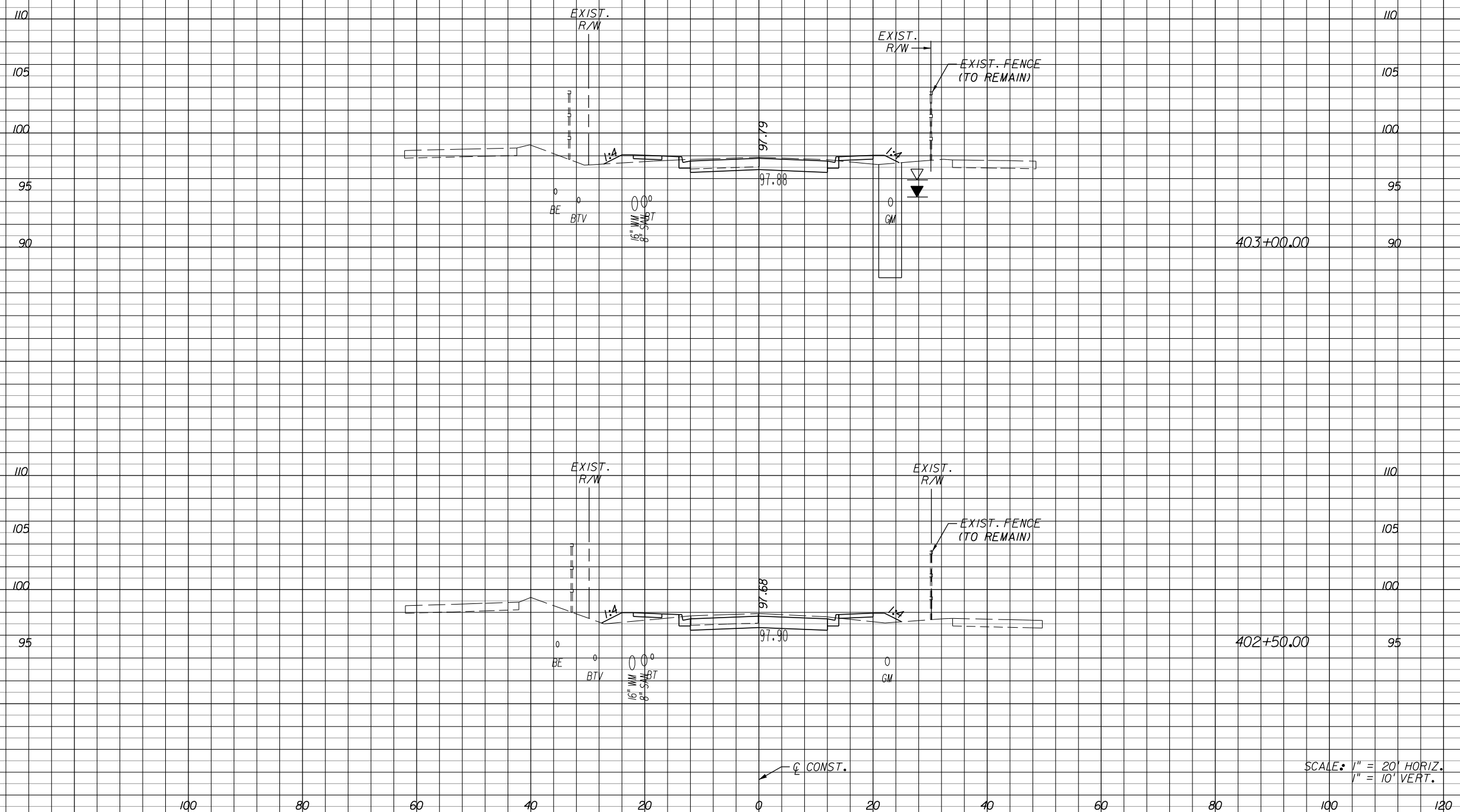
**RIO GRANDE (SOUTH)**  
**CROSS SECTIONS**

SHEET NO.  
240



Regular Exc. Embankment

A V A V



35	8
67	17
37	10
69	23

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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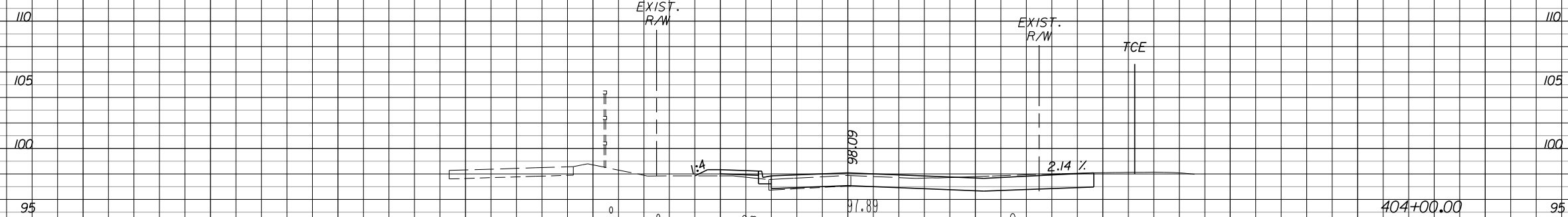
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**RIO GRANDE (SOUTH)**  
**CROSS SECTIONS**

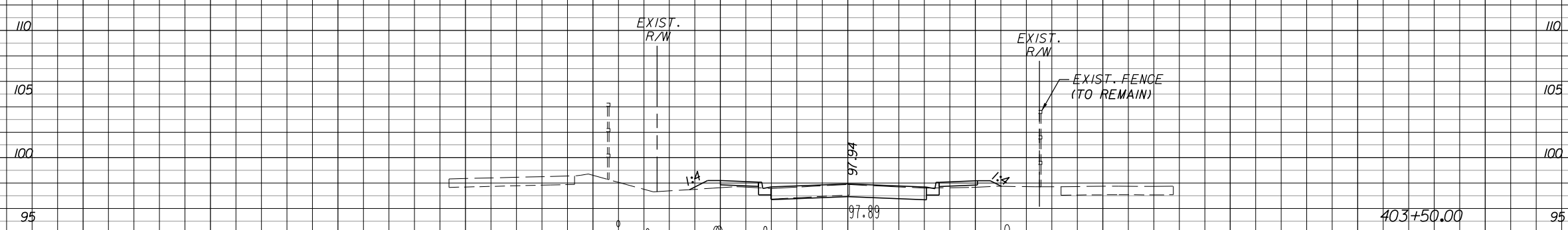
SHEET NO.  
241

Regular Exc. Embankment

A V A V



57	1
84	2



33	1
64	9

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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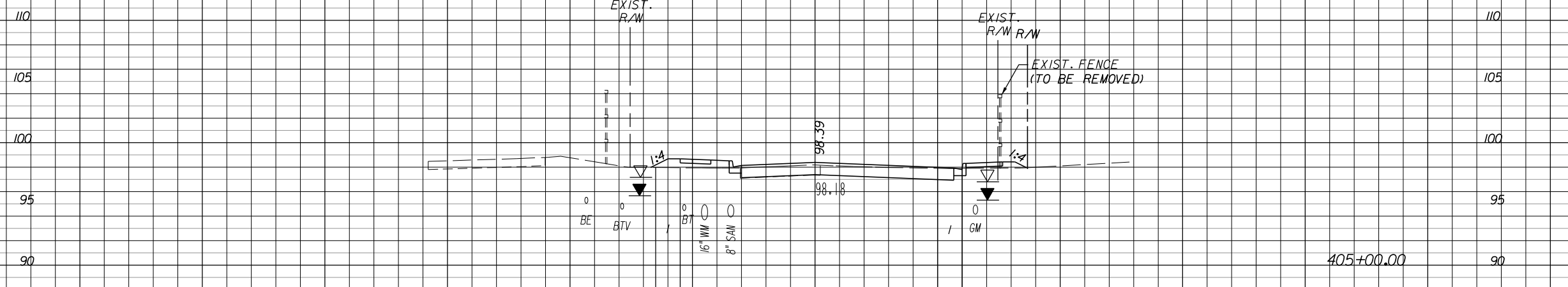
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**RIO GRANDE (SOUTH)**  
**CROSS SECTIONS**

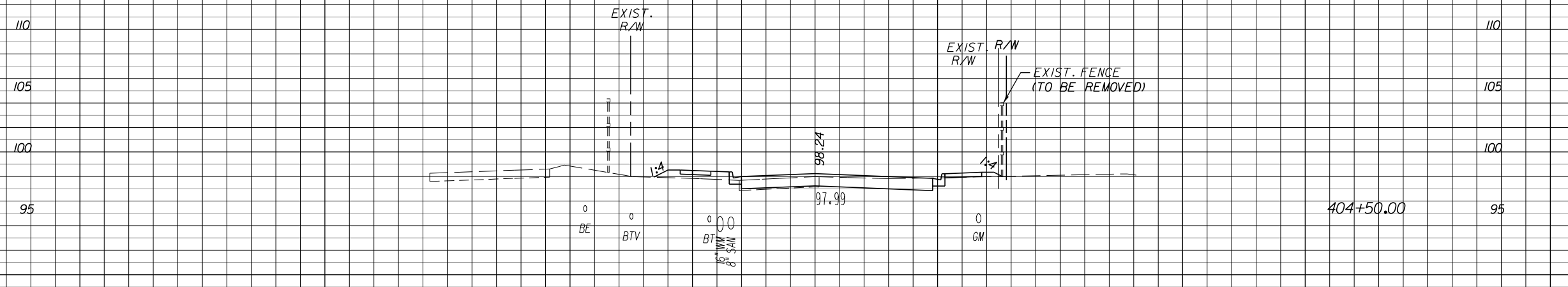
SHEET NO.  
242

Regular Exc.    Embankment

A    V    A    V



32	9
59	16



32	8
83	8

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

100    80    60    40    20    0    20    40    60    80    100    120

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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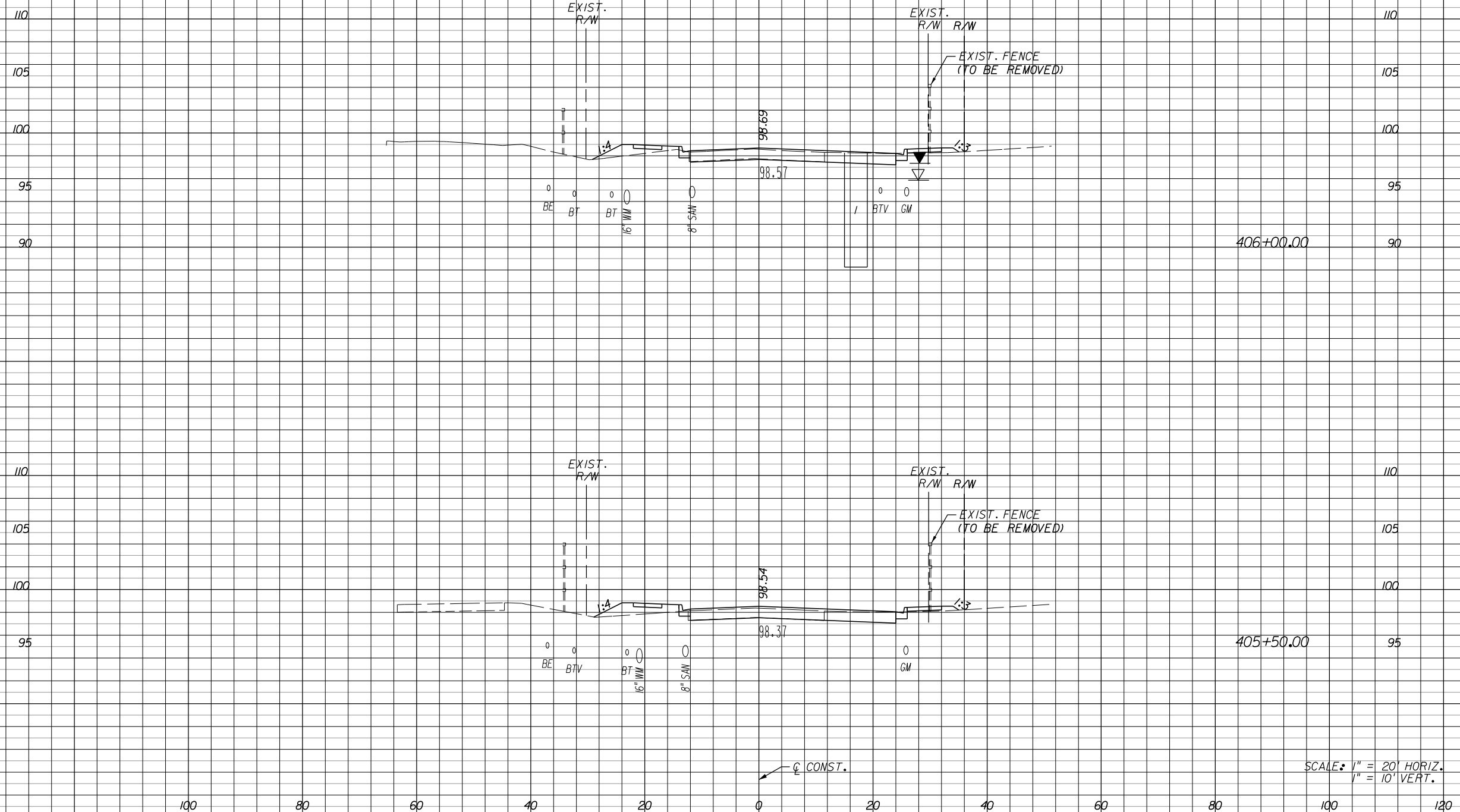
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**RIO GRANDE (SOUTH)**  
**CROSS SECTIONS**

SHEET NO.  
243

Regular Exc. Embankment

A V A V



35	10
62	20
33	12
60	19

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS			
DATE	BY	DESCRIPTION	

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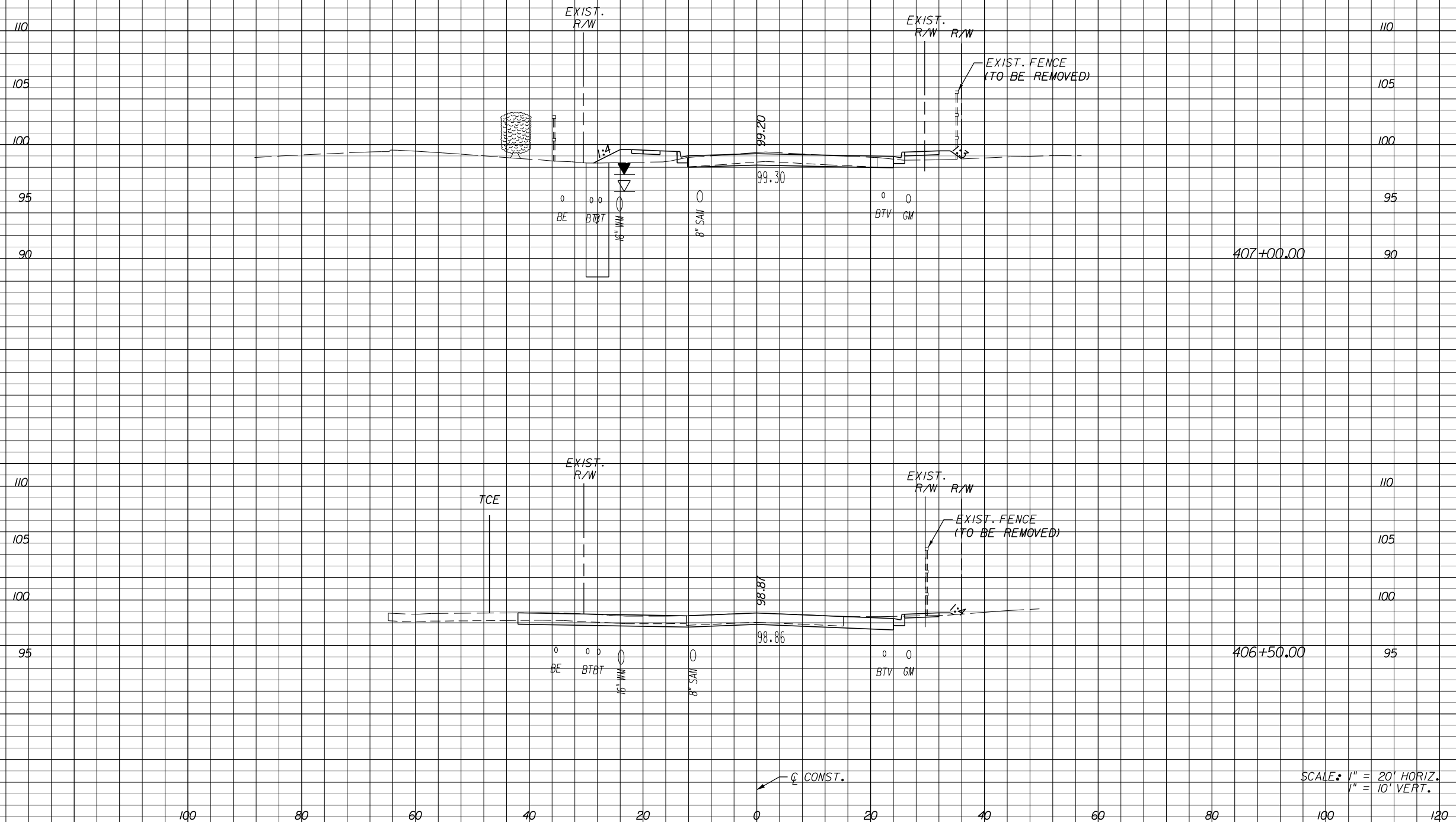
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**RIO GRANDE (SOUTH)**  
**CROSS SECTIONS**

SHEET NO.  
244

Regular Exc. Embankment

A V A V



37	17
98	16
68	1
95	9

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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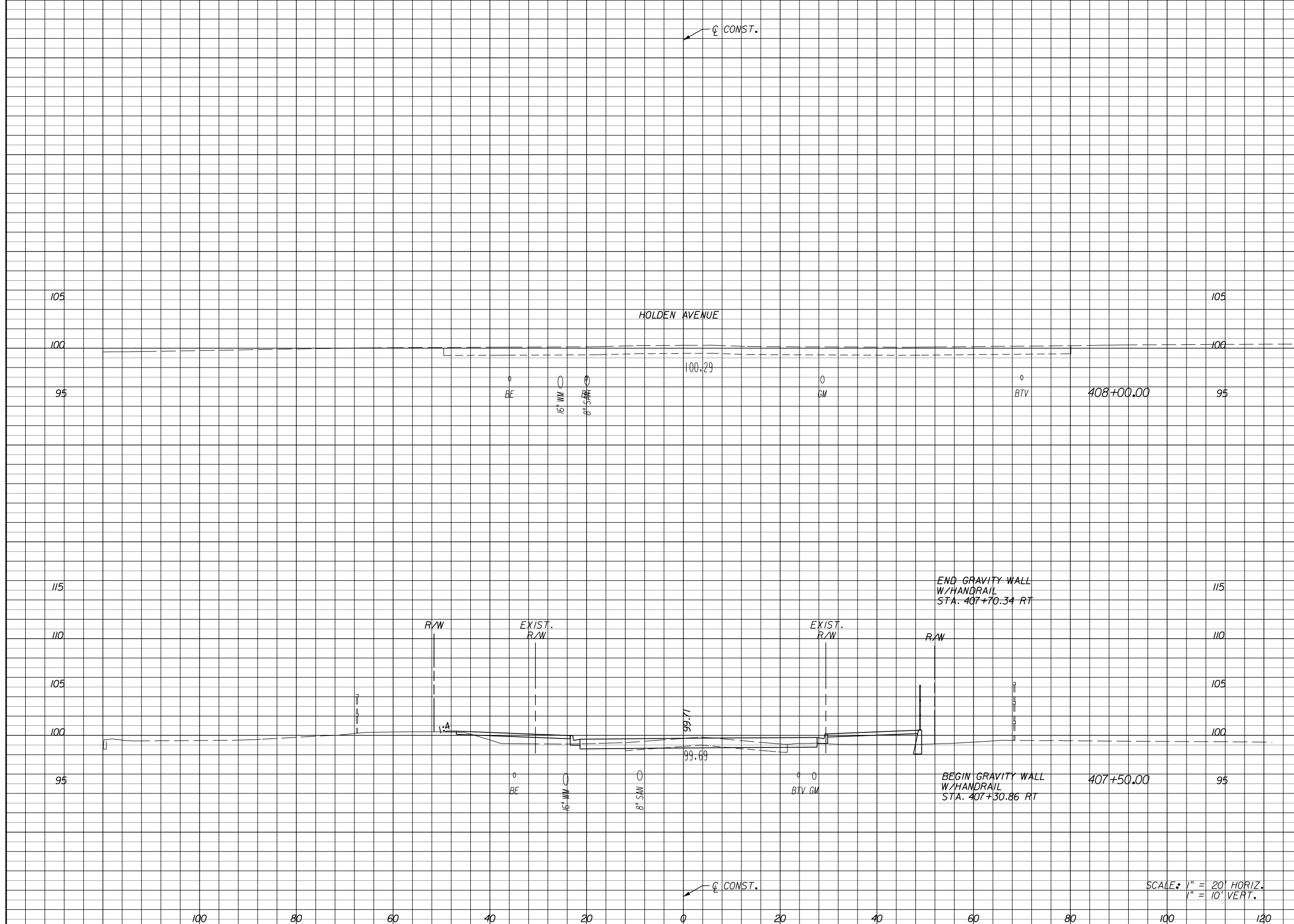
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**RIO GRANDE (SOUTH)**  
**CROSS SECTIONS**

SHEET NO.  
245

Regular Exc. Embankment

A V A V



Regular Exc. A	Exc. V	Embankment A	Embankment V
36	67	29	42

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS			
DATE	BY	DESCRIPTION	

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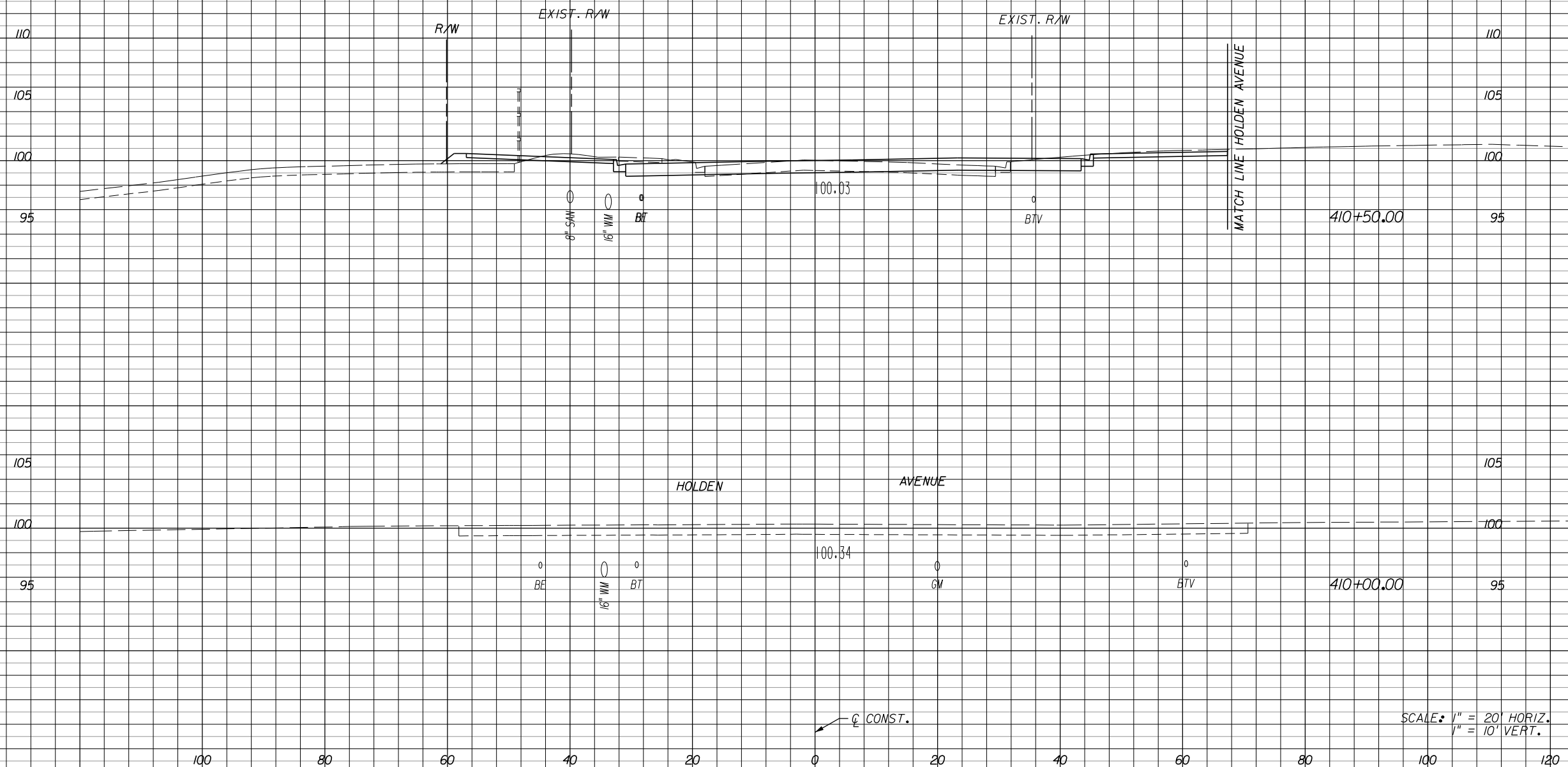
**RIO GRANDE (SOUTH)**  
**CROSS SECTIONS**

SHEET NO.  
246

Regular Exc. Embankment

A V A V

← C CONST.



85	0	6	0
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SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS			
DATE	BY	DESCRIPTION	

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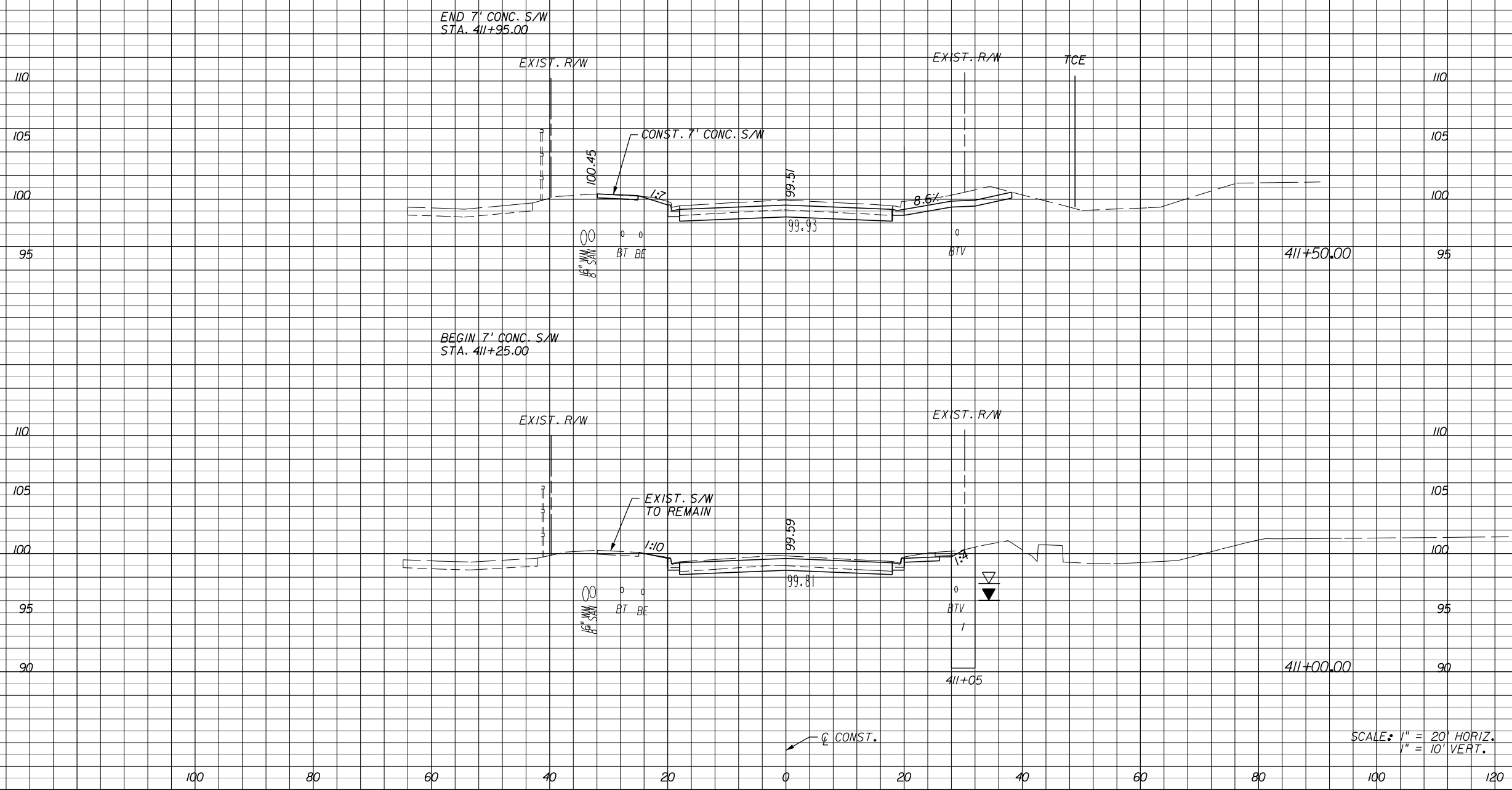
**ORANGE COUNTY**  
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FLORIDA

**RIO GRANDE (NORTH)**  
**CROSS SECTIONS**

SHEET NO.  
247

Regular Exc. Embankment

A V A V



64	0	0	0
108			
52	0	0	0
127			

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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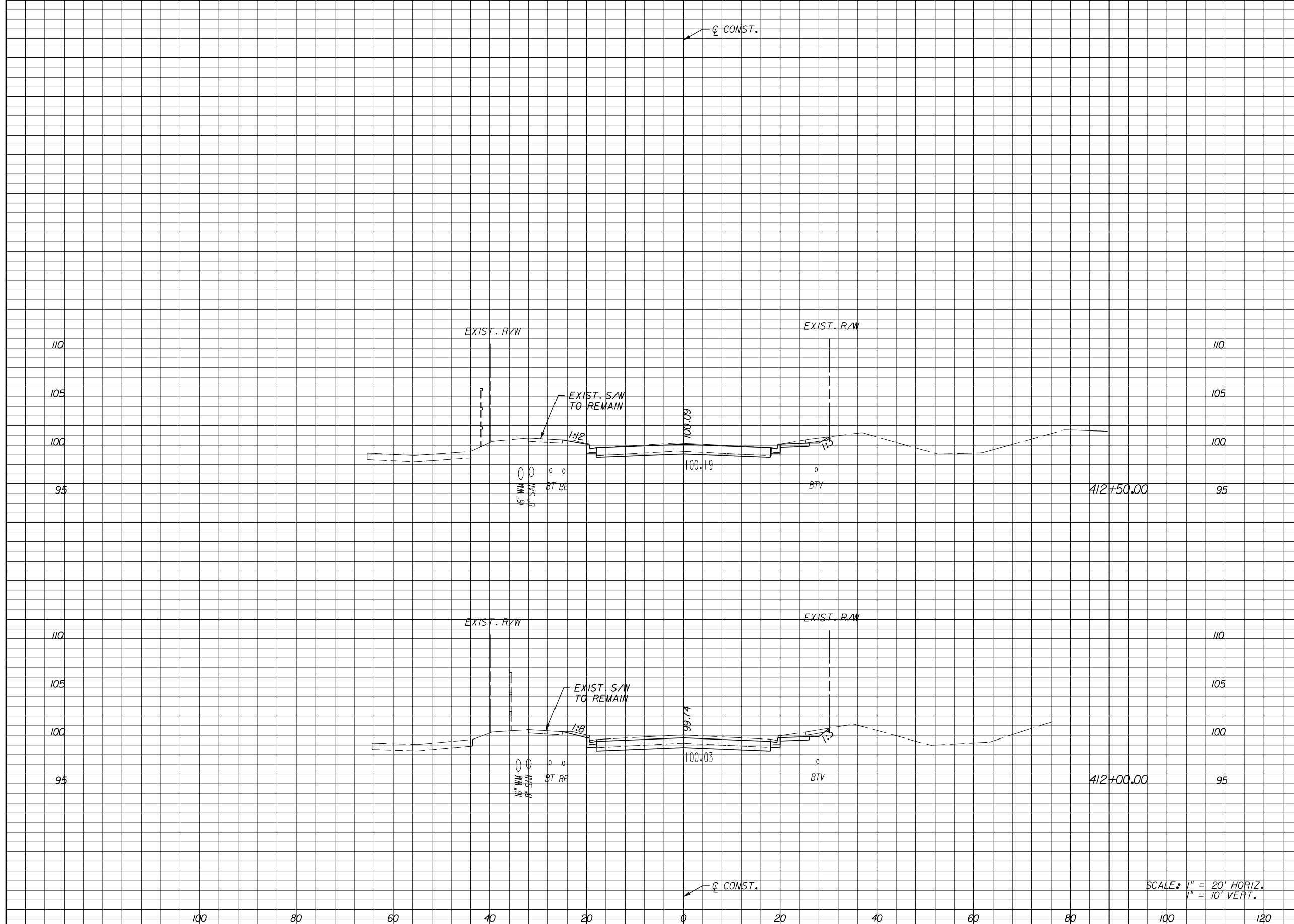
**RIO GRANDE (NORTH)**  
**CROSS SECTIONS**

SHEET NO.  
248



Regular Exc. Embankment

A V A V



48	0	0	0
98	0	0	0
59	0	0	0
114	0	0	0

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

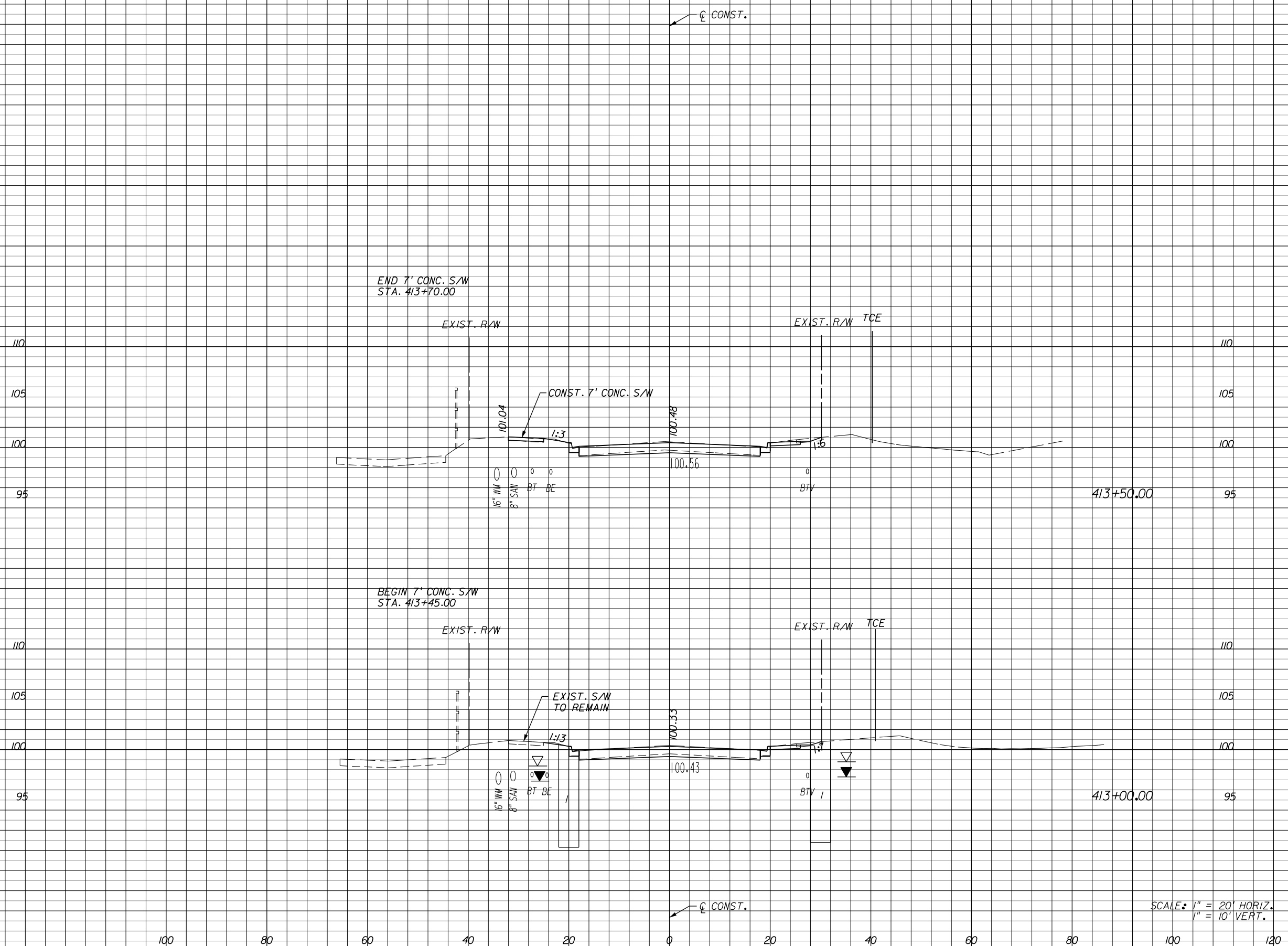
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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**RIO GRANDE (NORTH)**  
**CROSS SECTIONS**

SHEET NO.  
249



42	0	0	0
79	0	0	0
44	0	0	0
84	0	0	0

SCALE: 1" = 20' HORIZ.  
1" = 10' VERT.

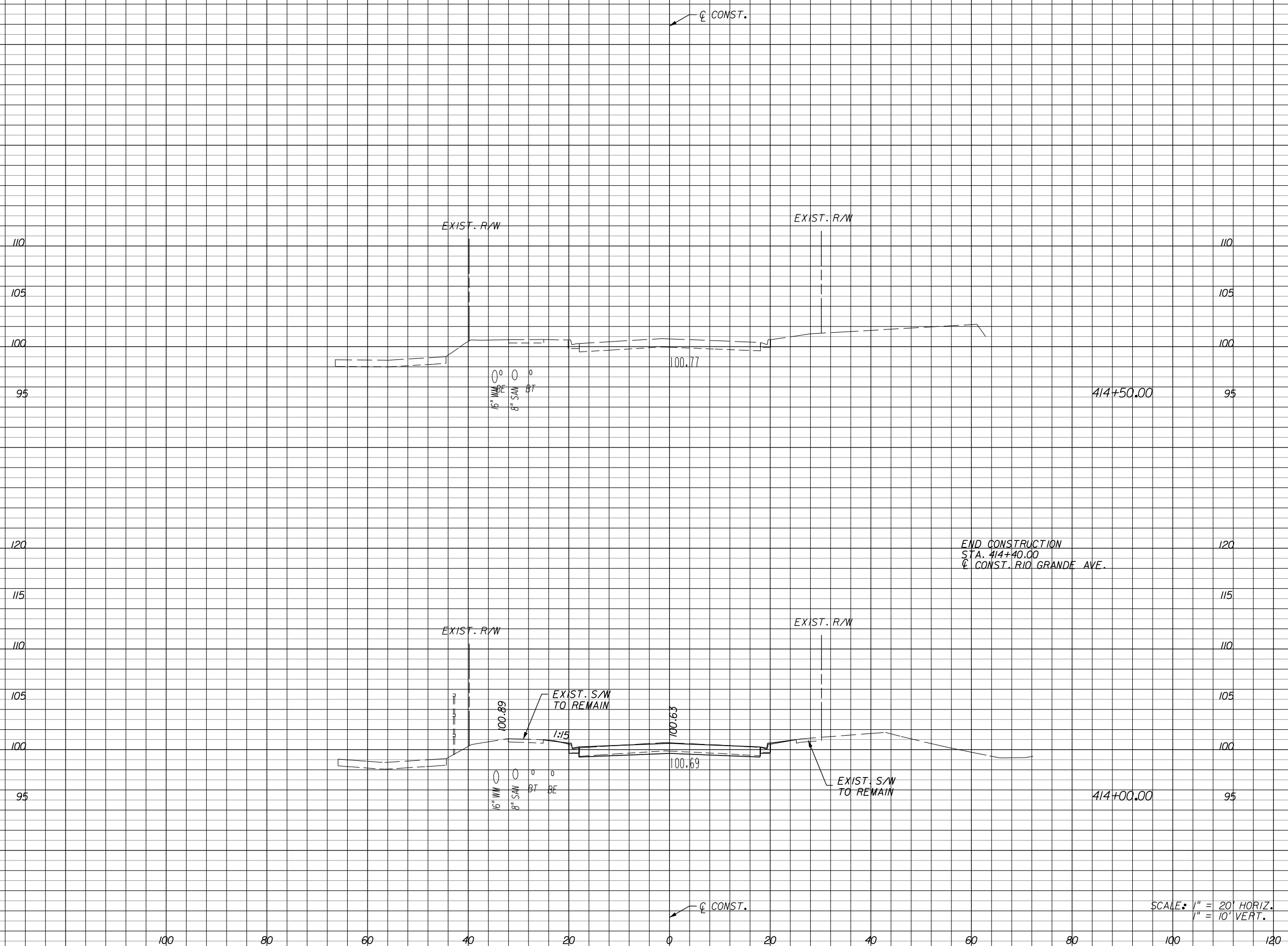
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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FLORIDA

**RIO GRANDE (NORTH)**  
**CROSS SECTIONS**

Regular		Exc.		Embankment	
A	V	A	V	A	V



END CONSTRUCTION  
 STA. 414+40.00  
 C CONST. RIO GRANDE AVE.

SCALE: 1" = 20' HORIZ.  
 1" = 10' VERT.

Regular		Exc.		Embankment	
A	V	A	V	A	V
		44		0	
			79		0

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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**RIO GRANDE (NORTH)**  
**CROSS SECTIONS**

SHEET NO.
251

### SUMMARY OF EARTHWORK

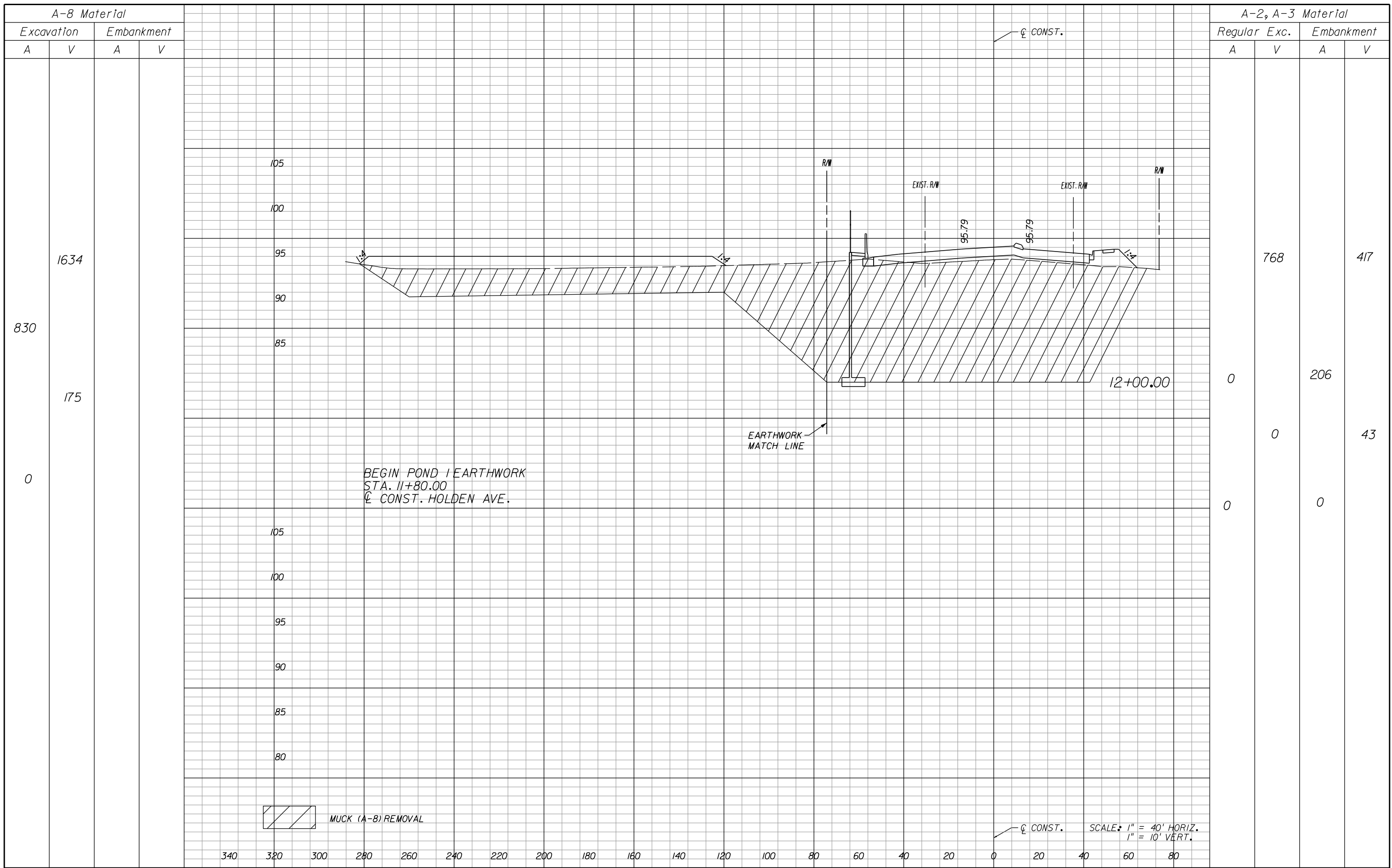
DESCRIPTION	P C.Y.	F C.Y.
ROADWAY EXCAVATION, A-2,A-3 MATERIAL		
ROADWAY	11,702	
POND 1 EXCAVATION	11,853	
POND 3 EXCAVATION	64,365	
TOTAL ROADWAY EXCAVATION	87,920	
SUBSOIL EXCAVATION, A-8 MATERIAL	70475	
+30% CONTINGENCY	30204	
TOTAL SUBSOIL EXCAVATION, A-8 MATERIAL	100,679	
FILL		
ROADWAY	56,287	
POND 1 FILL	4,320	
POND 3 FILL	2,200	
FILL TO REPACE SUBSOIL	100,679	
TOTAL PROJECT FILL	163,486	

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
4/3/13	TAA	PARCEL 1011 REVISIONS, REVISED ROADWAY EXCAVATION QUANTITY AND TOTAL			

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**EARTHWORK SUMMARY**



BEGIN POND 1 EARTHWORK  
 STA. 11+80.00  
 C.C. CONST. HOLDEN AVE.

MUCK (A-8) REMOVAL

SCALE: 1" = 40' HORIZ.  
 1" = 10' VERT.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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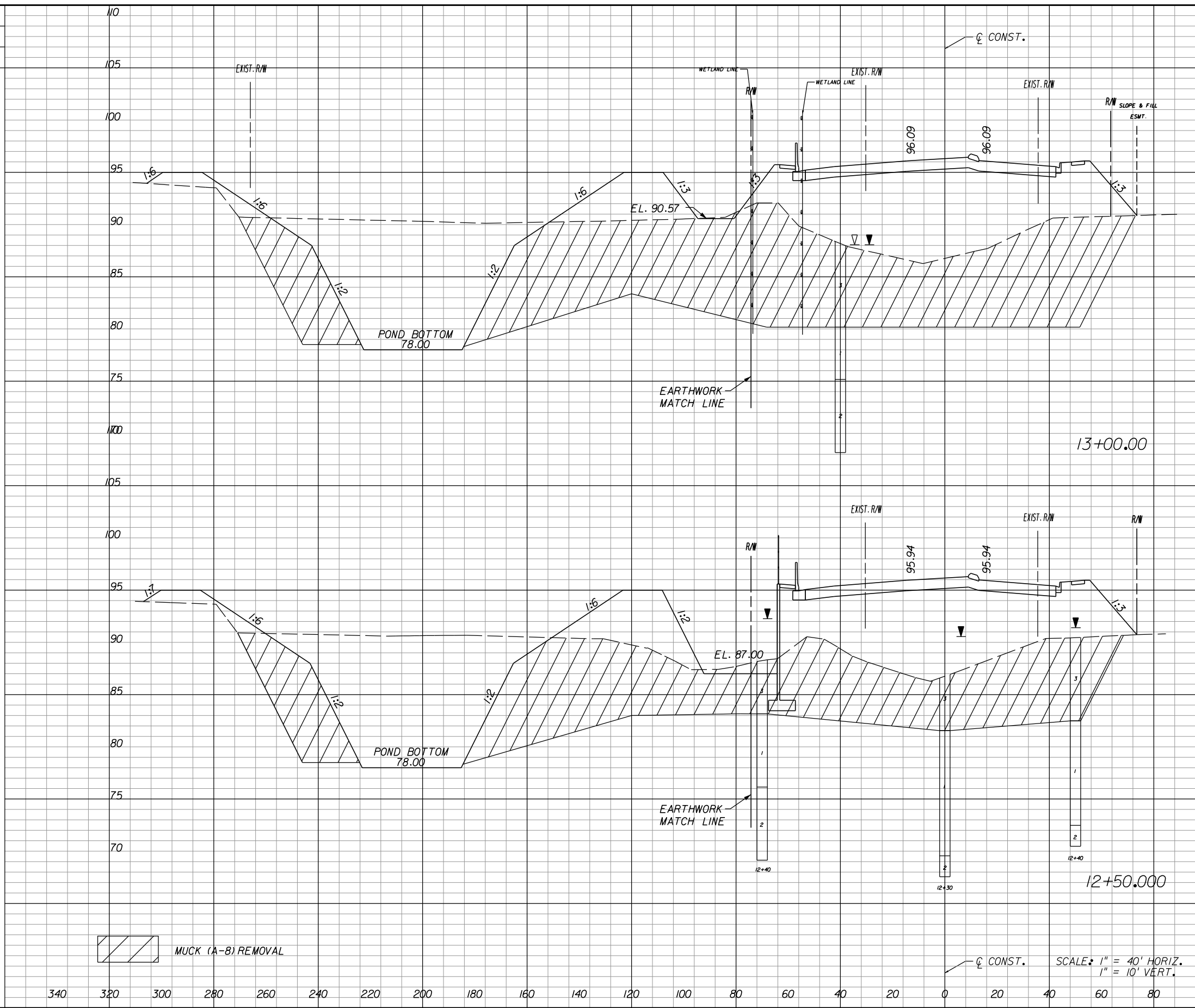
**POND 1**  
**CROSS SECTIONS**

SHEET NO.
253

A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material			
Regular Exc.		Embankment	
A	V	A	V

1982			
1094			
1879			
935			



1479	381
792	216
1501	426
829	244

MUCK (A-8) REMOVAL

SCALE: 1" = 40' HORIZ.  
1" = 10' VERT.

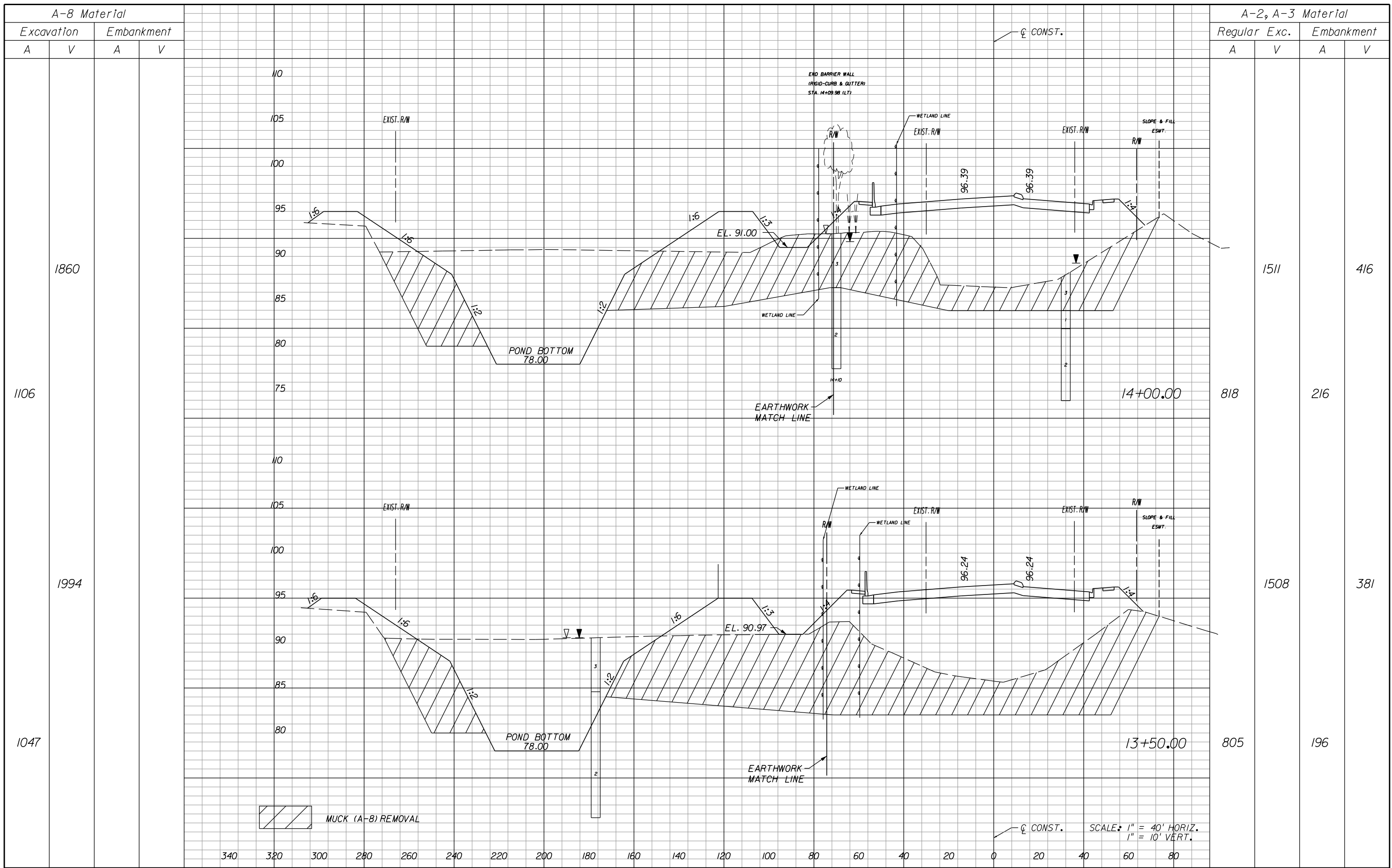
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DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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**POND 1**  
**CROSS SECTIONS**

SHEET NO.
254



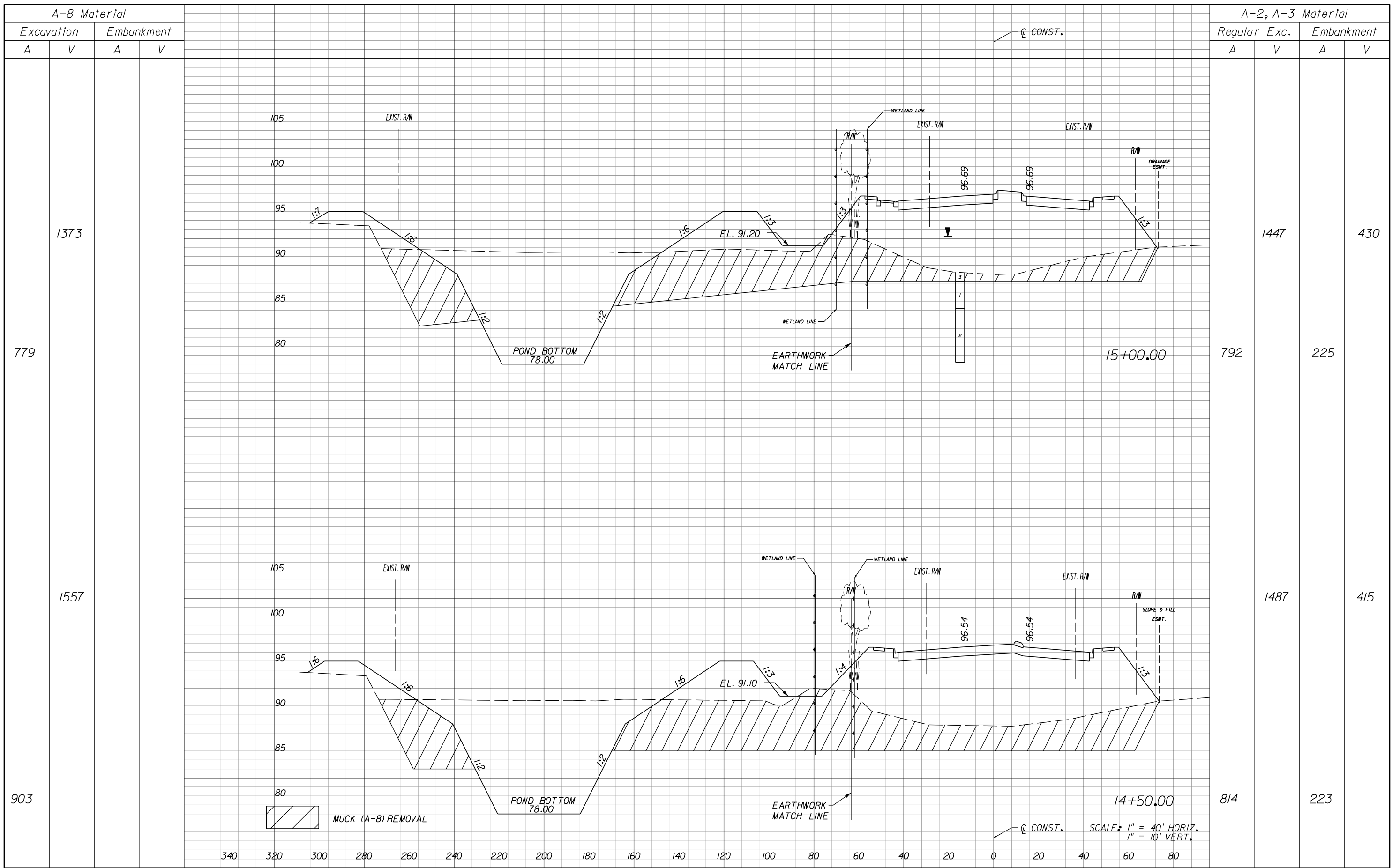
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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**POND 1**  
**CROSS SECTIONS**

SHEET NO.	255
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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

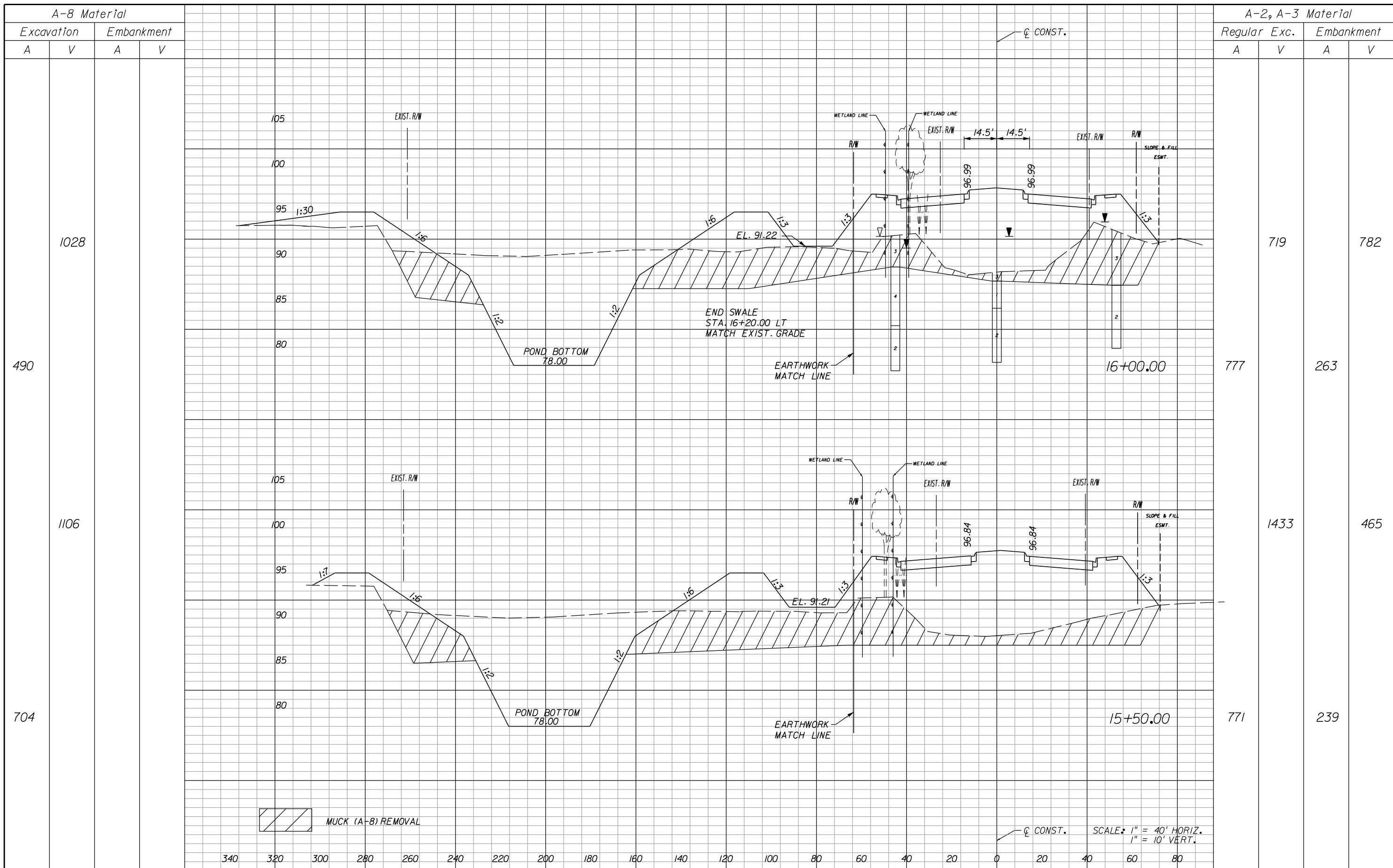
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**POND 1**  
**CROSS SECTIONS**

SHEET NO.  
 256





REVISIONS					
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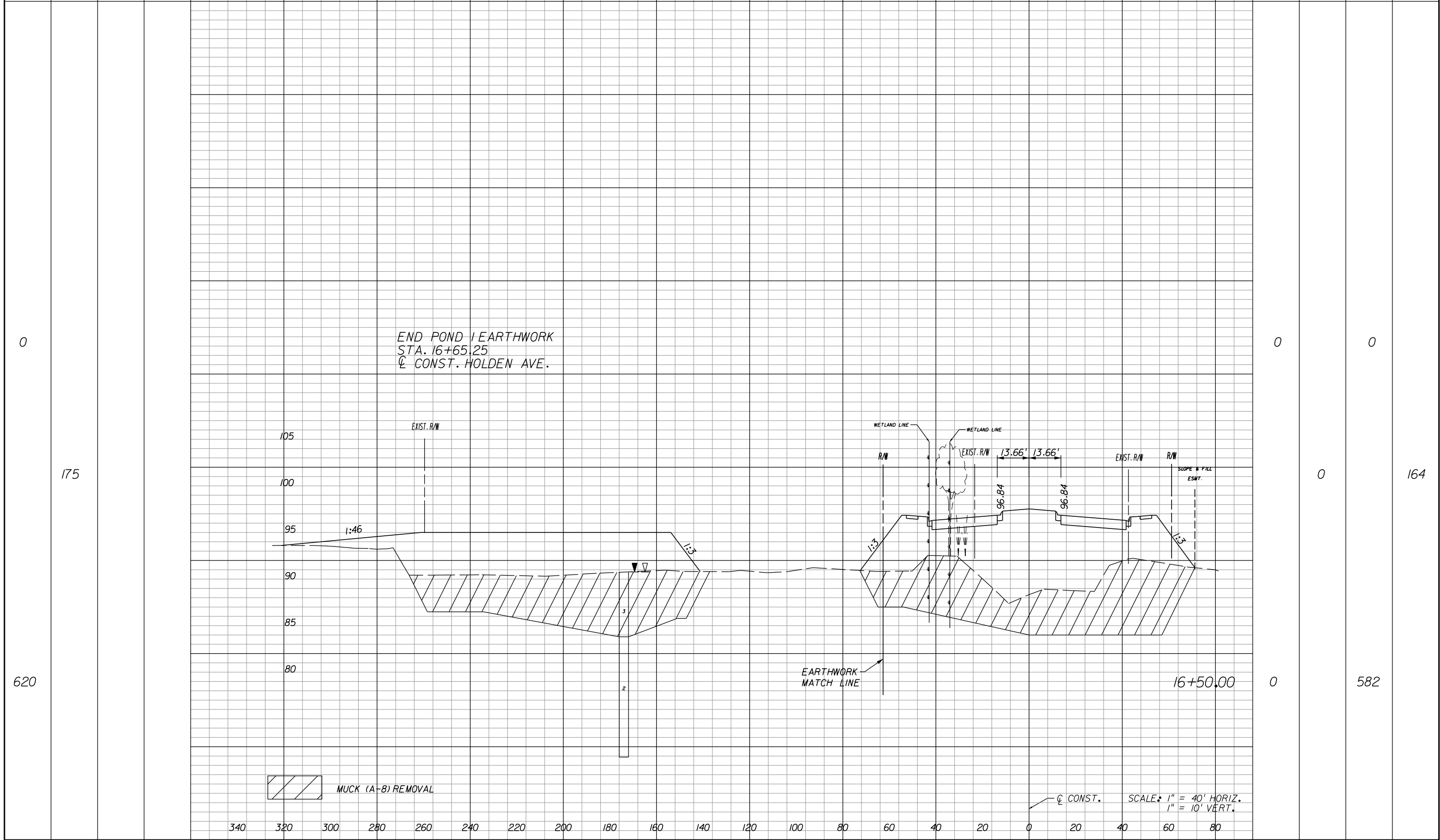
**ORANGE COUNTY**  
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**POND 1**  
**CROSS SECTIONS**

SHEET NO.	257
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A-8 Material			
Excavation		Embankment	
A	V	A	V

A-2, A-3 Material					
Regular		Exc.		Embankment	
A	V	A	V	A	V



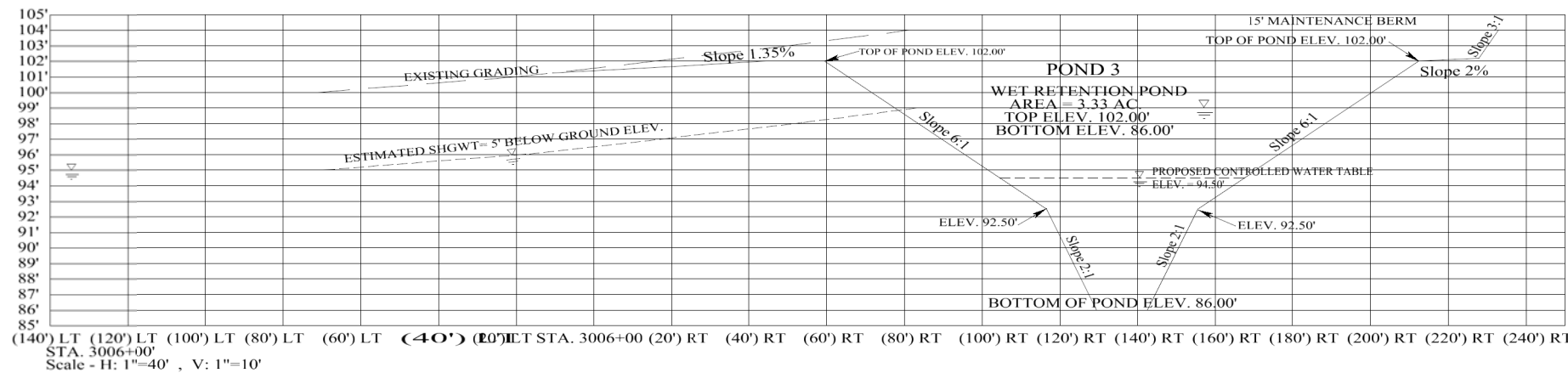
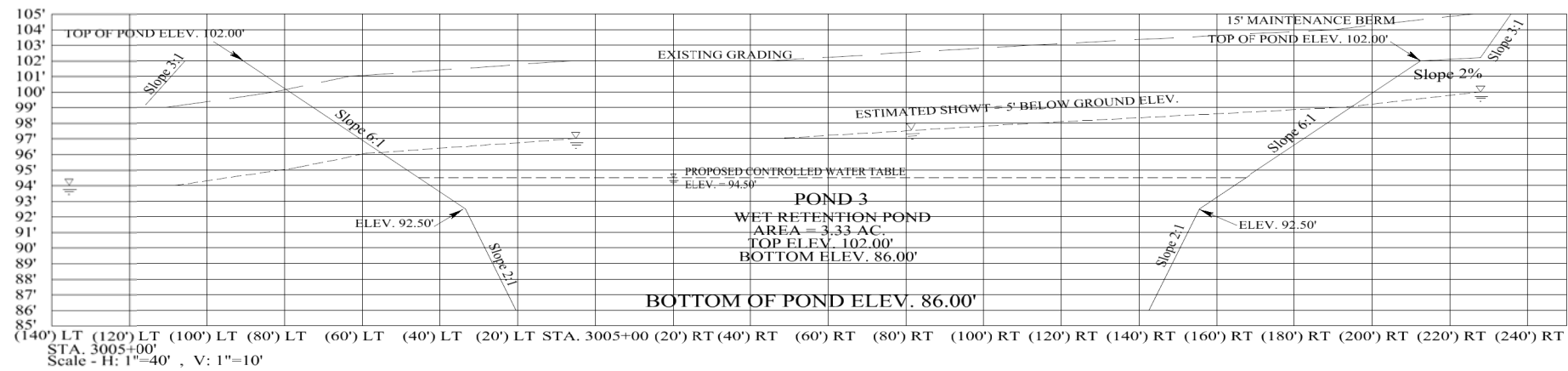
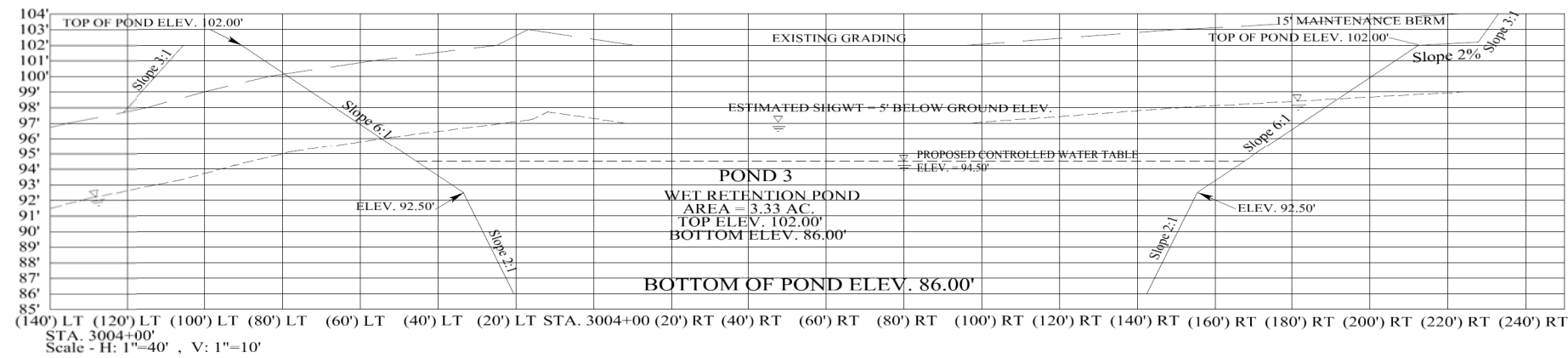
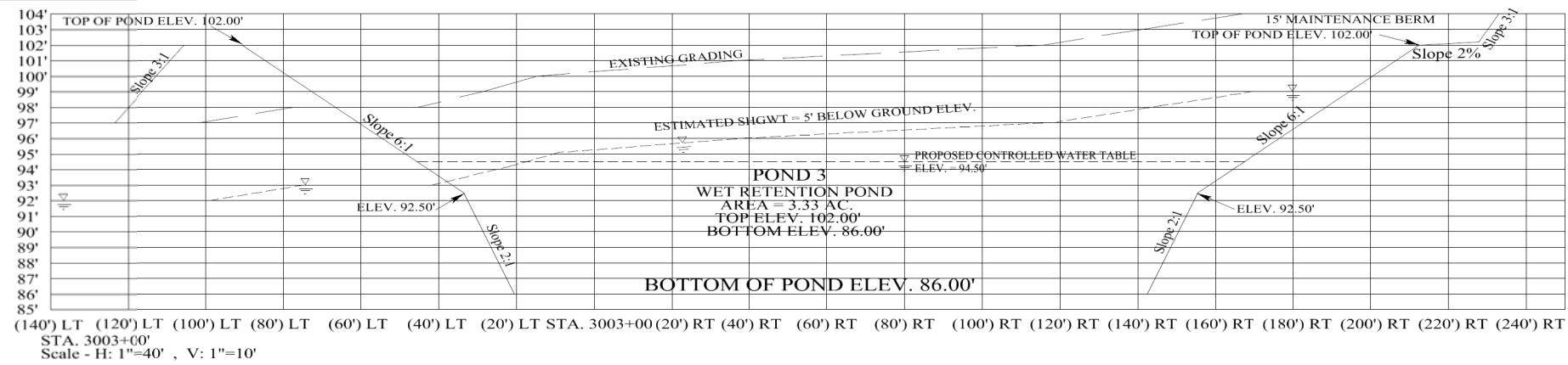
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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**POND 1**  
**CROSS SECTIONS**

SHEET NO.	258
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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

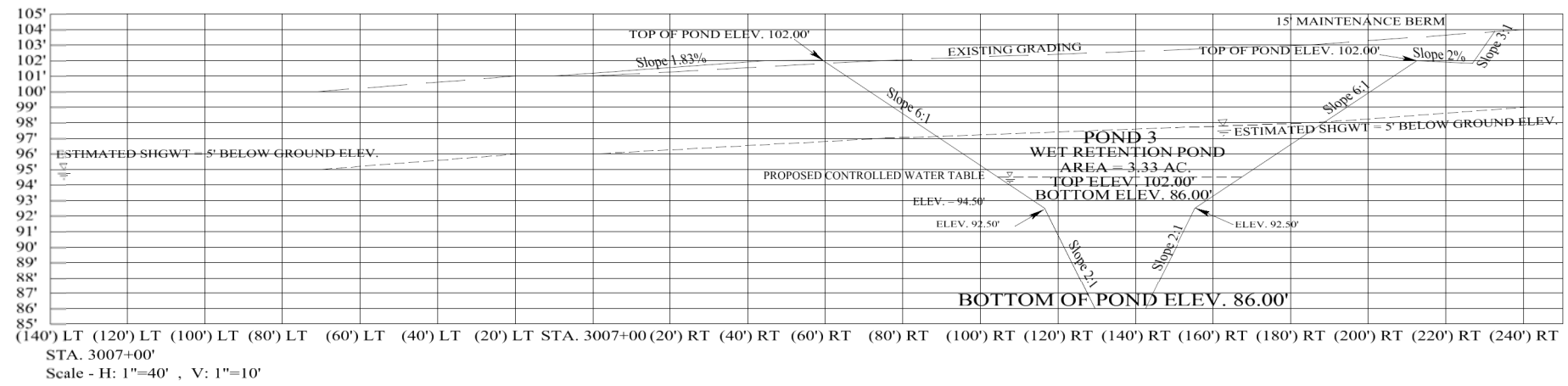
Water Resources • Land Development • Civil Engineering  
 2480 E. Michigan St. Orlando, Florida 32806  
 Tel: (407) 428-9200 • Fax: (407) 428-9222



**HOLDEN AVENUE**  
**POND 3 CROSS SECTIONS**

SHEET NO.

**259**



REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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**HOLDEN AVENUE**  
**POND 3 CROSS SECTIONS**

SHEET NO.

**260**

The following narrative of the Stormwater Pollution Prevention Plan contains references to the Standard Specifications for Road and Bridge Construction, the Design Standards, and other sheets of these construction plans. The first sheet of the construction plans (called the Key Sheet) contains an Index to the other sheets. The complete Stormwater Pollution Prevention Plan includes several items: this narrative description, the documents referenced in this narrative, the contractor's approved Erosion Control Plan required by Specification Section 104, and reports of inspections made during construction.

**1.0 SITE DESCRIPTION**

**1.a Nature of Construction Activity:**

Holden Avenue Phase 1 – Reconstruction of existing 2-lane rural roadway to 4-lane urban roadway including 2 stormwater ponds.

**1.b Sequence of Major Soil Disturbing Activities:**

In the Section 104 Erosion Control Plan, the contractor shall provide a detailed sequence of construction for all construction activities. The contractor shall follow the sequence of major activities described below, unless the contractor proposes a different sequence that is equal or better at controlling erosion and trapping sediment and is approved by the Engineer.

For each construction phase, install perimeter controls after clearing and grubbing necessary for installation of controls but before beginning other work for the construction phase. Remove perimeter controls only after all upstream areas are stabilized.

1. Clearing and grubbing, earthwork, and storm sewer construction for the pond outfalls.
2. Clearing and grubbing, earthwork for the pond construction.
3. Storm sewer construction. Construct the storm drain pipe in the upstream direction.
4. Earthwork associated with roadway, and construction of gravity and retaining walls, curb, subgrade, base, pavement, and sidewalk.

**1.c Area Estimates:**

Total site area: 30.98 acres  
Total area to be disturbed: 27.15 acres

**1.d Runoff Data:**

Runoff Coefficients:  
Before: 0.55  
During: Varies from 0.55 to 0.74  
After: 0.74

Outfall Information: There are two outfalls.

#1 Description: Pond 1. This pond discharges to existing wetlands which outfalls at the existing 38"x60" crossdrain under John Young Parkway (JYP-1)  
Location: Latitude 28°29'43" North, Longitude 81°24'57" West.  
Est. Drainage Area Size: 17.27 Ac. (Onsite area only; includes pond)  
Receiving Water Name: Lake Catherine floodplain/Shingle Creek

#2 Description: Pond 3. This pond discharges directly to Lake Tyler.  
Location: Latitude 28°29'38" N, Longitude 81°23'55"W  
Estimated Drainage Area: 9.88 Ac. (Onsite area only; includes pond)  
Receiving Water Name: Lake Tyler/Shingle Creek

Soils Data: The result of the soil borings along the roadway are shown in the Roadway Soil Survey Sheet(s). The results of soil borings done in the ponds are shown in the Pond Detail Sheets. The numbers for these are identified on the Key Sheet of these construction plans. In general the soils are clayey soils.

**1.e Site Map:**

The construction plans are being used as the site maps. The location of the required information is described below. The sheet numbers for the plan sheets referenced are identified on the Key Sheet of these construction plans.

\* **Drainage Patterns:** Drainage for the project area is collected by curb inlets and catch basins and conveyed via a storm sewer to the two stormwater ponds. The Cross Sections show overland flow direction at the right of way line.

\* **Approximate Slopes:** The slopes of the site can be seen in the Cross Section Sheets and the Plan and Profile Sheets.

\* **Areas of Soil Disturbance:** The areas to be disturbed are indicated on the Plan and Profile Sheets and the Cross Section Sheets. Any areas where permanent features are shown to be constructed above or below ground will be disturbed.

\* **Areas Not To Be Disturbed:** Essentially the whole project will be disturbed during construction.

\* **Locations of Temporary Controls:** Temporary Controls such as silt fence, turbidity barrier, hay bales, sod, seed and mulch, etc. shall be placed so the runoff from the disturbed areas will be contained within the project area. Typical locations of these controls are shown on the erosion control sheets.

\* **Locations of Permanent Controls:** The stormwater ponds are the primary permanent stormwater management controls. These are shown on the Pond Detail Sheets.

\* **Areas To Be Stabilized:** Temporary stabilization practices are shown in the same location as the temporary controls mentioned above. Permanent stabilization is shown on the Typical Section Sheets, the Plan and Profile Sheets and the Pond Detail Sheets.

\* **Surface Waters:** The locations of the surface waters adjacent to the project are shown on the Drainage Maps.

\* **Discharge Points To Surface Waters:** There are two existing outfalls. These locations are shown on the Drainage Maps and the Plan and Profile Sheets.

**1.f Receiving Waters:**

See Section 1.d for the outfall locations and receiving water names.

**2.0 CONTROLS:**

**2.a Erosion And Sediment Controls:**

In the Section 104 Erosion Control Plan, the contractor shall describe the proposed stabilization and structural practices based on the contractor's proposed Traffic Control Plan. The following recommended guidelines are based on the Traffic Control Plan (TCP) outlined in the construction plans. Where following the Traffic Control Plan (TCP) outlined in these construction plans, the contractor may choose to accept the following guidelines or modify them in the Section 104 Erosion Control Plan, subject to approval of the Engineer. As work progresses, the contractor shall modify the plan to adapt to seasonal variation, changes in construction activities, and the need for better practices.

For each construction phase, install perimeter controls after clearing and grubbing necessary for installation of controls but before beginning other work for the construction phase. Remove perimeter controls only after all upstream areas are stabilized.

**Phase IA of Traffic Control Plans**

**Roadway**  
Temporary pavement is to be constructed along the south side of Holden Avenue and the west side of Texas Avenue during this phase, at the locations shown in the Maintenance of Traffic Plans. Install staked silt fence along the right-of-way line prior to beginning construction operations along any segment of the roadway. Immediately after constructing this temporary pavement, stabilize the entire area between the edge of the temporary pavement and the right-of-way line using temporary sod.

**Drainage**  
A temporary drainage swale is to be constructed along the south side of Holden Avenue between approximate stations 50+30 and 60+50 due to the temporary widening of the roadway for maintenance of traffic. Immediately after construction, stabilize the banks of this swale using temporary sod. Place other erosion control measures as necessary based on FDOT Index 102 (hay bales, silt fence).

Several existing structures are to be moved and/or extended in this phase as shown in the Maintenance of Traffic Plans. During construction these inlets, manholes, and mitered end sections shall be protected from siltation and erosion using the measures shown in FDOT Index 102.

The existing box culvert at Lake Buchanan (station 46+80) is to be extended on its south side during this phase. During construction, utilize floating turbidity barrier in conjunction with staked silt fence on both the upstream and downstream sides of this structure.

**Phase IB of Traffic Control Plans**

**Roadway**  
Portions of Holden Avenue, Texas Avenue, Rio Grande Avenue, and John Young Parkway are to be constructed in this phase. Install silt fence along the right-of-way line prior to beginning construction operations along any segment of the roadway. During construction proposed inlets, manholes, and mitered end sections shall be protected from siltation and erosion using the measures shown in FDOT Index 102. Pipe shall be laid in the reverse direction of flow. Contractor shall have sand bags available at all times during construction of the proposed storm sewer system to substantially block runoff in the trench from entering the pipes. Immediately following construction of the proposed storm sewer system & sidewalk, stabilize the area from the back of the sidewalk to the right-of-way line using temporary sod.

**Pond 1**  
Clear and grub the pond site. Install staked silt fence (double row) around the right-of-way perimeter prior to beginning clearing and grubbing operations. Excavate the pond to its approximate dimensions, then seed and mulch the pond side slopes down to the water surface. Construct the proposed outfall weir. Construct the proposed storm sewer system in the upstream direction from the pond, to the limits shown in the maintenance of traffic plans. During construction proposed inlets, manholes, and mitered end sections shall be protected from siltation and erosion using the measures shown in FDOT Index 102.

**Phase IIA of Traffic Control Plans**

Temporary pavement is to be constructed along Holden Avenue, Texas Avenue, and Rio Grande Avenue during this phase, at the locations shown in the Maintenance of Traffic Plans. Construction is also continuing from previous phases. Install staked silt fence along the right-of-way line prior to beginning construction operations along any segment of the roadway not previously disturbed. Erosion control devices are to be maintained at all other active construction areas.

**Phase IIB of Traffic Control Plans**

**Roadway**  
Portions of Holden Avenue, Texas Avenue, Rio Grande Avenue, and John Young Parkway are to be constructed in this phase. Construction is also continuing from previous phases. Install silt fence along the right-of-way line prior to beginning construction operations along any segment of the roadway. During construction proposed inlets, manholes, and mitered end sections shall be protected from siltation and erosion using the measures shown in FDOT Index 102. Pipe shall be laid in the reverse direction of flow. Contractor shall have sand bags available at all times during construction of the proposed storm sewer system to substantially block runoff in the trench from entering the pipes. Immediately following construction of the proposed storm sewer system & sidewalk, stabilize the area from the back of the sidewalk to the right-of-way using temporary sod.

**Pond 3**  
Clear and grub the pond site. Install staked silt fence around the right-of-way perimeter prior to beginning clearing and grubbing operations. Excavate the pond to its approximate dimensions, then seed and mulch the pond side slopes down to the water surface. Construct the proposed outfall structure to Lake Tyler. Utilize floating turbidity barrier at the outfall point to the lake. Construct the proposed storm sewer system in the upstream direction from the pond, to the limits shown in the maintenance of traffic plans. During construction proposed inlets, manholes, and mitered end sections shall be protected from siltation and erosion using the measures shown in FDOT Index 102.

**Phase IIIA of Traffic Control Plans**

Temporary pavement is to be constructed along Rio Grande Avenue during this phase, at the locations shown in the Maintenance of Traffic Plans. Construction is also continuing from previous phases. Install staked silt fence along the right-of-way line prior to beginning construction operations along any segment of the roadway not previously disturbed. Erosion control devices are to be maintained at all other active construction areas.

**Phase IIIB of Traffic Control Plans**

Portions of Holden Avenue, Texas Avenue, Rio Grande Avenue, and John Young Parkway are to be constructed in this phase. Install staked silt fence along the right-of-way line prior to beginning construction operations along any segment of the roadway not previously disturbed. Erosion control devices are to be maintained at all other active construction areas. During construction proposed inlets, manholes, and mitered end sections shall be protected from siltation and erosion using the measures shown in FDOT Index 102. Pipe shall be laid in the reverse direction of flow. Contractor shall have sand bags available at all times during construction of the proposed storm sewer system to substantially block runoff in the trench from entering the pipes. Immediately following construction of the proposed storm sewer system & sidewalk, stabilize the area from the back of the sidewalk to the right-of-way line using temporary sod.

REVISIONS								<b>HOLDEN AVENUE STORMWATER POLLUTION PREVENTION PLAN</b>	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION				261

Phase IVA of Traffic Control Plans

Portions of Holden Avenue, Texas Avenue, and Rio Grande Avenue are to be constructed in this phase (medians and traffic separators). Install staked silt fence along the right-of-way line prior to beginning construction operations along any segment of the roadway not previously disturbed. Erosion control devices are to be maintained at all other active construction areas. During construction proposed inlets, manholes, and mitered end sections shall be protected from siltation and erosion using the measures shown in FDOT Index 102. Pipe shall be laid in the reverse direction of flow. Contractor shall have sand bags available at all times during construction of the proposed storm sewer system to substantially block runoff in the trench from entering the pipes. Immediately following construction of the proposed storm sewer system & sidewalk, stabilize the area from the back of the sidewalk to the right-of-way line using temporary sod.

Phase IVB of Traffic Control Plans

Roadway  
After the entire basin is permanently stabilized, place permanent sod.

Pond Construction  
After the entire basin is permanently stabilized, fine grade the ponds to their final dimensions. Sod pond side slopes with permanent sod. Do not remove erosion control devices until final paving & placement of sod is complete.

2.a.1 Stabilization Practices:

In the Section 104 Erosion Control Plan, the contractor shall describe the stabilization practices proposed to control erosion. The contractor shall initiate all stabilization measures 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. The stabilization practices shall include at least the following, unless otherwise approved by the Engineer.

- Temporary:
- \* Artificial coverings in accordance with Specification Section 104.
  - \* Seed and mulch, and sod in accordance with Specification Section 104.

- Permanent:
- \* Asphalt or concrete surface.

- \* Sod in accordance with Specification Section 575. The Contractor shall backfill and temporarily stabilize with sod all slopes within 48 hours of completion of the concrete curing time for box culvert.

2.a.2 Structural Practices:

In the Section 104 Erosion Control Plan, the contractor shall describe the proposed structural practices to control or trap sediment and otherwise prevent the discharge of pollutants from exposed areas of the site. Sediment controls shall be in place before disturbing soil upstream of the control. The structural practices shall include at least the following, unless otherwise approved by the Engineer.

- Temporary:
- \* Silt fence in accordance with Design Standard 102 and Specification Section 104.
  - \* Baled hay or straw in accordance with Design Standard 102 and Specification Section 104.
  - \* Turbidity barrier in accordance with Design Standard 102.
  - \* Sandbags to control erosion and trap silt
  - \* Inlet protection in accordance with Design Standard 102.

- Permanent:
- \* Sod.

2.b Stormwater Management:

Several storm sewer systems will be constructed to convey runoff to two (2) stormwater retention/detention ponds. The facilities have been permitted by the South Florida Water Management District (SFWMD) and Orange County and comply with applicable design standards.

2.c Other Controls:

2.c.1 Waste Disposal:

In the Section 104 Erosion Control Plan, the contractor shall describe the proposed methods to prevent the discharge of solid materials, including building materials, to waters of the United States. The proposed methods shall include at least the following, unless otherwise approved by the Engineer.

- \* Providing litter control and collection within the project during construction activities.
- \* Disposing of all fertilizer or other chemical containers according to EPA's standard practices as detailed by the manufacturer.
- \* Disposing of solid materials including building and construction materials off the project site but not in surface waters, or wetlands.

2.c.2 Off-Site Vehicle Tracking & Dust Control:

In the Section 104 Erosion Control Plan, the contractor shall describe the proposed methods for minimizing offsite vehicle tracking of sediments and generating dust. The proposed methods shall include at least the following, unless otherwise approved by the Engineer.

- \* Covering loaded haul trucks with tarps.
- \* Removing excess dirt from roads daily.
- \* Stabilizing construction entrances according to Design Standard 106.
- \* Using roadway sweepers during dust generating activities such as excavation and milling operations.

2.c.3 State and Local Regulations For Waste Disposal, Sanitary Sewer, Or Septic Tank Regulations:

In the Section 104 Erosion Control Plan, the contractor shall describe the proposed procedures to comply with applicable state and local regulations for waste disposal, and sanitary sewer or septic systems.

2.c.4 Fertilizers and Pesticides:

In the Section 104 Erosion Control Plan, the contractor shall describe the procedures for applying fertilizers and pesticides. The proposed procedures shall comply with applicable subsections of either Section 570 or 577 of the Specifications.

2.c.5 Toxic Substances:

In the Section 104 Erosion Control Plan, the contractor shall provide a list of toxic substances that are likely to be used on the job and provide a plan addressing the generation, application, migration, storage, and disposal of these substances.

2.d.4 Approved State and Local Plans and Permits:

- \* FDEP Rule Chapter 62-25 F.A.C.
- \* Contractor is required to complete, sign, and send FL DEP NPDES Notice of Intent and Notice of Termination, as Operator.

3.0 MAINTENANCE:

In the Section 104 Erosion Control Plan, the contractor shall provide a plan for maintaining all erosion and sediment controls throughout construction. The maintenance plan shall at a minimum, comply with the following.

- \* Silt Fence: Maintain per Section 104. The contractor should anticipate replacing silt fence on 12 month intervals.
- \* Baled Hay or Straw: Remove sediment when it reaches 1/2 height of bales or when water ponds in unacceptable amounts or areas. The contractor should anticipate replacing straw bales on 3-month intervals.
- \* Turbidity Barrier: Maintain per Section 104.

4.0 INSPECTIONS:

Qualified personnel shall inspect the following items at least once every seven calendar days and within 24 hours of the end of a storm that is 0.50 inches or greater. To comply, the contractor shall install and maintain rain gages and record the daily rainfall. Where sites have been permanently stabilized, inspections shall be conducted at least once every month. The contractor shall also inspect that controls installed in the field agree with the latest Stormwater Pollution Prevention Plan.

- \* Points of discharge to waters of the United States.
- \* Points of discharge to municipal storm sewer systems.
- \* Disturbed areas of the site that have not been finally stabilized.
- \* Areas used for storage of materials that are exposed to precipitation.
- \* Structural controls.
- \* Storm water management systems.
- \* Locations where vehicles enter or exit the site.

The contractor shall initiate repairs within 24 hours of inspections that indicate items are not in good working order.

If inspections indicate that installed stabilization and structural practices are not sufficient to minimize erosion, retain sediment, and prevent discharging pollutants, the contractor shall provide additional measures, as approved by the Engineer.

5.0 NON-STORMWATER DISCHARGES:

In the Section 104 Erosion Control Plan, the contractor shall identify all anticipated non-stormwater discharges (except flows from fire fighting activities). The contractor shall describe the proposed measures to prevent pollution of these non-stormwater discharges. If the contractor encounters contaminated soil or groundwater, contact Mr. Dennis Weatherford, Orange County Environmental Protection Division, Waste Management [(407)-836-1404] and the FDEP Central District Emergency Response [(407) 893-3337].

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

**LOCHRANE**  
ENGINEERS • SURVEYORS  
201 SOUTH BUMBY AVENUE ORLANDO, FLORIDA 32803  
PH: (407) 896-3317 FAX: (407) 896-9167 EMAIL: WWW.LOCHRANE.COM  
CERTIFICATE OF AUTHORIZATION NO. 2856  
THOMAS G. LOCHRANE, P.E. P.E. NUMBER 2011

**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

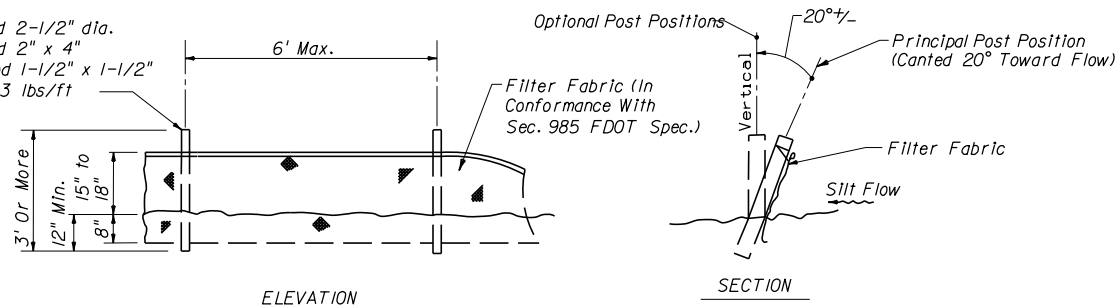


**HOLDEN AVENUE**  
**STORMWATER POLLUTION**  
**PREVENTION PLAN**

SHEET NO.  
262

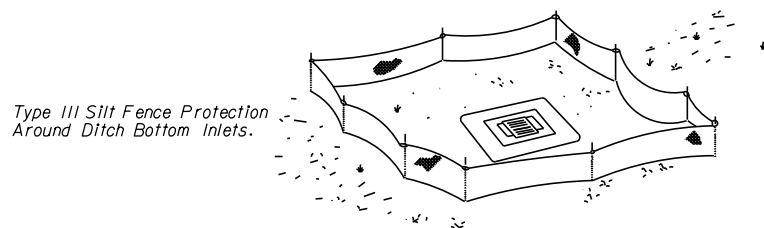
GENERAL NOTES

Post Options: Softwood 2-1/2" dia.  
Softwood 2" x 4"  
Hardwood 1-1/2" x 1-1/2"  
Steel 1.33 lbs/ft



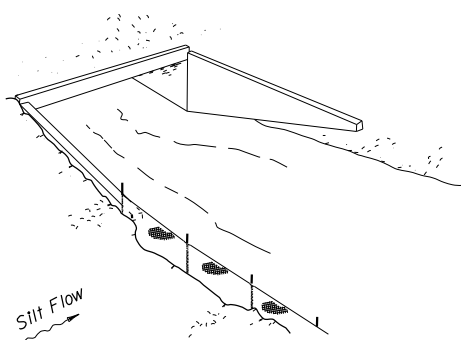
Note:  
Silt Fence to be paid for under the contract unit price for Prevention, Control, and Abatement of Erosion and Water Pollution (LS), Pay Item No. 104-14.

TYPE III SILT FENCE

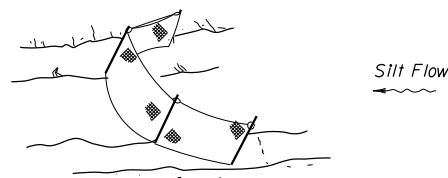


Type III Silt Fence Protection Around Ditch Bottom Inlets.

Do not deploy in a manner that silt fences will act as a dam across permanent flowing watercourses. Silt fences are to be used at upland locations and turbidity barriers used at permanent bodies of water.



Type III Silt Fence



Type III Silt Fence

Note: Spacing for Type III Fence to be in accordance with Chart 1, Sheet 1 of 3 and ditch installations at drainage structures Sheet 2 of 3 of FDOT Index 102.

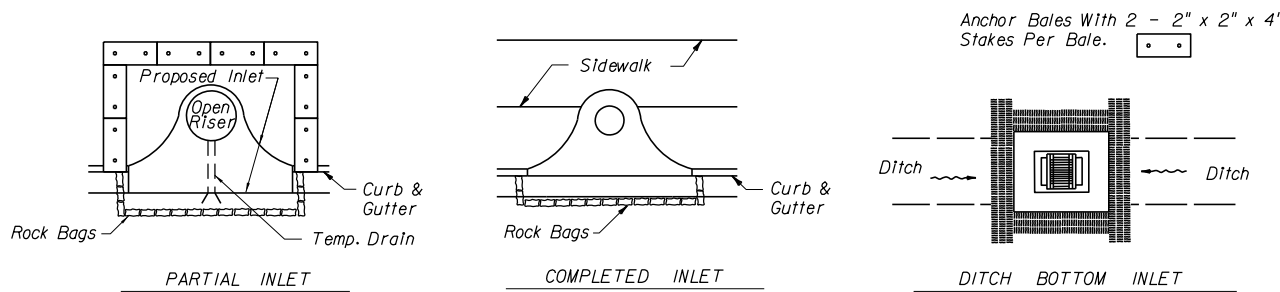
SILT FENCE APPLICATIONS

- THE CONTRACTOR SHALL EXECUTE ALL MEASURES NECESSARY TO LIMIT THE TRANSPORT OF SEDIMENTS OUTSIDE THE LIMITS OF THE PROJECT TO THE VOLUME AND AMOUNT THAT ARE EXISTING PRIOR TO THE COMMENCEMENT OF CONSTRUCTION. THIS CONDITION WILL BE SATISFIED FOR THE TOTAL ANTICIPATED CONSTRUCTION PERIOD. PROVISION MUST BE MADE TO PRESERVE THE INTEGRITY AND CAPACITY OF CHECK WEIRS, SEDIMENT BASINS, SLOPE DRAINS, GRADING PATTERNS, ETC. REQUIRED TO MEET THIS PROVISION THROUGHOUT THE LIFE OF THE CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE HAY BALES, SILT BARRIERS, TEMPORARY GRASSING, ETC. AS REQUIRED TO FULLY COMPLY WITH THE INTENT OF THIS SPECIFICATION.
- PHASING OF IMPLEMENTATION  
PHASE 1 - INSTALLATION OF EROSION CONTROL FEATURES  
EROSION CONTROL FEATURES ARE TO BE INSTALLED THROUGHOUT THE AREA OF SOIL DISTURBING ACTIVITIES AND AT ENVIRONMENTALLY SENSITIVE AREAS OR AT AREAS AS DIRECTED BY THE ENGINEER. THESE FEATURES INCLUDE BUT ARE NOT LIMITED TO HAYBALES, STAKED SILT FENCES, STAKED TURBIDITY BARRIERS, FLOATING TURBIDITY BARRIERS, ETC. THESE CONTROL FEATURES ARE TO REMAIN IN PLACE UNTIL AFTER CONSTRUCTION ACTIVITIES ARE COMPLETE AND UNTIL THERE IS NO LONGER A THREAT OF WATER QUALITY VIOLATIONS.  
PHASE 2 - DRAINAGE SYSTEM OR STRUCTURE EROSION CONTROL FEATURES.  
EROSION CONTROL FEATURES ARE TO BE INSTALLED AT ALL AREAS OF EXCAVATION OR FILL FOR DRAINAGE SYSTEM OR STRUCTURE CONSTRUCTION PRIOR TO SUCH EXCAVATION OR FILL. ALL STREAMS OR DITCHES ARE TO BE PROTECTED FROM EROSION OR SILTATION BY THE METHODS DETAILED ABOVE AND IN STANDARD INDEX NOS. 102-106. INLET ENTRANCES ARE ALSO TO BE PROTECTED FROM SILTATION. THE CONTROL FEATURES TO BE USED INCLUDE BUT ARE NOT LIMITED TO STAKED SILT FENCES AND HAYBALES.  
PHASE 3 - MAINTENANCE OF EROSION CONTROL FEATURES  
ALL ENVIRONMENTAL CONTROL FEATURES ARE TO BE MAINTAINED THROUGHOUT THE LIFE OF THE PROJECT AS NECESSARY FOR THE VARIOUS CONSTRUCTION PHASES. THE CONTRACTOR MUST ENSURE THAT ALL OF THESE FEATURES FUNCTION PROPERLY AT ALL TIMES.
- NO EXCAVATED MATERIAL SHALL BE STOCKPILED IN SUCH A MANNER AS TO DIRECT RUNOFF DIRECTLY OFF THE PROJECT SITE OR INTO ANY ADJACENT WATER BODY OR STORMWATER COLLECTION FACILITY.
- THE SURFACE AREA OF OPEN, RAW ERODIBLE SOIL EXPOSED BY CLEARING AND GRUBBING OPERATIONS OR EXCAVATION AND FILLING OPERATIONS SHALL BE CONTROLLED, SO THAT THIS OPERATION WILL NOT SIGNIFICANTLY AFFECT OFF-SITE DEPOSIT OF SEDIMENTS.
- INLETS AND CATCH BASINS SHALL BE PROTECTED FROM SEDIMENT LADEN STORMWATER RUNOFF UNTIL THE COMPLETION OF ALL CONSTRUCTION OPERATIONS THAT MAY CONTRIBUTE SEDIMENT TO THE INLET. (SEE NOTE 17).
- AREAS OPENED BY CONSTRUCTION OPERATIONS THAT ARE NOT ANTICIPATED TO BE DRESSED OR RECEIVE FINAL GRASSING TREATMENT WITHIN THIRTY DAYS SHALL BE SEEDED WITH A QUICK GROWING GRASS SPECIES WHICH WILL PROVIDE AN EARLY COVER, DURING THE SEASON IN WHICH IT IS PLANTED. TEMPORARY SEEDING SHALL BE CONTROLLED SO AS TO NOT ALTER OR COMPETE WITH PERMANENT GRASSING. THE RATE OF SEEDING SHALL BE 30 POUNDS PER ACRE.
- THE SEEDED OR SEEDED AND MULCHED AREA(S) SHALL BE ROLLED AND WATERED AS REQUIRED TO ASSURE OPTIMUM GROWING CONDITIONS FOR THE ESTABLISHMENT OF A GOOD GRASS COVER.
- IF AFTER 14 DAYS, THE TEMPORARY GRASSED AREAS HAVE NOT ATTAINED A MINIMUM OF 75% GOOD GRASS COVER, THE AREA WILL BE REWORKED AND ADDITIONAL SEED APPLIED TO ESTABLISH THE DESIRED VEGETATION COVER.
- ALL FEATURES OF THE PROJECT SHALL BE CONSTRUCTED TO PREVENT EROSION AND SEDIMENT AND SHALL BE MAINTAINED DURING THE LIFE OF THE CONSTRUCTION SO AS TO FUNCTION PROPERLY WITHOUT THE TRANSPORT OF SEDIMENTS OUTSIDE THE LIMITS OF THE PROJECT. THIS PROJECT MAY BE CONSTRUCTED IN PHASES, BUT THE EROSION CONTROL REQUIREMENTS AND PHASING OF IMPLEMENTATION SHALL APPLY TO EACH PHASE.
- ALL DISTURBED AREAS OUTSIDE THE EXCAVATION AND FILL LIMITS WILL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THEIR CONDITION PRIOR TO CONSTRUCTION.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR MAINTENANCE OF ALL NEWLY PLANTED GRASSES OR VEGETATION AND RETENTION/DETENTION FACILITIES UNTIL THE WORK HAS BEEN ACCEPTED BY THE COUNTY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE STABILITY OF EMBANKMENTS AND SHALL REPLACE ANY PORTION, WHICH IN THE OPINION OF THE ENGINEER, HAS BECOME DISPLACED DUE TO EROSION OR DUE TO CARELESSNESS OR NEGLIGENCE ON THE PART OF THE CONTRACTOR.
- THE CONTRACTOR SHALL COMPLY WITH ALL FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS CONTROLLING POLLUTION OF THE ENVIRONMENT. MEASURES SHALL BE TAKEN BY THE CONTRACTOR TO CONTROL EROSION AND SEDIMENT RUNOFF FROM THE SITE DURING CONSTRUCTION. SUCH METHODS SHALL BE IN ACCORDANCE WITH THE CURRENT FLORIDA DEPARTMENT OF TRANSPORTATION STANDARDS.
- ABSOLUTELY NO WORK WILL BE ALLOWED WITHIN ANY CONSERVATION AREA, BUFFER AREA, MITIGATION AREA OR DESIGNATED WETLAND AREA UNLESS SO SPECIFICALLY DESCRIBED BY THE PLANS AND GRANTED BY REASON OF PERMIT FROM THE GOVERNMENTAL ENTITY HAVING JURISDICTION OVER SAID AREA.
- PRIOR TO CLEARING AND GRUBBING, THE LIMITS OF WETLANDS, BUFFERS, AND MITIGATION AREAS SHALL BE CLEARLY MARKED ALONG THE PROPOSED RIGHT OF WAY LINE TO PROTECT THESE AREAS FROM ENCROACHMENT FROM CONSTRUCTION ACTIVITIES.
- ALL FILL EMBANKMENT AND GRADED AREAS SHALL BE PROTECTED AGAINST EROSION BY METHODS STATED IN SECTION 104, "F.D.O.T. STANDARD SPECIFICATIONS FOR BRIDGE AND ROAD CONSTRUCTION". SIDE SLOPE MAY BE SEEDED AND MULCHED, PROVIDED THAT THE MULCH MATERIAL IS DISC HARROWED AND THE SIDE SLOPES ARE NEITHER GREATER THAN 3:1 NOR PART OF A DRAINAGE CONVEYANCE.
- REFER TO POND DETAIL SHEETS FOR EROSION CONTROL MEASURES AT POND OUTFALLS. PIPE OR DITCH OUTFALLS OFF THE PROJECT SITE SHALL BE INSPECTED DAILY FOR POSSIBLE SEDIMENT BUILDUP OR TRANSPORT.
- EROSION CONTROL AT ALL INLET DRAINAGE STRUCTURES DURING CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH FDOT STANDARD INDEX No. 102.
- LOCATION & QUANTITY OF EROSION CONTROL MEASURES IS APPROXIMATE ONLY. ACTUAL LOCATIONS TO BE DETERMINED DURING CONSTRUCTION. PAYMENT FOR ALL EROSION CONTROL MEASURES TO BE INCLUDED UNDER ITEM 104-14, "PREVENTION, CONTROL AND ABATEMENT OF EROSION & WATER POLLUTION" (LS).

SUMMARY OF STAKED SILT FENCE

LOCATION STA. TO STA.	SIDE	NUMBER OF APPLICATIONS	P LF	F LF	FIELD BOOK REFERENCE
<b>HOLDEN AVE</b>					
11+80 - 36+14 *	RT		3355		
37+17 - 62+83	RT		2710		
37+30 - 42+80	LT		600		
50+40 - 62+91	LT		1380		
63+48 - 69+68	RT		699		
63+63 - 75+67 *	LT		1475		
72+00 - 75+96	RT		452		
<b>JOHN YOUNG PARKWAY</b>					
202+00 - 204+70	LT		270		
206+10 - 206+75	RT		65		
<b>TEXAS AVE</b>					
392+50 - 399+56	LT		708		
392+50 - 399+71	RT		794		
401+40 - 401+93	LT		53		
401+20 - 408+50	RT		711		
402+60 - 408+50	LT		620		
<b>RIO GRANDE AVE</b>					
401+00 - 407+34	LT		702		
401+00 - 407+32	RT		655		
410+70 - 414+40	LT		371		
410+81 - 414+40	RT		399		
POND 3	RT		1979		
SUBTOTAL			17,998		
1 REPLACEMENT CYCLE (1 YEAR)			17,998		
TOTAL			35,976		

\* NOTE:  
DOUBLE ROW SILT FENCE  
STA. 11+80 - 20+80 RT.  
STA. 69+45 - 70+70 LT.



PROTECTION AROUND INLETS OR SIMILAR STRUCTURES

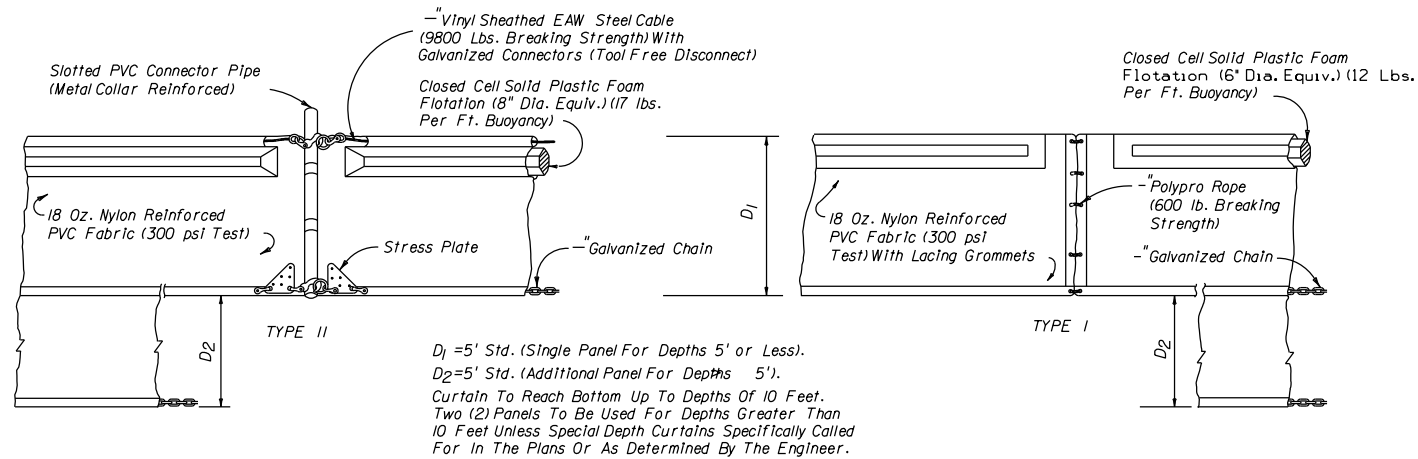
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

**LOCHRANE**  
ENGINEERS • SURVEYORS  
201 SOUTH BUMBY AVENUE ORLANDO, FLORIDA 32803  
PH: (407) 896-3317 FAX: (407) 896-9167 EMAIL: WWW.LOCHRANE.COM  
CERTIFICATE OF AUTHORIZATION NO. 2856  
FOREST W. ADKINS, P.E. P.E. NUMBER 56003

**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**HOLDEN AVENUE**  
**EROSION CONTROL PLAN**

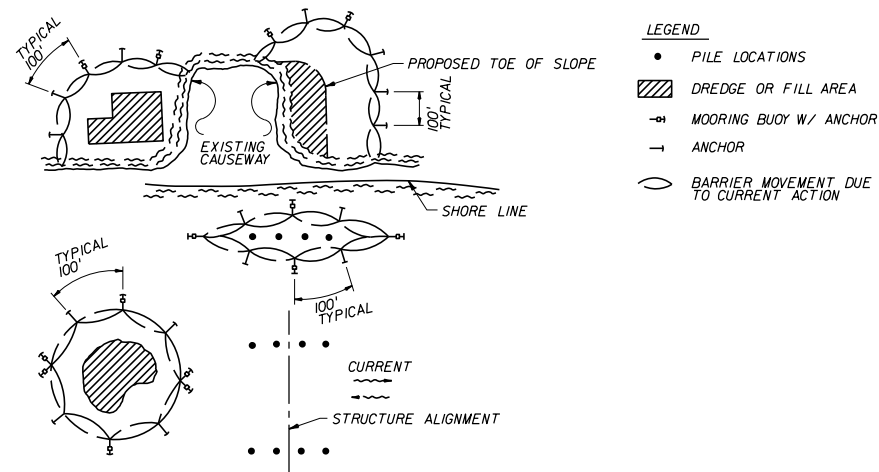
SHEET NO.  
263



D<sub>1</sub> = 5' Std. (Single Panel For Depths 5' or Less).  
 D<sub>2</sub> = 5' Std. (Additional Panel For Depths 5').  
 Curtain To Reach Bottom Up To Depths Of 10 Feet.  
 Two (2) Panels To Be Used For Depths Greater Than 10 Feet Unless Special Depth Curtains Specifically Called For In The Plans Or As Determined By The Engineer.

NOTICE: COMPONENTS OF TYPES I AND II MAY BE SIMILAR OR IDENTICAL TO PROPRIETARY DESIGNS. ANY INFRINGEMENT ON THE PROPRIETARY RIGHTS OF THE DESIGNER SHALL BE THE SOLE RESPONSIBILITY OF THE USER. SUBSTITUTIONS FOR TYPES I AND II SHALL BE AS APPROVED BY THE ENGINEER.

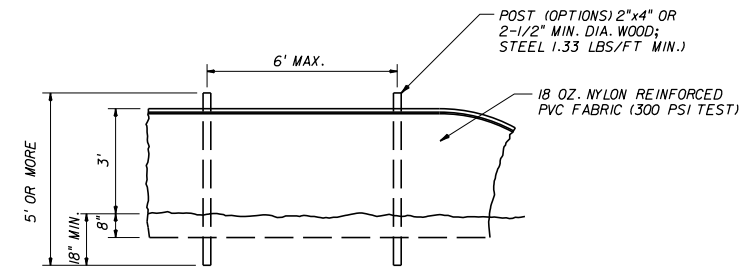
FLOATING TURBIDITY BARRIERS



- NOTES:
1. TURBIDITY BARRIERS ARE TO BE USED IN ALL PERMANENT BODIES OF WATER REGARDLESS OF WATER DEPTH.
  2. NUMBER AND SPACING OF ANCHORS DEPENDENT ON CURRENT VELOCITIES.
  3. DEPLOYMENT OF BARRIER AROUND PILE LOCATIONS MAY VARY TO ACCOMMODATE CONSTRUCTION OPERATIONS.
  4. NAVIGATION MAY REQUIRE SEGMENTING BARRIER DURING CONSTRUCTION OPERATIONS.
  5. FOR ADDITIONAL INFORMATION SEE SECTION 104 OF THE FDOT STANDARD SPECIFICATIONS.

TURBIDITY BARRIER APPLICATIONS

N.T.S.



STAKED TURBIDITY BARRIER

N.T.S.

SUMMARY OF STAKED TURBIDITY BARRIERS

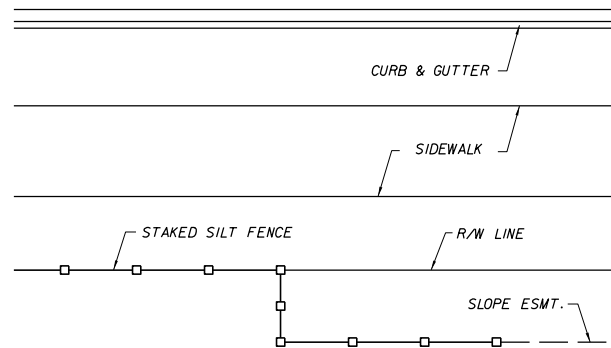
STRUCTURE NO.	LOCATION	SIDE	P	F
	STA. TO STA.		(LF)	(LF)
	POND 1	LT	1644	
	POND 1 OUTFALL	LT	1395	
	12+75 - 33+90	LT	2115	
	34+35 - 34+94	LT	59	
	42+80 - 47+04	LT	425	
	47+31 - 50+40	LT	310	
	TOTAL		5948	

SUMMARY OF FLOATING TURBIDITY BARRIERS

STRUCTURE NO.	LOCATION	SIDE	P	F
	STATION		(LF)	(LF)
JYP-2	11+47 - 11+87	LT	40	
JYP-3	11+47 - 11+85	RT	38	
HOLDEN AVE	33+90 - 34+50	LT	60	
	34+94 - 35+94	LT	100	
TEXAS AVE	401+93 - 402+60	LT	67	
	403+59 - 403+93	LT	34	
LB-0	46+29 - 46+51	RT	22	
	47+04 - 47+31	LT	27	
	TOTAL		388	

SUMMARY OF INLET PROTECTION

STRUCTURE NO.	LOCATION	SIDE	P	F
	STA. TO STA.		(EA)	(EA)
	EXIST. INLETS			
	HOLDEN AVE.	RT.	7	
	TEXAS AVE.	RT.	2	
	RIO GRANDE AVE.	LT.	1	
	MILLENNIA BLVD.	RT.	1	
	PROPOSED INLETS	LT. & RT.	87	
	TOTAL		98	



- NOTES:
1. STAKED SILT FENCE IS TO BE PLACED NO MORE THAN 6" FROM THE R.O.W. LINE OR THE FILL SLOPE EASEMENT LINE IF APPLICABLE.
  2. FOR DOUBLE ROW SILT FENCE ADJACENT TO WETLANDS SECOND ROW OF SILT FENCE TO BE PLACED 1' OR LESS BEHIND FIRST ROW ON CONSTRUCTION SIDE OF FENCE. SEE DRAINAGE MAPS AND SFWMD PERMIT FOR WETLAND LOCATIONS.

TYPICAL STAKED SILT FENCE PLACEMENT

N.T.S.

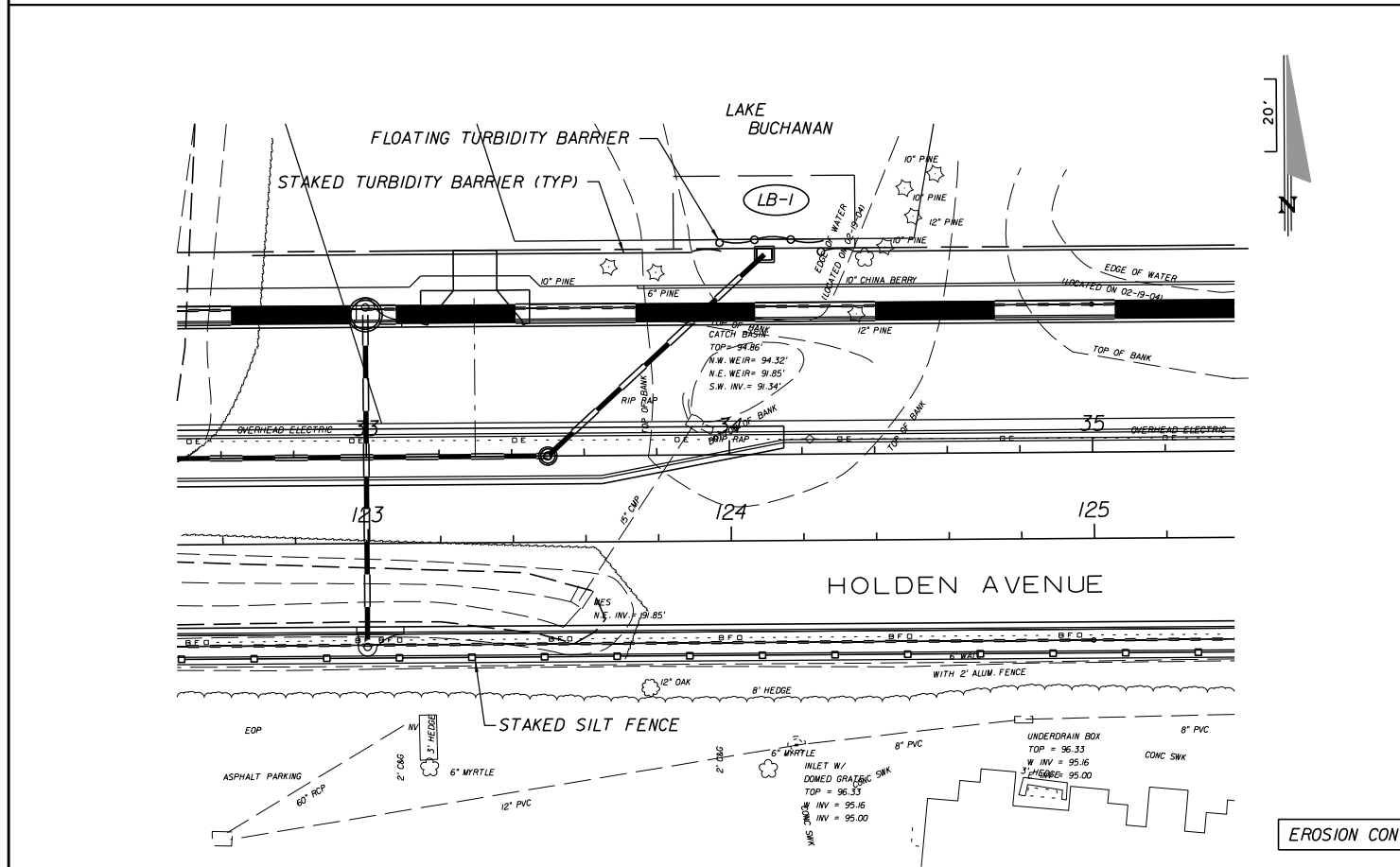
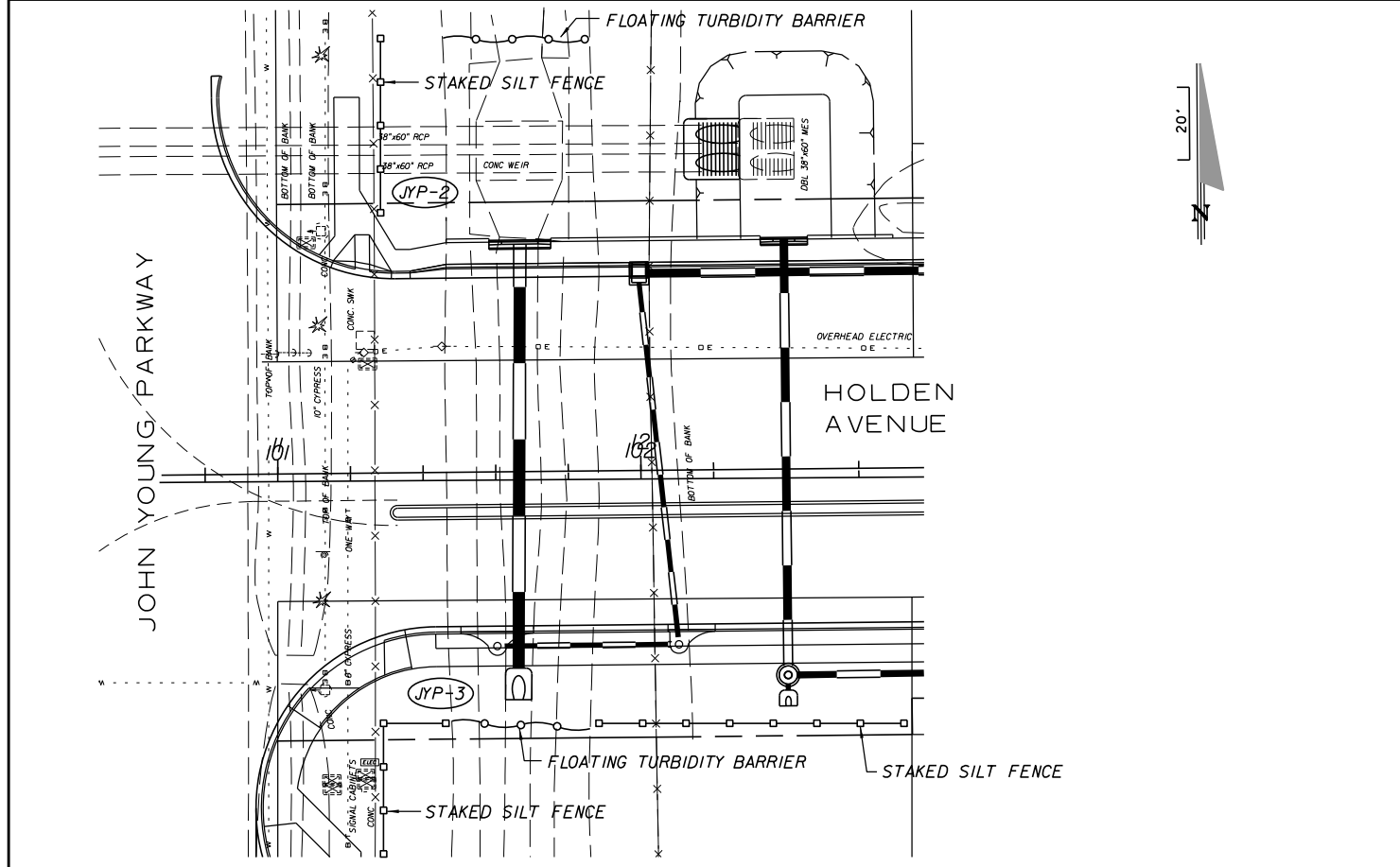
REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

**LOCHRANE**  
 ENGINEERS • SURVEYORS  
 201 SOUTH BUMBY AVENUE ORLANDO, FLORIDA 32803  
 PH: (407) 896-3317 FAX: (407) 896-9167 EMAIL: WWW.LOCHRANE.COM  
 CERTIFICATE OF AUTHORIZATION NO. 2856  
 FOREST W. ADKINS, P.E. P.E. NUMBER 56003

**ORANGE COUNTY**  
 GOVERNMENT  
 FLORIDA

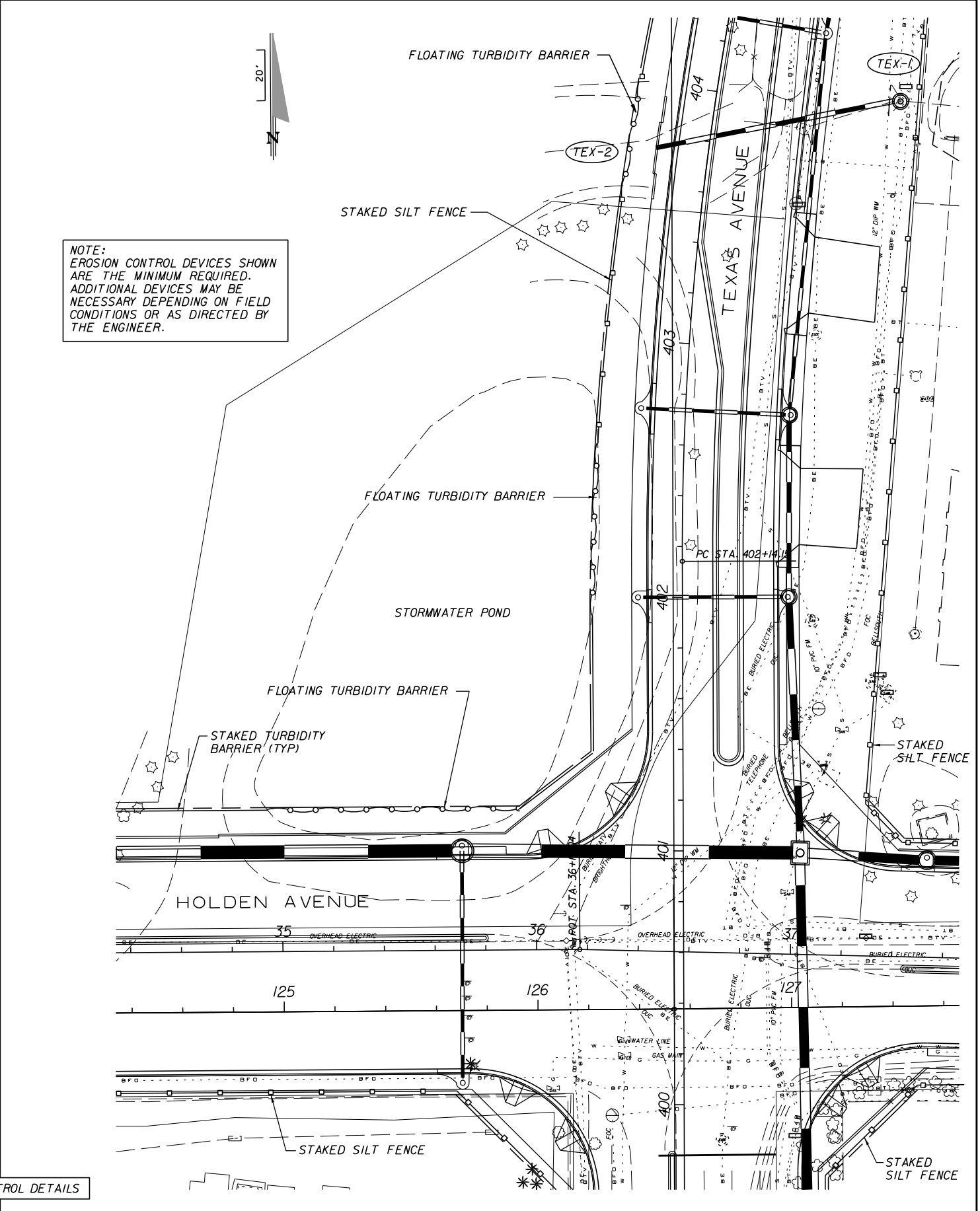
**HOLDEN AVENUE**  
**EROSION CONTROL PLAN**





EROSION CONTROL DETAILS

NOTE:  
 EROSION CONTROL DEVICES SHOWN  
 ARE THE MINIMUM REQUIRED.  
 ADDITIONAL DEVICES MAY BE  
 NECESSARY DEPENDING ON FIELD  
 CONDITIONS OR AS DIRECTED BY  
 THE ENGINEER.



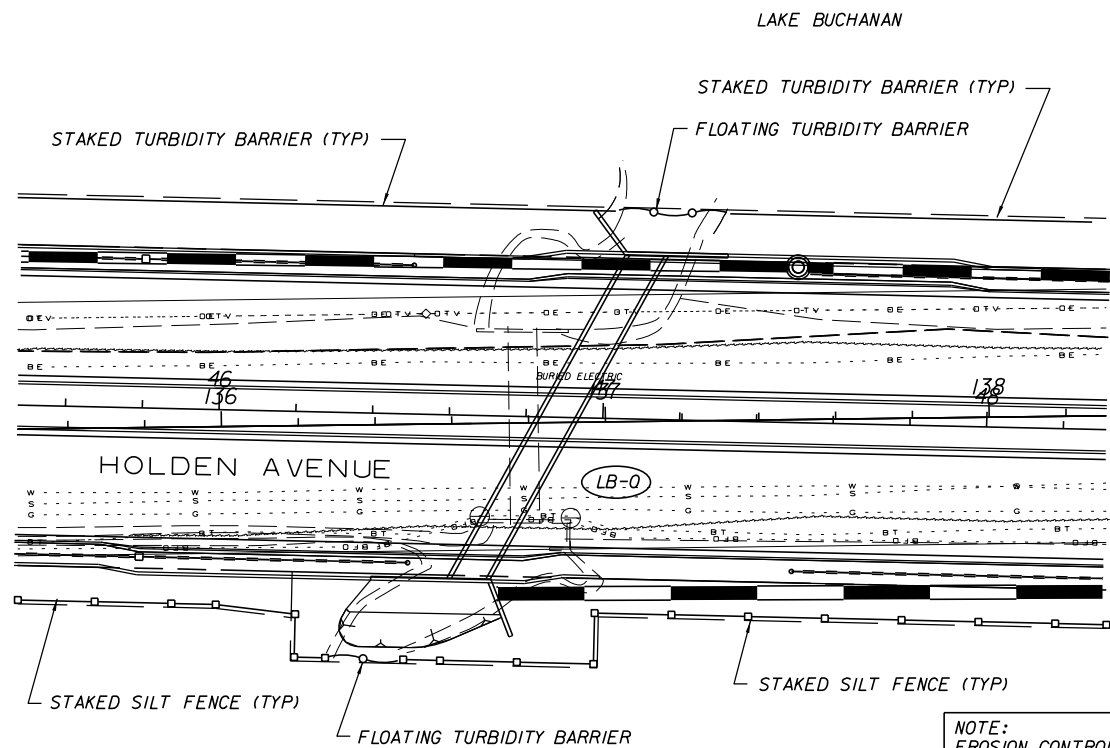
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DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

**LOCHRANE**  
 ENGINEERS • SURVEYORS  
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 PH: (407) 896-3317 FAX: (407) 896-9167 EMAIL: WWW.LOCHRANE.COM  
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**ORANGE COUNTY**  
**GOVERNMENT**  
 FLORIDA

**HOLDEN AVENUE**  
**EROSION CONTROL PLAN**

SHEET NO.  
 265



NOTE:  
 EROSION CONTROL DEVICES SHOWN  
 ARE THE MINIMUM REQUIRED.  
 ADDITIONAL DEVICES MAY BE  
 NECESSARY DEPENDING ON FIELD  
 CONDITIONS OR AS DIRECTED BY  
 THE ENGINEER.

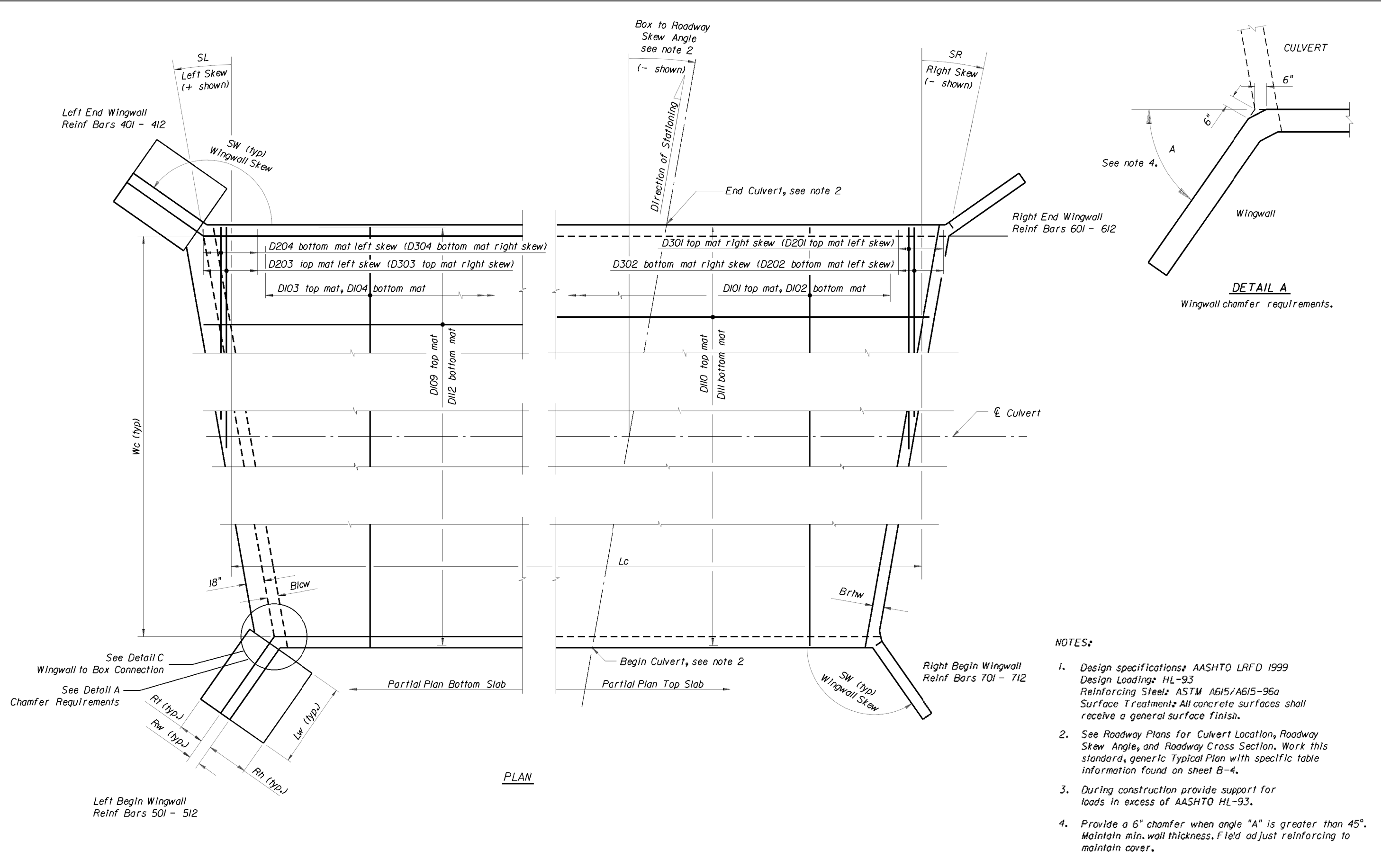
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DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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 201 SOUTH BUMBY AVENUE ORLANDO, FLORIDA 32803  
 PH: (407) 896-3317 FAX: (407) 896-9167 EMAIL: WWW.LOCHRANE.COM  
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**ORANGE COUNTY**  
**GOVERNMENT**  
 FLORIDA

**HOLDEN AVENUE**  
**EROSION CONTROL PLAN**

SHEET NO.	266
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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

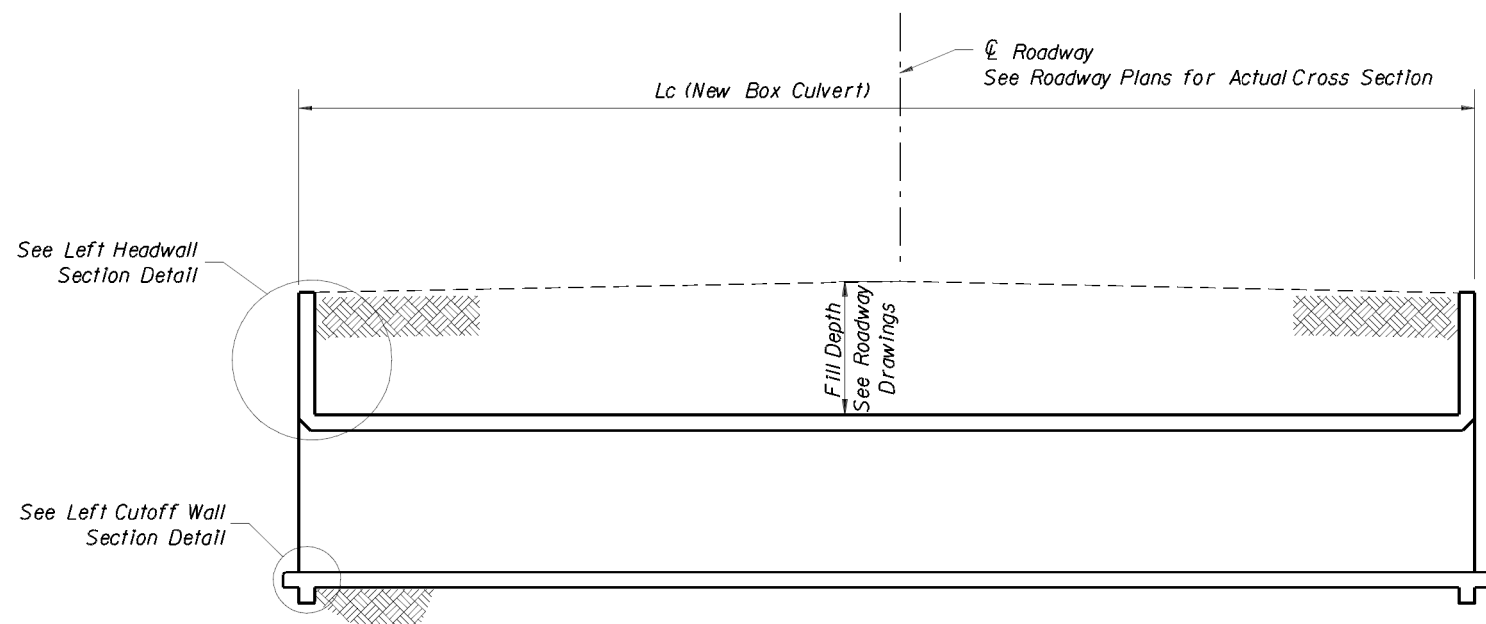
**AVCON**  
ENGINEER OF RECORD: LUCA DELVERME, P.E. NO. 63055  
CERTIFICATE OF AUTHORIZATION NO. 5057

AVCON, INC.  
5555 MICHIGAN STREET, SUITE 200  
ORLANDO, FLORIDA 32822-2779  
PHONE: (407) 599-1122  
FAX: (407) 599-1133  
www.avconinc.com

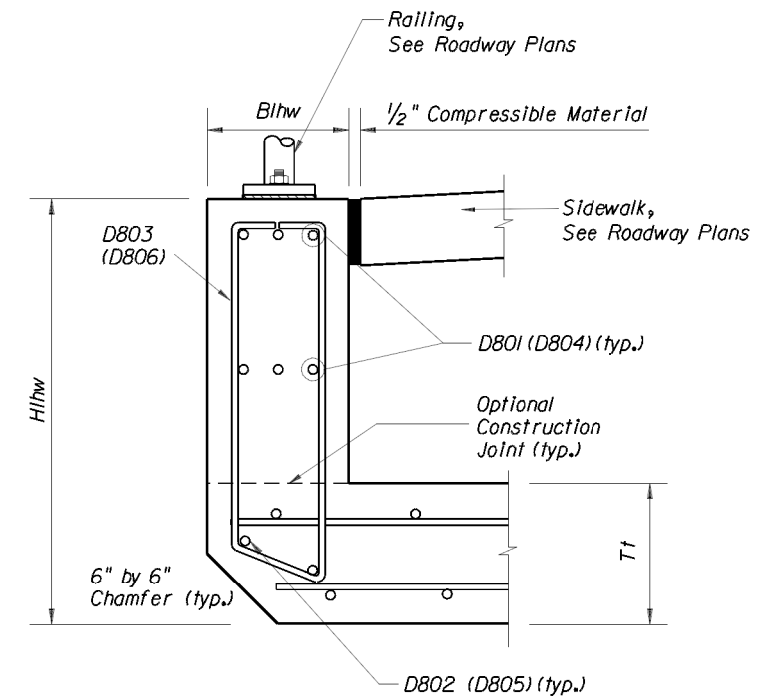
**ORANGE COUNTY**  
**GOVERNMENT**  
FLORIDA

**HOLDEN AVENUE**  
**CONCRETE BOX CULVERT**  
**TYPICAL PLAN**

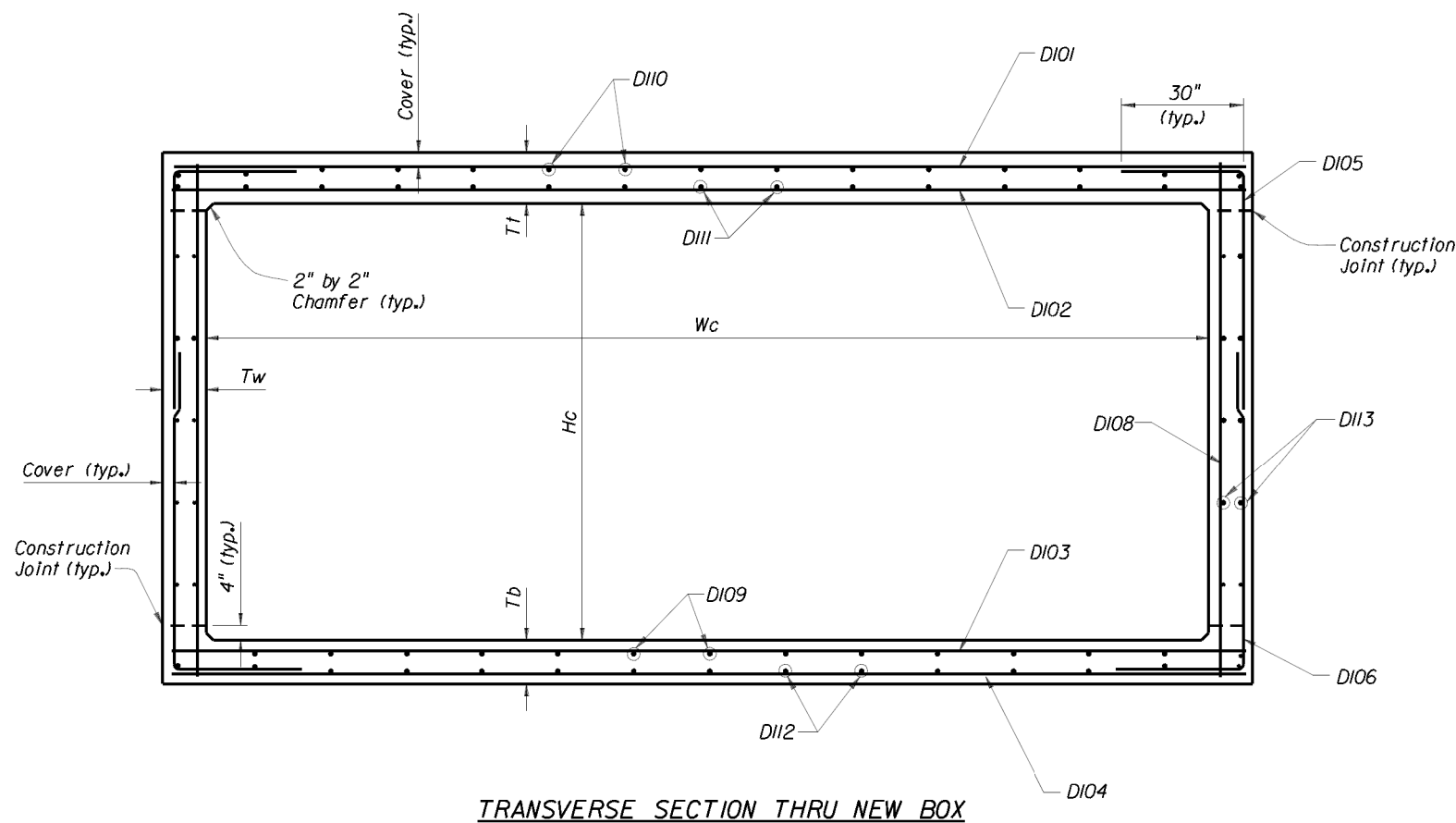
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B-1



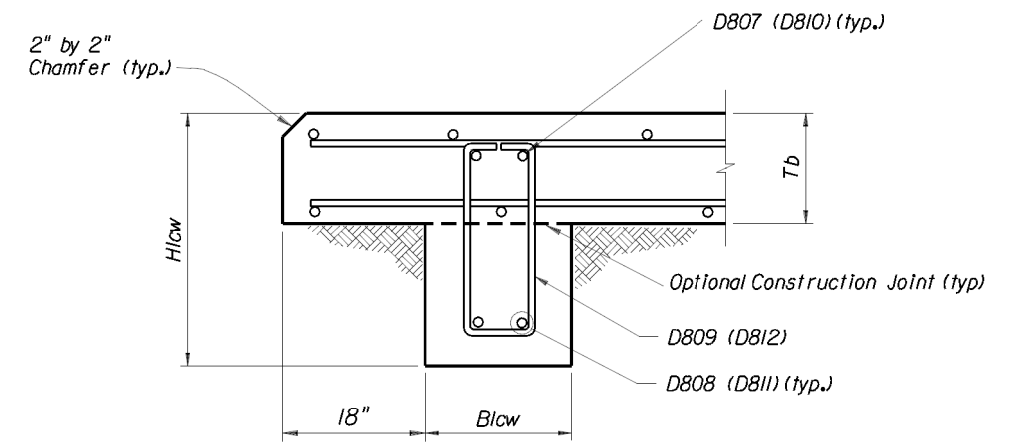
**LONGITUDINAL SECTION**



**LEFT HEADWALL SECTION  
(Right Headwall Similar)**



**TRANSVERSE SECTION THRU NEW BOX**



**LEFT CUTOFF WALL SECTION  
(Right Cutoff Wall Similar)**

**NOTES:**

1. Space Bars DII0 and DII2 with a bar in each corner and the remaining bars placed at equal spacing.
2. Place Bars DII3 at even spaces between corner Bars DII0 and DII2.
3. All rebar splices shall be 48 bar diameter, minimum, unless noted otherwise on structural plans.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

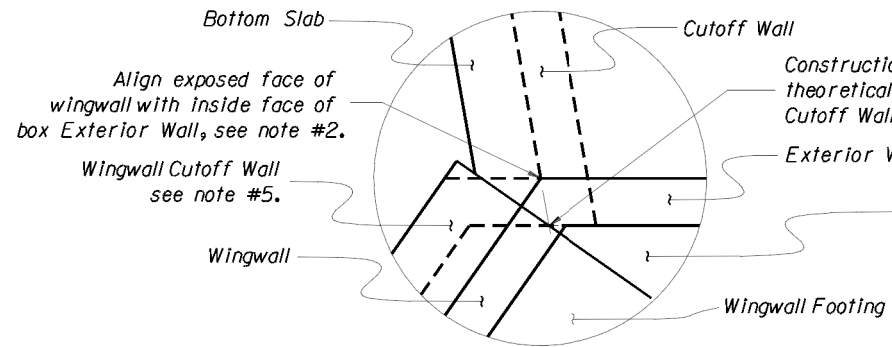
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 CERTIFICATE OF AUTHORIZATION NO. 5057

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 ORLANDO, FLORIDA 32822-2779  
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 FAX: (407) 599-1133  
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**HOLDEN AVENUE**  
**CONCRETE BOX CULVERT ELEVATION,**  
**SECTION, AND WALL DETAILS**

SHEET NO.  
 B-2



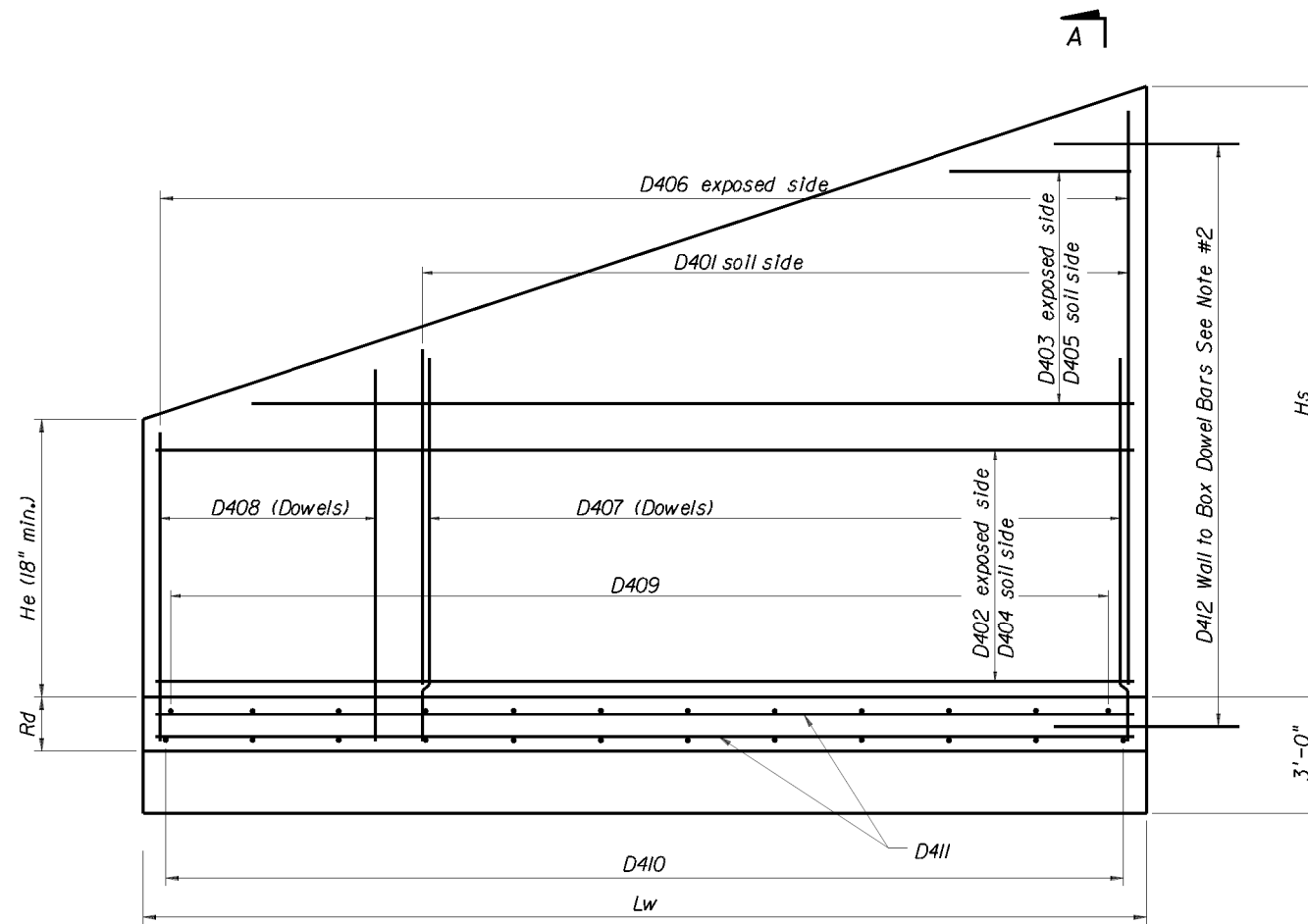
Construction Joint - Location determined by theoretical intersection of outside Face of Box Cutoff Wall and outside face of Box Exterior Wall.

For small angles, the contractor may elect to fill the area between the box and the wingwall footing with unreinforced concrete. For wingwall skew angles less than 90 degrees, field bend wingwall reinforcement as necessary while maintaining cover. No additional payment will be made for this work. Typical both sides

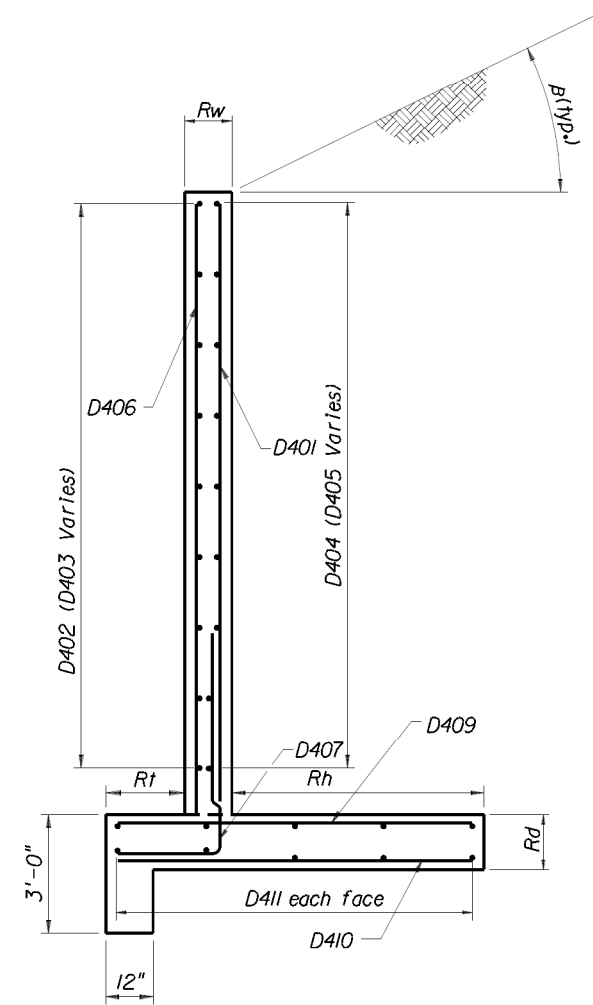
**Notes:**

1. Wingwall Construction Joint perpendicular to Wingwall.
2. In the vicinity of the Construction Joint, field bend reinforcement as necessary to maintain minimum reinforcement cover.
3. For constant height wingwalls, variable length bars D403, D405, and D408 are not needed.
4. Wingwall Skew Angles are measures from the adjacent box exterior wall to the wingwall.
5. Turn Wingwall Cutoff Wall as necessary to meet Box Cutoff Wall.

**DETAIL C - BOTTOM SLAB PLAN VIEW  
WINGWALL TO BOX CONNECTION  
(Left Begin Corner Shown - Other Corners Similar)**



**WINGWALL ELEVATION -Variable Height  
(Left End Shown - Other Corners Similar)**



**Section A-A**

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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ORLANDO, FLORIDA 32822-2779  
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**HOLDEN AVENUE  
CONCRETE BOX CULVERT  
WINGWALL DETAILS**

SHEET NO.

B-3

TABLE OF BOX CULVERT VARIABLES (Inches unless shown otherwise)																				
LOCATION	STRUCTURE NUMBER	BOX									HEADWALL and CUTOFF WALL									
		Wc(ft)	Hc(ft)	Tt	Tw	Tb	Tl	#cells	Lcft)	Cover	Bltw	Hltw	Brtw	Hrtw	Bltw	Hltw	Brtw	Hrtw	SL(deg)	SR(deg)
STA. 46+68	LB-0	8	4	12	10	12	10	1	94.3	3	16	31.5	16	30	12	36	12	36	27.6	27.6

TABLE OF BOX CULVERT VARIABLES (CONT.) (Inches unless shown otherwise)																			
STRUCTURE NUMBER	LEFT END WINGWALL									LEFT BEGIN WINGWALL									
	Rt	Rw	Rh	Rd	SW(deg)	B(deg)	Hcft)	Hsft)	Lwft)	Rt	Rw	Rh	Rd	SW(deg)	B(deg)	Hcft)	Hsft)	Lwft)	
LB-0	18	10	32	16	118	0	6.5	6.5	15	18	10	32	16	115	0	4	6.5	15	

TABLE OF BOX CULVERT VARIABLES (CONT.) (Inches unless shown otherwise)																			
STRUCTURE NUMBER	RIGHT END WINGWALL										RIGHT BEGIN WINGWALL								
	Rt	Rw	Rh	Rd	SW(deg)	B(deg)	Hcft)	Hsft)	Lwft)	RWcft)	Rt	Rw	Rh	Rd	SW(deg)	B(deg)	Hcft)	Hsft)	Lwft)
LB-0	18	10	32	16	130	0	4	6.5	15	4.17	18	10	32	16	118	0	6.5	6.5	20

CONCRETE QUANTITIES (yd <sup>3</sup> )																						
STRUCTURE NUMBER	BOX								LEFT END WINGWALL			LEFT BEGIN WINGWALL			RIGHT END WINGWALL			RIGHT BEGIN WINGWALL			Culvert Total	
	Left Cutoff Wall	Right Cutoff Wall	Bottom Slab	Walls	Top Slab	Left Head Wall	Right Head Wall	Sub total	Footing	Wall	Sub total	Footing	Wall	Sub total	Footing	Wall	Sub total	Footing	Wall	Sub total		
	LB-0	0.808	0.808	34.8	23.3	33.8	0.875	0.808	95.4	3.7	3.01	7.08	3.7	2.43	6.5	3.7	2.43	6.5	4.94	4.01		9.44

MAIN STEEL REINFORCEMENT SPACING (in)												
STRUCTURE#	D101	D102	D103	D104	D105	D106	D107	D108	D401	D501	D601	D701
LB-0	6	6	6	6	6	6	6	6	8	8	8	8

- NOTES:**
1. Environmental Class - Extremely Aggressive
  2. Reinforcing Steel, Grade 60
  3. Concrete Class IV, f'c = 5,500 psi
  4. Soil Properties:
    - Friction Angle - 32°
    - Modulus of Subgrade Reaction - 100,000 ksi
    - Nominal Bearing Capacity - 2,000 psf
  5. Reinforcing Steel Quantity - 23,880 lbs.

REVISIONS					
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**HOLDEN AVENUE  
 CONCRETE BOX CULVERT  
 TABLE OF VARIABLES**

SHEET NO.  
 B-4

M A R K	LENGTH	NO	TYP	STY	B	C	D	E	F	H	J	K	N	Ø		
SIZE	DES	FT	IN	BAR	BAR	FT	IN	FR	FT	IN	FR	FT	IN	FR	NO	ANG
				LOCATION				MAIN BOX				NO. REQUIRED = 1				
5	101	9-2	178	1	9-2											
5	201	VARY	9	1	8-11											
		4-8	0	1	0-3 1/4											
5	301	VARY	9	1	8-11											
		4-8	0	1	0-3 1/4											
5	102	9-2	178	1	9-2											
5	202	VARY	9	1	8-11											
		4-8	0	1	0-3 1/4											
5	302	VARY	9	1	8-11											
		4-8	0	1	0-3 1/4											
5	103	9-2	184	1	9-2											
5	203	VARY	6	1	6-0 1/2											
		3-2	0	1	0-3 1/2											
5	303	VARY	6	1	6-0 1/2											
		3-2	0	1	0-3 1/2											
5	104	9-2	184	1	9-2											
5	204	VARY	6	1	6-0 1/2											
		3-2	0	1	0-3 1/2											
5	304	VARY	6	1	6-0 1/2											
		3-2	0	1	0-3 1/2											
5	105	7-0	376	10	2-10	4-2										
5	106	7-0	376	10	2-10	4-2										
5	108	5-6	376	1	5-6											
4	109	96-0	12	41	60-0	36-0					2-2				1	
4	110	96-0	12	41	60-0	36-0					2-2				1	
4	111	95-4	12	41	60-0	35-3 1/2					2-2				1	
4	112	96-0	12	41	60-0	36-0					2-2				1	
4	113	96-0	24	41	60-0	36-0					2-2				1	
				LOCATION				LEFT END WINGWALL				NO. REQUIRED = 1				
5	401	6-3	22	1	6-3											
5	402	14-6	10	1	14-6											
4	404	14-6	7	1	14-6											
4	406	6-3	15	1	6-3											
5	407	6-0	22	10	1-10	4-2										
5	409	4-6	22	1	4-6											
5	410	4-6	22	1	4-6											
4	411	14-6	10	1	14-6											
5	412	2-0	9	1	2-0											
				LOCATION				LEFT BEGIN WINGWALL				NO. REQUIRED = 1				
5	501	VARY	22	1	6-1 1/2											
		5-0	0	1	3-10 1/2											
5	502	14-6	6	1	14-6											
5	503	VARY	3	1	11-9 1/2											
		15-10	0	1	19-9 1/2											
4	504	14-6	4	1	14-6											
4	505	VARY	3	1	19-9 1/2											
		15-10	0	1	11-9 1/2											
4	506	VARY	15	1	6-1 1/2											
		5-0	0	1	3-10 1/2											
5	507	6-0	22	10	1-10	4-2										
5	509	4-6	22	1	4-6											
5	510	4-6	22	1	4-6											
4	511	14-6	10	1	14-6											

NOTE:  
REFER TO FDOT STANDARD INDEX NO. 21300  
FOR STANDARD BAR BENDING DETAILS.

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FAX: (407) 599-1133  
www.avconinc.com

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FLORIDA

**HOLDEN AVENUE**  
**CONCRETE BOX CULVERT**  
**REINFORCING BAR LIST**

M A R K		LENGTH		NO	TYP	STY	B		C		D		E		F		H		J		K		N	Ø			
SIZE	DES	FT	IN	BAR	BAR	ANG	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	FT	IN	FR	NO	ANG				
5	512	2-0		9	1		2-0																				
LOCATION							RIGHT END WINGWALL										NO. REQUIRED = 1										
5	601	VARY		22	1		6-1 1/2																				
		5-0		0	1		3-10 1/2																				
5	602	14-6		6	1		14-6																				
5	603	VARY		3	1		11-9 1/2																				
		15-10		0	1		19-9 1/2																				
4	604	14-6		4	1		14-6																				
4	605	VARY		3	1		19-9 1/2																				
		15-10		0	1		11-9 1/2																				
4	606	VARY		15	1		6-1 1/2																				
		5-0		0	1		3-10 1/2																				
5	607	6-0		22	10		1-10		4-2																		
5	609	4-6		22	1		4-6																				
5	610	4-6		22	1		4-6																				
4	611	14-6		10	1		14-6																				
5	612	2-0		9	1		2-0																				
3	SI	14-8		2			REFER TO WINGWALL OPENING SHEET B-7																				
5	DG	8-0		8			REFER TO WINGWALL OPENING SHEET B-7																				
LOCATION							RIGHT BEGIN WINGWALL										NO. REQUIRED = 1										
5	701	6-3		30	1		6-3																				
5	702	19-6		10	1		19-6																				
4	704	19-6		7	1		19-6																				
4	706	6-3		20	1		6-3																				
5	707	6-0		30	10		1-10		4-2																		
5	709	4-6		30	1		4-6																				
5	710	4-6		30	1		4-6																				
4	711	19-6		10	1		19-6																				
5	712	2-0		9	1		2-0																				
LOCATION							LEFT HEADWALL										NO. REQUIRED = 1										
6	801	10-5		3	1		10-4 3/4																				
6	802	10-5		3	1		10-4 3/4																				
4	803	6-5		11	27		2-0 3/4	0-10				0-3	1-9 3/4	0-10	0-10												
LOCATION							RIGHT HEADWALL										NO. REQUIRED = 1										
6	804	10-5		3	1		10-4 3/4																				
6	805	10-5		3	1		10-4 3/4																				
4	806	6-3		11	27		1-11 1/2	0-10				0-3	1-8 1/2	0-10	0-10												
LOCATION							LEFT CUTOFF WALL										NO. REQUIRED = 1										
4	807	10-5		2	1		10-4 3/4																				
4	808	10-5		2	1		10-4 3/4																				
4	809	6-2		11	7		2-5 1/2	0-6		0-4 1/2	0-4 1/2																
LOCATION							RIGHT CUTOFF WALL										NO. REQUIRED = 1										
4	810	10-5		2	1		10-4 3/4																				
4	811	10-5		2	1		10-4 3/4																				
4	812	6-2		11	7		2-5 1/2	0-6		0-4 1/2	0-4 1/2																

END OF LIST

NOTE:  
REFER TO FDOT STANDARD INDEX NO. 21300  
FOR STANDARD BAR BENDING DETAILS.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION



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5555 MICHIGAN STREET, SUITE 200  
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www.avconinc.com

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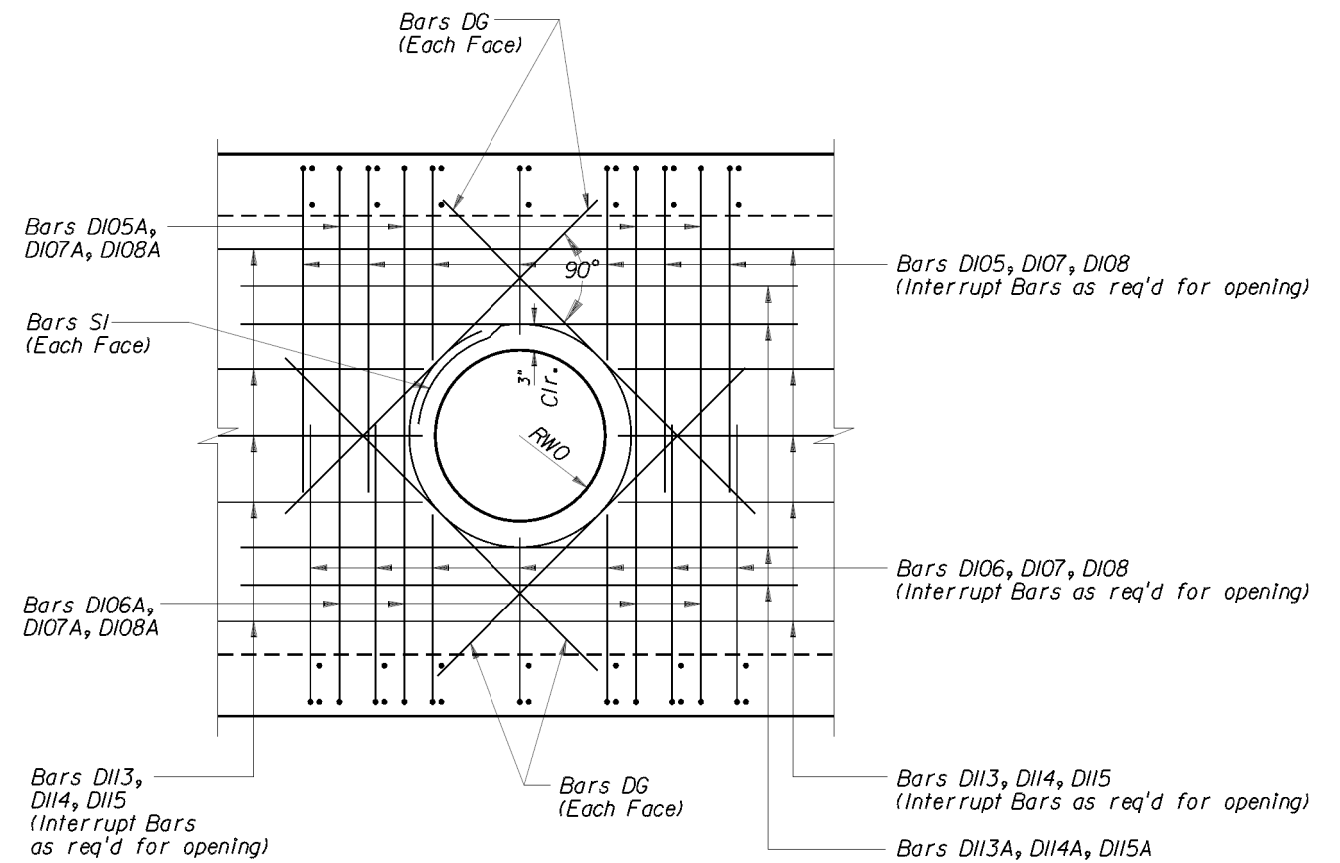


ORANGE COUNTY  
GOVERNMENT  
FLORIDA

**HOLDEN AVENUE  
CONCRETE BOX CULVERT  
REINFORCING BAR LIST (CONT.)**

SHEET  
NO.  
B-6





**TYPICAL CULVERT WINGWALL OPENING**

**NOTES:**

1. Provide min. 2'-0" wide strip of filter fabric around pipe between pipe and outside face of wall.
2. Coordinate exact location of wall opening with Roadway Plans.
3. Bars DIO5 through Bars DIO9 will remain as whole length in bar schedule and later cut in the field. Refer to sections for bar references.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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**ORANGE COUNTY  
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**CONCRETE BOX CULVERT  
 WINGWALL OPENING**

SHEET  
 NO.

B-7

**GENERAL NOTES**

**1. CONSTRUCTION SPECIFICATIONS:**

Florida Department of Transportation "Standard Specifications for Road and Bridge Construction", (current edition) and supplements thereto.

**2. SPECIFICATIONS:** American Assoc. of State Highway and Transportation officials (AASHTO) LRFD Bridge Design Specifications (17th edition).

Florida Dept. of Transportation Structures Design Guidelines (January 2006).

**3. MATERIAL STRESSES:** All allowable stresses shall be in accordance with the current AASHTO Specifications for all the materials shown on the plans.

**a. Concrete Compressive Strength:**

1. Precast Concrete Sheet Piles, Class **V** (Special with Silica Fume),  $f'c = 6000$  psi min.

2. C-I-P Concrete Bulkhead, Class **II**,  $f'c = 3400$  psi min.

3. C-I-P Concrete Retaining Wall, Class **IV**,  $f'c = 5500$  psi min.

**b. All Reinforcing Steel:** ASTM A615, Grade 60.

**4. DESIGN METHOD:** Load Factor, except that internal and external stability shall be designed for service loads. Allowable bearing capacity equals 2 ksf.

The following minimum factors of safety shall be utilized in the design of the walls:

Overturning	F.S. = 2.0
Sliding	F.S. = 1.5
Bearing Capacity	F.S. = 2.5

**5. DESIGN LOADS:**

Truck Loading: HS20-44

Sidewalk Loading: 85 lbs. per square foot

**6. SURFACE FINISH:**

A Class 5 Applied Finish Coating shall be applied to the top of the wall and the exposed face above ground line.

**7. ARCHITECTURAL TREATMENT:**

Alternate Architectural Treatments may be substituted for the Striated Pattern shown when approved by the Engineer. Concrete required for Architectural Treatment is not included in the quantities.

**8. ENVIRONMENTAL:**

Environmental Classification: Extremely Aggressive

**9. For Typical Sections along roadway, see Roadway Plans.**

**10. BULKHEAD CONSTRUCTION:**

Refer to Wall Plans for extent and refer to Concrete Sheet Pile Bulkhead Details sheet for size and reinforcing of bulkhead. Provide 1/2" expansion joints in the bulkhead at 80 feet spacing using compressible filler material and provide 3/4" v-groove control joints at quarter points between expansion joints. Expansion and control joints shall be placed in-line with sheet pile joint, typical.

**11. PHASING:**

All Sheet Pile Walls shall be installed after the installation of adjacent drainage structures and other utilities. Contractor shall backfill and compact subgrade adjacent to these new underground utilities to ensure an adequate density of the soil in front of driven sheet pile wall.

**CONCRETE SHEET PILE DATA TABLE**

WALL NUMBER	TYPE (See Detail A)	NUMBER REQUIRED	L (Ft.)	T (In.)	X (Ft.)	Ø (Degrees)
2	A	69	16	10	90.83	---
	B	2	16	10	90.83	45
	B	1	16	10	90.83	40
5A	A	174	4	10	92.53	---
5B	A	244	8	10	94.53	---
8	A	15	26	10	85.33	---

**NOTE:**

Work this sheet and Concrete Sheet Pile Data Table with FDOT Design Standards FY 2016-2017 Index No. 6010, 6040, and 6130. Costs to upgrade the precast panel to FY 2016-2017 shall be included in the bid.

**LEGEND**

B.F.O.W. = Back Face of Wall  
F.F.O.W. = Front Face of Wall

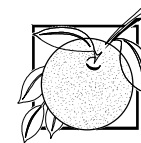
**REVISIONS**

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION



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**RETAINING WALL GENERAL NOTES**

SHEET NO.

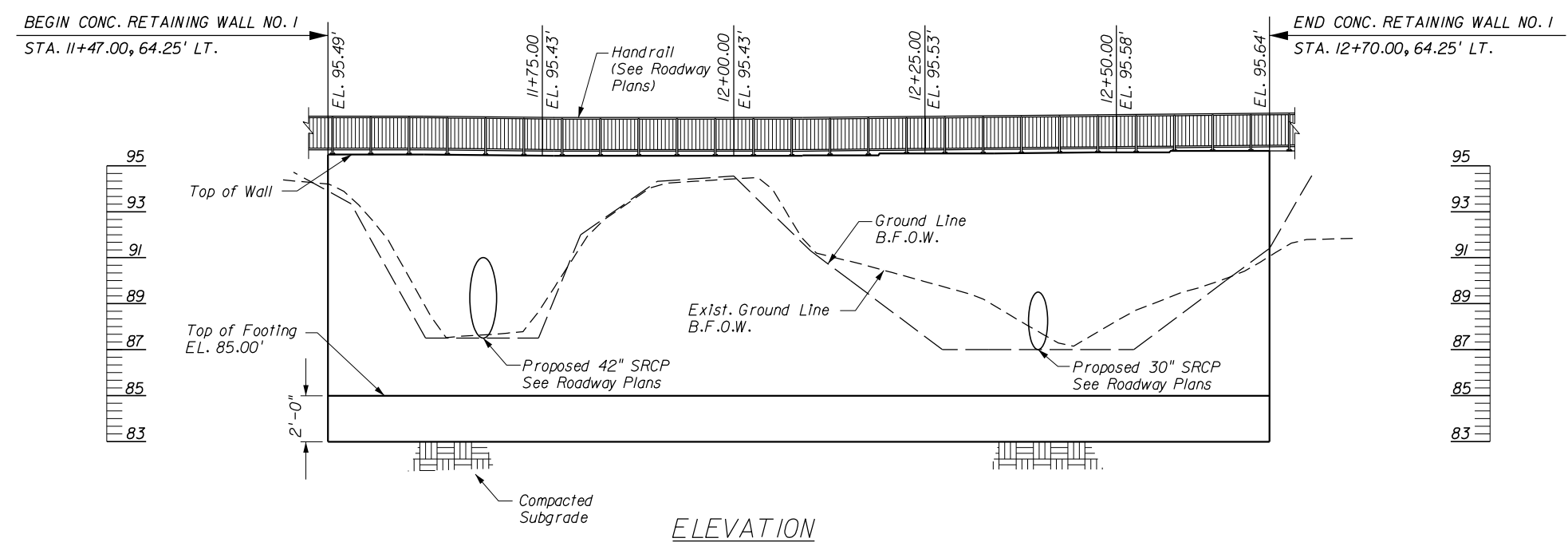
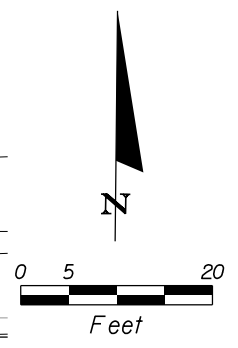
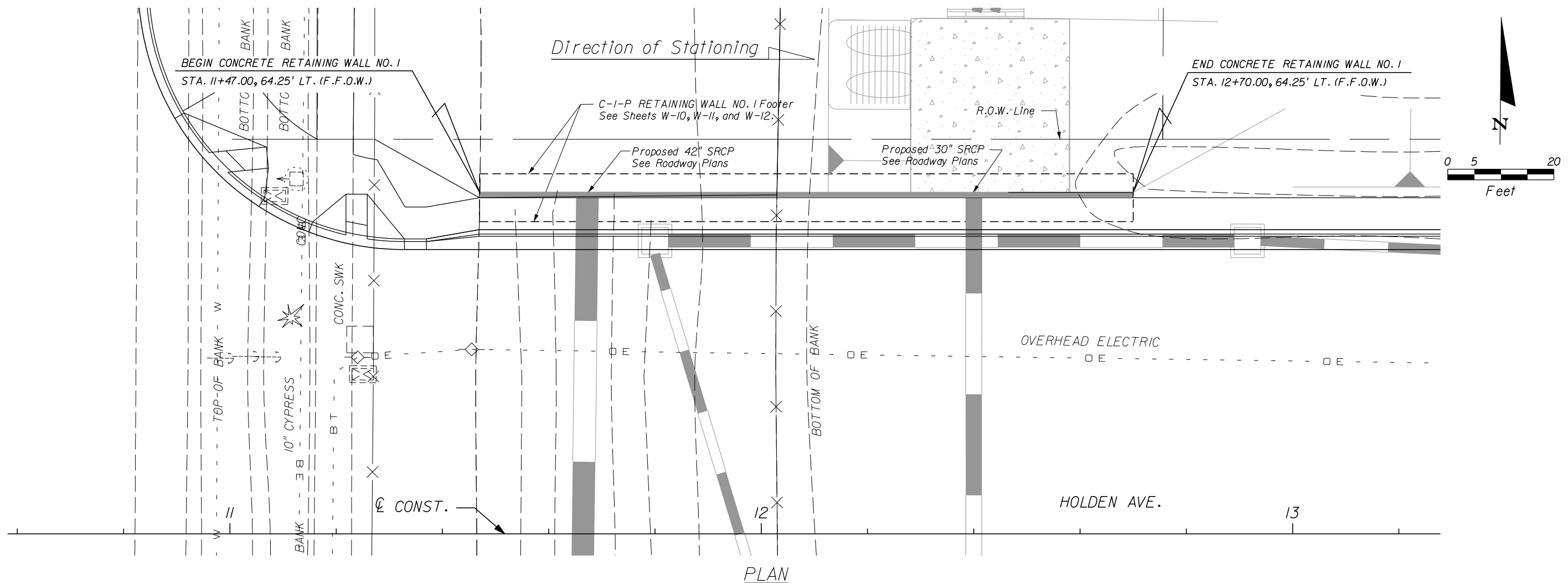
W-1

\$USER\$

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\* SEE "CONC. RETAINING WALL DATA" SHEET W-12 FOR WALL SIZE AND REINFORCING.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

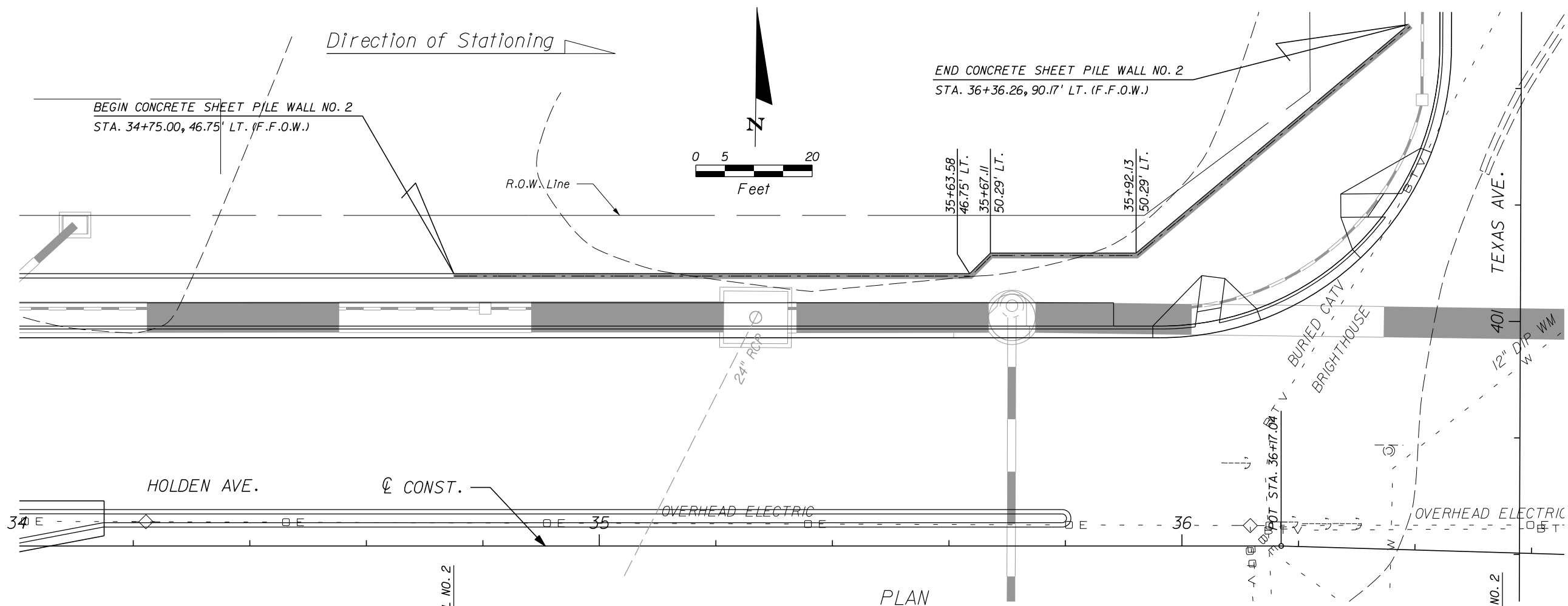
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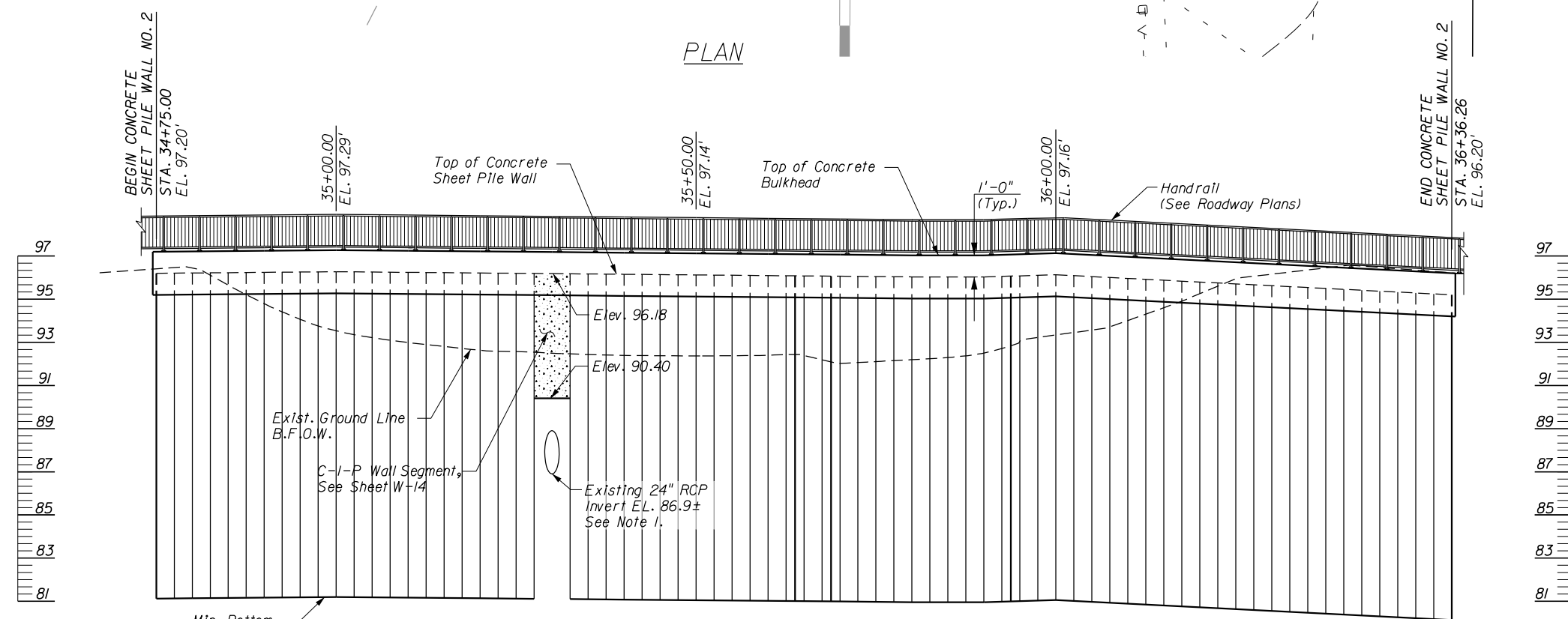
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**HOLDEN AVENUE C-I-P  
RETAINING WALL NO. 1  
PLAN AND ELEVATION**

SHEET NO.  
W-2



PLAN



ELEVATION

NOTES:  
 1. Invert elevation and exact location of pipe to be field verified. Coordinate pile installation with pipe location to satisfy min./max. jamb width per detail on sheet W-14.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

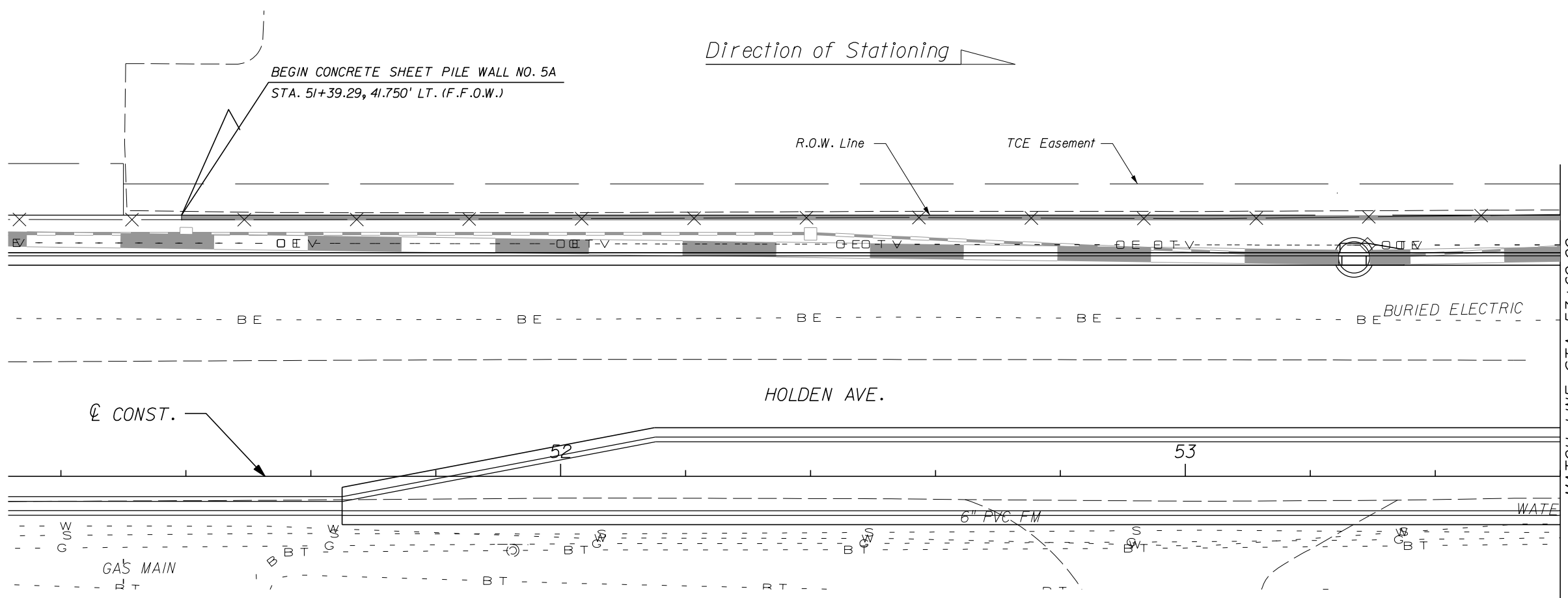
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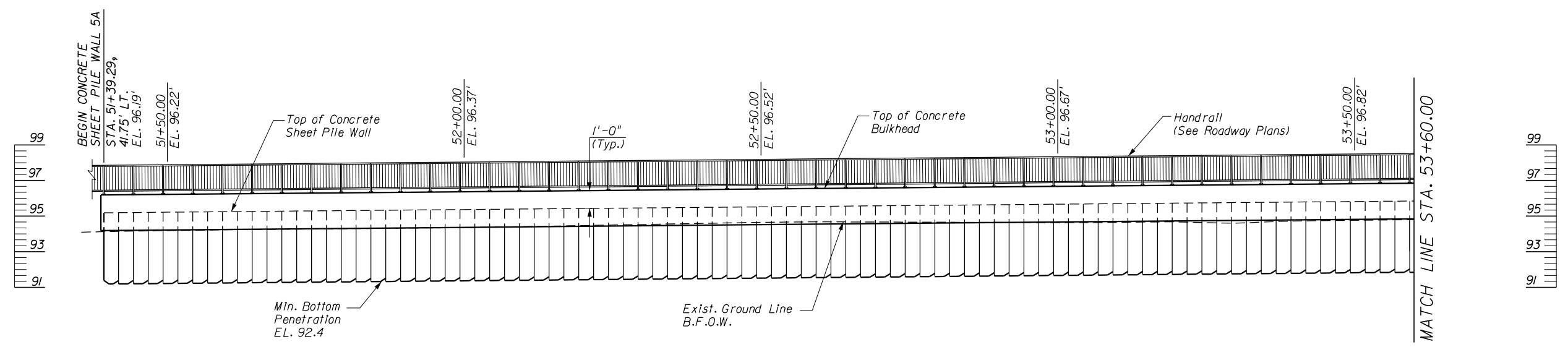
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**HOLDEN AVENUE**  
**CONCRETE SHEET PILE WALL NO. 2**  
**PLAN AND ELEVATION**

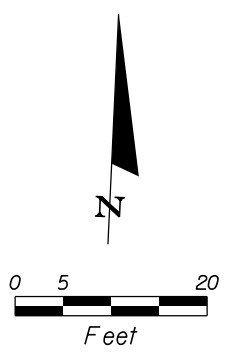
SHEET NO.  
 W-3



PLAN



ELEVATION



REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION


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 CERTIFICATE OF AUTHORIZATION NO. 5057

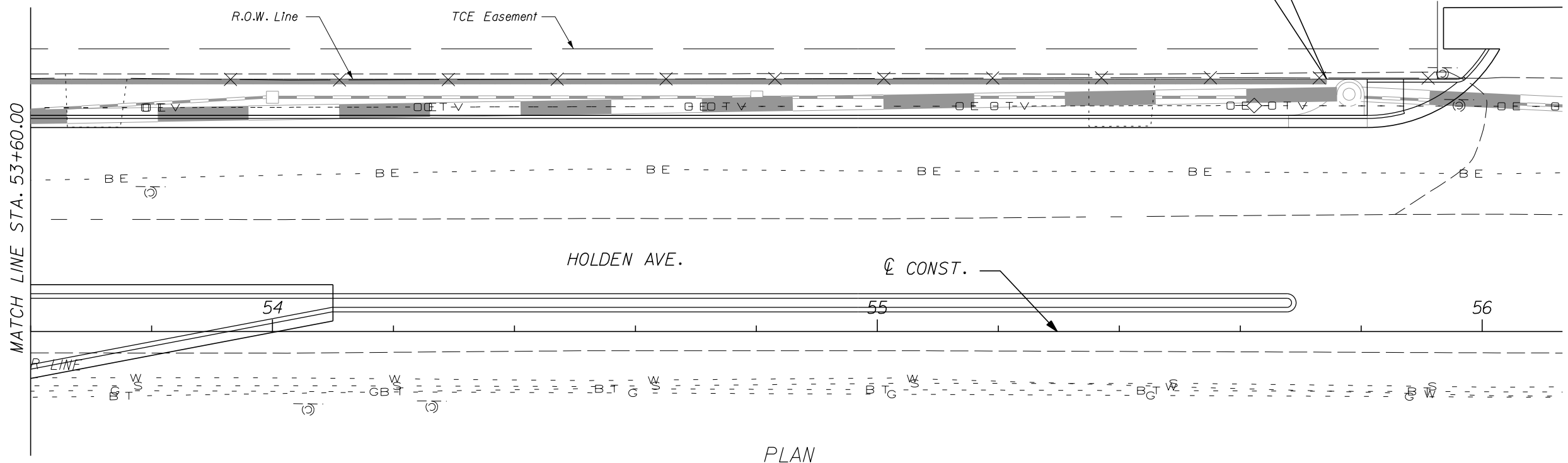
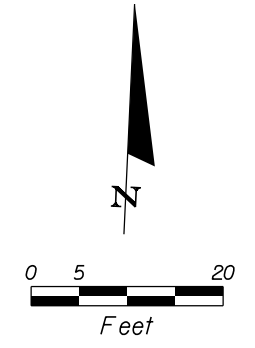
**ORANGE COUNTY**  
**GOVERNMENT**  
 FLORIDA

**HOLDEN AVENUE**  
**CONCRETE SHEET PILE WALL NO. 5A**  
**PLAN AND ELEVATION**

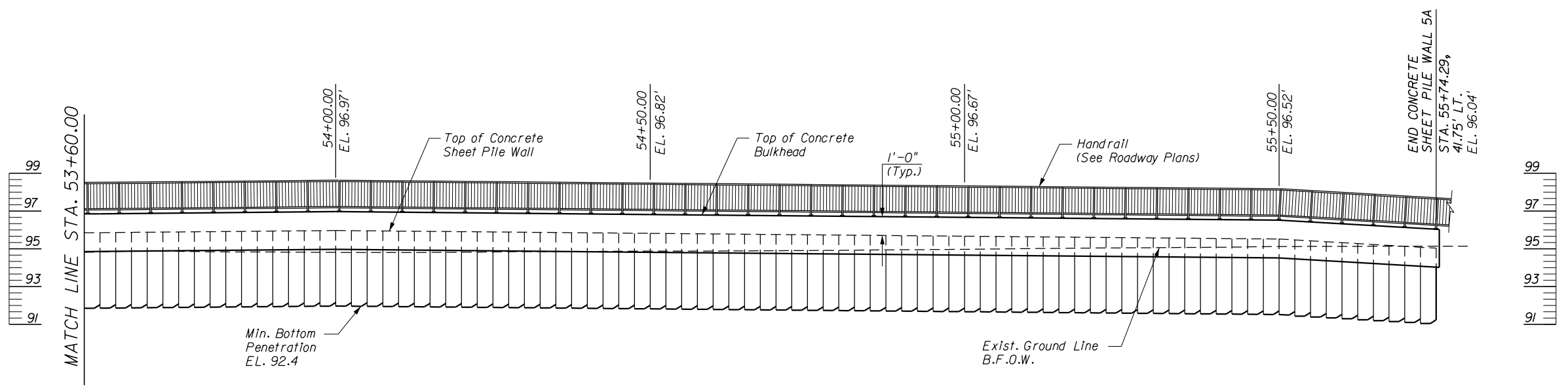
SHEET NO.  
 W-4

Direction of Stationing 

END CONCRETE SHEET PILE WALL NO. 5A  
STA. 55+74.29, 41.75' LT. (F.F.O.W.)



PLAN



ELEVATION

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

**AMCON**  
ENGINEER OF RECORD: LUCA DELVERME, P.E. NO. 63055  
CERTIFICATE OF AUTHORIZATION NO. 5057

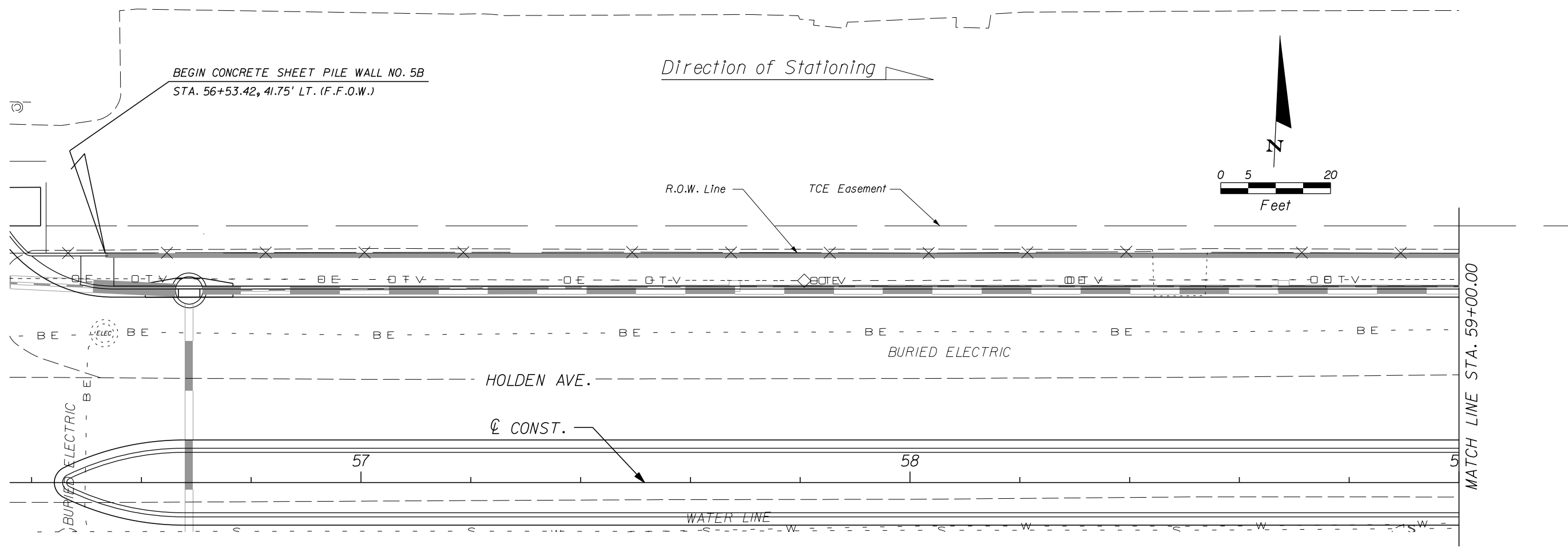
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PHONE: (407) 599-1122  
FAX: (407) 599-1133  
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FLORIDA

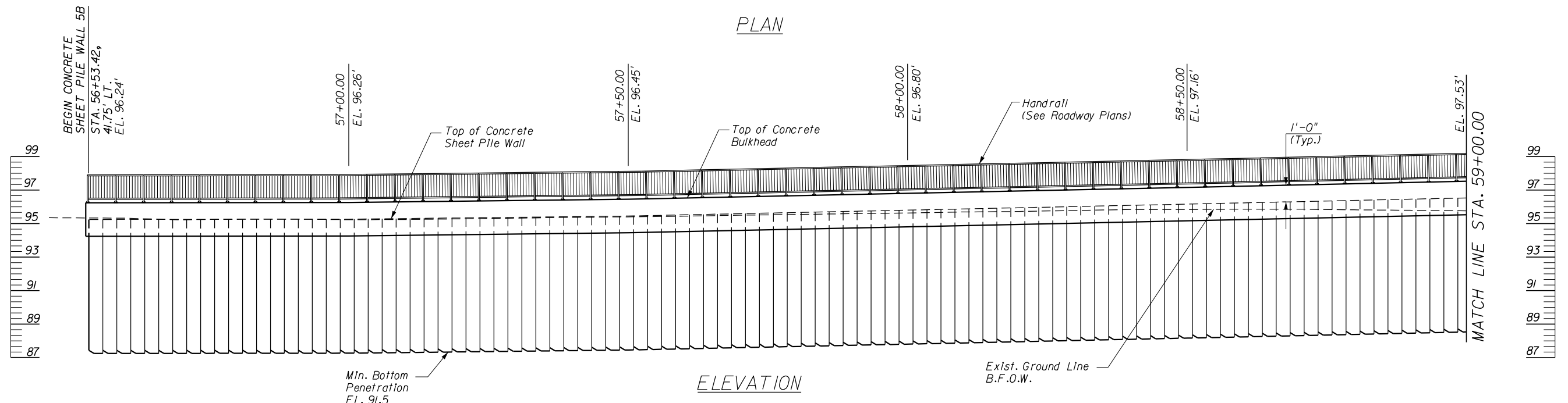


**HOLDEN AVENUE  
CONCRETE SHEET PILE WALL NO. 5A  
PLAN AND ELEVATION**

SHEET NO.  
W-5



PLAN



REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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ENGINEER OF RECORD: LUCA DELVERME, P.E. NO. 63055  
CERTIFICATE OF AUTHORIZATION NO. 5057

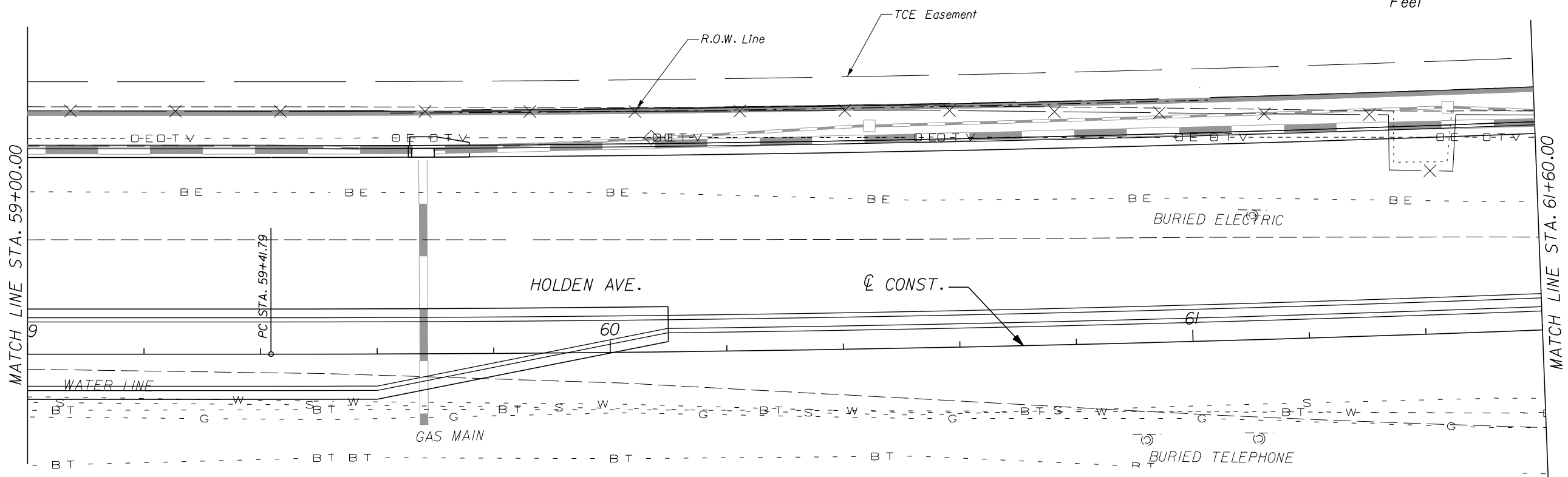
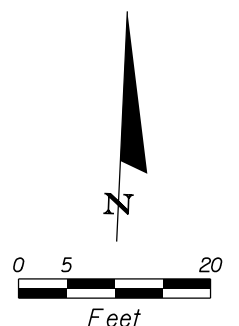
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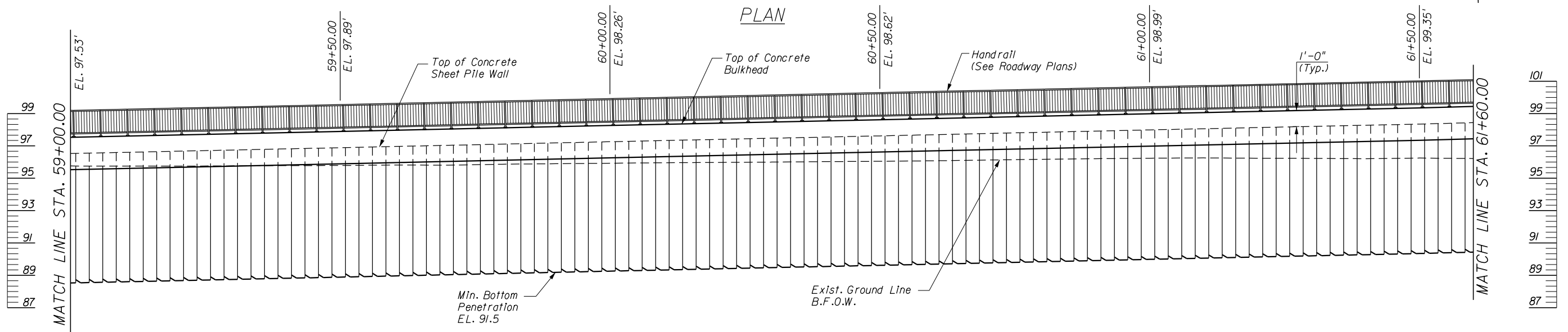
**HOLDEN AVENUE  
CONCRETE SHEET PILE WALL NO. 5B  
PLAN AND ELEVATION**

SHEET NO.  
W-6

Direction of Stationing 



PLAN



ELEVATION

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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 CERTIFICATE OF AUTHORIZATION NO. 5057

**ORANGE COUNTY**  
**GOVERNMENT**  
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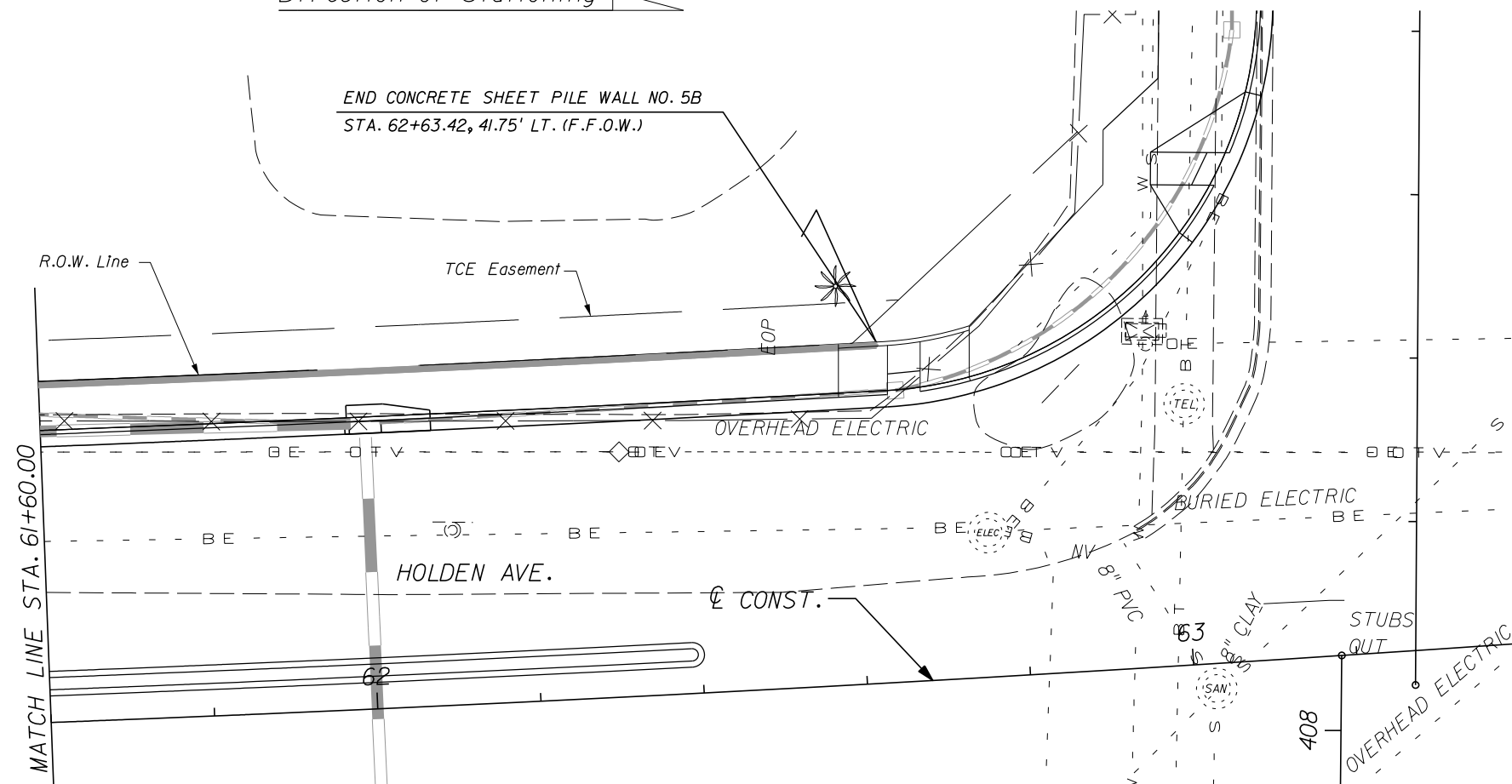
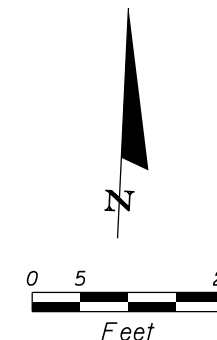
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**CONCRETE SHEET PILE WALL NO. 5B**  
**PLAN AND ELEVATION**

SHEET NO.  
 W-7

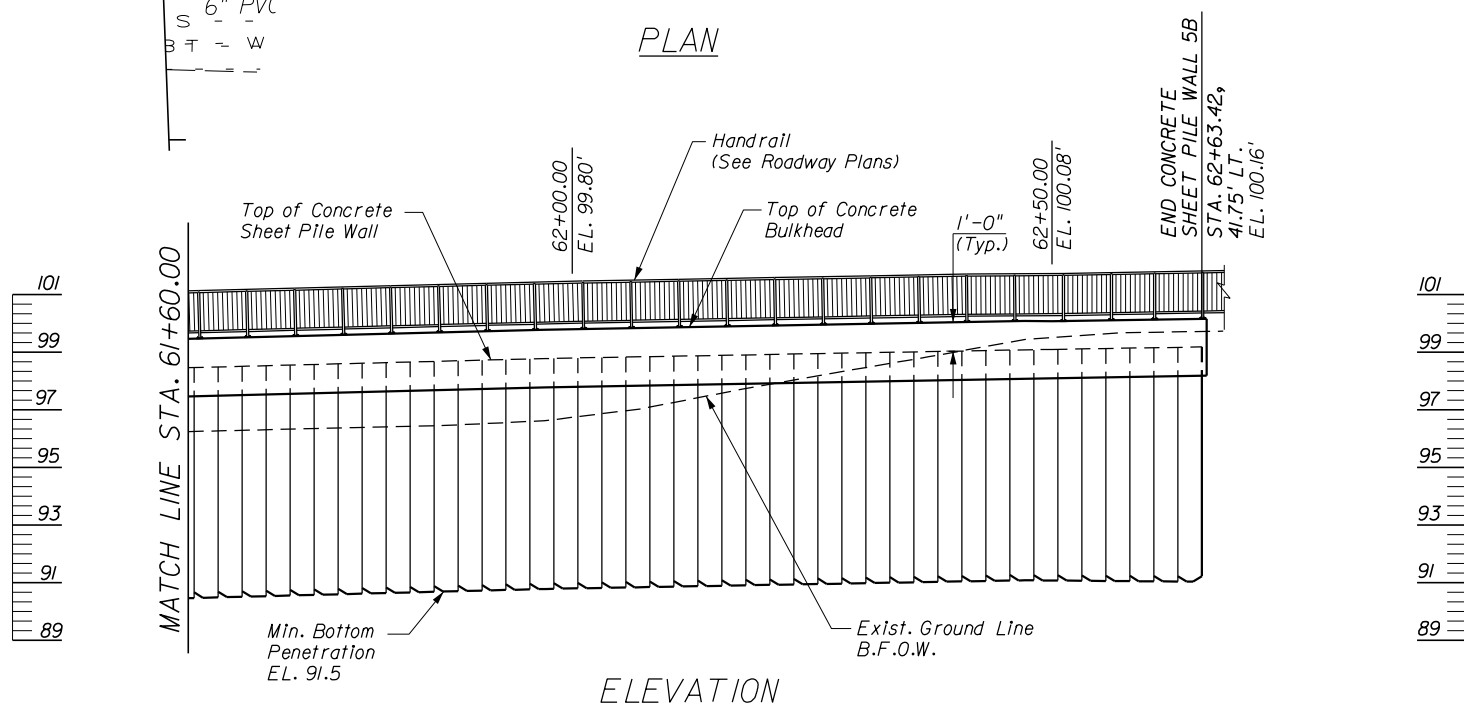


Direction of Stationing

END CONCRETE SHEET PILE WALL NO. 5B  
STA. 62+63.42, 41.75' LT. (F.F.O.W.)



PLAN



ELEVATION

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

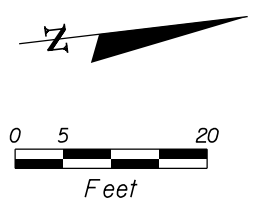
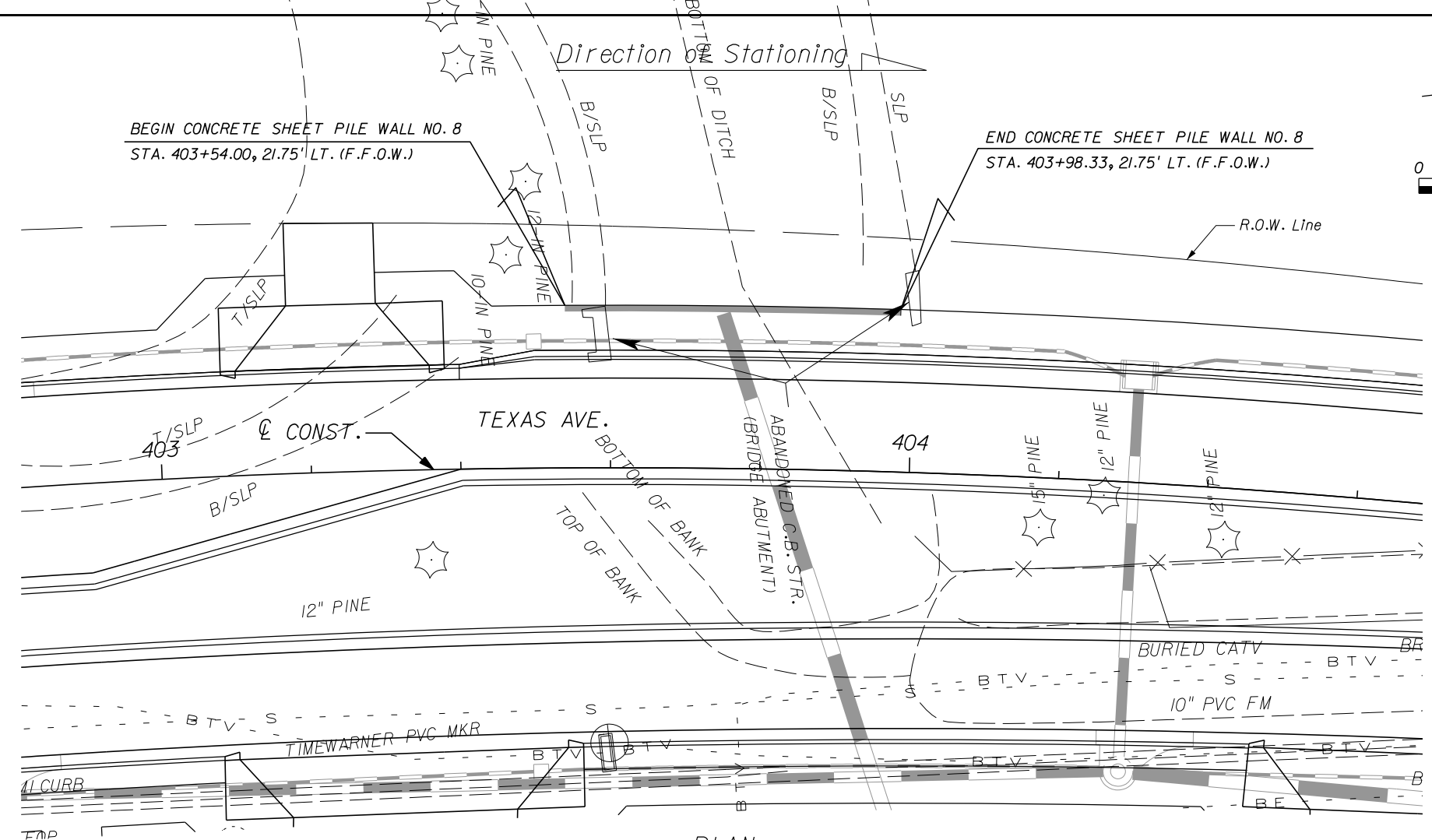
**AMCON**  
ENGINEER OF RECORD: LUCA DELVERME, P.E. NO. 63055  
CERTIFICATE OF AUTHORIZATION NO. 5057

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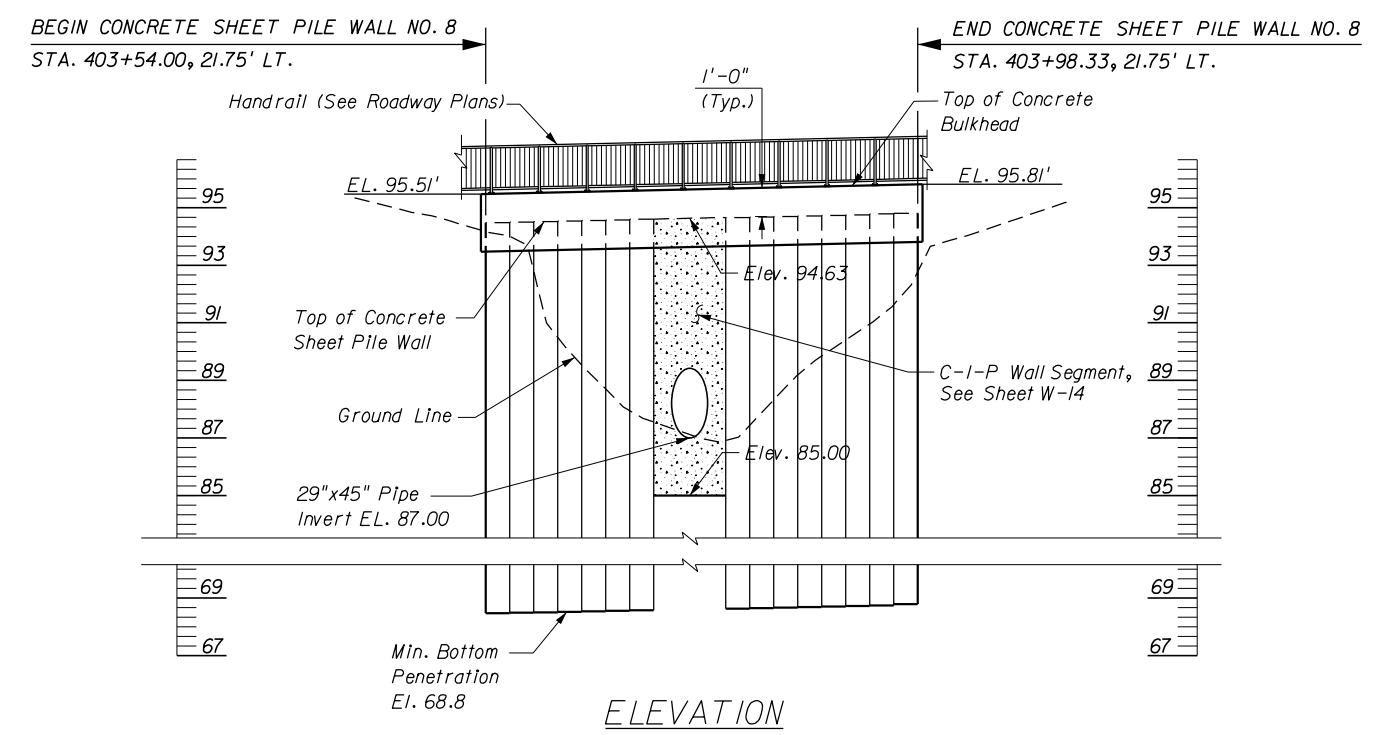
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**GOVERNMENT**  
FLORIDA

**HOLDEN AVENUE**  
**CONCRETE SHEET PILE WALL NO. 5B**  
**PLAN AND ELEVATION**

SHEET NO.  
W-8



PLAN



ELEVATION

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

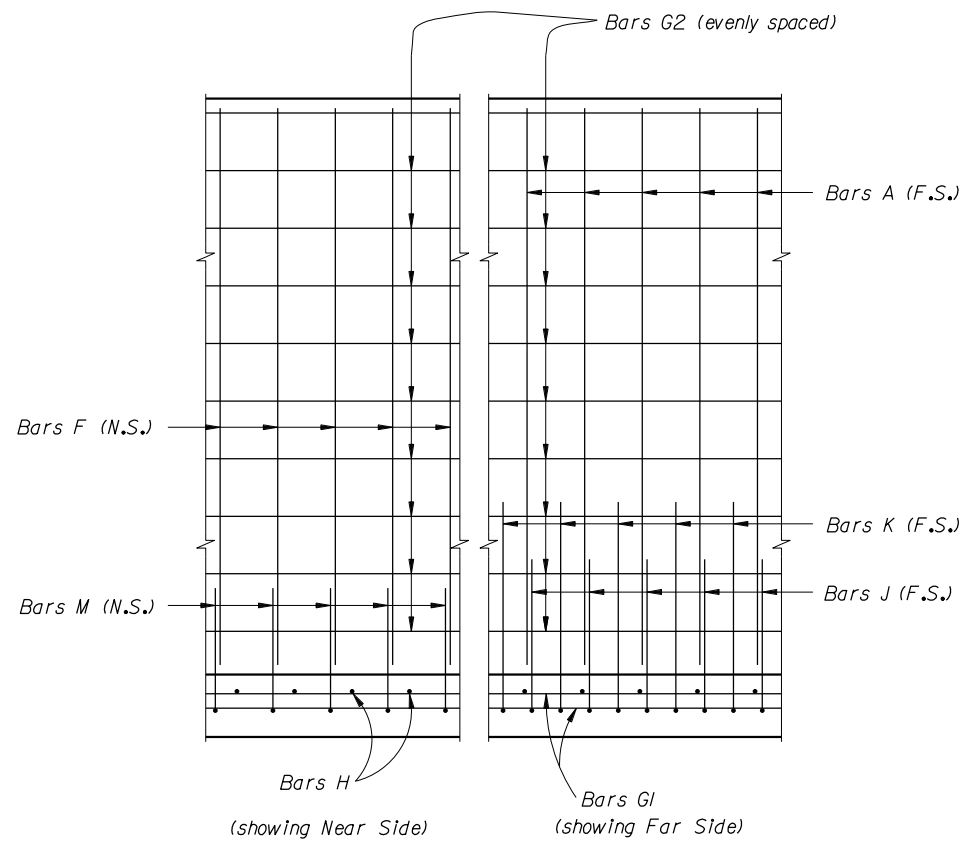
**AMCON**  
 ENGINEER OF RECORD: LUCA DELVERME, P.E. NO. 63055  
 CERTIFICATE OF AUTHORIZATION NO. 5057

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 ORLANDO, FLORIDA 32822-2779  
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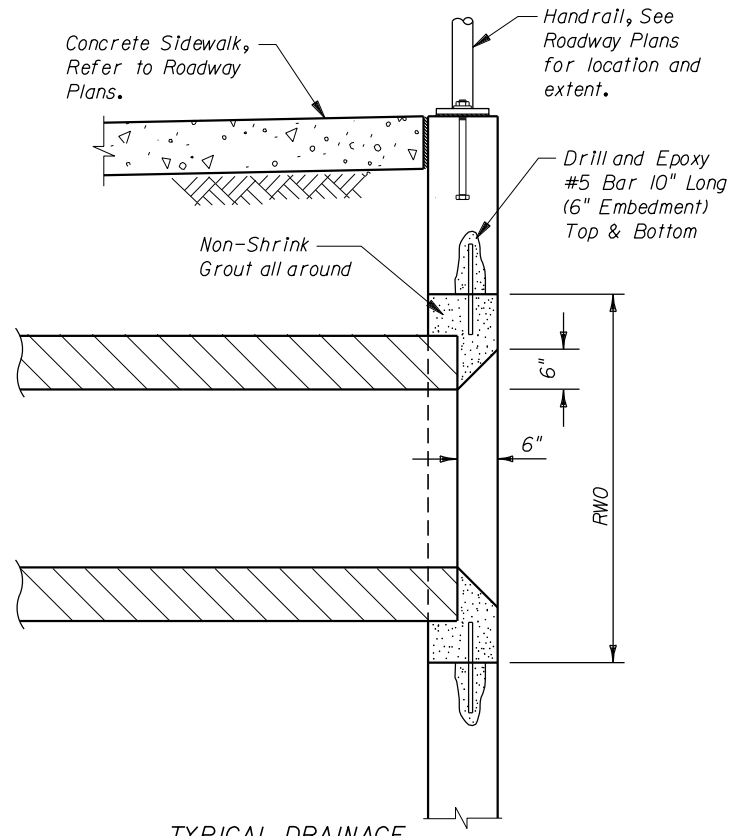
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 FLORIDA

**TEXAS AVENUE**  
**CONCRETE SHEET PILE WALL NO. 8**  
**PLAN AND ELEVATION**

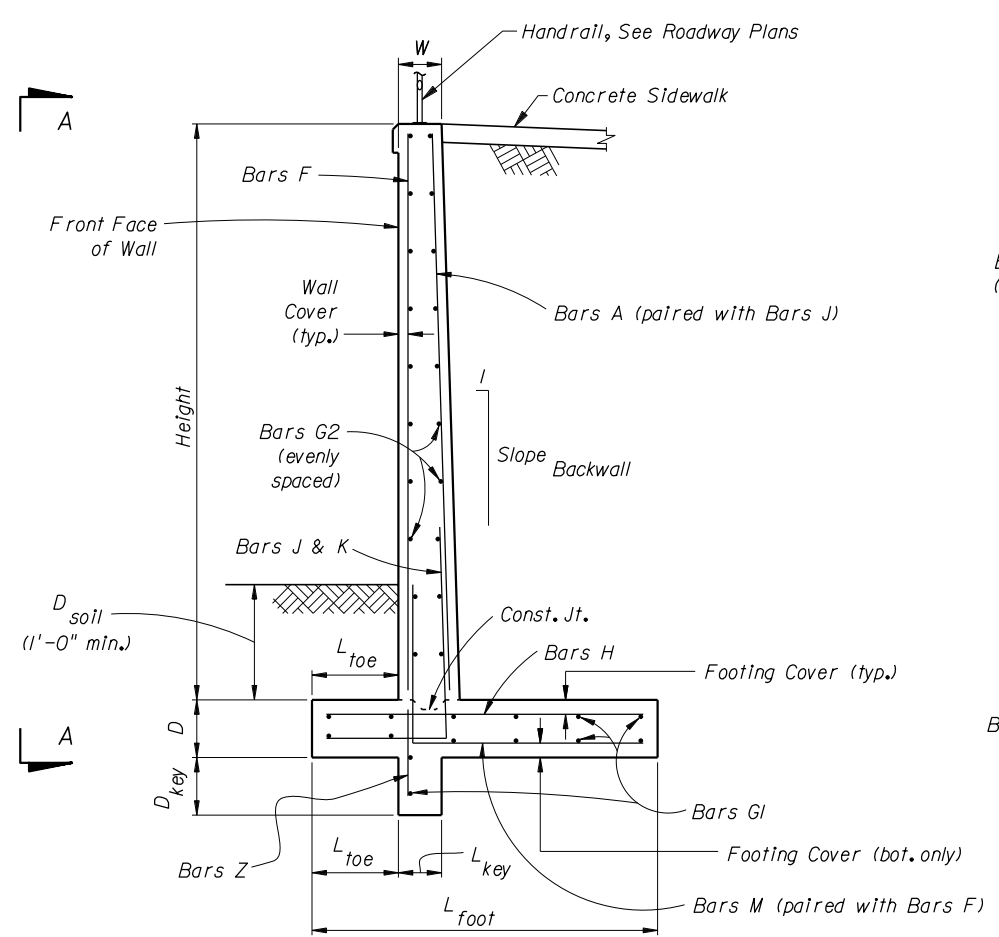
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 W-9



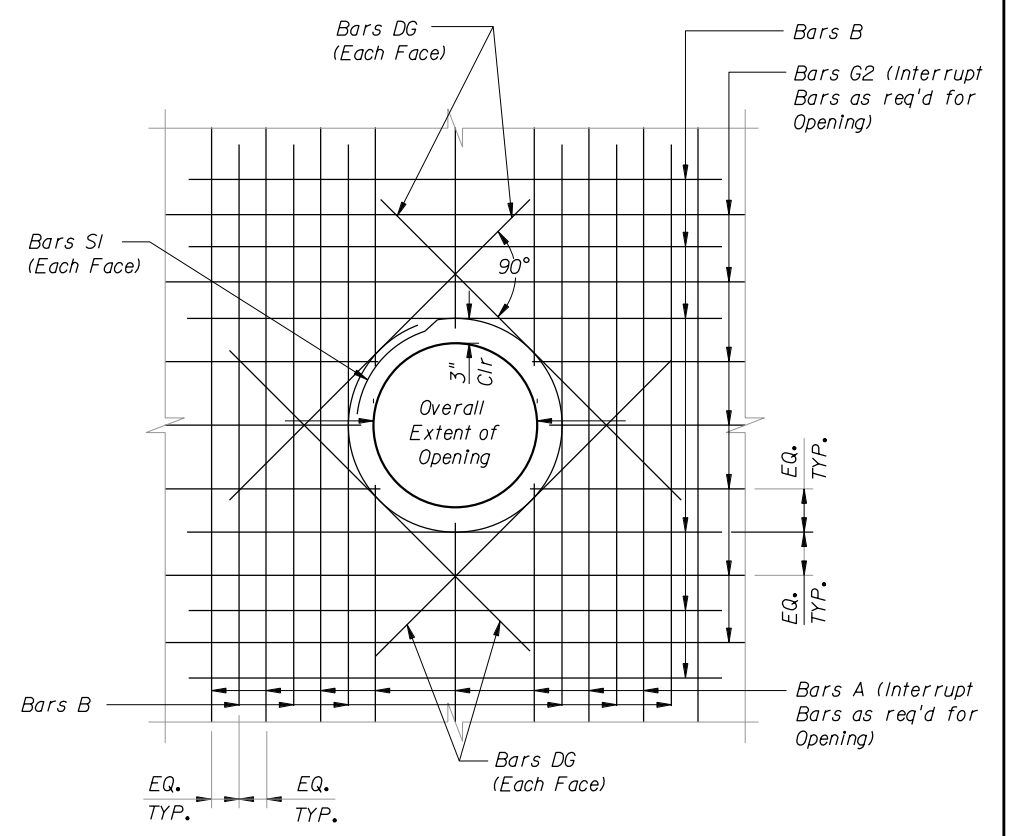
VIEW A-A  
(shear key not shown)



TYPICAL DRAINAGE  
PIPE THRU WALL



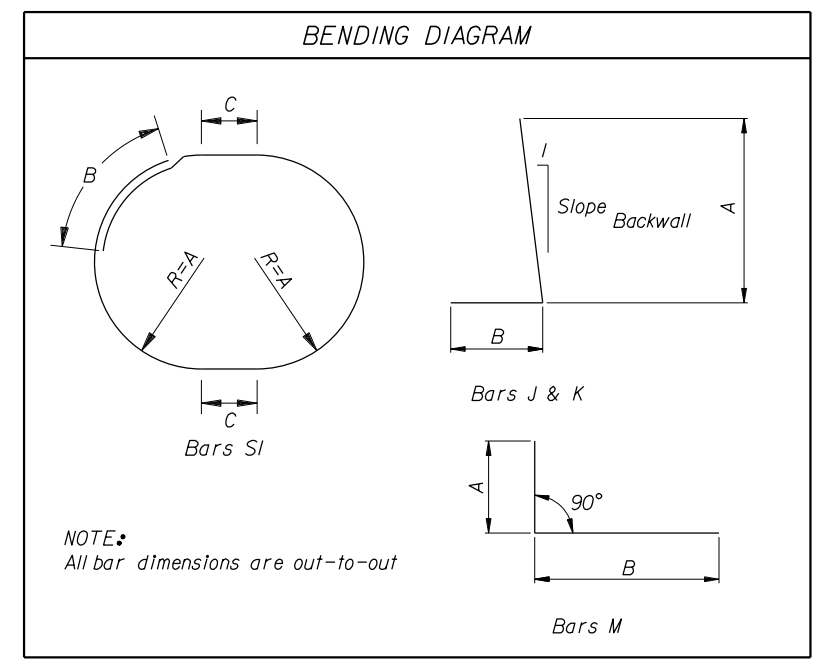
TYPICAL SECTION



TYPICAL WALL OPENING

**WALL OPENING NOTES**

1. Contractor shall coordinate the location, extent, and orientation (skew into wall) of each wall opening for the penetration of all utilities, i.e. pipes with diameters greater than 12". Refer to roadway plans for all wall openings required along portions of the retaining wall.
2. Bars A and Bars G2 shall be set as indicated in the bar schedule and later cut in the field as required. Bars B shall replace all interrupted Bars A and Bars G2 on each side of opening (each face). The length of Bars DG shall be a minimum 2x diameter of opening. Hook ends of Bars DG if necessary.



NOTE:  
All bar dimensions are out-to-out

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

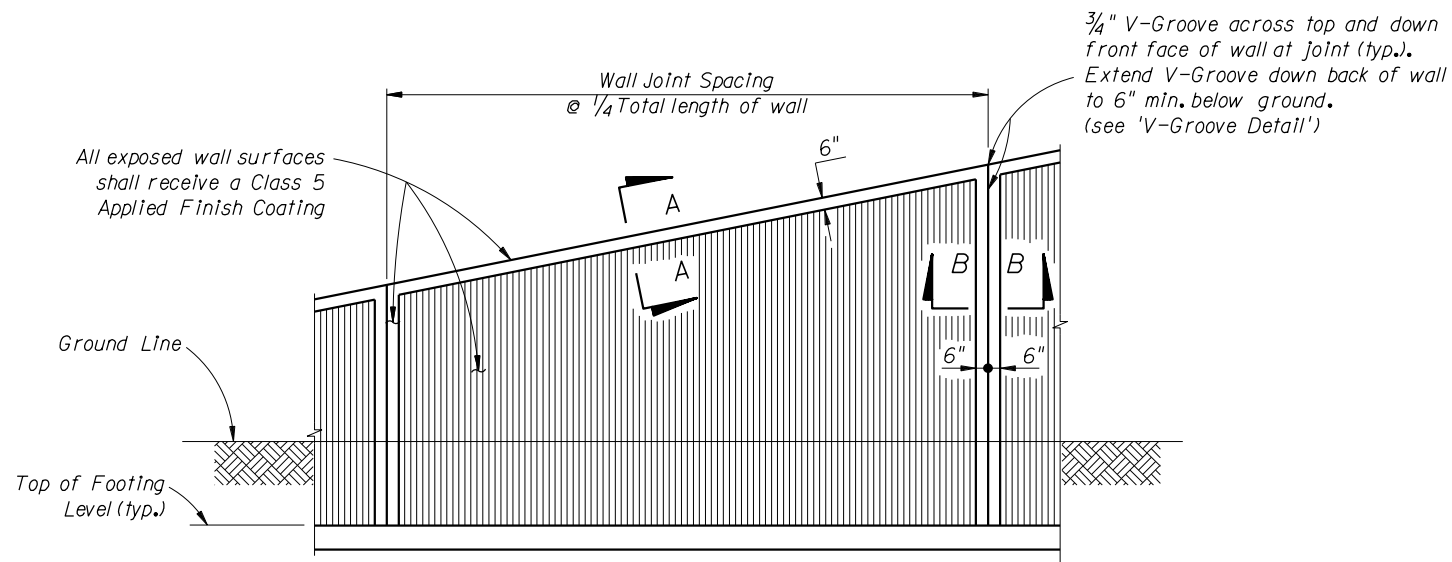
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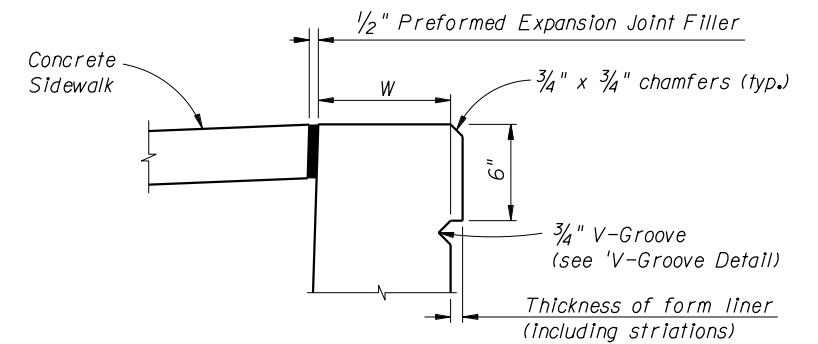
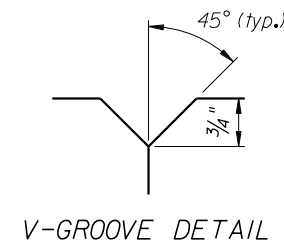
**ORANGE COUNTY GOVERNMENT**  
FLORIDA

**HOLDEN AVENUE C-I-P**  
**RETAINING WALL SECTIONS**

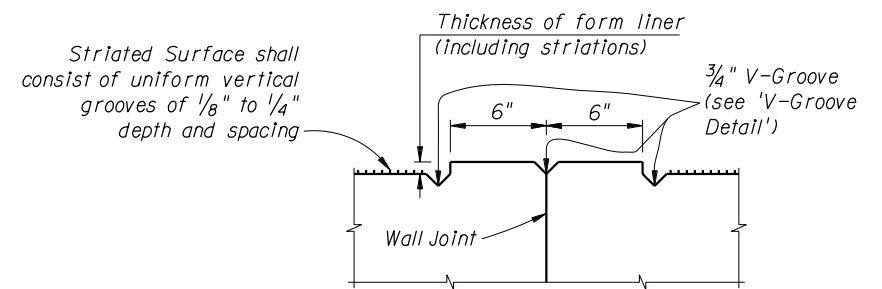
SHEET NO.  
W-10



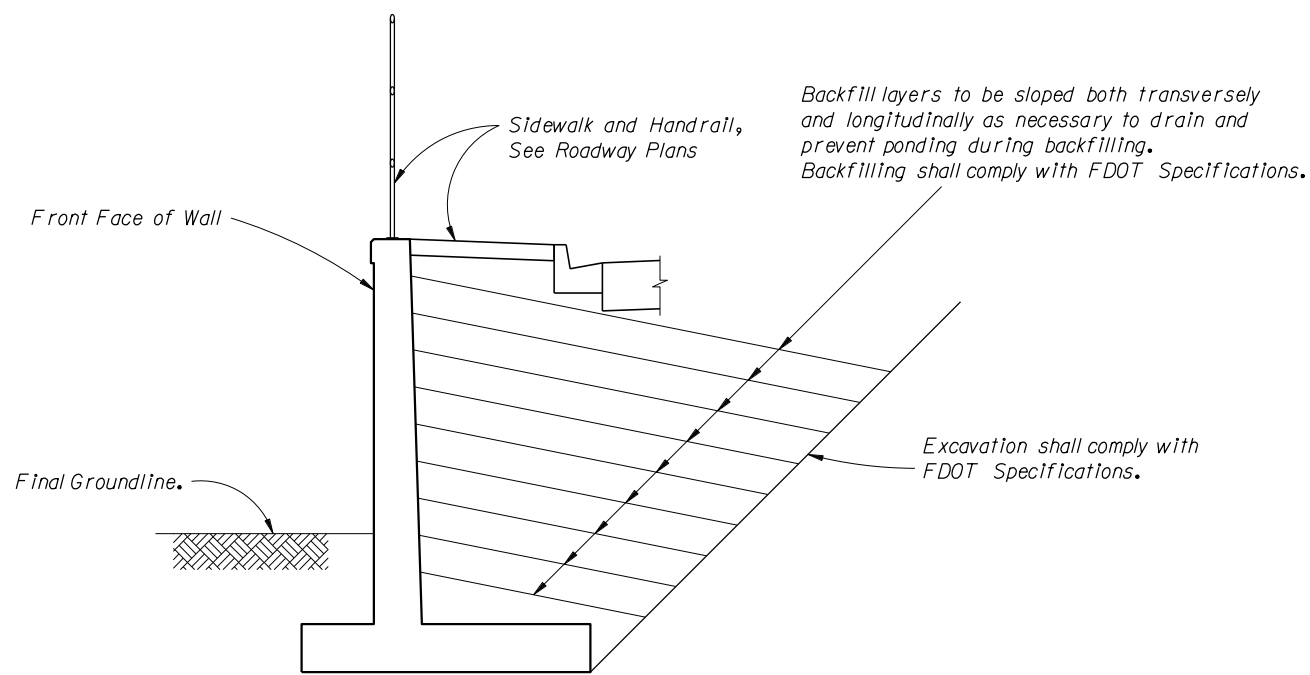
FRONT ELEVATION



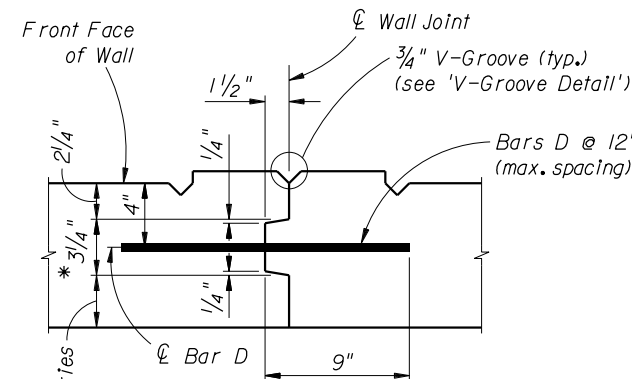
SECTION A-A



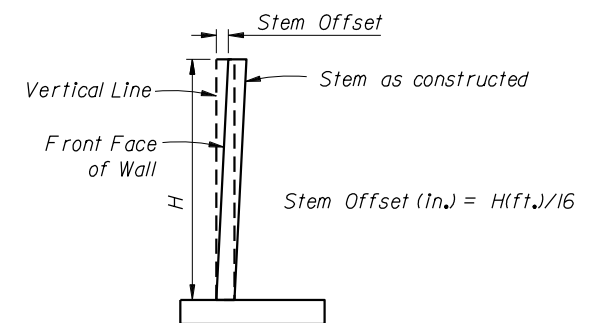
SECTION B-B



TYPICAL BACKFILL DETAIL



WALL JOINT DETAIL



STEM OFFSET VALUES

\* Key to stop 6" from top of wall. Joint across top of wall to be straight line.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

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 CERTIFICATE OF AUTHORIZATION NO. 5057

**ORANGE COUNTY GOVERNMENT**  
 FLORIDA

**HOLDEN AVENUE C-I-P  
 RETAINING WALL DETAILS**

SHEET NO.  
 W-11

**C-I-P RETAINING WALL DATA**

**WALL DIMENSIONS**

Wall No.	Begin		End		Height				Wall Length		D	W	L <sub>foot</sub>		L <sub>toe</sub>		Slope Backwall	D <sub>soil</sub>		L <sub>key</sub>	D <sub>key</sub>	V <sub>step</sub>	Wall Cover	Ftg.Cov. (typ.)	Ftg.Cov. (bot.)
	Station	Offset	Station	Offset	Begin		End		ft.	in.	in.	in.	ft.	in.	ft.	in.		ft.	in.	in.	in.	in.	in.	in.	in.
					ft.	in.	ft.	in.																	
W-1	11+47.00	62.5	12+70.00	62.5	10	6	10	6	123	0	24	12	9	0	3	6	0	1	0	12	12	0	2	3	4

**BILL OF REINFORCING STEEL**

Wall No.	Bars J											Bars K										Bars M						
	Size	No.	Spacing	A			B		Average Total Length		Size	No.	Spacing	A			B		Average Total Length		Size	No.	A		B		Total Length	
				Begin	End		ft.	in.	ft.	in.				ft.	in.	ft.	in.	ft.	in.	ft.			in.	ft.	in.	ft.	in.	ft.
W-1	6	185	8	5	8	5	8	4	0	9	8	0	0	0	0	0	0	0	0	0	6	124	5	0	5	0	10	0

**BILL OF REINFORCING STEEL**

Wall No.	Bars H				Bars GI					Bars R				Bars Z				Bars A					Bars B									
	Size	No.	Spacing	Length		Size	No.	Spacing	No. of Lap Splices	Total Length		Size	No.	Length		Size	No.	Spacing	Length			Average Length		Size	No.	Length						
				in.	ft.					in.	ft.			in.	ft.				in.	ft.	in.	ft.	in.			ft.	in.	ft.	in.	ft.	in.	
W-1	8	124	12	8	6	5	20	12	3	122	6	0	0	0	0	4	93	16	2	6	6	185	10	3	10	3	10	3	0	0	0	0

**BILL OF REINFORCING STEEL**

Wall No.	Bars F						Bars G2					Bars SI (See Note #9)						Bars DG (See Note #9)									
	Size	No.	Spacing	Length			Average Length		Size	No.	Spacing	No. of Lap Splices	Total Length		Size	No.	Length A		Length B		Length C		Size	No.	Length		
				Begin	End		ft.	in.					ft.	in.			ft.	in.	ft.	in.	ft.	in.			ft.	in.	ft.
W-1	6	124	12	10	3	10	3	10	3	5	22	12	3	122	6	3	2	2	4.5	1	0	0	0	5	8	7	2
															3	2	1	9.5	1	0	0	0	5	8	9	6	

**ESTIMATED QUANTITIES**

Wall No.	Concrete			Reinf. Steel
	Footing	Wall	TOTAL	
	C.Y.	C.Y.	C.Y.	
W-1	83	47.8	130.8	18233

**QUANTITIES NOTES:**

◊ Includes concrete for shear key.

**NOTES:**

1. Work the Sheet with Sheets W-10 and W-11.
2. A value of '0' for Slope Backwall indicates front and back of wall are parallel.
3. Dsoil is typical depth of soil and is used for design purposes only. See Plan and Elevation for actual ground line.
4. Non-zero values for Lkey and Dkey indicate the existence of a shear key.
5. A non-zero value for Vstep indicates the existence of a footing step, see Wall Plan and Elevation for location.
6. Bars J, K, A and F vary uniformly between begin and end wall heights as indicated by begin and end dimensions.
7. The number of GI Bars includes 2 additional bars when a shear key is specified.
8. For walls with variable begin/end height, Bars G2 shall be fanned such that they are evenly spaced throughout length of wall.
9. Two sets of values are provided; First set corresponds to 42" SRCP, Second set corresponds to 30" SRCP. Contractor to verify bar SI and DG dimensions with overall Pipe diameter for Typical Wall Opening detail.

**REVISIONS**

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION



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ORLANDO, FLORIDA 32822-2779  
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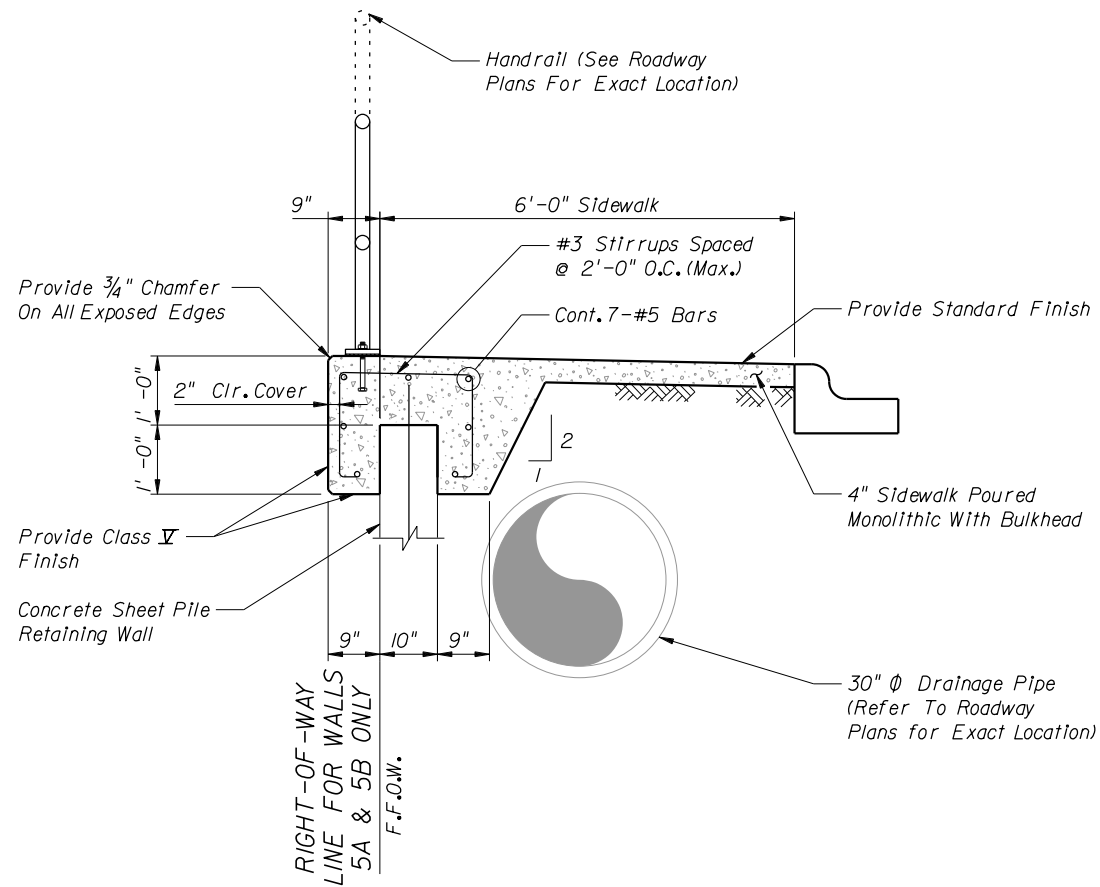
ENGINEER OF RECORD: LUCA DELVERME, P.E. NO. 63055  
CERTIFICATE OF AUTHORIZATION NO. 5057



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**GOVERNMENT**  
FLORIDA

**HOLDEN AVENUE C-I-P**  
**RETAINING WALL DATA**

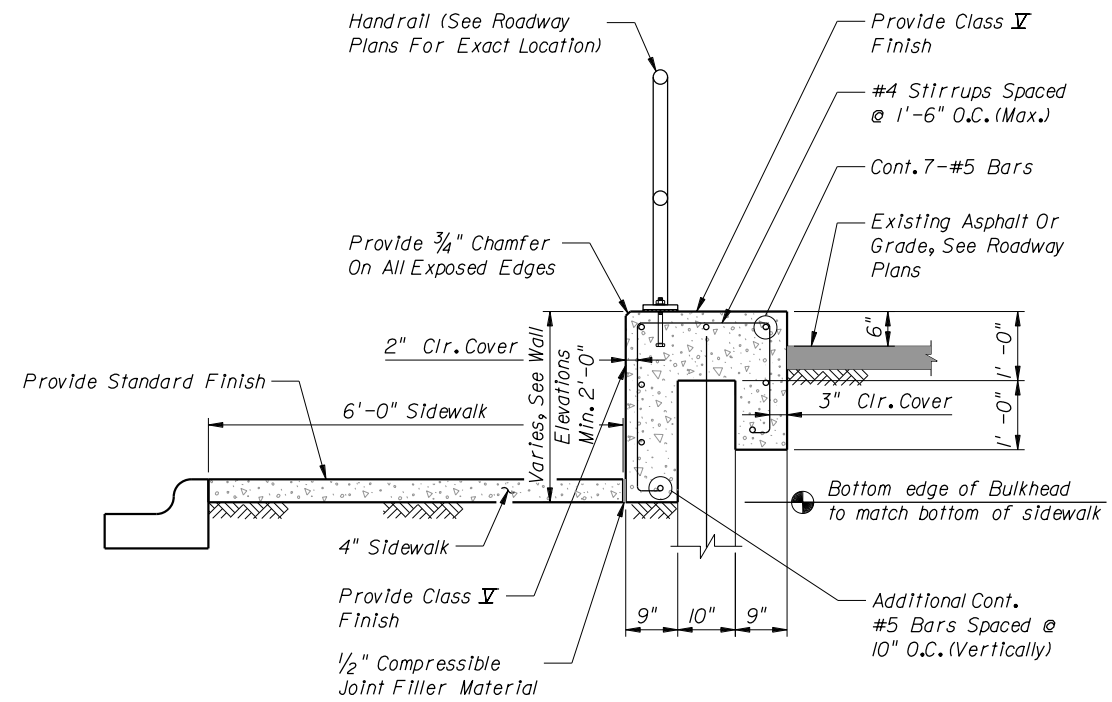
SHEET NO.  
W-12



TYPICAL SECTION THRU SIDEWALK

**Note:**

1. Concrete Quantity & Pay Item For Bulkhead Does Not Include The 4" Thick Portion Of Sidewalk.
2. Refer To General Notes Sheet For Joint Spacing And Other Information.



TYPICAL SECTION THRU SIDEWALK @ Wall No. 6B

ESTIMATED QUANTITIES		
Wall No.	Bulkhead Quantity (CY)	Reinforcing Steel (lbs.)
2	32.4	1481
5A	76.7	3655
5B	107.4	5792
8	8.1	320

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

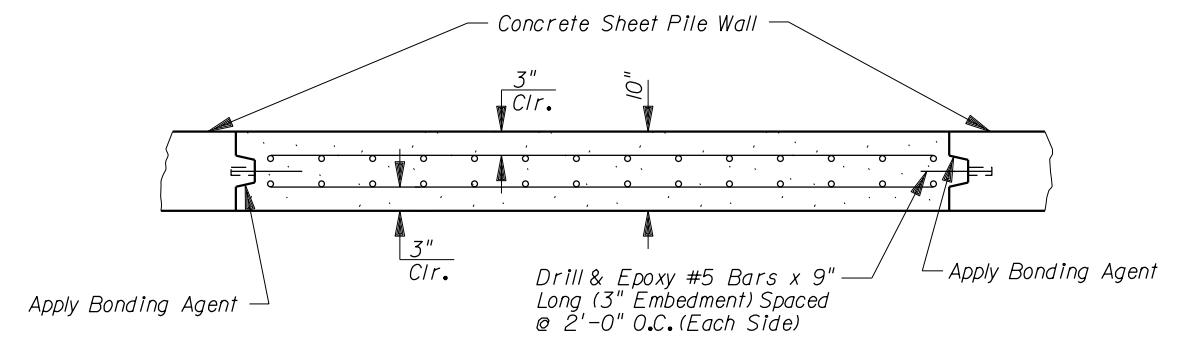
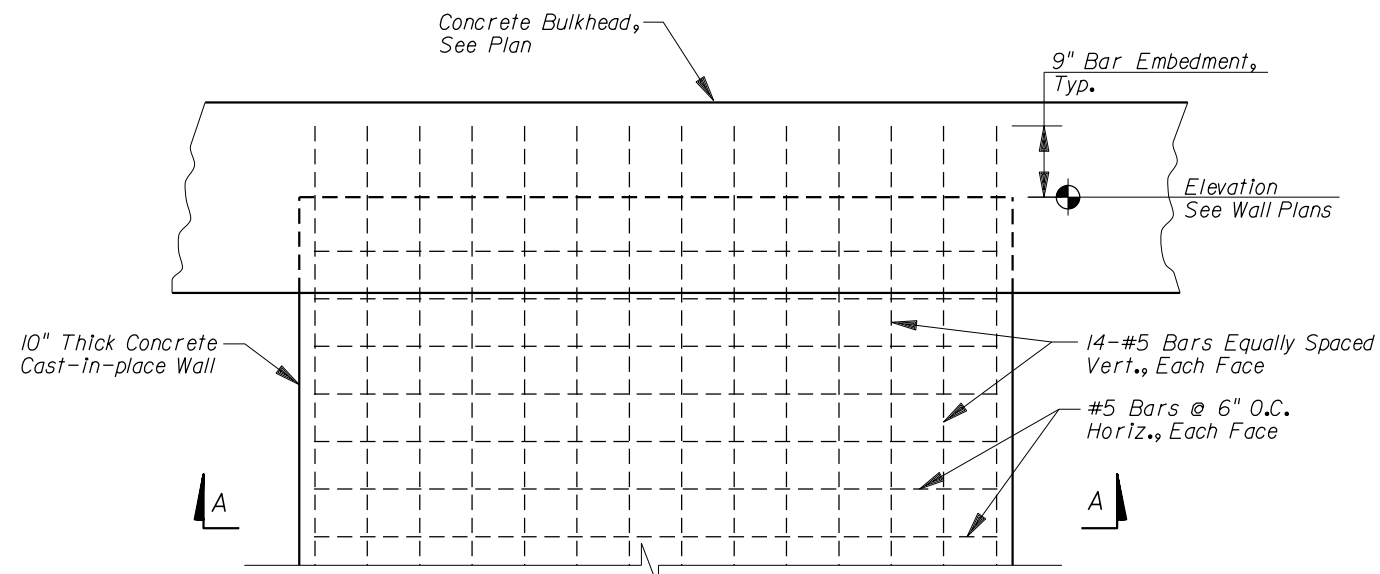
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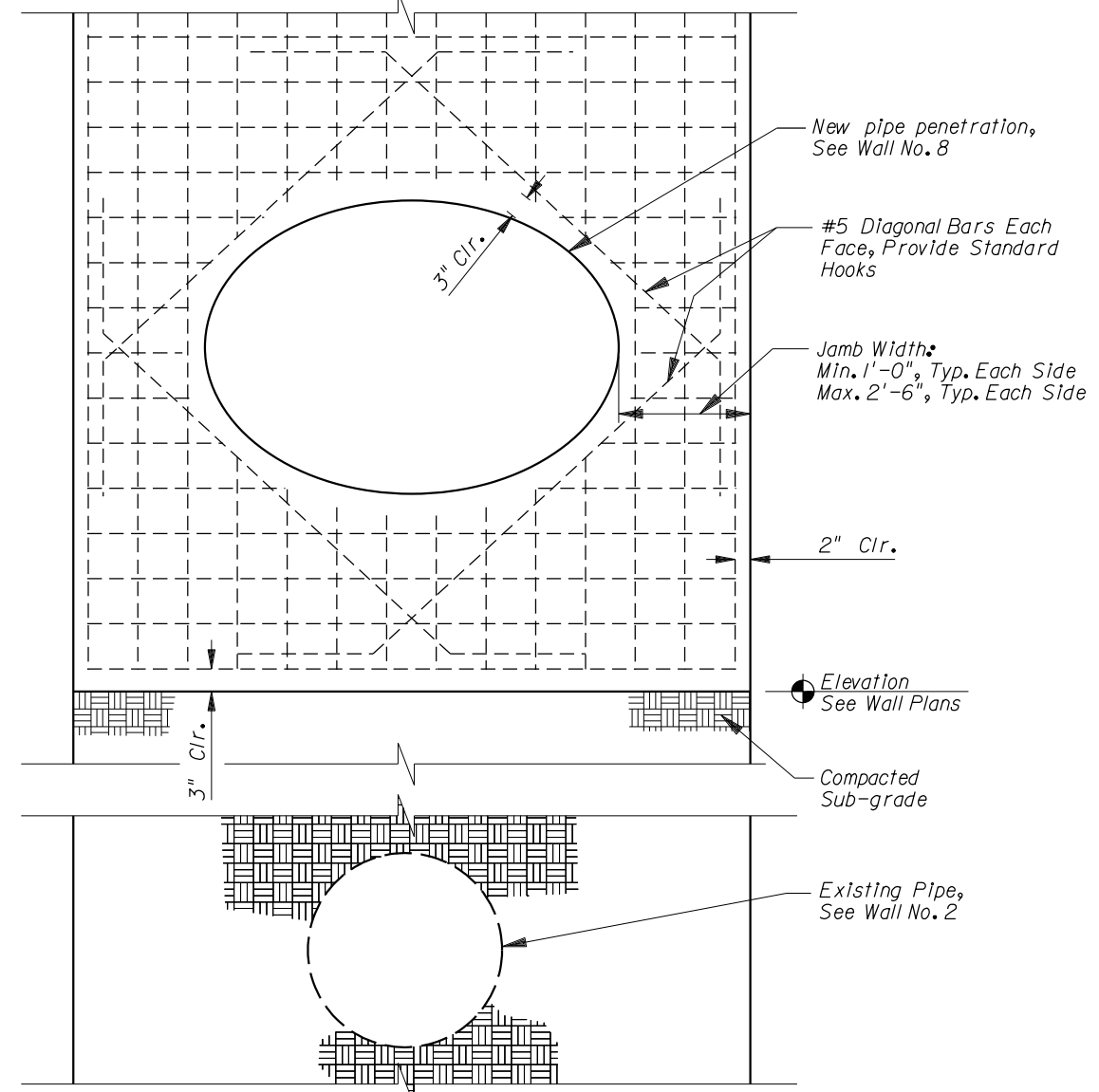
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 FLORIDA

**CONCRETE SHEET PILE WALL BULKHEAD DETAILS**

SHEET NO.  
 W-13



SECTION A-A



ELEVATION

**WALL OPENING NOTE:**

1. Contractor Shall Coordinate The Location, Extent, And Orientation (Skew angle of pipe Into Wall) Of Wall With Roadway Plans.

ESTIMATED QUANTITIES			
WALL NO.	ITEM	UNIT	QUANTITY
2	Class V Concrete (Special)	C.Y.	1.0
	Reinforcing Steel	LB.	348
8	Class V Concrete (Special)	C.Y.	2.3
	Reinforcing Steel	LB.	800

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

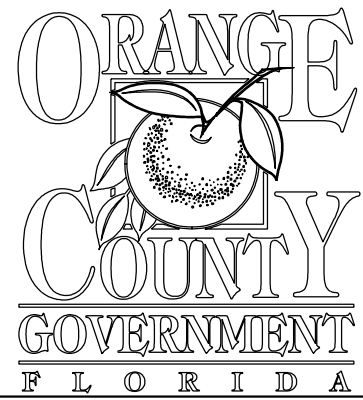
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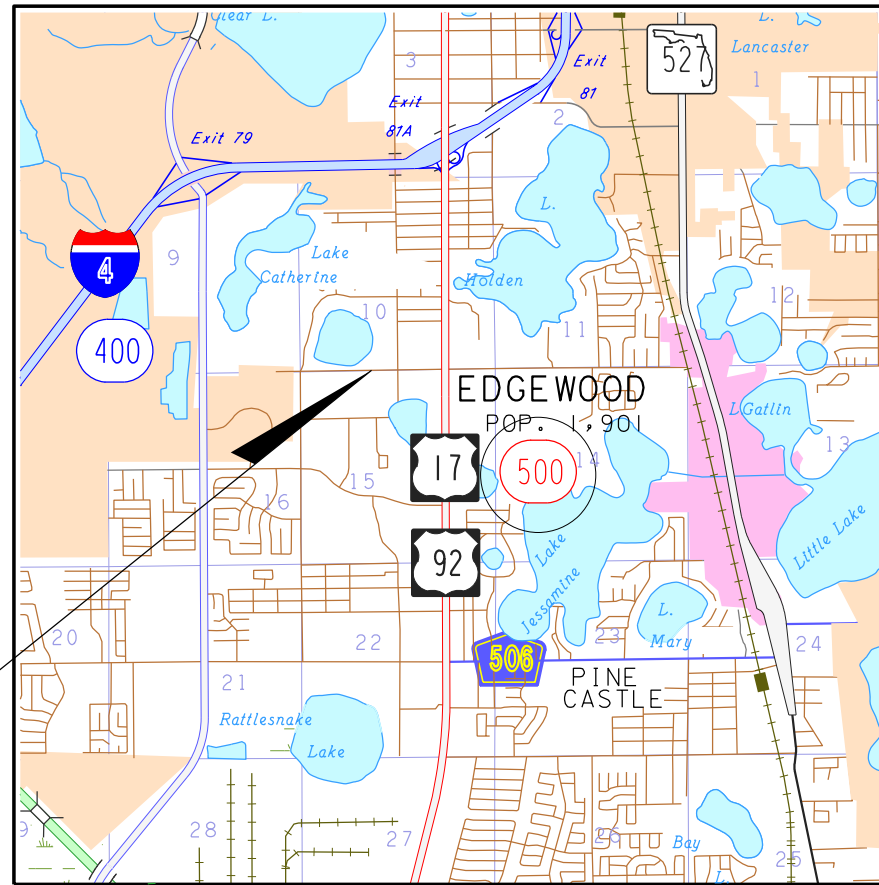
**HOLDEN AVENUE C-I-P WALL SEGMENT DETAILS**

SHEET NO.  
 W-14

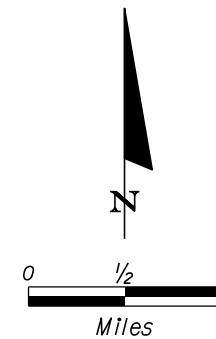


# TRAFFIC CONTROL PLANS FOR HOLDEN AVENUE (PHASE I) JOHN YOUNG PARKWAY TO ORANGE BLOSSOM TRAIL (US 441) ORANGE COUNTY, FLORIDA

DISTRICT 6



PROJECT LOCATION



GOVERNING STANDARDS AND SPECIFICATIONS: FLORIDA DEPARTMENT OF TRANSPORTATION, DESIGN STANDARDS FY 2016/2017, AND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION DATED JANUARY 2017, AS AMENDED BY CONTRACT DOCUMENTS.

JERRY L. DEMINGS, COUNTY MAYOR

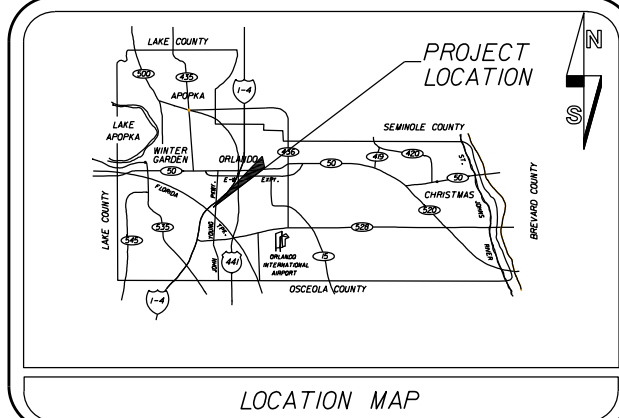
### BOARD OF COUNTY COMMISSIONERS

- BETSY VANDERLEY DISTRICT 1
CHRISTINE MOORE DISTRICT 2
MAYRA URIBE DISTRICT 3
MARIBEL GOMEZ CORDERO DISTRICT 4
EMILY BONILLA DISTRICT 5
VICTORIA P. SIPLIN DISTRICT 6

NOTE: PLANS WERE PREPARED ACCORDING TO AVAILABLE INFORMATION TO ADEQUATELY ADDRESS CONDITIONS AS THEY EXISTED AT THE TIME OF PLAN PREPARATION. DEEDS, CONDITIONS, AND OWNERSHIP OF PROPERTIES MAY HAVE CHANGED SINCE THE PROJECT DESIGN...

### CERTIFICATION TO PLANS

I HEREBY CERTIFY THAT THE DESIGN FOR THIS PROJECT AND THE ATTACHED CONSTRUCTION PLANS COMPLY WITH THE REQUIREMENTS OF SECTION 336.045 OF THE FLORIDA STATUTES AND ARE IN SUBSTANTIAL CONFORMANCE WITH THE STANDARDS CONTAINED IN THE EDITION OF THE "MANUAL OF UNIFORM MINIMUM STANDARDS FOR DESIGN, CONSTRUCTION AND MAINTENANCE FOR STREETS AND HIGHWAYS" IN EFFECT ON THIS DATE AS ADOPTED BY THE FLORIDA DEPARTMENT OF TRANSPORTATION PURSUANT TO SUBSECTION 336.045 (1) OF THE FLORIDA STATUTES. DATE: ENGINEER: DANTE A. GABRIEL, P.E. FLORIDA REG. NO. 37271



INDEX OF SHEETS table with columns SHEET and DESCRIPTION. Includes entries for M-1 Key Sheet, M-2 General Notes, M-3-M-5 Phasing Notes, M-6-M-16 Typical Sections, M-17-M-87 Traffic Control Plans, and M-88-M-94 Temporary Signalization.

UTILITIES ENCOUNTERED table with empty rows for recording utility details.

PLANS PREPARED BY: DANTE A. GABRIEL, P.E. P.E. LICENSE NUMBER 37271 VHB 225 E. ROBINSON STREET, SUITE 300 ORLANDO, FL 32801 CERTIFICATE OF AUTHORIZATION 3932

REVISIONS table with columns REVISIONS, DATE, and BY.


DESIGNED BY: JMD DATE: 7/13/2018
CHECKED BY: DAG DATE: 7/13/2018
DRAWN BY: JMD DATE: 7/13/2018
APPROVED BY: DAG DATE: 7/13/2018
PROJECT NO: 62796.00
SHEET M-1

Vertical text on the left margin: \\whb\proj\Orlando\62769.00 Holden Ave Ph / PD\Cad\Veeng\signing\MOT\Veystcol.DGN 7/13/2018 11:36:19 AM jdlstefano



## GENERAL NOTES

1. MAINTENANCE OF TRAFFIC SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (2009 ED.) AND THE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) DESIGN STANDARDS (FY 2016/2017)
2. THE CONTRACTOR SHALL CONTACT ORANGE COUNTY ONE (1) WEEK PRIOR TO THE START OF ANY PHASE OF WORK TO REQUEST STREET, LANE OR SIDEWALK CLOSURE AUTHORIZATION.
3. LOCAL RESIDENTIAL/BUSINESS ACCESS SHALL BE MAINTAINED AT ALL TIMES. CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION TO THE RESIDENTS/BUSINESSES AFFECTED BY CONSTRUCTION ACTIVITIES, ONE (1) WEEK IN ADVANCE OF THE START OF ANY PHASE OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE COPIES OF THE NOTIFICATION TO THE TRAFFIC CONTROL MANAGER PRIOR TO DISTRIBUTION.
4. THE CONTRACTOR SHALL NOTIFY THE ORANGE COUNTY SCHOOL BOARD, SAFETY MANAGER, WINNIE GERKIN ((407) 521-2339), ONE (1) WEEK IN ADVANCE OF THE START OF ANY PHASE OF CONSTRUCTION TO COORDINATE SCHOOL BUS RE-ROUTING.
5. THE CONTRACTOR SHALL NOTIFY THE FDOT OFFICE A MINIMUM OF FORTY-EIGHT (48) HOURS IN ADVANCE OF ANY LANE CLOSURES OR ANY WORK WITHIN THE FDOT RIGHT-OF-WAY.
6. ORANGE COUNTY RESERVES THE RIGHT TO REQUIRE ADDITIONAL DEVICES AND/OR CHANGES TO THE TRAFFIC CONTROL PLAN BASED UPON CHANGING TRAFFIC CONDITIONS.
7. ANY CHANGES MADE TO THE TRAFFIC CONTROL PLAN BY THE CONTRACTOR, SHALL BE SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER AND APPROVED BY THE TRAFFIC CONTROL MANAGER PRIOR TO IMPLEMENTATION.
8. CONTRACTOR SHALL NOTIFY LYNX AT (407) 841-2279 A MINIMUM OF ONE (1) WEEK PRIOR TO IMPLEMENTING ANY STREET CLOSURE OR DETOUR PLAN TO COORDINATE BUS RE-ROUTING.
9. THE NUMBER OF DEVICES SHOWN ON THESE PLANS ARE FOR ILLUSTRATION PURPOSES. ADDITIONAL DEVICES MAY BE REQUIRED TO PROPERLY PROTECT THE WORKERS AND WORK ZONE FROM VEHICULAR TRAFFIC.
10. IF TEMPORARY MARKINGS ARE REQUIRED ON FRICTION COURSE SURFACES, ALL MARKINGS SHALL BE INSTALLED USING 3M BRAND STAMARK REMOVABLE TAPE, SERIES 750, WET REFLECTIVE TEMPORARY TAPE. THE USE OF "FOIL BACK" TYPES OF TEMPORARY TAPE IS NOT PERMITTED.
11. 3M BRAND REMOVABLE BLACK MASK TAPE, SERIES 145, IS THE ONLY APPROVED MATERIAL FOR "BLACKING OUT" OF EXISTING PAVEMENT MARKINGS ON FINAL ROADWAY SURFACES. UNDER NO CIRCUMSTANCES WILL BLACK PAINT OR GRINDING BE PERMITTED.
12. PAINT PRODUCTS AND RETRO-REFLECTIVE PAVEMENT MARKERS WILL BE CONSIDERED TEMPORARY PAVEMENT MARKING MATERIALS ON SURFACES THAT ARE TO BE MILLED AND RESURFACED.
13. EXISTING PAVEMENT MARKINGS, WHICH ARE TO BE OBLITERATED, SHALL BE RESTORED TO ORIGINAL CONDITION UPON COMPLETION OF CONSTRUCTION AND PRIOR TO REINSTATING VEHICULAR TRAFFIC.
14. ALL SIGNS AND TRAFFIC CONTROL DEVICES SHALL BE NEW OR LIKE NEW CONDITION. ALL SIGNS SHALL BE POST MOUNTED UNLESS OTHERWISE INDICATED.
15. CHANNELIZING DRUMS SHALL BE USED ON NEWLY PAVED ROADWAYS.
16. DURING NON-WORKING HOURS, NO EQUIPMENT, VEHICLES OR MATERIAL SHALL BE PARKED OR STORED WITHIN THE CLEAR ZONE OF A ROADWAY OPEN TO VEHICULAR TRAFFIC.
17. EXISTING REGULATORY AND WARNING SIGNS ARE TO BE MAINTAINED AT ALL TIMES UNLESS OTHERWISE NOTED. ALL EXISTING SIGNS WHICH CONFLICT WITH THE TRAFFIC CONTROL PLAN DURING A CONSTRUCTION PHASE SHALL BE REMOVED OR COVERED AS NECESSARY. THE CONTRACTOR SHALL MAINTAIN AND RELOCATE EXISTING ROADWAY SIGNS, AS CONDITIONS WARRANT IN EACH PHASE, THROUGHOUT THE DURATION OF CONSTRUCTION. THE COST OF THESE SIGNING OPERATIONS IS TO BE INCLUDED IN THE LUMP SUM MAINTENANCE OF TRAFFIC.
18. PEDESTRIAN CONTROL SHALL BE MAINTAINED ON ONE SIDE OF THE ROAD AT ALL TIMES. IF UNABLE TO DO SO, THE CONTRACTOR SHALL PROVIDE TEMPORARY WALKWAYS, BOARDWALKS AND/OR TEMPORARY CONCRETE SIDEWALKS.
19. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING EACH EMPLOYEE SUPERVISING THE SELECTION AND PLACEMENT OF MAINTENANCE OF TRAFFIC (MOT) CONTROL DEVICES SHALL BE PROPERLY TRAINED BY ATTENDING AND SUCCESSFULLY COMPLETING AN FDOT APPROVED MOT COURSE. THE TRAINING SHALL BE AT A LEVEL APPLICABLE TO THE EMPLOYEE'S LEVEL OF INVOLVEMENT. COPIES OF CERTIFICATIONS SHALL BE PROVIDED TO ORANGE COUNTY PRIOR TO IMPLEMENTING ANY PHASE OF MOT.
20. THE CONTRACTOR SHALL PROVIDE A TRAFFIC CONTROL SUPERVISOR (TCS) WHO IS RESPONSIBLE FOR INITIATING, INSTALLING AND MAINTAINING ALL TRAFFIC CONTROL DEVICES.
21. THE TCS SHALL BE AVAILABLE ON A 24-HOUR PER DAY BASIS, PARTICIPATE IN ALL CHANGES TO TRAFFIC CONTROL AND REVIEW THE PROJECT ON A DAY-TO-DAY BASIS.
22. THE TCS SHALL BE PRESENT DURING THE INITIAL SETUP OF THE TRAFFIC CONTROL PLAN AND ALL SUBSEQUENT PHASES OR CHANGES TO THE TRAFFIC CONTROL.
23. THE TCS SHALL IMMEDIATELY CORRECT ALL DEFICIENCIES.
24. THE CONTRACTOR SHALL ENSURE THE TCS BE AVAILABLE ON SITE WITHIN 45 MINUTES OF NOTIFICATION OF AN EMERGENCY SITUATION AND IS PREPARED TO RESPOND TO AND CORRECT THE TRAFFIC CONTROL OR PROVIDE ALTERNATE ARRANGEMENTS FOR CORRECTIVE ACTIONS.
25. THE TCS SHALL BE RESPONSIBLE FOR PERFORMING WEEKLY, DAYTIME AND NIGHT TIME INSPECTIONS OF ALL TRAFFIC CONTROL DEVICES, TRAFFIC FLOW, PEDESTRIAN, BICYCLIST MOVEMENT THROUGH THE WORK AREA AND BUSINESS ACCOMMODATIONS.
26. ORANGE COUNTY MAY DISQUALIFY AND REMOVE FROM THE PROJECT A TCS THAT FAILS TO COMPLY WITH THESE PROVISIONS. ORANGE COUNTY MAY ALSO SUSPEND ALL WORK ACTIVITIES UNTIL CORRECTIVE ACTIONS HAVE BEEN COMPLETED.
27. THE CONTRACTOR SHALL EITHER BACKFILL OR COVER BY AN APPROVED METHOD ALL OPEN TRENCHES AT THE END OF EACH WORK PERIOD.
28. THE CONTRACTOR SHALL REPLACE ANY VEHICLE DETECTION LOOPS DAMAGED DURING CONSTRUCTION, AS PER THE ORIGINAL CONTRACT PLANS.
29. MODIFICATIONS TO OR RELOCATION OF SIGNALS SHALL BE THE CONTRACTORS RESPONSIBILITY. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MAINTENANCE MODIFICATIONS OR RELOCATIONS DURING EACH PHASE OF CONSTRUCTION. PAYMENT FOR ALL SIGNAL HEAD RELOCATIONS, MODIFICATIONS, AND TEMPORARY SIGNALIZATION SHALL BE INCLUDED AS PART OF THE LUMP SUM MAINTENANCE OF TRAFFIC.
30. ARROWS DENOTE DIRECTION OF TRAFFIC ONLY AND DO NOT REFLECT PAVEMENT MARKINGS. PAVEMENT MARKINGS HAVE BEEN LABELED AS NECESSARY.
31. TRAFFIC SHALL BE MAINTAINED ON PAVED SURFACES AT ALL TIMES.
32. POSITIVE DRAINAGE SHALL BE MAINTAINED AT ALL TIMES FOR THE ENTIRE PROJECT.
33. CHANNELIZING DEVICES ERECTED ALONG SIDE STREETS, BUSINESS DRIVEWAYS, AND RESIDENTIAL DRIVEWAYS SHALL BE SPACED AT 10' CENTER-TO-CENTER ALONG THE RETURN RADIUS UNLESS OTHERWISE NOTED.
34. ALL TEMPORARY PAVEMENT SHALL UTILIZE A FIRM AND UNYIELDING BASE WITH 2" ASPHALT PAVEMENT. PAVEMENT SHALL ADHERE TO PAVEMENT DESIGN FOR NEW ROADWAY. TEMPORARY PAVEMENT SHALL BE REPAIRED AS NEEDED OR AS DIRECTED BY THE ENGINEER AND PAYMENT SHALL BE INCLUDED IN THE LUMP SUM MAINTENANCE OF TRAFFIC.
35. ALL MAINTENANCE OF TRAFFIC PLANS SHOULD BE SHARED WITH LYNX AND ALL CHANGES PROVIDED WITH AT LEAST 48 HOURS NOTICE. THESE SHOULD BE SENT TO THE ASSISTANT CHIEF SUPERVISOR AT (407) 254-6207 (KTILLET@GOLINX.COM) WITH A COPY TO THE CHIEF SUPERVISOR AT (407) 254-6223 (RQUINONES@GOLINX.COM).
36. LYNX WILL MAINTAIN BUS SERVICE IN THE AREA DURING CONSTRUCTION. LINK 8 RUNS NORTH-SOUTH ON TEXAS AVE. AND EAST-WEST ON HOLDEN AVE. FROM TEXAS AVENUE TO ORANGE BLOSSOM TRAIL. LINK 57 RUNS NORTH-SOUTH ON JOHN YOUNG PARKWAY. THE CONTRACTOR MUST INCLUDE LYNX SERVICE, INCLUDING PEDESTRIAN ACCESS TO AND FROM THE BUS AT EACH BUS STOP.
37. AT LEAST 60 FEET FROM THE BACK OF THE STOPPED BUS TO THE TANGENT OF THE CURVE OF THE NEAREST DRIVEWAY OR 100 FEET FROM THE LOCATION OF THE BUS ARE REQUIRED TO ACCOMMODATE A TYPICAL 40 FOOT LONG LYNX BUS. THE FRONT DOORS ARE LOCATED AT THE FRONT CORNER OF THE TRANSIT BUS. THE REAR DOORS ARE LOCATED 27 FEET FROM THE FRONT CORNER. NEITHER SHOULD EMPTY TO DRAINAGE AS ALIGHTING CUSTOMERS CAN TRIP AND BE INJURED.
38. NOTE THAT LYNX SIGNS ARE NOT TO BE REMOVED OR RELOCATED BY THE CONTRACTOR. THE CONTRACTOR WILL COORDINATE WITH LYNX PROVIDING AT LEAST 7 DAYS NOTICE FOR LYNX TO REMOVE OR RELOCATE SIGNS. THE CONTRACTOR WILL COORDINATE WITH LYNX BUS STOP COORDINATION AT (407) 254-6180 (IBROWN@GOLYNX.COM) WITH A COPY TO LYNX FACILITIES MAINTENANCE AT (407) 254-6010 (SROBINSON@GOLYNX.COM).
38. THE CONTRACTOR SHALL KEEP ALL SIGNALS AFFECTED BY CONSTRUCTION ACTIVITIES OPERATIONAL THROUGHOUT ALL PHASES OF CONSTRUCTION. VEHICLE DETECTION MUST BE MAINTAINED FOR ALL LANES AT ALL TIMES.
39. NO LANE CLOSURES ALLOWED 6AM-9AM AND 3PM-7PM.
40. NIGHT TIME LANE CLOSURES REQUIRE POLICE OFFICER IN MARKED CAR PRESENT ON APPROACH TO WORK ZONE.
41. DRUMS WITH LIGHTS SHALL BE USED FOR CHANNELIZING DEVICES.

REVISIONS				VHB 225 E. Robinson Street, Suite 300 Landmark Center Two Orlando, FL 32801 (407) 839-4006 Certificate of Authorization #3932 Dante A. Gabriel, PE PE # 37271		<b>TRAFFIC CONTROL PLAN</b> <b>GENERAL NOTES</b>	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION				M-2

## PHASING NOTES

**PHASE IA:**

1. THE PURPOSE OF THIS PHASE IS TO CONSTRUCT TEMPORARY PAVEMENT ON HOLDEN AVENUE AND TEXAS AVENUE TO PREPARE FOR TRAFFIC SHIFTS THAT WILL BE UTILIZED TO COMPLETE SUBSEQUENT CONSTRUCTION ACTIVITIES AND TO PREPARE THE EXISTING DRAINAGE FACILITIES TO ACCOMMODATE POSITIVE DRAINAGE THROUGHOUT ALL PHASES OF CONSTRUCTION.
2. A TEMPORARY DRAINAGE SWALE SHALL BE CONSTRUCTED ALONG THE SOUTH SIDE OF HOLDEN AVENUE FROM APPROXIMATE STA. 50+30 TO APPROXIMATE STA. 60+50 OUTSIDE OF THE PROPOSED TEMPORARY PAVEMENT LIMITS TO COMPENSATE FOR THE EXISTING DRAINAGE SWALE IMPACTED BY THE TEMPORARY PAVEMENT TO BE CONSTRUCTED IN THIS PHASE. INDEX NO. 602 OF THE FDOT DESIGN STANDARDS SHALL BE UTILIZED DURING CONSTRUCTION OF THE TEMPORARY DRAINAGE SWALE.
3. THE EXISTING MITERED END SECTION AT APPROXIMATE STA. 50+30, THE EXISTING CROSS DRAIN AT APPROXIMATE STA. 53+00, AND THE EXISTING CURB INLET AND CROSS DRAIN AT APPROXIMATE STA. 75+15 LOCATED ALONG THE SOUTH SIDE OF HOLDEN AVENUE SHALL BE EXTENDED TO ALLOW FOR PLACEMENT OF TEMPORARY PAVEMENT. TO EXTEND THE EXISTING CROSS DRAINS AND DRAINAGE STRUCTURES, THE CONTRACTOR SHALL CUT OUT AND REMOVE THE DRAINAGE STRUCTURE AND EXTEND THE CROSS DRAIN PIPE BEFORE PLACING TEMPORARY PAVEMENT. INDEX NO. 602 OF THE FDOT DESIGN STANDARDS SHALL BE UTILIZED DURING EXTENSIONS OF EXISTING DRAINAGE STRUCTURES AND CROSS DRAINS.
4. THE EXISTING MITERED END SECTION AT APPROXIMATE STA. 60+50 AND THE EXISTING CURB INLET AT APPROXIMATE STA. 63+70 LOCATED ALONG THE SOUTH SIDE OF HOLDEN AVENUE SHALL BE EXTENDED TO ALLOW FOR PLACEMENT OF TEMPORARY PAVEMENT. TO EXTEND THE EXISTING DRAINAGE STRUCTURES, THE CONTRACTOR SHALL CUT OUT AND REMOVE THE DRAINAGE STRUCTURE AND EXTEND THE CROSS DRAIN PIPE BEFORE PLACING TEMPORARY PAVEMENT. ALL OF THE DRAINAGE STRUCTURES EXTENDED SHALL REMAIN CONNECTED TO THE EXISTING TRUNK LINE THAT RUNS FROM APPROXIMATE STA. 60+50 TO APPROXIMATE STA. 63+70. INDEX NO. 602 OF THE FDOT DESIGN STANDARDS SHALL BE UTILIZED DURING EXTENSIONS OF EXISTING DRAINAGE STRUCTURES AND CROSS DRAINS.
5. THE EXISTING CATCH BASIN INLET AT APPROXIMATE STA. 72+05, THE EXISTING CURB INLET AT APPROXIMATE STA. 72+50, AND THE EXISTING CATCH BASIN INLET AT APPROXIMATE STA. 73+20 LOCATED ALONG THE SOUTH SIDE OF HOLDEN AVENUE SHALL BE EXTENDED TO ALLOW FOR PLACEMENT OF TEMPORARY PAVEMENT. TO EXTEND THE EXISTING DRAINAGE STRUCTURES, THE CONTRACTOR SHALL CUT OUT AND REMOVE THE DRAINAGE STRUCTURE AND EXTEND THE CROSS DRAIN PIPE BEFORE PLACING TEMPORARY PAVEMENT. ALL OF THE DRAINAGE STRUCTURES EXTENDED SHALL REMAIN CONNECTED TO THE EXISTING TRUNK LINE THAT RUNS FROM APPROXIMATE STA. 72+05 TO APPROXIMATE STA. 73+85. INDEX NO. 602 OF THE FDOT DESIGN STANDARDS SHALL BE UTILIZED DURING EXTENSIONS OF EXISTING DRAINAGE STRUCTURES AND CROSS DRAINS.
6. THE EXISTING BOX CULVERT AND CONCRETE HEADWALL AT APPROXIMATE STA. 46+80 LOCATED ALONG THE SOUTH SIDE OF HOLDEN AVENUE SHALL BE EXTENDED TO ALLOW FOR PLACEMENT OF TEMPORARY PAVEMENT. TO EXTEND THE EXISTING BOX CULVERT AND CONCRETE HEADWALL, THE CONTRACTOR SHALL CUT OUT AND REMOVE THE CONCRETE HEADWALL ON THE SOUTH SIDE OF HOLDEN AVENUE AND EXTEND THE BOX CULVERT BEFORE PLACING TEMPORARY PAVEMENT. INDEX NO. 602 OF THE FDOT DESIGN STANDARDS SHALL BE UTILIZED DURING EXTENSIONS OF EXISTING BOX CULVERTS AND CONCRETE HEADWALLS.
7. TEMPORARY PAVEMENT SHALL BE CONSTRUCTED ALONG THE WEST SIDE OF TEXAS AVENUE FROM STA. 392+08.58 TO STA. 400+16.20. TO CONSTRUCT TEMPORARY PAVEMENT ALONG TEXAS AVENUE, TRAFFIC SHALL BE SHIFTED INTO TWO ELEVEN FOOT LANES ALONG THE EAST SIDE OF TEXAS AVENUE. INDEX NO. 602 SHALL THEN BE UTILIZED DURING CONSTRUCTION OF TEMPORARY PAVEMENT ALONG TEXAS AVENUE.
8. TEMPORARY PAVEMENT SHALL BE CONSTRUCTED ALONG THE SOUTH SIDE OF HOLDEN AVENUE FROM STA. 44+25.53 TO STA. 63+02.24, FROM STA. 63+45.18 TO STA. 65+26.52, AND FROM STA. 70+66.21 TO STA. 76+05.93. TO CONSTRUCT TEMPORARY PAVEMENT ALONG HOLDEN AVENUE, TRAFFIC SHALL BE SHIFTED INTO TWO ELEVEN (11) FOOT LANES ALONG THE NORTH SIDE OF HOLDEN AVENUE. INDEX NO. 602 SHALL THEN BE UTILIZED DURING CONSTRUCTION OF TEMPORARY PAVEMENT ALONG HOLDEN AVENUE.
9. TEMPORARY SIGNALIZATION STRUCTURES AND EQUIPMENT SHALL BE ERECTED AT THE INTERSECTION OF HOLDEN AVENUE AND RIO GRANDE AVENUE. TWO WOOD POLES SHALL BE INSTALLED AT THE INTERSECTION, ONE IN THE NORTHEAST CORNER, AND ONE IN THE SOUTHWEST CORNER. A DIAGONAL SPAN WIRE ASSEMBLY SHALL BE UTILIZED FOR ALL APPROACHES TO THE INTERSECTION.
10. TEMPORARY SIGNALIZATION STRUCTURES AND EQUIPMENT SHALL BE ERECTED AT THE INTERSECTION OF HOLDEN AVENUE AND ORANGE BLOSSOM TRAIL. TWO WOOD POLES SHALL BE INSTALLED AT THE INTERSECTION, ONE IN THE NORTHEAST CORNER, AND ONE IN THE SOUTHWEST CORNER. A DIAGONAL SPAN WIRE ASSEMBLY SHALL BE UTILIZED FOR ALL APPROACHES TO THE INTERSECTION.

**PHASE IB:**

1. THE PURPOSE OF THIS PHASE IS TO CONSTRUCT PORTIONS OF HOLDEN AVENUE, TEXAS AVENUE, RIO GRANDE AVENUE, MILLENIA BOULEVARD, AND THE NORTHBOUND RIGHT TURN LANE OF JOHN YOUNG PARKWAY. ALSO, PORTIONS OF THE PROPOSED CLOSED DRAINAGE SYSTEM WILL BE CONSTRUCTED.
2. CONSTRUCTION OF THE ENTIRE WIDTH OF THE NEW SECTION OF HOLDEN AVENUE FROM JOHN YOUNG PARKWAY TO TEXAS AVENUE, INCLUDING ALL DRAINAGE FEATURES, FROM STA. 10+82.14 TO STA. 36+32.98 SHALL BEGIN IN PHASE IB.
3. TRAFFIC SHALL BE SHIFTED TO THE EXISTING SOUTH SIDE OF HOLDEN AVENUE ONTO THE TEMPORARY PAVEMENT CONSTRUCTED IN PHASE IA. TRAFFIC SHALL BE MAINTAINED IN ONE ELEVEN FOOT WIDE LANE IN EACH DIRECTION AND THE USE OF BARRIER WALL WILL BE REQUIRED AS SHOWN IN THE PHASE IB TRAFFIC CONTROL PLANS. THE WESTBOUND LANES OF HOLDEN AVENUE SHALL BE CONSTRUCTED FROM STA. 36+84.79 TO STA. 76+06.59 INCLUDING THE DRAINAGE INLETS AND TRUNK LINE ON THE NORTH SIDE OF HOLDEN AVENUE. ALSO, CROSS DRAINS SHALL BE CONSTRUCTED ON THE NORTH SIDE OF HOLDEN AVENUE BETWEEN THE DRAINAGE INLETS AND THE LIMITS OF THE PHASE IB WORK ZONE. THE CONTRACTOR SHALL INSTALL PIPE PLUGS IN THE CROSS DRAINS AT THE LIMITS OF THE WORK ZONE. CONSTRUCTION OF THE WESTBOUND LANES OF HOLDEN AVENUE AND THE DRAINAGE TRUNK LINE WITHIN DRIVEWAY AND STREET OPENINGS SHALL BE COMPLETED DURING NIGHTTIME HOURS BY CLOSING THE DRIVEWAY OR STREET OPENING WHERE CONSTRUCTION ACTIVITIES ARE TO OCCUR. THE CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION ONE WEEK IN ADVANCE OF CONSTRUCTION OPERATIONS TO RESIDENTS/BUSINESSES WHOSE DRIVEWAYS ARE TO BE CLOSED. NO MEDIANS OR TRAFFIC SEPARATORS SHALL BE CONSTRUCTED IN PHASE IB ALONG HOLDEN AVENUE.
4. THE EXISTING OUTSIDE LANE OF JOHN YOUNG PARKWAY NORTHBOUND SHALL BE CLOSED AND TRAFFIC SHALL BE SHIFTED TO THE CENTER AND MEDIAN LANES. CONSTRUCTION OF THE NORTHBOUND RIGHT TURN LANE ALONG JOHN YOUNG PARKWAY FROM STA. 202+15.62 TO STA. 206+58.51 SHALL BEGIN IN PHASE IB.
5. A PORTION OF TEXAS AVENUE SHALL BE CONSTRUCTED FROM STA. 392+50.00 TO STA. 408+50.00. TRAFFIC SHALL BE SHIFTED TO THE EXISTING EAST SIDE OF TEXAS AVENUE (NORTH) IN ONE ELEVEN FOOT WIDE LANE IN THE SOUTHBOUND DIRECTION ONLY BETWEEN HOLDEN AVENUE AND THE LIMITS OF CONSTRUCTION. NORTHBOUND TRAFFIC ALONG TEXAS AVENUE (NORTH) SHALL BE DETOURED AS SHOWN IN THE PHASE IB DETOUR PLAN. THE USE OF BARRIER WALL WILL BE REQUIRED AS SHOWN IN THE PHASE IB TRAFFIC CONTROL PLANS. THE DRAINAGE TRUNK LINE ALONG THE EAST SIDE OF TEXAS AVENUE (NORTH) SHALL BE CONSTRUCTED FROM STA. 402+00.00 TO STA. 404+30.00 ALONG WITH THE DRAINAGE INLETS ON THE EAST SIDE OF TEXAS AVENUE (NORTH). ALL OF THE DRAINAGE INLETS ON THE WEST SIDE OF TEXAS AVENUE (NORTH) AND THE CROSS DRAINS SHALL BE CONSTRUCTED FROM STA. 402+00.00 TO STA. 408+50.00. THE CONTRACTOR SHALL INSTALL PIPE PLUGS IN THE CROSS DRAINS AT THE LIMITS OF THE WORK ZONE. CONSTRUCTION OF PORTIONS OF TEXAS AVENUE (NORTH) AND THE DRAINAGE TRUNK LINE WITHIN DRIVEWAY AND STREET OPENINGS SHALL BE COMPLETED DURING NIGHTTIME HOURS BY CLOSING THE DRIVEWAY OR STREET OPENING WHERE CONSTRUCTION ACTIVITIES ARE TO OCCUR. THE CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION ONE WEEK IN ADVANCE OF CONSTRUCTION OPERATIONS TO RESIDENTS/BUSINESSES WHOSE DRIVEWAYS ARE TO BE CLOSED. NO MEDIANS OR TRAFFIC SEPARATORS SHALL BE CONSTRUCTED IN PHASE IB ALONG TEXAS AVENUE (NORTH).
6. TRAFFIC SHALL BE SHIFTED TO THE WEST SIDE OF TEXAS AVENUE (SOUTH) ONTO THE TEMPORARY PAVEMENT CONSTRUCTED IN PHASE IA. TRAFFIC SHALL BE MAINTAINED IN ONE ELEVEN FOOT WIDE LANE IN EACH DIRECTION AND THE USE OF BARRIER WALL WILL BE REQUIRED AS SHOWN IN THE PHASE IB TRAFFIC CONTROL PLANS. THE NORTHBOUND LANES OF TEXAS AVENUE (SOUTH) SHALL BE CONSTRUCTED ALONG WITH THE DRAINAGE TRUNK LINE, DRAINAGE INLETS, AND CROSS DRAINS ON THE EAST SIDE OF TEXAS AVENUE (SOUTH). THE CONTRACTOR SHALL INSTALL PIPE PLUGS IN THE CROSS DRAINS AT THE LIMITS OF THE WORK ZONE. CONSTRUCTION OF PORTIONS OF TEXAS AVENUE (SOUTH) AND THE DRAINAGE TRUNK LINE WITHIN DRIVEWAY AND STREET OPENINGS SHALL BE COMPLETED DURING NIGHTTIME HOURS BY CLOSING THE DRIVEWAY OR STREET OPENING WHERE CONSTRUCTION ACTIVITIES ARE TO OCCUR. THE CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION ONE WEEK IN ADVANCE OF CONSTRUCTION OPERATIONS TO RESIDENTS/BUSINESSES WHOSE DRIVEWAYS ARE TO BE CLOSED. NO MEDIANS OR TRAFFIC SEPARATORS SHALL BE CONSTRUCTED IN PHASE IB ALONG TEXAS AVENUE (SOUTH).
7. A PORTION OF THE EAST SIDE OF RIO GRANDE AVENUE (NORTH) SHALL BE CONSTRUCTED FROM STA. 410+04.22 TO STA. 414+40.00 AND A PORTION OF THE EAST SIDE OF RIO GRANDE AVENUE (SOUTH) SHALL BE CONSTRUCTED FROM STA. 401+00.00 TO STA. 408+09.19. TRAFFIC SHALL BE SHIFTED TO THE EXISTING WEST SIDE OF RIO GRANDE AVENUE IN ONE ELEVEN FOOT WIDE LANE IN THE NORTHBOUND DIRECTION ONLY BETWEEN THE LIMITS OF CONSTRUCTION. SOUTHBOUND TRAFFIC ALONG RIO GRANDE AVENUE SHALL BE DETOURED AS SHOWN IN THE PHASE IB DETOUR PLAN. THE USE OF BARRIER WALL WILL BE REQUIRED AS SHOWN IN THE PHASE IB TRAFFIC CONTROL PLANS. THE NORTHBOUND LANES OF RIO GRANDE AVENUE SHALL BE CONSTRUCTED ALONG WITH THE DRAINAGE TRUNK LINE, DRAINAGE INLETS, AND CROSS DRAINS ON THE EAST SIDE OF RIO GRANDE AVENUE. THE CONTRACTOR SHALL INSTALL PIPE PLUGS IN THE CROSS DRAINS AT THE LIMITS OF THE WORK ZONE. CONSTRUCTION OF PORTIONS OF RIO GRANDE AVENUE (SOUTH) AND THE DRAINAGE TRUNK LINE WITHIN DRIVEWAY AND STREET OPENINGS SHALL BE COMPLETED DURING NIGHTTIME HOURS BY CLOSING THE DRIVEWAY OR STREET OPENING WHERE CONSTRUCTION ACTIVITIES ARE TO OCCUR. THE CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION ONE WEEK IN ADVANCE OF CONSTRUCTION OPERATIONS TO RESIDENTS/BUSINESSES WHOSE DRIVEWAYS ARE TO BE CLOSED.
8. THE LEFT EASTBOUND LANE OF MILLENIA BLVD. WILL BE UNDER CONSTRUCTION FROM STA. 4+96.12 TO 9+56.64.

REVISIONS				VHB 225 E. Robinson Street, Suite 300 Landmark Center Two Orlando, FL 32801 (407) 839-4006 Certificate of Authorization #3932 Dante A. Gabriel, PE PE # 37271		<b>TRAFFIC CONTROL PLAN</b> <b>PHASING NOTES</b>	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION				M-3

## PHASING NOTES

**PHASE IIA:**

1. THE PURPOSE OF THIS PHASE IS TO CONSTRUCT TEMPORARY PAVEMENT ON HOLDEN AVENUE, TEXAS AVENUE, AND RIO GRANDE AVENUE TO PREPARE FOR TRAFFIC SHIFTS THAT WILL BE UTILIZED TO COMPLETE SUBSEQUENT CONSTRUCTION ACTIVITIES.
2. TEMPORARY PAVEMENT SHALL BE CONSTRUCTED WITHIN THE INTERSECTION OF HOLDEN AVENUE AT TEXAS AVENUE AND HOLDEN AVENUE AT RIO GRANDE AVENUE TO PROVIDE A TRANSITION BETWEEN THE EXISTING PAVEMENT AT THE INTERSECTIONS AND THE NEWLY CONSTRUCTED PAVEMENT FROM PHASE IB. CONSTRUCTION OF TEMPORARY PAVEMENT SHALL OCCUR DURING NIGHTTIME HOURS UTILIZING A FLAGGING OPERATION AS SPECIFIED IN INDEX NO. 620 OF THE FDOT DESIGN STANDARDS.
3. TEMPORARY PAVEMENT SHALL BE CONSTRUCTED IN THE MEDIAN AREA OF HOLDEN AVENUE FROM STA. 72+04.37 TO STA. 76+00.61 TO PROVIDE A TRANSITION BETWEEN THE EXISTING PAVEMENT ALONG HOLDEN AVENUE AND THE NEWLY CONSTRUCTED PAVEMENT FROM PHASE IB. CONSTRUCTION OF TEMPORARY PAVEMENT SHALL OCCUR DURING NIGHTTIME HOURS UTILIZING INDEX NO. 625, SHEET 1 OF 2, OF THE FDOT DESIGN STANDARDS.
4. TEMPORARY PAVEMENT SHALL BE CONSTRUCTED IN THE MEDIAN AREA OF TEXAS AVENUE (SOUTH) FROM STA. 392+50.00 TO STA. 393+66.39 TO PROVIDE A TRANSITION BETWEEN THE EXISTING PAVEMENT ALONG TEXAS AVENUE (SOUTH) AND THE NEWLY CONSTRUCTED PAVEMENT FROM PHASE IB. CONSTRUCTION OF TEMPORARY PAVEMENT SHALL OCCUR DURING NIGHTTIME HOURS UTILIZING INDEX NO. 621 OF THE FDOT DESIGN STANDARDS.
5. TEMPORARY PAVEMENT SHALL BE CONSTRUCTED ALONG THE EAST SIDE OF TEXAS AVENUE (NORTH) FROM STA. 406+10.72 TO STA. 408+50.00 TO PROVIDE A TRANSITION BETWEEN THE EXISTING PAVEMENT ALONG TEXAS AVENUE (NORTH) AND THE NEWLY CONSTRUCTED PAVEMENT FROM PHASE IB. CONSTRUCTION OF TEMPORARY PAVEMENT SHALL OCCUR DURING NIGHTTIME HOURS UTILIZING INDEX NO. 621 OF THE FDOT DESIGN STANDARDS.
6. TEMPORARY PAVEMENT SHALL BE CONSTRUCTED IN THE MEDIAN AREA OF RIO GRANDE AVENUE (SOUTH) FROM STA. 406+39.62 TO STA. 408+09.19 AND IN THE MEDIAN AREA OF RIO GRANDE AVENUE (NORTH) FROM STA. 410+04.22 TO STA. 412+74.57 TO PROVIDE A TRANSITION BETWEEN THE EXISTING PAVEMENT ALONG RIO GRANDE AVENUE AND THE NEWLY CONSTRUCTED PAVEMENT FROM PHASE IB. CONSTRUCTION OF TEMPORARY PAVEMENT SHALL OCCUR DURING NIGHTTIME HOURS UTILIZING INDEX NO. 621 OF THE FDOT DESIGN STANDARDS.
7. PRIOR TO PHASE IIB, A SHORT TERM NIGHT TIME FLAGGING OPERATION WILL BE REQUIRED FOR TRAFFIC ON HOLDEN AVE. FOR CONSTRUCTION OF A TRUNK LINE FROM STA. 400+23 TO 400+50 ACROSS HOLDEN AVE.

**PHASE IIB:**

1. THE PURPOSE OF THIS PHASE IS TO CONTINUE CONSTRUCTION OF HOLDEN AVENUE, TEXAS AVENUE, RIO GRANDE AVENUE, THE NORTHBOUND RIGHT TURN LANE OF JOHN YOUNG PARKWAY, MILLENIA BLVD., AND THE PROPOSED CLOSED DRAINAGE SYSTEM.
2. CONTINUE CONSTRUCTION STARTED IN PHASE IB OF THE ENTIRE WIDTH OF THE NEW SECTION OF HOLDEN AVENUE FROM JOHN YOUNG PARKWAY TO TEXAS AVENUE, INCLUDING ALL DRAINAGE FEATURES, FROM STA. 10+82.14 TO STA. 36+32.98.
3. TRAFFIC SHALL BE SHIFTED ONTO THE NEWLY CONSTRUCTED WESTBOUND LANES OF HOLDEN AVENUE FROM PHASE IB. TRAFFIC SHALL BE MAINTAINED IN ONE ELEVEN FOOT WIDE LANE IN EACH DIRECTION AND THE USE OF BARRIER WALL WILL BE REQUIRED AS SHOWN IN THE PHASE IIB TRAFFIC CONTROL PLANS. THE EASTBOUND LANES OF HOLDEN AVENUE SHALL BE CONSTRUCTED FROM STA. 35+80.00 TO STA. 76+06.59 INCLUDING THE DRAINAGE INLETS ON THE SOUTH SIDE OF HOLDEN AVENUE. ALSO, CROSS DRAINS SHALL BE CONSTRUCTED ON THE SOUTH SIDE OF HOLDEN AVENUE BETWEEN THE DRAINAGE INLETS AND THE LIMITS OF THE PHASE IIB WORK ZONE. THE CONTRACTOR SHALL INSTALL PIPE PLUGS IN THE CROSS DRAINS AT THE LIMITS OF THE WORK ZONE IN THE EVENT CONNECTIONS TO THE CROSS DRAINS CONSTRUCTED IN PHASE IB ARE NOT POSSIBLE DUE TO MEDIAN WORK TO BE COMPLETED IN SUBSEQUENT PHASES. CONSTRUCTION OF THE EASTBOUND LANES OF HOLDEN AVENUE WITHIN DRIVEWAY AND STREET OPENINGS SHALL BE COMPLETED DURING NIGHTTIME HOURS BY CLOSING THE DRIVEWAY OR STREET OPENING WHERE CONSTRUCTION ACTIVITIES ARE TO OCCUR. THE CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION ONE WEEK IN ADVANCE OF CONSTRUCTION OPERATIONS TO RESIDENTS/BUSINESSES WHOSE DRIVEWAYS ARE TO BE CLOSED. NO MEDIANS OR TRAFFIC SEPARATORS SHALL BE CONSTRUCTED IN PHASE IIB ALONG HOLDEN AVENUE.
4. THE EXISTING OUTSIDE LANE OF JOHN YOUNG PARKWAY NORTHBOUND SHALL BE CLOSED AND TRAFFIC SHALL BE SHIFTED TO THE CENTER AND MEDIAN LANES. CONSTRUCTION OF THE NORTHBOUND RIGHT TURN LANE ALONG JOHN YOUNG PARKWAY FROM STA. 202+15.62 TO STA. 206+58.51 SHALL CONTINUE IN PHASE IIB.
5. PORTIONS OF TEXAS AVENUE SHALL CONTINUE TO BE CONSTRUCTED FROM STA. 392+50.00 TO STA. 408+50.00. TRAFFIC SHALL BE SHIFTED TO THE NEWLY CONSTRUCTED WEST SIDE OF TEXAS AVENUE (NORTH) FROM PHASE IB. TRAFFIC SHALL BE MAINTAINED IN ONE ELEVEN FOOT WIDE LANE IN EACH DIRECTION AND THE USE OF BARRIER WALL WILL BE REQUIRED AS SHOWN IN THE PHASE IIB TRAFFIC CONTROL PLANS. THE REMAINING DRAINAGE TRUNK LINE ALONG THE EAST SIDE OF TEXAS AVENUE (NORTH) SHALL BE CONSTRUCTED ALONG WITH THE REMAINING DRAINAGE INLETS AND CROSS DRAINS ALONG THE EAST SIDE OF TEXAS AVENUE (NORTH). THE CONTRACTOR SHALL INSTALL PIPE PLUGS IN THE CROSS DRAINS AT THE LIMITS OF THE WORK ZONE IN THE EVENT CONNECTIONS TO THE CROSS DRAINS CONSTRUCTED IN PHASE IB ARE NOT POSSIBLE DUE TO MEDIAN WORK TO BE COMPLETED IN SUBSEQUENT PHASES. CONSTRUCTION OF PORTIONS OF TEXAS AVENUE (NORTH) WITHIN DRIVEWAY AND STREET OPENINGS SHALL BE COMPLETED DURING NIGHTTIME HOURS BY CLOSING THE DRIVEWAY OR STREET OPENING WHERE CONSTRUCTION ACTIVITIES ARE TO OCCUR. THE CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION ONE WEEK IN ADVANCE OF CONSTRUCTION OPERATIONS TO RESIDENTS/BUSINESSES WHOSE DRIVEWAYS ARE TO BE CLOSED. NO MEDIANS OR TRAFFIC SEPARATORS SHALL BE CONSTRUCTED IN PHASE IIB ALONG TEXAS AVENUE (NORTH).

6. TRAFFIC SHALL BE SHIFTED TO THE EAST SIDE OF TEXAS AVENUE (SOUTH) ONTO THE NEWLY CONSTRUCTED NORTHBOUND LANES FROM PHASE IB. TRAFFIC SHALL BE MAINTAINED IN ONE ELEVEN FOOT WIDE LANE IN EACH DIRECTION AND THE USE OF BARRIER WALL WILL BE REQUIRED AS SHOWN IN THE PHASE IIB TRAFFIC CONTROL PLANS. THE SOUTHBOUND LANES OF TEXAS AVENUE (SOUTH) SHALL BE CONSTRUCTED ALONG WITH THE REMAINING DRAINAGE INLETS AND CROSS DRAINS ON THE WEST SIDE OF TEXAS AVENUE (SOUTH). THE CONTRACTOR SHALL INSTALL PIPE PLUGS IN THE CROSS DRAINS AT THE LIMITS OF THE WORK ZONE IN THE EVENT CONNECTIONS TO THE CROSS DRAINS CONSTRUCTED IN PHASE IB ARE NOT POSSIBLE DUE TO MEDIAN WORK TO BE COMPLETED IN SUBSEQUENT PHASES. NO MEDIANS OR TRAFFIC SEPARATORS SHALL BE CONSTRUCTED IN PHASE IIB ALONG TEXAS AVENUE (SOUTH).
7. A PORTION OF THE WEST SIDE OF RIO GRANDE AVENUE (NORTH) SHALL BE CONSTRUCTED FROM STA. 410+04.22 TO STA. 414+40.00 AND A PORTION OF THE WEST SIDE OF RIO GRANDE AVENUE (SOUTH) SHALL BE CONSTRUCTED FROM STA. 401+00.00 TO STA. 408+09.19. TRAFFIC SHALL BE SHIFTED ONTO THE NEWLY CONSTRUCTED EAST SIDE OF RIO GRANDE AVENUE FROM PHASE IB IN ONE ELEVEN FOOT WIDE LANE IN THE SOUTHBOUND DIRECTION ONLY BETWEEN THE LIMITS OF CONSTRUCTION. NORTHBOUND TRAFFIC ALONG RIO GRANDE AVENUE SHALL BE DETOURED AS SHOWN IN THE PHASE IIB DETOUR PLAN. THE USE OF BARRIER WALL WILL BE REQUIRED AS SHOWN IN THE PHASE IIB TRAFFIC CONTROL PLANS. THE SOUTHBOUND LANES OF RIO GRANDE AVENUE SHALL BE CONSTRUCTED ALONG WITH THE REMAINING DRAINAGE INLETS AND CROSS DRAINS ON THE WEST SIDE OF RIO GRANDE AVENUE. THE CONTRACTOR SHALL INSTALL PIPE PLUGS IN THE CROSS DRAINS AT THE LIMITS OF THE WORK ZONE IN THE EVENT CONNECTIONS TO THE CROSS DRAINS CONSTRUCTED IN PHASE IB ARE NOT POSSIBLE DUE TO MEDIAN WORK TO BE COMPLETED IN SUBSEQUENT PHASES. CONSTRUCTION OF PORTIONS OF RIO GRANDE AVENUE (SOUTH) WITHIN DRIVEWAY AND STREET OPENINGS SHALL BE COMPLETED DURING NIGHTTIME HOURS BY CLOSING THE DRIVEWAY OR STREET OPENING WHERE CONSTRUCTION ACTIVITIES ARE TO OCCUR. THE CONTRACTOR SHALL PROVIDE WRITTEN NOTIFICATION ONE WEEK IN ADVANCE OF CONSTRUCTION OPERATIONS TO RESIDENTS/BUSINESSES WHOSE DRIVEWAYS ARE TO BE CLOSED.
8. THE EASTBOUND CENTER LANE OF MILLENIA BLVD. WILL BE UNDER CONSTRUCTION FROM STA. 4+96.12 TO STA. 9+56.64.

**PHASE IIIA:**

1. THE PURPOSE OF THIS PHASE IS TO CONSTRUCT TEMPORARY PAVEMENT ON RIO GRANDE AVENUE TO PREPARE FOR A TRAFFIC SHIFT THAT WILL BE UTILIZED TO COMPLETE SUBSEQUENT CONSTRUCTION ACTIVITIES.
2. TEMPORARY PAVEMENT SHALL BE CONSTRUCTED IN THE MEDIAN AREA OF RIO GRANDE AVENUE (SOUTH) FROM STA. 401+00.00 TO STA. 404+22.23 TO PROVIDE A TRANSITION BETWEEN THE EXISTING PAVEMENT ALONG RIO GRANDE AVENUE (SOUTH) AND THE NEWLY CONSTRUCTED PAVEMENT FROM PHASES IB AND IIB. CONSTRUCTION OF TEMPORARY PAVEMENT SHALL OCCUR DURING NIGHTTIME HOURS UTILIZING INDEX NO. 621 OF THE FDOT DESIGN STANDARDS.

**PHASE IIIB:**

1. THE PURPOSE OF THIS PHASE IS TO COMPLETE CONSTRUCTION OF THE NEW SECTION OF HOLDEN AVENUE AND THE NORTHBOUND RIGHT TURN LANE OF JOHN YOUNG PARKWAY, AND CONTINUE CONSTRUCTION OF THE EXISTING SECTION OF HOLDEN AVENUE, TEXAS AVENUE, RIO GRANDE AVENUE, MILLENIA BLVD., AND THE PROPOSED CLOSED DRAINAGE SYSTEM.
2. COMPLETE CONSTRUCTION STARTED IN PHASE IB OF THE ENTIRE WIDTH OF THE NEW SECTION OF HOLDEN AVENUE FROM JOHN YOUNG PARKWAY TO TEXAS AVENUE, INCLUDING ALL DRAINAGE FEATURES, FROM STA. 10+82.14 TO STA. 36+32.98.
3. TRAFFIC SHALL BE MAINTAINED ON THE NEWLY CONSTRUCTED EASTBOUND AND WESTBOUND LANES OF HOLDEN AVENUE FROM PHASES IB AND IIB. TRAFFIC SHALL BE SHIFTED TO THE OUTSIDE IN TWO ELEVEN FOOT WIDE LANES IN EACH DIRECTION. THE FULL WIDTH MEDIANS AND TRAFFIC SEPARATORS ALONG HOLDEN AVENUE SHALL BE CONSTRUCTED FROM STA. 37+43.62 TO STA. 62+40.27, AND A MEDIAN PORTION OF HOLDEN AVENUE SHALL BE CONSTRUCTED FROM STA. 71+81.13 TO STA. 76+06.59, LESS THE MEDIAN AND TRAFFIC SEPARATOR. THE REMAINING CROSS DRAINS WITHIN THE MEDIANS OF HOLDEN AVENUE SHALL BE CONSTRUCTED.
4. THE EXISTING OUTSIDE LANE OF JOHN YOUNG PARKWAY NORTHBOUND SHALL BE CLOSED AND TRAFFIC SHALL BE SHIFTED TO THE CENTER AND MEDIAN LANES. CONSTRUCTION OF THE NORTHBOUND RIGHT TURN LANE ALONG JOHN YOUNG PARKWAY FROM STA. 202+15.62 TO STA. 206+58.51 SHALL BE COMPLETED.
5. CONSTRUCTION OF BOTH SHOULDERS AND CURB AND GUTTER WILL BE COMPLETED ON TEXAS AVE. FROM STA. 400+60.24 TO STA. 408+50.00. NORTHBOUND AND SOUTHBOUND TRAFFIC SHALL BE SHIFTED TO 10' LANES EACH.
6. THE REMAINDER OF TEXAS AVENUE (SOUTH) FROM STA. 392+50.00 TO STA. 399+81.67, INCLUDING FULL WIDTH MEDIANS AND TRAFFIC SEPARATORS, SHALL BE COMPLETED. THE MEDIAN LANE IN BOTH THE NORTHBOUND AND SOUTHBOUND DIRECTIONS SHALL BE CLOSED AND TRAFFIC SHALL BE SHIFTED TO THE OUTSIDE IN ONE ELEVEN FOOT WIDE LANE IN EACH DIRECTION.
7. THE RIGHT EASTBOUND LANE OF MILLENIA BLVD. WILL BE UNDER CONSTRUCTION FROM STA. 4+96.12 TO STA. 9+56.64.

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DATE	DESCRIPTION	DATE	DESCRIPTION				M-4

## PHASING NOTES

**PHASE IVA:**


1. THE PURPOSE OF THIS PHASE IS TO COMPLETE CONSTRUCTION OF HOLDEN AVENUE AND TEXAS AVENUE, AND TO CONTINUE CONSTRUCTION ON RIO GRANDE AVENUE.
2. TRAFFIC SHALL BE MAINTAINED ON THE NEWLY CONSTRUCTED EASTBOUND AND WESTBOUND LANES OF HOLDEN AVENUE FROM PHASES IB, IIB, AND IIIB. TRAFFIC SHALL BE SHIFTED TO THE OUTSIDE IN TWO ELEVEN FOOT WIDE LANES IN EACH DIRECTION AND THE FULL WIDTH MEDIAN AND TRAFFIC SEPARATOR ALONG HOLDEN AVENUE SHALL BE CONSTRUCTED FROM STA. 64+11.89 TO STA. 76+06.59.
3. TRAFFIC SHALL BE MAINTAINED ON THE NEWLY CONSTRUCTED NORTHBOUND AND SOUTHBOUND LANES OF TEXAS AVENUE (NORTH) FROM PHASES IB, IIB, AND IIIB. TRAFFIC SHALL BE SHIFTED TO THE OUTSIDE IN ONE TEN FOOT WIDE LANE IN EACH DIRECTION AND THE FULL WIDTH MEDIAN ALONG TEXAS AVENUE (NORTH) SHALL BE CONSTRUCTED FROM STA. 401+33.53 TO STA. 406+29.54.
4. RIO GRANDE AVENUE (NORTH) SHALL BE CLOSED FROM STA. 410+04.22 TO STA. 414+40.00. NORTHBOUND AND SOUTHBOUND TRAFFIC SHALL BE DETOURED AS SHOWN IN THE PHASE IVA DETOUR PLAN. THE REMAINDER OF RIO GRANDE AVENUE (NORTH) SHALL BE CONSTRUCTED.
5. TRAFFIC ALONG RIO GRANDE AVENUE (SOUTH) SHALL BE SHIFTED TO THE WEST SIDE IN ONE ELEVEN FOOT WIDE LANE IN THE SOUTHBOUND DIRECTION ONLY. NORTHBOUND TRAFFIC ALONG RIO GRANDE AVENUE (SOUTH) SHALL BE DETOURED AS SHOWN IN THE PHASE IVA DETOUR PLAN. PORTIONS OF THE MEDIAN AREA ALONG RIO GRANDE AVENUE (SOUTH) SHALL BE CONSTRUCTED FROM STA. 401+00.00 TO STA. 408+09.19.

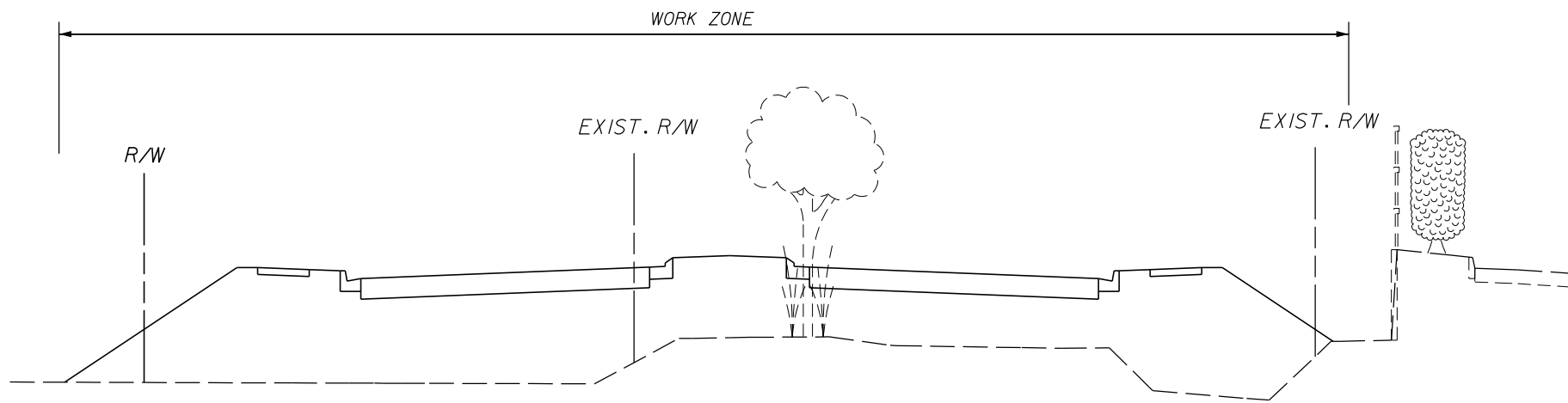
**PHASE IVB:**

1. THE PURPOSE OF THIS PHASE IS TO COMPLETE CONSTRUCTION OF RIO GRANDE AVENUE AND THE BEGIN AND END PROJECT TIE-IN POINTS.
2. TRAFFIC ALONG RIO GRANDE AVENUE (SOUTH) FROM STA. 401+00.00 TO STA. 403+60.00 SHALL BE SHIFTED TO THE EAST SIDE IN ONE ELEVEN FOOT WIDE LANE IN THE SOUTHBOUND DIRECTION ONLY. NORTHBOUND TRAFFIC ALONG RIO GRANDE AVENUE (SOUTH) SHALL BE DETOURED AS SHOWN IN THE PHASE IVB DETOUR PLAN. THE REMAINDER OF THE MEDIAN AREA ALONG RIO GRANDE AVENUE (SOUTH) SHALL BE CONSTRUCTED FROM STA. 401+00.00 TO STA. 403+60.00.
3. CONSTRUCTION OF THE BEGIN AND END OF PROJECT TIE-IN POINTS SHALL BE COMPLETED AT THE END OF PHASE IVB. INDEX NO 5/32 S. 620 AND 622 OF THE FDOT DESIGN STANDARDS SHALL BE UTILIZED TO COMPLETE CONSTRUCTION AT THE BEGINNING AND END OF THE PROJECT LIMITS.

**PHASE V:**

1. THE PURPOSE OF THIS PHASE IS TO CONSTRUCT THE FINAL FRICTION COURSE ALONG ALL ROADWAY SURFACES THAT ARE TO RECEIVE NEW PAVEMENT MARKINGS.
2. THE FINAL FRICTION COURSE ALONG HOLDEN AVENUE SHALL BE CONSTRUCTED BY FIRST CLOSING THE OUTSIDE LANE IN BOTH DIRECTIONS, THEN CLOSING THE MEDIAN LANE IN BOTH DIRECTIONS. LANE CLOSURES FOR PLACEMENT OF THE FINAL FRICTION COURSE SHALL BE PER THE FDOT DESIGN STANDARDS INDEX NO. 625, SHEET 1 OF 2.
3. THE FINAL FRICTION COURSE ALONG JOHN YOUNG PARKWAY NORTHBOUND SHALL BE CONSTRUCTED BY FIRST CLOSING THE OUTSIDE LANE, THEN CLOSING THE MEDIAN LANE, AND THEN CLOSING THE CENTER LANE. LANE CLOSURES FOR PLACEMENT OF THE FINAL FRICTION COURSE SHALL BE PER THE FDOT DESIGN STANDARDS INDEX NO. 625, SHEET 1 OF 2.
4. THE FINAL FRICTION COURSE ALONG TEXAS AVENUE (NORTH) SHALL BE CONSTRUCTED USING A FLAGGER OPERATION BY FIRST CLOSING THE NORTHBOUND LANE, THEN CLOSING THE SOUTHBOUND LANE. LANE CLOSURES FOR PLACEMENT OF THE FINAL FRICTION COURSE SHALL BE PER THE FDOT DESIGN STANDARDS INDEX NO. 621.
5. THE FINAL FRICTION COURSE ALONG TEXAS AVENUE (SOUTH) SHALL BE CONSTRUCTED BY FIRST CLOSING THE OUTSIDE LANE IN BOTH DIRECTIONS, THEN CLOSING THE MEDIAN LANE IN BOTH DIRECTIONS. LANE CLOSURES FOR PLACEMENT OF THE FINAL FRICTION COURSE SHALL BE PER THE FDOT DESIGN STANDARDS INDEX NO. 625, SHEET 1 OF 2.
6. THE FINAL FRICTION COURSE ALONG RIO GRANDE AVENUE (NORTH) SHALL BE CONSTRUCTED BY FIRST SHIFTING THE NORTHBOUND TRAFFIC INTO THE CENTER LANE AND CLOSING THE NORTHBOUND LANE, THEN CLOSING THE CENTER LANE, AND FINALLY BY SHIFTING THE SOUTHBOUND TRAFFIC TO THE CENTER LANE AND CLOSING THE SOUTHBOUND LANE. LANE CLOSURES FOR PLACEMENT OF THE FINAL FRICTION COURSE SHALL BE PER THE FDOT DESIGN STANDARDS INDEX NO. 625, SHEET 1 OF 2.
7. THE FINAL FRICTION COURSE ALONG RIO GRANDE AVENUE (SOUTH) SHALL BE CONSTRUCTED USING A FLAGGER OPERATION BY FIRST CLOSING THE NORTHBOUND LANE, THEN CLOSING THE SOUTHBOUND LANE. LANE CLOSURES FOR PLACEMENT OF THE FINAL FRICTION COURSE SHALL BE PER THE FDOT DESIGN STANDARDS INDEX NO. 621.
8. THE FINAL FRICTION COURSE ALONG MILLENIA BOULEVARD EASTBOUND SHALL BE CONSTRUCTED BY FIRST CLOSING THE OUTSIDE LANE, THEN CLOSING THE MEDIAN LANE, AND THEN CLOSING THE CENTER LANE. LANE CLOSURES FOR PLACEMENT OF THE FINAL FRICTION COURSE SHALL BE PER THE FDOT DESIGN STANDARDS INDEX NO. 625, SHEET 1 OF 2.

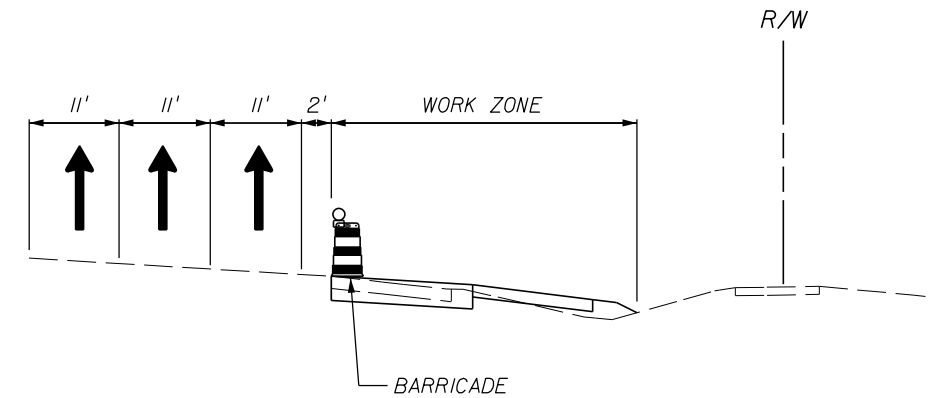
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DATE	DESCRIPTION	DATE	DESCRIPTION				M-5



TYPICAL SECTION

HOLDEN AVENUE

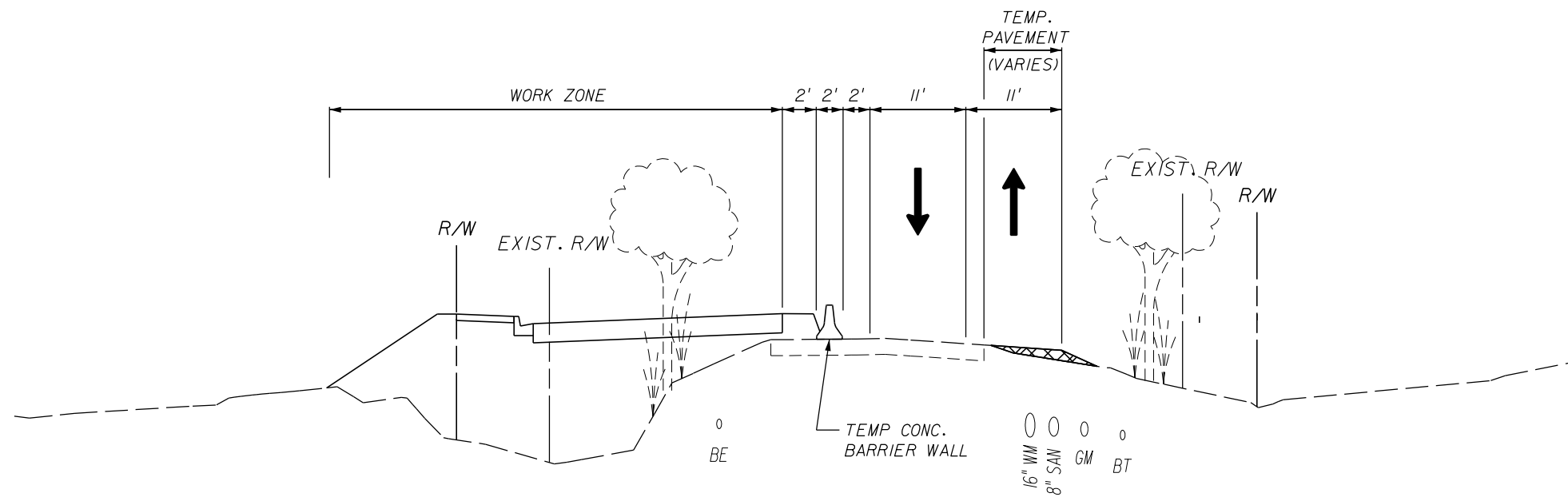
STA. 10+81.55 TO STA. 36+84.92



TYPICAL SECTION

JOHN YOUNG PARKWAY

STA. 202+05.05 TO STA. 206+51.75



TYPICAL SECTION

HOLDEN AVENUE

STA. 36+84.92 TO STA. 76+06.61

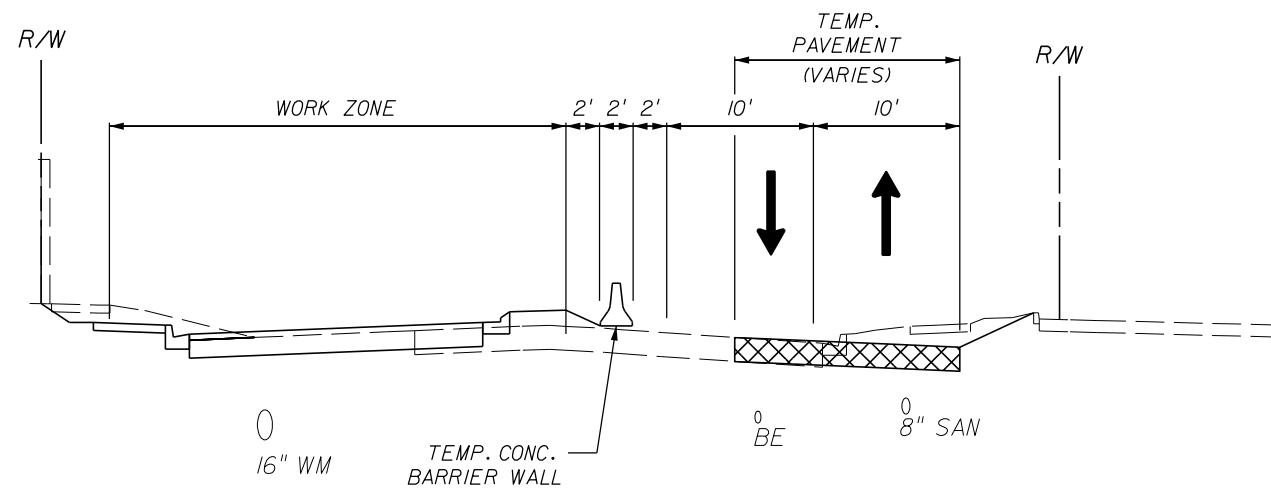
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**TRAFFIC CONTROL PLAN**  
**TYPICAL SECTIONS**  
**PHASE IB**

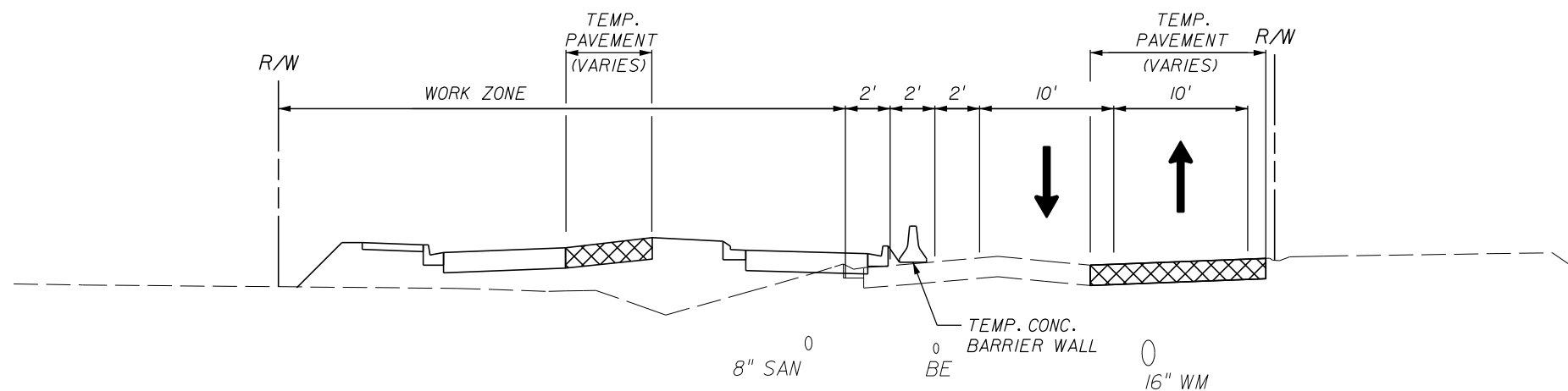
SHEET NO.  
 M-6



TYPICAL SECTION

TEXAS AVENUE

STA. 392+50.00 TO STA. 400+60.24



TYPICAL SECTION

TEXAS AVENUE

STA. 400+60.24 TO STA. 408+50.00

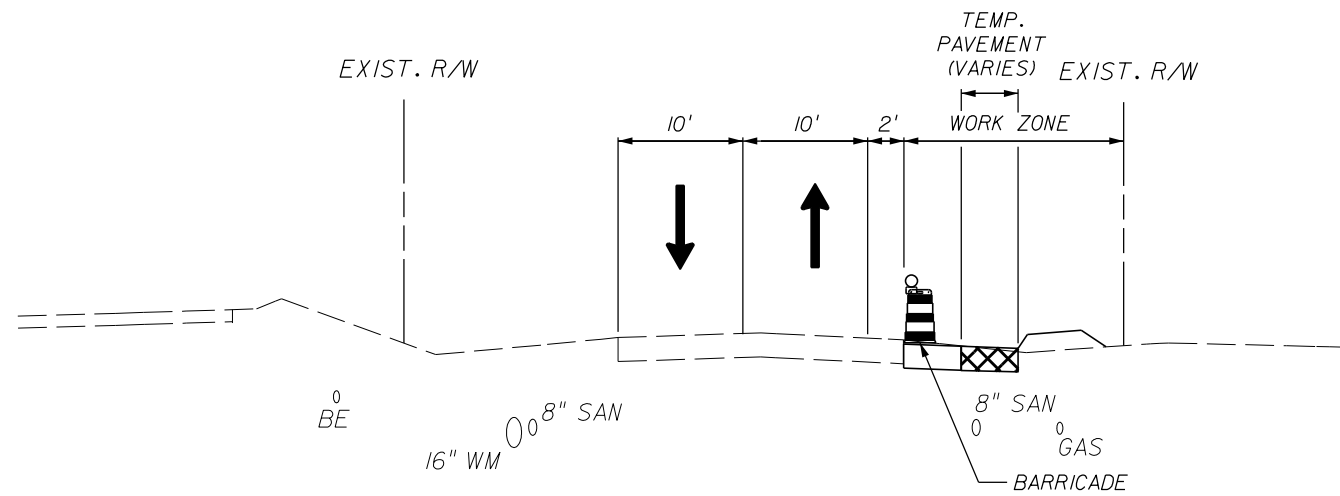
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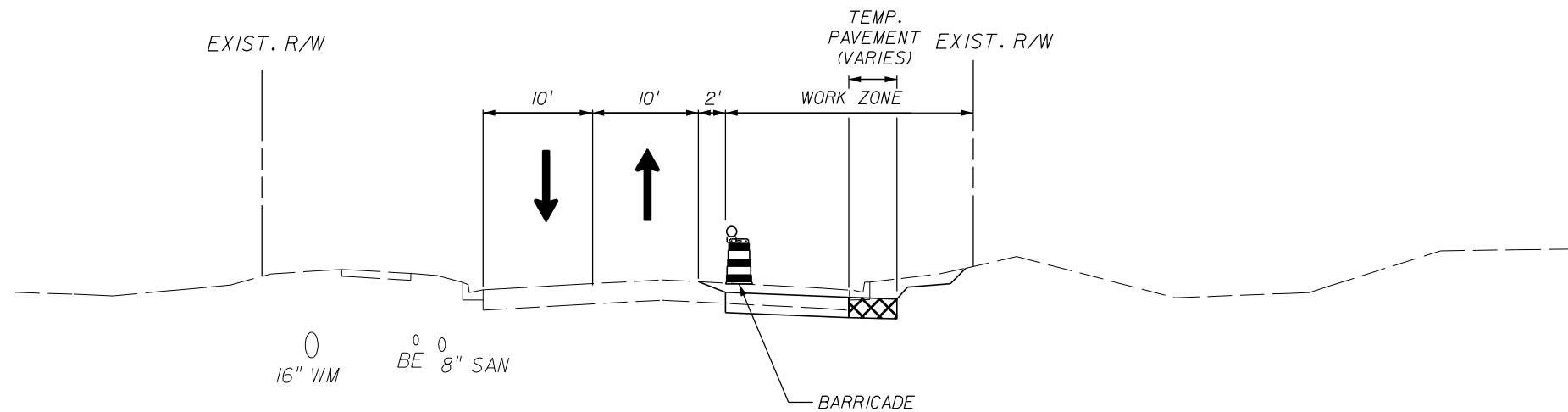


**TRAFFIC CONTROL PLAN**  
**TYPICAL SECTIONS**  
**PHASE IB**

SHEET NO.  
 M-7



TYPICAL SECTION  
 RIO GRANDE AVENUE (SOUTH)  
 STA. 401+00.00 TO STA. 408+09.19



TYPICAL SECTION  
 RIO GRANDE AVENUE (NORTH)  
 STA. 410+04.22 TO STA. 414+40.00

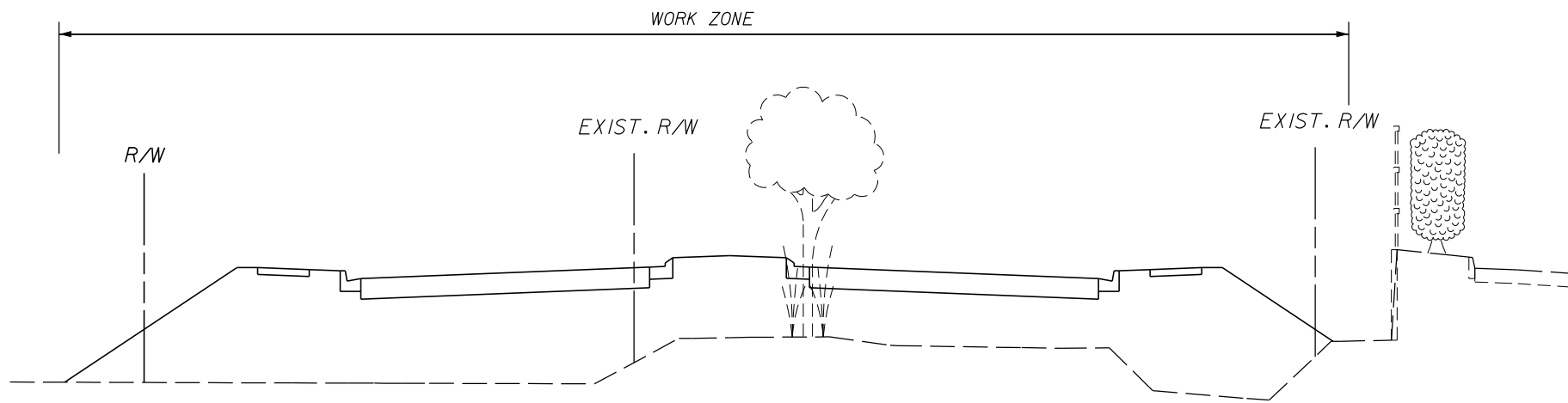
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**TRAFFIC CONTROL PLAN**  
**TYPICAL SECTIONS**  
**PHASE IB**

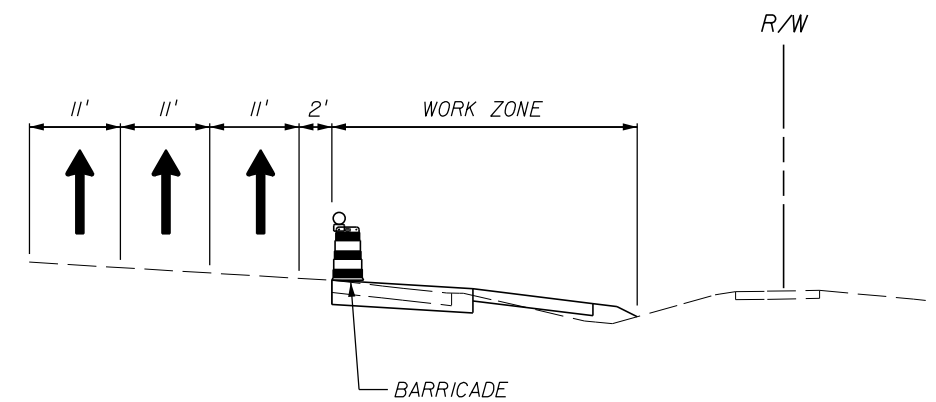
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 M-8



TYPICAL SECTION

HOLDEN AVENUE

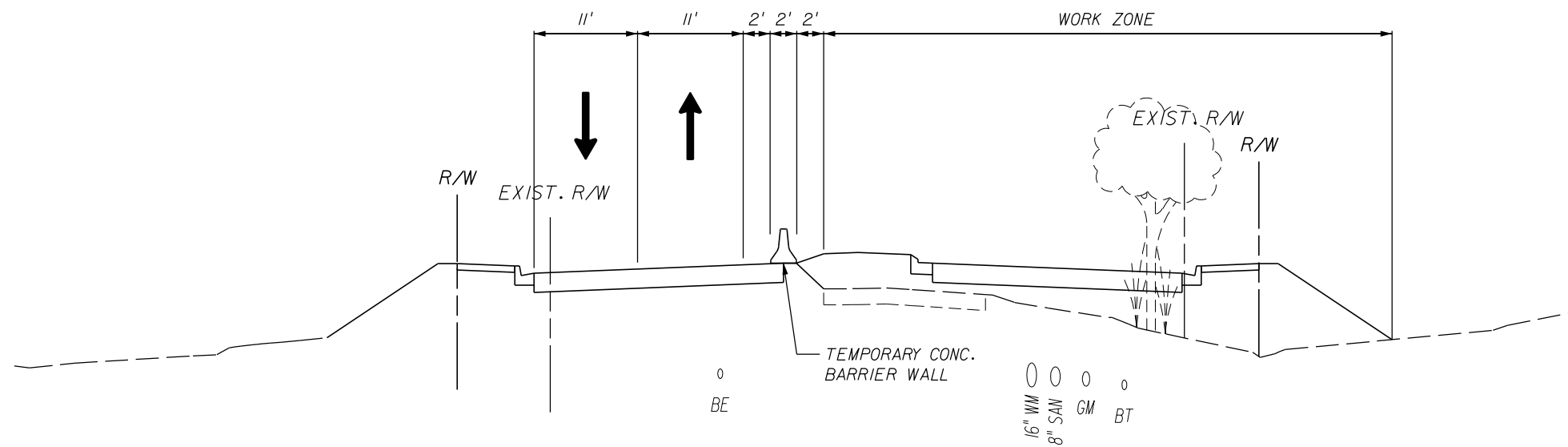
STA. 10+81.55 TO STA. 36+84.92



TYPICAL SECTION

JOHN YOUNG PARKWAY

STA. 202+05.05 TO STA. 206+51.75



TYPICAL SECTION

HOLDEN AVENUE

STA. 36+84.92 TO STA. 76+06.61

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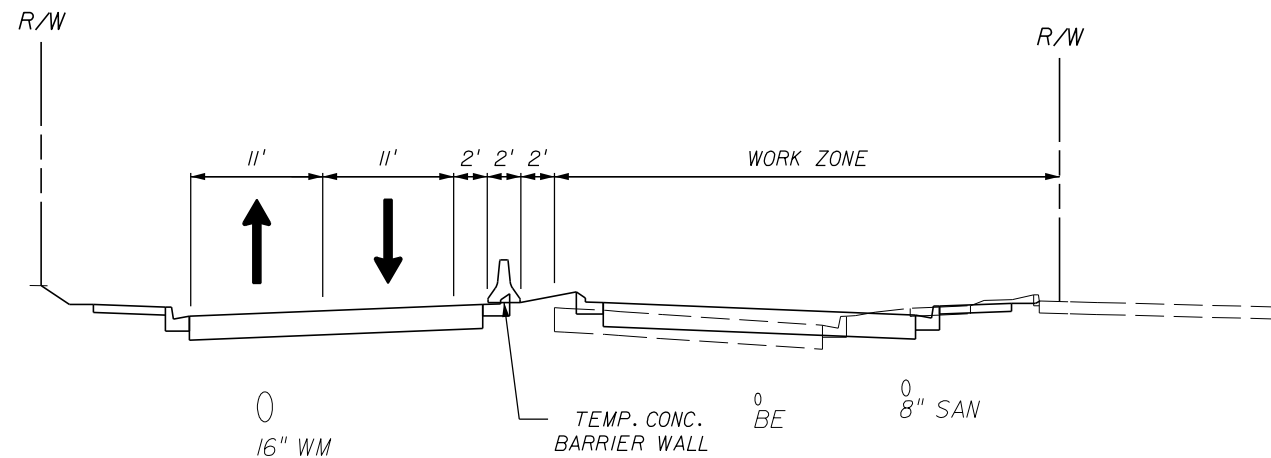
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TRAFFIC CONTROL PLAN  
 TYPICAL SECTIONS  
 PHASE IIB

SHEET NO.  
 M-9

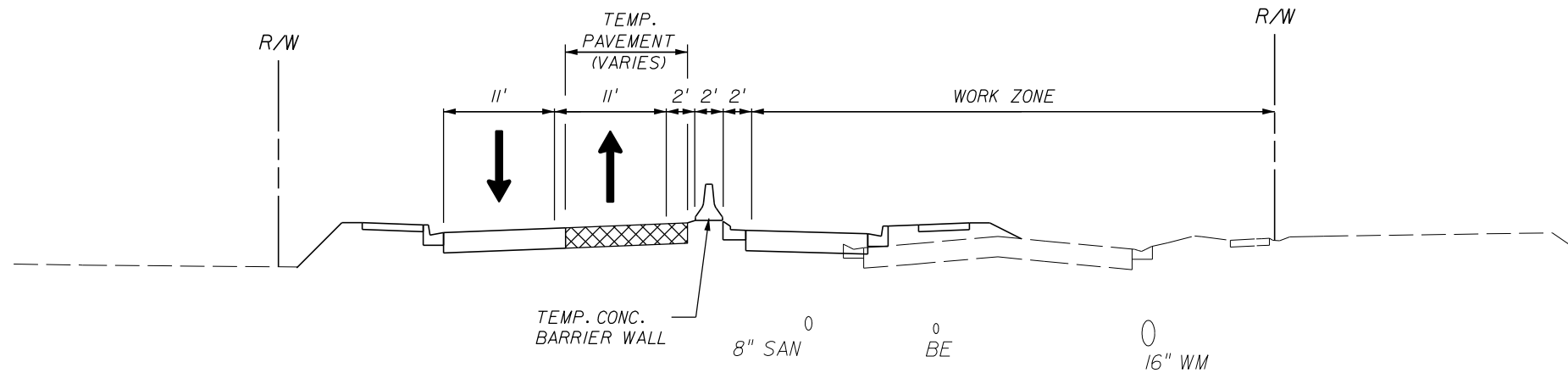




TYPICAL SECTION

TEXAS AVENUE

STA. 392+50.00 TO STA. 400+60.24



TYPICAL SECTION

TEXAS AVENUE

STA. 400+60.24 TO STA. 408+50.00

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**TRAFFIC CONTROL PLAN**  
**TYPICAL SECTIONS**  
**PHASE IIB**

SHEET NO.  
 M-10