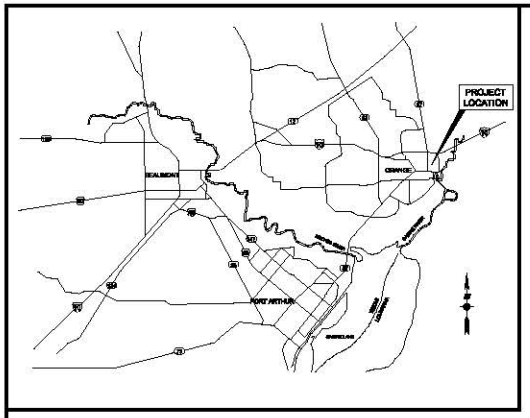
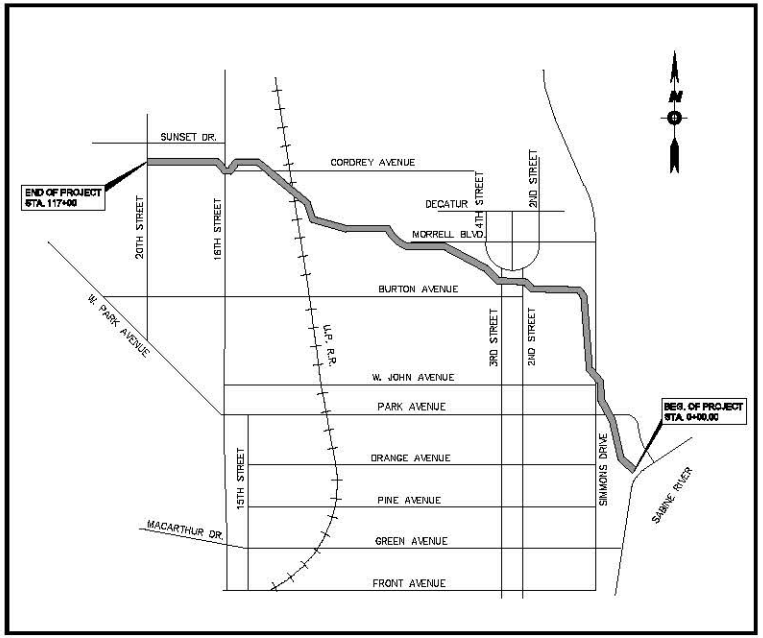


LOCATION MAP
N.T.S.

CONSTRUCTION PLANS FOR
COOPERS GULLY CONCRETE LINING
TO SERVE
CITY OF ORANGE
ORANGE COUNTY, TEXAS



VICINITY MAP
N.T.S.

TEXAS GENERAL LAND OFFICE
ESTABLISHED 1836

GRANT AWARD ID:
DRS220131

APPROVED FOR CONSTRUCTION

CITY OF ORANGE

BY: _____ DATE: _____
JIM B. WOLF, P.E.
DIRECTOR OF PUBLIC WORKS

JOB NO.: ORG-100

DATE: OCTOBER 2016

Engineering F-16194

Surveying 10194049

ARCENEAUX WILSON & COLE
engineering | surveying | planning

2901 Turtle Creek Drive, Suite 320
Port Arthur, TX 77642

409 724 7888
awcorg.com

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JOE M. WILSON, JR.
P.E. 92067

MARCH 27, 2017

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36	CUT / FILL SECTIONS STA. 29+00 - 35+00
37	CUT / FILL SECTIONS STA. 36+00 - 42+85
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42	CUT / FILL SECTIONS STA. 75+00 - 79+85
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100% SUBMITTAL - NOT FOR CONSTRUCTION

PLAN LEGEND

PLAN

EXISTING

BACK OF CURB, INLET AND DIRECTION OF FLOW

WATERLINE, VALVE, FLUSHING VALVE, REDUCER, RELIEF VALVE AND PLUG

STORM SEWER, MANHOLE AND PLUG (SMALLER THAN 30")

STORM SEWER, MANHOLE AND PLUG (30" AND LARGER)

SANITARY SEWER, PLUG, MANHOLE, STACK AND CLEAN-OUT

DITCH AND DIRECTION OF FLOW

PROPOSED

BACK OF CURB, INLET AND DIRECTION OF FLOW

WATERLINE, VALVE, FLUSHING VALVE, REDUCER, RELIEF VALVE AND PLUG

(SIZE) STORM SEWER, MANHOLE AND PLUG (SMALLER THAN 30")

(SIZE) STORM SEWER, MANHOLE AND PLUG (30" AND LARGER)

(SIZE) SANITARY SEWER, PLUG, WYE, MANHOLE, STACK AND CLEAN-OUT

DITCH AND DIRECTION OF FLOW

MISCELLANEOUS PLAN

LOT LINE, STREET RIGHT OF WAY LINE

PROPERTY BOUNDARY LINE

EASEMENT LINE

CENTERLINE AND STATION MARKERS

BASELINE AND STATION MARKERS

EXISTING FENCE

EXISTING RAILROAD

GAS LINE

PIPE LINE

TELEPHONE LINE

CONTOUR LINE AND ELEVATION

DRAINAGE AREA BOUNDARY

1.8 ACRES / 2.5 C.F.S. ACCUMULATED DRAINAGE AREA

1.8 ACRES / 2.5 C.F.S. INLET DRAINAGE AREA

GUY ANCHOR UP

UTILITY POLE W/ GUY WIRE

UP UTILITY POLE W/STREET LIGHT

BENCHMARK

BOUNDARY MARKER

SOIL BORE

EDGE OF ASPHALT PAVING

SCF SEDIMENT CONTROL FENCE

LIST OF ABBREVIATIONS

AC	ACRE	DR.	DRIVE	HWY	HIGHWAY	REQ'D	REQUIRED
B/B	BACK TO BACK	D.I.P.	DUCTILE IRON PIPE	I.P.,I.R.	IRON PIPE, IRON ROD	RT	RIGHT (X-SECTION NOTES)
℄	BASE LINE	ESMT	EASEMENT	LT	LEFT (X-SECTION NOTES)	ROW	RIGHT-OF-WAY
BM	BENCH MARK	EB	ELECTRICAL BOX	MH	MANHOLE	SPEC'D	SPECIFIED
B.L.	BUILDING LINE	EL ELEV	ELEVATION	MAX	MAXIMUM	SF	SQUARE FEET, FOOT
B.V.	BUTTERFLY VALVE	ER	END RETURN	M.S.L.	MEAN SEA LEVEL	SS	STAINLESS STEEL
C.I.	CAST IRON	EQ SPA, ES	EQUALLY SPACED	MIN	MINIMUM	STA	STATION
C/C	CENTER TO CENTER	EXIST	EXISTING	MON.	MONUMENT	STL	STEEL
℄	CENTERLINE	F.B.	FIELDBOOK	NTS	NOT TO SCALE	ST.	STREET
CONC	CONCRETE	F.G.	FINISHED GRADE	NO.	NUMBER	TBM	TEMPORARY BENCH MARK
CONC MON	CONCRETE MONUMENT	F.H.	FIRE HYDRANT	O.C.E.W.	ON CENTER EACH WAY	TC	TOP OF CURB
C.J.	CONSTRUCTION JOINT	F.S.	FIRE SPRINKLER	PVMT	PAVEMENT	TP	TOP OF PAVEMENT
C.P.P.	CORRUGATED PLASTIC PIPE	℄	FLOW LINE (INVERT)	P.V.C.	POLYVINYL CHLORIDE	TYP	TYPICAL
X-SECT	CROSS-SECTION	FT	FOOT, FEET	PROP	PROPOSED	UP	UTILITY POLE
C.Y.	CUBIC YARD	FND	FOUND	RCB	REINFORCED CONCRETE BOX	VPI	VERTICAL POINT OF INFLECTION
DIA	DIAMETER	GALV	GALVANIZED	RCP	REINFORCED CONCRETE PIPE	WM	WATER METER

GENERAL CONSTRUCTION NOTES

1. ALL ELEVATIONS SHOWN ARE M.S.L. DATUM PLUS 100 FEET.
2. CONTRACTOR TO VERIFY LOCATION AND ELEVATION OF EXISTING FACILITIES PRIOR TO CONSTRUCTION OF PROPOSED FACILITIES.
3. EXCESS SPOIL FROM CONSTRUCTION, WHICH CANNOT BE USED FOR FINAL SITE GRADING, SHALL BE DISPOSED OFFSITE BY CONTRACTOR AT NO ADDITIONAL PAY.
4. CONTRACTOR WILL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES PRIOR TO CONSTRUCTION IN AREA OF POSSIBLE UNDERGROUND UTILITIES WHICH MAY NOT BE SHOWN ON DRAWING.
5. CONTOURS SHOWN INDICATE EXISTING NATURAL GROUND PRIOR TO CLEARING AND GRUBBING.
6. TO CONTROL SEDIMENT AND STORM WATER POLLUTION, CONTRACTOR SHALL NOT REMOVE MORE CONCRETE LINER THAN CAN BE REPLACED WITHIN THE SAME WORK WEEK.
7. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES WITH EXISTING FACILITIES IN AREA OF CONSTRUCTION AT LEAST 48 HOURS BEFORE BEGINNING CONSTRUCTION IN THAT AREA. THE FOLLOWING IS A PARTIAL LIST OF CONTACTS:

ENTEX GAS	MR. KENNETH ROACH 409-963-7125
ENTERGY	MR. JOHNNY TRAHAN 409-882-2054
SOUTHWESTERN BELL	MR. ROGER FRUGE 409-839-6965
TIME WARNER COMMUNICATIONS	MR. HERCEL STRACENER 409-720-5501
CITY OF ORANGE PUBLIC WORKS	MR. J.B. WOLF, PE 409-988-7335
ORANGE COUNTY DRAINAGE DISTRICT	MR. XXXXXXXXXXXX 409-XXX-XXXX
TEXAS DEPARTMENT OF TRANSPORTATION	MR. DUANE BROWNING, PE 409-722-8377
TEXAS ONE CALL SYSTEM	1-800-245-4545
DIG-TESS	1-800-344-8377
AIRLIQUIDE	CURTIS BYRD 337-583-7699

	MIN. COMP. STRENGTH (PSI)		MAX. WATER CONTENT[1] POUNDS OF WATER/LB. CEMENT	GALLONS OF WATER/BAG OF CEMENT	MIN. CEMENTIC FER CT[2] LBS.	BAGS	SLUMP RANGE (IN)*	TOTAL AIR CONTENT (%)
CLASS-TYPE	7-DAY	28-DAY						
A-STRUCTURAL	2000	3000	0.58	6.25	494	5.25	2 ½ TO 4 ½	2 ½ TO 4 ½
Rep-STRUCTURAL[3]	2000	3000	0.50	5.65	423	4.50	7 TO 10[4]	3 TO 5
B-SLOPE PROTECTION	1500	2000	0.78	8.50	400	4.25	2 ½ TO 4	2 ½
C-PIPE BLOCKING	---	1500	0.87	11.00	282	3.00	3 TO 5	AS NEEDED
D-SEAL SLAB	---	---	---	---	376	4.00	6 TO 8	3 TO 5
E-MONOLITHIC SEWER	2000	3000	0.56	6.25	564	6.00	4 TO 6	AS NEEDED
F-PRESTRESSED[5]	---	5000	0.51	5.75	635	6.75	2 TO 3	AS NEEDED
G-PRESTRESSED[6]	---	6000	0.49	5.50	658	7.00	2 TO 3	2 ½ TO 4 ½
K-STRUCTURAL[6]	2800	4000	0.50	5.65	564	6.00	3 ½ TO 5	2 ½ TO 4 ½
Rep-STRUCTURAL	2800	4000	0.46	5.00	470	5.00	7 TO 10[4]	2 ½ TO 4 ½
P-PAVING 5-INCH [8]	1800	2600	0.68	7.50	423	4.50	3 TO 5	2 ½ TO 4 ½
450[7]								
P-PAVING 6-INCH [8]	1800	3000	0.68	7.50	423	4.50	3 TO 5	2 ½ TO 4 ½
480[7]								
P-PAVING 7-INCH [8]	2000	3000	0.64	7.50	470	5.00	3 TO 5	2 ½ TO 4 ½
500[7]								
P-PAVING 8-INCH [8]	2000	3000	0.64	7.50	470	5.00	3 TO 5	2 ½ TO 4 ½
550[7]								

CONCRETE NOTES

1. THE CITY TESTING LAB WILL SAMPLE ALL CONCRETE, MAKE AND TEST ALL BEAMS AND CYLINDERS IN ACCORDANCE WITH THE TEST METHODS PROVIDED FOR UNDER THE APPROPRIATE STANDARD SPECIFICATIONS FOR THE VARIOUS ITEMS.
2. REINFORCING STEEL TO BE PLACED 1/3 FROM BOTTOM OF SLAB AND SUPPORTED ON CHAIRS WHICH WILL ADEQUATELY SUPPORT IT DURING CONSTRUCTION.
3. ALL DOWELS USED FOR EXPANSION JOINTS AND CONSTRUCTION JOINTS MUST BE SUPPORTED ADEQUATELY SO THAT THEIR POSITION WILL BE MAINTAINED DURING CONSTRUCTION.

PIPE CONNECTION TABLE 2-1

CONNECTION TYPE INDEX
1 EXISTING MANHOLE
2 TO BE MANHOLED INTO PIPE
3 CLEAN AND CUT PIPE JOINTS AND
4 NEW PIPE
REQUIRED INSTALLATION SUPPLIES

PIPE CONNECTIONS

SHEET	CONNECTION NUMBER	CONNECTION TYPE	PIPE SIZE	TRIM LENGTH (L.F.)	EXTEND LENGTH (L.F.)	NEW LENGTH (L.F.)	SPECIAL REQUIREMENTS
6	1	3	30"	7	16		
	2	3	30"	9	16		
	3	3	30"	5	16		
	4	1	18"		44		ADJUST MH CONNECT AND ADD 10 L.F. 24" PIPE TO EXISTING CLASS III PIPE AND CONNECT TO PROPOSED MAIN OUT
7	5	1	60"		16		
	6	1	24"		5		
	7	1	30"		16		
	8	SPILLWAY	--				TIE IN TO PROPOSED CROSS SECTION
9	9	3	18"	2	6		
10	10	3	24"	2	6		
	11	SPILLWAY	--				TIE IN TO PROPOSED CROSS SECTION
	12	SPILLWAY	--				TIE IN TO PROPOSED CROSS SECTION
	13	1	18"		12		
	14	1	12"		6		
12	15	1	30"		24		
	16	4	18"			16	
13	17	1	36"		10		DEMO EXIST. RCP SPILLWAY
	18	1	12"		20		DEMO EXIST. RCP DETAIL A & B SPILLWAY
	19	2	70"	2			
	20	4	18"			24	
	21	4	24"				16 PVC SAFETY END TREATMENT
18	22	4	18"				8 "GRATE IN FT
	23	1	48"		12		
	24	5	18"	7			
	25	1	18"		14		
	26	4	18"				8 "GRATE IN FT
19	27	5	18"	7			"GRATE IN FT
	28	7	36"				"MITRE EXIST. RCP PIPE TO WATCH MATCH OF NEW LINER
	29	7	36"				"MITRE EXIST. RCP PIPE TO WATCH MATCH OF NEW LINER
	30	1	24"		20		"DEMO EXIST. RCP SPILLWAY"
16	31	4	36"				20 "DEMO EXIST. RCP 36" AND REPLACE W TH NEW
	32	4	36"	2	6		
	33	4	24"				24
17	34	4	18"	2			"MITRE EXIST. RCP PIPE TO WATCH MATCH OF NEW LINER
	35	1	24"		16		
19	36	2	30"	--			"MITRE EXIST. RCP PIPE TO WATCH MATCH OF NEW LINER
	37	2	30"	--			"MITRE EXIST. RCP PIPE TO WATCH MATCH OF NEW LINER
	38	2	24"	--			"MITRE EXIST. RCP PIPE TO WATCH MATCH OF NEW LINER
	39	2	24"	--			"MITRE EXIST. RCP PIPE TO WATCH MATCH OF NEW LINER
	40	2	18"	--			"MITRE EXIST. RCP PIPE TO WATCH MATCH OF NEW LINER
	41	2	30"	--			"MITRE EXIST. RCP PIPE TO WATCH MATCH OF NEW LINER
	42	3	12"	8	6		
	44	2	4"	--			"MITRE EXIST. RCP PIPE TO WATCH MATCH OF NEW LINER
	45		6"	5			REPLACE BOX GRATE WITH 2 - 6" PVC
	46	4	24"				25 PVMT-4-4-1 SAFETY END TREATMENTS W/ 18" SUMPER
	47	7	24"				"MITRE EXIST. RCP PIPE TO WATCH MATCH OF NEW LINER
20	48	5	36"	4	4		"DEMO EXIST. RCP SPILLWAY"
	49	4	24"				18 PVMT-4-4-1 SAFETY END TREATMENTS W/ 18" SUMPER
	50	4	24"				18 PVMT-4-4-1 SAFETY END TREATMENTS W/ 18" SUMPER
24	51	4	24"	12			PVMT-4-4-1 SAFETY END TREATMENTS W/ 18" SUMPER ADD 6" VERTICAL CROWN ROCK
25	52	3	30"	5	6		
	53	3	30"	4	8		
	54	4	18"				18 PVMT-4-4-1 SAFETY END TREATMENTS W/ 18" SUMPER
26	55	4	30"				34 "REMOVE EXIST. RCP PIPE & DITCH AND REPLACE WITH PROPOSED 34 L.F. 30" RCP

SHEET 2

NO.	DATE	REVISIONS	APPROVAL
4			
3			
2			
1			

DATE: OCTOBER 2016 SCALE: AS SHOWN DRAWN BY: RMI
JOB NO.: CRC-100 DESIGNED BY: CCC CHECKED BY: RCC

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

LEGEND & CONSTRUCTION NOTES

ORANGE, ORANGE COUNTY, TEXAS

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JOE M. WILSON, JR.
P.E. 92067

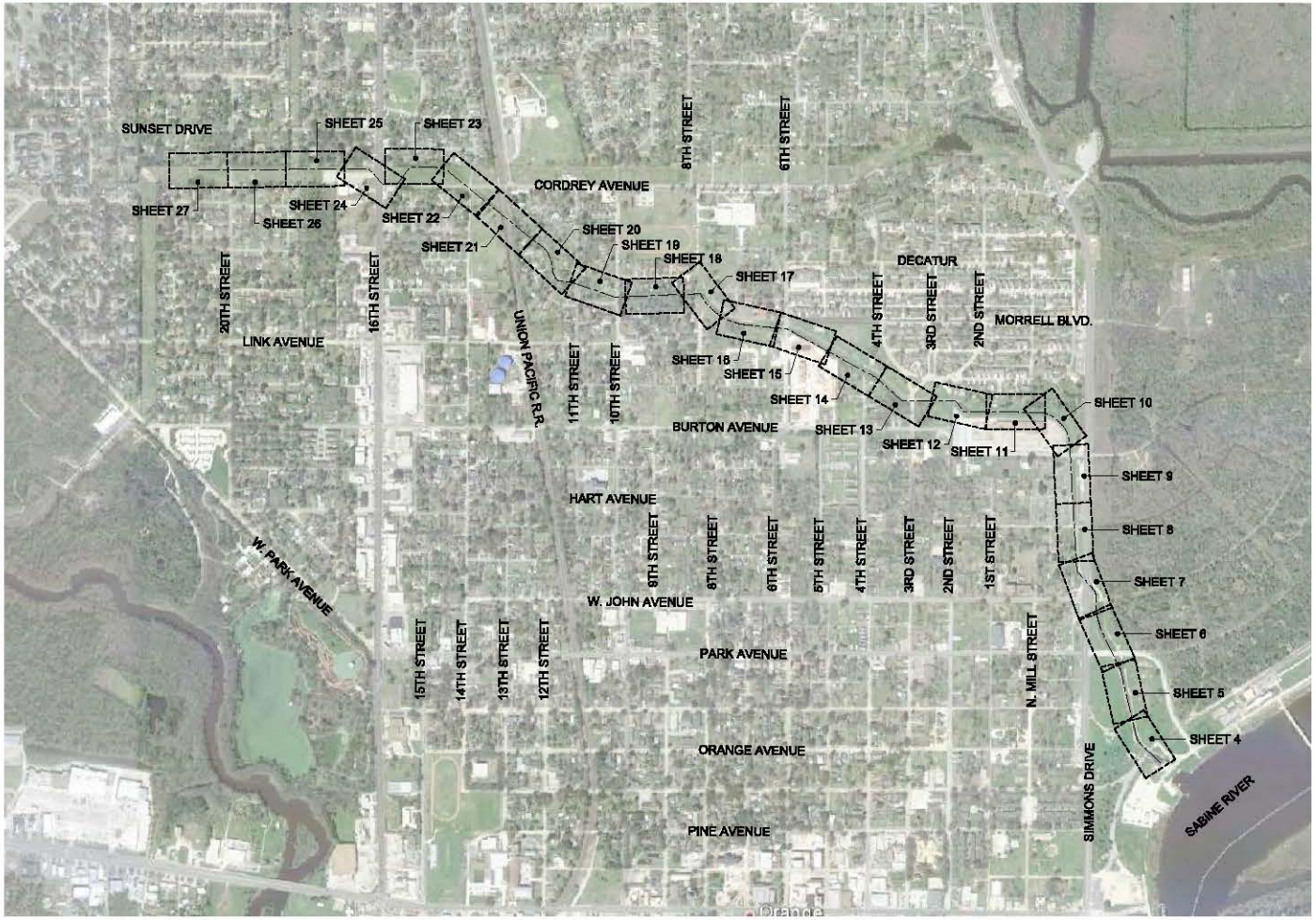
MARCH 27, 2017

Surveying
TBPLS#10194

ARCHEAULT, WILSON & COLE
Engineering | Surveying | Planning

4409 Texas Avenue
Port Arthur, TX 77642

Engineering
F-10194



COOPERS GULLY CONCRETE LINING
CITY OF ORANGE

LAYOUT

Orange County, Texas

NO.	DATE	REVISION
4		
3		
2		
1		

DATE: OCTOBER 2016
JOB NO.: DRC-102
SCALE: AS SHOWN
SURVEYED BY: DPC
DRAWN BY: SJB
CHECKED BY: AM
APPROVED

SHEET 3 OF ##

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P.E. 92087

MARCH 27, 2017

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Surveying
10174000

Engineering
F-10094

BLUE HATCH IN PLAN VIEW INDICATES THE BOUNDARIES OF THE JURISDICTIONAL WATER OF THE U.S.

OHWM-L

OHWM-R

58

FLOW

MATCH LINE STA. 5+00

PUMP STATION

0+00

1+00

2+00

3+00

4+00

5+00

* OHWM SHOWN IN PROFILE VIEW IS ESTIMATED BASED ON THE HIGHER OF LEFT BANK AND RIGHT BANK ELEVATIONS AND ACCOUNTS FOR VARIATIONS IN EROSIONAL AREAS, GPS METERING RESOLUTION, AND HAZARDOUS CONDITIONS ALONG BANKS.

*OHWM

EXISTING TOP OF DITCH

EXISTING BOTTOM OF DITCH

24" PIPE FL EL=100.52'

24" PIPE FL EL=98.25'

30" PIPE FL EL=96.44'

30" PIPE FL EL=94.70'

36" PIPE FL EL=96.36'

36" PIPE FL EL=95.90'

36" PIPE FL EL=95.45'

108'

104'

100'

96'

92'

SHEET 4

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

PLAN AND PROFILE STA. 0+00 TO STA. 5+00

ORANGE, ORANGE COUNTY, TEXAS

DATE: OCTOBER 2016

JOB NO.: CRC-100

SCALE: AS SHOWN

DESIGNED BY: CCC

DRAWN BY: RWI

CHECKED BY: FCC

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JOE M. WILSON, JR.
P.E. 92057

MARCH 27, 2017

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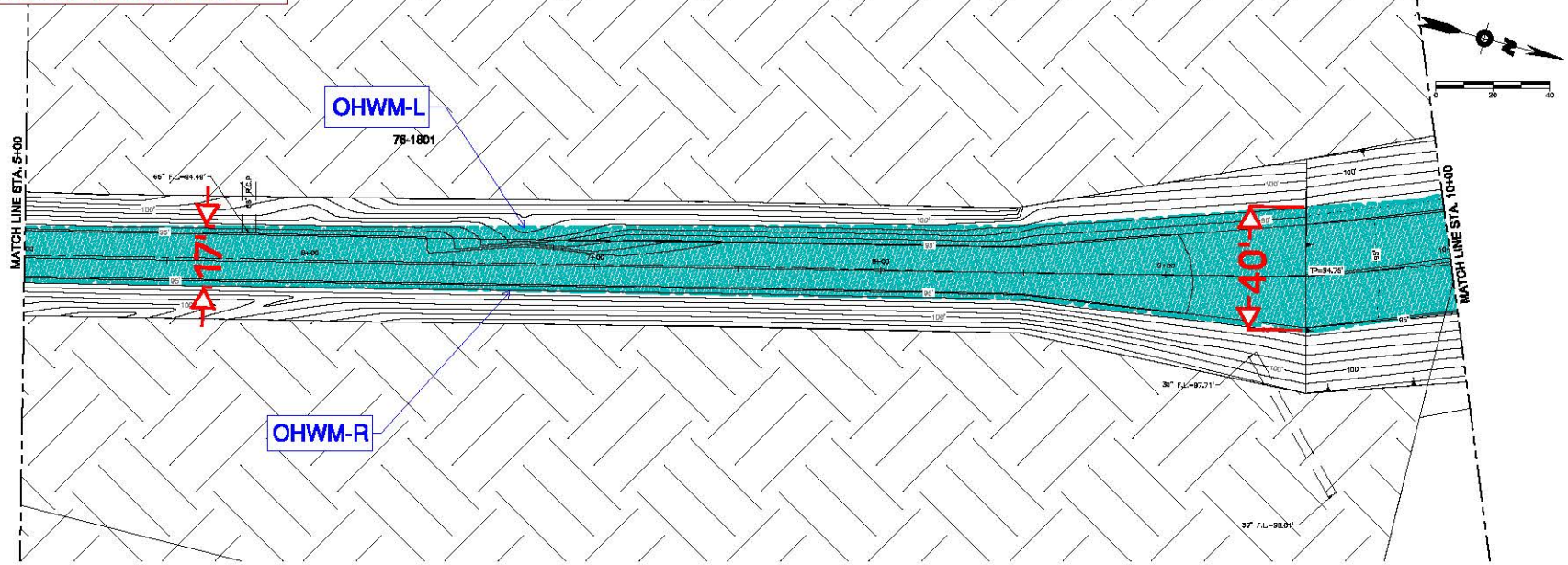
Surveying 10194444

Engineering F-10994

BLUE HATCH IN PLAN VIEW INDICATES THE BOUNDARIES OF THE JURISDICTIONAL WATER OF THE U.S.



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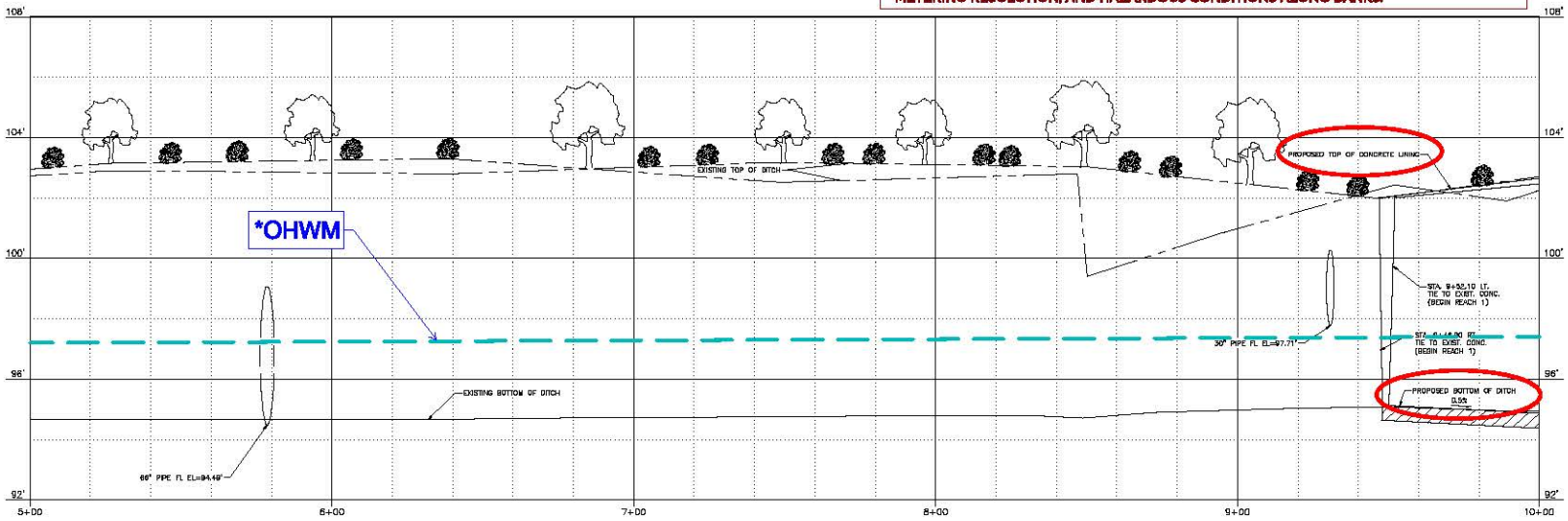

SHEET 5

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

PLAN AND PROFILE STA. 5+00 TO STA. 10+00

ORANGE, ORANGE COUNTY, TEXAS

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P.E. 92067

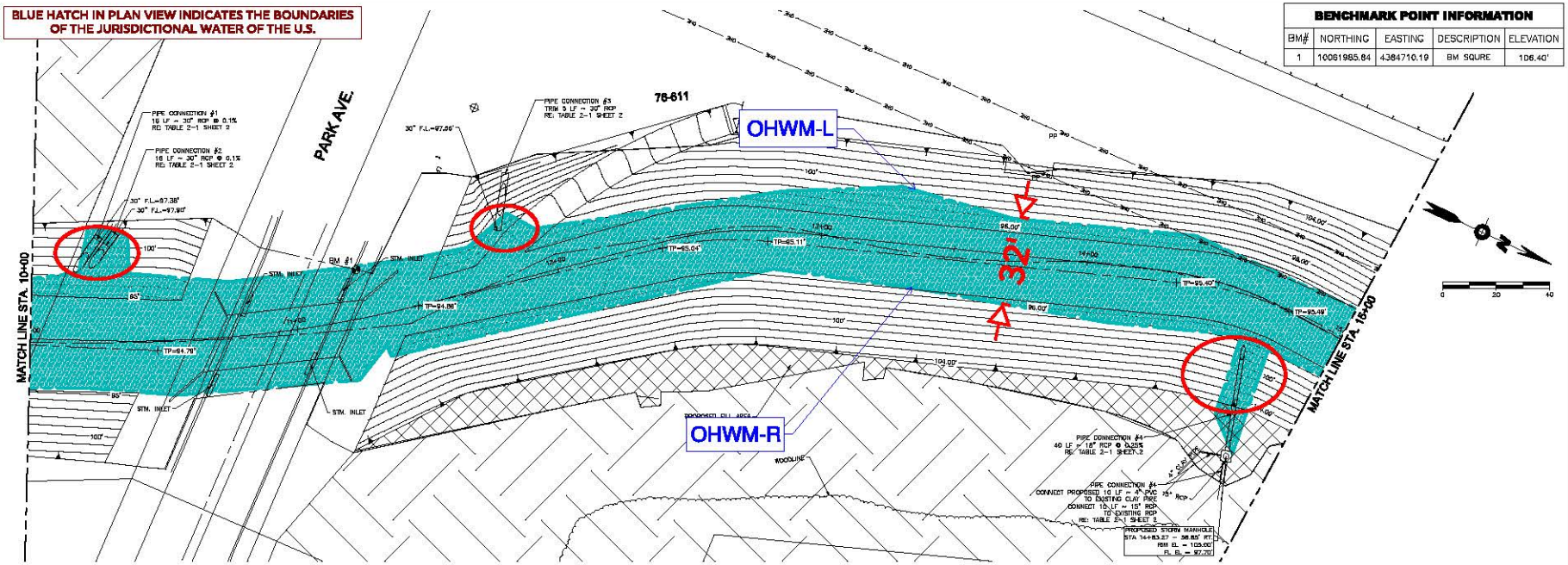
MARCH 27, 2017

ARCHEAULT, WILSON & COLE

BLUE HATCH IN PLAN VIEW INDICATES THE BOUNDARIES OF THE JURISDICTIONAL WATER OF THE U.S.

BENCHMARK POINT INFORMATION

BM#	NORTHING	EASTING	DESCRIPTION	ELEVATION
1	10061985.84	4384710.19	BM SQURE	106.40'



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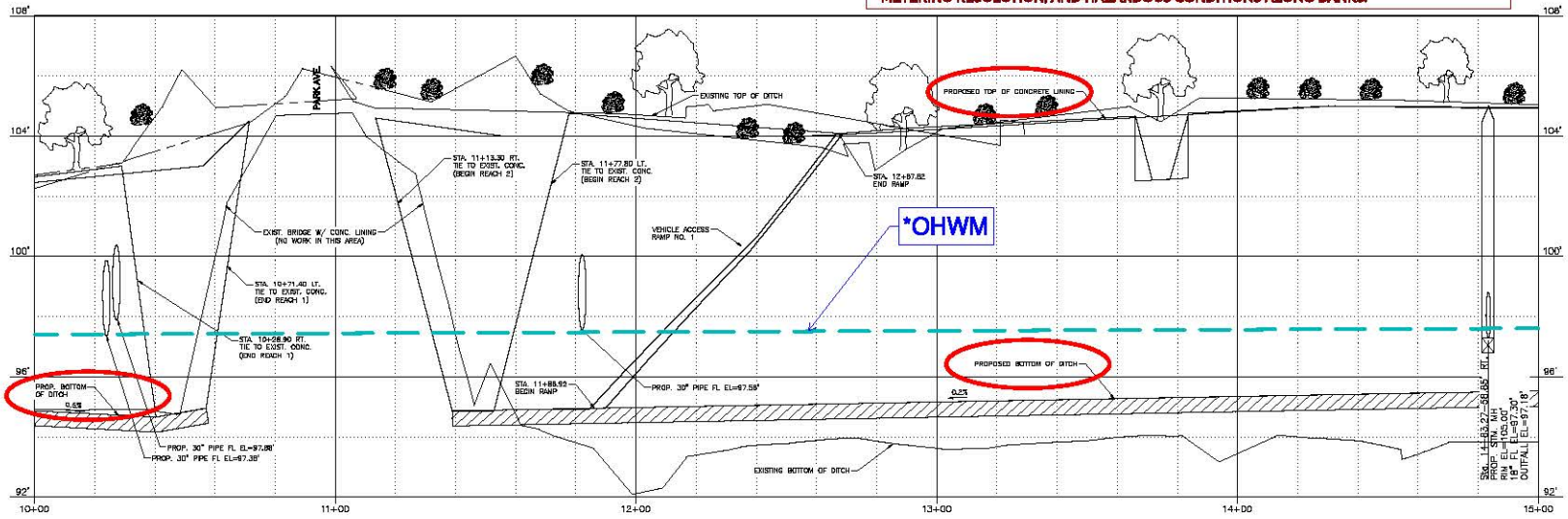

SHEET 6

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

PLAN AND PROFILE STA. 10+00 TO STA. 15+00

ORANGE, ORANGE COUNTY, TEXAS

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JOE M. WILSON, JR.
P.E. 92067

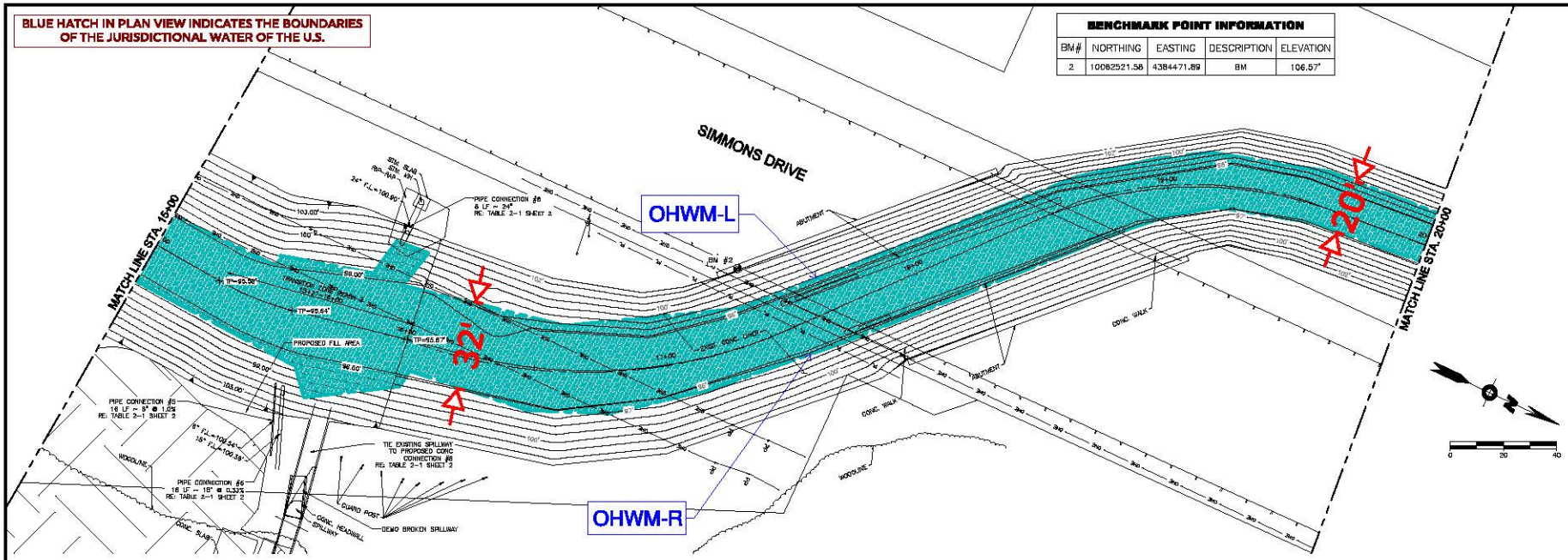
MARCH 27, 2017

ARCHERWILSON & COLE

BLUE HATCH IN PLAN VIEW INDICATES THE BOUNDARIES OF THE JURISDICTIONAL WATER OF THE U.S.

BENCHMARK POINT INFORMATION

BM#	NORTHING	EASTING	DESCRIPTION	ELEVATION
2	10082521.58	4384471.89	BM	106.57'



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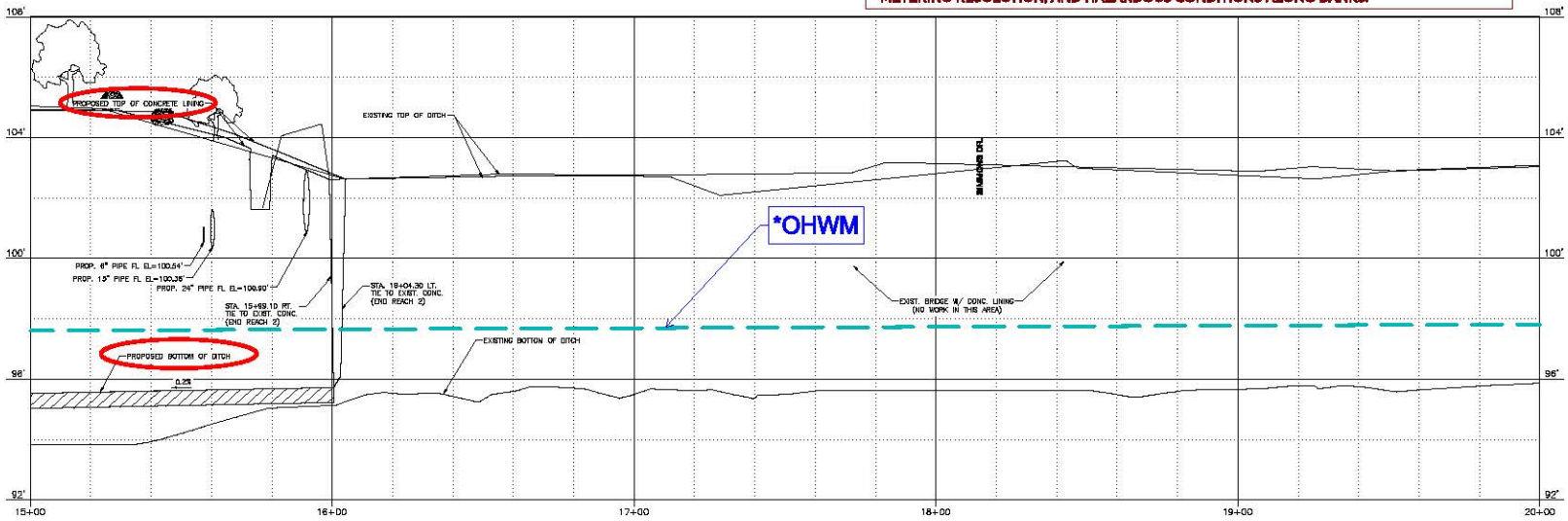

SHEET 7

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

PLAN AND PROFILE STA. 15+00 TO STA. 20+00

ORANGE, ORANGE COUNTY, TEXAS

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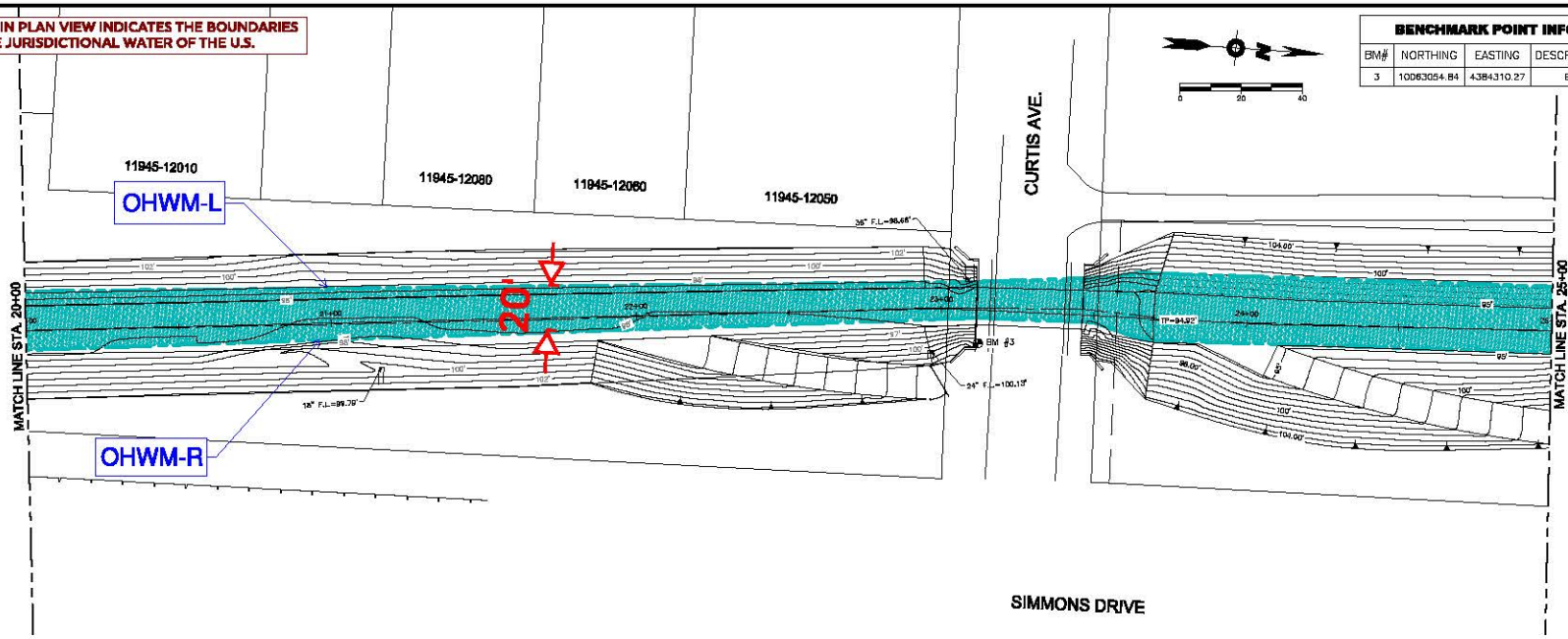
MARCH 27, 2017

ARCHEAULT, WILSON & COLE
Engineering Firm F-10994
Surveying 10194444

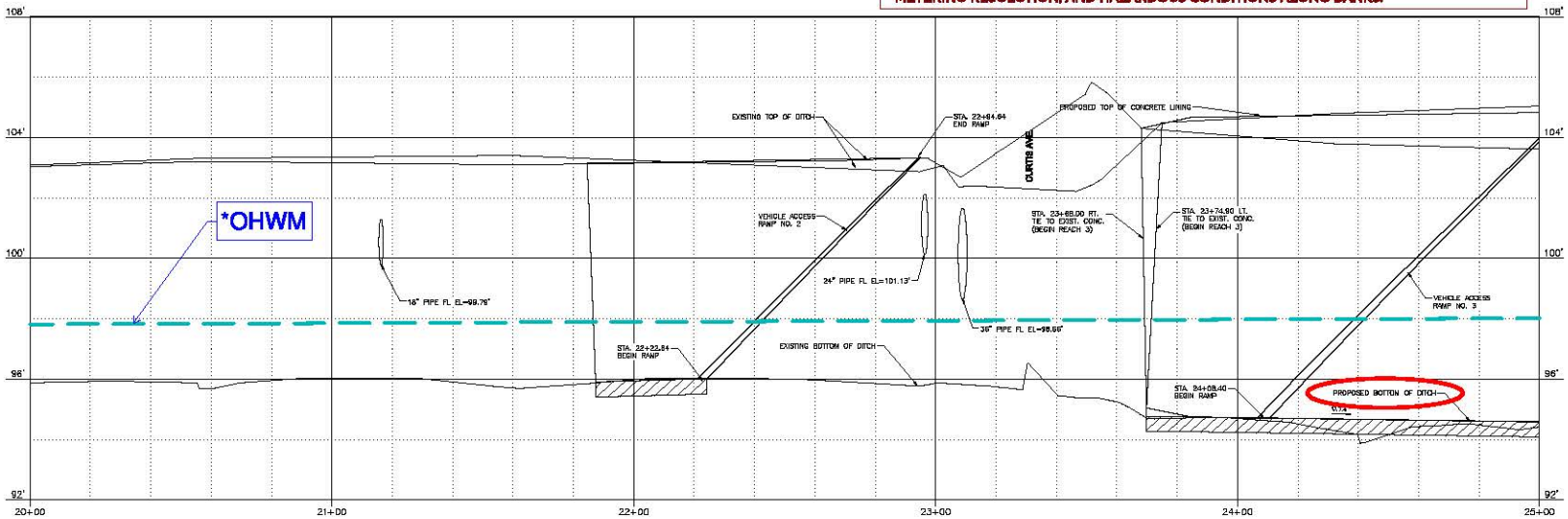
BLUE HATCH IN PLAN VIEW INDICATES THE BOUNDARIES OF THE JURISDICTIONAL WATER OF THE U.S.

BENCHMARK POINT INFORMATION

BM#	NORTHING	EASTING	DESCRIPTION	ELEVATION
3	10063054.84	4384310.27	BM	107.35'



* OHWM SHOWN IN PROFILE VIEW IS ESTIMATED BASED ON THE HIGHER OF LEFT BANK AND RIGHT BANK ELEVATIONS AND ACCOUNTS FOR VARIATIONS IN EROSIONAL AREAS, GPS METERING RESOLUTION, AND HAZARDOUS CONDITIONS ALONG BANKS.



SHEET 8

NO.	DATE	REVISION	APPROV.
1			
2			
3			
4			

DATE: OCTOBER 2016 | SCALE: AS SHOWN | DRAWN BY: RMI
JOB NO.: CRC-100 | DESIGNED BY: CCC | CHECKED BY: FCC

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

PLAN AND PROFILE STA. 20+00 TO STA. 25+00

ORANGE, ORANGE COUNTY, TEXAS

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JOE M. WILSON, JR.
P.E. 92067

MARCH 27, 2017

Surveying 10194944

Engineering F-10994

ARCHBEALDY, WILSON & COLE
Engineering | Surveying | Planning

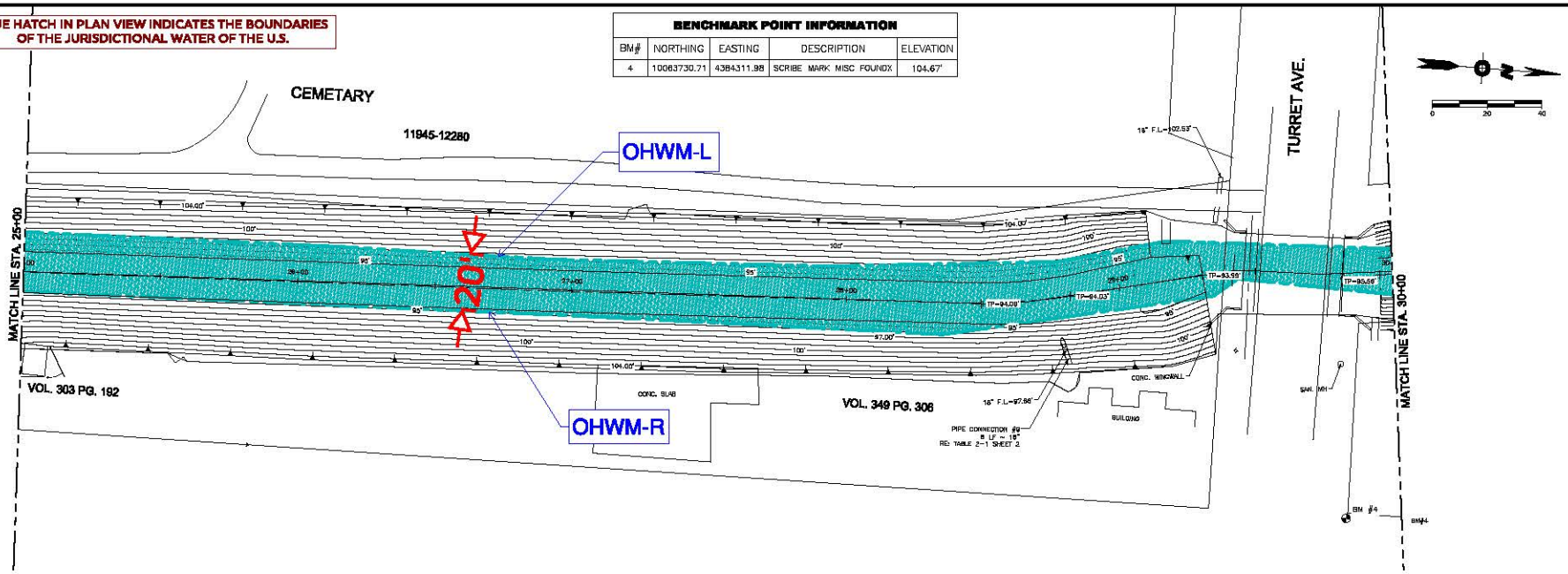
4409 Twin Creek Drive, Suite 200
Port Arthur, TX 77642

409.724.7888
www.awc-tx.com

BLUE HATCH IN PLAN VIEW INDICATES THE BOUNDARIES OF THE JURISDICTIONAL WATER OF THE U.S.

BENCHMARK POINT INFORMATION

BM#	NORTHING	EASTING	DESCRIPTION	ELEVATION
4	10063730.71	4384311.98	SCRIBE MARK MISC FOUNDX	104.67'



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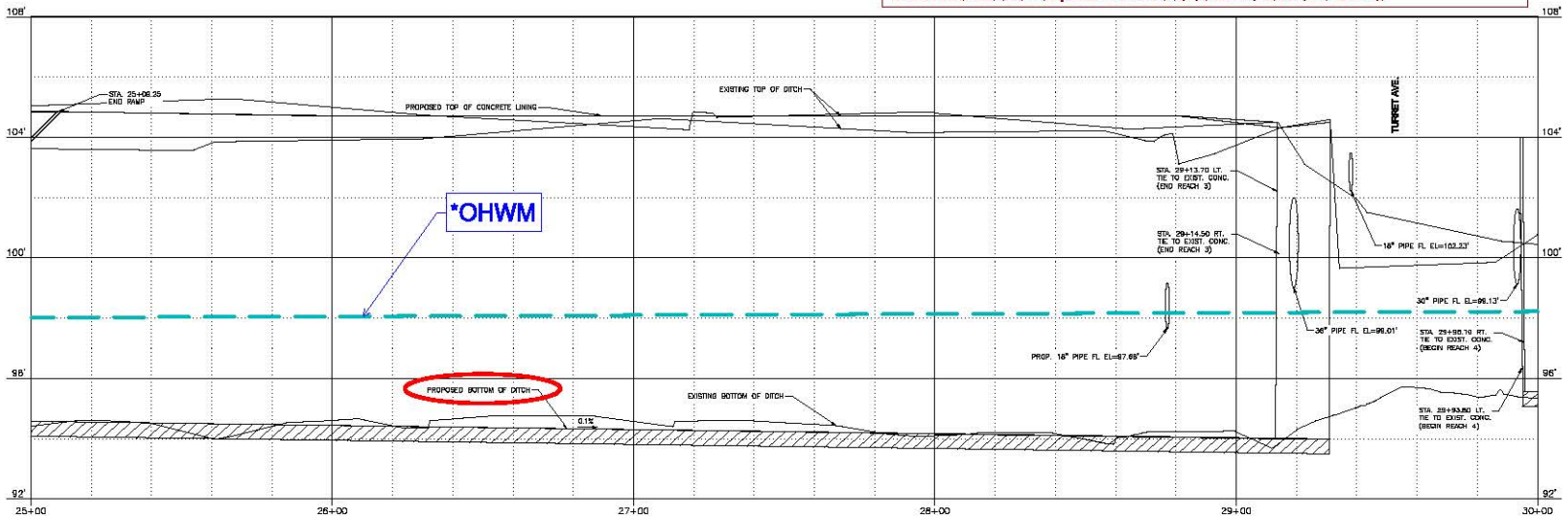

SHEET 9

NO.	DATE	REVISION	APPROV.
4			
3			
2			
1			

DATE: OCTOBER 2016 | SCALE: AS SHOWN | DRAWN BY: RMI
JOB NO.: CRC-100 | DESIGNED BY: CCC | CHECKED BY: FCC

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE
PLAN AND PROFILE STA. 25+00 TO STA. 30+00
ORANGE, ORANGE COUNTY, TEXAS

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JOE M. WILSON, JR.
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MARCH 27, 2017

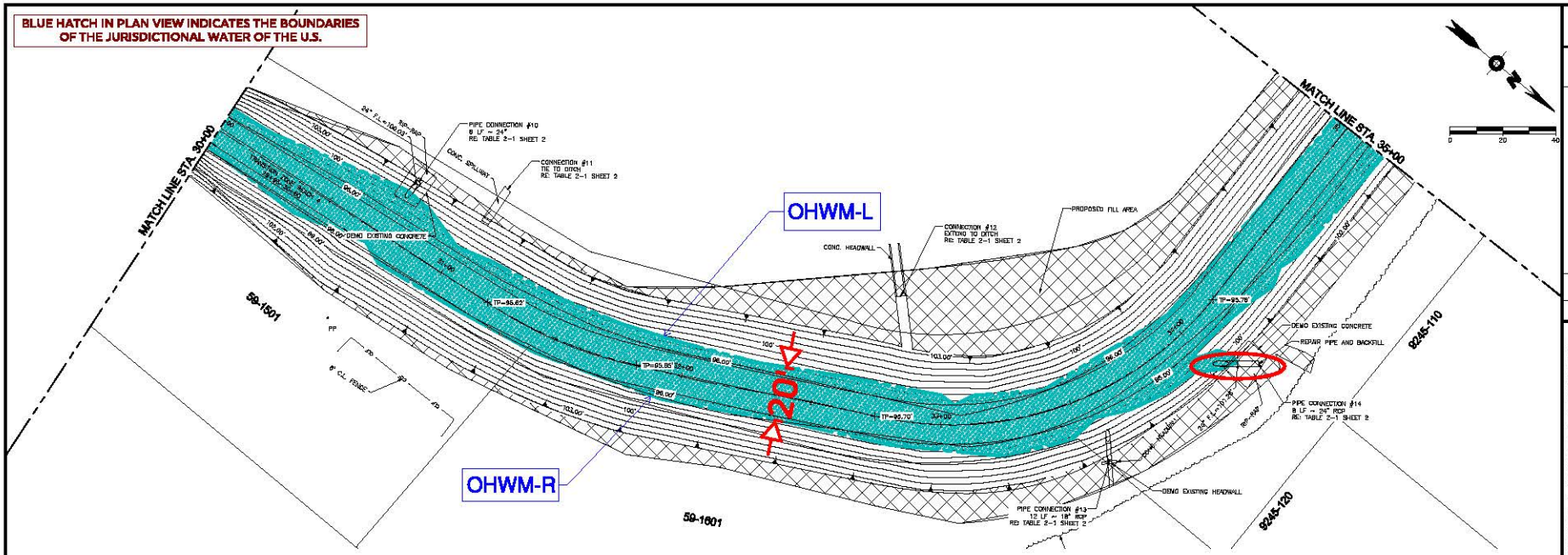
Surveying TBPLS#
Engineering TBPE#

ARCHEAULT, WILSON & COLE
Engineering | Surveying | Planning

409.296.3888
www.awc

2001 Tevis Creek Drive, Suite 200
Port Arthur, TX 77642

BLUE HATCH IN PLAN VIEW INDICATES THE BOUNDARIES OF THE JURISDICTIONAL WATER OF THE U.S.



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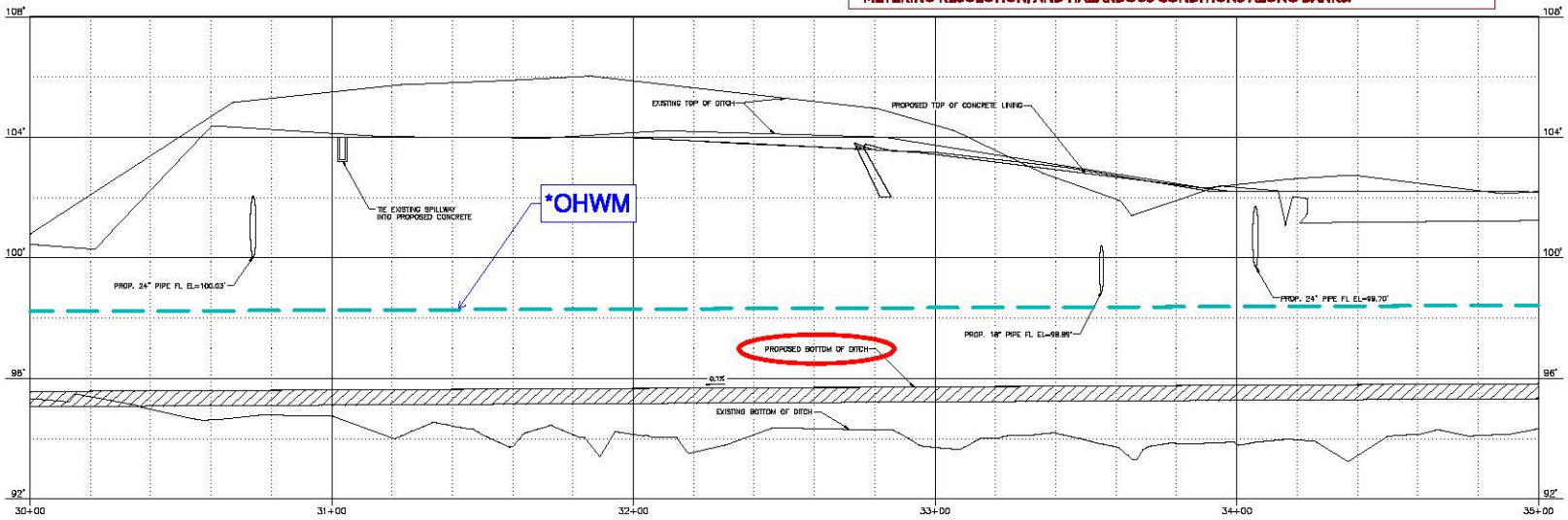

SHEET 10

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

PLAN AND PROFILE STA. 30+00 TO STA. 35+00

ORANGE, ORANGE COUNTY, TEXAS

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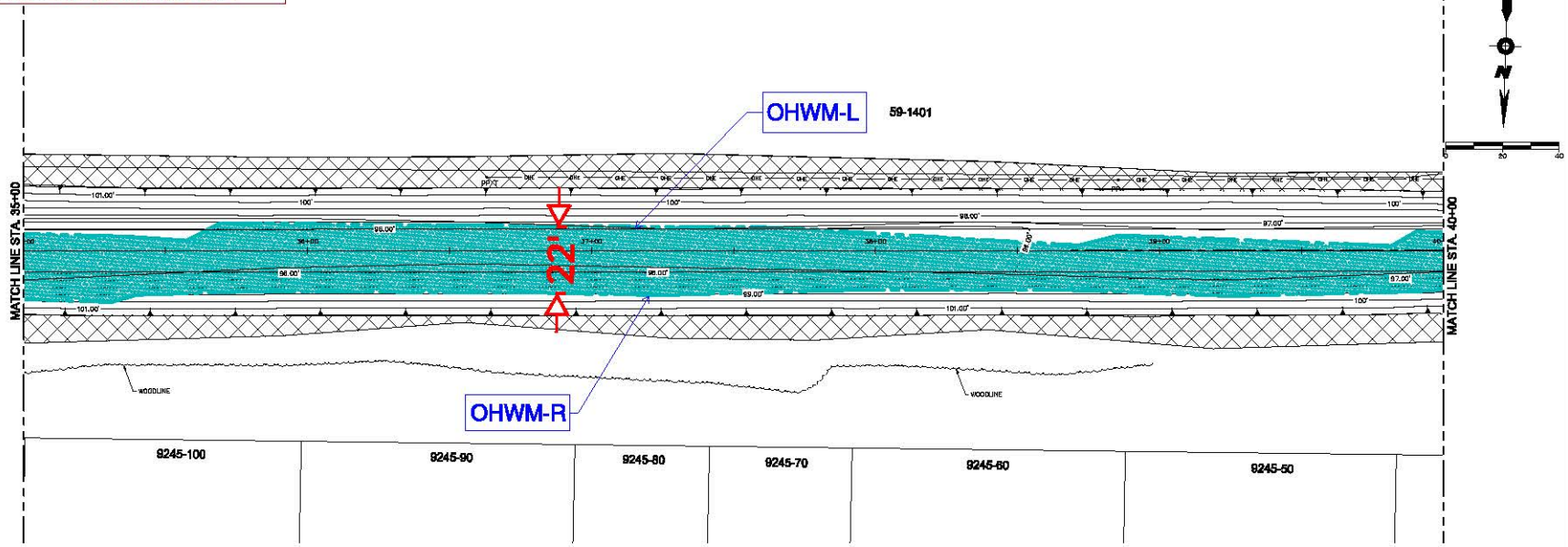
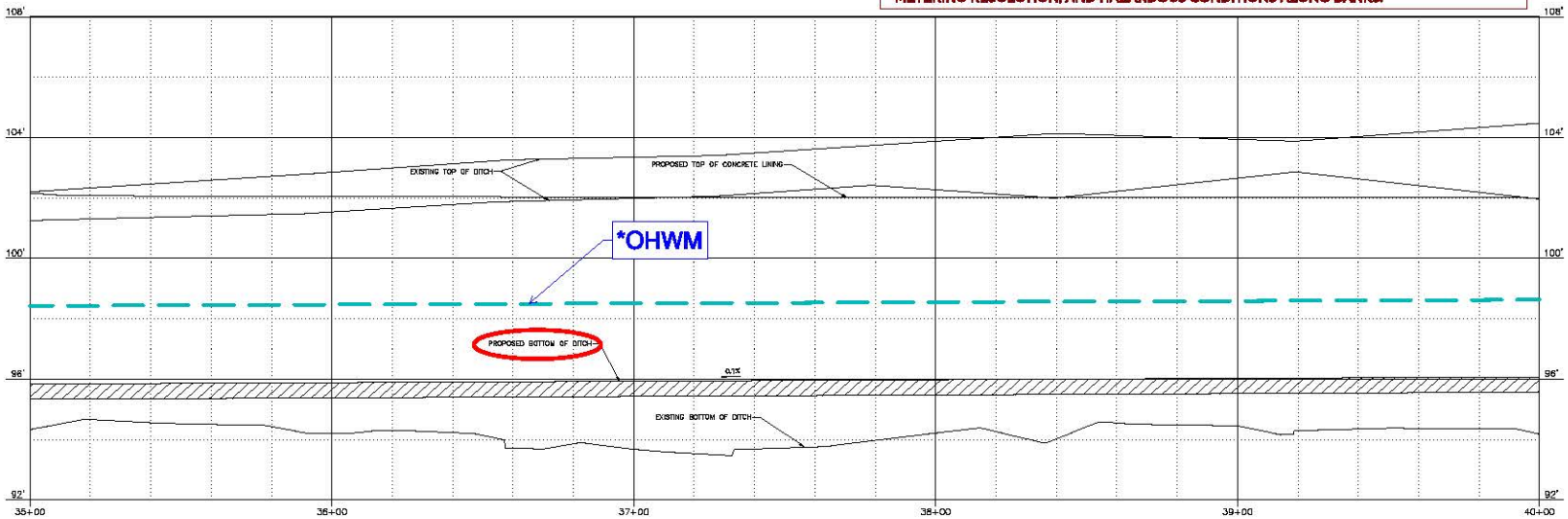
MARCH 27, 2017

ARCHEAULT, WILSON & COLE

BLUE HATCH IN PLAN VIEW INDICATES THE BOUNDARIES OF THE JURISDICTIONAL WATER OF THE U.S.



* OHWM SHOWN IN PROFILE VIEW IS ESTIMATED BASED ON THE HIGHER OF LEFT BANK AND RIGHT BANK ELEVATIONS AND ACCOUNTS FOR VARIATIONS IN EROSIONAL AREAS, GPS METERING RESOLUTION, AND HAZARDOUS CONDITIONS ALONG BANKS.



SHEET 11

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

PLAN AND PROFILE STA. 35+00 TO STA. 40+00

ORANGE, ORANGE COUNTY, TEXAS

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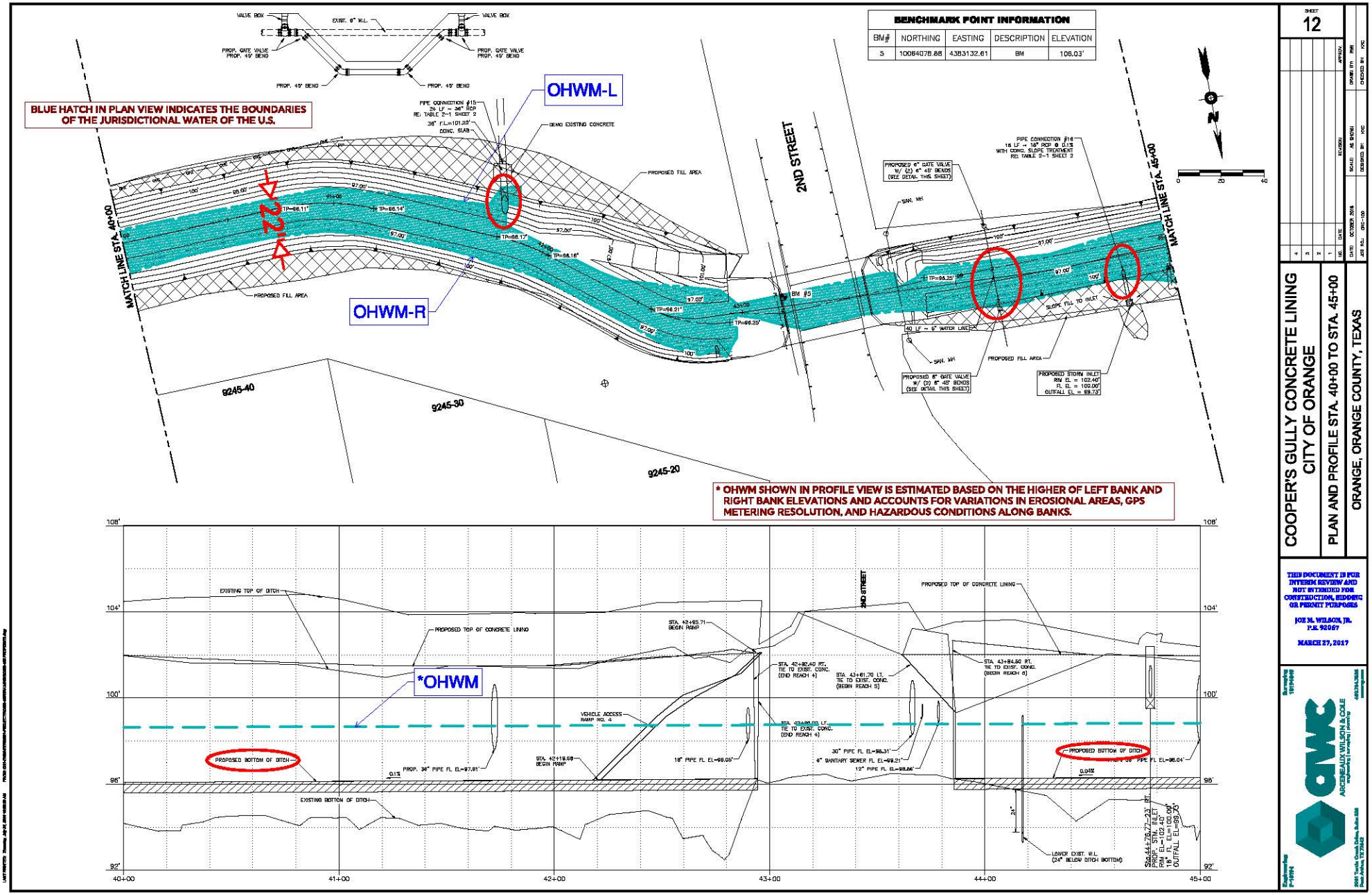
P.E. 92067

MARCH 27, 2017

ARCHEAULT, WILSON & COLE
Engineering | Surveying | Planning


BENCHMARK POINT INFORMATION
BM# | NORTHING | EASTING | DESCRIPTION | ELEVATION
5 | 10084078.88 | 4383132.61 | BM | 106.03'
BLUE HATCH IN PLAN VIEW INDICATES THE BOUNDARIES OF THE JURISDICTIONAL WATER OF THE U.S.
OHWM-L
OHWM-R
2ND STREET
MATCH LINE STA. 40+00
MATCH LINE STA. 45+00
PROPOSED FILL AREA
PROPOSED 6" GATE VALVE W/ (2) 6" 45° BENDS (SEE DETAIL THIS SHEET)
PROPOSED 8" GATE VALVE W/ (2) 8" 45° BENDS (SEE DETAIL THIS SHEET)
PROPOSED STORM INLET RIM EL = 102.40' FL EL = 100.00' OUTFALL EL = 99.73'
SLOPE FILL TO INLET
40 LF ~ 6" WATER LINE
9245-40
9245-30
9245-20
* OHWM SHOWN IN PROFILE VIEW IS ESTIMATED BASED ON THE HIGHER OF LEFT BANK AND RIGHT BANK ELEVATIONS AND ACCOUNTS FOR VARIATIONS IN EROSIONAL AREAS, GPS METERING RESOLUTION, AND HAZARDOUS CONDITIONS ALONG BANKS.
EXISTING TOP OF DITCH
PROPOSED TOP OF CONCRETE LINING
*OHWM
PROPOSED BOTTOM OF DITCH
EXISTING BOTTOM OF DITCH
VEHICLE ACCESS RAMP NO. 4
LOWER EXIST. W.L. (24" BELOW DITCH BOTTOM)
40+00
41+00
42+00
43+00
44+00
45+00
SHEET 12
COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE
PLAN AND PROFILE STA. 40+00 TO STA. 45+00
ORANGE, ORANGE COUNTY, TEXAS
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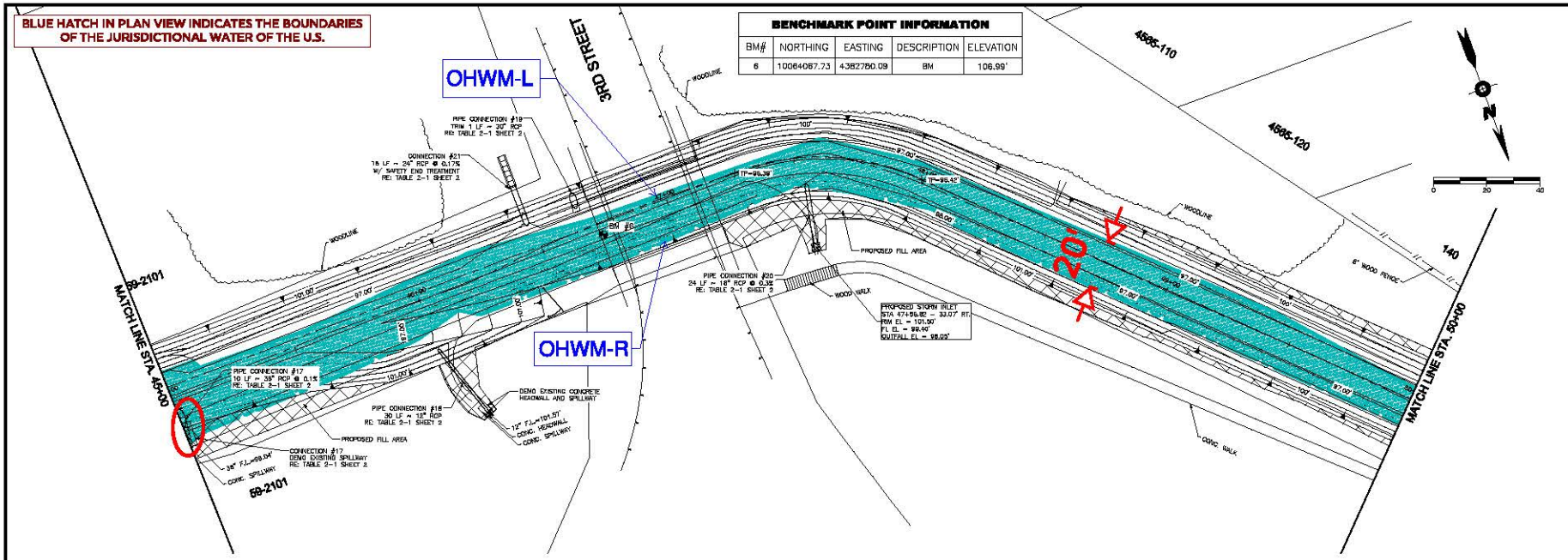
MARCH 27, 2017
ARCHEBALDY, WILSON & COLE

BLUE HATCH IN PLAN VIEW INDICATES THE BOUNDARIES OF THE JURISDICTIONAL WATER OF THE U.S.

BENCHMARK POINT INFORMATION

BM#	NORTHING	EASTING	DESCRIPTION	ELEVATION
6	10064087.73	4382780.09	BM	106.99'



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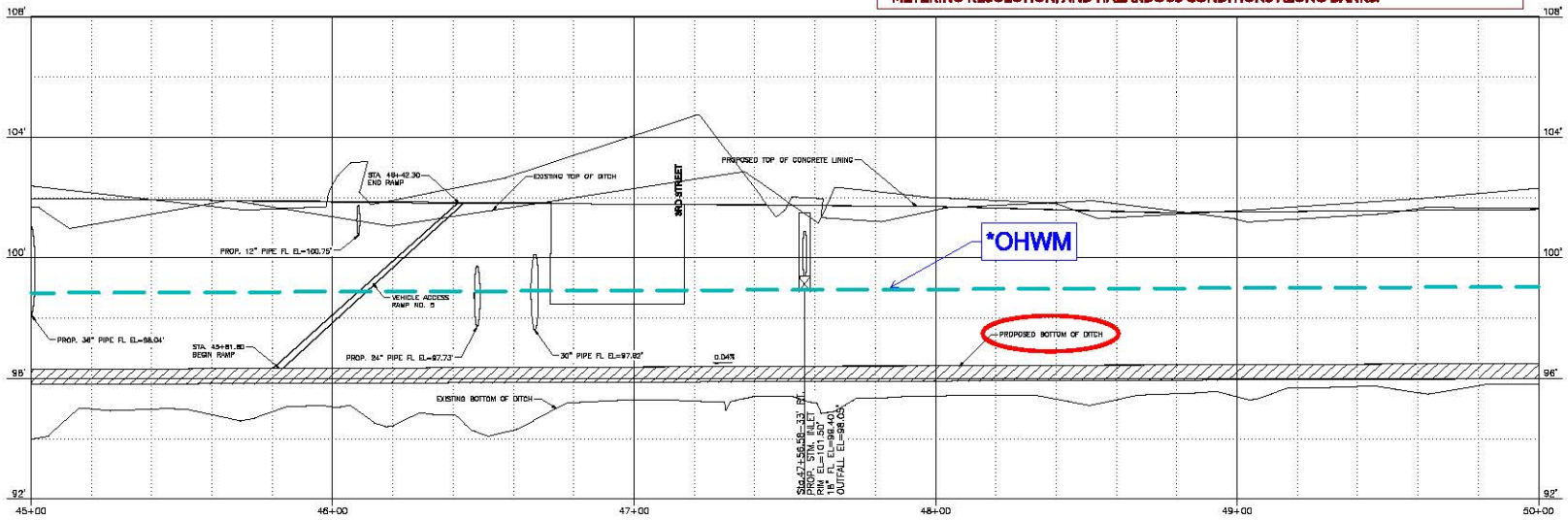

SHEET 13

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

PLAN AND PROFILE STA. 45+00 TO STA. 50+00

ORANGE, ORANGE COUNTY, TEXAS

DATE: OCTOBER 2016 | SCALE: AS SHOWN | DRAWN BY: RMI
JOB NO.: CRC-100 | DESIGNED BY: CCC | CHECKED BY: FCC

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JOE M. WILSON, JR.
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MARCH 27, 2017

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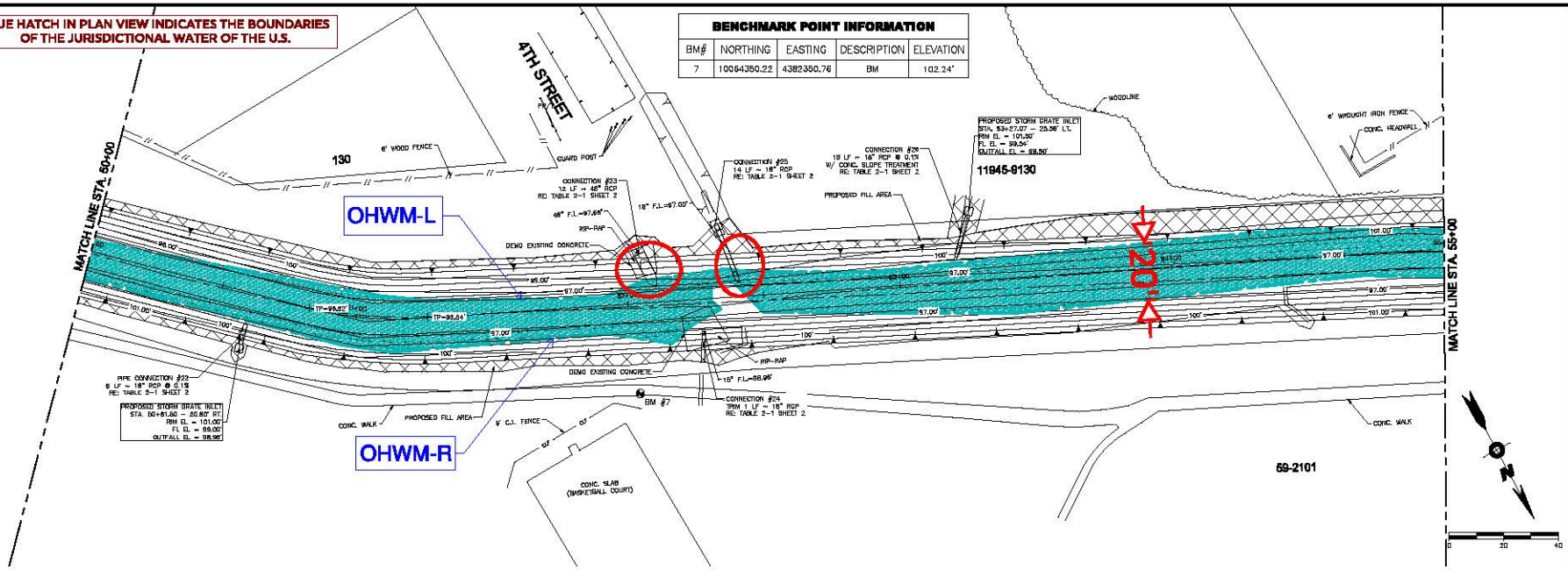
409.735.7888
www.cwc
2001 Tevis Creek Drive, Suite 200
Port Arthur, TX 77642

Surveying TBPLS#
Engineering Firm F-10994

BLUE HATCH IN PLAN VIEW INDICATES THE BOUNDARIES OF THE JURISDICTIONAL WATER OF THE U.S.

BENCHMARK POINT INFORMATION

BM#	NORTHING	EASTING	DESCRIPTION	ELEVATION
7	10064350.22	4382350.76	BM	102.24'



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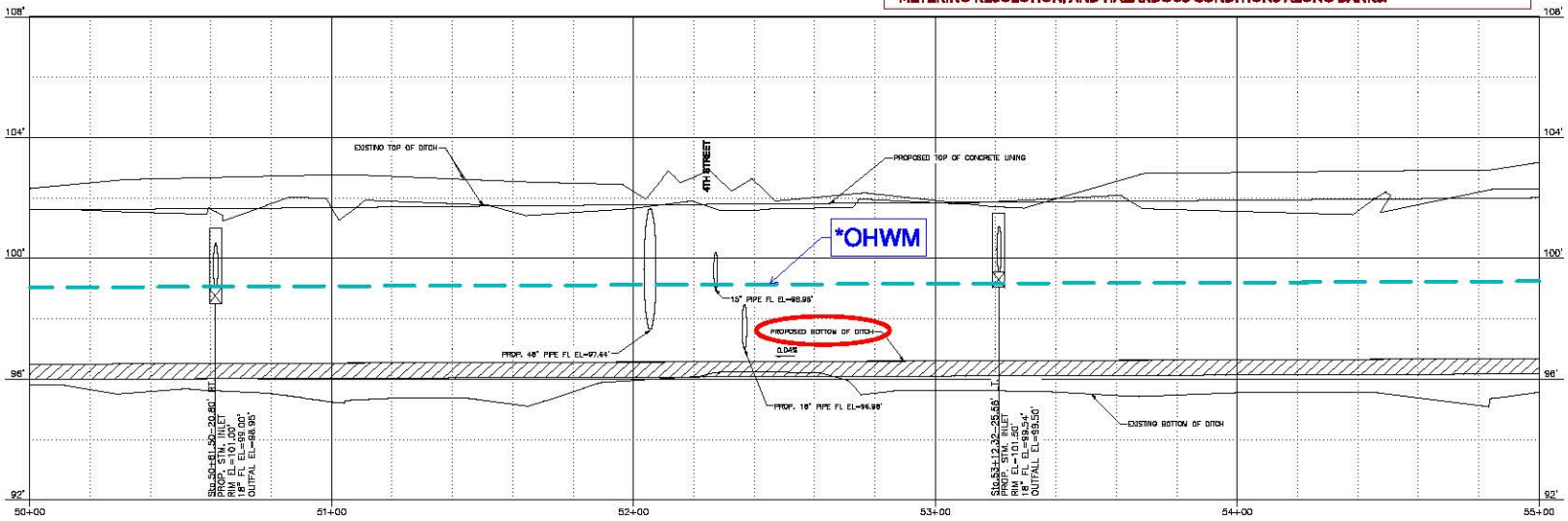

SHEET 14

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

PLAN AND PROFILE STA. 50+00 TO STA. 55+00

ORANGE, ORANGE COUNTY, TEXAS

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JOE M. WILSON, JR.
P.E. 92067

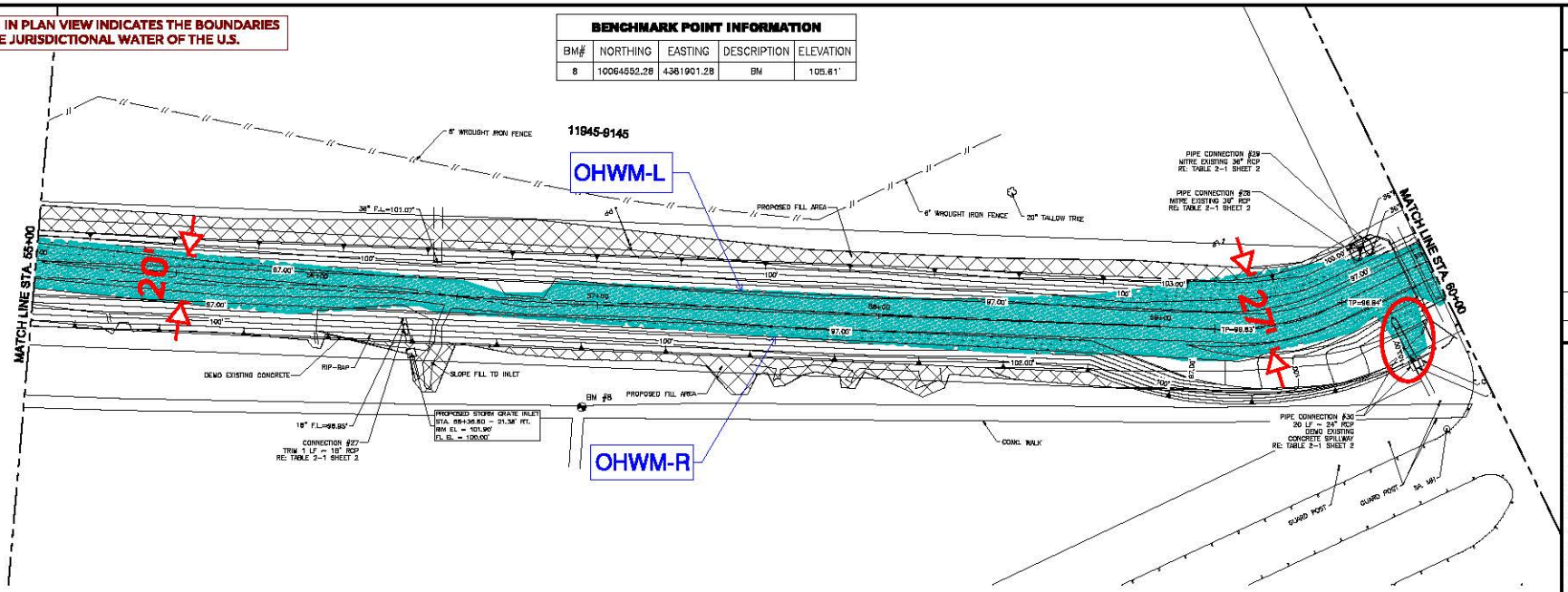
MARCH 27, 2017

ARCHEQUITY WILSON & COLE

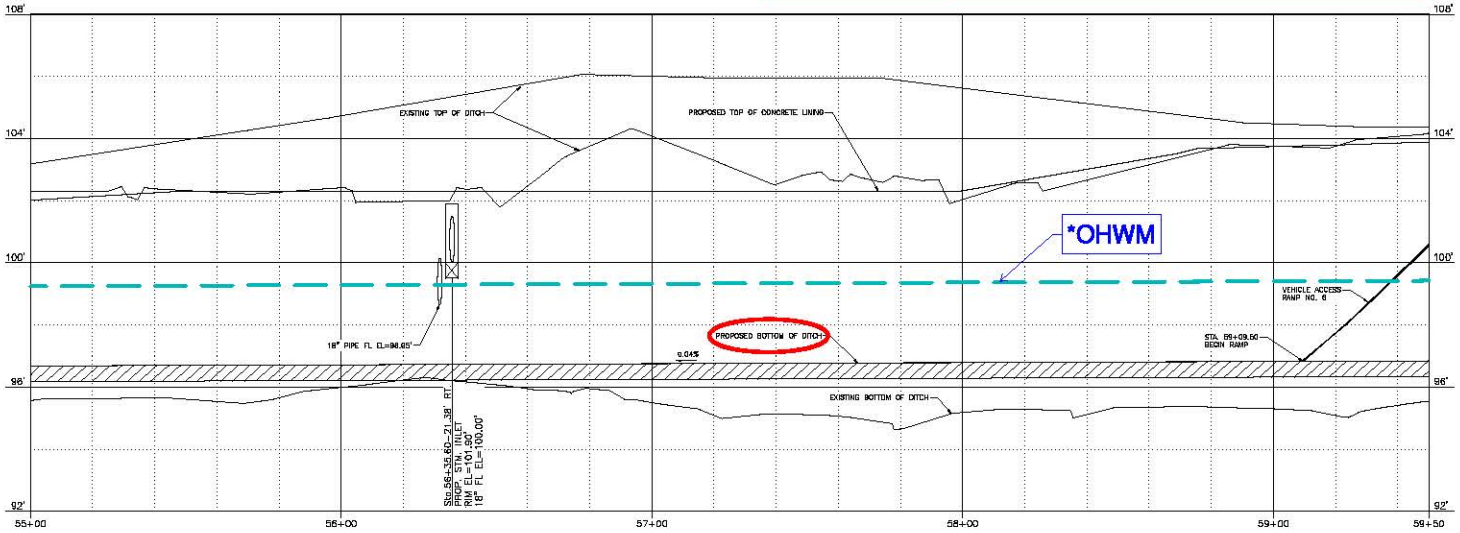
BLUE HATCH IN PLAN VIEW INDICATES THE BOUNDARIES OF THE JURISDICTIONAL WATER OF THE U.S.

BENCHMARK POINT INFORMATION

BM#	NORTHING	EASTING	DESCRIPTION	ELEVATION
8	10064552.28	4361901.28	BM	105.61'



* OHWM SHOWN IN PROFILE VIEW IS ESTIMATED BASED ON THE HIGHER OF LEFT BANK AND RIGHT BANK ELEVATIONS AND ACCOUNTS FOR VARIATIONS IN EROSIONAL AREAS, GPS METERING RESOLUTION, AND HAZARDOUS CONDITIONS ALONG BANKS.



SHEET 15

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

PLAN AND PROFILE STA. 55+00 TO STA. 60+00

ORANGE, ORANGE COUNTY, TEXAS

NO.	DATE	REVISION	APPROV.
4			
3			
2			
1			

DATE: OCTOBER 2016 SCALE: AS SHOWN DRAWN BY: RMI
JOB NO.: CRC-100 DESIGNED BY: CCC CHECKED BY: FCC

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JOE M. WILSON, JR.
P.E. 92067

MARCH 27, 2017

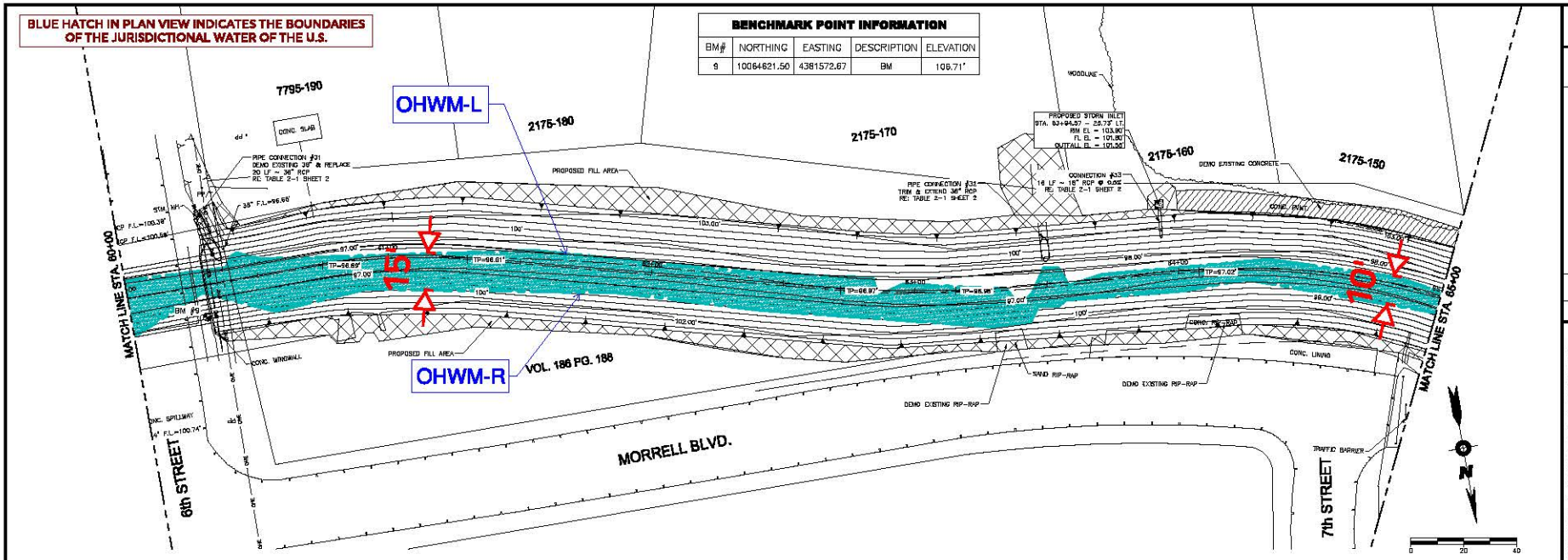
Surveying 10194444
Engineering P-10194

ARCHEQUITY WILSON & COLE
Engineering | Surveying | Planning
409.296.3666
www.awc
2000 Tower Creek Drive, Suite 200
Port Arthur, TX 77642

BLUE HATCH IN PLAN VIEW INDICATES THE BOUNDARIES OF THE JURISDICTIONAL WATER OF THE U.S.

BENCHMARK POINT INFORMATION

BM#	NORTHING	EASTING	DESCRIPTION	ELEVATION
9	10064621.50	4381572.67	BM	106.71'



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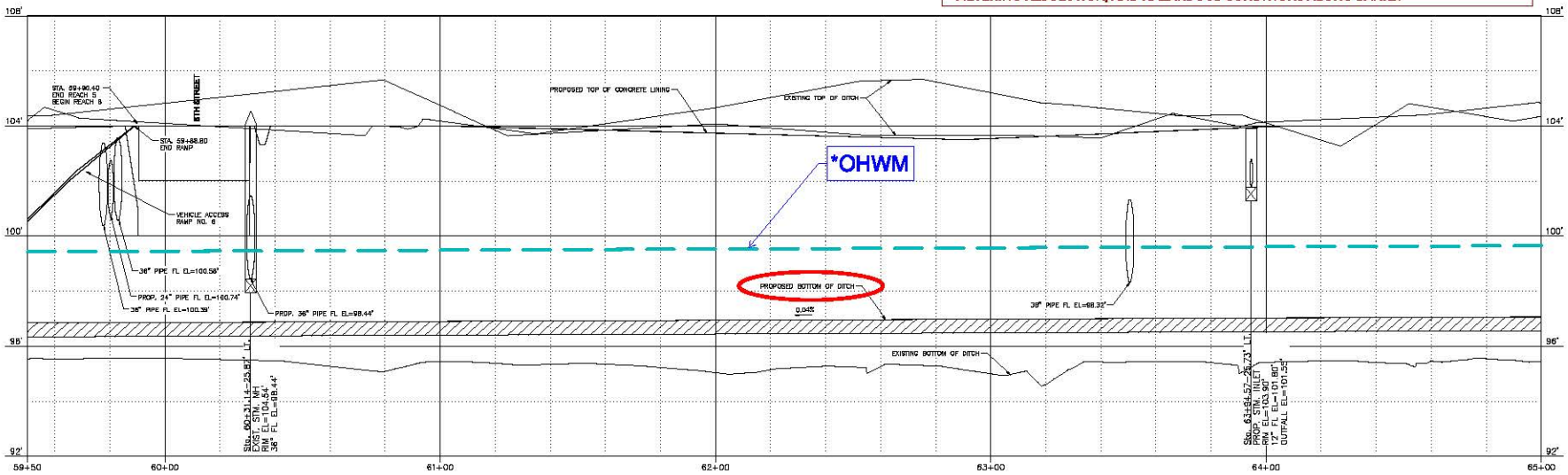

SHEET 16

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

PLAN AND PROFILE STA. 60+00 TO STA. 65+00

ORANGE, ORANGE COUNTY, TEXAS

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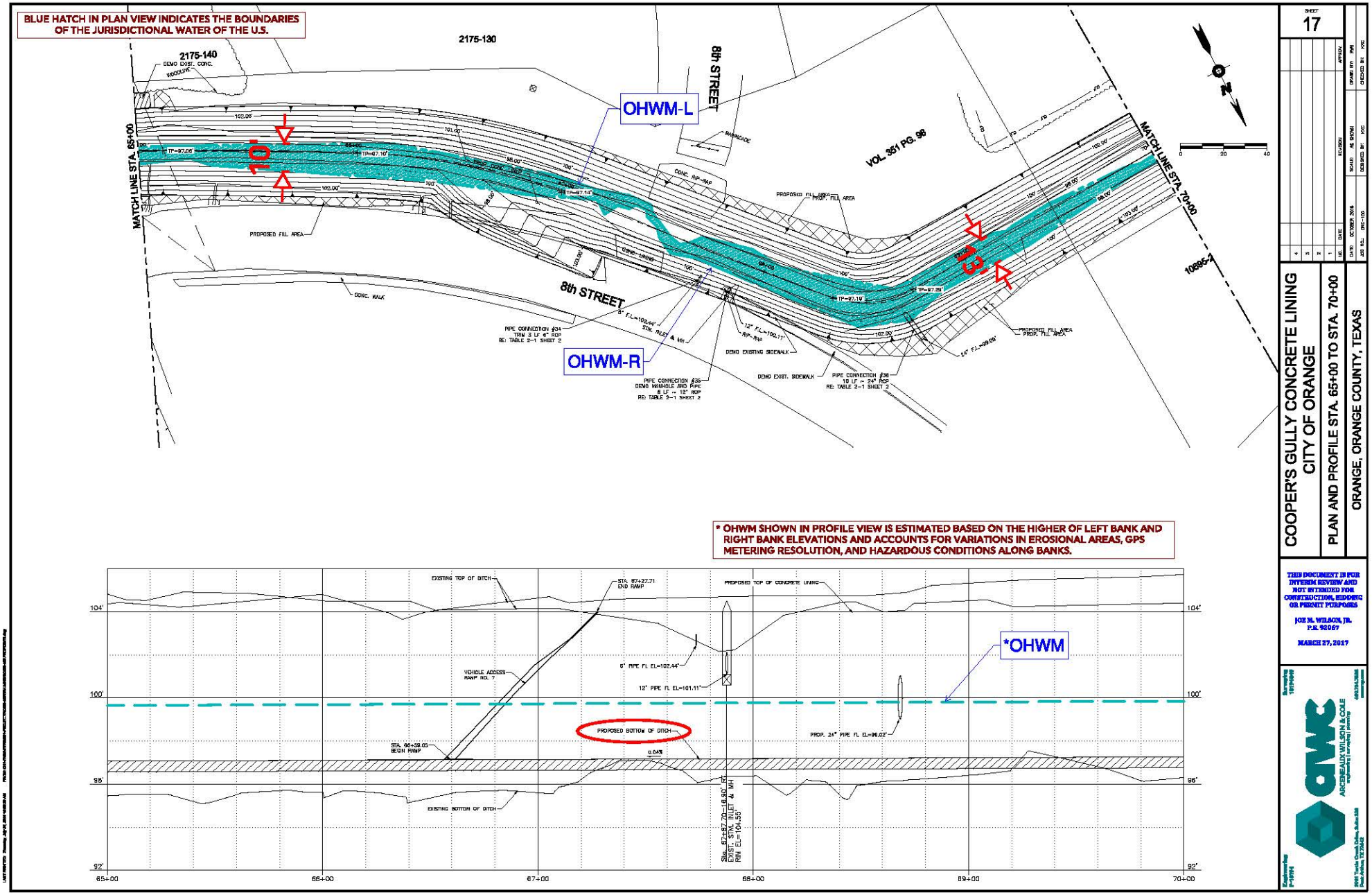
P.E. 92067

MARCH 27, 2017

ARCHEBALD, WILSON & COLE


BLUE HATCH IN PLAN VIEW INDICATES THE BOUNDARIES OF THE JURISDICTIONAL WATER OF THE U.S.
2175-130
2175-140
8th STREET
OHWM-L
OHWM-R
VOL. 351 PG. 98
MATCH LINE STA. 65+00
MATCH LINE STA. 70+00
PROPOSED FILL AREA
DEMO EXIST. CONC.
CONC. WALK
DEMO EXISTING SIDEWALK
DEMO EXIST. SIDEWALK
PIPE CONNECTION #34
TRIM 3 LF 4" RCP
RE: TABLE 2-1 SHEET 2
PIPE CONNECTION #35
DEMO MANHOLE AND PIPE
6 LF ~ 12" RCP
RE: TABLE 2-1 SHEET 2
PIPE CONNECTION #36
18 LF ~ 24" RCP
RE: TABLE 2-1 SHEET 2
10695-1
SHEET 17
COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE
PLAN AND PROFILE STA. 65+00 TO STA. 70+00
ORANGE, ORANGE COUNTY, TEXAS
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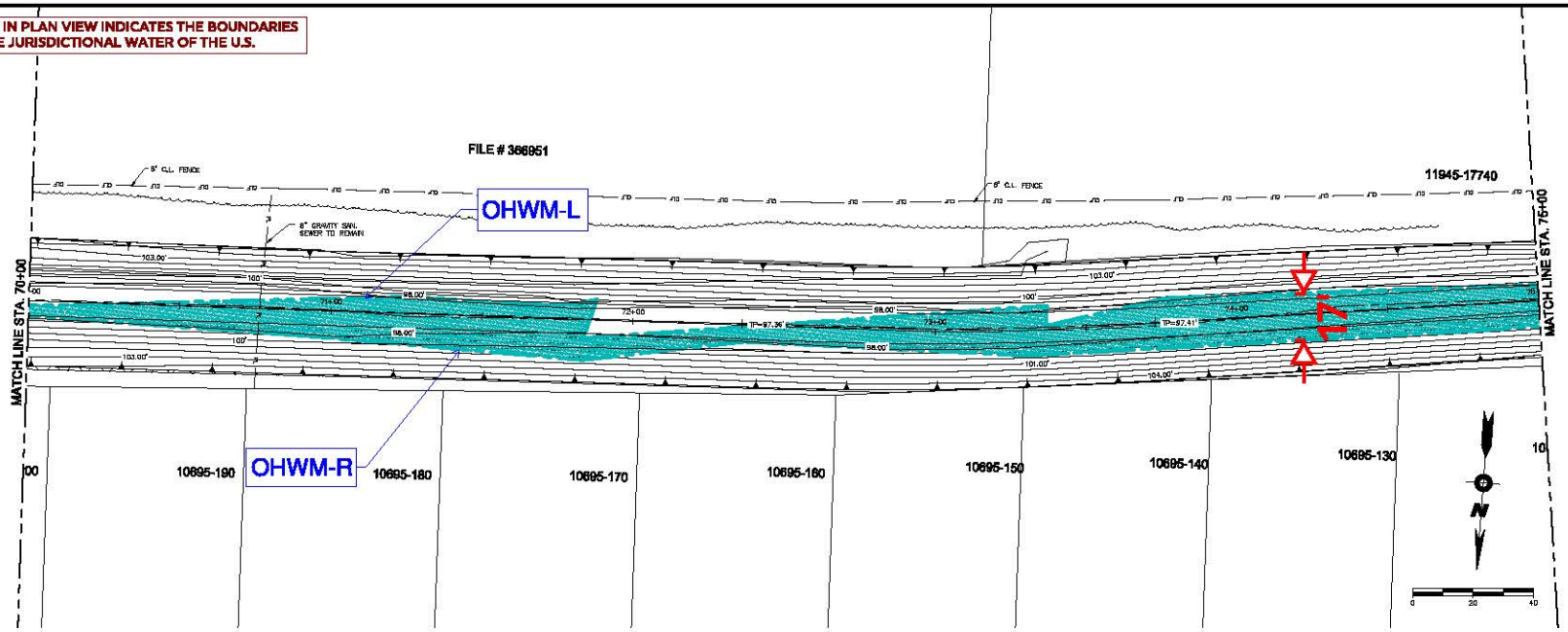
P.E. 92067
MARCH 27, 2017
ARCHEQUITY WILSON & COLE
* OHWM SHOWN IN PROFILE VIEW IS ESTIMATED BASED ON THE HIGHER OF LEFT BANK AND RIGHT BANK ELEVATIONS AND ACCOUNTS FOR VARIATIONS IN EROSIONAL AREAS, GPS METERING RESOLUTION, AND HAZARDOUS CONDITIONS ALONG BANKS.
EXISTING TOP OF DITCH
STA. 67+27.71 END RAMP
PROPOSED TOP OF CONCRETE LINING
*OHWM
VEHICLE ACCESS RAMP NO. 7
6" PIPE FL EL=102.44'
12" PIPE FL EL=101.11'
PROPOSED BOTTOM OF DITCH
0.04%
PROP. 24" PIPE FL EL=99.02'
STA. 66+59.05 BEGIN RAMP
EXISTING BOTTOM OF DITCH
Sta. 67+87.70~18.90' RT EXIST. STM. INLET & MH RIM EL=104.33
104'
100'
96'
92'
65+00
66+00
67+00
68+00
69+00
70+00

BLUE HATCH IN PLAN VIEW INDICATES THE BOUNDARIES OF THE JURISDICTIONAL WATER OF THE U.S.



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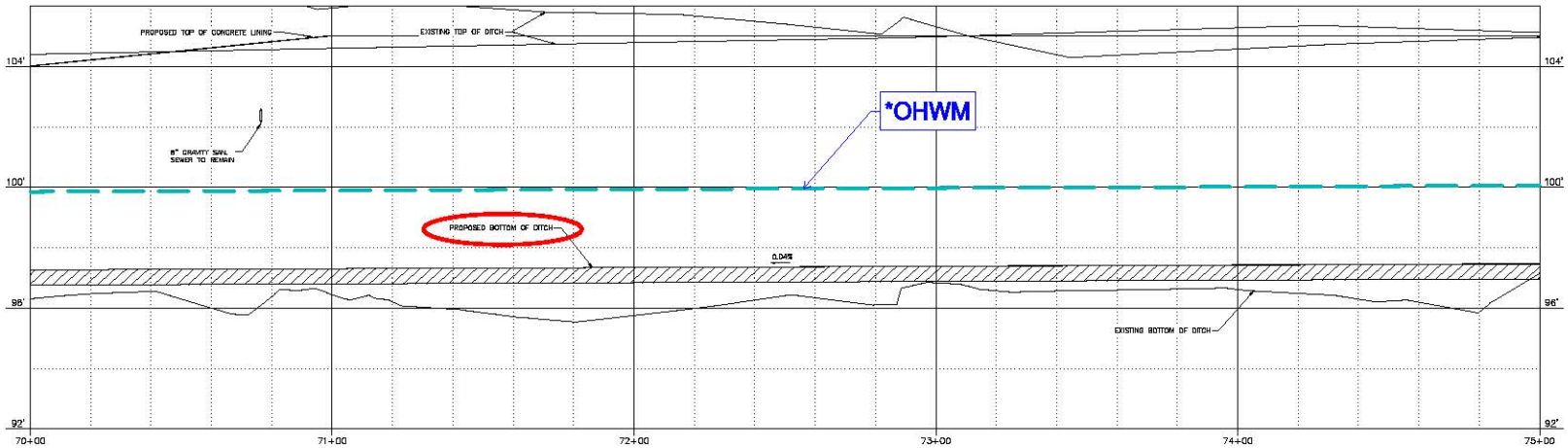

SHEET 18

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

PLAN AND PROFILE STA. 70+00 TO STA. 75+00

ORANGE, ORANGE COUNTY, TEXAS

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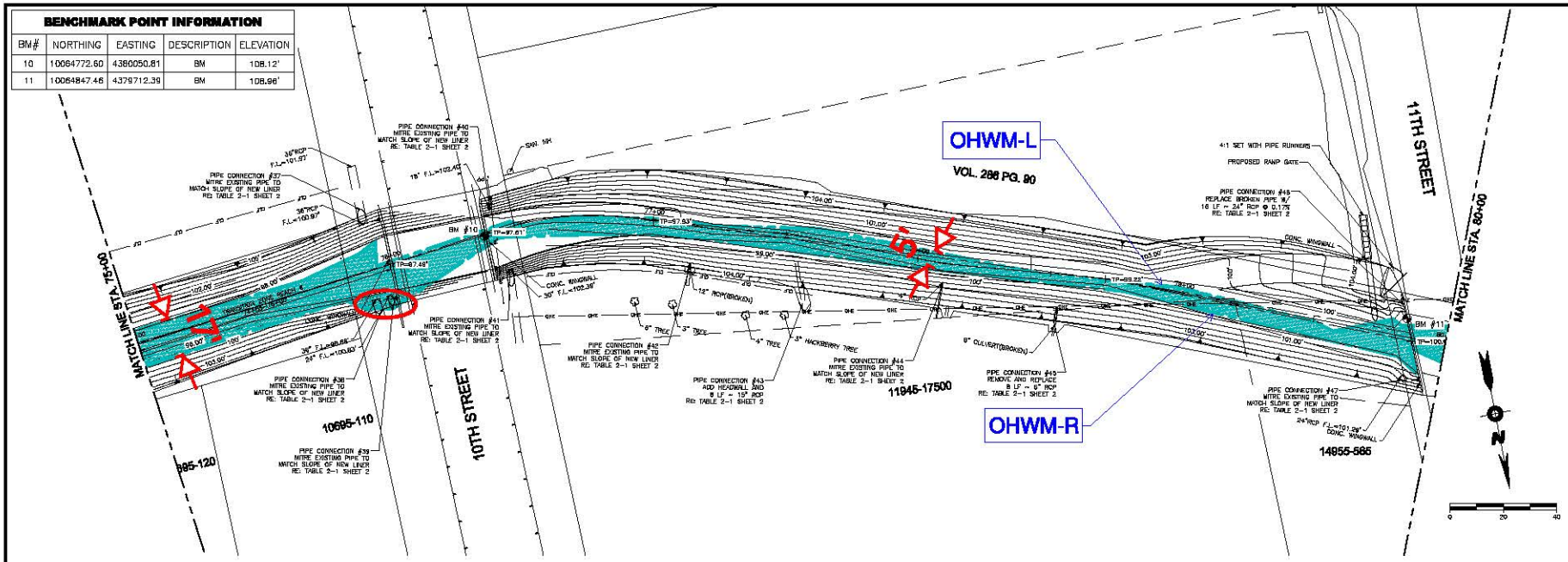
JOE M. WILSON, JR.
P.E. 92067

MARCH 27, 2017

ARCHEAULT, WILSON & COLE

BENCHMARK POINT INFORMATION

BM#	NORTHING	EASTING	DESCRIPTION	ELEVATION
10	10064772.60	4380050.81	BM	108.12'
11	10064847.46	4379712.39	BM	108.96'



BLUE HATCH IN PLAN VIEW INDICATES THE BOUNDARIES OF THE JURISDICTIONAL WATER OF THE U.S.

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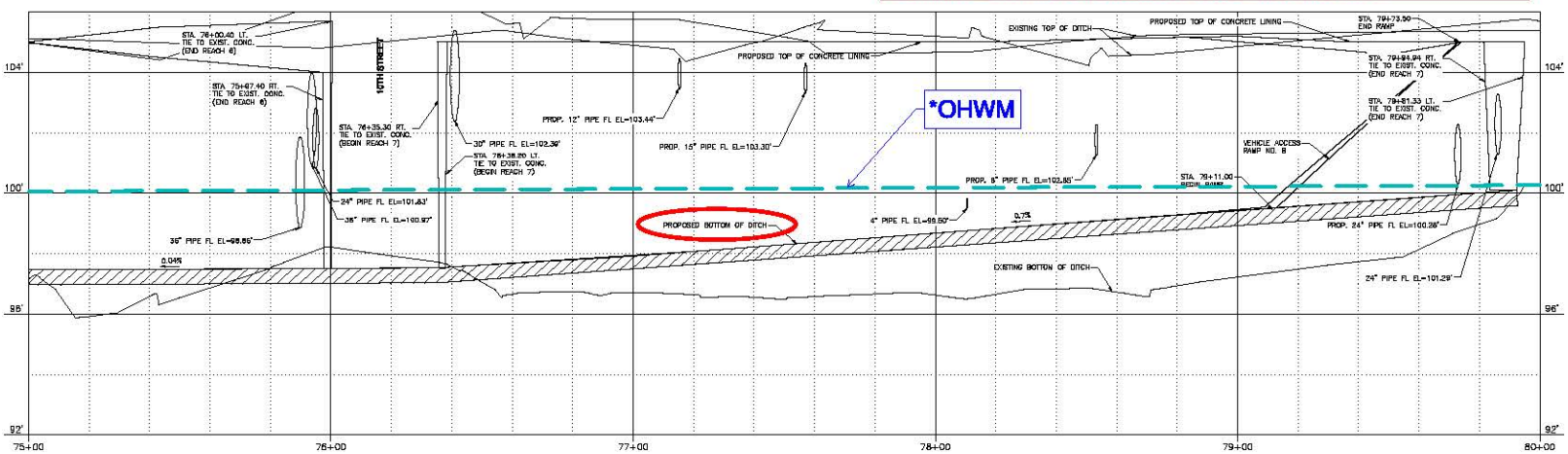

SHEET 19

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

PLAN AND PROFILE STA. 75+00 TO STA. 80+00

ORANGE, ORANGE COUNTY, TEXAS

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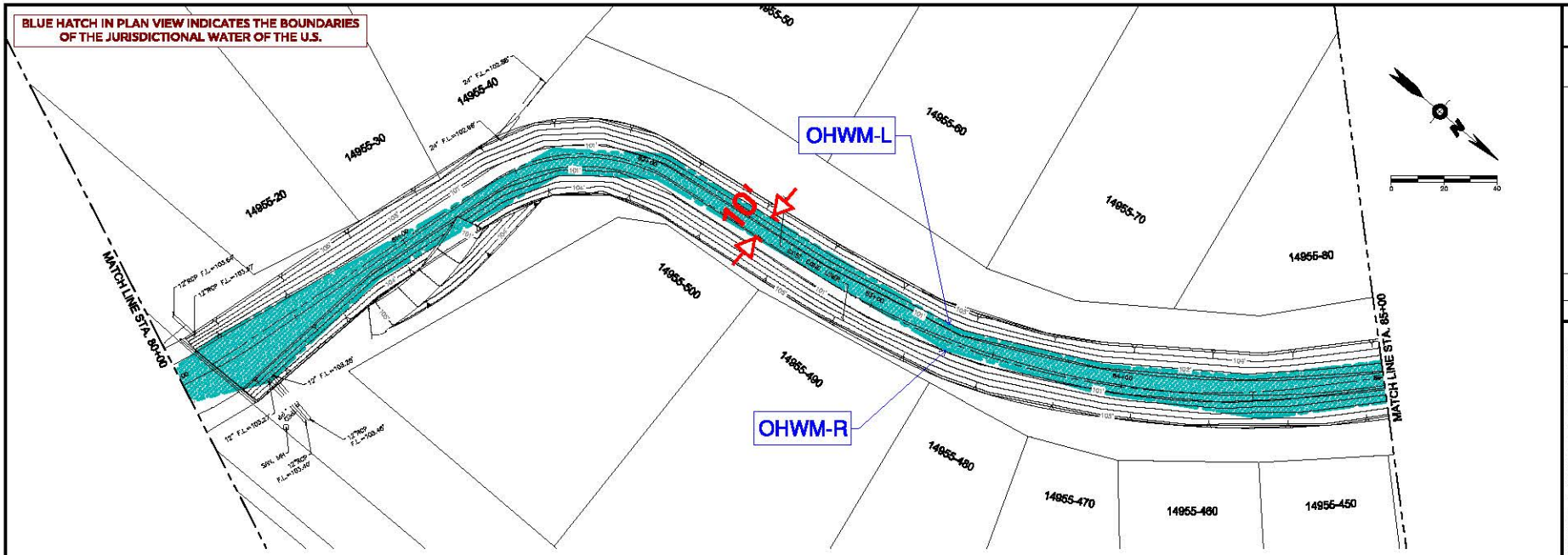
JOE M. WILSON, JR.
P.E. 92057

MARCH 27, 2017

ARCHEAULT, WILSON & COLE

BLUE HATCH IN PLAN VIEW INDICATES THE BOUNDARIES OF THE JURISDICTIONAL WATER OF THE U.S.



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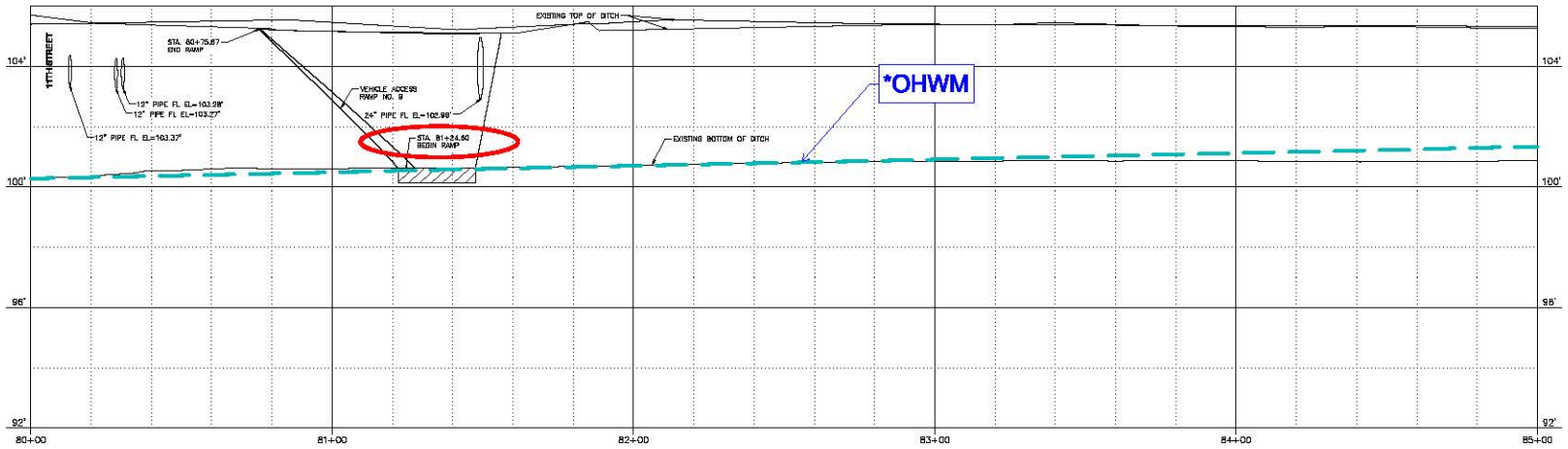

SHEET 20

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

PLAN AND PROFILE STA. 80+00 TO STA. 85+00

ORANGE, ORANGE COUNTY, TEXAS

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P.E. 92067

MARCH 27, 2017

ARCHEAULT, WILSON & COLE

BLUE HATCH IN PLAN VIEW INDICATES THE BOUNDARIES OF THE JURISDICTIONAL WATER OF THE U.S.

OHWM-L

OHWM-R

14955-90

14955-440

14955-430

14955-420

14955-410

14955-400

14955-370

MATCH LINE STA. 85+00

MATCH LINE STA. 90+00

END BASE BID / ADD ALT. #1

CONCRETE SWALE

CONCRETE SWALE

UNION PACIFIC R.R.

* OHWM SHOWN IN PROFILE VIEW IS ESTIMATED BASED ON THE HIGHER OF LEFT BANK AND RIGHT BANK ELEVATIONS AND ACCOUNTS FOR VARIATIONS IN EROSIONAL AREAS, GPS METERING RESOLUTION, AND HAZARDOUS CONDITIONS ALONG BANKS.

*OHWM

PROPOSED TOP OF CONCRETE LINING

EXISTING TOP OF DITCH

STA. 86+69.80 RT. TIE TO EXIST. CONC. (BEGIN REACH 8)

EXISTING BOTTOM OF DITCH

STA. 88+70.60 LT. TIE TO EXIST. CONC. (BEGIN REACH 8)

PROPOSED BOTTOM OF DITCH

U.P. RR

0.1%

6" AIR LIQUIDE LINE (APPROX. LOCATION & DEPTH)

104'

100'

96'

92'

85+00

86+00

87+00

88+00

89+00

90+00

SHEET 21

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

PLAN AND PROFILE STA. 85+00 TO STA. 90+00

ORANGE, ORANGE COUNTY, TEXAS

THIS DOCUMENT IS FOR INTERIM REVIEW AND NOT INTENDED FOR CONSTRUCTION, BIDDING OR PERMIT PURPOSES

JOE M. WILSON, JR.
P.E. 92057

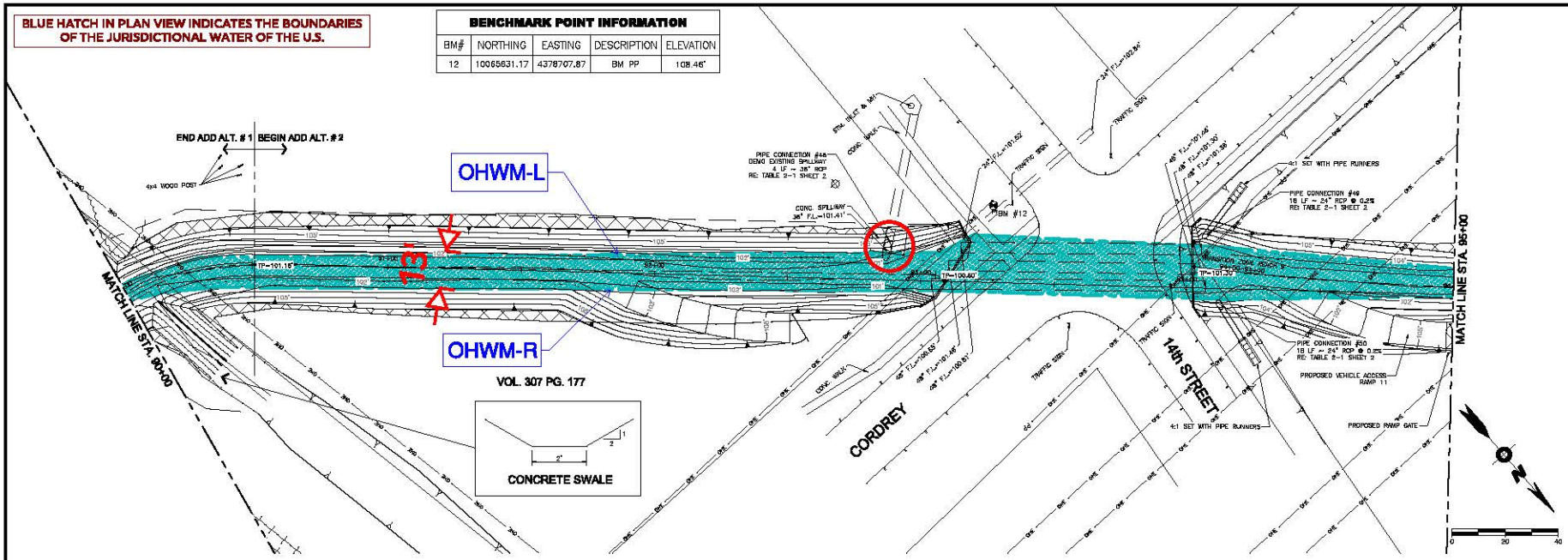
MARCH 27, 2017

ARCHEAULT, WILSON & COLE

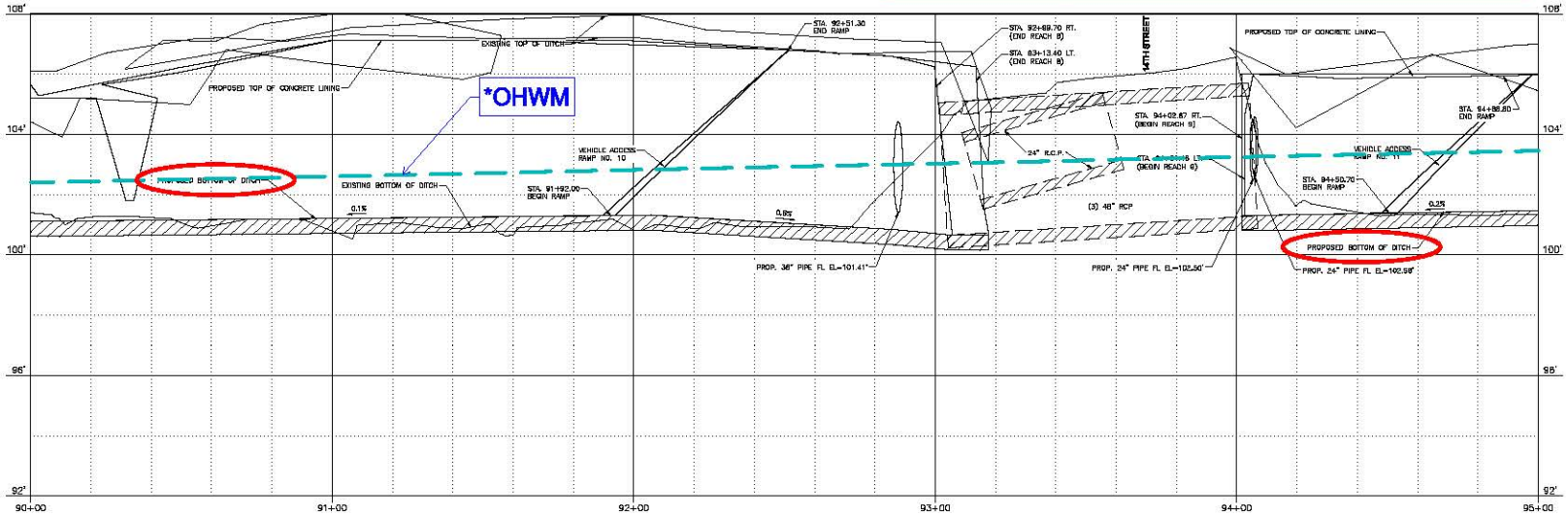
BLUE HATCH IN PLAN VIEW INDICATES THE BOUNDARIES OF THE JURISDICTIONAL WATER OF THE U.S.

BENCHMARK POINT INFORMATION

BM#	NORTHING	EASTING	DESCRIPTION	ELEVATION
12	10065631.17	4378707.87	BM PP	108.46'



* OHWM SHOWN IN PROFILE VIEW IS ESTIMATED BASED ON THE HIGHER OF LEFT BANK AND RIGHT BANK ELEVATIONS AND ACCOUNTS FOR VARIATIONS IN EROSIONAL AREAS, GPS METERING RESOLUTION, AND HAZARDOUS CONDITIONS ALONG BANKS.



SHEET 22

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

PLAN AND PROFILE STA. 90+00 TO STA. 95+00

ORANGE, ORANGE COUNTY, TEXAS

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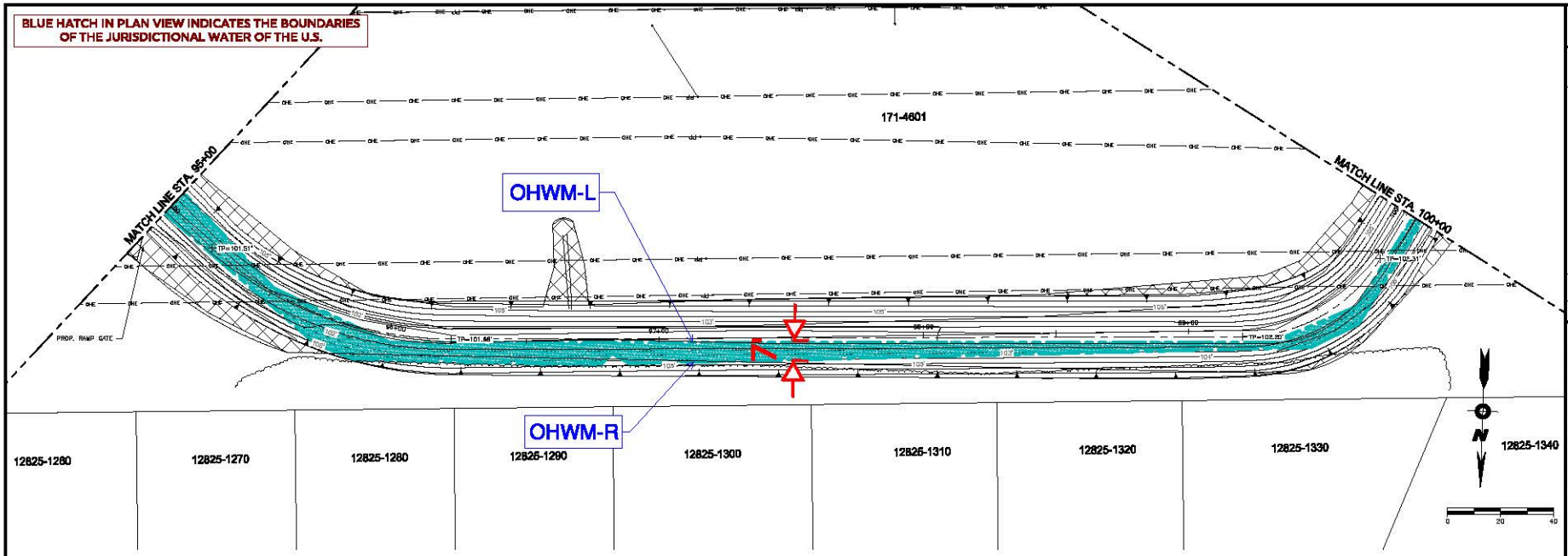
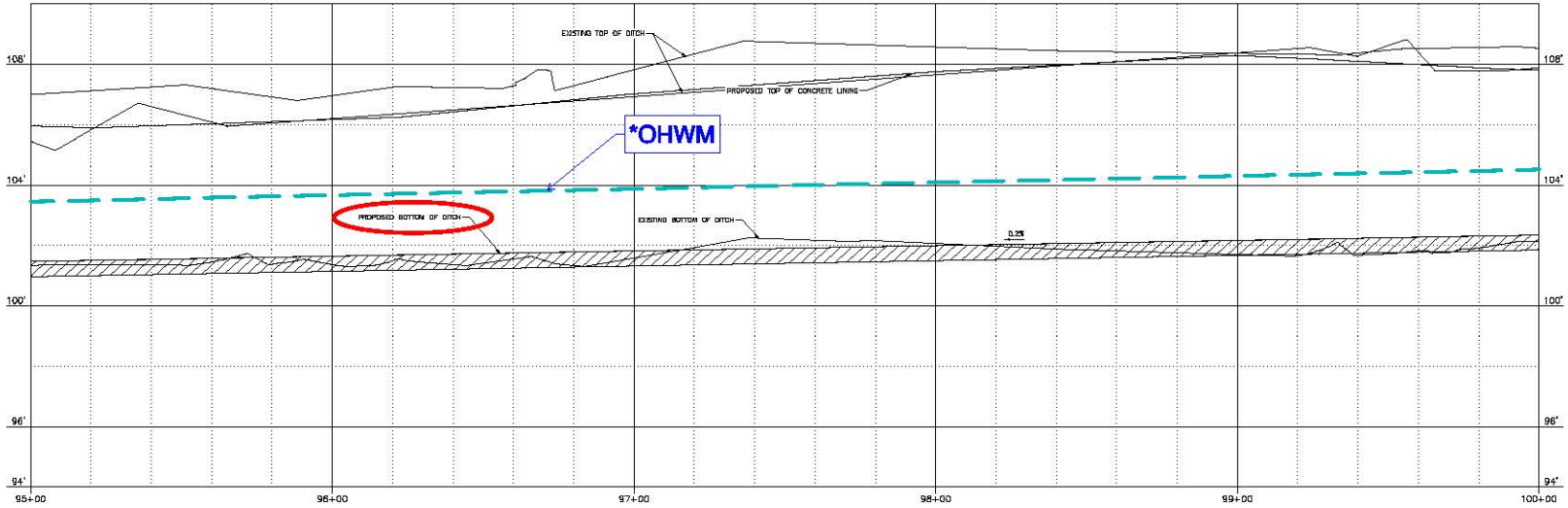
JOE M. WILSON, JR.
P.E. 92067

MARCH 27, 2017

ARCHERLAND WILSON & COLE



* OHWM SHOWN IN PROFILE VIEW IS ESTIMATED BASED ON THE HIGHER OF LEFT BANK AND RIGHT BANK ELEVATIONS AND ACCOUNTS FOR VARIATIONS IN EROSIONAL AREAS, GPS METERING RESOLUTION, AND HAZARDOUS CONDITIONS ALONG BANKS.



SHEET 23

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

PLAN AND PROFILE STA. 95+00 TO STA. 100+00

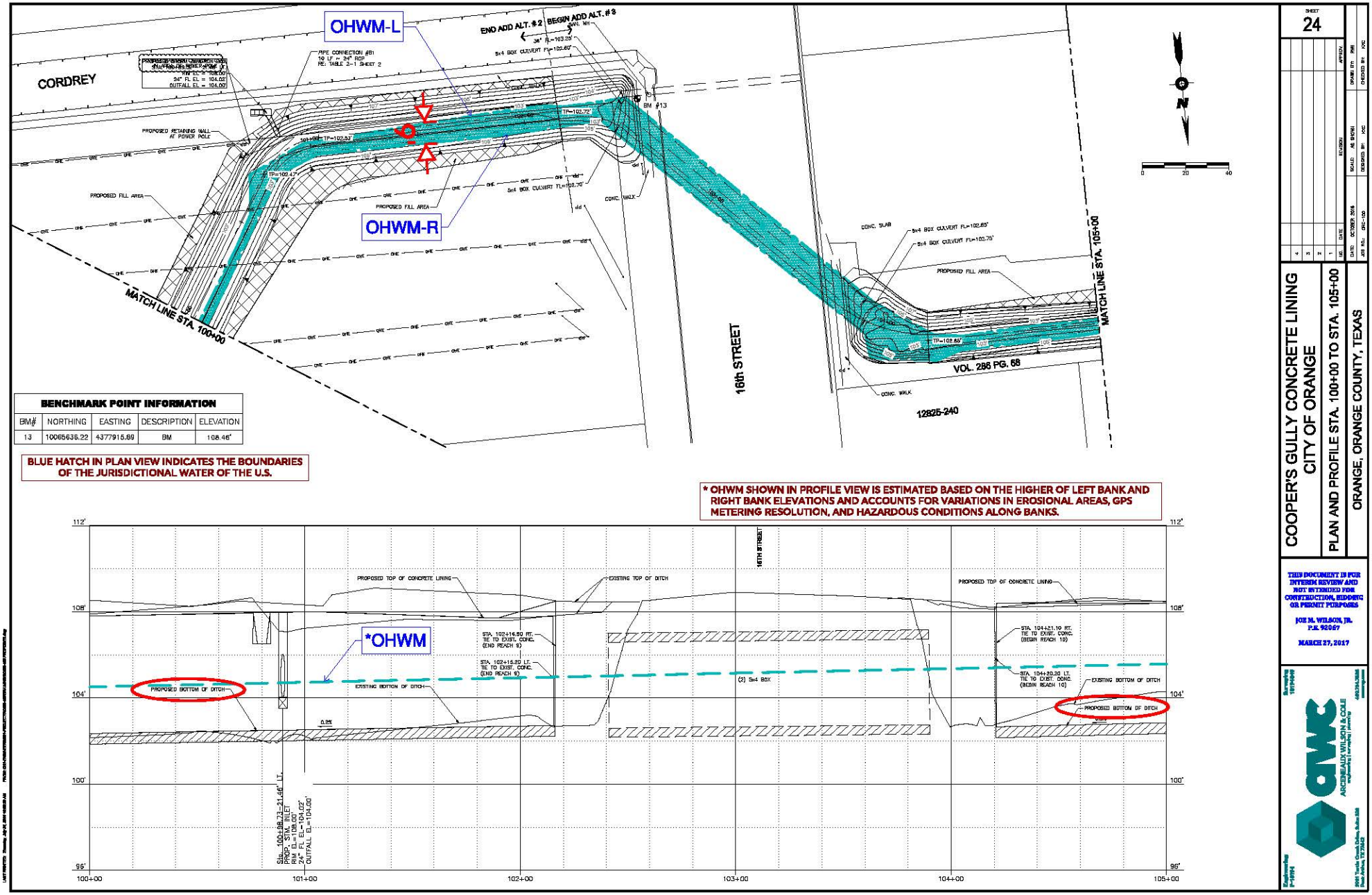
ORANGE, ORANGE COUNTY, TEXAS

THIS DOCUMENT IS FOR INTERIM REVIEW AND NOT INTENDED FOR CONSTRUCTION, BIDDING OR PERMIT PURPOSES

JOE M. WILSON, JR.
P.E. 92067

MARCH 27, 2017

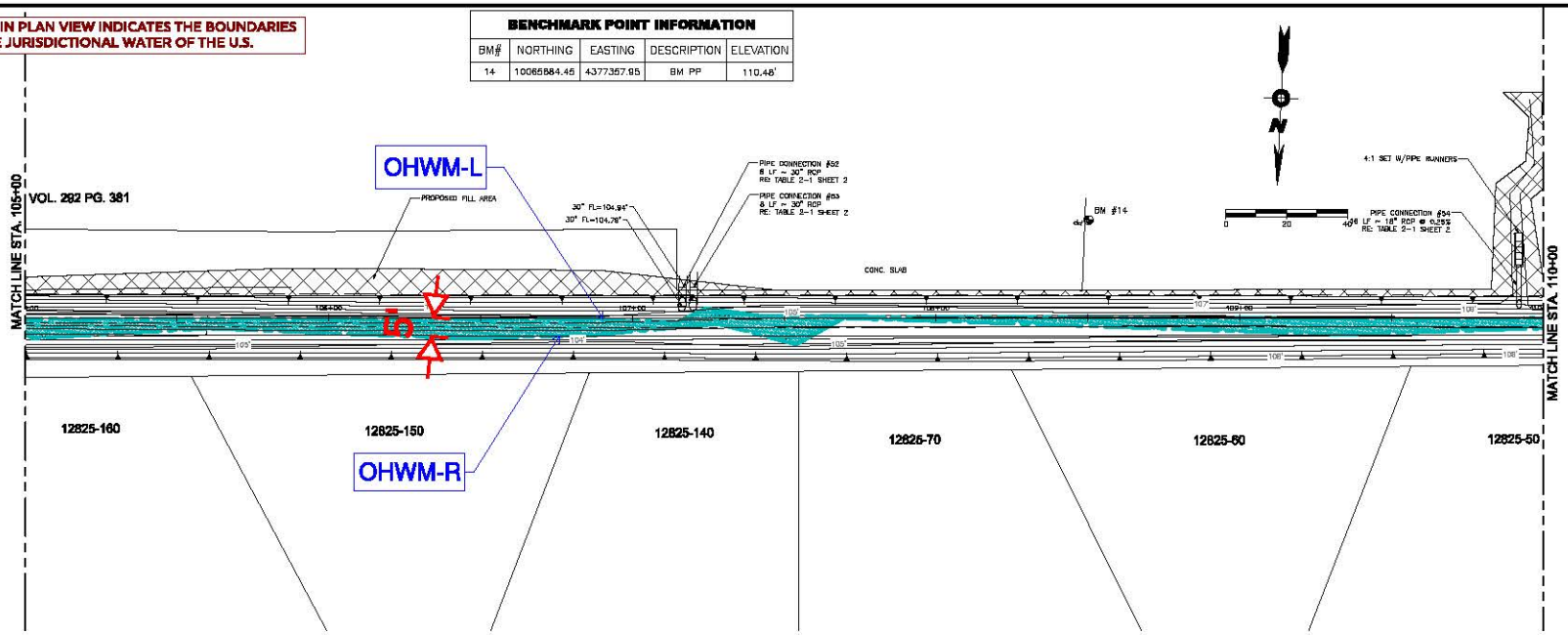
ARCHEAULT, WILSON & COLE


OHWM-L
OHWM-R
END ADD ALT. #2
BEGIN ADD ALT. #3
CORDREY
PROPOSED RETAINING WALL AT POWER POLE
PROPOSED FILL AREA
MATCH LINE STA. 100+00
MATCH LINE STA. 105+00
16th STREET
VOL. 286 PG. 68
12825-240
CONC. WALK
CONC. SLAB
BM #13
BENCHMARK POINT INFORMATION
BM# | NORTHING | EASTING | DESCRIPTION | ELEVATION
13 | 10065636.22 | 4377915.89 | BM | 108.46'
BLUE HATCH IN PLAN VIEW INDICATES THE BOUNDARIES OF THE JURISDICTIONAL WATER OF THE U.S.
* OHWM SHOWN IN PROFILE VIEW IS ESTIMATED BASED ON THE HIGHER OF LEFT BANK AND RIGHT BANK ELEVATIONS AND ACCOUNTS FOR VARIATIONS IN EROSIONAL AREAS, GPS METERING RESOLUTION, AND HAZARDOUS CONDITIONS ALONG BANKS.
*OHWM
PROPOSED TOP OF CONCRETE LINING
EXISTING TOP OF DITCH
PROPOSED BOTTOM OF DITCH
EXISTING BOTTOM OF DITCH
16TH STREET
(2) 5x4 BOX
112'
108'
104'
100'
96'
100+00
101+00
102+00
103+00
104+00
105+00
SHEET 24
COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE
PLAN AND PROFILE STA. 100+00 TO STA. 105+00
ORANGE, ORANGE COUNTY, TEXAS
THIS DOCUMENT IS FOR INTERIM REVIEW AND NOT INTENDED FOR CONSTRUCTION, BIDDING OR PERMIT PURPOSES
JOE M. WILSON, JR.
P.E. 92067
MARCH 27, 2017
ARCHEAULT, WILSON & COLE

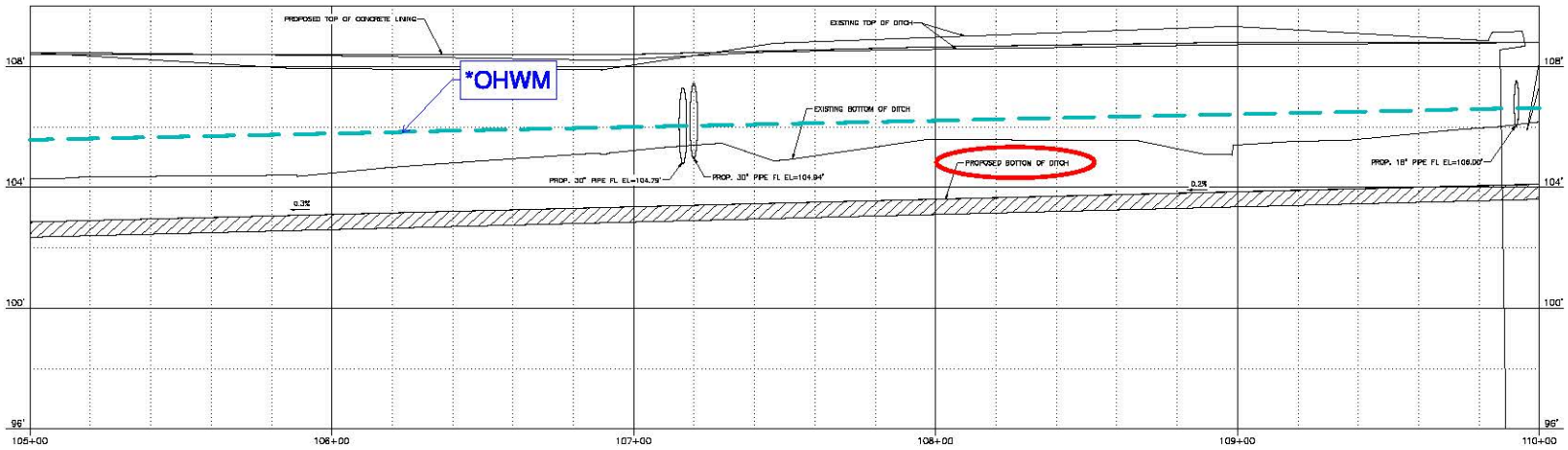
BLUE HATCH IN PLAN VIEW INDICATES THE BOUNDARIES OF THE JURISDICTIONAL WATER OF THE U.S.

BENCHMARK POINT INFORMATION

BM#	NORTHING	EASTING	DESCRIPTION	ELEVATION
14	10065584.45	4377357.95	BM PP	110.48'



* OHWM SHOWN IN PROFILE VIEW IS ESTIMATED BASED ON THE HIGHER OF LEFT BANK AND RIGHT BANK ELEVATIONS AND ACCOUNTS FOR VARIATIONS IN EROSIONAL AREAS, GPS METERING RESOLUTION, AND HAZARDOUS CONDITIONS ALONG BANKS.



SHEET 25

NO.	DATE	REVISION	APPROV.
4			
3			
2			
1			

DATE: OCTOBER 2016 SCALE: AS SHOWN DRAWN BY: RMI
JOB NO.: CRC-100 DESIGNED BY: CCC CHECKED BY: FCC

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE
PLAN AND PROFILE STA. 105+00 TO STA. 110+00
ORANGE, ORANGE COUNTY, TEXAS

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JOE M. WILSON, JR.
P.E. 92067

MARCH 27, 2017

Surveying Firm 10194044

ARCHEAULT, WILSON & COLE
Engineering | Surveying | Planning

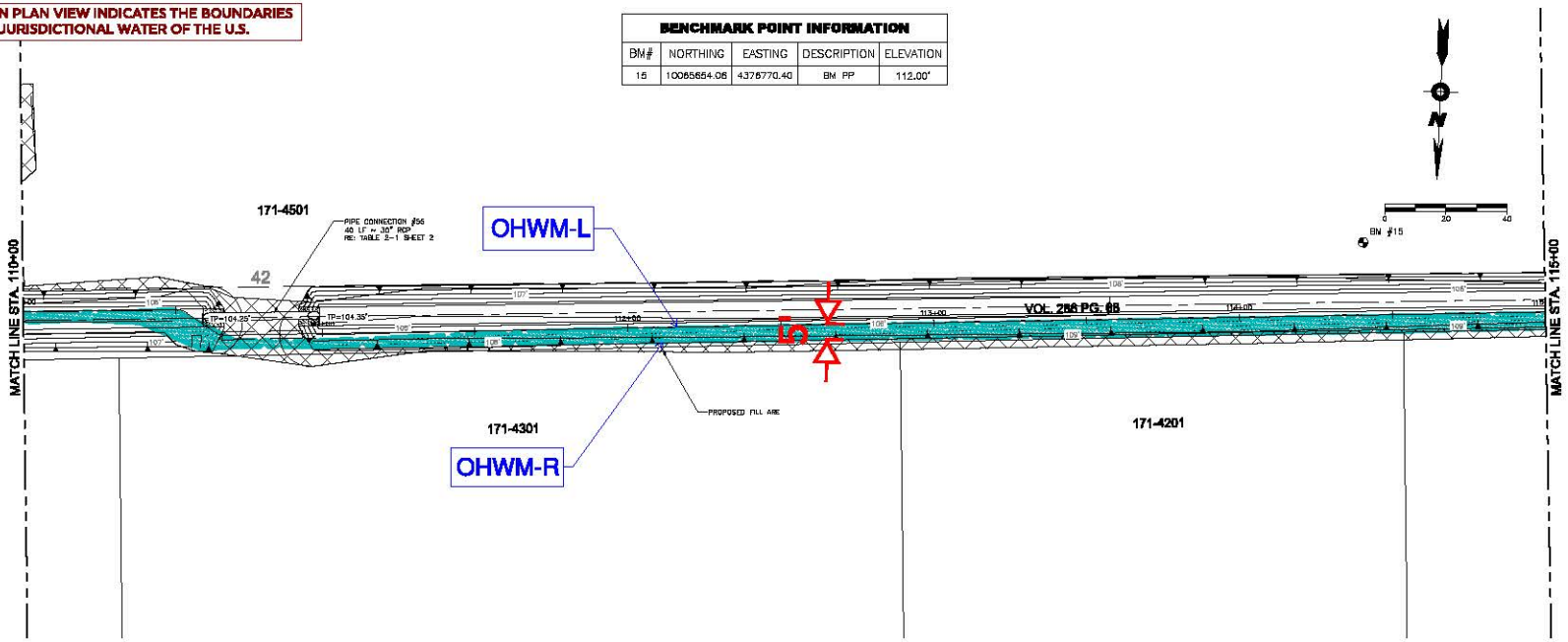
4802 Turtle Creek Drive, Suite 200
Port Arthur, TX 77642

Engineering Firm F-10994

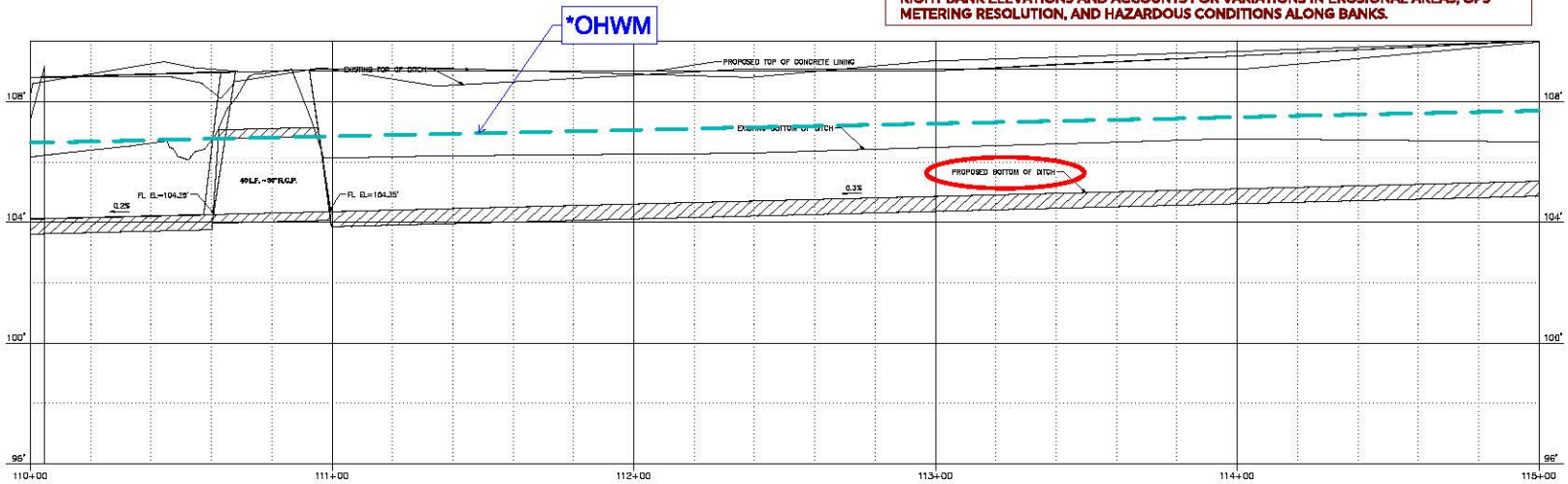
BLUE HATCH IN PLAN VIEW INDICATES THE BOUNDARIES OF THE JURISDICTIONAL WATER OF THE U.S.

BENCHMARK POINT INFORMATION

BM#	NORTHING	EASTING	DESCRIPTION	ELEVATION
15	10085654.08	4376770.40	BM PP	112.00'



* OHWM SHOWN IN PROFILE VIEW IS ESTIMATED BASED ON THE HIGHER OF LEFT BANK AND RIGHT BANK ELEVATIONS AND ACCOUNTS FOR VARIATIONS IN EROSIONAL AREAS, GPS METERING RESOLUTION, AND HAZARDOUS CONDITIONS ALONG BANKS.



SHEET 26

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

PLAN AND PROFILE STA. 110+00 TO STA. 115+00

ORANGE, ORANGE COUNTY, TEXAS

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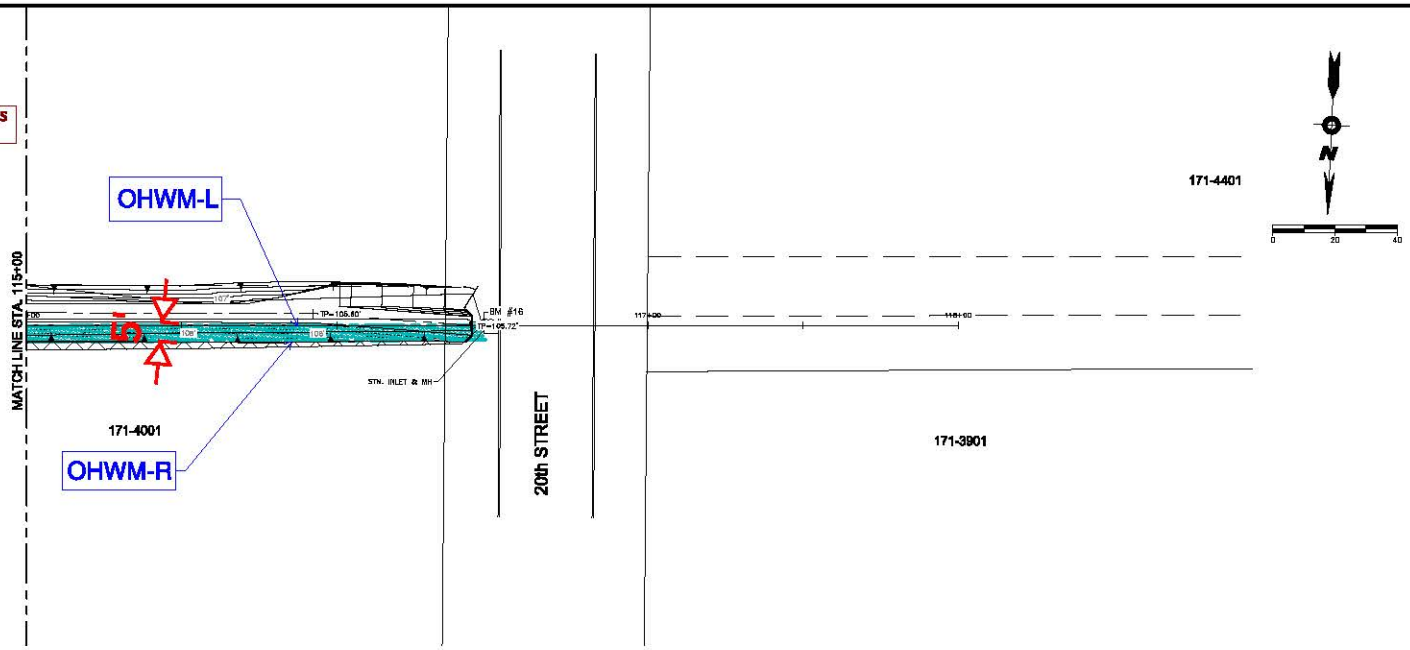
JOE M. WILSON, JR.
P.E. 92067

MARCH 27, 2017

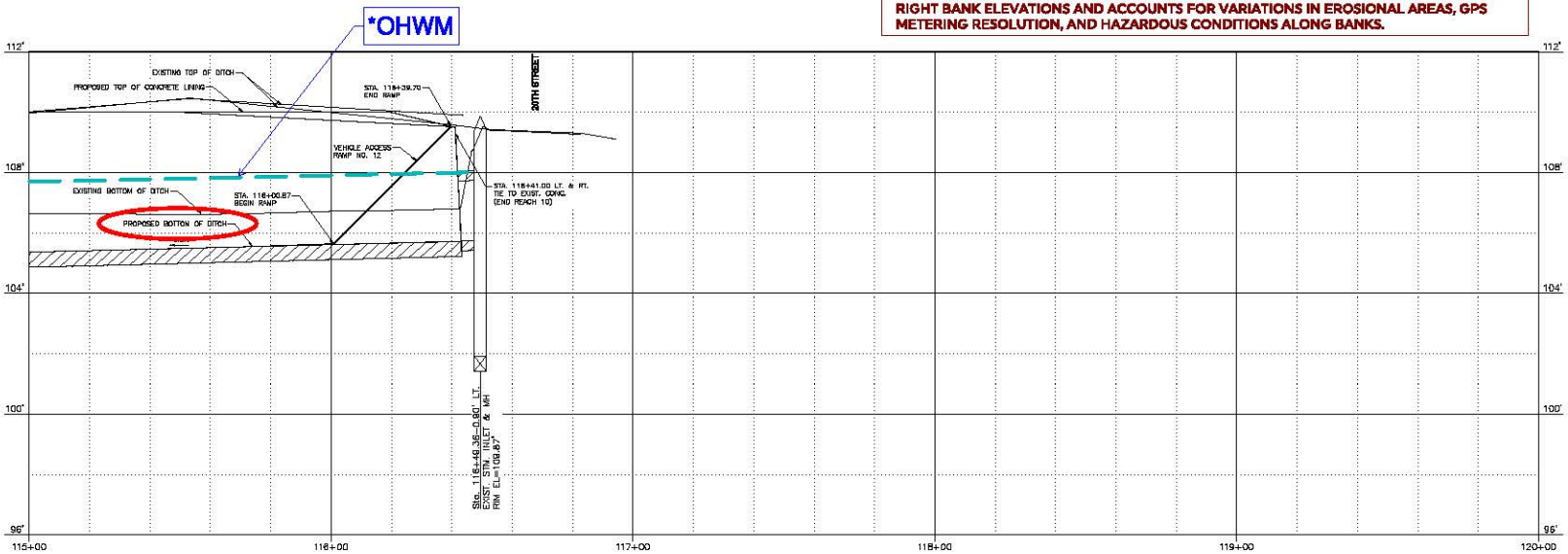
ARCHEAULT, WILSON & COLE

BENCHMARK POINT INFORMATION				
BM#	NORTHING	EASTING	DESCRIPTION	ELEVATION
16	10065860.41	4376582.44	BM	109.89'

BLUE HATCH IN PLAN VIEW INDICATES THE BOUNDARIES OF THE JURISDICTIONAL WATER OF THE U.S.



* OHWM SHOWN IN PROFILE VIEW IS ESTIMATED BASED ON THE HIGHER OF LEFT BANK AND RIGHT BANK ELEVATIONS AND ACCOUNTS FOR VARIATIONS IN EROSIONAL AREAS, GPS METERING RESOLUTION, AND HAZARDOUS CONDITIONS ALONG BANKS.



SHEET 27

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

PLAN AND PROFILE STA. 115+00 TO STA. 117+00

ORANGE, ORANGE COUNTY, TEXAS

DATE: OCTOBER 2016
JOB NO.: CRC-100
SCALE: AS SHOWN
DESIGNED BY: CCC
DRAWN BY: RWI
CHECKED BY: CCC

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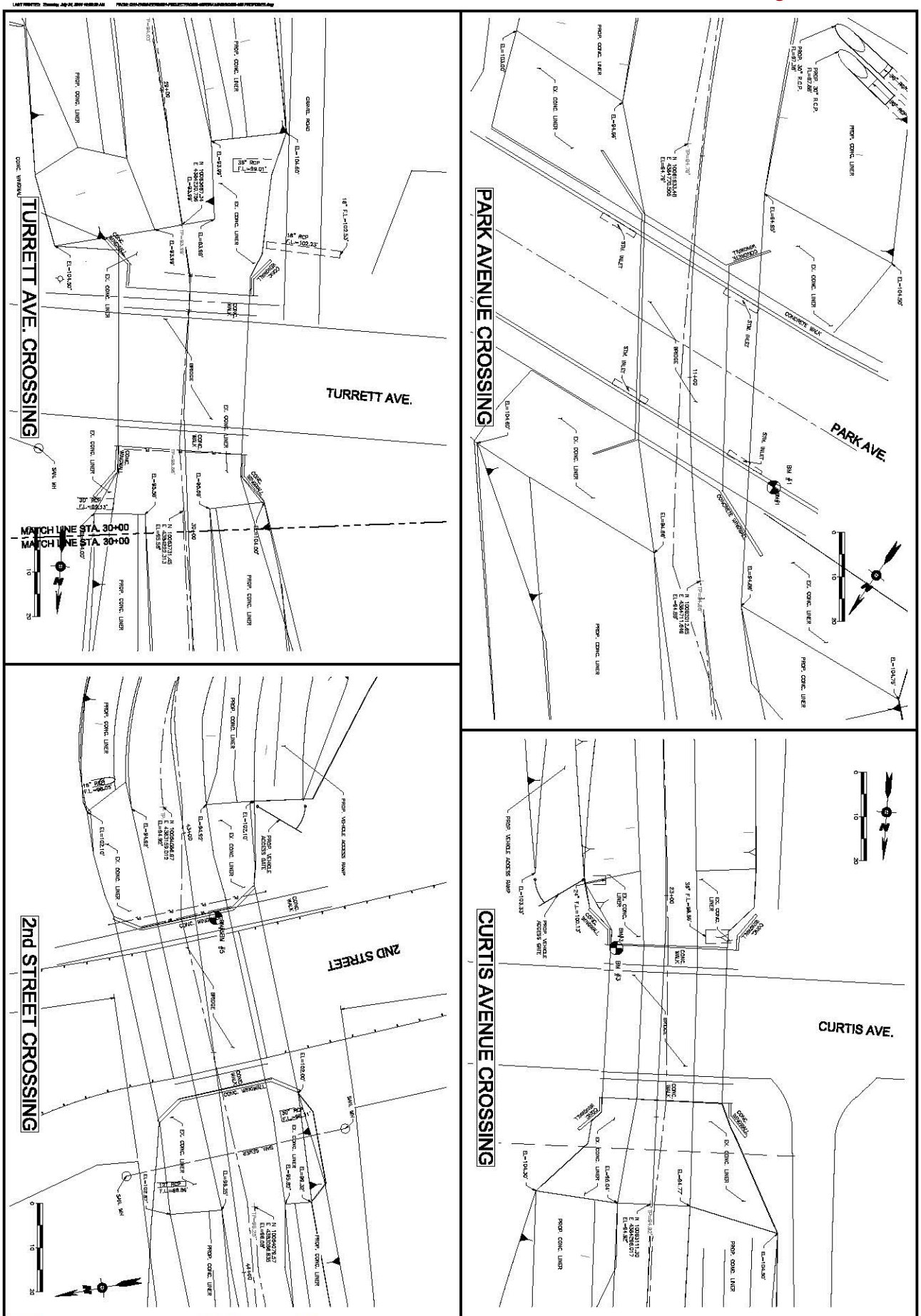
JOE M. WILSON, JR.
P.E. 92057

MARCH 27, 2017

ARCHEAULT, WILSON & COLE
Engineering Firm F-10994
Surveying 10194444


PARK AVENUE CROSSING
PARK AVE.
CONCRETE WALK
STM. INLET
BRIDGE
PROP. CONC. LINER
EX. CONC. LINER
TURRETT AVE. CROSSING
TURRETT AVE.
MATCH LINE STA. 30+00
MATCH LINE STA. 30+00
CURTIS AVENUE CROSSING
CURTIS AVE.
2nd STREET CROSSING
2ND STREET
PROP. VEHICLE ACCESS RAMP
PROP. VEHICLE ACCESS GATE
CONC. WINGWALL
SAN. MH
Engineering F-10194
Surveying 10194040
ARCENEAUX WILSON & COLE
engineering | surveying | planning
2001 Turtle Creek Drive, Suite 320
Port Arthur, TX 77642
409.724.7688
www.awc.com
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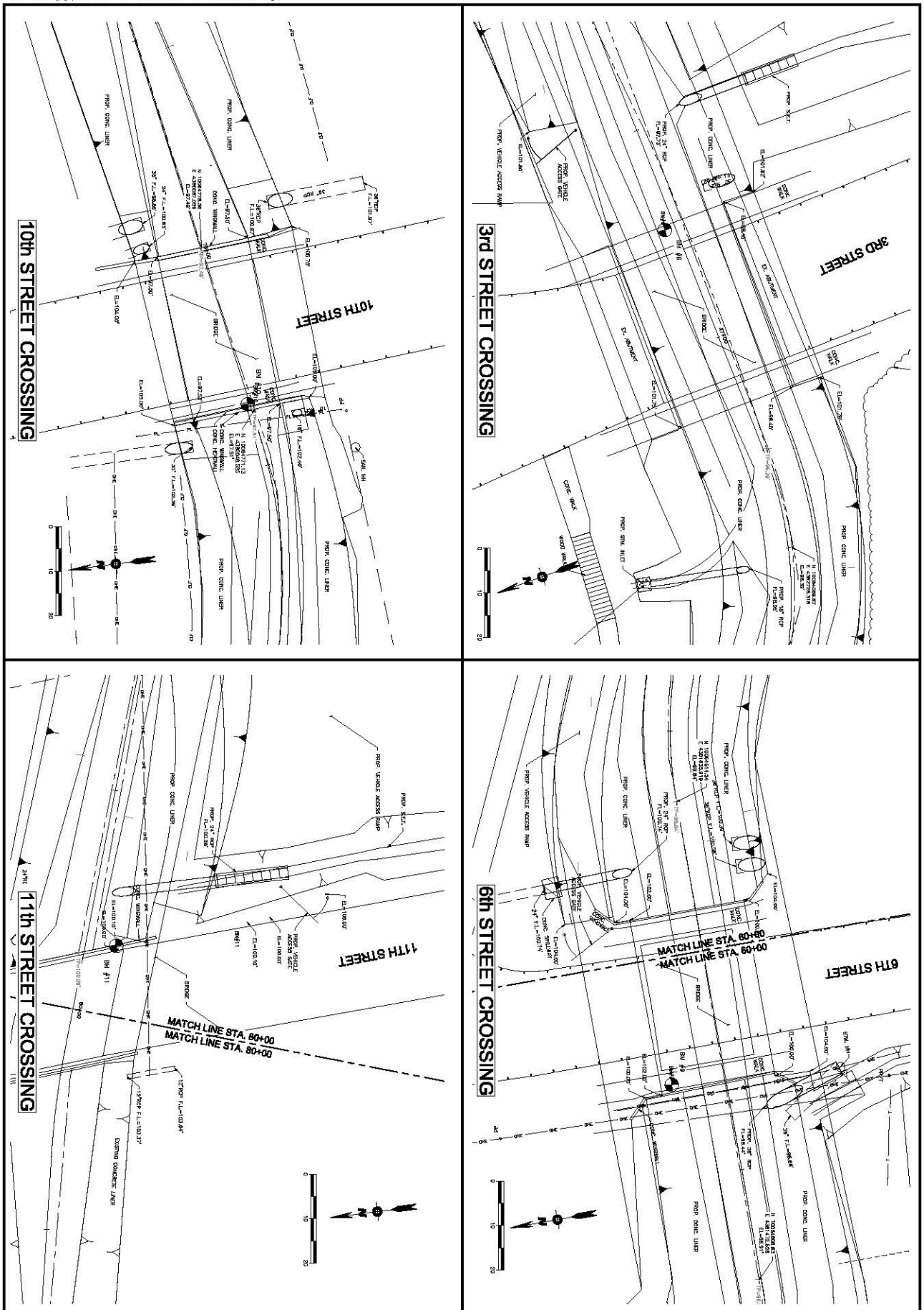
JOE M. WILSON, JR.
P.E. 92067
MARCH 27, 2017
COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE
ROAD CROSSING SHEET 1
ORANGE, ORANGE COUNTY, TEXAS
NO. DATE REVISION APPROV.
DATE OCTOBER 2016
SCALE: AS SHOWN
DRAWN BY: RMI
JOB NO.: ORC-100
DESIGNED BY: KKC
CHECKED BY: KKC
SHEET 28


10th STREET CROSSING
10TH STREET
PROP. CONC. LINER
CONC. WINGWALL
BRIDGE
BM #10
SAN. MH
3rd STREET CROSSING
3RD STREET
PROP. VEHICLE ACCESS RAMP
PROP. VEHICLE ACCESS GATE
PROP. 24" RCP
PROP. 14" RCP
CONC. WALK
PROP. STM. INLET
11th STREET CROSSING
11TH STREET
PROP. VEHICLE ACCESS GATE
BM #11
MATCH LINE STA. 80+00
MATCH LINE STA. 80+00
EXISTING CONCRETE LINER
6th STREET CROSSING
6TH STREET
MATCH LINE STA. 60+80
MATCH LINE STA. 60+00
BM #9
PROP. CONC. WINGWALL
PROP. 48" RCP
STM. MH
Engineering
F-10194
Surveying
10194-04
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engineering | surveying | planning
2001 Turtle Creek Drive, Suite 320
Port Arthur, TX 77642
409.724.7688
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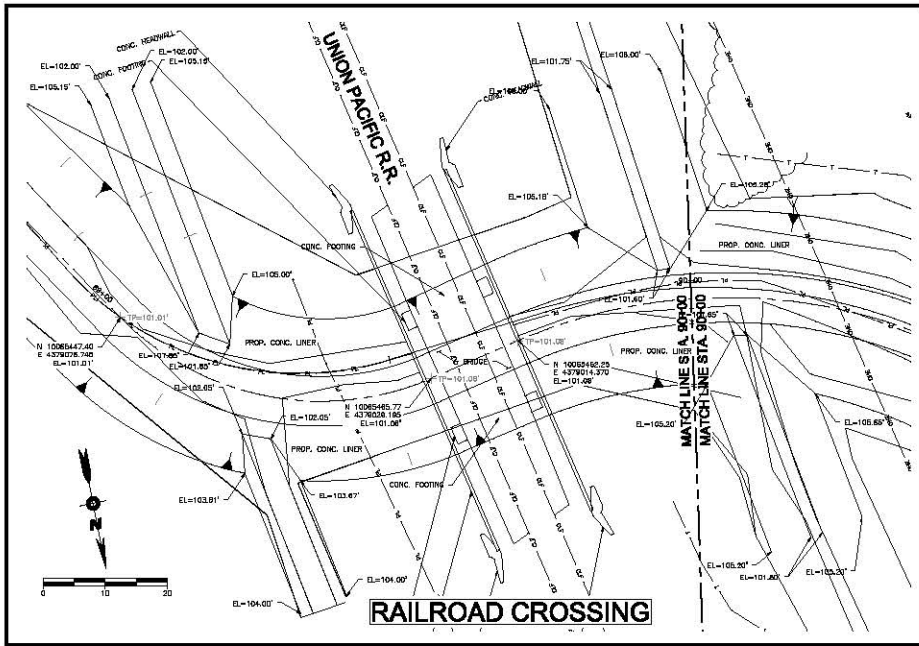
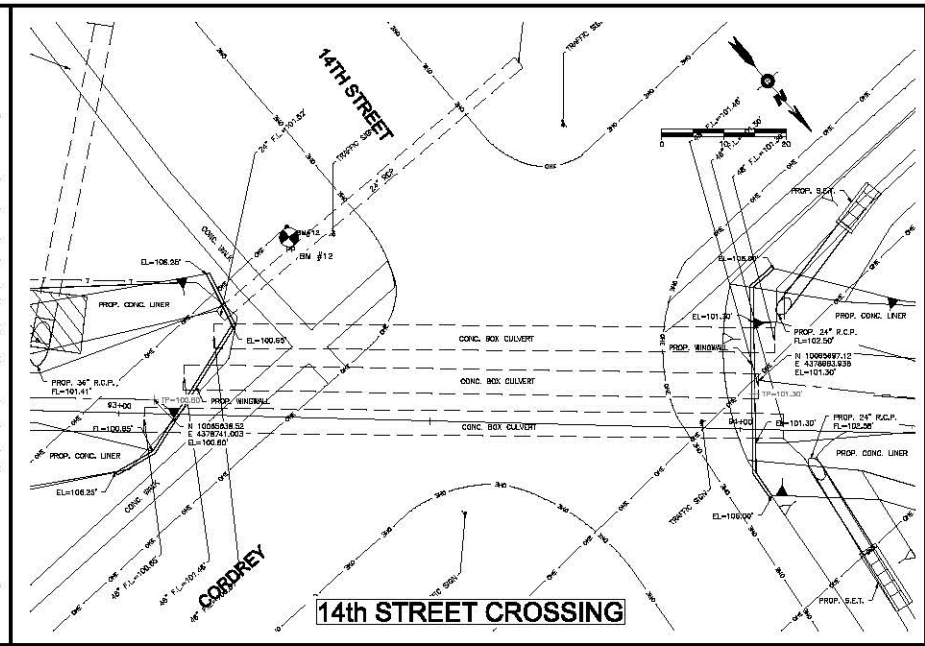
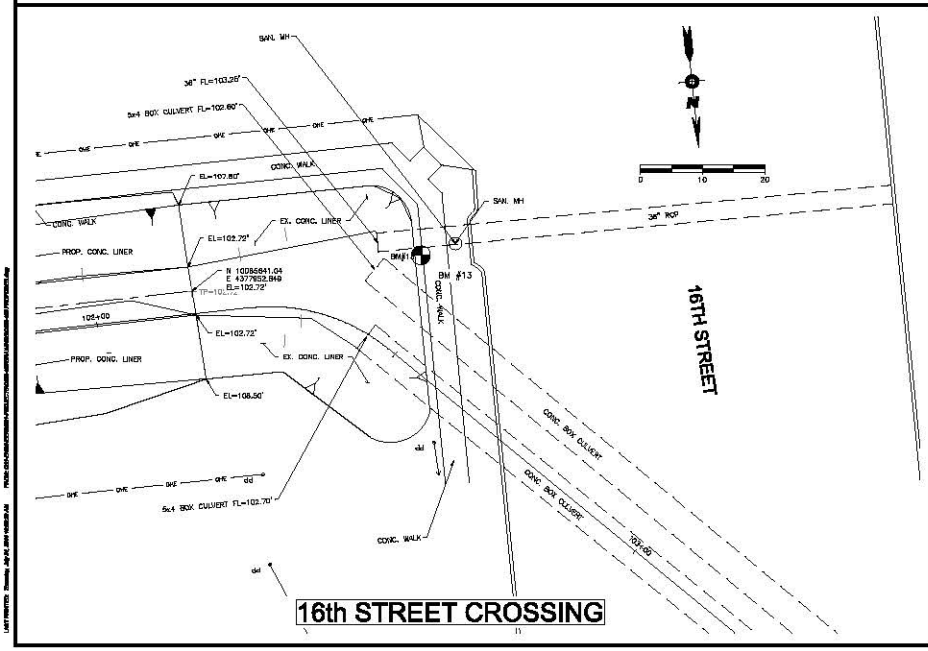
JOE M. WILSON, JR.
P.E. 92067
MARCH 27, 2017
COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE
ROAD CROSSING SHEET 2
ORANGE, ORANGE COUNTY, TEXAS
NO. DATE REVISION APPROV.
DATE OCTOBER 2016
SCALE: AS SHOWN
DRAWN BY: RMH
JOB NO.: ORC-100
DESIGNED BY: KKC
CHECKED BY: KKC
SHEET 29



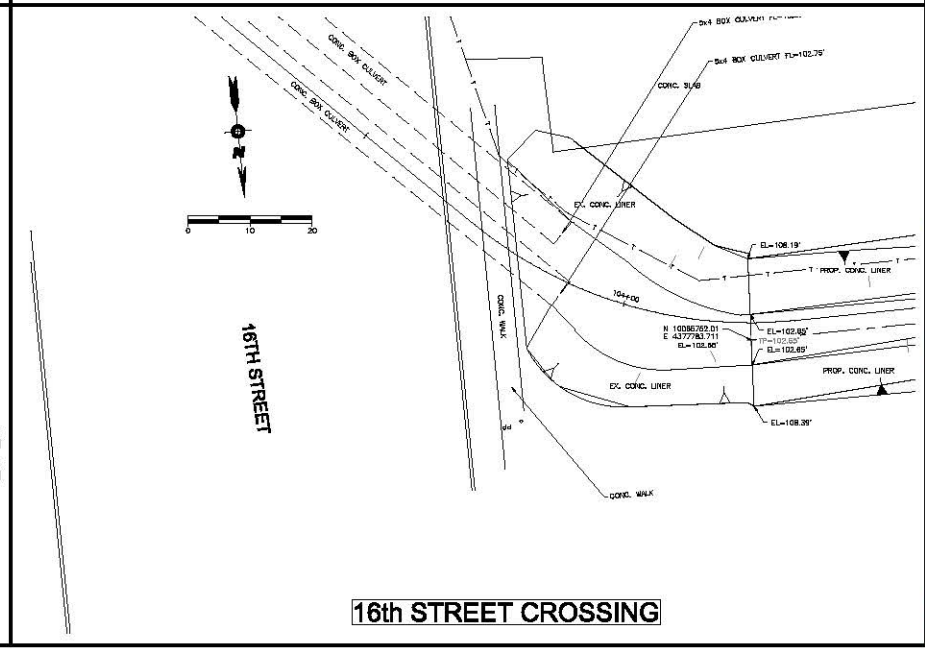
RAILROAD CROSSING



14th STREET CROSSING



16th STREET CROSSING



16th STREET CROSSING

SHEET 30

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

ROAD CROSSING SHEET 3

ORANGE, ORANGE COUNTY, TEXAS

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JOE M. WILSON, JR.
P.E. 92057

MARCH 27, 2017

ARCHEAULT, WILSON & COLE
Engineering, Surveying, Planning

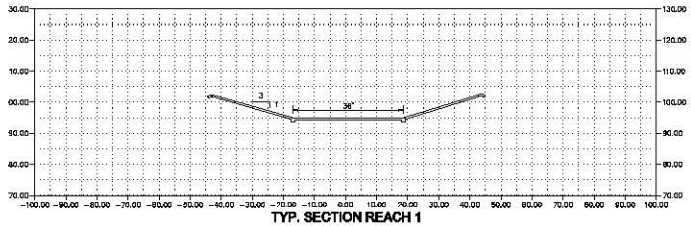
Surveying 10194444

Engineering P-10914

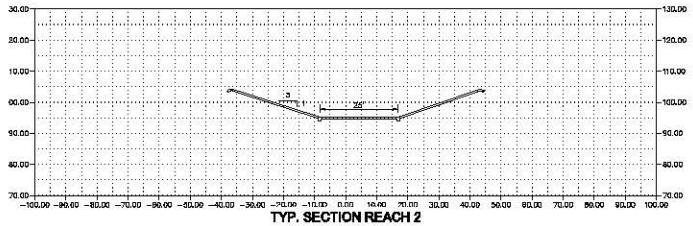
2001 Tuckle Creek Drive, Suite 200
Port Arthur, TX 77642

409.736.7888

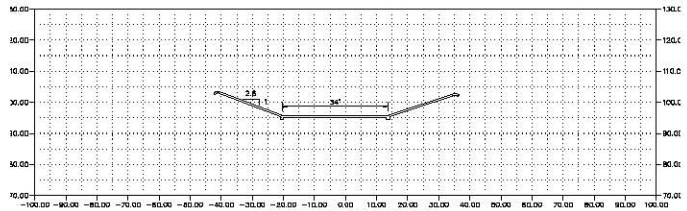
DATE: OCTOBER 2016 | SCALE: AS SHOWN | DRAWN BY: RMI
JOB NO.: CRC-100 | DESIGNED BY: CCC | CHECKED BY: FCC



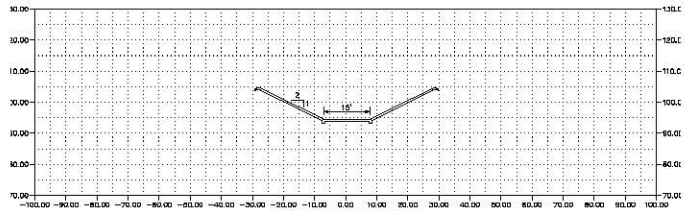
TYP. SECTION REACH 1
STA. 9+50 - 10+50



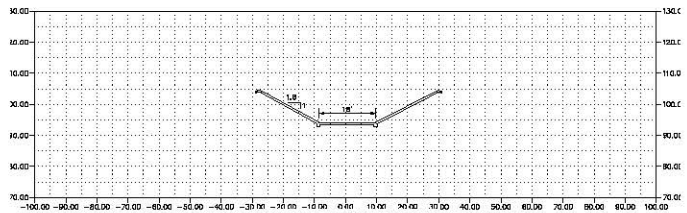
TYP. SECTION REACH 2
STA. 11+50 - 15+50



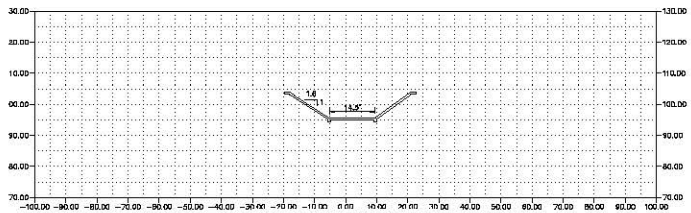
TRANSITION ZONE REACH 2
STA. 15+27 - 16+00



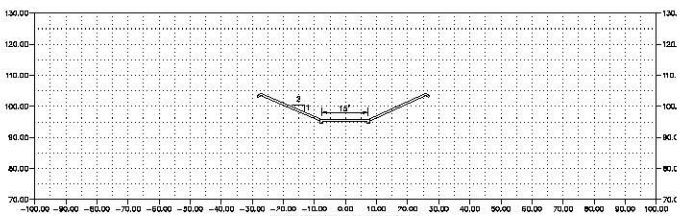
TYP. SECTION REACH 3
STA. 23+70 - 26+50



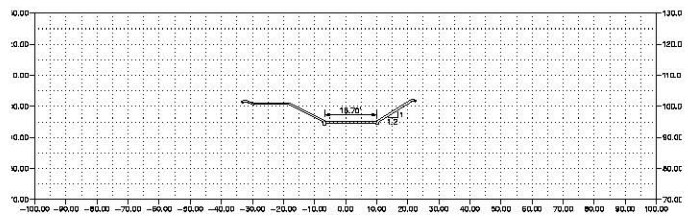
TRANSITION ZONE REACH 3
STA. 28+50 - 29+15



TRANSITION ZONE REACH 4
STA. 29+95 - 30+60



TYP. SECTION REACH 4
STA. 30+60 - 42+55



TRANSITION ZONE REACH 4
STA. 42+55 - 42+90

SHEET
31

NO.	DATE	REVISION	APPROV.
1			
2			
3			
4			

DATE: OCTOBER 2016 SCALE: AS SHOWN DRAWN BY: RWI
JOB NO.: CRC-100 DESIGNED BY: CCC CHECKED BY: FCC

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

CROSS SECTIONS SHEET 1

ORANGE, ORANGE COUNTY, TEXAS

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JOE M. WILSON, JR.
P.E. 92067

MARCH 27, 2017

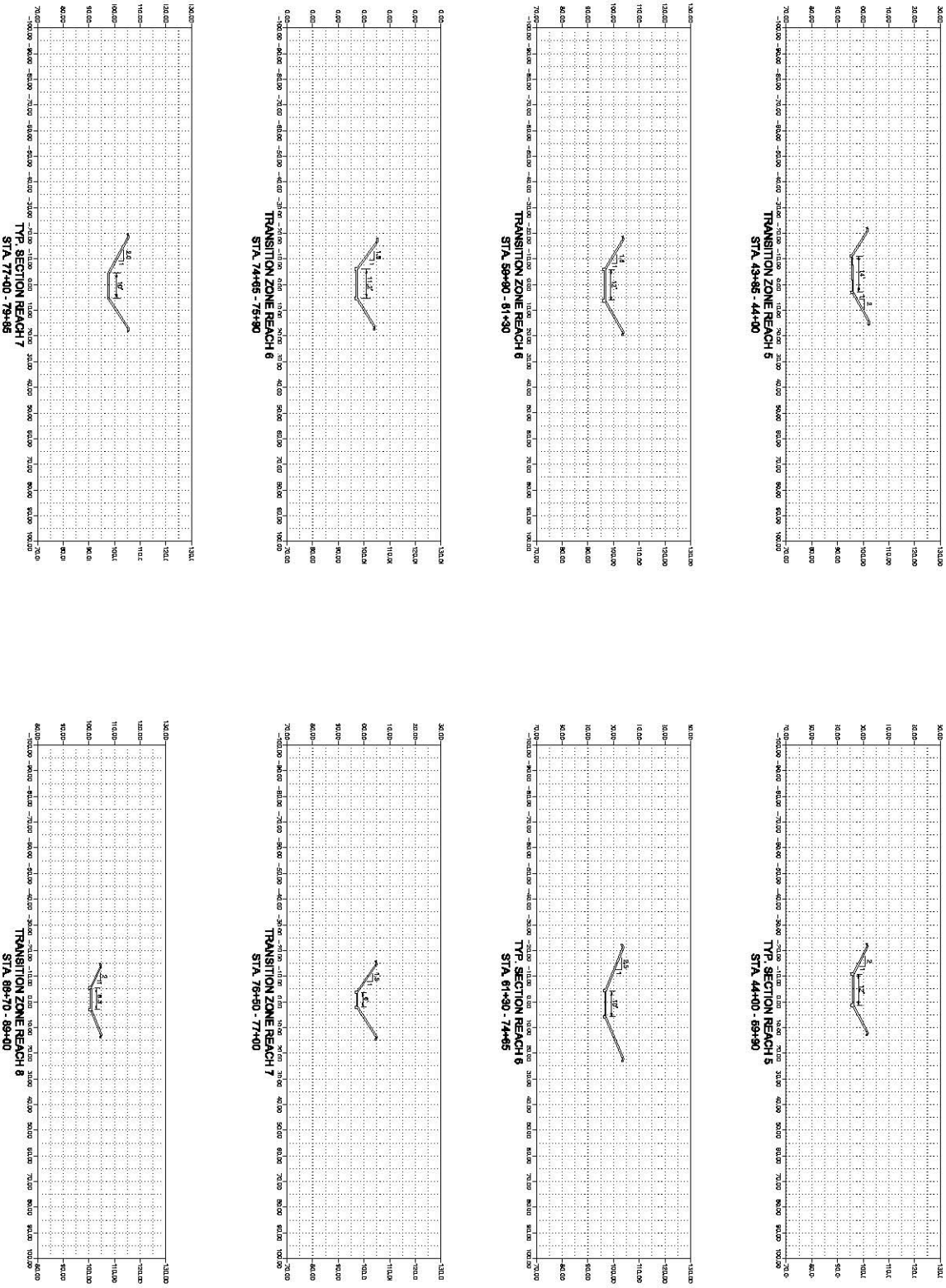
Surveying
10194944

Engineering
F-10194

ARCHEQUITY WILSON & COLE
engineering | surveying | planning

409.296.3888
www.awc

2001 Turtle Creek Drive, Suite 200
Port Arthur, TX 77642



Engineering F-10194

Surveying 10194-00

ARCENEAUX WILSON & COLE
engineering | surveying | planning

2001 Turtle Creek Drive, Suite 320
Port Arthur, TX 77642

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JOE M. WILSON, JR.
P.E. 92067

MARCH 27, 2017

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

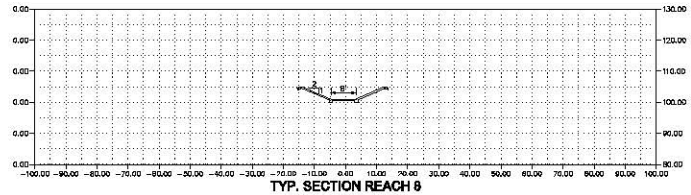
CROSS SECTIONS SHEET 2

ORANGE, ORANGE COUNTY, TEXAS

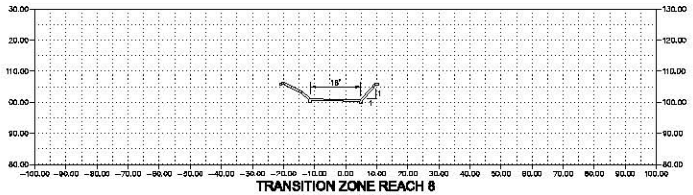
NO.	DATE	REVISION	APPROV.
4			
3			
2			
1			

DATE: OCTOBER 2016 | SCALE: AS SHOWN | DRAWN BY: RMH
JOB NO.: ORC-100 | DESIGNED BY: KWC | CHECKED BY: KWC

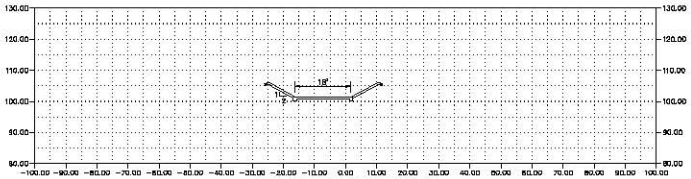
SHEET 32



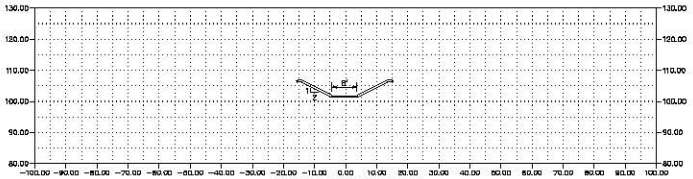
TYP. SECTION REACH 8
STA. 89+00 - 92+85



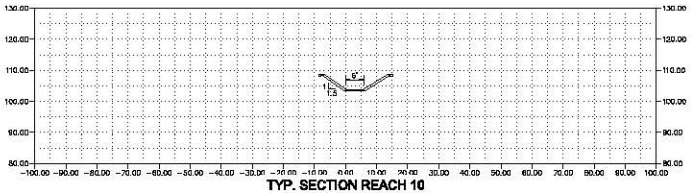
TRANSITION ZONE REACH 8
STA. 92+85 - 93+00



TRANSITION ZONE REACH 9
STA. 94+00 - 94+40



TYP. SECTION REACH 9
STA. 94+40 - 102+15



TYP. SECTION REACH 10
STA. 104+20 - 116+43

SHEET
33

NO.	DATE	REVISION	APPROV.
1			
2			
3			
4			

DATE: OCTOBER 2016 SCALE: AS SHOWN DRAWN BY: RWI
JOB NO.: CRC-100 DESIGNED BY: CCC CHECKED BY: CCC

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

CROSS SECTIONS SHEET 3

ORANGE, ORANGE COUNTY, TEXAS

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JOE M. WILSON, JR.
P.E. 92057

MARCH 27, 2017

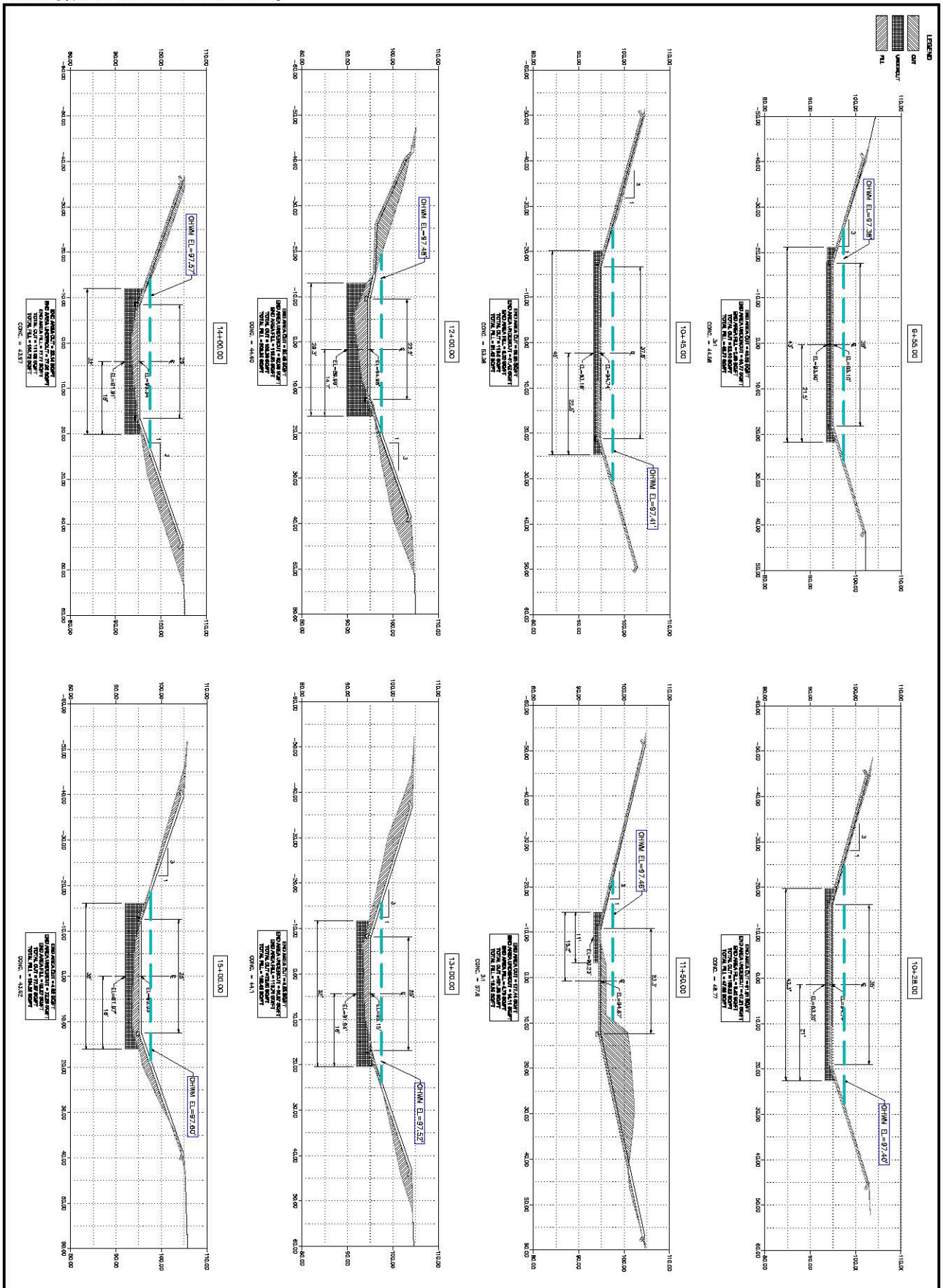
ARCHEAULT, WILSON & COLE
Engineering | Surveying | Planning

Surveying
10194944

Engineering
F-10994

2001 Turtle Creek Drive, Suite 200
Port Arthur, TX 77642

409.724.7888
www.awc



Engineering F-10194

Surveying 10194040

ARCENEAUX WILSON & COLE
engineering | surveying | planning

2001 Turtle Creek Drive, Suite 320
Port Arthur, TX 77642

409.724.7688
awcengcom

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JOB M. WILSON, JR.
P.E. 92067

MARCH 27, 2017

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

CUT FILL SECTIONS STA. 9+55 TO STA. 15+00

ORANGE, ORANGE COUNTY, TEXAS

NO.	DATE	REVISION	APPROV.
4			
3			
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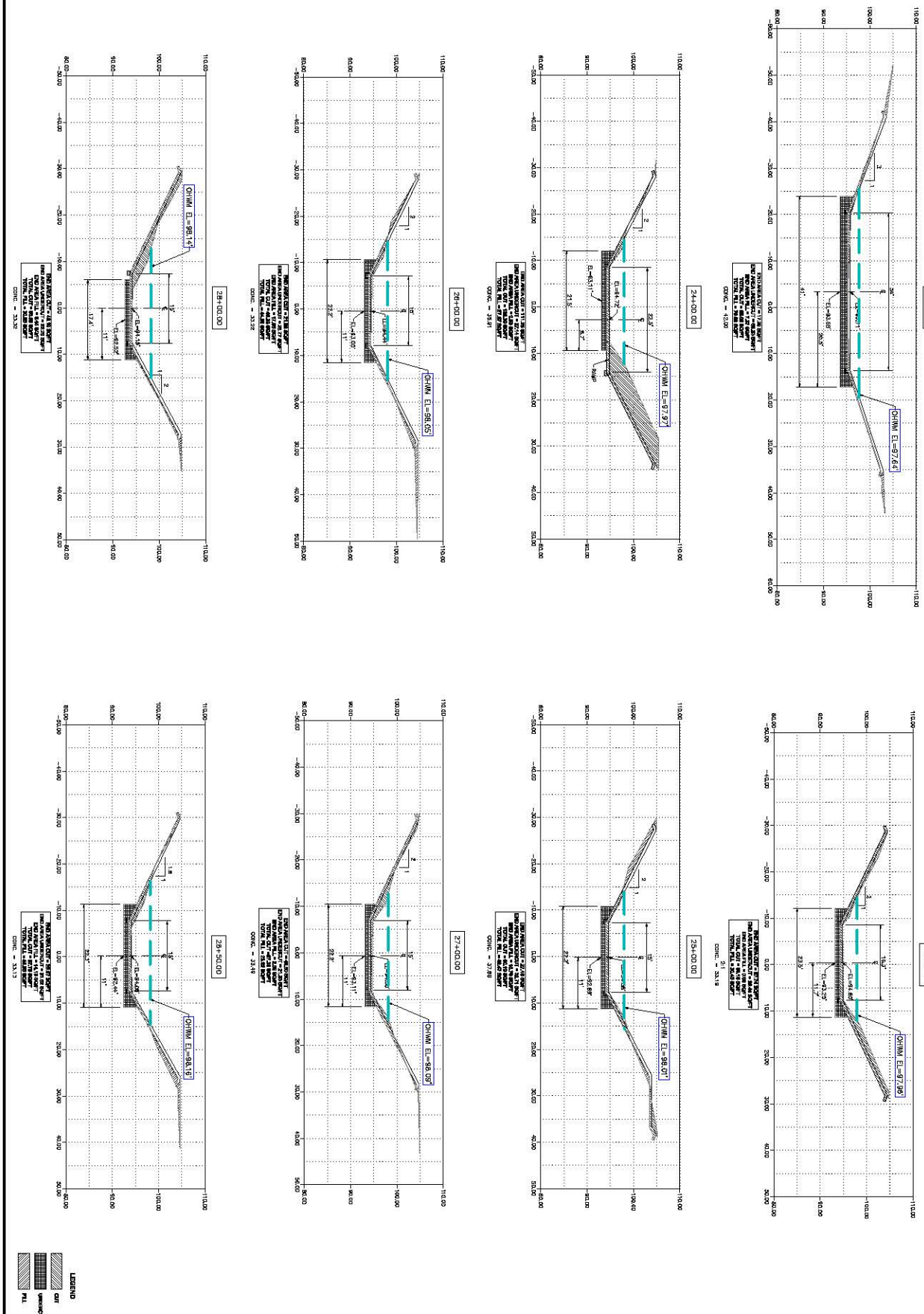
DATE: OCTOBER 2016 | SCALE: AS SHOWN | DRAWN BY: RMM
JOB NO.: ORC-100 | DESIGNED BY: KXC | CHECKED BY: KXC

SHEET 34



Engineering F-10194

Surveying 10194049

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Port Arthur, TX 77642

409.724.7688
awcengineers.com

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JOE M. WILSON, III.
P.E. 92067
MARCH 27, 2017

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

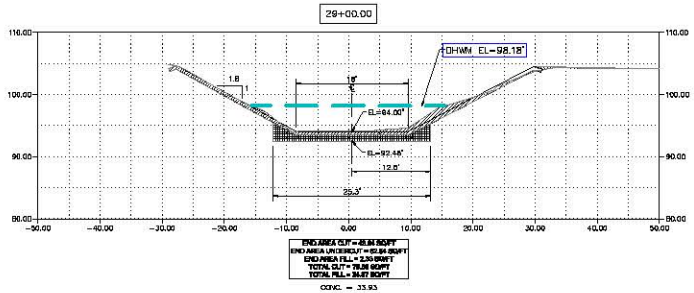
CUT FILL SECTIONS STA. 15+95 TO STA. 28+50

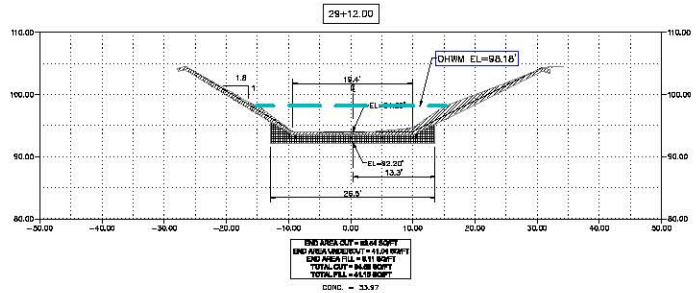
ORANGE, ORANGE COUNTY, TEXAS

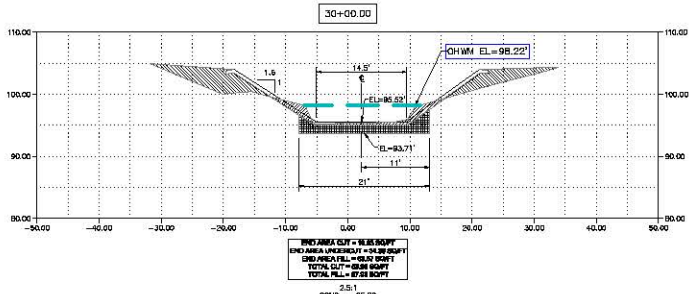
NO.	DATE	REVISION	APPROV.
4			
3			
2			
1			

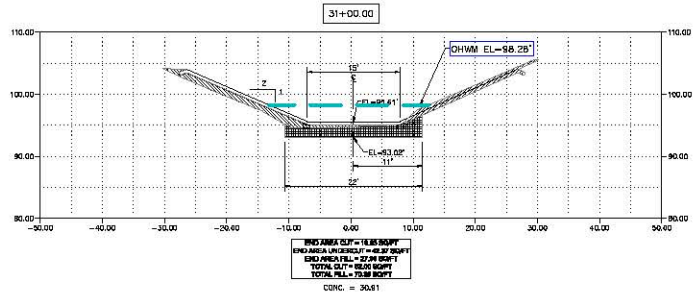
DATE: OCTOBER 2016	SCALE: AS SHOWN	DRAWN BY: RMH	
JOB NO.: ORC-100	DESIGNED BY: KXC	CHECKED BY: KXC	

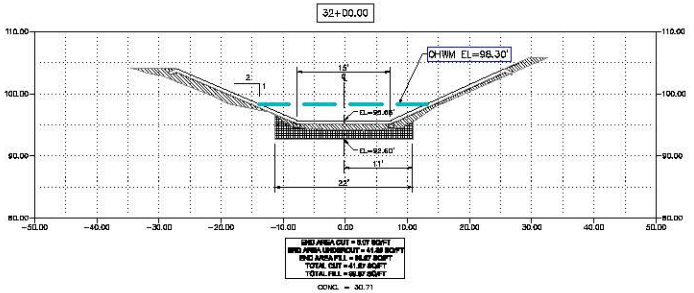
SHEET 35

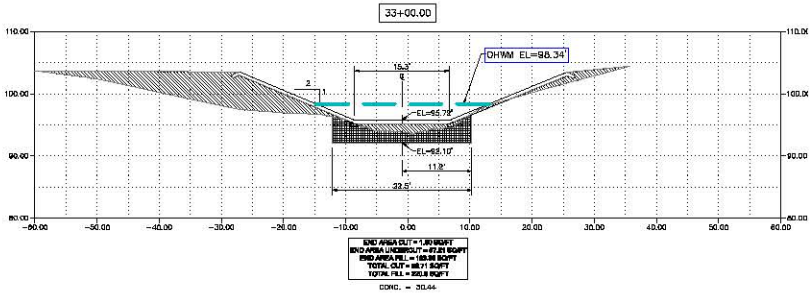


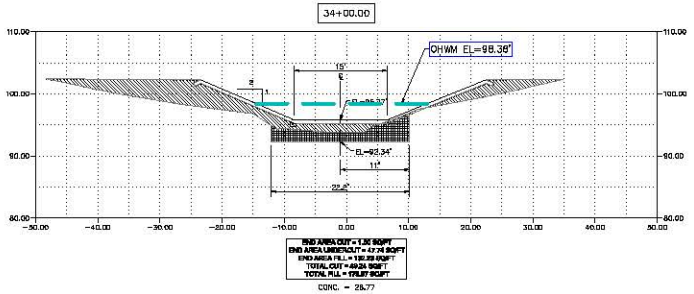


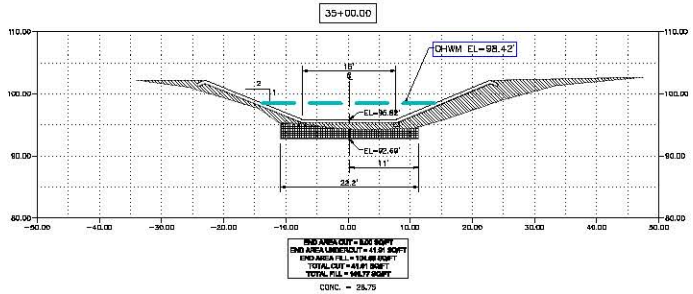












LEGEND

CUT

UNDERCUT

FILL

SHEET 36

NO.	DATE	REVISION	APPROV.
4			
3			
2			
1			

DATE: OCTOBER 2016 SCALE: AS SHOWN DRAWN BY: RMR

JOB NO.: GRC-100 DESIGNED BY: FCC CHECKED BY: FCC

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

CUT FILL SECTIONS STA. 29+00 TO STA. 35+00

ORANGE, ORANGE COUNTY, TEXAS

THIS DOCUMENT IS FOR INTERIM REVIEW AND NOT INTENDED FOR CONSTRUCTION, BIDDING OR PERMIT PURPOSES

JOE M. WILSON, JR.
P.E. 92067

MARCH 27, 2017

Surveying
TBPLS#

Engineering
F-10924

ARCHEQUITY WILSON & COLE
engineering, inventory, planning

4201 Travis Creek Drive, Suite 200
San Antonio, TX 78242

LAST PLOTTED: Friday, July 28, 2017 10:03:31 AM PLOT BY: FCC
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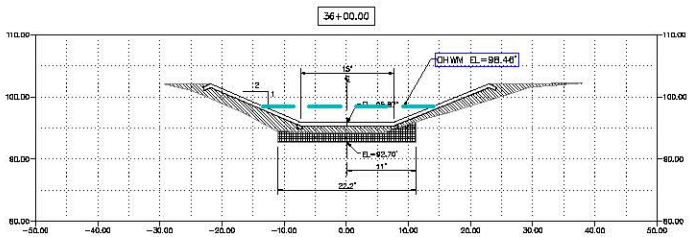
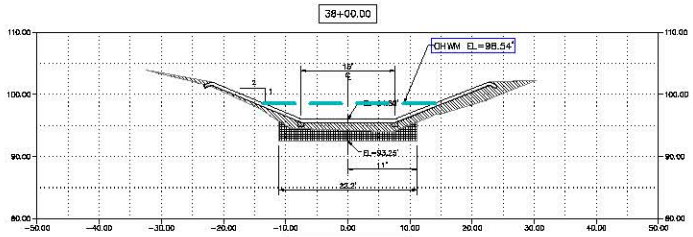
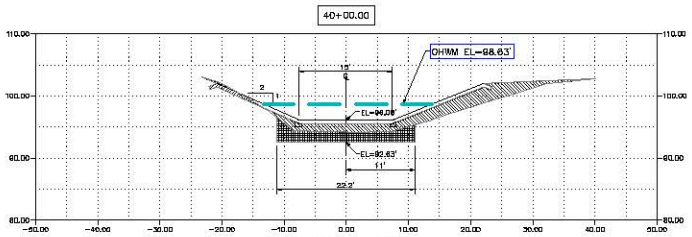
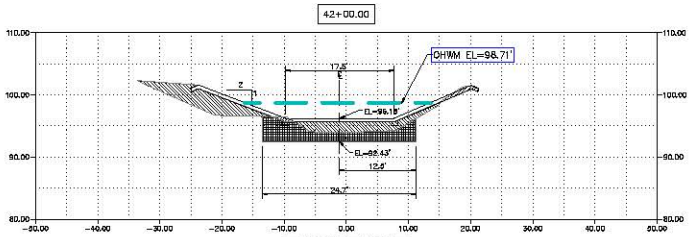
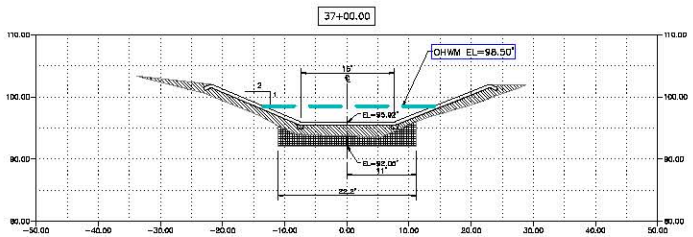
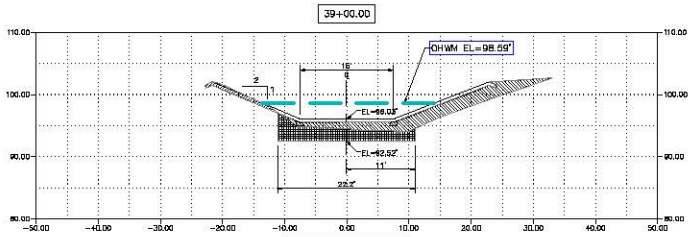


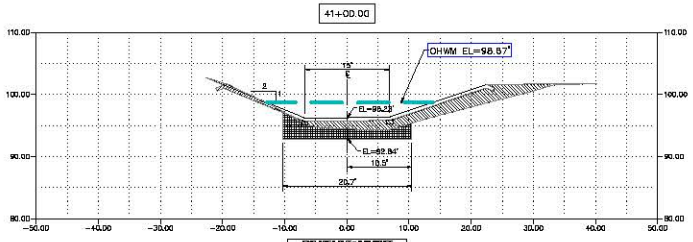


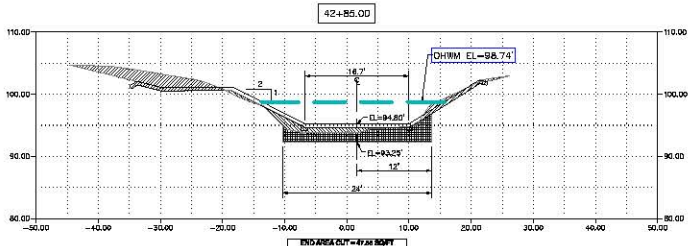












LEGEND

CUT

UNDERCUT

FILL

SHEET 37

NO.	DATE	REVISION	APPROV.
4			
3			
2			
1			

DATE: OCTOBER 2016 SCALE: AS SHOWN DRAWN BY: RMR

JOB NO.: GRC-100 DESIGNED BY: FCC CHECKED BY: FCC

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

CUT FILL SECTIONS STA. 36+00 TO STA. 42+85

ORANGE, ORANGE COUNTY, TEXAS

THIS DOCUMENT IS FOR INTERIM REVIEW AND NOT INTENDED FOR CONSTRUCTION, BIDDING OR PERMIT PURPOSES

JOE M. WILSON, JR.
P.E. 92067

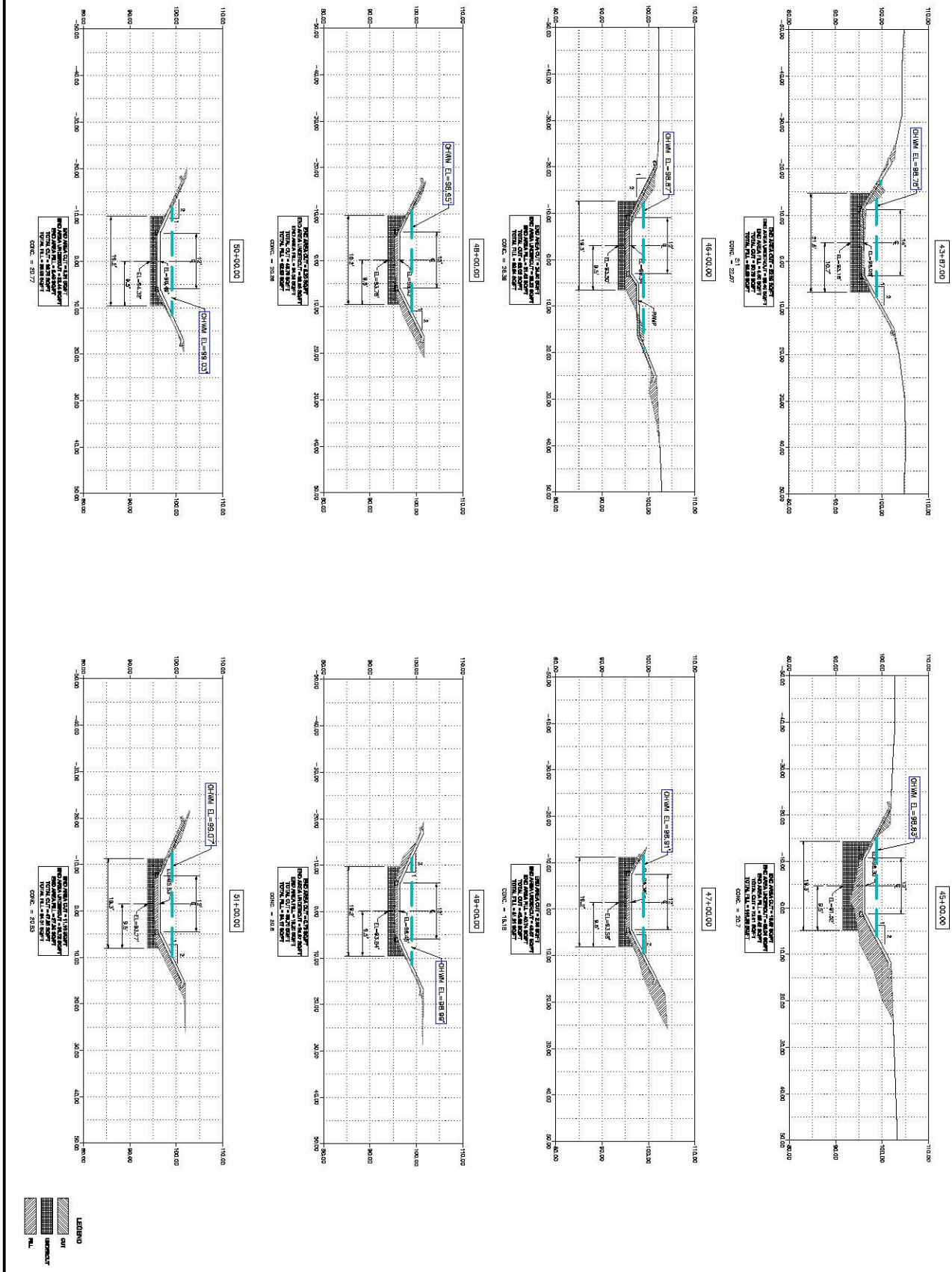
MARCH 27, 2017

Surveying TBPLS#

Engineering TBPE#

ARCHDEALY WILSON & COLE

2001 Turtle Creek Drive, Suite 200
San Antonio, TX 78213
430.705.7888
www.awc.com



Engineering F-10194 | Surveying 10194049

ARCENEAUX WILSON & COLE
engineering | surveying | planning

2001 Turtle Creek Drive, Suite 320
Port Arthur, TX 77642
409.724.7688
www.awc.com

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JOE M. WILSON, III.
P.E. 92067
MARCH 27, 2017

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

CUT FILL SECTIONS STA. 43+87 TO STA. 51+00

ORANGE, ORANGE COUNTY, TEXAS

NO.	DATE	REVISION	APPROV.
4			
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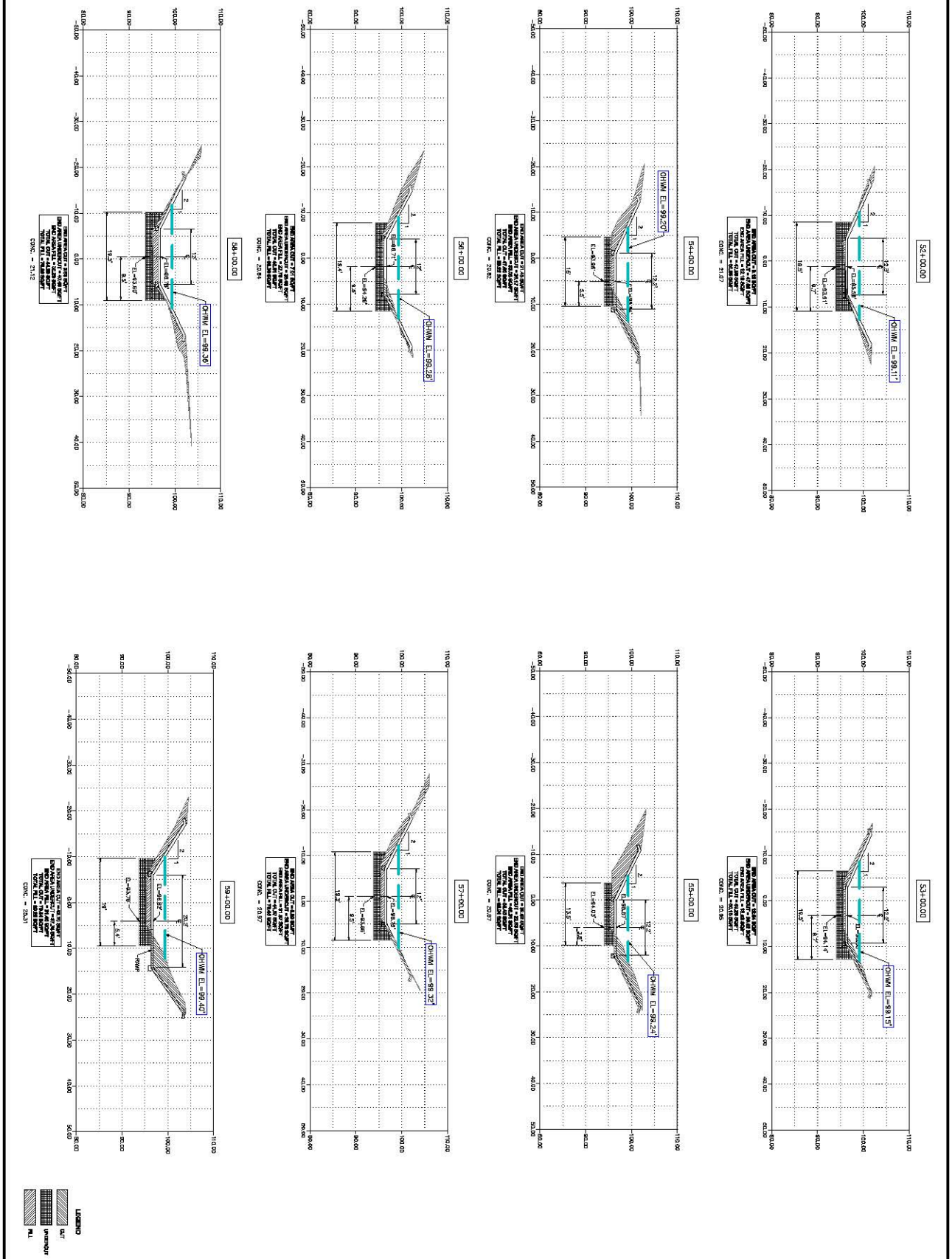
DATE: OCTOBER 2016 | SCALE: AS SHOWN | DRAWN BY: RMH
JOB NO.: ORC-100 | DESIGNED BY: KXC | CHECKED BY: KXC

SHEET 38



Engineering F-10194 | Surveying 10194049

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Port Arthur, TX 77642
409.724.7688
www.awc-pa.com

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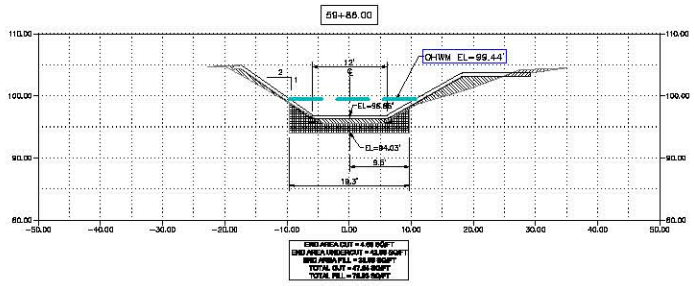
JOE M. WILSON, III, P.E. 92067
MARCH 27, 2017

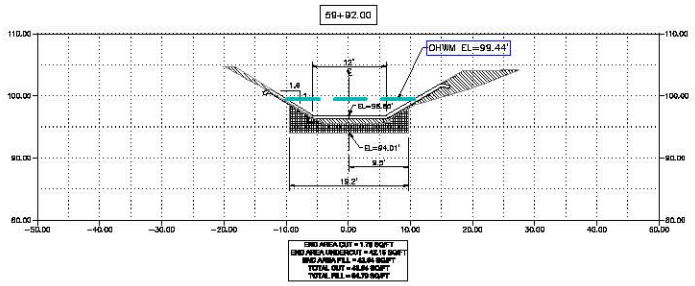
COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE
CUT FILL SECTIONS STA. 52+00 TO STA. 59+00
ORANGE, ORANGE COUNTY, TEXAS

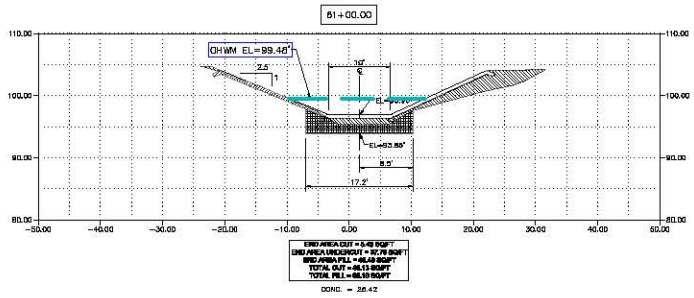
NO.	DATE	REVISION	APPROV.
4			
3			
2			
1			

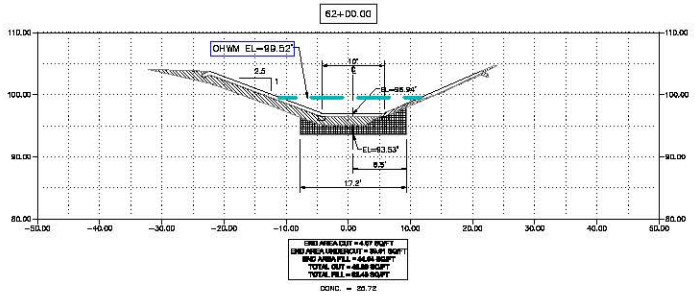
DATE: OCTOBER 2016 | SCALE: AS SHOWN | DRAWN BY: RMH
JOB NO.: ORC-100 | DESIGNED BY: KXC | CHECKED BY: KXC

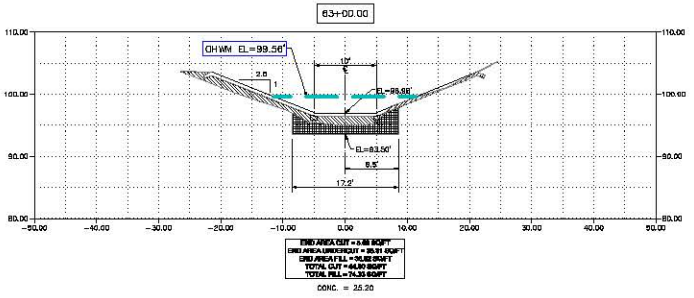
SHEET 39

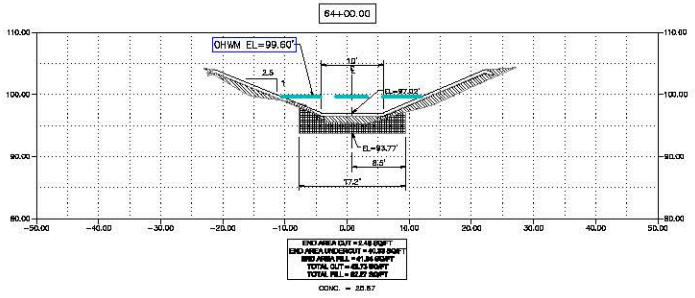


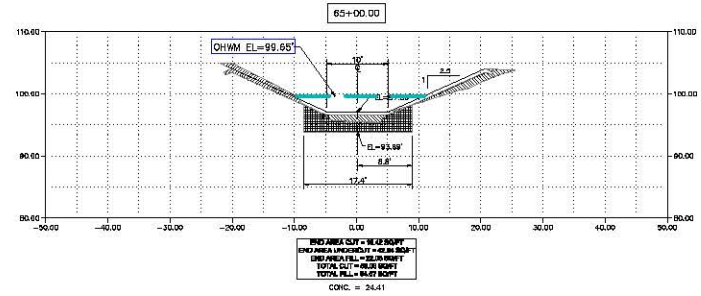


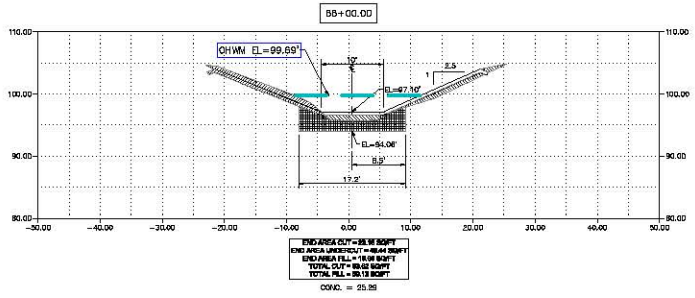












LEGEND

CUT

UNDERCUT

FILL

SHEET 40

NO.	DATE	REVISION	APPROV.
1			
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4			

DATE: OCTOBER 2016 SCALE: AS SHOWN DRAWN BY: RMI

JOB NO.: CRC-100 DESIGNED BY: FCC CHECKED BY: FCC

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

CUT FILL SECTIONS STA. 59+86 TO STA. 66+00

ORANGE, ORANGE COUNTY, TEXAS

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JOE M. WILSON, JR.
P.E. 92057

MARCH 27, 2017

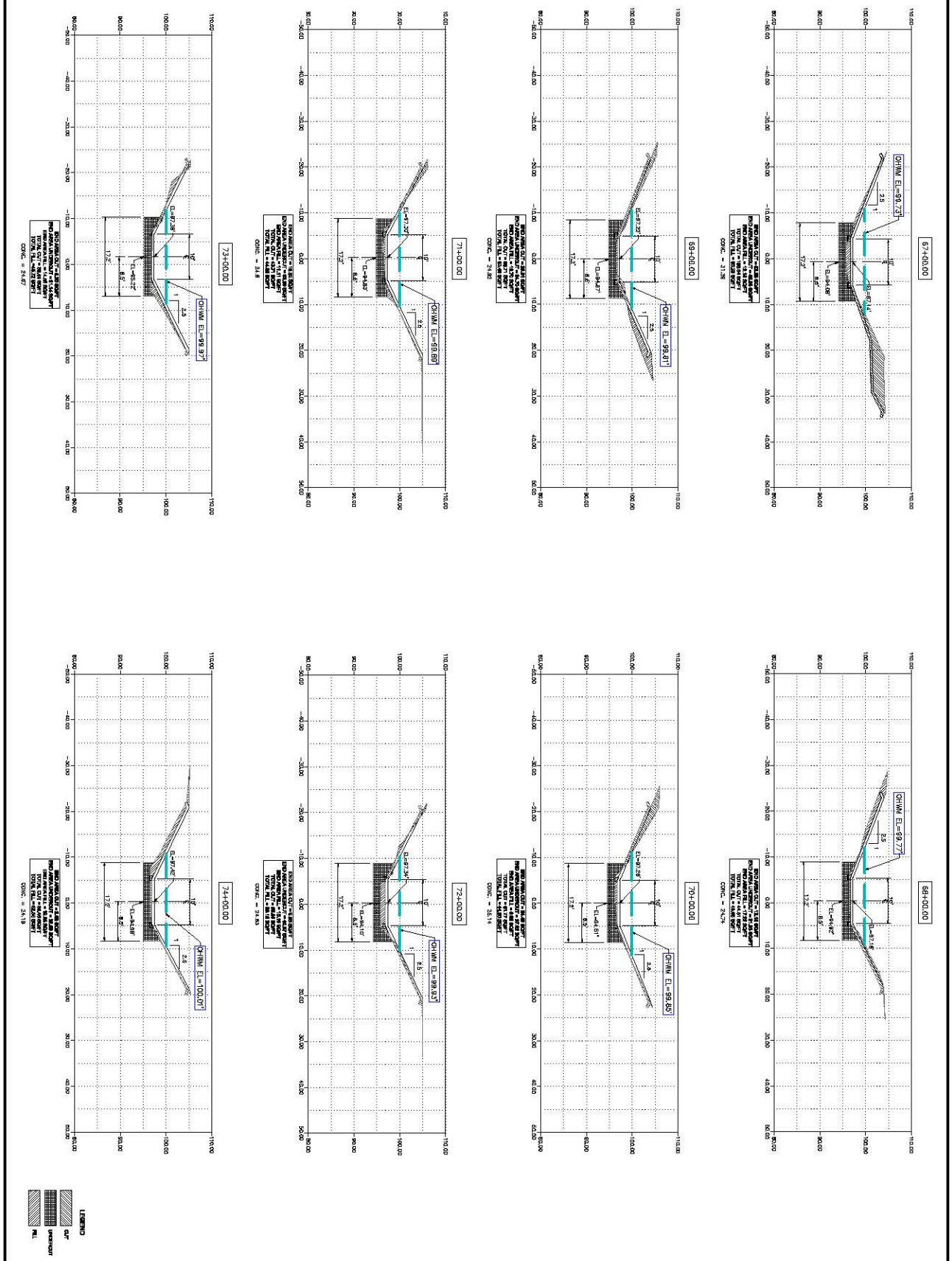
Surveying
1819444

Engineering
F-10994

ARCHERWILSON & COLE
Engineering | Surveying | Planning

4903 Tuttle Creek Drive, Suite 200
San Antonio, TX 78242

LAST PLOTTED: Tuesday, July 26, 2016 10:03:39 AM PROJ: C:\CAD\ACADPROJECTS\CRC-CRC\CRC-CRC-100\CRC-CRC-100-CUT FILL SECTIONS.dwg



Engineering F-10194 | Surveying 10194049

ARCENEAUX WILSON & COLE
engineering | surveying | planning

2001 Turtle Creek Drive, Suite 200
Port Arthur, TX 77642
409.794.7686

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JOE M. WILSON, JR.
P.E. 92067
MARCH 27, 2017

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

CUT FILL SECTIONS STA. 67+00 TO STA. 74+00

ORANGE, ORANGE COUNTY, TEXAS

NO.	DATE	REVISION	APPROV.
4			
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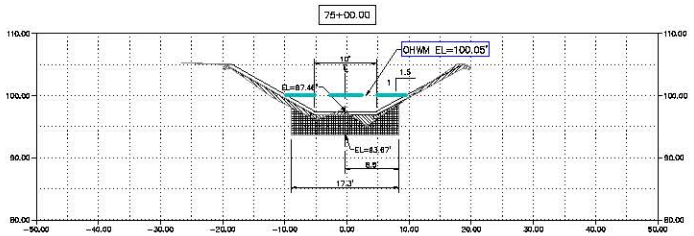
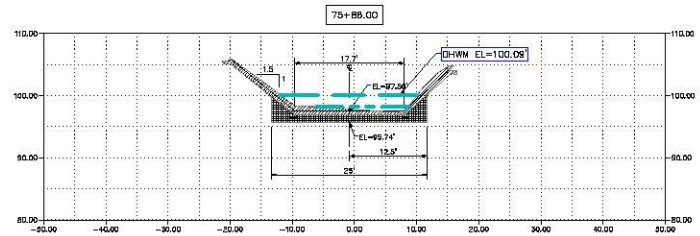
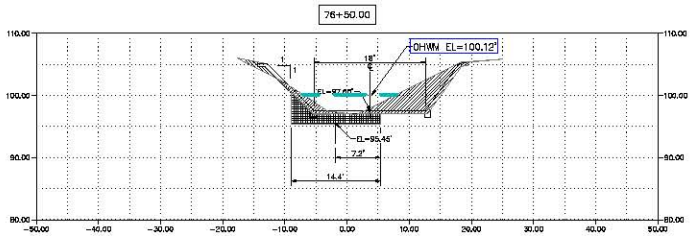
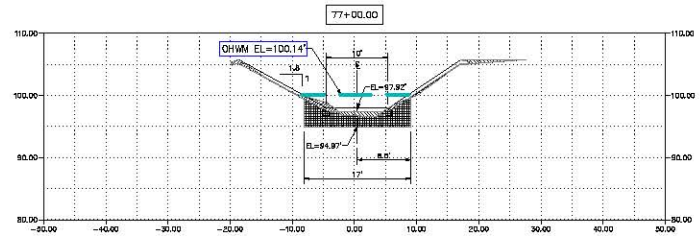
DATE: OCTOBER 2016 | SCALE: AS SHOWN | DRAWN BY: RMH
JOB NO.: ORC-100 | DESIGNED BY: KXC | CHECKED BY: KXC

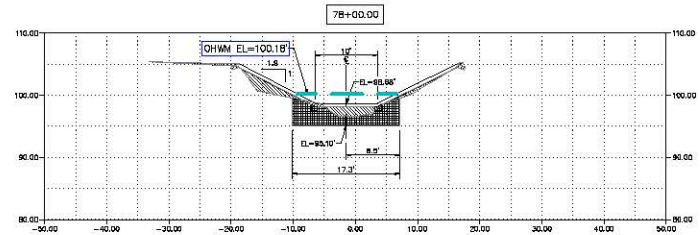
SHEET 41

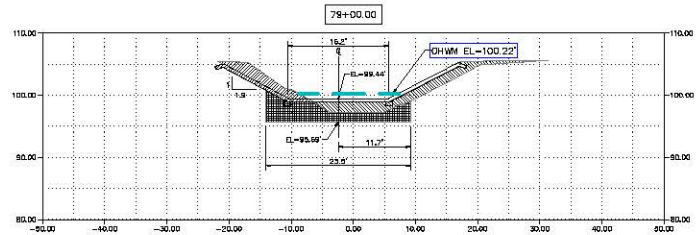


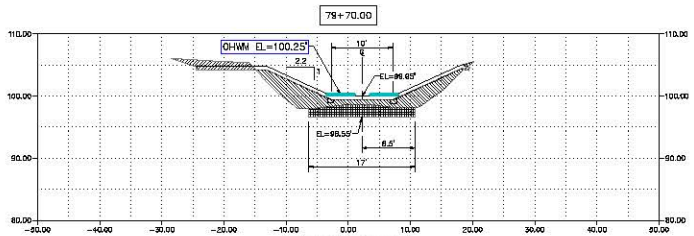


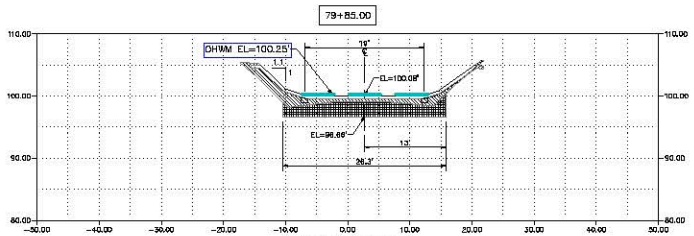












LEGEND

CUT

UNDERCUT

FILL

SHEET 42

NO.	DATE	REVISION	APPROV.
1			
2			
3			
4			

DATE: OCTOBER 2016 | SCALE: AS SHOWN | DRAWN BY: RMI

JOB NO.: CRC-100 | DESIGNED BY: FCC | CHECKED BY: FCC

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

CUT FILL SECTIONS STA. 75+00 TO STA. 79+85

ORANGE, ORANGE COUNTY, TEXAS

THIS DOCUMENT IS FOR INTERIM REVIEW AND NOT INTENDED FOR CONSTRUCTION, BIDDING OR PERMIT PURPOSES

JOE M. WILSON, JR.
P.E. 92067

MARCH 27, 2017

Surveying
1979-1984

ARCHEAULT, WILSON & COLE
Engineering | Surveying | Planning

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Engineering
F-1994

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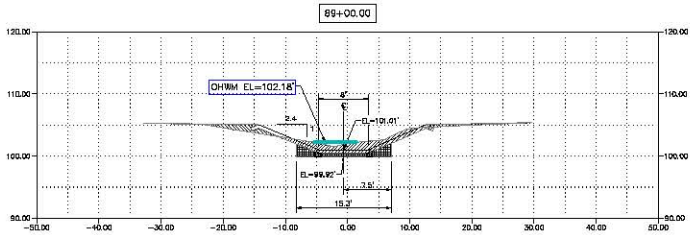
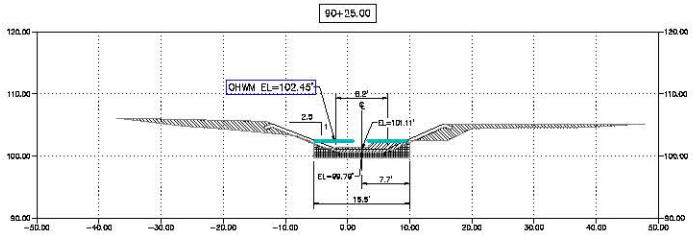
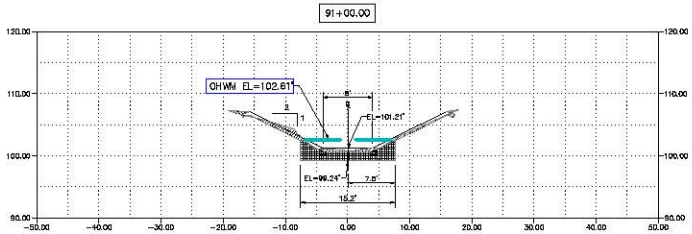
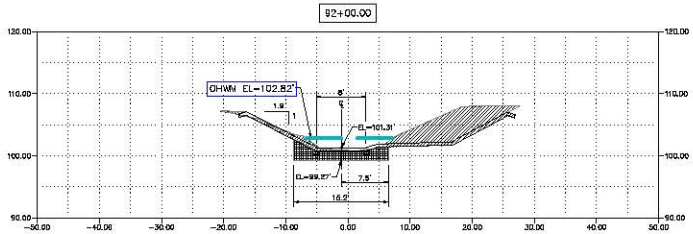
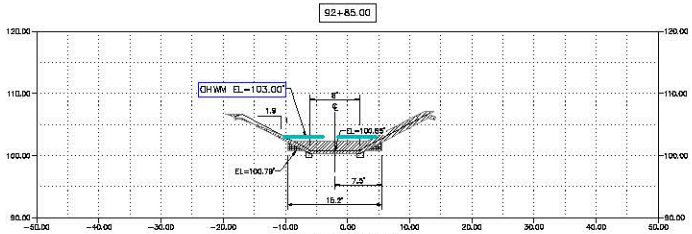
Port Arthur, TX 77642

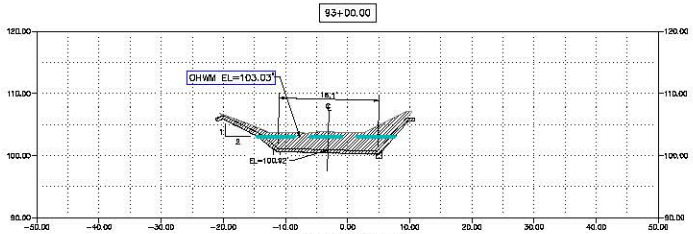


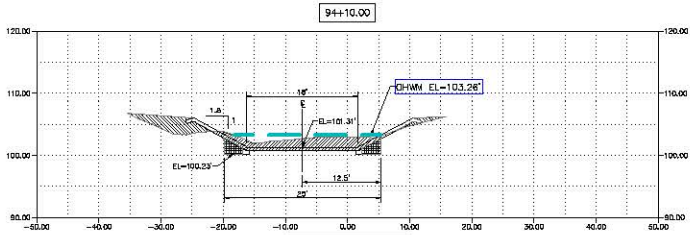


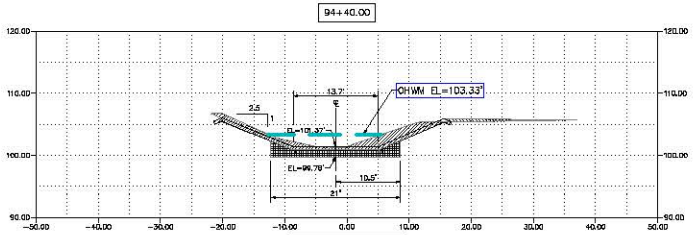












LEGEND

- CUT
- UNDERCUT
- FILL

SHEET 43

NO.	DATE	REVISION
4		
3		
2		
1		

DATE: OCTOBER 2016 | SCALE: AS SHOWN | DRAWN BY: RWI
JOB NO.: CRC-100 | DESIGNED BY: FCC | CHECKED BY: FCC

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

CUT FILL SECTIONS STA. 89+00 TO STA. 94+40

ORANGE, ORANGE COUNTY, TEXAS

THIS DOCUMENT IS FOR INTERIM REVIEW AND NOT INTENDED FOR CONSTRUCTION, BIDDING OR PERMIT PURPOSES

JOE M. WILSON, JR.
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MARCH 27, 2017

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F-1994

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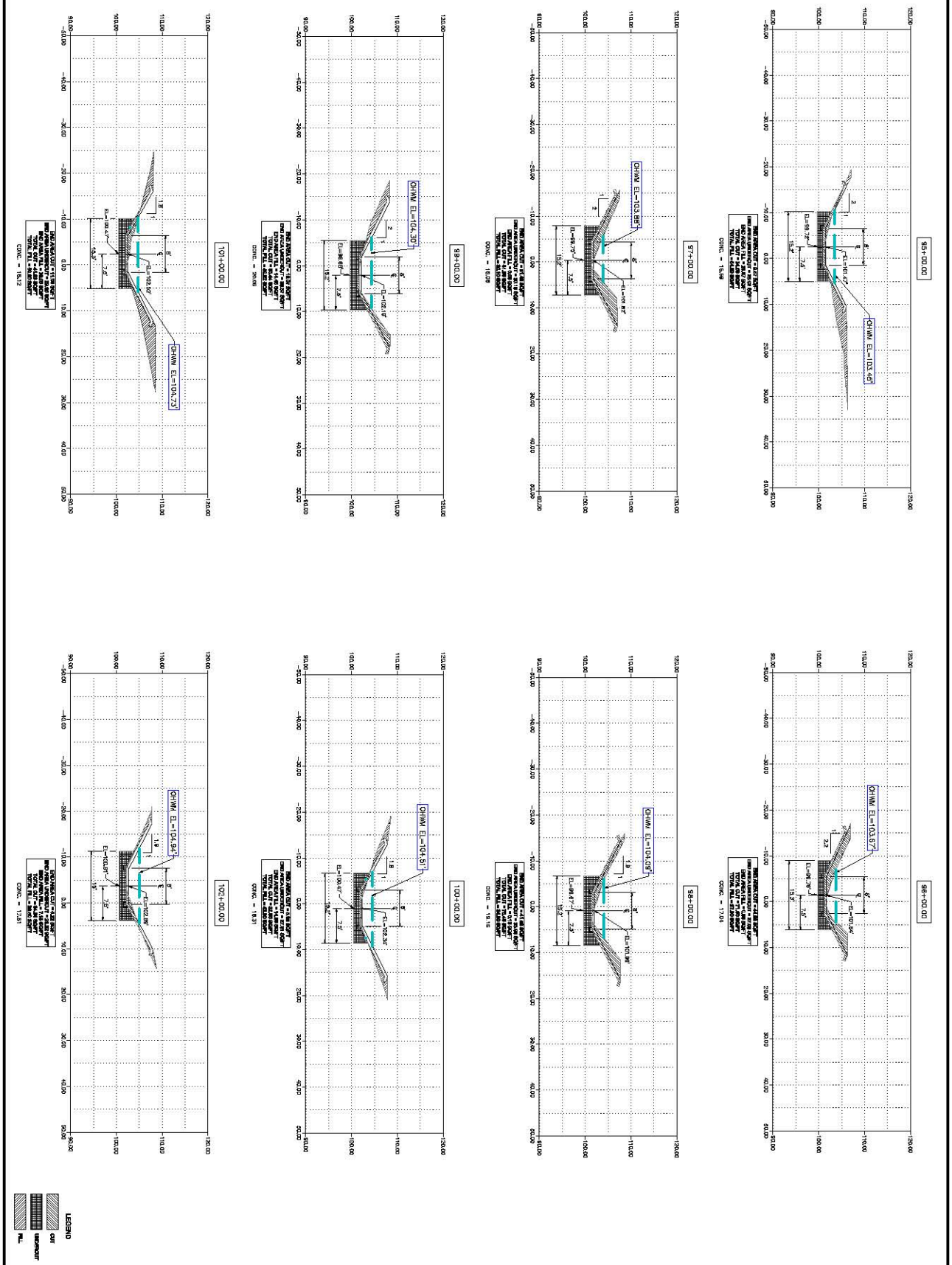
Port Arthur, TX 77642



Engineering F-10194 | Surveying 10194049

ARCENEAUX WILSON & COLE
engineering | surveying | planning

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Port Arthur, TX 77642
409.724.7688
awcengcom

THIS DOCUMENT IS FOR INTERIM REVIEW AND NOT ADMITTED FOR CONSTRUCTION, BIDDING OR PERMIT PURPOSES

JOE M. WILSON, III.
P.E. 92067
MARCH 27, 2017

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

CUT FILL SECTIONS STA. 95+00 TO STA. 102+00

ORANGE, ORANGE COUNTY, TEXAS

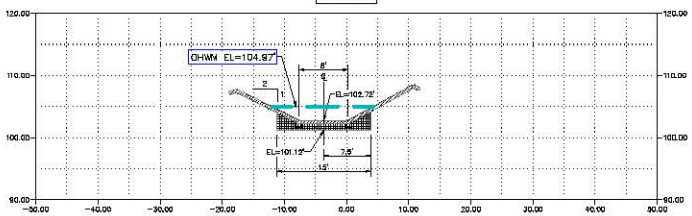
NO.	DATE	REVISION	APPROV.
4			
3			
2			
1			

DATE: OCTOBER 2016 | SCALE: AS SHOWN | DRAWN BY: RMH
JOB NO.: ORC-100 | DESIGNED BY: KXC | CHECKED BY: KXC

SHEET 44

SWG-2012-00823

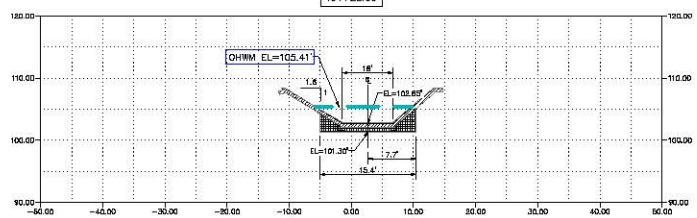
102+15.00



END AREA CUT = 15.75 SQFT
END AREA UNDERCUT = 39.01 SQFT
END AREA FILL = 8.01 SQFT
TOTAL CUT = 39.75 SQFT
TOTAL FILL = 33.07 SQFT

CONC. = 15.53

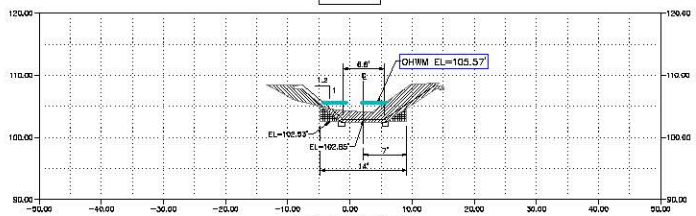
104+22.00



END AREA CUT = 17.87 SQFT
END AREA UNDERCUT = 35.21 SQFT
END AREA FILL = 8.04 SQFT
TOTAL CUT = 35.58 SQFT
TOTAL FILL = 32.25 SQFT

CONC. = 15.34

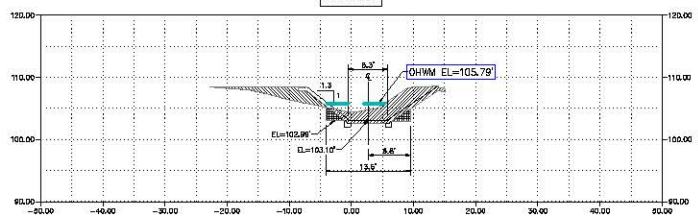
105+00.00



END AREA CUT = 10.88 SQFT
END AREA UNDERCUT = 7.48 SQFT
END AREA FILL = 11.11 SQFT
TOTAL CUT = 47.12 SQFT
TOTAL FILL = 16.57 SQFT

CONC. = 15.19

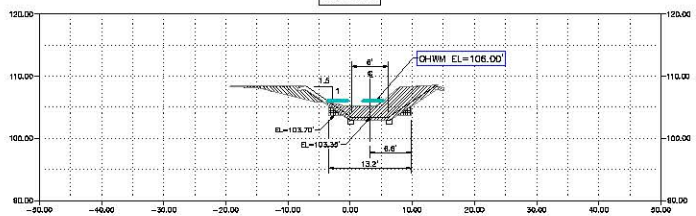
106+00.00



END AREA CUT = 40.45 SQFT
END AREA UNDERCUT = 9.00 SQFT
END AREA FILL = 11.32 SQFT
TOTAL CUT = 40.89 SQFT
TOTAL FILL = 54.88 SQFT

CONC. = 14.81

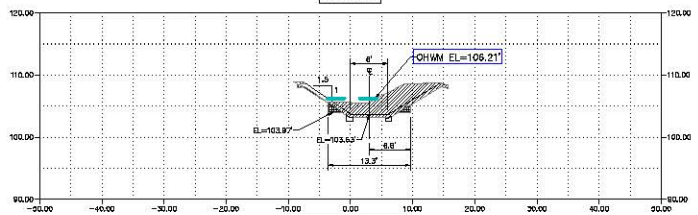
107+00.00



END AREA CUT = 43.47 SQFT
END AREA UNDERCUT = 3.04 SQFT
END AREA FILL = 11.09 SQFT
TOTAL CUT = 44.31 SQFT
TOTAL FILL = 14.84 SQFT

CONC. = 14.42

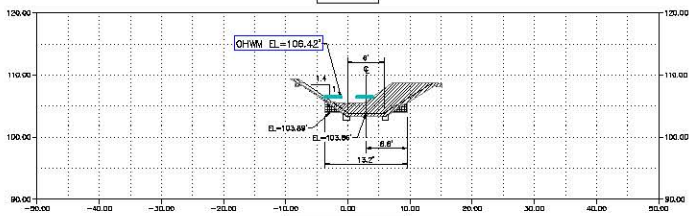
108+00.00



END AREA CUT = 40.63 SQFT
END AREA UNDERCUT = 3.04 SQFT
END AREA FILL = 0.03 SQFT
TOTAL CUT = 40.89 SQFT
TOTAL FILL = 0.09 SQFT

CONC. = 14.93

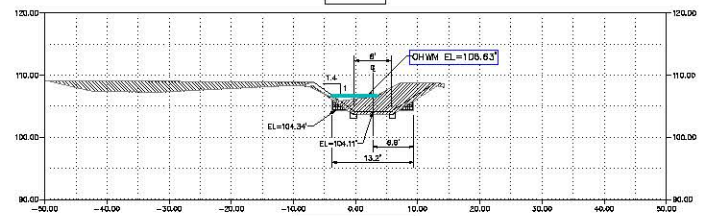
109+00.00



END AREA CUT = 46.12 SQFT
END AREA UNDERCUT = 4.89 SQFT
TOTAL CUT = 46.91 SQFT
TOTAL FILL = 9.26 SQFT

CONC. = 14.60

110+00.00



END AREA CUT = 44.34 SQFT
END AREA UNDERCUT = 4.30 SQFT
END AREA FILL = 58.16 SQFT
TOTAL CUT = 48.64 SQFT
TOTAL FILL = 58.58 SQFT

CONC. = 13.93

LEGEND

CUT
UNDERCUT
FILL

SHEET 45

NO.	DATE	REVISION
4		
3		
2		
1		

DATE: OCTOBER 2016
JOB NO.: GRC-100
SCALE: AS SHOWN
DESIGNED BY: FCC
DRAWN BY: RMI
CHECKED BY: FCC
APPROV.

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

CUT FILL SECTIONS STA. 102+15 TO STA. 110+00

ORANGE, ORANGE COUNTY, TEXAS

THIS DOCUMENT IS FOR INTERIM REVIEW AND NOT INTENDED FOR CONSTRUCTION, BIDDING OR PERMIT PURPOSES

JOE M. WILSON, JR.
P.E. 92067

MARCH 27, 2017

Surveying TBPLS#

Engineering TBPE#

ARCHERULTY WILSON & COLE
engineering, surveying, planning

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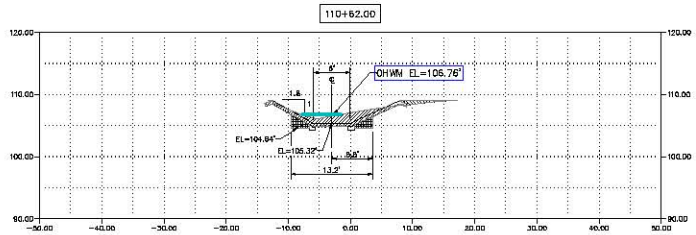
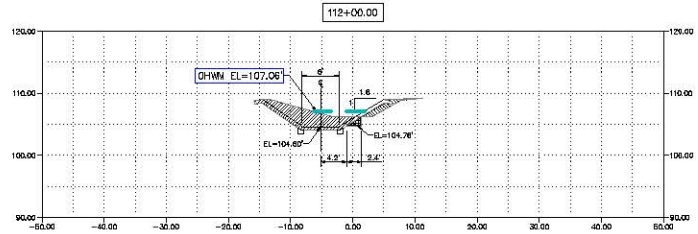
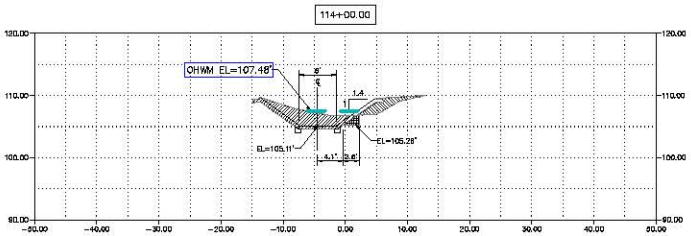
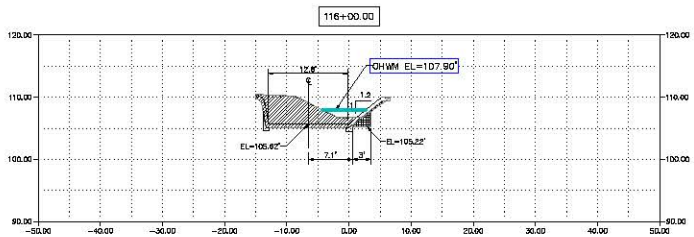
www.awc.com

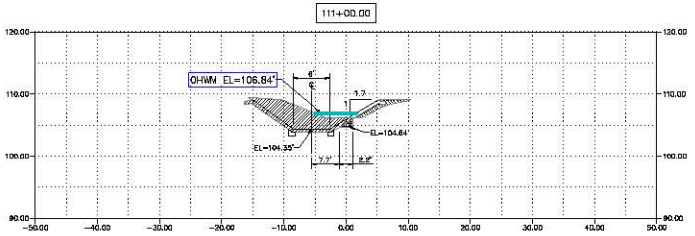
2001 Turtle Creek Drive, Suite 200
Port Arthur, TX 77642

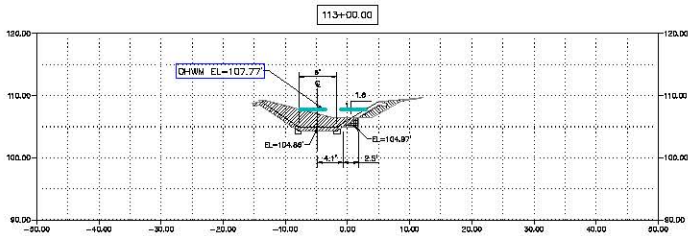


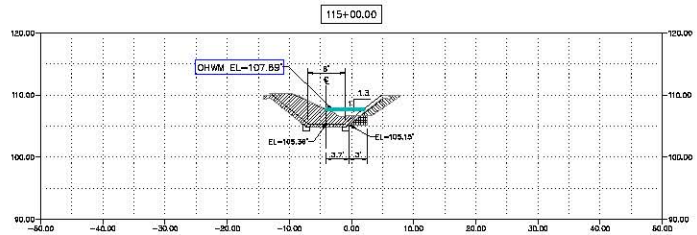


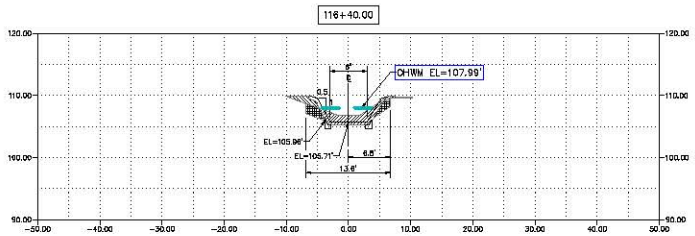












LEGEND

CUT

UNDERCUT

FILL

SHEET 46

NO.	DATE	REVISION	APPROV.
4			
3			
2			
1			

DATE: OCTOBER 2016 SCALE: AS SHOWN DRAWN BY: RMM

JOB NO.: GRC-100 DESIGNED BY: FCC CHECKED BY: FCC

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

CUT FILL SECTIONS STA. 110+62 TO STA. 116+40

ORANGE, ORANGE COUNTY, TEXAS

THIS DOCUMENT IS FOR INTERIM REVIEW AND NOT INTENDED FOR CONSTRUCTION, BIDDING OR PERMIT PURPOSES

JOE M. WILSON, JR.
P.E. 92067

MARCH 27, 2017

Surveying TBPLS-10194

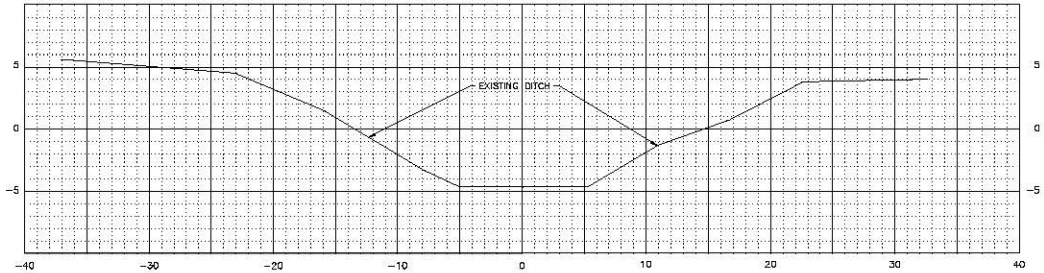
Engineering TBPE-F-10024

AMC

ARCHEAULT WILSON & COLE
engineering, surveying, planning

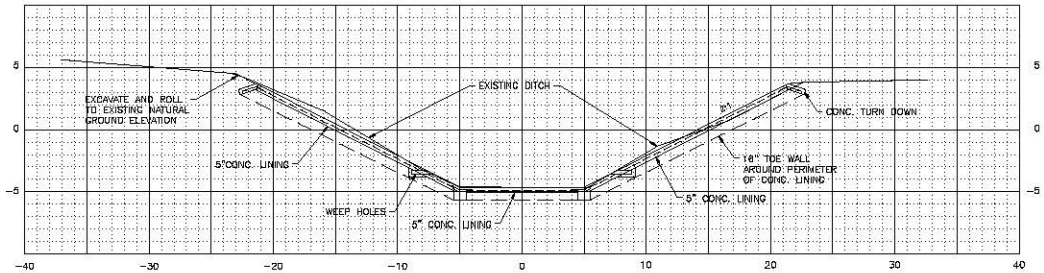
4810 Yoakum Creek Drive, Suite 200
Beaumont, TX 77706-3

409.835.7888
www.amc.com



EXISTING TYPICAL SECTION

SCALE: 1"=5'



PROPOSED TYPICAL SECTION

SCALE: 1"=5'

SHEET 47

NO.	DATE	REVISION	APPROV.
1			
2			
3			
4			

DATE: OCTOBER 2016 SCALE: AS SHOWN DRAWN BY: RWI

JOB NO.: CRC-100 DESIGNED BY: FCC CHECKED BY: FCC

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

TYPICAL CROSS SECTIONS

ORANGE, ORANGE COUNTY, TEXAS

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JOE M. WILSON, JR.
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MARCH 27, 2017

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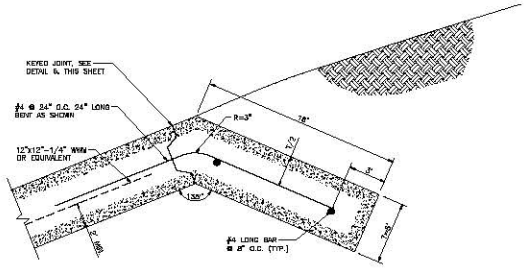
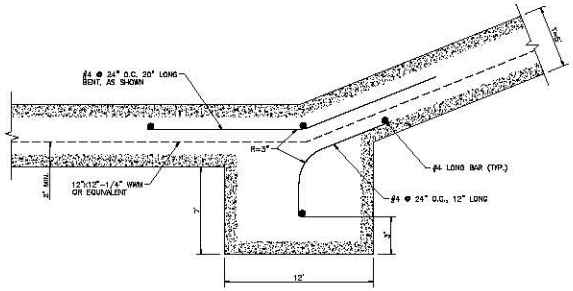
Port Arthur, TX 77642



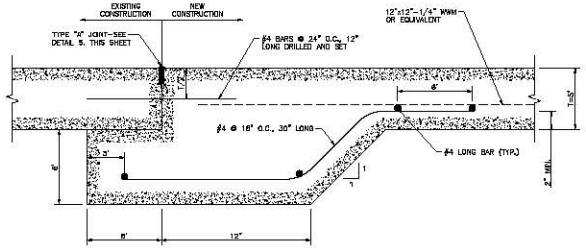
1 CONCRETE TURN DOWN

Scale: N.T.S.



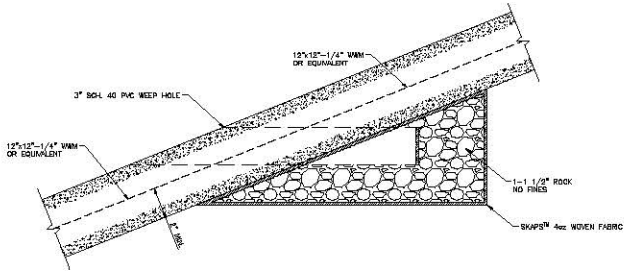
2 CONCRETE FOOTING

Scale: N.T.S.



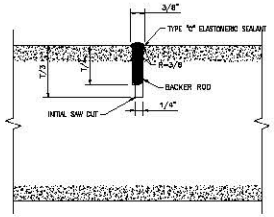
3 LINER TIE-IN

Scale: N.T.S.



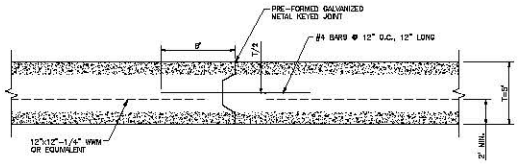
4 3" WEEP HOLE

Scale: N.T.S.



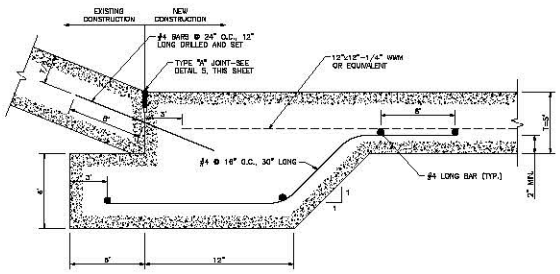
5 TYPE "A" JOINT

Scale: N.T.S.



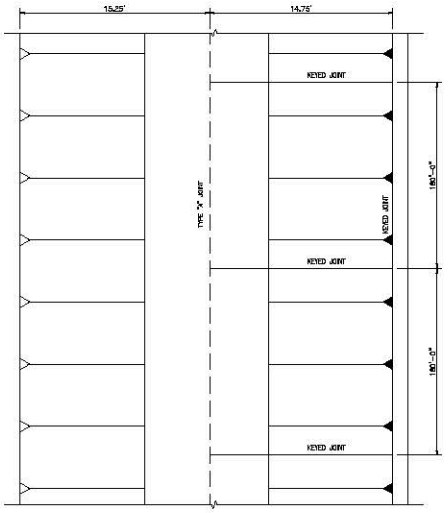
6 KEYED JOINT

Scale: N.T.S.



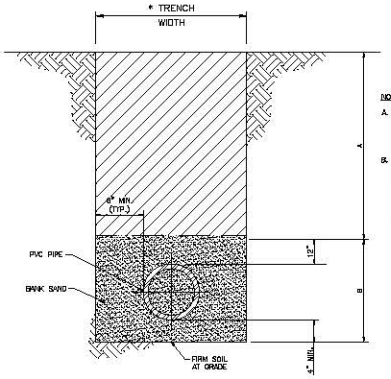
7 REPAIR DETAIL

Scale: N.T.S.



8 TYPICAL JOINT LOCATION

Scale: 1" = 6'



NOTES:

A. BACKFILL IN ACCORDANCE WITH ITEM J2001, PARA. 2.08-D. CEMENT-STABILIZED SAND SHALL BE USED WHEN UNDER OR WITHIN 5' OF FUTURE OR PROPOSED PAVEMENT.

B. BACKFILL WITH FIRMLY TAMPED BANK SAND IN ACCORDANCE WITH THIS DETAIL AND ITEM J2001, PARA. 2.08-C.

* PIPE LESS THAN 30-INCH
  MAX. 1'-6"+ø
  MIN. 1'-0"+ø
* PIPE 30-INCH AND LARGER
  MAX. 2'-0"+ø
  MIN. 1'-4"+ø

9 CLASS "C" BEDDING

Scale: N.T.S.

SHEET 48

NO.	DATE	REVISION	APPROV.
4			
3			
2			
1			

DATE: OCTOBER 2016 | SCALE: AS SHOWN | DRAWN BY: RMM
JOB NO.: GRC-100 | DESIGNED BY: KOC | CHECKED BY: KOC

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

CONSTRUCTION DETAILS

ORANGE, ORANGE COUNTY, TEXAS

THIS DOCUMENT IS FOR INTERIM REVIEW AND NOT INTENDED FOR CONSTRUCTION, BIDDING OR PERMIT PURPOSES

JOE M. WILSON, JR.
P.E. 92067

MARCH 27, 2017

Surveying TBPLS#

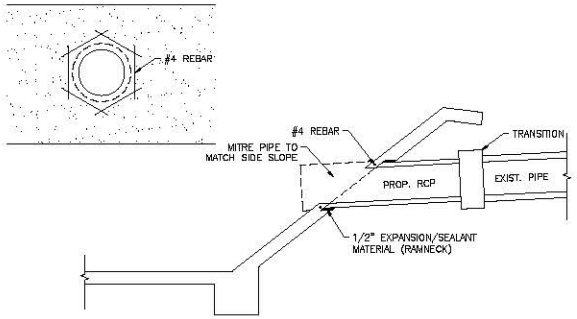
Engineering F-10924

ARCHERLAND WILSON & COLE
Engineering, Surveying, Planning

4810 Yoakum Blvd., Suite 200
Houston, TX 77006

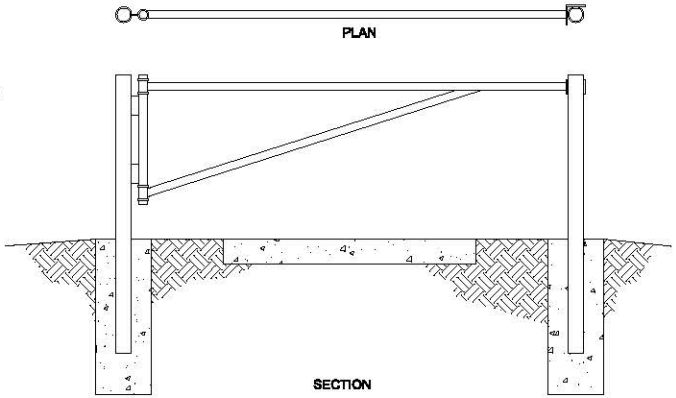
4810 Yoakum Blvd., Suite 200
South Antonio, TX 78402

www.awc-tx.com



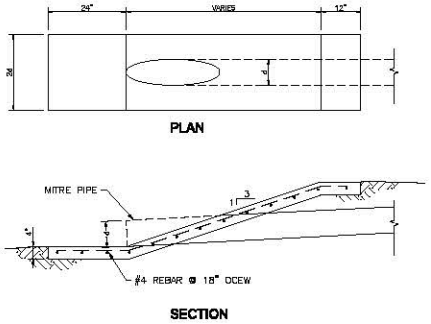
1 CULVERT MITRE @ LINER

Scale: N.T.S.



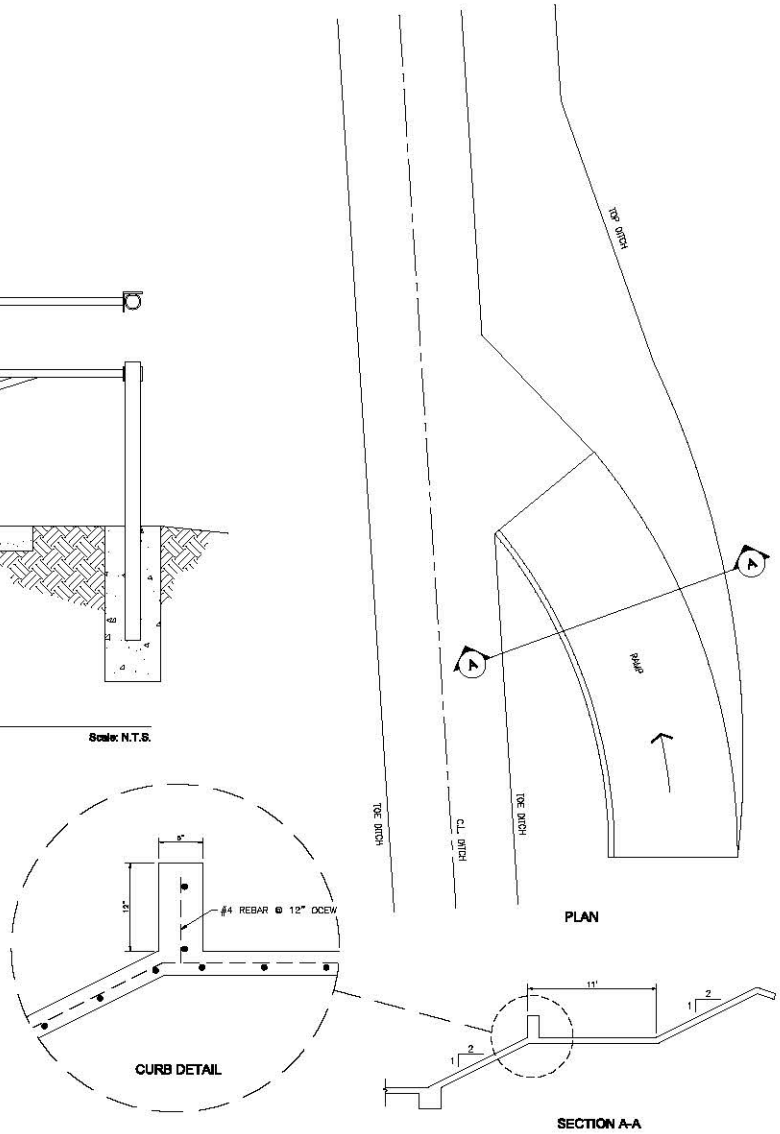
2 RAMP GATE

Scale: N.T.S.



3 CONCRETE SLOPE TREATMENT

Scale: N.T.S.



4 VEHICLE ACCESS RAMP

Scale: N.T.S.

SHEET 49

NO.	DATE	REVISION	APPROVAL
1			
2			
3			
4			

DATE: OCTOBER 2016 SCALE: AS SHOWN DRAWN BY: RWI
JOB NO.: CRC-100 DESIGNED BY: CCC CHECKED BY: CCC

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

CONSTRUCTION DETAILS

ORANGE, ORANGE COUNTY, TEXAS

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JOE M. WILSON, JR.
P.E. 92067

MARCH 27, 2017

Surveying 10194444

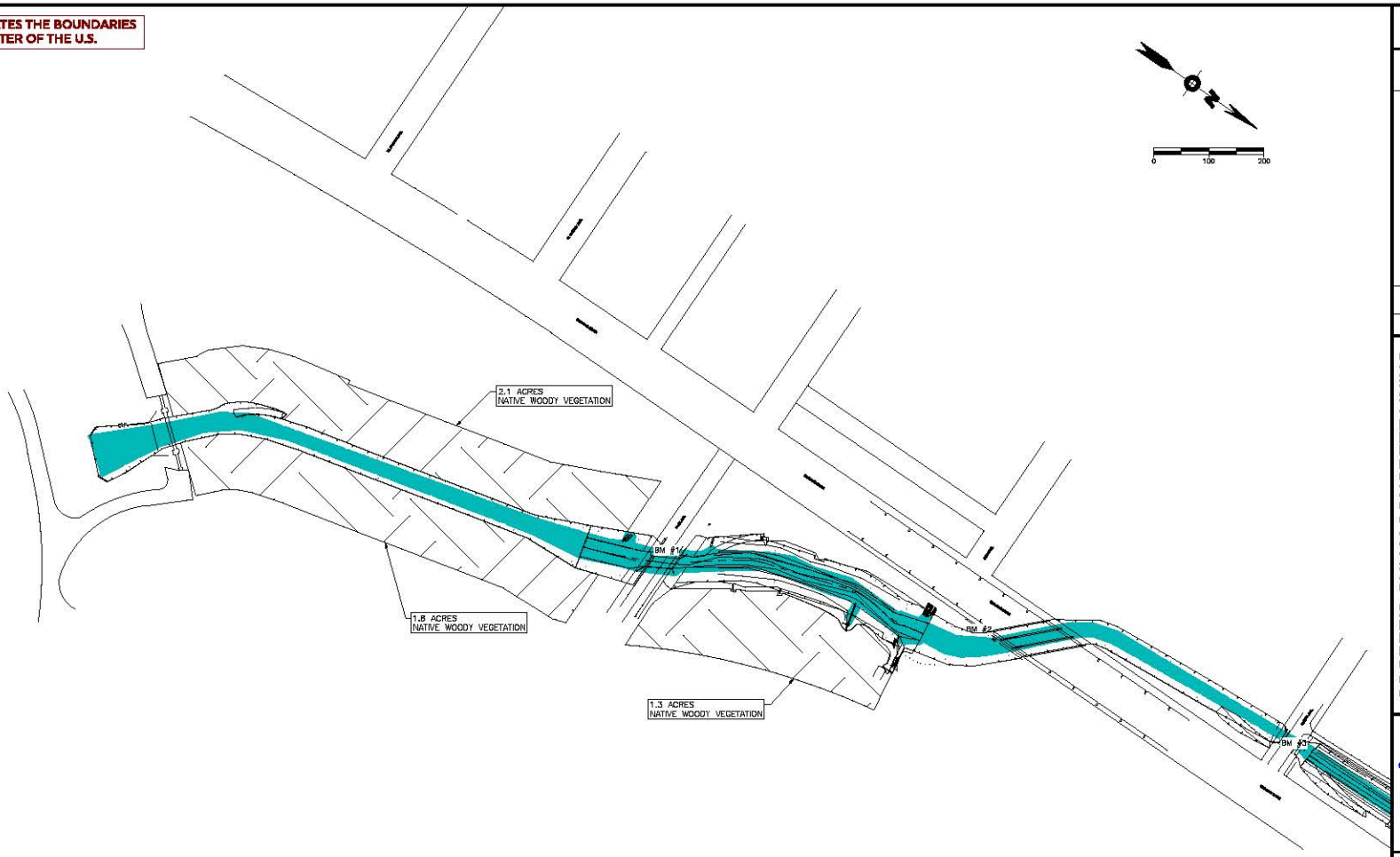
Engineering F-10994

ARCHEAULT, WILSON & COLE
Engineering | Surveying | Planning

409.735.5888
www.awc

2001 Tanks Creek Drive, Suite 200
Port Arthur, TX 77642

BLUE HATCH IN PLAN VIEW INDICATES THE BOUNDARIES OF THE JURISDICTIONAL WATER OF THE U.S.



SHEET 51

NO.	DATE	REVISION	APPROVA
1			
2			
3			
4			

DATE: OCTOBER 2016 SCALE: AS SHOWN DRAWN BY: RWI
JOB NO.: CRC-100 DESIGNED BY: CCC CHECKED BY: FCC

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE

RIPARIAN BUFFER-1

ORANGE, ORANGE COUNTY, TEXAS

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JOE M. WILSON, JR.
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MARCH 27, 2017

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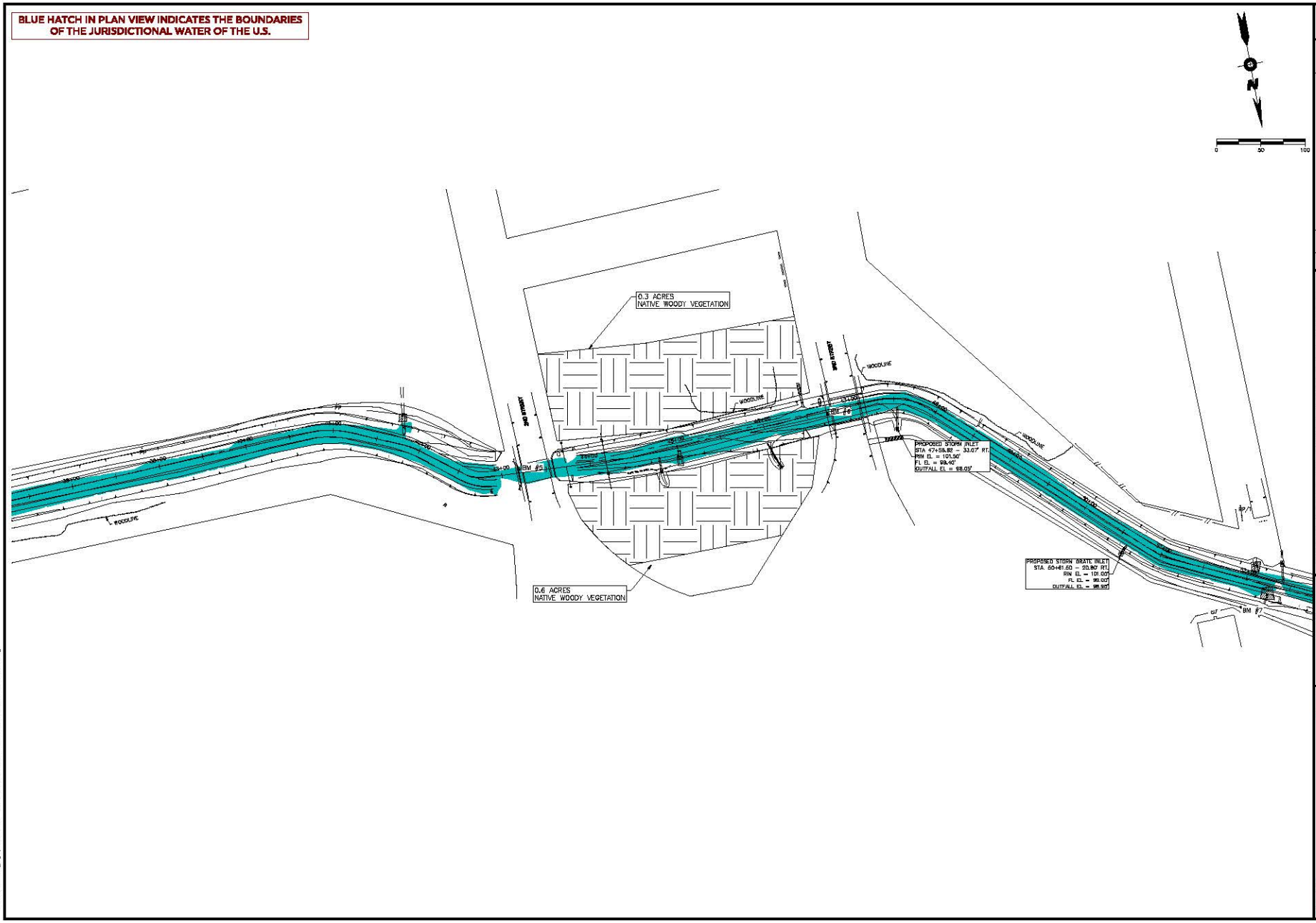
2001 Turtle Creek Drive, Suite 200
Port Arthur, TX 77642

BLUE HATCH IN PLAN VIEW INDICATES THE BOUNDARIES OF THE JURISDICTIONAL WATER OF THE U.S.



SHEET 52

NO.	DATE	REVISION	APPROV.
1			
2			
3			
4			

DATE: OCTOBER 2016 SCALE: AS SHOWN DRAWN BY: RWI
JOB NO.: CRC-100 DESIGNED BY: FCC CHECKED BY: FCC

COOPER'S GULLY CONCRETE LINING
CITY OF ORANGE
RIPARIAN BUFFER-2
ORANGE, ORANGE COUNTY, TEXAS

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JOE M. WILSON, JR.
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MARCH 27, 2017

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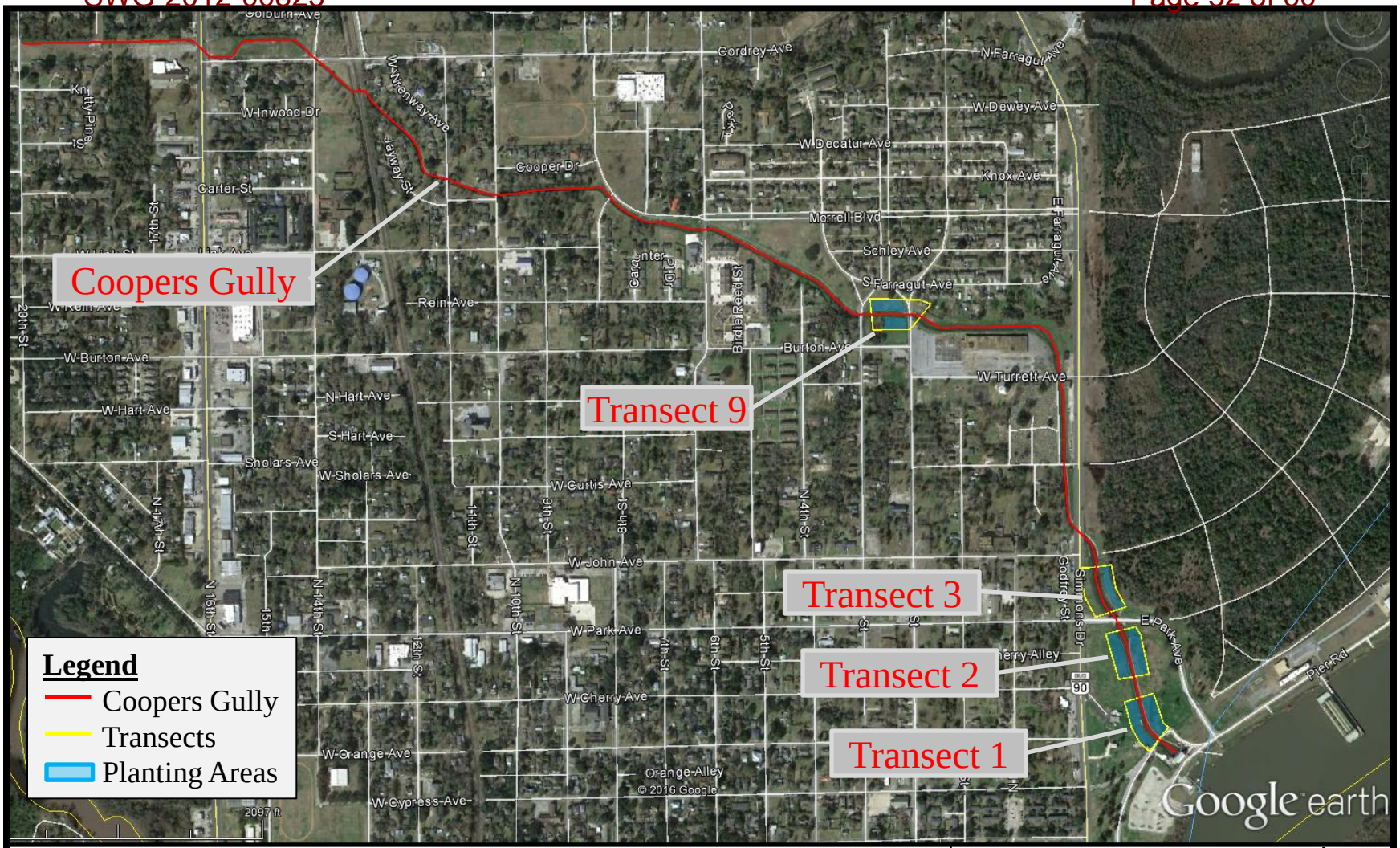
Port Arthur, TX 77642



LOCATION MAP

Base Map Source: Google Earth Image Date 1/24/2015

Scale 1 in. = 1,100 ft

N

Project: Coopers Gully Improvements Project
Orange, Orange County, Texas

Tolunay-Wong Engineers, Inc.

Project No.: 13.12.035

Client: Arceneaux, Wilson & Cole, LLC
Port Arthur, Texas

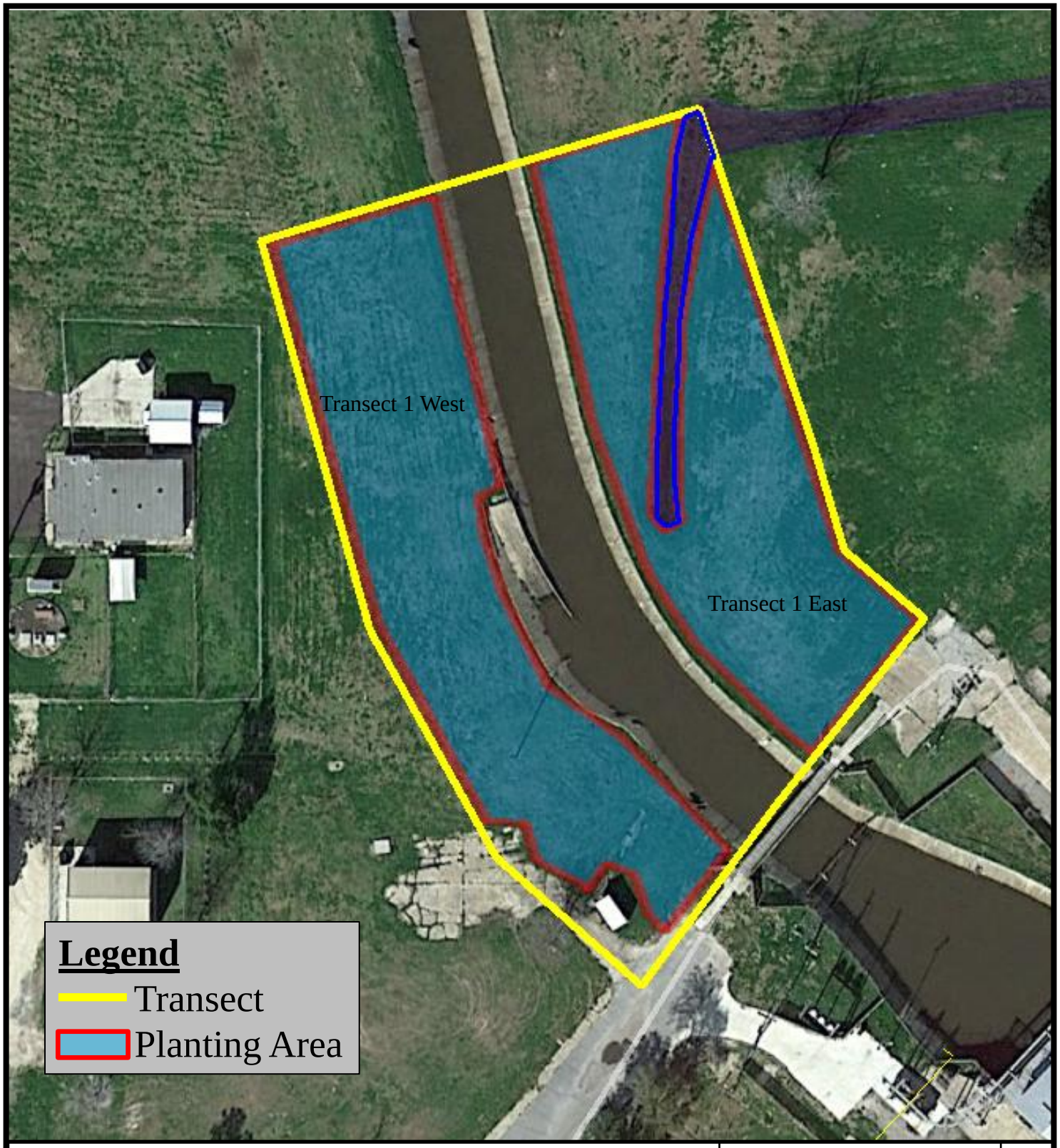


FIGURE 6: AERIAL PHOTO TRANSECT 1
Base Map Source: Google Earth Image Date 1/24/2015

Scale 1 in. ≈ 60 ft

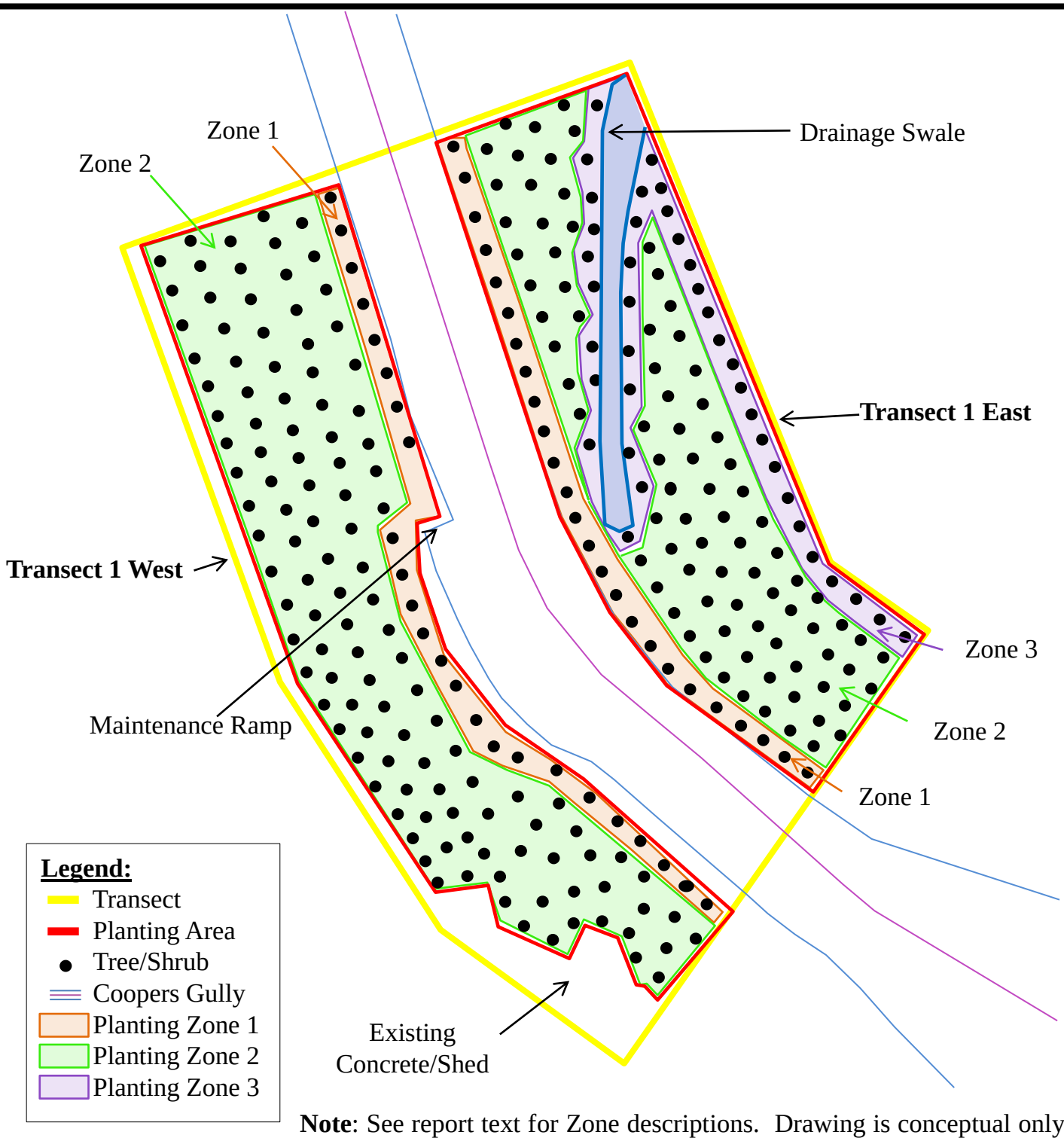
N

Project:
Coopers Gully
Improvements Project
Orange, Orange County, Texas

Tolunay-Wong Engineers, Inc.

Project No.: 13.12.035

Client: Arceneaux, Wilson & Cole, LLC
Port Arthur, Texas



Note: See report text for Zone descriptions. Drawing is conceptual only; plantings may be adjusted in the field to accommodate Site specific conditions.

FIGURE 2: PLANTING MAP TRANSECT 1
Base Map Source: Arceneaux, Wilson & Cole, LLC

Scale 1 in. ≈ 60 ft

N

Project: Coopers Gully Improvements Project
Orange, Orange County, Texas

Tolunay-Wong Engineers, Inc.

Project No.: 13.12.035

Client: Arceneaux, Wilson & Cole, LLC
Port Arthur, Texas

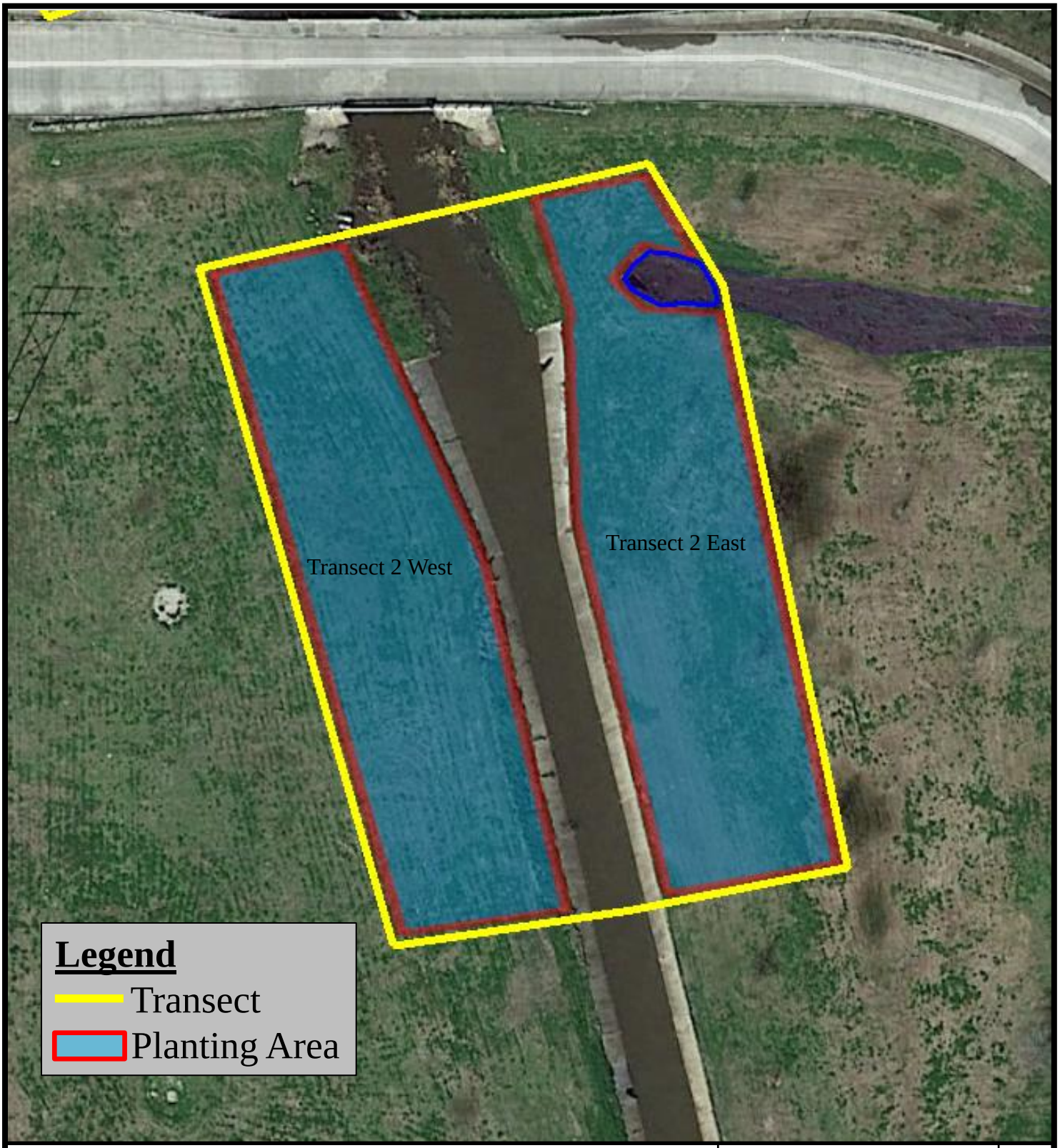


FIGURE 7: AERIAL PHOTO TRANSECT 2
Base Map Source: Google Earth Image Date 1/24/2015

Scale 1 in. ≈ 60 ft

N

Project: Coopers Gully Improvements Project
Orange, Orange County, Texas

Tolunay-Wong Engineers, Inc.

Project No.: 13.12.035

Client: Arceneaux, Wilson & Cole, LLC
Port Arthur, Texas

Note: See report text for Zone descriptions. Drawing is conceptual only; plantings may be adjusted in the field to accommodate Site specific conditions.

FIGURE 3: PLANTING MAP TRANSECT 2
Base Map Source: Arceneaux, Wilson & Cole, LLC

Scale 1 in. ≈ 60 ft

N

Project: Coopers Gully Improvements Project Orange, Orange County, Texas

Tolunay-Wong Engineers, Inc.

Project No.: 13.12.035

Client: Arceneaux, Wilson & Cole, LLC Port Arthur, Texas

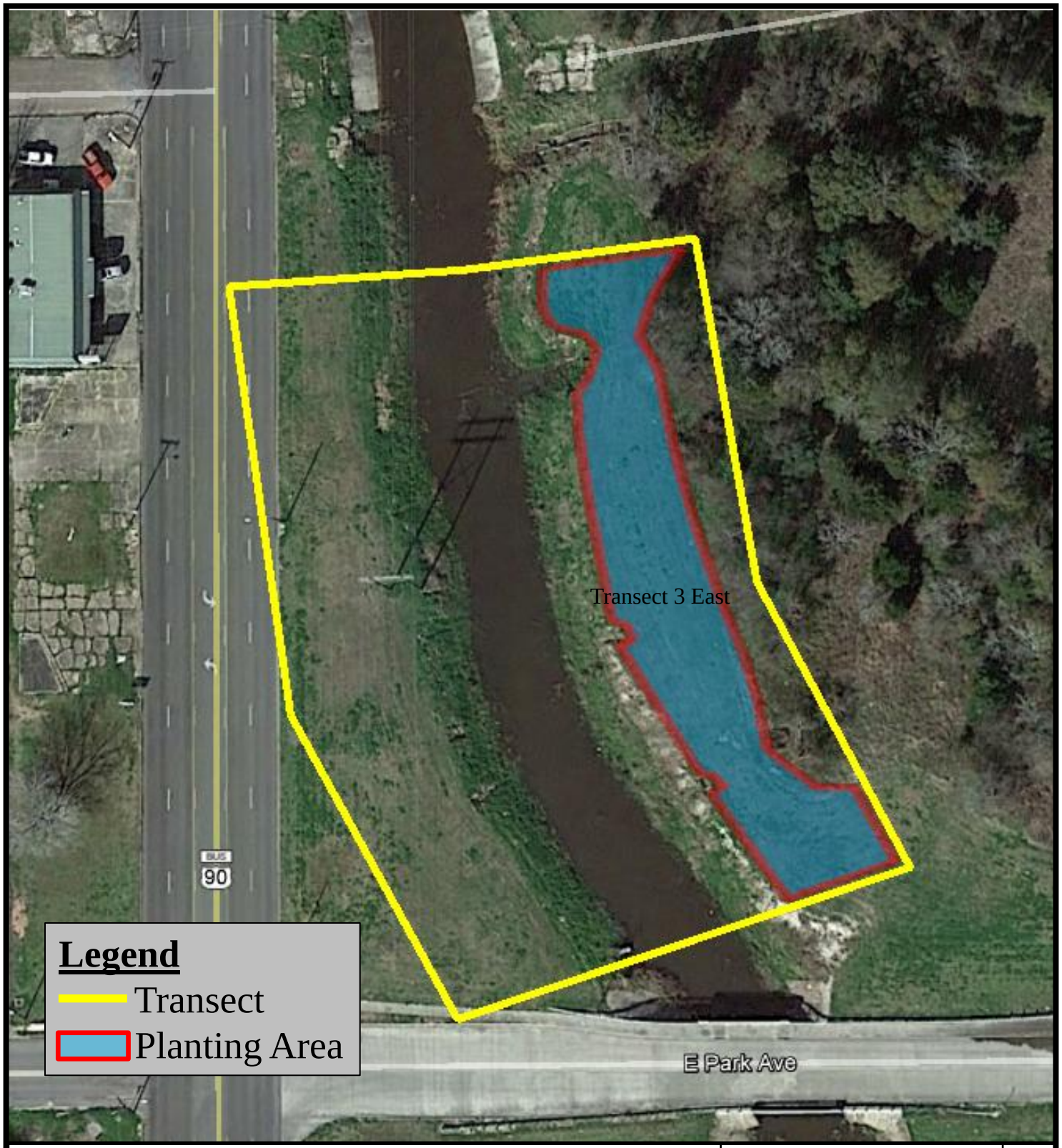


FIGURE 8: AERIAL PHOTO TRANSECT 3
Base Map Source: Google Earth Image Date 1/24/2015

Scale 1 in. ≈ 60 ft

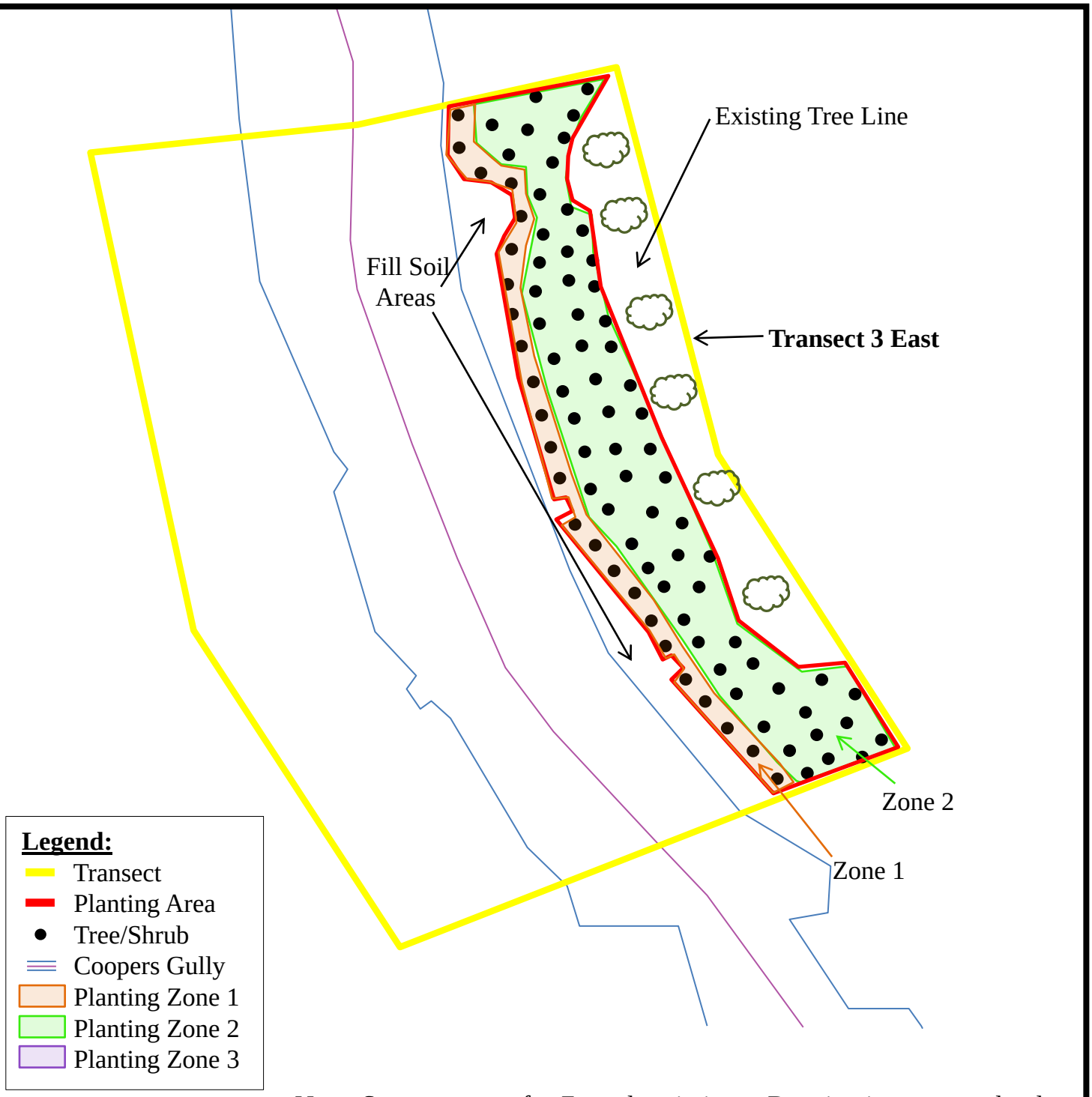
N

Project: Coopers Gully Improvements Project Orange, Orange County, Texas

Tolunay-Wong Engineers, Inc.

Project No.: 13.12.035

Client: Arceneaux, Wilson & Cole, LLC Port Arthur, Texas



Note: See report text for Zone descriptions. Drawing is conceptual only; plantings may be adjusted in the field to accommodate Site specific conditions.

FIGURE 4: PLANTING MAP TRANSECT 3
Base Map Source: Arceneaux, Wilson & Cole, LLC

Scale 1 in. ≈ 60 ft

N

Project: Coopers Gully Improvements Project Orange, Orange County, Texas

Tolunay-Wong Engineers, Inc.

Project No.: 13.12.035

Client: Arceneaux, Wilson & Cole, LLC Port Arthur, Texas

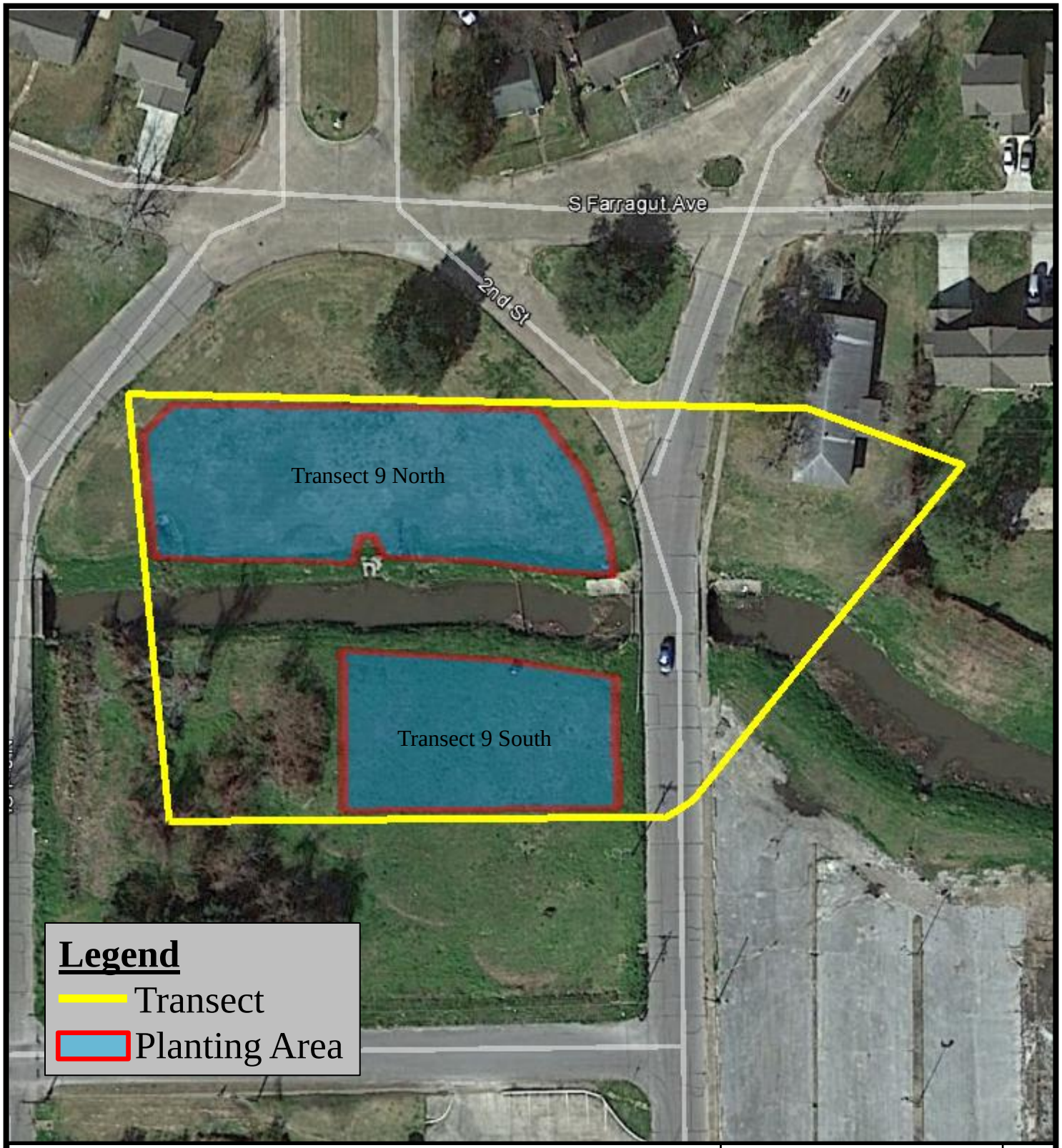


FIGURE 9: AERIAL PHOTO TRANSECT 9
Base Map Source: Google Earth Image Date 1/24/2015

Scale 1 in. ≈ 60 ft

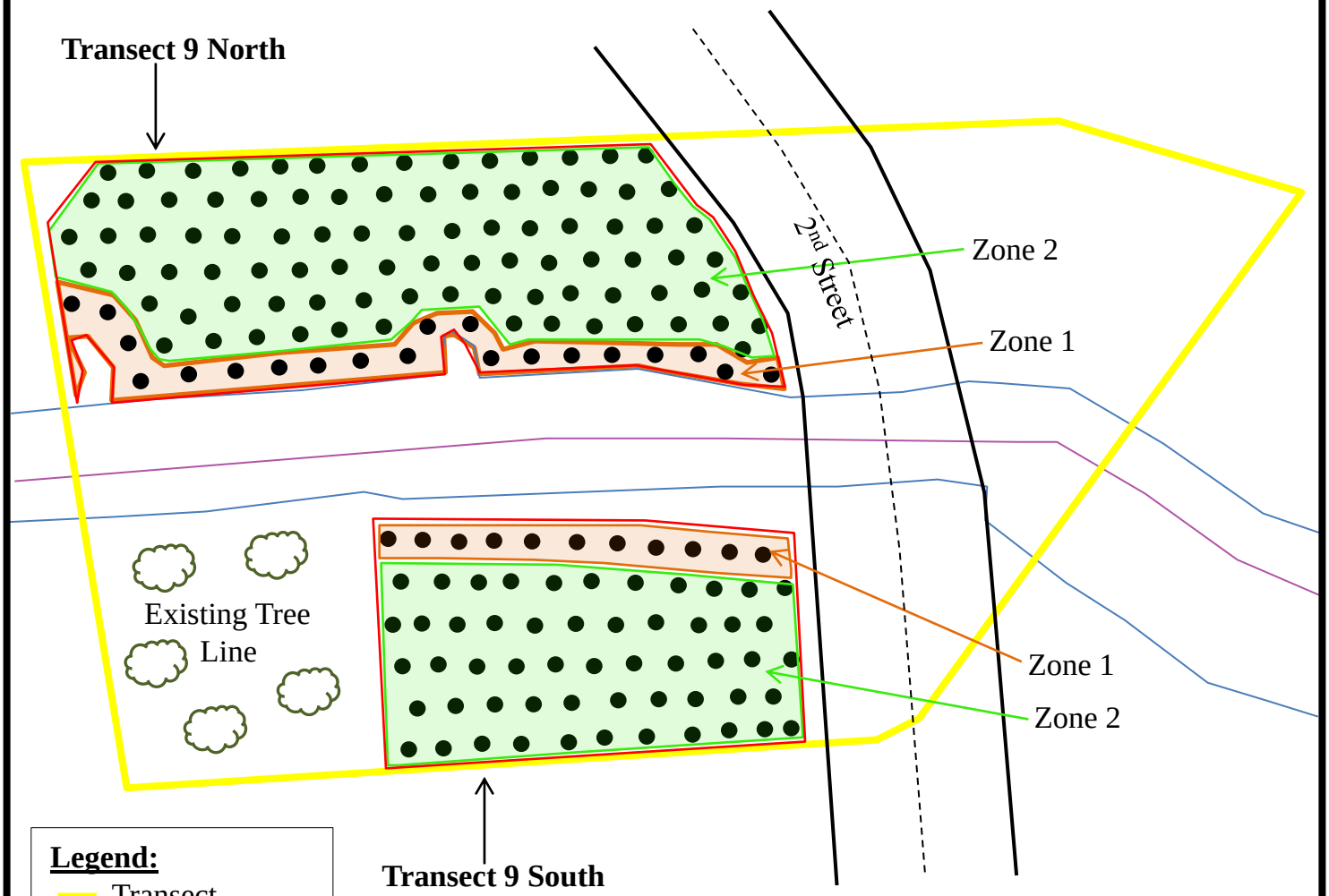
N

Project: Coopers Gully Improvements Project
Orange, Orange County, Texas

Tolunay-Wong Engineers, Inc.

Project No.: 13.12.035

Client: Arceneaux, Wilson & Cole, LLC
Port Arthur, Texas



Legend:
- Transect
- Planting Area
- Tree/Shrub
- Coopers Gully
- Planting Zone 1
- Planting Zone 2
- Planting Zone 3

Note: See report text for Zone descriptions. Drawing is conceptual only; plantings may be adjusted in the field to accommodate Site specific conditions.

FIGURE 5: PLANTING MAP TRANSECT 9
Base Map Source: Arceneaux, Wilson & Cole, LLC

Scale 1 in. ≈ 60 ft

N

Project: Coopers Gully Improvements Project Orange, Orange County, Texas

Tolunay-Wong Engineers, Inc.

Project No.: 13.12.035

Client: Arceneaux, Wilson & Cole, LLC Port Arthur, Texas